their completion, and were often altogether abandoned. After dusk the streets of the capital of England could not be traversed without lanterns or torches. This was the case until the last 40 or 50 years in nearly all the smaller towns of England, but there the darkness was the principal obstacle; in the inferior parts of "Old London," however, there were the additional inconveniences of broken limbs and robbery.

It would be easy to adduce instances from the olden writers in proof of all the above statements, but it seems idle to cite proofs of what is known to all.

The care of the streets, however, as regards the removal of the dirt, or, as the weather might be, the dust and mud, seems never to have been much of a national consideration. It was left to the corporations and the parishes. Each of these had its own especial arrangements for the collection and removal of dirt in its own streets; and as each parochial or municipal system generally differed in some respect or other, taken as a whole, there was no one general mode or system adopted. To all this the street-management of our own days, in the respect of scavengery, and, as I shall show, of sewerage, presents a decided improvement. This improvement in street-management is not attributable to any public agitation—to any public, and, far less, national manifestation of feeling. It was debated sometimes in courts of Common Council, in ward and parochial meetings, but the public generally seem to have taken no express interest in the matter. The improvement seems to have established itself gradually from the improved tastes and habits of the people.

Although *generally* left to the local powers, the subject of street-cleansing and management, however, has not been *entirely* overlooked by Parliament. Among parliamentary enactments is the measure best known as "Michael Angelo Taylor's Act," passed early in the present century, which requires all householders every morning to remove from the front of their premises any snow which may have fallen during the night, &c., &c.; the late Police Acts also embrace subordinately the subject of street-management.

On the other hand the sewers have long been the object of national care. "The daily great damages and losses which have happened in many and divers parts of this realm" (I give the spirit of the preamble of several Acts of Parliament), "as well by the reason of the outrageous flowings, surges, and course of the river in and upon the marsh grounds and other low places, heretofore through public wisdom won and made profitable for the great commonwealth of this realm, as also by occasion of land waters and other outrageous springs in and upon meadows, pastures, and other low grounds adjoining to rivers, floods, and other water-course," caused parliamentary attention to be given to the subject.

Until towards the latter part of the last century, however, the streets even of the better order were often flooded during heavy and continuous rains, owing to the sewers and drains having been choked, so that the sewage forced its way through the gratings into the streets and yards, flooding all the underground apartments and often the ground floors of the houses, as well as the public thoroughfares with filth.

It is not many months since the neighbourhood of so modern a locality as Waterloo-bridge was flooded in this manner, and boats were used in the Belvidere and York-roads. On the 1st of August, 1846, after a tremendous storm of thunder, hail, and rain, miles of the capital were literally under water; hundreds of publicans' beer-cellars contained far more water than beer, and the damage done was enormous. These facts show that though much has been accomplished towards the efficient sewerage of the metropolis, much remains to be accomplished still.

The first statute on the subject of the public sewerage was as early as the 9th year of the reign of Henry III. There were enactments, also, in most of the succeeding reigns, but they were all partial and conflicting, and related more to local desiderata than to any system of sewerage for the public benefit, until the reign of Henry VIII., when the "Bill of Sewers" was passed (in 1531). This act provided for a more general system of sewerage in the cities and towns of the kingdom, requiring the main channels to be of certain depths and dimensions, according to the localities, situation, &c. In many parts of the country the sewerage is still carried on according to the provisions in the act of Henry VIII., but those provisions were modified, altered, or "explained," by many subsequent statutes.

Any uniformity which might have arisen from the observance of the same principles of sewerage was effectually checked by the measures adopted in London, more especially during the last 160 years. As the metropolis increased new sewerage became necessary, and new local bodies were formed for its management. These were known as the Commissions of Sewers, and the members of those bodies acted independently one of another, under the authority of their own Acts of Parliament, each having its own board, engineers, clerks, officers, and workmen. Each commission was confined to its own district, and did what was accounted best for its own district with little regard to any general plan of sewerage, so that London was, and in a great measure is, sewered upon different principles, as to the size of the sewers and drains, the rates of inclination, &c. &c. In 1847 there were eight of these districts and bodies: the City of London, the Tower Hamlets, Saint Katherine's, Poplar and Blackwall, Holborn and Finsbury, Westminster and part of Middlesex, Surrey and Kent, and Greenwich. In 1848 these several bodies were concentrated by act of parliament, and entitled the "Metropolitan Commission of Sewers;" but the City of London, as appears to be the case with every parliamentary measure affecting the metropolis, presents an exception, as it retains a separate jurisdiction, and is not under the control of the general commissioners, to whom parliament has given authority over such matters.

The management of the metropolitan scaven-

gery and sewerage, therefore, differs in this respect. The scavengery is committed to the care of the several parishes, each making its own contract; the sewerage is consigned by Parliament to a body of commissioners. In both instances, however, the expenses are paid out of local rates.

I shall now proceed to treat of each of these subjects separately, beginning with the cleansing of the streets.

Of the Streets of London.

There are now three modes of pavement in the streets of the metropolis.

1. *The stone pavement* (commonly composed of Aberdeen granite).
2. *The macadamized pavement*, or rather *road*.
3. *The wood pavement*.

The stone pavement has generally, in the several towns of England, been composed of whatever material the quarries or rocks of the neighbourhood supplied, limestone being often thus used. In some places, where there were no quarries available, the stones of a river or rivulet-side were used, but these were rounded and slippery, and often formed but a rugged pathway. For London pavement, the neighbourhood not being rich in stone quarries, granite has usually been brought by water from Scotland, and a small quantity from Guernsey for the pavement of the streets. The stone pavement is made by the placing of the granite stones, hewn and shaped ready for the purpose, side by side, with a foundation of concrete. The concrete now used for the London street-pavement is Thames ballast, composed of shingles, or small stones, and mixed with lime, &c.

Macadamization was not introduced into the *streets* of London until about 25 years ago. Before that, it had been carried to what was accounted a great degree of perfection on many of the principal mail and coach roads. Some 50 miles on the Great North Road, or that between London and Carlisle, were often pointed out as an admirable specimen of road-making on Mac Adam's principles. This road was well known in the old coaching days as Leming-lane, running from Boroughbridge to Greta Bridge, in Yorkshire.

The first thoroughfare in London which was macadamized, a word adapted from the name of Sir W. Mac Adam, the originator or great improver of the system, was St. James's-square; after that, some of the smaller streets in the aristocratic parishes of St. James and St. George were thus paved, and then, but not without great opposition, Piccadilly. The opposition to the macadamizing of the latter thoroughfare assumed many forms. Independently of the conflicting statements as to extravagance and economy, it was urged by the opponents, that the dust and dirt of the new style of paving would cause the street to be deserted by the aristocracy—that the noiselessness of the traffic would cause the deaths of the deaf and infirm—that the aristocracy promoted this new-fangled street-making, that they might the better "sleep o' nights," regardless of all else. One writer especially regretted that the Duke of Queensberry, popularly known as "Old Q.," who resided at the western end of Piccadilly, had not lived to enjoy, undisturbed by vulgar noises, his bed of down, until it was his hour to rise and take his bath of perfumed milk! In short, there was all the fuss and absurdity which so often characterise local contests.

The macadamized street is made by a layer of stones, broken small and regular in size, and spread evenly over the road, so that the pressure and friction of the traffic will knead, grind, crush, and knit them into one compact surface. Until road-making became better understood, or until the early part of the present century, the roads even in the suburbs immediately connected with London, such as Islington, Kingsland, Stoke Newington, and Hackney, were "repaired when they wanted it." If there were a "rut," or a hole, it was filled up or covered over with stones, and as the drivers usually avoided such parts, for the sake of their horses' feet, another rut was speedily formed alongside of the original one. Under the old system, road-mending was patch-work; defects were sought to be remedied, but there was little or no knowledge of constructing or of reconstructing the surface as a whole.

The wood pavement came last, and was not established, even partially, until eleven or twelve years ago. One of the earliest places so paved was the Old Bailey, in order that the noise of the street-traffic might be deadened in the Criminal Courts. The same plan was adopted alongside some of the churches, and other public buildings, where external quietude, or, at any rate, diminished noise, was desired. At the first, there were great complaints made, and frequent expostulations addressed to the editors of the newspapers, as to the slipperiness of the wooden ways. The wood pavement is formed of blocks of wood, generally deal, fitted to one another by grooves, by joints, or by shape, for close adjustment. They are placed on the road over a body of concrete, in the same way as granite.

"In constructing roads, or rather streets, through towns or cities, where the amount of traffic is considerable, it will be found desirable," says Mr. Law, in his 'Treatise on the Constructing and Repairing of Roads,' "to pave their surface. The advantages belonging to pavements in such situations over macadamized roads are considerable; where the latter are exposed to an incessant and heavy traffic, their surface becomes rapidly worn, rendering constant repairs requisite, which are not only attended with very heavy expense, but also render the road very unpleasant for being travelled upon while being done; they also require much more attention in the way of scraping or sweeping, and in raking in ruts. And some difficulty would be experienced in towns to find places in which the materials, which would be constantly wanted for repairing the road, could be deposited. In dry weather the macadamized road would always be dusty, and in wet weather it would be covered with mud. The only advantage which such a road really possesses

over a pavement is the less noise produced by carriages in passing over it; but this advantage is very small when the pavement is properly laid."

Concerning wood pavements the same gentleman says, "Of late years wood has been introduced as a material for paving streets, and has been rather extensively employed both in Russia and America. It has been tried in various parts of London, and generally with small success, the cause of its failure being identical with the cause of the enormous sums being spent annually in the repairs of the streets generally, namely, the want of a proper foundation; a want which was sooner felt with wood than with granite, in consequence of the less weight and inertia of the wood. The comfort resulting from the use of wooden pavement, both to those who travelled, and those who lived in the streets, from the diminished jolting and noise, was so great, that it is just matter of surprise that so little care was taken in forming that which a very little consideration would have shown to be indispensable to its success, namely, a good foundation. Slipperiness of its surface, in particular states of the weather, was also found to be a disadvantage belonging to wooden pavement; but means might be devised which would render its surface at all times safe, and afford a secure footing for horses. As regards durability, it has scarcely been used for a sufficient period to allow a comparison being made with other materials, but from the result of some observations communicated by Mr. Hope to the Scottish Society of Arts, it appears that wooden blocks when placed with the end of the grain exposed, wear *less than granite*. At first sight, this result might appear questionable, but it is a well-ascertained fact that, where wood and iron move in contact in machinery, the iron generally wears more rapidly than the wood, the reason appearing to be, that the surface of the wood soon becomes covered with particles of dust and grit, which become partially embedded in it, and, while they serve to protect the wood, convert its surface into a species of file, which rapidly wears away whatever it rubs against."

Such then are the different modes of constructing the London roads or streets. I shall now endeavour to show the relative length, and relative cost of the streets thus severally prepared for the commercial, professional, and pleasurable transit of the metropolis.

The comparative extent of the macadamized, of the stone, and of the wood pavement of the streets of the metropolis has not as yet been ascertained, for no general account has appeared condensing the reports, returns, accounts, &c., of the several specific bodies of management into one grand total.

It is, however, possible to arrive at an approximation as to the comparative extent I have spoken of; and in this attempt at approximation, in the absence of all means of a definite statistical computation, I have had the assistance of an experienced and practical surveyor, familiar with the subject.

Macadamization prevails beyond the following boundaries:—

North of the New-road and of its extension, as the City-road, and westward of the New-road's junction with Lisson-grove.

Westward of Park-lane and of the West-end parks.

Eastward of Brick-lane (Spitalfields) and of the Whitechapel High-street.

Southward (on the Surrey side) from the New-cut and Long-lane, Bermondsey, and both in the eastern and western direction of Southwark, Lambeth, and the other southern parishes.

Stone pavement, on the other hand, prevails in the district which may be said to be within this boundary, bearing down upon the Thames in all directions.

It is, doubtlessly, the fact that in both the districts thus indicated exceptions to the general rule may prevail—that in one, for instance, there may be some miles of macadamized way, and in the other some miles of granite pavements; but such exceptions, I am told by a Commissioner of Paving, may fairly be dismissed as balancing each other.

The wooden pavement, I am informed on the same authority, does not now comprise five miles of the London thoroughfares; little notice, therefore, need be taken of it.

The miles of streets in the City in which stone only affords the street medium of locomotion are 50. The stone pavement in the localities outside of this area are six times, or approaching to seven times, the extent of that in the City. I have no actual admeasurement to demonstrate this point, for none exists, and no private individual can offer to measure hundreds of miles of streets in order to ascertain the composition of their surface. But the calculation has been made for me by a gentleman thoroughly conversant with the subject, and well acquainted with the general relative proportion of the defined districts, parishes, and boroughs of the metropolis.

We have thus the following result, as regards the inner police district, or Metropolis Proper:—

	Miles.
Granite paved streets	400
Macadamized ditto (or roads)	1350
Wood ditto	5
Total	1755

This may appear a disproportionate estimate, but when it is remembered that the inner police district of the metropolis extends as far as Hampstead, Tooting, Brentford, and Greenwich, it will be readily perceived that the relative proportions of the macadamized and paved roads are much about the same as is here stated.

As to the cost of these several roads, I will, before entering upon that part of the subject, state the prices of the different materials used in their manufacture.

Aberdeen granite is now 1*l.* 5*s.* per ton, delivered, and prepared for paving, or, as it is often called, "pitching." A ton of "seven inch" granite, that is, granite sunk seven inches in the ground, will cover from two and three-quarters to three square yards, superficial measure, or nine

feet per yard. The cost, labour included, is, therefore, from 9*s.* to 12*s.* the square yard. This appears very costly; but in some of the more quiet streets, such as those in the immediate neighbourhood of Golden and Fitzroy-squares, a good granite pavement will endure for 20 years, requiring little repair. In other streets, such as Cheapside, for instance, it lasts from three to four years, without repavement being necessary, supposing the best construction has been originally adopted.

For macadamized streets, where there is a traffic like that of Tottenham Court-road, three layers of small broken granite a year are necessary; the cost of this repavement being about 2*s.* 6*d.* a yard superficial measure. The repairs and relayings on macadamized roads of regular traffic range from 4*s.* to 6*s.* 6*d.* yearly, the square yard.

The wood pavement, which endures, with a trifling outlay for repairs, for about three years, costs, on an average, 11*s.* the square yard.

The concrete used as a foundation in this street-construction costs 4*s.* 6*d.* a cube yard, or 27 feet, by which admeasurement it is always calculated. A cube yard of Thames ballast weighs about 1¼ ton.

The average cost of street-building, new, taking an average breadth, or about ten yards, from footpath to footpath, is then—

	Per Mile. £.	*s.*	*d.*
Granite built	96	0	0
Macadamized	44	0	0
Wood	88	0	0

Or, as a total,

400 miles of granite paved streets at £96 per mile	38,400	0	0
1350 macadamized ditto, at £44 per mile	59,400	0	0
5 wood ditto, at £88 per mile	440	0	0
	98,240	0	0

This, then (about £100,000), is the *original cost* of the roads of the metropolis.

The cost of repairs, &c., annually, is shown by the amount of the paving rate, which may be taken as an average.

	£	*s.*	*d.*
400 miles of granite, at 20*s.* per mile	400	0	0
1350 macadamized ditto, at £13 4*s.* per mile	17,820	0	0
5 wood* ditto, at 20*s.* per mile	5	0	0
Total	18,225	0	0

According to a "General Survey of the Metropolitan Highways," by Mr. Thomas Hughes, the principal roads leading out of London are:—

1. *The Cambridge Road,* from Shoreditch through Kingsland.

2. *The Epping and Chelmsford Roads,* from Whitechapel, through Bow and Stratford.

3. *The Barking Road,* along the Commercial Road past Limehouse.

4. *The Dover Road,* from the Elephant and Castle, across Blackheath.

5. *The Brighton Roads,* (*a*) through Croydon, (*b*) through Sutton.

6. *The Guildford Road,* along the Westminster Road through Battersea and Wandsworth.

7. *The Staines, or Great Western Road,* from Knightsbridge through Brentford.

8. *The Amersham and Aylesbury Road,* along the Harrow Road, and through Harrow-on-the-Hill.

9. *The St. Alban's Road,* along the Edgeware Road through Elstree.

10. *The Oxford Road,* from Bayswater through Ealing.

11. *The Great Holyhead Road.*
12. *The Great North Road.*

} From Islington, by and through Barnet.

As to the amount of resistance to traction offered by different kinds of pavement, or the same pavement under different circumstances, the following are the general results of the experiments made by M. Morin, at the expense of the French Government:—

1st. The traction is directly proportional to the load, and inversely proportional to the diameter of the wheel.

2nd. Upon a paved, or hard macadamized road, the resistance is independent of the width of the tire, when it exceeds from three to four inches.

3rd. At a walking pace the traction is the same, under the same circumstances, for carriages with springs and without them.

4th. Upon hard macadamized, and upon paved roads, the traction increases with the velocity: the increments of traction being directly proportional to the increments of velocity above the velocity 3·28 feet per second, or about 2¼ miles per hour. The equal increment of traction thus due to each equal increment of velocity is less as the road is more smooth, and the carriage less rigid or better hung.

5th. Upon soft roads of earth, or sand, or turf, or roads fresh and thickly gravelled, the traction is independent of the velocity.

6th. Upon a well-made and compact pavement of hewn stones, the traction at a walking pace is not more than three-fourths of that upon the best macadamized roads under similar circumstances; at a trotting pace it is equal to it.

7th. The destruction of the road is in all cases greater, as the diameters of the wheels are less, and it is greater in carriages without than with springs.

In Sir H. Parnell's book on roads, p. 73, we are told that Sir John Macneill, by means of an instrument invented by himself for measuring the tractive force required on different kinds of road, obtained the following general results as to the power requisite to move a ton weight under ordinary circumstances, at a very low velocity.

* This relates merely to the repairs to the wooden pavement, but if a renewal of the blocks be necessary, then the cost approaches that of a new road; and a renewal is considered necessary about once in three years.

Description of Road.	Force, in pounds, required to move a ton.
On a well-made pavement . . .	33
On a road made with six inches of broken stone of great hardness, laid either on a foundation of large stones, set in the form of a pavement, or upon a bottoming of concrete	46
On an old flint road, or a road made with a thick coating of broken stone, laid on earth	65
On a road made with a thick coating of gravel, laid on earth . . .	147

In the same work the relative degrees of resistance to traction on the several kinds of roads are thus expressed :—

On a timber surface	2
On a paved road	2
On a well-made broken stone road, in a dry clean state	5
On a well-made broken stone road, covered with dust	8
On a well-made broken stone road, wet and muddy	10
On a gravel or flint road, in a dry clean state	13
On a gravel or flint road, in a wet muddy state	32

Of the Traffic of London.

I HAVE shown (at p. 159, vol. ii.) that the number of miles of streets included in the Inner District of the Metropolitan Police is 1750.

Mr. Peter Cunningham, in his excellent "Handbook of Modern London," tells us that "the streets of the Metropolis, if put together, would measure 3000 miles in length;" but he does not inform us what limits he assigns to the said metropolis; it would seem, however, that he refers to the Outer Police District: and in another place he cites the following as the extent of some of the principal thoroughfares :—

New-road . .	5115 yds.	long, or nearly	3 miles.
Oxford-street .	2304 ,,	,,	1½ ,,
Regent-street .	1730 ,,	,,	1 ,,
Piccadilly . .	1690 ,,		
City-road . .	1690 ,,		
Strand . . .	1396 ,,		

Of the two great lines of streets parallel to the river, the one extending along Oxford-street, Holborn, Cheapside, Cornhill, and Whitechapel to the Regent's-canal, Mile-end, is, says Mr. McCulloch, "above six miles in length;" while that which stretches from Knightsbridge along Piccadilly, the Haymarket, Pall-mall East, the Strand, Fleet-street, Watling-street, Eastcheap, Tower-street, and so on by Ratcliffe-highway to the West India Docks, is, according to the same authority, about equal in length to the other. Mr. Weale asserts, as we have already seen, that the greatest length of street from east to west is about fourteen miles, and from north to south about thirteen miles. The number of streets in London is said to be 10,000, though upon what authority the statement is made, and within what compass it is meant to be applied, I have not been able to ascertain. It is calculated, however, that there are 1900 miles of gas "mains" laid down in London and the suburbs; so that adopting the estimate of the Commissioners of Police, or 1760 miles of streets, within an area of about 90 square miles, we cannot go far wrong.

Now, as to the amount of *traffic* that takes place daily over this vast extent of paved road, it is almost impossible to predicate anything definitely. As yet there are only a few crude facts existing in connection with the subject. All we know is, that the London streets are daily traversed by 1500 omnibuses—such was the number of drivers licensed by the Metropolitan Commissioners in 1850—and about 3000 cabs—the number of drivers licensed in 1850 was 5000, but many "cabs" have a day and night driver as well, and the Return from the Stamp and Tax Office cited below, represents the number of licensed cabriolets, in 1849, at 2846: besides these public conveyances, there are the private carriages and carts, so that the metropolitan vehicles may be said to employ altogether upwards of 20,000 horses.

In the *Morning Chronicle* I said, when treating of the London omnibus-drivers and conductors:—"The average journey, as regards the distance travelled by each omnibus, is six miles, and that distance is, in some cases, travelled twelve times a day, or as it is called, 'six there and six back.' Some omnibuses perform the journey only ten times a day, and some, but a minority, a less number of times. Now, taking the average distance travelled by each omnibus at between 45 and 50 miles a day—and this, I am assured, on the best authority, is within the mark, while 60 miles a day might exceed it—and computing the omnibuses running daily at 1500, we find 'a travel,' as it was worded to me, of upwards of 70,000 miles daily, or a yearly 'travel' of more than 25,000,000 miles; an extent which is upwards of a thousand times more than the circumference of the earth; and that this estimate in no way exceeds the truth is proved by the sum annually paid to the Excise for 'mileage,' which amounts on an average to 9*l.* each 'bus' per month, or collectively to 162,000*l.* per annum, and this, at 1½*d.* per mile (the rate of duty charged), gives 25,920,000 miles as the aggregate distance travelled by the entire number of omnibuses every year through the London streets."

The distance travelled by the London cabs may be estimated as follows:—Each driver may be said to receive on an average 10*s.* a day all the year through. Now, the number of licences prove that there are 5000 cab-drivers in London, and as each of these must travel at the least ten miles in order to obtain the daily 10*s.*, we may safely assert that the whole 5000 go over 50,000 miles of ground a day, or, in round numbers, 18,250,000 miles in the course of the year.

According to a return obtained by Mr. Charles Cochrane from the Stamp and Tax Office, Somerset House, there were in the metropolis, in 1849–50, the following number of horses:—

Private carriage, job, and cart horses (in London)	3,683
Ditto . . . (in Westminster)	6,339
Cabriolets licensed 2846 (having two horses each)	5,692
Omnibuses licensed 1350 (four horses each)	5,500
Total number of horses in the metropolis	21,214

I am assured, by persons well acquainted with the omnibus trade, that the number of omnibus horses here cited is far too low—as many proprietors employ ten horses to each "bus," and none less than six. Hence we may fairly assume that there are at the least 25,000 horses at work every day in the streets of London. Besides the horses above mentioned, it is estimated that the number daily coming to the metropolis from the surrounding parts is 3000; and calculating that each of the 25,000, which may be said to be at work out of the entire number, travels eight miles a day, the aggregate length of ground gone over by the whole would amount to 200,000 miles per diem, or about 70,000,000 miles throughout the year. There are, as we have seen, upwards of 1750 miles of streets in London. It follows, therefore, that each piece of pavement would be traversed no less than 40,000 times per annum, or upwards of a hundred times a day, by some horse or vehicle.

As I said before, the facts that have been collected concerning the absolute traffic of the several parts of London are of the most meagre description. The only observations of any character that have been made upon the subject are—as far as my knowledge goes—those of M. D'Arcey, which are contained in a French report upon the roads of London, as compared with those of Paris.

This gentleman, speaking of the relative number of vehicles passing and repassing over certain parts of the two capitals, says:—"The Boulevards of Paris are the parts where the greatest traffic takes place. On the *Boulevard des Capucins* there pass, every 24 hours, 9070 horses drawing carriages; on the *Boulevard des Italiens*, 10,750; *Boulevard Poissonière*, 7720; *Boulevard St. Denis*, 9609; *Boulevard des Filles du Calvaire*, 5856: general average of the above, 8600. *Rue du Faubourg St. Antoine*, 4300; *Avenue des Champs Elysées*, 8959. At London, in Pall Mall, opposite Her Majesty's Theatre, there pass at least 800 carriages every hour. On London-bridge the number of vehicles passing and repassing is not less than 13,000 every hour. On Westminster-bridge the annual traffic amounts to 8,000,000 horses at the least. By this it will be seen that the traffic in Paris does not amount to one-half of what it is in the streets of London."

Of the Dust and Dirt of the Streets of London.

WE have merely to reflect upon the vast amount of traffic just shown to be daily going on throughout London—to think of the 70,000,000 miles of journey through the metropolis annually performed by the entire vehicles (which is more than two-thirds the distance from the earth to the sun)—to bear in mind that each part of London is on the average gone over and over again 40,000 times in the course of the year, and some parts as many as 13,000 times in a day—and that every horse and vehicle by which the streets are traversed are furnished, the one with four iron-bound hoofs, and the other with iron-bound wheels—to have an imperfect idea of the enormous weights and friction continually operating upon the surface of the streets—as well as the amount of grinding and pulverising, and wear and tear, that must be perpetually taking place in the paving-stones and macadamized roads of London; and thus we may be able to form some mental estimate as to the quantity of dust and dirt annually produced by these means alone.

But the table in pp. 186–7, which has been collected at great trouble, will give us still more accurate notions on the subject. It is not given as perfect, but as being the best information, in the absence of positive returns, that was procurable even from the best informed.

Here, then, we have an aggregate total of dust collected from the *principal* parts of the metropolis amounting to no less than 141,466 loads. The value of this refuse is said to be as much as 21,221*l.* 8*s.*, but of this and more I shall speak hereafter. At present I merely seek to give the reader a general notion upon the matter. I wish to show him, before treating of the labourers engaged in the scavenging of the London streets, the amount of work they have to do.

Of the Street-Dust of London, and the Loss and Injury occasioned by it.

THE daily and nightly grinding of thousands of wheels, the iron friction of so many horses' hoofs, the evacuations of horses and cattle, and the ceaseless motion of pedestrians, all decomposing the substance of our streets and roads, give rise to many distinct kinds of street-dirt. These are severally known as

(1) *Dust.*
(2) *Horse-dung* and *cattle-manure.*
(3) *Mud,* when mixed with water and with general refuse, such as the remains of fruit and other things thrown into the street and swept together.
(4) *Surface-water* when mixed with street-sewage.

These productions I shall treat severally, and first of the street-dust.

The "*detritus*" of the streets of London assumes many forms, and is known by many names, according as it is combined with more or less water.

A TABLE SHOWING THE SEVERAL DIVISIONS OF THE METROPOLIS CLEANSED BY THE SCAVENGERS AND PARISH MEN, THE NAMES OF THE CONTRACTORS, THE NUMBER OF MEN AND CARTS EMPLOYED IN COLLECTING, THE QUANTITY OF DUST AND MUD COLLECTED DAILY IN THE STREETS IN DRY AND WET WEATHER, WITH THE ANNUAL VALUE OF THE WHOLE.

Divisions and Districts.	Names of Contractors.	Number of Men employed at scavenging.		Number of Carts used daily in scavenging.		Number of loads collected daily.		Number of Cart-Loads annually collected by the Scavengers.	Annual value of Dirt collected by Scavengers.		
		In dry weather.	In wet weather.	In dry weather.	In wet weather.	In dry weather.	In wet weather.		£	s.	d.
Kensington	Parish	3	5	1	2	3	5	1252	187	16	0
Chelsea	Ditto	3	5	1	2	4	6	1565	234	15	0
Ditto (Hans' Town)	Mr. C. Humphries	3	4	1	1	3	5	1252	187	16	0
St. George's, Pimlico	Mr. Redding	2	4	1	2	5	7	1878	281	14	0
Ditto, Hanover Square	Parish	3	5	1	1	1½	2½	626	93	18	0
St. Margaret's, Westminster	Ditto	5	7	2	3	8	10	2817	422	11	0
St. John's, ditto	Mr. Hearne	5	7	1	2	8	10	2817	422	11	0
St. Martin's	Machine	6	9	4	4	4	6	1565	234	15	0
Hungerford-market	Mr. J. Gore	2	2	1	1	1	3	626	93	18	0
St. James's, Westminster	Parish	2	4	1	2	5	7	1878	281	14	0
Piccadilly	Parish and Machine	20	28	2	2	8	12	3130	469	10	0
Regent-street and Pall-mall	Ditto, ditto	8	12	2	2	4	6	1565	234	15	0
St. Ann's, Soho	Ditto	3	4	1	2	4	6	1565	234	15	0
Woods and Forests	Machine	2	4	1	2	5	7	1878	281	14	0
Paddington	Parish	4	6	1	2	6	8	2191	328	13	0
Marylebone (Five Districts)	Ditto	20	35	3	4	15	25	6260	939	0	0
Portland-market	Mr. Tame	3	5	1	1	2	4	939	140	17	0
Hampstead	Parish	2	4	1	1	2	4	939	140	17	0
Highgate	Ditto	2	4	1	1	2	4	939	140	17	0
St. Pancras, South-west Division	Mr. Stapleton	2	4	1	2	4	6	1565	234	15	0
Somers-town	Mr. Starkey	3	5	1	2	7	9	2504	375	12	0
Southampton Estate	Mr. C. Starkey	4	5	1	1	3	5	1252	187	16	0
Bedford ditto	Mr. J. Gore	2	2	1	1	1	3	626	93	18	0
Brewers' ditto	Mr. C. Starkey	2	2	1	1	1	3	626	93	18	0
Calthorpe ditto	Ditto	2	2	1	1	1	3	626	93	18	0
Cromer ditto	Ditto	2	2	1	1	1	3	626	93	18	0
Doughty ditto	Mr. Martin	2	2	1	1	1	3	626	93	18	0
Foundling ditto	Ditto	2	2	1	1	1	3	626	93	18	0
Harrison ditto	Ditto	2	2	1	1	1	3	626	93	18	0
Skinners' ditto	Mr. H. North	2	2	1	1	1	3	626	93	18	0
Union ditto	Mr. J. Gore	2	2	1	1	1	3	626	93	18	0
Islington District	Parish	6	9	2	3	3	5	1252	187	16	0
Battle-bridge	Mr. Starkey	5	6	1	2	5	7	1878	281	14	0
Hackney	Parish	5	7	1	1	2	4	939	140	17	0
St. Giles-in-the-Fields and St. George, Bloomsbury	Mr. Redding	7	9	2	3	6	10	2504	375	12	0
St. Mary-le-Strand	Mr. J. Gore	2	5	1	2	4	6	1565	234	15	0
Savoy	Ditto	2	3	1	1	1	3	626	93	18	0
St. Clement Danes	Parish	5	7	3	3 waggons.	2	6	1252	187	16	0
St. Paul's, Covent Garden	Ditto	3	5	1	2 carts.	3	5	1252	187	16	0
Covent Garden-market	Mr. Stapleton	5	7	5	6	9	12	3130	469	10	0
Holborn	Parish	6	9	2	3	4	6	1565	234	15	0
St. Sepulchre's	Mr. J. Gore	3	4	1	1	2	4	939	140	17	0
Hatton-garden	Messrs. Pratt and Sewell	2	2	1	1	1	3	626	93	18	0
St. James's, Clerkenwell	Mr. Dodd	5	7	2	3	8	10	2817	422	11	0
St. John's, ditto	Mr. J. Gould	5	7	3	3	6	8	2191	328	13	0
St. Luke's	Mr. Dodd	7	10	4	6	8	10	2817	422	11	0
Goswell-street	Mr. Redding	3	4	1	2	4	6	1565	234	15	0
Liberty of the Rolls	Messrs. Pratt and Sewell	2	2	1	1	1	3	626	93	18	0
Blackfriars Bridge	Mr. Jenkins	3	5	1	1	4	6	1565	234	15	0
City Division, Eastern, A	Mr. G. Sinnott	10	16	4	6	12	16	4382	657	6	0
Ditto, North Middle, B	Mr. T. Rooke	9	13	4	6	8	12	3130	469	10	0
Ditto, Western, C	Mr. C. Redding	12	14	4	6	14	18	5008	751	4	0
Ditto, South Middle, D	Mr. J. Gould	10	12	3	4	9	11	3130	469	10	0
Shoreditch	Mr. Dodd	6	9	2	4	8	12	3130	469	10	0
Norton Folgate	Mr. J. Gould	3	5	1	2	4	6	1565	234	15	0
Finsbury Square District	Ditto	3	4	1	2	6	8	2191	328	13	0
St. Botolph	Mr. Westley	2	4	2	2	4	6	1565	234	15	0
Spitalfields District	Mr. Newman	3	6	1	2	3	5	1252	187	16	0
Spitalfields-market	Mr. Parsons	5	7	3	4	4	6	1565	234	15	0
Bethnal-green	Mr. E. Newman	4	6	3	4	8	10	2817	422	11	0
Whitechapel	Mr. Parsons	3	5	2	3	6	8	2191	328	13	0
Commercial-road	Parish	4	6	2	3	4	6	1565	234	15	0
Mile-end	Mr. Newman	3	5	1	2	3	5	1252	187	16	0
Ditto, New-town	Mr. Parsons	3	6	1	1	3	5	1252	187	16	0
St. John's, Wapping	Mr. Westley	2	4	1	2	2	4	939	140	17	0
Shadwell	Ditto	2	4	1	2	3	5	1252	187	16	0
St. George's-in-the-East	Ditto	4	6	2	3	6	8	2191	328	13	0
Stepney	Mr. E. Newman	4	6	1	2	4	6	1565	234	15	0
Poplar	Parish	2	4	1	1	2	4	939	140	17	0
East Borough	Mr. Redding	4	6	2	3	3	5	1252	187	16	0
West ditto	Ditto	3	4	2	2	2	4	939	140	17	0
Borough Clink	Mr. W. Sinnott	3	5	1	2	2	4	939	140	17	0
Bermondsey	Parish	4	6	2	3	9	15	3576	563	18	0
Newington	Ditto	4	6	1	2	3	5	1252	187	16	0
Lambeth	Ditto	12	16	2	3	8	10	2817	422	11	0
Ditto (Christchurch)	Ditto	14	20	2	3	6	9	2191	328	13	0
Wandsworth	Ditto	2	4	1	1	1	3	626	93	18	0
Camberwell and Walworth	Ditto	4	6	1	2	5	7	1878	281	14	0
Rotherhithe	Ditto	3	5	1	2	3	5	1252	187	16	0
Greenwich	Ditto	3	5	1	2	4	6	1565	234	15	0
Deptford	Ditto	3	4	1	2	6	8	2191	328	13	0
Woolwich	Ditto	3	5	1	2	3	5	1252	187	16	0
Lewisham	Ditto	2	4	1	1	1	3	626	93	18	0
	Scavengers' Total	356	531	130	183	355½	548½	140,993	21,147	9	0
	Average total	444½ men.		156½ carts.		452 loads daily.		140,993 loads yearly.	£21,147	9	0
	Orderlies	546 ditto.				9 ditto.		2,817 ditto.	352	2	6
	Gross total	990½ men.		156½		461 loads daily.		143,800 loads yearly.	£21,499	11	6

1st. In a perfectly dry state, so that the particles no longer exist either in a state of cohesion or aggregation, but are minutely divided and distinct, it is known by the name of "dust."

2nd. When in combination with a small quantity of water, so that it assumes the consistency of a pap, the particles being neither free to move nor yet able to resist pressure, the detritus is known by the name of "mac mud," or simply "mud," according as it proceeds from a macadamized or stone paved road.

3rd. When in combination with a greater quantity of water, so that it is rendered almost liquid, it is known as "slop-dirt."

4th. When in combination with a still greater quantity of water, so that it is capable of running off into the sewers, it is known by the name of "street surface-water."

The mud of the streets of London is then merely the dust or detritus of the granite of which they are composed, agglutinated either with rain or the water from the watering-carts. Granite consists of silex, felspar, and mica. Silex is sand, while felspar and mica are also silex in combination with alumina (clay), and either potash or magnesia. Hence it would appear to be owing to the affinity of the alumina or clay for moisture, as well as the property of silex to "gelatinize" with water under certain conditions, that the particles of dry dust derive their property of *agglutinating*, when wetted, and so forming what is termed "mud"—either "mac," or simple mud, according, as I said before, to the nature of the paving on which it is formed.

By *dust* the street-cleansers mean the collection of every kind of refuse in the dust-bins; but I here speak, of course, of the fine particles of earthy matter produced by the attrition of our roads when in a dry state. Street-dust is, more properly speaking, mud deprived of its moisture by evaporation. Miss Landon (L. E. L.) used to describe the London dust as "mud in high spirits," and perhaps no figure of speech could convey a better notion of its character.

In some parts of the suburbs on windy days London is a perfect dust-mill, and although the dust may be allayed by the agency of the water-carts (by which means it is again converted into "mac," or mud), it is not often thoroughly allayed, and is a source of considerable loss, labour, and annoyance. Street-dust is not collected for any useful purpose, so that as there is no return to be balanced against its prejudicial effects it remains only to calculate the quantity of it annually produced, and thus to arrive at the extent of the mischief.

Street-dust is disintegrated granite, that is, pulverized quartz and felspar, felspar being principally composed of alumina or clay, and quartz silex or sand; it is the result of the attrition, or in a word it is the *detritus*, of the stones used in pavements and in macadamization; it is further composed of the pulverization of all horse and cattle-dung, and of the almost imperceptible, but still, I am assured, existent powder which arises from the friction of the wooden pavement even when kept moist. In the roads of the nearest suburbs, even around such places as the Regent's-park, at many seasons this dust is produced largely, so that very often an open window for the enjoyment of fresh air is one for the intrusion of fresh dust. This may be less the case in the busier and more frequently-watered thoroughfares, but even there the annoyance is great.

I find in the "Reports" in which this subject is mentioned but little said concerning the influence of dust upon the public health. Dr. Arnott, however, is very explicit on the subject. "It is," says he, "scarcely conceivable that the immense quantities of granite dust, pounded by one or two hundred thousand pairs of wheels (!) working on macadamized streets, should not greatly injure the public health. In houses bordering such streets or roads it is found that, notwithstanding the practice of watering, the furniture is often covered with dust, even more than once in the day, so that writing on it with the finger becomes legible, and the lungs and air tubes of the inhabitants, with a moist lining to detain the dust, are constantly pumping in the same atmosphere. The passengers by a stage-coach in dry weather, when the wind is moving with them so as to keep them enveloped in the cloud of dust raised by the horses' feet and the wheels of the coach, have their clothes soon saturated to whiteness, and their lungs are charged in a corresponding degree. A gentleman who rode only 20 miles in this way had afterwards to cough and expectorate for ten days to clear his chest again."

In order that the deleteriousness to health incident to the inhalation of these fine and offensive particles may be the better estimated, I may add, that in every 24 hours an adult breathes 36 hogsheads of air; and Mr. Erasmus Wilson, in his admirable work on the Skin, has the following passage concerning the extent of surface presented by the lungs:—

"The lungs receive the atmospheric air through the windpipe. At the root of the neck the windpipe, or trachea, divides into two branches, called bronchi, and each bronchus, upon entering its respective lung, divides into an infinity of small tubes; the latter terminate in small pouches, called air-cells, and a number of these little air-cells communicate together at the extremity of each small tube. The number of air-cells in the two lungs has been estimated at 1,744,000,000, and the extent of the skin which lines the cells and tubes together at 1500 square feet. This calculation of the number of air-cells, and the extent of the lining membrane, rests, I believe, on the authority of Dr. Addison of Malvern."

What is the amount of atmospherical granite, dung, and refuse-dust received in a given period into the human lungs, has never, I am informed, been ascertained even by approximation; but according to the above facts it must be something fearful to contemplate.

After this brief recital of what is known concerning the sanitary part of the question, I proceed to consider the damage and loss occasioned by street-



THE CROSSING-SWEEPER THAT HAS BEEN A MAID-SERVANT.

[*From a Photograph.*]

dust. In no one respect, perhaps, can this be ascertained with perfect precision, but still even a rough approximation to the extent of the evil is of value, as giving us more definite ideas on the subject.

It will be seen, on reference to the preceding table, that the quantity of street-refuse collected in dry weather throughout the metropolis is between 300 and 400 cart-loads daily, or upwards of 100,000 cart-loads, the greater proportion of which may be termed street-dust.

The damage occasioned by the street-dust arises from its penetrating, before removal, the atmosphere both without and within our houses, and consists in the soiling of wearing apparel, the injury of the stock-in-trade of shopkeepers, and of household furniture.

Washing is, of course, dependent upon the duration of time in which it is proper, in the estimation of the several classes of society, to retain wearing apparel upon the person, on the bed or the table, without what is termed a "change;" and this duration of time with thousands of both men and women is often determined by the presence or absence of dirt on the garment; and not arbitrarily, as among wealthier people, with whom a clean shirt every morning, and a clean table-cloth every one, two, three, or more days, as may happen, are regarded as things of course, no matter what may be the state of the displaced linen.

The Board of Health, in one of their Reports, speak very decisively and definitely on this subject. "Common observation of the rate at which the skin, linen, and clothes (not to speak of paper, books, prints, and furniture) become dirty in the metropolis," say they, "as compared with the time that elapses before a proportionate amount of deterioration and uncleanliness is communicated in the rural districts, will warrant the estimate, that *full one-half the expense of washing to maintain a passable degree of cleanliness*, is rendered necessary by the excess of smoke generated in open fires, and the *excess of dust arising from the imperfect scavenging of the roads and streets.* Persons engaged in washing linen on a large scale, state that it is dirtied in the crowded parts of the metropolis in *one-third* the time in which the like degree of uncleanliness would be produced in a rural district; but all attest the fact, that linen is more rapidly destroyed by washing than by the wear on the person. The expense of the more rapid destruction of linen must be added to the extra expense of washing. These expenses and inconveniences, the greater portion of which are due to *local maladministration, occasion an extra expenditure of upwards of two to three millions per annum*—exclusive of the injury done to the general health and the medical and other expenses consequent thereon."

Here, then, we find the evil effects of the imperfect scavenging of the metropolis estimated at between two and three millions sterling per annum, and this in the mere matter of extra washing and its necessary concomitant extra wear and tear of clothes.

As this estimate, however, appears to me to exaggerate the evil beyond all due bounds, I will proceed to adduce a few facts, bearing upon the point: and first as to the expense of washing.

In order to ascertain as accurately as possible, the actual washing expenses of labouring men and their families whose washing was done at home, Mr. John Bullar, the Honorary Secretary to the Association for the Promotion of Baths and Wash-houses, tells us in a Report presented to Parliament, "that inquiries were made of several hundred families of labouring men, and it was found that, *taking the wife's labour as worth 5s. a week!* the total cost of washing at home, for a man and wife and four children, averaged very closely on 2*s.* 6*d.* a week, = 5*d.* a head. The cost of coals, soda, soap, starch, blue, and sometimes water, was rather less than one-third of the amount. The time occupied was rarely less than two days, and more often extended into a third day, so that the value of the labour was rather more than two-thirds of the amount.

"The cost of washing to single men among the labouring classes, whose washing expenditure might be expected to be on a very low scale, such as hod-men and street-sweepers, was found to be 4½*d.* a head.

"The cost of washing to very small tradesmen could not be safely estimated at much more than 6*d.* a head a week.

"It may, perhaps," continues the Report, "be safe to reckon the weekly washing expenses of the poorer half of the inhabitants of the metropolis at not exceeding 6*d.* a head; but the expenditure for washing rapidly increases as the inquiry ascends into what are called the 'middle classes.'

"The washing expenses of families in which servants are employed may be considered as double that of the servants', and, therefore, as ranging from 1*s.* 6*d.* to 5*s.* a week a head.

"There is considerable difficulty in ascertaining with any exactness the washing expenditure of private families, but the conclusion is that, taking the whole population, the washing bills of London are nearly 1*s.* a week a head, or 5,000,000*l.* a year.

"Of course," adds Mr. Bullar, "I give this as but a rough estimate, and many exceptions may easily be taken to it; but I feel pretty confident that *it is not very far* from the truth."

As I before stated, I am in no way disposed to go to the extent of the calculation here made. It appears to me that in parliamentary investigations by the agency of select committees, or by gentlemen appointed to report on any subject, there is an aptitude to deal with the whole body of the people as if they were earning the wages of well and regularly-employed labourers, or even mechanics. To suppose that the starving ballast-heaver, the victim of a vicious truck system, which condemns him to poverty and drunkenness, or the sweep, or the dustman, or the street-seller—all very numerous classes—expends 1*s.* a week in his washing, is far beyond the fact. Still less is expended in the washing of these people's children. Even the well-conducted artizan, with two clean shirts a week

(costing him 6*d.*), with the washing of stockings, &c. (costing 1*d.* or 2*d.*), does not expend 1*s.* a week; so that, though the washing bills of many ladies and of some gentlemen may average 10*s.* weekly, if we consider how few are rich and how many poor, the extra payment seems insufficient to make up the average of the weekly shilling for the washing of all classes.

A prosperous and respectable master greengrocer, who was what may be called "particular" in his dress, as he had been a gentleman's servant, and was now in the habit of waiting upon the wealthy persons in his neighbourhood, told me that the following was the average of his washing bill. He was a bachelor; all his washing was put out, and he considered his expenditure far *above* the average of his class, as many used no night-shirt, but slept in the shirts they wore during the day, and paid only 3*d.*, and even less, per shirt to their washer-woman, and perhaps, and more especially in winter, made one shirt last the week.

Two shirts (per week) . .	7*d.*
Stockings	1
Night-shirt (worn two weeks generally, average per week) .	0¾
Sheets, blankets, and other household linens or woollens . .	2
Handkerchiefs	0¼
	11*d.*

My informant was satisfied that he had put his expenditure at the highest. I also ascertained that an industrious wife, who was able to attend to her household matters, could wash the clothes of a small tradesman's family,—for a man, his wife, and four small children,—"well," at the following rate:—

1 lb. soap	4½*d.* or 5*d.*
Soda and starch . .	0½
¼ cwt. coals (extra) . .	2½
	8½*d.*

or less than 1½*d.* per head.

In this calculation it will be seen the cheapest soap is reckoned, and that *there is no allowance for the wife's labour.* When I pointed out the latter circumstance, my informant said: "I look on it that the washing labour is part of the wife's keep, or what she gives in return for it; and that as she'd have to be kept if she didn't do it, why there shouldn't be no mention of it. If she was working for others it would be quite different, but washing is a family matter; that's my way of looking at it. Coke, too, is often used instead of coals; besides, a bit of bacon, or potatoes, or the tea-kettle, will have to be boiled, and that's managed along with the hot water for the suds, and would have to be done anyhow, especially in winter."

One decent woman, who had five children, "all under eight," told me she often sat up half, and sometimes the whole night to wash, when busy other ways. She was not in poverty, for she earned "a good bit" in going out to cook, and her husband was employed by a pork-butcher.

I may further add, that a great many single men wash their own clothes. Many of the street-sellers in particular do this; so do such of the poor as live in their own rooms, and occasionally the dwellers in the low lodging-houses. One street-seller of ham sandwiches, whose aprons, sleeves, and tray-cloth, were remarkably white, told me that he washed them himself, as well as his shirt, &c., and that it was the common practice with his class. This washing—his aprons, tray-cloths, shirts, and stockings included—cost him, every three weeks, 4½*d.* or 5*d.* for 1 lb. of soap, which is less than 1½*d.* a week. Among such people it is considered that the washing of a shirt is, as they say, "a penn'orth of soap, and the stockings in," meaning that a penny outlay is sufficient to wash for both.

But not only does Mr. Bullar's estimate exceed the truth as regards the cost of washing among the poorer classes, but it also errs in the proportion they are said to bear to the other ranks of society. That gentleman speaks of "the poorer *half* of the inhabitants of the metropolis," as if the rich and poor were equal in numbers! but with all deference, it will be found that the ratio between the well-to-do and the needy is as 1 to 2, that is to say, the property and income-tax returns teach us there are at least two persons with an income *below* 150*l.* per annum, to every one having an income *above* it. Hence, the population of London being, within a fraction, 2,400,000; the numbers of the metropolitan well-to-do and needy would be respectively 800,000 and 1,600,000, and, allowing the cost of the washing of the former to average 1*s.* per head (adults and children), and, the washing of the labouring classes to come to 2*d.* a head, young and old (the expense of the materials, when the work is done at home, average, it has been shown, about 1½*d.* for each member of the family), we shall then have the following statement:—

Annual cost of washing for 800,000 people, at 1*s.* per head per week .	£2,080,000
Annual cost of washing for 1,600,000 people, at 2*d.* per head per week .	693,333
Total cost of washing of metropolis	£2,773,333

I am convinced, low as the estimate of 2*d* a week may appear for all whose incomes are under 150*l.* a year, from many considerations, that the above computation is rather over than under the truth. As, for instance, Mr. Hawes has said concerning the consumption of soap in the metropolis, — "Careful inquiry has proved that the quantity used is much greater than that indicated by the Excise returns; but reducing the results obtained by inquiry in one uniform proportion, the quantity used by the labouring classes earning from 10*s.* to 30*s.* per week is 10 lbs. each per annum, including every member of the family. Dividing the population of the metropolis into three classes: (1) the wealthy; (2) the shopkeepers and tradesmen; (3) labourers and the poor, and allowing 15 lbs., 10 lbs., and 4 lbs. to each respectively, the consumption of the metropolis will be nearly 200 tons per week." The cost of each ton of soap Mr. Hawes estimates at 45*l.*

Professor Clarke, however, computes the metropolitan consumption of soap at 250 tons per week, and the cost per ton at 50*l.*

According to the above estimates, the total quantity of soap used every year in the metropolis is 12,000 tons, and this, at 50*l.* per ton, comes to .	£600,000
Professor Clarke reckons the gross consumption of soda in the metropolis, at 250 tons per month, costing 10*l.* a ton; hence for the year the consumption will be 3000 tons, costing	30,000
The cost of water, according to the same authority, is 3*s.* 4*d.* per head per annum, and this, for the whole metropolis, amounts to	400,000
Estimating the cost of the coals used in heating the water to be equal to that of the soap, we have for the gross expense of fuel annually consumed in washing	600,000
There are 21,000 laundresses in London, and, calculating that the wages of these average 10*s.* a week each all the year round, the gross sum paid to them, would be in round numbers	550,000
Profit of employers, say	550,000
Add for sundries, as starch, &c. .	50,000
Total cost of washing of metropolis	£2,780,000

Hence it would appear, that viewed either by the individual expense of the great bulk of society, or else by the aggregate cost of the materials and labour used in cleansing the clothes of the people of London, the total sum annually expended in the washing of the metropolis may be estimated at the outside at two millions and three quarters sterling per annum, or about 1*l.* 3*s.* 4*d.* per head.

And yet, though the data for the calculation here given, as to the cost and quantity of the principal materials used in cleansing the clothes of London, are derived from the same Report as that in which the expense of the metropolitan washing is estimated at 5,000,000*l.* per annum, the Board of Health do not hesitate in that document to say that,—"Of the fairness of the estimate of the expense of washing to the higher and middle classes, and to the great bulk of the householders, and the better class of artizans, we entertain no doubt whatever. Whatsoever deductions, if any, may be made from the above estimate, it is, nevertheless, an *under-estimate* for maintaining, at the present expense of washing, a proper amount of cleanliness in linen."

Proceeding, however, with the calculation as to the loss from the imperfect scavenging of the metropolis, we have the following results:—

LOSS FROM DUST AND DIRT IN THE STREETS OF THE METROPOLIS, OWING TO THE EXTRA WASHING ENTAILED THEREBY.

According to the Board of Health, taking the yearly amount of the washing of the metropolis at 5,000,000*l.*, and assuming the washing to be doubled by street-dirt, the loss will be	£2,500,000
Calculating the washing, however, for reasons above adduced, to be only 2,750,000*l.*, and to be as much again as it might be under an improved system of scavenging, the loss will be	1,375,000
Or calculating, *as a minimum*, that the remediable loss is less than one-half, the cost is	£1,000,000

Hence it would appear that the loss from dust and dirt is *really enormous.*

In a work entitled "Sanatory Progress," being the Fifth Report of the National Philanthropic Association, I find a calculation as to the losses sustained from dust and dirt upon our clothes. Owing to the increased wear from daily brushing to remove the dust, and occasional scraping to remove the mud, the loss is estimated at from 3*l.* to 7*l.* per annum for each well-dressed man and woman, and 1*l.* for inferiorly-dressed persons, including their Sunday and holiday clothing.

I inquired of a West-end tailor, who previously to his establishment in business had himself been an operative, and had had experience both in town and country as to the wear of clothes, and I learned from him the following particulars.

With regard to the clothes of the wealthy classes, of those who could always command a carriage in bad weather, there are no means of judging as to the loss caused by bad scavengery.

My informant, however, obliged me with the following calculations, the results of his experience. His trade is what I may describe as a medium business, between the low slop and the high fashionable trades. The garments of which he spoke were those worn by clerks, shopmen, students, tradesmen, town-travellers, and others not engaged in menial or handicraft labour.

Altogether, and after consulting his books relative to town and country customers, my informant thought it might be easy to substantiate the following estimate as regards the duration and cost of clothes in town and country among the classes I have specified.

TABLE SHOWING THE COMPARATIVE COST OF CLOTHES WORN IN TOWN AND COUNTRY.

Garments.	Original cost.	Town.		Country.		Difference of cost.
		Duration.	Annual cost.	Duration.	Annual cost.	
	£ s. d.	Years.	£ s. d.	Years.	£ s. d.	£ s. d.
Coat . .	2 10 0	2	1 5 0	3	0 16 8	0 8 4
Waistcoat .	0 15 0	2½	0 6 0	3	0 5 0	0 1 0
Trowsers . .	1 5 0	1¼	1 0 0	2	0 12 6	0 7 6
Total Suit.	4 10 0		2 11 0		1 14 2	0 16 10

Here, then, it appears that the annual outlay for clothes in town, by the classes I have specified, is about 2*l.* 11*s.*; while the annual outlay in the country for the same garments is 1*l.* 14*s.* 2*d.*; the difference of expense being 16*s.* 10*d.* per annum. I consulted another tailor on the subject, and his estimate was a trifle above that of my informant.

I should remark that the proportion thus adduced holds, *whatever be the number of garments* worn in the year, or in a series of years, for the calculation was made not as to individual garments, but as to the general wear, evinced by the average outlay, as shown in the tradesman's books, of the same class of persons in town and country.

In the calculation given in the publication of the National Philanthropic Association, the loss on a well-dressed Londoner's clothing, arising from excessive dust and dirt, is estimated at from 3*l.* to 7*l.* per annum. By the above table it will be seen that the clothes which cost 1*l.* 14*s.* 2*d.* per annum in the cleanliness of a country abode, cost 2*l.* 11*s.*, or, within a fraction, half as much again, in the uncleanliness of a London atmosphere and roads. If, therefore, any London inhabitant, of the classes I have specified, expend four times 2*l.* 11*s.* in his clothes yearly, as many do, or 10*l.* 4*s.*, he loses 3*l.* 5*s.* 4*d.*, or 5*s.* 4*d.* more than the minimum mentioned in the Report alluded to.

Now estimating 2*l.* 10*s.* as the yearly tailor's bill among the well-to-do (boys and men), and calculating that one-sixth of the metropolitan population (that is, half of the one-third who may be said to belong to the class having incomes above 150*l.* a year) spend this sum yearly in clothes, we have the following statement:—

AGGREGATE LOSS UPON CLOTHES WORN IN LONDON.

	£	s.	d.
400,000 persons living in London expend in clothing (at 2*l.* 10*s.* per annum)	1,000,000	0	0
400,000 persons living in better atmospheres in rural parts, and with the same stock of clothes, expend one-third less, or	666,666	13	4
Difference	333,333	6	8

It would be pushing the inquiry to exceeding minuteness were I to enter into calculations as to the comparative expense of boots, hats, and ladies' dresses worn in town and country; suffice it, that competent persons in each of the vestiary trades have been seen, and averages drawn for the accounts of their town and country customers.

All things, then, being duly considered, the following conclusion would seem to be warranted by the facts:—

Annual cost of clothes to 800,000 of the metropolitan population (those belonging to the class who have incomes *above* 150*l.* per annum) at 4*l.* per year each	£3,200,000
Annual cost of clothes to 1,600,000 of the metropolitan population (those belonging to the class who have incomes *below* 150*l.* per annum), at 1*l.* per year each	1,600,000
	£4,800,000
Annual cost of the same clothes if worn in the country	3,600,000
Extra expense annually entailed by dust and dirt of metropolis . . .	£1,200,000

In the above estimate I have included the cost of wear and tear of linen from extra washing when worn in London, and this has been stated on the authority of the Board of Health to be double that of linen worn in the country.

In connection with this subject I may cite the following curious calculation, taken from a Parliamentary Report, as to the cost of a working man's new shirt, comprising four yards of strong calico.

	d.
Material.—Cotton at 6*d.* per lb. 1¼ lb., with loss thereupon	8·25
Manufacture,—	d.
Spinning	2·25
Weaving	3·00
Profit	·25
	5·50
	13·75
Bleaching about .	1·25
	15·00

Grey (calico) 13·75*d.* + 9*d.* (making) = 1*s.* 10¾*d.*
Bleached . 15*d.* + 9*d.* „ = 2*s.*

As regards the loss and damage occasioned by the injury to household furniture and decorations, and to stocks-in-trade, which is another important consideration connected with this subject, I find the following statement in the Report of the Philanthropic Institution:—"The loss by goods and furniture is incalculable: shopkeepers lose from 10*l.* to 150*l.* a-year by the spoiling of their goods for sale; dealers in provisions especially, who cannot expose them without being deteriorated in value, from the dust that is incessantly settling upon them. Nor is it much better with clothiers of all kinds:—Mr. Holmes, shawl merchant, in Regent-street, has stated that his losses from road-dust alone exceed 150*l.* per annum." . . . . . "In a communication with Mr. Mivart, respecting the expenses of mud and road-dust to him, that gentleman stated that the rent of the four houses of which his hotel is composed, was 896*l.*; and that he could not (considering the cost of cleaning and servants) estimate the expense of repairing the damage done by the dirt and dust, carried and blown into these houses, at a less annual sum than that of his rent!"

An upholsterer obliged me with the following calculations, but so many were the materials, and so different the rates of wear or the liability to injury in different materials in his trade, that he could only calculate generally.

The same quality, colour, and pattern of curtains, silk damasks, which he had furnished to a house in town, and to a country house belonging to the same gentleman, looked far fresher and better after five years' wear in the country than after three in town. Both windows had a southern aspect, but the occupant would have his windows partially open unless the weather was cold, foggy, or rainy. It was the same, or nearly the same, he thought, with the carpets on the two places, for London dust was highly injurious to all the better qualities of carpets. He was satisfied, also, it was the same generally in upholstery work subjected to town dust.

I inquired at several West-end and city shops, and of different descriptions of tradesmen, of the injury done to their shop and shop-window goods by the dust, but I found none who had made any calculations on the subject. All, however, agreed that the dust was an excessive annoyance, and entailed great expense; a ladies' shoemaker and a bookseller expressed this particularly—on the necessity of making the window a sort of small glass-house to exclude the dust, which, after all, was not sufficiently excluded. All thought, or with but one hesitating exception, that the estimation as to the loss sustained by the Messrs. Holmes, considering the extent of their premises, and the richness of the goods displayed in the windows, &c., was not in excess.

I can, then, but indicate the injury to household furniture and stock-in-trade as a corroboration of all that has been advanced touching the damaging effects of road dirt.

OF THE HORSE-DUNG OF THE STREETS OF LONDON.

"FAMILIARITY with streets of crowded traffic deadens the senses to the perception of their actual condition. Strangers coming from the country frequently describe the streets of London as smelling of dung like a stable-yard."

Such is one of the statements in a Report submitted to Parliament, and there is no reason to doubt the fact. Every English visitor to a French city, for instance, must have detected street-odours of which the inhabitants were utterly unconscious. In a work which between 20 and 30 years ago was deservedly popular, Mathews's "Diary of an Invalid," it is mentioned that an English lady complaining of the villanous rankness of the air in the first French town she entered—Calais, if I remember rightly—received the comfortable assurance, "It is the smell of the Continent, ma'am." Even in Cologne itself, the "most stinking city of Europe," as it has been termed, the citizens are insensible to the foul airs of their streets, and yet possess great skill in manufacturing perfumed and distilled waters for the toilet, pluming themselves on the delicacy and discrimination of their nasal organs. What we perceive in other cities, as strangers, those who visit London detect in our streets—that they smell of dung like stable-yards. It is idle for London denizens, because they are unconscious of the fact, to deny the existence of any such effluvia. I have met with nightmen who have told me that there was "nothing particular" in the smell of the cesspools they were emptying; they "hardly perceived it." One man said, "Why, it's like the sort of stuff I've smelt in them ladies' smelling-bottles." An eminent tallow-melter said, in the course of his evidence before Parliament during a sanitary inquiry, that the smell from the tallow-melting on his premises was not only healthful and reviving—for invalids came to inhale it—but agreeable. I mention these facts to meet the scepticism which the official assertion as to the stable-like odour of the streets may, perhaps, provoke. When, however, I state the *quantity* of horse-dung and "cattle-droppings" voided in the streets, all incredulity, I doubt not, will be removed.

"It has been ascertained," says the Report of the National Philanthropic Association, "that four-fifths of the street-dirt consist of horse and cattle-droppings."

Let us, therefore, endeavour to arrive at definite notions as to the absolute quantity of this element of street-dirt.

And, first, as to the number of cattle and horses traversing the streets of London.

In the course of an inquiry in November, 1850, into Smithfield-market, I adduced the following results as to the number of cattle entering the metropolis, deriving the information from the experience of Mr. Deputy Hicks, confirmed by returns to Parliament, by the amount of tolls, and further ratified by the opinion of some of the most experienced "live salesmen" and "dead

salesmen" (sellers on commission of live and dead cattle), whose assistance I had the pleasure of obtaining.

The return is of the stock *annually* sold in Smithfield-market, and includes not only English but foreign beasts, sheep, and calves; the latter averaging weekly in 1848 (the latest return then published), beasts, 590; sheep, 2478; and calves, 248.

224,000 horned cattle.
1,550,000 sheep.
27,300 calves.
40,000 pigs.

Total . . 1,841,300.

I may remark that this is not a criterion of the consumption of animal food in the metropolis, for there are, besides the above, the daily supplies from the country to the "dead salesmen." The preceding return, however, is sufficient for my present purpose, which is to show the quantity of cattle manure "dropped" in London.

The number of cattle entering the metropolis, then, are 1,841,300 per annum.

The number of horses daily traversing the metropolis has been already set forth. By a return obtained by Mr. Charles Cochrane from the Stamp and Tax Office, we have seen that there are altogether

In London and Westminster, of private carriage, job, and cart horses . . .	10,022
Cab horses	5,692
Omnibus horses	5,500
Horses daily coming to metropolis . .	3,000
Total number of horses daily in London	24,214

The total here given includes the returns of horses which were either taxed or the property of those who employ them in hackney-carriages in the metropolis. But the whole of these 24,214 horses are not at work in the streets every day. Perhaps it might be an approximation to the truth, if we reckoned five-sixths of the horses as being worked regularly in the public thoroughfares; so that we arrive at the conclusion that 20,000 horses are daily worked in the metropolis; and hence we have an aggregate of 7,300,000 horses traversing the streets of London in the twelvemonth. The beasts, sheep, calves, and pigs driven and conveyed to and from Smithfield are, we have seen, 1,841,300 in number. These, added together, make up a total of 9,141,300 animals appearing annually in the London thoroughfares. The circumstance of Smithfield cattle-market being held but twice a week in no way detracts from the amount here given; for as the gross number of individual cattle coming to that market in the course of the year is given, each animal is estimated as appearing only once in the metropolis.

The next point for consideration is—what is the quantity of dung dropped by each of the above animals while in the public thoroughfares?

Concerning the quantity of excretions passed by a horse in the course of 24 hours there have been some valuable experiments made by philosophers whose names alone are a sufficient guarantee for the accuracy of their researches.

The following Table from Boussingault's experiments is copied from the "Annales de Chimie et de Physique," t. lxxi.

FOOD CONSUMED BY AND EXCRETIONS OF A HORSE IN TWENTY-FOUR HOURS.

Food.			Excretions.		
	Weight in a fresh state in grammes.	Weight in a fresh state in pounds.		Weight in a fresh state in grammes.	Weight in a fresh state in pounds.
		lbs. oz.			lbs. oz.
Hay . . .	7,500	20 0	Excrements .	14,250	38 2
Oats . . .	2,270	6 1	Urine . . .	1,330	3 7
	9,770	26 1			
Water . . .	16,000	42 10			
Total . .	25,770	68 11	Total . . .	15,580	41 9

Here it will be seen that the quantity of solid food given to the horse in the course of the 24 hours amounted only to 26 lbs.; whereas it is stated in the Report of the National Philanthropic Association, on the authority of the veterinary surgeon to the Life Guards, that the regulation horse rations in all cavalry regiments is 30 lbs. of solid food; viz., 10 lbs. of oats, 12 lbs. of hay, together with 8 lbs. of straw, for the horse to lie upon and munch at his leisure. "This quantity of solid food, with five gallons of water, is considered sufficient," we are told, "for all regimental horses, who have but little work to perform, in comparison with the draught horses of the metropolis, many of which consume daily 35 lbs. and upwards of solid food, with at least six gallons of water.

"At a conference held with the secretary and professors of the Veterinary College in College-street, Camden-town," continues the Report, "those gentlemen kindly undertook to institute a series of experiments in this department of equine physiology; the subject being one which interested themselves, professionally, as well as the council of the National Philanthropic Association. The experiments were carefully conducted under the superintendence of Professor Varnell. The food, drink, and voidances of several horses, kept in stable all day long, were separately weighed and measured; and the following were the results with an animal of medium size and sound health:—

"'Royal Veterinary College,
Sept. 29, 1849.

"'Brown horse of middle size ate in 24 hours, of hay, 16 lbs.; oats, 10 lbs.; chaff, 4 lbs.; in all	30 lbs.
Drank of water, in 24 hours, 6 gallons, or	48 lbs.
Total . . .	78 lbs.
Voided in the form of fæces . . .	49 lbs.
Allowance for nutrition, supply of waste in system, perspiration, and urine	29 lbs.

(Signed)
"'George Varnell,
"'Demonstrator of Anatomy.'"

Here we find the excretions to be 11 lbs. more than those of the French horse experimented upon by M. Boussingault; but then the solid food given to the English horse was 4 lbs. more, and the liquid upwards of 7 lbs. extra.

We may then, perhaps, assume, without fear of erring, that the excrements voided by horses in the course of 24 hours, weigh, at the least, 45 lbs.

Hence the gross quantity of dung produced by the 7,300,000 horses which traverse the London streets in the course of the twelvemonth will be 7,300,000 × 45, or 328,500,000 lbs., which is upwards of 146,651 tons. But these horses cannot be said to be at work above six hours each day; we must, therefore, divide the above quantity by four, and thus we find that there are 36,662 tons of horse-dung annually dropped in the streets of London.

I am informed, on good authority, that the evacuations of an ox, in 24 hours, will, on the average, exceed those of a horse in weight by about a fifteenth, while, if the ox be disturbed by being driven, the excretions will exceed the horse's by about a twelfth. As the oxen are not driven in the streets, or detained in the market for so long a period as horses are out at work, it may be fair to compute that their droppings are about the same, individually, as those of the horses.

Hence, as there are 224,000 horned cattle yearly brought to London, we have 224,000 × 45 lbs. = 10,080,000 lbs., or 4500 tons, for the gross quantity of ordure dropped by this number of animals in the course of 24 hours, so that, dividing by 4, as before, we find that there are 1125 tons of ordure annually dropped by the "horned cattle" in the streets of London.

Concerning the sheep, I am told that it may be computed that the ordure of five sheep is about equal in weight to that of two oxen. As regards the other animals it may be said that their "droppings" are insignificant, the pigs and calves being very generally carted to and from the market, as, indeed, are some of the fatter and more valuable sheep and lambs. All these facts being taken into consideration, I am told, by a regular frequenter of Smithfield market, that it will be best to calculate the droppings of each of the 1,617,300 sheep, calves, and pigs yearly coming to the metropolis at about one-fourth of those of the horned cattle; so that multiplying 1,617,300 by 10, instead of 45, we have 16,173,000 lbs., or 7220 tons, for the weight of ordure deposited by the entire number of sheep, calves, and pigs annually brought to the metropolis, and then dividing this by 4, as usual, we find that the droppings of the calves, sheep, and pigs in the streets of London amount to 1805 tons per annum.

Now putting together all the preceding items we obtain the following results:—

Gross Weight of the Horse-Dung and Cattle-Droppings annually deposited in the Streets of London:—

	Tons.
Horse-dung	36,662
Droppings of horned cattle . . .	1,125
Droppings of sheep, calves, and pigs	1,805
	39,592

Hence we perceive that the gross weight of animal excretions dropped in the public thoroughfares of the metropolis is about 40,000 tons per annum, or, in round numbers, 770 tons every week-day—say 100 tons a day.

This, I am well aware, is a low estimate, but it appears to me that the facts will not warrant any other conclusion. And yet the Board of Health, who seem to delight in "large" estimates, represent the amount of animal manure deposited in the streets of London at no less than 200,000 tons per annum.

"Between the Quadrant in Regent-street and Oxford-street," says the first Report on the Supply of Water to the Metropolis, "a distance of a third of a mile, three loads, on the average, of dirt, almost all horse-dung, are removed daily. On an estimate made from the working of the street-sweeping machine, in one quarter of the City of London, which includes lines of considerable traffic, the quantity of dung dropped must be upwards of 60 tons, or about 20,000 tons per annum, and this, on a City district, which comprises about one-twentieth only of the covered area of the metropolis, though within that area there is the greatest proportionate amount of traffic. Though the data are extremely imperfect, it is considered that the horse-dung which falls in the streets of the whole metropolis *cannot be less than* 200,000 *tons a year*."

Hence, although the data are imperfect, the Board of Health do not hesitate to conclude that

the gross quantity of horse-dung dropped throughout every part of London—back streets and all—is equal to one-half of that let fall in the greatest London thoroughfares. According to this estimate, all and every of the 24,000 London horses must void, in the course of the six hours that they are at work in the streets, not less than 51 lbs. of excrement, which is at the rate of very nearly 2 cwt. in the course of the day, or voiding only 49 lbs. in the twenty-four hours, they must remain out altogether, and never return to the stable for rest!!!

Mr. Cochrane is far less hazardous than the Board of Health, and appears to me to arrive at his result in a more scientific and conclusive manner. He goes first to the Stamp Office to ascertain the number of horses in the metropolis, and then requests the professors of the Veterinary College to estimate the average quantity of excretions produced by a horse in the course of 24 hours. All this accords with the soundest principles of inquiry, and stands out in startling contrast with the unphilosophical plan pursued by the Board of Health, who obtain the result of the most crowded thoroughfare, and then halving this, frame an exaggerated estimate for the whole of the metropolis.

But Mr. Cochrane himself appears to me to exceed that just caution which is so necessary in all statistical calculations. Having ascertained that a horse voids 49 lbs. of dung in the course of 24 hours, he makes the whole of the 24,214 horses in the metropolis drop 30 lbs. daily in the streets, so that, according to his estimate, not only must every horse in London be out every day, but he must be at work in the public thoroughfares for very nearly 15 hours out of the 24!

The following is the estimate made by Mr. Cochrane:—

Daily weight of manure deposited in the streets by 24,214 horses × 30 lbs. = 726,420 lbs., or 324 tons, 5 cwt., 100 lbs.
Weekly weight, 2270 tons, 1 cwt., 28 lbs.
Annual weight, 118,043 tons, 5 cwt.
Tons or cart-loads deposited annually, valued at 6*s.* × 118,043 = 35,412*l.* 19*s.* 6*d.*

It has, then, been here shown that, assuming the number of horses worked daily in the streets of London to be 20,000, and each to be out six hours *per diem*, which, it appears to me, is all that can be fairly reckoned, the quantity of horse-dung dropped weekly is about 700 tons, so that, including the horses of the cavalry regiments in London, which of course are not comprised in the Stamp-Office returns, as well as the animals taken to Smithfield, we may, perhaps, assert that the annual ordure let fall in the London streets amounts, at the outside, to somewhere about 1000 tons weekly, or 52,000 tons per annum.

The next question becomes—what is done with this vast amount of filth?

The Board of Health is a much better guide upon this point than upon the matter of quantity: "Much of the horse-dun dropped in the London streets, under ordinary circumstances," we are told, "dries and is pulverized, and with the common soil is carried into houses as dust, and dirties clothes and furniture. The odour arising from the surface evaporation of the streets when they are wet is chiefly from horse-dung. Susceptible persons often feel this evaporation, after partial wetting, to be highly oppressive. The surface-water discharged into sewers from the streets and roofs of houses is found to contain as much filth as the soil-water from the house-drains."

Here, then, we perceive that the whole of the animal manure let fall in the streets is worse than wasted, and yet we are assured that it is an article, which, if properly collected, is of considerable value. "It is," says the Report of the National Philanthropic Association, "an article of Agricultural and Horticultural commerce which has ever maintained a high value with the farmers and market-gardeners, wherever conveniently obtainable. When these cattle-droppings can be collected *unmixed*, in dry weather, they bear an acknowledged value by the grazier and root-grower;—there being no other kind of manure which fertilizes the land so bounteously. Mr. Marnock, Curator of the Royal Botanical Society, has valued them at from 5*s.* to 10*s.* per load; according to the season of the year. The United Paving Board of St. Giles and St. George, since the introduction of the Street Orderly System into their parishes, has wisely had it collected in a state separate from all admixture, and sold it at highly remunerative prices, rendering it the means of considerably lessening the expense of cleansing the streets."

Now, assuming the value of the street-dropped manure to be 6*s.* per ton when collected free from dirt, we have the following statement as to the value of the horse and cattle-voidances let fall in the streets of London:—

52,000 tons of cattle-droppings, at 6*s.* per ton £15,600 0 0

Mr. Cochrane, who considers the quantity of animal-droppings to be much greater, attaches of course a greater value to the aggregate quantity. His computation is as follows:—

118,043 tons of cattle-droppings, at 6*s.* per ton £35,412 19 6

It seems to me that the calculations of the quantity of horse and cattle-dung in the streets, are based on such well-authenticated and scientific foundations, that their accuracy can hardly be disputed, unless it be that a higher average might fairly be shown.

Whatever estimate be adopted, the worth of street-dropped animal manure, if properly secured and made properly disposable, is great and indisputable; most assuredly between 10,000*l.* and 20,000*l.* in value.

Of Street "Mac" and other Mud.

First of that kind of mud known by the name of "mac."

The scavengers call mud all that is *swept* from the granite or wood pavements, in contradistinction to "mac," which is both *scraped* and swept on the macadamized roads. The mud is usually carted apart from the "mac," but some contractors cause their men to shovel every kind of dirt they meet with into the same cart.

The introduction of Mac Adam's system of road-making into the streets of London called into existence a new element in what is accounted street refuse. Until of late years little attention was paid to "Mac," for it was considered in no way distinct from other kinds of street-dirt, nor as being likely to possess properties which might adapt it for any other use than that of a component part of agricultural manure.

"Mac" is found principally on the roads from which it derives its name, and is, indeed, the grinding and pounding of the imbedded pieces of granite, which are the staple of those roads. It is, perhaps, the most adhesive street-dirt known, as respects the London specimen of it; for the exceeding traffic works and kneads it into a paste which it is difficult to remove from the texture of any garment splashed or soiled with it.

"Mac" is carted away by the scavengers in great quantities, being shovelled, in a state of more or less fluidity or solidity, according to the weather, from the road-side into their carts. Quantities are also swept with the rain into the drains of the streets, and not unfrequently quantities are found deposited in the sewers.

The following passage from "Sanatory Progress," a work before alluded to, cites the opinion of Lord Congleton as to the necessity of continually removing the mud from roads. I may add that Lord Congleton's work on road-making is of high authority, and has frequently been appealed to in parliamentary discussions, inquiries, and reports on the subject.

"The late Lord Congleton (Sir Henry Parnell) stated before a Committee of the House of Commons, in June, 1838, 'a road should be cleansed from time to time, so as *never* to have half an inch of mud upon it; and this is particularly necessary to be attended to where the materials are *weak*; for, if the surface be not kept clean, so as to admit of its becoming dry in the intervals between showers of rain, it will be rapidly worn away.' How truly," adds the Report, "is his Lordship's opinion verified every day on the macadamized roads in and around London! * * * * * * The horse-manure and other filth are there allowed to accumulate, and to be carried about by the horses and carriage-wheels; the road is formed into cavities and mud-hollows, which, being wetted by the rain and the constantly plying *watering-carts*, retain the same. Thus, not only are vast quantities of offensive mud formed, but puddles and *pools of water* also; which water, not being allowed to run off to the side gutter, by declivity, owing to the *mud embankments* which surround it, naturally *percolates through the surface of the road, dissolving and loosening the soft earthy matrix* by which the broken granite is surrounded and fixed."

The quantity of "mac" produced is the next consideration, and in endeavouring to ascertain this there are no specific data, though there are what, under other circumstances, might be called circumstantial or inferential evidence.

I have shown both the length of the streets and roads and the proportion which might be pronounced macadamized ways in the Metropolis Proper. But as in the macadamized proportion many thoroughfares cannot be strictly considered as yielding "mac," I will assume that the roads and streets producing this kind of dirt, more or less fully, are 1200 miles in length.

On the busier macadamized roads in the vicinity of what may be called the interior of London, it is common, I was told by experienced men, in average weather, to collect daily two cart-loads of what is called mac, from every mile of road. The mass of such road-produce, however, is mixed, though the "mac" unquestionably predominates. It was described to me as mac, general dirt, and droppings, more than the half being "mac." In wet weather there is at least twenty times more "mac" than dung scavenged; but in dry weather the dung and other street-refuse constitute, perhaps, somewhat less than three-fourths of each cart-load. The "mac" in dry weather is derived chiefly from the fluid from the watering carts mixing with the dust, and so forming a paste capable of being removed by the scraper of the scavenger.

It may be fair to assume that every mile of the roads in question, some of them being of considerable width, yields at least one cart-load of "mac," as a daily average, Sunday of course excepted. An intelligent man, who had the management of the "mac" and other street collections in a contractor's wharf, told me that in a load of "mac" carted from the road to any place of deposit, there was (I now use his own words) "a good deal of water; for there 's great difference," he added, "in the *stiffness* of the "mac" on different roads, that seem very much the same to look at. But that don't signify a halfpenny-piece," he said, "for if the 'mac' is wanted for any purpose, and let be for a little time, you see, sir, the water will dry up, and leave the proper stuff. I haven't any doubt whatever that two loads a mile are collected in the way you 've been told, and that a load and a quarter of the two is 'mac,' though after the water is dried up out of it there mightn't be much more than a load. So if you want to calculate what the quantity of 'mac' is by itself, I think you had best say one load a mile."

But it is only in the more frequented approaches to the City or the West-end, such as the Knightsbridge-road, the New-road, the Old Kent-road, and thoroughfares of similar character as regards the extent of traffic, that two loads of refuse are daily collected. On the more distant roads, beyond the bounds traversed by the omnibuses for instance, or beyond the roads resorted to by the market gardeners on their way to the metropolitan "green" markets, the supply of street-refuse is hardly a quarter as great; one man thought it was a third, and another only a sixth of a load a day in quiet places.

Calculating then, in order to be within the mark,

that the macadamized roads afford daily two loads of dirt per mile, and reckoning the great macadamized streets at 100 miles in length, we have the following results:—

QUANTITY OF STREET-REFUSE COLLECTED FROM THE MORE FREQUENTED MACADAMIZED THOROUGHFARES.

	Loads.
100 miles, 2 loads per day . . .	200
„ Weekly amount . . .	1,200
„ Yearly amount . . .	62,400

PROPORTION OF "MAC" IN THE ABOVE.

100 miles, 1 load per day	100
„ Weekly	600
„ Yearly	31,200

To this amount must be added the quantity supplied by the more distant and less frequented roads situate within the precincts of the Metropolis Proper. These I will estimate at one-eighth less than that of the roads of greater traffic. Some of the more quiet thoroughfares, I should add, are not scavenged more than once a week, and some less frequently; but on some there is considerable traffic.

QUANTITY OF STREET-REFUSE COLLECTED FROM THE LESS FREQUENTED MACADAMIZED THOROUGHFARES.

	Loads.
1100 miles, ¼ load per day . . .	275
„ Weekly	1,650
„ Yearly	85,800

The proportion of mac to the gross dirt collected is greater in the more distant roads than what I have already described, but to be safe I will adopt the same ratio.

PROPORTION OF "MAC."

	Loads.
1100 miles of road, ⅛ load per day .	137
„ Weekly . . .	825
„ Yearly . . .	42,900

YEARLY TOTAL OF THE GROSS QUANTITY OF STREET-REFUSE, WITH THE PROPORTIONATE QUANTITY OF "MAC" COLLECTED FROM THE MACADAMIZED THOROUGHFARES OF THE METROPOLIS.

	Street Refuse.	"Mac."
	Cart-loads.	Loads.
100 miles of macadamized roads	62,400	31,200
1100 miles ditto ditto	85,800	42,900
	148,200	74,100

Thus upwards of 74,000 cart-loads of "mac" are, at a low computation, annually scraped and swept from the metropolitan thoroughfares.

So far as to the *quantity* of "mac" collected, and now as to its *uses*.

"'Mac,' or *Macadam*," says one of Mr. Cochrane's Reports, "is a grand prize to the scavenging contractor, who finds ready vend and a high price for it among the builders and brick-makers. Those who *paid* for the road—and their surveyors, *possibly*—know nothing of its value, or of their own loss by its removal from the road; they consider it in the light of *dirt—offensive* dirt—and are glad to *pay* the scavenger for carrying it away! When the *broom* comes, the scavenger's men take care to go *deep* enough; and many of them are, moreover, instructed to keep the '*mac*' as free from admixture with foreign substances as possible; for, though cattle-dung be valuable enough in itself, the '*mac*' loses *its* value to the builder and brickmaker by being *mixed with it*. Indeed, both are valuable for their respective uses if kept separate, not otherwise."

On my first making inquiries as to the uses and value of "mac," I was frequently told that it was utterly valueless, and that great trouble and expense were incurred in merely getting rid of it. That this is the case with many contractors is, doubtlessly, the fact; for now, unless the "mac," or, rather, the general road-dirt, be ordered, or a market for it be assured, it must be got rid of without a remuneration. Even when the contractor can shoot the "mac" in his own yard, and keep it there for a customer, there is the cost of re-loading and re-carting; a cost which a customer requiring to use it at any distance may not choose to incur. Great quantities of "mac," therefore, are wasted; and more would be wasted, were there places to waste it in.

Let me, therefore, before speaking of the uses and sale of it, point out some of the reasons for this wasting of the "mac" with other street-dirt. In the first place, the weight of a cart-load of street-refuse of any kind is usually estimated at a ton: but I am assured that the weight of a cart-load of "stiff mac" is a ton and a quarter at the least: and this weight becomes so trying to a scavenger's horse, as the day's work advances, that the contractor, to spare the animal, is often glad to get rid of the "mac" in any manner and without any remuneration. Thousands of loads of "mac," or rather of mixed street-dirt, have for this, and other reasons, been thrown away; and no small quantity has been thrown down the gulley-holes, to find its way into that main metropolitan sewer, the Thames. Of this matter, however, I shall have to speak hereafter.

There is no doubt that it is common for contractors to represent the "mac" they collect as being utterly valueless, and indeed an incumbrance. The "mixed mac," as I have said, may be so. Some contractors urge, especially in their bargains with the parish board, that all kinds of street dirt are not only worthless, but expensive to be got rid of. Five or six years ago, this was urged very strenuously, for then there was what was accounted a combination among the contractors. The south-west district of St. Pancras, until within the last six years, *received* from the contractor for the public scavengery, 100*l.* for the year's aggregation of street and house dirt. Since then, however, they have had to pay him 500*l.* for removing it.

Notwithstanding the reluctance of some of the contractors to give information on this, or indeed any subject connected with their trade, I have ascertained from indubitable authority, that "mac" is disposed of in the following manner. Some, but this is mostly the mixed kind, is got rid of in *any* manner; it has even been diluted with water so as to be driven down the drains. Some is mixed with the general street ordure—about a quarter of "mac," I was told, to three-quarters of dung and street mud—and shipped off in barges as manure. Some is given to builders, when they require it for the foundations of any edifices that are "handy," or rather it is carted thither for a nominal price, such as a trifle as beer-money for the men. Some, however, is *sold* for the same purpose, the contractors alleging that the charge is merely for cartage. Some, again, is given away or sold (with the like allegation) for purposes of levelling, of filling up cavities, or repairing unevennesses in any ground where improvements are being carried on; and, finally, some is sold to masons, plasterers, and brickmakers, for the purposes of their trade.

Even for such purposes as "filling up," there must be in the "mixed mac" supplied, at least a considerable preponderance of the pure material, or there would not be, as I heard it expressed, a sufficient "setting" for what was required.

As a set-off to what is sold, however, I may here state that 30*s.* has been paid for the privilege of depositing a barge-load of mixed street dirt in Battersea-fields, merely to get rid of it.

The principal use of the unmixed "mac" is as a component part of the mortar, or lime, of the mason in the exterior, and of the plasterer in the interior, construction of buildings, and as an ingredient of the mill in brick-grounds.

The accounts I received of the properties of "mac" from the vendors of it, were very contradictory. One man, until lately connected with its sale, informed me that as far as his own experience extended, "mac" was most in demand among scamping builders, and slop brickmakers, who looked only to what was cheap. To a notorious "scamper," he one morning sent three cart-loads of "mac" at 1*s.* a load, all to be used in the erection of the skeleton of one not very large house; and he believed that when it was used instead of sand with lime, it was for inferior work only, and was mixed, either for masons' or plasterers' work, with bad, low-priced mortar. Another man, with equal knowledge of the trade, however, represented "mac" as a most valuable article for the builder's purposes, it was "so *binding*," and this he repeated emphatically. A working builder told me that "mac" was as good as the best sand; it made the mortar "hang," and without either that or sand, the lime would "brittle" away.

"Mac" may be said to be composed of pulverised granite and rain water. Granite is composed of quartz, felspar, and mica, each in granular crystals. Hence, alumina being clay, and silex a substance which has a strong tendency to enter into combination with the lime of the mortar, the pulverizing of granite tends to produce a substance which has necessarily great binding and indurating properties.

From this reduction of "mac" to its elements, it is manifest that it possesses qualities highly valuable in promoting the cohesive property of mortar, so that, were greater attention paid to its collection by the scavenger, there would, in all probability, be an improved demand for the article, for I find that it is already used in the prosecution of some of the best masons' work. On this head I can cite the authority of a gentleman, at once a scientific and practical architect, who said to me—

"'Mac' is used by many respectable builders for making mortar. The objection to it is, that it usually contains much extraneous decaying matter."

Increased care in the collection of the material would, perhaps, remove this cause of complaint.

I heard of one West-end builder, employing many hands, however, who had totally or partially discontinued the use of "mac," as he had met with some which he considered showed itself *brittle* in the plastering of walls.

"Mac," is pounded, and sometimes sifted, when required for use, and is then mixed and "worked up" with the lime for mortar, in the same way as sand. By the brickmakers it is mixed with the clay, ground, and formed into bricks in a similar manner.

Of the proportion sold to builders, plasterers, and brickmakers, severally, I could learn no precise particulars. The general opinion appears to be, that "mac" is sold most to brickmakers, and that it would find even a greater sale with them, were not brick-fields becoming more and more remote. I moreover found it universally admitted, that "mac" was in less demand—some said by one-half—than it was five or six years back.

Such are the *uses* of "mac," and we now come to the question of its *value*.

The price of the purer "mac" seems, from the best information I can procure, to have varied considerably. It is now generally cheap. I did not hear any very sufficing reason advanced to account for the depreciation, but one of the contractors expressed an opinion that this was owing to the "disturbed" state of the trade. Since the passing of the Sanitary Bill, the contractors for the public scavengery have been prevented "shooting" any valueless street-dirt, or dirt "not worth carriage" in convenient waste-places, as they were once in the habit of doing. Their yards and wharfs are generally full, so that, to avoid committing a nuisance, the contractor will not unfrequently sell his "mac" at reduced rates, and be glad thus to get rid of it. To this cause especially Mr. —— attributed the deterioration in the price of "mac," but if he had convenience, he told me, and any change was made in the present arrangements, he would not scruple to store 1000 loads for the demands of next summer, as a speculation. I am of opinion, moreover, notwithstanding what seemed something very like unanimity of opinion on the part of the sellers of "mac," that what is given or thrown away is usually, if not always, *mixed* or inferior "mac," and that what is sold at the

lowest rate is only a degree or two better; unless, indeed, it be under the immediate pressure of some of the circumstances I have pointed out, as want of room, &c.

On inquiring the price of "mac," I believe the answer of a vendor will almost invariably be found to be "a shilling a load;" a little further inquiry, however, shows that an extra sum may have to be paid. A builder, who gave me the information, asked a parish contractor the price of "mac." The contractor at once offered to supply him with 500 loads at 1*s.* a load, if the "mac" were ordered beforehand, and could be shot at once; but it would be 6*d.* a mile extra if delivered a mile out of the mac-seller's parish circuit, or more than a mile from his yard; while, if extra care were to be taken in the collection of the "mac," it would be 2*d.*, 3*d.*, 4*d.*, or 6*d.* a load higher. This, it must be understood, was the price of "*wet* mac."

Good "*dry* mac," that is to say, "mac" ready for use, is sold to the builder or the brick-maker at from 2*s.* to 3*s.* the load; 2*s.* 6*d.*, or something very near it, being now about an average price. It is dried in the contractor's yard by being exposed to the sun, or it is sometimes protected from the weather by a shed, while being dried. More wet "mac" would be shot for the trade, and kept until dry, but for want of room in the contractors' yards and wharfs; for "mac" must give way to the more valuable dung, and the dust and ashes from the bins. The best "mac" is sometimes described as "country mac," that is to say, it is collected from those suburban roads where it is likely to be little mixed with dung, &c.

A contractor told me that during the last twelve months he had sold 300 loads of "mac;" he had no account of what he had given away, to be rid of it, or of what he had sold at nominal prices. Another contractor, I was told by his managing man, sold last year about 400 loads. But both these parties are "in a large way," and do not supply the data upon which to found a calculation as to an average yearly sale; for though in the metropolis there are, according to the list I have given in p. 167 of the present volume, 63 contracts, for cleansing the metropolis, without including the more remote suburbs, such as Greenwich, Lewisham, Tooting, Streatham, Ealing, Brentford, and others—still some of the districts contracted for yield no "mac" at all.

From what I consider good authority, I may venture upon the following moderate computation as to the quantity of "mac" sold last year.

Estimating the number of contracts for cleansing the more central parishes at 35, and adding 20 for all the outlying parishes of the metropolis—in some of which the supply of road "mac" is very fine, and by no means scarce—it may be accurate enough to state that, out of the 55 individual contracts, 300 loads of "mac" were sold by each in the course of last year. This gives 16,500 loads of "mac" disposed of per annum. It may, moreover, be a reasonable estimate to consider this "mac," wet and dry together, as fetching 1*s.* 6*d.* a load, so that we have for the sum realized the following result:—

16,500 loads of "mac," at 1*s.* 6*d.* per load £1237 10

It may probably be considered by the contractors that 1*s.* 6*d.* is too high an average of price per load: if the price be minimized the result will be—

16,500 loads of "mac," at 1*s.* per load £825

Then if we divide the first estimate among the 55 contractors, we find that they receive upwards of 22*l.* each; the second estimate gives nearly 15*l.* each.

I repeat, that in this inquiry I can but approximate. One gentleman told me he thought the quantity of "mac" thus sold in the year was twice 1600 loads; another asserted that it was not 1600. I am assured, however, that my calculation does not exceed the truth.

I have given the full quantity of "mac," as nearly, I believe, as it can be computed, to be yielded by the metropolitan thoroughfares; the surplusage, after deducting the 1600 loads sold, must be regarded as consisting of mixed, and therefore useless, "mac;" that is to say, "mac" rendered so *thin* by continuous wet weather, that it is little worth; "mac" wasted because it is not storeable in the contractor's yard; and "mac" used as a component part of a barge-load of manure.

In the course of my inquiries I heard it very generally stated that until five or six years ago 2*s.* 6*d.* might be considered a regular price for a load of "mac," while 4*s.*, 5*s.*, or even 6*s.* have been paid to one contractor, according to his own account, for the better kind of this commodity.

Of the Mud of the Streets.

The dirt yielded by a macadamized road, no matter what the composition, is always termed by the scavengers "*mac;*" what is yielded by a granite-paved way is always "*mud.*" Mixed mud and "mac" are generally looked upon as useless.

I inquired of one man, connected with a contractor's wharf, if he could readily distinguish the difference between "mac" and other street or mixed dirts, and he told me that he could do so, more especially when the stuff was sufficiently dried or set, at a glance. "If mac was darker," he said, "it always looked brighter than other street-dirts, as if all the colour was not ground out of the stone." He pointed out the difference kinds, and his definition seemed to me not a bad one, although it may require a practised eye to make the distinction readily.

Street-mud is only partially mud, for mud is earthy particles saturated with water, and in the composition of the scavenger's street-mud are dung, general refuse (such as straw and vegetable remains), and the many things which in poor neighbourhoods are still thrown upon the pavement.

In the busier thoroughfares of the metropolis—apart from the City, where there is no macadamization requiring notice—it is almost impossible to keep street "mac" and mud distinct, even if the scavengers cared more to do so than is the case at present; for a waggon, or any other vehicle, entering a street paved with blocks of wrought granite from a macadamized road must convey "mac" amongst mud; both "mac" and mud, however, as I have stated, are the most valuable separately.

In a Report on the Supply of Water, Appendix No. III., Mr. Holland, Upper Stamford-street, Waterloo-road, is stated to have said, in reply to a question on the subject:—"Suppose the inhabitants of one parish are desirous of having their streets in good order and clean: unless the adjoining districts concur, a great and unjust expense is imposed upon the cleaner parish; because every vehicle which passes from a dirty on to a clean street carries dirt from the former to the latter, and renders cleanliness more difficult and expensive. The inhabitants of London have an interest in the condition of other streets besides those of their own parish. Besides the inhabitants of Regent-street, for instance, all the riders in the 5000 vehicles that daily pass through that great thoroughfare are affected by its condition; and the inhabitants of Regent-street, who have to bear the cost of keeping that street in good repair and well cleansed, *for others' benefit as well as for their own*, may fairly feel aggrieved if they do not experience the benefits of good and clean streets when they go into other districts."

In the admixture of street-dirt there is this material difference—the dung, which spoils good "mac," makes good mud more valuable.

After having treated so fully of the road-produce of "mac," there seems no necessity to say more about mud than to consider its quantity, its value, and its uses.

In the Haymarket, which is about an eighth of a mile in length, and 18 yards in width, a load and a half of street-mud is collected daily (Sundays excepted), take the year through. As a farmer or market-gardener will give 3*s.* a load for common street-mud, and cart it away at his own cost, we find that were all this mud sold separately, at the ordinary rate, the yearly receipt for one street alone would be 70*l.* 4*s.* This public way, however, furnishes no criterion of the general mud-produce of the metropolis. We must, therefore, adopt some other basis for a calculation; and I have mentioned the Haymarket merely to show the great extent of street-dirt accruing in a largely-frequented locality.

But to obtain other data is a matter of no small difficulty where returns are not published nor even kept. I have, however, been fortunate enough to obtain the assistance of gentlemen whose public employment has given them the best means of forming an accurate opinion.

The street mud from the Haymarket, it has been positively ascertained, is 1¼ load each wet day the year through. Fleet-street, Ludgate-hill, Cheapside, Newgate-street, the "off" parts of St. Paul's Church-yard, Cornhill, Leadenhall-street, Bishopsgate-street, the free bridges, with many other places where locomotion never ceases, are, in proportion to their width, as productive of street mud as the Haymarket.

Were the Haymarket a mile in length, it would supply, at its present rate of traffic, to the scavenger 6 loads of street mud daily, or 36 loads for the scavenger's working week. In this yield, however, I am assured by practical men, the Haymarket is six times in excess of the average streets; and when compared with even "great business" thoroughfares, of a narrow character, such as Watling-street, Bow-lane, Old-change, and other thoroughfares off Cheapside and Cornhill, the produce of the Haymarket is from 10 to 40 per cent. in excess.

I am assured, however, and especially by a gentleman who had looked closely into the matter—as he at one time had been engaged in preparing estimates for a projected company purposing to deal with street-manures—that the 50 miles of the City may be safely calculated as yielding daily 1½ load of street mud per mile. Narrow streets—Thames-street for instance, which is about three-quarters of a mile long—yield from 2½ to 3½ loads daily, according to the season; but a number of off-streets and open places, such as Long-alley, Alderman's-walk, America-square, Monument-yard, Bridgewater-square, Austin-friars, and the like, are either streets without horse-thoroughfares, or are seldom traversed by vehicles. If, then, we calculate that there are 100 miles of paved streets adjoining the City, and yielding the same quantity of street mud daily as the above estimate, and 200 more miles in the less central parts of the metropolis, yielding only half that quantity, we find the following daily sum during the wet season:—

	Loads.
150 miles of paved streets, yielding 1½ load of street mud per mile	225
200 miles of paved streets, yielding ¾ load of street mud per mile	150
	375
Weekly amount of street mud during the wet season	2,250
Total ditto for six months in the year	58,500
63,000 loads of street mud, at 3*s.* per load	£8775

The great sale for this mud, perhaps nineteen-twentieths, is from the barges. A barge of street-manure, about one-fourth (more or less) "mac," or rather "mac" mixed with its street proportion of dung, &c., and three-fourths mud, dung, &c., contains from 30 to 40 tons, or as many loads. These manure barges are often to be seen on the Thames, but nearly three-fourths of them are found on the canals, especially the Paddington, the Regent's, and the Surrey, these being the most immediately connected with the interior part of the metropolis. A barge-load of this manure is usually sold at from 5*l.* to 6*l.* Calculating its average weight at 35 tons, and its average sale at 5*l.* 10*s.*, the price is rather more than 3*s.* a load. "Common street mud," I have been informed on good authority, "fetches 3*s.* per load from the farmer, when he himself carts it away."

The price of the barge-load of manure is tolerably uniform, for the quality is generally the same.

Some of the best, because the cleanest, street mud—as it is mixed only with horse-dung—is obtained from the wood streets, but this mode of pavement is so circumscribed that the contractors pay no regard to its manure produce, as a general rule, and mix it carelessly with the rest. Such, at least, is the account they themselves give, and they generally represent that the street manure is, owing to the outlay for cartage and boatage, little remunerative to them at the prices they obtain; notwithstanding, they are paid to remove it from the streets. Indeed, I heard of one contractor who was said to be so dissatisfied with the demand for, and the prices fetched by, his street-manure, that he has rented a few acres not far from the Regent's Canal, to test the efficacy of street dirt as a fertilizer, and to ascertain if to cultivate might not be more profitable than to sell.

Of the Surface-Water of the Streets of London.

The consideration of what Professor Way has called the "street waters" of the metropolis, is one of as great moment as any of those I have previously treated in my details concerning street refuse, whether "mac," mud, or dung. Indeed, water enters largely into the composition of the two former substances, while even the street dung is greatly affected by the rain.

The *feeders* of the street, as regards the street surface-water, are principally the rains. I will first consider the amount of surface-water supplied by the rain descending upon the area of the metropolis: upon the roofs of the houses, and the pavement of the streets and roads.

The depth of rain falling in London in the different months, according to the observations and calculations of the most eminent meteorologists, is as follows:—

Months.	Depth of Rain in inches. Royal Society, according to observation.	Howard, according to observation.	Daniell according to calculation.	Quantity of rain falling in the different seasons.	Number of days on which rain falls.
January	1·56	1·907	1·493		14·4
February ..	1·45	1·643	0·746	Winter. 5·263	15·8
March	1·36	1·542	1·440		12·7
April	1·55	1·719	1·786		14·0
May	1·67	2·036	1·853	Spring. 4·813	15·8
June	1·98	1·964	1·330		11·8
July	2·44	2·502	2·516		16·1
August	2·37	2·134	1·453	Summer. 6·632	16·3
September .	2·97	1·644	2·193		12·3
October....	2·46	2·672	2·073		16·2
November .	2·53	2·637	2·490	Autumn. 7·441	15·0
December .	1·65	2·489	2·426		17·7
Totals	24·04	25·179	22·199	24·804	178·1

The rainfall in London, according to a ten years' average of the Royal Society's observations, amounts to 23 inches; in 1848 it was as high as 28 inches, and in 1847 as low as 15 inches. The depth of rain annually falling near London is stated by Mr. Luke Howard to be, on an average of 23 years (1797–1819), as much as 25·179 inches. Mr. Daniel says that the average annual fall is $23\frac{1}{10}$ inches. The mean of the observations made at Greenwich between the years 1838 and 1849 was 24·84 inches.

The following extract from an account of the "Soft Water Springs of the Surrey Sands," by the Hon. Wm. Napier, is interesting.

"The amount of rainfall," says the Author, "is taken from a register kept at the Royal Military College, Sandhurst, from the year 1818 to 1846.

"The average fall of the last 15 years, during which time the register appears to have been correctly kept, is 22·64 inches. I consider this to be a very low estimate, however, of the average rainfall over the whole district. The fall on the ranges of the Hindhead must considerably exceed this amount, for I find in White's 'Selborne,' a register for ten years at that place; the greatest fall being in 1782, 50·26 inches, the lowest, in 1788, 22·50 inches, and the average of all 37·58 inches. The elevation of the Hindhead is about 800 feet above mean tide.

"With reference to the measurement of rain-fall, it is difficult indeed to obtain more than a very approximate idea for a given district of not very great extent; the method of measurement is so uncertain, as liable to be affected by currents of air and evaporation. It is well known that elevated regions attract by condensation more rain than low lands, and yet a rain-gauge placed on the ground will register a greater fall than one placed immediately, and even at a small height above it.

"M. Arago has shown from 12 years' observations at Paris, that the average depth of rain on the terrace of the Observatory was 19·88 inches, while 30 yards lower it was 22·21 inches. Dr. Heberden has shown the rainfall on the top of Westminster Cathedral, during a certain period to be only 12·09 inches, and at a lower level on the top of a house in the neighbourhood to be 22·608 inches. This fact has been observed all over the world, and I can only account for it as arising partly from the greater amount of condensation the nearer the earth's surface, but probably also from currents of air depriving a rain-gauge at a high elevation of its fair share."

The results of the above observations, as to the yearly quantity of rain falling in the metropolis, may be summed up as follows:—

	Inches of Rain falling Annually.
Royal Society (average of 20 years)	24·04
Mr. Howard (average of 23 years) .	25·179
Professor Daniell	22·199
Dr. Heberden	22·608
Mean	23·505

The "mean mean," or average of all the averages here given is within a fraction the average of the Royal Society's Observations for 10 years, and this is the quantity that I shall



THE IRISH CROSSING-SWEEPER.

[*From a Photograph.*]

adopt in my calculations as to the gross volume of rain falling over the entire area of London.

I have shown, by a detail of the respective districts in the Registrar General's department, that the metropolis contains 74,070 statute acres. Every square inch of this extent, as garden, arable, or pasture ground, or as road or street, or waste place, or house, or inclosed yard or lawn, of course receives its modicum of rain. Each acre comprises 6,272,640 square inches, and we thus find the whole metropolitan area to contain a number of square inches, almost beyond the terms of popular arithmetic, and best expressible in figures.

Area of metropolis in square inches, 464,614,444,800. Now, multiplying these four hundred and sixty four thousand, six hundred and fourteen millions, four hundred and forty-four thousand, eight hundred square inches, by 23, the number of inches of rain falling every year in London, we have the following result:—

Total quantity of rain falling yearly in the metropolis, 10,686,132,230,400 cubic inches.

Then, as a fraction more than 277½ cubic inches of water represent a weight of 10 lbs., and an admeasurement of a gallon, we have the following further results:—

	Weight in pounds and tons.	Admeasurement in gallons.
Yearly Rain-fall in the Metropolis	385,399,721,220 lbs., or 172,053,447 tons.	36,539,972,122 gals.

The total quantity of water mechanically supplied every day to the metropolis is said to be in round numbers 55,000,000 gallons, the amount being made up in the following manner:—

DAILY MECHANICAL SUPPLY OF WATER TO METROPOLIS.

Sources of Supply.	Average No. of Gallons per day.	
New River	14,149,315	
East London	8,829,462	
Chelsea	3,940,730	
West Middlesex	3,334,054	
Grand Junction	3,532,013	
Lambeth	3,077,260	
Southwark and Vauxhall	6,313,716	
Kent	1,079,311	
Hampstead	427,468	
Total from Companies		44,383,329
Artesian Wells		8,000,000
Land Spring Pumps		3,000,000
Total daily		55,383,329

YEARLY MECHANICAL SUPPLY OF WATER.

From Companies	16,200,000,000 gals.
„ Artesian Wells	1,920,000,000 „
„ Land Spring Pumps.	1,095,000,000 „
Total yearly	19,215,000,000 „

Hence it would appear that the rain falling in London in the course of the year is *rather more than double that of the entire quantity of water annually supplied to the metropolis by mechanical means*, the rain-water being to the other as 2·005 to 1·000.

Now, in order to ascertain what proportion of the entire volume of rain comes under the denomination of street surface-water, we must first deduct from the gross quantity falling the amount said to be caught, and which, in contradistinction to that mechanically *supplied* to the houses of the metropolis is termed, "catch." This is estimated at 1,000,000 gallons per diem, or 365,000,000 gallons yearly.

But we must also subtract from the gross quantity of rain-water that which falls on the roofs as well as on the "back premises" and yards of houses, and is carried off directly to the drains without appearing in the streets. This must be a considerable proportion of the whole, since the streets themselves, allowing them to be ten yards wide on an average, would seem to occupy only about one-tenth part of the entire metropolitan area, so that the rain falling *directly* upon the public thoroughfares will be but a tithe of the aggregate quantity. But the surface-water of the streets is increased largely by tributary shoots from courts and drainless houses, and hence we may fairly assume the *natural* supply to be doubled by such means. At this rate the volume of rain-water annually poured into and upon the metropolitan thoroughfares by natural means, will be between five and six thousand millions of gallons, or one hundred times the quantity that is daily supplied to the houses of the metropolis by mechanical agency.

Still only a part of this quantity appears in the form of surface-water, for a considerable portion of it is absorbed by the ground on which it falls—especially in dry weather—serving either to "lay the dust," or to convert it into mud. Due regard, therefore, being had to all these considerations, we cannot, consistently with that caution which is necessary in all statistical inquiries, estimate the surface-water of the London streets at more than one thousand millions of gallons per annum, or twenty times the daily mechanical supply to the houses of the entire metropolis, and which it has been asserted is sufficient to exhaust a lake covering the area of St. James's-park, 30 inches in depth.

The quantity of water annually poured upon the streets in the process of what is termed "watering" amounts, according to the returns of the Board of Health, to 275,000,000 gallons per annum! But as this seldom or never assumes the form of street surface-water, it need form no part of the present estimate.

What proportion of the thousand million gallons of "slop dirt" produced annually in the London streets is carried off down the drains, and what proportion is ladled up by the scavengers, I have no means of ascertaining, but that vast quantities run away into the sewers and there form large deposits of mud, everything tends to prove.

Mr. Lovick, on being asked, "How many loads of deposit have been removed in any one week in the Surrey and Kent district? What is the tota.

quantity of deposit removed in any one week in the whole of the metropolitan district?" replied:

"It is difficult, if not impossible, to ascertain correctly the quantity removed, owing to the variety of forms of sewers and the ever-varying forms assumed by the deposit from the action of varying volumes of water; but I have had observations made on the rate of accumulation, from which I have been enabled roughly to approximate it. In one week, in the Surrey and Kent district, about 1000 yards were removed. In one week, in the whole of the metropolitan districts, including the Surrey and Kent district, between 4000 and 5000 yards were removed; but in portions of the districts these operations were not in progress."

It is not here stated of what the deposit consisted, but there is no doubt that "mac" from the streets formed a great portion of it. Neither is it stated what period of time had sufficed for the accumulation; but it is evident enough that such deposits in the course of a year must be very great.

The street surface-water has been analyzed by Professor Way, and found to yield different constituents according to the different pavements from which it has been discharged. The results are as follows:—

"*Examination of Samples of Water from Street Drainage, taken from the Gullies in the Sewers during the rain of 6th May*, 1850.

"The waters were all more or less turbid, and some of them gave off very noxious odours, due principally to the escape of sulphuretted hydrogen gas.

"Some of them were alkaline to test-paper, but the majority were neutral.

"The following table exhibits the quantity of matter (both in solution and in solid state) contained in an imperial gallon of each specimen.

"STREET WATERS.

Number of Bottle.	Name of Street.	Quality of Paving.	Quality of Traffic.	Residue in an Imperial Gallon.		
				Soluble.	Insoluble.	Both.
				Grains.	Grains.	Grains.
1	Duke-street, Manchester-square	Macadam	Middling	92·80	105·95	198·75
7	Foley-street (upper part)	"	Little	95·13	116·30	211·43
5	Gower-street	Granite	Middling	126·00	168 30	294·30
12	Norton-street	"	Little	123·87	3·00	126·87
3	Hampstead-road (above the canal)	Ballasted	Great	96·00	84·00	180·00
4	Ferdinand-street	"	Middling	44·00	48·30	92·30
2	Ferdinand-place	"	Little	50·80	34·30	85·10
10	Oxford-street	Granite	Great	276·23	537·10	813·33
6	"	Macadam	"	194·62	390·30	584·92
11	"	Wood	"	34·00	5·00	39·00

"The influence of the quality of the paving on the composition of the drainage water," says Professor Way, "is well seen in the specimens Nos. 10, 6, and 11, all of them from Oxford-street, the traffic being described as 'Great.'

"The quantity of soluble salts is here found to be greatest from the granite matter from the macadamized road, and very inconsiderable from the wood pavement.

"The same relation between the granite and macadam pavement seems to hold good in the other instances; the granite for any quality of traffic affording more soluble salts to the water than the macadam.

"The ballasted pavement holds a position intermediate between the macadam and the wood, giving more soluble salts than the wood, but less than the macadam.

"The quantity of solid (insoluble) matter in the different samples of water, *which is a measure of the mechanical waste of the different kinds of pavement*, appears also to follow the same relation as that of the soluble salts; that is to say, granite greatest, next macadam, then ballasted, and, lastly, wood pavement, which affords a quantity of solid deposit almost too small to deserve notice.

"The influence of the quality of traffic on the composition of the different specimens of drainage is well marked in nearly all cases; the greatest amount of matter both insoluble and soluble being found in the water obtained from the streets of great traffic.

"The following table shows the composition of the soluble salts of four specimens, two of them being from the granite, and two from the macadam pavement.

"It appears from the table that the granite furnishes little or no magnesia to the water, whilst the quantity from the macadam is considerable.

"On the other hand, the quantity of potash is far greatest in the water derived from the granite.

"The traffic, as was before seen, has a very great influence on the quantity of the soluble salts. It seems also to influence their composition, for we find no carbonates either in the water from the granite, or that from the macadam, where the traffic is little; whereas, when it is great, carbonates of lime and potash are found in the water in large quantity, a circumstance which is no doubt attributable to the action of decaying organic matter on the mineral substances of the pavement.

"ANALYSIS OF THE SOLUBLE MATTER IN DIFFERENT SPECIMENS OF STREET DRAINAGE WATER.

	Grains in an Imperial Gallon.			
	Great Traffic.		Little Traffic.	
	Granite. No. 10.	Macadam. No. 6.	Granite. No. 12.	Macadam. No. 7.
Water of combination and some soluble organic matter	77·56	29·07	22·72	13·73
Silica	·51	2·81	...	...
Carbonic Acid	15·84	12·23	None	None
Sulphuric Acid	36·49	38·23	46·48	34·08
Lime	6·65	13·38	25·90	16·10
Magnesia	None	23·51	Trace	3·50
Oxide of Iron and Alumina, with a little Phosphate of Lime	2·58	1·25	...	...
Chloride of Potassium	None	10·99	None	2·79
" Sodium	53·84	44·88	18·44	19·70
Potash	82·76	18·27	8·75	5·23
Soda	...	...	1·58	...
	276·23	194·62	123·87	95·13

"The insoluble matter in the waters consists of the comminuted material of the road itself, with small fragments of straw and broken dung.

"The quantity of soluble salts (especially of salts of potash) in many of these samples of water is quite as great, and in some cases greater, than that found in the samples of sewer-water that have been examined; and it is open to question and further inquiry, whether the water obtained from the street-drainage of a crowded city might not often be of nearly equal value as liquid manure with the sewer-water with which it is at present allowed to mix."

With regard to the "ballasted pavement" mentioned by Professor Way, I may observe that it cannot be considered a *street*-pavement, unless exceptionally. It is formed principally of Thames ballast mixed with gravel, and is used in the construction of what are usually private or pleasure walks, such as the "gravel walks" in the inclosures of some of the parks, and upon Primrose-hill, &c.

Of the Master Scavengers in former Times.

Degraded as the occupation of the scavenger may be in public estimation; though "I'd rather sweep the streets" may be a common remark expressive of the lowest deep of humiliation among those who never handled a besom in their lives; yet the very existence of a large body who are public cleansers betokens civilization. Their occupation, indeed, was defined, or rather was established or confirmed, in the early periods of our history, when municipal regulations were a sort of charter of civic protection, of civic liberties, and of general progress.

The noun *Scavenger* is said by lexicographers to be derived from the German *schaben*, to shave or scrape, "applied to those who scrape and clear away the filth from public streets or other places." The more direct derivation, however, is from the Danish verb *skaver*, the Saxon equivalent of which is *sceafan*, whence the English *shave*. Formerly the word was written *Scavager*, and meant simply one who was engaged in removing the *Scrapeage* or *Rakeage* (the working men, it will be seen, were termed also "rakers") from the surface of the streets. Hence it would appear that there is no authority for the verb to scavenge, which has lately come into use. The term from which the personal substantive is directly made, is *scavage*, a word formed from the verb in the same manner as *sewage* and *rubbage* (now fashionably corrupted into rubbish), and meaning the refuse which is or should be scraped away from the roads. The Latin equivalent from the Danish verb *skave*, is *scabere*.

I believe that the first mention of a scavenger in our earlier classical literature, is by Bishop Hall, one of the lights of the Reformation, in one of his "Satires."

> "To see the Pope's blacke knight, a cloaked frere,
> Sweating in the channel *like a scavengere*."

Many similar passages from the old poets and dramatists might be adduced, but I will content myself with one from the "Martial Maid" of Beaumont and Fletcher, as bearing immediately on the topic I have to discuss:—

> "Do I not know thee for the alguazier,
> Whose dunghil *all the parish scavengers*
> Could never rid."

Johnson defines a scavenger to be "a petty

magistrate, whose province is to keep the streets clean;" and in the earlier times, certainly the scavenger was an officer to whom a certain authority was deputed, as to beadles and others.

One or two of these officials were appointed, according to the municipal or by-laws of the City of London, not to each parish, but to each ward. Of course, in the good old days, nothing could be done unless under "the sanction of an oath," and the scavengers were sworn accordingly on the Gospel, the following being the form as given in the black letter of the laws relating to the city in the time of Henry VIII.

"*The Oath of Scavagers, or Scavengers, of the Ward.*

"Ye shal swear, That ye shal wel and diligently oversee that the pavements in every Ward be wel and rightfully repaired, and not haunsed to the noyaunce of the neighbours; and that the Ways, Streets, and Lanes, be kept clean from Donge and other Filth, for the Honesty of the City. And that all the Chimneys, Redosses, and Furnaces, be made of Stone for Defence of Fire. And if ye know any such ye shall shew it to the Alderman, that he may make due Redress therefore. And this ye shall not lene. So help you God."*

To aid the scavengers in their execution of the duties of the office, the following among others were the injunctions of the civic law. They indicate the former state of the streets of London better than any description. A "Goung (or dung) fermour" appears to be a nightman, a dung-carrier or bearer, the servant of the master or ward scavenger.

"No Goungfermour shall spill any ordure in the Street, under pain of Thirteen Shillings and Four Pence.

"No Goungfermour shall carry any ordure till after nine of the clock in the Night, under pain of Thirteen Shillings and Four Pence. No man shall cast any urine boles, or ordure boles, into the Streets by Day or Night, *afore the Hour of nine in the Night*. And also he shall not cast it out, but bring it down and lay it in the Canel, under Pain of Three Shillings and Four Pence. And if he do so cast it upon any Person's Head, the Person to have a lawful Recompense, *if he have hurt thereby*.

"No man shall bury any Dung, or Goung, within the Liberties of this City, under Pain of Forty Shillings."

I will not dwell on the state of things which caused such enactments to be necessary, or on the barbarism of the law which ordered a lawful recompense to any person assailed in the manner intimated, only when he had "hurt thereby."

These laws were for the government of the city, where a body of scavengers was sometimes called a "street-ward." Until about the reign of Charles II., however, to legislate concerning such matters for the city was to legislate for the metropolis, as Southwark was then more or less under the city jurisdiction, and the houses of the nobility on the north bank of the Thames (the Strand), would hardly require the services of a public scavenger.

As new parishes or districts became populous, and established outside the city boundaries, the authorities seem to have regulated the public scavengery after the fashion of the city; but the whole, in every respect of cleanliness, propriety, regularity, or celerity, was most grievously defective.

Some time about the middle of the last century, the scavengers were considered and pronounced by the administrators or explainers of municipal law, to be "two officers chosen yearly in each parish in London and the suburbs, by the constables, churchwardens, and other inhabitants," and their business was declared to be, that they should "hire persons called 'rakers,' with carts to clean the streets, and carry away the dirt and filth thereof, under a penalty of 40s."

The scavengers thus appointed we should now term surveyors. There is little reason to doubt that in the old times the duly-appointed scavagers or scavengers, laboured in their vocation themselves, and employed such a number of additional hands as they accounted necessary; but how or when the master scavenger ceased to be a labourer, and how or when the office became merely nominal, I can find no information. So little attention appears to have been paid to this really important matter, that there are hardly any records concerning it. The law was satisfied to lay down provisions for street-cleansing, but to enforce these provisions was left to chance, or to some idle, corrupt, or inefficient officer or body.

Neither can I find any precise account of what was formerly done with the dirt swept and scraped from the streets, which seems always to have been left to the discretion of the scavenger to deal with as he pleased, and such is still the case in a great measure. Some of this dirt I find, however, promoted "the goodly nutriment of the land" about London, and some was "delivered in waste places apart from habitations." These waste places seem to have been the nuclei of the present dust-yards, and were sometimes "presented," that is, they were reported by a jury of nuisances (or under other titles), as "places of obscene resort," for lewd and disorderly persons, the lewd and disorderly persons consisting chiefly of the very poor, who came to search among the rubbish for anything that might be valuable or saleable: for there were frequent rumours of treasure or plate being temporarily hidden in such places by thieves. Some outcast wretches, moreover, slept within the shelter of these scavengers' places, and occasionally a vigilant officer—even down to our own times, or within these few years—apprehended such wretches, charged them with destitution, and had them punished accordingly. Much of the street refuse thus "delivered," especially the "dry rubbish," was thrown into the streets from

* "Haunsed" is explained by Strype to signify "made too high," and the "Redosses" to be "Rere-doughs." A mason informed me that he believed these Redosses were what were known in some old country-houses as "Back-Flues," or flues connecting any fire-grate in the out-offices with the main chimney. The term "lene" is the Teutonic *Lehn*, and signifies "let, lease," or literally *loan*.

houses under repair, &c., (I now speak of the past century,) and no use seems to have been made of any part of it unless any one requiring a load or two of rubbish chose to cart it away.

I have given this sketch to show what master scavengers were in the olden times, and I now proceed to point out what is the present condition of the trade.

Of the Several Modes and Characteristics of Street-Cleansing.

We here come to the practical part of this complex subject. We have ascertained the length of the streets of London—we have estimated the amount of daily, weekly, and yearly traffic—calculated the quantity of mud, dung, "mac," dust, and surface-water formed and collected annually throughout the metropolis—we have endeavoured to arrive at some notion as to the injury done by all this vast amount of filth owing to what the Board of Health has termed "imperfect scavenging,"—and we now come to treat of the means by which the loads of street refuse—the loads of dust—loads of "mac" and mud, and the tons of dung, are severally and collectively removed throughout the year.

There are two distinct, and, in a measure, diametrically opposed, methods of street-cleansing at present in operation.

1. That which consists in cleaning the streets when dirtied.

2. That which consists in cleaning them and *keeping* them clean.

These modes of scavenging may not appear, to those who have paid but little attention to the matter, to be *very* widely different means of effecting the same object. The one, however, removes the refuse from the streets (sooner or later) *after it has been formed*, whereas the other removes it *as fast as it is formed*. By the latter method the streets are never allowed to get dirty—by the former they must be dirty before they are cleansed.

The plan of street-cleansing *before* dirtied, or the pre-scavenging system, is of recent introduction, being the mode adopted by the "street-orderlies;" that of cleansing after having dirtied, or the post-scavenging system, is (so far as the more *general* or common method is concerned) the same as that pursued two centuries ago. I shall speak of each of these modes in due course, beginning with that last mentioned.

By the ordinary method of scavenging, the dirt is still swept or scraped to one side of the public way, then shovelled into a cart and conveyed to the place of deposit. In wet weather the dirt swept or scraped to one side is so liquified that it is known as "slop," and is "lifted" into the cart in shovels hollowed like sugar-spoons. The only change of which I have heard in this mode of scavenging was in one of the tools. Until about nine years ago birch, or occasionally heather, brooms or besoms were used by the street-sweepers, but they soon became clogged in dirty weather, and then, as one working scavenger explained it to me, "they scattered and drove the dirt to the sides 'stead of making it go right ahead as you wants it." The material now used for the street-sweeper's broom is known as "bass," and consists of the stems or branches of a New Zealand plant, a substance which has considerable strength and elasticity of fibre, and both "sweeps" and "scrapes" in the process of scavenging. The broom itself, too, is differently constructed, having divisions between the several insertions of bass in the wooden block of the head, so that clogging is less frequent, and cleaning easier, whereas the birch broom consisted of a close mass of twigs, and thus scattered while it swept the dirt. There was, of course, some outcry on the part of the "established-order-of-things" gentry among scavengers, against the innovation, but it is now general. As all the scavengers, no matter how they vary in other respects, work with the brooms described, this one mention of the change will suffice. No doubt the cleansing of the streets is accomplished with greater efficiency and with greater celerity than it was, but the mere process of manual toil is little altered.

In a work like the present, however, we have more particularly to deal with the labourers engaged; and, viewing the subject in this light, we may arrange the several modes of street-cleansing into the four following divisions:—

1. By paid manual-labourers, or men employed by the contractors, and paid in the ordinary ways of wages.

2. By paid "Machine"-labourers, differing from the first only or mainly in the means by which they attain their end.

3. By pauper labourers, or men employed by the parishes in which they are set to work, and either paid in money or in food, or maintained in the workhouses.

4. By street-orderlies, or men employed by philanthropists—a body of workmen with particular regulations and more organized than other scavengers.

By one or other of these modes of scavengery all the public ways of the metropolis are cleansed; and the subject is most peculiar, as including within itself all the several varieties of labour, if we except that of women and children—viz., manual labour, mechanical labour, pauper labour, and philanthropic labour.

By these several varieties of labour the highways and by-ways of the entire metropolis are cleansed, with one exception—the Mews, concerning which a few words here may not be out of place. *All* these localities, whether they be what are styled Private or Gentlemen's Mews, or Public Mews, where stables, coach-houses, and dwelling-rooms above them, may be taken by any one (a good many of such places being, moreover, public or partial thoroughfares); or whether they be job-masters' or cab-proprietors' mews; are scavenged by the occupants, for the manure is valuable. The mews of London, indeed, constitute a world of their own. They are tenanted by one class—coachmen and grooms, with their wives and families—men who are devoted to one pursuit, the care of horses and carriages; who live and asso-

ciate one among another; whose talk is of horses (with something about masters and mistresses) as if to ride or to drive were the great ends of human existence, and who thus live as much together as the Jews in their compulsory quarters in Rome. The mews are also the "chambers" of unemployed coachmen and grooms, and I am told that the very sicknesses known in such places have their own peculiarities. These, however, form matter for *future* inquiry.

Concerning the private scavenging of the metropolitan mews, the *Medical Times*, of July 26, 1851, contains a letter from Mr. C. Cochrane, in which that gentleman says:—

"It will be found, that in all the mews throughout the metropolis, the manure produced from each stable is packed up in a separate stack, until there is sufficient for a load for some market-gardener or farmer to remove. The groom or stable-man makes an arrangement, or agreement as it is called, with the market-gardener, to remove it at his convenience, and a gratuity of 1*s.* or 1*s.* 6*d.* per load is usually presented to the stable-man. In some places there are dung-pits containing the collectings of a fortnight's dung, which, when disturbed for removal, casts out an offensive effluvium, as sickening as it is disgusting to the whole neighbourhood. In consequence of the arrangement in question, if a third party wished to buy some of this manure, he could not get it; and if he wished to get rid of any by giving it away, the stable-man would not receive it, as it would not be removed sufficiently quick by the farmer. The result is, that whilst the air is rendered offensive and insalubrious, manure becomes difficult to be removed or disposed of, and frequently is washed away into the sewer.

"Of this manure there are always (at a moderate computation) remaining daily, in the mews and stable-yards of the metropolis, at least 2000 cart-loads.

"To remedy these evils, I would suggest that a brief Act of Parliament should be passed, giving municipal and parochial authorities the same complete control over the manure as they have over the 'ashes,' with the provision, that owners should have the right of removing it themselves for their own use; but if they did not do so daily, then the control to return to the above authorities, who should have the right of selling it, and placing the proceeds in the parish funds. By this simple means immense quantities of valuable manure would be saved for the purposes of agriculture—food would be rendered cheaper and more abundant—more people would be employed—whilst the metropolis would be rendered clean, sweet, and healthy."

I may dismiss this part of the subject with the remark, that I was informed that the mews' manure was in regular demand and of ready sale, being removed by the market-gardeners with greater facility than can street-dirt, which the contractors with the parishes prefer to vend by the cart-load.

Having enumerated the four several modes of street-cleansing, I will now proceed to point out briefly the characteristics of each class of cleansing. This will also denote the quality of the employers and the nature of the employment.

1. *The Paid Manual Labourers* constitute the bulk of those engaged in scavenging, and the chief pay-masters are the contractors. Many of these labourers consider themselves the only "regular hands," having been "brought up to the business;" but unemployed or destitute labourers or mechanics, or reduced tradesmen, will often endeavour to obtain employment in street-sweeping; this is the necessary evil of all *unskilled* labour, for since every one can do it (without previous apprenticeship), it follows that the beaten-out artisans or discarded trade assistants, beggared tradesmen, or reduced gentlemen, must necessarily resort to it as their only means of independent support; and hence the reason why dock labour and street labour, and indeed all the several forms of unskilled work, have a tendency to be overstocked with hands—the *unskilled* occupations being, as it were, the sink for all the refuse *skilled* labour and beggared industry of the country.

The "contractors," like other employers, are separated by their men into two classes—such as, in more refined callings, are often designated the "honourable" and "dishonourable" traders—according as they pay or do not pay what is reputed "fair wages."

I cannot say that I heard any especial appellation given by the working scavengers to the better-paying class of employers, unless it were the expressive style of "good-'uns." The inferior paying class, however, are very generally known among their work-people as "scurfs."

2. *The Street-sweeping Machine Labourers.*—Of the men employed as "attendant" scavengers, for so they may be termed, in connection with these mechanical and vehicular street-sweepers, little need here be said, for they are generally of the class of ordinary scavengers. It may, however, be necessary to explain that each of those machines must have the street refuse, for the "lick-in" of the machine, swept into a straight line wherever there is the slightest slope at the sides of a street towards the foot-path; the same, too, must sometimes be done, if the pavement be at all broken, even when the progress of the machine is, what I heard, not very appropriately termed "plain sailing." Sometimes, also, men follow the course of the street-sweeping machine, to "sweep up" any dirt missed or scattered, as the vehicle proceeds on a straightforward course, for at all to diverge would be to make the labour, where the machine alone is used, almost double.

3. *The Pauper, or Parish-employed Scavengers* represent characteristics peculiarly their own, as regards open-air labour in London. They are employed less to cleanse the streets, than to prevent their being chargeable to the poor's rate as out-door recipients, or as inmates of the workhouses. When paid, they receive a lower amount of wages than any other scavengers, and they are sometimes paid in food as well as in money, while a difference may be made between the wages of the married and of the unmarried men, and even between the married men who have and have not children; some, again, are employed in scavenging without any money receipt, their maintenance in the workhouse being considered a sufficient return for the fruits of their toil.

Some of these men are feeble, some are unskilful (even in tasks in which skill is but little of an element), and most of them are dissatisfied workmen. Their ranks comprise, or may comprise, men who have filled very different situations in life. It is mentioned in the second edition of one of the publications of the National Philanthropic Association, "Sanatory Progress" (1850), "that the once high-salaried cashier of a West-end bank died lately in St. Pancras-workhouse;—that the architect of several of the most fashionable West-end club-houses is now an inmate of St. James's-workhouse;—and that the architect of St. Pancras' New Church lately died in a back garret in Somers-town. "These recent instances (a few out of many)" says the writer, "prove that 'wealth has wings,' and that Genius and Industry have but leaden feet, when overtaken by Adversity. A late number of the *Globe* newspaper states that, 'among the police constables on the Great Western Railway, there are at present eight members of the Royal College of Surgeons, and three solicitors;'—and the *Limerick Examiner*, a few weeks ago, announced the fact, that 'a gentlewoman is now an inmate of the workhouse of that city, whose husband, a few years ago, filled the office of High Sheriff of the county.'"

I do not know that either the cashier or the architect in the two workhouses in question was employed as a street-sweeper.

This second class, then, are situated differently to the paid street-sweepers (or No. 1 of the present division), who may be considered, more or less, independent or self-supporting labourers, while the paupers are, of course, dependent.

4. *The "Street Orderlies."*—These men present another distinct body. They are not merely in the employment, but many of them are under the care, of the National Philanthropic Association, which was founded by, and is now under the presidency of, Mr. Cochrane. The objects of this society, as far as regards the street orderlies' existence as a class of scavengers, are sufficiently indicated in its title, which declares it to be "For the Promotion of Street Cleanliness and the Employment of the Poor; so that able-bodied men may be prevented from burthening the parish rates, and preserved independent of workhouse alms and degradation. Supported by the contributions of the benevolent."

The street orderlies, men and boys, are paid a fixed weekly wage, a certain sum being stopped from those single men who reside in houses rented for them by the association, where their meals, washing, &c., are provided. Among them are men of many callings, and some educated and accomplished persons.

The system of street orderlyism is, moreover, distinguished by one attribute unknown to any other mode; it is an effort, persevered in, despite of many hindrances and difficulties, to amend our street scavengery, indeed to reform it altogether; so that dust and dirt may be checked in their very origination.

The corporation, if I may so describe it, of the street orderlies, presents characteristics, again, varying from the other orders of what can only be looked upon either as the self-supporting or pauper workers.

These, then, are the several modes or methods of street-scavengery, and they show the following:—

Classes of Street-Sweeping Employers.

(1.) *Traders,* who undertake contracts for scavengery as a speculation. Under this denomination may be classed the contractors with parishes, districts, boards, liberties, divisions and subdivisions of parishes, markets, &c.

(2.) *Parishes,* who employ the men as a matter of parochial policy, with a view to the reduction of the rates, and with little regard to the men.

(3.) *Philanthropists,* who seek, more particularly, to benefit the men whom they employ, while they strive to promote the public good by increasing public cleanliness and order.

Under the head of "Traders" are the contractors with the parishes, &c., and the proprietors of the sweeping-machines, who are in the same capacity as the "regular contractors" respecting their dealings with labourers, but who substitute mechanical for manual operations.

Of these several classes of masters engaged in the scavengery of the metropolis I have much to say, and, for the clearer saying of it, I shall treat each of the several varieties of labour separately.

Of the Contractors for Scavengery.

The scavenging of the streets of the metropolis is performed *directly* or *indirectly* by the authorities of the several parishes "without the City," who have the power to levy rates for the cleansing of the various districts; within the City, however, the office is executed under the direction of the Court of Sewers.

When the cleansing of the streets is performed indirectly by either the parochial or civic authorities, it is effected by contractors, that is to say, by traders who undertake for a certain sum to remove the street-refuse at stated intervals and under express conditions, and who employ paid servants to execute the work for them. When it is performed *directly,* the authorities employ labourers, generally from the workhouse, and usually enter into an agreement with some contractor for the use of his carts and appliances, together with the right to deposit in his wharf or yard the refuse removed from the streets.

I shall treat first of the *indirect* mode of scavenging—that is to say, of cleansing the streets by contract—beginning with the contractors, setting forth, as near as possible, the receipts and expenditure in connection with the trade, and then proceeding in due order to treat of the labourers employed by them in the performance of the task.

Some of the contractors agree with the parochial

or district authorities to remove the dust from the house-bins as well as the dirt from the streets under one and the same contract; some undertake to execute these two offices under separate contracts; and some to perform only one of them. It is most customary, however, for the same contractor to serve the parish, especially the larger parishes, in both capacities.

There is no established or legally required *form* of agreement between a contractor and his principals; it is a bargain in which each side strives to get the best of it, but in which the parish representatives have often to contend against something looking like a monopoly; a very common occurrence in our day when capitalists choose to combine, which *is* legal, or unnoticed, but very heinous on the part of the working men, whose capital is only in their strength or skill. One contractor, on being questioned by a gentleman officially connected with a large district, as to the existence of combination, laughed at such a notion, but said there might be "a sort of understanding one among another," as among people who "must look to their own interests, and see which way the cat jumped;" concluding with the undeniable assertion that "no man ought reasonably to be expected to ruin himself for a parish."

There does not appear, however, to have been any countervailing qualities on the part of the parishes to this understanding among the contractors; for some of the authorities have found themselves, when a new or a renewed contract was in question, suddenly "on the other side of the hedge." Thus, in the south-west district of St. Pancras, the contractor, five or six years ago, paid 100*l.* per annum for the removal and possession of the street-dirt, &c.; but the following year the district authorities had to pay him 500*l.* for the same labour and with the same privileges! Other changes took place, and in 1848-9 a contractor again paid the district 95*l.* I have shown, too, that in Shadwell the dust-contractor now *receives* 450*l.* per annum, whereas he formerly *paid* 240*l.* To prove, however, that a spirit of combination does *occasionally* exist among these contractors, I may cite the following minute from one of the arish books.

Extract from Minute-book, Nov. 7, 1839.
Letter C, Folio 437.

"Commissioner's Office,
"30, Howland-street,
"Nov. 7, 1839.

"REPORT of the Paving Committee to the General Board, relating to the watering the district for the past year.

"Your Committee beg leave to report that for the past three years the sums paid by contract for watering were respectively:—

"For 1836	£230
„ 1837	220
„ 1838	200

"That in the month of February in the present year the Board advertised in the usual manner for tenders to water the district, when the following were received, viz.:—

"Mr. Darke	£315
„ Gore	318
„ Nicholls	312
„ Starkey	285

which was the lowest.

"Your Committee, anxious to prevent any increase in the watering-rate from being levied, and considering the amount required by the contractors for this service as excessive and exorbitant, and even evincing a spirit of combination, resolved to make an inroad upon this system, and after much trouble and attention adopted other measures for watering the district, the results of which they have great pleasure in presenting to the Board, by which it will be seen that a saving over the very lowest of the above tenders of 102*l.* 3*s.* has been effected; the sum of 18*l.* 18*s.* has been paid for pauper labour at the same time. Your Committee regret that, notwithstanding the efforts of themselves and their officers, the state of insubordination and insult of most of the paupers (in spite of all encouragement to industry) was such, that the Committee, on the 12th of July last, were reluctantly compelled to discontinue their services. The Committee cannot but congratulate the Board upon the result of their experiment, which will have the effect of breaking up a spirit of combination highly dangerous to the community at large, at the same time that their labours have caused a very considerable saving to the ratepayers; and they trust the work, considering all the numerous disadvantages under which they have laboured, has been performed in a satisfactory manner.

"P. CUNNINGHAM,
"Surveyor.
"30, Howland-street, Fitzroy-square."

The following regulations sufficiently show the nature of the agreements made between the contractors and the authorities as to the cleansing of the more important thoroughfares especially. It will be seen that in the regulations I quote every street, court, or alley, must now be swept *daily*, a practice which has only been adopted within these few years in the City.

"SEWERS' OFFICE, GUILDHALL, LONDON. RAKERS' DUTIES,* MIDSUMMER, 1851, TO MIDSUMMER, 1852.

"*CLEANSING.*

"*The whole surface* of every Carriage-way, Court, and Alley shall be swept *every day* (Sundays excepted), and all mud, dust, filth, and rubbish, all frozen or partially frozen matter, and snow, animal and vegetable matter, and everything offensive or injurious, shall be properly pecked, scraped, swept up, and carted away therefrom; and the iron gutters laid across or along the footways, the air-grates over the sewers, the gulley

* The reader will remember that in the historical sketch given of the progress of public scavengery, the word "Rakers" occurred in connection with the sworn master scavengers, &c., &c.; the word is now unknown to the trade, except that it appears on city documents.

grates in the carriage-way of the streets respectively; and all public urinals are to be daily raked out, swept, and made clean and clear from all obstructions; and the Contractor or Contractors shall, in time of frost, continually keep the channels in the Streets and Places clear for water to run off: and cleanse and cart away refuse began or gravel (when called upon by the Inspector to do so) from all streets newly paved.

"The Mud and Dirt, &c., is to be carted away immediately that it is swept up.

"N.B. The Inspector of the District may, at any time he may think it necessary, order any Street or Place to be cleansed and swept a second time in any one day, and the Contractor or Contractors are thereupon bound to do the same.

"The Markets and their approaches are also to be thus cleansed DAILY, and the approaches thereto respectively are also to be thus cleansed at such an hour in the night of Saturday in each week as the Inspector of the District may direct.

"Every Street, Lane, Square, Yard, Court, Alley, Passage, and Place (except certain main Streets hereinafter enumerated), are to be thus cleansed within the following hours Daily: namely—

"In the months of April, May, June, July, August, and September. To be begun not earlier than 4 o'Clock in the morning, and finished not later than 1 o'Clock in the afternoon.

"In the months of October, November, December, January, February, and March. To be begun not earlier than 5 o'Clock in the morning, and finished not later than 2 o'Clock in the afternoon.

"The following main Streets are to be cleansed DAILY throughout the year (except Sundays), to be begun not earlier than 4 o'Clock in the morning, and finished not later than 9 o'Clock in the morning.

Fleet Street	Old Bailey
Ludgate Hill and Street	Lombard Street
St. Paul's Church Yard	New Bridge Street
Cheapside	Farringdon Street
Newgate Street	Aldersgate Street
Poultry	St. Martin-le-grand
Watling Street, Budge Row, and Cannon St.	Prince's Street
	Moorgate Street
Mansion House Street	The Street called 'The Pavement'
Cornhill	
Leadenhall Street	Finsbury Place, South
Aldgate Street and Aldgate	Gracechurch Street
	Bishopsgate St., within and without
King William Street and London Bridge	
	The Minories
Fenchurch Street	Wood Street
Holborn	Gresham Street
Holborn Bridge	Coleman Street.
Skinner Street	

"N.B. In times of frost and snow these hours of executing the work may be extended at the discretion of the Local Commissioners."

The other conditions relate to the removal of the dust from the houses (a subject I have already treated), and specify the fines, varying from 1*l.* to 5*l.*, to be paid by the contractors, for the violation or neglect of any of the provisions of the contract. It is further required that "Each Foreman, Sweeper, and Dustman, in the employ of either of the Contractors," (of whom there are four, Messrs. Sinnott, Rooke, Reddin, and Gould), "will be required to wear a Badge on the arm with these words thereon,—

"'London Sewers,
No. —
Guildhall,'

by which means any one having cause of complaint against any of the men in the performance of their several duties, may, by taking down the number of the man and applying at the Sewers' Office, Guildhall, have reference to his name and employer.

"Any man working without his Badge, for each day he offends, the Contractor is liable to the penalty of Five Shillings.

"All the sweepings of the Streets, and all the dust and ashes from the Houses, are to be entirely carted away from the City of London, on a Penalty of *Ten Pounds* for each cart-load."

These terms sufficiently show the general nature of the contracts in question; the principal difference being that in some parts, the contractor is not required to sweep the streets more than once, twice, or thrice a week in ordinary weather.

The number of individuals in London styling themselves Master Scavengers is 34. Of these, 10 are at present without a contract either for dust or scavenging, and 5 have a contract for removing the dust only; so that, deducting these two numbers, the gross number 34 is reduced to 19 scavenging contractors. Of the latter number 16 are in a large way of business, having large yards, possessing several carts and some waggons, and employing a vast number of men daily in sweeping the streets, carting rubbish, &c. The other 3 masters, however, are only in a small way of business, being persons of more limited means. A *large* master scavenger employs from 3 to 18 carts, and from 18 to upwards of 40 men at scavengery alone, while a small master employs only from 1 to 3 carts and from 3 to 6 men. By the table I have given, p. 186, vol. ii., it is shown that there are 52 *contracts* between the several district authorities and master scavengers, and nineteen *contractors*, without counting members of the same family, as distinct individuals; this gives an average of nearly three distinct contracts per individual. The contracts are usually for a twelvemonth.

Although the table above referred to shows but 19 contractors for public scavenging, there are, as I have said, more, or about 24, in London, most of them in a "large way," and next year some of those who have no contracts at present may enter into agreements with the parishes. The smallness of this number, when we consider the vast extent of the metropolis, confirms the notion of the sort of monopoly and combination to which I have alluded. In the Post-Office Directory for 1851 there are no names under the heads of

Scavengers or Dustmen, but under the head of "Rubbish Carters." 28 are given, 9 names being marked as "Dust Contractors" and 10 as "Nightmen."

Of large contractors, however, there are, as I have said, about 24, but they may not all obtain contracts every year, and in this number are included different members of the same family or firm, who may undertake specific contracts, although in the trade it is looked upon as "one concern." The smaller contractors were represented to me as rather more numerous than the others, and perhaps numbered 40, but it is not easy to define what is to be accounted a contractor. In the table given in pp. 213, 214, I cite only 7 as being the better known. The others may be considered as small rubbish-carters and flying-dustmen.

There are yet other transactions in which the contractors are engaged with the parishes, independently of their undertaking the whole labour of street and house cleansing. In the parishes where pauper, or "poor" labour is resorted to—for it is not always that the men employed by the parishes are positive "paupers," but rather the unemployed poor of the parish—in such parishes, I say, an agreement is entered into with a contractor for the deposit of the collected street dirt at his yard or wharf. For such deposit the contractor must of course be paid, as it is really an occupation and renting of a portion of his premises for a specific purpose. The street dirt, however, is usually left to the disposal of the contractor, for his own profit, and where he once paid 50*l.* for the possession of the street-collected dirt of a parish, collected by labour which was no cost to him, he may now *receive* half of such 50*l.*, or whatever the terms of the agreement may be. I heard of one contractor who lately received 25*l.* where he once paid 50*l.*

In another way, too, contractors are employed by parishes. Where pauper or poor labour in street cleansing is the practice, a contractor's horses, carts, and cart-drivers are hired for the conveyance of the dirt from the streets. This of course is for a specific payment, and is in reality the work of the tradesmen who in the Post Office Directory are described as "Rubbish Carters," and of whom I shall have to speak afterwards. Some parishes or paving boards have, however, their own horses and vehicles, but in the other respects they have dealings with the contractors.

To come to as correct a conclusion as possible in this complicated and involved matter, I have obtained the aid of some gentlemen long familiar with such procedures. One of them said that to procure the accounts of such transactions for a series of years, with all their chops and changes, or to obtain a perfectly precise return, for any three years, affecting the whole metropolis, would be the work of a parliamentary commission with full powers "to send for papers," &c., &c., and that even *then* the result might not be satisfactory as a clear exposition. However, with the aid of the gentlemen alluded to, I venture upon the following approximation.

As my present inquiry relates only to the Scavenging Contractors in the metropolis, I will take the number of districts, markets, &c., which are specified in the table, p. 186, vol. ii. These are 83 in number, of which 29 are shown to be scavenged by the "parish." I will not involve in this computation any of the more rural places which may happen to be in the outskirts of the metropolitan area, but I will take the contracts as 54, where the contractors do the entire work, and as 29 where they are but the rubbish-carters and dirt receivers of the parishes.

I am assured that it is a fair calculation that the scavengery of the streets, apart from the removal of the dust from the houses, costs in payments to the contractors, 150*l.* as an average, to each of the several 54 districts; and that in the 29 localities in which the streets are cleansed by parish labour, the sum paid is at the rate of 50*l.* per locality, some of them, as the five districts of Marylebone for instance, being very large. This is calculated regardless of the cases where parishes may have their own horses and vehicles, for the cost to the rate-payers may not be very materially different, between paying for the hire of carts and horses, and investing capital in their purchase and incurring the expense of wear and tear. The account then stands thus:—

Parish payment on 54 contracts, 150*l.* each	£8100
Parish payment on 29 contracts, 50*l.* each	1450
Yearly total sum paid for Scavenging of the Metropolis	£9550

or, apportioned among 19 *contractors*, upwards of 500*l.* each; and among 83 *contracts*, about 115*l.* per *contract*. Even if other contractors are employed where parish labour is pursued, the cost to the rate-payers is the same. This calculation is made, as far as possible, as regards scavengery alone; and is independent of the value of the refuse collected. It is about the scavengery that the grand fight takes place between the parishes and contractors; the house dust, being uninjured by rain or street surface-water, is more available for trade purposes.

From this it would appear that the cost of cleansing the streets of London may be estimated in round numbers at 10,000*l.* per annum.

The next point in the inquiry is, What is the value of the street dirt annually collected?

The price I have adduced for the dirt gained from the streets is 3*s.* per load, which is a very reasonable average. If the load be dung, or even chiefly dung, it is worth 5*s.* or 6*s.* With the proportion of dung and street refuse to be found in such a thoroughfare as the Haymarket, in dry, or comparatively dry weather, a load, weighing about a ton, is worth about 3*s.* in the purchaser's own cart. On the other hand, as I have shown that quantities of mixed or slop "mac" have to be wasted, that some is sold at a nominal price, and a good deal at 1*s.* the load, 3*s.* is certainly a fair average.

Thus the annual sum of the street-dirt, as re-

A TABLE SHOWING THE NUMBER OF MEN AND CARTS EMPLOYED IN COLLECTING DUST, IN SCAVENGERY, AND AT RUBBISH CARTING, AS WELL AS THE NUMBER OF MEN, WOMEN, AND BOYS WORKING IN THE DUST-YARDS OF THE SEVERAL METROPOLITAN CONTRACTORS.

Contractors (Large).	Dust.		Scavengery.		Rubbish Carting.		Working in the Yard.		
	Number of Men employed.	Number of Carts used.	Number of Men employed.	Number of Carts, Wagons, or Machines used.	Number of Men employed.	Number of Carts used.	Number of Men employed.	Number of Women employed.	Number of Boys working.
Mr. Dodd	20	10	26	13	20	20	9	12	4
„ Gould	20	10	28	11	11	11	5	15	4
„ Redding	32	16	41	18	22	22	5	12	4
„ Gore	32	16	18	7	none.	none.	4	20	6
„ Rooke	16	8	16	6	16	16	2	6	3
„ Stapleton & Holdsworth	10	5	11	8	10	10	4	8	2
„ Tame	20	10	5	1	12	12	4	8	2
„ Starkey	10	5	22	8	none.	none.	4	12	3
„ Newman	8	4	23	10	8	8	4	8	2
„ Pratt and Sewell	10	5	4	2	20	20	2	6	2
„ W. Sinnott, Sen.	28	14	5	2	none.	none.	5	15	5
„ J. Sinnott	8	4	16	6	ditto.	ditto.	none.	none.	none.
„ Westley	10	5	18	9	ditto.	ditto.	3	9	2
„ Parsons	10	5	18	3	ditto.	ditto.	2	6	1
„ Hearne	18	9	7	2	20	20	3	9	3
„ Humphries	20	10	4	1	6	6	3	9	3
„ Calvert	6	3	none.	none.	7	7	2	6	2
	278	139	262	107	152	152	61	161	48
Contractors (Small).									
Mr. North	4	2	2	1	4	4	1	2	1
„ Milton	6	3	none.	none.	none.	none.	3	6	2
„ Jenkins	2	1	5	1	ditto.	ditto.	1	2	1
„ Stroud	10	5	none.	none.	ditto.	ditto.	4	9	3
„ Martin	2	1	6	3	ditto.	ditto.	1	2	1
„ Clutterbuck	4	2	none.	none.	5	5	1	3	1
„ W. Sinnott, Jun.	4	2	ditto.	ditto.	6	6	1	2	1
	32	16	13	5	15	15	12	26	10
Contractors, but not having any contract at present, only carting rubbish, &c.									
Mr. Darke	...	...	...	...	36	36			
„ Tomkins	...	...	...	...	6	6			
„ J. Cooper	...	...	...	...	8	8			
„ T. Cooper, Sen.	...	...	...	...	12	12			
„ Athill	...	...	...	...	6	6			
„ Barnett (lately sold off)									
„ Brown	...	...	...	...	4	4			
„ Ellis	...	...	...	...	6	6			
„ Limpus	...	...	...	...	10	10			
„ Emmerson	...	...	...	...	6	6			
					94	94			

Machines.	Dust.		Scavengers.		Rubbish.		Employed in Yard.		
	Men.	Carts.	Men.	Carts.	Men.	Carts.	Men.	Women.	Children
Woods and Forests	none.	none.	4	2 machines.	none.	none.	none.	none.	none.
Regent-street and Pall-mall.	ditto.	ditto.	12	2 „	ditto.	ditto.	ditto.	ditto.	ditto.
St. Martin's	ditto.	ditto.	9	4 „	ditto.	ditto.	ditto.	ditto.	ditto.
			25	8 „					
Parishes.									
Kensington *	...	...	5	2					
Chelsea *	...	...	5	2					
St. George's, Hanover-sq.*	...	...	5	1					
St. Margaret's, Westminster*	...	...	7	3					
Piccadilly *	...	...	28	2					
St. Ann's, Soho *	...	...	4	2					
Paddington *	...	...	6	2					
St. Marylebone *(5 Districts)	...	...	35	4					
St. James's, Westminster	...	...	2	1					
Hampstead	No parochial removal of dust.		4	1					
Highgate	ditto.		4	1					
Islington *	...	...	8	1					
Hackney	8	4	7	1	...	...	2	6	2
St. Clement Danes *	...	...	7	3 waggons.					
Commercial-road, East *	...	...	6	3 carts.					
Poplar	4	2	4	1	...	...	2	4	1
Bermondsey	6	3	6	3	...	...	3	6	2
Newington	8	4	6	2	...	...	2	6	2
Lambeth *	...	...	16	3					
Ditto (Christchurch)	4	2	20	3	...	...	1	4	1
Wandsworth	4	2	4	1	...	...	1	4	1
Camberwell and Walworth	8	4	6	2	...	...	2	5	3
Rotherhithe	6	3	5	2	...	...	1	5	2
Greenwich	4	2	5	2	...	...	1	3	1
Deptford	4	2	4	2	...	...	1	3	1
Woolwich	none.	none.	5	2					
Lewisham	ditto.	ditto	4	1					
Total for Parishes	56	28	218	50 carts. 3 waggons.			16	46	16
Total for large contractors	278	139	262	107	152	152	61	161	48
Total for small contractors	32	16	13	5	15	15	12	26	10
Total for machines	...	...	25	8 machines.					
Total for street orderlies	...	...	60	9					
Gross total	366	183	578	179 carts. 3 waggons.	167	167	89	233	74

	Men.	Carts.
Total employed at dust	366	183
„ „ scavenging	578	179
„ „ rubbish carting	167	167
„ (men, women, and children), in yard	396	
Total employed in the removal of house and street refuse	1507	529

* The parishes marked thus * have their dustmen and dust-carts, as well as the rubbish carting and the individuals in the dust-yard, reckoned in the numbers employed by the contractors.

gards the quantity collected by the contracting scavengers (as shown in the table given at page 186), is, in round numbers, 89,000 cart-loads; that collected by parish labour, with or without the aid of the street-sweeping machines, at 52,000 cart-loads, or a total (I do not include what is collected by the orderlies) of 141,000 loads.

This result shows, then, that the contractors yearly collect by scavenging the streets with their own paid labourers, and receive as the produce of pauper labour, as follows:—

	Loads of Street Dirt.	Per Load.	Total.
By Contractors	89,000	3*s.*	£13,350
By Parishes	52,000	3*s.*	7,800
Total	141,000		£21,150

or a value of rather more than 111*l.* as the return to each individual contractor in the table, or about 25*l.* as the average on each contract. As, however, the whole of the parish-collected manure does not come into the hands of the contractors, it will be fair, I am assured, to compute the total at 19,000*l.*, a sum of 100*l.* to each contractor, or nearly 22*l.* on each contract.

It would appear, then, that the total receipts of the contractors for the scavenging of London amount to very nearly 30,000*l.*; that is to say, 10,000*l.* as remuneration for the office, and 20,000*l.* as the value of the dirt collected. But against this sum as received, we have to set the gross expense of wages paid to men, wear and tear of carts and appliances, rent of wharfs, interest for money, &c.

Concerning the amount paid in wages, it appears by the table at pp. 186, 187, that the men employed by the scavenging contractors in wet weather, are 260 daily (being nearly half of the whole force of 531 men, the orderlies excepted). In dry weather, however, there are only 194 men employed. I will therefore calculate upon 194 men employed daily, and 66 employed half the year, making the total of 260. By the table here given, it will be seen that the total number of scavengers employed by the large and small contractors, is 275.

Number of Men.	Weekly Wage.	Yearly.
194 (for 12 months)	16*s.* *	£8070 8*s.*
66 (for 6 months)	16*s.*	1372 16*s.*
Total		£9443 4*s.*

There remains now to show the amount of capital which a large contractor must embark in his business: I include the amount of rent, and the expenditure on what must be provided for business purposes, and which is subject to wear and tear, to decay, and loss.

* I have computed all the weekly wages at 16*s.*, though some of the men are paid only 14*s.* My object in this is to give the contractors the benefit of the difference.

There are not now, I am told, more than twelve scavengers' wharfs and 20 yards (the wharf being also a yard) in the possession of the contractors in regular work. These are the larger contractors, and their capital, I am assured, may be thus estimated:—

Capital of the Master Scavengers.

	£	*s.*	*d.*
179 Carts, 21*l.* each	3,759	0	0
3 Waggons, 32*l.* each	96	0	0
230 Horses, 25*l.* each	5,750	0	0
230 Sets of harness, 2*l.* each	460	0	0
600 Brooms, 9*d.* each	22	10	0
300 Shovels, 1*s.* each	15	0	0
100 Barges, 50*l.* each	5,000	0	0
Total	15,102	10	0

I have estimated according to what may be the *present* value, not the original cost, of the implements, vehicles, &c. A broom, when new, costs 1*s.* 2*d.*, and is worn out in two or three weeks. A shovel, when new, costs 2*s.*

The following appears to be the

Yearly Expenditure of the Master Scavengers.

	£	*s.*	*d.*
Wages to working scavengers (as before shown)	9,443	0	0
Wages to 48 bargemen, engaged in unloading the vessels with street-dirt, 4 men to each of 12 wharfs, at 16*s.* weekly wage	1,996	0	0
Keep of 300 horses (26*l.* each)	7,800	0	0
Wear and tear (say 15 per cent. on capital)	2,250	0	0
Rent of 20 wharfs and yards (average 100*l.* each)	2,000	0	0
Interest on 15,000*l.* capital, at 10 per cent.	1,500	0	0
	£24,989	0	0

I have endeavoured in this estimate to confine myself, as much as possible, to the separate subject of scavengery, but it must be borne in mind that as the large contractors are dustmen as well as scavengers, the great charges for rent and barges cannot be considered as incurred solely on account of the street-dirt trade. Including, then, the payments from parishes, the account will stand thus:—

Yearly Receipts of Master Scavengers.

From Parishes	£9,450
From Manure, &c.	19,000
Total Income	£28,450
Deduct yearly Expenditure	25,000
Profit	£3,450

This gives a profit of nearly 182*l.* to each contractor, if equally apportioned, or a little more than 41*l.* on each contract for street-scavenging

alone, and a profit no doubt affected by circumstances which cannot very well be reduced to figures. The profit may appear small, but it should be remembered that it is *independent* of the profits on the dust.

Of the Contractors' (or Employers') Premises, &c.

At page 171 of the present volume I have described one of the yards devoted to the trade in house-dust, and I have little to say in addition regarding the premises of the contracting or employing scavengers. They are the same places, and the industrious pursuits carried on there, and the division and subdivision of labour, relate far more to the dustmen's department than to the scavengers'. When the produce of the sweeping of the streets has been thrown into the cart, it is so far ready for use that it has not to be sifted or prepared, as has the house-dust, for the formation of brieze, &c., the "mac" being sifted by the purchaser.

These yards or wharfs are far less numerous and better conducted now than they were ten years ago. They are at present fast disappearing from the banks of the Thames (there is, however, one still at Whitefriars and one at Milbank). They are chiefly to be found on the banks of the canals. Some of the principal wharfs near Maiden-lane, St. Pancras, are to be found among unpaven, or ill-paved, or imperfectly macadamized roads, along which run rows of what were once evidently pleasant suburban cottages, with their green porches and their trained woodbine, clematis, jasmine, or monthly roses; these tenements, however, are now occupied chiefly by the labourers at the adjacent stone, coal, lime, timber, dust, and general wharfs. Some of the cottages still presented, on my visits, a blooming display of dahlias and other autumnal flowers; and in one corner of a very large and very black-looking dust-yard, in which rose a huge mound of dirt, was the cottage residence of the man who remained in charge of the wharf all night, and whose comfortable-looking abode was embedded in flowers, blooming luxuriantly. The gay-tinted holly-hocks and dahlias are in striking contrast with the dinginess of the dust-yards, while the canal flows along, dark, sluggish, and muddy, as if to be in keeping with the wharf it washes.

The dust-yards must not be confounded with the "night-yards," or the places where the contents of the cess-pools are deposited, places which, since the passing of the Sanatory Act, are rapidly disappearing.

Upon entering a dust-yard there is generally found a heavy oppressive sort of atmosphere, more especially in wet or damp weather. This is owing to the tendency of charcoal to absorb gases, and to part with them on being saturated with moisture. The cinder-heaps of the several dust-yards, with their million pores, are so many huge gasometers retaining all the offensive gases arising from the putrefying organic matters which usually accompany them, and parting with such gases immediately on a fall of rain. It would be a curious calculation to estimate the quantity of deleterious gas thus poured into the atmosphere after a slight shower.

The question has been raised as to the propriety of devoting some special locality to the purposes of dust-yards, and it is certainly a question deserving public attention.

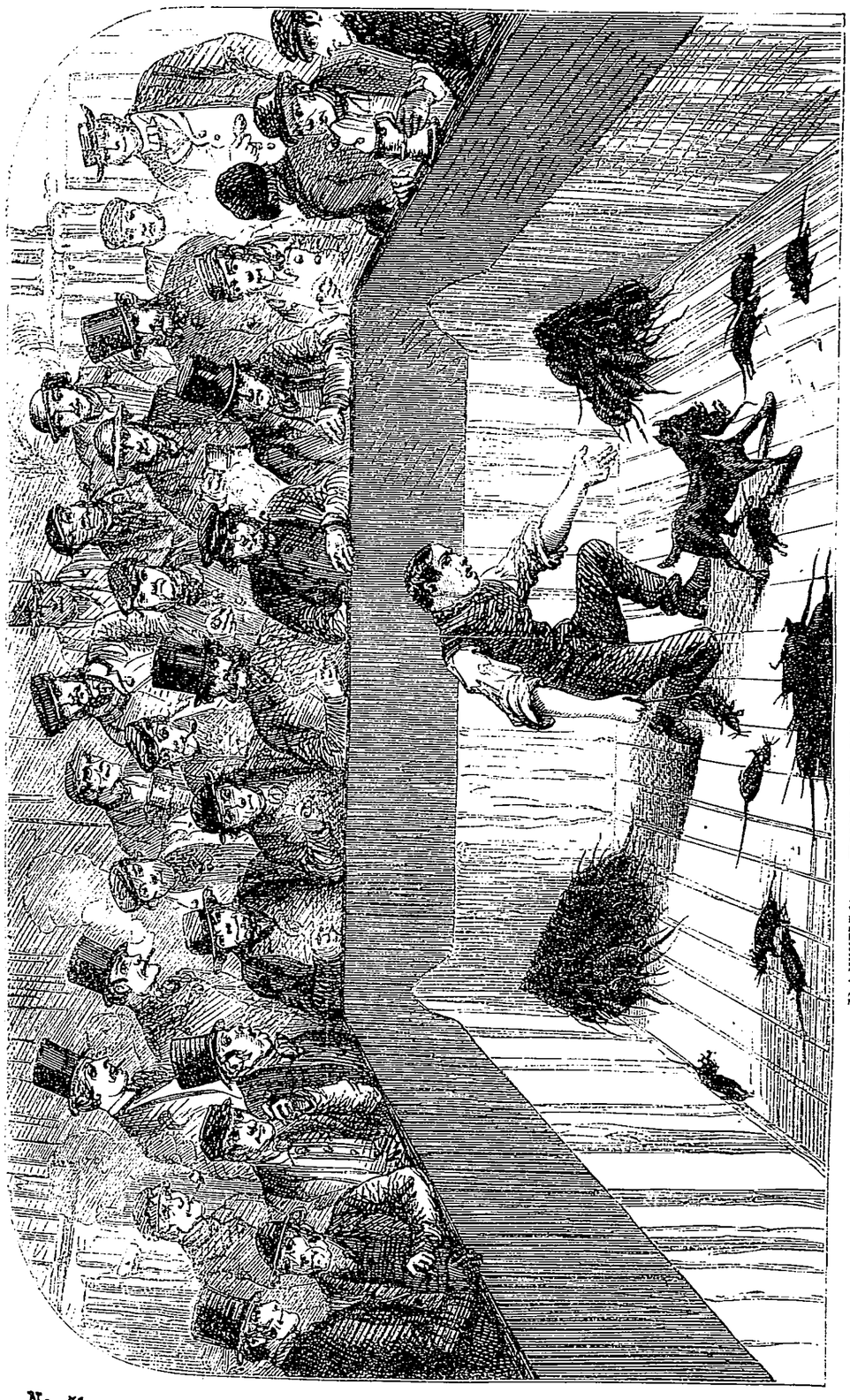
The chief disposal of the street manure is from barges, sent by the Thames or along the canals, and sold to farmers and gardeners. In the larger wharfs, and in those considered removed from the imputation of "scurfdom," six men, and often but four, are employed to load a barge which contains from 30 to 40 tons. In such cases the dust-yard and the wharf are one and the same place. The contents of these barges are mixed, about one-fourth being "mac," the rest street-mud and dung. This admixture, on board the vessel, is called by the bargemen and the contractors' servants at the wharfs Leicester (properly Læsta, a load). We have the same term at the end of our word bal-*last*.

I am assured by a wharfinger, who has every means of forming a correct judgment, it may be estimated that there are dispatched from the contractors' wharfs twelve barges daily, freighted with street-manure. This is independent of the house-dust barged to the country brick-fields. The weight of the cargo of a barge of manure is about 40 tons; 36 tons being a low average. This gives 3744 barge-loads, or 132,784 tons, or loads, yearly; for it must be recollected that the dirt gathered by pauper labour is dispatched from the contractors' yards or wharfs, as well as that collected by the immediate servants of the contractors. The price per barge-load at the canal, basin, or wharf, in the country parts where agriculture flourishes, is from 5*l*. to 6*l*., making a total of 20,594*l*. The difference of that sum, and the total given in the table (21,147*l*.) may be accounted for on the supposition that the remainder is sold in the yards and carted away thence. The slop and valueless dirt is not included in this calculation.

Of the Working Scavengers under the Contractors.

I have now to deal with what throughout the whole course of my inquiry into the state of London Labour and the London Poor I have considered the great object of investigation—the condition and characteristics of the working men; and what is more immediately the "labour question," the relation of the labourer to his employer, as to rates of payment, modes of payment, hiring of labourers, constancy or inconstancy of work, supply of hands, the many points concerning wages, perquisites, family work, and parochial or club relief.

First, I shall give an account of the class employment, together with the labour season and earnings of the labourers, or "economical" part of the subject. I shall then pass to the social points, concerning their homes, general expenditure, &c., and then to the more moral and intellectual questions of education, literature, politics, religion



RATTING—"THE GRAHAM ARMS," GRAHAM STREET.

[From a Photograph.

No. 51.

marriage, and concubinage of the men and of their families. All this will refer, it should be remembered, only to the working scavagers in the honourable or better-paid trade; the cheaper labourers I shall treat separately as a distinct class; the details in both cases I shall illustrate with the statement of men of the class described.

The first part of this multifarious subject appertains to the division of labour. This in the scavaging trade consists rather of that kind of "gang-work" which Mr. Wakefield styles "simple co-operation," or the working together of a number of people at the same thing, as opposed to "complex co-operation," or the working together of a number at *different branches* of the same thing. Simple co-operation is of course the ruder kind; but even this, rude as it appears, is far from being barbaric. "The savages of New Holland," we are told, "never help each other even in the most simple operations; and their condition is hardly superior—in some respects it is inferior—to that of the wild animals which they now and then catch."

As an instance of the advantages of "simple co-operation," Mr. Wakefield tells us that "in a vast number of simple operations performed by human exertion, it is quite obvious that two men working together will do more than four, or four times four men, each of whom should work alone. In the lifting of heavy weights, for example, in the felling of trees, in the gathering of much hay and corn during a short period of fine weather, in draining a large extent of land during the short season when such a work may be properly conducted, in the pulling of ropes on board ship, in the rowing of large boats, in some mining operations, in the erection of a scaffolding for a building, and in the breaking of stones for the repair of a road, so that the whole road shall always be kept in good repair—in all these simple operations, and thousands more, it is absolutely necessary that many persons should work together at the same time, in the same place, and in the same way."

To the above instances of simple co-operation, or gang-working, as it may be briefly styled in Saxon English, Mr. Wakefield might have added dock labour and scavaging.

The principle of complex co-operation, however, is not entirely unknown in the public cleansing trade. This business consists of as many branches as there are distinct kinds of refuse, and these appear to be four. There are (1) the wet and (2) the dry *house*-refuse (or dust and night-soil), and (3) the wet and (4) the dry *street*-refuse (or mud and rubbish); and in these four different branches of the one general trade the principle of complex co-operation is found commonly, though not invariably, to prevail.

The difference as to the class employments of the general body of public cleansers—the dustmen, street-sweepers, nightmen, and rubbish carters—seems to be this:—any nightman will work as a dustman or scavager; but it is not all the dustmen and scavagers who will work as nightmen. The reason is almost obvious. The avocations of the dustman and the nightman are in some degree hereditary. A rude man provides for the future maintenance of his sons in the way which is most patent to his notice; he makes the boy share in his own labour, and grow up unfit for anything else.

The regular working scavagers are then generally a distinct class from the working dustmen, and are all paid by the week, while the dustmen are paid by the load. In very wet weather, when there is a great quantity of "slop" in the streets, a dustman is often called upon to lend a helping hand, and sometimes when a working scavager is out of employ, in order to keep himself from want, he goes to a "job of dust work," but seldom from any other cause.

In a parish where there is a crowded population, the dustman's labours consume, on an average, from six to eight hours a day. In scavagery, the average hours of daily work are twelve (Sundays of course excepted), but they sometimes extended to fifteen, and even sixteen hours, in places of great business traffic; while in very fine dry weather, the twelve hours may be abridged by two, three, four, or even more. Thus it is manifest that the consumption of time alone prevents the same working men being simultaneously dustmen and scavagers. In the more remote and quiet parishes, however, and under the management of the smaller contractors, the opposite arrangement frequently exists; the operative is a scavager one day, and a dustman the next. This is not the case in the busier districts, and with the large contractors, unless exceptionally, or on an emergency.

If the scavagers or dustmen have completed their street and house labours in a shorter time than usual, there is generally some sort of employment for them in the yards or wharfs of the contractors, or they may sometimes avail themselves of their leisure to enjoy themselves in their own way. In many parts, indeed, as I have shown, the street-sweeping must be finished by noon, or earlier.

Concerning the *division of labour*, it may be said, that the principle of complex co-operation in the scavaging trade exists only in its rudest form, for the characteristics distinguishing the labour of the working scavagers are far from being of that complicated nature common to many other callings.

As regards the act of sweeping or scraping the streets, the labour is performed by the *gangsman* and his *gang*. The gangsman usually loads the cart, and occasionally, when a number are employed in a district, acts as a foreman by superintending them, and giving directions; he is a working scavager, but has the office of overlooker confided to him, and receives a higher amount of wage than the others.

For the completion of the street-work there are the *one-horse carmen* and the *two-horse carmen*, who are also working scavagers, and so called from their having to load the carts drawn by one or two horses. These are the men who shovel into the cart the dirt swept or scraped to one

side of the public way by the gang (some of it mere slop), and then drive the cart to its destination, which is generally their master's yard. Thus far only does the street-labour extend. The carmen have the care of the vehicles in cleaning them, greasing the wheels, and such like, but the horses are usually groomed by stablemen, who are not employed in the streets.

The division of labour, then, among the working scavagers, may be said to be as follows:—

1st. The *ganger*, whose office it is to superintend the gang, and shovel the dirt into the cart.

2nd. The gang, which consists of from three to ten or twelve men, who sweep in a row and collect the dirt in heaps ready for the ganger to shovel into the cart.

3rd. The carman (one-horse or two-horse, as the case may be), who attends to the horse and cart, brushes the dirt into the ganger's shovel, and assists the ganger in wet sloppy weather in carting the dirt, and then takes the mud to the place where it is deposited.

There is only one *mode of payment* for the above labours pursued among the master scavagers, and that is by the week.

1st. The ganger receives a weekly salary of 18*s.* when working for an "honourable" master; with a "scurf," however, the ganger's pay is but 16*s.* a week.

2nd. The gang receive in a large establishment each 16*s.* per week, but in a small one they usually get from 14*s.* to 15*s.* a week. When working for a small master they have often, by working over hours, to "make eight days to the week instead of six."

3rd. The one-horse carman receives 16*s.* a week in a large, and 15*s.* in a small establishment.

4th. The two-horse carman receives 18*s.* weekly, but is employed only by the larger masters.

On the opposite page I give a table on this point.

Some of these men are paid by the day, some by the week, and some on Wednesdays and Saturdays, perhaps in about equal proportions, the "casuals" being mostly paid by the day, and the regular hands (with some exceptions among the scurfs) once or twice a week. The chance hands are sometimes engaged for a half day, and, as I was told, "jump at a bob and a joey (1*s.* 4*d.*), or at a bob." I heard of one contractor who not unfrequently said to any foreman or gangsman who mentioned to him the applications for work, "O, give the poor devils a turn, if it's only for a day now and then."

Piece-work, or, as the scavagers call it, "by the load," *did* at one time prevail, but not to any great extent. The prices varied, according to the nature and the state of the road, from 2*s.* to 2*s.* 6*d.* the load. The system of piece-work was never liked by the men; it seems to have been resorted to less as a system, or mode of labour, than to insure assiduity on the part of the working scavagers, when a rapid street-cleansing was desirable. It was rather in the favour of the working man's *individual* emoluments than otherwise, as may be shown in the following way. In Battle-bridge, four men collect five loads in dry, and six men seven loads in wet weather. If the average piece hire be 2*s.* 3*d.* a load, it is 2*s.* 9$\frac{3}{4}$*d.* for each of the five men's day's work; if 2*s.* 2*d.* a load, it is 2*s.* 8$\frac{1}{2}$*d.* (the regular wage, and an extra halfpenny); if 2*s.*, it is 2*s.* 6*d.*; and if less (which has been paid), the day's wage is not lower than 2*s.* At the lowest rates, however, the men, I was informed, could not be induced to take the necessary pains, as they *would* struggle to "make up half-a-crown;" while, if the streets were scavaged in a slovenly manner, the contractor was sure to hear from his friends of the parish that he was not acting up to his contract. I could not hear of any men now set to piece-work within the precincts of the places specified in the table. This extra work and scamping work are the two great evils of the piece system.

In their payments to their men the contractors show a superiority to the practices of some traders, and even of some dock-companies—the men are never paid at public-houses; the payment, moreover, is always in money. One contractor told me that he would like all his men to be teetotallers, if he could get them, though he was not one himself.

But these remarks refer only to the *nominal* wages of the scavagers; and I find the nominal wages of operatives in many cases are widely different (either from some additions by way of perquisites, &c., or deductions by way of fines. &c., but oftener the latter) from the *actual* wages received by them. Again, the average wages, or gross yearly income of the casually-employed men, are very different from those of the constant hands; so are the gains of a particular individual often no criterion of the general or average earnings of the trade. Indeed I find that the several varieties of wages may be classified as follows:—

1. *Nominal Wages.*—Those said to be paid in a trade.

2. *Actual Wages.*—Those *really* received, and which are equal to the nominal wages, *plus* the additions to, or *minus* the deductions from, them.

3. *Casual Wages.*—The earnings of the men who are only occasionally employed.

4. *Average Casual or Constant Wages.*—Those obtained throughout the year by such as are either occasionally or regularly employed.

5. *Individual Wages.*—Those of particular hands, whether belonging to the scurf or honourable trade, whether working long or short hours, whether partially or fully employed, and the like.

6. *General Wages.*—Or the *average* wages of the whole trade, constant or casual, fully or partially employed, honourable or scurf, long and short hour men, &c., &c., all lumped together and the mean taken of the whole.

Now in the preceding account of the working scavagers' mode and rate of payment I have spoken only of the nominal wages; and in order to arrive at their actual wages we must, as we have seen, ascertain what additions and what deductions are generally made to and from this

TABLE SHOWING THE DIVISION OF LABOUR, MODE AND RATES OF PAYMENT, NATURE OF WORK PERFORMED, TIME UNEMPLOYED, AND AVERAGE EARNINGS OF THE OPERATIVE SCAVAGERS OF LONDON.

Operative Scavagers.	Mode of Payment.	Rates of Payment.	Nature of Work performed.	Time unemployed during the Year.	Average casual (or constant) gains throughout the Year.
I. *Manual Labourers.*					
A. Better Paid.					
Ganger	By the day.	18*s.* weekly, and 2*s.* allowance.	To load the cart and superintend the men.	Not two days during the year.	20*s.* per week.
Carman (2 horse)	"	18*s.* weekly, and 2*s.* allowance.	To take care of the horses, help to load the cart, and take the dirt and slop to the dust-yard.	Seldom or never out of employment.	20*s.* "
Ditto (1 horse)	"	16*s.* weekly, and 2*s.* allowance.	Ditto.	Ditto.	18*s.* "
Sweepers	"	16*s.* weekly, and 2*s.* allowance.	To sweep the district to which they are sent, and collect the dirt or slop ready for carting away.	About three months during the year.	13*s.* 6*d.* "
B. Worse Paid.					
Ganger	"	16*s.* weekly, and 1*s.* allowance.	To load the cart and superintend the men.	Three months during the year.	12*s.* 9*d.* "
Carman	"	15*s.* weekly, and 1*s.* allowance.	To take charge of the horse and cart, help to load the cart, and take the dirt or slop to the dust-yard.	Ditto.	12*s.* "
Sweepers	"	15*s.* weekly, and 1*s.* allowance.	To sweep the district, collect the dirt or slop ready for carting off, work in the yard, and load the barge.	Ditto.	12*s.* "
II. *Machine Men.*					
Carman	"	16*s.* weekly.	To take charge of the horse and machine, collect the dirt and take it to the yard.	Ditto.	12*s.* "
Sweepers	"	16*s.* weekly.	To sweep where the machine cannot work, work in the yard, and load the barges.	Ditto.	12*s.* "
III. *Parish Men.*					
A. Out-door Paupers.					
1. Paid in Money.					
Married men	"	9*s.* weekly.	Sweep the streets and courts belonging to the parish, and collect the dirt or slop ready for carting away.	Six months during the year.	4*s.* 6*d.* "
Single men	"	6*s.* weekly.	Ditto.	Ditto.	3*s.* "
2. Paid part in kind.					
Married men	"	6*s.* 9*d.* weekly, and 3 quartern loaves.	Ditto.	Ditto.	3*s.* 4$\frac{1}{2}$*d.* and 3 quartern loaves weekly.
Single men	"	5*s.* and 3 half-quartern loaves.	Ditto.	Ditto.	2*s.* 6*d.* and 3 half-quartern loaves weekly.
B. In-door Paupers	All in kind.	Food, lodging, and clothes.	Ditto.	Ditto.	Food, lodging, and clothes.
IV. *Street-Orderlies.*					
Foreman or Gangr	By the day.	15*s.* weekly.	Superintend the men and see that their work is done well.	.....	.....
Sweepers	"	12*s.* weekly.	Collect the dirt or slop ready for carting away.	.....	.....
Barrow men	"	.....	Collect the short dung as it gathers in the district to which they are appointed.	.....	.....
Barrow boys	"	.....	Ditto.	Ditto.	ditto.

amount. The deductions in the honourable trade are, as usual, inconsiderable.

All the *tools* used by operative scavagers are supplied to them by their employers—the tools being only brooms and shovels; and for this supply there are *no stoppages* to cover the expense.

Neither by *fines* nor by way of *security* are the men's wages reduced.

The *truck system*, moreover, is unknown, and has never prevailed in the trade. I heard of only one instance of an approach to it. A yard foreman, some years ago, who had a great deal of influence with his employer, had a chandler's-shop, managed by his wife, and it was broadly intimated to the men that they must make their purchases there. Complaints, however, were made to the contractor, and the foreman dismissed. One man of whom I inquired did not even know what the "truck system" meant; and when informed, thought they were "pretty safe" from it, as the contractor had nothing which he *could* truck with the men, and if "he polls us hisself," the man said, "he's not likely to let anybody else do it."

There are, moreover, no trade-payments to which the men are subjected; there are no trade-societies among the working men, no benefit nor sick clubs; neither do parochial relief and family labour characterize the regular hands in the honourable trade, although in sickness they may have no other resource.

Indeed, the working scavagers employed by the more honourable portion of the trade, instead of having any deductions made from their nominal wages, have rather additions to them in the form of perquisites coming from the public. These perquisites consist of allowances of beer-money, obtained in the same manner as the dustmen—not through the medium of their employers (though, to say the least, through their sufferance), but from the householders of the parish in which their labours are prosecuted.

The scavagers, it seems, are not required to sweep any places considered "private," nor even to sweep the public foot-paths; and when they *do* sweep or carry away the refuse of a butcher's premises, for instance—for, by law, the butcher is required to do so himself—they receive a gratuity. In the contract entered into by the city scavagers, it is expressly covenanted that no men employed shall accept gratuities from the householders; a condition little or not at all regarded, though I am told that these gratuities become less every year. I am informed also by an experienced butcher, who had at one time a private slaughter-house in the Borough, that, until within these six or seven years, he thought the scavagers, and even the dustmen, would carry away entrails, &c., in the carts, from the butcher's and the knacker's premises, for an allowance.

I cannot learn that the contractors, whether of the honourable or scurf trade, take any advantage of these "allowances." A working scavager receives the same wage, when he enjoys what I heard called in another trade "the height of perquisites," or is employed in a locality where there are no such additions to his wages. I believe, however, that the contracting scavagers let their best and steadiest hands have the best perquisited work.

These perquisites, I am assured, average from 1*s.* to 2*s.* a week, but one butcher told me he thought 1*s.* 6*d.* might be rather too high an average, for a pint of beer (2*d.*) was the customary sum given, and that was, or ought to be, divided among the gang. "In my opinion," he said, "there 'll be no allowances in a year or two." By the amount of these perquisites, then, the scavagers' gains are so far enhanced.

The wages, therefore, of an operative scavager in full employ, and working for the "honourable" portion of the trade, may be thus expressed:—

Nominal weekly wages	16*s.*
Perquisites in the form of allowances for beer from the public	2*s.*
Actual weekly wages	18*s.*

Of the "Casual Hands" among the Scavagers.

Of the scavagers proper there are, as in all classes of unskilled labour, that is to say, of labour which requires no previous apprenticeship, and to which any one can "turn his hand" on an emergency, two distinct orders of workmen, "the *regulars* and *casuals*" to adopt the trade terms; that is to say, the labourers consist of those who have been many years at the trade, constantly employed at it, and those who have but recently taken to it as a means of obtaining a subsistence after their ordinary resources have failed. This mixture of *constant* and *casual* hands is, moreover, a necessary consequence of all trades which depend upon the seasons, and in which an additional number of labourers are required at different periods. Such is necessarily the case with dock labour, where an easterly wind prevailing for several days deprives *thousands of work*, and where the change from a foul to a fair wind causes an equally inordinate demand for workmen. The same temporary increase of employment takes place in the agricultural districts at harvesting time, and the same among the hop growers in the picking season; and it will be hereafter seen that there are the same labour fluctuations in the scavaging trade, a greater or lesser number of hands being required, of course, according as the season is wet or dry.

This occasional increase of employment, though a benefit in some few cases (as enabling a man suddenly deprived of his ordinary means of living to obtain "a job of work" until he can "turn himself round"), is generally a most alarming evil in a State. What are the casual hands to do when the extra employment ceases? Those who have paid attention to the subject of dock labour and the subject of casual labour in general, may form some notion of the vast mass of misery that must be generally existing in London. The subject of hop-picking again belongs to the same question. Here are thousands of the very poorest employed only for a few days in the year. What, the mind naturally asks, do they after their short term of honest independence has ceased? With dock labour the poor man's bread depends upon the very winds; in scavaging and in street life generally it depends upon the rain; and in market-gardening, harvesting, hop-picking, and the like, it depends upon the sunshine. How many thousands in this huge metropolis have to look immediately to the very elements for their bread, it is overwhelming to contemplate; and yet, with all this fitfulness of employment we wonder that an extended knowledge of reading and writing does not produce a decrease of crime! We should, however, ask ourselves whether men can stay their hunger with alphabets or grow fat on spelling books; and wanting employment, and consequently food, and objecting to the *incarceration* of the workhouse, can we be astonished—indeed is it not a natural law—that they should help themselves to the property of others?

Concerning the "regular hands" of the contracting scavagers, it may, perhaps, be reasonable to compute that little short of one-half of them have been "to the manner born." The others are, as I have said, what these regular hands call "casuals," or "casualties." As an instance of the peculiar mixture of the regular and casual hands in the scavaging trade, I may state that one of my informants told me he had, at one period, under his immediate direction, fourteen men, of whom the former occupations had been as follows:—

7 Always Scavagers (or dustmen, and six of them nightmen when required).
1 Pot-boy at a public-house (but only as a boy).
1 Stable-man (also nightman).
1 Formerly a pugilist, then a showman's assistant.
1 Navvy.
1 Ploughman (nightman occasionally).
2 Unknown, one of them saying, but gaining no belief, that he had once been a gentleman.

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In my account of the street orderlies will be given an interesting and elaborate statement of the former avocations, the habits, expenditure, &c., of a body of street-sweepers, 67 in number. This table will be found very curious, as showing what classes of men have been *driven* to street-sweeping, but it will not furnish a criterion of the character of the "regular hands" employed by the contractors.

The "casuals" or the "casualties" (always called among the men "cazzelties"), may be more properly described as men whose employment is accidental, chanceful, or uncertain. The regular hands of the scavagers are apt to designate any new comer even for a permanence, any sweeper not reared to or versed in the business, a casual ("cazzel"). I shall, however, here deal with the "casual hands," not only as hands newly introduced into the trade, but as men of chanceful and irregular employment.

These persons are now, I understand, numerous in all branches of unskilled labour, willing to undertake or attempt any kind of work, but perhaps there is a greater tendency on the part of the surplus unskilled to turn to scavaging, from the fact that any broken-down man seems to account himself competent to sweep the streets.

To ascertain the number of these casual or outside labourers in the scavaging trade is difficult, for, as I have said, they are willing in their need to attempt any kind of work, and so may be "casuals" in divers departments of unskilled labour.

I do not think that I can better approximate the number of casuals than by quoting the opinion of a contracting scavager familiar with his workmen and their ways. He considered that there were always nearly as many hands on the look-out for a job in the streets, as there were regularly employed at the business by the large contractors; this I have shown to be 262, let us estimate therefore the number of casuals at 200.

According to the table I have given at pp. 213, 214, the number of men regularly or constantly employed at the metropolitan trade is as follows:—

Scavagers employed by large contractors .	262
Ditto small contractors . . .	13
Ditto machines	25
Ditto parishes	218
Ditto street-orderlies	60
Total working scavagers in London .	578

But the prior table given at pp. 186, 187, shows the number of scavagers employed throughout the metropolis in wet and dry weather (*exclusive of the street-orderlies*) to be as follows:—

Scavagers employed in wet weather . .	531
Ditto in dry weather	358
Difference	173

Hence it would appear that about one-third less hands are required in the dry than in the wet season of the year. The 170 hands, then, discharged in the dry season are the casually employed men, but the whole of these 170 are not turned adrift immediately they are no longer wanted, some being kept on "odd jobs" in the yard, &c.; nor can that number be said to represent the entire amount of the surplus labour in the trade; but only that portion of it which *does* obtain even casual employment. After much trouble, and taking the average of various statements, it would appear that the number of casualty or quantity of occasional surplus labour in the scavaging trade may be represented at between 200 and 250 hands.

The scavaging trade, however, is not, I am informed, so overstocked with labourers now as it

was formerly. Seven years ago, and from that to ten, there were usually between 200 and 300 hands out of work; this was owing to there being a less extent of paved streets, and comparatively few contractors; the scavaging work, moreover, was "scamped," the men, to use their own phrase, "licking the work over any how," so that fewer hands were required. Now, however, the inhabitants are more particular, I am told, "about the crooks and corners," and require the streets to be swept oftener. Formerly a gang of operative scavagers would only collect six loads of dirt a day, but now a gang will collect nine loads daily. The causes to which the surplus of labourers at present may be attributed are, I find, as follows:—Each operative has to do nearly double the work to what he formerly did, the extra cleansing of the streets having tended not only to employ more hands, but to make each of those employed do more work. The result has, however been followed by an increase in the wages of the operatives; seven years ago the labourers received but 2*s.* a day, and the ganger 2*s.* 6*d.*, but now the labourers receive 2*s.* 8*d.* a day, and the ganger 3*s.*

In the city the men have to work very long hours, sometimes as many as 18 hours a day without any extra pay. This practice of overworking is, I find, carried on to a great extent, even with those master scavagers who pay the regular wages. One man told me that when he worked for a certain large master, whom he named, he has many times been out at work 28 hours in the wet (saturated to the skin) without having any rest. This plan of overworking, again, is generally adopted by the small masters, whose men, after they have done a regular day's labour, are set to work in the yard, sometimes toiling 18 hours a day, and usually not less than 16 hours daily. Often so tired and weary are the men, that when they rise in the morning to pursue their daily labour, they feel as fatigued as when they went to bed. "Frequently," said one of my informants, "have I gone to bed so worn out, that I haven't been able to sleep. However" (he added), "there is the work to be done, and we must do it or be off."

This system of overwork, especially in those trades where the quantity of work to be done is in a measure fixed, I find to be a far more influential cause of surplus labour than "over population." The mere number of labourers in a trade is, *per se*, no criterion as to the quantity of labour employed in it; to arrive at this three things are required:—

(1) The number of hands;
(2) The hours of labour;
(3) The rate of labouring;

for it is a mere point of arithmetic, that if the hands in the scavaging trade work 18 hours a day, there must be one-third less men employed than there otherwise would, or in other words one-third of the men who are in work must be thus deprived of it. This is one of the crying evils of the day, and which the economists, filled as they are with their over-population theories, have entirely overlooked.

There are 262 men employed in the Metropolitan Scavaging Trade; one-half of these at the least may be said to work 16 hours per diem instead of 12, or one-third longer than they should; so that if the hours of labour in this trade were restricted to the usual day's work, there would be employment for one-sixth more hands, or nearly 50 individuals extra.

The other causes of the present amount of surplus labour are—

The many hands thrown out of employment by the discontinuance of railway works.

A less demand for unskilled labour in agricultural districts, or a smaller remuneration for it.

A less demand for some branches of labour (as ostlers, &c.), by the introduction of machinery (applied to roads), or through the caprices of fashion.

It should, however, be remembered, that men often found their opinions of such causes on prejudices, or express them according to their class interests, and it is only a few employers of unskilled labourers who care to inquire into the antecedent circumstances of men who ask for work.

As regards the population part of the question, it cannot be said that the surplus labour of the scavaging trade is referable to any inordinate increase in the families of the men. Those who are married appear to have, on the average, four children, and about one-half of the men have no family at all. Early marriages are by no means usual. Of the casual hands, however, full three-fourths are married, and one-half have families.

There are not more than ten or a dozen Irish labourers who have taken to the scavaging, though several have "tried it on;" the regular hands say that the Irish are too lazy to continue at the trade; but surely the labour of the hodman, in which the Irish seem to delight, is sufficient to disprove this assertion, be the cause what it may. About one-fourth of the scavagers entering the scavaging trade as casual hands have been agricultural labourers, and have come up to London from the several agricultural districts in quest of work; about the same proportion appear to have been connected with horses, such as ostlers, carmen, &c.

The *brisk and slack seasons* in the scavaging trade depend upon the state of the weather. In the depth of winter, owing to the shortness of the days, more hands are usually required for street cleansing; but a "clear frost" renders the scavager's labour in little demand. In the winter, too, his work is generally the hardest, and the hardest of all when there is snow, which soon becomes mud in London streets; and though a continued frost is a sort of lull to the scavagers' labour, after "a great thaw" his strength is taxed to the uttermost; and then, indeed, new hands have had to be put on. At the West End, in the height of the summer, which is usually the height of the fashionable season, there is again a more than usual requirement of scavaging industry in wet weather; but perhaps the greatest exercise of such industry is after a series of the fogs peculiar

to the London atmosphere, when the men cannot *see* to sweep. The table I have given shows the influence of the weather, as on wet days 531 men are employed, and on dry days only 358; this, however, does not influence the Street-Orderly system, as under it the men are employed every day, unless the weather make it an actual impossibility.

According to the rain table given at p. 202, there would appear to be, on an average of 23 years, 178 wet days in London out of the 365, that is to say, about 100 in every 205 days are "rainy ones." The months having the greatest and least number of wet days are as follows:—

	No. of days in the month in which rain falls.
December	17
July, August, October . . .	16
February, May, November . .	15
January, April	14
March, September	12
June	11

Hence it would appear that June is the least and December the most showery month in the course of the year; the greatest *quantity* of rain falling in any month is, however, in October, and the least quantity in March. The number of wet days, and the quantity of rain falling in each half of the year, may be expressed as follows:—

	Total in No. of wet days.	Total depth of rain falling in inches.
The first six months in the year ending June there are . .	84	10
The second six months in the year ending December there are	93	14

Hence we perceive that the quantity of work for the scavagers would fluctuate in the first and last half of the year in the proportion of 10 to 14, which is very nearly in the ratio of 358 to 531, which are the numbers of hands given in table pp. 186, 187, as those employed in wet and dry weather throughout the metropolis.

If, then, the labour in the scavaging trade varies in the proportion of 5 to 7, that is to say, that 5 hands are required at one period and 7 at another to execute the work, the question consequently becomes, how do the 2 casuals who are discharged out of every 7 obtain their living when the wet season is over?

When a scavager is out of employ, he seldom or never applies to the parish; this he does, I am informed, only when he is fairly "beaten out" through sickness or old age, for the men "hate the thought of going to the big house" (the union workhouse). An unemployed operative scavager will go from yard to yard and offer his services to do anything in the dust trade or any other kind of employment in connection with dust or scavaging.

Generally speaking, an operative scavager who is casually employed obtains work at that trade for six or eight months during the year, and the remaining portion of his time is occupied either at rubbish-carting or brick-carting, or else he gets a job for a month or two in a dust-yard.

Many of these men seem to form a body of street-jobbers or operative labourers, ready to work at the docks, to be navvies (when strong enough), bricklayers' labourers, street-sweepers, carriers of trunks or parcels, window-cleaners, errand-goers, porters, and (occasionally) nightmen. Few of the class seem to apply themselves to trading, as in the costermonger line. They are the loungers about the boundaries of trading, but seldom take any onward steps. The street-sweeper of this week, a "casual" hand, may be a rubbish-carter or a labourer about buildings the next, or he may be a starving man for days together, and the more he is starving with the less energy will he exert himself to obtain work: "it 's not in" a starving or ill-fed man to exert himself otherwise than what may be called *passively;* this is well known to all who have paid attention to the subject. The want of energy and carelessness begotten by want of food was well described by the tinman, at p. 355 in vol. i.

One casual hand told me that last year he was out of work altogether three months, and the year before not more than six weeks, and during the six weeks he got a day's work sometimes at rubbish carting and sometimes at loading bricks. Their wives are often employed in the yards as sifters, and their boys, when big enough, work also at the heap, either in carrying off, or else as fillers-in; if there are any girls, one is generally left at home to look after the rest and get the meals ready for the other members of the family. If any of the children go to school, they are usually sent to a ragged school in the neighbourhood, though they seldom attend the school more than two or three times during the week.

The additional hands employed in wet weather are either men who at other times work in the yards, or such as have their "turns" in street-sweeping, if not regularly employed. There appears, however, to be little of system in the arrangement. If more hands are wanted, the gangsman, who receives his orders from the contractor or the contractor's managing man, is told to put on so many new hands, and over-night he has but to tell any of the men at work that Jack, and Bob, and Bill will be wanted in the morning, and they, if not employed in other work, appear accordingly.

There is nothing, however, which can be designated a *labour market* appertaining to the trade. No "house of call," no trade society. If men seek such employment, they must apply at the contractor's premises, and I am assured that poor men not unfrequently ask the scavagers whom they see at work in the streets where to apply "for a job," and sometimes receive gruff or abusive replies. But though there is nothing like a labour market in the scavager's trade, the employers have not to "look out" for men, for I was told by one of their foremen, that he would undertake, if necessary, which it never was, by a mere "round of the docks," to select 200 new hale men, of all classes, and strong ones, too, if properly fed, who

in a few days would be tolerable street-sweepers. It is a calling to which agricultural labourers are glad to resort, and a calling to which *any* labourer or any mechanic may resort, more especially as regards sweeping or scraping, apart from shovelling, which is regarded as something like the high art of the business.

We now come to estimate the earnings of the casual hands, whose yearly incomes must, of course, be very different from those of the regulars. The *constant* weekly wages of any workman are of course the average of his casual—and hence we shall find the wages of those who are *regularly* employed far exceed those of the *occasionally* employed men:—

	£	s.	d.
Nominal yearly wages at scavaging for 25 weeks in the year, at 16*s.* per week	20	16	0
Perquisites for 26 weeks, at 2*s.* .	2	12	0
Actual yearly wages at scavaging .	23	8	0
Nominal and actual weekly wages at rubbish carting for 20 weeks in the year, at 12*s.* . . .	12	0	0
Unemployed six weeks in the year .	0	0	0
Gross yearly earnings . . .	35	8	0
Average casual or constant weekly wages throughout the year . .		15	4½

Hence the difference between the earnings of the casual and the regular hand would appear to be one-sixth. But the great evil of all casual labour is the uncertainty of the income—for where there is the greatest chance connected with an employment, there is not only the greatest necessity for providence, but unfortunately the greatest tendency to improvidence. It is only when a man's income becomes regular and fixed that he grows thrifty, and lays by for the future; but where all is chance-work there is but little ground for reasoning, and the accident which assisted the man out of his difficulties at one period is continually expected to do the same good turn for him at another. Hence the casual hand, who passes the half of the year on 18*s.*, and twenty weeks on 12*s.*, and *six weeks on nothing*, lives a life of excess both ways—of excess of "guzzling" when in work, and excess of privation when out of it—oscillating, as it were, between surfeit and starvation.

A man who had worked in an iron-foundry, but who had "lost his work" (I believe through some misconduct) and was glad to get employment as a street-sweeper, as he had a good recommendation to a contractor, told me that "the misery of the thing" was the want of regular work. "I've worked," he said, "for a good master for four months an end at 2*s.* 8*d.* a day, and they were prime times. Then I hadn't a stroke of work for a fortnight, and very little for two months, and if my wife hadn't had middling work with a laundress we might have starved, or I might have made a hole in the Thames, for it 's no good living to be miserable and feel you can't help yourself any how. We was sometimes half-starved, as it was. I 'd rather at this minute have regular work at 10*s.* a week all the year round, than have chance-work that I could earn 20*s.* a week at. I once had 15*s.* in relief from the parish, and a doctor to attend us, when my wife and I was both laid up sick. O, there 's no difference in the way of doing the work, whatever wages you 're on for; the streets must be swept clean, of course. The plan's the same, and there 's the same sort of management, any how."

Statement of a "Regular Scavager."

The following statement of his business, his sentiments, and, indeed, of the subjects which concerned him, or about which he was questioned, was given to me by a street-sweeper, so he called himself, for I have found some of these men not to relish the appellation of "scavager." He was a short, sturdy, somewhat red-faced man, without anything particular in his appearance to distinguish him from the mass of mere labourers, but with the sodden and sometimes dogged look of a man contented in his ignorance, and—for it is not a very uncommon case—rather proud of it.

"I don't know how old I am," he said—I have observed, by the by, that there is not any excessive vulgarity in these men's tones or accent so much as grossness in some of their expressions—"and I can't see what that consarns any one, as I 's old enough to have a jolly rough beard, and so can take care of myself. I should think so. My father was a sweeper, and I wanted to be a waterman, but father—he hasn't been dead long—didn't like the thoughts on it, as he said they was all drownded one time or 'nother; so I ran away and tried my hand as a Jack-in-the-water, but I was starved back in a week, and got a h—— of a clouting. After that I sifted a bit in a dust-yard, and helped in any way; and I was sent to help at and larn honey-pot and other pot making, at Deptford; but honey-pots was a great thing in the business. Master's foreman married a relation of mine, some way or other. I never tasted honey, but I 've heered it's like sugar and butter mixed. The pots was often wanted to look like foreign pots; I don't know nothing what was meant by it; some b—— dodge or other. No, the trade didn't suit me at all, master, so I left. I don't know why it didn't suit me; cause it didn't. Just then, father had hurt his hand and arm, in a jam again' a cart, and so, as I was a big lad, I got to take his place, and gave every satisfaction to Mr. ——. Yes, he was a contractor and a great man. I can't say as I knows how contracting's done; but it 's a bargain atween man and man. So I got on. I 'm now looked on as a stunning good workman, I can tell you.

"Well, I can't say as I thinks sweeping the streets is hard work. I 'd rather sweep two hours than shovel one. It tires one 's arms and back so, to go on shovelling. You can't change, you see, sir, and the same parts keeps getting gripped more and more. Then you must mind your eye, if you 're shovelling slop into a cart, perticler so; or some feller may run off with a complaint that he 's been splashed o' purpose. *Is* a man ever splashed o' purpose? No, sir, not as I knows on, in course not. [Laughing.] Why should he?

"The streets *must* be done as they 're done now. It always was so, and will always be so. Did I ever hear what London streets were like a thousand years ago? It 's nothing to me, but they must have been like what they is now. Yes, there was always streets, or how was people that has tin to get their coals taken to them, and how was the public-houses to get their beer? It 's talking nonsense, talking that way, a-asking sich questions." [As the scavager seemed likely to lose his temper, I changed the subject of conversation.]

"Yes," he continued, "I have good health. I never had a doctor but twice; once was for a hurt, and the t'other I won't tell on. Well, I think nightwork 's healthful enough, but I 'll not say so much for it as you may hear some on 'em say. I don't like it, but I do it when I 's obligated under a necessity. It pays one as overwork; and werry like more one 's in it, more one may be suited. I reckon no men works harder nor sich as me. O, as to poor journeymen tailors and sich like, I knows they 're stunning badly off, and many of their masters is the hardest of beggars. I have a nephew as works for a Jew slop, but I don't reckon that *work*; anybody might do it. You think not, sir? Werry well, it 's all the same. No, I won't say as I could make a veskit, but I 've sowed my own buttons on to one afore now.

"Yes, I 've heered on the Board of Health. They 've put down some night-yards, and if they goes on putting down more, what 's to become of the night-soil? I can't think what they 're up to; but if they don't touch wages, it may be all right in the end on it. I don't know that them there consarns does touch wages, but one 's natereally afeard on 'em. I could read a little when I was a child, but I can't now for want of practice, or I might know more about it. I yarns my money gallows hard, and requires support to do hard work, and if wages goes down, one 's strength goes down. I 'm a man as understands what things belongs. I was once out of work, through a mistake, for a good many weeks, perhaps five, or six or more; I larned then what short grub meant. I got a drop of beer and a crust sometimes with men as I knowed, or I might have dropped in the street. What did I do to pass my time when I was out of work? Sartinly the days seemed wery long; but I went about and called at dust-yards, till I didn't like to go too often; and I met men I know'd at tap-rooms, and spent time that way, and axed if there was any openings for work. I 've been out of collar odd weeks now and then, but when this happened, I 'd been on slack work a goodish bit, and was bad for rent three weeks and more. My rent was 2*s.* a week then; its 1*s.* 9*d.* now, and my own traps.

"No, I can't say I was sorry when I was forced to be idle that way, that I hadn't kept up my reading, nor tried to keep it up, because I couldn't then have settled down my mind to read; I know I couldn't. I likes to hear the paper read well enough, if I 's resting; but old Bill, as often volunteers to read, has to spell the hard words so, that one can't tell what the devil he 's reading about. I never heers anything about books; I never heered of Robinson Crusoe, if it wasn't once at the Wic. [Victoria Theatre]; I think there was some sich a name there. He lived on a deserted island, did he, sir, all by hisself? Well, I think, now you mentions it, I have heered on him. But one needn't believe all one hears, whether out of books or not. I don't know much good that ever anybody as I knows ever got out of books; they 're fittest for idle people. Sartinly I 've seen working people reading in coffee-shops; but they might as well be resting theirselves to keep up their strength. Do I think so? I 'm sure on it, master. I sometimes spends a few browns a-going to the play; mostly about Christmas. It 's werry fine and grand at the Wic., that 's the place I goes to most; both the pantomimers and t' other things is werry stunning. I can't say how much I spends a year in plays; I keeps no account; perhaps 5*s.* or so in a year, including expenses, sich as beer, when one goes out after a stopper on the stage. I don't keep no accounts of what I gets, or what I spends, it would be no use; money comes and it goes, and it often goes a d——d sight faster than it comes; so it seems to me, though I ain't in debt just at this time.

"I never goes to any church or chapel. Sometimes I hasn't clothes as is fit, and I s'pose I couldn't be admitted into sich fine places in my working dress. I was once in a church, but felt queer, as one does in them strange places, and never went again. They 're fittest for rich people. Yes, I 've heered about religion and about God Almighty. *What* religion have I heered on? Why, the regular religion. I 'm satisfied with what I knows and feels about it, and that 's enough about it. I came to tell you about trade and work, because Mr. —— told me it might do good; but religion hasn't nothing to do with it. Yes, Mr. ——'s a good master, and a religious man; but I 've known masters as didn't care a d—n for religion, as good as him; and so you see it comes to much the same thing. I cares nothing about politics neither; but I 'm a chartist.

"I 'm not a married man. I was a-going to be married to a young woman as lived with me a goodish bit as my housekeeper" [this he said very demurely]; "but she went to the hopping to yarn a few shillings for herself, and never came back. I heered that she 'd taken up with an Irish hawker, but I can't say as to the rights on it. Did I fret about her? Perhaps not; but I was wexed.

"I 'm sure I can't say what I spends my wages in. I sometimes makes 12*s.* 6*d.* a week, and sometimes better than 21*s.* with night-work. I suppose grub costs 1*s.* a day, and beer 6*d.*; but I keeps no accounts. I buy ready-cooked meat; often cold b'iled beef, and eats it at any tap-room. I have meat every day; mostly more than once a

day. Wegetables I don't care about, only ingans and cabbage, if you can get it smoking hot, with plenty of pepper. The rest of my tin goes for rent and baccy and togs, and a little drop of gin now and then."

The statement I have given is sufficiently explicit of the general opinions of the "regular scavagers" concerning literature, politics, and religion. On these subjects the great majority of the regular scavagers have no opinions at all, or opinions distorted, even when the facts seem clear and obvious, by ignorance, often united with its nearest of kin, prejudice and suspiciousness. I am inclined to think, however, that the man whose narrative I noted down was more dogged in his ignorance than the body of his fellows. All the intelligent men with whom I conversed, and whose avocations had made them familiar for years with this class, concurred in representing them as grossly ignorant.

This description of the scavagers' ignorance, &c., it must be remembered, applies only to the "regular hands." Those who have joined the ranks of the street-sweepers from other callings are more intelligent, and sometimes more temperate.

The system of concubinage, with a great degree of fidelity in the couple living together without the sanction of the law—such as I have described as prevalent among the costermongers and dustmen—is also prevalent among the regular scavagers.

I did not hear of habitual unkindness from the parents to the children born out of wedlock, but there is habitual neglect of all or much which a child should be taught—a neglect growing out of ignorance. I heard of two scavagers with large families, of whom the treatment was sometimes very harsh, and at others mere petting.

Education, or rather the ability to read and write, is not common among the adults in this calling, so that it cannot be expected to be found among their children. Some labouring men, ignorant themselves, but not perhaps constituting a class or a clique like the regular scavagers, try hard to procure for their children the knowledge, the want of which they usually think has barred their own progress in life. Other ignorant men, mixing only with "their own sort," as is generally the case with the regular scavagers, and in the several branches of the business, often think and say that what *they* did without their children could do without also. I even heard it said by one scavager that it wasn't right a child should ever think himself wiser than his father. A man who knew, in the way of his business as a private contractor for night-work, &c., a great many regular scavagers, "ran them over," and came to the conclusion that about four or five out of twenty could read, ill or tolerably well, and about three out of forty could write. He told me, moreover, that one of the most intelligent fellows generally whom he knew among them, a man whom he had heard read well enough, and always understood to be a tolerable writer, the other day brought a letter from his son, a soldier abroad with his regiment in Lower Canada, and requested my informant to read it to him, as "that kind of writing," although plain enough, was "beyond him." The son, in writing, had availed himself of the superior skill of a corporal in his company, so that the letter, on family matters and feelings, was written by deputy and read by deputy. Th costermongers, I have shown, when themselves un able to read, have evinced a fondness for listening to exciting stories of courts and aristocracies, and have even bought penny periodicals to have their contents read to them. The scavagers appear to have no taste for this mode of enjoying themselves; but then their leisure is far more circumscribed than that of the costermongers.

It must be borne in mind that I have all along spoken of the regular (many of them hereditary) scavagers employed by the more liberal contractors.

There are yet accounts of habitations, statements of wages, &c., &c., to be given, in connection with men working for the honourable masters, before proceeding to the scurf-traders.

The working scavagers usually reside in the neighbourhood of the dust-yards, occupying "second-floor backs," kitchens (where the entire house is sublet, a system often fraught with great extortion), or garrets; they usually, and perhaps always, when married, or what they consider "as good," have their own furniture. The rent runs from 1*s.* 6*d.* to 2*s.* 3*d.* weekly, an average being 1*s.* 9*d.* or 1*s.* 10*d.* One room which I was in was but barely furnished,—a sort of dresser, serving also for a table; a chest; three chairs (one almost bottomless); an old turn-up bedstead, a Dutch clock, with the minute-hand broken, or as the scavager very well called it when he saw me looking at it, "a stump;" an old "corner cupboard," and some pots and domestic utensils in a closet without a door, but retaining a portion of the hinges on which a door had swung. The rent was 1*s.* 10*d.*, with a frequent intimation that it ought to be 2*s.* The place was clean enough, and the scavager seemed proud of it, assuring me that his old woman (wife or concubine) was "a good sort," and kept things as nice as ever she could, washing everything herself, where "other old women lushed." The only ornaments in the room were three profiles of children, cut in black paper and pasted upon white card, tacked to the wall over the fire-place, for mantel-shelf there was none, while one of the three profiles, that of the eldest child (then dead), was "framed," with a glass, and a sort of bronze or "cast" frame, costing, I was told, 15*d.* This was the apartment of a man in regular employ (with but a few exceptions).

Another scavager with whom I had some conversation about his labours as a nightman, for he was both, gave me a full account of his own diet, which I find to be sufficiently specific as to that of his class generally, but only of the regular hands.

The diet of the regular working scavager (or nightman) seems generally to differ from that of mechanics, and perhaps of other working men, in the respect of his being fonder of salt and *strong-flavoured* food. I have before made the same remark concerning the diet of the poor generally. I do not mean, however, that the scavagers are fond of such animal food as is called "high," for I did not hear that nightmen or scavagers were more tolerant of what approached putridity than other labouring men, and, despite their calling, might sicken at the rankness of some haunches of venison; but they have a great relish for highly-salted cold boiled beef, bacon, or pork, with a saucer-full of red pickled cabbage, or dingy-looking pickled onions, or one or two big, strong, raw onions, of which most of them seem as fond as Spaniards of garlic. This sort of meat, sometimes profusely mustarded, is often eaten in the beer-shops with thick "shives" of bread, cut into big mouthfuls with a clasp pocket-knife, while vegetables, unless indeed the beer-shop can supply a plate of smoking hot potatoes, are uncared for. The drink is usually beer. The same style of eating and the same kind of food characterize the scavager and nightman, when taking his meal at home with his wife or family; but so irregular, and often of necessity, are these men's hours, that they may be said to have no homes, merely places to sleep or dose in.

A working scavager and nightman calculated for me his expenses in eating and drinking, and other necessaries, for the previous week. He had earned 15*s.*, but 1*s.* of this went to pay off an advance of 5*s.* made to him by the keeper of a beer-shop, or, as he called it, a "jerry."

	Daily.	Weekly.
	d.	*s.* *d.*
Rent of an unfurnished room		1 9
Washing (average)		3
[The man himself washed the dress in which he worked, and generally washed his own stockings.]		
Shaving (when twice a week)		1
Tobacco	1	7
[Short pipes are given to these men at the beer-shops, or public-houses which they "use."]		
Beer	4	2 4
[He usually spent more than 4*d.* a day in beer, he said, "it was only a pot;" but this week more beer than usual had been given to him in nightwork.]		
Gin	2	1 2
[The same with gin.]		
Cocoa (pint at a coffee-shop)	1½	10½
Bread (quartern loaf) (sometimes 5½*d.*)	6	3 6
Boiled salt beef (¾ lb. or ½ lb. daily, "as happened," for two meals, 6*d.* per pound, average	4	2 4
Pickles or Onions	0¼	1¾
Butter		1
Soap		1
		13 2½

Perhaps this informant was excessive in his drink. I believe he was so; the others not drinking so much regularly. The odd 9*d.*, he told me, he paid to "a snob," because he said he was going to send his half-boots to be mended.

This man informed me he was a "widdur," having lost his old 'oman, and he got all his meals at a beer or coffee-shop. Sometimes, when he was a street-sweeper by day and a nightman by night, he had earned 20*s.* to 22*s.*; and then he could have his pound of salt meat a day, for *three* meals, with a "baked tatur or so, when they was in." I inquired as to the apparently low charge of 6*d.* per pound for cooked meat, but I found that the man had stated what was correct. In many parts good boiled "brisket," fresh cut, is 7*d.* and 8*d.* per lb., with mustard into the bargain; and the cook-shop keepers (not the eating-house people) who sell boiled hams, beef, &c., in retail, but not to be eaten on the premises, vend the hard remains of a brisket, and sometimes of a round, for 6*d.*, or even less (also with mustard), and the scavagers like this better than any other food. In the brisk times my informant sometimes had "a hot cut" from a shop on a Sunday, and a more liberal allowance of beer and gin. If he had any piece of clothing to buy he always bought it at once, before his money went for other things. These were his proceedings when business was brisk.

In slacker times his diet was on another footing. He then made his supper, or second meal, for tea he seldom touched, on "fagots." This preparation of baked meats costs 1*d.* hot—but it is seldom sold hot except in the evening—and ¾*d.*, or more frequently two for 1½*d.*, cold. It is a sort of cake, roll, or ball, a number being baked at a time, and is made of chopped liver and lights, mixed with gravy, and wrapped in pieces of pig's caul. It weighs six ounces, so that it is unquestionably a cheap, and, to the scavager, a savoury meal; but to other nostrils its odour is not seductive. My informant regretted the capital fagots he used to get at a shop when he worked in Lambeth; superior to anything he had been able to meet with on the Middiesex side of the water. Or he dined off a saveloy, costing 1*d.*, and bread; or bought a pennyworth of strong cheese, and a farthing's worth of onions. He would further reduce his daily expenditure on cocoa (or coffee sometimes) to 1*d.*, and his bread to three-quarters of a loaf. He ate, however, in average times, a quarter of a quartern loaf to his breakfast (sometimes buying a halfpennyworth of butter), a quarter or more to his dinner, the same to his supper, and the other, with an onion for a relish, to his beer. He was a great bread eater, he said; but sometimes, if he slept in the daytime, half a loaf would "stand over to next day." He was always hungriest when at work among the street-mud or night-soil, or when he had finished work.

On my asking him if he meant that he partook of the meals he had described daily, "he answered "no," but that was *mostly* what he had; and if he bought a bit of cold boiled, or

even roast pork, "what offered cheap," the expense was about the same. When he was drinking, and he did "make a break sometimes," he ate nothing, and "wasn't inclined to," and he seemed rather to plume himself on this, as a point of economy. He had tasted fruit pies, but cared nothing for them; but liked four penn'orth of a hot meat or giblet pie on a Sunday. Batter-pudding he only liked if smoking hot; and it was "uncommon improved," he said, "with an ingan!" Rum he preferred to gin, only it was dearer, but most of the scavagers, he thought, liked Old Tom (gin) best; but "they was both good."

Of the drinking of these men I heard a good deal, and there is no doubt that some of them tope hard, and by their conduct evince a sort of belief that the great end of labour is beer. But it must be borne in mind that if inquiries are made as to the man best adapted to give information concerning any rude calling (especially), some talkative member of the body of these working men, some pot-house hero who has pursuaded himself and his ignorant mates that he is an oracle, is put forward. As these men are sometimes, from being trained to, and long known in their callings, more prosperous than their fellows, their opinions seem ratified by their circumstances. But in such cases, or in the appearance of such cases, it has been my custom to make subsequent inquiries, or there might be frequent misleadings, were the statements of these men taken as typical of the feelings and habits of the *whole* body. The statement of the working scavager given under this head is unquestionably typical of the character of a portion of his co-workers, and more especially of what was, and in the sort of hereditary scavagers I have spoken of *is*, the character of the regular hands. There are now, however, many checks to prolonged indulgence in "lush," as every man of the ruder street-sweeping class *will* call it. The contractors must be served regularly; the most indulgent will not tolerate any unreasonable absence from work, so that the working scavagers, at the jeopardy of their means of living, must leave their carouse at an hour which will permit them to rise soon enough in the morning.

The beer which these men imbibe, it should be also remembered, they regard as a proper part of their diet, in the same light, indeed, as they regard so much bread, and that among them the opinion is almost universal, that beer is necessary to "keep up their strength;" there are a few teetotallers belonging to the class; one man thought he *knew* five, and had *heard* of five others.

I inquired of the landlord of a beer-shop, frequented by these men, as to their potations, but he wanted to make it appear that they took a half-pint, *now and then*, when thirsty! He was evidently tender of the character of his customers. The landlord of a public house also frequented by them informed me that he really could not say what they expended in beer, for labourers of all kinds "used his tap," and as all tap-room liquor was paid for on delivery in his and all similar establishments, he did not know the quantity supplied to any particular class. He was satisfied these men, as a whole, drank less than they did at one time; though he had no doubt some (he seemed to know no distinctions between scavagers, dustmen, and nightmen) spent 1*s.* a day in drink. He knew one scavager who was dozing about not long since for nearly a week, "sleepy drunk," and the belief was that he had "found something." The absence of all accounts prevents my coming to anything definite on this head, but it seems positive that these men drink less than they did. The landlord in question thought the statement I have given as to diet and drink perfectly correct for a regular hand in good earnings. I am assured, however, and it is my own opinion, after long inquiry, that one-third of their earnings is spent in drink.

Of the Influence of Free Trade on the Earnings of the Scavagers.

As regards the influence of Free Trade upon the scavaging business, I could gain little or no information from the body of street-sweepers, because they have never noticed its operation, and the men, with the exception of such as have sunk into street-sweeping from better-informed conditions of life, know nothing about it. Among *all*, however, I have heard statements of the blessing of cheap bread; always cheap *bread*. "There 's nothing like bread," say the men, "it 's not all poor people can get meat; but they *must* get bread." Cheap food all labouring men pronounce a blessing, as it unquestionably is, but "somehow," as a scavager's carman said to me, "the thing ain't working as it should."

In the course of the present and former inquiries among unskilled labourers, street-sellers, and costermongers, I have found the great majority of the more intelligent declare that Free Trade had not worked well for them, because there were more labourers and more street-sellers than were required, for each man to live by his toil and traffic, and because the numbers increased yearly, and the demand for their commodities did not increase in proportion. Among the ignorant, I heard the continual answers of, "I can't say, sir, what it 's owing to, that I 'm so bad off;" or, "Well, I can't tell anything about that."

It is difficult to state, however, without positive inquiry, whether this extra number of hands be due to diminished employment in the agricultural districts, since the repeal of the Corn Laws, or whether it be due to the insufficiency of occupation generally for the increasing population. One thing at least is evident, that the increase of the trades alluded to cannot be said to arise directly from diminished agricultural employment, for but few farm labourers have entered these businesses since the change from Protection to Free Trade. If, therefore, Free-Trade principles *have* operated injuriously in reducing the work of the unskilled labourers, street-sellers, and the poorer classes generally, it can have done so only *indirectly*; that is to say, by throwing a mass of displaced country labour into the towns, and so

displacing other labourers from their ordinary occupations, as well as by decreasing the wages of working-men generally. Hence it becomes almost impossible, I repeat, to tell whether the increasing difficulty that the poor experience in living by their labour, is a consequence or merely a concomitant of the repeal of the Corn Laws; if it be a consequence, of course the poor are no better for the alteration; if, however, it be a coincidence rather than a necessary result of the measure, the circumstances of the poor are, of course, as much improved as they would have been impoverished provided that measure had never become law. I candidly confess I am as yet without the means of coming to any conclusion on this part of the subject.

Nor can it be said that in the scavagers' trade wages have in any way declined since the repeal of the Corn Laws; so that were it not for the difficulty of obtaining employment among the *casual* hands, this class must be allowed to have been considerable gainers by the reduction in the price of food, and even as it is, the *constant* hands must be acknowledged to be so.

I will now endeavour to reduce to a tabular form such information as I could obtain as to the expenditure of the labourer in scavaging before and after the establishment of Free Trade. I inquired, the better to be assured of the accuracy of the representations and accounts I received from labourers, the price of meat then and now. A butcher who for many years has conducted a business in a populous part of Westminster and in a populous suburb, supplying both private families with the best joints, and the poor with their "little bits" their "block ornaments" (meat in small pieces exposed on the chopping-block), their purchases of liver, and of beasts' heads. In 1845, the year I take as sufficiently prior to the Free-Trade era, my informant from his recollection of the state of his business and from consulting his books, which of course were a correct guide, found that for a portion of the year in question, mutton was as much as 7½*d.* per lb. (Smithfield prices), now the same quality of meat is but 5*d.* This, however, was but a temporary matter, and from causes which sometimes are not very ostensible or explicable. Taking the butcher's trade that year as a whole, it was found sufficiently conclusive, that meat was generally 1*d.* per lb. higher then than at present. My informant, however, was perfectly satisfied that, although situated in the same way, and with the same class of customers, he did *not* sell so much meat to the poor and labouring classes as he did five or six years ago, *he believed not by one-eighth*, although perhaps "pricers of his meat" among the poor were more numerous. For this my informant accounted by expressing his conviction that the labouring men spent their money in drink more than ever, and were a longer time in recovering from the effects of tippling. This supposition, from what I have observed in the course of the present inquiry, is negatived by facts.

Another butcher, also supplying the poor, said they bought less of him; but he could not say exactly to what extent, perhaps an eighth, and he attributed it to less work, there being no railways about London, fewer buildings, and less general employment. About the wages of the labourers he could not speak as influencing the matter. From this tradesmen also I received an account that meat generally was 1*d.* per lb. higher at the time specified. Pickled Australian beef was four or five years ago very low—3*d.* per lb.—salted and prepared, and "swelling" in hot water, but the poor "couldn't eat the stringy stuff, for it was like pickled ropes." "It's better now," he added, "but it don't sell, and there 's no nourishment in such beef."

But these tradesmen agreed in the information that poor labourers bought less meat, while one pronounced Free Trade a blessing, the other declared it a curse. I suggested to each that cheaper fish might have something to do with a smaller consumption of butcher's meat, but both said that cheap fish was the great thing for the Irish and the poor needle-women and the like, who were never at any time meat eaters.

From respectable bakers I ascertained that bread might be considered 1*d.* a quartern loaf dearer in 1845 than at present. Perhaps the following table may throw a fuller light on the matter. I give it from what I learned from several men, who were without accounts to refer to, but speaking positively from memory; I give the statement per week, as for a single man, without charge for the support of a wife and family, and without any help from other resources.

	Before Free Trade.	After Free Trade.	Saving since Free Trade.
Rent . . .	1*s.* 6*d.*	1*s.* 6*d.*	...
Bread (5 loaves)	2*s.* 11*d.*	2*s.* 6*d.*	5*d*
Butter (½ lb.) .	5*d.*	5*d.*	...
Tea (2 oz.) . .	8*d.*	8*d.*	...
Sugar (½ lb.) .	3*d.*	2*d.*	1*d.*
Meat (3 lb.) .	1*s.* 6*d.*	1*s.* 3*d.*	3*d.*
Bacon (1 lb.) .	5*d.*	5*d.*	...
Fish (a dinner a day, 6 days)	3*d.*, or 1*s.* 6*d.* weekly.	2*d.*, or 1*s.* weekly.	6*d.*
Potatoes or Vegetables (½*d.* a day) . .	3½*d.*	3½*d.*	...
Beer (pot) . .	3½*d.*	3½*d.*	...
Total saving, per week, since Free Trade			1*s.* 3*d.*

In butter, bacon, potatoes, &c., and beer, I could hear of no changes, except that bacon might be a trifle cheaper, but instead of a good quality selling better, although cheaper, there was a demand for an inferior sort.

In the foregoing table the weekly consumption of several necessaries is given, but it is not to be understood that one man consumes them all in a week; they are what may generally be consumed when such things are in demand by the poor, one week after another, or one day after another, forming an aggregate of weeks.

Thus. Free Trade and cheap provisions are an unquestionable benefit, if unaffected by drawbacks, to the labouring poor.

The above statement refers only to a fully employed hand.

The following table gives the change since Free Trade in the earnings of casual hands, and relates to the past and the present expenditure of a scavager. The man, who was formerly a house painter, said he could bring me 50 men similarly circumstanced to himself.

In 1845, per Week.			In 1851, per Week.		
	s.	*d.*		*s.*	*d.*
Rent . .	1	4	Rent . .	1	8
5 loaves . .	2	11	4 loaves . .	2	0
Butter . .	0	5	Butter . .	0	5
Tea . . .	0	6	Tea . . .	0	5
Meat (3 lbs.) .	1	6	Meat (3 lbs.) .	1	0
Potatoes . .	0	3	Potatoes . .	0	2
Beer (a pot) .	0	4	Beer (a pint) .	0	2
	7	3		5	10

Here, then, we find a positive saving in the expenditure of 1*s.* 5*d.* per week in this man's wages, since the cheapening of food.

His earnings, however, tell a different story.

	1845.		1851.	
	s.	*d.*	*s.*	*d.*
Earnings of 6 days . .	15	0		
Ditto 3 days . .			7	6
Weekly Income . . .	15	0	7	6
Expenditure	7	3	5	10
Difference . . .	7	9	1	8

Thus we pereeive that the beneficial effects of cheapness are defeated by the dearth of employment among labourers.

It is impossible to come to *precise* statistics in this matter, but all concurrent evidence, as regards the unskilled work of which I now treat, shows that labour is attainable at almost any rate.

Another drawback to the benefits of cheap food I heard of first in my inquiries (for the Letters on Labour and the Poor, in the *Morning Chronicle*) among the boot and shoemakers—their rents had been raised in consequence of their landlords' property having been subjected to the income tax. Numbers of large houses are now let out in single rooms, in the streets off Tottenham-court-road, and near Golden-square, as well as in many other quarters—to men, who, working for West-end tradesmen, must live, for economy of time, near the shops from which they derive their work. Near and in Cunningham-street and other streets, two men, father and son, rent upwards of 30 houses, the whole of which they let out in one or two rooms, it is believed at a very great profit; in fact they live by it.

The rent of these houses, among many others, was raised when the income tax was imposed, the sub-lettors declaring, with what truth no one knew, that the rents were raised to them. It is common enough for capitalists to fling such imposts on the shoulders of the poor, and I heard scavagers complain, that every time they had to change their rooms, they had either to pay more rent by 2*d.* or 3*d.* a week, or put up with a worse place. One man who lived at the time of the passing of the Income Tax Bill in Shoe-lane, found his rent raised suddenly 3*d.* a week, a non-resident landlord or agent calling for it weekly. He was told that the advance was to meet the income tax. "I know nothing about what income tax means," he said, "but it 's some ——roguery as is put on the poor." I heard complaints to the same purport from several working scavagers, and the lettors of rooms are the most exacting in places crowded with the poor, and where the poor think or feel they must reside "to be handy for work." What connection there may be between the questions of Free Trade and the necessity of the income tax, it is not my business now to dilate upon, but it is evident that the circumstances of the country are not sufficiently prosperous to enable parliament to repeal this "temporary" impost.

From a better informed class than the scavagers, I might have derived data on which to form a calculation from account books, &c., but I could hear of none being kept. I remember that a lady's shoemaker told me that the weekly rents of the ten rooms in the house in which he lived were 4*s.* 3*d.* higher than before the income tax, which "came to the same thing as an extra penny on over 50 loaves a week." It is certain that the great tax-payers of London are the labouring classes.

I have endeavoured to ascertain the facts in connection with this complex subject in as calm and just a manner as possible, leaning neither to the Protectionist nor the Free-Trade side of the question, and I must again in honesty acknowledge, that to the *constant* hands among the scavagers and dustmen of the metropolis, the repeal of the Corn Laws appears to have been an unquestionable benefit.

I shall conclude this exposition of the condition and earnings of the working scavagers employed by the more honourable masters, with an account of the average income and expenditure of the better-paid hands (regular and casual, as well as single and married), and first, of the unmarried regular hand.

The following is an estimate of the income and expenditure of an *unmarried* operative scavager *regularly* employed, working for a large contractor:—



JACK BLACK, HER MAJESTY'S RATCATCHER.

From a Photograph.

WEEKLY INCOME.	£	s.	d.
Constant Wages.			
Nominal weekly wages	0	16	0
Perquisites	0	2	0
Actual weekly wages	0	18	0

WEEKLY EXPENDITURE.	£	s.	d.
Rent	0	2	0
Washing and mending	0	0	10
Clothes, and repairing ditto	0	0	10
Butcher's meat	0	3	6
Bacon	0	0	3
Vegetables	0	0	4
Cheese	0	0	4
Beer	0	3	0
Spirits	0	1	0
Tobacco	0	0	10½
Butter	0	0	7½
Sugar	0	0	4
Tea	0	0	3
Coffee	0	0	3
Fish	0	0	4
Soap	0	0	2
Shaving	0	0	1
Fruit	0	0	4
Keep of 2 dogs	0	0	6
Amusements, as skittles, &c.	0	1	9
	0	18	0

The subjoined represents the income of an *unmarried* operative scavager *casually* employed by a small master scavager six months during the year, at 15*s.* a week, and 20 weeks at sand and rubbish carting, at 12*s.* a week.

Casual Wages.	£	s.	d.
Nominal weekly wages at scavaging, 16*s.* for 26 weeks during the year	20	16	0
Perquisites, 2*s.* for 26 weeks during the year	2	12	0
Actual weekly wages for 26 weeks during the year	0	16	0
Nominal and actual weekly wages at rubbish carting, 12*s.* for 20 weeks more during the year	12	0	0
Average casual or constant weekly wages throughout the year	0	15	4½

The expenditure of this man when in work was nearly the same as that of the regular hand; the main exceptions being that his rent was 1*s.* instead of 2*s.*, and no dogs were kept. When in work he saved nothing, and when out of work lived as he could.

The *married* scavagers are differently circumstanced from the *unmarried;* their earnings are generally increased by those of their family.

The labour of the wives and children of the scavagers is not unfrequently in the capacity of sifters in the dust-yards, where the wives of the men employed by the contractors have the preference, and in other but somewhat rude capacities. One of their wives I heard of as a dresser of sheep's trotters; two as being among the most skilful dressers of tripe for a large shop; one as "a cat's-meat seller" (her father's calling); but I still speak of the regular scavagers—I could not meet with one woman "working a slop-needle." One, indeed, I saw who was described to me as a "feather dresser to an out-and-out negur," but the woman assured me she was neither badly paid nor badly off. Perhaps by such labour, as an average on the part of the wives, 9*d.* a day is cleared, and 1*s.* "on tripe and such like." Among the "casual's" wives there are frequent instances of the working for slop shirt-makers, &c., upon the coarser sorts of work, and at "starvation wages," but on such matters I have often dwelt. I heard from some of these men that it was looked upon as a great thing if the wife's labour could clear the week's rent of 1*s.* 6*d.* to 2*s.*

The following may be taken as an estimate of the income and outlay of a *better paid and fully* employed operative scavager, with his wife and two children:—

WEEKLY INCOME OF THE FAMILY.	£	s.	d.
Nominal weekly wages of man, 16*s.*			
Perquisites, 2*s.*			
Actual weekly wages of man	0	18	0
Nominal weekly wages of wife, 6*s.*			
Perquisites in coal and wood, 1*s.* 4*d.*			
Actual weekly wages of wife	0	7	4
Nominal weekly wages of boy	0	3	0
	1	8	4

WEEKLY EXPENDITURE OF THE FAMILY.	£	s.	d.
Rent	0	3	0
Candle	0	0	3½
Bread	0	2	1
Butter	0	0	10
Sugar	0	0	8
Tea	0	0	10
Coffee	0	0	4
Butcher's meat	0	3	6
Bacon	0	1	2
Potatoes	0	0	10
Raw fish	0	0	4
Herrings	0	0	4
Beer (at home)	0	2	0
,, (at work)	0	1	6
Spirits	0	1	0
Cheese	0	0	6
Flour	0	0	3
Suet	0	0	3
Fruit	0	0	3
Rice	0	0	0½
Soap	0	0	6
Starch	0	0	0½
Soda and blue	0	0	1
Dubbing	0	0	0½
Clothes for the whole family, and repairing ditto	0	2	0
Boots and shoes for ditto, ditto	0	1	6
Milk	0	0	7
Salt, pepper, and mustard	0	0	1
Tobacco	0	0	9
Wear and tear of bedding, crocks, &c.	0	0	3
Schooling for girl	0	0	3
Baking Sunday's dinner	0	0	2
Mangling	0	0	3
Amusements and sundries	0	1	0
	1	7	6

The subjoined, on the other hand, gives the income and outlay of a *casually employed* operative scavager (*better paid*) with his wife and two boys in constant work:—

WEEKLY INCOME OF THE FAMILY.	£	s.	d.
Nominal wages of man at scavaging for six months, at 16*s.* weekly.			
Ditto at rubbish carting three months, 12*s.* weekly.			
Average casual wages throughout the year	0	15	0
Nominal weekly wages of wife, 6*s.* (constant).			
Perquisites in wood and coal, 1*s* 4*d.*			
Actual weekly wages of wife	0	7	4

WEEKLY EXPENDITURE OF THE FAMILY.	£	s.	d.
Rent	0	3	6
Candle	0	0	6
Soap	0	0	4
Soda, starch, and blue	0	0	2½
Bread	0	2	6
Butter	0	0	9
Dripping	0	0	5
Sugar	0	0	3
Tea	0	0	3
Coffee	0	0	6
Butcher's meat	0	3	6
Bacon	0	1	0
Potatoes	0	1	0
Cheese	0	0	6
Raw fish	0	0	4
Herrings	0	0	3
Fried fish	0	0	3
Flour	0	0	3
Suet	0	0	2

	£	s.	d.
Nominal weekly wages of two boys, 7s. the two			
Perquisites for running on messages, 1s. the two (constant).			
Actual weekly wages of the two boys.....	0	8	0
	1	10	4

	£	s.	d.
Fruit	0	0	6
Rice.....	0	0	1½
Beer (at home) .	0	2	0
,, (at work) .	0	1	9
Spirits.....	0	1	0
Tobacco.....	0	0	9
Pepper, salt, and mustard.....	0	0	1
Milk	0	0	7
Clothes for man, wife, and family.....	0	2	0
Repairing ditto for ditto	0	0	6
Boots and shoes for ditto.....	0	1	6
Repairing ditto for ditto.....	0	0	8
Wear and tear of bedding, crocks, &c.	0	0	3
Baking Sunday's dinner.....	0	0	2
Mangling	0	0	2
Amusements, sundries, &c..	0	1	0
	1	10	4

Of the Worse Paid Scavagers, or those working for Scurf* Employers.

There are in the scavagers' trade the same distinct classes of employers as appertain to all other trades; these consist of:—

1. The large capitalists.
2. The small capitalists.

As a rule (with some few honourable and dishonourable exceptions, it is true) I find that the large capitalists in the several trades are generally the employers who pay the higher wages, and the small men those who pay the lower. The reasons for this conduct are almost obvious. The power of the capital of the "large master" must be contended against by the small one; and the usual mode of contention in all trades is by reducing the wages of the working men. The wealthy master has, of course, many advantages over the poor one. (1) He can pay ready money, and obtain discounts for immediate payment. (2) He can buy in large quantities, and so get his stock cheaper. (3) He can purchase what he wants in the best markets, and that *directly* of the producer, without the intervention and profit of the middleman. (4) He can buy at the best times and seasons; and "lay in" what he requires for the purposes of his trade long before it is needed, provided he can obtain it "a bargain." (5) He can avail himself of the best tools and mechanical contrivances for increasing the productiveness or "economizing the labour" of his workmen. (6) He can build and arrange his places of work upon the most approved plan and in the best situations for the manufacture and distribution of the commodities. (7) He can employ the highest talent for the management or design of the work on which he s engaged. (8) He can institute a more effective system for the surveillance and checking of his workmen. (9) He can employ a large number of hands, and so reduce the secondary expenses (of firing, lighting, &c.) attendant upon the work, as well as the number of superintendents and others engaged to "look after" the operatives. (10) He can resort to extensive means of making his trade known. (11) He can sell cheaper (even if his cost of production be the same), from employing a larger capital, and being able to "do with" a less rate of profit. (12) He can afford to give credit, and so obtain customers that he might otherwise lose.

The small capitalist, therefore, enters the field of competition by no means equally matched against his more wealthy rival. What the little master wants in "substance," however, he generally endeavours to make up in cunning. If he cannot buy his materials as cheap as a trader of larger means, he uses an inferior or cheaper article, and seeks by some trick or other to palm it off as equal to the superior and dearer kind. If the tools and appliances of the trade are expensive, he either transfers the cost of providing them to the workmen, or else he charges them a rent for their use; and so with the places of work, he mulcts their wages of a certain sum per week for the gas by which they labour, or he makes them do their work at home, and thus saves the expense of a workshop; and, lastly, he pays his men either a less sum than usual for the same quantity of labour, or exacts a greater quantity from them for the same sum of money. By one or other of these means does the man of limited capital seek to counterbalance the advantages which his more wealthy rival obtains by the possession of extensive "resources." The large employer is enabled to work cheaper by the sheer force of his larger capital. He reduces the cost of production, not by employing a cheaper labour, but by "economizing the labour" that he does employ. The small employer, on the other hand, seeks to keep pace with his larger rival, and strives to work cheap, not by "the economy of labour" (for this is hardly possible in the small way of production), but by reducing the wages of his labourers. Hence the *rule* in almost every trade is that the smaller capitalists pay a lower rate of wages. To this, however, there are many honourable exceptions among the small masters, and many as dishonourable among the larger ones in different trades. Messrs. Moses, Nicoll, and Hyams, for instance, are men who certainly cannot plead deficiency of means as an excuse for reducing the ordinary rate of wages among the tailors.

Those employers who seek to reduce the prices of a trade are known technologically as "*cutting employers*," in contradistinction to the standard employers, or those who pay their workpeople and sell their goods at the ordinary rates.

Of "cutting employers" there are several kinds, differently designated, according to the different means by which they gain their ends. These are:—

1. "*Drivers*," or those who compel the men in their employ to do more work for the same wages; of this kind there are two distinct varieties:—
   a. *The long-hour masters*, or those who make the men work longer than the usual hours of labour.
   b. *The strapping masters*, or those who make the men (by extra supervision) "strap" to their work, so as to do a greater quantity of labour in the usual time.
2. *Grinders*, or those who compel the workmen (through their necessities) to do the same amount of work for less than the ordinary wages.

The reduction of wages thus brought about may or may not be attended with a corresponding reduction in the price of the goods to the public; if the price of the goods be reduced in proportion to the reduction of wages, the consumer, of course, is benefited at the expense of the producer. When it is not followed by a like diminution in the selling price of the article, and the wages of which the men are mulct go to increase the profits of the capitalist, the employer alone is benefited, and is then known as a "*grasper*."

Some cutting tradesmen, however, endeavour to undersell their more wealthy rivals, by reducing the ordinary rate of profit, and extending their business on the principle of small profits and quick returns, the "nimble ninepence" being considered "better than the slow shilling." Such traders, of course, cannot be said to reduce wages directly—indirectly, however, they have the same effect, for in reducing prices, other traders, ever ready to compete with them, but, unwilling, or perhaps unable, to accept less than the ordinary rate of profit, seek to attain the same cheapness by diminishing the cost of production, and for this end the labourers' wages are almost invariably reduced.

Such are the characteristics of the cheap employers in all trades. Let me now proceed to point out the peculiarities of what are called the scurf employers in the scavaging trade.

The insidious practices of capitalists in other callings, in reducing the hire of labour, are not unknown to the scavagers. The evils of which these workmen have to complain under scurf or slop masters are:—

1. *Driving*, or being compelled to do more work for the *same pay*.
2. *Grinding*, or being compelled to do the same or a greater amount of work for *less pay*.

1. Under the first head, if the employment be at all regular, I heard few complaints, for the men seemed to have learned to look upon it as an inevitable thing, that one way or other they *must* submit, by the receipt of a reduced wage, or the exercise of a greater toil, to a deterioration in their means.

The system of driving, or, in other words, the means by which extra work is got out of the men for the same remuneration, in the scavagers' trade is as follows:—some employers cause their scavagers after their day's work in the streets, to load the barges with the street and house-collected manure, without any additional payment; whereas, among the more liberal employers, there are bargemen who are employed to attend to this department of the trade, and if their street scavagers *are* so employed, which is not very often, it is computed as extra work or "over hours," and paid for accordingly. This same indirect mode of reducing wages (by getting more work done for the same pay) is seen in many piece-work callings. The slop boot and shoe makers pay the same price as they did six or seven years ago, but they have "knocked off the extras," as the additional allowance for greater than the ordinary height of heel, and the like. So the slop Mayor of Manchester, Sir Elkanah Armitage, within the last year or two, sought to obtain from his men a greater length of "cut" to each piece of woven for the same wages.

Some master scavagers or contractors, moreover, reduce wages by making their men do what is considered the work of "a man and a half" in a week, without the recompense due for the labour of the "half" man's work; in other words, they require the men to condense eight or nine days' labour into six, and to be paid for the six days only; this again is usual in the strapping shops of the carpenters' trade.

Thus the class of street-sweepers do not differ materially in the circumstances of their position from other bodies of workers skilled and unskilled.

Let me, however, give a practical illustration of the loss accruing to the working scavagers by the *driving* method of reducing wages.

A is a large contractor and a driver. He employs 16 men, and pays them the "regular wages" of the honourable trade; but, instead of limiting the hours of labour to 12, as is usual among the better class of employers, he compels each of his men to work at the least 16 hours per diem, which is one-third more, and for which the men should receive one-third more wages. Let us see, therefore, how much the men in his employ lose annually by these means.

	Sum received per Annum.	Sum they should receive.	Difference.
	£ s.	£ s.	£ s
4 Gangers, at 18s. a week, for 9 months in the year.....	140 8	210 12	70 4
12 Sweepers, at 16s. a week, for 9 months in the year.....	374 8	499 4	124 16
Total wages per Ann.	514 16	709 16	195 0

Here, then, we find the annual loss to these men through the system of "driving" to be 195*l.* per annum.

But A is not the only driver in the scavagers' trade; out of the 19 masters having contracts for scavaging, as cited in the table given at pp. 213, 214, there are 4 who are regular drivers; and, making the same calculation as above we have the following results:—

* The Saxon *Sceorfa*, which is the original of the English Scurf, means a scab, and scab is the term given to the "cheap men" in the shoemaking trade. Scab is the root of our word *Shabby*; hence Scurf and Scab, deprived of their offensive associations, both mean shabby fellows.

	Sum received per Annum.	Sum they should receive.	Difference.
26 Gangers, at 18s. a week, for 9 months in the year.....	£ s. 912 12	£ s. 1216 16	£ s. 304 4
80 Sweepers, at 16s. a week, for 9 months in the year.....	2496 0	3328 0	832 0
	3408 12	4544 16	1136 4

Thus we find that the gross sum of which the men employed by these drivers are deprived, is no less than 1136*l.* per annum.

2. The second or indirect mode of reducing the wages of the men in the scavaging trade is by *Grinding;* that is to say, by making the men do the same amount of work for less pay. It requires nothing but a practical illustration to render the injury of this particular mode of reduction apparent to the public.

B is a master scavager (a small contractor, though the instances are not confined to this class), and a "*Grinder.*" He pays 1*s.* a week less than the "regular wages" of the honourable trade. He employs six men; hence the amount that the workmen in his pay are mulct of every year is as follows:—

	Sum received per Annum.	Sum they should receive.	Difference.
6 men, at 15s. a week, for 9 months in the year.....	£ s. 175 10	£ s. 187 4	£ s. 11 14

Here the loss to the men is 11*l.* 14*s.* per annum, and there is but one such grinder among the 19 master scavagers who have contracts at present.

3. The third and last method of reducing the earnings of the men as above enumerated, is by a combination of both the systems before explained, viz., by *grinding* and *driving* united, that is to say, by not only paying the men a smaller wage than the more honourable masters, but by compelling them to work longer hours as well. Let me cite another illustration from the trade.

C is a large contractor, and both a grinder and driver. He employs 28 men, and not only pays them less wages, but makes them work longer hours than the better class of employers. The men in his pay, therefore, are annually mulct of the following sums.

SUMS THE MEN RECEIVE.	£ s. d.	SUMS THEY SHOULD RECEIVE.	£ s. d.
7 Gangers, at 16s. a week, for 9 months in the year.....	218 8 0	7 Gangers, at 18s. a week, for 9 months in the year.....	245 14 0
21 Sweepers, at 15s. a week....	614 5 0	Over work, 4 hours per day.	61 8 6
	832 13 0	21 Sweepers, at 16s. a week, 12 hours a day ..	655 4 0
		Over work, 4 hours a day ..	163 6 0
			1125 12 6

Here the annual loss to the men employed by this one master is 292*l.* 19*s.* 6*d.*

Among the 19 master scavagers there are altogether 7 employers who are both grinders and drivers. These employ among them no less than 111 hands; hence, the gross amount of which their workmen are yearly defrau—no, let me adhere to the principles of political economy, and say deprived—is as under:—

SUM THE MEN ANNUALLY RECEIVE.	£ s. d.	SUM THEY SHOULD ANNUALLY RECEIVE.	£ s. d.
28 Gangers, at 16s. a week, employed for 9 months in the year.....	873 12 0	28 Gangers, at 18s. a week (12 hours a day), for 9 months in the year	982 16 0
83 Sweepers, at 15s. a week, employed for 9 months in the year	2427 15 0	Over work, 4 hours per day	245 14 0
	3301 7 0	83 Sweepers, at 16s. a week, 12 hours a day	2589 12 0
		Over work, 4 hours per day	647 8 0
			4465 10 0

Here we perceive the gross loss to the operatives from the system of combined grinding and driving to be no less than 1164*l.* 3*s.* per annum.

Now let us see what is the aggregate loss to the working men from the several modes of reducing their wages as above detailed.

	£. s. d.
Loss to the working scavagers by the "driving" of employers.	1136 4 0
Ditto by the "grinding" .	11 14 0
Ditto by the "grinding *and* driving" of employers . .	1164 3 0
Total loss to the working scavagers per annum . . .	2312 1 0

Now this is a large sum of money to be wrested annually out of the workmen—that it is so wrested is demonstrated by the fact cited at p. 174 in connection with the dust trade.

The wages of the dustmen employed by the large contractors, it is there stated, have been increased within the last seven years from 6*d.* to 8*d.* per load. This increase in the rate of remuneration was owing to complaints made by the men to the Commissioners of Sewers, that they were not able to live on their earnings; an inquiry took place, and the result was that the Commissioners decided upon letting the contracts only to such parties as would undertake to pay a fair price to their workmen. The contractors accordingly increased the remuneration of the labourers as mentioned.

Now political economy would tell us that the Commissioners *interfered* with wages in a most reprehensible manner—preventing the natural operation of the law of Supply and Demand; but both justice and benevolence assure us that the Commissioners did perfectly right. The masters in the dust trade were forced to make good to the men what they had previously taken from them, and the same should be done in the scavaging trade—the contracts should be let only to those masters who will undertake to pay the regular rate of wages, and employ their men only the regular hours; for by such means, and by such means alone, can *justice* be done to the operatives.

This brings me to the *cause of the reduction of wages in the scavaging trade.* The scurf trade, I am informed, has been carried on among the master scavagers upwards of 20 years, and arose partly from the contractors having *to pay* the parishes for the house-dust and street-sweepings, brieze and street manure at that period often selling for 30*s.* the chaldron or load. The demand for this kind of manure 20 years ago was so great, that there was a competition carried on among the contractors themselves, each out-bidding the other, so as to obtain the right of collecting it; and in order not to lose anything by the large sums which they were induced to bid for the contracts, the employers began gradually to "grind down" their men from 17*s.* 6*d.* (the sum paid 20 years back) to 17*s.* a week, and eventually to 15*s.*, and even 12*s.* weekly. This is a curious and instructive fact, as showing that even an increase of prices will, *under the contract system,* induce a reduction of wages. The greed of traders becomes, it appears, from the very height of the prices, proportionally intensified, and from the desire of each to reap the benefit, they are led to outbid one another to such an extent, and to offer such large premiums for the right of appropriation, as to necessitate a reduction of every possible expense in order to make any profit at all upon the transaction. Owing, moreover, to the surplus labour in the trade, the contractors were enabled to offer any premiums and reduce wages as they pleased; for the casually-employed men, when the wet season was over, and their services no longer required, were continually calling upon the contractors, and offering their services at 2*s.* and 3*s.* less per week than the regular hands were receiving. The consequence was, that five or six of the master scavagers began to reduce the wages of their labourers, and since that time the number has been gradually increasing, until now there are no less than 21 scurf masters (8 of whom have no contracts) out of the 34 contractors; so that nearly three-fifths of the entire trade belong to the *grinding* class. Within the last seven or eight years, however, there has been an increase of wages in connection with the city operative scavagers. This was owing mainly to the operatives complaining to the Commissioners that they could not live upon the wages they were then receiving—12*s.* and 14*s.* a week. The circumstances inducing the change, I am informed, were as follows:—one of the gangers asked a tradesman in the city to give the street-sweepers "something for beer," whereupon the tradesman inquired if the men could not find beer out of their wages, and on being assured that they were receiving only 12*s.* a week, he had the matter brought before the Board. The result was, that the wages of the operatives were increased from 12*s.* to 15*s.* and 16*s.* weekly, since which time there has been neither an increase nor a decrease in their pay. The cheapness of provisions seems to have caused no reduction with them.

Now there are but two "efficient causes" to account for the reduction of wages among the scurf employers in the scavagers' trade:—(1) The employers may diminish the pay of their men from a disposition to "*grind*" out of them an inordinate rate of profit. (2) The price paid for the work may be so reduced that, consistent with the ordinary rate of profit on capital, and remuneration for superintendence, greater wages cannot be paid. If the first be the fact, then the employers are to blame, and the parishes should follow the example of the Commissioners of Sewers, and let the work to those contractors only who will undertake to pay the "regular wages" of the honourable trade; but if the latter be the case, as I strongly suspect it is, though some of the masters seem to be more "grasping" than the rest—but in the paucity of returns on this matter, it is difficult to state positively whether the price paid for the labour of the working scavager is in all the parishes proportional to the price paid to the employers for the work (a most important fact to be solved)—if, however, I repeat, the decrease of the wages be mainly due to the decrease in the sums given for the performance of the contract, then the parishes are to blame for seeking to get their work done *at the expense of the working men.*

The contract system of work, I find, necessarily tends to this diminution of the men's earnings in a trade. Offer a certain quantity of work to the lowest bidder, and the competition will assuredly be maintained at *the operative's expense.* It is idle to expect that, as a general rule, traders will take less than the ordinary rate of profit. Hence, he who underbids will usually be found to underpay. This, indeed, is almost a necessity of the system, and one which the parochial functionaries more than all others should be guarded against—seeing that a decrease of the operative's wages can but be attended with an increase of the very paupers, and consequently of the parochial expenses, which they are striving to reduce.

A labourer, in order to be self-supporting and avoid becoming a "burden" on the parish, requires something more than bare subsistence-money in remuneration for his labour, and yet this is generally the mode by which we test the *sufficiency of wages.* "A man can live very comfortably upon that!" is the exclamation of those who have seldom thought upon what constitutes the *minimum* of self-support in this country. A man's wages, to prevent pauperism, should include, besides present subsistence, what Dr. Chalmers has called "his secondaries;" viz., a sufficiency to pay for his maintenance: 1st, during the slack season; 2nd, when out of employment; 3rd, when ill; 4th, when old*. If insufficient to do

* These items wages *must* include to prevent pauperism, *even with providence.* But this is only on the supposition that the labourer is unmarried; if married, however, and having a family, then his wages should include, moreover, the keep of at least three extra persons, as well as the education of the children. If not, one of two results is self-evident—either the wife must toil, to the neglect of her young ones, and they be allowed to run about and pick their morals and education, as I have before said, out of the gutter, or else the whole family must be transferred to the care of the parish.

this, it is evident that the man at such times must seek parochial relief; and it is by the reduction of wages down to bare subsistence, that the cheap employers of the present day shift the burden of supporting their labourers when unemployed on to the parish; thus virtually perpetuating the allowance system or relief in aid of wages under the old Poor Law. Formerly the mode of hiring labourers was by the year, so that the employer was bound to maintain the men when unemployed. But now journey-work, or hiring by the day, prevails, and the labourers being paid—and that mere subsistence-money—only when wanted, are necessitated to become either paupers or thieves when their services are no longer required. It is, moreover, this change from yearly to daily hirings, and the consequent discarding of men when no longer required, that has partly caused the immense mass of surplus labourers, who are continually vagabondizing through the country begging or stealing as they go—men for whom there is but some two or three weeks' work (harvesting, hop-picking, and the like) throughout the year.

That there is, however, a large system of *jobbing pursued by the contractors* for the house-dust and cleansing of the streets, there cannot be the least doubt. The minute I have cited at page 210 gives us a slight insight into the system of combination existing among the employers, and the extraordinary fluctuations in the prices obtained by the contractors would lead to the notion that the business was more a system of gambling than trade. The following returns have been procured by Mr. Cochrane within the last few days:—

"Average yearly cost of cleansing the whole of the public ways within the City of London, including the removal of dust, ashes, &c., from the houses of the inhabitants, for eight years, terminating at Michaelmas in the year 1850	£4,643
Square yards of carriage-way, estimated at	430,000
Square yards of footway, estimated at	300,000

A more specific and later return is as follows:—

	Received for Dust. £	s.	d.	Paid for cleansing, &c. £	s.	d.	
1845 .	0	0	0 .	2833	2	0	Streets not cleansed daily.
1846	1354	5	0 .	6034	6	0	Streets cleansed daily.
1847	4455	5	0 .	8014	2	0	
1848	1328	15	0 .	7226	1	6	
1849 .	0	0	0 .	7486	11	6	
1850 .	0	0	0 .	6779	16	0	

"From the above return," says Mr. Cochrane, "it may be *inferred* that the annual sums paid for cleansing in each year of 1844 and 1843 did not exceed 2281*l.*, as this would make up the eight years' average calculation of 4643*l.*"

Since the streets have been cleansed daily, it will be seen that the average has been 7188*l.* The smallest amount, in 1846, was 6034*l.*; and the largest, in 1847, 8014*l.*; which was a sudden increase of 1980*l.*

Here, then, we perceive an immediate increase in the price paid for scavaging between 1846 and 1847 of nearly 33 per cent., and since the wages of the workmen were not proportionately increased in the latter year by the employers, it follows tha the profits of the contractors must have bee augmented to that enormous extent. The only effectual mode of preventing this system of jobbing being persevered in, *at the expense of the workmen*, is by the insertion of a clause in each parish contract similar to that introduced by the Commissioners of Sewers—that at least a fair living rate of wages shall be paid by each contractor to the men employed by him. This may be an interference with the freedom of labour, according to the economists' "cant" language, but at least it is a restriction of the tyranny of capital, for free labour means, when literally translated, *the unrestricted use of capital*, which is (especially when the moral standard of trade is not of the highest character) perhaps the greatest evil with which a State can be afflicted.

Let me now speak of the *Scurf labourers*. The moral and social characteristics of the working scavagers who labour for a lower rate of hire do not materially differ from those of the better paid and more regularly employed body, unless, perhaps, in this respect, that there are among them a greater proportion of the "casuals," or of men reared to the pursuit of other callings, and driven by want, misfortune, or misconduct, to "sweep the streets;" and not only that, but to regard the "leave to toil" in such a capacity a boon. These constitute, as it were, the cheap labourers of this trade.

Among the parties concerned in the lower-priced scavaging, are the usual criminations. The parish authorities will not put up any longer with the extortions of the contractors. The contractors cannot put up any longer with the stinginess of the parishes. The *working* scavagers, upon whose shoulders the burthen falls the heaviest—as it does in all depreciated tradings—grumble at both. I cannot aver, however, that I found among the men that bitter hatred of their masters which I found actuating the mass of operative tailors, shoemakers, dressmakers, &c., toward the slop capitalists who employed them.

I have pointed out in what the "scurf" treatment of the labourers was chiefly manifested—in extra work for inferior pay; in doing eight or nine days' work in six; and in being paid for only six days' labour, and not always at the ordinary rate even for the lighter toil—not 2*s.* 8*d.*, but 2*s.* 6*d.* or even 2*s.* 4*d.* a day. To the wealthy, this 2*d.* or 4*d.* a day may seem but a trifling matter, but I heard a working scavager (formerly a house-painter) put it in a strong light: "that 3*d.* or 4*d.* a day, sir, is a poor family's rent." The rent, I may observe, as a result of my inquiries among the more decent classes of labourers, is often the primary consideration: "You see, sir, we must have a roof over our heads."

A scavager, working for a scurf master, gave me the following account. He was a middle-aged man, decently dressed, for when I saw him, he was in his "Sunday clothes," and was quiet in his tones, even when he spoke bitterly.

"My father," he said, "was once in business as a butcher, but he failed, and was afterwards a journeyman butcher, but very much respected, I know, and I used to job and help him. O dear, yes! I can read and write, but I have very seldom to write, only I think one never forgets it, it 's like learning to swim, that way; and I read sometimes at coffee-shops. My father died rather sudden, and me and a brother had to look out. My brother was older than me, he was 20 or 21 then, and he went for a soldier, I believe to some of the Ingees, but I 've never heard of him since. I got a place in a knacker's yard, but I didn't like it at all, *it was so confining*, and should have hooked it, only I left it honourable. I can't call to mind how long that 's back, perhaps 16 or 18 years, but I know there was some stir at the time about having the streets and yards cleaner. A man called and had some talk with the governor, and says he, says the governor, says he, 'if you want a handy lad with his besom, and he 's good for nothing else'—but that was his gammon—'here 's your man;' so I was engaged as a young sweeper at 10*s.* a week. I worked in Hackney, but I heard so much about railways, that I saved my money up to 10*s.*, and popped [pledged] a suit of mourning I 'd got after my father's death for 22*s.*, and got to York, both on foot and with lifts. I soon got work on a rail; there was great call for rails then, but I don't know how long it 's since, and I was a navvy for six or seven years, or better. Then I came back to London. I don't know just what made me come back, *but I was restless*, and I thought I could get work as easy in London as in the country, but I couldn't. I brought 21 gold sovereigns with me to London, twisted in my fob for safeness, in a wash-leather bag. They didn't last so long as they ought to. I didn't care for drinking, only when I was in company, but I was a little too gay. One night I spent over 12*s.* in the St. Helena Gardens at Rotherhithe, and that sort of thing soon makes money show taper. I got some work with a rubbish carter, a regular scurf. I made only about 8*s.* a week under him, for he didn't want me this half day or that whole day, and if I said anything, he told me I might go and be d—d, he could get plenty such, and I knew he could. I got on then with a gangsman I knew, at street-sweeping. I had 15*s.* a week, but not regular work, but when the work wer'n't regular, I had 2*s.* 8*d.* a day. I then worked under another master for 14*s.* a week, and was often abused that I wasn't better dressed, for though that there master paid low wages, he was vexed if his men didn't look decent in the streets. I 've heard that he said he paid the best of wages when asked about it. I had another job after that, at 15*s.*, and then 16*s.* a week, with a contractor as had a wharf; but a black nigger slave was never slaved as I was. I've worked all night, when it 's been very moonlight, in loading a barge, and I 've worked until three and four in the morning that way, and then me and another man slept an hour or two in a shed as joined his stables, and then must go at it again. Some of these masters is ignorant, and treats men like dirt but this one was always civil, and made his people be civil. But, Lord, I hadn't a rag left to my back. Everything was worn to bits in such hard work, and then I got the sack. I was on for Mr. —— next. He 's a jolly good 'un. I was only on for him temp'ry, but I was told it was for temp'ry when I went, so I can't complain. I 'm out of work this week, but I 've had some jobs from a butcher, and I 'm going to work again on Monday. I don't know at what wages. The gangsmen said they 'd see what I could do. It 'll be 15*s.*, I expect, and over-work if it 's 16*s.*

"Yes, I like a pint of beer now and then, and one requires it, but I don't get drunk. I dusted for a fortnight once while a man was ill, and got more beer and twopences give me than I do in a year now; aye, twice as much. My mate and me was always very civil, and people has said, 'there 's a good fellow, just sweep together this bit of rubbish in the yard here, and off with it.' That was beyond our duty, but we did it. I have very little night-work, only for one master; he 's a sweep as well. I get 2*s.* 6*d.* a job for it. Yes, there 's mostly something to drink, but you can't demand nothing. Night-work 's nothing, sir; no more ain't a knacker's yard.

"I pay 2*s.* a week rent, but I 'm washed for and found soap as well. My landlady takes in washing, and when her husband, for they 're an old couple, has the rheumatics, I make a trifle by carrying out the clothes on a barrow, and Mrs. Smith goes with them and sees to the delivery. I 've my own furniture.

"Well, I don't know what I spend in my living in a week. I have a bit of meat, or a saveloy or two, or a slice of bacon every day, mostly when I 'm at work. I sometimes make my own meals ready in my room. No, I keep no accounts. There 'd be very little use or pleasure in doing it when one has so little to count. When I 'm past work, I suppose I must go to the workhouse. I sometimes wish I 'd gone for a soldier when I was young enough. I shouldn't have minded going abroad. I 'd have liked it better than not, for *I like to be about; yes, I like a change.*

"I go to chapel every Sunday night, and have regularly since Mr. —— (the butcher) gave me this cast-off suit. I promised him I would when I got the togs.

"Things would be well enough with me if I 'd constant work and fair pay. I don't know what makes wages so low. I suppose it 's rich people trying to get all the money they can, and caring nothing for poor men's rights, and poor men 's sometimes forced to undersell one another, 'cause half a loaf you know, sir, is better than no bread at all" (a proverb, by the way, which has wrought no little mischief).

In conclusion, I may remark, that although I was told, in the first instance, there was sub-letting in street sweeping, I could not hear of any facts to

prove it. I was told, indeed, by a gentleman who took great interest in parochial matters, with a view to "reforms" in them, that such a thing was most improbable, for if a contractor sub-let any of his work it would soon become known, and as it would be evident that the work could be accomplished at a lower rate, the contractor would be in a worse position for his next contract.

Of the Street-Sweeping Machine, and the Street-Sweepers employed with it.

Until the introduction of the machines now seen in London, I believe that no mechanical contrivances for sweeping the streets had been attempted, all such work being executed by manual labour, and employing throughout the United Kingdom a great number of the poor. The street-sweeping machine, therefore, assumes an importance as another instance of the displacement, or attempted displacement, of the labour of man by the mechanism of an engine.

The street-sweeping machines were introduced into London about five years ago, after having been previously used, under the management of a company, in Manchester, the inventor and maker being Mr. Whitworth, of that place. The novelty and ingenuity of the apparatus soon attracted public attention, and for the first week or two the vehicular street-sweeper was accompanied in its progress by a crowd of admiring and inquisitive pedestrians, so easily attracted together in the metropolis. In the first instance the machines were driven through the streets merely to display their mode and power of work, and the drivers and attendants not unfrequently came into contact with the regular scavagers, when a brisk interchange of street wit took place, the populace often enough encouraging both sides. At present the street-sweeping machine proceeds on its line of operation as little noticed, except by visitors, and foreigners especially, as any other vehicle. The body of the sweeping machine, although the sizes may not all be uniform, is about 5 feet in length, and 2 feet 8 inches or 3 feet in width; the height is about 5 feet 6 inches or 6 feet, and the form that of a covered cart, with a rounded top. The sides of the exterior are of cast iron, the top being of wood. At the hinder part of the cart is fixed the sweeping-machine itself, covered by sloping boards which descend from the top of the cart, projecting slightly behind the vehicle to the ground; under the sloping boards is an endless chain of brushes as wide as the cart, 16 in number, placed at equal distances, and so arranged, that when made to revolve, each brush in turn passes over the ground, sweeping the mud along with it to the bottom sloping board, and so carrying it up to the interior of the cart. The chain of brushes is set in motion, over the surface of the pavement, by the agency of three cog wheels of cast iron; these are worked by the rotation of the wheels of the cart, the cogs acting upon the spindles to which the brooms are attached. The spindles, brushes, and the sloped boards can be raised or lowered by the winding of an instrument called the broom winder; or the whole can be locked. The brooms are raised when any acclivity is to be swept, and lowered at a declivity. The vehicle must be water-tight, in order to contain the slop.

When full the machine holds about half a cart load or half a ton of dirt; this is emptied by letting down the back in the manner of a trap door. If the contents be solid, they have to be forked out; if more sloppy, they are "shot" out, as from a cart, the interior generally being roughly scraped to complete the emptying.

The districts which have as yet been cleansed by the machines are what may be considered a government domain, being the public thoroughfares under the control of the Commissioners of the Woods and Forests, running from Westminster Abbey to the Regent-circus in Piccadilly, and including Spring-gardens, Carlton-gardens, and a portion of the West Strand, where they were first employed in London; they have been used also in parts of the City; and are at present employed by the parish of St. Martin-in-the-Fields. The company by whom the mechanical street-sweeping business is carried on employ 12 machines, 4 water carts, 19 horses, and 24 men. They have also the use, but not the sole use, of two wharfs and barges at Whitefriars and Millbank. The machines altogether collect about 30 cart-loads of street-dirt a day, which is equivalent to four or five barge-loads in a week, if all were boated. Two barges per week are usually sent to Rochester, the others up the river to Fulham, &c. The average price is 5*l.* 10*s.* to 6*l.* per barge load, but when the freight has been chiefly dung, as much as 8*l.* has been paid for it by a farmer.

The street-sweeping machine seems to have commanded the approbation of the General Board of Health, although the Board's expression of approval is not without qualification. "Even that efficient and economical implement," says one of the Reports, "the street-sweeping machine, leaves much filth between the interstices of the stones and some on the surface." One might have imagined, however, that an efficient and economical implement would not have left this "much filth" in its course; but the Board, I presume, spoke comparatively.

The reason of the circumscribed adoption of the machine—I say it with some reluctance, but from concurrent testimony—appears to be that it does *not* sweep sufficiently clean. It sweeps the surface, but only the surface; not cleansing what the scavagers call the "nicks" and "holes," and the Board of Health the "interstices," in the pavement.

One man is obliged to go along with each machine, to sweep the ridge of dirt invariably left at the edge of the track of the vehicle into the line of the next machine, so that it may be "licked up." In fine weather this work is often light enough. It is also the occupation of the accompanying scavager to sweep the dirt from the sloping edges of the public ways into the direct course of the machine, for the brushes are of no service along such slopes; he must also sweep out the contents of any hole or hollow there may be in the streets, as is frequently the case when the pavement has been disturbed in the

relaying or repairing of the gas or water pipes. But for this arrangement, I was told, the brushes would pass "clean over" such places, or only disturb without clearing away the dirt. Indeed irregularities of any kind in the pavement are great obstructions to the efficiency of the street-sweeping machine.

There are some places, moreover, wholly unsweepable by the machine; in many parts of St. Martin's parish, for instance, there are localities where the machine cannot be introduced; such are—St. Martin's-court; the flagged ways about the National Gallery; and the approach, alongside the church, to the Lowther Arcade; the pavement surrounding the fountains which adorn the "noblest site in Europe;" and a variety of alleys, passages, yards, and minor streets, which must be cleansed by manual labour.

In fair weather, again, water carts are indispensable before machine sweeping, for if the ground be merely dry and dusty, the set of brooms will not "bite."

We now come to estimate the *relative values of the mechanical and manual labour applied to the scavaging of the streets.* The average progress of the street-sweeping machine, in the execution of the scavagers' work, is about two miles an hour. It must not be supposed, however, that two streets each a mile in length, could be swept in one hour; for to do this the vehicle would have to travel up and down those streets as many times as the streets are wider than the machine. The machines, sometimes two, sometimes three or four, follow alongside each other's tracks in sweeping a street, so as to leave no part unswept. Thus, supposing a street half a mile long and nine yards wide, and that each machine swept a breadth of a yard, then three such machines, driven once up, and once again down, and once more up such a street, would cleanse it in three quarters of an hour. To do this by manual labour in the same or nearly the same time, would require the exertions of five men. Each machine has been computed to have mechanical power equal to the industry of five street-sweepers; and such, from the above computation, would appear to be the fact. I do not include the drivers in this enumeration, as of course the horse in the scavagers' cart, and in the machine require alike the care of a man, and there is to each vehicle (whether mechanical or not) one hand (besides the carman) to sweep after the ordinary work. Hence every two men with the machine do the work of seven men by hand.

Having, then, ascertained the relative values of the two forces employed in cleansing the streets, let me now proceed to set forth what is "the economy of labour" resulting from the use of the sweeping machine. In the following table are given the number of men at present engaged by the machine company in the cleansing of those districts where the machine is in operation, as well as the annual amount of wages paid to the machine labourers; these facts are then collocated with the number of manual labourers that would be required to do the same work under the ordinary contract system (assuming every two labourers with the machine to do the work of seven labourers by hand), as well as the amount of wages that would be paid to such manual labourers; and finally, the number of men and amount of wages under the one system of street-cleansing is subtracted from the other, in order to arrive at the number of street-sweepers at present displaced by machine labour, and the annual loss in wages to the men so displaced; or, to speak economically, the last column represents the amount by which the Wage Fund of the street-sweepers is diminished by the employment of the machine.

TABLE SHOWING THE DIFFERENCE BETWEEN THE NUMBER OF MEN AT PRESENT ENGAGED IN STREET-SWEEPING BY MACHINES, AND THE NUMBER THAT WOULD BE REQUIRED TO SWEEP THE SAME DISTRICTS BY HAND, TOGETHER WITH THE ANNUAL AMOUNT OF WAGES ACCRUING TO EACH.

Districts.	Machine Labour.		Manual Labour.		Difference.	
	Number of Men employed to attend Machines.	Annual Wages received by Machine Men, at 16*s.* a Week.	Number of men that would be required to sweep the Streets by Manual labour.	Annual Wages that would be received by Manual Labourers, at 15*s.* a Week.	Number of Men displaced by Machine-work.	Annual Loss in Wages to Manual Labourers by Machine-work.
		£ *s.*		£ *s.*		£ *s.*
St. Martin's-in-the Fields	8	332 16	28	1092 0	20	759 4
Regent-street and Pall-mall (see table, p. 214) .	12	499 4	42	1638 0	30	1138 16
Other places, connected with Woods and Forests . .	4	166 8	14	546 0	10	379 12
Total. . .	24	998 8	84	3276 0	60	2277 12

Hence, we perceive that no less than 60 street-sweepers are deprived of work by the street-sweeping machine, and that the gross Wage Fund of the men is diminished by the employment of mechanical labour no less than 2277*l.* per annum.

But let us suppose the street-sweeping machine to come into general use, and all the men who are at present employed by the contractors, both large and small, to sweep the street by hand to be superseded by it, what would be the result? how much money would the manual labourers be deprived of per annum, and how many self-supporting labourers would be pauperized thereby? The following table will show us: in the first compartment given below we have the number of manual labourers employed throughout London by the large and small contractors, and the amount of wages annually received by them*; in the second compartment is given the number of men that would be required to sweep the same districts by the machine, and the amount of wages that would be received by them at the present rate; and the third and last compartment shows the gross number of hands that would be displaced, and the annual loss that would accrue to the operatives by the substitution of mechanical for manual labour in the sweeping of the streets.

TABLE SHOWING THE DIFFERENCE BETWEEN THE NUMBER OF CONTRACTORS' MEN AT PRESENT EMPLOYED TO SWEEP THE STREETS BY HAND, AND THE NUMBER THAT WOULD BE REQUIRED TO SWEEP THE SAME DISTRICTS BY MACHINE WORK, TOGETHER WITH THE AMOUNT OF WAGES ACCRUING TO EACH.

	Manual Labour.		Machine Labour.		Difference.	
	Number of Men at present employed by Contractors to sweep the streets.	Annual Wages received by Contractors' Men for sweeping the Streets, at 15s. a Week.	Number of Machine Men that would be required to attend the Street-sweeping Machines.	Annual Wages that would be received by Machine Men, at 16s. a Week.	Number of Men that would be displaced by Machine-work.	Annual Loss that would accrue to Manual Labourers by Machine-work.
		£ s.		£ s.		£ s.
Districts at present swept by large contractors (see table, p. 214) .	262	10,218 0	75	3120 0	187	7098 0
Districts swept by small contractors.	13	507 0	4	166 8	9	340 12
Total. . .	275	10,725 0	79	3286 8	196	7438 12

Here we find that nearly 200 men would be pauperized, losing upwards of 7000*l.* per annum, if the street-sweeping machine came into general use throughout London. But, before the introduction of machines, the thoroughfares of St. Martin's parish were swept only once a week in dry weather, and three times a week in sloppy weather, and since the introduction of the machines they have been swept daily; allowing, therefore, the extra cleansing to have arisen from the extra cheapness of the machine work—though it seems to have been the result of improved sanatory regulations, for in parts where the machine has not been used the same alteration has taken place—making such allowance, however, it may, perhaps, be fair to say, that the same increase of cleansing would take place throughout London; that is to say, that the streets would be swept by the machines, were they generally used, twice as often as they are at present by hand. At this rate 158 machine men, instead of 79 as above calculated, would be required for the work; so that, reckoning for the increased employment which might arise from the increased cheapness of the work, we see that, were the street-sweeping machines used throughout the metropolis, nearly 120 of the 275 manual labourers now employed at scavaging by the large and small contractors, would be thrown out of work, and deprived of no less a sum than 4680*l.* per annum.

This amount, of course, the parishes would pocket, minus the sum that it would cost them to keep the displaced scavagers as paupers, so that in this instance, at least, we perceive that, however great a benefit cheapness may be to the wealthy classes, to the poorer classes it is far from being of the same advantageous character; for, just as much as the rate-payers are the gainers in the matter of street-cleansing must the labourers be the losers—the economy of labour in a trade where there are too many labourers already, and where the quantity of work does not admit of indefinite increase, meaning simply the increase of pauperism†.

* I have estimated the whole at 15*s.* a week the year through, gangers, "honourable men," regular hands and all, so as to allow for the diminished receipts of the casual hands.

† The usual argument in favour of machinery, viz., that "by reducing prices it extends the market, and so, causing a greater demand for the commodities, induces a greater quantity of employment," would also be an argument in favour of over population, since this, by cheapening, labour must have the same effect as machinery on prices, and, consequently (according to the above logic), induce a greater quantity of employment! But granting that machinery really does benefit the labourer in cases *where the market, and therefore the quantity of work, is largely extensible*, surely it cannot but be an injury in those callings where *the quantity of work is fixed*. Such is the fact with the sawing of wood, the reaping of corn, the threshing of corn, the sweeping of the streets, &c., and hence the evil of mechanical labour applied to such trades.

The "*labour question*" as connected with the sweeping-machine work, requires but a brief detail, as it presents no new features. The majority of the machine men may be described as having been "general (unskilled) labourers" before they embarked in their present pursuits: labourers for builders, brick-makers, rubbish-carters, the docks, &c.

Among them there is but one who was brought up as a mechanic; the others have all been labourers, brick-makers, and what I heard called "barrow-workers" on railways, the latter being the most numerous.

Employment is obtained by application at the wharfs. There is nothing of the character of a trade society among the machine-men; nothing in the way of benefit or sick clubs, unless the men choose to enrol themselves in a general benefit society, of which I did not hear one instance.

The payment is by the week, and without drawback in the guise or disguise of fines, or similar inflictions for the use of tools, &c.; the payment, moreover, is always in money.

The only perquisite is in the case of anything being found in the streets; but the rule as to perquisites seems to be altogether an understanding among the men. The disposal of what may be picked up in the streets appears, moreover, to be very much in the discretion of the picker up. If anything be found in the contents of the vehicle, when emptied, it is the perquisite of the driver, who is also the unloader; he, however, is expected to treat the men "on the same beat" out of any such "treasure trove," when the said treasure is considerable enough to justify such bounty. Odd sixpences, shillings, or copper coin, I was informed, were found almost every week, but I could ascertain no general average. One man, some time ago, found a purse inside the vehicle containing 20*s.*, and "spent it out and out all on hisself," in a carouse of three days. He lost his situation in consequence.

The number of men employed by the company in this trade is 24, and these perform all the work required in the driving and attendance upon the machines in the street, in loading the barges, grooming the horses, &c. There is, indeed, a twenty-fifth man, but he is a blacksmith, and his wages of 35*s.* weekly are included in the estimate as to wear and tear given below, for he shoes the horses and repairs the machines.

The rate of wages paid by the machine company is 16*s.* a week, so that the full amount of wages is paid to the men.

But though the company cannot be ranked among the grinders of the scavaging trade, they *must* be placed among "the drivers."

I am assured, by those who are familiar with such labour, that the 24 men employed by the machine masters do the work of upwards of 30 in the honourable trade, with a corresponding saving to their employers, from an adherence to the main point of the scurf system, the overworking of the men without extra payment.

It has been before stated that, in dry weather, the roads require to be watered before being swept, so that the brushes may *bite*. In summer the machine-men sometimes commence this part of their business at three in the morning; and at the other periods of the year, sometimes at early morning, when moonlight. In summer the hours of labour in the streets are from three, four, five, or six in the morning, to half-past four in the afternoon; in winter, from light to light, and after street there may be yard and barge work.

The saving by this scurf system, then, is:—

30 men (honourable trade), 16*s.* weekly	£1248 yearly.
24 men (scurf-trade) doing same work), 16*s.* weekly . .	998 „
Saving to capitalist and loss to labourer	£250 „

It now but remains to sum up the capital, income, and expenditure of the machine-scavaging trade.

The cost of a street-sweeping machine is 50*l.* to 60*l.*, with an additional 5*l.* 5*s.* for the set of brooms. The wear and tear of these machines are very considerable. A man who had the care of one told me that when there was a heavy stress on it he had known the iron cogs of the inner wheels "go rattle, rattle, snap, snap," until it became difficult to proceed with the work. The brooms, too, in hard work and "cloggy" weather, are apt to snap short, and in the regular course of wear have to be renewed every four or five weeks. The sets of brooms are of bass, worked strongly with copper wire. The whole apparatus can be unscrewed and taken to pieces, to be cleaned or repaired. The repairs, independently of the renewal of the brooms, have been calculated at 7*l.* yearly each machine. The capital invested, then, in twelve street-sweeping machines, in the horses, and what may be considered the appurtenances of the trade, together with the yearly expenditure, may be thus calculated:—

CAPITAL OF STREET-SWEEPING MACHINE TRADE.

12 machines, 60*l.* each	£720
12 sets of brooms, 5*l.* 5*s.* each set .	63
19 horses, 25*l.* each	475
4 water-carts, 20*l.* each	80
19 sets of harness (new), 7*l.* each set	133
4 barges, 50*l.* each	200
	£1671

YEARLY EXPENDITURE.

24 men, 16*s.* weekly	£998
120 sets of brooms for 12 machines, 4*l.* per set	480
Wear and tear, &c. (15 per cent.) .	255
Keep of 19 horses, 10*s.* each weekly	494
Rent (say)	150
Clerk (say)	100
Interest on capital, at 10 per cent. .	179
	£2674

In this calculation I have included wear and tear of the whole of the implements of the stock-in-trade, &c., taking that of the brooms on the most moderate estimate. According to the scale of payment by the parish of St. Martin (which is now 1000*l.* per annum) the probable receipts of a single year will be :—

YEARLY RECEIPTS.

	£	s.	d.
For hire of 12 machines . .	2500	0	0
200 barge-loads of manure, 5*l.* 15*s.* per barge	1150	10	0
	3650	10	0
Yearly expenditure .	2674	0	0
Profit	976	10	0

OF THE CLEANSING OF THE STREETS BY PAUPER LABOUR.

UNDER the head of the several modes and characteristics of street-cleansing, I stated at p. 207 of the present volume that there were no less than four distinct kinds of labourers employed in the scavaging of the public thoroughfares of the metropolis. These were :—

1. The self-supporting manual labourers.
2. The self-supporting machine labourers.
3. The pauper labourers.
4. The "philanthropic" labourers.

I have already set forth the distinguishing features of the first two of these different orders of workmen in connection with the scavaging trade, and now proceed in due order to treat of the characteristics of the third.

The subject of pauper labour generally is one of the most difficult topics that the social philosopher can deal with. It is not possible, however, to do more here than draw attention to the salient points of the question. The more comprehensive consideration of the matter must be reserved till such time as I come to treat of the poor specially under the head of those that cannot work.

By the 43 Eliz., which is generally regarded as the basis of the existing poor laws in this country, it was ordained that in every parish a fund should be raised by local taxation, not merely for the relief of the aged and infirm, but *for setting to work all persons having no means to maintain themselves, and using no ordinary or daily trade of life to get their living by.*

It was, however, soon discovered that it was one thing to pass an act for setting able-bodied paupers to work, and another thing to do so. "In every place," as Mr. Thornton truly says in his excellent treatise on "Over Population," "there is only a certain amount of work to be done," (limited by the extent of the market) "and only a certain amount of capital to pay for it; and, if the number of workmen be more than proportionate to the work, employment can only be given to those who want it by taking from those who have."

Let me illustrate this by the circumstances of the scavaging trade. There are 1760 miles of streets throughout London, and these would seem to require about 600 scavagers to cleanse them. It is self-evident, therefore, that if 400 paupers be "set" to sweep particular districts, the same number of self-supporting labourers must be deprived of employment, and if these cannot obtain work elsewhere, they of course must become paupers too, and, seeking relief, be put upon the same kind of work as they were originally deprived of, and that only to displace and pauperize in their turn a similar number of independent operatives.

The work of a country then being limited (by the capital and market for the produce), there can be but two modes of setting paupers to labour: (1) by throwing the self-supporting operatives out of employment altogether, and substituting pauper labourers in their stead; (2) by giving a portion of the work to the paupers, and so decreasing the employment, and consequently the wages, of the regular operatives. In either case, however, the independent labourers must be reduced to a state of comparative or positive dependence, for *it is impossible to make labourers of the paupers of an over-populated country without making paupers of the labourers.*

Some economists argue that, as paupers are consumers, they should, whenever they are able to work, be made producers also, or otherwise they exhaust the national wealth, to which they do not contribute. This might be a sound axiom were there work sufficient for all. But in an over-populated country there is not work enough, as is proven by the mere fact of the over-population; and the able-bodied paupers *are* paupers simply *because they cannot obtain work*, so that to employ those who are out of work is to throw out those who are in work, and thus to pauperize the self-supporting.

The whole matter seems to hinge upon this one question—

Who are to maintain the paupers? The rate-paying traders or the non-ratepaying workmen?

If the paupers be set to work in a country like Great Britain, they must necessarily be brought into competition with the self-supporting workmen, and so be made to share the wage fund with them, decreasing the price of labour in proportion to the extra number of such pauper labourers among whom the capital of the trade has to be shared. Hence the burden of maintaining the paupers will be virtually shifted from the capitalist to the labourer, the poor-rate being thus really paid out of the wages of the operatives, instead of the profits of the traders, as it should be

And here lies the great wrong of pauper labour. It saddles the poor with the maintenance of their poorer brethren, while the rich not only contribute nothing to their support, but are made still richer by the increased cheapness resulting from the depreciation of labour and their consequent ability to obtain a greater quantity of commodities for the same amount of money.

In illustration of this argument let us say the wages of 600 independent scavagers amount, at 15*s.* a week each the year through, to 23,400*l.* per annum; and let us say, moreover, that the keep of 400 paupers amounts, at 5*s.* a week each, to, altogether, 5200*l.*; hence the total annual expense to the several metropolitan parishes for cleansing the streets and maintaining 400 paupers would be 23,400*l.* + 5200*l.* = 28,600*l.*

If, however, the 400 paupers be set to scavaging work, and made to do something for their keep, one of two things *must* follow: (1) either the 400 extra hands will receive their share of the 23,400*l.* devoted to the payment of the operative scavagers, in which case the wages of each of the regular hands will be reduced from 15*s.* to 9*s.* a week; hence the maintenance of the paupers will be saddled upon the 600 independent operatives, who will lose no less than 9360*l.* per annum, while the ratepayers will be saved the maintenance of the 400 paupers and so gain 5200*l.* per annum by the change; (2) or else 400 of the self-supporting operatives must be thrown out of work, in which case the displaced labourers will lose no less than 15,600*l.*, while the ratepayers will gain upwards of 5000*l.*

The reader is now, I believe, in a position to comprehend the wrong done to the self-supporting scavagers by the employment of pauper labour in the cleansing of the streets.

The preparation of the material of the roads of a parish seems, as far as the metropolis is concerned, at one time to have supplied the chief "test," to which parishes have resorted, as regards the willingness to labour on the part of the able-bodied applicants for relief. When the casual wards of the workhouses were open for the reception of all vagrants who sought a night's shelter, each tramper was required to break so many stones in the morning before receiving a certain allowance of bread, soup, or what not for his breakfast; and he then might be received again into the shelter of this casual asylum. In some parishes the wards were open without the test of stone-breaking, and there was a crowded resort to them, especially during the prevalence of the famine in Ireland and the immigration of the Irish peasants to England. The favourite resort of the vagrants was Marylebone workhouse, and Irish immigrants very frequently presented slips of paper on which some tramper whom they had met with on their way had written "*Marylebone workhouse,*" as the best place at which they could apply, and these the simple Irish offered as passports for admission!

Gradually, the asylum of these wards, with or without labour tests, was discontinued, and in one where the labour test used to be strongly insisted upon—in St. Pancras—a school for pauper children has been erected on the site of the stone-yard.

This labour test was unequal when applied to all comers; for what was easy work to an agricultural labourer, a railway excavator, a quarryman, or to any one used to wield a hammer, was painful and blistering to a starving tailor. Nor was the test enforced by the overseers or regarded by the paupers as a proof of willingness to work, but simply as a punishment for poverty, and as a means of deterring the needy from applying for relief. To make labour a punishment, however, is *not* to destroy, but really to confirm, idle habits: it is to give a deeper root to the vagrant's settled aversion to work. "Well, I always thought it was unpleasant," the vagabond will say to himself "*that* working for one's bread, and now I'm *convinced* of it!" Again, in many of the workhouses the labour to which the paupers were set was of a manifestly unremunerative character, being work for mere work's sake; and to apply people to unproductive labour is to destroy all the ordinary motives to toil—to take away the only stimulus to industry, and remove the very will to work which the labour test was supposed to discover *.

The labour test, then, or setting the poor to work as a proof of their willingness to labour, appears to be as foolish as it is vicious; the objections to it being—(1) the inequality of the test applied to different kinds of work-people; (2) the tendency of it to confirm rather than weaken idle habits by making labour inordinately repulsive; (3) the removal of the ordinary stimulus to industry by the unproductiveness of the work to which the poor are generally applied.

And now, having dealt with the subject of parish labour as a test of the willingnes to work on the part of the applicants for relief, I will proceed to deal with that portion of the work itself which is connected with the cleansing of the streets.

And first as to the employment of paupers at all in the streets. If pauperism be a disgrace, then it is unjust to turn a man into the public thoroughfares, wearing the badge of beggary, to be pointed at and scorned for his poverty, especially when we are growing so particularly studious of our criminals that we make them wear masks to prevent even their faces being seen †. Nor is it consistent with the principles of an enlightened national morality that we should force a body of honest men to labour upon the highways, branded with a degrading garb, like convicts. Neither is it *wise* to do so, for the shame of poverty soon becomes deadened by the repeated exposure to public scorn; and thus the occasional recipient of parish relief is ultimately

* Mr. Sidney Herbert informed me, that when he was connected with the Ordnance Department the severest punishment they could discover for idleness was the piling and unpiling of cannon shot; but surely this was the consummation of official folly! for idleness being simply an aversion to work, it is almost self-evident that it is *impossible* to remove this aversion by making labour inordinately irksome and repulsive. Until we understand the means by which work is made pleasant, and can discover other modes of employing our paupers and criminals, all our workhouse and prison discipline is idle tyranny.

† This is done at the Model Prison, Pentonville.

converted into the hardened and habitual pauper. "Once a pauper always a pauper," I was assured was the parish rule; and here lies the *rationale* of the fact. Not long ago this system of employing *badged* paupers to labour in the public thoroughfares was carried to a much more offensive extent than it is even at present. At one time the pauper labourers of a certain parish had the attention of every passer-by attracted to them while at their work, for on the back of each man's garb—a sort of smock-frock—was marked, with sufficient prominence, "CLERKENWELL. STOP IT!" This public intimation that the labourers were not only paupers, but regarded as thieves, and expected to purloin the parish dress they wore, attracted public attention, and was severely commented upon at a meeting. The "STOP IT!" therefore was cancelled, and the frocks are now *merely* lettered "CLERKENWELL." Before the alteration the men very generally wore the garment inside out.

The present dress of the parish scavagers is usually a loose smock-frock, costing 1*s.* 6*d.* to 2*s*, and a glazed hat of about the same price. In some cases, however, the men may wear these things or not, at their option.

The pauper scavagers employed by the several metropolitan parishes may be divided into three classes:—

1. The in-door paupers, who receive no wages whatever (their lodging, food, and clothing being considered to be sufficient remuneration for their labour).

2. The out-door paupers, who are paid partly in money and partly in kind, and employed in some cases three days and in others six days in the week.

These may be subdivided into—(*a*) the single men, who receive, or rather used to receive, 9*d.* and a quartern loaf for each of the three or more days they were so employed; (*b*) the married men with families, who receive 7*s.* and 3 quartern loaves a week to 1*s.* 1½*d.* and 1 quartern loaf for each day's labour.

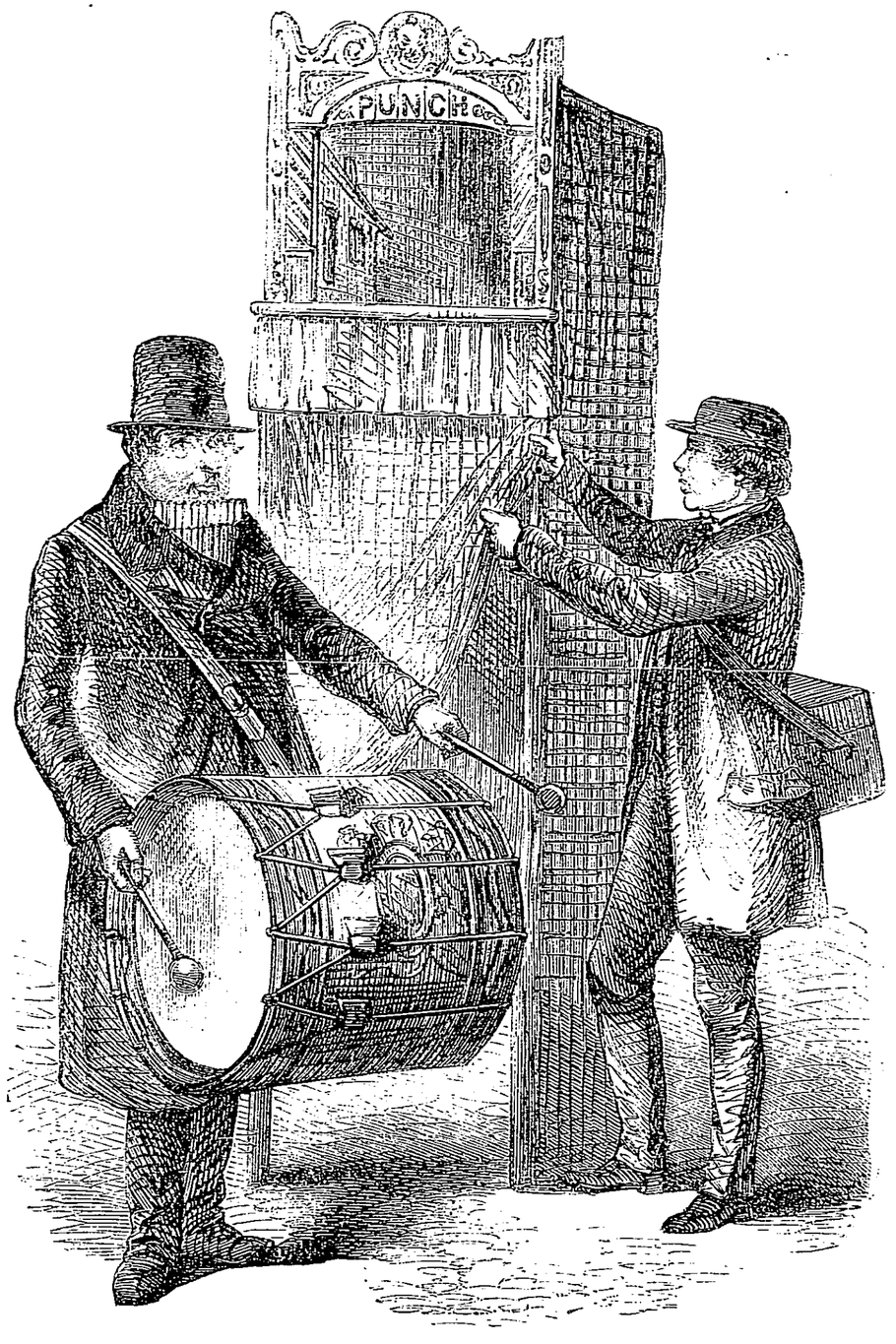
3. The unemployed labourers of the district, who are set to scavaging work by the parish, and paid a regular money wage—the employment being constant, and the rate of remuneration ranging from 1*s.* 3*d.* to 2*s.* 6*d.* a day for each of the six days, or from 7*s.* 6*d.* to 15*s.* a week.

In pp. 246, 247, I give a table of the wages paid by each of the metropolitan parishes. This has been collected at great trouble in order to arrive at the truth on this most important matter, and for which purpose the several parishes have been personally visited. It will be seen on reference to this document, that there is only one parish at present that employs its in-door paupers in the scavaging of the public streets; and 3 parishes employing 48 out-door paupers, who are paid partly in money and partly in bread; the money remuneration ranging from 1*s.* 1½*d.* a day (paid by Clerkenwell) to 7*s.* a week (paid by Chelsea), and moreover 31 parishes employing 408 applicants for relief (paupers they cannot be called), and paying them wholly in money, the remuneration ranging from 15*s.* per week to 7*s.* 6*d.* (paid by the Liberty of the Rolls), and the employment from 6 to 3 days weekly. As a general rule it was found that the greatest complaints were made by the authorities as to the idleness of the poor and by the poor as to the tyranny of the authorities, in those parishes where the remuneration was the least. In St. Luke's, Chelsea, for instance, where the remuneration is but 7*s.* a week and three loaves, the criminations and recriminations by the parish functionaries and the paupers were almost equally harsh and bitter. I should, however, observe that the men employed in this parish spoke in terms of great commendation of Mr. Pattison the surveyor, saying he always gave them to understand that they were free labourers, and invariably treated them as such. The men at work for Bermondsey parish also spoke very highly of their superintendent, who, it seems, has interested himself to obtain for them a foul-weather coat. Some of the highway boards or trusts take all the pauper labourers sent them by the parish, while others give employment only to such as please them. These boards generally pay good wages, and are in favour with the men.

The mode of working, as regards the use of the implements and the manual labour, is generally the same among the pauper scavagers as I have described in connection with the scavagers generally.

The consideration of what is the rate of parish pay to the poor who are employed as scavagers, is complicated by the different modes in which the employment is carried out, for, as we see, there is—1st, the scavaging labour, by workhouse inmates, without any payment beyond the cost of maintenance and clothing; 2nd, the "short" or three-days-a-week labour, with or without "relief" in the bestowal of bread; and 3rd, the six days' work weekly, with a money wage and no bread, nor anything in the form of payment in kind or of "relief."

Let me begin with the first system of labour above mentioned, viz. the employment of the in-door paupers without wages of any kind, their food, lodging, and clothing being considered as equivalents for their work. The principal evil in connection with this form of parish work is its compulsory character, the men regarding it not as so much work given in exchange for such and such comforts, but as something *exacted* from them; and, to tell the truth, it is precisely the counterpart of slavery, being equally deficient in all inducement to toil, and consequently requiring almost the same system of compulsion and supervision in order to keep the men at their labour. All interest in the work is destroyed, there being no reward connected with it; and consequently the same organized system of setting to work is required as with cattle. There are but two inducements to voluntary action—pain to be avoided or pleasure to be derived—or, in other words, the attractiveness and repulsiveness of objects. Take away the pecuniary attraction of labour, and men become mere beasts of burden, capable of being set to work only by the dread of some punishment; hence the system of parish labour, which



PUNCH'S SHOWMEN.

[*From a Photograph.*]

has no reward directly connected with it, must necessarily be tyrannical, and so tend to induce idleness and a hatred of work altogether.

Of the different forms of pauper work, street-sweeping is, I am inclined to believe, the most unpopular of all among the poor. The scavaging is generally done in the workhouse dress, and that to all, except the hardened paupers, and sometimes even to them, is highly distasteful. Neither have such labourers, as I have said, the incentive of that hope of the reward which, however diminutive, still tends to sweeten the most repulsive labour. I am informed by an experienced gangsman under a contractor, that it is notorious that the workhouse hands are the least industrious scavagers in the streets. "They don't sweep as well," he said, "and don't go about it like regular men; they take it quite easy." It is often asserted that this labour of the workhouse men is applied as a *test;* but this opinion seems rather to bear on the past than the present.

One man thus employed gave me the following account. He was garrulous but not communicative, as is frequently the case with men who love to hear themselves talk, and are not very often able to command listeners. He was healthy looking enough, but he told me he was, or had been "delicate." He querulously objected to be questioned about his youth, or the reason of his being a pauper, but seemed to be abounding in workhouse stories and workhouse grievances.

"Street-sweeping," he said, "degrades a man, and if a man's poor he hasn't no call to be degraded. Why can't they set the thieves and pickpockets to sweep? they could be watched easy enough; there's always idle fellers as reckons themselves real gents, as can be got for watching and sitch easy jobs, for they gets as much for them, as three men's paid for hard work in a week. I never was in a prison, but I've heerd that people there is better fed and better cared for than in workusses. What's the meaning of that, sir, I'd like for to know? You can't tell me, but I can tell you. The workus is made as ugly as it can be, that poor people may be got to leave it, and chance dying in the street rather." [Here the man indulged in a gabbled detail of a series of pauper grievances which I had a difficulty in diverting or interrupting. On my asking if the other paupers had the same opinion as to street-sweeping as he had, he replied:—] "To be sure they has; all them that has sense to have a'pinion at all has; there's not two sides to it any how. No, I don't want to be kept and do nothink. I want *proper* work. And by the rights of it I might as well be kept with nothink to do as —— or ——" [parish officials]. "Have they nothing to do," I asked? "Nothink, but to make mischief and get what ought to go to the poor. It's salaries and such like as swallers the rates, and that's what every poor family knows as knows anythink. Did I ever like my work better? Certainly not. Do I take any pains with it? Well, where would be the good? I can sweep well enough, when I please, but if I could do more than the best man as ever Mr. Parke paid a pound a week to, it wouldn't be a bit better for me—not a bit, sir, I assure you. We all takes it easy whenever we can, but the work *must* be done. The only good about it is that you get outside the house. It's a change that way certainly. But we work like horses and is treated like asses." [On my reminding him that he had just told me that they all took it easy when they could, and *that* rather often, he replied:] "Well, don't horses? But it ain't much use talking, sir. It's only them as has been in workusses and in parish work as can understand all the ins and outs of it."

In giving the above and the following statements I have endeavoured to elicit the *feelings* of the several paupers whom I conversed with. Poor, ignorant, or prejudiced men may easily be mistaken in their opinions, or in what they may consider their "facts," but if a clear exposition of their sentiments be obtained, it is a guide to the truth. I have, therefore, given the statement of the in-door pauper's opinions, querulously as they were delivered, as I believe them to be the sentiments of those of his class who, as he said, had any opinion at all.

It seems indeed, from all I could learn on the subject, that pauper street-work, even at the best, is unwilling and slovenly work, pauper workmen being the worst of all workmen. If the streets be swept clean, it is because a dozen paupers are put to the labour of eight, nine, or ten regular scavagers who are independent labourers, and who may have some "pride of art," or some desire to show their employers that they are to be depended upon. This feeling does not actuate the pauper workman, who thinks or knows that if he did evince a desire and a perseverance to please, it would avail him little beyond the sneers and ill-will of his mates; so that, even with a disposition to acquire the good opinion of the authorities, there is this obstacle in his way, and to most men who move in a circumscribed sphere it is a serious obstacle.

Of the second mode of pauper scavaging, viz., that performed by out-door paupers, and paid for partly in money and partly in kind, I heard from officials connected with pauper management very strong condemnations, as being full of mischievous and degrading tendencies. The payment to the out-door pauper scavager averages, as I have stated, 9*d.* a day to a single man, with, perhaps, a quartern loaf; and this, in some cases, is for only three days in the week; while to a married man with a family, it varies between 1*s.* 1½*d.* and 1*s.* 2*d.* a day, with a quartern, and sometimes two quartern loaves; and this, likewise, is occasionally from three to six days in the week. On this the single or family men must subsist, if they have no other means of earning an addition. The men thus employed are certainly not independent labourers, nor are they, in the full sense of the word as popularly understood, paupers; for their means of subsistence are partly the fruits of their toil; and although they are wretchedly dependent, they seem to feel that they have a sort of right to be set to work, as the law ordains such modicum of relief, in or out of the workhouse, as will only ward off death through hunger. This "three-

*TABLE SHOWING THE NUMBER OF MEN EMPLOYED BY SCAVAGING, AS WELL AS THE NUMBER OF HOURS PER DAY AMOUNT OF WAGES ACCRUING TO EACH, AND THE TOTAL

Parishes.	No. of married men employed by parishes daily in scavaging the streets.	Number of single men employed by parishes daily in scavaging the streets.	Number of Superintendents employed by parishes.	Number of Foremen or Gangers employed by parishes.	Daily or weekly wages of the married parish-men.
Paid in Money (by Parishes).					*s.*
Greenwich	7	1	1	1	15
Walworth	12	8		3	15
Newington	30		1	5	15
Lambeth	20			4	15
Poplar	4	1			15
St. Ann's, Soho	4			1	14
Rotherhithe	6			1	12
Wandsworth	12	4		4	12
Hackney	8	5	1	2	12
St. Mary's, Paddington	20	4		4	12
St. Giles's, and St. George's, Bloomsbury	10		2		12
St. Pancras (South-west Division)	6	2		1	11
St. Clement Danes	2	5		1	11
St. Paul's, Covent-garden	6			1	10
St. James's, Westminster	6			1	10
Ditto	6			1	9
Ditto	10		1	1	9
St. Andrew's, Holborn	80	15	1	10	9
Marylebone	30	6	1	4	9*s.* a week.
St. George's, Hanover-square	1				7*s.* 6*d.*
Liberty of the Rolls	13	1	1		1*s.* 4*d.* per day.
Bermondsey	5				15
Paid in Money (by Highway Boards).					
St. James's, Clerkenwell (1st Division)	7	1		1	15
Islington	4	1	1		15
Commercial Road East	4			1	15
Hampstead	3	2		1	14
Highgate	6	1		1	12
Kensington	4			1	12
Lewisham	10			1	12
Camberwell	6			1	12
Christchurch, Lambeth	5			1	12
Woolwich	4			1	9
Deptford					
Paid partly in kind.					
St. Luke's, Chelsea	27	9		3	7*s.*, and on an average 3 loaves each, at 4*d.* a loaf.
Hans-town „	6			1	7*s.*, and average 9 loaves per head.
St. James's, Clerkenwell	6				1*s.* 1½*d.* a day, and 1 quartern loaf.
Paid wholly in kind.					
St. Pancras (Highways)	10		1		estimated expense of food, 2*s.* 4*d.* weekly.
Total	400	66	8	62	

* The number of men here given as employed by the parishes in the scavaging of the streets will be found to differ from that of the table at page 213; but the present table includes *all* the parish-men employed throughout London, whereas the other referred to only a portion of the localities there mentioned.

THE METROPOLITAN PARISHES AND HIGHWAY BOARDS IN AND NUMBER OF DAYS PER WEEK, TOGETHER WITH THE ANNUAL WAGES OF THE WHOLE.

Daily or weekly wages of the single parish-men.	Weekly wages of the Superintendents employed by parishes.	Weekly wages of Foremen or Gangers employed by parishes.	Number of hours per day each parish-man is employed to sweep the streets.	Number of days in the week each parish-man is employed in sweeping the streets.	Total annual wages of the whole, including the estimated value of food and clothes.
s.	*s.*	*s.*			£. *s.* *d.*
15	30*s.* and a house to live in.	18	10	6	456 16 0
14		13	12	6	899 12 0
	20	18	10	6	1456 0 0
		18	10	6	967 4 0
15			12	6	195 0 0
		16	10	6	187 4 0
		18	10	6	234 0 0
		18	10	6	665 12 0
10		18	10	6	509 12 0
10	20	15	12	6	936 0 0
12		18	12	6	93 12 0
		18	12	6	267 16 0
11		15	10	6	234 0 0
11		13	12	6	187 4 0
		12	10	6	187 4 0
		12	10	6	166 12 0
		12	10	6	304 4 0
	15	12	10	6	2685 16 0
9	18	16	10	6	1060 16 0
9*s.* a week.	20	16	10	6	19 10 0
			10	6	321 3 4
1*s.* 4*d.* per day	28*s.* and clothing.		10	5	
			10	6	195 0 0
15		18	10	6	405 0 0
15	100*l.* a year.		12	6	295 0 0
		18	10	6	202 10 0
14		18	10	6	228 16 0
12		18	12	6	265 4 0
		18	10	6	171 12 0
		18	12	6	358 16 0
		15	10	6	226 4 0
		18	10	6	202 16 0
		18	10	3	140 8 0
7		14	10	6	834 12 0
		14	10	6	161 4 0
			10	3	70 4 0
	21*s.* and food.		8	4	128 5 4
					15,919 8 8

days-a-week work" is by the poor or pauper labourers looked upon as being, after the in-door pauper work, the worst sort of employment.

From a married man employed by the parish under this mode, I had the following account.

He was an intelligent-looking man, of about 35, but with nothing very particular in his appearance unless it were a head of very curly hair. He gave me the statement in his own room, which was larger than I have usually found such abodes, and would have been very bare, but that it was somewhat littered with the vessels of his trade as a street-seller of Nectar, Persian Sherbet, Raspberryade, and other decoctions of coloured ginger-beer, with high-sounding names and indifferent flavour: in the summer he said he could live better thereby, with a little costering, than by street-sweeping, but being often a sickly man he could not do so during the uncertainties of a winter street trade. His wife, a decent looking woman, was present occasionally, suckling one child, about two years old—for the poor often protract the weaning of their children, as the mother's nutriment is the *cheapest* of all food for the infant, and as the means of postponing the further increase of their family—whilst another of five or six years of age sat on a bench by her side. There was nothing on the walls in the way of an ornament, as I have seen in some of the rooms of the poor, for the couple had once been in the workhouse, and might be driven there again, and with such apprehensions did not care, perhaps, to make a home otherwise than they found it, even if the consumption of only a little spare time were involved.

The husband said:—

"I was brought up as a type-founder; my father, who was one, learnt me his trade; but he died when I was quite a young man, or I might have been better perfected in it. I was comfortably off enough then, and got married. Very soon after that I was taken ill with an abscess in my neck, you can see the mark of it still." [He showed me the mark.] "For six months I wasn't able to do a thing, and I was a part of the time, I don't recollect how long, in St. Bartholomew's Hospital. I was weak and ill when I came out, and hardly fit for work; I couldn't hear of any work I could get, for there was a great bother in the trade between master and men. Before I went into the hospital, there was money to pay to doctors; and when I came out I could earn nothing, so everything went, yes, sir, everything. My wife made a little matter with charing for families she'd lived in, but things are in a bad way if a poor woman has to keep her husband. She was taken ill at last, and then there was nothing but the parish for us. I suffered a great deal before it come to that. It was awful. No one can know what it is but them that suffers it. But I didn't know what in the world to do. We lived then in St. Luke's, and were passed to our own parish, and were three months in the workhouse. The living was good enough, better then than it is now, I've heard, but I was miserable."

"And I was *very* miserable," interposed the wife, "for I had been brought up comfortable; my father was a respectable tradesman in St. George's-in-the-East, and I had been in good situations."]

"We made ourselves," said the husband, "as useful as we could, but we were parted of course. At the three months' end, I had 10*s.* given to me to come out with, and was told I might start costermongering on it. But to a man not up to the trade, 10*s.* won't go very far to keep up costering. I didn't feel master enough of my own trade by this time to try for work at it, and work wasn't at all regular. There were good hands earning only 12*s.* a week. The 10*s.* soon went, and I had again to apply for relief, and got an order for the stone-yard to go and break stones. Ten bushels was to be broken for 15*d.* It was dreadful hard work at first. My hands got all blistered and bloody, and I've gone home and cried with pain and wretchedness. At first it was on to three days before I could break the ten bushels. I felt shivered to bits all over my arms and shoulders, and my head was splitting. I then got to do it in two days, and then in one, and it grew easier. But all this time I had only what was reckoned three days' work in a week. That is, you see, sir, I had only three times ten bushels of stones given to break in the week, and earned only 3*s.* 9*d.* Yes, I lived on it, and paid 1*s.* 6*d.* a week rent, for the neighbours took care of a few sticks for us, and the parish or a broker wouldn't have found them worth carriage. My wife was then in the country with a sister. I lived upon bread and dripping, went without fire or candle (or had one only very seldom) though it wasn't warm weather. I can safely say that for eight weeks I never tasted one bite of meat, and hardly a bite of butter. When I couldn't sleep of a night, but that wasn't often, it was terrible, very. I washed what bits of things I had then myself, and had sometimes to get a ha'porth of soap as a favour, as the chandler said she 'didn't make less than a penn'orth.' If I eat too much dripping, it made me feel sick. I hardly know how much bread and dripping I eat in a week. I spent what money I had in it and bread, and sometimes went without. I was very weak, you may be sure, sir; and if I'd had the influenza or anything that way, I should have gone off like a shot, for I seemed to have no constitution left. But my wife came back again and got work at charing, and made about 4*s.* a week at it; but we were still very badly off. Then I got to work on the roads every day, and had 1*s.* and a quartern loaf a day, which was a rise. I had only one child then, but men with larger families got two quartern loaves a day. Single men got 9*d.* a day. It was far easier work than stone-breaking too. The hours were from eight to five in winter, and from seven to six in summer. But there's always changes going on, and we were put on 1*s.* 1½*d.* a day and a quartern loaf, and only three days a week. All the same as to time of course. The bread wasn't good; it was only cheap. I suppose there was 20 of us working most of the times as I was. The gangsman, as you call him, but that's more for the regular hands, was a servant of the parish, and a great tyrant.

Yes, indeed, when we had a talk among ourselves, there was nothing but grumbling heard of. Some of the tales I've heard were shocking; worse than what I've gone through. Everybody was grumbling, except perhaps two men that had been 20 years in the streets, and were like born paupers. They didn't feel it, for there's a great difference in men. They knew no better. But anybody might have been frightened to hear some of the men talk and curse. We've stopped work to abuse the parish officers as might be passing. We've mobbed the overseers, and a number of us, I was one, were taken before the magistrate for it; but we told him how badly we were off, and he discharged us, and gave us orders into the workhouse, and told 'em to see if nothing could be done for us. We were there till next morning, and then sent away without anything being said.

"It's a sad life, sir, is a parish worker's. I wish to God I could get out of it. But when a man has children he can't stop and say 'I can't do this,' and 'I won't do that.' Last week, now, in costering, I lost 6*s.*'" [he meant that his expenses, of every kind, exceeded his receipts by 6*s.*], and though I can distil nectar, or anything that way" [this was said somewhat laughingly], "it's only when the weather's hot and fine that any good at all can be done with it. I think, too, that there's not the money among working men that there once was. Anything regular in the way of pay must always be looked at by a man with a family.

"Of course the streets must be properly swept, and if I can sweep them as well as Mr. Dodd's men, for I know one of them very well, why should I have only 3*s.* 4½*d.* a week and three loaves, and he have 16*s*, I think it is? I don't drink, my wife knows I don't" [the wife assented], "and it seems as if in a parish a man must be kept down when he is down, and then blamed for it. I may not understand all about it, but it looks queer."

From an *unmarried* man, looking like a mere boy in the face, although he assured me he was nearly 24, as far as he knew, I heard an account of his labour and its fruits as a parish scavager; also of his former career, which partakes greatly in its characteristics of the narratives I gave, toward the close of the first volume, of deserted, neglected, and runaway children.

He lived from his earliest recollection with an old woman whom he first called "grandmother," and was then bid to call "aunt," and she, some of the neighbours told him, had "kept him out of his rights," for she had 4*s.* a week with him, so that there ought to have been money coming to him when he grew up. I have sometimes heard similar statements from the ignorant poor, for it is agreeable enough to them to fancy that they have been wronged out of fortunes to which they were justly entitled, and deprived of the position and consequence in life which they ought to have possessed "by rights." In the course of my inquiries among the poor women who supply the slop milliners' shops with widows' caps, cap fronts, women's collars, &c., &c., I was told by one middle-aged cap-maker, a very silly person, that she would be worth 100,000*l*, "if she had her rights." What those "rights" were she could not explain, only that there was and had been a great deal of money in the family, and of course she had a right to her share, only she was kept out of it.

The youth in question never heard of a father, and had been informed that his mother had died when he was a baby. From what he told me, I think it most probable that he was an illegitimate child, for whose maintenance his father possibly paid the 4*s.* a week, perhaps to some near relative of the deceased mother. The old woman, as well as I could make the matter out from his narrative, died suddenly, and, as little was known about her, she was buried by the parish, and the lad, on the evening of the funeral, was to have been taken by the landlord of the house where they lodged into the workhouse; but the boy ran away before this could be accomplished; the parish of course not objecting to be relieved of an incumbrance. He thought he was then about twelve or thirteen years of age, and he had before run away from two schools, one a Ragged-school, to which he had been sent, "*for it was so confining*," he said, "and one master, not he as had the raggeds, leathered him," to use his own words, "tightly." He knew his letters now, he thought, but that was all, and very few," he said, gravely, "would have put up with it so long as I did." He subsisted as well as he could by selling matches, penny memorandum books, onions, &c., after he had run away, sleeping under hedges in the country, or in lodging-houses in town, and living on a few pence a day, or "starving on nothink." He was taken ill, and believed it was of a fever, at or somewhere about Portsmouth, and when he was sufficiently recovered, and had given the best account he could of himself, was passed to his parish in London. The relieving officer, he said, would have given him a pair of shoes and half-a-crown, and let him "take his chance, but the doctor wouldn't sartify any ways." He meant, I think, that the medical officer found him too ill to be at large on his own account. He discharged himself, however, in a few weeks from this parish workhouse, as he was convalescent. "The grub there, you see, sir," he said, "was stunning good when I first went, but it fell off." As the probability is that there was no change in the diet, it may not be unfair to conclude that the regular meals of the establishment were very relishable at first, and that afterwards their very regularity and their little variation made the recipient critical.

"When I left, sir," he stated, "they guv me 2*s.* 6*d.*, and a tidy shirt, and a pair of blucherers, and mended up my togs for me decent. I tried all sorts of goes then. I went to Chalk-farm and some other fairs with sticks for throwing, and used to jump among them as throwing was going on, and to sing out, 'break my legs and miss my pegs.' I got many a knock, and when I did, oh! there *was* such larfing at the fun on it. I sold garden sticks too, and garden ropes, and posts sometimes; but it was all wery poor pay. Sometimes I made 10*d.*,

but not never I think but twice 1*s.* a day at it, and oftener 6*d.*, and in bad weather there was nothink to be done. If I made 6*d.* clear, it was 1*d.* for cawfee—for I often went out fasting in a morning—and 1*d.* for bread and butter, and 1*d.* for pudden for dinner, and another 1*d.* perhaps for beer—half-pint and a farden out at the public bar—and 2*d.* for a night's lodging. I've had sometimes to leave half my stock in flue with a deputy for a night's rest. O, I didn't much mind the bugs, so I could rest; and next day had to take my things out if I could, and pay a hexter ha'penny or penny, for hintrest, like. Yes, I've made 18*d.* a hevening at a fair; but there's so many a going it there that one ruins another, and wet weather ruins the whole biling, the pawillion, theaytres and all. I never was a hactor, never; but I've thought sometimes I'd like to try my hand at it. I may some day, 'cause I'm tall. I was forced to go to the parish again, for I got ill and dreadful weak, and then they guv me work on the roads. I can't just say how long it's since, two or three year perhaps, but I had 9*d.* a day at first, and reglar work, and then three days and three loaves a week, and then three days and no loaves. I haven't been at it werry lately. I've rayther taken the summer out of myself, but I must go back soon, for cold weather 's a coming. Vy, I lived a good deal on carrying trunks from the busses to Euston Railway; a good many busses stops in the New-road, in the middle of the square. Some was foreigners, and they was werry scaly. No, I never said nothink but once, ven I got two French ha'pennies for carrying a heavy old leather thing, like a coach box, as seemed to belong to a family; and then the railway bobbies made me hold my tongue. I jobbed about in other places too, but the time's gone by now. O, I had a deal to put up with last winter. What is 9*d.* a day for three days? and if poor men had their rights, times 'ud be different. I'd like to know where all the money goes. I never counted how many parish sweepers there was; too many by arf. I've a rights to work, and it 's as little as a parish can do to find it. I pay 1*s.* a week for half a bed, and not half enough bed-clothes; but me and Jack Smith sometimes sleeps in our clothes, and sometimes spreads 'em o' top. No, poor Jack, he hasn't no hold on a parish; he's a mud-lark and a gatherer [bone-grubber]. Do I like the overseers and the parish officers? In course not, nobody does. Why don't they? Well, how can they? that 's just where it is. Ven I haven't been at sweeping, I've staid in bed as long as I was let; but Mother B.—I don't know no other name she has—wouldn't stand it after ten. O no, it wern't a common lodging-house, a sort of private lodging-house perhaps, where you took by the week. If I made nothink but my ninepences, I lived on bread and cawfee, or bread and coker, and sometimes a red herring, and I've bought 'em in the Brill at five and six a penny. Mother B. charged ½*d.* for leave to toast 'em on her gridiron. She *is* a scaly old ——. *I've oft spent all my money in a tripe supper at night, and fasted all next day.* I used to walk about and look in at the cook-shop windows, and try for a job next day. *I'd have gone five miles for anybody for a penn'orth of pudden.* No, I never thought of making away with myself; never. Nor I never thought of going for a soldier; *it wouldn't suit me to be tied so.* What I want is this here—regular work and no jaw. O, I'm sometimes as miserable as hunger 'll make a parson, if ever he felt it. Yes, I go to church sometimes when I'm at work for the parish, if I'm at all togged. No doubt I shall die in the workus. You see there's nobody in the world cares for me. I can't tell just how I spend my money; just as it comes into my head. No, I don't care about drinking; it don't agree with me; but there's some can live on it. I don't think as I shall ever marry, though who knows?"

The third and last system of parish work is where the labourer is employed regularly, and paid a fixed wage, out of the parochial fund certainly, but not in the same manner as the paupers are paid, nor with any payment in kind (as in loaves), but all in money. The payment in this wise is usually 1*s.* 6*d.* a day, and, but for such employment, the poor so employed, would, in most instances, apply for relief.

In one parish, where the poor are regularly employed in street sweeping, and paid a regular wage in money, the whole scavaging work is done by the paupers, as they are usually termed, though they are not "on the rate." By them the streets are swept and the houses dusted, the granite broken for macadamization, and the streets and roads repaved or repaired. This is done by about 50 men, the labour in the different departments I have specified being about equally apportioned as to the number employed in each. The work is executed without any direct intervention of the parish officers employed in administering *relief* to the poor, but through the agency of a board. All the men, however, are the poor of the parish, and but for this employment would or might claim relief, or demand admittance with their families into the workhouse. The system, therefore, is one of indirect pauper labour. Nearly all the men have been unskilled labourers, the exception being now and then a few operatives in such handicrafts as were suffering from the dearth of employment. Some of the artizans, I was informed, would be earning their 9*s.* in the stone-yard one week, and the next getting 30*s.* at their business. The men thus labouring for the parish are about three-fifths Irishmen, a fifth Welchmen, or rather more than a fifth, and the remainder Englishmen. There is not a single Scotchman among them.

There is no difference, in the parish I allude to, between the wages of married and single men, but men with families are usually preferred among the applicants for such work. They all reside in their own rooms, or sometimes in lodging-houses, but this rests with themselves.

I had the following account from a heavy and healthy-looking middle-aged man, dressed in a jacket and trousers of coarse corduroy. There is so little distinctive about it, however, that I will not consume space in presenting it in the narrative form in which I noted it down. It may suffice that the man seemed to have little recollection as to the past, and less care as to the future. His life, from all I could learn from him, had been spent in what may be called menial labour, as the servant, not of an individual, but of a parish; but there was nothing, he knew of, that he had to thank anybody for—parish or any one. They wanted *him* and he wanted *them*. On my asking him if he had never tried to "better himself," he said that he *had* once as a navvy, but a blow on the head and eye, from a portion of rock shivered by his pick-axe, disabled him for awhile, and he left railway work. He went to church, as was expected of him, and he and his wife liked it. He had forgotten how to read, but never was "a dab at it," and so "didn't know nothing about the litany or the psalms." He couldn't say as he knew any difference between the Church of England and the Roman Catholic church-goers, "cause the one was a English and the t' other a Irish religion," and he "wasn't to be expected to understand Irish religion." He saw no necessity to put by money (this he said hesitatingly), supposing he could; what was his parish for? and he would take care he didn't lose his settlement. If he'd ever had such a chance as some had he might have saved money, but he never had. He had no family, and his wife earned about 4*s.* a week, but not every week, in a wool warehouse, and they did middling.

The above, then, are the modes in which paupers, or imminent paupers, so to speak, are employed, and in one way or other are *paid* for their labour, or what is called paid, and who, although parish menials, still reside in their own abodes, with the opportunity, such as it is, of "looking out" for better employment.

As to the *moral qualities of the street-sweeping paupers* I do not know that they differ from those of paupers generally. All men who feel themselves sunk into compulsory labour and a degraded condition are dissatisfied, and eager to throw the blame of their degradation from their own shoulders. But it is evident that these men are unwilling workers, because their work is deprived of its just reward; and although I did not hear of any difficulty being experienced in getting them to work, I was assured by many who knew them well, that they do not go about it with any eagerness. Did any one ever hear a pauper whistle or sing at his street-work? I believe that every experienced vestryman will agree to the truth of the statement that it is very rarely a confirmed pauper rises from his degradation. His thoughts and aspirations seem bounded by the workhouse and the parish. The reason appears to be because the workhouse authorities seek rather to degrade than to elevate the man, resorting to every means of shaming the pauper, until at last he becomes so utterly callous to the disgrace of pauperism that he does not care to alter his position. The system, too, assisted by the parish authorities of not paying for work, or paying less than the ordinary prices of the trade, causes the pauper labourers to be unwilling workers; and finding that industry brings no reward, or less than its fair reward, to them, they get to hate all work, and to grow up habitual burdens on the State. Crabbe, the poet, who in all questions of borough and parish life is an authority, makes his workhouse boy, Dick Monday, who when a boy got more kicks than half-pence, die Sir Richard Monday, of Monday-place; but this is a flight on the wings of poetical licence; certainly not impossible, and that is all which can be said for its likelihood.

The following remarks on the payment of the parish street-sweepers are from one of Mr. Cochrane's publications:—

"The council considers it a duty to the poor to touch upon the niggardly manner in which parish scavengers are generally paid, and the deplorable and emaciated condition which they usually present, with regard to their clothing and personal appearance. One contractor pays 16*s.* 6*d.* per week; 2 pay 16*s.*; 12 (including a Highway Board) pay 15*s.* each; 1 pays 14*s.* 6*d.*; 2 pay 14*s.*; and 1 pays so low as 12*s.* On the other hand, five parish boards of 'guardians of the poor,' pay only 9*s.* each, to their miserable mud-larks; one pays 8*s.*; another 7*s.* 5*d.*; a third 7*s.*; a fourth compensates its labourers—in the British metropolis, where rent and living are necessarily higher than elsewhere—with 5*s.* 8*d.* per week! whilst a fifth pays 3 men 15*s.* each, 12 men 10*s.* each, and 6 men 7*s.* 6*d.* each, for exactly the same kind of work!!! But what renders this mean torture of men (because they happen to be poor) absurd as well as cruel, are the anomalous facts, that whilst the guardians of one parish pay 5 men 7*s.* each, the contractor for another part of the same parish, pays his 4 men 14*s.* each;—and whilst the guardians of a second parish pay only 5*s.* 8*d.*, the Highway Board pays 15*s.* to each of its labourers, for performing exactly the same work in the same district!—Mr. Darke, scavenging contractor of Paddington, lately stated that he never had, and never would, employ any man at less than 16*s.* or 18*s.* per week;—and Mr. Sinnott, of Belvidere-road, Lambeth, about three months since, offered to certain West-End guardians, to take 40 paupers out of their own workhouse to cleanse their own parish, on the street-orderly system;—and to pay them 15*s.* per week each man*; but the economical guardians preferred filth and a full workhouse, to cleanliness, Christian charity, and common sense;—and so the proposal of this considerate contractor was rejected! It is certainly far from being creditable to boards of gentlemen and wealthy tradesmen who manage parish affairs, to pay little more than one-half the wages that an individual does, to poor labourers who cannot choose their employment or their masters. . . . .

"The broken-down tradesman, the journeyman deprived of his usual work by panic or by poverty of the times, the ingenious mechanic, or the unsuccessful artist, applies at the parish labour-market for leave to live by other labour than that

* To the honourable conduct of the above-named contractors to their men, I am glad to be able to bear witness. All the men speak in the highest terms of them.

which hitherto maintained him in comfort. . . . . The usual language of such persons, even when applying for private alms or parochial relief, is, not that they want money, but 'that they have long been out of work;' 'that their particular trade has been overstocked with apprentices, or superseded by machinery;' or, 'that their late employer has become bankrupt, or has discharged the majority of his hands from the badness of the times.' To a man of this class, the guardian of the poor replies, 'We will test your willingness to labour, by employing you in the stone-yard, or to sweep the streets; but the parish being heavily burthened with rates, we cannot afford more than 7*s.* or 8*s.* a week.' The poor creature, conscious of his own helplessness, accepts the miserable pittance, in order to preserve himself and family from immediate starvation. . . . . .

"The council has taken much pains to ascertain the wages, and mode of expenditure of them, by this uncared-for, and almost pariah, class of labourers throughout the metropolitan parishes; and it possesses undeniable proofs, that few possess any further garment than the rags upon their backs; some being even without a change of linen; that they never enter a place of worship, on account of their want of decent clothing; that their wives and children are starved and in rags, and the latter without the least education; that they never by any chance taste fresh animal food; that one-third of their hard earnings is paid for rent; and that their only sustenance (unless their wives happen to go out washing or charing), consists of bread, potatoes, coarse tea without milk or sugar, a salt herring two or three times a week, and a slice of rusty bacon on Sunday morning! The meal called dinner they never know; their only refection being breakfast and 'tea:' beer they do not taste from year's end to year's end; and any other luxury, or even necessary, is out of the question.

"Of the 21 scavengers employed by St. James's parish in 1850, no less than 16," says Mr. Cochrane's report, "were married, with from one to four children each. How the poor creatures who receive but 7*s.* 6*d.* a week support their families, is best known to themselves."

Let me now, in conclusion, endeavour to arrive at a rough estimate as to the sum of which the pauper labours annually are mulct by the beforementioned rates of remuneration, estimating their labour at the market value or amount paid by the honourable contractors, viz. 16*s.* a week; for if private individuals can afford to pay that wage, and yet reap a profit out of the transaction, the guardians of the poor surely could and should pay the same prices, and not avail themselves of starving men's necessities to reduce the wages of a trade to the very quick of subsistence. If it be a sound principle that the condition of the pauper should be rendered *less* desirable than that of the labourer, assuredly the principle is equally sound that the condition of the labourer should be made *more* desirable than that of the pauper; for if to pamper the pauper be to make indolence more agreeable than industry, certainly to grind down the wages of the labourer is to render industry as unprofitable as indolence. In either case the same premium is proffered to pauperism. As yet the Poor-Law Commissioners have seen but one way of reducing the poor-rates, viz., by rendering the state of the pauper as *unenviable* as possible, and they have wholly lost sight of the other mode of attaining the same end, viz., by making the state of the labourer as *desirable* as possible. To institute a terrible poor law without maintaining an attractive form of industry, is to hold out a boon to crime. If the wages of the working man are to be reduced to bare subsistence, and the condition of the pauper is to be rendered worse than that of the working man, what atrocities will not be committed upon the poor. Elevate the condition of the labourer, and there will be no necessity to depress the pauper. Make work more attractive by increasing the reward for it, and laziness will necessarily become more repulsive. As it is, however, the pauper is not only kept at the very lowest point of subsistence, but his half-starved labour is brought into competition with that of men living in a comparative state of comfort; and the result, of course, is, that instead of decreasing the number of paupers or poor-rates, we make paupers of our labourers, and fill our workhouses by such means. If a scavager's labour be worth from 12*s.* to 15*s.* per week in the market, what moral right have the *guardians of the poor* to pay 5*s.* 8*d.* for the same commodity? If the paupers are set to do work which is fairly worth 15*s.*, then to pay them little more than one-third of the regular value is not only to make unwilling workers of the paupers, but to drag down all the better workmen to the level of the worst.

It may be estimated that the outlay on pauper labour, as a whole, after deducting the sum paid to superintendents and gangers, does not exceed 10*s.* weekly per individual; consequently the lowering of the price of labour is in this ratio: There are now, in round numbers, 450 pauper scavagers in the metropolis, and the account stands thus:—

	Yearly.
450 scavagers, at the regular weekly wages of 16*s.* each . . .	£18,710
450 pauper labourers, 10*s.* each weekly	11,700
Lower price of pauper work . .	£7,020

Hence we see, that the great scurf employers of the scavagers, after all, are the guardians of the poor, compared with whom the most grasping contractor is a model of liberality.

That the minimum of remuneration paid by the parishes has tended, and is tending more and more, to the general depreciation of wages in the scavaging trade, there is no doubt. It has done so directly and indirectly. One man, who had been a last-maker, told me that he left his employment as a London scavager, for he had "come down to the parish," and set off at the close of the summer into Kent for the harvest and hopping, for, when in the country, he had been more used to agricultural labour than to last, clog, or patten making. He considered that he had not been successful; still he returned to London a richer man by 26*s.* 6*d.* Nearly 20*s.* of this soon went for shoes and necessary clothing, and to pay some arrears of rent, and a chandler's bill he owed, after which he could be trusted again where he was known. He applied to the foreman of a contractor, whom he knew, for work. "What wage?" said the foreman. "Fifteen shillings a week," was the reply. "Why, what did you get from the parish for sweeping?" "Nine shillings." "Well," said the foreman, "I know you're a decent man, and you were recommended before, and so I *can* give you four or five days a week at 2*s.* 4*d.* a day, and no nonsense about hours; *for you know yourself I can get* 50 *men as have been parish workers at* 1*s.* 9*d. a day, and jump at it, and so you mustn't be cheeky.*" The man closed with the offer, knowing that the foreman spoke the truth.

A contractor told me that he could obtain "plenty of hands," used to parish scavaging work, at 10*s.* 6*d.* to 12*s.* a week, whereas he paid 16*s.*

It is evident, then, that the system of pauper work in scavaging has created an increasing market for cheap and deteriorated labour, a market including hundreds of the unemployed at other unskilled labours; and it is hardly to be doubted that the many who have faith in the doctrine that it is the best policy to buy in the cheapest and sell in the dearest market, will avail themselves of the low-priced labour of this pauper-constituted mart.

It is but right to add, that those parishes which pay 15*s.* a week are as worthy of commendation as those which pay 9*s.*, 7*s.* 6*d.* and 7*s.* per week, and 1*s.* 4*d.* and 1*s.* 1½*d.* a day are reprehensible; and, unfortunately, the latter have a tendency to regulate all the others.

Of the Street-Orderlies.

This constitutes the last of the four varieties of labour employed in the cleansing of the public thoroughfares of London. I have already treated of the self-supporting manual labour, the self-supporting machine labour, and the pauper labour, and now proceed to the consideration of the philanthropic labour of the streets.

In the first place, let us understand clearly what is meant by philanthropic labour, and how it is distinguished from pauper labour on the one hand, and self-supporting labour on the other. Self-supporting labour I take to be that form of work which returns not less, and generally something more, than is expended upon it. Pauper labour, on the other hand, is work to which the applicants for parish relief are "set," not with a view to the profit to be derived from it, but partly as a test of their willingness to work, and partly as a means of employing the unemployed; while philanthropic labour is employment provided for the unemployed with the same disregard of profit as distinguishes pauper labour, but with a greater regard for the poor, and as a means of affording them relief in a less degrading manner than is done under the present Poor Law. Pauper and philanthropic labour, then, differ essentially from self-supporting labour in being *non-profitable* modes of employment; that is to say, they yield so bare an equivalent for the sum expended upon the labourers, that none, in the ordinary way of trade, can be found to provide the means necessary for putting them into operation: while pauper labour differs from philanthropic labour, in the fact that the funds requisite for "setting the poor on work" are provided by law as a matter of social policy, whereas, in the case of philanthropic labour, the funds, or a part of them, are supplied by voluntary contributions, out of a desire to improve the labourers' condition. There are, then, two distinguishing features in all philanthropic labour—the one is, that it yields no profit (if it did it would become a matter of trade), and the other, that it is instituted and maintained from a wish to benefit the labourer.

The Street-Orderly system forms part of the operations on behalf of the poor adopted by a society, of which Mr. Charles Cochrane is the president, entitled the "National Philanthropic Association," which is said to have for its object "the promotion of social and salutiferous improvements, street cleanliness, and the employment of the poor, so that able-bodied men may be prevented from burthening the parish-rate, and preserved independent of workhouse, alms, and degradation." Here a twofold object is expressed: the Philanthropic Association seeks not only to benefit the poor by giving them employment, and "preserving them independent of workhouse, alms, and degradation," but to benefit the public likewise, by "promoting social and salutiferous improvements and street cleanliness." I shall deal with each of these objects separately; but first let me declare, so as to remove all suspicion of private feelings tending in any way to bias my judgment in this most important matter, that I am an utter stranger to the President and Council of the Philanthropic Association; and that, whatever I may have to say on the subject of the street-orderlies, I do simply in conformity with my duty to the public—to state truthfully all that concerns the labourers and the poor of the metropolis.

Viewed economically, philanthropic and pauper work may be said to be the regulators of the minimum rate of wages—establishing the lowest point to which competition can possibly drive down the remuneration for labour; for it is evident, that if the self-supporting labourer cannot obtain greater comforts by the independent exercise of his industry than the parish rates or private charity will afford him, he will at once give over working for the trading employer, and declare on the funds raised by assessment or voluntary subscription for his support. Hence, those who wish well to the labourer, and who believe that cheapness of commodities is desirable "only," as Mr. Stewart Mill says (p. 502, vol. ii.), "when the cause of it is, that their production costs little labour, and not when occasioned by that labour's

being ill-remunerated;" and who believe, moreover, that the labourer is to be benefited solely by the cultivation of a high standard of comfort among the people — to such, I say, it is evident, that a poor law which reduces the relief to able-bodied labourers to the smallest modicum of food consistent with the continuation of life must be about the greatest curse that can possibly come upon an over-populated country, admitting, as it does, of the reduction of wages to so low a point of mere brutal existence as to induce that recklessness and improvidence among the poor which is known to give so strong an impetus to the increase of the people. A minimized rate of parish relief is necessarily a minimized rate of wages, and admits of the labourers' pay being reduced, by pauper competition, to little short of starvation; and such, doubtlessly, would have been the case long ago in the scavaging trade by the employment of parish labour, had not the Philanthropic Association instituted the system of street-orderlies, and by the payment of a higher rate of wages than the more grinding parishes afforded—by giving the men 12*s.* instead of 9*s.* or even 7*s.* a week—prevented the remuneration of the regular hands being dragged down to an approximation to the parish level. Hence, rightly viewed, philanthropic labour—and, indeed, pauper labour too—comes under the head of a remedy for low wages, as preventing, if properly regulated, the undue depreciation of industry from excessive competition, and it is in this light that I shall now proceed to consider it.

The several plans that have been propounded from time to time, as remedies for an insufficient rate of remuneration for work, are as multifarious as the circumstances influencing the three requisites for production—labour, capital, and land. I will here run over as briefly as possible—abstaining from the expression of all opinion on the subject—the various schemes which have been proposed with this object, so that the reader may come as prepared as possible to the consideration of the matter.

The remedies for low wages may be arranged into two distinct groups, viz., those which seek to increase the labourer's rate of pay *directly*, and those which seek to do so *indirectly*.

The *direct* remedies for low wages that have been propounded are :—

A. *The establishment of a standard rate of remuneration for labour.* This has been proposed to be brought about by three different means, viz. :—

1. By law or government authority; either (*a*) fixing the minimum rate of wages, and leaving the variations above that point to be adjusted by competition (this, as we have seen, is the effect of the poor-law); or, (*b*) settling the rate of wages generally by means of local boards of trade for *conseils de prud'hommes*, consisting of delegates from the workmen and employers, to determine, by the principles of natural equity, a *reasonable* scale of remuneration in the several trades, their decision being binding in law on both the employers and the employed.
2. By public opinion; this has been generally proposed by those who are what Mr. Mill terms "shy of admitting the interference of authority in contracts for labour," fearing that if the law intervened it would do so rashly and ignorantly, and desiring to compass by *moral* sanction what they consider useless or dangerous to attempt to bring about by *legal* means. "Every employer," says Mr. Mill, "they think, *ought* to give *sufficient wages*," and if he does not give such wages willingly, he should be compelled to do so by public opinion.
3. By trade societies or combination among the workmen; that is to say, by the payment of a small sum per week out of the wages of the workmen, towards the formation of a fund for the support of such of their fellow operatives as may be out of employment, or refuse to work for those employers who seek to give less than the standard rate of wages established by the trade.

B. *The prohibition of stoppages or deductions of all kinds from the nominal wages of workmen.* This is principally the object of the Anti-Truck Society, which seeks to obtain an Act of Parliament, enjoining the payment in full of all wages. The stoppages or extortions from workmen's wages generally consist of :—

1. Fines for real or pretended misconduct.
2. Rents for tools, frames, gas, and sometimes lodgings.
3. Sale of trade appliances (as trimmings, thread, &c.) at undue prices.
4. Sale of food, drink, &c., at an exorbitant rate of profit.
5. Payment in public-houses; as the means of inducing the men to spend a portion of their earnings in drink.
6. Deposit of money as security before taking out work; so that the capital of the employer is increased without payment of interest to the workpeople.

C. *The institution of certain aids or additions to wages;* as—

1. Perquisites or gratuities obtained from the public; as with waiters, boxkeepers, coachmen, dustmen, vergers, and others.
2. Beer money, and other "allowances" to workmen.
3. Family work; or the co-operation of the wife and children as a means of increasing the workman's income.
4. Allotments of land, to be cultivated after the regular day's labour.
5. The parish "allowance system," or relief in aid of wages, as practised under the old Poor Law.

D. *The increase of the money value of wages;* by—

1. Cheap food.
2. Cheap lodgings; through building improved dwellings for the poor, and doing away with the profit of sub-letting.
3. Co-operative stores; or the "club system" of obtaining provisions at wholesale prices.
4. The abolition of the payment of wages on Sunday morning, or at so late an hour on the Saturday night as to prevent the labourer availing himself of the Saturday's market.
5. Teetotalism; as causing the men to spend nothing in fermented drinks, and so leaving them more to spend on food.

Such are the *direct* modes of remedying low wages, viz., either by preventing the price of labour itself falling below a certain standard; prohibiting all stoppages from the pay of the labourer; instituting certain aids or additions to such pay; or increasing the money value of the ordinary wages by reducing the price of provisions.

The *indirect* modes of remedying low wages are of a far more complex character. They consist of, first, the remedies propounded by political economists, which are—

A. *The decrease of the number of labourers;* for gaining this end several plans have been proposed, as—

1. Checks against the increase of the population, for which the following are the chief Malthusian proposals :—
   a. Preventive checks for the hindrance of impregnation.
   b. Prohibition of early marriages among the poor.
   c. Increase of the standard of comfort, or requirements, among the people; as a means of inducing prudence and restraint of the passions.
   d. Infanticide; as among the Chinese.
2. Emigration; as a means of draining off the surplus labourers.
3. Limitation of apprentices in skilled trades; as a means of preventing the undue increase of particular occupations. This, however, is advocated not by economists, but generally by operatives.
4. Prevention of family work; or the discouragement of the labour of the wives and children of operatives. This, again, cannot be said to be an "economist" remedy.

B. *Increase of the circulating capital, or sum set aside for the payment of the labourers.*

1. By government imposts. "Governments," says Mr. Mill, "can create additional industry by creating capital. They may lay on taxes, and employ the amount productively." This was the object of the original Poor Law (43 Eliz.), which empowered the overseers of the poor to "raise weekly, or otherwise, by taxation of every inhabitant, &c., such sums of money as they shall require for providing a sufficient stock of flax, hemp, wool, and other ware or stuff, to set the poor on work."
2. By the issue of paper money. The proposition of Mr. Jonathan Duncan is, that the government should issue notes equivalent to the taxation of the country, with the view of affording increased employment to the poor; the people being set to work as it were upon credit, in the same manner as the labourers were employed to build the market-house at Guernsey.

C. *The extension of the markets of the country;* by the abolition of all restrictions on commerce, and the encouragement of the free interchange of commodities, so that, by increasing the demand for our products, we may be able to afford employment to an extra number of producers.

The above constitute what, with a few exceptions, may be termed, more particularly, the "economist" remedies for low wages.

D. *The regulation of the quantity of work done by each workman, or the prevention of the undue economizing of labour.* For this end, several means have been put forward.

1. The shortening the hours of labour, and abolition of Sunday-work.
2. Alteration of the mode of work; as the substitution of day-work for piece-work, as a means of decreasing the stimulus to overwork.
3. Extension of the term of hiring; by the substitution of annual engagements for daily or weekly hirings, with a view to the prevention of "casual labour."
4. Limitation of the number of hands employed by one capitalist; so as to prevent the undue extension of "the large system of production."
5. Taxation of machinery; with the object, not only of making it contribute its quota to the revenue of the country, but of impeding its undue increase.
6. The discountenance of every form of work that tends to the making up of a greater quantity of materials with a less quantity of labour; and consequently to the expenditure of a greater proportion of the capital of the country on machinery or materials, and a correspondingly less proportion on the labourers.

E. *"Protective imposts," or high import duties on such foreign commodities as can be produced in this country;* with the view of preventing the labour of the comparatively untaxed and uncivilized foreigner being brought into competition with that of the taxed and civilized producer at home.

F. *"Financial reform," or reduction of the taxation of the country;* as enabling the home labourer the better to compete with the foreigner.

The two latter proposals, and that of the extension of the markets, may be said to seek to remedy low wages by expanding or circumscribing the foreign trade of the country.

G. *A different division of the proceeds of labour.* For this object several schemes have been propounded :—

1. The "tribute system" of wages; or payment of labour according to the additional value which it confers on the materials on which it operates.
2. The abolition of the middleman; whether "sweater," "piece-master," "lumper," or what not, coming between the employer and employed.
3. Co-operation; or joint-stock associations of labourers, with the view of abolishing the profit of the capitalist employer.

H. *A different mode of distributing the products of labour;* with the view of abolishing the profit of the dealer, between the producer and consumer—as co-operative stores, where the consumers club together for the purchase of their goods directly of the producers.

I. *A more general and equal division of the wealth of the country:* for attaining this end there are but two known means:—
1. Communism; or the abolition of all rights to individual property.
2. Agapism; or the voluntary sharing of individual possessions with the less fortunate or successful members of the community.

These remedies may, with a few exceptions (such as the tribute system of wages, and the abolition of middlemen), be said to constitute the socialist and communist schemes for the prevention of distress.

J. *Creating additional employment for the poor;* and so removing the surplus labour from the market. Two modes of effecting this have been proposed:—
1. Home colonization, or the cultivation of waste lands by the poor.
2. Orderlyism, or the employment of the poor in the promotion of public cleanliness, and the increased sanitary condition of the country.

K. *The prevention of the enclosure of commons;* as the means of enabling the poor to obtain gratuitous pasturage for their cattle.

L. *The abolition of primogeniture;* with the view of dividing the land among a greater number of individuals.

M. *The holding of the land by the State,* and equal apportionment of it among the poor.

N. *Extension of the suffrage among the people;* and so allowing the workman, as well as the capitalist and the landlord, to take part in the formation of the laws of the country. For this purpose there are two plans:—
1. "The freehold-land movement," which seeks to enable the people to become proprietors of as much land as will, under the present law, give them "a voice" in the country.
2. Chartism, or that which seeks to alter the law concerning the election of members of Parliament, and to confer the right of voting on every male of mature age, sound mind, and non-criminal character.

O. *Cultivation of a higher moral and Christian character among the people.* This form of remedy, which is advocated by many, is based on the argument, that, without some mitigation of the "selfishness of the times," all other schemes for improving the condition of the people will be either evaded by the cunning of the rich, or defeated by the servility of the poor.

The above I believe to be a full and fair statement of the several plans that have been proposed, from time to time, for alleviating the distress of the people. This enumeration is as comprehensive as my knowledge will enable me to make it; and I have abstained from all comment on the several schemes, so that the reader may have an opportunity of impartially weighing the merits of each, and adopting that, which in his own mind, seems best calculated to effect what, after all, we every one desire—whether protectionist, economist, free-trader, philanthropist, socialist, communist, or chartist—the good of the country in which we live, and the people by whom we are surrounded.

Now we have to deal here with that particular remedy for low wages or distress which consists in creating additional employment for the poor, and of which the street-orderly system is an example.

The increase of employment for the poor was the main object of the 43 Eliz., for which purpose, as we have seen, the overseers of the several parishes were empowered to raise a fund by assessments upon the property of the rich, for providing "a sufficient stock of flax, hemp, wool, and other ware or stuff, to set the poor on work." But though economists, to this day, tell us that "while, on the one hand, industry is limited by capital, so, on the other, every increase of capital gives, or is capable of giving, additional employment to industry, and this without assignable limit,"* nevertheless the great difficulty of carrying out the provisions of the original poor-law has consisted in finding a market for the products of pauper labour, for the frequent gluts in our manufactures are sufficient to teach us that it is one thing to produce and another to dispose of the products; so that to create additional employment for the poor something besides capital is requisite: it is necessary either that they shall be engaged in producing that which they themselves immediately consume, or that for which the market admits of being extended.

The two plans proposed for the employment of the poor, it will be seen, consist (1) in the cultivation of waste lands; (2) in promoting public cleanliness, and so increasing the sanitary condition of the country. The first, it is evident, removes the objection of a market being needed for the products of the labour of the poor, since it proposes that their energies should be devoted to the production of the food which they themselves consume; while the second seeks to create additional employment in effecting that increased cleanliness which more enlightened physiological views have not only made more desirable, but taught us to be absolutely necessary to the health and enjoyment of the community.

* This is Mr. Mills's second *fundamental* proposition respecting capital (see "Principles of Pol. Econ." p. 82, vol. i.). "What I intend to assert is," says that gentleman, "that the portion (of capital) which is destined to the maintenance of the labourers may—supposing no increase in anything else—be indefinitely increased, without creating an impossibility of finding them employment—in other words, if there are human beings capable of work, and food to feed them, they may always be employed in producing something."

The great impediment, however, to the profitable employment of the poor, has generally been the unproductive or unavailing character of pauper labour. This has been mainly owing to the fact that the able-bodied who are deprived of employment are necessarily the lowest grade of operatives; for, in the displacement of workmen, those are the first discarded whose labour is found to be the least efficient, either from a deficiency of skill, industry, or sobriety, so that pauper labour is necessarily of the least productive character.

Another great difficulty with the employment of the poor is, that the idle, or those to whom work is more than usually irksome, require a stronger inducement than ordinary to make them labour, and the remuneration for parish work being necessarily less than for any other, those who are pauperized through idleness (the most benevolent among us must allow there are such) are naturally less than ever disposed to labour when they become paupers. All pauper work, therefore, is generally unproductive or unavailing, because it is either inexpert or unwilling work. The labour of the in-door paupers, who receive only their food for their pains, is necessarily of the same compulsory character as slavery; while that of the out-door paupers, with the remuneration often cut down to the lowest subsisting point, is scarcely of a more willing or more availing kind.

Owing to this general unproductiveness, (as well as the difficulty of finding a field for the profitable employment of the unemployed poor,) the labour of paupers has been for a long time past directed mainly to the cleansing of the public thoroughfares. Still, from the degrading nature of the occupation, and the small remuneration for the toil, pauper labourers have been found to be such unwilling workers that many parishes have long since given over employing their poor even in this capacity, preferring to entrust the work to a contractor, with his paid self-supporting operatives, instead.

The founder of the Philanthropic Association appears to have been fully aware of the two great difficulties besetting the profitable employment of the poor, viz., (1) finding a field for the exercise of their labours where they might be "set on work" with benefit to the community, and without injury to the independent operatives already engaged in the same occupation; and (2) overcoming the unwillingness, and consequently the unavailingness, of pauper labour.

The first difficulty Mr. Cochrane has endeavoured to obviate by taking advantage of that growing desire for greater public cleanliness which has arisen from the increased knowledge of the principles governing the health of towns; and the second, by giving the men 12*s.* instead of 9*s.* or 7*s.* a week, or worse than all, 1*s.* 1½*d.* and a quartern loaf a day for three days in the week, and so not only augmenting the stimulus to work (for it should be remembered that wages are to the human machine what the fire is to the steam-engine), but preventing the undue depreciation of the labour of the independent workman. He who discovers the means of increasing the rewards of labour, is as great a friend to his race as he who strives to depreciate them is the public enemy; and I do not hesitate to confess, that I look upon Mr. Charles Cochrane as one of the illustrious few who, in these days of unremunerated toil, and their necessary concomitants—beggars and thieves, has come forward to help the labourers of this country from their daily-increasing degradation. His benevolence is of that enlightened order which seeks to extend rather than destroy the self-trust of the poor, not only by creating additional employment for them, but by rendering that employment less repulsive.

The means by which Mr. Cochrane has endeavoured to gain these ends constitutes the system called Street-Orderlyism, which therefore admits of being viewed in two distinct aspects—first, as a new mode of improving "the health of towns," and, secondly, as an improved method of employing the poor.

Concerning the first, I must confess that the system of scavaging or cleansing the public thoroughfares pursued by the street-orderlies assumes, when contemplated in a sanitary point of view, all the importance and simplicity of a great discovery. It has been before pointed out that this system consists not only in cleansing the streets, but in *keeping* them clean. By the street-orderly method of scavaging, the thoroughfares are continually being cleansed, and so never allowed to become dirty; whereas, by the ordinary method, they are not cleansed *until* they are dirty. Hence the two modes of scavaging are diametrically opposed; under the one the streets are cleansed as fast as dirtied, while under the other they are dirtied as fast as cleansed; so that by the new system of scavaging the public thoroughfares are maintained in a perpetual state of cleanliness, whereas by the old they may be said to be kept in a continual state of dirt.

The street-orderly system of scavaging, however, is not only worthy of high commendation as a more efficient means of gaining a particular end—a simplification of a certain process—but it calls for our highest praise as well for the end gained as for the means of gaining it. If it be really a sound physiological principle, that the Creator has made dirt offensive to every rightly-constituted mind, because it is injurious to us, and so established in us an instinct, before we could discover a reason, for removing all refuse from our presence, it becomes, now that we have detected the cause of the feeling in us, at once disgusting and irrational to allow the filth to accumulate in our streets in front of our houses. If typhus, cholera, and other pestilences are but divine punishments

inflicted on us for the infraction of that most kindly law by which the health of a people has been made to depend on that which is naturally agreeable—cleanliness, then our instinct for self-preservation should force us, even if our sense of enjoyment would not lead us, to remove as fast as it is formed what is at once as dangerous as it should be repulsive to our natures. Sanitarily regarded, the cleansing of a town is one of the most important objects that can engage the attention of its governors; the removal of its refuse being quite as necessary for the continuance of the existence of a people as the supply of their food. In the economy of Nature there is no loss: this the great doctrine of waste and supply has taught us; the detritus of one rock is the conglomerate of another; the evaporation of the ocean is the source of the river; the poisonous exhalations of animals the vital air of plants; and the refuse of man and beasts the food of their food. The dust and cinders from our fires, the "slops" from the washing of our houses, the excretions of our bodies, the detritus and "surface-water" of our streets, have all their offices to perform in the great scheme of creation; and if left to rot and fust about us not only injure our health, but diminish the supplies of our food. The filth of the thoroughfares of the metropolis forms, it would appear, the staple manure of the market-gardens in the suburbs; out of the London mud come the London cabbages: so that an improvement in the scavaging of the metropolis tends not only to give the people improved health, but improved vegetables; for that which is nothing but a pestiferous muck-heap in the town becomes a vivifying garden translated to the country.

Dirt, however, is not only as prejudicial to our health and offensive to our senses, when allowed to accumulate in our streets, as it is beneficial to us when removed to our gardens,—but it is a most expensive commodity to keep in front of our houses. It has been shown, that the cost to the people of London, in the matter of extra washing induced by defective scavaging, is at the least 1,000,000*l.* sterling per annum (the Board of Health estimate it at 2,500,000*l.*); and the loss from extra wear and tear of clothes from brushing and scrubbing, arising from the like cause, is about the same prodigious sum; while the injury done to the furniture of private houses, and the goods exposed for sale in shops, though impossible to be estimated—appears to be something enormous: so that the loss from the defective scavaging of the metropolis seems, at the lowest calculation, to amount to several millions per annum; and hence it becomes of the highest possible importance, economically as well as physiologically, that the streets should be cleansed in the most effective manner.

Now, that the street-orderly system is the only rational and efficacious mode of street cleansing both theory and practice assure us. To allow the filth to accumulate in the streets before any steps are taken to remove it, is the same as if we were never to wash our bodies until they were dirty—it is to be perpetually striving to cure the disease, when with scarcely any more trouble we might prevent it entirely. There is, indeed, the same difference between the new and the old system of scavaging, as there is between a bad and a good housewife: the one never cleaning her house until it is dirty, and the other continually cleaning it, so as to prevent it being ever dirty.

Hence it would appear, that the street-orderly system of scavaging would be a great public benefit, even were there no other object connected with it than the increased cleanliness of our streets; but in a country like Great Britain, afflicted as it is with a surplus population (no matter from what cause), that each day finds the difficulty of obtaining work growing greater, the opening up of new fields of employment for the poor is perhaps the greatest benefit that can be conferred upon the nation. Without the discovery of such new fields, "the setting the poor on work" is merely, as I have said, to throw out of employment those who are already employed; it is not to decrease, but really to increase, the evil of the times—to add to; rather than diminish, the number of our paupers or our thieves. The increase of employment in a nation, however, requires, not only a corresponding increase of capital, but a like increase in the demand or desire, as well as in the pecuniary means, of the people to avail themselves of the work on which the poor are set (that is to say, in the extension of the home market); it requires, also, some mode of stimulating the energies of the workers, so as to make them labour more willingly, and consequently more availingly, than usual. These conditions appear to have been fulfilled by Mr. Cochrane, in the establishment of the street-orderlies. He has introduced, in connection with this body, a system of scavaging which, while it employs a greater number of hands, produces such additional benefits as cannot but be considered an equivalent for the increased expenditure; though it is even doubtful whether, by the collection of the street manure unmixed with the mud, the extra value of that article alone will not go far to compensate for the additional expense; if, however, there be added to this the saving to the metropolitan parishes in the cost of watering the streets—for under the street-orderly system this is not required, the dust never being allowed to accumulate, and consequently never requiring to be "laid"—as well as the greater saving of converting the paupers into self-supporting labourers; together with the diminished expense of washing and doctors' bills, consequent on the increased cleanliness of the streets—there cannot be the least doubt that the employment of the poor as street-orderlies is no longer a matter of philanthropy, but of mere commercial prudence.

Such appear to me to be the principal objects of Mr. Cochrane's street-orderly system of scavaging; and it is a subject upon which I have spoken the more freely, because, being unacquainted with that gentleman, none can suspect me of being prejudiced in his favour, and because I have felt that the good which he has done and is likely to do to the poor, has been comparatively unacknow-



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ledged by the public, and that society and the people owe him a heavy debt of gratitude*.

I shall now proceed to set forth the character of the labour, and the condition and remuneration of the labourers in connection with the street-orderly system of scavaging the metropolitan thoroughfares.

The first appearance of the street-orderlies in the metropolis was in 1843. Mr. Charles Cochrane, who had previously formed the National Philanthropic Association, with its eleemosynary soup-kitchens, &c., then introduced the system of street-orderlies, as one enabling many destitute men to support themselves by their labour; as well as, in his estimation, a better, and eventually a more economical, mode of street-cleansing, and partaking also somewhat of the character of a street police.

The first "demonstration," or display of the street-orderly system, took place in Regent-street, between the Quadrant and the Regent-circus, and in Oxford-street, between Vere-street and Charles-street. The streets were thoroughly swept in the morning, and then each man or boy, provided with a hand-broom and dust-pan, removed any dirt as soon as it was deposited. The demonstration was pronounced highly successful and the system effective, in the opinion of eighteen influential inhabitants of the locality who acted as a committee, and who publicly, and with the authority of their names, testified their conviction that "the most efficient means of keeping streets clean, and more especially great thoroughfares, was to prevent the accumulation of dirt, by removing the manure within a few minutes after it has been deposited by the passing cattle; the same having, hitherto, remained during several days."

The cost of this demonstration amounted to about 400*l.*, of which, the Report states, "200*l.* still remains due from the shop-keepers to the Association; which," it is delicately added, "from late commercial difficulties they have not yet repaid" (in 1850).

Whilst the street-orderlies were engaged in cleansing Regent-street, &c., the City Commissioners of the sewers of London were invited to depute some person to observe and report to them concerning the method pursued; but with that instinctive sort of repugnance which seems to animate the great bulk of city officials against improvement of any kind, the reply was, that they "did not consider the same worthy their attention." The matter, however, was not allowed to drop, and by the persevering efforts of Mr. Cochrane, the president, and of the body of gentlemen who form the Council of the Association, Cheapside, Cornhill, and the most important parts of the very heart of the city were at length cleansed according to the new method. The ratepayers then showed that *they*, at least, *did* consider "the same worthy of attention," for 8000 out of 12,000 within a few days signed memorials recommending the adoption of what they pronounced an improvement, and a public meeting was held in Guildhall (May 4, 1846), at which resolutions in favour of the street-orderly method were passed. The authorities did not adopt these recommendations, but they ventured so far to depart from their venerable routine as to order the streets to be "swept every day!" This employed upwards of 300 men, whereas at the period when the sages of the city sewers did not consider any proposed improvement in scavagery worthy their attention, the number of men employed by them in cleansing the streets did not exceed 30.

The street-orderly system was afterwards tried in the parishes of St. Paul, Covent-garden, St. James (Westminster), St. Martin-in-the-Fields, St. Anne, Soho, and others—sometimes calling forth opposition, of course from the authorities connected with the established modes of paving, scavaging, &c.

It is not my intention to write a complete history of the street-orderlies, but merely to sketch their progress, as well as describe their peculiar characteristics.

Within these few months public meetings have been held in almost every one of the 26 wards of the City, at which approving resolutions were either passed unanimously or carried by large majorities; and the street-orderly system is now about to be introduced into St. Martin's parish instead of the street-sweeping machine.

As far as the street-orderly system has been tried, and judging only by the testimony of public examination and public record of opinion, the trial has certainly been a success. A memorial to the Court of Sewers, from the ward of Broad-street, supported by the leading merchants of that locality, in recommendation of the employment of street-orderlies, seems to bear more closely on the subject than any I have yet seen.

"Your memorialists," they state, "have observed that those public thoroughfares within the city of London which are now cleansed by street-orderlies, *are so remarkably clean* as to be *almost free from mud in wet, and dust in dry weather*—that *such extreme cleanliness is of great comfort to the public*, and tends to improve the sanitary condition of the ward."

But it is not only in the metropolis that the street-orderlies seem likely to become the established scavagers. The streets of Windsor, I am informed, are now in the course of being cleansed upon the orderly plan. In Amsterdam, there are at present 16 orderlies regularly employed upon scavaging a portion of the city, and in Paris and Belgium, I am assured, arrangements are being made for the introduction of the system into both those cities. Were the street-orderly mode of scavaging to become general throughout this country, it is estimated that employment would be given to 100,000 labourers, so that, with the families of these men, not less than half a million of people would be supported in a state of independence by it. The total number of adult able-bodied paupers relieved—in-door and out-door—throughout England and Wales, on January 1, 1850, was 154,525.

The following table shows the route of the street-orderly operations in the metropolis. A further

* Mr. Cochrane is said, in the Reports of the National Philanthropic Association, to have expended no less than 9000*l.* of his fortune in the institution of the Street-Orderly system of scavaging.

column, in the Report from which the table has been extracted, contained the names of thirteen clergymen who have "weekly read prayers and delivered discourses to the street-orderlies at their respective stations, and recorded flattering testimonials of their conduct and demeanour."

EMPLOYMENT OF STREET-ORDERLIES.

Localities Cleansed.	No. of Street-Orderlies.	Wives and Children dependent.	Money expended. £	s.	d.
1843-4. Oxford and Regent Streets	50	256	560	0	0
1845. Strand	8	—	38	0	0
1845-6. Cheapside, Cornhill, &c.. City of London	100	363	1540	2	0
1846-7. St. Margaret's and St. John's, Westminster	15	65	306	0	0
1847. Piccadilly, St. James's, &c.	8	32	115	0	0
1848. Strand	8	31	35	0	0
1848. St. Martin's Lane, &c.	38	138	153	0	0
1848. Piccadilly, St. James's, &c.	48	108	341	3	0
1848-9. St. Paul's, Covent Garden	13	38	38	10	0
1849. Regent Street, Whitehall, &c.	18	68	98	0	0
1849. St. Giles's and St. George's, Bloomsbury	14	71	58	1	0
1849. St. Pancras, New Road, &c.	16	46	177	6	0
1849. St. Andrew's and St. George's, Holborn.	23	83	63	4	9
1849. Lambeth Parish	16	41	84	16	0
1851. St. Martin's-in-the-Fields	68	179	119	3	4
1851. City of London, Central Districts (per week, during 6 weeks last past)	103	378	55	0	0
Total	546	1897	3782	6	1

The period of nine years comprised in the above statement (1843 and 1851 being both included) gives a yearly average, as to the number of the poor employed, exceeding 60, with a similar average of 210 wives and children, and a yearly average outlay of 420*l.* The number of orderlies now employed by the Association is from 80 to 90.

Such, then, is a brief account of the rise and progress of this new mode of street-sweeping, and we now come to a description of the work itself.

"The orderlies," says the Report of the Association, "keep the streets free from mud in winter, and dust in summer; and that with the least possible personal drudgery:—adhering to the principle of operation laid down, viz., that of '*Cleansing and keeping Clean,*' they have merely, after each morning's sweeping and removal of dirt, to keep a vigilant look-out over the surface of street allotted to them; and to remove with the hand-brush and dust-pan, from any particular spot, whatever dirt or rubbish may fall upon it, *at the moment of its deposit.* Thus are the streets under their care kept constantly clean.

"But sweeping and removing dirt," continues the Report, "is not the only occupation of the street-orderly, whilst keeping up a careful inspection of the ground allotted to him. He is also the watchman of house-property and shop-goods; the guardian of reticules, pocket-books, purses, and watch-pockets;—the experienced observer and detector of pickpockets; the ever ready, though unpaid, auxiliary to the police constable. Nay, more;—he is always at hand, to render assistance to both equestrian and pedestrian: if a horse slip, stumble, or fall,—if a carriage break down, or vehicles come into collision,—the street-orderly darts forward to raise and rectify them: if foot-passengers be run over, or knocked down, or incautiously loiter on a crossing, the street-orderly rescues them from peril or death; or warns them of the approaching danger of carriages driving in opposite directions: if other accidents befall pedestrians,—if they fall on the pavement, from sudden illness, faintness, or apoplexy, the street-orderly is at hand to render assistance, or convey them to the nearest surgery or hospital. If strangers are at fault as to the localities of London, or the place of their destination, the orderly, in a civil and respectful manner, directs them on their way. If habitual or professional mendicants are importunate or troublesome, the street-orderly warns them off; or hands them to the care of the policeman. And if a *really* poor or starving fellow-creature wanders in search of food or alms, he leads him to a workhouse or soup-kitchen*.

"*Should the system become general* (*of which there is now every good prospect*), *it will be the means of rescuing no less than* TEN THOUSAND PERSONS *and their families from destitution and distress* (in London alone);—from the forlorn and wretched condition which tempts to criminality and outrage, to that of comfort, independence, and happiness—produced by their own industry, aided by the kind consideration of those who are more the favourites of fortune than themselves.

"In conclusion it may be stated, that the street-orderly system will keep the streets and pavements of London and Westminster as clean as the court-yard and hall of any gentleman's private dwelling: it will not only secure the general comfort and health of upwards of two millions of people, but save a vast annual amount to shopkeepers, housekeepers, and others, with regard to the spoiling of their goods by dust and dirt; in the wear and tear of clothes and furniture, by an eternal round of brushing, dusting, scouring, and scrubbing."

The foregoing extract fully indicates the system pursued and results of street-orderlyism. I will now deal with what may be considered *the labour or trade part of the question.*

By the street-orderly plan a district is duly apportioned. To one man is assigned the care of a series of courts, a street, or 500, 1000, 1200, 1500, or 2000 yards of a public way, according to its traffic, after the whole surface has been swept "the first thing in the morning." In Oxford-street, for instance, it has been estimated that 500 yards can be kept clear of the dirt continually being deposited by one man; in the squares, where there is no great traffic, 2000 yards; while in so busy a part as Cheapside, some nine men will be required to be hourly on the look-out. These street-orderlies are confined to their beats as strictly as are policeman, and as they soon become known to the inhabitants, it is a means of checking any disposition to loiter, or to shirk the work; to say nothing of the corps of inspectors and superintendents.

The *division of labour* among the street-orderlies is as follows:—

1. The *foreman*, whose duty is to "look over the men" (one such over-looker being employed to about every 20 men), and who receives 15*s.* per week.

2. The *barrow-men*, or sweepers, consisting of men and boys; the former receiving 12*s.* and the latter generally 7*s.* per week.

The *tools and implements* used, and their cost, are as follows:—wooden scoops, to throw up the slop, 1*s.* 2*d.* each (they used to be made of iron, weighing 8 lbs. each, but the men then complained that the weight "broke their arms"); shovel, 2*s.* 3*d.*; hoe and scraper, 1*s.* 3*d.*; hand-broom, 8*d.*; scavager's broom, 1*s.* 2*d.*; barrow, 12*s.*; covered barrow, 24*s.*

In the amount of his receipts, the street-orderly appears to a disadvantage, as many of the "regular hands" of the contractors receive 16*s.* weekly, and he but 12*s.* The reason for this circumscribed payment I have already alluded to—the deficiency of funds to carry out the full purposes of the Association. Contrasted with the remuneration of the great majority of the pauper scavagers, the street-orderly is in a state of comparative comfort, for he receives nearly double as much as the Guardians of the Poor of Chelsea and the Liberty of the Rolls pay their labourers, and full 25 per cent. more than is paid by Bermondsey, Deptford, Marylebone, St. James's, Westminster, St. George's, Hanover-square, and St. Andrew's, Holborn; and, I am assured, it is the intention of the Council to pay the full rate of wages given by the more respectable scavagers, viz., 16*s.* a week each man. *If traders can do this, philanthropists, who require no profit, at least should be equally liberal.* The labourer never can be benefited by depreciating the ordinary wages of his trade; and I must in justice confess, that there are scattered throughout the Report repeated regrets that the funds of the Association will not admit of a higher rate of wages being paid.

The street-orderly is not subjected to any fines or drawbacks, and is paid always in money, every Saturday evening at the office of the Association. In this respect, however, he does not differ from other bodies of scavagers.

The usual mode of obtaining employment among the street-orderlies is by personal application at the office of the Association in Leicester-square; but sometimes letters, well-penned and well-worded, are addressed to the president.

The daily number of applicants for employment is far from demonstrative of that unbroken prosperity of the country, of which we hear so much. On my inquiring into the number, I ascertained towards the end of August, that, for the previous fortnight, during fine summer weather, London being still full of the visitors to the Exhibition, on an average 30 men, of nearly all conditions of life, applied personally each day for work at street-sweeping, at 12*s.* a week. Certainly this labour is not connected with the feeling of pauper degradation, but it does not look well for the country that in twelve days 360 men should apply for such work. On the year's average, I am assured, there are 30 applications daily, but only ten new applicants, as men call to solicit an engagement again and again. Thus in the year there are *nine thousand, three hundred, and ninety* applications, and 3130 individual applicants. In the course of one month last winter, there were applications from 300 boys in Spitalfields alone, to be set to work; and I am told, that had they been successful, 3000 lads would have applied the next month.

When an application is made by any one recommended by subscribers, &c., to the Association, or where the case seems worthy of attention, the names and addresses are entered in a book, with a slight sketch of the circumstances of the person wishing to become a street-orderly, so that inquiries may be made. I give a few of the more recent of these entries and descriptions, which are really "histories in little":—

"Thomas M'G——, aged 50, W— L— street, Chelsea Hospital, single man. Taught a French and English school in Lyons, France. Driven out of France at the Revolution of 1848. Penniless.

* A street-orderly in St. Martin's-lane recovered a piece of broad-cloth from a man who had just stolen it from a warehouse; others in Drury-lane detected several thefts from provision-shops. Two orderlies in Holborn saved the lives of the guard and driver of one of Her Majesty's mail-carts, the horse having become unmanageable in consequence of the shafts being broken. In St. Mary's Church, Lambeth, a gentleman having fallen down in apoplexy, the orderlies who were attending Divine service, carried him out into the air, and promptly procured him medical aid, but unhappily life was extinct. Many instances have occurred, however, in which they have rendered essential service to the public and to individuals.

"Rich. M——, 13, C—— street, H—— garden, 42 years. Married. Can read and write. Has been a seaman in the royal service ten years. Chairmaker by trade. Has jobbed as a porter in Rochester, Kent.

"Phil. S——, 1, R— L— street, High Holborn. From Killarney, co. Kerry. Bred a gardener. Fifteen years in constabulary force, for which he has a character from Col. Macgregor, and received the compensation of 50*l.*, which he bestowed on his father and mother to keep them at home. Nine months in England, viz., in Bristol, Bath, and London. Aged 35. Can read and write.

"Edw. C——, 79, M—— street, Hackney. Aged 27. Married. Army-pensioner, 6*d.* a day. Can read and write. Recommended by Rev. T. Gibson, rector of Hackney.

"Chas. J——, 11, D—— street, Chelsea. Aged 38. Gentleman's servant."

In my account of the "regular hands" employed by the contracting scavagers, I have stated that the street-orderlies were a more miscellaneous body, as they had not been reared in the same proportion to street work. They are also, I may add, a better-conducted and better-informed class than the general run of unskilled labourers, as they know, before applying for street-orderly work, that inquiries are made concerning them, and that men of reprobate character will not be employed.

Many of those employed as orderlies have since returned to their original employments; others have procured, and been recommended to, superior situations in life to that of street-orderlies, by the Council of the Association, but *no instance has occurred of any street-orderly having returned back to his parish workhouse or stoneyard.*" This certainly looks well.

One street-orderly, I may add, is now a reputable school-master, and has been so for some time; another is a clerk under similar circumstances. Another is a good theoretical and practical musician, having officiated as organist in churches and at concerts; he is also a neat music copyist. Another tells of his correspondence with a bishop on theological topics. Another, with a long and well-cultured beard, has been a model for artists. One had 150*l.* left to him not long ago, which was soon spent; his wife spent it, he said, and then he quietly applied to be permitted to be again a street-orderly. Several have got engagements as seamen, their original calling—indeed, I am assured, that a few months of street-orderly labour is looked upon as an excellent ordeal of character, after which the Association affirms good behaviour on the part of the employed.

The subscribers to the funds not unfrequently recommend destitute persons to the good offices of the Association, apart from their employment as street-orderlies. Thus, it is only a few weeks ago, that twelve Spanish refugees, none of them speaking English, were recommended to the Association; one of them it was ultimately enabled to establish as a waiter in an hotel resorted to by foreigners, another as an interpreter, another as a gentleman's servant, and another (with a little boy, his son) in shoe-blacking in Leicester-square.

Thus among street-orderlies are to be found a great diversity of career in life, and what may be called adventures.

One great advantage, however, which the orderly possesses over his better paid brethren is in the greater probability of his "rising out of the street." This is very rarely the case with an ordinary scavager.

I now give the following account from one of the street-orderlies, a tall, soldierly-looking man:—

"I'm 42 now," he said, "and when I was a boy and a young man I was employed in the *Times* machine office, but got into a bit of a row—a bit of a street quarrel and frolic, and was called on to pay 3*l.*, something about a street-lamp: that was out of the question; and as I was taking a walk in the park, not just knowing what I'd best do, I met a recruiting sergeant, and enlisted on a sudden—all on a sudden—in the 16th Lancers. When I came to the standard, though, I was found a little bit too short. Well, I was rather frolicsome in those days, I confess, and perhaps *had rather a turn for a roving life*, so when the sergeant said he'd take me to the East India Company's recruiting sergeant, I consented, and was accepted at once. I was taken to Calcutta, and served under General Nott all through the Affghan war. I was in the East India Company's artillery, 4th company and 2nd battalion. Why, yes, sir, I saw a little of what you may call 'service.' I was at the fighting at Candahar, Bowlinglen, Bowling-pass, Clatigillsy, Ghuznee, and Caboul. The first real warm work I was in was at Candahar. I've heard young soldiers say that they've gone into action the first time as merry as they would go to a play. Don't believe them, sir. Old soldiers will tell you quite different. You *must* feel queer and serious the first time you're in action: it's not fear—it's nervousness. The crack of the muskets at the first fire you hear in real hard earnest is uncommon startling; you see the flash of the fire from the enemy's line, but very little else. Indeed, oft enough you see nothing but smoke, and hear nothing but balls whistling every side of you. And then you get excited, just as if you were at a hunt; but after a little service—I can speak for myself, at any rate—you go into action as you go to your dinner.

"I served during the time when there was the Affghanistan retreat; when the 44th was completely cut up, before any help could get up to them. We suffered a good deal from want of sufficient food; but it was nothing like so bad, at the very worst, as if you're suffering in London. In India, in that war time, if you suffered, you were along with a number in just the same boat as yourself; and there's always something to hope for when you're an army. It's different if you're walking the streets of London by yourself—I felt it, sir, for a little bit after my return—and if you haven't a penny, you feel as if there wasn't a hope. If you have friends it may be different, but I had none. It's no comfort if you know hundreds are suffering as you are, for you can't help and cheer one another as soldiers can.

"Well, sir, as I've told you, I saw a good deal of service all through that war. Indeed I served thirteen years and four months, and was then discharged on account of ill health. If I'd served eight months longer that would have been fourteen years, and I should have been entitled to a pension. I believe my illness was caused by the hardships I went through in the campaigns, fighting and killing men that I never saw before, and until I was in India had never heard of, and that I had no ill-will to; certainly not, why should I? they never did me any wrong. But when it comes to war, if you can't kill them they'll kill you. When I got back to London I applied at the East India House for a pension, but was refused. I hadn't served my time, though that wasn't my fault.

"I then applied for work in the *Times* machine office, and they were kind enough to put me on. But I wasn't master of the work, for there was new machinery, wonderful machinery, and a many changes. So I couldn't be kept on, and was some time out of work, and very badly off, as I've said before, and then I got work as a scavenger. O, I knew nothing about sweeping before that. I'd never swept anything except the snow in the north of India, which is quite a different sort of thing to London dirt. But I very soon got into the way of it. I found no difficulty about it, though some may pretend there is an art in it. I had 15*s.* a week, and when I was no longer wanted I got employment as a street-orderly. I never was married, and have only myself to provide for. I'm satisfied that the street-orderly is far the best plan for street-cleaning. Nothing else can touch it, in my opinion, and I thought so before I was one of them, and I believe most working scavengers think so now, though they mayn't like to say so, for fear it might go against their interest.

"Oh, yes, I'm sometimes questioned by gentlemen that may be passing in the streets while I'm at work, all about our system. They generally say, 'and a very good system, too.' One said once, 'It shows that scavengers can be decent men; they weren't when I was first in London, above 40 years ago.' Well, I sometimes get the price of a pint of beer given to me by gentlemen making inquiries, but very seldom."

Until about eighteen months ago none but unmarried men were employed by the Association, and these all resided in one locality, and under one general superintendence or system. The boarding and lodging of the men has, however, been discontinued about fifteen months; for I am told it was found difficult to encourage industrial and self-reliant pursuits in connection with public eleemosynary aid. Married men are now employed, and all the street-orderlies reside at their own homes; the adults, married or single, receiving 12*s.* a week each; the boys, 6*s.*; while to each man is gratuitously supplied a blouse of blue serge, costing 2*s.* 6*d.*, and a glazed hat, costing the same amount.

The system formerly adopted was as follows:—

The men were formed into a distinct body, and established in houses taken for them in Ham-yard, Great Windmill-street, Haymarket.

"The wages of the men," states the Report, "were fixed at 12*s.* each per week; that is, 9*s.* were charged for board and lodging, and 3*s.* were paid in money to each man on Saturday afternoon, out of which he was expected to pay for his clothing and washing. The men had provided for them clean wholesome beds and bedding, a common sitting-room, with every means of ablution and personal cleanliness, including a warm bath once a week. Their food was abundant and of the best quality, viz., coffee and bread and butter for breakfast, at eight o'clock; round of beef, bread, and vegetables, four times a week for dinner, at one o'clock; nutritious soup and bread, or bread and cheese, forming the afternoon repast of the other three days. At six in the evening, when they returned from their labours, they were refreshed with tea or coffee, and bread and butter; or for supper, at nine, each had a large basin of soup, with bread. Thus, three-fourths of their wages being laid out for them to advantage, the men were well lodged and fed; and they have always declared themselves satisfied, comfortable, and happy, under the arrangements that were made for them. Under the charge of their intelligent and active superintendent, the street-orderlies soon fell into a state of the most exact discipline and order; and when old orderlies were drafted off, either to enter the service of parish boards who adopted the system, or were recommended into service, or some other superior position in life, and when new recruits came to supply their places, the latter found no difficulty in conforming to the rules laid down for the performance of their duties, as well as for their general conduct. 'Military time' regulated their hours of labour, refreshment, and rest; due attention was required from all; and each man (though a scavenger) was expected to be cleanly in his person, and respectful in his demeanour; indeed, nothing could be more gratifying than the conduct of these men, both at home and abroad."

"In their domicile in Ham Yard," continues the Report, "the street-orderlies have invariably been encouraged to follow pursuits which were useful and improving, after their daily labours were at an end; for this, a small library of history, voyages, travels, and instructive and entertaining periodical works, was placed at their disposal; and it is truly gratifying to the Council to be able to state, that the men evinced great satisfaction, and even avidity, in availing themselves of this source of intellectual pleasure and improvement. Writing materials also were provided for them, for the purpose of practice and improvement, as well as for mutual instruction in this most necessary and useful art; and it must be gratifying to the members of the Association to be informed, that, in April last, 34 out of 40 men appended their

signatures, distinctly and well written, to a document which was submitted to them. Such a fact will at least prove, that when poor persons are employed, well fed, and lodged, and cared for in the way of instruction, they do not always mis-spend their time, nor, from mere preference, run riot in pot-houses and scenes of low debauchery. It is to be borne in mind, however, that one-half of these men were persons of almost every trade and occupation, from the artizan to the shopman and clerk, and therefore previously educated; the other half consisted of labourers and persons forsaken and indigent from their birth, and formerly dependent on workhouse charity or chance employment for their scanty subsistence; consequently in a state of utter ignorance as to reading and writing.

"Every night, after supper, prayers were read by the superintendent; and it has frequently been a most edifying as well as gratifying sight to members of your Council, as well as to other persons of rank and station in society, who have visited the Hospice in Ham Yard at that interesting hour, to observe the decorum with which these poor men demeaned themselves; and the heartfelt solemnity with which they joined in the invocations and thanks to their Creator and Preserver!

"Each Sunday morning, at 8 o'clock, a portion of the church service was read, followed by an extemporaneous discourse or exhortation by the secretary to the Hospice. They were marshalled to church twice on the Sabbath, headed by the superintendent and foremen; and generally divided into two or three bodies, each taking a direction to St. James's, St. Anne's, or St. Paul's, Covent Garden; in all of which places of worship they had sitting accommodation provided by the kindness of the clergy and churchwardens. On Tuesday evenings they had the benefit of receiving pastoral visits and instruction from several of the worthy clergymen of the surrounding parishes."

This is all very benevolent, but still very wrong. There is but one way of benefiting the poor, viz., by developing their powers of self-reliance, and certainly not in treating them like children. Philanthropists always seek to do too much, and in this is to be found the main cause of their repeated failures. The poor are expected to become angels in an instant, and the consequence is, they are merely made *hypocrites*. Moreover, no men of any independence of character will submit to be washed, and dressed, and fed like schoolboys; hence none but the worst classes come to be experimented upon. It would seem, too, that this overweening disposition to play the part of *ped-agogues* (I use the word in its literal sense) to the poor, proceeds rather from a love of power than from a sincere regard for the people. Let the rich become the advisers and assistants of the poor, giving them the benefit of their superior education and means—but *leaving the people to act for themselves*—and they will do a great good, developing in them a higher standard of comfort and moral excellence, and so, by improving their tastes, inducing a necessary change in their habits. But such as seek merely to *lord it* over those whom distress has placed in their power, and strive to bring about the *villeinage* of benevolence, making the people the philanthropic, instead of the feudal, serfs of our nobles, should be denounced as the arch-enemies of the country. Such persons may mean well, but assuredly they achieve the worst towards the poor. The curfew-bell, whether instituted by benevolence or tyranny, has the same degrading effect on the people—destroying their principle of self-action, without which we are all but as the beasts of the field.

Moreover, the laying out of the earnings of the poor is sure, after a time, to sink into "a job," and I quote the above passage to show that, despite the kindest management, eleemosynary help is *not* a fitting adjunct to the industrial toil of independent labourers.

The residences of the street-orderlies are now in all quarters where unfurnished rooms are about 1*s.* 9*d.* or 2*s.* a week. The addresses I have cited show them residing in the outskirts and the heart of the metropolis. The following returns, however, will indicate the ages, the previous occupations, the education, church-going, the personal habits, diet, rent, &c., of the class constituting the street-orderlies, better than anything I can say on the matter.

Before any man is employed as a street-orderly, he is called upon to answer certain questions, and the replies from 67 men to these questions supply a fund of curious and important information—important to all but those who account the lot of the poor of *no* importance. In presenting these details, I beg to express my obligations to Mr. Colin Mackenzie, the enlightened and kindly secretary of the Association.

I shall first show what is the order of the questioning, then what were the answers, and I shall afterwards recapitulate, with a few comments, the salient characteristics of the whole.

The questions are after this fashion; the one I adduce having been asked of a scavager to whom a preference was given:—

The Parish of St. Mary, Paddington.—Questions asked of Parish Scavagers, applying for employment as Street-Orderlies, with the answers appended.

Name?—W—— C——.
Age?—35 years.
How long a scavenger?—Three months.
What occupation previously?—Gentleman's footman.
Married or single?—Married.
Reading, writing, or other education?—Yes.
Any children?—One.
Their ages?—Three years.
Wages?—Nine shillings per week.
Any parish relief?—No.

What and how much food the applicants have usually purchased in a week.

Meat?—2*s.* 6*d.*
Bacon?—None.
Fish?—None.
Bread?—2*s.*
Potatoes?—4*d.*
Butter?—6*d.*
Tea and sugar?—1*s.*
Cocoa?—None.
What rent they pay?—2*s.*
Furnished or unfurnished lodgings?—Unfurnished.
Any change of dress?—No.
Sunday clothing?—No.
How many shirts?—Two shirts.
Boots and shoes?—One pair.
How much do they lay out for clothes in a year?—I have nothing but what I stand upright in.
Do they go to church or chapel?—Sometimes.
If not, why not?—It is from want of clothes.
Do they ever bathe?—No.
Does the wife go out to, or take in work?—Yes.
What are her earnings?—Uncertain.
Do they have anything from charitable institutions or families?—No.
When ill; where do they resort to?—Hospitals, dispensaries, and the parish doctor.
Do their children go to any school; and what?—Paddington.
Do they ever save any money; how much, and where?—
How much do they spend per week in drink?
Do not passers by, as charitable ladies, &c., give them money; and how much per week?—No.

Such are the questions asked, and I now give the answers of 67 individuals.

Their ages were:—

10 were from 20	to 30	15 from 50	to 60
13 „	30 „ 40	4 „	60 „ 70.
24 „	40 „ 50	1 „	70

The greatest number of any age was 7 persons of 45 years respectively.

Their previous occupations had been:—

22 labourers.	1 sweep.
3 at the business "all their lives."	1 haybinder.
	1 gaslighter.
3 dustmen.	1 dairyman.
3 ostlers.	1 ploughman.
2 stablemen.	1 gardener.
2 carmen.	1 errand boy.
2 porters.	1 fur dresser.
2 gentlemen's servants.	1 fur dyer.
2 greengrocers.	1 skinner.
1 following dust-cart.	1 leather dresser.
1 excavator.	1 letter-press printer.
1 gravel digging.	1 paper stainer.
1 stone breaking in yards.	1 glass blower.
	1 farrier.
1 at work in the brick-fields.	1 plasterer.
	1 clerk.
1 at work in the lime-works.	1 vendor of goods.
	1 licensed victualler.
1 coal porter.	

Therefore, of 67 scavagers
12 had been artizans.
55 „ unskilled workmen.

Hence about five-sixths belong to the unskilled class of operatives.

Time of having been at scavagering.

3 "all their lives" at the business.	4 from 5 to 10 years.
	34 „ 1 „ 5 „
1 about 27 years.	13 twelve months and less.
6 from 15 to 20 years.	
6 „ 10 „ 15 „	

Hence it would appear, that few have been at the business a long time. The greater number have not been acting as scavagers more than five years.

State of education.—Could they read and write?

45 answered yes.	5 could read only.
4 replied that they could read and write.	12 could do neither.
	1 was deaf and dumb.

Hence it would appear, that rather more than two-thirds of the scavagers have received *some little* education.

Did they go to church or chapel?

22 answered yes.	1 not often.
9 went to church.	17 never went at all.
4 „ chapel.	1 was ashamed to go.
4 „ the Catholic chapel.	1 went out of town to enjoy himself.
1 „ both church and chapel.	2 made no return (1 being deaf and dumb).
5 went sometimes.	

Thus it would seem, that not quite two-thirds regularly attend some place of worship; that about one-eleventh go occasionally; and that about one-fourth never go at all.

Why did they not go to church?

12 had no clothes.
55 returned no answer (1 being deaf and dumb).

Hence of those who never go (19 out of 67), very nearly two-thirds (say 12 in 19) have no clothes to appear in.

Did they bathe?

59 answered no.	Thames.
3 replied yes.	2 returned "sometimes."
2 said they did in the	1 was deaf and dumb.

Hence it appeared, that about seven-eighths never bathe, although following the filthiest occupation.

Were they married or single?

56 were married.	6 were single.
5 „ widowers.	

Thus it would seem, that about ten-elevenths are or have been married men.

How many children had they?

1	had 15.	6	had 1 each.
1	„ 6.	16	„ none (6 of these being single men).
2	„ 5 each.	2	returned their family as grown up without stating the number.
11	„ 4 „		
19	„ 3 „		
9	„ 2 „		

Consequently 51 out of 61, or five-sixths, are married, and have families numbering altogether 165 children; the majority had only 3 children, and this was about the average family.

What were the ages of their children?

11 were grown up.
2 between 30 and 40.
9 „ 20 and 30.
49 „ 10 and 20.
80 „ 1 and 10.
8 were 1 year and under.
5 were returned at home.
1 returned as dead.

One-half of the scavagers' children, therefore, are between 1 and 10 years of age; the majority would appear to be 8 years old.

Some were said to be grown up, but no number was given.

Did their children go to school?

13 answered yes.
13 to the National School
5 to the Ragged School.
2 to Catholic.
2 to Parish.
6 to local schools.
1 replied that he went sometimes.
2 returned no.
1 replied that his children were "not with him."
22 (of whom 16 had no children, and 1 was deaf and dumb) made no reply.

From this it would seem, that a large majority —41 out of 51, or four-fifths—of the parents who have children send them to school.

Did their wives work?

15 returned no.
6 said their wives were "unable."
1 had lost the use of her limbs.
2 did, but "not often."
4 did "when they could."
10 worked "sometimes."
12 answered yes.
1 sold cresses.
15 made no return (11 having no wives and 1 being deaf and dumb).

Hence two-fifths of the wives (22 out of 56) do no work, 16 do so occasionally, and 13, or one-fourth, are in the habit of working.

What were wives' earnings?

10 returned them as "uncertain."
1 "didn't know."
1 estimated them at 1*s.* 6*d.* per week.
1 at 1*s.* to 2*s.* „
2 at 2*s.* „
3 at 2*s.* or 3*s.* „
2 at about 3*s.* „
1 at 2*s.* to 4*s.* per week.
1 at 3*s.* or 4*s.* „
1 at 3*d.* or 4*d.* per day.
43 gave no returns (having either no wives, or their wives not working).
1 was deaf and dumb.

So that, out of 29 wives who were said to work, 16 occasionally and 13 regularly, there were returns for 23. Nearly half of their earnings were given as uncertain from their seldom doing work, while the remainder were stated to gain from 1*s.* to 4*s.* per week; about 2*s.* 6*d.* perhaps would be a fair average.

What wages were they themselves in the habit of receiving?

3 had 16*s.* 6*d.* per week.
2 „ 16*s.* „
28 „ 15*s.* „
3 „ 14*s.* 6*d.* „
1 „ 14*s.* „
2 „ 12*s.* „
15 had 9*s.* per week.
4 „ 8*s.* „
5 „ 7*s.* „
4 „ 1*s.* 1½*d.* a day and 2 loaves.

Hence it is evident, that one-half receive 15*s.* or more a week, and about a fourth 9*s.*

It was not the parishes, however, but the contractors with the parishes, who paid the higher rates of wages: Mr. Dodd, for St. Luke's; Mr. Westley, for St. Botolph's, Bishopsgate; Mr. Parsons, for Whitechapel; Mr. Newman, for Bethnal-green, &c.

These wages the scavagers laid out in th following manner:—

For rent, per week.

1 paid 4*s.*
1 „ 3*s.* 6*d.*
8 „ 3*s.*
14 „ 2*s.* 6*d.*
33 „ 2*s.*
4 „ 1*s.* 6*d.*
1 paid 1*s.* 3*d.*
2 „ 1*s.*
1 lived rent free.
1 paid for board and lodging.
1 lived with mother.

Hence it would appear, that near upon half the number paid 2*s.* rent. The usual rent paid seems to be between 2*s.* and 3*s.*, five-sixths of the entire number paying one or other of those amounts. Only three lived in furnished lodgings, and the rents of these were, respectively, two at 2*s.* 6*d.* and the other at 2*s.*

For bread, per week.

1 expended 5*s.* 3*d.*
1 „ 5*s.*
1 „ 4*s.* 7*d.*
1 „ 4*s.* 6*d.*
1 „ 4*s.* 3*d.*
7 „ 4*s.*
13 „ 3*s.* 6*d.*
8 „ 3*s.*
3 „ 2*s.* 6*d.*
4 „ 2*s.* 3*d.*
13 „ 2*s.*
4 expended 1*s.* 6*d.*
1 „ 1*s.* 9*d.*
4 two loaves a day from parish.
3 gave a certain sum per week to their wives or mothers to lay out for them, and 1 boarded and lodged.
1 was deaf and dumb.

Thus it would seem, that the general sum expended weekly on bread varies between 2*s.* and 4*s.* The average saving from free-trade, therefore, would be between 4*d.* and 8*d.*, or say 6*d.*, per week.

For meat, per week.

4 expended 4*s.*
5 „ 3*s.* 6*d.*
11 „ 3*s.*
12 „ 2*s.* 6*d.*
1 „ 2*s.* 4*d.*
5 „ 2*s.*
4 „ 1*s.* 6*d.*
1 „ 1*s.* 2*d.*
9 „ 1*s.*
2 „ 10*d.*
2 „ 6*d.*
1 expended 8*d.*
1 once a week.
4 had none.
5 no returns (3 of this number gave a weekly allowance to wives or mothers, 1 was deaf and dumb, and 1 paid for board and lodging).

By the above we see, that the sum usually expended on meat is between 2*s.* 6*d.* and 3*s.* per week, about one-third of the entire number expending that sum. All those who expended 1*s.* and less per week had 9*s.* and less for their week's labour. The average saving from the cheapening of provisions would here appear to be between 5*d.* and 6*d.* per week at the outside.

For tea and sugar, per week.

2 paid 2*s.* 6*d.*
1 „ 2*s.* 4*d.*
1 „ 2*s.* 3*d.*
19 „ 2*s.*
2 „ 1*s.* 9*d.*
4 „ 1*s.* 8*d.*
12 „ 1*s.* 6*d.*
5 „ 1*s.* 4*d.*
5 paid 1*s.* 3*d.*
5 „ 1*s.* 2*d.*
13 „ 1*s.*
2 „ 8*d.*
5 no returns: 1 deaf and dumb, 1 board and lodging, and 3 making allowances.

The sum usually expended on tea and sugar seems to be between 1*s.* 6*d.* and 2*s.* per week.

For fish, per week.

3 expended 1*s.*
5 „ 8*d.*
23 „ 6*d.*
8 „ 4*d.*
23 „ nothing.
4 allowed so much per week to wives, or mother, or landlady.
1 deaf and dumb.

Hence one-third spent 6*d.* weekly in fish, and one-third nothing.

For bacon, per week.

1 expended 1*s.*
2 „ 10*d.*
1 „ 9*d.*
5 „ 8*d.*
9 „ 6*d.*
1 expended 4*d.*
43 „ nothing.
4 allowances to wives, &c.
1 deaf and dumb.

The majority (two-thirds), therefore, do not have bacon. Of those that do eat bacon, the usual sum spent weekly is 6*d.* or 8*d.*

For butter, per week.

1 expended 1*s.* 8*d.*
24 „ 1*s.*
11 „ 10*d.*
12 „ 8*d.*
11 „ 6*d.*
1 expended 3*d.*
2 „ nothing.
4 made allowances.
1 deaf and dumb.

Thus one-third expended 1*s.*, and about one-sixth spent 10*d.*; another sixth, 8*d.*; and another sixth, 6*d.* a week, for butter.

For potatoes, per week.

1 spent 1*s.*
2 „ 10*d.*
6 „ 8*d.*
1 „ 7*d.*
18 „ 6*d.*
6 spent 4*d.*
28 spent nothing.
4 made allowances.
1 deaf and dumb.

About one-fourth spent 6*d.*; the greater proportion, however (nearly one-half), expended nothing upon potatoes weekly.

For clothes, yearly.

2 expended 2*l.*
2 „ 1*l.* 10*s.*
2 „ 1*l.* 5*s.*
3 „ 1*l.*
1 „ 18*s.*
1 „ 17*s.*
1 „ 15*s.*
4 „ 12*s.*
1 „ 10*s.*
34 couldn't say.
1 had 2 pairs of boots a year, but no clothes.
2 expended "not much."
2 got them as they could.
1 expended a few shillings.
1 said it "all depends."
2 returned "nothing."
1 was deaf and dumb.
6 made no return.

Hence 43 out of 67, or nearly two-thirds, spent little or nothing upon their clothes.

Had they a change of dress?

33 had a change of dress.
33 had not.
1 was deaf and dumb.

Above one-half, therefore, had no other clothes but those they worked in.

Had they any Sunday clothing?

20 had some.
45 had none.
21 made no return.
1 deaf and dumb.

More than two-thirds, then, had no Sunday clothes.

How many shirts had they?

10 had 3 shirts.
54 „ 2 „
2 had 1 shirt.
1 was deaf and dumb.

The greater number, therefore, had two shirts.

How many shoes had they?

27 had 2 pairs.
39 „ 1 „
1 was deaf and dumb.

Thus the majority had only one pair of shoes.

How much did they spend in drink?

1 expended 2*s.* a week.
1 „ 1*s.* or 2*s.* „
2 „ 1*s.* 6*d.* „
4 „ 1*s.* „
1 „ 6*d.* „
1 „ 3*d.* or 5*d.* „
7 said they "couldn't say."
1 said he "wouldn't say."
1 said "that all depends."
2 said they "had none to spend."
2 expended nothing.
44 gave no return (1 deaf and dumb).

Hence answers were given by one-third, of whom the greatest number "couldn't say." (!) Of the ten who acknowledged spending anything upon drink, the greater number, or 4, said they spent 1*s.* a week only. But?

Did they save any money?

36 answered no.
31 gave no reply (1 being deaf and dumb).

What did they in case of illness coming upon themselves or families?

28 went to the dispensary
8 went to the hospital.
6 „ parish doctor.
3 wives went to the lying-in hospital.
1 went to the workhouse.
2 said "nothing."
1 "never troubled any."
8 made no reply (1 being deaf and dumb).

The greater number, then, go, when ill, to the dispensary.

Were they in receipt of alms?

56 answered no.
2 „ sometimes.
3 „ yes.
6 made no returns (1 being deaf and dumb).

Did the passers-by give them anything?

49 answered no.
2 „ sometimes
1 answered very seldom.
12 no returns (1 being deaf and dumb).
beer.
1 answered never.
2 „ seldom.

Did they receive any relief from their parishes?

56 replied no.
4 had 2 loaves and 1*s.* a day as wages.
1 had 4 loaves a week.
1 „ a 4-lbs. loaf.
1 had 15 lbs. of bread.
2 answered "not at present."
2 made no returns.

Thus the greater proportion (five-sixths), it will be seen, had no relief; two of those who had relief received 9*s.* wages a week, and two others only 7*s.*, while four received part of their wages from the parish in bread.

These analyses are not merely the characteristics of the applicant or existent street-orderlies; they are really the annals of the poor in all that relates to their domestic management in regard to meat and clothes, the care of their children, their church-going, education, previous callings, and parish relief. The inquiry is not discouraging as to the character of the poor, and I must call attention to the circumstance of how rarely it is

that so large a collection of facts is placed at the command of a public writer. In many of the public offices the simplest information is as jealously withheld as if statistical knowledge were the first and last steps to high treason. I trust that Mr. Cochrane's example in the skilful arrangement of the returns connected with the Association over which he presides, and his courteous readiness to supply the information, gained at no small care and cost, will be more freely followed, as such a course unquestionably tends to the public benefit.

It will be seen from these statements, how hard the struggle often is to obtain work in unskilled labour, and, when obtained, how bare the living. Every farthing earned by such workpeople is necessarily expended in the support of a family; and in the foregoing details we have another proof as to the diminution of the purchasing fund of the country, being in direct proportion to the diminution of the wages. If 100 men receive but 7*s.* a week each for their work, their yearly outlay, to "keep the bare life in them," is 1820*l.* If they are paid 16*s.* a week, their outlay is 4160*l.*; an expenditure of 2340*l.* more in the productions of our manufactures, in all textile, metal, or wooden fabrics; in bread, meat, fruit, or vegetables; and in the now necessaries, the grand staple of our foreign and colonial trade—tea, coffee, cocoa, sugar, rice, and tobacco. *Increase your wages, therefore, and you increase your markets.* For manufacturers to underpay their workmen is to cripple the demand for manufactures. To talk of the over-production of our cotton, linen, and woollen goods is idle, when thousands of men engaged in such productions are in rags. It is not that there are too many makers, but too few who, owing to the decrease of wages, are able to be buyers. Let it be remembered that, out of 67 labouring men, three-fourths could not afford to buy proper clothing, expending thereupon "little" or "nothing," and, I may add, *because* earning little or nothing, and so having scarcely anything to expend.

I now come to *the cost of cleansing the streets upon the street-orderly system*, as compared with that of the ordinary modes of payment to contractors, &c. It will have been observed, from what has been previously stated, that the Council of the Association contend that far higher amounts may be realized for street manure when collected clean, according to the street-orderly plan. If, by a better mode of collecting the street dirt, it be kept unmixed, its increase in value and in price may be most positively affirmed.

Before presenting estimates and calculations of cost, I may remind the reader that, under the street-orderly system, no watering carts are required, and none are used where the system is carried out in its integrity. To be able to dispense with the watering of the streets is not merely to get rid of a great nuisance, but to effect a considerable saving in the rates.

I now give two estimates, both relating to the same district:—

COMPARATIVE EXPENSE OF CLEANING AND WATERING THE STREETS, &c., OF ST. JAMES'S PARISH; under the system now in operation by the Paving Board, and under the sanitary system of employing street-orderlies, as recommended by 779 ratepayers. It is assumed, from reasonable data, that the superficial contents of all the streets, lanes, courts, and alleys in the parish, do not amount to more than 80,000 square yards.

"Present Annual Expense of Cleansing St. James's Parish:—

Paid to contractor for carrying away slop, including expense of brooms		£800 0 0
Paid to 23 men, average wages, 10*s.* per week, 52 weeks		593 0 0
		£1393 0 0

"Annual Expense of Street-Orderly System"—

30 men (including those with hand-barrows), at 10*s.* per week, 52 weeks	£780 0 0	
Expense of brooms	30 0 0	
Cartage of slop	100 0 0	
		£910 0 0
		£483 0 0
Saving by diminished expense of street-watering throughout the parish		450 0 0
Annual prospective saving		£933 0 0

"Obs.—The sum of 800*l.* per annum was paid to the contractor on account of expenses incurred for the removal of slop. During the three years previous to 1849, the contractor paid money to the parish for permission to remove the house-ashes, the value of which was then 2*s.* per load; it is now 2*s.* 6*d.* In St. Giles's and St. George's parishes, whose surface is more than twice the extent of St. James's, the expense of slop-cartage, in 1850, was 304*l.* 14*s.* 0*d.*, whilst the sum received for cattle-manure collected by street-orderlies, was 73*l.* 14*s.* 0*d.*; and the slop-expenses for the four months ending November 29, were 59*l.* 18*s.* 6*d.*, whilst the manure sold for 21*l.* 6*s.* 0*d.* Thus has the slop-expense in these extensive united parishes been reduced to less than 120*l.* per annum. Since the preceding estimate was submitted to the Commissioners of Paving, the street-orderly system has been introduced into St. James's parish; and it is confidently expected that the 'Annual Prospective saving' of 933*l.*, will be fully realised."

A similar estimate has just been sent into the authorities of the great parish of St. Marylebone, but its results do not differ from the one I have just cited.

I next present an estimate contrasting the expense of the street-orderly method with the cost of employing sweeping-machines:—

"COMPARATIVE EXPENSE OF CLEANSING AND WATERING THE STREETS, &c., OF ST. MARTIN'S PARISH, under the system now in operation by the Paving Board, and under the sanitary system of employing street-orderlies, as recommended by 703 ratepayers. It is assumed, from reasonable data, that the superficial contents of all the streets, lanes, courts, and alleys in the parish, amount to about 70,000 square yards.

"Expenses by Machinery in St Martin's Parish.

	£	s.	d
Annual payment to street-machine proprietor	930	0	0
Watering rate (1847)	644	16	8½
Salaries to clerks	391	0	0
Support of 29 able-bodied men in workhouse, thrown out of work, at 4*s.* 6*d.* per man	327	12	0
	£2343	8	8½

"Expenditure by the Employment of Street-Orderlies.

	£	s.	d.
Maintenance of 23 street-orderlies to keep clean 70,000 yards (presumed contents), at 2500 yards each man, at 12*s.* per week	768	0	0
Two inspectors of orderlies, at 15*s.* per week	78	0	0
One superintendent of ditto, at 1*l.* per week	52	0	0
Wear and tear of brooms	36	8	0
Interest on outlay for barrows, brooms, and shovels	26	19	0
Watering rate (not required)	..	..	..
Value of manure pays for cartage	..	..	..
	961	7	0
Annual saving by street-orderlies	1382	1	8½
	2343	8	8½

I now give an estimate concerning a smaller district, *one of the divisions of St. Pancras parish.* It was embodied in a Report read at a meeting in Camden-town, on the desirableness of introducing the street-orderly system:—

The Report set forth that the Committee had "made a minute investigation into the present systems of street-cleansing, as adopted under the superintendence of Mr. Bird, the parish surveyor, and under that of the National Philanthropic Association.

"From the 26th of March, 1848, to the 26th of March, 1849, the *Directors of the Poor expended in paving and cleansing, &c., the three and a quarter miles under their charge*, 3545*l.* 19*s.* 7*d.*; of this the following items were for cleansing, viz.—

	£	s.	d.
Labour	249	13	0
Tools	10	12	0
Slop carting	495	0	0
Proportion of foreman's salary	39	0	0
	795	5	0

"The street-orderly system of cleansing the said roads in the most efficient manner would give the following expenditure per annum:—

	£	s.	d.
Thirty-four men to cleanse 3½ miles, at the rate of 2000 superficial yards each man, 12*s.* per week each	1060	16	0
Two inspectors of orderlies, at 15*s.* per week each	78	0	0
Superintendent	104	0	0
Cost of brooms, shovels, &c.	83	0	0
No allowance for slop-carting, the National Philanthropic Association holding that the manure, properly collected, will more than pay for its removal	..	..	..
	1325	16	0
Deduct cost of cleansing by the old mode	795	5	0
	530	11	0

"The apparent extra cost, therefore, would be 530*l.* 11*s.* The vestry, however, would see that the charge for supporting 34 able-bodied men in the workhouse is at least 5*s.* per week each, or 442*l.* per annum. This, therefore, must be deducted from the 530*l.* 11*s.*, leaving the extra cost 88*l.* 11*s.* per annum. This sum, the committee were assured, will be not only repaid by the reduced outlay for repairs, which the new system will effect; but a very great saving will be the result of the thorough cleansed state in which the roads will be constantly maintained. Under the late system, to find the roads in a cleansed state was the exception, not the rule; and when all the advantages likely to result from the new system were taken into consideration, the committee did not hesitate to recommend it for adoption in its most efficient form."

Concerning the *expense of cleansing the City by the street-orderly system*, Mr. Cochrane says:—

"The number required for the whole surface (including the footways, courts, &c.) would be about 250 men and boys.

"Upon the present system this number would be formed in three divisions:—

"First division.—170 to begin work at 6 a.m., and end 6 p.m. Second division, called relief and aids.—30 boys boys from 12 at noon to 10. Third division.—50 men from 6 p.m. to 6 a.m. Total, 250.

"The men and boys are now working at from 6*s.* to 12*s.* per week.

These 250 men and boys would cost for wages during the year about	£5100
Twelve foremen, at 40*l.* per annum	480
Two superintendents at 50*l.* each	100
Brooms, &c.	325
Barrows	100
Two clerks, at 100*l.* each	200
Manager	100
	£6405

"No items are given for slopping or cartage, as, if the streets are properly attended to, there ought to be no slop, whilst the value of the manure may be more than equivalent for the expense of its removal.

"Some slop-carts will, however, be occasionally required for Smithfield-market and similar localities; making, therefore, ample allowance for contingencies, it is confidently considered that the expense for cleansing the whole of the city of London by street-orderlies would not exceed 8000*l.* per annum."

"Expenses of Cleansing and Watering the Streets, &c., of the City of London, on the old system of Scavaging, from June, 1845, to June, 1846.

	Annual Expense.
To scavaging contractors	£6040
Value of ashes and dust of the city of London, given gratis to the above contractors in the year ending 1846, and now purchased by them for the year ending 1847	5500
Estimated contributions levied for watering streets	4300
Salaries to surveyors, inspectors, beadles, clerks, &c., of Sewers' Office, according to printed account, March 3, 1846	2485
Expense for cleaning out sewers and gully-holes (not known)	
Annual expense under the imperfect system of street-cleansing	£18,025

"Number of men employed, 58.

"State of the Streets:—Inhabitants always complaining of their being muddy in winter and dusty in summer."

Two estimates, then, show an expectation of a yearly saving of no less than 2320*l.* to the ratepayers of two parishes alone; 938*l.* to St. James's, and 1382*l.* to St. Martin's. And this, too, if all that be augured of this system be realized, with a freedom from street dust and dirt unknown under other methods of scavagery. I think it right,

however, to express my opinion that even in the reasonable prospect of these great savings being effected, it is a paltry, or rather a false, because miscalled, economy to speculate on the payment of 10*s.* and 12*s.* a week to street-labourers in the parishes of St. James and St. Martin respectively, when so many of the contractors pay their men 16*s.* weekly. If this low hire be justifiable in the way of an experiment, it can never be justifiable as a continuance of the *reward* of labour.

If the street-orderly system is to be the means of *permanently* reducing the wages of the regular scavagers from 16*s.* to 12*s.* a week, then we had better remain afflicted with the physical dirt of our streets, than the moral filth which is sure to proceed from the poverty of our people—but if it is to be a means of elevating the pauper to the dignity of the independent labour, rather than dragging the independent labourer down to the debasement of the pauper, then let all who wish well to their fellows encourage it as heartily and strenuously as they can—otherwise the sooner it is denounced as an insidious mode of defrauding the poor of one-fourth of their earnings the better; and it is merely in the belief that Mr. Cochrane and the Council of the Association *mean* to keep faith with the public and increase the men's wages to those of the regular trade, that the street-orderly system is advocated here. If our philanthropists are to reduce wages 25 per cent., then, indeed, the poor man may cry, "*save me from my friends.*"

As to the positive and definite working of the street-orderly system as an *economical* system, no information can be given beyond the estimates I have cited, as it has never been duly tested on a sufficiently large scale. Its working has been, of necessity, desultory. It has, however, been introduced into St. George's, Bloomsbury; St. James's, Westminster; and is about to be established in St. Martin's-in-the-Fields; and in the course of a year or two it seems that it will be sufficiently tested. That its working has hitherto been desultory is a necessity in London, where "vested interests" look grimly on any change or even any inquiry. That it deserves a full and liberal testing seems undeniable, from the concurrent assent of all parishioners who have turned their attention to it.

It remains to show the expenses of the Philanthropic Association, for I am unable to present an account of street-orderlyism separately. The two following tables fully indicate to what an extent the association is indebted to the private purse of Mr. Cochrane, who by this time has advanced between 6000*l.* and 7000*l.*

"BALANCE SHEET.

Receipts and Expenditure of the National Philanthropic Association, for the Promotion of Social and Sanatory Improvements and the Employment of the Poor, from 29th September, 1846, to 29th September, 1849.

Dr.	£	s.	d.
To subscriptions and donations from the 29th September, 1846, to 29th September, 1849	1393	16	7
Balance due to president, 29th September, 1849....	5739	19	9
	7133	16	4

Cr.	£	s.	d.
By balance due to president, as per Balance Sheet, Sept. 29, 1846	2935	17	9
Secretary's salary	300	0	0
Rent of offices, &c.....	248	10	0
Salaries to clerks, messengers, &c..	371	19	4
Do. to collectors	312	18	1
Commission to do.....	130	5	6
Printing and stationery ..	556	17	0
Hire of rooms for public meetings	60	10	0
Advertisements and newspapers	244	5	3
Bill posting....	8	12	6
Salaries to persons in charge of free lavatories in Hamyard, Great Windmill-st., St. James's ..	10	18	2
Brooms, barrows, and shovels, for the use of street-orderlies.....	86	8	0
Charges of contractors and others for removal of street slop, &c.....	58	9	6
Food, lodging, and wages to street-orderlies, domiciled in Ham-yard, Great Windmill-street, St. James's.....	930	11	4
Clothing for the street-orderlies	13	3	2
Baths provided for do.	5	15	10
Sundry expenses for offices, including postage-stamps, &c...	92	7	11
Law expenses..	8	10	11
Builder's charges for free lavatories in Hamyard	95	13	10
Amount advanced to the late secretary for improving the dwellings of the poor ..	20	0	0
Farther advances made by president on various occasions for the general purposes of the Association	592	2	4
	7133	16	4

Audited by us, Oct. 19th, 1849, Charles Shepherd Lenton, 33, Leicester-square; and Joseph Child, 42, Leicester-square."

STREET-ORDERLIES.—CITY SURVEYOR'S REPORT.

I HAVE been favoured with a Report "upon street-cleansing and in reference to the Street-Orderly System," by the author, Mr. W. Haywood, the Surveyor to the City Commission of Sewers, who has invited my attention to the matter, in consequence of the statements which have appeared on the subject in "London Labour and the London Poor."

Mr. Haywood, whose tone of argument is courteous and moderate, and who does not scruple to do justice to what he accounts the good points of the street-orderly system, although he condemns it as a whole, gives an account of the earlier scavaging of the city, not differing in any material respect from that which I have already printed. He represents the public ways of the City, which I have stated to be about 50 miles, as "about 51 miles lineal, about 770,157 superficial yards in area." This area, it appears, comprehends 1000 different places.

In 1845 the area of the carriage-way of the City was estimated at 418,000 square yards, and the footway at 316,000, making a total of 734,000; but since that period new streets have been made and others extensively widened. The precincts of Bridewell, St. Bartholomew, St. James's, Duke's-place, Aldgate, and others, have been added to the jurisdiction of the Sewers Commission by Act of Parliament, so that the Surveyor now estimates the area of the carriage-way of the City of London at 441,250 square yards, and the footway at 328,907, making a total of 770,157 square yards.

"I am fully impressed," observes Mr. Haywood, "with the great importance to a densely-populated city of an efficient cleansing of the public ways. Probably after a perfect system of sewage and drainage (which implies an adequate water supply), and a well-paved surface (which I have always considered to be little inferior in its importance to the former, and which is indispensable to obtaining clean sweeping), good surface cleansing ranks next in its beneficial sanitary influence; and most certainly the comfort gained by all through having public thoroughfares in a high degree of cleanliness is exceedingly great."

Mr. Haywood expresses his opinion that streets "ordure soddened"—smelling like "stable yards," —dangerous to the health of the inhabitants—impassable from mud in winter and from dust in summer—and inflicting constant pecuniary loss, "can only exist in an appreciable degree in thoroughfares swept much less frequently" than the streets within the jurisdiction of the City Commissioners of Sewers. In this opinion, however, Mr. Haywood comes into direct collision with the statements put forth by the Board of Health, who have insisted upon the insanitary state of the metropolitan streets, more strongly, perhaps, in their several Reports, than has Mr. Cochrane.

But Mr. Haywood believes that not only are the assertions of the Board of Health as to the unwholesome state of the metropolitan thoroughfares unfounded as regards the city of London, but he asserts that from the daily street-sweeping, "the surface there is maintained in as high an average condition of cleanliness, as the means hitherto adopted will enable to be attained."

"Nor does this apply," says Mr. Haywood, "to the main thoroughfares only. In the poorer courts and alleys within the city, where a high degree of cleanliness is, at least, as needful, in a sanitary point of view, as in the larger and wider thoroughfares, the facilities for efficient sweeping are as great, if not greater, than in other portions of your jurisdiction. For many years past the whole of the courts and alleys which carts do not enter, have been paved with flagstone, laid at a good inclination, and presenting an uniform smooth *non-absorbent* surface: in many of these courts where the habits of the people are cleanly, the scavenger's broom is almost unneeded for weeks together; in others, where the habit prevails of throwing the refuse of the houses upon the pavements, the daily sweeping is highly essential; but in all these courts the surface presents a condition which renders good clean sweeping a comparatively easy operation, that which is swept away being mostly dry, or nearly so."

After alluding to the street-orderly principle of scavaging, "to clean and keep clean," Mr. Haywood observes, "between the '*street-orderly system*' and the periodical or intermittent sweeping there is this difference, that upon the former system there should be (if it fulfils what it professes) no deposit of any description allowed to remain much longer than a few minutes upon the surface, and that there should be neither mud in the wet weather, nor dust in the dry weather, upon the public ways; whilst, upon the latter system, the deposit necessarily accumulates between the periods of sweeping, commencing as soon as one sweeping has terminated, gradually increasing, and being at its point of extreme accumulation at the period when the next sweeping takes place: the former, then, is, or should be, a system of prevention; the latter, confessedly, but a system of palliation or cure.

"The more frequent the periodical sweeping, therefore, the nearer it approximates in its results to the '*street-orderly system*,' inasmuch as the accumulations, being frequently removed, must be smaller, and the evils of mud, dust, effluvia, &c., less in proportion.

"Now to fulfil its promise: upon the 'street-orderly system,' there should be men both day and night within the streets, who should constantly remove the manure and refuse, and, failing this, if there be only cessation for six hours out of the twenty-four of the 'continuous cleansing,' it becomes at once a periodical cleansing but a degree in advance of the daily sweeping, which has been now for years in operation within the city of London."

This appears to me to be an extreme conclusion:—because the labours of the street-orderly system cease when the great traffic ceases, and when, of course, there is comparatively little or no dirt

deposited in the thoroughfares, therefore, says Mr. Haywood, "the City system of cleansing once per day is *only a degree* behind that system of which the principle is incessant cleansing at such time as the dirtying is incessant." The two principles are surely as different as light and darkness:—in the one the cleansing is intermittent and the dirt constant; in the other the dirt is intermittent and the cleanliness constant—constant, at least, so long as the causes of impurity are so.

Mr. Haywood, however, states that the Commissioners were so pleased with the appearance of the streets, when cleansed on the street-orderly system, which "was *certainly much to be admired*," that they introduced a somewhat similar system, calling their scavagers "daymen," as they had the care of *keeping* the streets clean, *after* a daily morning sweeping by the contractor's men. They commenced their work at 9 A.M. and ceased at 6 P.M. in the summer months, and at half-past 4 P.M. in the winter. In the summer months 36 daymen were employed on the average; in the winter months, 46. The highest number of scavaging daymen employed on any one day was 63; the lowest was 34. The area cleansed was about 47,000 yards (superficial measure), and with the following results, and the following cost, from June 24, 1846, to the same date, 1847:—

	Yards Superficial.
The average area cleansed during the summer months, per man per diem, was	1298
Ditto during winter, per man per diem, was	1016
The average of both summer and winter months was, per man per diem	1139

The cost of the experiment was for daymen (including brooms, barrows, shovels, cartage, &c. *	£1450 18
One Foreman at	78 0
And the total cost of the experiment	£1528 18

"The daily sweeping," Mr. Haywood says, "which for the previous two years had been established throughout the City, gave at that time *very great satisfaction*. It was quite true that the streets which the daymen attended to, *looked superior* to those cleansed only *periodically*, but the practical value of the difference was considered by many not to be worth the sum of money paid for it. It was also felt that, if it was continued, it should upon principle be extended at least to all streets of similar traffic to those upon which it had been tried; and as, after due consideration, the Commission thought that one daily sweeping was sufficient, both for health and comfort, the day or continuous sweeping was abandoned, and the whole City only received, from that time to the present, the usual daily sweeping."

The "present" time is shown by the date of Mr. Haywood's Report, October 13, 1851. The reason assigned for the abandonment of the system of the daymen is peculiar and characteristic. The system of continuous cleansing gave very great satisfaction, although it was but a degree in advance of the once-a-day cleansing. The streets which the daymen attended to "looked," and of course were, "superior" in cleanliness to those scavaged periodically. It was also felt that the principle should "be extended at least to all streets of similar traffic;" and why was it not so extended? Because, in a word, "it was not worth the money;" though by what standard the value of public cleanliness was calculated, is not mentioned.

The main question, therefore, is, what is the difference in the cost of the two systems, and is the admitted "superior cleanliness" produced by the continuous mode of scavaging, in comparison with that obtained by the intermittent mode, of sufficient public value to warrant the increased expense (if any)—in a word, as the City people say—is it *worth the money?*

First, as to the comparative cost of the two systems: after a statement of the contracts for the dusting and cleansing of the City (matters I have before treated of) Mr. Haywood, for the purpose of making a comparison of the present City system of scavaging with the street-orderly system, gives the table in the opposite page to show the cost of street cleansing and dusting within the jurisdiction of the City Court of Sewers.

Mr. Haywood then invites attention to the subjoined statement of the National Philanthropic Association, on the occurrence of a demonstration as to the efficiency and economy of the street-orderly system.

"Association for the Promotion of Street Paving, Cleansing, Draining, &c., 20, Vere Street, Oxford Street, January 26th, 1846.

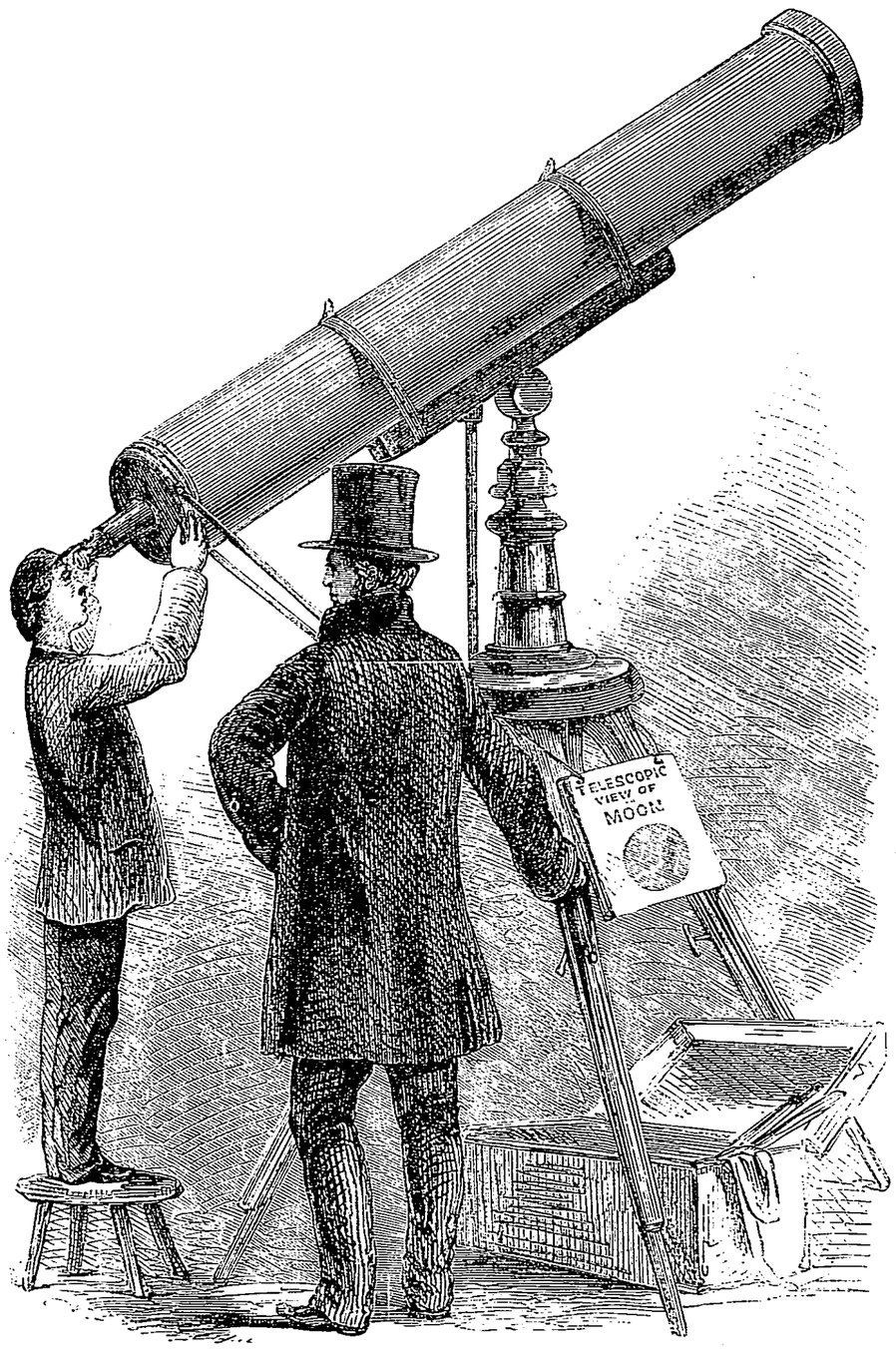
"Approximation to the total Expenses connected with cleansing, as an experiment, certain parts of the City of London, commencing December, 1845, for the period of two months.

	£. s. d.
"350 brooms, being an average of 5 brooms for each man	25 19 10
For carting	99 1 9
For advertising	65 0 0
For rent of store-room, 3*l.* 14*s.*; Clerks' salaries, 12*l.*; Messengers, 5*l.* 5*s.*; wooden clogs for men, 2*l.* 5*s.* 10*d.*; expenses of washing wood pavement, 5*l.*	28 4 10
Expenses of barrows	24 14 9
Christmas dinner to men, foremen, and superintendents (97)	15 12 6
83 men (averaging at 2*s.* 6*d.* per day) for 9 weeks	573 15 0
4 superintendents at 25*s.* 4*d.*, foreman at 18*s.*, cart foreman 20*s.*, storekeeper 18*s.*, chief superintendents 2*l.*, for 9 weeks	112 10 0
For various small articles, brushes, rakes, &c.	36 7 8
Petty expenses of the office, postages, &c., and stationery	6 0 0
Approximation to the total cost of the expense	£887 4 7

Signed, M. DAVIES, Secretary."

"I will now," says Mr. Haywood, "without further present reference to the Report of the Association, proceed to form an estimate of the expenses of the system as they would have been if it had been extended to the whole City, and which estimate will be based upon the informa-

* The wages paid are not stated.



STREET TELESCOPE EXHIBITOR.

[*From a Photograph.*]

TABLE SHOWING THE COST OF STREET CLEANSING AND DUSTING WITHIN THE JURISDICTION OF THE CITY COURT OF SEWERS.

Date.	Mode of Contracting, whether Contracts for Dusting and Scavenging were let separately or together.	Leading or Principal feature in the Regulations for the Dusting and Cleansing.	Sum paid for Scavenging and Dusting, or for Scavenging only during the year.	Sum received by Commission for Sale of Dust when the Contracts were let separately.	Total Disbursements by the Commission for Scavenging and Dusting.
			£ s. d.	£ s. d.	£ s. d.
Year ending Michaelmas, 1841	separately	Main streets of largest traffic running east and west cleansed *daily*, other principal streets *every other day*, the whole of the remainder of the public ways *twice* a week; dust to be removed at least *twice* a week.	4590 6 0	Amounts paid and received are balanced	4590 6 0
„ 1842	separately		3633 17 0		3633 17 0
„ 1843	together		2084 4 6		2084 4 6
		Average per Annum for 3 Years.			3436 2 6
„ 1844	separately	Main line of streets cleansed *daily*, other principal streets *every other day*, and all other place *twice* in every week; dust to be removed at least *twice* a week.	3826 12 6	Amounts paid and received are balanced	3826 12 6
„ 1845	separately		2833 2 0		2833 2 0
		Average per Annum of the 2 Years			3329 17 3
„ 1846	separately	*Daily cleansing* throughout every public way of every description; dust to be removed twice a week.	6034 6 0	1354 5 0	4680 1 0
„ 1847	separately		8014 2 0	4455 5 0	3558 17 0
„ 1848	separately		7226 1 6	1328 15 0	5897 6 6
„ 1849	together		7486 11 6		7486 11 6
„ 1850	together		6779 16 0		6779 16 0
„ 1851	together		6328 17 0		6328 17 0
		Average per Annum of the last 6 Years			5788 11 6

NOTE.—From 24th June, 1846, to 24th June, 1847, the Commission made their own experiment upon the Street-Orderly System—the expenses of such experiment are included in the above amounts. In 1849 the area of the jurisdiction of the Commission was increased by the addition of various precincts under the City of London Sewers' Act.

tion as to the expenses of the system, furnished by the experiment or demonstration made by the Association within your jurisdiction.

"The total cost of the experiment was £987 4*s.* 7*d.*, and, deducting the charges under the head of advertising, Christmas dinner, and petty cash expenses, and also that for office-rent, clerks, messengers, &c., and assigning £50 as the value of the implements at that time for future use, there is left a balance of £822 7*s.* 3*d.* as the clear cost of the experiment.

"The experiment was tried for a period of eight weeks exactly, according to the return made to the Commission by the Superintendent of the Association, but as in the statement of expenses the wages appear to be included for a period of nine weeks, I have assumed nine weeks as the correct figure, and the experiment must therefore have cost a sum of £822 7*s.* 3*d.* for that period, or at the rate of about £91 per week.

	Squ. Yards
"Now the total area of the carriage-way of the City of London was at that time	418,000
"And the area of the foot-way . .	316,000
"Making a total of	734,000
"And the area of the carriage-way cleaned by the street-orderlies was	30,670
"And the area of the foot-way . .	18,590
"Making a total of	49,260

"The total area of foot-way and carriage-way cleansed was therefore 1-15th of the whole of the carriage-way and foot-way of the City; or, taken separately, the carriage-way cleansed was somewhat more than 1-14th of the whole of the City carriage-way.

"It has been seen also that the total cost of cleansing this 1-14th portion of the carriage-way, after deducting all extraneous expenses, was at the rate per week of £91
Or at the rate, per annum, of £4732

"To assign an expenditure in the same proportion for the remaining 13-14ths of the whole carriage-way area of the City would not be just, for, in the first place, allowance must be made, owing to the dirt brought off from the adjacent streets, which, it is assumed, would not have been the case had they also been cleansed upon the street-orderly system; and moreover, as the majority of the streets cleansed were those of large traffic, a larger proportion of labour was needed to them than would have been the case had the experiment been upon any equal area of carriage-way, taken from a district comprehending streets of all sizes and degrees of traffic; but if I assume that the 1-14th portion of the City cleansed represents 1-11th of the whole in the labour needed for cleansing the whole of the City upon the same system, I believe I shall have made a very fair deduction, and shall, if anything, err in favour of the experiment.

"Estimating, therefore, the expense of cleansing the whole of the City carriage-way upon the street-orderly system according to the expenses of the experiment made in 1845-6, and from the data then furnished, it appears that cleansing upon such system would have come to an annual sum of 52,052*l.*

"It will be seen that there is a remarkable difference between this estimate of 52,052*l.* per annum and that of 18,000*l.* per annum estimated by the Association, and given in their Report of the 26th January, 1846; and what is more remarkable is, that my estimate is framed not upon any assumption of my own, but is a dry calculation based upon the very figures of expense furnished by the Association itself, and hereinbefore recited."

A second demonstration, carried on in the City by the street-orderlies, is detailed by Mr. Haywood, but as he draws the same conclusions from it, there is no necessity to do other than allude to it here.

According to the above estimate, it certainly must be admitted that the difference between the two accounts is, as Mr. Haywood says, "remarkable"—the one being nearly three times more than the other. But let us, for fairness' sake, test the cost of cleansing the City thoroughfares upon the continuous plan of scavaging by the figures given in Mr. Haywood's own report, and see whether the above conclusion is warranted by the facts there stated. From June, 1846, to June, 1847, we have seen that several of the main streets in the City were cleansed continuously throughout the day by what were called "day-men"—that is to say, 47,000 superficial yards of the principal thoroughfares were *kept* clean (*after* the daily cleansing of them by the contractor's men) by a body of men similar in their mode of operation to the street-orderlies, and who removed all the dirt as soon as deposited between the hours of the principal traffic. The cost of this experiment (for such it seems to have been) was, for the twelve months, as we have seen, 1528*l.* 18*s.* Now if the expense of cleansing 47,000 superficial yards upon the continuous method was 1529*l.*, then, according to Cocker, 770,157 yards (the total area of the public ways of the City) would cost 25,054*l.*; and, adding to this 632*l.* for the sum paid to the contractors for the daily scavaging, we have only 31,382*l.* for the gross expense of cleansing the whole of the City thoroughfares once a day by the "regular scavagers," and *keeping* them clean *afterwards* by a body similar to the street-orderlies—a difference of upwards of 20,600*l.* between the facts and figures of the City Surveyor.

It would appear to me, therefore, that Mr. Haywood has erred, in estimating the probable expense of the street-orderly system of scavaging applied to the City at 52,000*l.* per annum, for, by his own showing, it actually cost the authorities for the one year when it was tried there, only 1529*l.* for 47,000 superficial yards, at which rate 770,000 yards could not cost more than 31,500*l.*, and this, even allowing that the same amount of labour would be required for the continuous cleansing of the minor thoroughfares as was needed for the principal ones. That the error is an oversight on the part of the City Surveyor, the whole tone of his Report is sufficient to assure us, for it is at once moderate and candid.

It must, on the other hand, be admitted, that Mr. Haywood is perfectly correct as to the difference between the cost of the "demonstration" of the street-orderly system of cleansing in the City, and the estimated cost of that mode of scavaging when brought into regular operation there; this, however, the year's experience of the City "day-men" shows, could not possibly exceed 32,000*l.*, and might and probably would be much less, when we take into account the smaller quantity of labour required for the minor thoroughfares—the extra value of the street manure when collected free from mud—the saving in the expense of watering the streets (this not being required under the orderly system)—and the abolition of the daily scavaging, which is included in the sum above cited, but which would be no longer needed were the orderlies employed, such work being performed by them at the commencement of their day's labours; so that I am disposed to believe, all things considered, that somewhere about 20,000*l.* per annum might be the gross expense of continuously cleansing the City. Mr. Cochrane estimates it at 18,000*l.* But whether the admitted superior cleanliness of the streets, and the employment of an extra number of people, will be held by the citizens to be worth the extra money, it is not for me to say. If, however, the increased cleanliness effected by the street-orderlies is to be brought about by a decrease of the wages of the regular scavagers from 16*s.* to 12*s.* a week, which is the amount upon which Mr. Cochrane forms his estimate, then I do not hesitate to say the City authorities will be gainers, in the matter of poor-rates at least, by an adherence to the present method of scavaging, paying as they do the best wages, and indeed affording an illustrious example to all the metropolitan parishes, in refusing to grant contracts to any master scavagers but such as consent to deal fairly with the men in their employ. And I do hope and trust, for the sake of the working-men, the City Commissioners of Sewers will, should they decide upon having the City cleansed *continuously*, make the same requirement of Mr. Cochrane, before they allow his street-orderlies to displace the regular scavagers at present employed there.

Benefits to the community, gained at the expense of "the people," are really great evils. The street-orderly system is a good one when applied to parishes employing paupers and paying them 1*s.* 1½*d.* and a loaf per day, or even nothing, except their food, for their labour. Here it elevates paupers into independent labourers; but, applied to those localities where the highest wages are paid, and there is the greatest regard shown for the welfare of the workmen, it is merely a scurf-system of degrading the independent labourers to the level of paupers, by reducing the wages of the regular scavagers from 16*s.* to 12*s.* per week. The avowed object of the street-orderly system is to provide employment for able-bodied men, and so to *prevent* them becoming a *burthen to the parish.* But is not a reduction of the scavager's wages to the extent of 25 per cent. a week, more likely to *encourage* than to *prevent* such a result? This is the weak point of the orderly system, and one which gentlemen calling themselves *philanthropists* should really blush to be parties to.

After all, the opinion to which I am led is this—the street-orderly system is incomparably the best mode of scavaging, and the payment of the men by "*honourable*" masters the best mode of employing the scavagers. The evils of the scavaging trade appear to me to spring chiefly from the parsimony of the parish authorities—either employing their own paupers without adequate remuneration, or else paying such prices to the contractors as almost necessitates the under-payment of the men in their employ. Were I to fill a volume, this is all that could be said on the matter.

Of the "Jet and Hose" System of Scavaging.

There appears at the present time a bent in the public mind for an improved system of scavagery. Until the ravages of the cholera in 1832, and again in 1848, roused the attention of Government and of the country, men seemed satisfied to dwell in dirty streets, and to congratulate themselves that the public ways were dirtier in the days of their fathers; a feeling or a spirit which has no doubt existed in all cities, from the days of those original scavagers, the vultures and hyenas of Africa and the East, the adjutants of Calcutta, and the hawks—the common glades or kites of this country—and which, we are told, in the days of Henry VIII. used to fly down among the passengers to remove the offal of the butchers and poulterers' stalls in the metropolitan markets, and in consideration of which services it was forbidden to kill them—down to the mechanical sweeping of the streets of London, and even to Mr. Cochrane's excellent street-orderlies.

Besides the plan suggested by Mr. Cochrane, whose orderlies cleanse the streets without wetting, and consequently without dirtying, the surface by the use of the watering-cart, there is the opposite method proposed by Mr. Lee, of Sheffield, and other gentlemen, who recommend street-cleansing by the hose and jet, that is to say, by flushing the streets with water at a high pressure, as the sewers are now flushed; and so, by *washing* rather than *sweeping* the dirt of the streets into the sewers, through the momentum of the stream of water, dispensing altogether with the scavager's broom, shovel, and cart.

In order to complete this account of the scavaging of the streets of London, I must, in conclusion, say a few words on this method, advocated as it is by the Board of Health, and sanctioned by scientific men. By the application of a hose, with a jet or water pipe attached to a fire-plug, the water being at high pressure, a stream of fluid is projected along the street's surface with force enough to *wash* away all before it into the sewers, while by the same apparatus it can be thrown over the fronts of the houses. This mode of street-cleansing prevails in some American cities, especially in Philadelphia, where the principal thoroughfares are said to be kept admirably clean by it; while the fronts of the houses are as bright as those in the towns of Holland, where they are washed, not by mechanical appliances, but by water thrown over them out of scoops by hand labour—one of the instances of the minute and indefatigable industry of the Dutch.

It is stated in one of the Reports of the Board of Health, that "unless cleansing be general and simultaneous, much of the dirt of one district is carried by traffic into another. By the subdivision of the metropolis into small districts, the duty of cleansing the *public* carriage-way is thrown upon a number of obscure and irresponsible authorities; while the duty of cleansing the *public* footways, which are no less important, *are* charged upon multitudes of private individuals." [The grammar

is the Board of Health's grammar.] "It is a false pecuniary economy, in the case of the poorest inhabitants of court or alley, who obtain their livelihood by any regular occupation, to charge upon each family the duty of cleansing the footway before their doors. The performance of this service daily, at a rate of 1*d.* *per week* per house or per family, would be an economy in soap and clothes to persons the average value of whose time is never less than 2*d.* per hour." [This is at the rate of 2*s.* a day; did this most innocent Board *never* hear of work yielding 1*s.* 6*d.* a week? But the sanitary authorities seem to be as fond as teetotallers of "going to extremes."]

In another part of the same Report the process and results are described. It is also stated that for the success of this method of street purification the pavement must be good; for "a powerful jet, applied by the hose, would scoop out hollows in unpaved places, and also loosen and remove the stones in those that are badly paved." As every public place ought to be well-paved, this necessity of new and good pavement is no reasonable objection to the plan, though it certainly admits of a question as to the durability of the roads—the macadamized especially—under this continual soaking. Sir Henry Parnell, the great road authority, speaks of wet as the main destroyer of the highways.

It is stated in the Report, after the mention of experiments having been made by Mr. Lovick, Mr. Hale, and Mr. Lee (Mr. Lee being one of the engineering inspectors of the Board), that

"Mr. Lovick, at the instance of the Metropolitan Commissioners of Sewers, conducted his experiments with such jets as could be obtained from the water companies' mains in eligible places; but the pressure was low and insufficient. Nevertheless, it appeared that, taking the extra quantity of water required at the actual expense of pumping, the paved surfaces might be washed clean at one-half the price of the scavagers' manual labour in sweeping. Mr. Lee's trials were made at Sheffield, with the aid of a more powerful and suitable pressure, and he found that with such pressure as he obtained the cleansing might be effected in one-third the time, and at one-third the usual expense, of the scavagers' labour of sweeping the surface with the broom." [This expense varies, and the Board nowhere states at what rate it is computed; the scavagers' wages varying 100 per cent.]

"The effect of this mode of cleansing in close courts and streets," it is further stated, "was found to be peculiarly grateful in hot weather. The water was first thrown up and diffused in a thin sheet, it was then applied rapidly to cleansing the surface and the side walls, as well as the pavements." Mr. Lovick states that the immediate effect of this operation was to lower the temperature, and to produce a sense of freshness, similar to that experienced after a heavy thunder-shower in hot weather. But there is nothing said as to the probable effect of this state of things in winter—a hard frost for instance. The same expedient was resorted to for cooling the yards and outer courts of hospitals, and the shower thrown on the windows of the wards afforded great relief. Mr. Lovick, in his Report on the trial works for cleansing courts, states:—

"The importance of water as an agent in the improvement and preservation of health being in proportion to the unhealthiness or depressed condition of districts, its application to close courts and densely-populated localities, in which a low sanitary condition must obtain, is of primary importance. Having shown the practicability of applying this system (cleansing by jets of water) to the general cleansing of the streets, my further labours have been, and are now, directed to this end.

"For the purpose of ascertaining the effect produced by operations of this nature upon the atmosphere, two courts were selected: Church-passage, New Compton-street, open at both ends, with a carriage-way in the centre, and footway on each side; and Lloyd's-court, Crown-street, St. Giles's, a close court, with, at one entrance, a covered passage about 40 feet in length: both courts were in a very filthy condition; in Church-passage there were dead decaying cats and fish, with offal, straw, and refuse scattered over the surface; at one end an entrance to a private yard was used as a urinal; in every part there were most offensive smells.

"Lloyd's-court was in a somewhat similar condition, the covered entrance being used as a general urinal, presenting a disgusting appearance; the whole atmosphere of the court was loaded with highly-offensive effluvia; in the covered entrance this was more particularly discernible.

"The property of water, as an absorbent, was rendered strikingly apparent in the immediate and marked effects of its application, a purity and freshness remarkably contrasted to the former close and foul condition prevailing throughout. A test of this, striking and unexpected, was the change at different periods in the relative condition of atmosphere of the courts and of the contiguous streets. In their ordinary condition, as might have been expected, the atmosphere was purer in the streets than in the courts; it was to be inferred that the cleansing would have more nearly assimilated these conditions. This was not only the case, but it was found to have effected a complete change; the atmosphere of the courts at the close of the operations being far fresher and purer than the atmosphere of the streets. The effect produced was in every respect satisfactory and complete; and was the theme of conversation with the lookers-on, and with the men who conducted the operations.

"The expense of these operations, including water, would be, for—

"Church-passage (time, five minutes), 1½*d.*

"Lloyd's-court (time, ten minutes), 3¼*d.*

"Mr. Hale, another officer, gave a similar statement."

Other experiments are thus detailed:—

"Lascelles-court, Broad-street, St. Giles's. This court was pointed out to me as one of the worst in London. Before cleansing it smelt *intolerable*," [*sic*] "and looked disgusting. Besides an abundance of ordinary filth arising from the exposure of refuse, the surface of the court contained heaps of human excrement, there being only one privy to the whole court, and that not in a state to be publicly used. . . . . The cleansing operations were commenced by sprinkling the court with deodorising fluid, mixed with 20 times its volume of water; a great change, from a very pungent odour to an imperceptible smell, was immediately effected; after which the refuse of the court was washed away, and the pavement thoroughly cleansed by the hose and jet; and now this place, which before was in a state almost indescribable, presented an appearance of comparative comfort and respectability."

It is stated as the result of another experiment in "an ordinary wide street with plenty of traffic," that "water-carts and ordinary rains only create the mud which the jet entirely removes, giving to the pavement the appearance of having been as thoroughly cleansed as the private stone steps in front of the houses."

With respect to Mr. Lee's experiments in Sheffield, I find that Messrs. Guest, of Rotherham, are patentees of a tap for the discharge of water at high pressures, and that they had adapted their invention to the purpose of a fire-plug and stand pipe suitable for street-cleansing by the hose and jet. Church-street, one of the principal thoroughfares, was experimentally cleansed by this process: "The carriage-way is from 20 to 24 feet wide, and about 150 yards long. It was washed almost as clean as a house-floor in five minutes." Mr. Lee expresses his conviction that, by the agency of the hose and jet, every street in that populous borough might be cleansed at about 1*s.* per annum for each house. "The principal thoroughfares," he states, "could be thus made perfectly clean, three times every week, before business hours, and the minor streets and lanes twice, or once per week, at later hours in the day, by the agency of an abundant supply of water, at *less than half the sum necessary for the cartage alone* of an equal quantity of refuse in a solid or semi-fluid condition."

The highways most frequented in Sheffield constitute about one-half of the whole extent of the streets and roads in the borough, measuring 47 miles. This length, Mr. Lee computes, might be effectually cleansed with the hose and jet, ten miles of it three times a week, 21 miles twice a week, and 16 miles once a week, a total of 88 miles weekly, or 4576 miles yearly. The quantity of Water required would be 3000 gallons a mile, or a yearly total of 13,728,000 gallons. This water might be supplied, Mr. Lee opines, at ·1*d.* per 1000 gallons (57*l.* 4*s.* per annum), although the price obtained by the Water-works Company was 6½*d.* per 1000 gallons (371*l.* 16*s.* per annum). "I now proceed," he says, "to the cost of labour: 4576 miles per annum is equal to 14⅔ miles for each working day, or to six sets of two men cleansing 2½ miles per day each set. To these must be added three horses and carts, and three carters, for the removal of such *débris* as cannot be washed away and for such parts of the town as cannot be cleansed by this system, making a total of fifteen men. Their wages I would fix at 50*l.* per annum each. The estimate is as follows:—

	£
"Annual interest upon the first cost of hose and pipes, three horses and carts	30
Fifteen men's wages	750
Three horses' provender	150
Wear, tear, and depreciation of hose, &c.	250
Management and incidentals, say	120
	£1300."

The estimate, it will be seen, is based on the supposition that *the water supply should be at the public cost*, and not a specific charge for the purposes of street-cleansing.

The 47 miles of highway of Sheffield is but three miles less than those of the city of London, the cost of cleansing which is, according to the estimate before given, no less than 18,000*l.*

The Sheffield account is divested of all calculations as to house-dust and ashes, and the charge for watering-carts; but, taking merely the sum paid to scavaging contractors, and assigning 1000*l.* (out of the 2485*l.*), as the proportion of salaries, &c., under the department of scavagery in the management of the City Commissioners, we find that while the expense of street-cleansing by the Sheffield hose and jet was little more than 34*l.*, in London, by the ordinary mode, it was upwards of 140*l.* per mile, or more than four times as much. The hose and jet system is said to have washed the streets of Sheffield as clean as a house-floor, which could not be said of it in London. The streets of the City, it should also be borne in mind, are now swept daily; Mr. Lee proposes only a periodical cleaning for Sheffield, or once, twice, and thrice a week. Of the cost of the experiments made in London with the hose and jet, in Lascelles-court, &c., nothing is said.

Street-cleansing by the hose and jet is, then, as yet but an experiment. It has not, like the street-orderly mode, been tested continuously or systematically; but the experiments are so curious and sometimes so startling in their results that it was necessary to give a brief account of them here, in order to render this account of the cleansing of the streets of the metropolis as comprehensive as possible. For my own part, I must confess the street-orderly system appears to excel all other modes of scavagery, producing at once the greatest cleanliness with the greatest employment to the poor. Nor am I so convinced as the theoretic and crotchety Board of Health as to the healthfulness of dampness, or the daily evaporation of a sheet of even clean water equal in extent to the entire surface of the London streets. It is certainly *doubtful*, to say the least, whether so much additional moisture might *improve* the public health, which the Board are instituted to protect; rain certainly contributes to cleanliness, and yet no one would advocate continued wet weather as a source of general convalescence.

I shall conclude this account of the scavaging

of London, with the following brief statement as to the mode in which these matters are conducted abroad.

In Paris, where our system of parochial legislation and management is unknown, the scavaging of the streets—so frequently matters of private speculation with us—is under the immediate direction of the municipality, and the Government publish the returns, as they do of the revenue of their capital from the abattoirs, the interments, and other sources.

In the *Moniteur* for December 10, 1848, it is stated that the refuse of the streets of Paris sells for 500,500 francs (20,020*l.*), when sold by auction in the mass; and 3,800,000 francs (equal to 152,000*l.*) when, after having lain in the proper receptacles, until fit for manure, it is sold by the cubic foot. In 1823, the streets of Paris were leased for 75,000 francs (3000*l.*) per annum in 1831 the value was 166,000 francs (6640*l.*); and since 1845 the price has risen to the sum first named, viz., 500,500 francs (20,020*l.*); from which, however, is to be deducted the expense of cleansing, &c. I may add, that the receptacles alluded to are large places provided by Government, where the manure is deposited and left to ferment for twelve or eighteen months.

Of the Cost and Traffic of the Streets of London.

I HAVE, at page 183 of the present volume, given a brief statement of the annual cost attending the keeping of the streets of the metropolis in working order.

The formation of the streets of a capital like London, the busiest in the world—streets traversed daily by what Cowper, even in his day, described as "the ten thousand wheels" of commerce—is an elaborate and costly work.

In my former account I gave an estimate which referred to the amount dispensed weekly in wages for the labour of the workmen engaged in laying down the paved roads of the metropolis. This was at the rate of 100,000*l.* per week; that is to say, calculating the operation of relaying the streets to occupy one year in every five, there is no less than 5,200,000*l.* expended in that time among the workpeople so engaged. The sum expended in labour for the continued repairs of the roads, after being so relaid, appears to be about 20,000*l.* per week*, or, in round numbers, about 1,000,000*l.* a year; so that the gross sum annually disbursed to the labourers engaged in the construction of the roads of London would seem to be about 2,250,000*l.*, that is to say, 1,000,000*l.* for repairing the old roads, and 1,250,000*l.* per annum for laying down new ones in their place.

It now remains for me to set forth the gross cost of the metropolitan highways, that is to say, the sum annually expended in both labour and materials, as well for relaying as for repairing the roads.

The granite-built streets cost, when relaid, about 11,000*l.* the mile, of ten yards' width, which is at the rate of 12*s.* 6*d.* the square yard, materials and labour included, the granite (Aberdeen) being 1*l.* 5*s.* per ton, and one ton of "seven-inch" being sufficient to cover about three square yards.

The average cost of a macadamized road, materials and labour included, if constructed from the foundation, is about 4400*l.* per street mile (ten yards wide)—5*s.* the superficial yard being a fair price for materials and labour.

Wood pavement, on the other hand, costs about 9680*l.* a mile of ten yards' width for materials and labour, which is at the rate of 11*s.* the superficial yard.

The cost of *repairs*, materials and labour included, is, for granite pavement about 1½*d.* per square yard, or 100*l.* the street mile of ten yards wide; for "Macadam" it is from 6*d.* to 3*s.* 6*d.*, or an average of 1*s.* 6*d.* per superficial yard, which is at the rate of 1320*l.* the street mile; while the wood pavement costs about the same for repairs as the granite.

The total cost of repairing the streets of London, then, may be taken as follows:—

	£
Repairing granite-built streets, per mile of ten yards wide	100
Repairing macadamized roads, per street mile	1320
Repairing wood pavement, per street mile	100

Or, as a total for all London,—

Repairing 400 miles of granite-built streets, at 100*l.* per mile	40,000
Repairing 1350 miles of macadamized streets, at 1320*l.* per mile	1,782,000
Repairing five miles of wood, at 100*l.* per mile	500
	£1,822,500

The following, on the other hand, may be taken as the total cost of *reconstructing* the London streets:—

	£
Granite-built streets, per mile ten yards wide	11,000
Macadamized streets, per street mile	4,400
Wood „ „	9,680

Or, as a total for the entire streets and roads of London,—

	£
Relaying 400 miles of granite-built streets, at 11,000*l.* per mile	4,400,000
Relaying 1350 miles of macadamized streets, at 4400*l.* per mile	5,940,000
Relaying five miles of wood-built streets, at 9680*l.*	48,400
	£10,388,400

But the above refers only to the road, and besides this, there is, as a gentleman to whom I am much indebted for valuable information on the subject, reminds me, the foot paving, granite curb, and granite channel not included. The usual price for *paving* is 8*d.* per foot superficial, when laid—granite curb 1*s.* 7*d.* per foot run, and granite channel 12*s.* per square yard.

"Now, presuming that three-fourths of the roads," says my informant, "have paved footpaths on each side at an average width of six feet exclusive of curb, and that one-half of the macadamized roads have granite channels on each side, and that one-third of all the roads have granite curb on each side; these items for 400 miles of granite road, 1350 macadamized, and 5 miles of wood—together 1755 miles—will therefore amount to

	£	s.	d.
Three-fourths of 1755 miles of streets paved on each side, six feet wide, at 8*d.* per foot superficial	2,779,392	0	0
One-half of 1350 miles of macadamized roads with one foot of granite channel on each side, at 12*s.* per yard square	458,537	4	5
One-third of 1755 miles of road with granite curb on each side, at 1*s.* 7*d.* per foot run	489,060	0	0
	3,726,989	4	5
Cost of constructing 1755 miles of roadway	10,388,400	0	0
Total cost of constructing the streets of London	£14,115,389	4	5

"Accordingly the original cost of the metropolitan pavements exceeds fourteen millions sterling, and, calculating that this requires renewal every five years, the gross annual expenditure will be at the rate of 2,500,000*l.* per annum, which, added to 1,822,500*l.*, gives 4,322,500*l.*, or upwards of four millions and a quarter sterling for the entire annual cost of the London roadways.

"From rather extensive experience," adds my informant, "in building operations, and consequently in making and paying for roads, I am of opinion that the amount I have shown is under rather than above the actual cost.

"In a great many parts of the metropolis the roads are made by the servants of a body of Commissioners appointed for the purpose; and from dear-bought experience I can say they are a public nuisance, and would earnestly caution speculating builders against taking building ground or erecting houses in any place where the roads are under their control. The Commissioners are generally old retired tradesmen, and have very little to occupy their attention, and are often quite ignorant of their duties; I have reason to believe, too, that some of them even use their little authority to gratify their dislike to some poor builder in their district, by meddling and quibbling, and while that is going on the houses which have been erected can neither be let nor sold; so that as the bills given for the materials keep running, the builder, when they fall due, is ruined, for his creditors will not take his unlet houses for their debts, and no one else will purchase them until let, for none will rent them without proper accesses. I feel certain that in those parts where the roads are made by Commissioners three times more builders, in proportion to their number, get into difficulties than in the districts where they are permitted to make the roads themselves."

The paved ways and roads of London, then, it appears, cost in round numbers 10,000,000*l.* sterling, and require nearly 2,000,000*l.* to be expended upon them annually for repairs.

But this is not the sole expense attendant upon the construction of the streets of the metropolis. Frequently, in the formation of new lines of thoroughfare, large masses of property have to be bought up, removed, and new buildings erected at considerable cost. In a return made pursuant to an order of the Court of Common Council, dated 23rd October, 1851, for "An account of all moneys which have been raised for public works executed, buildings erected, or street improvements effected, out of the Coal Duties receivable by the Corporation of London in the character of trustees for administration or otherwise, since the same were made chargeable by Parliament for such purposes in the year 1766," the following items are given relating to the cost of the formation of new streets and improvements of old ones:—

Street Improvements forming New Thoroughfares.

	Amount raised for Public Works, &c. £.	s.	d.
Building the bridge across the river Thames, from Blackfriars, in the city of London, to Upper Ground-street, in the county of Surrey, now called Blackfriars Bridge, and forming the avenues thereto, and embanking the north abutment of the said bridge—(Entrusted to the Corporation of the city of London)	210,000	0	0
Making a new line of streets from Moorfields, opposite Chiswell-street, towards the east into Bishopsgate-street (now Crown-street and Sun-street), also from the east end of Chiswell-street westward into Barbican—(Corporation of the city of London)	16,500	0	0
Making a new street from Crispin-street, near Spitalfields Church, into Bishopsgate-street (now called Union-street), in the city of London and in the county of Middlesex—(Commissioners named in Act 18, George III., c. 78)	9,000	0	0
Opening communications between Wapping-street and Ratcliffe-highway, and between Old Gravel-lane and Virginia-street, all in the county of Middlesex—(Commissioners appointed under Act 17, Geo. III., c. 22)	1,000	0	0
Formation of Farringdon-street, removal of Fleet-market, and erection of Farringdon-market, in the city of London—(Corporation of the city of London).	250,000	0	0
Formation of a new street from the end of Coventry-street to the junction of Newport-street and Long-acre (Cranbourn-street), continuing the line of street from Waterloo Bridge, already completed to Bow-street (Upper Wellington-street), and thence northward into Broad-street, Holborn, and thence to Charlotte-street, Bloomsbury, extending Oxford-street in a direct line through St. Giles's, so as to communicate with Holborn at or near Southampton-street (New Oxford-street); also widening the northern and			

* At p. 183 the sum of 10,225*l.* is said to be expended in repairs *annually*; it should have been *weekly*

	£	s.	d.
Brought forward . .	496,500	0	0
southern extremities of Leman-street, Goodman's-fields, and forming a new street from the northern side of Whitechapel to the front of Spital-fields Church (Commercial-street), and forming a new street from Rose-mary-lane to East Smithfield, near to the entrance of the London-docks; also formation of a street from the neighbourhood of the Houses of Parliament towards Buckingham Palace, in the city of Westminster (Victoria-street), all in the county of Middlesex; also formation of a line of new street between Southwark and Westminster Bridges, in the county of Surrey—(Her Majesty's Commissioners of Woods, Forests, and Land Revenues)	665,000	0	0
NOTE.—The Commissioners of Her Majesty's Woods have been authorised to raise further moneys on the credit of the duty of 1*d.* per ton for further improvements in the neighbourhood of Spitalfields, but the Chamberlain is not officially cognizant of the amount.			
Forming a new street from the northern end of Victoria-street, Holborn (formed by the Corporation to Clerkenwell-green, all in the county of Middlesex) —(Clerkenwell Improvement Commissioners)	25,000	0	0
Formation of a new line of streets from King William-street, London Bridge, to the south side of St. Paul's Cathedral, by widening and improving Cannon-street, making a new street from Cannon-street, near Bridge-row, to Queen-street, and another street from the west side of Queen-street, in a direct line to St. Paul's-churchyard, and widening Queen-street, from the junction of the said new street to Southwark Bridge; also improving Holborn Bridge and Field-lane, and effecting an improvement in Grace-church-street and Ship Tavern-passage, all in the city of London—(Corporation of the city of London) . .	500,000	0	0
Finishing the new street left incomplete by the Clerkenwell Improvement Commissioners, from the end of Victoria-street, Farringdon-street, to Coppice-row, Clerkenwell, all in the county of Middlesex—(Corporation of the City of London)	33,000	0	0
Total cost of forming the above-mentioned new thoroughfares . . .	1,764,500	0	0

Improving existing Thoroughfares.

	£	s.	d.
Improving existing approaches, and forming new approaches to new London Bridge, viz., in High-street, Tooley-street, Montague-close, Pepper-alley, Whitehorse-court, Chequer-court, Chaingate, Churchyard-passage, St. Saviour's churchyard, Carter-lane, Boar's-head-place, Fryingpan-alley, Green Dragon-court, Joyner-street, Red Lion-street, Counter-street, Three Crown-court, and the east front of the Town Hall, all in the Borough of Southwark; also ground and premises at the north-west foot of London Bridge, Upper Thames-street, Red-cross-wharf, Mault's-wharf, High Timber-street and Broken-wharf, Swan-passage, Churchyard-alley, site of Fishmonger's Hall, Great East-cheap, Little Eastcheap, Star-court, Fish-street-hill, Little Tower-street, Idol-lane, St. Mary-at-hill, Crooked-lane, Miles-lane, Three Tun-alley, Warren-court, Cannon-street, Grace-church-street, Bell-yard, Martin's-lane, Nicholas-lane, Clement's-lane, Abchurch-lane, Sherborne-lane, Swithin's-lane, Cornhill, Lombard-street, Dove-court, Fox Ordinary-court, Old Post Office Chambers, Mansion-house-street, Princes-street, Coleman-street, Coleman-street-buildings, Moorgate-street, London Wall, Lothbury, Tokenhouse-yard, King's Arms-yard, Great Bell-alley, Packer's-court, White's-alley, Great Swan-alley, Crown-court, George-yard, Red Lion-court, Cateaton-street, Gresham-street, Milk-street, Wood-street, King-street, Basinghall-street, Hounds'ditch, Ladlane, Threadneedle-street, Aldgate High-street, and Maiden-lane, all in the City of London—(Corporation of the City of London)	1,016,721	18	1
Widening and improving the entrance into London near Temple-bar, improving the Strand and Fleet-street, and formation of Pickett-street, and for making a new street from the east end of Snow-hill to the bottom of Holborn-hill, now called Skinner-street—(Corporation of the City of London)	246,300	0	0
Widening and improving Dirty-lane and part of Brick-lane, leading from Whitechapel to Spitalfields, and for paving Dirty-lane, Petticoat-lane, Wentworth-street, Old Montague-street, Chapel-street, Princes-row, &c.. all in the county of Middlesex—(Commissioners appointed by the Act 18, Geo. III., c. 80)	1,500	0	0
Widening the avenues from the Minories, through Goodman's-yard into Prescott-street, and through Swan-street and Swan-alley into Mansell-street, and from Whitechapel through Somerset-street into Great Mansell-street, all in the county of Middlesex—(Commissioners named in Act 18, George III., c. 50)	1,500	0	0
Total cost of improving the above-mentioned thoroughfares . . .	1,265,721	18	1

Paving.

	£	s.	d.
Paving the road from Aldersgate Bars to turnpike in Goswell-street, in the county of Middlesex—(Commissioners Sewers, &c., of the City of London) .	5,500	0	0
Completing the paving of the town borough of Southwark and certain parts adjacent—(Commissioners for executing Act 6, George III., for paving town and borough of Southwark)	4,000	0	0
Total cost of paving the above-mentioned thoroughfares	9,500	0	0

Hence the aggregate expense of the preceding improvements has been upwards of 3,000,000*l.* sterling.

I have now, in order to complete this account of the cost of paving and cleansing the thoroughfares of the metropolis, only to add the following statement as to the traffic of the principal thoroughfares in the city of London, for which I am indebted to Mr. Haywood, the City Surveyor.

By the subjoined Return it will be seen that there are two tides as it were in the daily current of locomotion in the City—the one being at its flood at 11 o'clock A.M., after which it falls gradually till 2 o'clock, when it is at its lowest ebb, and then begins to rise, gradually till 5 o'clock, when it reaches its second flood, and then begins to decline once more. The point of greatest traffic in the City is London-bridge, where the conveyances passing and repassing amount to 13,099 in the course of twelve hours*.

* At p. 185 the traffic of London Bridge is stated to be 13,000 conveyances per hour. instead of per 12 hours.

Of these it would appear, that 9351 consist of one-horse vehicles and equestrians, 3389 of two-horse conveyances, and only 359 of vehicles drawn by more than two horses. The one-horse vehicles would seem to be between two and three times as many as the two-horse, which form about one-fourth of the whole, while those drawn by more than two horses constitute about one-sixtieth of the entire number.

The Return does not mention the state of the weather on the several days and hours at which the observations were made, nor does it tell us whether there was any public event occurring on those days which was likely to swell or diminish the traffic beyond its usual proportions. The table, moreover, it should be remembered, is confined to the observations of only one day in each locality, so that we must be guarded in receiving that which records a mere accidental set of circumstances as an example of the general course of events. It would have been curious to have extended the observations throughout the night, and so have ascertained the difference in the traffic; and also to have noted the decrease in the number of vehicles passing during a continuously wet as well as a showery day. The observations should be further carried out to different seasons, in order to be rendered of the highest value. Mr. Haywood and the City authorities would really be conferring a great boon on the public by so doing.

OF THE RUBBISH CARTERS.

THE public cleansing trade, I have before said, consists of as many divisions as there are distinct species of refuse to be removed, and these appear to be four. There is the *house*-refuse, consisting of two different kinds, as (1) the wet house-refuse or "slops," and "night-soil," and (2) the dry house-refuse, or dust and soot; and there is the *street*-refuse, also consisting of two distinct kinds, as (3) the wet street-refuse, or mud and dirt; and (4) the dry street-refuse or "rubbish."

I now purpose dealing with the labourers engaged in the collection and removal of the last-mentioned kind of refuse.

Technologically there are several varieties of "rubbish," or rather "*dirt*," for such appears to be the generic term, of which "rubbish" is *strictly* a species. Dirt, according to the understanding among the rubbish-carters, would seem to consist of any solid earthy matter, which is of an useless or refuse character. This dirt the trade divides into two distinct kinds, viz. :—

1. "Soft dirt," or refuse clay (of which "dry dirt," or refuse soil or mould, is a variety).

2. "Hard-dirt," or "hard-core," consisting of the refuse bricks, chimney-pots, slates, &c., when a house is pulled down, as well as the broken bottles, pans, pots, or crocks, and oyster-shells, &c., which form part of the contents of the dustman's cart.

The phrase "hard-core"* seems strictly to mean all such refuse matter as will admit of being used as the foundation of roads, buildings, &c. "Rubbish," on the other hand, appears to be limited, by the trade, to "dry dirt;" out of the trade, however, and etymologically speaking, it signifies all such *dry* and *hard* refuse matter as is rendered useless by wear and tear*. The term *dirt*, on the other hand, is generally applied to *soft* refuse matter, and *dust* to *dry* refuse matter in a state of minute division, while *slops* is the generic term for all *wet* or *liquid* refuse matter. I shall here restrict the term rubbish to all that dry and hard refuse matter which is the residuum of certain worn-out or "used-up" earthen commodities, as well as the surplus earth which is removed whenever excavations are made, either for the building of houses, the cutting of railways, the levelling of roads, the laying down of pipes or drains, and the sinking of wells.

The commodities whose residuum goes to swell the annual supply of *rubbish*, are generally of an earthy nature. Such commodities as are made of *fibrous* or *textile* materials, go, when "used up," chiefly to form manure if of an animal nature, and to be converted into paper if of a vegetable origin. The refuse materials of our woollen clothes, our old coats and trousers, are either torn to pieces and re-manufactured into shoddy, or become the invigorators of our hop and other plants; whereas those of our linen or cotton garments, our old shirts and petticoats, form the materials of our books and letters; while our old ropes, &c., are converted into either brown paper or oakum. Those commodities, on the other hand, which are made of *leathern* materials, become, when worn out, the ingredients of the prussiate of potash and other nitrogenised products manufactured by our chemists. Our old *wooden* commodities, again, are used principally to kindle our fires; while the refuse of our fires themselves, whether the soot which is deposited in the chimney above, or the ashes which fall below, are employed mainly to increase the fertility of our land. Our worn-out *metal* commodities, on the other hand, are newly melted, and go to form fresh commodities when the metals are of the scarcer kind, as gold, silver, copper, brass, lead, and even iron; and when of the more common kind, as is the case with old tin, and occasionally iron vessels, they either become the ingredients in some of our chemical manufactures, or else when formed of tin are cut up into smaller and inferior commodities. Even the detritus of our *streets* is used as the soil of our market gardens. All this we have already seen, and we have now to deal more particularly with

* The *core* in this term may be a corruption of the Saxon *Carr*, a rock, rather than that which would at first suggest itself as its origin, viz., the Latin *cor*, the heart. *Hard-core* would therefore mean hard rock-like rubbish, instead of lumps of rubbish having a hard nucleus or heart.

* The term *rubbish* is a polite corruption of the original word *rubbage*, which is still used by uneducated people; *ish* is an *adjectival* termination, as whitish, slavish, brutish, &c., and is used only in connection with such substantives as are derived from adjectives, as English, Scottish, &c. Whereas the affix *age* is strictly substantival, as sewage, garbage, wharfage, &c., and is found applied only to adjectives derived from substantives, as *savage*. A like polite corruption is found in the word *pudding*, which should be strictly *pudden*: the addition of the g is as gross a mistake as saying *garding* for *garden*. There is no such verb as to *pud* whence could come the substantival participle *pudding*; and the French word from which we derive our term is *poudin* without the *g* like *jardin*, the root of our *garden*.

STREET

TABLE SHOWING THE NUMBER OF VEHICLES AND HORSES PASSING THROUGH HOURS OF 8 A.M. AND 8 P.M., UPON CERTAIN

Date.	Situation.	Hour ending 9 A.M.			Hour ending 10 A.M.			Hour ending 11 A.M.			Hour ending 12 A.M.			
		Vehicles drawn by			Vehicles drawn by			Vehicles drawn by			Vehicles drawn by			
		1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	
8th July, 1850.	Temple Bar Gate	230	61	20	292	192	42	448	235	21	505	222	30	A
9th ,, ,,	Holborn Hill, by St. Andrew's Church	250	65	12	380	166	6	480	181	9	530	154	14	B
10th ,, ,,	Ludgate Hill, by Pilgrim-street	268	76	17	290	170	16	454	261	13	420	210	6	C
11th ,, ,,	Newgate-street, by Old Bailey	250	59	11	360	155	13	433	184	11	367	137	5	D
12th ,, ,,	Aldersgate-street, by Fann-street	140	20	8	198	52	11	150	44	14	147	36	13	E
13th ,, ,,	Cheapside, by Foster-lane	345	110	18	483	301	21	703	385	36	768	390	11	F
15th ,, ,,	Poultry, by Mansion House	287	103	24	437	315	19	654	398	19	690	373	17	G
16th ,, ,,	Finsbury Pavement, by South-place	185	63	14	252	123	10	330	138	7	250	129	8	H
17th ,, ,,	Cornhill, by Royal Exchange	98	56	7	172	177	15	252	210	17	270	184	7	I
18th ,, ,,	Threadneedle-street	47	47	4	67	77	1	162	97	3	160	50	4	J
19th ,, ,,	Gracechurch-street, by St. Peter's-alley	202	50	6	200	99	23	308	113	18	320	175	12	K
20th ,, ,,	Lombard-street, by Birchin-lane	121	15	1	87	28	2	140	12	4	174	14	..	L
22nd ,, ,,	Bishopsgate Within, by Great St. Helen's	194	58	7	253	144	11	323	164	13	277	143	10	M
23rd ,, ,,	London Bridge	519	139	22	744	339	45	955	334	43	820	274	30	N
24th ,, ,,	Bishopsgate-street Without, by City boundry	148	51	4	197	121	11	310	134	3	170	109	7	O
25th ,, ,,	Aldgate High-street, by ditto	335	68	22	291	111	20	292	115	10	287	145	10	P
26th ,, ,,	Leadenhall-st., rear of East India House	193	45	13	272	141	16	388	196	11	340	150	5	Q
27th ,, ,,	Eastcheap, by Philpot-lane	274	35	26	293	40	13	340	46	12	320	34	18	R
29th ,, ,,	Tower-street, by Mark-lane	132	22	15	180	37	5	220	32	10	220	39	12	S
30th ,, ,,	Tower-street, by Botolph-lane	79	7	2	117	10	3	153	15	7	90	7	8	T
31st ,, ,,	Lower Thames-street, by Botolph-lane	268	42	17	280	78	23	409	99	10	393	89	34	U
1st Aug. ,,	Blackfriars Bridge	97	28	15	172	43	12	126	28	11	160	42	21	V
2nd ,, ,,	Upper Thames-street, rear of Queen-street	180	16	7	206	18	6	180	16	6	254	14	9	W
3rd ,, ,,	Smithfield Bars	175	20	11	198	60	4	205	41	7	298	39	6	X
	Fenchurch-street													
		5017	1256	303	6421	2997	339	8415	3478	315	8230	3159	267	

STREET TRAFFIC.

TABLE SHOWING TOTALS OF EVERY DESCRIPTION OF VEHICLE PASSING PER HOUR AND PER DAY OF 12 HOURS THROUGH CERTAIN STREETS WITHIN THE CITY OF LONDON.

Date.	Situation.	Hours Ending 9 A.M.	10 A.M.	11 A.M.	12 Noon	1 P.M.	2 P.M.	3 P.M.	4 P.M.	5 P.M.	6 P.M.	7 P.M.	8 P.M.	Total of 12 Hours.	Average per Hour.
1850.															
July 8	Temple Bar Gate	311	526	704	757	691	664	791	737	738	671	537	614	7741	645
,, 9	Holborn-hill, by St. And. Ch.	327	552	670	698	623	606	535	377	915	445	341	317	6906	575
,, 10	Ludgate-hill, by Pilgrim-st.	361	476	728	636	789	514	628	531	619	584	543	420	6829	569
,, 11	Newgate-st., by Old Bailey	320	528	628	509	555	537	564	733	572	563	467	394	6375	531
,, 12	Aldersgate-st., by Fann-st.	168	261	208	196	214	235	194	219	235	233	229	198	2590	215
,, 13	Cheapside, by Foster-lane	473	805	1124	1169	1020	1009	1007	1076	1106	964	808	492	11053	921
,, 15	Poultry, by Mansion House	414	762	1071	1080	1043	941	875	910	956	825	802	595	10274	856
,, 16	Finsbury-pave., by South-pl	262	385	475	387	364	345	293	347	493	475	400	244	4460	371
,, 17	Cornhill, by Roy. Exchange	161	364	479	461	487	441	493	451	468	430	354	327	4916	409
,, 18	Threadneedle-street	93	145	262	214	211	154	212	195	198	205	148	103	2150	179
,, 19	Gracech-st., by St. Pet.-alley	258	322	439	507	392	423	464	516	461	436	338	331	4887	407
,, 20	Lombard-st., by Birchin-la	137	117	156	188	169	232	237	304	243	209	130	106	2228	185
,, 22	Bishopsg.-st., by Gt St. Hel.	259	408	500	430	396	238	439	432	541	456	404	345	4842	403
,, 23	London Bridge	680	1128	1332	1124	1094	1048	1101	1180	1344	1308	962	798	13099	1091
,, 24	Bishp.-st. out, by Cy. Bound	203	329	447	286	307	342	390	335	430	439	323	279	4110	342
,, 25	Aldgate High-street, ditto	425	422	417	442	445	379	389	409	405	401	331	289	4754	396
,, 26	Leadenhall-st., E. I. House	251	429	595	495	594	563	525	569	466	508	437	418	5930	494
,, 27	Eastcheap, by Philpot-lane	335	346	398	372	378	343	368	393	398	349	294	128	4102	341
,, 29	Tower-street, by Mark-lane	169	222	262	271	292	324	290	262	282	238	164	114	2890	240
,, 30	L. Thames-st, by Botolph-la	88	130	175	105	105	108	118	147	168	121	69	46	1380	115
,, 31	Blackfriars Bridge	327	381	518	516	465	336	385	416	570	548	463	337	5262	438
Aug. 1	U.Thames-st., rear of Qn.-st	140	227	165	223	205	160	164	213	253	312	176	93	2331	194
,, 2	Smithfield Bars	203	230	202	277	276	255	334	267	328	289	283	159	3108	259
,, 3	Fenchurch-street	206	262	253	343	293	269	272	327	364	259	249	545	3642	303
		6576	9757	12203	11686	11408	10466	11068	11351	12543	11342	9757	7697	125859	10488

TRAFFIC.

CERTAIN THOROUGHFARES WITHIN THE CITY OF LONDON, BETWEEN THE DAYS DURING THE YEAR 1850.

	Hour ending 1 P.M.			Hour ending 2 P.M.			Hour ending 3 P.M.			Hour ending 4 P.M.			Hour ending 5 P.M.			Hour ending 6 P.M.			Hour ending 7 P.M.			Hour ending 8 P.M.		
	Vehicles drawn by			Vehicles drawn by			Vehicles drawn by			Vehicles drawn by			Vehicles drawn by			Vehicles drawn by			Vehicles drawn by			Vehicles drawn by		
	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.	1 Horse and Equestrians.	2 Horses.	3 Horses or more.
A	460	218	13	415	230	19	550	231	10	496	237	4	470	255	13	435	219	17	329	200	8	405	198	11
B	453	160	10	435	158	13	373	150	12	270	100	7	639	251	25	330	111	4	615	209	17	219	92	6
C	530	256	3	330	180	4	400	221	7	288	242	1	375	235	9	360	220	4	330	210	3	214	202	4
D	390	156	9	377	155	5	390	167	7	525	201	12	390	177	5	415	142	6	337	126	4	250	136	8
E	165	40	9	180	49	6	150	32	12	172	40	7	197	36	12	185	40	8	175	44	10	141	46	11
F	630	334	6	664	336	9	665	338	4	730	339	7	671	427	8	645	303	16	482	319	7	271	212	9
G	630	358	5	595	337	9	548	321	6	575	330	5	565	381	10	505	310	10	455	344	3	292	299	4
H	243	115	6	223	118	4	184	107	2	215	128	4	340	135	8	300	159	16	242	142	16	140	101	3
I	275	202	4	253	189	8	305	185	3	276	172	3	255	206	7	242	180	8	177	176	1	186	140	1
J	160	50	1	120	32	2	164	46	2	157	37	1	150	45	3	157	45	3	115	30	3	77	31	..
K	295	87	10	330	81	12	360	93	11	375	123	18	302	135	24	310	113	13	253	79	6	250	75	6
L	160	9	..	215	15	2	227	9	1	283	20	1	223	20	..	180	26	3	115	15	..	94	12	..
M	260	125	11	164	70	4	320	113	6	287	140	5	380	150	11	320	123	7	270	127	7	222	120	3
N	775	296	23	765	255	28	793	284	24	845	305	30	975	336	33	970	305	33	680	264	18	510	258	20
O	191	112	4	243	96	3	285	97	8	231	103	1	309	113	8	305	126	8	203	112	8	177	99	3
P	300	135	10	249	123	7	260	112	17	274	122	13	248	141	16	276	110	15	220	100	11	190	96	3
Q	415	168	11	385	171	7	353	158	14	387	172	10	295	166	5	390	183	15	292	139	6	260	152	6
R	340	27	11	300	28	15	310	38	20	345	40	8	340	43	15	280	58	11	230	59	5	109	16	3
S	260	26	6	270	39	15	252	34	4	226	26	10	230	39	13	195	34	9	137	25	2	94	16	4
T	83	21	1	100	8	..	100	15	3	130	13	4	143	23	2	100	15	6	52	14	3	40	4	2
U	365	78	22	253	65	18	302	73	10	340	66	10	450	103	17	446	87	15	361	89	13	265	66	6
V	160	35	10	120	31	9	125	33	6	160	44	9	185	52	16	241	54	17	139	25	12	71	13	9
W	252	18	6	232	19	4	305	20	9	250	11	6	305	17	6	265	20	4	269	10	9	145	14	..
X	240	45	8	223	39	7	220	46	6	267	54	6	300	57	7	215	36	8	193	53	3	516	28	1
	8132	3077	199	7441	2815	210	7941	2923	204	8104	3065	182	8327	3543	273	8067	3019	256	6671	2911	175	5138	2426	133

STREET TRAFFIC.

TABLE SHOWING THE TOTAL NUMBER OF EACH DESCRIPTION OF VEHICLE PASSING THROUGH CERTAIN STREETS WITHIN THE CITY OF LONDON, BETWEEN THE HOURS OF 8 A.M. AND 8 P.M. (12 Hours.)

Date.	Situation.	Total Number of Vehicles drawn by			Total of the whole.	Average Number per Hour.			Average of the whole.
		1 Horse and Equestrians.	2 Horses.	3 Horses or more.		1 Horse and Equestrians.	2 Horses.	3 Horses or more.	
8th July, 1850.	Temple Bar Gate	5035	2498	208	7741	419	208	17	645
9th ,, ,,	Holborn Hill, by St. Andrew's Church	4974	1797	135	6906	414	149	11	575
10th ,, ,,	Ludgate Hill, by Pilgrim-street	4259	2483	87	6829	354	207	7	569
11th ,, ,,	Newgate-street, by Old Bailey	4484	1795	96	6375	373	149	8	531
12th ,, ,,	Aldersgate-street, by Fann-street	1990	479	121	2590	165	40	10	215
13th ,, ,,	Cheapside, by Foster-lane	7107	3794	152	11053	592	316	12	921
15th ,, ,,	Poultry, by Mansion House	6283	3869	122	10274	523	332	10	856
16th ,, ,,	Finsbury Pavement, by South-place	2904	1458	98	4460	242	121	8	371
17th ,, ,,	Cornhill, by Royal Exchange	2761	2074	81	4916	230	172	7	409
18th ,, ,,	Threadneedle-street	1536	587	27	2150	128	49	2	179
19th ,, ,,	Gracechurch-st., by St. Peter's-alley	3505	1223	159	4887	292	102	13	407
20th ,, ,,	Lombard-street, by Birchin-lane	2019	195	14	2228	168	16	1	185
22nd ,, ,,	Bishopsgate-st., by Great St. Helen's	3270	1477	95	4842	272	123	8	403
23rd ,, ,,	London Bridge	9351	3389	359	13099	779	282	30	1091
24th ,, ,,	Bishopsgate-st., out, by City Boundry	2769	1273	68	4110	230	106	5	342
25th ,, ,,	Aldgate High-street, ditto	3222	1378	154	4754	268	114	12	396
26th ,, ,,	Leadenhall-street, East India House	3970	1841	119	5930	330	153	10	494
27th ,, ,,	Eastcheap, by Philpot-lane	3481	464	157	4102	290	38	13	341
29th ,, ,,	Tower-street, by Mark-lane	2416	369	105	2890	201	30	8	240
30th ,, ,,	Lower Thames-st., by Botolph-lane	1187	152	41	1380	98	12	3	115
31st ,, ,,	Blackfriars Bridge	4132	935	195	5262	344	78	16	438
1st Aug. ,,	Upper Thames-st., rear of Queen-st.	1756	428	147	2331	146	35	12	194
2nd ,, ,,	Smithfield Bars	2843	193	72	3108	237	16	6	259
3rd ,, ,,	Fenchurch-street	3050	518	74	3642	254	43	6	303
		88304	34669	2886	125859	7359	2889	240	10488

the refuse of the sole remaining materials, viz., those of an *earthy* kind, and out of which are made our bricks, our earthenware and porcelain, as well as our glass, plaster, and stone commodities. What becomes of all these materials when the articles made of them are no longer fit for use? The old glass is, like the old metal, remelted and made into new commodities; some broken bottles are used for the tops of walls as a protection against trespassers; and the old bricks, when sound, are employed again for inferior brickwork; but what becomes of the rest of the earthen materials—the unsound bricks or "bats," the old plaster and mortar, the refuse slates and tiles and chimney-pots, the broken pans, and dishes, and other crocks—in a word, the potsherds and pansherds*, as the rubbish-carters call them—what is done with these?

But rubbish, as we have seen, consists not only of refuse earthen commodities, but of refuse earth itself: such as the soil removed during excavations for the foundations of houses, for the cuttings of railways, the levelling of roads, the formation of parks, the laying down of pipes or drains, and the sinking of wells. For each and all of these operations there is necessarily a certain quantity of soil removed, and the question that naturally occurs to the mind is, what is done with it?

There is, moreover, a third kind of rubbish, which, though having an animal origin, consists chiefly of earthy matter, and that is the shells of oysters, and other shell-fish. Whence go they, since these shells are of a comparatively indestructible nature, and thousands of such fish are consumed annually in the metropolis? What, the inquirer asks, becomes of the refuse bony coverings of such fish?

Let us first, however, endeavour to estimate what quantity of each of these three kinds of rubbish is annually produced in London, beginning with the refuse earthen commodities.

There is no published account of the quantity of *crockeryware* annually manufactured in this country. Mr. McCulloch tells us, "It is estimated, that the *value* of the various sorts of earthenware produced at the potteries may amount to about 1,700,000*l.* or 1,800,000*l.* a year; and that the earthenware produced at Worcester, Derby, and other parts of the country, may amount to about 850,000*l.* or more, making the whole value of the manufacture 2,550,000*l.* or 2,650,000*l.* a year." What proportion of this quantity may fall to the share of the metropolis, and what proportion of the whole may be annually destroyed, I know of no means of judging. We must therefore go some other way to work in order to arrive at the required information. Now, it has been before shown, that the quantity of "dust," or dry refuse from houses, annually collected, amounts to 900,000 tons or chaldrons yearly; and I find, on inquiry at the principal "yards," that the average quantity of Potsherds and broken crockery is at the rate of about half a bushel to every load of dust, or say 1 per cent. out of the entire quantity collected. At other yards, I find the proportion of sherds to be about the same, so that we may fairly assume that the gross quantity of broken earthenware produced in London is in round numbers 9000 loads or tons per annum. The sherds run about 250 pieces to the bushel, and assuming every five of such pieces to be the remains of an entire article, there would be in each bushel the fragments of fifty earthenware vessels; and thus the total quantity of crockeryware destroyed yearly in the metropolis will amount to 18,000,000 vessels.

As to the quantity of *refuse bricks*, the number annually produced, which is between 1,500,000,000 and 2,000,000,000, will give us no knowledge of the quantity yearly converted into rubbish. In order to arrive at this, we must ascertain the number of houses pulled down in the course of the twelvemonth; and I find, by the Returns of the Registrar-General, that the buildings removed between 1841 and 1851 have been as follows:—

DECREASE IN THE NUMBER OF HOUSES THROUGHOUT LONDON BETWEEN 1841 AND 1851.

	Total Decrease in 10 Years.	Annual Average Decrease.
St, Martin's	116	11·6
St. James's, Westminster	130	13·0
St. Giles's	181	18·1
Strand	389	38·9
Holborn	86	8·6
East London	11	1·1
West London	265	26·5
London, City of	592	59·2
Whitechapel	2	·2
St. Saviour's, Southwark	46	4·6
St. Olave's	158	15·8
Total	1976	197·6

Thus, then, we perceive that there have been, upon an average, very nearly 200 houses annually pulled down in London within the last ten years, and I find, on inquiry among those who are likely to be the best-informed on such matters, that each house so pulled down will yield from 40 to 50 loads of rubbish; so that, altogether, the quantity of refuse bricks, slates, tiles, chimney-pots, &c., annually produced in London must be no less than 8000 loads.

But the above estimate refers only to those houses which have been pulled down and never rebuilt; so that, in order to arrive at the gross quantity of this kind of rubbish yearly produced in the metropolis, we must add to the preceding amount the quantity accruing from such houses as are pulled down and built up again, or newly fronted and repaired, which are by far the greater number. These, I find, may be estimated at between 5 and 10 per cent. of the gross number of houses in the metropolis. In some quarters (the older parts of London, for instance,) the proportion is much higher, while in the suburbs, or newer districts, it is scarcely half per cent. Each of the houses so new-fronted or repaired may be said to yield, on an average, 10 loads of rubbish, and, at this rate, the yearly quantity of refuse bricks, mortar, &c., proceeding from such a source, will be 150,000 loads per annum; so that the total amount of rubbish produced in London by the demolition and reparation of houses would appear to be about 160,000 loads yearly.

The quantity of refuse *oyster shells* may easily be found by the number of oysters annually sold in Billingsgate-market. These, from the returns which I obtained from the market salesmen, and printed at p. 63 of the first volume of this work, appear to be, in round numbers, 500,000,000; and, calculating that one-third of this quantity is sent into the country, the total number of shells remaining in the metropolis may be estimated at about 650,000,000. Reckoning, then, that 500 shells go to the bushel (the actual number was found experimentally to be between 525 and 550), and consequently that 20,000 are contained in every load, we may conclude that the gross quantity of refuse oyster shells annually produced in London average somewhere about 30,000 loads. That this is an approximation to the true quantity there can be little doubt, for, on inquiry at one of the largest dust-yards, I was informed by the hill-man that the quantity of oyster-shells collected with the refuse dust from houses in the vicinity of Shoreditch, Whitechapel, and other localities at the east-end of the metropolis, averages 6 bushels to the load of dust; about the west-end, however, half a bushel or a bushel to each load is the average ratio; while from the City there is none, the house "dust" there being free from oyster-shells. In taking one district, however, with another, I am assured that the average may be safely computed at 2 bushels of oyster-shells to every 3 loads of dust; hence, as the gross amount of house-dust is equal to 900,000 tons or loads per annum, the quantity of refuse oyster-shells collected yearly by the dustmen may be taken at 15,000 loads. But, besides these, there is the quantity got rid of by the costermongers, which seldom or never appear in the dust-bins. The costers sell about 124,000,000 oysters per annum, and thus the extra quantity of shells resulting from these means would be about 12,400 loads; so that the gross quantity of refuse oyster-shells actually produced in London may be said to average between 25,000 and 30,000 loads per annum.

There still remains the quantity of *refuse earth* to be calculated; this may be estimated as follows:—

1. *Foundations of Houses.*—Each house that is built requires the ground to be excavated from two to three yards deep, the average area of each being about nine yards square. This gives between 160 and 200 cubic yards of earth removed from the foundation of each house. A cubic yard of earth is a load, so that there are between 160 and 200 loads of earth displaced in the building of every new house.

The following statement shows—

THE NUMBER OF HOUSES BUILT THROUGHOUT LONDON BETWEEN 1841 AND 1851.

	Total No. of Houses built in 10 Years.	Average No. of Houses built per Year.
West Districts	9,624	962·4
North Districts	13,778	1377·8
Central Districts	349	34·9
East Districts	8,343	834·3
South Districts	14,807	1480·7
Total	46,901	4690·1

Hence, estimating the number of new houses built yearly in the metropolis at 4500, the total quantity of earth removed for the foundations of the buildings throughout London would be 800,000 loads per annum.

2. *The Cuttings of Railways.*—The railways formed within the area of the metropolis during the last ten years have been—the Great Northern; the Camden Town, and Bow; the West India Docks and Bow; and the North Kent Lines. The extension of the Southampton Railway from Vauxhall to Waterloo-bridge, as well as the Richmond Line, has also been formed within the same period, but for these no cuttings have been made.

The Railway Cuttings made within the area of the Metropolis Proper during the last ten years have been to the following extent:—

RAILWAYS.	Length of Cutting.	Width of Cutting.		Depth of Cutting.	Quantity of earth Removed.
		At top.	At bottom.		
	Miles.	Yards.	Yards.	Yards.	Loads.
Great Northern	1½	12	10	10	290,400
Camden Town and Bow	1½	12	10	10	290,400
West India Docks and Bow	2	15	10	12	528,000
North Kent	2	15	10	12	528,000

Hence, the gross quantity of earth removed from railway cuttings within the last ten years has been 1,636,800 loads, or say, in round numbers, 160,000 loads per annum.

* This is the Saxon *sceard*, which means a sheard, remnant, or fragment, and is from the verb *sceran*, signifyng both to shear and to share or divide. The low Dutch *schaard* is a piece of pot, a fragment.

3. *The Cutting of Roads and Streets.*—According to a Return presented to Parliament, there were 200 miles of new streets formed within the metropolitan police district between the years 1839-49; but in the formation of these no earth has been taken away; on the contrary a considerable quantity has been required for their construction. In the case of the lowering of Holborn-hill, that which was removed from the top was used to fill up the hollow.

4. *The Formation of Parks.*—The only park that has been constructed during the last ten years in the metropolis is Victoria Park, at the east end of the town; but I am informed that, in the course of the works there, no earth was carted away, the soil which was removed from one part being used for the levelling of another.

5. *Pipe and Sewer Works.*—The earth displaced in the course of these operations is usually put back into the ground whence it was taken, excepting in the formation of some new sewer, and then a certain proportion has to be carted away. Upon inquiry among those who are likely to be best informed, I am assured that 1000 loads may be taken as the quantity carted away in the course of the last year.

6. *Well-sinking.*—In this there has been but little done. Those who are best informed assure me that within the last ten years no such works of any magnitude have been executed.

The account as to the quantity of rubbish removed in London, then, stands thus :—

	Loads per Annum.
Refuse Earthen Materials.	
Potsherds and Pansherds . .	9,000
Old bricks, tiles, slates, mortar, &c. .	160,000
Oyster-shells	25,000
Refuse Earth.	
Foundations of houses . . .	800,000
Railway cuttings	160,000
Pipe and sewer laying . . .	1,000
	1,155,000

Thus, then, we perceive that the gross quantity of rubbish that has to be annually removed throughout the metropolis is upwards of 1,000,000 loads per annum.

Now what is done with the vast amount of refuse matter? Whither is it carried? How is it disposed of?

The rubbish from the house building or removing is of no value to the master carter, and is shot gratuitously wherever there is the privilege of shooting it; this privilege, however, is very often usurped. Great quantities used to be shot in what were, until these last eight years, Bishop Bonner's Fields, but now Victoria Park. At the present time this sort of rubbish is often slily deposited in localities generally known as "the ruins," being places from which houses, and indeed streets, have been removed, and the sites left bare and vacant.

But the main localities for the deposition of this kind of refuse are in the fields round about the metropolis. Each particular district appears to have its own special "shoot," as it is called, for rubbish, of which the following are the principal.

Rubbish shoots.

The rubbish of Kensington and Chelsea is shot in the Pottery Grounds and Kensington-fields.

The rubbish of St. George's Hanover-square, Marylebone, and Paddington, is shot in the fields about Notting-hill and Kilburn.

The rubbish of Westminster, Strand, Holborn, St. Martin's, St. Giles's, St. James's, Westminster, West London, and Southwark, is shot in Cubitt's fields at Millbank and Westminster improvements.

The rubbish of Hampstead is shot in the fields at back of Haverstock-hill.

The rubbish of Saint Pancras is shot in the Copenhagen-fields.

The rubbish of Islington, Clerkenwell, and St. Luke's, is shot in the Eagle Wharf-road and Shepherdess-fields.

The rubbish of East London and City is shot in the Haggerstone-fields.

The rubbish of Whitechapel, St. George's in the East, and Stepney, is shot in Stepney fields.

The rubbish of Hackney, Bethnal-green, and Shoreditch, is shot in the Bonkers-pond, Hackney-road.

The rubbish of Poplar is shot in the fields at back of New Town, Poplar.

The rubbish of Bermondsey is shot in the Bermondsey fields.

The rubbish of Newington, Camberwell, and Lambeth, is shot in Walworth-common and Kennington-fields.

The rubbish of Wandsworth is shot in Pottershole, Wandsworth-common.

The rubbish of Greenwich and Lewisham is shot in Russia-common, near Lewisham.

The rubbish of Rotherhithe is used for ballast.

The quantity of rubbish annually shot in each of the above-mentioned localities appears to range from 5000 up to as high as 30,000 and 40,000 loads.

Of the earth removed in forming the foundation of new houses, between one-fourth and one-sixth of the whole is used to make the gardens at the back, and the bed of the roads in front of them, while the entire quantity of the soil displaced in the execution of the "cuttings" of railways is carted away in the trucks of the company to form embankments in other places. Hence there would appear to be about from 160,000 to 200,000 loads of refuse bricks, potsherds, pansherds, and oyster-shells, and about 600,000 loads of refuse earth deposited every year in the fields or "shoots" in the vicinity of the metropolis.

The refuse earth displaced in forming the foundations of houses is generally carted away by the builders' men, so that it is principally the refuse bricks, &c., that the rubbish-carters are engaged in removing; these they usually carry to the shoots already indicated, or to such other localities where the hard core may be needed for forming the foundation of roads, or the rubbish be required for certain other purposes.

The principal *use to which the "rubbish" is put*



GARRET-MASTER; OR CHEAP FURNITURE MAKER.

[*From a Sketch.*]

is for levelling, when the hollow part of any newly-made road has to be filled up, or garden or lawn ground has to be levelled for a new mansion. Rubbish, at one time, was in demand for the ballasting of small coasting vessels. For such ballasting 2*d.* a ton has to be paid to the corporation of the Trinity House. This rubbish has been used, but sometimes surreptitiously, for ballast, unmixed with other things. It is, however, light and inferior ballast, and occupies more space than the gravel ballast from the bed of the Thames.

Suppose that a collier requires ballast to the extent of 60 tons; if house rubbish be used it will occupy the hold to a greater height by about 10 inches than would the ballast derived from the bed of the Thames. The Thames ballast is supplied at 1*s.* a ton; the rubbish-ballast, however, was only 3*d.* to 6*d.* a ton, but now it is seldom used unless to mix with manure, which might be considered too wet and soft, and likely to ferment on the voyage to a degree unpleasant even to the mariners used to such freights. The rubbish, I am told, checks the fermentation, and gives consistency to the manure.

I am assured by a tradesman, who ships a considerable quantity of stable manure collected from the different mews of the metropolis, that comparatively little rubbish is now used for ballast (unless in the way I have stated); even for mixing, but a few tons a week are required up and down the river, and perhaps a small quantity from the wharfs on the several canals. Nothing was ever paid for the use of this rubbish as ballast, the carters being well satisfied to have the privilege of shooting it. Two of the principal shoots by the river side were at Bell-wharf, Shadwell, and off Wapping-street. The rubbish of Rotherhithe, it will be seen, is mainly "shot" as ballast.

The "*hard-core*" is readily got rid of; sometimes it is shot gratuitously (or merely with a small gratuity for beer to the men); but if it have to be carted three or four miles, it is from 2*s.* 6*d.* to 3*s.* a load. This is used for the foundations of houses, the groundwork of roads, and other purposes where a hard substratum is required. The hard-core on a new road is usually about nine inches deep. There are on an average 20 miles of streets, 15 yards wide, formed annually in London. Hence there would be upwards of 160,000 loads of hard-core required for this purpose alone. Where the soil is of a gravelly nature, but little hard rubbish is needed. Oyster-shells *did* form a much greater portion than they do now of the hard substratum of roads. Eight or nine years ago the costermongers could sell their oyster-shells for 6*d.* a bushel. Now they cannot, or do not, sell them at all; and the law not only forbids their deposit in any place whatever, but forbids their being scattered in the streets, under a penalty of 5*l.* But as the same law provides no place where these shells may be deposited, the costermongers are in what one of them described to me as "a quandary." One man, who with his wife kept two stalls in Tottenham Court-road, one for fish (fresh and dried) and for shell-fish, and the other for fruit and vegetables, told me that he gave "one of those poor long-legged fellows who were neither men nor boys, and who were always starving and hanging about for a two-penny job, two-pence to carry away a hamper-full of shells and get rid of them as he best could. O, where he put them, sir," said the man, "I don't know, I wouldn't know; and I shouldn't have mentioned it to you, only I saw you last winter and know you're inquiring for an honest purpose."

Another costermonger who has a large barrow of oysters and mussels, and sometimes of "wet fish" near King's-cross, and at the junction of Leather-lane with Back-hill, Hatton-garden, was more communicative: "If you'll walk on with me, sir," he said, "*I'll* show you where they're shot. You may mention my name if you like, sir; I don't care a d—— for the crushers; not a blessed d——." He accordingly conducted me to a place which seemed adapted for the special purpose. At the foot of Saffron-hill and the adjacent streets runs the Fleet-ditch, now a branch of the common sewers; not covered over as in other parts, but open, noisome, and, as the dark water flows on, throwing up a sickening stench. The ditch is indifferently fenced, so that any one with a little precaution may throw what he pleases into it. "There, sir," said my companion, "there's the place where more oyster-shells is thrown than anywhere in London. They're thrown in in the dark." Assuredly the great share of blame is not to those who avail themselves of such places for illegal purposes, but to those who leave such filthy receptacles available. The scattered oyster-shells along all the approaches, on both sides, to this part of the open Fleet-ditch, evince the use that is made of it in violation of the law. Many of the costers, however, keep the shells by them till they amount to several bushels, and then give the rubbish-carters a few pence to dispose of them for them.

Some of the costermongers, again, obtain leave to deposit their oyster-shells in the dustmen's yards, where quantities may be seen whitening the dingy dust-heaps, and a large quantity are collected with the house-dust and ashes, together with the broken crockery from the dust-bins of the several houses. The oyster-shells are carted away with the pan-sherds, &c., for the purposes I have mentioned.

I now come to deal with the rubbish-carters, that is to say, with the labourers engaged in the removal of the "hard" species of refuse; of which we have seen there are between 160,000 and 200,000 loads annually carted away; the refuse earth, or "soft dirt," being generally removed by the builders' men, and the refuse, crockeryware, &c., by the dustmen, when collecting the dust from the "bins" of the several houses.

The master *Rubbish-Carters* are those who keep carts and horses to be hired for carting away the old materials when houses or walls are pulled down. They are also occasionally engaged in carrying away the soil or rubbish thrown up from the foundations of buildings; the excavations of docks, canals, and sewers; the digging

of artesian wells, &c. This seems to comprise what in this carrying or removing trade is accounted "rubbish."

Perhaps not one of these tradesmen is solely a rubbish-carter, for they are likewise the carters of new materials for the use of builders, such as lime, bricks, stone, gravel, slates, timber, iron-work, chimney-pieces, &c. Some of them are public carmen; licensed carmen if they work, or ply, in the City; but beyond the City boundaries no licence is necessary. This complication perplexes the inquiry, but I purpose to confine it, as much as possible, to the rubbish-carters proper, having defined what may be understood by "rubbish." These carters are also employed in digging, pick-axing, &c., at the buildings, the rubbish of which they are engaged to remove.

Among the conveyors of rubbish are no distinctions as to the kind. Any of them will one week cart old bricks from a house which has been pulled down, and the next week be busy in removing the soil excavated where the foundations and cellars of a new mansion have been dug.

From inquiries made in each of the different districts of the metropolis, there appear to be from 140 to 150 tradesmen who, with the carting of bricks, lime, and other building commodities, add also that of rubbish-carting. These "masters" among them find employment for 840 labouring men, some of whom I find to have been in the service of the same employer upwards of 20 years.

The Post-Office Directory, under the head of rubbish-carters, gives the names of only 35 of the principal masters, of whom several are marked as scavagers, dust-contractors, nightmen, and road-contractors. The occupation abstract of the census, on the other hand, totally ignores the existence of any such class of workmen, masters as well as operatives. I find, however, by actual visitation and inquiry in each of the metropolitan districts, and thus learning the names of the several masters as well as the number of men in their employment, that there may be said to be, in round numbers, 150 master rubbish-carters, employing among them 840 operatives throughout London.

A large proportion of this number of labouring men, however, are casual hands, who have been taken on when the trade was busy during the summer (which is the the "brisk season" of rubbish-cartage), and who are discharged in the slack time; during which period they obtain jobs at dust-carting or scavaging, or some such out-door employment. Among the employers there are scarcely any who are purely rubbish-carters, the large majority consisting of dust and road-contractors, carmen, dairymen, and persons who have two or three horses and carts at their disposal. When a master builder or bricklayer obtains a contract, he hires horses and carts to take away any rubbish which may previously have been deposited. The contract of the King's Cross Terminus of the Great Northern Railway, for instance, has been undertaken by Mr. W. Jay, the builder; and, not having sufficient conveyances to cart the rubbish away, he has hired horses and carts of others to assist in the removal of it. The same mode is adopted in other parts of the metropolis, where any improvements are going on. The owners of horses and carts let them out to hire at from 7*s.* for one horse, to 14*s.* for two per day. If, however, the job be unusually large, the master rubbish-carters often take it by contract themselves.

Although the *operative rubbish-carters* may be classed among unskilled labourers, they are, perhaps, less miscellaneous, as a body, than other classes of open-air workers. Before they can obtain work of the best description it is necessary that they should have some knowledge of the management of a horse in the drawing of a loaded carriage, or of the way in which the animal should be groomed and tended in the stable. I was told by an experienced carman, that he, or any one with far less than his experience, could in a moment detect, merely by the mode in which a man would put the harness on a horse and yoke him to the cart, whether he was likely to prove a master of his craft in that line or not. My informant had noticed, more especially many years ago, when labour was not so abundantly obtainable as it was last year, that men out of work would offer him their services as carmen even if they had never handled a whip in their lives, as if little more were wanted than to walk by the horse's side. An experienced carter knows how to ease and direct the animal when heavily burdened, or when the road is rugged; and I am assured by the same informant, that he had known one of his horses more fatigued after traversing a dozen miles with a "yokel" (as he called him), or an incompetent man, than the animal had been after a fifteen miles' journey with the same load under the care of a careful and judicious driver. This knowledge of the management of a horse is most essential when men are employed to work "single-handed," or have confided to them singly a horse and cart; when they work in gangs it is not insisted upon, except as regards the "carman," or the man having charge of the horse or the team.

The master rubbish-carters generally are more particular than they used to be as to the men to whom they commit the care of their horses. It may be easy enough to learn to drive a horse and cart, but a casual labourer will now hardly get employment in rubbish-carting of a "good sort" unless he has attained that preliminary knowledge. The foreman of one of the principal contractors said to me, "It would never do to let a man learn his business by practising on our horses." I mention this to show, that although rubbish-carting is to be classed among unskilled labours, *some* training is necessary.

I am informed that one-third of the working rubbish-carters have been rubbish-carters from their youth, or cart, car, or waggon-drivers, for they all seem to have known changes; or they have been used to the care of horses in the capacity of ostlers, stable-men, helpers, coaching-inn porters, coachmen, grooms, and horse-breakers. Of the remainder, one-half, I am informed, have "had a turn" at such avocations as scavagery, bricklayers' labouring, dock work, railway excavating, night work, and the many toils to which such men resort in their struggles to obtain bread, whatever may have been their original occupation, which is rarely that of an artizan. The other, and what may be called the greater half of the remaining number, is composed of agricultural labourers who were rubbish-carters in the country, and of the many men who have had the care of horses and vehicles in the provinces, and who have sought the metropolis, depending upon their thews and sinews for a livelihood, as porters, or carmen, or labourers in almost any capacity. The most of these men at the plough, the harrow, the manure-cart, the hay and corn harvests, have been practised carters and horse drivers before they sought the expected gold in the streets of London. Full a third of the whole body of rubbish-carters are Irishmen, who in Ireland were small farmers, or cottiers, or agricultural labourers, or belonged to some of the classes I have described.

The mechanics among rubbish-carters I heard estimated, by men with equal means of information, as one in twenty and one in fifteen. Among these *quondam* mechanics were more farriers, cart and wheel wrights, than of other classes.

It seems to be regarded as an indispensable thing that working rubbish-carters should have one quality—bodily strength. I am told that one employer, who died a few weeks ago, used to say to any applicant for work, "It 's no use asking for it, if you wish to keep it, unless you can lift a horse up when he 's down."

As I have shown of the scavagers, &c., the employers in rubbish-carting may be classed as "honourable" and "scurfs." The men do not use the word "honourable," nor any equivalent term, but speak of their masters, though with no great distinctiveness, as being either "good," or "scurfs." As in other branches of unskilled labour where there are no trade societies or general trade regulations among the operatives, there are few distinctive appellations.

From the facts I have collected in connection with this trade, it would appear that there are 180 master rubbish-carters in the metropolis, about 140 of whom pay 18*s.* or more per week as wages, while the remaining 40 pay less than that amount. The latter constitute what the men term the scurf portion of the trade; so that the honourable masters among the rubbish-carters may be said to comprise seven-ninths of the whole.

I will first treat of the circumstances, characteristics, and wages of the men employed in the honourable trade.

And first, as regards *the division of labour* among the operative rubbish-carters, the work is as simple as possible.

There are—

1. *The Rubbish-Carters* proper, or "carmen," who are engaged principally in conveying the refuse brick or earth to the several shoots.

2. *The Rubbish-Shovellers*, or "gangers," who are engaged principally in filling the cart with the rubbish to be removed. Generally speaking, the two offices are performed by the same individual, who is both carter and shoveller, and it is only in large works that the gangers are employed.

Master builders and others who require the aid of rubbish-carters for the removal of earth or any other kind of rubbish from ground about to be built upon, or from old buildings about to be repaired or pulled down, either hire horses, carts, and carmen, by the day, of the master rubbish-carters, or pay a certain price per load for the removal of the rubbish. If the job be likely to last some length of time, the builders pay the masters so much per load for carting away the rubbish; but if the job be only for a short period, the horses, carts, and carmen are hired of the masters for the time. The price paid to the master rubbish-carter ranges from 2*s.* 6*d.* to 3*s.* 6*d.* per load for the removal of rubbish and bringing back such bricks, lime, or sand as may be required for the building. The master rubbish-carter, in all cases, pays the men engaged in the removal of the rubbish.

The operative rubbish-carters (except in a very few instances) never work in gangs, either in the construction of new buildings or in old buildings about to be pulled down or repaired. In digging the foundations of new houses, the master builders, or speculators, building upon their own ground employ their own excavators, and engage rubbish-carters to remove the refuse earth, the latter being merely occupied in carting it away.

The principle of simple co-operation or gang-work occasionally prevails; and, when this is the case, the gang is employed in shovelling and picking, while the carman, as the shovellers throw out the rubbish, fills or shovels the rubbish into the cart.

Each rubbish-carter will, on an average, convey away from two to five loads a day, according to the distance he has to take it. Calculating 850 men to remove four loads per diem for five months in a year, the gross quantity of rubbish annually removed would be very nearly 326,000 loads.

In the regular trade *the hours of daily labour* are twelve, or from six to six; but the men are allowed half an hour for breakfast, an hour for dinner, and half an hour for tea, and almost invariably leave at half-past five, so postponing the "tea" half-hour until after the termination of their work. In winter the hours are generally "between the lights," but on very short, dark, or foggy days, lanterns are used. The men employed by one firm "often made up," I was told by one of them, "for lost time, by shovelling by moonlight." The carman, however, has to get to his stable in the summer at four o'clock in the morning, and to tend his horse after he has done work at night; so that the usual hours of labour with him are fifteen and sixteen per day, as well as Sunday-work.

The rubbish-carters are *paid by the week*, 18*s.* to 20*s.* being the weekly amount; and by *the load*, which is indeed piece-work. The payment to the

TABLE SHOWING THE NUMBER OF OPERATIVE RUBBISH-CARTERS EMPLOYED THROUGHOUT LONDON, THE WAGES RECEIVED BY THEM, THE NUMBER OF WEEKS THEY ARE EMPLOYED, AS WELL AS THE QUANTITY OF RUBBISH REMOVED BY THEM IN THE COURSE OF THE YEAR.

Master Rubbish Carters.		No. of Operative Rubbish-Carters.	No. of Shovellers working in Gangs.	Quantity of Rubbish carted Daily.	Quantity of Rubbish carted Annually.	No. of days in the week each Operative is employed at Rubbish-Carting.	No. of weeks during the year each Operative is engaged in Removing Rubbish.	Weekly Wages of Rubbish-Carters.	Weekly Wages of the Operatives working in Gangs at Rubbish-Carting.
				lds.	loads.			s.	s.
Kensington.	Mr. J. Bird	5	..	15	2340	6	26	18	..
	— Hough	3	..	9	1404	6	26	18	..
	— Dubbins	3	..	9	1404	6	26	18	..
	— Taylor	3	..	12	1872	6	26	18	..
	— Gale	3	..	12	1872	6	26	18	..
	— G. Bird	10	..	20	3120	6	26	18	..
Chelsea.	— Nicholls	10	..	20	3120	6	26	18	..
	— Emmerson	5	..	15	2340	6	26	18	..
	— Freeman	5	..	15	2340	6	26	18	..
	— Pattison	2	..	6	936	6	26	18	..
	— Porter	6	..	18	2808	6	26	18	..
St. George's, Hanover	— Rawlins	4	..	16	1248	6	13	18	..
	— Wells	2	..	8	624	6	13	18	..
	— Watkins	5	..	15	1170	6	13	18	..
	— Liddiard	5	..	15	1170	6	13	18	..
Westminster.	— Farmer	4	..	16	1920	6	20	18	..
	— Bugbee	6	4	30	2340	6	13	18	18
	— Reddin	6	4	30	2340	6	13	18	18
	— Francis	5	..	20	3120	6	26	18	..
Westminster Improvements.	— Chadwick	3	..	15	2340	6	26	18	..
	— Francis	5	..	20	3120	6	26	18	..
	— Farmer	5	..	20	3120	6	26	18	..
	— Duggan	8	..	40	6240	6	26	18	..
St. Martin's.	— T. Cooper	3	3	21	1872	6	13	18	20
	— Wall	2	2	16	1248	6	13	18	20
	— Duggan	4	..	16	1248	6	13	18	..
St. James's, Westminster.	— Nicolls	5	..	20	1560	6	13	18	..
	— Wells	2	..	8	624	6	13	18	..
	— Watkins	5	..	15	810	6	9	18	..
Marylebone.	— Freeman	3	..	12	2808	6	39	13	..
	— Curmock	4	..	16	2496	6	26	18	..
	— Nicolls	8	..	24	1872	6	26	18	..
	— Watkins	10	..	40	4160	6	26	18	..
	— Perkins	5	..	20	3120	6	26	18	..
	— Culverwell	5	..	20	3120	6	26	18	..
West London.	Mr. Rutty	3	..	12	360	5	6	18	..
	— Kitchener	3	..	15	360	6	4	18	..
	— Wickham	3	..	12	240	5	4	18	..
	— Porter	4	..	16	864	6	9	18	..
West London Improvements.	— Crook	3	..	6	468	6	13	13	..
	— M'Carthy	6	..	30	4680	6	26	20	..
	— Reddin	5	..	25	3900	6	26	18	..
	— Rooke	6	..	30	4680	6	26	18	..
	— Bugbee	5	..	25	3900	6	26	13	..
	— Chadwick	5	..	25	3900	6	26	18	..
London City.	— Bateman	3	..	12	288	6	4	18	..
	— Tame	4	..	12	216	6	3	18	..
	— Walker	2	..	8	144	6	3	18	..
	— Harmadu	3	..	9	216	6	4	18	..
	— Bindy	1	..	6	72	3	4	18	..
London City Improvements.	— Duggan	10	..	50	7800	6	26	18	..
	— Bugbee	20	..	100	15600	6	26	18	..
	— Gould	10	..	50	7800	6	26	18	..
Shoreditch.	— Booth	5	..	20	360	3	6	18	..
	— Styles	2	..	8	96	3	4	18	..
	— Wood	5	..	20	780	3	13	18	..
	— Gould	5	..	20	1560	6	13	18	..
Bethnal Green.	— Calvert	2	..	8	240	3	10	15	..
	— Newman	2	..	6	234	3	13	16	..
	— Rooke	4	..	16	624	3	13	18	..
	— Tilley	3	..	12	936	6	13	18	..
Whitechapel.	— Newman	3	..	9	216	3	8	16	..
	— Tomkins	2	..	6	234	3	13	18	..
	— Abbott	2	..	6	90	3	5	18	..
St. George's in the East.	— Clarke	6	..	18	360	4	5	16	..
	— Calvert	4	..	16	192	3	4	15	..
	— Newman	3	..	12	216	3	6	16	..
	— Tomkins	2	..	6	108	3	6	18	..
Stepney.	— Abbott	6	..	18	432	3	8	18	..
	— Newman	4	..	16	288	3	6	18	..
	— Potter	3	..	12	180	3	5	16	..
	— Church	4	..	12	216	3	6	15	..
Paddington.	Mr. Curmock	3	..	12	936	6	13	18	..
	— Tame	6	..	18	432	3	8	18	..
	— Humphries	6	..	18	702	3	13	16	..
	— Nicolls	3	..	12	263	3	13	18	..
Hampstead.	— Seal & Jackson	2	..	6	936	6	26	20	..
	— Kirtland	1	..	3	468	6	26	20	..
	— Hingston	1	..	3	117	3	13	20	..
	— Batterbury	1	..	3	117	3	13	20	..
St. Pancras.	— Smith	2	..	8	384	4	12	18	..
	— Perkins	8	..	24	1872	6	13	18	..
	— Reddin	6	..	24	2304	6	16	18	..
	— Jay	6	..	24	2304	6	16	18	..
	— M. Rose	3	..	12	468	3	13	18	..
Islington.	— Eldred	4	..	20	1920	6	16	16	..
	— Croot	3	..	12	936	6	13	16	..
	— Speller	2	..	8	288	6	6	16	..
	— J. Rose	5	..	20	1560	6	13	16	..
Hackney.	— Piper	3	..	9	702	6	13	13	..
	— Rumball	6	..	18	2808	6	26	18	..
	— Booth	5	..	15	1170	6	13	18	..
St. Giles's.	— Duggan	3	..	12	936	6	13	16	..
	— Freeman	4	..	16	624	3	13	18	..
	— Bugbee	2	..	8	768	6	16	18	..
	— Wall	2	..	8	288	6	6	19	..
	— Mildwater	2	..	6	180	6	5	18	..
St. Giles's Improvements.	— Reddin	10	..	50	3900	6	13	18	..
	— Bugbee	10	..	50	3900	6	13	18	..
	— North	3	..	12	432	6	6	18	..
	— Nicolls	5	..	20	1560	6	13	18	..
Strand.	— Piper	4	..	16	384	6	4	18	..
	— Reddin	5	..	20	480	6	4	18	..
	— Ellis	3	..	12	180	3	5	18	..
	— Cooper	3	..	12	108	3	3	18	..
Holborn.	— Lovell	2	..	8	312	3	13	18	..
	— M'Carthy	6	..	24	1872	6	13	18	..
	— Wells	3	..	12	468	3	13	18	..
	— Ellis	3	..	12	324	3	9	18	..
Holborn and New Oxford-street Improvements.	— Reddin	20	..	80	6240	6	13	18	..
	— Bugbee	10	..	40	3120	6	13	18	..
	— Nicolls	5	..	20	480	3	8	18	..
	— Ellis	6	..	24	936	3	13	16	..
	— T. Brown	3	..	12	624	4	13	18	..
Clerkenwell.	— Wood	4	..	16	576	6	6	18	..
	— Johnstone	3	..	15	360	6	4	17	..
	— Clarkson	6	..	24	432	6	3	16	..
	— North	3	..	12	144	3	4	18	..
	— J. Brown	2	..	6	180	6	5	18	..
St. Luke's.	— Rhodes	5	..	20	500	5	5	18	..
	— Wood	5	..	20	360	3	6	18	..
	— Dodd	5	..	20	1200	6	10	16	..
	— Gould	10	..	30	2340	6	13	18	..
EastLondon.	— Pratt & Sewell	3	..	9	351	3	13	18	..
	— Tomkins	2	..	6	234	3	13	18	..
	— Crook	2	..	6	234	3	13	18	..
	— Abbott	2	..	8	384	6	8		..
Poplar.	Mr. Pine	3	..	12	324	3	9	18	..
	— Monk	3	..	12	720	5	13	18	..
	— Tingey	2	..	8	240	3	10	18	..
	— Gabriel	4	..	16	624	3	13	18	..
	— Jones	3	..	12	192	4	4	18	..
St. George's,	— Reddin	10	..	40	3120	6	13	18	..
	— G. Whitten	2	..	10	780	6	13	18	..
St. Olave's,	— Webbon	3	..	12	936	6	13	18	..
	— Reddin	10	..	40	3120	6	13	18	..
St. Saviour's, Southwark.	— Bugbee	2	..	6	72	3	4	18	..
	— Ryder	2	..	6	72	3	4	18	..
	— Wright	1	..	3	36	3	4	18	..
Bermondsey.	— Peake	5	..	20	3120	6	26	18	..
	— Duckett	12	..	36	5616	6	26	18	..
	— Elworthy	8	..	24	3744	6	26	18	..
	— Slee	5	..	20	3120	6	26	18	..
	— Adams	4	2	20	4680	6	39	18	18
Newington.	— Gutteris	3	..	9	270	6	5	18	..
	— Crawley	2	..	8	256	4	8	18	..
	— Martainbody	6	.	24	960	4	10	18	..
Wandsworth.	— Nicholson	5	..	15	1170	6	13	17	..
	— Mears	3	..	6	468	6	13	17	..
	— Parsons	4	..	16	864	6	9	17	..
	— Easton	3	..	15	720	6	8	17	..
Lambeth.	— J. Whitton	10	..	40	2080	4	13	19	..
	— G. Whitton	8	..	24	1248	4	13	19	..
	— Kenning	2	..	10	390	3	13	18	..
Camberwell.	— Hook	6	..	18	540	3	10	18	..
	— Michel	2	..	8	384	6	8	18	..
	— Marsland	2	..	8	128	4	4	18	..
	— Walton	2	..	6	144	4	6	18	..
	— Evans	1	..	3	90	6	5	18	..
Rotherhithe.	— Walker	10	..	30	3240	6	18	15	..
	— Brown	8	..	24	936	3	13	18	..
	— Hobman	12	..	36	1404	3	13	13	..
	— East	6	..	18	702	3	13	18	..
	— Stevens	5	..	20	1560	6	13	15	..
Greenwich.	— Jeffry	2	..	10	600	6	10	15	..
	— Turtle	5	..	15	720	6	8	14	..
	— Hiscock	2	..	6	432	6	12	17	..
	— Allen	2	..	10	780	6	13	12	..
Woolwich.	— Connall	5	..	10	1560	6	26	16	..
	— Waller	3	..	6	468	6	13	15	..
	— Miller	6	..	12	936	6	13	15	..
	— Fuller	8	..	16	960	6	10	15	..
	— Barnes	4	..	12	648	6	9	15	..
	— Sharpe	12	..	36	1404	3	13	15	..
	— Taylor	8	..	24	2616	6	14	15	..
	— Ginno	5	..	20	780	3	13	15	..
	— Millard	4	..	10	390	3	13	15	..
	— Graham	3	..	9	270	3	10	15	..
Lewisham.	— Peakes	5	..	15	810	6	9	15	..
	— Wellard	3	..	12	936	6	13	15	..
	— Fleckell	6	..	18	1404	6	13	15	..
	— Hollis	4	..	12	288	3	8	15	..
	Total	640	15	3134	259031				

operatives by the load varies from 6*d.* to 1*s.* 6*d.*, for it is necessarily regulated by the distance to be traversed. If the rubbish have to be carted a mile to its destination—or, as the men call it, to "the shoot"—of course it is to be so conveyed at a proportionally lower rate than if it had to be driven two or three miles. The employment of men by the load, however, becomes less every year, and the reason, I am assured, is this:—The great stress of the labour falls upon the horse. If the animal be strong and manageable, a man, for the sake of conveying an extra load a day, might overtax its powers, injure it gradually, and deteriorate its strength and its value. The operative carters, on their part, have complained that sometimes even "good" employers have set them to work by the load with "hard old horses," which no management could get out of their slow, long-accustomed pace. Thus a man might clear by the piece-work but 1*s.* 6*d.* a day, with a horse not worth 15*l.*; while another carter, with a superior animal worth twice as much, might clear 3*s.* or 3*s.* 6*d.* Some "hard" masters, I was informed, liked these old horses, because they were bought cheap, and though they brought in less than superior animals they were easier kept; while if less were earned by the piece-work with such horses, less was paid in wages; and if the horse broke its leg, or was killed, or injured, it was more easily replaced. This mode of employment is, as I have said, less and less carried into effect; but it is still one of the ways in which a working carter may be made a sufferer, because a principal accessary of his work—the horse—may not be capable of the requisite exertion.

The nominal wages of the rubbish-carters in the best employ are from 18*s.* to 20*s.* a week; in the worse-paid trade 15*s.* is the more general price; but even as little as 12*s.* is given by some masters.

The actual wages are the same as the nominal in the honourable trade, with the addition of perquisites in beer to the men of from 1*s.* to 2*s.* weekly, and of "findings," especially to the carmen, of an amount I could not ascertain, but perhaps realizing 6*d.* a week. One carman put all he found on one side to buy new year's clothes for his children, and on new year's eve last year he had 48*s.* 0½*d.*, "money, and what brought money;" but this is far from an usual case.

The rate of wages paid to the operative rubbish-carters throughout the different districts of London, I find, by inquiries in each locality, to be by no means uniform. For instance, at Hampstead the wages are unexceptionally 20*s.* per week; while at Kensington, Chelsea, and indeed the whole of the west districts of London, they are 18*s.* weekly; in St. Martin's parish, however, 19*s.* a week is paid by two masters. In the north districts again, 18*s.* a week is generally paid; with the exception of Hampstead, where the weekly wages for the same labour are as high as 20*s.*, and Islington, where they are as low as 16*s.* In the central districts, too, the wages are generally 18*s.*; the lower rate of 17*s.* and 16*s.* per week being paid in certain places by "cutting" and "grasping" individuals, who form isolated exceptions to the rule. In a certain portion of the eastern districts, such as Bethnal Green, St. George's in the East, and Stepney, 16*s.* and 15*s.* a week appears to be the rule; while in Shoreditch and Poplar 18*s.* is paid by all the masters. The southern districts of the metropolis are equally irregular in their rates of wages. Lewisham pays as low as 15*s.*, and Woolwich the same weekly sum, with one exception. Wandsworth, on the other hand, pays uniformly 17*s.*; while in Southwark, Bermondsey, Newington, and Camberwell, the wages paid by all are 18*s.* In Lambeth as much as 19*s.* is given by two masters out of three; whereas, in Greenwich one master pays 14*s.*, and the other even as low as 12*s.* a week. When I come to treat of the lower-paid trade, I shall explain the causes of the above difference as regards wages.

The analysis of the facts I have collected on this subject is as follows:—Out of 180 masters, employing among them 840 men, there are—

			Wages per Week.
5 masters employing	11 men, and paying		20*s.*
5 „ „	30 „ „		19*s.*
127 „ „	605 „ „		18*s.*
6 „ „	20 „ „		17*s.*
16 „ „	70 „ „		16*s.*
19 „ „	97 „ „		15*s.*
1 „ „	5 „ „		14*s.*
1 „ „	2 „ „		12*s.*

Hence, three-fourths of the operatives may be said to receive 18*s.* weekly, and about one-sixth 16*s.*

The perquisites in this trade are more in beer than in money, nor are they derived from the employers, unless exceptionally. They are given to the rubbish-carters by the owners of the premises where they work, and may, in the best trade, amount, in beer or in money to buy beer, to from 1*s.* 6*d.* to 2*s.* weekly per man. The other perquisites are what is found in the digging of the rubbish for the carts, and in the shooting of it. As in other trades of a not dissimilar character, there appears to be no fixed rule as to "treasure trove." One man told me that in digging or shovelling each man kept what he found; another said the men drank it. Anything found, however, when the cart is emptied is the perquisite of the carman. "It's luck as is everything;" said one carman. "There was a mate of mine as hadn't not no better work nor me, once found an old silver coin, like a bad half-crown, as a gen'lman he knowed gave him five good shillings for, and he found a silver spoon as fetched 1*s.* 9*d.*, in one week, and that same week on the same ground *I* got nothing but five bad ha'pennies. I once worked in the City where the Sun office now is, just by the Hall of Commerce in Threadneedle-street, and something was found in the Hall as now is; it was a French church once; and an old gent gave us on the sly 1*s.* a day for beer, to show him or tell him of anything we

turned up queer. We did show him things as we thought queer, and they looked queer, but he allus said 'Chi-ish,' or 'da-amn.' From what I've heard him say to another old cove as sometimes was with him, they looked for something Roman Catholic." My informant no doubt meant "Roman," as in digging the foundations of the Hall of Commerce a tesselated Roman pavement was found at a great depth.

Among these workmen are *no Trade Societies, no Benefit or Sick-Clubs*, and, indeed, no measures whatever for the upholding of accustomed wages, or providing "for a rainy day," unless individually. If a rubbish-carter be sick, the men in the same employ, whatever their number, 10 or 40, contribute on the Saturday evenings 6*d.* each, towards his support, until the patient's convalescence. There are no Houses of Call.

The *payment is in the master's yard* on the Saturday evening, and always in money. There are no drawbacks, unless for any period during the hours of regular labour, when a man may have been absent from his work. Fines there are none, except in large establishments among the carmen where many horses are kept, and then, if a man do not keep his regular stable-hours in the mornings, especially the Sunday mornings, he is fined 6*d.* These fines are spent by the carmen generally, and most frequently in beer.

The *usual way of applying for work* is to call at the yards or premises, or, more frequently, to take a round in the districts where it is known that buildings or excavations are being carried on, to inquire of the men if a hand be wanted. Sometimes a foreman may be there who has authority to "put on" new hands; if not, the applicant, with the prospect of an engagement in view, calls upon any party he may be directed to. Several men told me that when they were engaged nothing was said about character. The employers seem to be much influenced by the applicant's appearance.

I must now give a brief description of the rubbish-carter, and the scene of his labours.

Any one who observes, and does not merely see, the labour of the rubbish-carter, will have been struck with the stolid indifference with which these men go about their work, however much the scene of their labours, from its historical associations, may interest the better informed. So it was when the rubbish carters were employed in removing the ruins of the old Houses of Parliament, and of that portion of the Tower which suffered from the ravages of the fire; and so it would be if they were directed to-morrow to commence the demolition and rubbish-carting of Westminster Abbey, the Temple Church, or St. Paul's, even in their present integrity.

Sometimes the scene of the rubbish-carter's industry presents what may be called a "piteous aspect." This was not long ago the case in Cannon-street, City, and the adjacent courts and alleys; when the houses had been cleared of their furniture, the windows were removed (giving the house what may be styled a "blind" look); most of the doors had been taken away, as well as some of the floors. Large cyphers, scrawled in whitewash on the walls and woodwork, intimated the different "lots," and all spoke of desertion; the only moving thing to be seen, perhaps, was some flapping paper, torn from the sides of a room and which fluttered in the wind.

A scene of exceeding bustle follows the apparent desolateness of the premises. When the whole has been disposed of to the several purchasers, the further and final work of demolition begins. Baskets filled with the old bricks are rapidly lowered by ropes and pulleys into the carts below, it being the carter's business to empty them, and then up the empty baskets are drawn, as if by a single jerk. The sound of the hammer used in removing and separating the old bricks of the building, the less frequent sound of the pick-axe, the rumble of the stones and bricks into the cart, the noise of the pulleys, the shouts of the men aloft, crying "be-low there!" the half-articulate exclamations of the carters choked with dust, form a curious medley of noises. The atmosphere is usually a cloud of dust, which sticks to the men's hair like powder. The premises are boarded round, and if adjoining a thoroughfare the boards are closely fitted, to prevent the curious and the loiterers obstructing the current of passengers. The work within is confined to the labourers; "no persons admitted except on business" seems a rule rigidly enforced. The only men inside who appear idle are the over-lookers, or surveyors. They stand with their hands in their breeches' pockets; and a stranger to the business might account them uninterested spectators, but for the directions they occasionally give, now quietly, and now snappishly; while the Irishmen show an excessive degree of activity, the assumption of which never deceives an overlooker.

From twelve to one is the customary dinner-hour, and then all is quiet. On visiting some new buildings at Maida-hill, I found seven men, out of about 30, all fast asleep in the nooks and corners of the piles of bricks and rubbish, the day being fine. The others were eating their dinners at the public-houses or at their own homes.

In the progress of pulling down, the work of removal goes on very rapidly where a strong force is employed—the number varying from about twelve to 30 men. A four-storied house is often pulled down to its basement, and the contents of the walls, floors, &c., removed, in ten days or a fortnight

As the work of demolition goes on, the rubbish carter loads the cart with the old bricks, mortar, and refuse which the labourers have displaced. In some places, where a number of buildings is being removed at the same time, an inclined plane or road is formed by the rubbish-carters, up and down which the horses and vehicles can proceed. Until such means of carriage have been employed, the rubbish from the interior foundation is often shot in a mound within the premises, and carried off when the way has been formed, excepting such portion as may be retained for any purpose.

In hot weather, many of the rubbish-carters in the fair trade work in their shirts, a broad woollen belt being strapped round the waist which, they

say, supports "the small of the back" in their frequent bending and stooping. Some wear woollen night-caps at this work when there is much dust; and nearly all the men in the honourable trade wear the "strong men's" half-boots, laced up in the front, as the best protectors of the feet from the intrusion of rubbish.

In the cold weather, the rubbish-carter's working dress is usually a suit of strong drab-white fustian. The suit comprises a jacket with two large pockets. The cost of such a suit, new, at a slop-tailor's, is from 28*s.* to 35*s.*; from a good shop, and of better materials, 40*s.* to 55*s.* Some prefer stout corduroy to fustian trowsers; and some work in short smock-frocks.

Having thus shown the nature of the work, the class of men employed, and the amount of remuneration, I proceed to describe the characteristics of the rubbish-carters employed by the honourable masters; I will then describe the state of the labourers who are *casually* rather than *constantly* employed; and finally speak of the condition and habits of the lower-paid workers under the cheap masters.

The Ability to Read and Write.—I think I heard of fewer instances of defective education among the rubbish-carters than among other classes of unskilled labourers. The number of men who could read and not write, I found computed at about one-half. It appears that the children of these men are very generally sent to school, which is certainly a healthful sign as to the desire of the parents to do justice to their offspring. As among other classes, I met with uneducated men who had exaggerated notions of the advantages of the capability of reading and writing, and men who possessed such capability representing it as a worthless acquirement.

The *majority of the Rubbish-Carters* in the honourable trade *are*, I am informed, *really married men*, and have families "born in lawful wedlock." One decent and intelligent man, to whom I was referred, said (his wife being present and confirming his statement): "I don't know how it is, sir, but they say one scabbed sheep will affect a flock." "Oh! it's dreadful," said the wife; "but some way it seems to run in places. Now, we've lived among people much in our own way of life in Clerkenwell, and Pentonville, and Paddington. Well, we've reason to believe, that there wasn't much living together unmarried in Clerkenwell or Pentonville, but a goodish deal in Paddington. I don't know why, for they seemed to live one with another, just as men do with their wives. But if there's daughters, sir, as is growing up and gets to know it, as they're like enough to do, ain't it a bad example? Yes, indeed," said the wife, "and I'm told they call going together in that bad way—they ought all to be punished—without ever entering a church or chapel, getting 'ready married.'" I inquired if they were not perhaps married quietly at the Registrar's office? "O, that," said Mrs. B——, "ain't like being married at all. *I* would never have consented to such a way, but I'm pretty certain they don't as much as do that. No, sir." (in answer to another inquiry), "I hope, and think, it ain't so bad among young couples as it was, but its bad enough as it is, God he knows." The proportions of Wedlock and Concubinage I could not learn, for the woman, I was assured, always took the man's name; and both man and woman, unless in their cups or their quarrels, declared they were man and wife, only there was no good in wasting money to get their "marriage lines" all for no use.

The Politics of the rubbish-carters are, I am assured by some of the best informed among them, of no fixity, or principle, or inclination whatever, as regards one-half of the entire body; and that the other half, whether ignorant or not, are Chartists, the Irish generally excepted; and they, I understood, as I had learned on previous occasions, had no political opinions, unless such as were entertained by their priests. Strong, rude, and ignorant as many of these carters are, I am told that few of them took part in any public manifestation of opinion, or in any disturbance, unless they were out of work. "I think I know them well," one of their body said to me, "and as long as they have pretty middling of work, it'll take a very great thing indeed to move 'em. If they was longish out of work and felt a pinch, very likely they'd be found ready for anything."

With respect to Free Trade, I am told that these men sometimes discuss it, and formerly discussed it far more frequently among themselves, but that it was not above one in a dozen, and of the better sort only, who cared to talk about it either now or then. There seems no doubt that the majority, whether they understand its principles and working or not, are favourable to it; I may say, from all I could learn, that the *great* majority are. I heard of one rubbish-carter, formerly a small farmer, who left London for some other employment, in the spring, contending, and taking pains to enforce his conviction, that Free Trade would ruin the best interests of rubbish-carters, as year by year there would be more agricultural labourers resorting to the great towns to look for such work as rubbish-carting, for every farmer would employ more Irish labourers at his own terms, and even the 8*s.* a week, the extent of the earnings of the agricultural labourers in some parishes, would be undersold by the Irish. Last winter, he said, very many countrymen came to London, and would do so the next, and more and more every year, and so make labour cheaper.

As far as I could extend my inquiries and observations, this man's arguments—although I cannot say I heard any one offer to controvert them—were not considered sound, nor his facts fully established. There were certainly great numbers of good hands out of employment last winter, and many new applicants for work; "but buildings," I was told by a carman, "are of course always slacker carried on in the winter. Now, this year, so far (beginning of October), things seem to promise pretty well in our business, and so if it's good this winter and was bad the last, why, as there's the same Free Trade, it seems as if it had nothing to do with it. There's not so much building going on now as there was a few years ago, but trade's steadier, I think."

Other rubbish-carters, in the best trade, said that they had found little difference for six or eight years, only as bread was cheaper or dearer; and, if Free Trade made bread cheap, no man ought to say a word against it, "no matter about anything else." Of course I give these opinions as they came to me.

As to Food, these labourers, when in full work, generally live what they consider *well*; that is, they eat meat and have beer to their meals every day. Three of them told me that they could not say what their living cost separately, as they took all their meals at home with their families, their wives laying out the money. One couple had six children, and the husband said they cost him about 17*s.* a week in food, or about 2*s.* 6*d.* per head, reckoning a pint of beer a day for himself, and not including the youngest, which was an infant at the breast. The father earned 22*s.* weekly, and the eldest child, a boy, 3*s.* 6*d.* a week for carrying out and collecting the papers for a news-agent. The wife could earn nothing, although an excellent washerwoman, the cares of her family occupying her whole time. She always had "the cold shivers," she said, "if ever she thought of John's being out of work, but he was a steady man, and had been pretty fortunate." If these men were engaged on a job at any distance, they sometimes breakfasted before starting, or carried bread and butter with them, and eat it to a pint of coffee if near enough to a coffee-shop, but in some places they were not near enough. Their dinners they carried with them, generally cold meat and bread, in a basin covered with a plate, a handkerchief being tied round it so as to keep the plate firm and afford a hold to the bearer. "It's not always, you see, sir," said a rubbish-carter, "that there's a butcher's shop near enough to run to and buy a bit of steak and get it dressed at a tap-room fire, just for buying a pint of beer, and have a knife and fork, and a plate, and salt found you into the bargain, and pepper and mustard too, if you'll give the girl or the man 1*d.* a week or so. But we're glad to get a good cold dinner. O, as to beer, it would be a queer out-of-the-way place indeed where a landlord didn't send out a man to a building with beer." One single man, who told me he was only a small eater, gave me the following as his *daily* bill of fare, as he rarely took any meals at his lodgings:

	s.	*d.*
Half-quartern loaf	0	2¾
Butter	0	1
Coffee (twice a day)	0	3
Eleven o'clock beer, sometimes a pint and sometimes half-a-pint, but often obtained as a perquisite (average)	0	1½
½ lb. of beef steak, or a chop, or four or five pennyworth of cold meat from a cook-shop (average)	0	5
Potatoes	0	1
Dinner beer	0	2
Bread and cheese and beer for supper	0	4
	1	8½

This was the average cost of his daily food, while on Sundays he generally paid 1*s.* 6*d.* for breakfast and tea, and a good dinner off a hot joint with baked potatoes from the oven, along with the family and other lodgers. He had a good walk every Sunday morning, he said, but liked to sleep away the afternoon. He found his own Sunday beer, costing 4*d.* dinner and supper, but he didn't eat anything at supper, as he wasn't inclined after resting all day, and so his weekly expenses in food were:—

	s.	*d.*
Six working days, at 1*s.* 8¼*d.* a day	10	1½
Sunday	1	10
Week's food	11	11½

To this, in the way of drink or luxuries, I might add, the carter said, 2*d.* a day for gin (although he wasn't a drinker and was very seldom tipsy), "for I treat a friend to a quartern one day and may-be he stands treat the next." Also 4*d.* for Sunday gin, as he and the other men took a glass just before dinner for an appetite, and he took one after dinner to send him asleep. Add, too, 3*d.* a week for tobacco. In all 1*s.* 7*d.*, which swells the weekly cost of eating, drinking, and smoking to 13*s.* 6½*d.* His washing was 4*d.* a week (he washed his working jacket and trowsers himself), his rent 2*s.* 6*d.* for a bed to himself; so that, 16*s.* 4½*d.* being spent out of an earning of 18*s.*, he had but 1*s.* 5½*d.* a week left for his clothes, shoes, &c. If he wanted a shilling or two for anything, he said, he knocked off his supper, and then nothing was allowed in his reckoning for perquisites, so he might be 2*s.* in hand, at least 2*s.*, every week in a regular way of living. This man expressed his conviction that no man, who had to work hard, could live at smaller cost than he did. That numbers of men did so, he admitted, but he "couldn't make it out." The two ways of living which I have described may be taken as the modes prevalent among this class of labourers, who seek to live "comfortably." Others who "rough it" live at less cost, dining, for instance, off a pennyworth of pudding and half a pint of beer.

I ascertained that among the rubbish-carters, *those most frequently attendant on public worship are the Irish Roman Catholics*, and such Englishmen as had been agricultural labourers in rural parishes, and had been reared in the habit of church-going; a habit in which, but not without many exceptions, they still persevere. Among London-bred labourers such habits are rarely formed.

The abodes of the better description of rubbish-carters are not generally in those localities which are crowded with the poor. They reside in the streets off the Edgeware and Harrow-roads, as building has been carried on to a very great extent in Westbourne, Maida-hill, &c.; in Portland-town, Camden-town, Somers-town, about King's-cross; in Islington, Pentonville, and Clerkenwell; off the Commercial and Mile-end-roads; in Walworth, Camberwell, Kennington, and Newington; and, indeed, in all the quarters where building has been prosecuted on an extensive

scale. I was in some of their apartments, and found them tidy and comfortable-looking: one was especially so. Some stone-fruit on the mantel-shelf shone as if newly painted, and the fender and fire-irons glittered from their brightness to the fire of the small grate. The husband, however, was in good earnings, and the wife cleared about 5*s.* weekly on superior needlework. There was one thing painful to observe—the contrast between the robust and sun-burnt look of the husband, and the delicate and pallid, not to say sickly, appearance of the wife. The rents for unfurnished apartments vary from 2*s.* to 5*s.*, but rarely the latter, unless the wife take in a little washing. I heard of some at 2*s.*, but very few; 2*s.* 6*d.* to 3*s.* 6*d.* are common prices.

I heard of no partiality for amusements among the rubbish-carters, beyond what my informant spoke of—a visit to the play. Some, I was told, but principally the younger men, never missed going to a fair, which was not too far off. I think not quite one-half of those I spoke to, with the best earnings, had been to the Exhibition. Of the worst paid, I am told, not one in 50 went; one man told me that he had no amusements but his pipe and his beer. Some of them, I was assured, drank half a gallon of beer in a day, but at intervals, so as not to be intoxicated. "A hand at cribbage" is a favourite public-house game among a few of these men; but not above one in half-a-dozen, I was assured, "knew the cards," and not one in two dozen played them.

These, then, are the characteristics of the labouring rubbish-carters employed in the honourable trade.

A fine-looking man, upwards of six feet in stature and of proportionate bulk, with so smart a set to his bushy whiskers, and a look of such general tidiness (after he had left off work in the evening), that he might have been taken for a life-guardsman had it not been for a slight slouch of the shoulders, and a very unmilitary gait, gave me the following account:—

"I'm a London man," he said, "and though I'm not yet 25, I've kept myself for the last five years. I've worked at rubbish-carting and general ground-work (digging for pipe-laying, &c.,) as we nearly all do, but mainly at rubbish-carting, and I'm at that now. My friends are in the same line, so I helped them: I was big enough, and was brought up that way. O, yes, I can read and write, but I haven't time, or very seldom, to read anything but a newspaper now and again. I'm a carman now, and have a very good master. I've served him, more or less, for three years. I have had 25*s.* a week, and I have had 29*s.*, but that included over-work. Two hours extra work a day makes an extra day in the week, you see, sir. O, yes, I might have saved money, and I'm trying to save 25*l.* now to see if I can't raise a horse and cart, and begin for myself in a small way, general jobbing. I've been used to cart mould, and gravel, and turf for gentlemen's gardens, or when gardens have been laid out in new buildings, as well as rubbish, for the same master. Last year I set to work in hard earnest in the same way, and this is where it is that always stops me. Mr. —— [his employer] is very busy now, and things look pretty well about here [Camden-town], but I don't know how it is in other parts. It was the same last year, but trade fell off in the winter, and I was three months out of work. O, that's a common case, especial with young men, for of course the old hands has the preference. That's where it is, you see, sir; it's a *uncertain* trade. It's always that new shoes is wanted, but it ain't always new houses. My money all went, and then all my things went to the pawn, and when I got fairly to work again, I had a shirt and a shilling left, and owed some little matters. I'd saved well on to 50*s.*, and could have gone on saving, but for being thrown out. Then, when you get into regular wages again, there's your uncle to meet, and there's always something wanted—a pair of half-boots, or a new shirt, or a new tool, or something; so one loses heart about it, and I can't abear not to appear respectable.

"I pay 2*s.* a week for my lodging, but it's only for half a bed. The house is let out that way to single men like me, so each bed brings in 4*s.* a week. There's two beds in the room where I sleep; I don't know how many in all. Why, yes, it's a respectable sort of a place, but I don't much like it. There's plenty such places; some's decent and some's not. Oh, certainly, a place of your own's best, if it's ever so humble, but it wouldn't suit a man like me. I may work one week at Paddington, and the next at Bow, and if I had a furnished room at Paddington, what good would it be if I went to work at Bow? Only the bother and expense of removing my sticks again and again. O, people that find lodgings for such as me, know that well enough, and makes a prey of us, of course.

"I take my meals at a public-house or a coffee-shop. O yes, I live well enough. I have meat every day to dinner; a man like me must keep up his strength, and you can't do that without good meat. It's all nonsense about vegetables and all that, as if men's stomachs were like cows'. I have bread and butter and tea or coffee for breakfast and tea, sometimes a few cresses with it just to sweeten the blood, which is the proper use of vegetables. A pint of beer or so for supper, but I don't care about supper, though now and then I take a bit of bread and cheese with a nice fresh onion to it. Well, I'm sure I can't say what I lay out in my living in a week; sometimes more and sometimes less. I keep no account; I pay my way as I go on. Some weeks when I get my Saturday night's wage, I have from 2*s.* 6*d.* to 6*s.* 6*d.* left from last Saturday night's money, but that's only when I've had nothing to lay out beyond common. Now, last week I was 4*s.* 9*d.* to the good, and this week I shall be about the ditto; but then I want a waistcoat and a silk handkerchief for my neck for Sunday wear; so I must draw on my Saturday night. There's a gentleman takes care of my money for me, and I carry him what I have over in a week, and he takes care of it for me. I did a good deal of

work about his houses—he has a block of them—and his own place, and I've gardened for him; and from what I've heard, my money's safer with him than with a Savings' Bank. When I want to draw he likes to be satisfied what it's for, and he's lent me as much as 33*s.* in different sums, when I was hard up. He's what I call a real gentleman. He says if I ever go to him tipsy to draw, and says it quite solemn like, he'll take me by the scruff of the neck and kick me out; though [laughing] he can't be much above five foot, and has gray hairs, and seems a feeble sort of a man, I mean of a gentleman. He enters all I pay in a book. Here it is, sir, for this year, if you'd like to see it. I wasn't able to put anything by for a goodish bit. I lost my book once, but I knew how much, and so did Mr. ——, and he put it down in a lump.

		£	*s.*	*d.*
July 18 .	In hand . .	1	3	0
25 .	Received . .	0	3	6
Aug. 9 .	,, . .	0	3	6
23 .	,, . .	0	5	0
Sept. 13 .	,, . .	0	9	6
20 .	,, . .	0	4	0
27 .	,, . .	0	4	0
		£2	12	6

"If I can't save a little to start myself on when I'm a single man, I can't ever after, I fancy; so I'm a trying.

"No, my expenses, over and above my living and lodging and washing, and all that, ain't heavy. Yes, I'm very fond of a good play, very. Some galleries is 6*d.*, and some 3*d*; but then there's refreshment and that, so it costs 1*s.* a time. Perhaps I go once a week, but only in autumn and winter, when nights get long, and we leave work at half-past five. The last time I was at the play was at the Marylebone, but there was some opera pieces that don't suit me; such stuff and nonsense. I like something very lively, or else a deep tragedy. Sadler's Wells is the place, sir. I mean to go there to-morrow night. Yes, I'm very fond of the pantomimes. Concerts I've been at, but don't care for them. They're as dear at 2*d.* as an egg a penny, and an egg's only a bite.

"Well, I've gone to church sometimes, but a carman hasn't time, for he has his horses to attend to on Sunday mornings, and that uses up his morning. No, I never go now. Work must be done. It ain't my fault. I'm sure, if I could have my wish, I'd never do anything on a Sunday.

"Yes, there's far too many as undersells us in work. I know that, but I don't like to think about them or to talk about them." [He seemed desirous to ignore the very existence of the scurf rubbish-carters.] "They're Irish many of them. They're often quarrelsome and blood-thirsty, but I know many decent men among the Irishmen in our gangs. There's good and bad among them, as there is among the English. There's very few of the Irish that are carmen; they haven't been much used to horses.

"I have done a little as a nightman when I worked for Mr. ——. He was a parish contractor, and undertook such jobs, and liked to put strong men on to them. I didn't like it. I can't think it's a healthy trade. I can't say, but I heard it represented, that in this particular calling there was a great deal of under-contracting going on when the railway undertakings generally received a severe check, and when a great number of hands were thrown out of employment, and sought employment in rubbish-carting generally, and apart from railway-work. These hands suffered greatly for a long time. The tommy-shops and the middle-man system were enough to swallow the largest amount of railway wages, so that very few had saved money, and they were willing to work for very low wages. A good many of these people went to endeavour to find work at the large new docks being erected at Great Grimsby, near Boston, in Lincolnshire. Some of the more prudent were able to raise the means of emigrating, and from one cause or other the pressure of this surplus labour among rubbish-carters and excavators, as regards the metropolis, became relieved."

Of Casual Labour in General, and that of the Rubbish-Carters in Particular.

The subject of casual labour is one of such vast importance in connection with the welfare of a nation and its people, and one of which the causes as well as consequences seem to be so utterly ignored by economical writers and unheeded by the public, that I purpose here saying a few words upon the matter in general, with the view of enabling the reader the better to understand the difficulties that almost all unskilled and many skilled labourers have to contend with in this country.

By *casual* labour I mean such labour as can obtain only *occasional* as contradistinguished from *constant* employment. In this definition I include all classes of workers, literate and illiterate, skilled and unskilled, whose professions, trades, or callings expose them to be employed temporarily rather than continuously, and whose incomes are in a consequent degree fluctuating, casual, and uncertain.

In no country in the world is there such an extent, and at the same time such a diversity, of casual labour as in Great Britain. This is attributable to many causes—commercial and agricultural, natural and artificial, controllable and uncontrollable.

I will first show what are the causes of casual labour, and then point out its effects.

The causes of casual labour may be grouped under two heads:—

I. *The Brisk and Slack Seasons, and Fit Times,* or periodical increase and decrease of work in certain occupations.

II. *The Surplus Hands* appertaining to the different trades.

First, as to the briskness or slackness of employment in different occupations. This depends in different trades on different causes, among which may be enumerated—

A. The weather.

B. The seasons of the year.
C. The fashion of the day.
D. Commerce and accidents.

I shall deal with each of these causes *seriatim*.

A. The labour of thousands is influenced by the *weather;* it is suspended or prevented in many instances by stormy or rainy weather; and in some few instances it is promoted by such a state of things.

Among those whose labour cannot be executed on *wet days*, or executed but imperfectly, and who are consequently deprived of their ordinary means of living on such days, are—paviours, pipe-layers, bricklayers, painters of the exteriors of houses, slaters, fishermen, watermen (plying with their boats for hire), the crews of the river steamers, a large body of agricultural labourers (such as hedgers, ditchers, mowers, reapers, ploughmen, thatchers, and gardeners), costermongers and all classes of street-sellers (to a great degree), street-performers, and showmen.

With regard to the degree in which agricultural (or indeed in this instance woodland) labour may be influenced by the weather, I may state that a few years back there had been a fall of oaks on an estate belonging to Col. Cradock, near Greta-bridge, and the poor people, old men and women, in the neighbourhood, were selected to strip off the bark for the tanners, under the direction of a person appointed by the proprietor: for this work they were paid by the basket-load. The trees lay in an open and exposed situation, and the rain was so incessant that the "barkers" could scarcely do any work for the whole of the first week, but kept waiting under the nearest shelter in the hopes that it would "clear up." In the first week of this employment nearly one-third of the poor persons, who had commenced their work with eagerness, had to apply for some temporary parochial relief. A rather curious instance this, of a parish suffering from the casualty of a very humble labour, and actually from the attempt of the poor to earn money, and do work prepared for them.

On the other hand, some few classes may be said to be benefited by the rain which is impoverishing others: these are cabmen (who are the busiest on *showery* days), scavagers, umbrella-makers, clog and patten-makers. I was told by the omnibus people that their vehicles filled better in hot than in wet weather.

But the labour of thousands is influenced also by the *wind;* an easterly wind prevailing for a few days will throw out of employment 20,000 dock labourers and others who are dependent on the shipping for their employment; such as lumpers, corn-porters, timber-porters, ship-builders, sail-makers, lightermen, watermen, and, indeed, almost all those who are known as 'long-shoremen. The same state of things prevails at Hull, Bristol, Liverpool, and all our large ports.

Frost, again, is equally inimical to some labourers' interests; the frozen-out market-gardeners are familiar to almost every one, and indeed all those who are engaged upon the land may be said to be deprived of work by severely cold weather.

In the weather alone, then, we find a means of starving thousands of our people. Rain, wind, and frost are many a labourer's natural enemies, and to those who are fully aware of the influence of "the elements" upon the living and comforts of hundreds of their fellow-creatures, the changes of weather are frequently watched with a terrible interest. I am convinced that, altogether, a wet day deprives not less than 100,000, and probably nearer 200,000 people, including builders, bricklayers, and agricultural labourers, of their ordinary means of subsistence, and drives the same number to the public-houses and beer-shops (on this part of the subject I have collected some curious facts); thus not only decreasing their income, but positively increasing their expenditure, and that, perhaps, in the worst of ways.

Nor can there be fewer dependent on the winds for their bread. If we think of the vast number employed either directly or indirectly at the various ports of this country, and then remember that at each of these places the prevalence of a particular wind must prevent the ordinary arrival of shipping, and so require the employment of fewer hands; we shall have some idea of the enormous multitude of men in this country who can be starved by "a nipping and an eager air." If in London alone there are 20,000 people deprived of food by the prevalence of an easterly wind (and I had the calculation from one of the principal officers of the St. Katherine Dock Company), surely it will not be too much to say that throughout the country there are not less than 50,000 people whose living is thus precariously dependent.

Altogether I am inclined to believe, that we shall not be over the truth if we assert there are between 100,000 and 200,000 individuals and their families, or half a million of people, dependent on the elements for their support in this country.

But this calculation refers to those classes only who are deprived of a certain number of *days'* work by an alteration of the weather, a cause that is essentially *ephemeral* in its character. The other series of natural events influencing the demand for labour in this country are of a more *continuous* nature—the stimulus and the depression enduring for weeks rather than days. I allude to the *second* of the four circumstances above-mentioned as inducing briskness or slackness of employment in different occupations, viz.:—

B. The seasons.

These are the seasons of the year, and not the arbitrary seasons of fashion, of which I shall speak next.

The following classes are among those exposed to the uncertainty of employment, and consequently of income, from the above cause, since it is only in particular seasons that particular works, such as buildings, will be undertaken, or that open-air pleasure excursions will be attempted: carpenters, builders, brickmakers, painters, plasterers, paper-hangers, rubbish-carters, sweeps, and riggers and lumpers, the latter depending mainly

on the arrival of the timber ships to the Thames (and this, owing to the ice in the Baltic Sea and in the river St. Lawrence, &c., takes place only at certain seasons of the year), coal-whippers and coal-porters (the coal trade being much brisker in winter), market-porters, and those employed in summer in steam-boat, railway, van, and barge excursions.

Then there are the casualties attending agricultural labour, for, although the operations of nature are regular "even as the seed time follows the harvest," there is, almost invariably, a smaller employment of labour after the completion of the haymaking, the sheep-shearing, and the grain-reaping labours.

For the hay and corn harvests it is well known that there is a periodical immigration of Irishmen and women, who clamour for the *casual* employment; others, again, leave the towns for the same purpose; the same result takes place also in the fruit and pea-picking season for the London green-markets; while in the winter such people return some to their own country, and some to form a large proportion of the casual class in the metropolis. A tall Irishman of about 34 or 35 (whom I had to see when treating of the religion of the street Irish) leaves his accustomed crossing-sweeping at all or most of the seasons I have mentioned, and returns to it for the winter at the end of October; while his wife and children are then so many units to add to the casualties of the street sale of apples, nuts, and onions, by overstocking the open-air markets.

The autumnal season of hop-picking is the grand rendezvous for the vagrancy of England and Ireland, the stream of London vagrancy flowing freely into Kent at that period, and afterwards flowing back with increased volume. Men, women, and children are attracted to the hop harvest. The season is over in less than a month, and then the casual labourers engaged in it (and they are nearly all casual labourers) must divert their industry, or their endeavours for a living, into other channels, swelling the amount of casualty in unskilled work or street-trade.

Numerically to estimate the influence of the seasons on the labour-market of this country is almost an overwhelming task. Let us try, however: there are in round numbers one million agricultural labourers in this country; saying that in the summer four labourers are employed for every three in the winter, there would be 250,000 people and their families, or say 1,000,000 of individuals, deprived of their ordinary subsistence in the winter time; this, of course, does not include those who come from Ireland to assist at the harvest-getting—how many these may be I have no means of ascertaining. Added to these there are the natural vagabonds, whom I have before estimated at another hundred thousand (see p. 408, vol. i.), and who generally help at the harvest work or the fruit or hop-picking.

Then there are the carpenters, who are 163,000 in number; the builders, 9200; the brickmakers, 18,000; the painters, 48,200; the coal-whippers, 9200; the coal-miners, 110,000; making altogether 350,000 people, and estimating that for every four hands employed in the brisk season, there are only three required in the slack, we have 80,000 more families, or 300,000 people, deprived of their living by the casualty of labour; so that if we assert that there are, at the least, including agricultural labourers, 1,250,000 people thus deprived of their usual means of living, we shall not be very wide of the truth.

The next cause of the briskness or slackness of different employments is—

C. Fashion.

The London fashionable season is also the parliamentary season, and is the "briskest" from about the end of February to the middle of July.

The workmen most affected by the aristocratic, popular, or general fashions, are—

Tailors, ladies' habit-makers, boot and shoe-makers, hatters, glovers, milliners, dress-makers, mantua-makers, drawn and straw bonnet-makers, artificial flower-makers, plumassiers, stay-makers, silk and velvet weavers, saddlers, harness-makers, coach-builders, cabmen, job-coachmen, farriers, livery stable keepers, poulterers, pastry-cooks, confectioners, &c., &c.

The above-mentioned classes may be taken, according to the Occupation Abstract of the last Census, at between 500,000 and 600,000; and, assuming the same ratio as to the difference of employment between the brisk and the slack seasons of the trades, or, in other words, that 25 per cent. less hands are required at the slack than at the brisk time of these trades, we have another 150,000 people, who, with their families, may be estimated altogether at say 500,000, who are thrown out of work at a certain season, and have to starve on as best they can for at least three months in the year.

The last-mentioned of the causes inducing briskness or slackness of employment are—

D. Commerce and Accidents.

Commerce has its periodical fits and starts. The publishers, for instance, have their season, generally from October to March, as people read more in winter than in summer; and this arrangement immediately effects the printers and book-binders; there is no change, however, as regards the newspapers and periodicals. Again, the early importation to this country of the new foreign fruits gives activity to the dock and wharf labourers and porters and carmen. Thus the arrival here, generally in autumn, of the nut, chestnut, and grape (raisin) produce of Spain; of the almond crops in Portugal, Spain, and Barbary; the date harvest in Morocco, and different parts of Africa; the orange gathering in Madeira, and in St. Michael's, Terceira, and other islands of the Azores; the fig harvest from the Levant; the plum harvest of the south of France; the currant picking of Zante, Ithaca, and other Ionian Islands;—all these events give an activity, as new fruit is always most saleable, to the traders in these southern productions; and more shopmen, shop-porters, wharf labourers, and assistant lightermen are required—casually required—for the time.

I was told by a grocer, with a country connec-

tion, and in a large way of business, that for three weeks or a month before Christmas he required the aid of four fresh hands, a shopman, an errand-boy, and two porters (one skilled in packing), for whom he had nothing to do after Christmas. If in the wide sweep of London trade there be 1000 persons, including the market salesmen, the retail butchers, the carriers, &c., so circumstanced, then 4000 men are *casually* employed, and for a very brief time.

The brief increase of the carrying business generally about Christmas, by road, water, or railway, is sufficiently indicated by the foregoing account.

The employment, again, in the cotton and woollen manufacturing districts may be said to depend for its briskness on commerce rather than on the seasons.

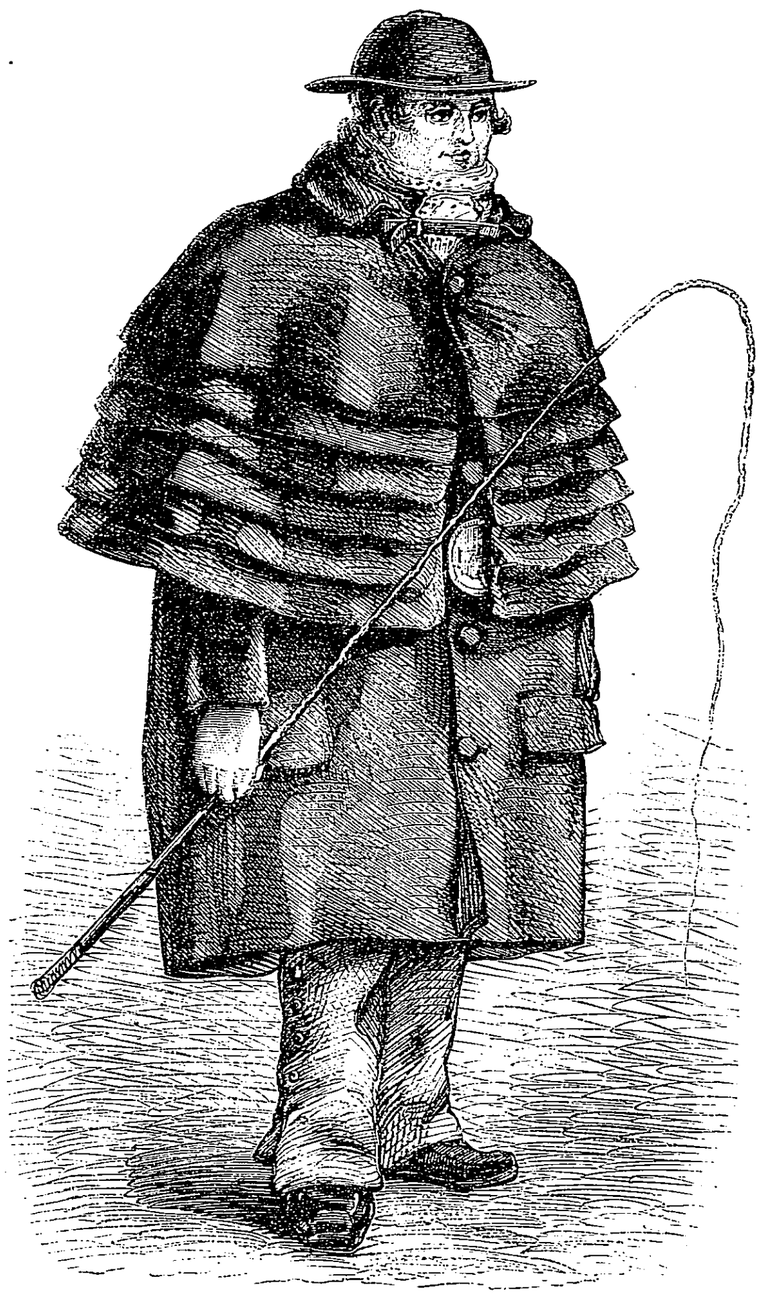
Accidents, or extraordinary social events, promote casual labour and then depress it. Often they depress without having promoted it.

During the display of the Great Exhibition, there were some thousands employed in the different capacities of police, packing, cleaning, porterage, watching, interpreting, door-keeping and money-taking, cab-regulating, &c.; and after the close of the Exhibition how many were retained? Thus the Great Exhibition fostered casual, or uncertain labour. Foreign revolutions, moreover, affect the trade of England: speculators become timid and will not embark in trade or in any proposed undertaking; the foreign import and export trades are paralysed; and fewer clerks and fewer labourers are employed. Home political agitations, also, have the same effect; as was seen in London during the corn-law riots, about 35 years ago (when only eight members of the House of Commons supported a change in those laws); the Spafields riots in 1817; the affair in St. Peter's-field, Manchester, in 1819; the disturbances and excitement during the trial of Queen Caroline, in 1820-1, and the loss of life on the occasion of her funeral in 1821; the agitation previously to the passing of the Reform Bill had a like effect; the meeting on Kennington Common on the 10th of April;—in all these periods, indeed, employment decreased. Labour is affected also by the death of a member of the royal family, and the hurried demand for general mourning, but in a very small degree to what was once the case. A West-End tailor employing a great number of hands did not receive a single order for mourning on the death of Queen Adelaide; while on the demise of the Princess Charlotte (in 1817) thousands of operative tailors, throughout the three kingdoms, worked day and night, and for double wages, on the general mourning. Gluts in the markets, an increase of heavy bankruptcies and "panics," such as were experienced in the money market in 1825-6, and again in 1846, with the failure of banks and merchants, likewise have the effect of augmenting the mass of casual labour; for capitalists and employers, under such circumstances, expend as little as possible in wages or employment until the storm blows over. Bad harvests have a similar depressing effect.

There are also the consequences of changes of taste. The abandonment of the fashions of gentlemen's wearing swords, as well as embroidered garments, flowing periwigs, large shoe-buckles, all reduced able artizans to poverty by depriving them of work. So it was, when, to carry on the war with France, Mr. Pitt introduced a tax on hair powder. Hundreds of hair-dressers were thrown out of employment, many persons abandoning the fashion of wearing powder rather than pay the tax. There are now city gentlemen, who can remember that when clerks, they had sometimes to wait two or three hours for "their turn" at a barber's shop on a Sunday morning; for they could not go abroad until their hair was dressed and powdered, and their queues trimmed to the due standard of fashion. So it has been, moreover, in modern times in the substitution of silk for metal buttons, silk hats for stuff, and in the supersedence of one material of dress by another.

These several causes, then, which could only exist in a community of great wealth and great poverty have rendered, and are continually rendering, the labour market uncertain and over-stocked; to what extent they do and have done this, it is, of course, almost impossible to say *precisely;* but, even with the strongest disposition to avoid exaggeration, we may assert that there are in this country no less than 125,000 families, or 500,000 people, who depend on the weather for their food; 300,000 families, or 1,250,000 people, who can obtain employment only at particular seasons; 150,000 more families, or 500,000 people, whose trade depends upon the fashionable rather than the natural seasons, are thrown out of work at the cessation of the brisk time of their business; and, perhaps, another 150,000 of families, or 500,000 people, dependent on the periodical increase and decrease of commerce, and certain social and political accidents which tend to cause a greater or less demand for labour. Altogether we may assert, with safety, that there are at the least 725,000 families, or three millions of men, women, and children, whose means of living, far from being certain and constant, are of a precarious kind, depending either upon the rain, the wind, the sunshine, the caprice of fashion, or the ebbings and flowings of commerce.

But there is a still more potent cause at work to increase the amount of *casual* labour in this country. Thus far we have proceeded on the assumption that at the brisk season of each trade there is full employment for all; but this is far from being the case in the great majority, if not the whole, of the instances above cited. In almost all occupations there is in this country a *superfluity of labourers*, and this alone would tend to render the employment of a vast number of the hands of a casual rather than a regular character. In the generality of trades the calculation is that one-third of the hands are fully employed, one-third partially, and one-third unemployed throughout the year. This, of course, would be the case if there were twice too many work-people; for suppose the number of work-people in



CAB DRIVER.

[*From a Photograph.*]

a given trade to be 6000, and the work sufficient to employ (fully) only half the quantity, then, of course, 2000 might be occupied their whole time, 2000 more might have work sufficient to occupy them half their time, and the remaining 2000 have no work at all; or the whole 4000 might, on the average, obtain three months' employment out of the twelve; and this is frequently the case. Hence we see that a surplusage of hands in a trade tends to change the employment of the great majority from a state of constancy and regularity into one of casualty and precariousness.

Consequently it becomes of the highest importance that we should endeavour to ascertain what are the circumstances inducing a surplusage of hands in the several trades of the present day. A *surplusage of hands* in a trade may proceed from three different causes, viz.:—

1. The alteration of the hours, rate, or mode of working, or else the term of hiring.
2. The increase of the hands themselves.
3. The decrease of the work.

Each of these causes is essentially distinct; in the first case there is neither an increase in the number of hands nor a decrease in the quantity of work, and yet a surplusage of labourers is the consequence, for it is self-evident that if there be work enough in a given trade to occupy 6000 men all the year round, labouring twelve hours per day for six days in the week, the same quantity of work will afford occupation to only 4000 men, or one-third less, labouring between fifteen and sixteen hours per diem for seven days in the week. The same result would, of course, take place, if the workman were made to labour one-third more *quickly*, and so to get through one-third more work in the same time (either by increasing their interest in their work, by the invention of a new tool, by extra supervision, or by the subdivision of labour, &c., &c.), the same result would, of course, ensue as if they laboured one-third longer hours, viz., one-third of the hands must be thrown out of employment. So, again, by altering the *mode or form of work*, as by producing on the large scale, instead of the small, a smaller number of labourers are required to execute the same amount of work; and thus (if the market for such work be necessarily limited) a surplusage of labourers is the result. Hence we see that the alteration of the hours, rate, or mode of working may tend as positively to overstock a country with labourers as if the labourers themselves had unduly increased.

But this, of course, is on the assumption that both the quantity of work and the number of hands remain the same. The next of the three causes, above mentioned as inducing a surplusage of hands, is that which arises from a positive *increase in the number of labourers*, while the quantity of work remains the same or increases at a less rate than the labourers; and the third cause is, where the surplusage of labourers arises not from any alteration in the number of hands, but from a positive *decrease in the quantity of work*.

These are distinctions necessary to be borne clearly in mind for the proper understanding of this branch of the subject.

In the first case both the number of hands and the quantity of work remain the same, but the term, rate, or mode of working is changed.

In the second, hours, rate, or mode of working remain the same, as well as the quantity of work, but the number of hands is increased.

And in the third case, neither the number of hands nor the hours, rate, or mode of working is supposed to have been altered, but the work only to have decreased.

The surplusage of hands will, of course, be the same in each of these cases.

I will begin with the first, viz., that which induces a surplusage of labourers in a trade by enabling fewer hands to get through the ordinary amount of work. This is what is called the "economy of labour."

There are, of course, only three modes of economizing labour, or causing the same quantity of work to be done by a smaller number of hands.

1st. By causing the men to work *longer*.

2nd. By causing the men to work *quicker*, and so get through more work in the same time.

3rd. By *altering the mode* of work, or hiring, as in the "large system of production," where fewer hands are required; or the custom of temporary hirings, where the men are retained only so long as their services are needed, and discharged immediately afterwards.

First, of that mode of economizing labour which depends on an *increase of either the ordinary hours or days for work*. This is what is usually termed over-work and Sunday-work, both of which are largely creative of surplus hands. The hours of labour in mechanical callings are usually twelve, two of them devoted to meals, or 72 hours (less by the permitted intervals) in a week. In the course of my inquiries for the *Chronicle*, I met with slop cabinet-makers, tailors, and milliners who worked sixteen hours and more daily, their toil being only interrupted by the necessity of going out, if small masters, to purchase materials, and offer the goods for sale; or, if journeymen in the slop trade, to obtain more work and carry what was completed to the master's shop. They worked on Sundays also; one tailor told me that the coat he worked at on the previous Sunday was for the Rev. Mr. ——, who "little thought it," and these slop-workers rarely give above a few minutes to a meal. Thus they toil 40 hours beyond the hours usual in an honourable trade (112 hours instead of 72), in the course of a week, or between three and four days of the regular hours of work of the six working days. In other words, two such men will in less than a week accomplish work which should occupy three men a full week; or 1000 men will execute labour fairly calculated to employ 1500 at the least. A paucity of employment is thus caused among the general body, by this system of over-labour decreasing the share of work accruing to the several operatives, and so adding to surplus hands.

Of over-work, as regards excessive labour, both in the general and fancy cabinet trade, I heard

the following accounts, which different operatives concurred in giving; while some represented the labour as of longer duration by at least an hour, and some by two hours, a day, than I have stated.

The labour of the men who depend entirely on "the slaughter-houses" for the purchase of their articles is usually seven days a week the year through. That is, seven days—for Sunday work is all but universal—each of 13 hours, or 91 hours in all; while the established hours of labour in the "honourable trade" are six days of the week, each of 10 hours, or 60 hours in all. Thus 50 per cent. is added to the extent of the production of low-priced cabinet-work, merely from "over-hours;" but in some cases I heard of 15 hours for seven days in the week, or 105 hours in all.

Concerning the hours of labour in this trade, I had the following minute particulars from a garret-master who was a chair-maker:—

"I work from six every morning to nine at night; some work till ten. My breakfast at eight stops me for ten minutes. I can breakfast in less time, but it's a rest; my dinner takes me say twenty minutes at the outside; and my tea, eight minutes. All the rest of the time I'm slaving at my bench. How many minutes' rest is that, sir? Thirty-eight; well, say three-quarters of an hour, and that allows a few sucks at a pipe when I rest; but I can smoke and work too. I have only one room to work and eat in, or I should lose more time. Altogether I labour 14¼ hours every day, and I must work on Sundays—at least 40 Sundays in the year. One may as well work as sit fretting. But on Sundays I only work till it's dusk, or till five or six in summer. When it's dusk I take a walk. I'm not well-dressed enough for a Sunday walk when it's light, and I can't wear my apron on that day very well to hide patches. But there's eight hours that I reckon I take up every week one with another, in dancing about to the slaughterers. I'm satisfied that I work very nearly 100 hours a week the year through; deducting the time taken up by the slaughterers, and buying stuff—say eight hours a week—it gives more than 90 hours a week for my work, and there's hundreds labour as hard as I do, just for a crust."

The East-end turners generally, I was informed, when inquiring into the state of that trade, labour at the lathe from six o'clock in the morning till eleven and twelve at night, being 18 hours' work per day, or 108 hours per week. They allow themselves two hours for their meals. It takes them, upon an average, two hours more every day fetching and carrying their work home. Some of the East-end men work on Sundays, and not a few either, said my informant. "Sometimes I have worked hard," said one man, "from six one morning till four the next, and scarcely had any time to take my meals in the bargain. I have been almost suffocated with the dust flying down my throat after working so many hours upon such heavy work too, and sweating so much. It makes a man drink where he would not."

This system of over-work exists in the "slop" part of almost every business—indeed, it is the principal means by which the cheap trade is maintained. Let me cite from my letters in the *Chronicle* some more of my experience on this subject. As regards the London mantua-makers, I said:—"The workwomen for good shops that give fair, or tolerably fair wages, and expect good work, can make six average-sized mantles in a week, *working from ten to twelve hours a day;* but the slop-workers, by toiling from thirteen to sixteen hours a day, will make *nine* such sized mantles in a week. In a season of twelve weeks 1000 workers for the slop-houses and warehouses would at this rate make 108,000 mantles, or 36,000 more than workers for the fair trade. Or, to put it in another light, these slop-women, by being compelled, in order to live, to work such over-hours as inflict lasting injury on the health, supplant, by their over-work and over-hours, the labour of 500 hands, working the regular hours."

The following are the words of a chamber-master, working for the cheap shoe trade:—

"From people being obliged to work twice the hours they once *did* work, or that in reason they *ought* to work, a glut of hands is the consequence, and the masters are led to make reductions in the wages. They take advantage of our poverty and lower the wages, so as to undersell each other, and command business. My daughters have to work fifteen hours a day that we may make a bare living. They seem to have no spirit and no animation in them; in fact, such very hard work takes the youth out of them. They have no time to enjoy their youth, and, with all their work, they can't present the respectable appearance they ought." "I" (interposed my informant's wife) "often feel a faintness and oppression from my hard work, as if my blood did not circulate."

The better class of artizans denounce the system of Sunday working as the most iniquitous of all the impositions. They object to it, not only on moral and religious grounds, but economically also. "Every 600 men employed on the Sabbath," say they, "deprive 100 individuals of a week's work. Every six men who labour seven days in the week must necessarily throw one other man out of employ for a whole week. The seventh man is thus deprived of his fair share of work by the overtoiling of the other six." This Sunday working is a necessary consequence of the cheap slop-trade. The workmen cannot keep their families by their six days' labour, and therefore they not only, under that system, get less wages and do more work, but by their extra labour throw so many more hands out of employment.

Here then, in the over-work of many of the trade, we find a vast cause of surplus hands, and, consequently, of casual labour; and that the work in these trades has not proportionately increased is proven by the fact of the existence of a superfluity of workmen.

Let us now turn our attention to the second of the causes above cited, viz., *the causing of men to work quicker*, and so to accomplish more in the same time. There are several means of attaining this end; it may be brought about either (*a*) by making the workman's gains depend directly on the quantity of work executed by him, as by the substitution of piece-work for day-work; (*b*) by the omission of certain details or parts necessary for the perfection of the work; (*c*) by decreasing the workman's pay, and so increasing the necessity for him to execute a greater quantity of work in order to obtain the same income; (*d*) increasing the supervision, and encouraging a spirit of emulation among the workpeople; (*e*) by dividing the labour into a number of simple and minute processes, and so increasing the expertness of the labourers; (*f*) by the invention of some new tool or machine for expediting the operations of the workman.

I shall give a brief illustration of each of these causes *seriatim*, showing how they tend to produce a surplusage of hands in the trades to which they are severally applied. And first, as to *making the workman's gains depend directly on the quantity of work executed by him.*

Of course there are but two direct modes of paying for labour—either by the day or by the piece. Over-work by day-work is effected by means of what is called the "strapping system" (as described in the *Morning Chronicle* in my letter upon the carpenters and joiners), where a whole shop are set to race over their work in silence one with another, each striving to outdo the rest, from the knowledge that anything short of extraordinary exertion will be sure to be punished with dismissal. Over-work by piece-work, on the other hand, is almost a necessary consequence of that mode of payment—for where men are paid by the quantity they do, of course it becomes the interest of a workman to do more than he otherwise would.

"Almost all who work by the day, or for a fixed salary, that is to say, those who labour for the gain of others, not for their own, have," it has been well remarked, "no interest in doing more than the smallest quantity of work that will pass as a fulfilment of the mere terms of their engagement. Owing to the insufficient interest which day labourers have in the result of their labour, there is a natural tendency in such labour to be extremely inefficient—a tendency only to be overcome by vigilant superintendence on the part of the persons who *are* interested in the result. The 'master's eye' is notoriously the only security to be relied on. But superintend them as you will, day labourers are so much inferior to those who work by the piece, that, as was before said, the latter system is practised in all industrial occupations where the work admits of being put out in definite portions, without involving the necessity of too troublesome a surveillance to guard against inferiority (or scamping) in the execution." But if the labourer at piece-work is made to produce a greater quantity than at day-work, and this solely by connecting his own interest with that of his employer, how much more largely must the productiveness of workmen be increased when labouring wholly on their own account! Accordingly it has been invariably found that whenever the operative unites in himself the double function of capitalist and labourer, as the "garret-master" in the cabinet trade, and the "chamber-master" in the shoe trade, making up his own materials or working on his own property, his productiveness, single-handed, is considerably greater than can be attained even under the large system of production, where all the arts and appliances of which extensive capital can avail itself are brought into operation.

As regards the increased production by *omitting certain details necessary for the due perfection of the work*, it may be said that "scamping" adds at least 200 per cent. to the productions of the cabinet-maker's trade. I ascertained, in the course of my previous inquiries, several cases of this over-work from scamping, and adduce two. A very quick hand, a little master, working, as he called it, "at a slaughtering pace," for a warehouse, made 60 plain writing-desks in a week of 90 hours; while a first-rate workman, also a quick hand, made 18 in a week of 70 hours. The scamping hand said he must work at the rate he did to make 14*s.* a week from a slaughter-house; and so used to such style of work had he become, that, though a few years back he did West-end work in the best style, he could not now make eighteen desks in a week, if compelled to finish them in the style of excellence displayed in the work of the journeyman employed for the honourable trade. Perhaps, he added, he couldn't make them in that style at all. The frequent use of rosewood veneers in the fancy cabinet, and their occasional use in the general cabinet trade gives, I was told, great facilities for scamping. If in his haste the scamping hand injure the veneer, or if it have been originally faulty, he takes a mixture of gum shellac and "colour" (colour being a composition of Venetian red and lamp black), which he has ready by him, rubs it over the damaged part, smooths it with a slightly-heated iron, and so blends it with the colour of the rosewood that the warehouseman does not detect the flaw. In the general, as contra-distinguished from the fancy, cabinet trade I found the same ratio of "scamping." A good workman in the better-paid trade made a four-foot mahogany chest of drawers in five days, working the regular hours, and receiving, at piece-work price, 35*s.* A scamping hand made five of the same size in a week, and had time to carry them for sale to the warehouses, wait for their purchase or refusal, and buy material. But for the necessity of doing this the scamping hand could have made seven in the 91 hours of his week, though of course in a very inferior manner. "They would hold together for a time," I was assured, "and that was all; but the slaughterer cared only to have them viewly and cheap." These two cases exceed the average, and I have cited them to show what *can* be done under the scamping system.

We now come to the *increased rate of working induced by a reduction of the ordinary rate of remuneration of the workman.* Not only is it true that over-work makes under-pay, but the

converse of the proposition is equally true, that under-pay makes over-work—that is to say, it is true of those trades where the system of piece-work or small mastership admits of the operative doing the utmost amount of work that he is able to accomplish; for the workman in such cases seldom or never thinks of reducing his expenditure to his income, but rather of increasing his labour, so as still to bring his income, by extra production, up to his expenditure. Hence we find that, as the wages of a trade descend, so do the labourers extend their hours of work to the utmost possible limits—they not only toil earlier and later than before, but the Sunday becomes a work-day like the rest (amongst the "sweaters" of the tailoring trade Sunday labour, as I have shown, is almost universal); and when the hours of work are carried to the extreme of human industry, then more is sought to be done in a given space of time, either by the employment of the members of their own family, or apprentices, upon the inferior portion of the work, or else by "scamping it." "My employer," I was told by a journeyman tailor working for the Messrs. Nicoll, "reduces my wages one-third, and the consequence is, I put in two stitches where I used to give three." "I must work from six to eight, and later," said a pembroke-table-maker to me, "to get 18*s.* now for my labour, where I used to get 54*s.* a week—that's just a third. I could in the old times give my children good schooling and good meals. Now children have to be put to work very young. I have four sons working for me at present. Not only, therefore, does any stimulus to extra production make over-work, and over-work make under-pay; but under-pay, by becoming an additional provocative to increased industry, again gives rise in its turn to over-work. Hence we arrive at a plain unerring law—*over-work makes under-pay and under-pay makes over-work.*

But the above means of increasing the rate of working refer solely to those cases where the extra labour is induced by making it the *interest* of the workman so to do. The other means of extra production is *by stricter supervision of journeymen, or those paid by the day.* The shops where this system is enforced are termed "strapping-shops," as indicative of establishments where an undue quantity of work is expected from a journeyman in the course of the day. Such shops, though not directly making use of cheap labour (for the wages paid in them are generally of the higher rate), still, by exacting more work, may of course be said, in strictness, to encourage the system now becoming general, of less pay and inferior skill. These strapping establishments sometimes go by the name of "scamping shops," on account of the time allowed for the manufacture of the different articles not being sufficient to admit of good workmanship.

Concerning this "*strapping*" system I received the following extraordinary account from a man after his heavy day's labour. Never in all my experience had I seen so sad an instance of over-work. The poor fellow was so fatigued that he could hardly rest in his seat. As he spoke he sighed deeply and heavily, and appeared almost spirit-broken with excessive labour:—

"I work at what is called a strapping shop," he said, "and have worked at nothing else for these many years past in London. I call 'strapping' doing as much work as a human being or a horse possibly can in a day, and that without any hanging upon the collar, but with the foreman's eyes constantly fixed upon you, from six o'clock in the morning to six o'clock at night. The shop in which I work is for all the world like a prison; the silent system is as strictly carried out there as in a model gaol. If a man was to ask any common question of his neighbour, except it was connected with his trade, he would be discharged there and then. If a journeyman makes the least mistake, he is packed off just the same. A man working at such places is almost always in fear; for the most trifling things he's thrown out of work in an instant. And then the quantity of work that one is forced to get through is positively awful; if he can't do a plenty of it, he don't stop long where I am. No one would think it was possible to get so much out of blood and bones. No slaves work like we do. At some of the strapping shops the foreman keeps continually walking about with his eyes on all the men at once. At others the foreman is perched high up, so that he can have the whole of the men under his eye together. I suppose since I knew the trade that a *man does four times the work that he did formerly.* I know a man that's done four pairs of sashes in a day, and one is considered to be a good day's labour. What's worse than all, the men are every one striving one against the other. Each is trying to get through the work quicker than his neighbours. Four or five men are set the same job, so that they may be all pitted against one another, and then away they go every one striving his hardest for fear that the others should get finished first. They are all tearing along from the first thing in the morning to the last at night, as hard as they can go, and when the time comes to knock off they are ready to drop. I was hours after I got home last night before I could get a wink of sleep; the soles of my feet were on fire, and my arms ached to that degree that I could hardly lift my hand to my head. Often, too, when we get up of a morning, we are more tired than when we went to bed, for we can't sleep many a night; but we mustn't let our employers know it, or else they'd be certain we couldn't do enough for them, and we'd get the sack. So, tired as we may be, we are obliged to look lively, somehow or other, at the shop of a morning. If we're not beside our bench the very moment the bell's done ringing, our time's docked—they wont give us a single minute out of the hour. If I was working for a fair master, I should do nearly one-third, and sometimes a half, less work than I am now forced to get through, and, even to manage that much, I shouldn't be idle a second of my time. It's quite a mystery to me how they *do* contrive to get so much work

out of the men. But they are very clever people. They know how to have the most out of a man, better than any one in the world. They are all picked men in the shop—regular 'strappers,' and no mistake. The most of them are five foot ten, and fine broad-shouldered, strong-backed fellows too—if they weren't they wouldn't have them. Bless you, they make no words with the men, they sack them if they're not strong enough to do all they want; and they can pretty soon tell, the very first shaving a man strikes in the shop, what a chap is made of. Some men are done up at such work—quite old men and gray with spectacles on, by the time they are forty. I have seen fine strong men, of 36, come in there and be bent double in two or three years. They are most all countrymen at the strapping shops. If they see a great strapping fellow, who they think has got some stuff about him that will come out, they will give him a job directly. We are used for all the world like cab or omnibus horses. Directly they've had all the work out of us, we are turned off, and I am sure, after my day's work is over, my feelings must be very much the same as one of the London cab horses. As for Sunday, it is *literally* a day of rest with us, for the greater part of us lay a-bed all day, and even that will hardly take the aches and pains out of our bones and muscles. When I'm done and flung by, of course I must starve."

The next means of inducing a quicker rate of working, and so economizing the number of labourers, is by the *division* and *subdivision of labour.* In perhaps all the skilled work of London, of the better sort, this is more or less the case; it is the case in a much smaller degree in the country.

The nice subdivision makes the operatives perfect adepts in their respective branches, working at them with a greater and a more assured facility than if their care had to be given to the whole work, and in this manner the work is completed in less time, and consequently by fewer hands.

In illustration of the extraordinary increased productiveness induced by the division of labour, I need only cite the well-known cases:—

"It is found," says Mr. Mill, "that the productive power of labour is increased by carrying the separation further and further; by breaking down more and more every process of industry into parts, so that each labourer shall confine himself to an even smaller number of simple operations. And thus, in time, arise those remarkable cases of what is called the division of labour, with which all readers on subjects of this nature are familiar. Adam Smith's illustration from pin-making, though so well-known, is so much to the point, that I will venture once more to transcribe it. 'The business of making a pin is divided into eighteen distinct operations. One man draws out the wire, another straightens it, a third cuts it, a fourth points it, and a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on, is a peculiar business; to whiten the pins is another; it is even a trade by itself to put them into the paper. I have seen a small manufactory where ten men only were employed, and were some of them, consequently, performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about twelve pounds of pins in a day. There are in a pound upwards of 4000 pins of a middling size.

"'Those ten persons, therefore, could make among them upwards of 48,000 pins in a day. Each person, therefore, making a tenth part of 48,000 pins, might be considered as making 4800 pins in a day. But if they had all wrought separately and independently, and without any of them having been educated to this peculiar business, they certainly could not each of them have made 20, perhaps not one pin in a day.'"

M. Say furnishes a still stronger example of the effects of division of labour, from a not very important branch of industry certainly, the manufacture of playing cards. "It is said by those engaged in the business, that each card, that is, a piece of pasteboard of the size of the hand, before being ready for sale, does not undergo fewer than 70 operations, every one of which might be the occupation of a distinct class of workmen. And if there are not 70 classes of work-people in each card manufactory, it is because the division of labour is not carried so far as it might be; because the same workman is charged with two, three, or four distinct operations. The influence of this distribution of employment is immense. I have seen a card manufactory where thirty workmen produced daily 15,500 cards, being above 500 cards for each labourer; and it may be presumed that if each of these workmen were obliged to perform all the operations himself, even supposing him a practised hand, he would not, perhaps, complete two cards in a day; and the 30 workmen, instead of 15,500 cards, would make only 60."

One great promoter of the decrease of manual labour is to be found in the economy of labour from a very different cause to any I have pointed out as tending to the increase of surplus hands and casual labour, viz., to *the use of machinery.*

In this country the use of machinery has economised the labour both of man and horse to a greater extent than is known in any other land, and that in nearly all departments of commerce or traffic. The total estimated machine power in the kingdom is 600,000,000 of human beings, and this has been all produced within the last century. In agriculture, for example, the threshing of the corn was the peasant's work of the later autumn and of a great part of the winter, until towards the latter part of the last century. The harvest was hardly considered complete until the corn was threshed by the peasants. On the first introduction of the threshing machines, they were demolished in many places by the country labourers, whose rage was excited to find that their winter's work, instead of being regular, had become *casual.*

But the use of these machines is now almost

universal. It would, of course, be the height of absurdity to say that threshing machines could possibly increase the number of threshers, even as the reaping machines cannot possibly increase the number of reapers; their effect is rather to displace the greater number of labourers so engaged, and hence indeed the "economy" of them. It is not known what number of men were, at any time, employed in threshing corn. Their displacement was gradual, and in some of the more remote parts of the provinces, the flails of the threshers may be heard still, but if a threshing machine—for they are of different power—do the work, as has been stated, of six labourers, the economization or displacement of manual labour is at once shown to be the economization and displacement of the whole labour (for a season) of a country side; thus increasing surplus hands.

In other matters—in the unloading vessels by cranes, in *all* branches of manufactures, and even in such minor matters as the grinding of coffee berries, and the cutting and splitting of wood for lucifer matches, an immense amount of manual labour has been minimized, economized, or displaced by steam machinery. On my inquiry into the condition of the London sawyers, I found that the labour of 2000 men had been displaced by the steam saw-mills of the metropolis alone. At one of the largest builder's I saw machines for making mortises and tenons, for sticking mouldings, and, indeed, performing all the operations of the carpenter—one such machine doing the work, perhaps, of a hundred men. I asked the probable influence that such an instrument was likely to have on the men? "Ruin them all," was the laconic reply of the superintendent of the business! Within the last year casks have been made by machinery—a feat that the coopers declared impossible. Wheels, also, have been lately produced by steam. I need, however, as I have so recently touched upon the subject, do no more than call attention to the information I have given (p. 240. vol. ii.) concerning the use of machinery in lieu of human labour. It is there shown that if the public street-sweeping were effected, throughout the metropolis, by the machines, nearly 196 of the 275 manual labourers, now scavaging for the parish contractors, would be thrown out of work, and deprived of 7438*l.*, out of their joint earnings, in the year.

It is the fashion of political economists to insist on the general proposition that machinery increases the demand for labour, rather than decreases it; when they write unguardedly, however, they invariably betray a consciousness that the benefits of machinery to manual labourers are not quite so invariable as they would otherwise make out. Here, for instance, is a confession from the pamphlet on "the Employer and Employed," published by the Messrs. Chambers, gentlemen who surely cannot be accused of being averse to economical doctrines. It is true the pamphlet is intended to show the evils of strikes to working men, but it likewise points out the evils of mechanical power to the same class when applied to certain operations.

"Strikes also lead to *the superseding of hand labour by machines*," says this little work. "In 1831, on the occasion of a strike at Manchester, several of the capitalists, afraid of their business being driven to other countries, had recourse to the celebrated machinists, Messrs. Sharp and Co. of Manchester, requesting them to direct the inventive talents of their partner, Mr. Roberts, to the construction of a self-acting mule, in order to emancipate the trade from galling slavery and impending ruin. Under assurances of the most liberal encouragement in the adoption of his invention, Mr. Roberts suspended his professional pursuits as an engineer, and set his fertile genius to construct a spinning automaton. In the course of a few months he produced a machine, called the 'Self-acting Mule,' which, in 1834, was in operation in upwards of 60 factories; *doing the work of the head spinners so much better than they could do it themselves, as to leave them no chance against it.*

"In his work on the 'Philosophy of Manufactures,' Dr. Ure observes on the same subject—'The elegant art of calico-printing, which embodies in its operations the most elegant problems of chemistry, as well as mechanics, had been for a long period the sport of foolish journeymen, who turned the liberal means of comfort it furnished them into weapons of warfare against their employers and the trade itself. They were, in fact, by their delirious combinations, plotting to kill the goose which laid the golden eggs of their industry, or to force it to fly off to a foreign land, where it might live without molestation. In the spirit of Egyptian task-masters, the operative printers dictated to the manufacturers the number and quality of the apprentices to be admitted into the trade, the hours of their own labour, and the wages to be paid them. At length capitalists sought deliverance from this intolerable bondage in the resources of science, and were speedily reinstated in their legitimate dominion of the head over the inferior members. The four-colour and five-colour machines, which now render calico-printing an unerring and expeditious process, are mounted in all great establishments. It was under the high-pressure of the same despotic confederacies, that self-acting apparatus for executing the dyeing and rinsing operations has been devised.'

"The croppers of the West Riding of Yorkshire, and the hecklers or flax-dressers, can unfold 'a tale of wo' on this subject. Their earnings exceeded those of most mechanics; but the frequency of strikes among them, and the irregularities in their hours and times of working, compelled masters to substitute machinery for their manual labour. *Their trades, in consequence, have been in a great measure superseded.*"

It must, then, be admitted that machinery, *in some cases at least*, does displace manual labour, and so tend to produce a surplusage of labourers, even as over-work, Sunday-work, scamping-work, strapping-work, piece-work, minutely-divided work, &c., have the same effect so long as the quantity of work to be done remains unaltered. *The extensibility of the market* is the one circumstance

which determines whether the economy of labour produced by these means is a blessing or a curse to the nation. To apply mechanical power, the division of labour, the large system of production, or indeed any other means of enabling a less number of labourers to do the same amount of work *when the quantity of work to be done is limited in its nature*, as, for instance, the threshing of corn, the sawing of wood, &c., is necessarily to make either paupers or criminals of those who were previously honest independent men, living by the exercise of their industry in that particular direction. Economize your labour one-half, in connection with a particular article, and you must sell twice the quantity of that article or displace a certain number of the labourers; that is to say, suppose it requires 400 men to produce 4000 commodities in a given time, then, if you enable 200 men to produce the same quantity in the same time, you must get rid of 8000 commodities, or deprive a certain number of labourers of their ordinary means of living. Indeed, the proposition is almost self-evident, though generally ignored by social philosophers: economize your labour at a greater rate than you expand your markets, and you must necessarily increase your paupers and criminals in precisely the same ratio. "The division of labour," says Mr. Mill, following Adam Smith, "is limited by the extent of the market. If by the separation of pin-making into ten distinct employments 48,000 pins can be made in a day, this separation will only be advisable if the number of accessible consumers is such as to require every day something like 48,000 pins. If there is a demand for only 25,000, the division of labour can be advantageously carried but to the extent which will every day produce that smaller number." Again, as regards the large system of production, the same authority says, "the possibility of substituting the large system of production for the small depends, of course, on the extent of the market. The large system can only be advantageous when a large amount of business is to be done; it implies, therefore, either a populous and flourishing community, or a great opening for exportation." But these are mere glimmerings of the broad incontrovertible principle, that *the economization of labour at a greater rate than the expansion of the markets, is necessarily the cause of surplus labour in a community.*

The effect of machinery in depriving the families of agricultural labourers of their ordinary sources of income is well established. "Those countries," writes Mr. Thornton, "in which the class of agricultural labourers is most depressed, have all one thing in common. Each of them was formerly the seat of a flourishing manufacture carried on by the cottagers at their own homes, which has now decayed or been withdrawn to other situations. Thus, in Buckinghamshire and Bedfordshire, the wives and children of labouring men had formerly very profitable occupation in making lace; during the last war a tolerable lace-maker, working eight hours a day, could easily earn 10*s.* or 12*s.* a week; the profits of this employment have been since so much reduced by the use of machinery, that a pillow lacemaker must now work twelve hours daily to earn 2*s.* 6*d.* a week."

The last of the conditions above cited, as causing the same or a greater amount of work to be executed with a less quantity of labour, is *the large system of production*. Mr. Babbage and Mr. Mill have so well and fully pointed out "the economy of labour" effected in this manner, that I cannot do better than quote from them upon this subject:—

"Even when no additional subdivision of the work," says Mr. Mill, "would follow an enlargement of the operations, there will be good economy in enlarging them to the point at which every person to whom it is convenient to assign a special occupation will have full employment in that occupation." This point is well illustrated by Mr. Babbage:—"If machines be kept working through the 24 hours" [which is evidently the only economical mode of employing them], "it is necessary that some person shall attend to admit the workmen at the time they relieve each other; and whether the porter or other servant so employed admit one person or twenty, his rest will be equally disturbed. It will also be necessary occasionally to adjust or repair the machine; and this can be done much better by a workman accustomed to machine-making than by the person who uses it. Now, since the good performance and the duration of machines depend, to a very great extent, upon correcting every shake or imperfection in their parts as soon as they appear, the prompt attention of a workman resident on the spot will considerably reduce the expenditure arising from the wear and tear of the machinery. But in the case of a single lace-frame, or a single loom, this would be too expensive a plan. Here, then, arises another circumstance, which tends to enlarge the extent of the factory. It ought to consist of such a number of machines as shall occupy the whole time of one workman in keeping them in order. If extended beyond that number the same principle of economy would point out the necessity of doubling or tripling the number of machines, in order to employ the whole time of two or three skilful workmen. Where one portion of the workman's labour consists in the exertion of mere physical force, as in weaving, and in many similar arts, it will soon occur to the manufacturer that, if that part were executed by a steam-engine, the same man might, in the case of weaving, attend to two or more looms at once; and, since we already suppose that one or more operative engineers have been employed, the number of looms may be so arranged that their time shall be fully occupied in keeping the steam-engine and the looms in order.

"Pursuing the same principles, the manufactory becomes gradually so enlarged that the expense of lighting during the night amounts to a considerable sum; and as there are already attached to the establishment persons who are up all night, and can therefore constantly attend to it, and also engineers to make and keep in repair any

machinery, the addition of an apparatus for making gas to light the factory leads to a new extension, at the same time that it contributes, by diminishing the expense of lighting and the risk of accidents from fire, to reduce the cost of manufacturing.

"Long before a factory has reached this extent it will have been found necessary to establish an accountant's department, with clerks to pay the workmen, and to see that they arrive at their stated times; and this department must be in communication with the agents who purchase the raw produce, and with those who sell the manufactured article. It will cost these clerks and accountants little more time and trouble to pay a large number of workmen than a small number, to check the accounts of large transactions than of small. If the business doubled itself it would probably be necessary to increase, but certainly not to double, the number either of accountants or of buying and selling agents. *Every increase of business would enable the whole to be carried on with a proportionally smaller amount of labour.* As a general rule, the expenses of a business do not increase by any means proportionally to the quantity of business. Let us take as an example a set of operations which we are accustomed to see carried on by one great establishment—that of the Post Office.

"Suppose that the business, let us say only of the London letter-post, instead of being centralised in a single concern, were divided among five or six competing companies. Each of these would be obliged to maintain almost as large an establishment as is now sufficient for the whole. Since each must arrange for receiving and delivering letters in all parts of the town, each must send letter-carriers into every street, and almost every alley, and this, too, as many times in the day as is now done by the Post Office, if the service is to be as well performed. Each must have an office for receiving letters in every neighbourhood, with all subsidiary arrangements for collecting the letters from the different offices and re-distributing them. I say nothing of the much greater number of superior officers who would be required to check and control the subordinates, implying not only a greater cost in salaries for such responsible officers, but the necessity, perhaps, of being satisfied in many instances with an inferior standard of qualification, and so failing in the object."

But this refers solely to the "large system of business" as applied to purposes of manufacture and distribution. In connection with agriculture there is the same saving of labour effected. "The large farmer," says Mr. Mill, "has some advantage in the article of buildings. It does not cost so much to house a great number of cattle in one building, as to lodge them equally well in several buildings. There is also some advantage in implements. A small farmer is not so likely to possess expensive instruments. But the principal agricultural implements, even when of the best construction, are not expensive. It may not answer to a small farmer to own a threshing machine for the small quantity of corn he has to thresh; but there is no reason why such a machine should not in every neighbourhood be owned in common, or provided by some person to whom the others pay a consideration for its use. The large farmer can make some saving in cost of carriage. There is nearly as much trouble in carrying a small portion of produce to market, as a much greater produce; in bringing home a small, as a much larger quantity of manure, and articles of daily consumption. There is also the greater cheapness of buying things in large quantities."

A short time ago I went into Buckinghamshire to look into the allotment system. And, in one parish of 1800 acres, I found that some years ago there were seventeen farmers who occupied, upon the average, 100 acres each, and who, previous to the immigration of the Irish harvest-men, *constantly* employed six men a-piece, or, in the aggregate, upwards of 100 hands. Now, however, the farmers in the same parish occupy to the extent of 300 acres each, and respectively employ only six men *and a few extra hands at harvest time.* Thus the number of hands employed by this system has been decreased one-half. I learned, moreover, from a clergyman there, who had resided in Wiltshire, that the same thing was going on in that county also; that small farms were giving way to large farms, and that at least half the labourers had been displaced. The agricultural labourers, at the time of taking the last census, were 1,500,000 in number; so that, if this system be generally carried out, there must be 750,000 labourers and their families, or 3,000,000 people, deprived of their living by it.

Sir James Graham, in his evidence before the Committee on Criminal Commitments, has given us some curious particulars as to the decrease of the number of hands required for agricultural purposes, where the large system of production is pursued in place of the small: he has told us how many hands he was enabled to get rid of by these means, the proportion of labour displaced, it will be seen, amounted to about 10 per cent. of the labouring population. In answer to a question relative to the increase of population in his district, he replied:—

"I have myself taken *very strong means to prevent it,* for it so happens that my whole estate came out of lease in the year 1822, after the currency of a lease of fourteen years; and by *consolidation of farms, and the destruction of cottages, I have diminished, upon my own property, the population to the extent of from* 300 *to* 400 *souls.*"

"On how many acres?—On about 30,000 acres." [This is at the rate of one in every 100 acres].

"What was the whole extent of population?—It was under 4000 before I reduced it.

"What became of those 300 or 400?—The greater part of them, being small tenants were, enabled to find farms on the estates of other proprietors, who pursued the opposite course of subdividing their estates for the purpose of obtaining

higher nominal rents; *others have become day labourers,* and as day labourers, I have reason to know, they are more thriving than they were on my estate as small farmers, subject to a high rent, which their want of capital seldom enabled them to pay; two or three of these families went to America.

"Have you any out of work?—None entirely out of work, some only partially employed; but since the *dispersion of this large mass of population,* the supply of labour has not much exceeded the demand, for *whenever I removed a family, I pulled down the house,* and the parochial jealousy respecting settlements is an ample check on the influx of strangers."

Similar to the influence of the large system of production in its displacement of labourers, as enabling a larger quantity of work to be executed by one establishment with a smaller number of hands than would be required were the amount of work to be divided into a number of smaller establishments,—similar to this mode of economizing labour, is that mode of work which, by altering the produce rather than the mode of production, and by substituting an article that requires less labour for one that required more, gets rid of a large quantity of labour, and, consequently, adds to the surplusage of labourers. An instance of this is in the substitution of pasturage for tillage. "*Plough less and graze more,*" says Sir J. Graham, the great economist of labour, simply because fewer people will be required to attend to the land. But this plan of grazing instead of ploughing was adopted in this country some centuries back, and with what effect to the labourers and the people at large, the following extract from the work of Mr. Thornton, on over-population, will show:—

"The extension of the woollen manufacture was raising the price of wool; and the little attendance which sheep require was an additional motive for causing sheep farming to be preferred to tillage. Arable land, therefore, began to be converted into pasture; and the seemingly-interminable corn fields, which, like those of Germany at this day, probably extended for miles without having their even surface broken by fences or any other visible boundaries, disappeared. After being sown with grass they were surrounded and divided by inclosures, to prevent the sheep from straying, and to do away with the necessity of having shepherds always on the watch. By these changes the quantity of work to be done upon a farm was exceedingly diminished, and most of the servants, whom it had been usual to board and lodge in the manor and farm-houses, were dismissed. This was not all. The married farm-servants were ousted from their cottages, which were pulled down, and their gardens and fields were annexed to the adjoining meadows. The small farmers were treated in the same way, as their leases fell in, *and were sent to join the daily increasing crowd of competitors for work that was daily increasing in quantity.*

"Even freeholders were in some instances ejected from their lands. This social revolution had probably commenced even before the prosperity of the peasantry had reached its climax; but in 1487 it attracted the notice of Parliament, and an Act was passed to restrain its progress; for already it was observed that inclosures were becoming 'more frequent, whereby arable land, *which could not be manured without people and families, was turned into pasture, which was easily rid by a few herdsmen;*' and that 'tenancies for years, lives, and at will, whereupon most of the yeomanry lived, were turned into demesnes'*. In 1533†, An act was passed strongly condemning the practice of 'accumulating' farms, which it was declared had reduced 'a marvellous multitude' of the people to poverty and misery, and left them no alternative but to steal, or to die 'pitifully' of cold and hunger. In this Act it was stated that single farms might be found with flocks of from 10,000 to 20,000 sheep upon them; and it was ordained that no man should keep more than 2000 sheep, except upon his own land, or rent more than two farms.

"Two years later it was enacted that the king should have a moiety of the profits of land converted (subsequently to a date specified) from tillage to pastures, until a suitable house was erected, and the land was restored to tillage. In 1552, a law‡ was made which required that on all estates as large a quantity of land as had been kept in tillage for four years together at any time since the accession of Henry VIII., should be so continued in tillage. But these, and many subsequent enactments of the same kind, had not the smallest effect in checking the consolidation of farms. We find Roger Ascham, in Queen Elizabeth's reign, lamenting the dispersion of families, the ruin of houses, the breaking up and destruction of 'the noble yeomanry, the honour and strength of England.' Harrison also speaks of towns pulled down for sheep-walks; 'and of the tenements that had fallen either down or into the lord's hands;' or had been 'brought and united together by other men, so that in some one manor, seventeen, eighteen, or twenty houses were shrunk.'§

"'Where have been a great many householders and inhabitants,' says Bishop Latimer, 'there is now but a shepherd and his dog.'‖ And in a curious tract, published in 1581, by one William Stafford, a husbandman is made to exclaim, 'Marry, these inclosures do and undo us all, for they make us pay dearer for our land that we occupy, and causeth that we can have no land to put to tillage; all is taken up for pasture, either for sheep or for grazing of cattle, insomuch that I have known of late a dozen ploughs, within less compass than six miles about me, laid down within this seven years; and where threescore persons or upwards had their livings, now one man, with his cattle, hath all. Those sheep is

* Lord Bacon's Hist. of King Henry VII., Works, vol. v. p. 61.
† 25th Henry VIII. cap. 13.
‡ 5 & 6 Edw. VI., cap. 5.
§ Eden's Hist. of the Poor, vol. i. p. 118.
‖ Latimer's Sermons, p. 109.

the cause of all our mischief, for they have driven husbandry out of the country, by which was increased before all kinds of victuals, and now altogether sheep, sheep, sheep.'* While numbers of persons were thus continually driven from their homes, and deprived of their means of livelihood, we need not be at a loss to account for the increase of vagrancy, without ascribing it to the increase of population."

As an instance, within our time, of the same mode of causing a surplusage of labourers, and so adding to the quantity of casual labour in the kingdom, viz., by the extension of pasturage and consequent diminution of tillage, we may cite the "clearances," as they were called, which took place, some few years back, in the Highlands of Scotland. "It is only within the last few years," says the author above quoted, "that the strathes and glens of Sutherland have been *cleared of their inhabitants, and that the whole country has been converted into one immense sheepwalk*, over which the traveller may proceed for 40 miles together without seeing a tree or a stone wall, or anything, but a heath dotted with sheep and lambs† . . . . . The example of Sutherland is imitated in the neighbouring counties. During the last four years *some hundreds of families* have been 'weeded' out of Ross-shire, and nearly 400 more have received notice to quit next year. Similar notice has been given to 34 families in Cromarty, and only the other day eighteen families, who were living in peace and comfort, in Glencalvie, in Ross-shire, were expelled from the farms occupied for ages by themselves and their forefathers, to make room for sheep." And still we are told to "*plough less and graze more!*"

We now come to the last-mentioned of the circumstances inducing a surplusage of labourers, and, consequently, augmenting the amount of casual labour throughout the kingdom, viz., by *altering the mode of hiring the labourers.* At page 236 of the present volume, I have said, in connection with this part of the subject,—

"Formerly the mode of hiring farm-labourers was by the year, so that the employer was bound to maintain the men when unemployed. But now weekly hirelings and even journey-work, or hiring by the day, prevail, and the labourers being paid mere subsistence-money only when wanted are necessitated to become either paupers or thieves when their services are no longer required. It is, moreover, this change from yearly to weekly and daily hirings, and the consequent discarding of men when no longer wanted, that has partly caused the immense mass of surplus labourers, who are continually vagabondizing through the country, begging or stealing as they go—men for whom there is but some two or three weeks' work (harvesting, hop-picking, and the like) throughout the year."

Blackstone, in treating of the laws relating to master and servant (the greater part of the farm labourers or farm servants, as they were then called, being included under the latter head), tells us at page 425 of his first volume—

"The first sort of servants, acknowledged by the laws of England, are MENIAL SERVANTS; so called from being *inter mœnia*, or domestic. The contract between them and their masters arises upon the hiring. If the hiring be generally, without any particular *time limited*, the law construes it to be a *hiring for a year* (Co. Lit. 42); upon a principle of natural equity, that the servant shall serve, and the master maintain him, throughout all the revolutions of the respective seasons, as well when *there is work to be* done, *as when there is not.*"

Mr. Thornton says, "until recently it had been common for farm servants, even when married and living in their own cottages, to take their meals with their master; and, what was of more consequence, in every farm-house, many unmarried servants, of both sexes, were lodged, as well as boarded. The latter, therefore, even if ill paid, might be tolerably housed and fed, and many of them fared, no doubt, much better than they could have done if they had been left to provide for themselves, with treble their actual wages."

Formerly throughout the kingdom—and it is a custom *still* prevalent in some parts, more especially in the north—single men and women seeking engagements as farm-servants, congregated at what were called the "Hirings," held usually on the three successive market days, which were nearest to May-day and Martinmas-day. The hiring was thus at two periods of the year, but the engagement was usually for the twelvemonth. By the concurrent consent, however, of master and servant, when the hiring took place, either side might terminate it at the expiration of the six months, by giving due notice; or a further hiring for a second twelvemonth could be legally effected without the necessity of again going to the hirings. The servants, even before their term of service had expired, could attend a hiring (generally held under the authority of the town's charter) as a matter of right; the master and mistress having no authority to prevent them. The Market Cross was the central point for the holding of the hirings, and the men and women, the latter usually the most numerous, stood in rows around the cross. The terms being settled, the master or mistress gave the servant "a piece of money," known as a "god's penny" (the "handsel penny"), the offer and acceptance of this god's penny being a legal ratification of the agreement, without any other step. In the old times such engagements had almost always (as shown in the term "God's penny") a character of religious obligation. At the earliest period, the hirings were held in the church-yards; afterwards by the Market Cross.

I have spoken of this matter more in the past than the present tense, for the system is greatly changed as regards the male farm-servant, though little as regards the female. Now the male farm-labourers, instead of being hired for a specific term, are more generally hired by week, by job, or by day; indeed, even "half-a-day's" work is known. At one period it was merely the

* Pictorial History of England, vol. ii. p. 900.

† Reports of the "Commissioner" of the *Times* Newspaper, in June, 1845.

married country labourers, residing in their own cottages, who were temporarily engaged, but it is now the general body, married and unmarried, old and young, with a few exceptions. Formerly the farmer was bound to find work for six or twelve months (for both terms existed) for his hired labourers. If the land did not supply it, still the man must be maintained, and be paid his full wages when due. By such a provision, the labour and wage of the hired husbandman were regular and rarely *casual;* but this arrangement is now seldom entered into, and the hired husbandman's labour is consequently generally casual and rarely regular. This principle of hiring labourers only for so long as they are wanted, as contradistinguished from the "*principle of natural equity*," spoken of by Blackstone, which requires that "the servant shall serve and the master maintain him *throughout all the revolutions of the respective seasons, as well when there is work to be done as when there is not,*" has been the cause, perhaps, of more casual labour and more pauperism and crime, in this country, than, perhaps, any other of the antecedents before mentioned. The harvest is now collected solely by casual labourers, by a horde of squalid immigrants, or the tribe of natural and forced vagabonds who are continually begging or stealing their way throughout the country; our hops are picked, our fruit and vegetables gathered by the same precarious bands—wretches who, perhaps, obtain some three months' harvest labour in the course of the year. The ships at our several ports are discharged by the same "*casual hands,*" who may be seen at our docks scrambling like hounds for the occasional bit of bread that is vouchsafed to them; there numbers loiter throughout the day, even on the chance of *an hour's employment;* for the term of hiring has been cut down to the finest possible limits, so that the labourer may not be paid for even a second longer than he is wanted. And since he gets only bare subsistence money when employed, "What," we should ask ourselves, "*must* be his lot when unemployed?"

I now come to consider the circumstances causing an undue increase of the labourers in a country. Thus far we have proceeded on the assumption that both the quantity of work to be done and the number of hands to do it remained stationary, and we have seen that by the mere alteration of the time, rate, and mode of working, a vast amount of surplus, and, consequently, casual labour may be induced in a community. We have now to ascertain how, still assuming the quantity of work to remain unaltered, the same effect may be brought about by an undue *increase of the number of labourers.*

There are many means by which the number of labourers may be increased besides that of a positive increase of the people. These are—

1. By the undue increase of apprentices.
2. By drafting into the ranks of labour those who should be otherwise engaged, as women and children.
3. By the importation of labourers from abroad.
4. By the migration of country labourers to towns, and so overcrowding the market in the cities.
5. By the depression of other trades.
6. By the undue increase of the people themselves.

Each and every of the first-mentioned causes are as effective a circumstance for the promotion of surplus labour, as even the positive extension of the population of the country.

Let me begin with the undue increase of a trade by means of *apprentices.*

This is, perhaps, one of the chief aids to the cheap system. For it is principally by apprentice labour that the better masters, as well as workmen, are undersold, and the skilled labourer consequently depressed to the level of the unskilled. But the great evil is, that the cheapening of goods by this means causes an undue increase in the trade. The apprentices grow up and become labourers, and so the trade is glutted with workmen, and casual labour is the consequence.

This apprentice system is the great bane of the printer's trade. Country printers take an undue number of boys to help them cheap; these lads grow up, and then, finding wages in the provinces depressed through this system of apprentice labour, they flock to the towns, and so tend to glut the labour market, and consequently to increase the number of casual hands.

One cause of the increased surplus and casual labour in such trades as dressing-case, work-box, writing-desk-making and other things in the fancy cabinet trade (among the worst trades even in Spitalfields and Bethnal Green), shoemaking, and especially of women and children's shoes, is the taking of many apprentices by small masters (supplying the great warehouses). As journey-work is all but unknown in the slop fancy cabinet trade, an apprentice, when he has "served his time," must start on his own account in the same wretched way of business, or become a casual labourer in some unskilled avocation, and this is one way in which the hands surely, although gradually, increase beyond the demand. It is the same with the general slop cabinet-maker's trade in the same parts. The small masters supply the "slaughter-houses," the linen-drapers, &c., who sell cheap furniture; they work in the quickest and most scamping manner, and do more work (which is nearly all done on the chance of sale), as they must confine themselves to one branch. The slop chair-makers cannot make tables, nor the slop table-makers, chairs; nor the cheffonier and drawer-makers, bedsteads; for they have not been taught. Even if they knew the method, and *could* accomplish other work, the want of practice would compel them to do it slowly, and the slop mechanic can never afford to work slowly. Such classes of little masters, then, to meet the demand for low-priced furniture, rear their sons to the business, and frequently take apprentices, to whom they pay small amounts. The hands so trained (as in the former instances) are not skilled enough to work for the honourable trade, so that they can only adopt the course pursued by their parents, or masters, before them. Hence a rapid, although again gradual

increase of surplus hands; or hence a resort to some unskilled labour, to be wrought casually. This happens too, but in a smaller degree, in trades which are not slop, from the same cause. Concerning the *apprentice system* in the boot and shoe trade, when making my inquiries into the condition of the London workmen, I received the following statements:—

"My employer had seven apprentices when I was with him; of these, two were parish apprentices (I was one), and the other five from the Refuge for the Destitute, at Hoxton. With each Refuge boy he got 5*l.* and three suits of clothes, and a kit (tools). With the parish boys of Covent-garden and St. Andrew's, Holborn, he got 5*l.* and two suits of clothes, reckoning what the boy wore as one. My employer was a journeyman, and by having all us boys he was able to get up work very cheap, though he received good wages for it. We boys had no allowance in money, only board, lodging, and clothing. The board was middling, the lodging was too, and there was nothing to complain about in the clothing. He was severe in the way of flogging. I ran away six times myself, but was forced to go back again, as I had no money and no friend in the world. When I first ran away I complained to Mr. ——— the magistrate, and he was going to give me six weeks. He said it would do me good; but Mr. ——— interfered, and I was let go. I don't know what he was going to give me six weeks for, unless it was for having a black eye that my master had given me with the stirrup. Of the seven only one served his time out. He let me off two years before my time was up, as we couldn't agree. The mischief of taking so many apprentices is this:—The master gets money with them from the parish, and can feed them much as he likes as to quality and quantity; and if they run away soon, the master's none the worse, for he 's got the money; and so boys are sent out to turn vagrants when they run away, as such boys have no friends. Of us seven boys (at the wages our employer got) one could earn 19*s.*, another 15*s.*, another 12*s.*, another 10*s.*, and the rest not less than 8*s.* each, for all worked sixteen hours a day—that 's 4*l.* 8*s.* a week for the seven, or 225*l.* 10*s.* a year. You must recollect I reckon this on nearly the best wages in the women's trade. My employer you may call a sweater, and he made money fast, though he drank a good deal. We seldom saw him when he was drunk; but he *did* pitch into us when he was getting sober. Look how easily such a man with apprentices can undersell others when he wants to work as cheap as possible for the great slop warehouses. They serve haberdashers so cheap that oft enough it 's starvation wages for the same shops."

Akin to the system of using a large number of apprentices is that of *employing boys and girls* to displace the work of men, at the less laborious parts of the trade.

"It is probable," said a working shoemaker to me, "that, independent of apprentices, 200 additional hands are added to our already overburdened trade yearly. Sewing boys soon learn the use of the knife. Plenty of poor men will offer to finish them for a pound and a month's work; and men, for a few shillings and a few weeks' work, will teach other boys to sew. There are many of the wives of chamber-masters teach girls entirely to make children's work for a pound and a few months' work, and there are many in Bethnal-green who have learnt the business in this way. These teach some other members of their families, and then actually set up in business in opposition to those who taught them, and in cutting offer their work for sale at a much lower rate of profit; and shopkeepers in town and country, having circulars sent to solicit custom, will have their goods from a warehouse that will serve them cheapest; then the warehouseman will have them cheap from the manufacturer; and he in his turn cuts down the wages of the workpeople, who fear to refuse offers at the warehouse price, knowing the low rate at which chamber-masters will serve the warehouse."

As in all trades where lowness of wages is the rule, the boy system of labour prevails among the cheap cabinet-workers. It prevails, however, among the garret-masters, by very many of them having one, two, three or four youths to help them, and so the number of boys thus employed through the whole trade is considerable. This refers principally to the general cabinet trade. In the fancy trade the number is greater, as the boys' labour is more readily available; but in this trade the greatest number of apprentices is employed by such warehousemen as are manufacturers, as some at the East end are, or rather by the men that they constantly keep at work. Of these men, one has now eight and another fourteen boys in his service, some apprenticed, some merely "engaged" and dischargeable at pleasure. A sharp boy, in six or eight months, becomes "handy;" but four out of five of the workmen thus brought up can do nothing well but their own particular branch, and that only well as far as celerity in production is considered.

It is these boys who are put to make, or as a master of the better class distinguished to me, not to *make* but to put together, ladies' work-boxes at 5*d.* a piece, the boy receiving 2½*d.* a box. 'Such boxes,' said another workman, 'are nailed together; there 's no dove-tailing, nothing of what I call *work*, or workmanship, as you say, about them, but the deal 's nailed together, and the veneer 's dabbed on, and if the deal 's covered, why the thing passes. The worst of it is, that people don't understand either good work or good wood. Polish them up and they look well. Besides—and that 's another bad thing, for it encourages bad work—there 's no stress on a lady's work-box, as on a chair or a sofa, and so bad work lasts far too long, though not half so long as good; in solids especially, if not in veneers."

To such a pitch is this demand for children's labour carried, that there is a market in Bethnal-green, where boys and girls stand twice a week to be hired as binders and sewers. Hence it will be easily understood that it is impossible for the skilled and grown artizan to compete with the labour of mere children, who are thus literally brought into the market to undersell him!

Concerning this market for boys and girls, in Bethnal-green, I received, during my inquiries into the boot and shoe trade, the following statements from shopkeepers on the spot:—

"Mr. H—— has lived there sixteen years. The market-days are Monday and Tuesday mornings, from seven to nine. The ages of persons who assemble there vary from ten to twenty, and they are often of the worst character, and a decideded nuisance to the inhabitants. A great many of both sexes congregate together, and most market days there are three females to one male. They consist of sewing boys, shoe-binders, winders for weavers, and girls for all kinds of slop needlework, girls for domestic work, nursing children, &c. No one can testify, for a fact, that they (the females) are prostitutes; but, by their general conduct, they are fit for anything. The market, some years since, was held at the top of Abbey-street; but, on account of the nuisance, it was removed to the other end of Abbey-street. When the schools were built, the nuisance became so intolerable that it was removed to a railway arch in White-street, Bethnal-green. There are two policemen on market mornings to keep order, but my informant says they require four to maintain anything like subjection."

But *family work, or the conjoint labour of a workman's wife and children*, is an equally extensive cause of surplus and casual labour.

A small master, working, perhaps, upon goods to be supplied at the lowest rates to wholesale warehousemen, will often contribute to this result by the way in which he brings up his children. It is less expensive to him to teach them his own business, and he may even reap a profit from their labour, than to have them brought up to some other calling. I met with an instance of this in an inquiry among the toy-makers. A maker of common toys brought up five children to his own trade, for boys and girls can be made useful in such labour at an early age. His business fell off rapidly, which he attributed to the great and numerous packages of cheap toys imported from Germany, Holland, and France, after the lowering of the duty by Sir Robert Peel's tariff. The chief profit to the toy-maker was derived from the labour, as the material was of trifling cost. He found, on the change in his trade, that he could not employ all his family. His fellow tradesmen, he said, were in the same predicament; and thus surplus hands were created, so leading to casualty in labour.

"The system which has, I believe, the worst effect on the women's trade in the boot and shoe business throughout England is," I said in the *Morning Chronicle*, "chamber-mastering. There are between 300 and 400 chamber-masters. Commonly the man has a wife, and three or four children, ten years old or upwards. The wife cuts out the work for the binders, the husband does the knife-work, the children sew with uncommon rapidity. The husband, when the work is finished at night, goes out with it, though wet and cold, and perhaps hungry—his wife and children waiting his return. He returns sometimes, having sold his work at cost price, or not cleared 1*s.* 6*d.* for the day's labour of himself and family. In the winter, by this means, the shopkeepers and warehouses can take the advantage of the chamber-master, buying the work at their own price. By this means haberdashers' shops are supplied with boots, shoes, and slippers; they can sell women's boots at 1*s.* 9*d.* per pair; shoes, 1*s.* 3*d.* per pair; children's, 6*d.*, 8*d.*, and 9*d.* per pair, getting a good profit, having bought them of the poor chamber-master for almost nothing, and he glad to sell them at any price, late at night, his children wanting bread, and he having walked about for hours, in vain trying to get a fair price for them; thus, women and children labour as well as husbands and fathers, and, with their combined labours, they only obtain a miserable living."

The labour of the wife, and indeed the whole family—family work, as it is called—is attended with the same evil to a trade, introducing a large supply of fresh hands to the labour market, and so tending to glut with workpeople each trade into which they are introduced, and thus to increase the casual labour, and decrease the earnings of the whole.

"The only means of escape from the inevitable poverty," I said in the same letters, "which sooner or later overwhelms those in connection with the cheap shoe trade, seems to the workmen to be by the employment of his whole family as soon as his children are able to be put to the trade—and yet this only increases the very depression that he seeks to avoid. I give the statement of such a man residing in the suburbs of London, and working with three girls to help him:—

"'I have known the business,' he said, 'many years, but was not brought up to it. I took it up because my wife's father was in the trade, and taught me. I was a weaver originally, but it is a bad business, and I have been in this trade seventeen years. Then I had only my wife and myself able to work. At that time my wife and I, by hard work, could earn 1*l.* a week; on the same work we could not now earn 12*s.* a week. As soon as the children grew old enough the falling off in the wages compelled us to put them to work one by one—as soon as a child could make threads. One began to do that between eight and nine. I have had a large family, and with very hard work too. We have had to lie on straw oft enough. Now, three daughters, my wife, and myself work together, in chamber-mastering; the whole of us may earn, one week with another, 28*s.* a week, and out of that I have eight to support. Out of that 28*s.* I have to pay for grindery and candles, which cost me 1*s.* a week the year through. I now make children's shoes for the wholesale houses and anybody. About two years ago I travelled from Thomas-street, Bethnal-green, to Oxford-street, "on the

hawk." I then positively had nothing in my inside, and in Holborn I had to lean against a house, through weakness from hunger. I was compelled, as I could sell nothing at that end of the town, to walk down to Whitechapel at ten at night. I went into a shop near Mile-end turnpike, and the same articles (children's patent leather shoes) that I received 8*s.* a dozen for from the wholesale houses, I was compelled to sell to the shopkeeper for 6*s.* 6*d.* This is a very frequent case—very frequent—with persons circumstanced as I am, and so trade is injured and only some hard man gains by it.'"

Here is the statement of a worker at "fancy cabinet" work on the same subject:—

"The most on us has got large families. We put the children to work as soon as we can. My little girl began about six, but about eight or nine is the usual age." "*Oh, poor little things,*" *said the wife,* "*they are obliged to begin the very minute they can use their fingers at all.*" "The most of the cabinet-makers of the East end have from five to six in family, and they are generally all at work for them. The small masters mostly marry when they are turned of 20. You see our trade's coming to such a pass, that unless a man has children to help him he can't live at all. *I've worked more than a month together, and the longest night's rest I've had has been an hour and a quarter; aye, and I've been up three nights a week besides.* I've had my children lying ill, and been obliged to wait on them into the bargain. You see, we couldn't live if it wasn't for the labour of our children, though it makes 'em—poor little things!—old people long afore they are growed up."

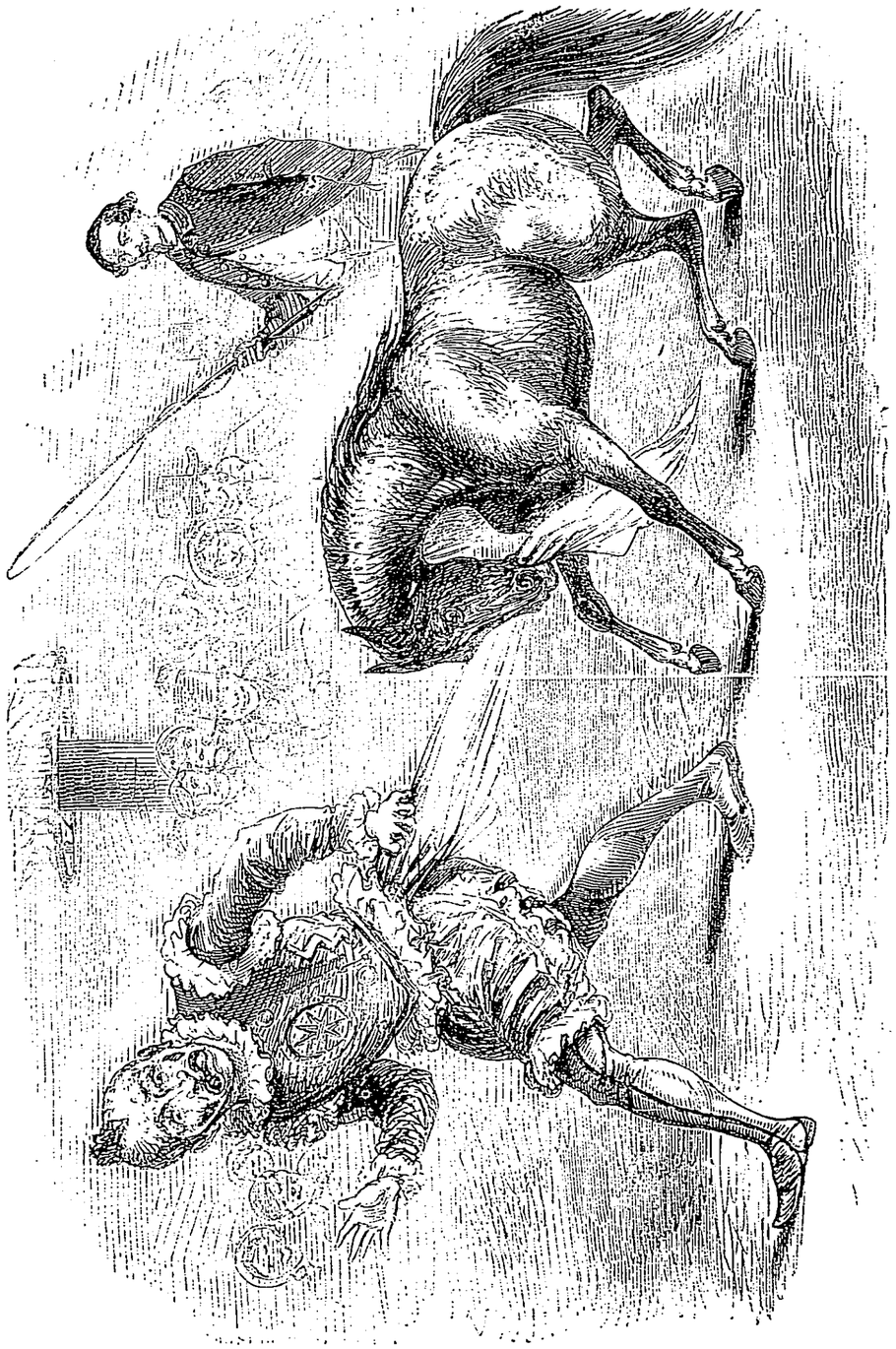
"Why, I stood at this bench," said the wife, "with my child, only ten years of age, from four o'clock on Friday morning till ten minutes past seven in the evening, without a bit to eat or drink. I never sat down a minute from the time I began till I finished my work, and then I went out to sell what I had done. I walked all the way from here [Shoreditch] down to the Lowther Arcade, to get rid of the articles." *Here she burst out in a violent flood of tears, saying,* "*Oh, sir, it is hard to be obliged to labour from morning till night as we do, all of us, little ones and all, and yet not be able to live by it either.*"

"And you see the worst of it is, this here children's labour is of such value now in our trade, that there's more brought into the business every year, so that it's really for all the world *like breeding slaves.* Without my children I don't know how we should be able to get along." "There's that little thing," said the man, pointing to the girl ten years of age before alluded to, as she sat at the edge of the bed, "why she works regularly every day from six in the morning till ten at night. She never goes to school. We can't spare her. There's schools enough about here for a penny a week, but we could not afford to keep her without working. If I'd ten more children I should be obliged to employ them all the same way, and there's hundreds and thousands of children now slaving at this business. There's the M——'s; they have a family of eight, and the youngest to the oldest of all works at the bench; and the oldest ain't fourteen. I'm sure, of the 2500 small masters in the cabinet line, you may safely say that 2000 of them, at the very least, has from five to six in family, *and that's upwards of* 12,000 *children that's been put to the trade since prices has come down.* Twenty years ago I don't think there was a child at work in our business; and I am sure there is not a small master now whose whole family doesn't assist him. But what I want to know is, what's to become of the 12,000 children when they're growed up, and come regular into the trade? Here are all my young ones growing up without being taught anything but a business that I know they must starve at."

In answer to my inquiry as to what dependence he had in case of sickness, "Oh, bless you," he said, "there's nothing but the parish for us. I *did* belong to a Benefit Society about four years ago, but I couldn't keep up my payments any longer. I was in the society above five-and-twenty year, and then was obliged to leave it after all. I don't know of one as belongs to any Friendly Society, and I don't think there is a man as can afford it in our trade now. They must all go to the workhouse when they're sick or old."

The following is from a journeyman tailor, concerning the employment of women in his trade:—

"When I first began working at this branch, there were but very few females employed in it: a few white waistcoats were given out to them, under the idea that women would make them cleaner than men—and so indeed they can. But since the last five years the sweaters have employed females upon cloth, silk, and satin waistcoats as well, and before that time the idea of a woman making a cloth waistcoat would have been scouted. But since the increase of the puffing and the sweating system, masters and sweaters have sought everywhere for such hands as would do the work below the regular ones. Hence the wife has been made to compete with the husband, and the daughter with the wife: they all learn the waistcoat business, and must all get a living. If the man will not reduce the price of his labour to that of the female, why he must remain unemployed; and if the full-grown woman will not take the work at the same price as the young girl, why she must remain without any. The female hands, I can confidently state, have been sought out and introduced to the business by the sweaters, from a desire on their part continually to ferret out hands who will do the work cheaper than others. The effect that this continual reduction has had upon me is this: Before the year 1844 I could live comfortably, and keep my wife and children (I had five in family) by my own labour. My wife then attended to her domestic and family duties; but since that time, owing to the reduction in prices, she has been compelled to resort to her needle, as well as myself, for her living." [On the table was a bundle of crape and bombazine ready to be



CIRCUS CLOWN AT FAIR.

made up into a dress.] "I cannot afford now to let her remain idle—that is, if I wish to live, and keep my children out of the streets, and pay my way. My wife's earnings are, upon an average, 8*s.* per week. She makes dresses. I never would teach her to make waistcoats, because I knew the introduction of female hands had been the ruin of my trade. With the labour of myself and wife now I can only earn 32*s.* a week, and six years ago I could make my 36*s.* If I had a daughter I should be obliged to make her work as well, and then probably, with the labour of the three of us, we could make up at the week's end as much money, as, up to 1844, I could get by my own single hands. My wife, since she took to dressmaking, has become sickly from over-exertion. Her work, and her domestic and family duties altogether, are too much for her. Last night I was up all night with her, and was compelled to call in a female to attend her as well. The over-exertion now necessary for us to maintain a decent appearance, has so ruined her constitution that she is not the same woman as she was. In fact, ill as she is, she has been compelled to rise from her bed to finish a mourning-dress against time, and I myself have been obliged to give her a helping-hand, and turn to at women's work in the same manner as the women are turning to at men's work."

"The cause of the serious decrease in our trade," said another tailor to me, "is the employment given to workmen at their own homes; or, in other words, to the 'sweaters.' The sweater is the greatest evil to us; as the sweating system increases the number of hands to an almost incredible extent—wives, sons, daughters, and extra women, all working 'long days'—that is, labouring from sixteen to eighteen hours per day, and Sundays as well. I date the decrease in the wages of the workman from the introduction of piece-work and giving out garments to be made off the premises of the master; for the effect of this was, that the workman making the garment, knowing that the master could not tell whom he got to do his work for him, employed women and children to help him, and paid them little or nothing for their labour. This was the beginning of the sweating system. The workmen gradually became transformed from journeymen into 'middlemen,' living by the labour of others. Employers soon began to find that they could get garments made at a less sum than the regular price, and those tradesmen who were anxious to force their trade, by underselling their more honourable neighbours, readily availed themselves of this means of obtaining cheap labour. The consequence was, that the sweater sought out where he could get the work done the cheapest, and so introduced a fresh stock of hands into the trade. Female labour, of course, could be had cheaper than male, and the sweater readily availed himself of the services of women on that account. Hence the males who had formerly been employed upon the garments were thrown out of work by the females, and obliged to remain unemployed, unless they would reduce the price of their work to that of the women. It cannot, therefore, be said that the reduction of prices originally arose from there having been more workmen than there was work for them to do. There was no superabundance of hands until female labour was generally introduced—and even if the workmen had increased 25 per cent. more than what they were twenty years back, still that extra number of hands would be required now to make the same number of garments, owing to the work put into each article being at least one-fourth more than formerly. So far from the trade being over-stocked with male hands, if the work were confined to the men or the masters' premises, there would not be sufficient hands to do the whole."

According to the last Census (1841, G.B.), out of a population of 18,720,000 the proportions of the people occupied and unoccupied were as follows:—

Occupied	7,800,000
Unoccupied (including women and children) , ...	10,920,000

Of those who were occupied the following were the proportions:—

Engaged in productive employments*	5,350,000
Engaged in non-productive employments	2,450,000

Of those who were engaged in productive employments, the proportion (in round numbers) ran as follows:—

Men	3,785,000
Women	660,000
Boys and girls . . .	905,000

Here, then, we find nearly one-fifth, or 20 per cent., of our producers to be boys and girls, and upwards of 10 per cent. to be women. Such was the state of things in 1841. In order to judge of the possible and probable condition of the labour market of the country, if this introduction of women and children into the ranks of the labourers be persisted in, let us see what were the proportions of the 10,920,000 men, women, and children who ten years ago still remained unoccupied among us. The ratio was as follows:—

Men	275,000
Women	3,570,000
Boys and girls . . .	7,075,000

Here the unoccupied men are about 5 per cent. of the whole, the children nearly two-thirds, and the wives about one-third. Now it appears that out of say 19,000,000 people, 8,000,000 were, in 1841, occupied, and by far the greater number, 11,000,000, unoccupied.

Who were the remaining eleven millions, and what were they doing? They, of course, consisted principally of the unemployed wives and children of the eight millions of people before specified, three millions and a half of the number

* I have here included those engaged in Trade and Commerce, and employers as well as the employed among the *producers*.

being females of twenty years of age and upwards, and seven millions being children of both sexes under twenty. Of these children, four millions, according to the "age abstract," were under ten years, so that we may fairly assume that, at the time of taking the last census, *there were very nearly seven millions of wives and children of a workable age still unoccupied.* Let us suppose, then, that these seven millions of people are brought in competition with the five million producers. What is to be the consequence? If the labour market be overstocked at present with only five millions of people working for the support of nineteen millions (I speak according to the Census of 1841), what would it be if another seven millions were to be dragged into it? And if wages are low now, and employment is precarious on account of this, what will not both work and pay sink to when the number is again increased, and the people clamouring for employment are at least treble what they are at present? When the wife has been taught to compete for work with the husband, and son and daughter to undersell their own father, what will be the state of our labour market then?

But the labour of wives, and children, and apprentices, is not the only means of glutting a particular trade with hands. There is another system becoming every day more popular with our enterprising tradesmen, and this is the *importation of foreign labourers.* In the cheap tailoring this is made a regular practice. Cheap labour is regularly imported, not only from Ireland (the wives of sweaters making visits to the Emerald Isle for the express purpose), but small armies of working tailors, ready to receive the lowest pittance, are continually being shipped into this country. That this is no exaggeration let the following statement prove:—

"I am a native of Pesth, having left Hungary about eight years ago. By the custom of the country I was compelled to travel three years in foreign parts, before I could settle in my native place. I went to Paris, after travelling about in the different countries of Germany. I stayed in Paris about two years. My father's wish was that I should visit England, and I came to London in June, 1847. I first worked for a West end show shop—not *directly* for them—but through the person who is their middleman getting work done at what rates he could for the firm, and obtaining the prices they allowed for making the garments. I once worked four days and a half for him, finding my own trimmings, &c., for 9*s.* For this my employer would receive 12*s.* 6*d.* He then employed 190 hands; he *has* employed 300. Many of those so employed set their wives, children, and others to work, some employing as many as five hands this way. The middleman keeps his carriage, and will give fifty guineas for a horse. I became unable to work from a pain in my back, from long sitting at my occupation. The doctor told me not to sit much, and so, as a countryman of mine was doing the same, I employed hands, making the best I could of their labour. I have now four young women (all Irish girls) so employed. Last week one of them received 4*s.*, another 4*s.* 2*d.*, the other two 5*s.* each. They find their board and lodging, but I find them a place to work in, a small room, the rent of which I share with another tailor, who works on his own account. There are not so many Jews come over from Hungary or Germany as from Poland. The law of travelling three years brings over many, but not more than it did. The revolutions have brought numbers this year and last. They are Jew tailors flying from Russian and Prussian Poland to avoid the conscription. I never knew any of these Jews go back again. *There is a constant communication among the Jews, and when their friends in Poland, and other places, learn they are safe in England, and in work and out of trouble, they come over too. I worked as a journeyman in Pesth, and got 2s. 6d. a week, my board and washing, and lodging, for my labour.* We lived well, everything being so cheap. The Jews come in the greatest number about Easter. They try to work their way here, most of them. Some save money here, but they never go back; if they leave England it is to go to America."

The labour market of a particular place, however, comes to be overstocked with hands, not only from the introduction of an inordinate number of apprentices and women and children into the trade, as well as the importation of workmen from abroad, but the same effect is produced by *the migration of country labourers to towns.* This, as I have before said, is specially the case in the printer's and carpenter's trades, where the cheap provincial work is executed chiefly by apprentices, who, when their time is up, flock to the principal towns, in the hopes of getting better wages than can be obtained in the country, owing to the prevalence of the apprentice system of work in those parts. The London carpenters suffer greatly from what are called "improvers," who come up to town to get perfected in their art, and work for little or no wages. The work of some of the large houses is executed mainly in this way; that of Mr. Myers was, for instance, against whom the men lately struck.

But the unskilled labour of towns suffers far more than the skilled from the above cause.

The employment of unskilled labourers in towns is being constantly rendered more casual by the migrations from the country parts. The peasants, owing to the insufficiency of their wages, and the wretchedness of their dwellings and diet, in Wilts, Somerset, Dorset, and elsewhere, leave their native places without regret, and swell the sum of unskilled labour in towns. This is shown by the increase of population far beyond the excess of births over deaths in those counties where there are large manufacturing or commercial towns; whilst in purely agricultural counties the increase of population does not keep pace with the excess of births. "Thus in Lancashire," writes Mr. Thornton, in his work on Over-Population, "the increase of the population in the ten years ending in 1841, was 330,210, and in Cheshire, 60,919; whilst the excess of

births was only 150,150 in the former, and 26,000 in the latter. In particular towns the contrast is still more striking. In Liverpool and Bristol the annual deaths actually exceed the births, so that these towns are only saved from depopulation by their rural recruits, yet the first increased the number of its inhabitants in ten years by more than one-third, and the other by more than one-sixth. In Manchester, the annual excess of births could only have added 19,290 to the population between 1831 and 1841; the actual increase was 68,375. The number of emigrants (immigrants) into Birmingham, during the same period, may, in the same way, be estimated at 40,000; into Leeds, at 8000; into the metropolis, at 130,000. On the other hand, in Dorset, Somerset, and Devon, the actual addition to the population, in the same decennial period, was only 15,491, 31,802, and 39,253 respectively; although the excess of births over deaths in the same counties was about 20,000, 38,600, and 45,700."

The unskilled labour market suffers, again, from the depression of almost any branch of skilled labour; for whatever branch of labour be depressed, and men so be deprived of a sufficiency of employment, one especial result ensues—the unskilled labour market is glutted. The skilled labourer, a tailor, for instance, may be driven to work for the wretched pittance of an East end slop-tailor, but he cannot "turn his hand" to any other description of skilled labour. He cannot say, "I will make billiard-tables, or book-cases, or boots, or razors;" so that there is no resource for him but in unskilled labour. The Spitalfields weavers have often sought dock labour; the turners of the same locality, whose bobbins were once in great demand by the silk-winders, and for the fringes of upholsterers, have done the same; and in this way the increase of casual labour increases the poverty of the poor, and so tends directly to the increase of pauperism.

We have now seen what a vast number of surplus labourers may be produced by an extension of time, rate, or mode of working, as well as by the increase of the hands, by other means than by *the increase of the people themselves.* If, however, we are increasing our workers at a greater rate than we are increasing the means of work, the excess of workmen must, of course, remain unemployed. But are we doing this?

Let us test the matter on the surest data. In the first instance let us estimate the increase of population, both according to the calculations of the late Mr. Rickman and the returns of the several censuses. The first census, I may observe, was taken in 1801, and has been regularly continued at intervals of ten years. The table first given refers to the population of England and Wales:—

INCREASE IN THE POPULATION OF ENGLAND AND WALES.

Years.	Population, England and Wales.	Numerical Increase.	Increase per Cent.	Annual Increase per cent.	Increase per Cent. in 50 Years, from 1801 to 1851 = 101.	Annual average increase per Cent., 1·41.
*1570	4,038,879					
1600	4,811,718	772,839	19	0·6		
630	5,601,517	789,799	16	0·5		
1670	5,773,646	172.129	3	0·08		
1700	6,045,008	271,362	5	0·2		
1750	6,517,035	472,027	8	0·2		
†1801	8,892,536	2,375.501	37	0·7		
1811	10,164,068	1,271.532	14	1·4		
1821	11,999,322	1,835.250	18	1·8		
1831	13,896,797	1,897,475	16	1·6		
1841	15,914,148	1,982,489	14	1·4		
1851	17,922.768	1,968,341	13	1·3		

* The amount of the population from 1570 to 1750, as here given, is copied from Rickman's tables, as published by the Registrar-General.

† The population at the decennial term, as here given, is the amended calculation of the Registrar-General, as given in the new census tables.

INCREASE IN THE POPULATION OF SCOTLAND.

Years.	Population, Scotland.	Numerical Increase.	Increase per Cent.	Annual Increase per Cent.	Increase per Cent. in 50 years, from 1801 to 1851 = 78.	Annual rate of Increase per Cent., 1·16.
*1755	1,265,380					
†1801	1,608,420	343,040	27	0·6		
1811	1,805,864	197.444	12	1·3		
1821	2,091,512	285.657	16	1·6		
1831	2,364,386	272,865	13	1·3		
1841	2,620,184	255,798	11	1·1		
1851	2,870,784	245,237	10	1·0		

* From returns furnished by the clergy.

† The returns here cited are copied from those given by the Registrar-General in the new census.

INCREASE IN THE POPULATION OF IRELAND

Years.	Population, Ireland.	Numerical Increase and Decrease. † denotes Increase. * ,, Decrease.	Increase and Decrease per Cent.	Annual rate of Increase and Decrease per Cent.	Total Decrease in 30 Years, from 1821 to 1851 = 4 per Cent.	Annual rate of Decrease for 30 Years, from 1821 to 1851. ·1 per Cent.
1731[a]	2,010,221					
1754[b]	2,372,634	† 362,413	†19			
1767	2,544,276	† 171,642	† 7			
1777	2,690,556	† 146,280	† 6			
1785	2,845,932	† 155,376	† 6			
1788	4,040,000	†1,194,068	†42			
1805[c]	5,395,456	†1,355,456	†34			
1813[d]	5,937,858	† 542,402	†10			
1821[e]	6,801,827	† 863,969	†15	†1·4		
1831	7,767,401	† 965,574	†14	†1·3		
1841	8,175,124	† 407,723	† 5	† ·5		
1851	6,515,794	*1,659,330	*20	*1·8		

[a] Returns obtained through an inquiry instituted by the Irish House of Lords.
[b] The population from 1754–1788 is estimated from the "hearth money" returns.
[c] Newenham's Inquiry into the Population of Ireland.
[d] Estimate from incomplete census.
[e] First complete census.

INCREASE IN THE POPULATION OF THE UNITED KINGDOM.

Years.	Population.	Numerical Increase.	Decennial Increase per Cent.	Annual Increase per Cent.	Increase in 30 years, from 1821 to 1851 = 31 per Cent.	Annual Rate of Increase ·9 per Cent.
1821	20,892,670					
1831	24,028,584	3,135,914	15	1·4		
1841	26,709,456	2,680,872	11	1·1		
1851	27,309,346	599,890	2	0·2		

Discarding, then, all conjectural results, and adhering solely to the returns of the censuses, we find that, according to the official numberings of the people *throughout the kingdom*, the increased rate of population is, in round numbers, 10 per cent. every ten years; that is to say, where 100 persons were living in the United Kingdom in 1821, there are 130 living in the present year of 1851. The average increase in England and Wales for the last 50 years may, however, be said to be 1·5 per cent. per annum, the population having doubled itself during that period.

How, then, does this rate of increase among the people, and consequently the labourers and artizans of the country, correspond with the rate of increase in the production of commodities, or, in plain English, the means of employment? *This* is the main inquiry.

The only means of determining the total amount of commodities produced, and consequently the quantity of work done in the country, is from official returns, submitted to the Parliament and the public as part of the "revenue" of the kingdom. These afford a broad and accurate basis for the necessary statistics; and to get rid of any speculating or calculating on the subject, I will confine my notice to such commodities; giving, however, further information bearing on the subject, but still derived from official sources, so that there may be no doubt on the matter. The facts in connection with this part of the subject are exhibited in the table given in the next page.

The majority of the articles there specified supply the elements of trade and manufacture in furnishing the materials of our clothing, in all its appliances of decency, comfort, and luxury. The table relates, moreover, to our commerce with other countries—to the ships which find profitable employment, and give such employment to our people, in the aggregate commerce of the nation. Under almost every head, it will be seen, the increase in the means of labour has been more extensive than has the increase in the number of labourers; in some instances the difference is wide indeed.

The annual rate of increase among the population has been ·9 per cent. From 1801 to 1841 the population of the kingdom at the outside cannot be said to have doubled itself. Yet the productions in cotton goods *were not less than ten times greater in* 1851 *than in* 1801. The increase in the use of wool from 1821 to 1851 was more than sixfold; that of the population, I may repeat, *not* twofold. In *twenty* years (1831 to 1851) the hides were more than doubled in amount as a means of production; in *fifty* years the population has not increased to the same amount. Can any one, then, contend that the labouring population has extended itself at a greater rate than the means of labour, or that the vast mass of surplus labour throughout the country is owing to the working classes having increased more rapidly than the means of employing them?

Thus, it is evident, that the means of labour

TABLE SHOWING THE INCREASE IN THE PRODUCTIONS AND COMMERCE OF THE UNITED KINGDOM, FROM 1801–1850.

† denotes increase. * ,, decrease.	1801.	1811.	Increase and Decrease per Cent. from 1801 to 1811.	1821.	Increase per Cent. from 1811 to 1821.	1831.	Increase and Decrease per Cent. from 1821 to 1831.	1841.	Increase per Cent. from 1831 to 1841.	1850.	Increase per Cent. from 1841 to 1850.	Total Increase per Cent.	Average Annual Increase per Cent.
Soap ..... in lbs.	55,500,000	80,000,000	†44	97,000,000	†21	127,500,000	†31	170,500,000	†34	205,000,000	20	269	5·3
Cotton ..... ,,	56,000,000	92,000,000	†64	137,000,000	†49	273,000,000	†99	437,000,000	†60	664,700,000	52	1087	21·7
Wool ..... ,,	....	.....	..	10,000,000	..	30,000,000	†200	53,000,000	†77	72,675,000	37	627	20·9
Silk ..... ,,	1,000,000	1,500,000	†50	2,250,000	†50	4,250,000	†89	5,000,000	†18	7,159,000	43	616	12·3
Flax ..... ,,	....	....	..	55,000,000	..	104,000,000	†89	151,000,000	†45	204,000,000	35	271	9·0
Hemp ..... ,,	....	....	..	....	..	56,500,000	..	73,000,000	†29	117,447,000	61	166	5·4
Hides ..... ,,	....	....	..	....	..	26,000,000	..	51,000,000	†96	66,300,000	30	155	7·7
Official Value of Exports[a] in £	24,500,000	21,750,000	*11	40,250,000	†85	60,000,000	†49	101,750,000	†79	197,309,000	94	705	14·1
Official Value of Imports ,,	....	25,500,000	..	29,750,000	†17	49,250,000	†62	62,750,000	†30	100,400,000	60	294	7·3
Tonnage of Vessels belonging to British Empire	....	....	..	2,560,203	..	2,501,964	† 1	3,512,480	†36	4,232,962	21	65	2·2
Tonnage of Vessels entering Ports	....	....	..	1,695,000	..	3,241,927	†71	4,629,575	†44	7,110,476	53	274	9·1

[a] The *official* value was established long ago; it represents a price put upon merchandise or commodities; it is in reality a fixed value, and serves to indicate the relative extent of imports and exports in different years. The *declared* value is simply the market price.

have increased at a more rapid pace than the labouring population. But the increase in "property" of the country, in that which is sometimes called the "staple" property, being the assured possessions of the class of proprietors or capitalists, as well as in the profits, prove that, if the labourers of the country have been hungering for want of employment, at least the wealth of the nation has kept pace with the increase of the people, while the profits of trade have exceeded it.

Amount of the Property and Income of Great Britain.

Year.	Property assessed to Property-tax.	Annual Profits of Trade.
1815 . .	£60,000,000	£37,000,000
1842 . .	95,250,000	
1844 . .	.....	60,000,000
Increase . .	58 per cent.	
,, . .	.....	62 per cent.
Annual rate of increase . . .	1·7 per cent.	1·7 per cent.

Here, then, we find, that the property assessed to the property tax has increased 35,250,000*l.* in 27 years, from 1815 to 1842, or upwards of 1,000,000*l.* sterling a year; this is at the rate of 1·7 per cent. every year, whereas the population of Great Britain has increased at the rate of only 1·4 per cent. per annum. But the amount of assessment under the property tax, it should be borne in mind, does not represent the full value of the possessions, so that among this class of proprietors there is far greater wealth than the returns show.

As regards the annual profits of trade, the increase between the years 1815 and 1844 has been 23,000,000*l.* in 29 years. This is at the rate of 1·7 per cent. per annum, and the annual increase in the population of Great Britain is only 1·4 per cent. But the amount of the profits of trade is unquestionably greater than appears in the financial tables of the revenue of the country; consequently there is a greater increase of wealth over population than the figures indicate.

The above returns show the following results:—

	Increase per Cent. per Ann.
Population of the United Kingdom .	·9
Productions from	21 to 5
Exports	14
Imports	5
Shipping entering Ports . . .	9
Property	1·7
Profits of trade	1·7

Far, very far indeed then, beyond the increase of the population, has been the increase of the wealth and work of the country.

And now, after this imposing array of wealth, let us contemplate the reverse of the picture: let us inquire if, while we have been increasing in riches and productions far more rapidly than we have been increasing in people and producers—let us inquire, I say, if we have been numerically increasing also in the sad long lists of paupers and criminals. Has our progress in poverty and crime been "*pari passu*," or been more than commensurate in the rapidity of its strides?

TABLE SHOWING THE NUMBER OF PAUPERS IN ENGLAND AND WALES.*

Years.	Number of Paupers relieved, Quarters ending Lady-day.	Numerical Increase and Decrease. † denotes Increase. * ,, Decrease.	Annual Increase and Decrease per Cent.	Increase per Cent. from 1840 to 1848 = 56. Annual Increase, 7 per Cent.
1840	1,199,529			
1841	1,299,048	† 99,519	† 8	
1842	1,427,187	†128,139	†10	
1843	1,539,490	†112,303	† 8	
1844	1,477,561	†938,071	†60	
1845	1,470,970	* 6,591	* 0·4	
1846	1,332,089	* 38,881	* 3	
1847	1,721,350	†389.261	†29	
1848	1,876,541	†155,191	† 9	

Here, then, we have an increase of 56 per cent. in less than ten years, though the increase of the population of England and Wales, in the same time, was but 13 per cent.; and let it be remembered that the increase of upwards of 650,000 paupers, in nine years, has accrued since the New Poor Law has been in what may be considered full working; a law which many were confident would result in a diminution of pauperism, and which certainly cannot be charged with offering the least encouragement to it. Still in *nine* years, our poverty increases while our wealth increases, and our paupers grow nearly four times as quick as our people, while the profits on trade nearly double themselves in little more than a quarter of a century.

We now come to the records of criminality:—

TABLE SHOWING THE INCREASE IN THE NUMBER OF CRIMINALS IN ENGLAND AND WALES FROM 1805-1850.

	Annual Average Number of Criminals Committed.	Numerical Increase.	Decennial Increase per Cent.	Annual Increase per Cent.	Increase per Cent. in the 43 years.	
1805	4,605					
1811	5,375	770	17	2·8		Annual Average Increase per Cent., 11·7.
1821	9,733	4408	82	8·2	504	
1831	15,318	5535	57	5·7		
1841	22,305	6987	46	4·6		
1850	27,814	5509	25	3·6		

From these results—and such figures are facts, and therefore stubborn things—the people cannot be said to have increased beyond the wealth or the means of employing them, for it is evident that *we increase in poverty and crime as we increase in wealth, and in both far beyond our increase in numbers.* The above are the bare facts of the country—it is for the reader to explain them as he pleases.

As yet we have dealt with those causes of casual labour only which may induce a surplusage of labourers without any *decrease taking place in the quantity of work.* We have seen, first, how the number of the unemployed may be increased either by altering the hours, rate, or mode of working, or else by changing the term of hiring, and this while the number of labourers remains the same; and, secondly, we have seen how the same results may ensue from increasing the number of labourers, while the conditions of working and hiring are unaltered. Under both these circumstances, however, the actual quantity of work to be done in the country has been supposed to undergo no change whatever; and at present we have to point out not only how the amount of surplus, and, consequently, of casual labour, in the kingdom, may be increased by *a decrease of the work,* but also how the work itself may be made to decrease. To know the causes of the one we must ascertain the antecedents of the other. What, then, are the circumstances inducing a decrease in the quantity of work? and, consequently, what the circumstances inducing an increase in the amount of surplus and casual labour?

In the first place we may induce a large amount of casual labour *in particular districts,* not by decreasing the gross quantity of work required by the country, but by merely shifting the work into new quarters, and so decreasing the quantity in the ordinary localities. "The west of England," says Mr. Dodd, in his account of the textile manufactures of Great Britain, "was formerly, and continued to be till a comparatively recent period, the most important clothing district in England. The changes which the woollen manufacture, as respects both localization and mode of management, has been and is now undergoing, are very remarkable. Some years ago the 'west of England cloths' were the test of excellence in this manufacture; while the productions of Yorkshire were deemed of a coarser and cheaper character. At present, although the western counties have not deteriorated in their product, the West Riding of Yorkshire has made giant strides, by which equal skill in every department has been attained; while the commercial advantages resulting from coal-mines, from water-power, from canals and railroads, and from vicinage to the eastern port of Hull and the western port of Liverpool, give to the West Riding a power which Gloucestershire and Somersetshire cannot equal. The steam-engine, too, and various machines for facilitating some of the manufacturing processes, have been more readily introduced into the former than into the latter; a circumstance which, even without reference to other points of comparison, is sufficient to account for much of the recent advance in the north."

Of late years the products of many of the west of England clothing districts have considerably declined. Shepton Mallet, Frome and Trowbridge, for instance, which were at one time the seats of a flourishing manufacture for cloth, have now but little employment for the workmen in those parts; and so with other towns. "At several places in Wiltshire, Somersetshire, and Gloucestershire, and others of the western counties," says Mr. Thornton, "most of the cottagers, fifty years ago, were weavers, whose chief dependence was their looms, though they worked in the field at harvest time and other busy seasons. By so doing they kept down the wages of agricultural labourers, who had no other employment; and now that they have themselves become dependent upon agriculture, in consequence of the removal of the woollen manufacture from the cottage to the factory" [as well as to the north of England], "these reduced wages have become their own portion also;" or, in other words, since the shifting of the woollen manufacture in these parts, the quantity of casual labour in the cultivation of the land has been augmented.

The same effect takes place, of course, if the work be shifted to the Continent, instead of merely to another part of our own country. This has been the main cause of the misery of the straw-plaiters of Buckinghamshire and Bedfordshire. "During the last war," says the author before quoted, "there were examples of women (the wives and children of labouring men) earning as much as 22*s.* a week. The profits of this employment have been so much reduced by the competition of Leghorn hats and bonnets, that a straw-plaiter cannot earn much more than 2*s.* 6*d.* in the week."

But the work of particular localities may not only decrease, and the casual labour, in those parts, increase in the same proportion, by shifting it to other localities (either at home or abroad), even while the gross quantity of work required by the nation remains the same, but the quantity of work may be less than ordinary at *a particular time,* even while the same gross quantity annually required undergoes no change. This is the case in those periodical gluts which arise from overproduction, in the cotton and other trades. The manufacturers, in such cases, have been increasing the supplies at a too rapid rate in proportion to the demand of the markets, so that, though there be no decrease in the requirements of the country, there ultimately accrues such a surplus of commodities beyond the wants and means of the people, that the manufacturers are compelled to stop producing until such time as the regular demand carries off the extra supply. And during all this time either the labourers have to work half-time at half-pay, or else they are thrown out of employment altogether.

Thus far we have proceeded in the assumption that the actual quantity of work required by the nation *does not decrease in the aggregate, but only in particular places or at particular times,* owing to a greater quantity than usual being done in other places or at other times *. We have still to consider what are the circumstances which tend to *diminish the gross quantity of work required by the country.* To understand these we must know the conditions on which all work depends; these are simply the conditions of demand and supply, and hence to know what it is that regulates the demand for commodities, and what it is that regulates the supply of them, is also to know what it is that regulates the quantity of work required by the nation.

Let me begin with the decrease of work arising from a *decrease of the demand* for certain commodities. This decrease of demand may proceed from one of three causes:—

1. An increase of cost.
2. A change of taste or fashion.
3. A change of circumstances.

The *increase of cost* may be brought about either by an increase in the expense of production or by a tax laid upon the article, as in the case of hair-powder, before quoted. Of the *change of taste or fashion,* as a means of decreasing the

* The official returns as to the number of paupers are most incomplete and unsatisfactory. In the 10th annual Report of the Poor Law Commissioners, p. 480 (1844), a table is printed which is said to give the returns from the earliest period for which authentic Parliamentary documents have been received, and this sets forth the number of paupers in England and Wales, for the *entire twelve months* in the years 1803, 1813, 1814, and 1815; then comes a long interval of "no returns," and after 1839 we have the numbers for only *three months* in each year, from 1840 up to 1843; in the first annual Report (1848) these returns for one quarter in each year are continued up to 1848; and then we get the returns for only two days in each year, the 1st of July and the 1st of January, so that to come to any conclusion amid so much inconsistency is utterly impossible. The numbers above given would have been continued to the present period, could any comparison have been instituted. The numbers for the periods (not above given) are—

1803	1,040,716	Number of paupers for the entire twelve months.
1813	1,426,065	
1814	1,402,576	
1815	1,319,851	
1849 (1st Jan.)	940,851	Number of paupers for two separate days in each year.
,, (1st July)	846,988	
850 (1st Jan.)	889,830	
,, (1st July)	796,318	
851 (1st Jan.)	829,440	

* It might at first appear that, when the work is shifted to the Continent, there would be a proportionate decrease of the aggregate quantity at home, but a little reflection will teach us that the foreigners must take something from us in *exchange* for their work, and so increase the quantity of our work in certain respects as much as they depress it in others.

demand for a certain article of manufacture, and, consequently, of a particular form of labour, many instances have already been given; to these the following may be added:—"In Dorsetshire," says Mr. Thornton, "the making of wire shirt-buttons (now in a great measure superseded by the use of mother-o'-pearl) once employed great numbers of women and children." So it has been with the manufacture of metal coat-buttons; the change to silk has impoverished hundreds.

The decrease of work arising from a *change of circumstances* may be seen in the fluctuations of the iron trade; in the railway excitement the demand for labour in the iron districts was at least tenfold as great as it is at present, and so again with the demand for arms during war time; at such periods the quantity of work in that particular line at Birmingham is necessarily increased, while the contrary effects, of course, ensue immediately the requirements cease, and a large mass of surplus and casual hands is the result. It is the same with the soldiers themselves, as with the gun and sword makers; on the disbanding of certain portions of the army at the conclusion of a war, a vast amount of surplus labourers are poured into the country to compete with those already in work, and either to drag down their weekly earnings, or else, by obtaining *casual* employment in their stead, to reduce the gross quantity of work accruing to each, and so to render their incomes not only less in amount but less constant and regular. Within the last few weeks no less than 1000 policemen employed during the Exhibition have been discharged, of course with a like result to the labour market.

The circumstances tending to *diminish the supply* of certain commodities, are—

1. Want of capital.
2. Want of materials.
3. Want of labourers.
4. Want of opportunity.

The *decrease of the quantity of capital* in a trade may be brought about by several means: it may be produced by a want of security felt among the moneyed classes, as at the time of revolutions, political agitations, commercial depressions, or panics; or it may be produced by a deficiency of enterprise after the bursting of certain commercial "bubbles," or the decline of particular manias for speculation, as on the cessation of the railway excitement; so, again, it may be brought about by a failure of the ordinary produce of the year, as with bad harvests.

The *decrease of the quantity of materials*, as tending to diminish the supply of certain commodities, may be seen in the failure of the cotton crops, which, of course, deprive the cotton manufacturers of their ordinary quantity of work. The same diminution in the ordinary supply of particular articles ensues when the men engaged in the production of them "strike" either for an advance of wages, or more generally to resist the attempt of some cutting employer to reduce their ordinary earnings; and lastly, a like decrease of work necessarily ensues when the *opportunity of working is changed*. Some kinds of work, as we have already seen, depend on the weather—on either the wind, rain, or temperature; while other kinds can only be pursued at certain seasons of the year, as brick-making, building, and the like; hence, on the cessation of the opportunities for working in these trades, there is necessarily a great decrease in the quantity of work, and consequently a large increase in the amount of surplus and therefore casual labour.

We have now, I believe, exhausted the several causes of that vast national evil—casual labour. We have seen that it depends,

First, upon certain times and seasons, fashions and accidents, which tend to cause a periodical briskness or slackness in different employments;

And secondly, upon the number of surplus labourers in the country.

The circumstances inducing surplus labour we have likewise ascertained to be three.

1. An alteration in the hours, rate, or mode of working, as well as in the mode of hiring.
2. An increase of the hands.
3. A decrease of the work, either in particular places, at particular times, or in the aggregate, owing to a decrease either in the demand or means of supply.

Any one of these causes, it has been demonstrated, must necessarily tend to induce an over supply of labourers and consequently a casualty of labour, for it has been pointed out that an over supply of labourers does not depend *solely* on an increase of the workers beyond the means of working, but that a decrease of the ordinary quantity of work, or a general increase of the hours or rate of working, or an extension of the system of production, or even a diminution of the term of hiring, will also be attended with the same result—facts which should be borne steadily in mind by all those who would understand the difficulties of the times, and which the "economists" invariably ignore.

On a careful revision of the whole of the circumstances before detailed, I am led to believe that there is considerable truth in the statement lately put forward by the working classes, that only one-third of the operatives of this country are fully employed, while another third are partially employed, and the remaining third wholly unemployed; that is to say, estimating the working classes as being between four and five millions in number, I think we may safely assert—considering how many depend for their employment on particular times, seasons, fashions, and accidents, and the vast quantity of over-work and scamp-work in nearly all the cheap trades of the present day, the number of women and children who are being continually drafted into the different handicrafts with the view of reducing the earnings of the men, the displacement of human labour in some cases by machinery, and the tendency to increase the division of labour, and to extend the large system of production beyond the requirements of the markets, as well as the temporary mode of hiring—all these things being considered, I say I believe we may safely conclude that, out of the four million five hundred thousand people who have to depend on their industry for the livelihood of themselves and families, there is (owing to the extraordinary means of economizing labour which have been developed of late years, and the discovery as to how to do the work of the nation with fewer people) barely sufficient work for the *regular* employment of half of our labourers, so that only 1,500,000 are fully and constantly employed, while 1,500,000 more are employed only half their time, and the remaining 1,500,000 wholly unemployed, obtaining a day's work *occasionally* by the displacement of some of the others.

Adopt what explanation we will of this appalling deficiency of employment, one thing at least is certain: we cannot *consistently with the facts of the country*, ascribe it to an increase of the population beyond the means of labour; for we have seen that, while the people have increased during the last fifty years at the rate of ·9 per cent. per annum, the wealth and productions of the kingdom have far exceeded that amount.

Of the Casual Labourers among the Rubbish-Carters.

The casual labour of so large a body of men as the rubbish-carters is a question of high importance, for it affects the whole unskilled labour market. And this is one of the circumstances distinguishing unskilled from skilled labour. Unemployed cabinet-makers, for instance, do not apply for work to a tailor; so that, with skilled labourers, only one trade is affected in the slack season by the scarcity of employment among its operatives. With unskilled labourers it is otherwise. If in the course of next week 100 rubbish-carters were from any cause to be thrown out of employment, and found an impossibility to obtain work at rubbish-carting, there would be 100 fresh applicants for employment among the bricklayer's-labourers, scavagers, nightmen, sewermen, dock-workers, lumpers, &c. Many of the 100 thus unemployed would, of course, be willing to work at reduced wages merely that they might subsist; and thus the hands employed by the regular and "honourable" part of those trades are exposed to the risk of being underworked, as regards wages, from the surplusage of labour in other unskilled occupations.

The employment of the rubbish-carters depends, in the first instance, upon the *season*. The services of the men are called into requisition when houses are being built or removed. In the one case, the rubbish-carters cart away the refuse earth; in the other they remove the old materials. The *brisk season* for the builders, and consequently for the rubbish-carters, is, as I heard several of them express it, "when days are long." From about the middle of April to the middle of October is the *brisk* season of the rubbish-carters, for during those six months more buildings are erected than in the winter half of the year. There is an advantage in fine weather in the masonry becoming *set;* and efforts are generally made to complete at least the carcase of a house before the end of October, at the latest.

I am informed that the difference in the employment of labourers about buildings is 30 per cent.—one builder estimated it at 50 per cent.—less in winter than in summer, from the circumstance of fewer buildings being then in the course of erection. It may be thought that, as rubbish-carters are employed frequently on the foundation of buildings, their business would not be greatly affected by the season or the weather. But the work is often more difficult in wet weather, the ground being heavier, so that a smaller extent of work only can be accomplished, compared to what can be done in fine weather; and an employer may decline to pay six days' wages for work in winter, which he might get done in five days in summer. If the men work by the piece or the load the result is the same; the rubbish-carter's employer has a smaller return, for there is less work to be charged to the customer, while the cost in keeping the horses is the same.

Thus it appears that under the most favourable circumstances about *one-fourth* of the rubbish-carters, even in the honourable trade, may be exposed to the evils of non-employment merely from the state of the weather influencing, more or less, the custom of the trade, and this even during *the* six months' employment out of the year; after which the men must find some other means of earning a livelihood.

There are, in round numbers, 850 operative rubbish-carters employed in the brisk season throughout the metropolis; hence 212 men, at this calculation, would be regularly deprived of work every year for six months out of the twelve. It will be seen, however, on reference to the table here given, that the average number of weeks each of the rubbish-carters is employed throughout the twelve months is far below 26; indeed many have but three and four weeks work out of the 52.

By an analysis of the returns I have collected on this subject I find the following to have been the actual term of employment for the several rubbish-carters in the course of last year:—

Men.	Employment in the Year.	
9 had	39 weeks, or	9 months.
·214 „	26 „	6 „
4 „	20 „	5 „
10 „	18 „	
28 „	16 „	4 „
8 „	14 „	
353 „	13 „	3 „
4 „	12 „	
34 „	10 „	
29 „	9 „	
38 „	8 „	2 „
38 „	6 „	
27 „	5 „	
45 „	4 „	1 „
15 „	3 „	
856		

Hence about one-fourth of the trade appear to have been employed for six months, while upwards of one-half had work for only three months or less throughout the year—many being at work only three days in the week during that time.

The rubbish-carter is exposed to another casualty over which he can no more exercise control than he can over the weather; I mean to what is generally called *speculation*, or a rage for building. This is evoked by the state of the money market, and other causes upon which I need not dilate; but the effect of it upon the labourers I am describing is this: capitalists may in one year embark sufficient means in building speculations to erect, say 500 new houses, in any particular district. In the following year they may not erect more than 200 (if any), and thus, as there is the same extent of unskilled labour in the market, the number of hands required is, if the trade be generally less speculative, less in one year than in its predecessor by the number of rubbish-carters required to work at the foundations of 300 houses. Such a cause may be exceptional; but during the last ten years the inhabited houses in the five districts of the Registrar-General have increased to the extent of 45.000, or from 262,737 in 1841, to 307,722 in 1851. It appears, then, that the annual increase of our metropolitan houses, concluding that they increase in a regular yearly ratio, is 4500. Last year, however, as I am informed by an experienced builder, there were rather fewer buildings erected (he spoke only from his own observations and personal knowledge of the business) than the yearly average of the decennial term.

The casual and constant wages of the rubbish-carters may be thus detailed. The whole system of the labour, I may again state, must be regarded as *casual*, or—as the word imports in its derivation from the Latin *casus*, a chance—the labour of men who are occasionally employed. Some of the most respectable and industrious rubbish-carters with whom I met, told me they generally might make up their minds, though they might have excellent masters, to be six months of the year unemployed at rubbish-carting; this, too, is less than the average of this chance employment.

Calculating, then, the rubbish-carter's receipt of *nominal wages* at 18*s.*, and his *actual wages* at 20*s.* in the honourable trade, I find the following amount to be paid.

By nominal wages, I have before explained, I mean what a man is *said* to receive, or has been *promised* that he shall be paid weekly. Actual wages, on the other hand, are what a man positively *receives*, there being sometimes additions in the form of perquisites or allowances; sometimes deductions in the way of fines and stoppages; the additions in the rubbish-carting trade appear to average about 2*s.* a week. But these *actual wages* are received only so long as the men are employed, that is to say, they are the *casual* rather than the *constant* earnings of the men working at a trade, which is essentially of an occasional or temporary character; the average employment at rubbish-carting being only three months in the year.

Let us see, therefore, what would be the constant earnings or income of the men working at the better-paid portion of the trade.

	£	*s.*	*d.*
The gross actual wages of ten rubbish-carters, casually employed for 39 weeks, at 20*s.* per week, amount to	390	0	0
The gross actual wages of 250 rubbish-carters, casually employed for 26 weeks, at 20*s.* per week .	6500	0	0
The gross actual wages of 360 rubbish-carters, casually employed for 13 weeks, at 20*s.* per week .	4600	0	0
Total gross actual wages of 620 of the better-paid rubbish-carters .	11,490	0	0

But this, as I said before, represents only the *casual* wages of the better-paid operatives—that is to say, it shows the amount of money or money's worth that is positively received by the men while they are in employment. To understand what are the *constant* wages of these men, we must divide their gross casual earnings by 52, the number of weeks in the year: thus we find that the constant wages of the ten men who were employed for 39 weeks, were 15*s.* instead of 20*s.* per week—that is to say, their wages, equally divided throughout the year, would have yielded that constant weekly income. By the same reasoning, the 20*s.* per week casual wages of the 250 men employed for 26 weeks out of the 52, were equal to only 10*s.* constant weekly wages; and so the 360 men, who had 20*s.* per week casually for only three months in the year, had but 5*s.* a week *constantly* throughout the whole year. Hence we see the enormous difference there may be between a man's casual and his constant earnings at a given trade.

The next question that forces itself on the mind is, how do the rubbish-carters live when no longer employed at this kind of work?

When the slack season among rubbish-carters commences, nearly one-fifth of the operatives are discharged. These take to scavaging or dustman's work, as well as that of navigators, or, indeed, any form of unskilled labour, some obtaining full employ, but the greater part being able to "get a job only now and then." Those masters who keep their men on throughout the year are some of them large dust contractors, some carmen, some dairymen, and (in one or two instances in the suburbs, as at Hackney) small farmers. The dust-contractors and carmen, who are by far the more numerous, find employment for the men employed by them as rubbish-carters in the season, either at the dust-yard or carrying sand, or, indeed, carting any materials they may have to move—the wages to the men remaining the same; indeed such is the transient character of the rubbish-carting trade, that there are no masters or operatives who devote themselves solely to the business.

The Effects of Casual Labour in General.

Having now pointed out the causes of casual labour, I proceed to set forth its effects.

All casual labour, as I have said, is necessarily *uncertain* labour; and wherever uncertainty exists, there can be no foresight or pro-vidence. Had the succession of events in nature been irregular,—had it been ordained by the Creator that similar causes under similar circumstances should *not* be attended with similar effects,—it would have been impossible for us to have had any knowledge of the future, or to have made any preparations concerning it. Had the seasons followed each other fitfully,—had the sequences in the external world been variable instead of invariable, and what are now termed "constants" from the regularity of their succession been changed into inconstants,—what provision could even the most prudent of us have made? Where all was dark and unstable, we could only have guessed instead of reasoned as to what was to come; and who would have deprived himself of present enjoyments to avoid future privations, which could appear neither probable nor even possible to him? Pro-vidence, therefore, is simply the result of certainty, and whatever tends to increase our faith in the uniform sequences of outward events, as well as our reliance on the means we have of avoiding the evils connected with them, necessarily tends to make us more prudent. Where the means of sustenance and comfort are fixed, the human being becomes conscious of what he has to depend upon; and if he feel *assured* that such means may fail him in old age or in sickness, and be fully impressed with the *certainty* of suffering from either, he will immediately proceed to make some provision against the time of adversity or infirmity. If, however, his means be *uncertain*—abundant at one time, and deficient at another—a spirit of speculation or gambling with the future will be induced, and the individual get to believe in "luck" and "fate" as the arbiters of his happiness rather than to look upon himself as "the architect of his fortunes"—trusting to "chance" rather than his own powers and foresight to relieve him at the hour of necessity. The same result will necessarily ensue if, from defective reasoning powers, the ordinary course of nature be not sufficiently apparent to him, or if, being in good health, he grow too confident upon its continuance, and, either from this or other causes, is led to believe that death will overtake him before his powers of self-support decay.

The ordinary effects of uncertain labour, then, are to drive the labourers to improvidence, recklessness, and pauperism.

Even in the classes which we do not rank among labourers, as, for instance, authors, artists, musicians, actors, uncertainty or irregularity of employment and remuneration produces a spirit of wastefulness and carelessness. The steady and daily accruing gains of trade and of some of the professions form a certain and staple income; while in other professions, where a large sum may be realized at one time, and then no money be earned until after an interval, incomings are rapidly spent, and the interval is one of suffering. This is part of the very nature, the very essence, of the casualty of employment and the delay of remuneration. The past privation gives a zest to the present enjoyment; while the present enjoyment renders the past privation faint as a remembrance and unimpressive as a warning. "Want of providence," writes Mr. Porter, "on the part of those who live by the labour of their hands, and whose employments so often depend upon circumstances beyond their control, is a theme which is constantly brought forward by many whose lot in life has been cast beyond the reach of want. It is, indeed, greatly to be wished, for their own sakes, that the habit were general among the labouring classes of saving some part of their wages when fully employed, against less prosperous times; but it is difficult for those who are placed in circumstances of ease to *estimate the amount of virtue that is implied in this self-denial.* It must be a hard trial for one who has recently, perhaps, seen his family enduring want, to deny them the small amount of indulgences, which are, at the best of times, placed within their reach."

It is easy enough for men in smooth circumstances to say, "the privation is a man's own fault, since, to avoid it, he has but to apportion the sum he may receive in a lump over the interval of non-recompense which he knows will follow." Such a course as this, experience and human nature have shown not to be easy—perhaps, with a few exceptions, not to be possible. It is the starving and not the well-fed man that is in danger of surfeiting himself. When pestilence or revolution are rendering life and property *casualties* in a country, the same spirit of improvident recklessness breaks forth. In London, on the last visitation of the plague, in the reign of Charles II., a sort of Plague Club indulged in the wildest excesses in the very heart of the pestilence. To these orgies no one was admitted who had not been bereft of some relative by the pest. In Paris, during the reign of terror in the first revolution, the famous Guillotine Club was composed of none but those who had lost some near relative by the guillotine. When they met for their half-frantic revels every one wore some symbol of death: breast pins in the form of guillotines, rings with death's-heads, and such like. The duration of their own lives these Guillotine Clubbists knew to be uncertain, not merely in the ordinary uncertainty of nature, but from the character of the times; and this feeling of the jeopardy of existence, from the practice of violence and bloodshed, wrought the effects I have described. Life was more than naturally casual. When the famine was at the worst in Ireland, it was remarked in the *Cork Examiner*, that in that city there never had been seen more street "larking" or street gambling among the poor lads and young men who were really starving. This was a natural result of the casualty of labour and the consequent casualty of food. Persons, it should be remembered, do not insure houses or shops that

are "doubly or trebly hazardous;" they gamble on the uncertainty.

Mr. Porter, in his "Progress of the Nation," cites a fact bearing immediately upon the present subject.

"The formation of a canal, which has been in progress during the last five years, in the north of Ireland (this was written in 1847), has afforded steady employment to a portion of the peasantry, who before that time were suffering all the evils, so common in that country, which result from the precariousness of employment. Such work as they could previously get came at uncertain intervals, and was sought by so many competitors, that the remuneration was of the scantiest amount. In this condition of things the men were improvident, to recklessness; their wages, insufficient for the comfortable sustenance of their families, were wasted in procuring for themselves a temporary forgetfulness of their misery at the whiskey-shop, and the men appeared to be sunk into a state of hopeless degradation. From the moment, however, that work was offered to them which was *constant in its nature and certain in its duration*, and on which their weekly earnings would be sufficient to provide for their comfortable support, *men who had been idle and dissolute were converted into sober hard-working labourers, and proved themselves kind and careful husbands and fathers;* and it is stated as a fact, that, notwithstanding the distribution of several hundred pounds weekly in wages, the whole of which must be considered as so much additional money placed in their hands, the consumption of whiskey was absolutely and *permanently* diminished in the district. During the comparatively short period in which the construction of this canal was in progress, some of the most careful labourers—men who most probably before then never knew what it was to possess five shillings at any one time—saved sufficient money to enable them to emigrate to Canada."

There can hardly be a stronger illustration of the blessing of constant and the curse of casual labour. We have competence and frugality as the results of one system; poverty and extravagance as the results of the other; and among the very same individuals.

In the evidence given by Mr. Galloway, the engineer, before a parliamentary committee, he remarks, that "when employers are competent to show their men that their business is *steady and certain*, and when men find that they are likely to have *permanent* employment, they have always *better habits and more settled notions*, which will make them *better men* and *better workmen*, and will produce great benefits to all who are interested in their employment."

Moreover, even if payment be assured to a working man regularly, *but deferred for long intervals*, so as to make the returns lose all appearance of regularity, he will rarely be found able to resist the temptation of a tavern, and, perhaps, a long-continued carouse, or of some other extravagance to his taste, when he receives a month's dues at once. I give an instance of this in the following statement:—

For some years after the peace of 1815 the staffs of the militias were kept up, but not in any active service. During the war the militias performed what are now the functions of the regular troops in the three kingdoms, their stations being changed more frequently than those of any of the regular regiments at the present day. Indeed, they only differed from the "regulars" in name. There was the same military discipline, and the sole difference was, that the militia-men—who were balloted for periodically—could not, by the laws regulating their embodiment, be sent out of the United Kingdom for purposes of warfare. The militias were embodied for twenty-eight days' training, once in four years (seldom less) after the peace, and the staff acted as the drill sergeants. They were usually steady, orderly men, working at their respective crafts when not on duty after the militia's disembodiment, and some who had not been brought up to any handicraft turned out—perhaps from their military habits of early rising and orderliness—very good gardeners, both on their own account and as assistants in gentlemen's grounds. No few of them saved money. Yet these men, with very few exceptions, when they received a month's pay, fooled away a part of it in tippling and idleness, to which they were not at all addicted when attending regularly to their work with its regular returns. If they got into any trouble in consequence of their carousing, it was looked upon as a sort of legitimate excuse, "Why you see, sir, it was the 24th" (the 24th of each month being the pension day).

The thoughtless extravagance of sailors when, on their return to port, they receive in one sum the wages they have earned by severe toil amidst storms and dangers during a long voyage, I need not speak of; it is a thing well known.

These soldiers and seamen cannot be said to have been *casually* employed, but the results were the same as if they had been so employed; the money came to them in a lump at so long an interval as to appear uncertain, and was consequently squandered.

I may cite the following example as to the effects of uncertain earnings upon the household outlay of labourers who suffer from the casualties of employment induced by the season of the year. "In the long fine days of summer, the little daughter of a working brickmaker," I was told, "used to order chops and other choice dainties of a butcher, saying, 'Please, sir, father don't care for the price just a-now; but he must have his chops good; line-chops, sir, and tender, please—'cause he's a brickmaker.' In the winter, it was, 'O please, sir, here's a fourpenny bit, and you must send father something cheap. He don't care what it is, so long as it's cheap. It's winter, and he hasn't no work, sir—'cause he 's a brickmaker.'"

I have spoken of the tendency of casual labour to induce intemperate habits. In confirmation of this I am enabled to give the following account as to the increase of the sale of malt liquor in the metropolis *consequent upon wet weather*. The account is derived from the personal observations of a gentleman long familiar with the brewing trade, in connection with one of the largest houses. In short, I may state that the account is given on the very best authority.

There are *nine* large brewers in London; of these the two firms transacting the greatest extent of business supply, daily, 1000 barrels each firm to their customers; the seven others, among them, dispose, altogether, of 3000 barrels daily. All these 5000 barrels a day are solely for town consumption; and this may be said to be the *average* supply the year through, but the public-house sale is far from regular.

After a wet day the sale of malt liquor, principally beer (porter), to the metropolitan retailers is from 500 to 1000 barrels more than when a wet day has not occurred; that is to say, the supply increases from 5000 barrels to 5500 and 6000. Such of the publicans as keep small stocks go the next day to their brewers to order a further supply; those who have better-furnished cellars may not go for two or three days after, but the result is the same.

The reason for this increased consumption is obvious; when the weather prevents workmen from prosecuting their respective callings in the open air, they have recourse to drinking, to pass away the idle time. Any one who has made himself familiar with the habits of the working classes has often found them crowding a public-house during a hard rain, especially in the neighbourhood of new buildings, or any public open-air work. The street-sellers, themselves prevented from plying their trades outside, are busy in such times in the "publics," offering for sale braces, belts, hose, tobacco-boxes, nuts of different kinds, apples, &c. A bargain may then be struck for so much and a half-pint of beer, and so the consumption is augmented by the trade in other matters.

Now, taking 750 barrels as the average of the extra sale of beer in consequence of wet weather, we have a consumption beyond the demands of the ordinary trade in malt liquor of 27,000 gallons, or 216,000 pints. This, at 2*d.* a pint, is 1800*l.* for a day's needless, and often prejudicial, outlay caused by the casualty of the weather and the consequent casualty of labour. A censor of morals might say that these men should go home under such circumstances; but their homes may be at a distance, and may present no great attractions; the single men among them may have no homes, merely sleeping-places; and even the more prudent may think it advisable to wait awhile under shelter in hopes of the weather improving, so that they could resume their labour, and only an hour or so be deducted from their wages. Besides, there is the attraction to the labourer of the warmth, discussion, freedom, and excitement of the public-house.

That the great bulk of the consumers of this *additional* beer are of the classes I have mentioned is, I think, plain enough, from the increase being experienced only in that beverage, the consumption of gin being little affected by the same means. Indeed, the statistics showing the ratio of beer and gin-drinking are curious enough (were this the place to enter into them), the most gin, as a general rule, being consumed in the most depressed years.

"It is a fact worth notice," said a statistical journal, entitled "Facts and Figures," published in 1841, "as illustrative of the *tendency of the times of pressure to increase spirit drinking*, that whilst under the privations of last year (1840) the poorer classes paid 2,628,286*l.* tax for spirits; in 1836, a year of the greatest prosperity, the tax on British spirits amounted only to 2,390,188*l.* *So true is it that to impoverish is to demoralise.*"

The numbers who imbibe, in the course of a wet day, these 750 barrels, cannot, of course, be ascertained, but the following calculations may be presented. The class of men I have described rarely have spare money, but if known to a landlord, they probably may obtain credit until the Saturday night. Now, putting their *extra* beer-drinking on wet days—for on fine days there is generally a pint or more consumed daily per working man—putting, I say, the *extra* potations at a pot (quart) each man, we find *one hundred and eight thousand* consumers (out of 2,000,000 people, or, discarding the women and children, not 1,000,000)! A number doubling, and trebling, and quadrupling the male adult population of many a splendid continental city.

Of the data I have given, I may repeat, no doubt can be entertained; nor, as it seems to me, can any doubt be entertained that the increased consumption is directly attributable to the casualty of labour*.

Of the Scurf Trade among the Rubbish-Carters.

Before proceeding to treat of the cheap or "scurf" labourers among the rubbish-carters, I shall do as I have done in connection with the casual labourers of the same trade, say a few words on that kind of labour in general, both as to the means by which it is usually obtained and as to the distinctive qualities of the scurf or low-priced labourers; for experience teaches me that the mode by which labour is cheapened is more or less similar in all trades, and it will therefore save much time and space if I here—as with the casual labourers—give the general facts in connection with this part of my subject.

In the first place, then, there are but two direct modes of cheapening labour, viz.:—

1. By making the workmen do *more* work for the *same* pay.

2. By making them do the *same* work for *less* pay.

The first of these modes is what is technically termed "*driving*," especially when effected by compulsory "overwork;" and it is called the "economy of labour" when brought about by more elaborate and refined processes, such as the division of labour, the large system of production, the invention

* The Great Exhibition, I am informed, produced a very small effect on the consumption of porter; and, according to the official returns, 160,000 gallons less spirits were consumed in the first nine months of the present year, than in the corresponding months of the last: thus showing that any occupation of mind or body is incompatible with intemperate habits, for drunkenness is essentially the vice of idleness, or want of something better to do.

of machinery, and the *temporary*, as contradistinguished from the *permanent*, mode of hiring.

Each of these modes of making workmen do *more* work for the *same* pay, can but have the same depressing effect on the labour market, for not only is the *rate* of remuneration (or ratio of the work to the pay) reduced when the operative is made to do a greater quantity of work for the same amount of money, but, unless the means of disposing of the extra products be proportionately increased, it is evident that just as many workmen must be displaced thereby as the increased term or rate of working exceeds the extension of the markets; that is to say, if 4000 workpeople be made to produce each twice as much as formerly (either by extending the hours of labour or increasing their rate of labouring), then if the markets or means of disposing of the extra products be increased only one-half, 1000 hands must, according to Cocker, be deprived of their ordinary employment; and these competing with those who are in work will immediately tend to reduce the wages of the trade generally, so that not only will the *rate* of wages be decreased, since each will have more work to do, but the actual earnings of the workmen will be diminished likewise.

Of the economy of labour itself, as a means of cheapening work, there is no necessity for me to speak here. It is, indeed, generally admitted, that to economize labour without proportionally extending the markets for the products of such labour, is to deprive a certain number of workmen of their ordinary means of living; and under the head of casual labour so many instances have been given of this principle that it would be wearisome to the reader were I to do other than allude to the matter at present. There are, however, several other means of causing a workman to do more than his ordinary quantity of work. These are:—

1. By extra supervision when the workmen are paid by the day. Of this mode of increased production an instance has already been cited in the account of the strapping-shops given at p. 304, vol. ii.
2. By increasing the workman's interest in his work; as in piece-work, where the payment of the operative is made proportional to the quantity of work done by him. Of this mode examples have already been given at p. 303, vol. ii.
3. By large quantities of work given out at one time; as in "lump-work" and "contract work."
4. By the domestic system of work, or giving out materials to be made up at the homes of the workpeople.
5. By the middleman system of labour.
6. By the prevalence of small masters.
7. By a reduced rate of pay, as forcing operatives to labour both longer and quicker, in order to make up the same amount of income.

Of several of these modes of work I have already spoken, citing facts as to their pernicious influence upon the greater portion of those trades where they are found to prevail. I have already shown how, by extra supervision—by increased interest in the work—as well as by decreased pay, operatives can be made to do more work than they otherwise would, and so be the cause, unless the market be proportionately extended, of depriving some of their fellow-labourers of their fair share of employment. It now only remains for me to set forth the effect of those modes of employment which have not yet been described, viz., the domestic system, the middleman system, and the contract and lump system, as well as the small-master system of work.

Let me begin with the first of the last-mentioned modes of cheapening labour, viz., *the domestic system of work*.

I find, by investigation, that in trades where the system of working on the master's premises has been departed from, and a man is allowed to take his work home, there is invariably a tendency to cheapen labour. These home workers, whenever opportunity offers, will use other men's ill-paid labour, or else employ the members of their family to enhance their own profits.

The domestic system, moreover, naturally induces *over-work and Sunday-work, as well as tends to change journeymen into trading operatives, living on the labour of their fellow-workmen*. When the work is executed off the master's premises, of course there are neither definite hours nor days for labour; and the consequence is, the generality of home workers labour early and late, Sundays as well as week-days, availing themselves at the same time of the co-operation of their wives and children; thus the trade becomes overstocked with workpeople by the introduction of a vast number of new hands into it, as well as by the overwork of the men themselves who thus obtain employment. When I was among the tailors, I received from a journeyman to whom I was referred by the Trades' Society as the one best able to explain the causes of the decline of that trade, the following lucid account of the evils of this system of labour:—

"The principal cause of the decline of our trade is the employment given to workmen at their own homes, or, in other words, to the 'sweaters.' The sweater is the greatest evil in the trade; as the sweating system increases the number of hands to an almost incredible extent—wives, sons, daughters, and extra women, all working 'long days'—that is, labouring from sixteen to eighteen hours per day, and Sundays as well. By this system two men obtain as much work as would give employment to three or four men working regular hours in the shop. Consequently, the sweater being enabled to get the work done by women and children at a lower price than the regular workman, obtains the greater part of the garments to be made, while men who depend upon the shop for their living are obliged to walk about idle. A greater quantity of work is done under the sweating system at a lower price. I consider that the decline of my trade dates from the change of day-work into piece-work. According to the old system, the



PHOTOGRAPHIC SALOON, EAST END OF LONDON.

From a Sketch.

No. 59.

journeyman was paid by the day, and consequently must have done his work under the eye of his employer. It is true that work was given out by the master before the change from day-work to piece-work was regularly acknowledged in the trade. But still it was morally impossible for work to be given out and not be paid by the piece. *Hence I date the decrease in the wages of the workman from the introduction of piece-work, and giving out garments to be made off the premises of the master.* The effect of this was, that the workman making the garment, knowing that the master could not tell whom he got to do his work for him, employed women and children to help him, and paid them little or nothing for their labour. This was the beginning of the sweating system. The workmen gradually became transformed from journeymen into 'middlemen,' living by the labour of others. Employers soon began to find that they could get garments made at a less sum than the regular price, and those tradesmen who were anxious to force their trade, by underselling their more honourable neighbours, readily availed themselves of this means of obtaining cheap labour."

' The *middleman system of work* is so much akin to the domestic system, of which, indeed, it is but a necessary result, that it forms a natural addendum to the above. Of this indirect mode of employing workmen, I said, in the *Chronicle*, when treating of the timber-porters at the docks:—

"The middleman system is the one crying evil of the day. Whether he goes by the name of 'sweater,' 'chamber-master,' 'lumper,' or contractor, it is this *trading operative* who is the great means of reducing the wages of his fellow working-men. To make a profit out of the employment of his brother operatives he must, of course, obtain a lower class and, consequently, cheaper labour. Hence it becomes a *business* with him to hunt out the lowest grades of working men—that is to say, those who are either morally or intellectually inferior in the craft—the drunken, the dishonest, the idle, the vagabond, and the unskilful; these are the instruments that he seeks for, because, these being unable to obtain employment at the regular wages of the sober, honest, industrious, and skilful portion of the trade, he can obtain their labour at a lower rate than what is usually paid. Hence drunkards, tramps, men without character or station, apprentices, children—all suit him. Indeed, the more degraded the labourers, the better they answer his purpose, for the cheaper he can get their work, and consequently the more he can make out of it.

"'Boy labour or thief labour,' said a middleman, on a large scale, to me, 'what do I care, so long as I can get my work done cheap?' That this *taking out* of cheap and inferior labour really takes place, and is a necessary consequence of the middleman system, we have merely to look into the condition of any trade where it is extensively pursued. I have shown, in my account of the tailors' trade printed in the *Chronicle*, that the wives of the sweaters not only parade the streets of London on the look-out for youths raw from the country but that they make periodical trips to the poorer provinces of Ireland, in order to obtain workmen at the lowest possible rate. I have shown, moreover, that foreigners are annually imported from the Continent for the same purpose, and that among the chamber-masters in the shoe trade, the child-market at Bethnal-green, as well as the workhouses, are continually ransacked for the means of obtaining a cheaper kind of labour. All my investigations go to prove, that it is chiefly by means of this middleman system that the wages of the working men are reduced. It is this contractor—this trading operative—who is invariably the prime mover in the reduction of the wages of his fellow-workmen. He uses the most degraded of the class as a means of underselling the worthy and skilful labourers, and of ultimately dragging the better down to the abasement of the worst. He cares not whether the trade to which he belongs is already overstocked with hands, for, be those hands as many as they may, and the ordinary wages of his craft down to bare subsistence point, it matters not a jot to him; *he* can live solely by reducing them still lower, and so he immediately sets about drafting or importing a fresh and cheaper stock into the trade. If *men* cannot subsist on lower prices, then he takes apprentices, or hires children; if women of chastity cannot afford to labour at the price he gives, then he has recourse to prostitutes; or if workmen of character and worth refuse to work at less than the ordinary rate, then he seeks out the moral refuse of the trade—those whom none else will employ; or else he flies, to find labour meet for his purpose, to the workhouse and the gaol. Backed by this cheap and refuse labour, he offers his work at lower prices, and so keeps on reducing and reducing the wages of his brethren, until all sink in poverty, wretchedness, and vice. Go where we will, look into whatever poorly-paid craft we please, we shall find this *trading operative,* this *middleman* or contractor, at the bottom of the degradation."

The "contract system" or "lump work," as it is called, is but a corollary, as it were, of the foregoing; for it is an essential part of the middleman system, that the work should be obtained by the trading operative in large quantities, so that those upon whose labour he lives should be kept continually occupied, and the more, of course, that he can obtain work for, the greater his profit. When a quantity of work, usually paid for by the piece, is given out at one time, the natural tendency is for the piece-work to pass into lump-work; that is to say, if there be in a trade a number of distinct parts, each requiring, perhaps, from the division of labour, a distinct hand for the execution of it, or if each of these parts bear a different price, it is frequently the case that the master will contract with some one workman for the execution of the whole, agreeing to give a certain price for the job "in the lump," and allowing the workman to get whom he pleases to execute it. This is the case with the piece-working masters in the coach-building trade; but it is not essential to the contract or

lump system of work, that other hands should be employed; the main distinction between it and piece-work being that the work is given out in large quantities, and a certain allowance or reduction of price effected from that cause alone.

It is this contract or lump work which constitutes the great evil of the carpenter's, as well as of many other trades; and as in those crafts, so in this, we find that the lower the wages are reduced the greater becomes the number of trading operatives or middlemen. For it is when workmen find the difficulty of living by their labour increased that they take to scheming and trading upon the labour of their fellows. In the slop trade, where the pay is the worst, these creatures abound the most; and so in the carpenter's trade, where the wages are the lowest—as among the speculative builders—there the system of contracting and sub-contracting is found in full force.

Of this contract or lump work, I received the following account from the foreman to a large speculating builder, when I was inquiring into the condition of the London carpenters:—

"The way in which the work is done is mostly by letting and subletting. The masters usually prefer to let work, because it takes all the trouble off their hands. They know what they are to get for the job, and of course they let it as much under that figure as they possibly can, all of which is clear gain without the least trouble. How the work is done, or by whom, it's no matter to them, so long as they can make what they want out of the job, and have no bother about it. Some of our largest builders are taking to this plan, and a party who used to have one of the largest shops in London has within the last three years discharged all the men in his employ (he had 200 at least), and has now merely an office, and none but clerks and accountants in his pay. He has taken to letting his work out instead of doing it at home. The parties to whom the work is let by the speculating builders are generally working men, and these men in their turn look out for other working men, who will take the job cheaper than they will; and so I leave you, sir, and the public to judge what the party who really executes the work gets for his labour, and what is the quality of work that he is likely to put into it. The speculating builder generally employs an overlooker to see that the work is done sufficiently well to pass the surveyor. That's all he cares about. Whether it's done by thieves, or drunkards, or boys, it's no matter to him. The overlooker, of course, sees after the first party to whom the work is let, and this party in his turn looks after the several hands that he has sublet it to. The first man who agrees to the job takes it in the lump, and he again lets it to others in the piece. I have known instances of its having been let again a third time, but this is not usual. The party who takes the job in the lump from the speculator usually employs a foreman, whose duty it is to give out the materials and to make working drawings. The men to whom it is sublet only find labour, while the 'lumper,' or first contractor, agrees for both labour and materials. It is usual in contract work, for the first party who takes the job to be bound in a large sum for the due and faithful performance of his contract. He then, in his turn, finds out a sub-contractor, who is mostly a small builder, who will also bind himself that the work shall be properly executed, and there the binding ceases—those parties to whom the job is afterwards let, or sublet, employing foremen or overlookers to see that their contract is carried out. The first contractor has scarcely any trouble whatsoever; he merely engages a gentleman, who rides about in a gig, to see that what is done is likely to pass muster. The sub-contractor has a little more trouble; and so it goes on as it gets down and down. Of course I need not tell you that the first contractor, who does the *least* of all, gets the *most* of all; while the poor wretch of a working man, who positively executes the job, is obliged to slave away every hour, night after night, to get a bare living out of it; and this is the contract system."

A tradesman, or a speculator, will contract, for a certain sum, to complete the skeleton of a house, and render it fit for habitation. He will sublet the flooring to some working joiner, who will, in very many cases, take it on such terms as to allow himself, by working early and late, the regular journeymen's wages of 30*s.* a week, or perhaps rather more. Now this sub-contractor cannot complete the work within the requisite time by his own unaided industry, and he employs men to assist him, often subletting again, and such assistant men will earn perhaps but 4*s.* a day. It is the same with the doors, the staircases, the balustrades, the window-frames, the room-skirtings, the closets; in short, all parts of the building.

The subletting is accomplished without difficulty. Old men are sometimes employed in such work, and will be glad of any remuneration to escape the workhouse; while stronger workmen are usually sanguine that by extra exertion, "though the figure is low, they may make a tidy thing out of it after all." In this way labour is cheapened. "Lump" work, "piece" work, work by "the job," are all portions of the contract system. The principle is the same. "Here is this work to be done, what will you undertake to do it for?"

In number after number of the *Builder* will be found statements headed "Blind Builders." One firm, responding to an advertisement for "estimates" of the building of a church, sends in an offer to execute the work in the best style for 5000*l.* Another firm may offer to do it for somewhere about 3000*l.* The first-mentioned firm would do the work well, paying the "honourable" rate of wages. The under-working firm *must* resort to the scamping and subletting system I have alluded to. It appears that the building of churches and chapels, of all denominations, is one of the greatest encouragement to slop, or scamp, or under-paid work. The same system prevails in many trades with equally pernicious effects.

"If you will allow me," says a correspondent, "I would state that there is one cause of hardship

and suffering to the labouring or handicraftsman, which, to my mind, is far more productive of distress and poor-grinding than any other, or than all other causes put together: I allude to the *contract* system, and especially in reference to printing. Depend upon it, sir, the father of wickedness himself could not devise a more malevolent or dishonest course than that now very generally pursued by those who should be, of all others, the friends of the poor and working man. The Government and the great West-end clubs have reduced their transactions to such a low level in this respect that it seems to be the only question with them, Who will work lowest or supply goods at the lowest figure? And this, too, totally irrespective of the circumstance whether it may not reduce wages or bankrupt the contractor. No matter whether a party who has executed the work required for years be noted for paying a fair and remunerating price to his workmen or sub-tradesmen, and bears the character of a responsible and trustworthy man—all this is as nothing; for somebody, who may be, for aught that is cared, deficient in all these points, will do what is needful at *so much* less; and then, unless willing to reduce the wage of his workpeople, the long-employed tradesman has but the alternative of losing his business or cheating his creditors. And then, to give a smack to the whole affair, the 'Stationery Office' of the Government, or the committee of the club, will congratulate themselves and their auditors on the fact that a diminution in expenses has been effected; a result commemorated perhaps by an addition of salary to the officials in the former case, and of a 'cordial vote of thanks' in the latter. I do not write 'without book,' I can assure you, on these matters; for I have long and earnestly watched the subject, and could fill many a page with the details."

Of the ruinous effects of the contract system in connection with the army clothing, Mr. Pearse, the army clothier, gave the following evidence before the Select Committee on Army and Navy Appointments.

"When the contract for soldier's great coats was opened, Mr. Maberly took it at the same price (13*s.*) in December, 1808; this shows the effect of wild competition. In February following, Esdailes' house, who were accoutrement makers, and not clothiers, got knowledge of what was Mr. Maberly's price, and *they* tendered at 12*s.* 6½*d.* a month afterwards; it was evidently then a struggle for the price, and how the quality the least good (if we may use such a term) could pass. Mr. Maberly did not like to be outbidden by Esdailes; *Esdailes topped subsequently*, and Mr. Maberly bid 12*s.* 6*d.* Three months after, and Mr. Dixon bid again, and got the contract for 11*s.* 3*d.* in October, and in December of that year another public tender took place, and Messrs. A. and D. Cock took it at 11*s.* 5½*d.*, *and they subsequently broke.* It went on in this sort of way,—changing hands every two or every three months, by bidding against each other. Presently, though it was calculated that the great coat was to wear four years, it was found that *those great coats were so inferior in quality, that they wore only two years*, and representations were accordingly made to the Commander-in-Chief, when it was found necessary that great care should be taken to go back to the original good quality that had been established by the Duke of York."

Mr. Shaw, another army clothier, and a gentleman with whose friendship, I am proud to say, I have been honoured since the commencement of my inquiries—a gentleman actuated by the most kindly and Christian impulses, and of whom the workpeople speak in terms of the highest admiration and regard; this gentleman, impressed with a deep sense of the evils of the contract system to the under-paid and over-worked operatives of his trade, addressed a letter to the Chairman of the Committee on Army, Navy, and Ordnance Estimates, from which the following are extracts:—

"My Lord, my object more particularly is, to request your lordship will submit to the committee, *as an evidence of the evils of contracts*, the great coat sent herewith, made similar to those supplied to the army, and I would respectfully appeal to them as men, gentlemen, *as Christians*, whether *fivepence*, the price now being given to poor females for making up those coats, is a fair and just price for six, seven, and eight hours' work. . . . My Lord, *the misery amongst the workpeople is most distressing*—of a mass of people, *willing to work*, who cannot obtain it, and of a mass, especially women, most iniquitously paid for their labour, who are in a state of oppression disgraceful to the Legislature, the Government, the Church, and the consuming public. . . . . I would, therefore, most humbly and earnestly call upon your lordship, and the other members of the committee, to recommend an *immediate stop to be put to the system of contracting* now pursued by the different government departments, as being one of false economy, as a system most *oppressive to the poor*, and *being most injurious*, in every way, to the best *interests of the country*."

In another place the same excellent gentleman says:—

"I could refer to the screwing down of other things by the government authorities, but the above will be sufficient to show *how cruelly the workpeople employed in making up this clothing are oppressed; and some of the men will tell you they are tired of life. Last week I found one man making a country police coat, who said his wife and child were out begging.*"

The last mentioned of the several modes of cheapening labour is the "*small-master system*" of work, that is to say, the operatives taking to make up materials on their own account rather than for capitalist employers. In every trade where there are *small* masters, trades into which it requires but little capital to embark, there is certain to be a cheapening of labour. Such a man works himself, and to get work, to meet the exigences of the rent and the demands of the collectors of the parliamentary and parochial taxes, he will often underwork the very journeymen whom he occasionally employs, doing "the job" in such

cases with the assistance of his family and apprentices, at a less rate of profit than the amount of journeymen's wages.

Concerning these garret masters I said, when treating of the Cabinet trade, in the *Chronicle*, "The cause of the extraordinary decline of wages in the Cabinet trade (even though the hands decreased and the work increased to an unprecedented extent) will be found to consist in the increase that has taken place within the last 20 years of what are called 'garret masters' in the cabinet trade. These garret masters are a class of small 'trade-working masters,' the same as the 'chamber masters' in the shoe trade, supplying both capital and labour. They are in manufacture what 'the peasant proprietors' are in agriculture—their own employers and their own workmen. There is, however, this one marked distinction between the two classes—the garret master cannot, like the peasant proprietor, *eat* what he produces; the consequence is, that he is obliged to convert each article into food immediately he manufactures it—no matter what the state of the market may be. The capital of the garret master being generally sufficient to find him in materials for the manufacture of only one article at a time, and his savings being but barely enough for his subsistence while he is engaged in putting those materials together, he is compelled, the moment the work is completed, to part with it for whatever he can get. He cannot afford to keep it even a day, for to do so is generally to remain a day unfed. Hence, if the market be at all slack, he has to force a sale by offering his goods at the lowest possible price. What wonder, then, that the necessities of such a class of individuals should have created a special race of employers, known by the significant name of 'slaughter-house men'—or that these, being aware of the inability of the 'garret masters' to hold out against any offer, no matter how slight a remuneration it affords for their labour, should continually lower and lower their prices, until the entire body of the competitive portion of the cabinet trade is sunk in utter destitution and misery? Moreover, it is well known how strong is the stimulus among peasant proprietors, or, indeed, any class working for themselves, to extra production. So it is, indeed, with the garret masters; their industry is almost incessant, and hence a greater quantity of work is turned out by them, and continually forced into the market, than there would otherwise be. What though there be a brisk and a slack season in the cabinet-maker's trade as in the majority of others?—slack or brisk, the garret masters must produce the same excessive quantity of goods. In the hope of extricating himself from his overwhelming poverty, he toils on, producing more and more—and yet the more he produces the more hopeless does his position become; for the greater the stock that he thrusts into the market, the lower does the price of his labour fall, until at last, he and his whole family work for less than half what he himself could earn a few years back by his own unaided labour."

The small-master system of work leads, like the domestic system, with which, indeed it is intimately connected, to the employment of wives, children, and apprentices, as a means of assistance and extra production—for as the prices decline so do the small masters strive by further labour to compensate for their loss of income.

Such, then, are the several modes of work by which labour is cheapened. There are, as we have seen, but two ways of *directly* effecting this, viz., first by making men do more work for the same pay, and secondly, by making them do the same work for less pay. The way in which men are made to do more, it has been pointed out, is, by causing them either to work longer or quicker, or else by employing fewer hands in proportion to the work; or engaging them only for such time as their services are required, and discharging them immediately afterwards. These constitute the several modes of economizing labour, which lowers the rate of remuneration (the ratio of the pay to the work) rather than the pay itself. The several means by which this result is attained are termed "systems of work, production, or engagement," and such are those above detailed.

Now it is a necessity of these several systems, though the actual amount of remuneration is not directly reduced by them, that a cheaper labour should be obtained for carrying them out. Thus, in contract or lump work, perhaps, the price may not be immediately lowered; the saving to the employer consisting chiefly in supervision, he having in such a case only one man to look to instead of perhaps a hundred. The contractor, or lumper, however, is differently situated; he, in order to reap any benefit from the contract, must, since he cannot do the whole work himself, employ others to help him, and to reap any benefit from the contract, this of course must be done at a lower price than he himself receives; so it is with the middleman system, where a profit is derived from the labour of other operatives; so, again, with the domestic system of work, where the several members of the family, or cheaper labourers, are generally employed as assistants; and even so is it with the small-master system, where the labour of apprentices and wives and children is the principal means of help. Hence the operatives adopting these several systems of work are rather the instruments by which cheap labour is obtained than the cheap labourers themselves. It is true that a sweater, a chamber master, or garret master, a lumper or contractor, or a home worker, generally works cheaper than the ordinary operatives, but this he does chiefly by the cheap labourers he employs, and then, finding that he is able to underwork the rest of the trade, and that the more hands he employs the greater becomes his profit, he offers to do work at less than the usual rate. It is not a necessity of the system that the middleman operative, the domestic worker, the lumper, or garret master should be himself underpaid, but simply that he should employ others who are so, and it is thus that such systems of work tend to cheapen the labour of those trades in which they are found to prevail. Who, then, are the cheap labourers?—who the individuals, by means of

whose services the sweater, the smaller master, the lumper, and others, is enabled to underwork the rest of his trade?—what the general characteristics of those who, in the majority of handicrafts, are found ready to do the same work for less pay, and how are these usually distinguished from such as obtain the higher rate of remuneration?

The cheap workmen in all trades, I find, are divisible into three classes:—

1. The unskilful.
2. The untrustworthy.
3. The inexpensive.

First, as regards the *unskilful*. Long ago it has been noticed how frequently boys were put to trades to which their tastes and temperaments were antagonistic. Gay, who in his quiet, unpretending style often elicited a truth, tells how a century and a half ago the generality of parents never considered for what business a boy was best adapted—

> "But ev'n in infancy decree
> What this or t'other son shall be."

A boy thus brought up to a craft for which he entertains a dislike can hardly become a proficient in it. At the present time thousands of parents are glad to have their sons reared to *any* business which their means or opportunities place within their reach, even though the lad be altogether unsuited to the craft. The consequence is, that these boys often grow up to be unskilful workmen. There are technical terms for them in different trades, but perhaps the generic appellation is "muffs." Such workmen, however well conducted, can rarely obtain employment in a good shop at good wages, and are compelled, therefore, to accept second, third, and fourth-rate wages, and are often driven to slop work.

Other causes may be cited as tending to form unskilful workmen: the neglect of masters or foremen, or their incapacity to teach apprentices; irregular habits in the learner; and insufficient practice during a master's paucity of employment. I am assured, moreover, that hundreds of mechanics yearly come to London *from the country parts*, whose skill is altogether inadequate to the demands of the "honourable trade." Of course, during the finishing of their education they can only work for inferior shops at inferior wages; hence another cause of cheap labour. Of this I will cite an instance: a bootmaker, who for years had worked for first-rate West-end shops, told me that when he came to London from a country town he was sanguine of success, because he knew that he was a *ready* man (a quick workman.) He very soon found out, however, he said, that as he aspired to do the best work, he "had his business to learn all over again;" and until he attained the requisite skill, he worked for "just what he could get:" he was a cheap, because then an unskilful, labourer.

There is, moreover, the cheaper labour of *apprentices*, the great prop of many a slop-trader; for as such traders disregard all the niceties of work, as they disregard also the solidity and perfect finish of any work (finishing it, as it was once described to me, "just to the eye"), a lad is soon made useful and his labour remunerative to his master, as far as slop remuneration goes, which, though small in a small business, is wealth in a "monster business."

There are, again, the "*improvers*." These are the most frequent in the dress-making and millinery business, as young women find it impossible to form a good connection among a wealthier class of ladies in any country town, unless the "patronesses" are satisfied that their skill and taste have been perfected in London. In my inquiry (in the course of two letters in the *Morning Chronicle*) into the condition of the workwomen in this calling, I was told by a retired dressmaker, who had for upwards of twenty years carried on business in the neighbourhood of Grosvenor-square, that she had sometimes met with "improvers" so tasteful and quick, from a good provincial tuition, that they had really little or nothing to learn in London. And yet their services were secured for one, and oftener for two years, merely for board and lodging, while others employed in the same establishment had not only board and lodging, but handsome salaries. The improver's, then, is generally a cheap labour, and often a very cheap labour too. The same form of cheap labour prevails in the carpenter's trade.

There is, moreover, the labour of *old men*. A tailor, for instance, who may have executed the most skilled work of his craft, in his old age, or before the period of old age, finds his eyesight fail him,—finds his tremulous fingers have not a full and rapid mastery of the needle, and he then labours, at greatly reduced rates of payment, on the making of soldiers' clothing—"sanc-work," * as it is called—or on any ill-paid and therefore ill-wrought labour.

The inferior, as regards the quality of the work, and under-paid class of *women*, in tailoring, for example, again, cheapen labour. It is cheapened, also, by the employment of *Irishmen* (in, perhaps, all branches of skilled or unskilled labour), and of *foreigners*, more especially of Poles, who are inferior workmen to the English, and who will work *very* cheap, thus supplying a low-price labour to those who seek it.

I may remark further, that if a first-rate workman be driven to slop work, he soon loses his skill; he can only work slop; this has been shown over and over again, and so *his* labour becomes cheap in the mart.

2. Of *Untrustworthy Labour* (as a cause of cheap labour) I need not say much. It is obvious that a drunken, idle, or dishonest workman or workwoman, when pressed by want, will and must labour, not for the recompense the labour merits, but for whatever pittance an employer will accord. There is no reliance to be placed in him. Such a man cannot "hold out" for terms, for he is perhaps starving, and it is known that "he cannot be depended upon." In the sweep's trade many of those who work at a lower rate than the rest of

* The term *sanc* in "sanc-work" is the Norman word for blood (Latin, *sanguis*; French, *sang*), so that "sanc-work" means, literally, bloody work, this called either from the sanguinary trade of the soldier, or from the blood-red colour of the cloth.

the trade are men who have lost their regular work by dishonesty.

3. The *Inexpensive class* of workpeople are very numerous. They consist of three sub-divisions:—

(*a.*) Those who have been accustomed to a coarser kind of diet, and who, consequently, requiring less, can afford to work for less.

(*b.*) Those who derive their subsistence from other sources, and who, consequently, do not live by their labour.

(*c.*) Those who are in receipt of certain "aids to their wages," or who have other means of living beside their work.

Of course these causes can alone have influence where the wages are *minimized* or reduced to the lowest ebb of subsistence, in which case they become so many means of driving down the price of labour still lower.

a. Those who, being what is designated hard-reared that is to say, accustomed to a scantier or coarser diet, and who, therefore, "can do" with a less quantity or less expensive quality of food than the average run of labourers, can of course live at a lower cost, and so *afford* to work at a lower rate. Among such (unskilled) labourers are the peasants from many of the counties, who seek to amend their condition by obtaining employment in the towns. I will instance the agricultural labourers of Dorsetshire.

"Bread and potatoes," writes Mr. Thornton, in his work on Over-Population and its Remedy, p. 21, "do really form the staple of their food. As for meat, most of them would not know its taste, if, once or twice *in the course of their lives*, —on the squire's having a son and heir born to him, or on the young gentleman's coming of age,— they were not regaled with a dinner of what the newspapers call 'old English fare.' Some of them contrive to have a little bacon, in the proportion, it seems, of *half a pound a week to a dozen persons*, but they more commonly use fat to give the potatoes a relish; and, as one of them said to Mr. Austin (a commissioner), they don't *always* go without cheese.'"

With many poor Irishmen the rearing has been still harder. I had some conversation with an Irish rubbish-carter, who had been thrown out of work (and was entitled to no allowance from any trade society) in consequence of a strike by Mr. Myers's men. On my asking him how he subsisted in Ireland, "Will, thin, sir," he said, "and it's God's truth, I once lived for days on green things I picked up by the road side, and the turnips, and that sort of mate I stole from the fields. It was called staling, but it was the hunger, 'deed was it. That was in the county Limerick, sir, in the famine and 'viction times; and, glory be to God, I 'scaped when others didn't."

I may observe that the chief local paper, the *Limerick and Clare Examiner*, published twice a week, gave, twice a week, at the period of "the famine and evictions," statements similar to that of my informant.

Now, would not a poor man, reared as the Limerick peasant I have spoken of, who was actually driven to eat the grass, which biblical history shows was once a signal punishment to a great offender—would not such a man work for the veriest dole, rather than again be subjected to the pangs of hunger? In my inquiries among the costermongers, one of them said of the Irish in his trade, and without any bitterness, "they'll work for nothing, and live on less." The meaning is obvious enough, although the assertion is, of course, a contradiction in itself.

"This department of labour," says Mr. Baines, in his History of the Hand-Loom Weavers, is "greatly overstocked, and the price necessarily falls. The evil is aggravated by the multitudes of Irish who have flocked into Lancashire, some of whom, having been linen weavers, naturally resort to the loom, and others learn to weave as the easiest employment they can adopt. Accustomed to a wretched mode of living in their own country, they are contented with wages that would starve an English labourer. They have, in fact, so lowered the *rate* of wages as to drive many of the English out of the employment, and to drag down those who remain in it to their own level."

b. Those who derive their subsistence from other sources can, of course, afford to work cheaper than those who have to live by their labour. To this class belongs the labour of wives and children, who, being supposed to be maintained by the toil of the husband, are never paid "living wages" for what they do; and hence the misery of the great mass of needlewomen, widows, unmarried and friendless females, and the like, who, having none to assist them, are forced to starve upon the pittance they receive for their work. The labour of those who are in prisons, workhouses, and asylums, and who consequently have their subsistence found them in such places, as well as the work of prostitutes, who obtain their living by other means than work, all come under the category of those who can afford to labour at a lower rate than such as are condemned to toil for an honest living. It is the same with apprentices and "improvers," for whose labour the instruction received is generally considered to be either a sufficient or partial recompense, and who consequently look to other means for their support. Under the same head, too, may be cited the labour of amateurs, that is to say, of persons who either are not, or who are too proud to acknowledge themselves, regular members of the trade at which they work. Such is the case with very many of the daughters of tradesmen, and of many who are considered *genteel* people. These young women, residing with their parents, and often in comfortable homes, at no cost to themselves, will, and do, undersell the regular needlewomen; the one works merely for pocket-money (often to possess herself of some article of finery), while the other works for what is called "the bare life."

c. The last-mentioned class, or those who are in possession of what may be called "aids to wages," are differently circumstanced. Such are the men who have other employment besides that for which they accept less than the ordinary pay, as is the case with those who attend at gentlemen's houses for one or two hours every morning, cleaning boots, brushing clothes, &c., and who, having the remainder of the day at their own disposal, can afford to work at any calling cheaper than others, because not solely dependent upon it for their living.

The army and navy pensioners (non-commissioned officers and privates) were, at one period, on the disbanding of the militia and other forces, a very numerous body, but it was chiefly the military pensioners whose position had an effect upon the labour of the country. The naval pensioners found employment as fishermen, or in some avocation connected with the sea. The military pensioners, however, were men who, after a career of soldiership, were not generally disposed to settle down into the drudgery of regular work, even if it were in their power to do so; and so, as they always had their pensions to depend upon, they were a sort of universal jobbers, and jobbed cheaply. At the present time, however, this means of cheap labour is greatly restricted, compared with what was the case, the number of the pensioners being considerably diminished. Many of the army pensioners turn the wheels for turners at present.

The allotment of gardens, which yield a partial support to the allottee, are another means of cheap labour. The allotment demands a certain portion of time, but is by no means a thorough employment, but merely an "aid," and consequently a *means*, to low wages. Such a man has the advantage of obtaining his potatoes and vegetables at the cheapest rate, and so can afford to work cheaper than other men of his class. It was the same formerly with those who received "relief" under the old Poor-Law.

And even under the present system it has been found that the same practice is attended with the same result. In the Sixth Annual Report of the Poor-Law Commissioners, 1840, at p. 31, there are the following remarks on the subject:—

"Whilst upon the subject of relief to widows in aid of wages, we must not omit to bring under your Lordship's notice an illustration of the *depressing effect* which is produced by the practice of giving relief in aid of wages to widows upon the earnings of females. Colonel A'Court states:—

"'As regards females, the instance to which I have alluded presents itself in the Portsea Island Union, where, from the insufficiency of workhouse accommodation, as well as from benevolent feelings, small allowances of 1*s.* 6*d.* or 2*s.* a week are given to widows with or without small children, or to married women deserted by their husbands. *Having this certain income, however small, they are enabled to work at lower wages than those who do not possess this advantage.* The consequence is, that competition has enabled the shirt and stay manufacturers, who abound in the Union, and who furnish in great measure the London as well as many foreign markets with these articles of their trade to get their work done at the extraordinary low prices of—stays, complete, 9*d.*; shirts, from 1*s.* to 1*s.* 6*d.* per dozen.

"'The women all declare that they cannot possibly, after working from twelve to fifteen hours per day, earn more than 1*s.* 6*d.* per week. The manufacturers assert that, by steady work, 4*s.* to 6*s.* a week may be earned under ordinary circumstances.

"'In the meantime *the demand for workwomen increases*, and it is by no means unusual to see hand-bills posted over the town requiring from 500 to 1000 additional stitchers.'"

Such, then, is the character of the cheap workers in all trades; go where we will, we shall find the low-priced labour of the trade to consist of either one or other of the three classes above-mentioned; while the *means* by which this labour is brought into operation will be generally by one of the "systems of work" before specified.

The cheap labour of the rubbish-carters' trade appears to be a consequence of two distinct antecedents, viz., casual labour and the prevalence of the contract system among builder's work. The small-master system also appears to have some influence upon it.

First as regards the influence of casual labour in reducing the ordinary rate of wages.

The tables given at p. 290, vol. ii., showing the wages paid to the rubbish-carters, present what appears, and indeed is, a strange discrepancy of payment to the labourers in rubbish-carting. About three-fourths of the rubbish-carters throughout Londonreceive 18*s.* weekly, when in work; in Hampstead, however, the rate of their wages is (uniformly) 20*s.* a week; in Lambeth (but less uniformly), it is 19*s.*; in Wandsworth, 17*s.*; in Islington, 16*s.*; and in Greenwich, 14*s.* and 12*s.* The character of the work, whether executed for 12*s.* or 20*s.* weekly, is the same; why, then, can a rubbish-carter, who works at Hampstead, earn 8*s.* a week more than one who works at Greenwich? An employer of rubbish-carters, and of similar labourers, on a large scale, a gentleman thoroughly conversant with the subject in all its industrial bearings, accounts for the discrepancy in this manner:—

After the corn and the hop-harvests have terminated, there is always an influx of unskilled labourers into Gravesend, Woolwich, and Greenwich. These are the men who, from the natural bent of their dispositions, or from the necessity of their circumstances, resort to the casual labour afforded by the revolution of the seasons, when to gather the crops before the weather may render the harvest precarious and its produce unsound, is a matter of paramount necessity, and the increase of hands employed during this season is, as a consequence, proportionately great. The chief scene of such labour in the neighbourhood of the metropolis, is in the county of Kent; and on the cessation of this work, of course there is a large amount of labour "turned adrift," to seek, the next few days, for any casual employment that may "turn up." In this way, I am assured,

a large amount of cheap and unskilled labour is being constantly placed at the command of those masters who, so to speak, occupy the line of march to London, and are, therefore, first applied to for employment by casual labourers; who, when engaged, are employed as inferior, or unskilful, workmen, at an inferior rate of remuneration. Greenwich may be looked upon as the first stage or halt for casual labourers, on their way to London.

My informant assured me, as the result of his own observations, that an English labourer would, as a general rule, execute more work by one-sixth, in a week, than an Irish labourer (a large proportion of the casual hands are Irish); that is, the extent of work which would occupy the Irishman six, would occupy the Englishman but five days, were it so calculated. The Englishman was, however, usually more skilled and persevering, and far more to be depended upon. So different was the amount of work, even in rubbish-carting, between an able and experienced hand and one unused to the toil, or one inadequate from want of alertness or bodily strength, or any other cause, to its full and quick execution, that two "good" men in a week have done as much work as three indifferent hands. Thus two men at 18*s.* weekly each are as cheap (only employers cannot always see it), when they are thorough masters of their business, as three unready hands at 12*s.* a week each. The misfortune, however, is, that the 12*s.* a week men have a tendency to reduce the 16*s.* to their level.

With regard to the difference between the wages of Hampstead and Greenwich, I am informed that stationary working rubbish-carters are not too numerous in Hampstead, which is considered as rather "out of the way;" and as that metropolitan suburb is surrounded in every direction by pasture-land and wood-land, it is not in the line of resort of the class of men who seek the casual labour in harvesting, &c., of which I have spoken; it is rarely visited by them, and consequently, the regular hands are less interfered with than elsewhere, and wages have not been deteriorated.

The mode of work among the scurf labourers differs somewhat from that of the honourable part of the trade; the work executed by the scurf masters being for the most part on a more limited scale than that of the others. To meet the demands of builders or of employers generally, when "time" is an object, demands the use of relays of men, and of strong horses. This demand the smaller or scurf master cannot always meet. He may find men, but not always horses and carts, and he will often enough undertake work beyond his means and endeavour to aggrandise his profits by screwing his labourers. The *hours of scurf-employed labour* are nominally the same as the regular trade, but as an Irish carter said, "it's ralely the hours the masther plases, and they're often as long as it's light." The *scurf labourer is often paid by the day*, with "a day's hire, and no notice beyond." I am informed that scurf labourers generally work an hour a day, without extra remuneration, longer than those in the honourable trade.

The rubbish-carters employed by the scurf masters are not, as a body, I am assured, so badly paid as they were a few years back. It is rarely that labouring men can advance any feasible reason for the changes in their trade.

One of the main causes of the deteriorated wages of the rubbish-carters is the system of contracting and subletting. This, however, is but a branch of the ramified system of subletting in the construction of the "scamped" houses of the speculative builders. The building of such houses is sublet, literally from cellar to chimney. The rubbish-carting may be contracted for at a certain sum. The contractor may sublet it to men who will do it for one-fourth less perhaps, and who may sublet the labour in their turn. For instance, the calculation may be founded on the working men's receiving 15*s.* weekly. A contractor, a man possessing a horse, perhaps, and a couple of carts, and hiring another horse, will undertake it on the knowledge of his being able to engage men at 12*s.* or 13*s.* weekly, and so obtain a profit; indeed the reduction of price in such cases must all come out of the labour.

This subletting, I say, is but a small part of a gigantic system, and it is an unquestionable cause of the grinding down of the rubbish-carters' wages, and that by a class who have generally been working men themselves, and risen to be the owners of one or two carts and horses.

From one of these men, now a working carter, I had the following account, which further illustrates the mode of labour as well as of employment.

"I got a little a-head," he stated, "from railway jobbing and such like, and my father-in-law, as soon as I got married, made me a present of 20*l.* unexpected. I started for myself, thinking to get on by degrees, and get a fresh horse and cart every year. But it couldn't be done, sir. If I offered to take a contract to cart the rubbish and dig it, a builder would say,—'I can't wait; you haven't carts and horses enough from your own account, and I can't wait. If you have to hire them I can do that myself.' I was too honest, sir, in telling the plain truth, or I might have got more jobs. It's not a good trade in a small way, for if your horses aren't at work, they're eating their heads off, and you're fretting your heart out. Then I got to do sub-contracting, as you call it. No, it weren't that, it was under-working. I'd go to Mr. V—— as I knew, and say, 'You're on such a place, sir, have you room for me?' 'I think not,' he'd say, 'I've only the regular thing and no advantages—10*s.* 6*d.* for a day's work, horse and cart, or 4*s.* a load.' Those are the regular terms. Then I'd say, 'Well, sir, I'll do it for 8*s.* 6*d.*, and be my own carman;' and so perhaps I'd get the job, and masters often say: 'I know I shall lose at 10*s.* 6*d.*, but if I don't, you shall have something over.' Get anything over! Of course not, sir. I could have lived if I had constant work for two horses and carts, for I would have got a cheap man; such as me must get cheap men to drive the second cart, and under my own eye, whenever I could; but one of my poor horses broke his leg, and had to be sent to the knacker's, and I sold the other and my carts, and have worked ever since as a labouring man; mainly at pipe-work. O, yes, and rubbish-carting. I get 18*s.* a week now, but not regular.

"Well, sir, I'm sure I can't say, and I think no man could say, how much there's doing in sub-contracting. If I'm at work in Cannon-street, I don't know what's doing at Notting-hill, or beyond Bow and Stratford. No, I'm satisfied there's not so much of it as there was, but it's done so on the sly; who knows how much is done still, or how little? It's a system as may be carried on a long time, and is carried on, as far as men's labour goes, but it's different where there's horses, and stable rent. They can't be screwed, or under-fed, beyond a certain pitch, or they couldn't work at all, and so there's not as much under-work about horse-labour."

These small men are among the scurf and petty rubbish-carters, and are often the means of depressing the class to which they have belonged.

The employment in the honourable trade at rubbish-carting would be one of the best among unskilled labourers, were it continuous. But it is not continuous, and three-fourths of those engaged in it have only six months' work at it in the year. In the scurf-masters' employ, the work is really "casual," or, as I heard it quite as often described, "chance." In both departments of this trade, the men out of work look for a job in scavagery, and very generally in night-work, or, indeed, in any labour that offers. The Irish rubbish-carters will readily became hawkers of apples, oranges, walnuts, and even nuts, when out of employ, so working in concert with their wives. I heard of only four instances of a similar resource by the English rubbish-carters.

What I have said of the education, religion, politics, concubinage, &c., &c., of the better-paid rubbish-carters would have but to be repeated, if I described those of the under-paid. The latter may be more reckless when they have the means of enjoyment, but their diet, amusements, and expenditure would be the same, were their means commensurate. As it is, they sometimes live very barely and have hardly any amusements at their command. Their dinners, when single men, are often bread and a saveloy; when married, sometimes tea and bread and butter, and occasionally some "block ornaments;" the Irish being the principal consumers of cheap fish.

The labour of the wives of the rubbish-carters is far more frequently that of char-women than of needle-women, for the great majority of these women before their marriage were servant-maids. All the information I received was concurrent in that respect. The wife of a carman who keeps a chandler's shop near the Edgeware-road, greatly resorted to by the class to which her husband belonged, told me that out of somewhere about 25 wives of rubbish-carters or similar workmen, whom she knew, 20 had been domestic servants; what the others had been she did not know.

"I can tell you, sir," said the woman, "charing is far better than needle-work; far. If a young woman has conducted herself well in service, she can get charing, and then if she conducts herself well again, she makes good friends. That's, of course, if they're honest, sir. I know it from experience. My husband—before we were able to open this shop—was in the hospital a long time, and I went out charing, and did far better than a sister I have, who is a capital shirt-maker. There's broken victuals, sometimes, for your children. It's a hard world, sir, but there's a many good people in it."

One woman (before mentioned) earned not less than 5*s.* weekly in superior shirt-making, as it was described to me, which was evidently looked upon as a handsome remuneration for such toil. Another earned 3*s.* 6*d.*; another 2*s.* 6*d.*; and others, with uncertain employ, 2*s.*, 1*s.* 6*d.*, and in some weeks nothing. Needle-work, however, is, I am informed, not the work of one-tenth of the rubbish-carters' wives, whatever the earnings of the husband. From all I could learn, too, the wives of the under-paid rubbish-carters earned more, by from 10 to 20 per cent., than those of the better-paid. The earnings of a char-woman in average employ, as regards the wives of the rubbish-carters, is about 4*s.* weekly, without the exhausting toil of the needle-woman, and with the advantage of sometimes receiving broken meat, dripping, fat, &c., &c. The wives of the Irish labourers in this trade are often all the year street-sellers, some of wash-leathers, some of cabbage-nets, and some of fruit, clearing perhaps from 6*d.* to 9*d.* a day, if used to street-trading, as the majority of them are.

The under-paid labourers in this trade are chiefly poor Irishmen. The Irish workmen in this branch of the trade have generally been brought up "on the land," as they call it, in their own country, and after the sufferings of many of them during the famine, 12*s.* a week is regarded as "a rise in the world."

From one of this class I learned the following particulars. He seemed a man of 26 or 28:—

"I was brought up on the land, sir," he said, "not far from Cullin, in the county Wexford. I lived with my father and mother, and shure we were badly off. Shure, thin, we were. Father and mother—the Heavens be their bed—died one soon after another, and some friends raised me the manes to come to this country. Well, thin, indeed, sir, and I can't say how they raised them, God reward them. I got to Liverpool, and walked to London, where I had some relations. I sold oranges in the strates the first day I was in London. God help me, I was glad to do anything to get a male's mate. I've lived on 6*d.* a-day sometimes. I have indeed. There was 2*d.* for the lodging, and 4*d.* for the mate, the tay and bread and butter. Did I live harder than that in Ireland, your honour? Well, thin, I have. I've lived on a dish of potatoes that might cost a penny there, where things is bhutiful and chape. Not like this country. No, no. I wouldn't care to go back. I have no friends there now. Thin I got

ingaged by a man—yis, he was a rubbish-carter—to help him to fill his cart, and then we shot it on some new garden grounds, and had to shovel it about to make the grounds livil, afore the top soil was put on, for the bhutiful flowers and the gravel walks. Tim—yis, he was a counthryman of mine, but a Cor-rk man—said he'd made a bad bargain, for he was bad off, and he only clared 4*d.* a load, and he'd divide it wid me. We did six loads in a day, and I got 1*s.* every night for a wake. This was a rise. But one Sunday evening I was standing talking with people as lived in the same coort, and I tould how I was helping Tim. And two Englishmen came to find four men as they wanted for work, and ould Ragin (Regan) tould them what I was working for. And one of 'em said, I was 'a b —— Irish fool,' and ould Ragin said so, and words came on, and thin there was a fight, and the pelleece came, and thin the fight was harder. I was taken to the station, and had a month. I had two black eyes next morning, but was willin' to forget and forgive. No, I'm not fond of fightin'. I'm a paceable man, glory be to God, and I think I was put on. Oh, yis, and indeed thin, your honour, it was a fair fight."

I inquired of an English rubbish-carter as to these fair fights. He knew nothing of the one in question, but had seen such fights. They were usually among the Irish themselves, but sometimes Englishmen were "drawn into them." "Fair fights! sir," he said, "why the Irishes don't stand up to you like men. They don't fight like Christians, sir; not a bit of it. They kick, and scratch, and bite, and tear, like devils, or cats, or women. They're soon settled if you can get an honest knock at them, but it isn't easy."

"I sarved my month," continued my Irish informant, "and it ain't a bad place at all, the prison. I tould the gintleman that had charge of us, that I was a Roman Catholic, God be praised, and couldn't go to his prayers. 'O very well, Pat,' says he. And next day the praste came, and we were shown in to him, and very angry he was, and said our conduc' was a disgrace to religion, and to our counthry, and to him. Do I think he was right, sir? God knows he was, or he wouldn't have said so.

"I hadn't been out of prison two hours before I was hired for a job, at 10*s.* a week. It was in the city, and I carried old bricks and rubbish along planks, from the inside of a place as was pulled down; but the outside, all but the roof, was standin' until the windor frames, and the door posts, and what other timbers there was, was sould. It was dreadful hard work, carrying the basket of rubbish on your back to the cart. The dust came through, and stuck to my neck, for I was wet all over wid sweatin' so. Every man was allowed a pint of beer a day, and I thought nivver anything was so sweet. I don't know who gave it. The masther, I suppose. Will, thin, sir, I don't know who was the masther; it was John Riley as ingaged me, but *he's* no masther. Yis, thin, and I've been workin' that way ivver since. I've sometimes had 14*s.* a week, and sometimes 10*s.*, and sometimes 12*s.* A man like me must take what he can get, and I will take it. I've been out of work sometimes, but not so much as some, for I'm young and strong. No, I can't save no money, and I have nothing just now to save it for. When I'm out of work, I sell fruit in the streets."

This statement, then, as regards the Irish labourers, shows the quality of the class employed. The English labourers, working on the same terms, are of the usual class of men so working,—broken-down men, unable, or accounting themselves unable, to "do better," and so accepting any offer affording the means of their daily bread.

Of the London Chimney-Sweepers.

Chimney-Sweepers are a consequence of two things—chimneys and the use of coals as fuel; and these are both commodities of comparatively recent introduction.

It is generally admitted that the earliest mention of *chimneys* is in an Italian MS., preserved in Venice, in which it is recorded that chimneys were thrown down in that city from the shock of an earthquake in 1347. In England, down even to the commencement of the reign of Elizabeth, the greater part of the houses in our towns had no chimneys; the fire was kindled on a hearth-stone on the floor, or on a raised grate against the wall or in the centre of the apartment, and the smoke found its way out of the doors, windows, or casements.

During the long, and—as regards civil strife—generally peaceful, reign of Elizabeth, the use of chimneys increased. In a Discourse prefixed to an edition of Holinshed's "Chronicles," in 1577, Harrison, the writer, complains, among other things, "marvellously altered for the worse in England," of the multitude of chimneys erected of late. "Now we have many chimneys," he says, "and our tenderlings complain of rheums, catarrhs, and poses. Then we had none but *rere-doses*, and our heads did never ache."* He demurs, too, to the change in the material of which the houses were constructed: "Houses were once builded of willow, then we had oaken men; but now houses are made of oak, and our men not only become willow, but a great many altogether of straw, which is a sore alteration."

* "Reredos, dossel (*retable*, Fr.; *postergule*, Ital.)," according to Parker's Glossary of Architecture, was "the wall or screen at the back of an altar, seat, &c.; it was usually ornamented with panelling, &c., especially behind an altar, and sometimes was enriched with a profusion of niches, buttresses, pinnacles, statues, and other decorations, which were often painted with brilliant colours.

"The open fire-hearth, frequently used in ancient domestic halls, was likewise called a reredos.

"In the description of Britain prefixed to Holinshed's 'Chronicles,' we are told that formerly, before chimneys were common in mean houses, 'each man made his fire against a reredosse in the hall, where he dined and dressed his meat.'"

The original word would appear to be *dosel* or *rere-dosel;* for Kelham, in his "Norman Dictionary," explains the word *doser* or *dosel* to signify a hanging or canopy of silk, silver, or gold work, under which kings or great personages sit; also the back of a chair of state (the word being probably a derivative of the Latin *dorsum*, the back. *Dos*, in slang, means a *bed*, a "dossing crib" being a sleeping-place, and has clearly the same origin) A *rere-dos* or *rere-dosel* would thus appear to have been a *screen* placed *behind* anything. I am told, that in the old houses in the north of England, erections at the back of the fire may, to this day, occasionally be seen, with an aperture behind for the insertion of plates, and such other things as may require warming.

A correspondent says there is "a 'reredos,' or open fire-hearth, now to be seen in the extensive and beautiful ruins of the Abbey of St. Agatha, in the North Riding of Yorkshire. The ivy now hangs over and partially conceals this reredos; but its form is tolerably perfect, and the stones are still coloured by the action of the fire, which was extinguished, I need hardly say, by the cold water thrown on such places by Henry VIII."

In Shakespeare's time, the chimney-sweepers seem to have become a recognised class of public cleansers, for in "Cymbeline" the poet says—

> "Fear no more the heat o' the sun,
> Nor the furious winter's rages;
> Thou thy worldly task hast done,
> Home art gone, and ta'en thy wages:
> Golden lads and girls all must,
> *As chimney-sweepers* come to dust."

In this beautiful passage there is an intimation, by the "chimney-sweepers" being contrasted with the "golden lads and girls," that their employment was regarded as of the meanest, a repute it bears to the present day.

But chimneys seem, like the "sweeps" or "sweepers," to have been a necessity of a change of fuel. In the days of "rere-dosses," our ancestors burnt only wood, so that they were not subjected to so great an inconvenience as we should be were our fires kindled without the vent of the chimney. Our fuel is coal, which produces a greater quantity of soot, and of black smoke, which is the result of imperfect combustion, than any other fuel, the smoke from wood being thin and pure in comparison.

The first mention of the use of coal as fuel occurs in a charter of Henry III., granting licence to the burgesses of Newcastle to dig for coal. In 1281 Newcastle is said to have had some slight trade in this article. Shortly afterwards coal began to be imported into London for the use of smiths, brewers, dyers, soap-boilers, &c. In 1316, during the reign of Edward I., its use in London was prohibited because of the supposed injurious influence of the smoke. In 1600 the use of coal in the metropolis became universal; about 200 vessels were employed in the London trade, and about 200,000 chaldrons annually imported.

In 1848, however, there were, besides the railway-borne coals, 12,267 cargoes imported, or 3,418,340 tons. The London coal trade now employs 2700 vessels and 21,600 seamen, and constitutes one-fourth of the whole general trade of the Thames.

To understand the *necessity* for chimney-sweepers, and the extent of the work for them to do, that is to say, the quantity of soot deposited in our chimneys during the combustion of the three and a half millions of tons of coals that are now annually consumed in London, we must first comprehend the conditions upon which the evolution of soot depends, soot being simply the fine carbonaceous particles condensed from the smoke of coal fuel, and deposited against the sides of the chimneys during its ascent between the walls to the tops of our houses. These conditions appear to have been determined somewhat accurately during the investigations of the Smoke Prevention Committee.

There are two kinds of smoke from the ordinary materials of combustion—(A) *Opaque*, or black smoke; (B) *Transparent*, or invisible smoke.

A. The *Opaque* smoke, though the most offensive and annoying from its dirtying properties, is, like the muddiest water, the least injurious to animal or vegetable health. It consists of the particles of unconsumed carbon which have not been deposited in the form of soot in the flue or chimney. This is the black smoke which will be further described.

B. *Transparent* smoke is composed of gases which are for the most part invisible, such as carbonic acid and carbonic oxide; also of sulphurous acid, but smokes with that component are both visible and invisible. The sulphurous acid is said by Professor Brande to destroy vegetation, for it has long been a cause of wonder why vegetation in towns did not flourish, since carbonic acid (which is so largely produced from the action of our fires) is the vital air of trees, shrubs, and plants*.

* It has been notorious for many years, that flowers will not bloom in any natural luxuriance, and that fruit will not properly ripen, in the heart of the city. Whilst this is an unquestionable fact, it is also a fact, that greatly as suburban dwellings have increased, and truly as London may be said to have "gone into the country," the greater quantity of the large, excellent, unfailing, and cheap supply of the fruits and vegetables in the London "green" markets are grown within a circle of from ten to twelve miles from St. Paul's. In the course of my inquiries (in the series of letters on Labour and the Poor in the *Morning Chronicle*) into the supply, &c., to the "green markets" of the metropolis, I was told by an experienced market-gardener, who had friends and connections in several of the suburbs, that he fancied, and others in the trade were of the same opinion, that no gardening could be anything but a failure if attempted within "where the fogs went." My informant explained to me that the fogs, so peculiar to London, did not usually extend beyond three or four miles from the heart of the city. He was satisfied, he said, that within half a mile or so of this reach of fog the gardener's labours might be crowned with success. He knew nothing of any scientific reason for his opinion, but as far as a purely London fog extended (without regard to any mist pervading the whole country as well as the neighbourhood of the capital), he thought it was the boundary within which there could be no proper growth of fruit or flowers. That the London fog has its *limits* as regards the manifestation of its greatest density, there can be no doubt. My informant was frequently asked, when on his way home, by omnibus drivers and others whom he knew, and met on their way to town a few miles from it: "How's the fog, sir? *How far?*"

The extent of the London fog, then, if the information I have cited be correct, may be considered as indicating that portion of the metropolis where the population, and consequently the smoke, is the thickest, and within which agricultural and horticultural labours cannot meet with success. "The nuisance of a November fog in London," Mr. Booth stated to the Smoke Committee, "is most assuredly increased by the smoke of the town, arising from furnaces and private fires. It is vapour saturated with particles of carbon which causes all that uneasiness and pain in the lungs, and the uneasy sensations which we experience in our heads. I have no doubt of the density of these fogs arising from this carbonaceous matter."

The loss from the impossibility of promoting vegetation in the district most subjected to the fog is nothing, as the whole ground is already occupied for the thousand purposes of a great commercial city. The matter is, however, highly curious, as a result of the London smoke.

Concerning the frequency of fogs in the district of the immediate neighbourhood of the metropolis, it is stated in Weale's "London," that fogs "appear to be owing, 1st,