

great work, when invested with full powers to effect it completely : for at present there appears to be no alternative between doing it well or ill ; between simply shifting the evil from the centre of the populous districts to the suburbs, and deteriorating them ; fixing the sites of interments at inconvenient distances, forming numerous, separate, and weak, and yet enormously expensive, establishments ; aggravating the expense, and physical and moral evils of the delay of interment ; diminishing the solemnities of sepulture ; scattering away the elements of moral and religious improvement, and increasing the duration and sum of the existing evils :—there appears to be no distinct or practicable alternative between these results and effecting such a change as, if zealously carried out, will soothe and elevate the feelings of the great bulk of the population, abate the apprehensions of the dying, influence the voluntary adoption of beneficial changes in the practice of obsequies, occasion an earlier removal of the dead from amidst the living to await interment and ensure the impressiveness of the funeral service, give additional securities against attempts on life, and trustworthy evidence of the fact of death, with the means of advancing the protection of the living against the attacks of disease ; and at a reduced expense provide in well arranged national cemeteries places for public monuments, becoming the position of the empire amongst civilized nations.

I have the honour to be, Sir,

Your obedient servant,

EDWIN CHADWICK.

APPENDIX.

APPENDIX.

No. 1.

REGULATIONS FOR PUBLIC INTERMENT AT FRANCKFORT,
PASSED 1829.

The transference of the cemetery to the outside of the town required the herewith enacted abolition of the ancient mode and custom of interring the dead, and the substitution of another and more suitable arrangement. For this purpose the following regulations for Sachsenhausen [the suburbs of Franckfort], as well as Franckfort, are published for general observance:—

SECTION I.

(1.) The mixed Church and School Commission has the chief superintendence of all church, cemetery, and interment affairs.

The regulation of all matters relating to interments is conferred upon the legally-appointed Church and Cemetery Commission.

All officers employed in connection with interments are placed under the control of the said Commission, and it will be its duty to report yearly to the mixed Church and School Commission on the expenses and receipts, and the general progress of the institution.

(2.) The superintendence of the cemetery, of the sextons in their various employments, and of the house of reception, is given to an inspector, whose duties are hereafter described in the 2nd section.

(3.) For the performance of all the necessary arrangements preceding the interment, commissaries of interments are appointed to take the place of the so-called undertakers. These commissaries have to arrange everything connected with the funeral, and are responsible for the proper fulfilment of all the regulations given in their instructions.

(4.) In order to prevent the great expense which was formerly occasioned by the attendance with the dead to the grave, bearers shall be appointed who shall attend to the cemetery all funerals, without distinction of rank or condition.

To these bearers shall be given assistants, who shall be equally under the control of the interment commissaries.

(5.) A sufficient number of sextons and assistants shall be appointed to form the graves and assist at the interment.

(6.) There are four classes of funerals and interments. Every house of mourning may choose the class of funeral on paying the sum fixed for that class to the Church and Cemetery Commission.

All Christian interments, without distinction, can be conducted only according to these interment regulations. It remains open to the friends of the dead to attend the burial either in carriage or on foot; but this must be without expense to the house of mourning. The funerals of the town guards and of the soldiers of the line remain the same, but are only to cost a fixed sum.

If it be the wish of a family, the clergyman may attend the funeral, and he may perform a service either at the side of the grave, or, in case of bad weather, in the house of reception.

All interments whatsoever, except in extraordinary cases, where the police determines the time, must take place early—in summer before nine, in winter before eleven o'clock, in the morning.

The blowing of trumpets from the steeples, the attendance of women with napkins, the bearings of crosses, the attendance of the old-fashioned mourning coach, and also the use of the so-called "chariot of Heaven," and the following of young handicrafts-men, which generally were an immense expense, are all given up. New carriages of a simpler and more respectable form, and such as are better suited to the object and to the greater distance of the cemetery from the town, shall be built.

The bodies of adults who are taken direct from the house of mourning to the grave, must be borne in the funeral carriage to the gate of the cemetery, where the bearers will convey the coffin to the grave.

The dead who have been placed in the house of reception must be borne in the same manner to the grave.

In exceptional cases, the dead may be borne to the grave by other persons; but this is only allowed when there is any particular cause of sympathy with the dead, or with the surviving family, and it must be free of all expense.

(7.) A complete and exact plan of the new cemetery shall be prepared, and all the graves shall be marked upon it.

Every place of interment must be numbered, which number must be engraved upon the plan as soon as it is taken.

The actuary of the Cemetery Commission shall keep a book, in which is entered, along with the number of the grave, the rank, age, name, and surname of the deceased.

(8.) Those who possess family vaults, family graves, or monuments, receive from the Cemetery Commission a document attesting their right, and they must also follow the regulations which are contained in it.

(9.) No grave can be opened till after the lapse of 20 years.

Hence, if a family grave-plot is full, and the oldest grave has not been closed 20 years on the occurrence of another death in the family, if it cannot be placed in the grave-plot of any other relative, it must be interred in the general interment ground, in the regular order and course.

(10.) The printed table of the cost of interment determines what sum is to be paid for funerals to the Church and Cemetery Commission.

SECTION II.—*The duties of the Cemetery Inspector.*

(11.) He is chosen by the Church and Cemetery Commission, and the appointment is confirmed by the mixed Church and School Commission.

In case the latter commission should find reason to delay the ratification, the grounds of the delay are to be reported to the senate, which will then order what is requisite.

The oath of the Cemetery Inspector must be taken before the younger *Herr Burgermeister*, but his dismissal must be conducted in the same manner as his appointment.

He must be examined by the Sanitary Board, and must be found by them to be qualified. He must also be a burgher.

The Cemetery Inspector retains his situation during good behaviour, exact obedience to the interment regulations, and all other matters contained in his instructions.

(12.) The sextons and their assistants are under the control of the Cemetery Inspector.

He has to enforce the regulation that all those employed in the solemnities of funerals, or in the house of mourning, shall appear in good black clothes, and that no disorder, negligence, or defect, is permitted in the cemetery.

He has further to see that on the part of the sextons, or the gardeners,

the neatness of the paths of the cemetery is restored after interments, as also that of the plantations and flower borders, as quickly as possible, and also that the mounds on the graves in the common ground are covered with green turf and kept in a pretty form.

(13.) The interments are to be notified by writing to the inspector of the cemetery by the Interment Commissary. This notification must be signed by the Church and Cemetery Commission, otherwise the inspector may not venture to order the sextons to form a grave.

One of the principal duties of the inspector is to keep a register of all the interments from these notifications, which register he must weekly lay before the Church and Cemetery Commission.

(14.) The coffins must, without any distinction, be lowered into the graves, and the inspector has to see that the necessary ropes are always in proper condition.

No less important is it for the inspector to be present at an interment, in order that by his presence nothing may be done by his subordinates, or by any other person, which should be contrary to the dignity of the interment or to the regulations.

(15.) The inspector must also inspect the family vaults, graves, and monuments, and keep a book, in which he enters statements of any repairs which may be necessary, and a notification of this is immediately to be sent to the Church and Cemetery Commission, without whose permission no alteration can be made in the graves.

(16.) The inspector has also the superintendence of the house of reception.

(17.) It is the duty of the inspector to treat all who have to apply to him with politeness and respect, and to give the required information unweariedly and with ready good will.

Under no pretext is he allowed either to demand or receive any payment, as he has a sufficient salary.

SECTION III.—*On the Interment Commissaries.*

(18.) On the motion of the Church and Cemetery Commission, the Consistory names four Interment Commissaries for the Lutheran community.

For the reformed church in Franckfort two Interment Commissaries are chosen by the reformed consistory from those proposed by the Church and Cemetery Commission. Amongst those persons proposed by this commission, there must be included not only the present clergymen of the two reformed communities, but the clergyman at all times must be proposed.

The Catholic has also an Interment Commissary, chosen by the Church and School Commission from those proposed by the Church and Cemetery Commission.

The list proposed for every such appointment must include, at least, three burghers, fit to fill the situation.

The appointment is given during good behaviour, and the commissary must take an oath that he will truly and exactly follow the regulations, and that he feels it his duty to perform all these and any other particular instructions which he may receive.

(19.) To each of the three Interment Commissaries of the Lutheran community four districts are given, in which they must superintend all that has to be done from the death to the interment in their community.

The two Reformed commissaries, as well as the Catholic, have to take care of everything connected with interment in their communities.

(20.) In order that illness or any other unavoidable obstacle may not easily interfere with the function of these commissaries, two Lutheran, one Reformed, and one Catholic commissaries, shall be appointed as substitutes, and shall have the same duties and obligations as their superiors.

(21.) These commissaries must notify to each other at what hour they have an interment in charge, in order that many interments at the same time may be avoided.

(22.) The commissary is to be informed immediately as soon as a death has occurred. Thereon the commissary acquaints the family of the deceased with all that is to be done or observed with regard to the interment.

The commissary must then send to the proper officer a notification of the death, and receive the interment certificate, signed by the Church and Cemetery Commission. If the hour and day of the interment is fixed by the family of the deceased, the interment commissary informs the bearers of it the day before, so that if many funerals occurred on one day, it may be so arranged that no delays or annoyances should take place.

Timely warning is to be given to the friends of those who are placed in the house of reception, of the hour and day of interment, in order that they may, if desirous of doing so, attend the funeral.

(23.) The bearers alone, without any exception, must place the coffin in the ground.

The commissary must see that the bearers are always cleanly and respectably dressed in black when they appear at a funeral, and must be particularly careful that they conduct themselves seriously, quietly, and respectably.

He must also see that the carriage of the dead is not driven quickly either in the town or beyond it, but that it is conducted respectably at a quiet pace.

When the dead is covered, and not until then, the commissary and the bearers shall leave the cemetery in perfect silence.

For any impropriety which may, through the conduct of the bearers, arise during the interment, the commissary is responsible.

(24.) The commissary must keep a register of the deaths which occur in his district. He must close it every month with his signature, and present it in the first three days of the following month to the Church and Cemetery Commission.

(25.) If desired by the family of the deceased to communicate the event to the friends, the commissary shall do so, and for this he is to be paid according to the tax. But it is by no means necessary that he should be employed, as any other person may be employed to announce the death.

(26.) The substitute must receive half of the sum fixed by the tax-roll as belonging to the commissary, whose place he fills.

If the substitute is employed to announce the death, he receives the whole of the remuneration for that service.

Of the Bearers or Attendants of the Funerals.

(27.) The coffin bearers are chosen by the Church and School Commission, according to the sect for which they are to be employed.

The appointment of attendants on funerals and their assistants depends on good conduct.

They are bound by oath, truly and exactly, to do all that is prescribed by the interment regulations, as also all that may further be committed to them by the Church and Cemetery Commission.

(28.) For the interment of the Reformed and Lutheran sects in Franckfort, there shall be appointed thirty-six attendants of funerals and twelve assistants.

The community in Sachsenhausen has also twelve attendants and six assistants.

These attendants and their assistants are chosen from both these evangelical sects, without regard, however, to the particular number which there may be belonging to the one or the other sect.

They are summoned by writing to the performance of their duties at the

four different classes of funeral by the Interment Commissioner belonging to that community, and are subject to the strictest inspection by that commissioner.

The Catholic community has also twelve attendants and six assistants. The whole of the attendants and assistants must be citizens or burghers of Franckfort, or from the neighbourhood, and of unquestionable reputation.

(29.) On the occasion of every death, whenever they are required, these bearers must appear in a neat and clean dress, and conduct themselves respectfully and quietly.

The dress consists of a frock coat, vest, trousers, a round hat, stockings, and shoes or boots, all of black.

In winter is added a black cloak.

The whole of the dress must be of a particular form and make.

(30.) The bearers shall neither eat nor drink in the house of mourning; they shall neither ask nor receive, under the strongest penalty, any sum for that purpose, since they and their assistants have a fixed and sufficient salary, according to the interment regulations; any breach of this regulation will be punished by dismissal.

The assistant will pay half the rate to the bearer. That assistant who has signalized himself by the exact fulfilment of his duties, shall be the first to be promoted as bearer in case of a vacancy.

Neglect of duty on the first occasion shall be punished by the Church and Cemetery Commission with suspension from the office for a certain length of time, and on a repetition of the neglect, with dismissal.

It is before this commission that the bearers have to bring their complaints, which may sometimes occur, against the Interment Commissary, under whose immediate control they are placed, and the matter is there settled.

(31.) The Church and Cemetery Commission has to name from amongst the attendants of the Lutheran and Catholic funerals those who are to be cross-bearers. These, as well as the bearers, must fulfil most exactly and conscientiously the orders of the Commissioner of Interments, and must only attend when required by him.

SECTION IV.—Of the Grave-diggers.

(32.) The Church and Cemetery Commission appoints the sextons and their assistants, who are bound by oath to fulfil the regulations and necessary arrangements of the Commission.

(33.) The Church and Cemetery Commission appoints one of the sextons as chief, who must always live in the town, and to whom the Interment Commissioner must make known the event of a death, in order that it may be notified to the Church and Cemetery Inspector, who thereupon orders the preparation of a grave.

This chief sexton has a register, in which he enters all the notifications of interments that have been sent to him, and which, when asked for, he must lay before the Church and Cemetery Commission.

No grave can be prepared, unless the warrant for it has been signed by the Church and Cemetery Commission.

Every grave must be six feet deep, three feet and a-half wide, and seven feet long for an adult.

The measurement for children is regulated by the Church and Cemetery Inspector on each separate occasion. Between the graves in the ordinary course there must be an interval of one foot.

(34.) The whole of the sextons, in which is included their assistants, are under the inspection of the Church and Cemetery Inspector, who must keep them to their duty, and who is answerable for any misdemeanor, or offence or neglect of the sextons.

(35.) The sextons must always be respectably dressed in black during the interment, and those who go to the house of mourning must always appear in neat and clean attire, and must be studious at all times, whether engaged within or without the churchyard, to preserve a modest and proper behaviour. Drunkenness, neglect of duty, or abuse of their services, will be punished by the Church and Cemetery Commission, and on repetition of the offence the offender will be dismissed. The sextons are forbidden, on pain of dismissal, from making any alteration in any family vault, or grave, or in the ordinary graves, without especial orders. They shall, on the other hand, keep all the flowers, borders, and shrubs in the neatest order, and one of the sextons must be an excellent gardener, whose office it shall be to keep the plantations and borders in good condition.

Any assistant who has been guilty of any fault which has led to the dismissal of the sexton, shall not be able to be employed again as sexton.

(36.) The salary for the making of a grave is settled by the Church and Cemetery Commissioners, on the roll, and no more than this sum can either be demanded or received, under pain of dismissal.

An assistant who has to perform the work of a sexton on account of sickness, must give the sexton half the remuneration. In case the sexton allows the assistant to do his work, or, on occasion of increased work requiring the employment of an assistant, the assistant must receive the full pay.

That assistant who has signalized himself by the exact and excellent performance of his duties, shall be the first to be promoted when a vacancy occurs.

When the qualifications are equal, the assistant of the longest standing shall be promoted, and when this is equal, the oldest shall be made sexton.

The complaints of the sextons and assistants against the Inspector or amongst themselves are to be settled by the Church and Cemetery Commission.

Of the Cost of Interment.

The Church and Cemetery Commission undertake to conduct the interments at the price fixed by them in the tax roll.

The whole rates could only be made so moderate, by making all interments to depend on the Church and Cemetery Commission, therefore the solemnities of interment can be superintended by no one except the said Commission, under the regulation of the printed orders.

The Interment Commissioner, on the occasion of a death, must call the attention of the friends to these orders. It depends entirely on the choice of the friends to which of the four classes of prices the funeral shall belong.

(39.) The Commission of Interments has to receive the payment for the interment from the friends, and must immediately pay it over to the Church and Cemetery Commission.

(40.) Besides, or in addition to the authorized payment printed in the tax roll, and determined by the Church and Cemetery Commission as the sufficient remuneration of the Inspector, Commissioner of Interments, the bearers and sextons, no one is, on the occasion of a death, either to give money or to furnish food and drink.

The practice of furnishing crape, gloves, lemons, &c., by the friends of the dead, is also given up, and the persons engaged in conducting the interment, must take all the requisites with them, without asking or receiving any compensation, under pain of instant dismissal.

The time which these orders are to remain in force.

(41.) Experience will best show what alteration is necessary in these regulations, and they are therefore after some years to be laid by the mixed

Church and School Commission before the Senate for revision, and further regulation.

The rate of Interment for the Christian communities of the free town of Franchfort.

The following, by order of the Legislative Assembly, of the 31st May, 1836, is the table of the rate of interment, which is here made known for every one's observance and obedience.

The interments of adults are divided into four classes:—

| | English Money. |
|--------------------------------|----------------|
| | £. s. d. |
| The 1st class costs 50 florins | = 4 7 6 |
| The 2nd " 36 " | = 3 3 0 |
| The 3rd " 22 " | = 1 18 6 |
| The 4th " 15 " | = 1 6 3 |

The interment of children are also of four classes:—

| <i>First Class.</i> | | English Money. |
|------------------------------|------------|----------------|
| | | £. s. d. |
| Children from 10 to 15 . . . | 22 florins | = 1 18 6 |
| " 5 to 10 . . . | 16 florins | = 1 8 0 |
| " 0 to 5 . . . | 12 florins | = 1 1 0 |

| <i>Second Class.</i> | | |
|------------------------------|------------|----------|
| Children from 10 to 15 . . . | 16 florins | = 1 8 0 |
| " 5 to 10 . . . | 11 florins | = 0 19 3 |
| " 0 to 5 . . . | 8 florins | = 0 14 0 |

| <i>Third Class.</i> | | |
|------------------------------|------------|----------|
| Children from 10 to 15 . . . | 10 florins | = 0 17 6 |
| " 5 to 10 . . . | 8 florins | = 0 14 0 |
| " 0 to 5 . . . | 4 florins | = 0 7 0 |

| <i>Fourth Class.</i> | | |
|------------------------------|-----------------------|----------|
| Children from 10 to 15 . . . | 6 florins | = 0 10 6 |
| " 5 to 10 . . . | 5 florins | = 0 8 9 |
| " 0 to 5 . . . | 2 florins 30 kruiters | = 0 4 4 |

For the funeral of all the city militia and officers of the line, twelve florins must be paid for the cross, the pall, and the making of the grave, inclusive of the carriage, by the friends of the dead.

The interment of a pauper will cost six florins, eight kruiters.

The expenses of the interments of the institution for paupers are settled by the Church and Cemetery Commission, with the officers of that institution.

If the Interment Commissary be employed by the friends of the deceased, to announce the occurrence of the death, he is to receive three guilders per day.

SECTION V.—The Regulations with regard to the House for the reception of the Dead.

The following are the regulations regarding the use of the house for the reception and care of the dead, which are here made known for every one's observance.

212 *Regulations for abating Apprehensions of Premature Interment.*

- (1.) The object of this institution is—
 - a. To give perfect security against the danger of premature interment.
 - b. To offer a respectable place for the reception of the dead, in order to remove the corpse from the confined dwellings of the survivors.
- (2.) The use of the reception-house is quite voluntary, yet, in case the physician may consider it necessary for the safety of the survivors that the dead be removed, a notification to this effect must be forwarded to the younger burgermeister to obtain the necessary order.
- (3.) Even, in case the house of reception is not used, the dead cannot be interred until after the lapse of three nights, without the proper certificate of the physician that the signs of decomposition have commenced. In order to prevent the indecency which has formerly occurred, of preparing too early the certificate of the death, the physician shall in future sign a preliminary announcement of the occurrence of death, for the sake of the previous arrangements necessary for an interment, but the certificate of death is only to be prepared when the corpse shows unequivocal signs of decomposition having commenced. For the dead which it is wished to place in the house of reception, the physician prepares a certificate of removal. This certificate of removal can only be given after the lapse of the different periods, of six hours; in sudden death, of twelve hours; and in other cases, twenty-four hours.

In case of the thermometer being below 10 degrees of Reaumur, (30 Fahrenheit), removal can only take place when there are unequivocal signs of death, and under the certificate of death from the physician.
- (4.) The custody and treatment of the dead in the house of reception is the same for all ranks and conditions.
- (5.) The superintendence of the house of reception is conferred upon the Inspector of the Church Yard. He must possess the requisite medical and surgical knowledge, and must be examined by the Sanitary Board with regard to his qualification for the office, and must be instructed according to their direction.
- (6.) The guardians of the dead are under the control of the inspector, and must receive a special instruction with regard to their duties.
- (7.) The dead which are placed in the house of reception must not be interred until unequivocal signs of decomposition have appeared. The inspector determines the time of interment.
- (8.) The dead, on arrival at the house of reception, are immediately placed in separate rooms, which are built for that purpose, and which are numbered, and there receive all the proper means of security.
- (9.) In the house of reception, there are besides these rooms two other chambers; one is used as the animating chamber, the other, as a bath room. The kitchen, which is also near at hand, is used to furnish hot water, or whatever may be required.
- (10.) In case a body gives signs of re-animation, it must be brought immediately into the chamber used for that purpose, when all the means will be applied by the inspector, according to the instructions he has received.
- (11.) This chamber, in which there is a bed, must always be carefully locked, in order that it may never be used for any other purpose. The inspector alone has possession of the key of this chamber.
- (12.) There must be in this chamber every necessary provision of medicines, and of means of resuscitation and proper ventilation of the air, according to the instruction of the Sanitary Board, and all these arrangements must be kept in most perfect order by the inspector.
- (13.) If any particular case occurs in the house of reception, the Sanitary Board must immediately have information of it, and the Board must from time to time examine into the state of the house.

Regulations for the Care of the Dead previous to Interment. 213

- (14.) Permission to friends and relatives to enter the rooms of the dead is not granted unconditionally, on account of considerations of health, but it depends upon the consent of the inspector. Entrance into the waiting hall, from which the rooms in which the dead are deposited range, is at all times allowed to the relatives of the dead.
- (15.) A register is kept in the house of reception, in which is entered the rank and name of the dead, the age, the last disease, the day and hour of the death, the placing in the house of reception, and the time of interment, and the name of the last physician. Every registration is signed by the inspector.
- (16.) No payment is made for reception and guarding of the dead in the house of reception, nor for the services of the inspector or nurses, nor for the heating of the chambers. These expenses are defrayed from the Interment Fund.
- (17.) The inspector and nurses are strictly forbidden to allow any persons to visit them in the buildings of the burial ground.
- (18.) When the inspector has been examined by the Sanitary Board, as to his special qualifications, and has passed, the oath is administered to him by the younger burgermeister.

Instructions to the Inspector in regard to the House of Reception.

- (1.) The inspector must be examined as to his medical and surgical knowledge, by the Sanitary Board, and as to his treatment of suspended animation, in which he is specially instructed by the Sanitary Board, and is then sworn in by the younger burgermeister.
- (2.) The inspector has to instruct his assistants, and must see that his instructions are strictly followed.
- (3.) He must answer for all that is out of order in the house of reception.
- (4.) As long as there are corpses in the house, the inspector must not leave his house.
- (5.) He has to keep a register, in a form which is prescribed, and must punctually and clearly fill up all the heads of the form.
- (6.) As soon as a corpse is brought to the house, the inspector must determine in which of the rooms it is to be placed, and order all the necessary arrangements and means of security, and the attendance of guardians, and must not leave the dead until everything has been arranged for its proper protection and care.
- (7.) The Cemetery Inspector must superintend the attendants night and day.
- (8.) No corpse can be interred until unequivocal signs of decomposition have appeared. On this matter the inspector has to act according to the instructions of the Sanitary Board.
- (9.) Should the case arise, that the dead sets in motion the alarum, or that the nurses perceive a slight colour in the cheek, or a slight breathing, or a movement in the eye-lid, the inspector must immediately arrange that the body be brought into the fresh air of the re-animating chamber, which is properly warmed, and he will there adopt all the other means, on which he has received instructions from the Sanitary Board.
- (10.) When these signs of life have appeared, the inspector must immediately give information of the circumstance by a messenger to the physician who last attended the person, in order that a notification of the same may be made to the *Physikat*.
- The tidings of the re-animation shall be conveyed to the house of mourning by the physician alone, and then only when there is no longer any doubt of the resuscitation.
- (11.) One of the first essentials in the house is cleanliness. The Cemetery Inspector has therefore strictly to watch that everything which belongs to the house is kept most perfectly clean by the nurses.

In order to preserve the purity of the air, he must see that the arrangements for ventilation are kept in perfect order.

(12.) He must also see that the rooms are properly warmed during the cold weather.

(13.) The Cemetery Inspector is not specially paid for his services in the house of reception, but has a house free, besides the salary determined by the Cemetery Commission, and printed in the salary table.

Instructions in respect to the Watchers or Nurses.

(1.) The nurses, amongst which the sextons may be sometimes employed, are named and appointed by the Church and Cemetery Commission, on good behaviour.

(2.) They are under the superintendence of the Cemetery Inspector, and must obey his orders with the greatest exactitude and alacrity.

(3.) As soon as a corpse is brought to the house the nurses must convey it immediately into the room pointed out by the inspector, and afterwards do all that is required of them by him.

(4.) They must be instructed in all their duties by the inspector.

(5.) He, whose week it is to watch in the warder's chamber, must never leave the chamber when there are corpses in the rooms, on pain of instant dismissal; but if anything requires him to leave the chamber, he must first summon with a bell one of the other nurses to take his place.

(6.) The nurses must keep everything in the house in the greatest cleanliness. Any one who has frequently to be reminded of his duties through carelessness shall be dismissed from the situation.

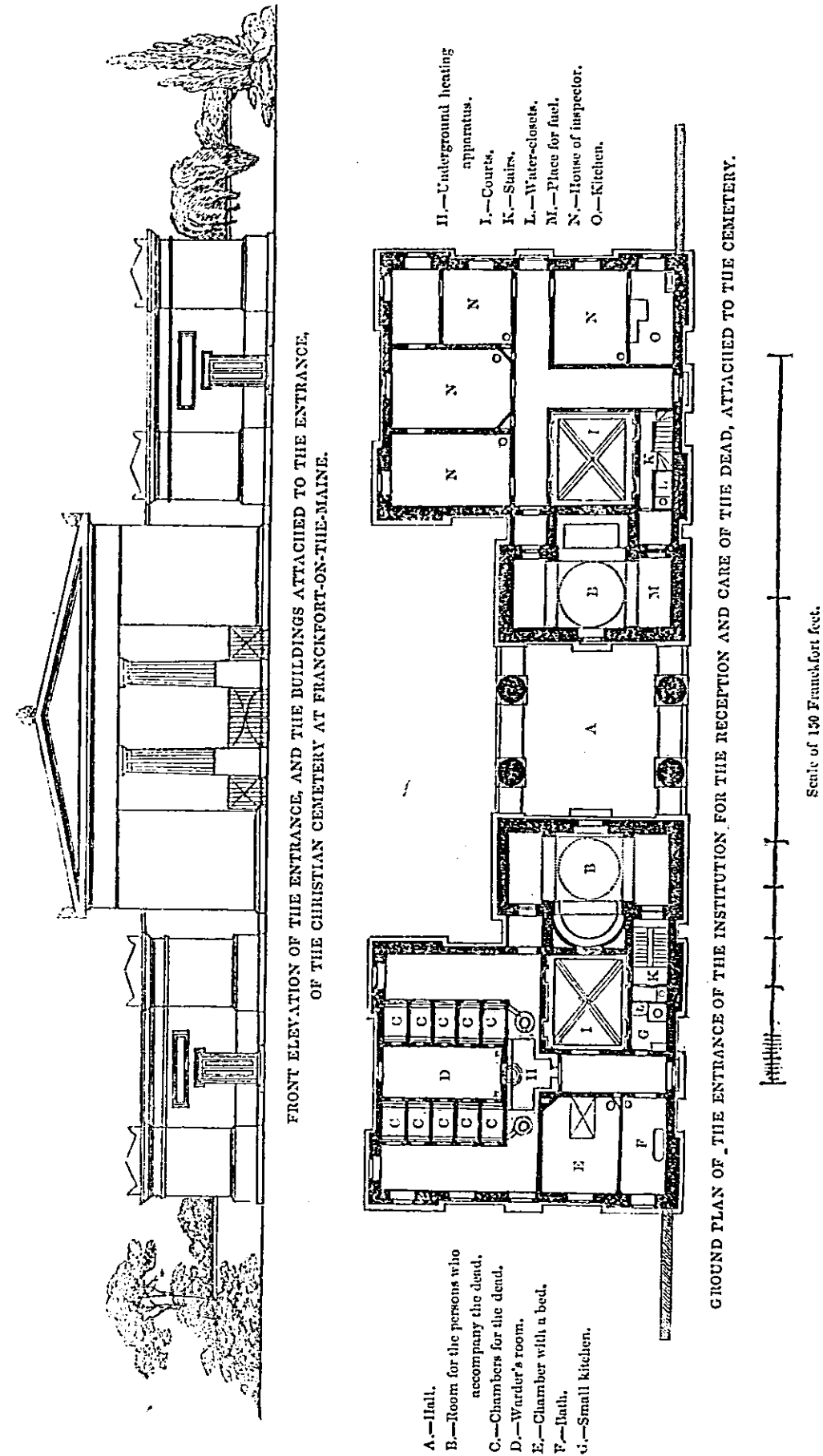
(7.) If roughness be shown by a nurse to the dead, he must be punished with instant dismissal, and a notification of the same must be given by the Church and Cemetery Commission to the police, in order that proper inquiry and punishment be given.

(8.) In case the alarum is set in motion, or any other sign of life is perceived, the nurse must immediately inform the Inspector, and quietly and gently fulfil all his directions.

(9.) The nurses are forbidden to use tobacco in the house.

(10.) They are forbidden to receive any visits in the house, and more especially to allow any person to come during the night into the ward-chamber.

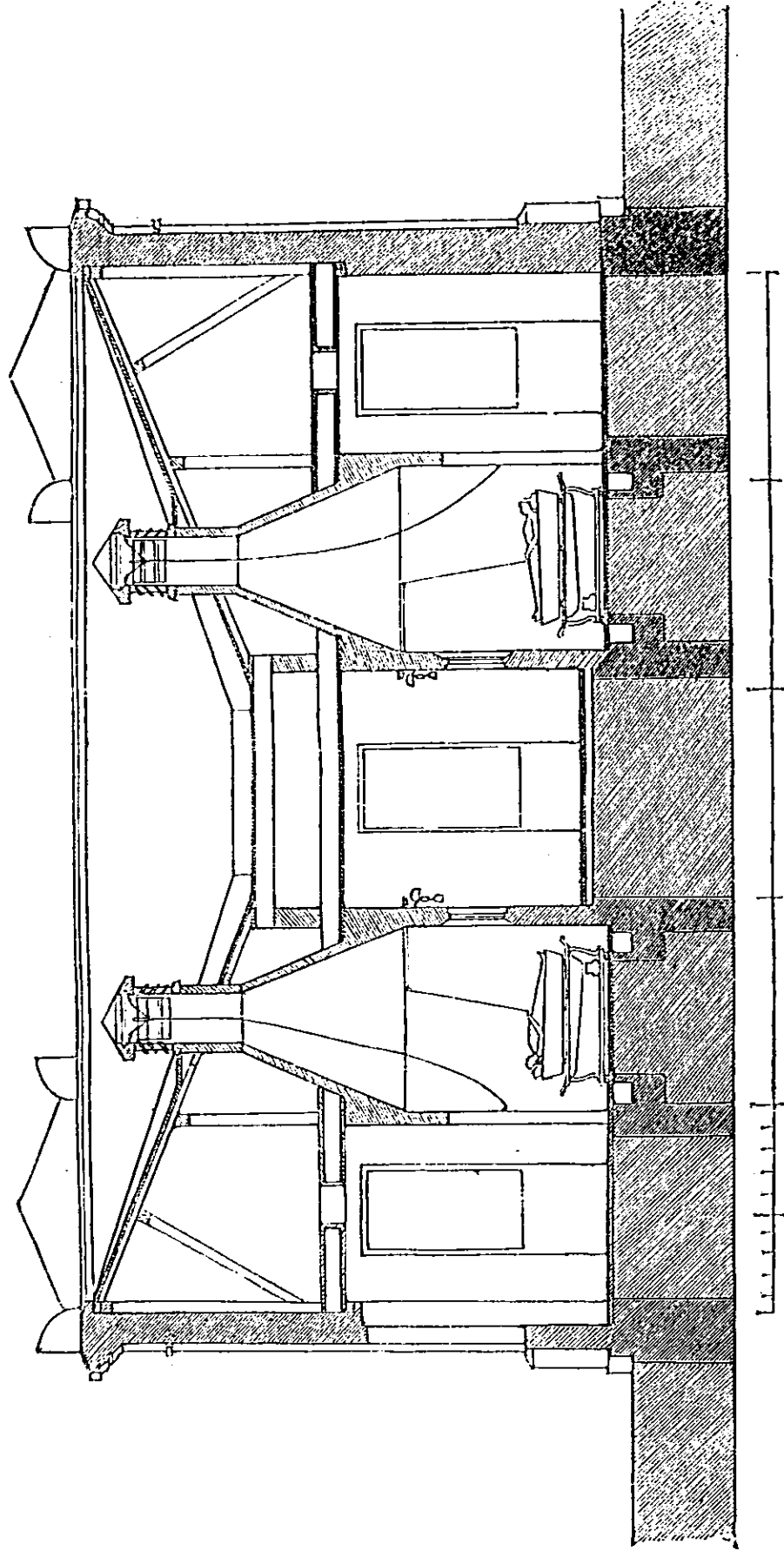
(11.) There shall be in the warder's chamber a clock, which, by a certain mechanism, can tell when, and how long a nurse may have slept during the night. Frequent negligence of this kind will be punished by dismissal.



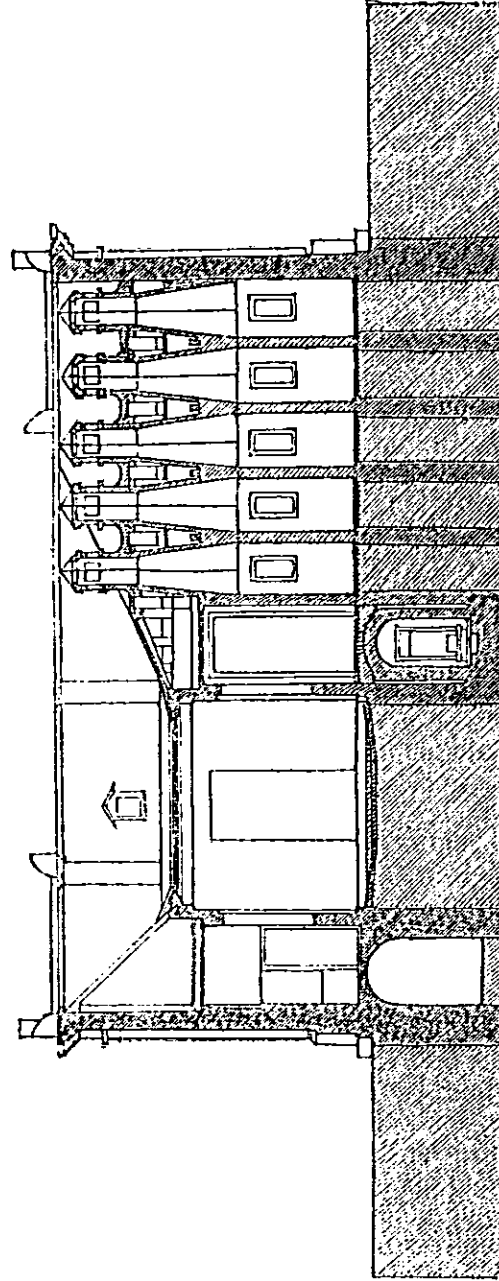
FRONT ELEVATION OF THE ENTRANCE, AND THE BUILDINGS ATTACHED TO THE ENTRANCE, OF THE CHRISTIAN CEMETERY AT FRANKFORT-ON-THE-MAINE.

GROUND PLAN OF THE ENTRANCE OF THE INSTITUTION, FOR THE RECEPTION AND CARE OF THE DEAD, ATTACHED TO THE CEMETERY.

Scale of 150 Frankfort feet.



TRANSVERSE SECTION OF THE PROBATIONARY HOUSE OF RECEPTION AND CARE OF THE DEAD PREVIOUS TO INTERMENT AT THE CEMETERY.



LONGITUDINAL SECTION OF THE PROBATIONARY HOUSE OF RECEPTION AND CARE OF THE DEAD PREVIOUS TO INTERMENT AT THE CEMETERY.

No. 2.

REGULATIONS FOR THE EXAMINATION AND CARE OF THE DEAD, AND FOR RELIEVING THE APPREHENSIONS OF PREMATURE INTERMENTS, PROVIDED AT MUNICH.

Regulations for the Examination of the Dead.

Whereas it is of importance to all men to be perfectly assured that the beings who were dear to them in life are not torn from them so long as any, the remotest, hope exists of preserving them; so is death less dreadful in its shape when one is convinced of its actual occurrence, and no longer a danger exists of being buried alive.

In order to afford this satisfaction to mankind, and to preclude the possibility of any one being considered as dead who is not actually so; that the spread of infectious disorders be avoided as much as possible; that the quackeries so highly injurious to health may be suppressed; that murders committed by secret violence may be discovered, and the perpetrators delivered over to the hands of justice, is the imperative duty of every wise government; and in order to accomplish these objects, every one of which is of infinite importance, recourse must be had to the Safety Police as the most efficient means, by a strict medical examination into the deaths occurring, and a conformable view of the body.

In consideration of which, the orders already existing on this subject will undergo a strict examination, and, with the august consent of the government of the Isar-Circle, the following general regulations have been fixed upon:—

1. An examination of all dead bodies, at two different times, and this without exception to rank, is henceforth to take place in the metropolitan city of Munich, and the suburbs belonging thereto.

2. The first examination is to be held immediately after death has taken place, and the second shortly before the interment.

3. At the public hospitals, both examinations are intrusted to the acting physician, who has however strictly to observe those regulations relating to the certificates for the examination of the dead.

4. The first examination is to take place at the very spot where death has taken place, or where any dead body may be discovered, by the sworn surgeon of the district; the second examination, however, by the surgeon appointed by and belonging to the Police Establishment.

5. The city of Munich, with the suburbs, are to be divided into Eight Districts; for each of these districts a separate surgeon is hereby appointed, viz.:—

[Here follow the eight districts, with the names and residences of the Surgeons appointed for each district.]

6. As soon as a death takes place, immediate notice must be given by the Soul-nuns, Midwife, &c., &c., or by any such person charged with the arrangements for the burial. This said notice must state the street, the number of the house, and of the floor where the dead body is lying; whereupon the said surgeon has immediately to go there, and conduct the investigation according to his instructions.

7. Previous to this, and before the first examination has taken place, it is neither permitted to undress nor to clean the dead body; nor is the body allowed (in cases of natural death) to be carried out of that room where death has taken place, or to be removed from the spot; and it is not even permitted to remove the cushions from under the head of the dead body. Every violation of this decree will be punished with a fine of from 5 to 15 florins, or with imprisonment from one to three days.

8. Those regulations issued by the examining surgeon respecting the treatment of the dead body, or which relate to the clothes and other objects of the deceased, must be strictly obeyed.

9. After the examining surgeon has convinced himself that every hope of re-animation has disappeared, he fills up the certificate of examination ac-

ording to his instructions; but he it observed at the same time, that if a medical man has attended the deceased, such is bound to enter in the said certificate the description of the disease, and to certify it by his signature.

10. If the dead body remains in the dwelling-house until the burial takes place, the second examination by the surgeon from the Police must be held there; and for this reason the certificate must be forwarded into his hands as soon as possible.

11. But if the dead body after the first examination has been removed to the house for the reception of the dead, in order to remain there, this said certificate should previously, or at the delivery, be taken to the Inspector of his Institution, in order that no obstacle may arise to its reception.

12. The utmost cleanliness and greatest order is to prevail in this said house for the reception of the dead, where the dead bodies removed there are to be placed under a perpetual and proper watch; and the Police Surgeon is bound to call at the Institution twice every day, namely, in the morning and in the evening, to institute a very minute examination of the dead bodies there; and in case of any signs of re-animation, to render speedy and the most serviceable assistance.

13. If the medical man who conducts the second examination perceives those signs in a corpse which do not leave any doubt whatsoever that a death has taken place, he then enters the verification in the certificate, which thereupon is taken to the Directory of Police, who then grant the permission for the interment.

14. Without such a legal certificate permitting it, no body is allowed to be buried; and that Priest or Clergyman who will assist at any burial without having seen this certificate forfeits a sum from 15 to 30 florins.

15. Proper arrangements have been made that the Printed Forms for the decreed Certificates may always be obtained at the Directory of Police, and will be delivered gratis to the officiating medical men of the Public Hospitals, as well as to the Examining Surgeons; a receipt however must be given for them.

16. All those persons nominated for the execution of these measures, as the Soul-nuns, Midwives, attendants at the house for the reception of the dead; the Inspector of such House, the Examining Surgeons, the Surgeons of the Police, &c., &c., will be supplied with the printed regulations, as well as the most minute instructions, for which purpose they will be sworn, and be ever subject to a rigorous inspection.

Munich, Nov. 20, 1821.

[The regulations which follow this are chiefly as to the different prices of different degrees of the religious service.]

Regulations for the Guards or Watchers at the House for the reception of the Dead near the Burial Ground at Munich, with reference to the Inspection of Dead Bodies.

1. There must be at least two healthworthy and active men, as trusty as possible, appointed as Body Watchers, and specially sworn in by the Police.

2. When a body is intended to be placed in the house for the reception of the dead, it must be previously notified to the Inspector of the same, and the before-mentioned "Examination Ticket," or a special official order, be delivered over to him.

3. It is forbidden to the Body Watchers to place any body there without the previous knowledge and concurrence of the Inspector.

4. Should no obstacle arise, the corpse is then received by the Body Watchers, and deposited in the place appropriated to it.

5. The cover of the coffin must then be immediately withdrawn, the face of the deceased uncovered, and the hands and feet disengaged from the bandages attached to them.

6. The place where the bodies are watched must be kept warm day and night, and lighted during the night without interruption.

7. Great cleanliness is to be observed, and a supply of pure air to be kept up.

8. The Watchers must constantly remain in the watch-room, and frequently by day and night enter the room for the reception of the dead, in order carefully to observe the bodies lying there.

9. The Police Surgeons will particularly instruct the Body Watchers as to what signs or appearances they are especially to observe, and how they are to act with regard to them. On this point they are to take the greatest care.

10. Should any sign or appearances which may betoken re-animation proceed from any body, it must be immediately brought into the watch-room with every care and precaution, and placed on the bed provided with mattresses and blankets for that purpose.

11. On such an event occurring, not only the Inspector must be informed of it, but the Police Surgeon must be called in without a moment's delay.

12. As to the treatment of the body until the arrival of the Surgeon, the Inspector and Body Watchers are informed by the Police Surgeon. In all cases warm water be prepared, and the safety apparatus arranged.

13. The body, thus awakened from its sleep, must be treated with extreme care, and everything must be avoided likely to create any strong impression on it.

14. No coffin wherein a body is placed must be closed, nor must any preparation for the burial take place, until the distinct permission from the Police Surgeon is issued.

15. The entrance into the room for the reception of the dead is allowed to every one under proper restrictions, care being taken that the quiet and good order there are not disturbed.

16. Any Body Watcher who shall be convicted of any neglect in the performance of his duties, will be punished with a proportional fine and imprisonment, and dismissed on a repetition of the offence.

Munich, Nov. 20, 1821. Royal Police Direction.

Regulations for the Proceedings at the Second Examination of the Corpses by the proper nominated Surgeon of the Police.

1. The second examination of the deceased must be performed by the appointed Police Surgeon, who must, however, take particular pains to satisfy himself that the first examination has been duly executed, that the certificates were properly drawn up, that the Soul-nuns have fulfilled their various duties, and that both the Inspector, as well as the appointed Watchmen belonging to the house for the reception of the dead, have duly discharged the duties with which they are intrusted, and that, moreover, nothing has been undertaken or omitted that should not be in accordance with the various intents and purposes of the decreed examination of the bodies.

2. This said Surgeon must be supplied with a copy of all the regulations relating to the examination of the bodies, as well as copies of all such regulations for the guidance of all others charged with the performance of any of these duties.

3. If the Surgeon who is appointed by the Police feels convinced that by one person or other any act has been performed contrary to the prescribed duties, or that any negligence in the execution of the service exists, he must, on pain of personal responsibility, give immediate notice to the Police.

4. The same (the Police Surgeon) is bound to issue proper instructions, more particularly to the Soul-nuns, to the Inspector of the house for the reception of the dead, and to the Watchers and attendants of the said institution, as well as to all individuals assisting at any of the examinations; which said instructions relate to the method of proceeding, and treatment of the dead bodies, especially in such a case where re-animation might again take place, and repeated caution must be given on this subject.

5. The second examination with which he is charged must either be undertaken in that house where death has taken place, or in the house for the reception of the dead. In the first case, when, for instance, the deceased

is kept at the house where death has taken place until the final interment, the Police Surgeon must receive the necessary information through the medium of the examining ticket, which has been issued and signed by the medical man of the district, and which ticket must be forwarded to him, either through the Soul-nun, or through any such person charged to attend the deceased.

6. The stated sickness, or the manner how death ensued, as also the time in which deceased is to be buried; all of which, having been entered on the ticket, must serve him for guidance whether the second examination must be more or less accelerated. In all cases, however, such must be undertaken as timely as possible, so that generally interment may take place after 48 hours.

7. He has, accordingly, to go to that place stated in the certificate of examination, examine the corpse with due minuteness, and, in case the burial may be proceeded with, he has to state it in the certificate; such is then to be forwarded to the Royal Police, where the permission for interment is granted.

8. If it is intended to remove the body to the house for the reception of the dead, such may take place without any hesitation after the proceedings of the first examination; and in this case the Police Surgeon must find both the body and certificate at that place.

9. The Police Surgeon is bound to attend twice every day at the house for the reception of the dead of the burial-ground, viz., every morning from 9 to 10 o'clock, and in the afternoon from 3 to 4 o'clock. On his arrival, such dead bodies, with their certificates, which have been examined, must be shown to him; he examines them, and signs those certificates which do not admit of any delay; which certificates are afterwards forwarded to the Royal Police authorities, in order to procure the certificate of permission for the burial.

10. Of all such dead bodies having undergone the second examination by the Police Surgeon, and which have been considered by him proper for burial, minute lists must be kept by him containing the consecutive numbers, as well as the statement of that day on which the interment has been ordered, and all such observations which have been entered in the certificate of examination.

11. Such corpses which from the manner of their death are subject to any judicial examination or dissection, will, after their previous dissection, be received by the proper judicial authorities, and the interment is to take place according to the existing orders.

12. Should information be forwarded to the Police Surgeon that signs of re-animation have been observed in any body, it is to be his first and most sacred duty to attend instantly at the place and spot, in order to conduct all attempts at restoration, and to issue orders about the mode of treatment of the re-animated body.

13. Attending minutely to his duties, it is certain that he may perceive divers symptoms which are not only important to him as Examining Surgeon, but also as surgeon to the Police; he has therefore to attend minutely to such observations, and, together with his own, communicate such to his superior authorities.

14. In case the Police Surgeon should be prevented, either by indisposition, absence, or any other cause, from conducting the examinations with which he is intrusted, he is forthwith to give immediate notice to the Royal Police, in order to provide for a proper substitute, whom he may himself propose.

15. It is fully expected from the Surgeon of the Police, that, impressed with the importance of the business he is charged with, he will do all in his power to attain the manifold important objects belonging to it. Any negligence of which he may be guilty will be rigorously punished, and on a repetition of the offence he will be discharged.

Royal Police Direction, Munich.

Instructions to the Soul-Nuns as to their Duties in regard to the Inspection of the Dead.

(1.) As soon as a person is dead, or appears to be so, the nurse or sister of charity in attendance is immediately to give information of the same to the medical man appointed to the district.

(2.) For this purpose she obtains the *form of notification* for conducting the inspection of the dead, which contains the divisions of the districts of inspection, and the names of the physicians appointed to each district.

(3.) In order that the physician may inspect *immediately, and without the slightest delay*, the case of death in his district, the name of the street, the number and floor of the house in which the death occurs is to be given with exactness, so that he may not in any way be hindered in going to the place and making the earliest possible inspection.

(4.) Before this inspection has taken place, it is expressly forbidden to undress the corpse, or wash it, or, if the death is a natural one, to remove it from the bed or room in which the death took place, or even to take away or alter the position of the pillow.

(5.) Any disobedience to this law will be punished by a fine of from 5 to 15 florins, or by a three days' imprisonment.

(6.) The physician will make a note of all the circumstances of the first inspection, according to his instructions. If he should consider that particular arrangements are necessary, they are to be adopted immediately.

(7.) His note of remarks shall be left at the house, in the charge of the soul-nun, and through them the signature of the physicians attending the person who had died, if such there has been, shall be procured.

(8.) If the dead is retained at the house till the time of interment, the note of inspection must be directly handed over to the public surgeon, in order that he may make the second inspection, and determine further what is necessary with regard to the interment.

(9.) If after a certain length of time he sees no reason to postpone the interment, he will make a note to that effect and give it to the police direction, and from them is procured the sanction for the interment.

This sanction will be given in to the clergyman's office belonging to the district, and thence handed over to the officer who has the care of the house for the reception of the dead previous to interment. Without this sanction no corpse can be interred.

(10.) The corpse must be retained until interment in an apartment where there is fresh and pure air. The coffin must not be closed, nor the face covered till after the second inspection, and the hands and feet must not be bound.

If any signs of life should be observed, the district physician is immediately to be called.

(11.) If the corpse is conveyed into the house for the reception of the dead, the second inspection must be made there. The district physician's note of inspection is to be given to the officer of the house for the reception of the dead at the time, or before the corpse being brought there, and that officer is to hand over the note to the public surgeon. Without this note of inspection, no corpse can be received into the house for the reception of the dead.

(12.) The soul-nuns, or midwives, or whoever is intrusted with this office, must wait for the second inspection, and for the time when the public surgeon shall pronounce that the interment is necessary. For this purpose the surgeon will make the requisite certificate, which must then be given to the proper officer, who immediately gives the sanction for the interment.

(13.) As the second inspection in the house for the reception of the dead must take place, according to the regulations, in the morning between 9 and 10, and in the afternoon between 3 and 4, the sanction for interment may be procured between 11 and 12 in the morning, and 4 and 5 in the afternoon.

No. 3.

DEFECTIVE ARRANGEMENTS FOR THE VERIFICATION OF THE CAUSES OF DEATH.

Thomas Abraham, Esq., Surgeon.

You are Registrar of Deaths in the City of London Union. Since you have been Registrar, have you had occasion to send notice to the coroner of cases where the causes of death stated appeared suspicious?—Yes, in about half-a-dozen cases. One was of an old gentleman occupying apartments in Bell Alley. His servant went out to market, and on her return, in less than an hour, found him dead on the bed, with his legs lying over the side of it. He had been ailing some time, and was seized occasionally with difficulty of breathing, but able to get up, and when she left him she did not perceive anything unusual in his appearance. I went to the house myself, and made inquiries into the cause of death; and although I did not discover anything to lead to the suspicion of his having died from poison or other unfair means, I considered it involved in obscurity, and referred the case to the coroner for investigation. Another case was of a traveller who was found dead in his bed at an inn. The body was removed to a distance of forty miles before a certificate to authorize the burial was applied for. His usual medical attendant certified to his having been for several years the subject of aortic aneurism, which was the probable cause of his sudden death, although the evidence was imperfect and unsatisfactory, and could not be otherwise without an examination of the body, and I therefore refused to register it without notice to the coroner.

A third case occurred a few days ago. A medical certificate was presented to me of the death of a man from disease of the heart and aneurism of the aorta. He was driven in a cab to the door of a medical practitioner in this neighbourhood, and was found dead. He might have died from poison, and, without the questions put on the occasion of registering the cause of death, the case might have passed without notice. There was not in this case, as in others, any evidence to show that death was occasioned by unfair means, but the causes were obscure and unsatisfactory, and I felt it to be my duty to have them investigated by the coroner.

But for anything known, you may have passed cases of murder?—Certainly; and there is at present no security against such cases. The personal inspection of the deceased would undoubtedly act as a great security.

In the course of your practice, have you had occasion to believe that evil is produced by the retention of the corpse?—Yes; I can give an instance of a man, his wife, and six children, living in one room, in Draper's Buildings. The mother and all the children successively fell ill of typhus fever: the mother died; the body remained in the room. I wished it to be removed the next day, and I also wished the children to be removed, being afraid that the fever would extend. The children were apparently well at the time of the death of the mother. The recommendation was not attended to: the body was kept five days in the only room which this family of eight had to live and sleep in. The eldest daughter was attacked about a week after the mother had been removed, and, after three days' illness, that daughter died. The corpse of this child was only kept three days, as we determined that it should positively be removed. In about nine days after the death of the girl, the youngest child was attacked, and it died in about nine days. Then the second one was taken: he lay twenty-three days, and died. Then another boy died. The two other children recovered.

By the immediate removal of the corpse, and the use of proper preventive means, how many deaths do you believe might have been prevented?—I think it probable that the one took it from the other, and that if the corpse of the first had been removed the rest would have escaped;

although I, of course, admit that the same cause which produced the disease of the mother might also have produced it in the children. I believe that, in cases of typhus, scarlatina, and other infectious diseases, it frequently happens that the living are attacked by the same disease from the retention of the body.

Have you had occasion to observe the effects of cesspools in your district?—Yes, and that they are very injurious to the health. In the states of the weather when offensive emanations arise from the cesspools and drains, I have often heard people complain of headache, giddiness, nausea, languor, and an indisposition for exertion of any kind; and I have known a walk or a ride in the open air to remove those symptoms, but in an hour or two after their return home they have found themselves as bad as before. Their sleep brings them little or no refreshment; in truth, they have inhaled, during the whole of the night, the noxious atmosphere, which is very depressing, and will fully account for their rising, as they often say, as tired as when they went to bed. As an example, I may mention the case of a compositor, residing in Draper's Buildings—a narrow, confined, and filthy place, where there was always a disgusting stench in every house. He was the subject of disordered stomach and liver, which might have been induced by his night-work and intemperance: the stinking hole in which he resided contributed its share towards it, without doubt. This man remained at home for a week, when he was getting better, but had scarcely any appetite. I advised him to walk in Finsbury Circus two or three times a-day, as long as he could without fatigue; and on several occasions, when he returned to his dinner, he said, "Now, if I had had my dinner in Finsbury Circus I could have eaten a hearty one, but now I do not seem to care anything about it." I believe that if I had entered that man's house with a good appetite for a dinner, and had remained there for an hour, that I should have cared no more about eating than he did,—which I attribute to the nauseating and depressing effects of the effluvia from the cesspools, drains, and general filthiness of the place.

Are you aware whether this state of things arose from the cesspools or the state of the sewers?—I conceive the worst have been cesspools; but the drains, if they open, are just as bad. I was called upon to visit a patient living in a court in Whitecross Street, ill of typhus fever; in the centre of it was a gully-hole, which was untrapped and smelt horribly. The fever went through the whole of that court. I gave it as my opinion at the time, that the case I visited was occasioned by the gully-hole, and that the fever would go through the court, which it did.

Have you perceived the present state of the drains in the city of London?—At times they smell very strongly, which scarcely any one can fail to notice; but I have heard country-people complain of them at times when they have not attracted any particular notice from me.

Are you aware that decomposing matter is allowed to accumulate in them?—Yes; very recently they took up the refuse in our street, Old Broad Street; it smelt very badly, and it was black and horribly filthy.

How long before had the sewer been cleansed?—I do not know. I do not remember its having been cleansed, before the last September, since I have been there, which is about nine years.

Do you remember to have perceived the smell from the sewers before the last September?—Yes; there is a gully-hole near my own house from which there was constantly an offensive smell: it was much worse after a thaw in winter, or a shower of rain in summer. A neighbour living two doors from me being more annoyed by it than I, made great efforts, and at length succeeded in getting it trapped; and I have not since perceived any smell from it, though I observe it now in other places. The gully-holes are trapped now in most of the respectable streets, but in the bye and poor streets they are not trapped.

From the evidence which has come before you, have you any doubt that

the existing state of sewers in the City are the latent cause of much disease and death?—I have not the least doubt of it in the world.—A great deal of active disease, which creeps on gradually and insidiously, may be traced to that cause.

In the poorer districts, in what state is the surface-cleansing of the streets?—Even the best streets are very badly cleansed, but in the poorer streets of the city the cleansing is very bad indeed—horribly bad! Take Duke's Place, for example; you will see cabbage-stalks and rotten oranges that have been thrown away, and they often remain there for several days. We do not get our streets swept oftener than once a-week.

If there were a perfect system of drainage and cleansing in the city, do you think that the health and the duration of life of the inhabitants would be extended?—I think there would be a considerable extension.

What is the physical condition of the children born in London of parents who are natives of the rural districts, as compared with the physical condition of children who are born in the country of parents of the same class?—The children born and bred up in London are more frequently of small stature and have slender limbs, are deficient in stamina and powers of endurance, are of irritable frames and prone to inflammatory attack, than children born and bred up in the country. An impure atmosphere is immeasurably more injurious to children than adults. Children also suffer more from want of opportunities of exercise in the open air. The beneficial effects of pure air and exercise on children who have been born and pent up in London are most marked: a weakly child, and which, if kept in London, would perhaps always continue weakly, would most likely become strong and healthy if sent into the country. I cannot doubt that children born of healthy parents, and bred up in the country, would be more robust and stronger than children born of the same class of parents and bred up in London, and that this difference may be justly ascribable to atmospheric influence.

When children are weakly, what is the effect on the temper and character?—The temper and character of weakly children are generally found to correspond with, and are most probably derived from, the character of their constitution: their temper is quick and irritable, their passions ardent, their perception keen, and their imagination predominant over their judgment.

You are speaking, of course, of the general characteristics of individuals as specimens of the population brought up under such circumstances?—Yes, of persons coming under my own observation.

Have you, as Registrar of Deaths, noticed the larger proportion of infant mortality in the city?—There is, I conceive, all over the kingdom, a large proportion of infant deaths; but I have no doubt that a considerable proportion of the excess of infant deaths in London is ascribable to atmospheric influences.

It appears, from the Mortuary Registration, that of deaths in the city of London, about one-half are deaths of children under ten years of age; whilst in a rural district, take the county of Hereford for example, only one-third of the deaths are deaths of children.

Do you conceive it probable that this different rate of infant mortality is to be traced chiefly to the difference of the atmospheric influence, the average age of all of the labouring classes being, in Herefordshire, 39 years, whilst in the City of London the average age of the deaths of all the labouring classes is only 22 years?—I am decidedly of opinion that a greater proportion of the excess of infant mortality in London, and the reduced duration of life, are ascribable to atmospheric impurity.

If all cesspools were removed, and water-closets substituted; if water were introduced into the houses of the poorest classes; if the sewers were regularly flushed weekly, or oftener, so as to prevent accumulations of deposit and the escape of miasma, such as you have described; if the carriage

and foot pavements were more frequently and completely cleansed; if these several public duties were performed with practicable efficiency, can you express a confident opinion that decrease and premature deaths would be considerably diminished?—I am quite confident that the adoption of such measures would not only diminish disease of every kind, but greatly improve the moral as well as the physical condition of the inhabitants.

No. 4.

THE PROPORTIONS OF DEATHS AND FUNERALS PREVENTIBLE BY SANITARY MEANS.

Henry Blenkarne, Esq., South West District Surgeon of the City of London Union.

Have you in your district perceived any effects resulting from interments in the parochial burying places?—I have no cognizance of any bad effects resulting from those interments. The first twenty years of my life I lived close to a burial-ground, and never was aware or heard of any prejudicial consequences arising. I may observe, however, that when a relation of mine has attended the church she has been enabled to perceive whenever a vault underneath the church has been opened. She has said, "I feel they have opened a vault;" and on inquiry it has turned out to have been so.

Have you observed any evil effects following the practice of the long retention of the corpse in the house amidst the living?—Yes, I have observed effects follow, but I cannot say produced by them, though they were perhaps increased by them. In those cases which I have had where there has been a succession of cases of fever in the same family, after a death it has generally occurred that the parties affected have complained two or three days before that they felt very unwell. Generally this has been the case. I have, in such instances, ordered them medicine immediately. Since the Union has been established we have immediately removed all fever cases to the Fever Hospital.

The retention of the corpse amidst the living, under such circumstances, must aggravate the mortality, must it not?—There cannot be a moment's doubt about it.

What, from the observations in your district, has been the actual state of the sewerage, and cleansing dependent upon it, as the cleansing of the cesspools?—There has been great improvement in the city of London by the improvement of the sewerage, in so far as it has removed the cesspools. When you went into a respectable house formerly, you could, in the city, tell the state of the weather by the smell from the cesspools. Where water-closets are substituted, the health of the inhabitants has undoubtedly been improved. In the poorer neighbourhoods, where they have still cesspools, they are still very bad. I constantly tell them, if you get rid of that nasty cesspool you'll get well and keep well; it is of no use my giving you physic until that is done. Where there have been deposits accumulating in the sewers, and the drains have been choked up, the effect has been just the same as if there had been cesspools.

You are aware that in respect to sewerage it is the practice to allow deposits to accumulate in the sewers, and then, when the private drains are stopped up, to open the sewer and get out the deposit by means of buckets, and remove it in carts?—Yes, I am.

Have you seen any illness result from this practice?—I cannot state a case, though I have no doubt of its highly injurious effects; but can decidedly speak to illness arising from the accumulations. The illness is just the same as from cesspools: a low depressing nervous fever, most like that which is described to be the form of the jungle fever. In November

or December last, they were taking up the deposits from the sewers near Broken Wharf, in Upper Thames-street: the stench from it was quite sufficient to have produced any fever: it was not within my district, and I do not know what were the effects. Fortunately there was clear weather, and the wind blew towards the river.

Have you any doubt that the removal of such refuse, as well as the accumulation, must be attended with danger to life?—Yes; if any person in a state of mental or bodily depression were exposed to such an influence, it would produce low fever; it would be dangerous in proportion as it was stagnant.

In passing through the city, have you been assailed with smells from gully-holes?—Only yesterday, in passing through the city, the smells from many of the gully-holes were very offensive; and several medical friends agree with me in attributing extremely prejudicial consequences as arising from this cause.

The following case is related on the authority of Dr. Good, as having occurred within the city of London, and is mentioned by Mr. Fuller, in a letter from a surgeon who has paid great attention to the influence of sewerage, and who adduces the facts of the case in evidence that typhus may be produced by the miasma from sewers:—"Soon after the closing of the Parliamentary Committee, I learned, from the late Dr. Hope, the particulars of a case which, to my mind, has completely proved the production of typhus fever from it, and was so much in the character of an *experimentum crucis*, that I did not consider it necessary to prosecute the inquiry any further. The case is as follows:—"A family in the city of London, who had occupied the same house for many years, enjoying a good state of health, had a nursery-maid seized with typhus fever; the young woman was removed from the house and another substituted in her place. In a short time the new nurse-maid was attacked with typhus fever, and was also sent away. A few weeks after one of the children was seized with the same fever: an inquiry was now instituted by the medical man in attendance, in order to ascertain, if possible, the cause of this frequent recurrence of typhus fever, when the following facts were brought to light:—"The nursery was situated on the upper floor but one of the house, and about a fortnight or three weeks before the first case of fever occurred, a sink was placed in the corner of the nursery for the purpose of saving the labour of the servants; this was found to communicate with the common sewer, and to be quite open, or untrapped; they ordered it immediately to be effectually trapped, and then no other case of fever occurred, although it continued to be occupied as before; and, when I learned the case, more than a twelvemonth had passed."

Have you met with cases analogous to the one here stated?—I have met with several such cases. I know of an instance where a room in an old house had an offensive stench, and the health of the person living in it was always bad. A stench was perceived in the room, which it was guessed might arise from the decay of dead rats in the wainscot. The party went to much expense to pull down the wainscot, when it was found that there was an opening which communicated with the cesspool below. The hole was properly cemented and stopped up, and the room has since that time become quite habitable and healthy; and where I have directed the cesspools to be emptied, as the predisposing cause, the general result has been that the sick have immediately got well. From my knowledge of the local causes I can predicate, with certainty, what will be the general effect on the health in the case of removal of the parties.

Besides the houses of the labouring classes, are there many houses of the middling classes in your district in the city of London that are provided with cesspools?—Many houses that I go into are provided with cesspools. I mentioned the other day to a lady that I should never be enabled to keep her well so long as there was a cesspool in the house; I told her that the

expense of continued medical attendance would pay for a communication with the common sewer and better cleansing.

Are you aware that a new practice has arisen of preventing the accumulation of deposits in the sewers, by flushes of water, which remove all deposits weekly, and so far prevent the year's accumulation and corruption of deposits in the sewers. If this system were enforced in the city, have you any doubt as to the extensive prevention of disease and mortality which would be thereby effected amongst all classes?—Certainly it would be a great boon, in a sanitary point of view, to the population of the city of London. I am so much convinced of this, that in my own house I put a stick under the handle of the water-closet, so as to have a continued flow or flush of water for some length of time; this I do to remove any accidental accumulation. Of course the flushing of the common sewers would have the same effects.

Besides the accumulations in the sewers, is there at this time no decomposing refuse from the defective cleansing of the courts and bye-streets, and poorer districts?—Yes; in the poorer districts there is accumulation. In one court, for example, called Harrow-court, Thames-street, where there is almost always low fever, there is always dirt and filth, and I am constantly exhorting the people to remove the filth; but the great difficulty with the poor people is commonly how to get the water. There is a court in Cornhill which a man was cleansing the other day by applying a hose to the water-cock (which is used in case of fire), in order to cleanse the pavement. An officer belonging to the water company coming by, said, "If I see you doing that again, I shall indict you."

Are you aware that the streets are swept oftener than weekly in the city of London?—My impression is—not oftener.

It has been proposed that water should be laid on, and kept at high pressure in the streets, so as to enable the courts and alleys, the foot and the carriage pavements, to be washed daily by means of a hose attached to the water-pipes. This, which has been proposed for protection against fire, as well as for cleansing the streets more completely, has, I am informed, been done in Philadelphia. If the system were carried out in the city of London, what do you conceive would be the effect on the health of the population in the poorer districts?—I should certainly say that it would tend greatly to prolong life amongst the population.

From the mortuary registries it appears that the average duration of life among the professional persons and gentry in the city of London, who live in better cleansed and ventilated houses, and better cleansed streets, is, on the average of the whole class, about 43 years, and 6 per cent. of the deaths are deaths from epidemic disease; whilst among the labouring classes the proportion of deaths from epidemic disease is 19 per cent., and the average age of all who die is only 22 years. With such sanitary regulations as are under the public control of the public authorities, to what extent do you think it probable the duration of life amongst the labouring classes may be extended?—So far as I can judge, without examination of the particular cases, I should say that the average might be extended one-half at the least.

The majority of the cases of epidemic diseases may decidedly be ascribed to the want of cleanliness and ventilation. On looking over the mortuary registry of the deaths occurring in Upper Thames-street and the district attached to it, I find the causes of death most frequently registered are "low fever," "low fever," occurring one after the other. This recurrence of low fever corresponds with my experience of sickness, which so often assumes the character of low typhoid nervous depression. The medicine I use in the greatest quantity is ammonia, as an active diffusive stimulus. For all classes this medicine is in constant use. In damp weather we have always much increase of this illness; the dampness produces a depression which lays them open to the atmospheric poison.

Have you had instances where better cleansing has taken place and illness diminished?—Yes; for example, in Ireland-yard, containing a large number of families of coal-heavers and others, a place which I never was out of from continued illnesses: the yard has been much better cleansed, the houses put in better order, and now there is very little illness there. I know for a fact, that in the neighbourhood of London-wall, where recently great improvements have taken place in the sewerage and ventilation, disease has greatly diminished, especially *low fever*. Formerly they had a sewer which used to be stopped up and overflowed; they have had of late a new sewer, which now works better; they have no stink or stench in the kitchens, as formerly, and they have nothing of the same kind of disease going on there that they used to have before.

Are the houses in Ireland-yard occupied by the same inhabitants?—Just by the same class. The habits of coal-heavers are reputed to be none of the best in respect to general cleanliness or temperance.

Have you observed any alteration in their habits?—Not in the least.

Have you observed what is the personal condition of the natives of London?—The real cockney is generally of stunted growth.

Have you observed whether the children born in London of parents who have come from the rural districts are as tall or as strong as the parents?—Generally shorter children, though some of them are as tall, but all are of comparatively weakly constitutions; they are particularly predisposed to strumous disease. I have been so impressed with the effect of children living in a London atmosphere, that I have been anxious to send them out of it when possible.

Does not defective cleansing, as causing atmospheric impurity, not only tend to produce disease and shorten the duration of life, but depress the physical condition of the population?—Decidedly.

No. 5.

Dr. Wray, Medical Officer of the West London Union.

You have read what is stated by Mr. Blencarne, and by Mr. Abrahams—do you generally agree with them as to the effects of defective cleansing, on the condition of the population?—I agree with the whole of what they state; it perfectly accords with my own experience, which has been about 25 years in this district. I have during that time observed a great falling off in the condition of the children; they are stunted, squalid, poor-looking things, and there is a great deal of deformity amongst them.

Have you observed moral effects attendant on the physical depression?—Yes; I have observed a great deal in our neighbourhood. I think the females of the poorer classes who are not strong for work, are more apt to take to courses of livelihood other than by work;—that very many of them go upon the town.

No. 6.

Mr. Thomas Porter, Surgeon to the St. Botolph's Bishopsgate District.

Have you observed any emanations from the sewers in your district?—In Liverpool-street there is now a cleansing of the sewers by opening the top, taking the soil out, and carting it away.

What is the effect of this process?—It vitiates the atmosphere to a considerable extent.

Have you observed any effects from it?—I have often found headache to result from it to myself, and parties have complained to me of the same effects.

What is the state of the drainage?—There are some districts, such as Halfmoon-street, which are imperfectly drained, where the cesspools are suffered to overflow and run along the kennels at the sides of the street, causing foetid and deleterious exhalations; in this street and the alleys opening into it, especially Thompson's-court, Thompson'-rents, Baker's-court, Providence-place, and Campions-buildings, fever prevails nearly the whole year round. It also prevails very much in Bligh's-buildings, Lamb-alley, Dunning's-alley, Sweet Apple-court, Montague-court, Artillery-lane, Rose-alley, and Catherine-wheel-alley. These places, all of which are badly drained and not regularly cleansed, are seldom without fever for any length of time.

In these places are there any water-closets?—No; they have nothing but common necessities, which are usually allowed to run over before they are emptied, and it is impossible to enter the tenements without being assailed by the disagreeable and unhealthy effluvia thence arising.

Have they water laid on in the rooms of the several tenements?—Seldom in the rooms; generally in some place in the court to which they all go. Many have not that even, and they resort to the common street pumps. I do not remember an instance where water is properly laid on in any house of the labouring classes.

What rents are paid for houses in this condition?—Rent for one room is from 1s. 6d. to 4s. 6d. per week. The rents are very high in proportion to the size and accommodation of the rooms.

You say you have observed emanations from the sewers within your district?—Yes; they are frequently very offensive in moist warm weather. You may, indeed, almost tell the condition of the weather from the smells from the public sewers. Recently in returning from Islington along the City-road from the Canal bridge to Finsbury-square, and along Sun-street, I noticed in passing near the gratings, as every person must have noticed, a peculiarly offensive effluvia.

Within the city itself have you perceived the same effluvia on passing the gratings of the sewers?—Frequently; it is so general that no particular place is distinguished by being free from it.

Suppose a tradesman or a merchant returning from Change in a state of depression from anxiety passing through a street, exposed to a succession of smells and breathing the effluvia from such sewers; what is likely to be the effect upon him?—A low nervous fever, with considerable gastric derangement. The greater part of fever cases which I have to treat are of this description.

Is that with every class of persons?—Yes, with every rank of life. They are mostly of the low or typhoid type, and do not bear depletion. In my ordinary course of treatment I generally begin by emptying the stomach and bowels, and by lowering the diet. I then use a moderately stimulating treatment with a perfect absence of solid food.

Is gross feeding or excess very common amongst the people of your district?—Not very common. Excess from drinking is more frequent than excess from eating.

In what proportion will there be of excess from eating or drinking in such cases?—Amongst the labouring classes perhaps there may be one case in ten from excess of drinking, and one case in thirty from excess of eating.

If these excesses had taken place in a purer atmosphere, do you conceive the results in disease would have followed?—In most instances the system in a pure atmosphere would have thrown off the inconvenience without fever.

Then excess or depression both predispose to the attacks of disease from atmospheric impurity, and especially to the direct influence of the effluvia in question?—Yes, certainly; excess of watching, want of rest, mental anxiety, every depressing cause predisposes to an attack.

Besides the defects in respect to the cleansing of the cesspools and the drains, are there not defects in respect to other portions of cleansing, such as dust-bins neglected?—Yes, in those places there is no person to regulate or to see that done which ought to be done; consequently the dustmen and scavengers duty is much neglected, and places are filled with decomposing remains, which remain there two or three weeks in summer and much longer in winter. The carelessness of the people themselves as to cleanliness is also deplorable, as it operates very injuriously on their health and comfort; the floors of their rooms, the passages, stairs, and landings are often suffered to remain unwashed for weeks and months, and the walls and ceilings are seldom cleansed or whitened, so that what with filthiness of one kind or other they present an appearance of wretchedness beyond all description.

What is the condition of the children born or kept in courts or places of the condition you describe, with badly cleansed drains, with privies, and without water or conveniences for cleansing introduced into their habitations?—The children are, for the most part, of delicate or weak frame, and subject to struma. The health of children depends partly whether they were born in such places or not, whether their parents on each side are Londoners, as there appears to be a gradual decline in physical power by a long continuance in a vitiated atmosphere, which passes from parent to progeny, and partly also in a family where one part of the children have been born and brought up in the country and the other in town; those born in the country, and not coming into London until they are five years of age, will have comparatively strong frames, and will resist such influences, whilst those born in town will be comparatively of delicate frame, weakly and strumous, liable to glandular disease, and diseased affections of the joints and the spine. Generally they are shorter in stature, sometimes they are taller, but then they are slender and very delicate, in which case they are likely to have bending of the limbs.

What is the condition of females born under such circumstances?—I have observed that the females are less depressed than the males, and are reared with less difficulty.

Why is this so?—I have not been able to determine. It may be that the male requires more extensive and powerful exercise, and that in pure air, than the female, and consequently that the female suffers less from the want of it.

What are the moral characteristics of the population brought up under these depressing physical circumstances?—They have decided unwillingness to labour. They are not so strenuous as the more healthy people from the country. They are more apt to resort to subterfuge to gain their ends without labour. Light employments they do not object to, and do comparatively well in. But it is difficult to keep a native of London, either male or female to heavy work; they will avoid it if they can. The cause is in most cases physical from the deficiency of ability to labour. The greatest part of them are mentally irritable and impatient under moral restraint.

Is any similar difference marked on the condition of the children of tradespeople between those children of tradespeople brought up in London and those born in the country?—Yes, there is a similar difference perceptible, but less in degree. Amongst tradesmen, too, it is the extensive practice of the parents to send their children out of town to school or on visits, which may powerfully affect them beneficially. In the tradesman's family they have better sleeping rooms, and greater cleanliness in person, and in bed and body linen, and also a better regulated dietary.

What is the effect of such atmospheric impurities as those described in the chances of recovery from attacks of disease?—It lessens the chances of recovery and greatly impedes convalescence. Indeed, in many instances, very little progress can be made until the patient is sent out into the

country. In a case of fever which occurred to a strong healthy man, aged 24, a carman, in a close neighbourhood, the house being without drains and ill ventilated; no progress could be effected until he was removed into the country, although the fever had decidedly subsided. I believe that in this case something else would have supervened, had he not been removed. I frequently remove patients in a respectable condition, finding no chance of recovery without it. Many of the better conditioned houses being badly adapted for the treatment of fevers, having low ceilings and insufficient ventilation.

What will be the difference in respect to the time of cure or convalescence between a well and an ill-cleansed neighbourhood?—A difference of perhaps one-half.

Suppose the rooms of each house supplied with water, the privies and cesspools removed, drains from the houses to sewers, and the sewers so constructed as to be cleansed, and to convey away daily such refuse as that which is allowed to remain decomposing in the close courts during weeks. Supposing the surfaces of the streets cleansed as frequently after the manner in use in Philadelphia and other towns where they are cleansed with water daily, to what extent do you conceive disease would be reduced?—Of fevers two-thirds certainly, and other diseases would be considerably lessened.

No. 7.

Mr. John H. Paul, Surgeon, Medical Officer of the City of London Union.

In what condition in respect to cleanliness are the courts and other places within your district, chiefly inhabited by the labouring classes?—The cleansing of the courts and alleys in my district is defective. I agree with what Mr. Blenkarne says in respect to cesspools. For instance, in one room in a house in Sugar Loaf-court, Garlick-hill, next to their common cesspool, I have frequently attended patients, and before going, I surmise that whatever disease they are primarily affected with, it will generally run into one of low character with tendency to typhus. In the interval of little more than a twelvemonth, I have attended several occupants of the house, one after the other, who have all been, to a certain extent, similarly affected. I have generally improved their health by giving diffusive stimuli, and have occasionally prevailed on them to remove.

How many visits in the year may you have paid to this same house?—Upwards of forty visits. But there are other houses where there are similar evils, where I have had occasion to visit them still more frequently. In one house in Star-court, Bread Street-hill, which is similarly situated, where almost the whole of the inmates were laid up with fever, and where I had to visit it three times a day for upwards of three weeks. There were deaths on each floor of that house. Fever assumed, at one time, so malignant an aspect, that there appeared to be no possibility of saving them, except by removal. I do not remember one case of a removal in time where death ensued. The ward inquest had the inhabitants removed, and the house cleansed.

But was the cesspool removed?—Emptied but not removed.

Then in time you will have a recurrence of the same evils in the place in question?—Yes, certainly.

What is the condition of children brought up in such places?—Generally pale and emaciated, scrofulous, and apt to mesenteric disease.

You were medical attendant at the Norwood school, where the pauper children from the city of London are taken. Do you think, that on a view of the children, and without any positive knowledge of the sort of residences of the parents of the children, you could on the view select from the rest, the children who came from the courts and alleys, such as

you have described in the city of London?—I have but little doubt of it, though generally speaking the children from the city were of rather a better description than those from more crowded localities. Indeed, the courts and alleys of my district are superior to those in other quarters of the metropolis. They are situated near the banks of the Thames with a considerable fall towards the river. Some parents also take their children much out into the open air, and in these the influence of the place would not be so visible, but with the majority there would be but very little mistake. Whilst at Norwood, my chief trouble arose from this sick and diseased class of children, who generally improved very much after being there some little time.

What was the moral condition of these physically depressed children, as compared with other pauper children, whose position had been less unfavourable?—The moral condition of this depressed class of children was generally worse also.

No. 8.

Effects observed of Dark, Ill-ventilated, and Ill-drained Localities on the Moral and Physical Condition of the Population of Paris.

Dr. la Chaise, in his Medical Topography of Paris, which is an early attempt to investigate the influence of localities on the moral and physical condition of a population, gives the following description of the physical condition of the short-lived population bred up in the narrow and dark streets, and ill-cleansed and badly ventilated houses of Paris, which description may serve for comparison with those given of the native population in the crowded and badly cleansed districts of London.

"The Parisian," he says, "in stature is often below what is commonly termed middle-size. His fair skin, soft to the touch, forms a striking contrast to that of the inhabitant of small towns, and, above all, to the countryman, who is more exposed to the various changes of the weather, and to the action of the sun and light. The hair of the Parisian is generally fair or light brown, and his eyes blue. His muscular frame is little developed, so that the form has on the whole a feminine appearance. In the labouring class the muscles of the lower limbs are sometimes developed, but irregularly and incompletely, which is explained by the exercise given exclusively to certain muscles by their employment or handicraft; these irregularities of development are much less frequent in the rural districts where the movements, and consequently muscular actions, are much more equally divided. The temperament, that is to say the physical constitution peculiar to the Parisian, differs, as is perceived, from each of the distinct and determined forms admitted by physiologists. He seems to partake of the union of many,—to be intermediate between those which are recognized under the names nervous, bilious, and lymphatic-sanguine; the first seems, however, to predominate.

"It is not, however, rare to meet in Paris with physical constitutions entirely in the extremes and contrasted with each other; that is to say, there are here, as in other large towns, large numbers of weakly and debilitated, vulgarly called sickly, and others with hollow chest and tall slim figure.

"The women of Paris are rather pretty than handsome; without regular features, they owe to the development of the cellular tissue, and to the fairness and fineness of the skin, a certain softness of form which is very graceful; and a quick and spiritual eye makes one forget the paleness of their cheeks.

"Considered morally, the portrait of the Parisian presents colours which are not impossible to seize, notwithstanding their great variety. He may be said generally to be lively, spiritual, industrious, and deserving the name of frivolous. Much less perhaps is given him. He is inquisitive, and carries into his work a taste, an ardent imagination, and inventive

mind, which he is willing to believe should compensate for sustained activity. There necessarily results from this a great nervous susceptibility, an *encéphalique* predominance, which it is important to the physician never to overlook.

"If a sound and firm organization allows a few to resist the effects of this premature exercise of the organ of thought, a rapid increase in its functions always shows itself in the injury done to the other organs, and generally to the muscular system, which bear the marks of feebleness and often of deplorable languor. In this life, too active morally and too indolent physically, the nervous system acquires not what is vulgarly called a feebleness or delicacy, but a susceptibility, or rather a predominance, which is affected by the least shock. Hence that fickleness, and that vivacity of desires, that changeableness in the tastes, in a word that coquetry, that unequal and whimsical moody character, those caprices and vapours. The character is not alone affected by this excess of susceptibility; all the organs, the whole of the economy of the body feels it in turn; the nervous system acts particularly on the uterus, develops it prematurely; thus the women generally arrive at puberty much earlier at Paris than in the provinces, and especially than in the country. It is not unfrequent to find young girls of 12 or 13 fully formed and capable of becoming mothers, whilst in the country, even in the south, they do not attain that period till the age of 15 or 16."

No. 9.

NOTE TO PAGE 123, ON SIR CHRISTOPHER WREN'S PLAN FOR EXTRA MURAL INTERMENTS, AND FOR EXCLUDING GRAVEYARDS ON THE REBUILDING OF THE CITY OF LONDON.

Whosoever examines the various modern plans for the improvement of the metropolis, and compares them with the plan of the architect of St. Paul's, will see in them only small approximations to his conceptions, and that they only provide for a few large openings, without reference to any general sanitary considerations, and without providing for the mass of the population, whereas he was for "excluding all narrow dark alleys without thoroughfares, and courts," such as are commonly left untouched in the new lines of streets; and he had provided that not only "all church yards," but "all trades that use great fires, or yield noisome smells, be placed out of town." If, as is confidently maintained on such evidence as that before referred to, *ante* p. 22 and 25, the proportions of death might even now be reduced by one-third in the city of London by better drainage and other sanitary measures (independently of the removal of those courts and alleys, &c., on the evidence of the proportions of mortality actually prevalent in districts such as he would have constructed, facilitating, and almost necessitating by regular lines an early and more systematic drainage below the streets, as well as a free and copious flow of fresh air from above, it may be as confidently maintained that the mortality and numbers of burials would have been reduced in like proportions from the period of the rebuilding of the city. The whole of the deformed area stands as a monument of the disasters incurred to the living generation, by a weak and careless yielding, not of the present to the future, but of the present itself, to blind and ignorant impulses, which have entailed immense demoralization, waste of health, and life and money, and a large proportion of the evil which now depresses the sanitary condition of the population of that particular district which his improvements would have covered. "The practicability of this whole scheme," says the Parentalia, "without loss to any man or infringement of any property, was at that time fully demonstrated, and all material objections fully weighed and answered; the only, and as it happened, in-

surmountable difficulty, was the obstinate averseness of great part of the citizens to alter their old properties, and to recede from building their houses again on the old ground and foundations, as also the distrust in many, and unwillingness to give up their properties, though for a time only, into the hands of public trustees or commissioners, till they might be dispensed to them again, with more advantages to themselves than otherwise was possible to be effected; for such a method was proposed, that by an equal distribution of ground into buildings, leaving out churchyards, gardens, &c. (which are to be removed out of the town), there would have been sufficient room both for the augmentation of the streets, disposition of the churches, halls, and all public buildings, and to have given every proprietor full satisfaction; and although few proprietors should happen to have been seated again directly upon the very same ground they had possessed before the fire, yet no man would have been thrust any considerable distance from it, but been placed, at least, as conveniently, and sometimes more so, to their own trades than before." "By these means the opportunity, in a great degree, was lost of making the new city the most magnificent, as well as commodious, for health and trade of any upon earth, and the surveyor being thus confined and cramped in his designs, it required no small labour and skill to model the city in the manner it has since appeared." The plan was approved by the King and the Parliament, but opposed by the corporation, who, it is stated in a history of the city institutions, by one of its officers, conceived that they would have lost population and trade by the plan; *i. e.*, they would have been spread beyond its jurisdiction. But on both points this policy was dreadfully mistaken. Only a burthensome population is obtained by overcrowding, that is to say, a larger than the natural proportions of the young and dependent, of widowhood, and early and destitute orphanage, and of sickly and dependent, and prematurely aged adults. As an example of the coincidence of pecuniary economy with enlarged sanitary measures, it may be mentioned, that it is shown in a report on a survey made for sanitary purposes by Mr. Butler Williams of the College of Civil Engineers, Putney, that a loss of not less than 80,000*l.* per annum is now incurred in carriage traffic alone on two main lines of street, namely, Holborn Hill to the Bank, and Ludgate Hill to the same point, being made crooked and with steep acclivities instead of straight and level, as Sir Christopher Wren designed them. It is to be regretted that the discussions on the rebuilding of Hamburg have presented an instance of a similar conflict of local interests, which, in a few instances, has been so far successful as to preserve several dense masses of crowded and unwholesome habitations for the poorer classes, in the face of the recent experience of the sort of population which, to the surprise of the better classes of inhabitants, issued out of them and made the city at the time of its destruction a scene of plunder and anarchy more terrible than the fire itself.

No. 10.

LETTER FROM THE TOWN CLERK OF STOCKPORT, ON INFANTICIDES COMMITTED PARTLY FOR THE SAKE OF BURIAL MONEY.

DEAR SIR,

Stockport, 25th January, 1843.

I HAVE no doubt that infanticide to a considerable extent has been committed in the borough of Stockport; and I have been professionally engaged in prosecuting two distinct charges of infanticide, of which I give you the following summary:—

The first case was against Robert Standing, by trade a hatter. He had

a female child about sixteen years of age, who, from imbecility, was not very likely to obtain her own living. One morning, about five o'clock, he sent her to call up a labouring hatter, with whom he (the father) was going to work during the day; but, previous to his so sending her, he gave the child some coffee. After the child's return she was seized with vomiting, and all the usual symptoms of illness caused by mineral poison, and died during the course of that day. The coroner (the late Mr. Hollins) held an inquest on the body, but refused to allow any surgical examination; and charging the jury that the death was a natural one, such a verdict was returned. In about three months afterwards, the case, and some suspicious circumstances, came to the knowledge of the Stockport police; and I was consulted as town-clerk and clerk to the justices. The magistrates issuing a warrant for the exhumation of the body, I attended with a competent surgeon and chemist (Mr. John Rayner), and a large—very large quantity of arsenic was found in the stomach, and all parts of the body which could be affected by arsenic taken internally were remarkably preserved from putrefaction. Standring, being apprehended, was tried before Mr. Justice Coleridge at the Chester Assizes. The judge apparently summed up for a conviction; but the jury, after a long deliberation, returned a verdict of acquittal. The verdict was an extraordinary one, and can only be accounted for by the general feeling against capital punishments, which enables so many criminals (capitally indicted) to escape any punishment.

The inducement for this murder, so far as it could be ascertained, was of a twofold character; partly to obtain money from the burial friendly societies, in which Standring had entered his child as a member, and from which he received about 8*l.*, and partly to free himself from the future burthen of supporting the child. The judge, in summing up the case for the consideration of the jury, remarked upon the apparent inadequacy of the motives for the murder; but, with all due deference to his lordship, when it is known to be an established fact that Mr. Ashton, a manufacturer of Hyde, was murdered by two miscreants whose only inducement was 10*l.* divided between them, there can be no scale laid down to indicate the lowest price for murder.

The other case involved no less than three distinct cases of murder. Robert Sandys, and Ann his wife, and George Sandys, and Honor his wife, were brothers and sisters-in-law, living in Stockport, in two adjoining cellars. They were bear or mat makers. Robert had two sons and two daughters, all young children, and George had a female child also very young. Two of the female children of Robert Sandys were one morning taken very ill, and one of them died the same day, under very suspicious circumstances, the neighbours publicly declaring that the children must be poisoned. These two girls (along with their brother, a little boy about five years of age) having been in the morning of the illness in the company of Bridget Ryley (a girl of inoffensive but imbecile mind), their mother, Ann Sandys, after the neighbours said the children must have been poisoned, said, "Oh, Bridget Ryley must have given them something." Bridget Ryley had given them some cold cabbage, which Ann Sandys well knew, and the boy who had been with them was not at all unwell. Bridget Ryley was apprehended, and by accident I was present at the coroner's inquest. I came in just at its termination, Bridget Ryley being in custody, and Ann Sandys being about to close her examination. After she had concluded her examination, which was very strong against Bridget Ryley, she began to apologize for Bridget, saying, She did not think the poor girl (as she called her) intended any harm to the child; and she evidently wished to make it appear that the poisoning was all a matter of accident. Bridget Ryley was then asked to say what she knew about the business, and she earnestly protested her innocence, saying the child had died of the same complaint as another child of Ann Sandys had died of three weeks

before. It appeared strange that the mother of the child should both criminate and exculpate Bridget Ryley, and I thought I could perceive a watchful restlessness in her eye, which ill accorded with the probable grief of a bereaved parent; I therefore communicated to the coroner my opinion that the mother of the children might be the murderess, and that if so, the child which had been buried three weeks before would also prove poisoned. The coroner thought it a very proper inquiry, and adjourned the inquest, directing this other child to be exhumed; and it proved to have been poisoned by arsenic. Whilst this exhumation was taking place, Honor Sandys met one of the constables, and she expressed a wish that they would not disturb her dear little infant. The constable told me this, and directions were consequently given for its immediate exhumation. Arsenic had also caused the death of this child. Ann Sandys then said that Bridget Ryley must have poisoned them all, and that a child which Bridget Ryley had nursed had died in a similar way. (This was after Ann Sandys was in custody and charged with this murder.) This last child so nursed by Bridget Ryley was exhumed, but it had died a natural death. Now all these three children so poisoned were in friendly burial societies, and their parents would receive for their funerals about 3*l.* for each child. The expense of the funeral would be about 1*l.*, and the profit on each murder 2*l.*, and the liberation from the future expense of keeping the child.

At the ensuing assizes for Chester Mr. Justice Coltman postponed the trial to enable the boy, the son of Ann Sandys, to be educated for examination. This boy would have proved some very material facts as to the mode in which the poison was administered, but as this did not come out in evidence, as the boy was not considered capable of being examined at the subsequent assizes, it is hardly fair now to state them.

Mr. Justice Erskine tried the cases, and Robert Sandys was convicted, but his wife Ann Sandys acquitted. I afterwards was told by one of the jury that they acquitted her because they thought she acted under the control of her husband, and they thought that justified her acquittal. The judge and counsel had been silent on this point, satisfied with their own knowledge, that in murder the wife, though acting with her husband, is guilty and punishable, and thinking the jury as wise as themselves.

In consequence of an objection to the admissability of a statement made by Ann Sandys before the coroner, and also to the form of the indictment, judgment was respited to the following assizes. The judges determined for the Crown on both points, and sentence of death was passed on Robert Sandys. Afterwards, and without any communication to the parties prosecuting, the sentence of death was commuted to transportation for life. George and Honor Sandys were not tried, as the evidence was not so conclusive against them, and Robert and Ann were believed to be the principals in these murders.

I know it to be the opinion of some of the respectable medical practitioners in Stockport that infanticides have been commonly influenced by various motives—to obtain the burial moneys from the societies in question, and to be relieved from the burthen of the child's support. The parties generally resort to a mineral poison, which, causing sickness, and sometimes purging, assumes the appearance of the diseases to which children are subject; and as they then take the child to a surgeon who prescribes after a very cursory examination, they thus escape any suspicion on the part of their neighbours. Each child in Sandys' case was so treated, but they took care not to administer the physic obtained.

How to prevent these infanticides is a question of great difficulty. I think these societies are of great use if under proper regulation and inspection. These cases may be good arguments for requiring the due inspection, after death, of each child in a burial society by a surgical examiner, who might judge, in most cases, whether a *post-mortem*

examination were advisable or not; but as these societies are very useful on the whole, the partial misuse of them cannot avail against their general use. Probably an application to these societies of the law applicable to life assurance companies might tend to prevent the crime of infanticide. The object of these burial societies is the decent interment of the deceased member. In life insurance companies no person is by law allowed to recover from an insurance company more money than the value of his interest in the life of the person whose life is insured: for instance, should his interest in a life lease be worth 500*l.* he may insure and recover 500*l.*, but not 600*l.* He therefore receives by the policy that which he loses by the death, and no more. If he has no interest the policy is void. Now, applying this principle to these burial societies would make it necessary that some officer of the society should prepare for and superintend the interment of the child, and that no further sum than requisite for the decent interment should be expended, and no money in any case should be paid to the friends of the deceased; also, no party should be insured in more than one society.

None of our registrars of births and deaths are medical men, and no case of infanticide has been discovered through the instrumentality of the Registration Act.

I shall be glad to furnish you with the briefs in these cases of murder, should you desire them, or with any further information in my power.

In all four deaths each child was in a burial society, and arsenic was indisputably the cause of death.

I may also mention that each death was of a female child. The male children, more likely to be useful to their parents, were in each case spared.

I have the honour to be,
Your most obedient servant,
HENRY COPPOCK,
*Town Clerk of Stockport, and
Clerk to the Stockport Union.*

[In answer to a subsequent inquiry, Mr. Coppock stated that at the time the offences detailed in the above letter were committed, both the parties were in employment. Standing was a hatter, in full work, and making with industry 20*s.* a-week; the Sandys, Robert and George, were mat-makers, not making more than from 7*s.* to 10*s.* per week each; the women contributing, it is presumed, to the earnings of the family.]

No. 11.

A RETURN OF THE AVERAGE AGES AT WHICH DEATHS AND FUNERALS OCCURRED DURING THE YEAR 1839 TO THE SEVERAL CLASSES OF SOCIETY IN THE SEVERAL SUPERINTENDENT REGISTRARS' DISTRICTS OF THE METROPOLIS;

Also of the PROPORTIONATE NUMBERS of DEATHS to the POPULATION of each such District: setting forth the excess in Numbers of Deaths and Funerals in each such District above the proportionate Numbers of Deaths and Funerals in healthy and well-conditioned Town Districts: setting forth also the amount of Reduction of the ordinary Duration of Life of each Class in the District, as compared with the standards of Longevity afforded by the Insurance Tables deduced from the experience of the Population of Carlisle, and of the County of Hereford.

The explanations given in respect to the totals inserted at § 37 are applicable to the annexed district returns, which are only submitted as the best approximations that can be obtained in the present state of the registration. The practical bearing of the consideration of the ages of deaths as well as the proportionate numbers of deaths on the subject of provision for funerals is shown in §§ 72, 75, 76, 78, 79, 80, 81, also §§ 160, 161, 163, 169, 173, and note to § 150, also § 205. For the sake of those who are engaged as members of committees in the investigation of the health of the populous towns and the causes of mortality, it may be of public use to give full explanations of the principles on which returns should be made to measure the relative pressure of those causes in different localities, or amongst different classes of the community: it may also be of use to show the necessity of careful provisions for the registration of facts which are of great importance to every community.

Dr. Price, in his work on Annuities and Reversionary Payments, states that in his time the proportion of deaths in London within the bills of mortality was rather more than 1 to 22 of the population annually, which he states as an equivalent proposition to saying that the average duration of life to all who died was 22 years. Again he observes that—

“One with another, then, they will have an expectation of life of 22½ years; that is, one of 22½ will die every year.” p. 255.

In p. 274, that—

“In the dukedom of Wurtemberg, the inhabitants, Mr. Susmilch says, are numbered every year; and from the average of 5 years, ending in 1754, it appeared that taking the towns and country together, 1 in 32 died annually. In another province which he mentions, consisting of 635,998 inhabitants, 1 in 33 died annually. From these facts he concludes, that, taking a whole country in *gross*, including all cities and villages, mankind enjoy among them about 32 or 33 years each of existence. This very probably is below the truth; from whence it will follow, that a child born in a country parish or village has at least an expectation of 36 or 37 years; supposing the proportion of *country* to *town* inhabitants, to be as 3½ to 1, which, I think, this ingenious writer's observations prove to be nearly the case in Pomerania, Brandenburg, and some other kingdoms.

By Mr. Milne, in his work on Annuities, and in his article on Mortality in the last edition of the Encyclopedia Britannica, by Dr. Bissett Hawkins, and by nearly all statistical writers, the proportions of deaths to the population, and the average ages of death, are treated as equivalent. Dr. Southwood Smith has been misled to adopt the same view. He states in his work on the Philosophy of Health, p. 135, that “There is reason to believe that the mortality at present throughout Europe, taking all countries together, including towns and villages, and combining all classes into one aggregate, is 1 in 36. Susmilch, a celebrated German writer, who

flourished about the middle of the last century, estimated it at this average at that period. The result of all Mr. Finlaison's investigations is, that the average for the whole of Europe does not materially differ at the present time." "It has been shown that the average mortality at present at Ostend is 1 in 36, which is the same thing as to assert that a new-born child at Ostend has an expectation of $35\frac{1}{2}$ years of life."

Having of late had occasion to make rather extensive observations on this subject, it appears to be a public duty to state, that in no class of persons, in no district or country, and in no tract of time, has the fact hitherto appeared to be in coincidence with this hypothesis; and also that returns of the proportions of deaths to the population, when taken singly as the exponents of the average duration of life, are often mischievously misleading, exaggerating those chances of life sometimes to the extent of double the real amount. If Dr. Price, instead of resting satisfied with Susmilch's hypothesis, had taken the actual ages of the dying within the bills of mortality, he would have found only a casual approximation to the hypothesis for the whole metropolis; and if he had taken the worst conditioned districts, that, as applied to them, it was in error full one-half. On Mr. Milne's own data it appears that the proportions of deaths to the population at Carlisle, instead of coinciding with the ascertained average ages of death, $38\cdot72$, were in the year 1780, 1 in 35; in 1787, they were 1 in 43; and in 1801, they were 1 in 44. Having caused an average to be deduced from the actual ages of 5,200,141 deaths which occurred in the Prussian States from 1820 to 1834, instead of 36 years, the actual average age of deaths was only 28 years and 10 months. The average ages of death in France, as deduced from Duvillard's table, founded on the experience of one million of deaths, instead of being 36 years, was 28 years and 5 months.

The public errors created and maintained by taking the proportions of deaths as exponents of the average ages of death, or of the chances of life to the population, may be illustrated by reference to the actual experience amongst nearly two millions of the population, or upwards of forty-five thousand deaths in thirty-two districts, equivalent to as many populous towns, which the Registrar-General has obligingly enabled me to examine for the year 1839.

The Carlisle table is taken as the standard for the duration of life, to measure the loss of life in the several districts, as it gives the probability of life from infancy, well ascertained for one town, and nearly coincides with the experience of the annuity offices on the select class of lives insured by them, and with the results which I have obtained from the mortuary registries showing the average age of death in the county of Hereford. Each of the recognized insurance tables may, however, be used. If the Carlisle table be taken, the chances of life at infancy would be $38\cdot72$; by the Chester table it would be $36\cdot70$; by the Northampton, $25\cdot18$; by the Montpellier table, $25\cdot36$; by the last Swedish table, $39\cdot39$; by the experience of Geneva, $40\cdot18$. After the attainment of twenty years of age these several tables give the chances of life as follows:—by the Carlisle table it would be $41\cdot46$; by the Chester table, $36\cdot48$; by the Northampton table, $33\cdot43$; by the Montpellier table, $37\cdot99$; by the Swedish table, $39\cdot98$; by the Geneva experience, $37\cdot67$; and by the experience of the Equitable Society, $41\cdot67$. For civic purposes in this country, the most important period for considering the chances of life is after coming of age, or after the attainment of twenty-one years; the average ages of all who die above that age in each district of the metropolis are therefore given to illustrate the extent of loss of life to each class of adults, which is the more important to be observed, as it has been hastily supposed that the pressure of the more common and removable causes of disease is almost exclusively upon the infant population.

In illustration of the errors occasioned by taking the proportions of deaths as the exponent of the duration of life; if we take the proportions of deaths in the district of Islington, with its population of

55,720, we find the deaths for the year only 1 to every 55 of the population, which would appear to be a highly healthy standard; whereas, when we examine the average age of death of all of that population who have died during that year, we find it to be only 29 years: in other words, we find that the average duration of the period of existence has even in that district been shortened by at least nine years to all, and to an extent of at least six years on the average to the class of adults. If we examine the pressure of the causes of death upon each class of the community, in the same district, we find that the class of artisans, instead of attaining 39 years, have, on the average, been cut off at 19 years; and hence that children and adults, and on the average all those of the labouring classes who have died, have been deprived of 20 years of the natural expectation of life; and that even the class of adults who have died have been deprived of 15 years of working ability, involving extensive orphanage and premature widowhood. If we take such a district as Bethnal Green, inhabited by weavers and a badly conditioned population, the returns of the proportionate number of deaths to the population (1 in 41) would lead to the supposition of an average vitality of nearly double the real amount, which appears from this year's return to be only 22 years for the whole population. For the working classes in that district it is no more than 18 years. If we carry investigations closer, and into the local causes of the mortality, we have them developed in such evidence as that given by Mr. T. Taylor, one of the registrars of that district;—or in other districts by such information as that given by Mr. Worrell, the registrar of St. Pancras, or by registrars of St. George's, Hanover Square, or by the registrar of a district of Marylebone, where we find the state of overcrowding (noted in § 26), combined with the insufficient supplies of water, the defective drainage and neglect of cleansing which is described in the answers—attended by a reduction of 12 years' duration of life to the adult artisans. In the opulent parish of St. George's, Hanover Square, it is attended by a loss of 16 years; in Marylebone and in St. Pancras, by a loss of 17 years. The external and internal circumstances of the labouring population, where such results have been obtained, vary widely, and the results are commonly the mean of extreme differences. For example, in the parish of St. Margaret's, Leicester, which has a population of 22,000, almost all of whom are artisans engaged in the manufacture of stockings, where the average age of death in the whole parish was, during the year 1840, 18 years, I succeeded in obtaining the ages of death in the different streets, when it appeared that this average was made up as follows:—Average age of deaths in the streets that were drained (and that by no means perfectly) $23\frac{1}{2}$ years; in the streets that were partially drained, $17\frac{1}{2}$ years; in the streets that were entirely undrained, $13\frac{1}{2}$ years. Though the defective drainage and cleansing was the main cause, it was doubtless not the only cause of this variation. That, however, was a year of a heavy mortality, and the average age of death in that and another district during the years 1840, 1841, and 1842, was in the streets drained $25\frac{1}{2}$ years; in those partly drained 21, and those not drained, 17 years. The general average was 21 years. The proportions of death to the population in Leicester were during the same period, 1 in $36\frac{1}{2}$. The inquiries promoted in the districts of other towns have developed instances of large masses of population amongst whom even lower average duration of life than any noted in the first report is attendant on the circumstances described as causes.

So far as estimates of the number of the people before a census was taken may be depended upon, it appears that the proportionate numbers of deaths in the metropolis were, at the commencement of the last century, 1 to 20. At the time the first census was taken (1801) the proportion of deaths to the population within the bills of mortality appeared to be 1 to 39. At the present time it appears to be 1 to 40. Having had the average ages of death within the bills of mortality in the metropolis calculated from the earliest to the later returns published, they appear to be,

as far as they can be made out from the returns, which are only given in quinquennial and decennial periods, as follows:—

Of all returned as having died during the

| | The average Age was | |
|---------------------------------------|---------------------|---------|
| | Years, | Months. |
| 22 years, from 1728 to 1749 | 25 | 1 |
| 25 years, from 1750 to 1774 | 25 | 6 |
| 25 years, from 1775 to 1799 | 26 | 0 |
| 25 years, from 1800 to 1825 | 29 | 0 |
| 6 years, from 1825 to 1830 | 29 | 10 |

Thus, whilst it would appear from the proportionate numbers of deaths to the population that the average duration of life in the metropolis has doubled during the last century, it appears from the returns of the average ages themselves that it has only increased four years and nine months, or about one-fifth. The district of the old bills of mortality comprehends little more than one-half of the metropolis. The average age of death for the year 1839 for the whole metropolis, it will have been seen, is only 27 years. So far as an average for that year for the old district can be made out from the several recent district returns, it would appear to be no more than 26 years. But the earlier mortuary registration was known to be extremely defective, especially in the registration of deaths in the poorer districts, and the recent lower averages are ascribable to the closer registration of the infantile mortality in those districts. The earlier returns are only to be regarded in so far as the errors from period to period are likely to have compensated each other; they are only adduced as indicating the degree of proportionate progression, correspondent with the general physical improvements of the population. But the slow general improvement, made up by the great improvements of particular classes, is consistent with the positive deterioration of others. The average age of death of the whole of the working classes we have seen is still no more than 22 years in the whole of the metropolis. In large sub-districts, if we could distinguish accurately the classes of deaths, the average would be found to be not more than half that period: a rate of mortality ascribable to increased over-crowding and stationary accommodation, greatly below anything that probably existed at the commencement of the century. The chief errors in the existing returns are errors which cause the extent of the evils which depress the sanitary condition of the population, and the mortality consequent on those evils to be under estimated.

The erroneous conclusions as to the ages of the populations from the proportions of deaths, have perhaps arisen from assumptions of the existence of states of things rarely, if ever, found, namely, perfectly stationary populations and perfectly stationary causes of death. I have been asked "If 1 out of 40 die yearly, must not the average age of all who die be 40 years?" The answer, by actual experience, as we have seen, is, that it is often not 30 years; and perhaps the reason why it is not so will be most conveniently illustrated by hypothetical cases. For example, let it be assumed that in any given year 40 persons die out of 1600, which is in the proportion of 1 to 40, and in consequence of an unusual prevalence of measles, or some disease to which children are subject, the greater number of deaths occur amongst the infant portion of the population, and hence, out of the 40 deaths, 20 occur at 5 years of age, 10 at 25, and 10 at 60. Then the total existence had, would have been $(20 \times 5) + (10 \times 25) + (10 \times 60) = 100 + 250 + 600 = 950$ years, and this divided by 40, the number who died would give $\frac{950}{40} = 23\frac{1}{2}$ years nearly as the average duration of life to each of the 40 who died.

On the other hand, suppose a severe winter, in which the peculiar causes of mortality may have pressed unusually heavy upon the older lives, and let the numbers who died have been 20, at 60 years of age; 10 at 40; and 10 at 5; in such case, the total existence enjoyed would have been

$(20 \times 60) + (10 \times 40) + (10 \times 5) = 1200 + 400 + 50 = 1650$ years, which, divided by 40, would give $\frac{1650}{40} = 41\frac{1}{4}$ years as the average duration of life to each.

And again, where, in fact, the proportion of death in one year may be represented as 1 death out of 20 of the population; the average existence enjoyed may be greater than when 1 in 40 died for the reason given in the former case. As for example, in the year when 1 in 20 died, it may have happened that the deaths were among the older lives, and that, taking one with another, the average age of all who died might be 50; while in the other case the mortality might have been amongst the infant population, when the average age might have been 20. If the proportion of 1 in 40, or 1 in 20, were to obtain each year continuously, taking one life with another, the average duration to a population just born, of whom 1 in 40 died, and whose place should be supplied each year by a new birth, would be about 20 years to each life, or one-half; and of a similar population, of whom 1 out of 20 died annually, the average duration of life to each would be about 10 years, or one-half the period at the expiration of which all the lives would have expired.

When these examples are considered, it will be understood that the average age of death may remain stationary, or may go on increasing, whilst the proportions of death remain the same, or vary. The actual mortality of most districts is found to be coincident chiefly with its physical condition, and is most accurately measured by the years of vitality which have been enjoyed, *i. e.*, by the average age of death. The numbers of deaths increase or diminish considerably, and frequently create erroneous impressions, whilst the average ages of death are found to maintain a comparatively steady course, always nearest to the actual condition of the population, and give the most sure indications.

The chief test of the pressure of the causes of mortality is then the duration of life in years: and whatever age may be taken as the standard of the natural age or the average age of the individual in any community may be taken to correct the returns of the proportions of death in that same community. For example, in the returns of the St. George's, Hanover Square district, it appears that in 1839, the proportions of deaths was 1 to 50 of the population; but the average number of years which 1325 individuals who died during that year had lived, was only 31 years, or 8 years below the average period of life in Carlisle. There was then in that district during that year a total loss of 10,600 years of life, which at 39 years may be considered as equal to an excess of deaths of 272 persons, and in a healthy state the proportions of deaths should have been 1 in 63 instead of 1 in 50 of the population. The excess in numbers of deaths in the metropolis has been measured by this standard, the total number of years of life would in a healthy community have been divided in portions of not less than 39 years to every individual who died.

The effect of migration or of emigration, in disturbing the results of returns of the average ages of death in particular localities appears to be commonly much exaggerated.

As formerly, when navy surgeons, overlooking the filth of their ships, which has since been removed, and not perceiving the effects of the atmospheric impurities arising from the overcrowding, which have since been diminished by better ventilation, directed their whole attention to supposed distant causes and mysterious agencies, and were wont to ascribe the whole of the fever which ravaged a fleet to infection from some casual hand, who was found to have been received on board from some equally filthy and ill kept prison where the "gaol fever" had been prevalent; so now, in some of our towns, we find much ingenuity exercised to avoid the immediate force of the facts presented by such returns, by a search for collateral and incidental defects in them. Thus in Liverpool the whole of its vast excess of mortality has been charged upon the poorer passengers who pass through the

port. In other towns also, all the excess of deaths from epidemic or infectious disease is charged upon the vagrant population. In New York and some of the American cities, where inquiries have been stimulated by the example of the sanitary inquiry in this country, a common observation made on the proved excess of mortality is, that a large proportion of "foreigners" frequent the city. An inquiry into the cases themselves would generally show that if, instead of the proportion of the immigrant population being a small per-centage, it formed a very large proportion of the population included; still the proportion per cent. of sickness and mortality, from consumption and other diseases, amongst the resident population, is the greatest; and that even in lodging-houses the disease most frequently appears first in the occupants who are stationary, and last in the new comers. In some badly conditioned districts, where there is a very severe mortality observable on children, a less proportionate amount of mortality prevails amongst the adults who are migrant, than on other adults resident in somewhat less depressed districts, but who are more stationary. Of all classes (unless it be the higher classes who resort to watering-places) it is not the sickly and the weakly who travel for subsistence as handicraftsmen, or for subsistence in commerce, but the healthy and robust. In so far as the general results of mortuary registration of any district are disturbed by a population who are migrant (who are not only above the average strength, but who generally come with the additional advantage of health by travel in the open air and in a purer atmosphere), they are usually disturbed by unduly raising and giving the locality an appearance of an average of health, and the fatally deceptive chances of longevity that do not belong to it. Whilst therefore the localities gain by the average health and strength of the migrant population, other districts have the credit of a share of the excess of disease and mortality which really belong to unhealthy localities. In other words, the population migrating through such districts carry away more disease and mortality from the crowded districts than they take into them. If there had been a mortuary registration at Walcheren, or any pestilential stations productive of an excessive mortality in the army, the registries probably would not have given the localities credit for more than half the mortality which belonged to them. The real sickness and mortality of the more depressed town districts are often made to appear lower than they are by the number of cases treated in distant workhouses, hospitals, and dispensaries, for which no credit is given to the locality where the cause of death occurred.

It would doubtless proportionately enhance the value of such returns as those in question, if the rule were fully carried out that "the population enumerated must always be precisely that which produces the deaths registered;" the grand desideratum being, as expressed by Mr. Milne, for insurance purposes, "to determine the number of annual deaths at each age which takes place among the living at the same age;"* but the facts cited of the greater proportion of adults, and of health in those adults who are immigrant, will answer the objections to the superior applicability to local or class insurance tables, deduced from actual local observation of the local rate of mortality prevalent amongst that population, whether migrant or stationary, and without reference to the actual ages of the living (though that were desirable), compared with deductions from any general insurance table, *i. e.* the experience of a distant and wholly unconnected population. Deductions from tables, however correctly made from the experience of other towns, must be, and are proved, by such experience as that hereafter cited, to be merely "guess-work." Vide 'General Sanitary Report,' pp. 218, 219. For myself, I make it a general rule of precaution neither to receive nor adduce statistical returns as evidence without previous inquiry, wherever it is possible, into the particulars on which they are founded, or with which they are

* Art. 'Mortality,' Ency. Britan., last edit., p. 524.

connected. I adduce them less as principal evidence, proving anything by themselves, than as proximate measures, or as indications of the extent of the operation of causes substantiated by distinct investigations. The general conclusions which the facts that have come to my knowledge tend to establish on the subject of the experience of mortality are, that there is no general law of mortality yet established that is applicable to all countries or to all classes, or to all times, as commonly assumed; that every place, and class, and period has rather its own circumstances and its own law, varying with those circumstances; that the actual experience of any class or place, or period, even with the disturbance of any ordinary amount of migration, or immigration, or any ordinary influx of young lives from births, is a safer guide than any experience deduced from the experience of another people living at another time and place, or any assumed general law.

For many public purposes, I have submitted it as a desideratum that population returns should give not merely the *numbers* of each class, or of those engaged in each distinct occupation, which only enables us to resort to the fallacious standard of the proportionate numbers of deaths, to judge of the mortality incidental to the class, but the total ages of each class, which would serve as an index of alterations in the sanitary condition of that same class. Such returns of the total ages should, for the public use, be reduced to their simplest proportions. In the form in which they are usually given, only in intervals of quinquennial or decennial periods, they are extremely meagre, and involve so much inaccuracy in any attempts that might be made to use them, for the purpose of comparing district with district, as to be generally useless. Whereas, if the ages of any class, or of the general population living in any district, and the ages of those of them who die, were reduced to the simplest proportions—that is, if the total years of age, whether of the living or dying, were divided by the total number of individuals from which the returns were made, the public would be enabled to make comparisons between district and district, and to judge of the relative degrees of pressure, in each, of the causes of mortality. As the simple proportions of average ages of the living have not yet, that I am aware of, been used, or even calculated in any instance, I beg leave to exemplify them.

Mr. Griffith Davies is theoretically of opinion, on a formula of De Moivre, that in general the average age of death in any community is necessarily higher than the average age of those living in the same community: and that in a stationary population the average age of death will, under ordinary circumstances, be in the ratio of 3 to 2 higher than the average age of the living. I have had the average age of the living population, on which the experience embodied in the Carlisle Insurance table was founded, calculated: and if that may be considered to have been a stationary population, the proportion of the ages of the living to those of the dying was practically as about 3 to 4: for whilst the average age of the dying was $38\frac{3}{10}$, the average age of the living population was $32\frac{9}{10}$. The average age of the dying in Hereford, in which the increase of population had been very slight, was 39. But the average age of the living population, so far as it can be made out from quinquennial returns, was 28 years and 5 months. On this and all returns of the ages of the living, in the mode in which the returns have been collected, allowance must be made for understatement of ages by some of the adult members of the community. On the whole, the proportion of the ages of the living to the dying appears to be in an ordinarily healthy and stationary community, as about 3 to 4.

As yet the observations have not been on a sufficiently wide basis; but it appears that wherever there is any divergence between the average ages of the living and the average ages of the dying, the divergence beyond their natural proportions may be taken as indicating the proportionate

operation of some disturbing cause upon either line, as by some extraordinary increase of births, or by immigration or emigration, on the average ages of the living, and on the line of the average ages of the dead.

So far as I have been enabled to observe or collect from the extremely imperfect data at present available to the public service, the line of the average ages of the living is comparatively steady; the disturbances by migration and immigration which often compensate each other, for the same place and period, being much the same at different periods, and seldom affect the results materially, whilst the variations in the pressure of the causes of death from year to year, are usually considerable, and warrant the assumption that in general the disturbances occasioning the divergence described, are from the operations of causes of death upon that line. Wherever the pressure of the causes of death has yet been observed to be very great, there the line of mortality, or the average age of death, is below, what may be called, the line of vitality constituted by the average age of the living; and wherever there is on the whole any diminution of those causes of death, as by better ventilation, or by widening streets, opening new thoroughfares, better supplies of water, sewerage and cleansing, and improvements in the general habits of the population, there the line of mortality, the infantile mortality especially, diminishes, the average age of each adult class, up to sexagenarians or octogenarians, increases, and the average age of death ascends above the average age of the living. The means of observation are as yet too few to elicit more than indications for the guidance of sustained investigation, to determine whether the divergence of the two lines may be reduced to any rule.

In Liverpool,—where the investigations into the condition of the resident cellar population certainly show an increase of the causes of death,—overcrowding, defective ventilation, bad supplies of water, and increased filth,—the average age of death is, for the whole town, 17 or 18 years only, whilst the average age of the living population, so far as it can be made out from the mode in which the census is prepared, is 24 years. As far as can be ascertained by reference to previous registries of one large parish, where the ages of the dead were formerly entered, the average duration of life in that town has gradually fallen. The average ages of all who were buried in St. Nicholas parish between the years 1784 and 1809 was 25.

In Manchester, the average age of the living is 25 years, but the average age of the dying is only 18. In Leeds, the average age of the living is also 25 years, but the average age of the dying is only 21.

| | Years. | Months. |
|--|--------|---------|
| The average age of all who <i>live</i> in the town parishes of Middlesex, so far as they can be made out from the only available materials,—the returns in quinquennial periods,—is only | 26 | 2 |
| But the average age of all who <i>die</i> , judging from one year's return, appears to be about | 27 | 0 |

If, however, we allow for the understatement of ages, the two lines for the whole metropolis would be nearly coincident. On the experience of Carlisle and Hereford, the average age of death should be twelve years higher.

Arranging the several districts of the metropolis, in the order of the average age of deaths, we find the average age of the living decrease with the average age of the dying; and the proportion of births to the population increase with the decrease of the average age of death. The excess in the proportionate number of births beyond the proportions in such a county as Hereford (1 to 44), where the average age of death is much higher, and proportionate number of deaths to the population, afford important indicia.

| Districts in which average Age of Death of the whole Population is | Average Age of Death in the District, of all Classes. | Average Age of all who live in the District. | Proportions of Births to the Population. | Proportions of Deaths to the Population. | Excess above County of Hereford in the Number of | |
|---|---|--|--|--|--|---------|
| | | | | | Deaths and Funerals. | Births. |
| Highest (Comprising 2 Districts.) Population 120,678. | 35 | 27 11 | 1 to 41 | 1 to 42 | 966 | 145 |
| 1. Intermediate (6 Districts.) Population 311,022. | 30 | 27 5 | 1 to 39 | 1 to 46 | 1,836 | 689 |
| 2. Intermediate (12 Districts.) Population 774,937. | 27 | 26 11 | 1 to 33 | 1 to 40 | 7,457 | 5,718 |
| Lowest (12 Districts.) Population 663,290. | 23 | 26 5 | 1 to 30 | 1 to 41 | 5,795 | 6,822 |

It will be observed that in the least healthy districts where the pressure of the causes of mortality is the most extensive, the average age of death falls nearly three years and a half *below* the average age of the living, whilst in the higher districts the line of mortality rises towards the natural position, or nearly four years above it. But it must still be borne in mind, in the inspection of the returns from the highest district, that the average is made up of districts which are probably retrograding, connected with others which are advancing,—of districts such as are developed by Mr. Worrell, registrar, in his note on one of the returns from St. Pancras, comprising streets, the connected courts and alleys from which are widely as separate and distinct in condition,—and, if I may use such an illustration, as little appropriate for any average that could be represented by numerals—as were the conditions of Lazarus and Dives.

Even the lowest proportion of deaths to the population presented in the district returns, that of Hackney, where it is only 1 to 56, appears to be a proportion in excess by nearly one-eighth, *i. e.* the deaths from epidemics, as well as the excess of more than one-third in the deaths of children under 10 years of age. The return, from the healthiest district in the returns, of the average age of deaths gives an average of 7 years' loss of life for the whole population; whilst for the *adults* of the middle classes it gives 10 years, and for the *adults* of the working classes 7 years' premature loss of life. Even in the county of Hereford where there is a proportion of deaths of 1 to 64 of the population, and the standard of the Carlisle table of insurance where an average age of 39 years of death is attained, it will be observed that even this average includes a large proportion (542), or nearly 1-third in the number of deaths under 10 years of age, and 123 or 1-14th deaths from epidemics, besides others involving deaths from preventible causes. Only 329, or 1 in 5 of the deaths in this very healthy county, were deaths registered as from old age. By the removal of this excess of deaths, the excess of births which replace them would even in these districts be of course still further diminished.

It may be conjectured that if there were the means of distinguishing accurately the various classes of the living amongst whom these deaths fall, the irregularity of the proportionate number of deaths which probably arise amongst the labouring classes would be accounted for. The present returns of the number of births do not distinguish the classes amongst whom the births occur. Taking the districts in the order of the average age in which deaths occur to the labouring classes, and comparing the proportions of the deaths and funerals with the proportions which occur in Hereford, the excess of deaths and funerals was in 1839 as follows:—

| Districts in which average Age of Death of Artisans, &c., is | Average Age of Death of Artisans, &c. in the Districts. | Excess in Number of Deaths of Artisans, &c., in the District above the Deaths of Agricultural Labourers in Herefordshire. |
|--|---|---|
| 1. Highest number of the class (comprising 2 Districts.) | 38 | 483 |
| 2. Intermediate (1) number of the class (5 Districts.) | 27 | 548 |
| 3. Intermediate (2) number of the class (10 Districts) | 23 | 1,773 |
| 4. Lowest number of the class (15 Districts.) | 20 | 4,121 |

The totals of the subjoined district returns for the metropolis are as follows:—

| | Number of deaths of each class. | | | Number of deaths from Epidemic disease. | Average age at death of all who die above 21. | Average age at death of the whole class including children. |
|-------------------------|---------------------------------|--------------------------|--------------|---|---|---|
| | Adults. | Children under 10 years. | Total. | | | |
| Gentlemen | 1724 | 529 | 2253 | 210 | 60 | 44 |
| Tradesmen | 3979 | 3703 | 7682 | 1428 | 51 | 25 |
| Labourers | 12045 | 13885 | 25930 | 5469 | 49 | 22 |
| Paupers | 3062 | 593 | 3655 | 557 | 60 | 49 |
| Undescribed | 2996 | 2761 | 5757 | 1051 | 56 | 28 |
| Totals | 23806 | 21471 | 45277 | 8715 | 53 | 27 |

The following totals of the mortuary registration of the several registrars' districts in Hereford for the same year are given for comparison:—

| | Number of deaths of each class. | | | Number of deaths from Epidemic disease. | Average age at death of all who die above 21. | Average age at death of the whole class, including children. |
|-------------------------|---------------------------------|--------------------------|-------------|---|---|--|
| | Adults. | Children under 10 years. | Total. | | | |
| Gentlemen | 49 | 19 | 68 | 2 | 65 | 45 |
| Farmers, &c. | 205 | 45 | 250 | 14 | 60 | 47 |
| Labourers | 833 | 324 | 1157 | 87 | 58 | 39 |
| Paupers | 26 | 11 | 37 | 1 | 71 | 51 |
| Undescribed | 124 | 143 | 267 | 19 | 68 | 30 |
| Totals | 1237 | 542 | 1779 | 123 | 60 | 39 |

The total number of births registered in the several districts in the metropolis, where it is yet far from complete, in the year 1839, was 51,232, or 1 to 37 of the population. The total number of births registered in Hereford during the same year was 2579, or 1 to 44.

The positions advanced in the Sanitary Report of the greater proportion of births in the districts where the deaths are the most frequent, is confirmed in respect to the metropolis by a more recent return with which I have been obligingly favoured by the Registrar-General, in which he shows,—

| | Proportion per cent. | | Ratio of deaths to births. |
|--|----------------------|---------|----------------------------|
| | Deaths. | Births. | |
| "Unhealthiest sub-districts | 3.14 | 3.66 | 1 to 1.17 |
| Less unhealthy sub-districts | 2.68 | 3.18 | 1 to 1.19 |
| Average sub-districts | 2.43 | 3.35 | 1 to 1.38 |
| Healthier sub-districts | 2.17 | 2.64 | 1 to 1.22 |
| Healthiest sub-districts". | 1.87 | 2.47 | 1 to 1.32 |

"The mortality is 68 per cent. higher in the unhealthy than in the healthy sub-districts: the proportion of births is 48 per cent. greater in the unhealthy than in the healthy sub-districts."

If the deaths in the metropolis during 1839 had been in the same proportion to the population as they were in Hereford, there would have been 8866 funerals less during that year.

If the proportion of births in the metropolis during that year had been the same as in Hereford, there would have been 16,053 births the less.

Or to vary the illustration:—

If the deaths in Hereford had been in the same proportion as the deaths in the metropolis, the community in that county would during that year have had 977 funerals the more.

If the births in Hereford had been in the same proportion as in the metropolis, there would during that year have been 540 births the more.

If the deaths in the whole of England and Wales had been in the proportions attained in some districts, and attainable in all, namely, 1 in 50, there would during the year have been 31,866 funerals less, and more than ten times that amount of cases of sickness the less.

If the proportions of births in the whole kingdom had been the same as those occurring in average healthy districts—such as that of the town district of Hackney, for example, of 1 to 42—there would have been 139,958 births the less to make up for the excess of deaths.

The importance of the subject will justify the reference to other examples.

The commissioners for taking the census of Ireland have bestowed considerable labour to effect various improvements, with a view to determine more accurately the actual condition and progress of the population. They have attempted, amongst other improvements, to ascertain not merely the total number of houses, but the number of each description of houses in each district. From the want of any system of mortuary or birth registration in Ireland their attempts to ascertain correctly the proportions of deaths and births to the population appear to have been to some degree frustrated; and the return of the average age of death must be received as an approximation, giving higher than the real chances of life in that country. From the mode which the commissioners adopted of collecting the ages of the living, by taking the actual age of each individual with precautions, it appears probable that their returns on this head are more trustworthy than those obtained in England.

The proportions of births to the population obtained by the Census Commissioners in Ireland are, I conceive, below the real amount; the proportions of deaths are confessedly so. The proportions of deaths and several other results may however serve for comparison between one province and another and between one county and another. I have taken the following results from several of their tables, or have had them calculated from their data. I submit them as indications of the momentous public truths that still lie open for investigation, of which truths the most important are the extent of the operation of the causes of mortality, which can only be correctly ascertained on the spot by inquiries for a mortuary registration, by responsible officers of superior qualifications and intelligence as officers of health, The fractional numbers are omitted in the returns from the provinces,

| | LEINSTER. | | | | MUNSTER. | | | | ULSTER. | | | | CONNAUGHT. | | | | IRELAND. | | | |
|--|-----------|-----------|---------|-----------|----------|-----------|---------|-----------|---------|-----------|---------|-----------|------------|-----------|---------|-----------|----------|-----------|---------|-----------|
| | RURAL. | | TOWN. | | RURAL. | | TOWN. | | RURAL. | | TOWN. | | RURAL. | | TOWN. | | RURAL. | | TOWN. | |
| | Houses. | Families. | Houses. | Families. | Houses. | Families. | Houses. | Families. | Houses. | Families. | Houses. | Families. | Houses. | Families. | Houses. | Families. | Houses. | Families. | Houses. | Families. |
| 1. First Class houses | 2 | 2 | 24 | 33 | 1 | 1 | 12 | 14 | 1 | 1 | 10 | 9 | 5 | 6 | 7 | 10 | 13 | 14 | 15 | 21 |
| 2. "Good farm-houses, or in towns } houses in a small street, having } from 5 to 9 rooms and windows" | 21 | 21 | 37 | 39 | 13 | 13 | 44 | 49 | 21 | 21 | 56 | 60 | 8 | 8 | 30 | 33 | 16 | 17 | 43 | 46 |
| 3. "A better description of cottages, } still built of mud, but varying } from 2 to 4 rooms and windows" | 47 | 46 | 23 | 16 | 34 | 34 | 30 | 25 | 45 | 45 | 23 | 21 | 39 | 39 | 36 | 33 | 41 | 41 | 26 | 21 |
| 4. "All mud cabins having only one } room" | 28 | 28 | 14 | 10 | 50 | 49 | 13 | 10 | 32 | 32 | 9 | 8 | 51 | 50 | 25 | 22 | 40 | 39 | 13 | 10 |
| | Males. | Females. | Males. | Females. | Males. | Females. | Males. | Females. | Males. | Females. | Males. | Females. | Males. | Females. | Males. | Females. | Males. | Females. | Males. | Females. |
| Average age at death | 32 | 31 | 25 | 23 | 27 | 23 | 23 | 21 | 31 | 28 | 23 | 21 | 26 | 24 | 22 | 20 | 29 | 27 | 24 | 21 |
| | 33 | 35 | 25 | 23 | 28 | 24 | 23 | 21 | 32 | 29 | 24 | 22 | 25 | 23 | 22 | 20 | 29 | 27 | 24 | 21 |
| Average term of premature loss of } life as compared with the experi- } ence of Carlisle or the county of } Hereford..... | 7 | 14 | | | 11 | 15 | | | 7 | 15 | | | 14 | 16 | | | 10 | 15 | | |
| | 9 | | | | 12 | | | | 8 | | | | 15 | | | | 11 | | | |
| Annual proportion of births to the } mean population..... | 1 | in | 32 | 3 | 1 | in | 29 | 5 | 1 | in | 31 | 1 | 1 | in | 28 | | 1 | in | 30 | 3 |
| Average age of all who lived in 1841.. | 25 | | | | 24 | | | | 21 | | | | 23 | | | | 24 | | | |
| Proportion of widows to every 100 of } the population above 17 years old } | 13 | | 17 | | 12 | | 16 | | 12 | | 15 | | 12 | | 17 | | 12 | | 16 | |
| Rate of increase on population since } 1831 | 3 | 35 | | | 7 | 59 | | | 4 | 36 | | | 5 | 58 | | | 5 | 25 | | |
| Excess in number of births to every } 10,000 of the population above the } proportion of births in Hereford.. } | 73 | | | | 95 | | | | 84 | | | | 117 | | | | 90 | | | |
| Positive numbers of births in excess } above the proportion of births in } Hereford | 14,515 | | | | 22,875 | | | | 20,003 | | | | 16,624 | | | | 71,016 | | | |

The proportion of widowhood (which would generally be attended by its proportion of orphanage) to the short duration of life in the worst conditioned districts is submitted as confirmatory of the principles expounded in the General Sanitary Report on the condition of the labouring population in Great Britain. Vide p. 188, *et seq.*

Conformity of the rate of increase of population with the ages of the living and the dying was not to be expected in the returns where the emigration from the different provinces is (probably) variable; but in the two provinces where the household condition appears to be the worst, and the proportion of mud cabins the greatest, there we find the mortality is the highest.

Where the pressure of the causes of mortality is the greatest; where the average age of death is the lowest, and the duration of life is the shortest, there the increase of population is the greatest. The proportion of children is great because life is short and the generation transient; the middle aged and the aged are swept away in large proportions; and marriages are disproportionately early. But, says a political economist in an essay in support of Mr. Malthus's original view, "The effect of wars, plagues, and epidemic disorders, those terrible correctives, as they have been justly termed by Dr. Short, of the redundance of mankind on the principle of population, sets its operation in the most striking point of view. These scourges tend to place an old country in the situation of a colony. They lessen the number of inhabitants, without, in most cases, lessening the capital that is to feed and maintain them." What I apprehend the actual facts when examined, place in a striking point of view, is the danger of adopting conclusions deeply affecting the interests of communities, on hypothetical reasonings, and without a careful investigation whether the facts sustain them: the facts them-

selves, when examined, show that (be it as it may with war) epidemic disorders do *not* lessen the number of inhabitants; and that they *do* in all cases that have been examined lessen the capital that is to feed and maintain them. They lessen the proportion of productive hands and increase the proportion of the helpless and dependent hands. They place every community, new or old, in respect to its productive economy in the position which the farmer will understand by the like effects of epidemics upon his cattle, when in order to raise one horse two colts must be reared, and the natural period of work of the one reared is, by disease and premature death, reduced by one-third or one-half. The exposition already given, *vide* General Report p. 176, *et seq.* p. 200, of the dreadful misery and disease-sustaining fallacy which erects pestilence into a good, is further illustrated by the effects of the proportions of the dependent populations of Ireland. Thus in England, the population above 15 and under 50 years of age in every ten thousand is 5025, and this five thousand have 3600 children below 15 years of age dependent upon them. In Ireland, the population above 15 years of age is 4900—in other words, there are 125 less of adults in every ten thousand; and this smaller proportion of living adults, with eight or ten years' span less of life or working ability, have 4050, or four hundred and fifty more children dependent upon them. In England there are 1,365 persons in every ten thousand, or 13½ per cent. above 50 years old to exercise the influence of their age and experience upon the community. In Ireland there are only 10 per cent., or 1050 in every ten thousand of the population above 50 years of age.

It appears from a report which the Census Commissioners give on the sanitary condition of Dublin, that the mortality in the different localities of that city varies with their physical condition in the lower districts, and coincides with the description already cited in the general report, from the report of Dr. Speer, the physician to the Dublin Fever Hospital (*vide* General Sanitary Report, p. 96). The like consequences follow to the lower Irish population settled in the English towns with the like habits, which permit them to accumulate refuse round their dwellings, and live in an atmosphere compounded of the miasma of a pigsty and a privy, and the smoke of a chimney in a crowded room. The Census Commissioners of Ireland have endeavoured to obtain returns of the chief causes of the mortality; and it appears from the report upon them, that hitherto, notwithstanding all that has been said and written, that fever has returned nearly decennially in periods, irrespective of any general distress in that country, and has extended its ravages to classes who were exposed to the miasma, but who suffered no distress. "Cases of starvation," it is stated, "have been registered from returns at almost every age, 79 of them took place in the rural district, or 1 death in 11,539 of the general mortality of the open country, and minor towns and villages; 18 in the civic, or 1 in 13,009 of the deaths in towns of or above 2000 people; and 20 occurred in hospitals; the patients having been admitted when suffering from want of food, or in such a destitute condition as subsequently produced death from exhaustion. Including the deaths in hospitals with those in the civic districts, to which they properly belong, it appears that the deaths from want and destitution in the larger towns have been 1 in 7240 to the total mortality of these places. During the first 5-year period, these deaths were on an average but 6 per annum, and in the last 5-year period (that ending June, 1841) they had increased to the yearly average of 18."

The dependency of the duration of life upon the physical condition of the population, and the connexion of several classes of moral and economical facts, with the proportionate mortality, may be further exemplified. Taking the four counties in Ireland in which the proportions of mud hovels are the greatest; and the four counties in which the proportions of such tenements are the least;* I have added the average ages of death as additional proofs and exemplifications of the conclusions stated in pp. 128 and 129, and other parts of the General Report.

* The county of Dublin is left out as having a disproportionate amount of suburban population.

| | The four Counties where the average proportion of mud hovels, as habitations, is the lowest. | | | | The four Counties where the average proportion of mud hovels, as habitations, is the highest. | | | |
|---|--|-----------|-----------|-----------|---|----------|-----------|-----------|
| | Down. | Wexford. | Kilkenny. | Monaghan. | Kerry. | Mayo. | Clare. | Cork. |
| Proportion per cent. of families occupying habitations which are mud cabins having only one room* | 24.7 | 29.4 | 30.9 | 31.5 | 66.7 | 62.8 | 56.8 | 56.7 |
| | 29 | | | | 61 | | | |
| Proportion of deaths from epidemic disease to every 10,000 of the population | 36 | 28.5 | 36.8 | 40.4 | 50.2 | 51.0 | 53.1 | 43.3 |
| | 35.5 | | | | 47.8 | | | |
| Average age of all who have died during the 10 years ended 6th June, 1841 | 33.6 | 34.10 | 33.2 | 31.4 | 24.10 | 23.2 | 24.5 | 28.8 |
| | 33.4 | | | | 26.8 | | | |
| Average age of all the living in 1841 | 24.10 | 25.10 | 24.8 | 24.2 | 23.1 | 23.0 | 22.9 | 24.0 |
| | 24.11 | | | | 23.5 | | | |
| Proportions of births to the population | 1 in 33.4 | 1 in 34.3 | 1 in 33.6 | 1 in 32.5 | 1 in 28.8 | 1 in 28. | 1 in 28.7 | 1 in 31.8 |
| | 1 in 33.4 | | | | 1 in 29.9 | | | |
| Increase per cent. of the population since 1831 | 2.7 | 10.6 | 7.9 | 2.5 | 11.7 | 6.2 | 10.9 | 9.9 |
| | 5.0 | | | | 8.7 | | | |
| Per cent. of the population, 15 years and under | 39.7 | 36.6 | 37.8 | 40.9 | 42.4 | 43.1 | 42.4 | 39.7 |
| | 38.8 | | | | 41.9 | | | |
| Above 50 years | 12.0 | 12.5 | 10.9 | 10.9 | 9.4 | 9.4 | 8.7 | 10.4 |
| | 11.6 | | | | 9.5 | | | |
| Proportion per cent. of male and female population, 17 years and upwards. | | | | | | | | |
| Unmarried | 42 | 44½ | 45½ | 41 | 37 | 36 | 40½ | 42 |
| | 43½ | | | | 39 | | | |
| Married | 49 | 47 | 45½ | 49½ | 55 | 56 | 51½ | 50 |
| | 47¾ | | | | 53 | | | |
| Per cent. of the population, 5 years old and upwards, who can neither read nor write | 27.5 | 41.3 | 51.2 | 51.3 | 70.4 | 79.0 | 63.1 | 65.6 |
| | 42.8 | | | | 69.7 | | | |
| Proportions of crimes† of violence or passion to each 10,000 of the population on an average of 8 years to 1842:— | | | | | | | | |
| Murders and Manslaughters { Proportions Positive Numbers. } | .11 | .20 | .44 | .55 | .71 | .87 | 1.08 | .52 |
| | 34 | 55 | 83 | 88 | 166 | 271 | 249 | 316 |
| | .32 | | | | .72 | | | |
| Rapes and Assaults, with intent to commit { Proportions Positive Numbers. } | .06 | .15 | .22 | .35 | .71 | .51 | .46 | .28 |
| | 15 | 22 | 34 | 58 | 166 | 159 | 108 | 178 |
| | .17 | | | | .44 | | | |

* The census, which gives not only the description of the houses, but the different description of holdings or sizes of farms, shows that in both groups of counties they are nearly of the same size, but the farms are rather the largest in the best conditioned group. In both sets, 93 per cent. of the farms are under 30 acres; upwards of 40 per cent. of them from 1 to 5 acres only; 35 per cent. of them from 5 to 15 acres; 13 per cent. from 15 to 30 acres; and about 7 per cent. only above 30 acres; so that the chief differences would apparently be in their houses.

† By my colleagues and myself, the uncertainty of the returns of commitments, or of convictions, as data to judge of the amount of crime committed in any district, was demonstrated in § 1 to § 4 of our Report as Commissioners of Inquiry into the condition of the Constabulary Force in England and Wales; but that uncertainty attaches perhaps in the least degree to the higher classes of crimes.

The general sanitary condition of the population of Scotland and the pressure of the preventible causes of death appears to be lower than in England, and higher than in Ireland, and so it appears from the recent census is the average age of the living.

It may be conceived that the low average age of the living in these cases is ascribable mainly to an increasing proportion of children incidental to an increasing population. Not so, however: the average age of the living is more powerfully influenced by disturbing causes affecting the population of adults, each with accumulated years, than by causes affecting the infantile population. One adult of 50 years added to the living is equal to the addition of 50 infants, and so with the average ages of deaths. The average ages of the living appear to have increased and not diminished with the increasing population. Be the sanitary condition of the poorest classes and the amount of disease and death what it may, as compared with former periods (and there is direct evidence that it is in populous districts increasing), there has been some improvement in the residences of the middle and higher classes; household drainage and cleanliness has in some districts been improved; the quantity of town and land drainage and cultivation has of late increased in various proportions in each country; and the decrease in the causes of mortality appears to have been followed by an increase of the average age of the living, of particular classes at the least, sufficient to present an increase, though a dreadfully slow one, in the average age of the adults living. The increase of the proportion of adults may be represented as follows:—

| | England. | | Ireland. | | Scotland. | |
|--|----------|-------|----------|-------|-----------|------|
| | 1821 | 1841 | 1821 | 1841 | 1821 | 1841 |
| Percentage of Population of 15 Years and under | 39.09 | 36.07 | 41.06 | 40.44 | 41.0 | 36.4 |
| Over 15 Years | 60.91 | 63.93 | 58.94 | 59.56 | 59.0 | 63.6 |
| Average age of each living individual | 25.3 | 26.7 | 2.37 | 24.0 | 25.1 | 25.9 |

In abundance of employment, in high wages, and the chief circumstances commonly reputed as elements of prosperity of the labouring classes, the city of New York is deemed pre-eminent. I have been favoured with a copy of "*The Annual Report of the Interments in the City and County of New York for the Year 1842,*" presented to the Common Council by Dr. John Griscom, the city inspector, in which it may be seen how little those circumstances have hitherto preserved large masses of people from physical depression. He has stepped out of the routine to examine on the spot the circumstances attendant on the mortality which the figures represent. He finds that upwards of 33,000 of the population of that city live in cellars, courts, and alleys, of which 6618 are dwellers in cellars. "Many," he states, "of these back places are so constructed as to cut off all circulation of air, the line of houses being across the entrance, forming a *cul de sac*, while those in which the line is parallel with, and at one side of the entrance, are rather more favourably situated, but still excluded from any general visitation of air in currents. As to the influence of these localities upon the health and lives of the inmates, there is, and can be, no dispute; but few are aware of the dreadful extent of the disease and suffering to be found in them. In the damp, dark, and chilly cellars, fevers, rheumatism, contagious and inflammatory disorders, affections of the lungs, skin, and eyes, and numerous others, are rife, and too often successfully combat the skill of the physician and the benevolence of strangers.

"I speak now of the influence of the locality merely. The degraded habits of life, the filth, the degenerate morals, the confined and crowded apartments, and insufficient food, of those who live in more elevated rooms, comparatively beyond the reach of the exhalations of the soil, engender a different train of diseases, sufficiently distressing to contemplate, but the

addition to all these causes of the foul influences of the incessant moisture and more confined air of under-ground rooms, is productive of evils which humanity cannot regard without shuddering."

He gives instances where the cellar population had been ravaged by fever whilst the population occupying the upper apartments of the same houses were untouched. In respect to the condition of these places, he cites the testimony of a physician, who states that, "frequently in searching for a patient living in the same cellar, my attention has been attracted to the place by a peculiar and nauseous effluvia issuing from the door indicative of the nature and condition of the inmates." A main cause of this is the filthy external state of the dwellings and defective street cleansing, and defective supplies of water, which, except that no provision is made for laying it on the houses of the poorer classes, is now about to be remedied by a superior public provision.

| | Years. | Months. |
|---|--------|---------|
| The average age of the white population living in New York, according to the census, is | 23 | 3 |
| But the average age of all who die there is only | 20 | 0 |

Or an excess of deaths over the ages of the living of more than three years and three months; denoting, if the like excess prevailed from year to year, an increasing pressure of the causes of mortality. If the mortality be the same from year to year the chances of life would appear to be lower in New York than in Dublin, where, according to the data given by the Census Commissioners, it would appear to be 25 years 6 months.

In America little attention and labour appear to have been bestowed in any of the rural districts on general land drainage. Yet nature inflicts terrible punishment for the neglect of the appointed and visible warnings and actual premonitory scourges, amongst which are the mosquitoes and the tribes of insects that only breed in stagnant water and live in its noxious exhalations. The cleansing and the general sanitary condition of the American towns appear to be lower than in England or Scotland, whilst the heat there at times is greater and decomposition more active; pestilence in the shape of yellow fever, ague, and influenza is there more rife, the deaths in proportion to the population more numerous, and the average age of death (so far as there is information) amongst the resident population much lower.

| | Years. | Months. |
|--|--------|---------|
| The average age of the whole of the living population in America, so far as it can be deduced from the returns at the periods given in the census, is only | 22 | 2 |

Notwithstanding the earlier marriages, and the extent of emigration, and the general increase of the population, the whole circumstances appear to me to prove this to be the case of a population depressed to this low age chiefly by the greater proportionate pressure of the causes of disease and premature mortality. The proportionate numbers at each interval of age in every 10,000 of the two populations are as follows:—

| | United States of America. | England and Wales. |
|----------------|---------------------------|--------------------|
| Under 5 years | 1744 | 1324 |
| 5 and under 10 | 1417 | 1197 |
| 10 " 15 | 1210 | 1089 |
| 15 " 20 | 1091 | 997 |
| 20 " 30 | 1816 | 1780 |
| 30 " 40 | 1160 | 1289 |
| 40 " 50 | 732 | 959 |
| 50 " 60 | 436 | 645 |
| 60 " 70 | 245 | 440 |
| 70 " 80 | 113 | 216 |
| 80 " 90 | 32 | 59 |
| 90 and upwards | 4 | 5 |
| | <u>10,000</u> | <u>10,000</u> |

Average age of all the living. 22 years 2 months 26 years 7 months.

Here it may be observed, that whilst in England there are 5025 persons between 15 and 50 who have 3610 children or persons under 15; in America there are 4789 persons living between 15 and 50 years of age who have 4371 children dependent upon them. In England there are in every ten thousand persons 1365 who have obtained above 50 years' experience; in America there are only 830.

The moral consequences of the predominance of the young and passionate in the American community are attested by observers to be such as have already been described in the General Sanitary Report as characteristic of those crowded, filthy, and badly administered districts in England where the average duration of life is short, the proportion of the very young great, and the adult generation transient.

The difference does not arise solely from the greater proportion of children arising from a greater increase of population, though that is to some extent consistent with what has been proved to be the effect of a severe general mortality; the effects of the common cause of depression is observable at each interval of age: the adult population in America is younger than in England, and if the causes of early death were to remain the same, it may be confidently predicted that the American population would remain young for centuries.

| | Years. | Months. |
|---|--------|---------|
| The average age of all alive above 15 in America is | 33 | 6 |
| The average age of all alive above 15 years in England and Wales is | 37 | 5 |
| The average age of all above 20 years in America is | 37 | 7 |
| In the whole of England the average of all above 20 years is | 41 | 1 |

The difference at the different stages of age appear also to prevail in proportion to the different pressure of the causes of disease and mortality in different districts in England: *e. g.* In the town parishes of Middlesex the average age of the living above 15 years is 35 years and 10 months; but in Hereford it is 39 years and 2 months. In Middlesex the average age of the adult population, that is of all above 20 years, is 38 years and 8 months; whilst in Hereford it is 42 years and 1 month.

The comparative amount of disease and death elsewhere, it need scarcely be said, in no way affects the positive amount of evil in this country, or dispenses with the duty of adopting such practical measures as may be preventive of a single one of the cases of preventible deaths which abound in masses in the large districts having the least unfavourable averages.

The instances have been adduced to exemplify the suggestions of amendment in the mode of measuring the amount and influence of mortality, and more especially to show the importance of giving the average age as well as the numbers of deaths and the average age of the living in each class of the community.

The subsequent district returns and the notes extracted from the reports made by the local registrars to the Registrar-General, in corroboration of the General Sanitary Report, will show the immense importance to the community of the facts that require investigation. It cannot be too urgently repeated that it is only by examinations, case by case, and on the spot, that the facts from which sound principles may be correctly distinguished. They can only be well classed for general conclusions and public use by persons who have large numbers brought before their actual view and consideration, and who have thus brought before them impressively the common circumstances for discrimination, which no hearsay, no ordinary written information will present to their attention. The attainment of this immensely important public service might properly have been submitted as a principal instead of a collateral object, to the improvement of the practice of interment, for the appointment of such a small well qualified agency as that proposed, § 225, of some five or six trustworthy officers of public health for each million of a town population with the requisite

powers and responsibilities for ascertaining the actual amount of the preventible causes of death, and informing the local officers and the public of what is to be done for their removal.

The districts are placed in the order of the average age of death of the whole population during the year 1839, commencing with the highest average.

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|---|---------------|---------------------------------|--------------------|--------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| Greenwich. Population 80,811. | Gentry . . | No. 62 | No. 18 | No. 80 | No. 9 | Years. 62 | Years. 48 | Years. .. | Years. .. | 1 in 39 | 159 |
| | Tradesmen | 150 | 97 | 247 | 42 | 54 | 31 | 8 | 8 | | |
| | Artisans, &c. | 947 | 414 | 1,361 | 227 | 56 | 36 | 6 | 3 | | |
| | Undescribed | 141 | 110 | 251 | 35 | 58 | 30 | 4 | 9 | | |
| | Paupers . . | 109 | 21 | 130 | 17 | 62 | 52 | .. | .. | | |
| Totals and Averages . | 1,409 | 660 | 2,069 | 330 | .. | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 1,780 | Age of Living | | 28 | Births | | 1 in 45 | .. |
| Camberwell. Population, 39,867. | Gentry . . | 58 | 23 | 81 | 11 | 58 | 38 | 4 | 1 | 1 in 51 | 100 |
| | Tradesmen | 111 | 86 | 197 | 35 | 54 | 28 | 8 | 11 | | |
| | Artisans, &c. | 137 | 134 | 271 | 54 | 51 | 26 | 11 | 13 | | |
| | Undescribed | 98 | 37 | 135 | 13 | 61 | 42 | 1 | .. | | |
| | Paupers . . | 92 | 6 | 98 | 7 | 62 | 56 | .. | .. | | |
| Totals and Averages . | 496 | 286 | 782 | 117 | .. | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 709 | Age of Living | | 27.5 | Births | | 1 in 44 | .. |
| Hackney. Population 42,274. | Gentry . . | 50 | 11 | 61 | 6 | 61 | 47 | 1 | .. | 1 in 56 | 155* |
| | Tradesmen | 134 | 94 | 228 | 21 | 52 | 29 | 10 | 10 | | |
| | Artisans, &c. | 117 | 120 | 237 | 35 | 55 | 27 | 7 | 12 | | |
| | Undescribed | 80 | 102 | 182 | 36 | 60 | 25 | 2 | 14 | | |
| | Paupers . . | 46 | 4 | 50 | 1 | 67 | 61 | .. | .. | | |
| Totals and Averages . | 427 | 331 | 758 | 99 | .. | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 995 | Age of Living | | 26.10 | Births | | 1 in 42 | .. |
| St. George, Hanover Square. Population 66,433. | Gentry . . | 110 | 28 | 138 | 12 | 59 | 45 | 2 | .. | 1 in 50 | 272† |
| | Tradesmen | 112 | 79 | 191 | 23 | 50 | 29 | 12 | 10 | | |
| | Artisans, &c. | 528 | 344 | 872 | 130 | 47 | 27 | 15 | 12 | | |
| | Undescribed | 18 | 17 | 35 | 3 | 61 | 32 | 1 | 7 | | |
| | Paupers . . | 77 | 12 | 89 | 8 | 59 | 51 | 3 | .. | | |
| Totals and Averages . | 845 | 480 | 1,325 | 176 | .. | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 1,260 | Age of Living | | 28.3 | Births | | 1 in 53 | .. |

* Mr. W. R. Robinson, the Registrar for West Hackney District, describes the condition of the houses where the greatest mortality prevails as "bad, with murky superficial gutters within a yard of the front doors. Supply of water bad, quite insufficient for health, and that only three times a week; cleanliness not prevailing. Shacklewell is, beyond doubt, the most healthy village in the district, or, I may say (after nearly 30 years' practice here), within the same distance from London (two miles). The only parts of the district that are particularly unhealthy are the streets I have named, together with Hartwell-street, Dalston; but all these require three things only to render them not less healthy than the other parts of the neighbourhood:—1, Proper and effectual drainage, and removal of superficial drains and gutters. 2, A constant supply of water, so as to wash away impurities in the drains, and enable the inhabitants to preserve a greater degree of cleanliness, &c. 3, That the houses should be kept in better repair, and frequently lime-washed; and the privies should be more frequently emptied, and not allowed to run over; and that any stagnant ditch, within a certain distance from houses, should be covered over."

† Mr. E. Jay, Registrar of Hanover-square District.—Name any particular streets, courts, or houses which, from the number of deaths occurring therein, and the nature of the diseases, appear to you to be unhealthy.—"I should therefore say that the most unhealthy streets, &c., in my district are Oxford-buildings, Brown-

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|------------------------------------|---------------|---------------------------------|--------------------|--------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| Rotherhithe. Population 13,916. | Gentry . . | No. 6 | No. .. | No. 6 | No. 1 | Years. 57 | Years. 49 | Years. 5 | Years. .. | 1 in 41 | 79* |
| | Tradesmen | 12 | 2 | 14 | 2 | 50 | 40 | 12 | .. | | |
| | Artisans, &c. | 70 | 14 | 84 | 2 | 51 | 40 | 11 | .. | | |
| | Undescribed | 78 | 121 | 199 | 50 | 52 | 19 | 10 | 20 | | |
| | Paupers . . | 33 | 5 | 38 | 3 | 63 | 56 | .. | .. | | |
| Totals and Averages . | 199 | 142 | 341 | 58 | .. | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 335 | Age of Living | | 26.7 | Births | | 1 in 36 | .. |
| St. Olaves. Population 18,427. | Gentry . . | 4 | .. | 4 | .. | 64 | .. | .. | .. | 1 in 19 | 229† |
| | Tradesmen | 55 | 46 | 101 | 24 | 48 | 25 | 14 | 14 | | |
| | Artisans, &c. | 603 | 215 | 818 | 107 | 43 | 30 | 19 | 9 | | |
| | Undescribed | 5 | 14 | 19 | 7 | 50 | 16 | 12 | 23 | | |
| | Paupers . . | 47 | 4 | 51 | 8 | 59 | 54 | 3 | .. | | |
| Totals and Averages . | 714 | 279 | 993 | 146 | .. | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 519 | Age of Living | | 27.0 | Births | | 1 in 36 | .. |

street, Toms-court, Thomas-street, Grosvenor-market, Grosvenor-mews, George-street, and Hart-street; and to these, perhaps, may be added North-row, and Dolphin-court, and Providence-court, also the north end of Davies-street, adjoining Oxford-street. I have observed small-pox always to exist, when prevalent anywhere, in No. 24, George-street (Grosvenor-square); and much sickness and mortality have occurred in No. 18, Oxford-buildings. Oxford-buildings consist of 18 inhabited houses, containing many wretched families, principally Irish labourers; it was improved lately, in consequence of the exertions of humane individuals, but is still the seat of great poverty and vice. The ventilation here is so bad, that even visiting the houses is a disagreeable duty, from the foul air breathed even for a short space of time. The supply of water is good, and the drainage is reported by those who attend to the subject to be perfect, as it is throughout the parish; but the bad effluvia show that there must be some defect in this point. Three families frequently live in one room, some of the houses containing upwards of 50 persons; many of them live almost entirely on potatoes and herrings, and beer when they can get it. Want of fuel in many cases in winter. Brown-street.—Occupied by the poor and working class; the rooms very small, badly ventilated, and cleansed; the damp kitchens, with frequently stone-floors, are lived and slept in. Living is bad, from the poverty which prevails here. Hart-street.—Many poor families reside here, often in great want. Tolerably well drained. Toms-court.—Contains eight houses; inhabitants in a wretched state in many cases, partly from want of employ, partly from intemperance. Small-pox and epidemics have raged here. George-street.—Some of the houses here are inhabited by working men of a better class, but it also contains others in a wretched condition, in point of cleanliness and ventilation, and much privation is suffered by the inhabitants. Grosvenor-market.—This spot is particularly close, being built almost in *cul de sac*; the houses are dark, badly ventilated, and most unhealthy; the food of some of the poorest principally potatoes; a large slaughter-house situated here adds to its unhealthiness; great want of fuel in winter. Grosvenor-mews.—Here the inhabitants are very thickly crowded, and among the children there is always much mortality; in one house, at the time of taking the census, there were 80 persons. The inhabitants consist of coachmen and their families, as do many of the mews in this district. This class is frequently intemperate; they live over stables, are ignorant of the necessity of free ventilation, and many appear to suffer in consequence. New comers from the country complain of the want of free air, to which they ascribe their deteriorated health. Thomas-street.—Some of the houses in bad condition, and inhabited by the poorest families. No attention to ventilation. Supply of butchers' meat casual and infrequent. Pneumonia and bronchitis are frequently fatal in these poorer districts; and he who enters the damp, dark, underground kitchen, in which all the occupants live and sleep, in which the room is made more close by a fire required for their cooking, the atmosphere is loaded with moisture from wet clothes hung across the narrow space to dry, and probably some child ill of disease, sees that such a state of surrounding circumstances shuts out all chance of recovery in at least the majority of cases."

* Mr. G. Pitt, the Registrar of the Rotherhithe District, states:—"Hanover-street contains about 35 or 40 houses, in a very old and dilapidated state. The houses have generally six or eight rooms each, and sometimes as many families of the poorest kind, chiefly Irish. As the street has no thoroughfare, and is on an incline of at least 10 feet, it is badly drained. The water and filth constantly remaining in the street, it is most unhealthy. The same remarks apply in all respects to Spread Eagle-court, except that the houses stand upon level ground. Norfolk-place and Kenning's-buildings are exposed to the most offensive exhalations of about 150 feet in length of open sewer, which receives the filth of the whole surrounding neighbourhood. Typhus prevailed here at one time to a most serious extent. The persons who occupy the houses above described are labourers, with uncertain employment, and their earnings of course irregular. Their food of the coarsest kind, with habits by no means temperate."

† Mr. W. Stainer, the Registrar of St. Olave District.—"In what parts of your district has the number of deaths registered in the years 1838, 1839, 1840, 1841, and 1842 been the greatest, in proportion to the population?—"In the densely populated courts and alleys where there are open drains and sewers, and the inhabitants are living in dirt, stench, and a state of wretchedness to be conceived only by those who have

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|--|----------------------|---------------------------------|--------------------|---------------------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| Kensington, (including Chelsea). Population 114,952. | Gentry. | No. 193 | No. 50 | No. 243 | No. 17 | Years. 60 | Years. 45 | Years. 2 | .. | 1 in 51 | 582* |
| | Tradesmen | 204 | 120 | 324 | 33 | 50 | 30 | 12 | 9 | | |
| | Artisans, &c. | 559 | 619 | 1,178 | 223 | 53 | 24 | 9 | 15 | | |
| | Undescribed | 202 | 181 | 383 | 47 | 58 | 30 | 4 | 9 | | |
| | Paupers | 106 | 36 | 142 | 24 | 61 | 44 | 1 | .. | | |
| | Totals and Averages. | 1,264 | 1,006 | 2,270 | 344 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 2,782 | | Age of Living 27.5 | | Births 1 in 41 | | | | | |
| Islington. Population 55,720. | Gentry. | 83 | 35 | 118 | 11 | 61 | 42 | 1 | .. | 1 in 53 | 261 |
| | Tradesmen | 151 | 121 | 272 | 43 | 50 | 26 | 12 | 13 | | |
| | Artisans, &c. | 177 | 260 | 437 | 108 | 47 | 19 | 15 | 29 | | |
| | Undescribed | 106 | 27 | 133 | 9 | 61 | 46 | 1 | .. | | |
| | Paupers | 49 | 10 | 59 | 3 | 60 | 49 | 2 | .. | | |
| | Totals and Averages. | 566 | 453 | 1,019 | 174 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 1,177 | | Age of Living 26.11 | | Births 1 in 47 | | | | | |
| St. Martin in the Fields. Population 25,195. | Gentry. | 23 | 4 | 27 | 2 | 57 | 46 | 3 | .. | 1 in 36 | 200 |
| | Tradesmen | 60 | 47 | 107 | 22 | 45 | 24 | 17 | 15 | | |
| | Artisans, &c. | 165 | 137 | 302 | 82 | 43 | 26 | 14 | 13 | | |
| | Undescribed | 89 | 112 | 201 | 42 | 51 | 21 | 11 | 18 | | |
| | Paupers | 68 | 4 | 72 | 4 | 65 | 60 | .. | .. | | |
| | Totals and Averages. | 405 | 304 | 709 | 152 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 601 | | Age of Living 28.4 | | Births 1 in 42 | | | | | |
| Poplar. Population 31,091. | Gentry. | 16 | 7 | 23 | 2 | 61 | 43 | 1 | .. | 1 in 47 | 186 |
| | Tradesmen | 44 | 40 | 84 | 18 | 51 | 26 | 11 | 13 | | |
| | Artisans, &c. | 235 | 240 | 475 | 80 | 53 | 25 | 9 | 14 | | |
| | Undescribed | 19 | 10 | 29 | 2 | 63 | 36 | .. | 3 | | |
| | Paupers | 45 | 3 | 48 | 2 | 64 | 53 | .. | .. | | |
| | Totals and Averages. | 359 | 300 | 659 | 104 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 1,106 | | Age of Living 25.10 | | Births 1 in 28 | | | | | |

witnessed it. Prior to the year 1841 several very unhealthy courts existed, in which some of the earliest cases of Asiatic cholera occurred on the first appearance of that disease in the metropolis, but these have been removed, and the ground now forms the site of the termini of the Brighton and other railways. There are large open sewers completely stagnant through or near them, the smell from which in summer is so dreadful that it is extraordinary how human beings can bear it. The supply of water is scanty. The inhabitants are not more dirty than might be expected from their circumstances."

* Mr. James Pursey, the Registrar of St. Mary, Paddington.—In what parts of your district has the greatest number of deaths occurred from small-pox, measles, scarlatina, hooping-cough, diarrhoea, dysentery, cholera, influenza, or fever (typhus)?—"Kent's-place, Church-place, North-wharf-road, Dudley-street, Green-street." And state generally the condition of those unhealthy streets, courts, and houses, as to drainage, supplies of water, cleanliness.—"There being no sewer, the drainage is bad. A good supply of water may be had if proper receptacles were set up. Filthy condition; Kent's-place particularly; so much so, that the medical officer stated to me that he intended to write to the guardians thereupon."

Mr. T. W. C. Perfect, the Registrar of St. Peter's, Hammersmith.—"All that part of the district called Mulberry-hall, consisting of various courts and alleys; South-street, in an unfinished state; High-bridge, including New-street; Foundry-yard; Trafalgar-street and Henrietta-street; the New-road, and all the houses erected, and now building in Mr. Scott's park. Always damp and aguish."

Mr. W. Larner, the Registrar of the North-west District.—In what parts of your district has the greatest number of deaths occurred from small-pox, measles, scarlatina, hooping-cough, diarrhoea, dysentery, cholera, influenza, or fever (typhus)?—"Chelsea Workhouse, Leader-street, Oakham-street, Little College-street,

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|---|----------------------|---------------------------------|--------------------|--------------------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| Marylebone. Population 137,955. | Gentry. | No. 156 | No. 40 | No. 196 | No. 20 | Years. 59 | Years. 46 | Years. 3 | .. | 1 in 45 | 857* |
| | Tradesmen | 198 | 172 | 370 | 57 | 51 | 27 | 11 | 12 | | |
| | Artisans, &c. | 682 | 759 | 1,441 | 251 | 48 | 23 | 14 | 16 | | |
| | Undescribed | 347 | 324 | 671 | 104 | 54 | 27 | 8 | 12 | | |
| | Paupers | 288 | 73 | 361 | 61 | 54 | 42 | 8 | .. | | |
| | Totals and Averages. | 1,671 | 668 | 3,039 | 493 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 3,511 | | Age of Living 27.9 | | Births 1 in 39 | | | | | |
| Stepney. Population 90,657. | Gentry. | 64 | 9 | 73 | 3 | 65 | 56 | .. | .. | 1 in 41 | 620† |
| | Tradesmen | 169 | 104 | 273 | 47 | 53 | 31 | 9 | 8 | | |
| | Artisans, &c. | 568 | 591 | 1,159 | 247 | 48 | 23 | 14 | 16 | | |
| | Undescribed | 203 | 274 | 477 | 101 | 56 | 22 | 6 | 17 | | |
| | Paupers | 189 | 28 | 217 | 28 | 63 | 54 | .. | .. | | |
| | Totals and Averages. | 1,193 | 1,006 | 2,199 | 426 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 2,502 | | Age of Living 26.6 | | Births 1 in 36 | | | | | |
| St. Mary, Newington. Population 54,607. | Gentry. | 79 | 13 | 92 | 6 | 62 | 50 | .. | .. | 1 in 46 | 338 |
| | Tradesmen | 75 | 64 | 139 | 23 | 50 | 26 | 12 | 13 | | |
| | Artisans, &c. | 325 | 420 | 745 | 162 | 52 | 22 | 10 | 17 | | |
| | Undescribed | 75 | 76 | 151 | 31 | 59 | 30 | 3 | 9 | | |
| | Paupers | 64 | 6 | 70 | 1 | 60 | 55 | 2 | .. | | |
| | Totals and Averages. | 618 | 579 | 1,197 | 223 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 1,620 | | Age of Living 26.8 | | Births 1 in 34 | | | | | |

Arthur-street, and Britton-street. The above streets are not supplied with sewers to drain the surface, and, consequently, the waste water of the houses is carried away by cesspools on the respective premises attached to each house. Generally supplied by water being laid on from the Chelsea Water-works Company. In general, a want of cleanliness. According to the returns on taking the census in 1841, it was found to be the case that very many of the houses in the above-mentioned streets (the principal of which are only four-roomed houses) contained 10, 12, and in some cases more persons; therefore, it may be inferred from those returns it oftentimes occurs that three, four, and frequently more, sleep in the same rooms in these streets."

* Mr. Edward Joseph, the Registrar of the Rectory District, states:—"Calmell-buildings, to which I allude, is a narrow court, being about 22 feet in breadth; the houses are three stories high, surrounded and overtopped by the adjacent buildings; the drainage is carried on by a common sewer running down the centre of the court, the receptacle for slops, &c. from the houses on both sides; the lower apartments, especially the kitchens, which are under ground, are damp and badly ventilated, light and air being admitted through a grating on a level with the court. At all times, but especially so in warm weather, a most offensive effluvia is perceptible everywhere. The houses are 26 in number, and rented at about 20l. to 30l. per annum; each contains 10 rooms, which the renters of houses let out to families or individuals, who in their turn in many instances receive as lodgers those who are unable to bear the expenses of a room; by such means an immense per centage is added to the original rent. According to last year's census, the number of inhabitants in this court was 944, of whom 426 were males, 518 females; of this number, 178 were children under 7 years of age; 200 from 7 to 20 years; 459 from 20 to 45; and 189 from 45 years and upwards. The number of persons in one house varied from 2 to 70. Males employed, 261; females, 163. Total number of the working population 424, leaving 520 without occupation; the greater part of these were children and old persons, dependent upon parochial relief and the assistance of others. The following is a statement of the comparative mortality in different parts of the houses, as it occurred during the past year:—In the kitchens, 1 in 13; parlours, 1 in 37; first floor, 1 in 30; second floor, 1 in 33; attics, 1 in 12."

† Mr. A. Barnett, the Registrar of the Limehouse District.—In what parts of your district has the number of deaths registered in the years 1838, 1839, 1840, 1841, and 1842, been the greatest in proportion to the population?—"In those parts of my district in which there exists the greatest amount of distress, namely, the want of food, of firing, of water, also of cleanliness, both of person and habitation, and, I may add, of the district generally; as examples, may be mentioned the districts surrounding Jamaica-place, Salmon's-lane, Eastfield-street, Limehouse-causeway, Three-colt-street, and the Tile-yard." And state generally the condition of those unhealthy streets, courts, and houses, as to drainage, supplies of water, and cleanliness.—"The drainage is frequently altogether wanting, in most cases very imperfect; the supply of water insufficient, and want of cleanliness very apparent."

Mr. T. Barnes, the Registrar of the Shadwell District.—In what parts of your district has the number of

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|-------------------------------------|----------------------|---------------------------------|--------------------|---------------------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| St. Pancras. Population 129,711. | Gentry. | No. 151 | No. 49 | No. 200 | No. 15 | Years. 61 | Years. 45 | Years. 1 | Years. .. | 1 in 43 | 934* |
| | Tradesmen | 349 | 286 | 635 | 108 | 50 | 27 | 12 | 12 | | |
| | Artisans, &c. | 622 | 674 | 1,296 | 237 | 47 | 22 | 15 | 17 | | |
| | Undescribed | 269 | 354 | 623 | 199 | 55 | 23 | 7 | 16 | | |
| | Paupers | 232 | 49 | 281 | 47 | 61 | 50 | 1 | .. | | |
| | Totals and Averages. | 1,623 | 1,412 | 3,035 | 656 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 3,264 | | Age of Living 26.10 | | Births 1 in 46 | | | | | |
| West London. Population 33,629. | Gentry. | 12 | 4 | 16 | 2 | 53 | 38 | 4 | 1 | 1 in 27 | 387† |
| | Tradesmen | 83 | 103 | 186 | 41 | 49 | 22 | 13 | 17 | | |
| | Artisans, &c. | 393 | 381 | 774 | 186 | 46 | 22 | 16 | 17 | | |
| | Undescribed | 149 | 17 | 166 | 23 | 47 | 38 | 15 | 1 | | |
| | Paupers | 99 | 16 | 115 | 26 | 64 | 55 | .. | .. | | |
| | Totals and Averages. | 736 | 521 | 1,257 | 278 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 698 | | Age of Living 27.7 | | Births 1 in 48 | | | | | |

deaths registered in the years 1838, 1839, 1840, 1841, and 1842, been the greatest in proportion to the population?—“New Gravel-lane, and the several courts and alleys communicating therewith, Angel-gardens, New-street, and Labour-in-vain-street, Shadwell; Red Lion-street (including the workhouse), Upper Well-alley, Cross-alley, and Upper Gun-alley, Wapping. The drainage is bad; the supplies of water are insufficient. In these parts of the district the density of population is great. In many cases a whole family, consisting of seven or eight persons, sleep in the same room.”

* Mr. Worrell, the Registrar of the Gray's Inn-lane District:—“To ascertain and compare the healthy with the unhealthy parts of my district, I have placed against each street the whole number of deaths from all causes during the last five years. I have taken the number of deaths from a population of 5000, resident in what I consider healthy streets; and I have also taken the number of deaths from a population of 5000, resident in streets which I consider unhealthy. The 5000 occupying the best houses are composed of merchants, professional gentlemen, and the richer class of tradesmen; they occupy 728 houses, containing about 7800 good rooms; the streets are wide, well drained, and have a plentiful supply of water. The 5000 occupying the unhealthy streets are composed of the lower class of tradesmen, journeymen mechanics, labourers, and costermongers; they occupy 434 houses, containing about 2800 rooms, the best of which are little better than the worst of the 7800 before mentioned; the streets are mostly confined, the drains in a bad state, and in many places the accumulation of filth renders the atmosphere foul, whilst the supply of water is not very good. The number of deaths which I find in the healthy streets during five years, amongst a population of 5000, amounts to 325; and, during the same period, amongst 5000 occupying the unhealthy streets I find 613. No doubt many of the residents in the best houses go into the country, with the view of benefiting their health, and there die; but certain it is that many more of the poorer classes die in the workhouses and hospitals—so that, no doubt, amongst a certain number of poor, at least two deaths occur to one amongst the same number of rich. Having been a collector of rates upwards of 25 years, and, as a house agent, having had much to do with the letting of houses, I am thoroughly acquainted with the neighbourhood; and, having taken an active part in collecting and distributing voluntary contributions in times of distress and severe weather, I have been enabled to judge of the condition of the poor and their habitations, and I have always observed that sickness prevails much more in places where sewers and drains are bad than in other parts where the inhabitants are equally poor, but have more wholesome houses to live in. Any suggestion here as to remedy may, probably, be considered out of place, but, having had much experience as a Commissioner of Pavements, as well as in several offices of local management during the last 25 years, and having given much attention to the subject (an evil which, in my opinion, affects the metropolis to an extent little imagined), I have no doubt as to the means of remedy, and improvement in the local administration being perfectly easy and effectual.”

† In another classification he arranges, from descriptions of streets with nearly equal population, the highest in each class; the relative proportions, and average ages of deaths, are ascertained to be as follows:—

| | Population. | Deaths. | Average Age of Death. |
|-------------------|-------------|---------|-----------------------|
| Class 1 | 1432 | 97 | 35 |
| Class 2 | 1465 | 119 | 32 |
| Class 3 | 1448 | 157 | 25 |
| Class 4 | 1386 | 200 | 21 |

“The above statement proves that, out of a population of 1432 occupying the best houses, 95 deaths occurred within five years, 29 of which, at and under five years of age; and that out of a population of 1386, occupying the worst houses, the whole number of deaths are one hundred and eighty-nine, one hundred and four of which at and under five years of age.”

‡ Mr. F. Hutchinson, the Registrar of the South District:—State generally the condition of those unhealthy streets, courts, and houses, as to drainage, supplies of water, cleanliness.—“The drainage of all or

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|---|----------------------|---------------------------------|--------------------|--------------------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| Whitechapel. Population 71,758. | Gentry. | No. 17 | No. 4 | No. 21 | No. .. | Years. 58 | Years. 47 | Years. 4 | Years. .. | 1 in 31 | 768* |
| | Tradesmen | 142 | 136 | 278 | 42 | 50 | 26 | 12 | 13 | | |
| | Artisans, &c. | 741 | 637 | 1,378 | 261 | 48 | 25 | 14 | 14 | | |
| | Undescribed | 116 | 313 | 429 | 107 | 53 | 16 | 4 | 23 | | |
| | Paupers | 166 | 37 | 203 | 38 | 63 | 51 | .. | .. | | |
| | Totals and Averages. | 1,182 | 1,121 | 2,303 | 448 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 2,103 | | Age of Living 26.2 | | Births 1 in 34 | | | | | |
| St. James, Westminster. Population 37,407. | Gentry. | 27 | 9 | 36 | 1 | 57 | 42 | 5 | .. | 1 in 50 | 251 |
| | Tradesmen | 68 | 66 | 134 | 23 | 51 | 26 | 11 | 13 | | |
| | Artisans, &c. | 161 | 190 | 351 | 59 | 46 | 21 | 16 | 18 | | |
| | Undescribed | 52 | 83 | 135 | 28 | 52 | 20 | 10 | 19 | | |
| | Paupers | 81 | 15 | 96 | 7 | 58 | 49 | 4 | .. | | |
| | Totals and Averages. | 389 | 363 | 752 | 118 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 844 | | Age of Living 23.2 | | Births 1 in 44 | | | | | |
| East London. Population 39,655. | Gentry. | 14 | 3 | 17 | .. | 63 | 50 | .. | .. | 1 in 36 | 372 |
| | Tradesmen | 134 | 164 | 298 | 76 | 53 | 23 | 9 | 16 | | |
| | Artisans, &c. | 265 | 391 | 656 | 145 | 51 | 21 | 11 | 18 | | |
| | Undescribed | 36 | 10 | 46 | 1 | 50 | 38 | 12 | 1 | | |
| | Paupers | 87 | 11 | 98 | 18 | 65 | 57 | .. | .. | | |
| | Totals and Averages. | 536 | 579 | 1,115 | 240 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 1,235 | | Age of Living 27.0 | | Births 1 in 32 | | | | | |
| Holborn. Population 39,720. | Gentry. | 36 | 9 | 45 | 3 | 58 | 47 | 4 | .. | 1 in 36 | 367 |
| | Tradesmen | 144 | 164 | 308 | 75 | 52 | 21 | 10 | 15 | | |
| | Artisans, &c. | 231 | 353 | 584 | 149 | 50 | 19 | 12 | 20 | | |
| | Undescribed | 21 | 6 | 27 | 2 | 54 | 41 | 8 | .. | | |
| | Paupers | 105 | 32 | 137 | 35 | 60 | 46 | 2 | .. | | |
| | Totals and Averages. | 537 | 564 | 1,101 | 264 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 969 | | Age of Living 27.2 | | Births 1 in 41 | | | | | |

most of these courts and houses is exceedingly defective. About a year ago, for instance, I thought it my duty to complain to the local authorities respecting a privy in Hanging-sword-alley, that had been full for a great length of time, and could not have been used, but for a hole just below the seat, by means of which the fluid contents flowed into the open gutter. The effluvia from these houses arising from the defective state of the drains is most offensive. In some houses there are only cesspools in the cellars, which are emptied only once in from six months to three years. Water is supplied from the New River three times a-week for about two hours. In many of the houses, water-pipes have never been laid down, and in others the Company have stopped the supplies, in consequence of non-payment. Some of these places, and in particular Plumtree-court, are in a most filthy state. Offal, accumulations of dirt, and the refuse of vegetables, &c. lying in the gutters. The houses are generally remarkable for their dirty and uncomfortable appearance, and are mostly without any proper receptacle for dirt and ashes. The population is very dense; 15 to 20, and, I am informed, sometimes 30 persons, inhabiting one house, consisting of six rooms. The general condition of the population is very bad, particularly as regards the women and children, who are more confined to these localities than the men, the latter being generally employed elsewhere during the day-time. Many of the persons renting these houses suffer in pocket by letting lodgings to parties who never pay; and in health, by thus crowding their families, so as to induce disease and infectious disorders.”

* Mr. C. H. Rich, the Registrar of the Mile End New Town District, observes:—“With reference as to the healthy and unhealthy streets in my district, I have been carefully through my books, and I cannot particularize any one place more than another. The drainage is very bad; the hamlet is drained principally by surface drainage, which empties itself into a ditch which is uncovered. It runs along the north side of the

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy Standard. |
|---|-----------------------|---------------------------------|--------------------|--------|-----------------------|---|---|--------------------------------|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| Shoreditch. Population 83,552. | Gentry . . | No. 63 | No. 23 | No. 86 | No. 14 | Years. 65 | Years. 47 | Years. 15 | Years. 16 | 1 in 35 | 732* |
| | Tradesmen | 153 | 150 | 303 | 63 | 47 | 23 | 11 | 20 | | |
| | Artisans, &c. | 498 | 802 | 1,300 | 271 | 51 | 19 | 11 | 20 | | |
| | Undescribed | 150 | 75 | 225 | 34 | 57 | 37 | 5 | 2 | | |
| | Paupers . . | 234 | 49 | 283 | 56 | 57 | 46 | 5 | .. | | |
| | Totals and Averages . | 1,098 | 1,099 | 2,197 | 433 | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 3,058 | Age of Living | | 26 | Births | | 1 in 27 | .. |
| City of London. Population 55,967. | Gentry . . | 32 | 12 | 44 | 3 | 63 | 43 | .. | .. | 1 in 50 | 403 |
| | Tradesmen | 247 | 244 | 491 | 84 | 48 | 23 | 14 | 16 | | |
| | Artisans, &c. | 213 | 270 | 483 | 94 | 50 | 22 | 12 | 17 | | |
| | Undescribed | 77 | 29 | 106 | 15 | 58 | 39 | 4 | .. | | |
| | Paupers . . | .. | .. | .. | .. | .. | .. | .. | .. | | |
| | Totals and Averages . | 569 | 555 | 1,124 | 196 | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 1,210 | Age of Living | | 27.7 | Births | | 1 in 46 | .. |
| St. John & St. Margaret, Westminster. Population 56,718. | Gentry . . | 37 | 14 | 51 | 9 | 55 | 42 | 7 | .. | 1 in 39 | 521† |
| | Tradesmen | 82 | 102 | 184 | 47 | 46 | 20 | 16 | 19 | | |
| | Artisans, &c. | 458 | 581 | 1039 | 264 | 48 | 21 | 14 | 18 | | |
| | Undescribed | 38 | 21 | 62 | 9 | 56 | 49 | 6 | .. | | |
| | Paupers . . | 97 | 19 | 116 | 17 | 57 | 46 | 5 | .. | | |
| | Totals and Averages . | 712 | 740 | 1,452 | 346 | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 1,730 | Age of Living | | 26.11 | Births | | 1 in 33 | .. |

hamlet, which makes it very unwholesome; there has, within the last three years, been a sewer made (down High-street and Well-street), which has much improved that part of the district. The hamlet has been much improved within the last four years as regards the paving of several of the streets which were in a most filthy state; they are now under the commission. If Luke-street and Underwood-street, which contain about 50 houses in each street, were paved, it would be a great improvement, and no doubt beneficial to health. For want of proper sewerage, the health of the hamlet is generally bad."

* Mr. N. Bowring, the Registrar of the district Haggerstone West, specifies as the seats of the greatest mortality.—"Phillips-street, Edward-street, Mill-row, Wilmer-gardens, and the upper part of Hoxton Old Town (east side), in which the principal diseases are typhus-fever, consumption, inflammation of the lungs, and scarlatina. Two of those places mentioned above, namely, Mill-row and Wilmer-gardens, are without drainage; but at the back of the west end of Phillips-street, south side of Edward-street, and at the back of the upper end of Hoxton Old Town, is an open ditch, almost a dead level, in which filth of every description is thrown. I believe it is under the management of the Commissioners of Sewers, but is seldom cleaned out; the stench emitted, particularly in the summer months, is almost intolerable, and is considered by the inhabitants as the sole cause of much illness and death. Drainage very deficient. Water supplied three times a-week. The people generally of cleanly habits."

† Mr. George Pease, the Registrar for the St. John the Evangelist District, thus describes the condition of the places in the lower districts, where the greatest mortality occurs:—"Great Peter-street, Perkin's rents, Duck-lane, and Old Pye-street, are the most densely populated in the district. The houses in Great Peter-street, for the most part, are very old, irregular, and uncleanly. Occupied by tradesmen and small shopkeepers, together with labourers, mechanics, and others of uncertain earnings. The houses in the other three streets are often occupied by 10 or 12 persons in one room, most of them of the lowest grade in society, such as mendicants, hawkers, costermongers, lodging-house-keepers, thieves, and abandoned females of irregular and intemperate habits. Their food chiefly consists of salt-fish and other scraps, collected by the mendicants and disposed of to the general dealers. The houses are, for the most part, very low, filthy, and dilapidated, badly drained, and indifferently supplied with water. There are other unwholesome nuisances arising from the collecting and boiling bones, soap, and tallow, &c. Holland-street, Medway-street, Marlborough-place, New Peter-street, with several other avenues, surrounding an extensive waste (formerly the site of Marlborough-square) oftentimes nearly covered with stagnant water. The houses are small, very dirty, and dilapidated, low in situation, without any drainage, having stagnant waters back and front; some in the occupation of the labouring class, and laundresses low in the scale, irregular in their earnings and habits. Many cases of typhoid fever have occurred here, and several recently. Rochester-row, Strutton-ground, and Artillery-square, are thickly populated by tradesmen of all kinds and others; they are without sewerage or proper drainage; the first having an open ditch through the centre for the greater part; and

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy Standard. |
|---|-----------------------|---------------------------------|--------------------|--------|-----------------------|---|---|--------------------------------|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| St. James, Clerkenwell. Population 56,709. | Gentry . . | No. 52 | No. 15 | No. 67 | No. 8 | Years. 60 | Years. 46 | Years. 2 | Years. .. | 1 in 43 | 474 |
| | Tradesmen | 99 | 109 | 208 | 50 | 49 | 23 | 13 | 16 | | |
| | Artisans, &c. | 324 | 533 | 857 | 183 | 50 | 19 | 12 | 20 | | |
| | Undescribed | 82 | 17 | 99 | 6 | 59 | 44 | 3 | .. | | |
| | Paupers . . | 76 | 14 | 90 | 2 | 60 | 50 | 2 | .. | | |
| | Totals and Averages . | 633 | 688 | 1,321 | 249 | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 1,771 | Age of Living | | 25.11 | Births | | 1 in 32 | .. |
| St. George in the East. Population 41,351. | Gentry . . | 18 | 3 | 21 | .. | 63 | 54 | .. | .. | 1 in 36 | 468* |
| | Tradesmen | 66 | 72 | 138 | 29 | 49 | 23 | 13 | 16 | | |
| | Artisans, &c. | 313 | 481 | 794 | 158 | 46 | 18 | 16 | 12 | | |
| | Undescribed | 62 | 14 | 76 | 3 | 60 | 46 | 2 | .. | | |
| | Paupers . . | 93 | 14 | 107 | 14 | 61 | 52 | 1 | .. | | |
| | Totals and Averages . | 552 | 584 | 1,136 | 204 | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 1,404 | Age of Living | | 26.6 | Births | | 1 in 29 | .. |
| St. Giles and St. George. Population 54,250. | Gentry . . | 66 | 32 | 98 | 15 | 60 | 40 | 2 | .. | 1 in 36 | 528† |
| | Tradesmen | 119 | 114 | 233 | 44 | 52 | 26 | 10 | 13 | | |
| | Artisans, &c. | 280 | 584 | 864 | 221 | 51 | 17 | 11 | 22 | | |
| | Undescribed | 42 | 20 | 62 | 9 | 53 | 35 | 9 | 4 | | |
| | Paupers . . | 208 | 34 | 242 | 53 | 54 | 46 | 8 | .. | | |
| | Totals and Averages . | 715 | 784 | 1,499 | 342 | .. | .. | .. | .. | .. | .. |
| | | No. of Births | | 1,622 | Age of Living | | 27.9 | Births | | 1 in 33 | .. |

the occupiers of the latter are under the necessity of pumping out into the open street (generally at night) the offensive water that collects in the cesspools within their dwellings. Part of Vauxhall-bridge road, which is contiguous to Douglas-street, Bentinck-street and place, with sundry other small streets or places communicating with them on the one side, and Upper and Lower Garden-street, with Dean's-place, on the other. The houses are small and numerous; inhabited by labourers, laundresses, costermongers, and others; without proper drainage, having open ditches and stagnant waters in their vicinity. Typhus and scarlatina have been frequent here, and several deaths therefrom have occurred within the last few weeks. In Causton-street the houses are small, populous, with courts or places occupied by labourers generally, and an open ditch in front. Ship-court, with Cottage-place, is situated very low; composed of small, ill-ventilated, dirty, dilapidated houses; thickly inhabited by labourers and others of very low and irregular earnings and habits; adjoining several large dilapidated premises, with extensive wastes or yards used as pig and cow-yards, or for the purpose of collecting slop-soil and other filth, left evaporating in the open air, without sewerage or proper drainage. Vine-street, with Champion's-alley, York-buildings in Grub-street, on one side, and Scott's-rents on the other, for the most part are small old houses, peopled by the labouring classes, with bad drainage, and the wharfs in Millbank-street, for the deposit of slop-soil and other nuisance."

* Mr. J. Verrall, the Registrar of the St. John's District.—"The following places appear to me to be unhealthy from the absence of all habit of cleanliness in most of the inhabitants; the want of drainage; the ruinous condition of the houses; the number of lay-stalls, in which filth of all kinds is accumulated, and the number of pigs kept in the neighbourhood.—King-street, Queen-street, Gold-street, Ship-street, Hilliard's court, and Pruson's island. In the following places (in addition to the foregoing) the houses appear unhealthily crowded and very dirty, with inadequate means of ventilation, namely, Church's-gardens, New-court, Crown-place, Miner-court, Macord's-rents, Ellis-court, Petrie-court, Hampton-court, Ryerolt's-court, and Matthew's-court."

† Mr. George Lee, the Registrar of the St. Giles' South District reports generally, as to the condition of the worst parts of the district, that they are characterized by insufficient drainage, indifferent supply of water, cleanliness neglected.

Mr. John Yardley, Registrar of St. George, Bloomsbury District.—"They are places without a thoroughfare to (two of them are built many feet below the surface of the street adjoining), and surrounded with houses of much greater height."

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|---|----------------------|---------------------------------|--------------------|--------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| Strand. Population 43,894. | Gentry. | No. 47 | No. 21 | No. 68 | No. 8 | Years. 59 | Years. 40 | Years. 3 | Years. .. | 1 in 41 | 413* |
| | Tradesmen | 129 | 132 | 261 | 58 | 51 | 25 | 11 | 14 | | |
| | Artisans, &c. | 299 | 382 | 681 | 178 | 48 | 21 | 14 | 18 | | |
| | Undescribed | 26 | 19 | 45 | 4 | 55 | 28 | 7 | 11 | | |
| | Paupers | 15 | 5 | 20 | .. | 65 | 49 | .. | .. | | |
| | Totals and Averages. | 516 | 559 | 1075 | 248 | .. | .. | .. | .. | | |
| | | No. of Births | | 957 | Age of Living | | 27.3 | Births | | 1 in 46 | .. |
| Lambeth. Population 115,853. | Gentry. | 141 | 64 | 205 | 19 | 58 | 37 | 4 | 2 | 1 in 46 | 979† |
| | Tradesmen | 340 | 452 | 792 | 174 | 50 | 21 | 12 | 18 | | |
| | Artisans, &c. | 452 | 704 | 1,156 | 245 | 49 | 19 | 13 | 20 | | |
| | Undescribed | 113 | 68 | 181 | 27 | 59 | 35 | 3 | 4 | | |
| | Paupers | 173 | 38 | 211 | 37 | 56 | 44 | 6 | .. | | |
| | Totals and Averages. | 1,219 | 1,326 | 2,545 | 502 | .. | .. | .. | .. | | |
| | | No. of Births | | 3,782 | Age of Living | | 26.2 | Births | | 1 in 31 | .. |
| St. George, South-wark. Population 46,622. | Gentry. | 32 | 9 | 41 | 5 | 61 | 45 | 1 | .. | 1 in 39 | 492‡ |
| | Tradesmen | 66 | 53 | 119 | 18 | 54 | 30 | 8 | 9 | | |
| | Artisans, &c. | 371 | 591 | 962 | 248 | 53 | 20 | 9 | 19 | | |
| | Undescribed | 35 | 15 | 50 | 10 | 50 | 30 | 12 | 9 | | |
| | Paupers | 22 | 6 | 28 | 2 | 58 | 45 | 4 | .. | | |
| | Totals and Averages. | 526 | 674 | 1,200 | 283 | .. | .. | .. | .. | | |
| | | No. of Births | | 1,574 | Age of Living | | 26.5 | Births | | 1 in 30 | .. |

* Mr. W. Fitch, the Registrar of the St. Clement Danes' District, describes the houses of the lower classes as excessively crowded.—“The number of persons sleeping in the same rooms are generally the whole family, from two to six persons, and often more. I beg to observe, that where persons occupy different rooms in one house they are generally very particular in keeping the doors of their rooms closed for the purpose of preventing others passing up and down stairs overlooking their abode, thereby causing a very great check to ventilation. Washing clothes, and placing them to dry in the rooms during the night, is another inconvenience the wretchedly poor are labouring under in many parts of my district, and this to a great extent.”

† Mr. C. Mears, Registrar of Waterloo-road, No. 1 District.—In what parts of your district has the number of deaths registered in the years 1838, 1839, 1840, 1841, and 1842 been the greatest in proportion to the population?—“In the undermentioned parts:—Whitehorse-street, Woolton-street, Windmill-street, Windmill-row, Little Windmill-street, and courts, Isabella-place, Broadwall, Cornwall-road and place, Cottage-place, Commercial-road, Bond-place and Commercial-buildings, Princes-court, Eaton-street, Bradstreet, Roupell-street, New-street, Mitre-place, John-street, Salutation-place.” And state generally the condition of those unhealthy streets, courts, and houses, as to drainage, supplies of water, cleanliness.—“In the above places there is very imperfect drainage; very few have any communication with the sewers. The houses have cesspools, and the water runs to waste and settles on the surface, leaving the lower parts of the houses damp. Supplies of water tolerably good; cleanliness, indifferent.”

Mr. J. Green, Registrar of Waterloo-road, No. 2.—In what parts of your district has the greatest number of deaths occurred from small-pox, measles, scarlatina, hooping-cough, diarrhoea, dysentery, cholera, influenza, or fever (typhus)?—“Juston-street, Hooper-street, Whiting-street, Apollo-buildings, courts and streets adjacent, Charles-street, Harriot-street, Frazier-street, Lucretia-street, James street, Barnes-terrace, Granby-place and Granby-gardens, Burdett-street, Francis street.” And state generally the condition of those unhealthy streets, courts, and houses, as to drainage, supplies of water, cleanliness.—“In the above-named streets the drainage is very imperfect, and much filthy water is thrown often into the streets. A plentiful supply of water. Many pay but little attention to cleanliness. Densely populated. In many houses from four to eight or nine in one room.”

‡ Mr. H. Bell, the Registrar of the Kent-road District:—In what parts of your district has the number of deaths registered in the years 1838, 1839, 1840, 1841, and 1842 been the greatest in proportion to the population?—“There are many close, filthy courts in this district; in these, the deaths are uniformly the highest; and the local registration does not correctly show this fact, for the people inhabiting them are very poor, and in extreme illness are often removed either to the workhouse or the hospitals, and they die in those places.” And state generally the condition of those unhealthy streets, courts, and houses as to drainage, supplies of water, cleanliness?—“Drainage,—open gutters choked, and pits of stagnant water. Supplies of water—good

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|--------------------------------------|----------------------|---------------------------------|--------------------|--------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| St. Luke. Population 49,982. | Gentry. | No. 21 | No. 6 | No. 27 | No. 3 | Years. 56 | Years. 38 | Years. 6 | Years. 1 | 1 in 40 | 538 |
| | Tradesmen | 62 | 52 | 114 | 17 | 49 | 25 | 13 | 14 | | |
| | Artisans, &c. | 391 | 569 | 960 | 306 | 49 | 20 | 13 | 19 | | |
| | Undescribed | 85 | 49 | 134 | 17 | 58 | 35 | 4 | 4 | | |
| | Paupers | .. | .. | .. | .. | .. | .. | .. | .. | | |
| | Totals and Averages. | 559 | 676 | 1,235 | 343 | .. | .. | .. | .. | | |
| | | No. of Births | | 2,271 | Age of Living | | 25.11 | Births | | 1 in 22 | .. |
| Bermondsey. Population 34,847. | Gentry. | 3 | 5 | 8 | .. | 51 | 20 | 11 | 19 | 1 in 42 | 364* |
| | Tradesmen | 66 | 59 | 125 | 16 | 48 | 25 | 14 | 14 | | |
| | Artisans, &c. | 202 | 373 | 575 | 144 | 51 | 18 | 11 | 21 | | |
| | Undescribed | 24 | 26 | 50 | 6 | 45 | 21 | 17 | 18 | | |
| | Paupers | 62 | 14 | 76 | 15 | 57 | 47 | 5 | .. | | |
| | Totals and Averages. | 357 | 477 | 834 | 181 | .. | .. | .. | .. | | |
| | | No. of Births | | 1,151 | Age of Living | | 24.7 | Births | | 1 in 30 | .. |
| Bethnal Green. Population 74,087. | Gentry. | 39 | 11 | 50 | 4 | 61 | 46 | 1 | .. | 1 in 41 | 794‡ |
| | Tradesmen | 110 | 136 | 246 | 56 | 53 | 24 | 9 | 15 | | |
| | Artisans, &c. | 468 | 874 | 1,342 | 369 | 51 | 18 | 11 | 21 | | |
| | Undescribed | 69 | 19 | 88 | 6 | 57 | 44 | 5 | .. | | |
| | Paupers | 76 | 19 | 95 | 19 | 65 | 49 | .. | .. | | |
| | Totals and Averages. | 762 | 1,059 | 1,821 | 454 | .. | .. | .. | .. | | |
| | | No. of Births | | 2,674 | Age of Living | | 25.2 | Births | | 1 in 28 | .. |

supply from water-works. Cleanliness—as a general rule they seldom attend to this, unless they expect a visit from the medical or other officers; they excuse it by stating that they have to work for their living. The people live very close in small rooms; have often more than one bed in a room. Beds are made of straw and shavings to sleep on, and a great number sleep on the floor; from three to ten persons in a room; almost every room is a sleeping-room.”

Mr. J. Bedwell, the Registrar of the Borough-road District:—In what parts of your district has the number of deaths registered in the years 1838, 1839, 1840, 1841, and 1842 been the greatest in proportion to the population?—“My district, formerly nearly a square, bounded on the west by about 50 houses in Blackfriars-road; on the south, by about 70, in the Borough-road; on the east, by about the same number in Blackman-street, and partly on the north by Wellington-street; I find the greatest number of deaths in proportion to the population in the small streets within the above quadrangle. Drainage very deficient; supply of water plentiful; cleanliness little attended to by a great number. The density of population extreme. Small houses with a family in each room. We have lodging-houses in the Mint where from 50 to 150 sleep nightly; 10 large beds in one room in some of them.”

* Mr. J. Paul, the Registrar of St. James's District.—In what parts of your district has the greatest number of deaths occurred from small-pox, measles, scarlatina, hooping-cough, diarrhoea, dysentery, cholera, influenza, or fever (typhus)? And in what parts have epidemic diseases been most fatal?—“I do not know. Neither small-pox, scarlatina, measles, hooping-cough, diarrhoea, nor influenza has been peculiarly localized. My experience of a longer date as surgeon to the poor of the district leads me to believe that cholera, dysentery, and typhus fever have been more prevalent in London-street and its vicinity, and the Tar-yard. In both these places drainage is bad; and the inhabitants of the former locality obtain their supply of water from a running ditch—a common receptacle for everything, where a hundred cloacine empty themselves. Drainage is bad in many parts of the district; lots of small houses are built; streets of a better description unfinished; their proprietors, who look only to the cash returns, pay little attention to the drainage or cleanliness. There appears to be no remedy for these calamities. The supply of water is now pretty good.”

‡ Mr. George Reynolds, the Registrar of the Church District, in answer to the question, In what parts of your district has the number of deaths registered in the years 1838, 1839, 1840, 1841, and 1842 been the greatest in proportion to the population? states, “In Beckford-row, Elliot-row, Alfred-place, Camden-gardens, Pitt-street, Pott-street, Camden-street, Wolverley-street, New York-street, and Punderson-gardens.” And state generally the condition of those unhealthy streets, courts, and houses, as to drainage, supplies of water, cleanliness.—“The places I have named are entirely without drainage. Supply of water, one hand-cock to many houses. Cleanliness, great want of.” Name any particular streets or parts which, according to the facts that have fallen under your notice, appear to you to be healthy, and with reference to the points adverted to in the preceding question, compare the healthy with the unhealthy portions of your district.—“My

| District. | Class. | Number of Deaths of each Class. | | | Deaths from Epidemic. | Average Age at Death of all who die above 21. | Average Age at Death, including Children. | Years' Average premature loss of Life by | | Proportionate Number of Deaths to Population. | Excess in Number of Deaths above a Healthy standard. |
|--------------------------------------|-----------------------|---------------------------------|--------------------|--------|-----------------------|---|---|--|------------------------|---|--|
| | | Adults. | Children under 10. | Total. | | | | Deaths above Age of 21. | Deaths of all Classes. | | |
| St. Saviour's. Population 3,1980. | Gentry . . | No. 9 | No. 1 | No. 10 | No. 1 | Years. 52 | Years. 47 | Years. 10 | Years. .. | 1 in 36 | 422 |
| | Tradesmen | 45 | 43 | 88 | 17 | 52 | 26 | 10 | 13 | | |
| | Artisans, &c. | 250 | 218 | 468 | 93 | 45 | 22 | 17 | 17 | | |
| | Undescribed | 89 | 198 | 287 | 65 | 51 | 15 | 11 | 21 | | |
| | Paupers . . | 23 | 9 | 32 | 4 | 59 | 40 | 3 | .. | | |
| | Totals and Averages . | 416 | 499 | 915 | 180 | .. | .. | .. | .. | .. | .. |
| | | No. of Births 1,145 | | | Age of Living 27.3 | | Births 1 in 29 | | | | |

entire district, I think, would be in a much more healthy condition had we efficient drainage; instead of which, even this, the main road of the parish, is without a sewer, notwithstanding the Commissioners of Sewers have been repeatedly memorialized, and the following fact brought under their notice, that the cellars of the houses do not extend to the depth of 3 feet 6 inches below the level of the carriage-road, and yet there is an average of 18 inches of water during the greater part of the winter season, that many persons are obliged to use the pump for many hours daily to preserve their property." He gives the following letter from a medical officer of great experience:—

" 289, Bethnal-green-road, October 31st, 1842.

" Dear Reynolds,—As you are aware, I have attended many of the inhabitants of this road and its vicinity, and I do not hesitate to say that many of their diseases are to be attributed entirely to the want of drainage. They are—1st, febrile diseases; 2nd, diseases of the respiratory organs; 3rd, nervous diseases; 4th, diseases of the digestive organs; and lastly, cachectic diseases. Of the first kind, the very numerous cases of fever in the undrained districts that occur shortly after the autumnal rains, I take in the light of cause and effect. Rheumatism (acute and chronic) are the result of sleeping in houses the walls of which absorb the surface water and elevate it by capillary attraction to the height of two or three feet. The diseases of the respiratory and digestive organs are above the average number, and are attributable to the same cause. The nervous diseases I attribute to the poisonous gases exhaled from putrifying matter. They are—1st, epilepsy. In two families this disease attacked every one of the younger branches of the family, and they were cured by removal to another district. Many cases of spasm of a particular muscle, as one or two of the muscles of the face, the large muscle in front of the neck, and even some of the muscles of the arm; also frequent cases of the most inveterate hysteria, have been temporarily relieved by removal, and have returned again on their return home. Of the cachectic diseases, some are produced, others aggravated, by this cause. Scrofula is of this latter description. The cases of the children in your own family show that it is impossible to prevent suppuration when the patient is constantly breathing a humid atmosphere. This has also been the case with one of your immediate neighbours. That form of scrofula termed tabes mesenterica, I think, is, in many cases, brought on entirely by the same cause. Want of time prevents my extending the example of diseases attributable to this cause.

" I am, dear Reynolds, yours truly, " T. TAYLOR."

" Mr. James Murray, the Registrar of the Hackney-road District, in answer to the question, In what parts of your district has the number of deaths registered in the years 1838, 1839, 1840, 1841, and 1842 been the greatest, in proportion to the population? states, "The greatest number of deaths registered, in proportion to the population, have occurred in all the streets leading into Old Cock-lane, especially the courts therein, and in all the streets leading into the Hackney-road as far as Strout's-place, viz., Old Nichol-street, New Nichol-street, Half Nichol-street, Vincent-street, Mead-street, Turville-street, and courts therein, Collingwood-street, Old Castle-street, Virginia-row, Austin-street, Gascoigne-place, and Weatherhead, Nova Scotia, Green Gate, and Cooper's gardens, and Wellington-row." In what parts of your district has the greatest number of deaths occurred from small-pox, measles, scarlatina, hooping-cough, diarrhoea, dysentery, cholera, influenza, or fever (typhus)?—"The greatest number of deaths from the diseases named have occurred in precisely the same parts of my district, especially in the courts and in those anomalous assemblages of small cabins built on low and undrained ground, called gardens." And in what parts have epidemic diseases been most fatal?—"Epidemic diseases have been most fatal wherever the greatest number of people are congregated on the smallest space, which is again the identical spot mentioned above, with the exception of Wellington-row and the gardens, where the deaths appear to be chiefly caused by their low, damp, and almost swampy condition during winter. Pneumonia being there the prevailing cause of death, with occasional instances of putrid sore throat." And state generally the condition of those unhealthy streets, courts, and houses, as to drainage, supplies of water, cleanliness.—"These streets and courts have generally an imperfect drainage, suitable only to a former state. These drains are very near the surface; and some of the houses are built over them, so as to communicate a dampness prejudicial to health. The gardens herein mentioned appear to be entirely without drainage. The supply of water in the streets is generally good, but in the courts and in the gardens is derived from a main, to the cock of which the inhabitants have common access while the water is on, and have to fetch it in pails to their houses, which mode of supply I consider to be insufficient for health or cleanliness. The population is very dense, in some cases amounting to nearly 30 persons in a single house. As an average, an enumeration district may be taken, 57 houses, 580 persons. On taking in a larger district, 30,000 people congregated on a spot about half a mile square. The houses are universally let out in rooms, a custom apparently introduced by the French refugees; the houses built by whom are all on the Edinburgh Old Town or French fashion, with large rooms on each floor, intended for a family, with a common staircase. A single room now generally contains a family, with tools of trade, bed, and kitchen, which, coupled with uncleanly habits, occasions a constant effluvia, very oppressive, and, I doubt not, unhealthy. In the larger houses, the lowest grade live in damp under-ground kitchens."

No. 12.
EXAMPLES OF ORDINARY UNDERTAKERS' BILLS IN THE METROPOLIS.

| No. 1. | | £. | s. | d. |
|--|--|----|-----|----|
| Elm coffin, lined, ruffled, mattress, sheet, and pillow | | 3 | 11 | 0 |
| Leaden coffin, plate of inscription, 5 men with ditto | | 6 | 15 | 0 |
| Outside case, brass engraved plate, 5 men with ditto, & making-up | | 9 | 9 | 6 |
| Pall 7s. 6d., 2 porters, scarfs, staves, covers, bands, & gloves, 38s. | | 2 | 5 | 6 |
| Four gentlemen's crape scarfs, bands, and gloves | | 6 | 12 | 0 |
| Seventeen silk ditto ditto | | 41 | 5 | 0 |
| Hearse, 4 horses, feathers and velvets for ditto | | 5 | 16 | 0 |
| Five coaches, pairs, ditto for ditto | | 9 | 15 | 0 |
| Six coach cloaks, bands, and gloves, 60s., truncheons & wands 6s. | | 3 | 6 | 0 |
| Eighteen pages and bearers, silk bands, and gloves | | 11 | 14 | 0 |
| Attending and assistance, 63s.; scarf, band, and gloves for minister, 55s. | | 5 | 18 | 0 |
| Hatband and gloves for clerk and sexton, 30s.; grave-digger, &c., 3s. 6d. | | 1 | 13 | 6 |
| Paid vault dues 4l. 12s. 6d.; letters 20s.; fetching company 4s. 6d. | | 5 | 17 | 0 |
| Two crape bands and gloves for servants 20s.; 8 silk do. do. 5s. | | 6 | 0 | 0 |
| Thirty-four men's allowance 28s. | | 1 | 8 | 0 |
| | | £ | 121 | 5 |
| | | | 0 | |

| No. 2. | | £. | s. | d. |
|---|--|----|----|----|
| Elm shell, lined, ruffled, mattress, sheet, and pillow | | 3 | 8 | 0 |
| Leaden coffin, plate of inscription, and 5 men with do., & making up | | 6 | 3 | 0 |
| Outside case, engraved plate, 5 men with ditto | | 8 | 13 | 0 |
| Pall 7s.; 2 porters' scarfs, staves, bands, and gloves | | 2 | 7 | 0 |
| Lid of feathers 21s.; 3 men with do., and bands and gloves 45s. | | 3 | 6 | 0 |
| Hearse, 4 horses 2l. 14s.; feathers and velvets for ditto, 2l. 6s. | | 5 | 0 | 0 |
| Two coaches, pairs 2l. 14s.; ditto ditto 1l. 2s. | | 3 | 16 | 0 |
| Three coachmen's cloaks, bands, and gloves | | 1 | 11 | 6 |
| Ten pages and bearers 40s.; bands and gloves for ditto. 5l.; truncheons and wands 4s. | | 7 | 4 | 0 |
| Eight gentlemen's cloaks 8s.; 4 crape bands, &c., 40s.; 6 silk ditto 6l. 6s. | | 8 | 14 | 0 |
| Two bands and gloves for clerk and sexton 30s.; 2 ditto for private servants 17s. | | 2 | 7 | 0 |
| Attending 21s.; 18 men's allowances 18s.; letters of invitation 4s. | | 2 | 4 | 0 |
| Paid dues 7l. 14s. 6d.; pew-opener, &c. 2s.; fetching company 2s. | | 7 | 18 | 6 |
| | | £ | 62 | 11 |
| | | | 0 | |

| No. 3. | | £. | s. | d. |
|--|--|----|----|----|
| Covered coffin, lined, ruffled, plate of inscription, mattress, sheet and pillow | | 4 | 19 | 0 |
| Pall 7s. 6d.; 2 porters, gowns, staves, and for bands & gloves 30s. | | 1 | 19 | 6 |
| Four gentlemen's cloaks, crape bands and gloves 1l. 18s.; attending ceremony 20s. | | 2 | 18 | 0 |
| Hearse and coach, pairs 3l. 12s.; velvets for ditto 21s.; 2 cloaks and bands 11s. | | 5 | 4 | 0 |
| Six pages, bands, gloves, truncheons, wands, 62s.; fetching company 9s. | | 3 | 11 | 0 |
| Paid 10 men's allowance 25s.; stone 10s.; turnpike, gravedigger 4s. | | 1 | 19 | 0 |
| | | £ | 20 | 10 |
| | | | 6 | |

| No. 4. | | £. s. d. |
|---|----------|----------|
| Smooth elm, polished nails, inscription, lined, mattress, sheet, and pillow | 4 10 0 | |
| Pall 7s.; 4 crape bands; 6 ladies' hoods and gloves. | 2 17 0 | |
| Attending 5s.; dues at church 18s.; 5 men's allowance 6s.6d. | 1 9 6 | |
| | £ 8 16 6 | |

To the Executor of — — —, Esq.

Dr to — — —.

For the Funeral of — — —, Esq., died 19th February, aged 80,
N. 5 and 84 B., Cemetery, All Souls.

| | |
|--|------------|
| To a 6 ft. x 22 elm coffin, lined and ruffed with fine cotton | 2 10 0 |
| Wool bed | 0 10 6 |
| Fine sheet and pillow | 0 18 0 |
| Lead coffin, solder, and workmanship | 6 18 0 |
| Lead plate of inscription | 0 5 0 |
| Inch and a half oak coffin, made to receive the above, covered with fine black cloth, 3 rows of brass nails, 4 pair of large handles, star and serpent, and finished with rays | 15 15 0 |
| Brass plate of inscription | 2 8 0 |
| To the use of the best velvet pall | 0 10 6 |
| Three crape hatbands | 0 12 0 |
| Three crape scarfs | 3 0 0 |
| Silk scarf, hatbands, and gloves, the Rev. Mr. Lynarn | 2 6 0 |
| Seven silk scarfs | 10 10 0 |
| Seven silk hatbands | 4 7 6 |
| Five silk scarfs, hatbands, and gloves, Rev. Mr. Rue, Mr. Hawes Smith, Rule Field | 11 10 0 |
| Eleven pair of kid gloves | 1 18 6 |
| Two porters, with silk dressings | 0 18 0 |
| Two hatbands and gloves for ditto | 0 15 0 |
| The plume of ostrich feathers | 1 1 0 |
| Man carrying ditto | 0 6 6 |
| Silk hatbands and gloves for ditto | 0 7 6 |
| Hearse and four | 3 10 0 |
| Feathers and velvets for ditto | 2 18 0 |
| Three mourning coaches and four | 10 10 0 |
| Feathers and velvets for ditto | 2 14 0 |
| Four coachman's cloaks | 0 4 0 |
| Silk hatbands and gloves for ditto | 1 10 0 |
| Eight hearse pages, with truncheons | 1 16 0 |
| Silk hatbands and gloves for ditto | 3 0 0 |
| Six coach pages, with wands | 1 7 0 |
| Silk hatbands and gloves for ditto | 2 5 0 |
| Silk hatband and gloves for clerk at the ground | 0 12 6 |
| Four hatbands and gloves for servants of the two carriages | 2 10 0 |
| One hatband and gloves for terrace beadle | 0 10 6 |
| One hatband and gloves for man servant | 0 7 6 |
| Four pair of habit gloves | 0 12 0 |
| Attending the funeral | 1 1 0 |
| Silk hatband and gloves | 0 16 0 |
| Twenty-six men's expenses as customary | 1 19 0 |
| Turnpikes | 0 6 6 |
| Paid dues at the cemetery | 22 7 6 |
| Silk scarf, hatband, and gloves (Mr. Owen) | 2 6 0 |
| Paid for the bell | 0 6 6 |
| | £ 130 16 0 |

The Funeral Expenses of Mary Maria — — — — —,

Performed by — — — — —,

| Nov. 15, 1834. | | £. s. d. |
|--|-----------|----------|
| 5 ft. 9 inch. 17 elm, lined, ruffed super linen | 2 5 0 | |
| Tufted mattress | 0 14 0 | |
| No. 10 shroud, sheet, cap, and pillow | 2 5 0 | |
| Stout lead coffin, soldering up | 7 7 0 | |
| Lead plate ditto | 0 5 0 | |
| Six men with lead coffin | 0 18 0 | |
| Two men attending on the surgeons | 0 6 0 | |
| Making up—plumbers | 0 5 0 | |
| Elm case, covered with fine black cloth, set 2 rows all round, No. 1 nails; 4 pair cherub tin handles, gripes and drops; 8 screws, black | 7 7 0 | |
| Brass engraved plate, fine laquered | 2 12 6 | |
| Six men in with case moving down stairs | 0 18 0 | |
| Nov. 21:— | | |
| Best pall, lid of feathers | 1 8 0 | |
| Four fine cloaks | 0 6 0 | |
| Nine rich silk bands for gentlemen | 6 6 0 | |
| Nine pair gentlemen's best kid gloves | 1 16 0 | |
| Two porters and furniture 16s. | 0 13 9 | |
| Featherman, 2 pages and wands | 0 12 6 | |
| Hearse and 4 horses | 2 12 0 | |
| Feathers and velvets for ditto | 3 3 0 | |
| Six hearse pages and truncheons | 1 5 0 | |
| Mourning coach and four horses | 2 12 0 | |
| Feathers and velvets for ditto | 1 1 0 | |
| Two coach pages and wands | 0 8 6 | |
| Two coachmen's cloaks | 0 2 0 | |
| Two velvet hammercloths | 0 6 0 | |
| Attending funeral | 0 7 6 | |
| Fifteen silk bands for 2 porters, 8 pages, 3 feathermen, and 2 coachmen | 6 0 0 | |
| Fifteen pair gloves for ditto ditto | 1 2 6 | |
| Paid dues at St. Margaret's | 2 9 6 | |
| Lead fees ditto | 0 16 7 | |
| Bell and searchers | 0 8 0 | |
| Bearers | 0 3 0 | |
| Sexton | 0 3 0 | |
| Extra digging | 0 15 0 | |
| Grave-maker | 0 3 0 | |
| Men's allowance, coffin case and funeral | 0 12 6 | |
| | 5 10 7 | |
| | £ 60 19 1 | |

Exposition of the English Law in respect to Perpetuities in Public Burial Grounds.

[From the decision in the case of *Gilbert v. Buzzard and Boyer*, 2nd Haggard's Reports of Cases argued and determined in the Consistory Court of London, containing the Judgments of the Right Hon. Lord Stowell.]

In what way the mortal remains are to be conveyed to the grave, and there deposited, I do not find any positive rule of law, or of religion, that prescribes. The authority under which the received practices exist, is to be found in our manners, rather than in our laws: they have their origin

in natural sentiments of public decency and private affection; they are ratified by common usage and consent; and being attached to a subject of the gravest and most impressive nature, remain unaltered by private caprice and fancy, amidst all the giddy revolutions that are perpetually varying the modes and fashions that belong to the lighter circumstances of human life. That bodies should be carried in a state of naked exposure to the grave, would be a real offence to the living, as well as an apparent indignity to the dead. Some involucra, or coverings, have been deemed necessary in all civilized and Christian countries; but chests or trunks containing the bodies, descending along with them into the grave, and remaining there till their own decay, cannot plead either the same necessity, or the same general use.

* * * * *

The rule of law which says, that a man has a right to be buried in his own church-yard, is to be found, most certainly, in many of our authoritative text writers; but it is not quite so easy to find the rule which gives him the right of burying a large chest or trunk in company with himself. That is no part of his original and absolute right, nor is it necessarily involved in it. That right, strictly taken, is to be returned to his parent earth for dissolution, and to be carried thither in a decent and inoffensive manner. When these purposes are answered, his rights are, perhaps, fully satisfied in the strict sense in which any claim, in the nature of an absolute right, can be deemed to extend.

* * * * *

It has been argued, that the ground once given to the body is appropriated to it for ever; it is literally in mortmain unalienably; it is not only the *domus ultima*, but the *domus æterna*, of that tenant, who is never to be disturbed, be his condition what it may; the introduction of another body into that lodgment at any time, however distant, is an unwarrantable intrusion. If these positions be true, it certainly follows, that the question of comparative duration sinks into utter insignificance.

In support of them, it seems to be assumed, that the tenant himself is imperishable; for, surely, there can be no inextinguishable title, no perpetuity of possession, belonging to a subject which itself is perishable. But the fact is, that "man" and "for ever" are terms quite incompatible in any state of his existence, dead or living, in this world. The time must come when "*ipsæ perire ruinæ*," when the posthumous remains must mingle with, and compose a part of, that soil in which they have been deposited. Precious embalmments, and costly monuments may preserve for a long time the remains of those who have filled the more commanding stations of human life; but the common lot of mankind furnishes no such means of conservation. With reference to them, the *domus æterna* is a mere flourish of rhetoric; the process of nature will speedily resolve them into an intimate mixture with their kindred dust; and their dust will help to furnish a place of repose for other occupants in succession. It is objected, that no precise time can be fixed at which the mortal remains, and the chest which contains them, shall undergo the complete process of dissolution, and it certainly cannot; being dependent upon circumstances that vary, upon difference of soils, and exposures of seasons and climates; but observation can ascertain them sufficiently for practical use. The experience of not many years is required to furnish a sufficient certainty for such a purpose.

Founded on such facts and considerations, the legal doctrine certainly is, and has remained, unaffected; that the common cemetery is not *res unius ætatis*, the property of one generation now departed, but is, likewise, the common property of the living, and of generations yet unborn, and is subject only to temporary appropriations. There exists in the whole a right of succession, which can be lawfully obstructed only in a portion of it, by public authority, that of the ecclesiastical magistrate, who gives occasion-

ally an exclusive title, in such portion, to the succession of some family, or to an individual, who has a fair claim to be favoured by such a distinction; and this, not without a just consideration of its expedience, and a due attention to the objections of those who oppose such an alienation from the common property. Even a bricked grave, granted without such an authority, is an aggression upon the common freehold interests, and carries the pretensions of the dead to an extent that violates the rights of the living.

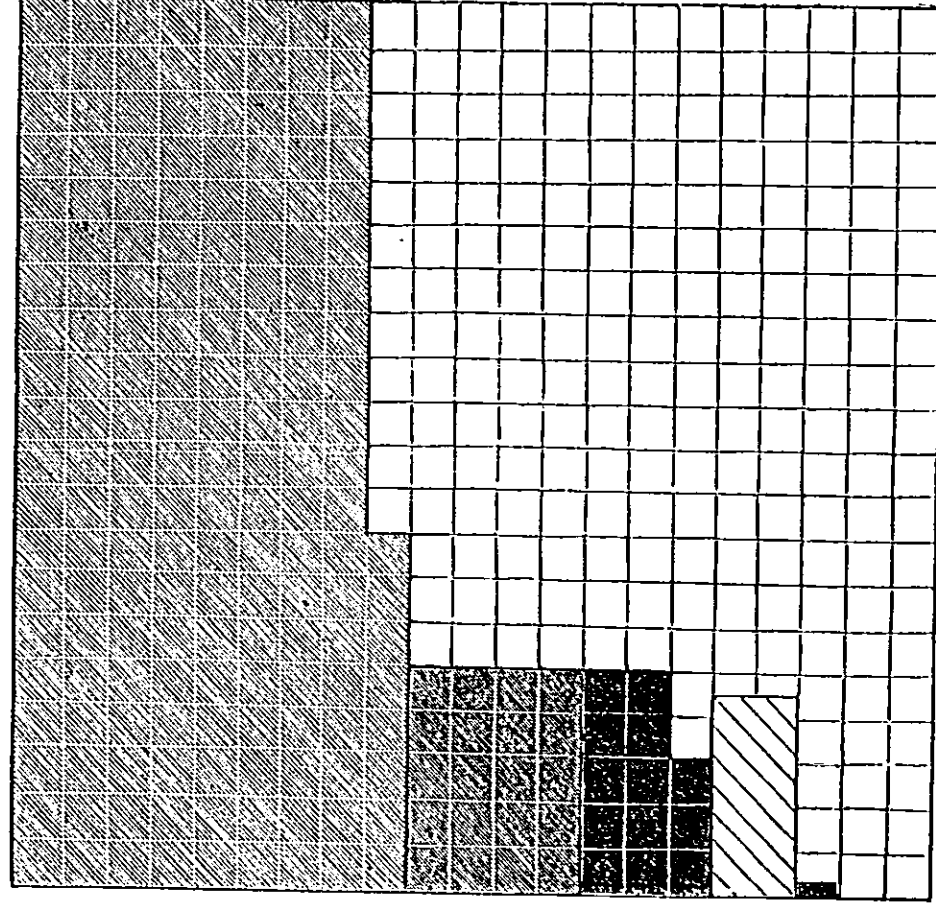
If this view of the matter be just, all contrivances that, whether intentionally or not, prolong the time of dissolution beyond the period at which the common local understanding and usage have fixed it, is an act of injustice, unless compensated in some way or other. In country parishes, where the population is small, and the cemetery is large, it is a matter less worthy of consideration; more ground can be spared, and less is wanted; but, in populous parishes, in large and crowded cities, the indulgence of an exclusive possession is unavoidably limited; for, unless limited, evils of most formidable magnitude take place. Churchyards cannot be made commensurate to the demands of a large and increasing population; the period of decay and dissolution does not arrive fast enough in the accustomed mode of depositing bodies in the earth, to evacuate the ground for the use of succeeding claimants: new cemeteries must be purchased at an enormous expense to the parish, and to be used at an increased expense to families, and at the inconvenience of their being compelled to resort to very inconvenient distances for attending on the offices of interment.

In this very parish three additional burial-grounds are alleged to have been purchased, and to be now nearly filled. This is the progress of things in their ordinary course; and if to this is to be added the general introduction of a new mode of interment, which is to ensure to bodies a much longer possession, the evil will become intolerable, and a comparatively small portion of the dead will shoulder out the living and their posterity. The whole environs of this metropolis will be surrounded with a circumvallation of church-yards, perpetually increasing, by becoming themselves surcharged with bodies, if indeed land-owners can be found who will be willing to divert their ground from the beneficial uses of the living to the barren preservation of the dead, contrary to the humane maxim quoted by Tully from Plato's Republic:—"Quæ terra fruges ferre, et, ut mater, cibos, suppeditare possit, eam ne quis nobis minuat, neve vivus neve mortuus."

No. 13.

VIEW OF THE EXTENT OF INTRA-MURAL BURIAL GROUND PROVIDED, AS COMPARED WITH THE QUANTITY REQUIRED FOR THE METROPOLIS, AT THE STANDARD OF 110 PER ACRE.—Vide Report, § 156, § 160, § 161, § 171. The plan represents the statistical facts and proportions of space after the mode used by Mr. Sopwith, the engineer.

Each square of the subjoined plate represents an acre. The extent of squares coloured shows the extent of ground occupied by each religious denomination. The blank spaces show the extent of deficiency of public ground for the burial of the population in single graves.



CHURCH OF ENGLAND
PAROCHIAL
BURIAL GROUNDS.
Burials 101 per acre.

PROTESTANT DISSENTERS'
BURIAL GROUNDS.
Burials 246 per acre.

PRIVATE OR TRADING
BURIAL GROUNDS.
Burials 403 per acre.

JEWS' BURIAL GROUNDS.
Burials 33 per acre.

ROMAN CATHOLICS'
BURIAL GROUNDS.
Burials 1043 per acre.

BURIAL FEES.—A Return of the Amount of the Burial Fees received by the Clergymen of several of the Parishes of the Metropolis was given in to the Committee of the House of Commons by the Bishop of London. The following Table gives the same Amount of Fees divided by the Returns of the Number of Burials, in the Years 1830, 1831, and 1832, returned from the several Parishes, to an order of the House of Commons made in the Year 1834.

| PARISHES. | No. of Burials in 1830. | No. of Burials in 1831. | No. of Burials in 1832. | Average of the three Years. | Amount of Burial Fees in 1833. | | Amount of Burial Fees in 1840. | | Average Burial Fees, 1833-9-40. | | Average Fee per Burial. | |
|---|-------------------------|-------------------------|-------------------------|-----------------------------|--------------------------------|-------|--------------------------------|-------|---------------------------------|-------|-------------------------|-------|
| | | | | | £. | s. d. | £. | s. d. | £. | s. d. | £. | s. d. |
| St. James, Westminster . . . | 1,063 | 1,168 | 1,087 | 1,106 | 298 | 0 0 | 246 | 0 0 | 291 | 0 0 | 5 5 | 3 3 |
| St. Botolph, Bishopsgate . . . | 248 | 300 | 319 | 289 | 42 | 7 2 | 23 | 9 10 | 33 | 19 4 | 0 2 | 3 3 |
| St. George the Martyr . . . | 158 | 218 | 147 | 174 | 59 | 5 10 | 59 | 0 8 | 62 | 19 8 | 0 7 | 3 3 |
| St. John, Westminster . . . | 815 | 893 | 984 | 897 | 93 | 19 8 | 105 | 13 7 | 107 | 13 5 | 0 2 | 5 6 |
| St. George in the East . . . | 705 | 681 | 802 | 729 | 101 | 8 6 | 74 | 8 6 | 92 | 10 8 | 0 2 | 6 6 |
| St. Bride . . . | 162 | 223 | 175 | 187 | 51 | 2 0 | 81 | 2 4† | 61 | 3 8 | 0 6 | 7 7 |
| St. Giles and St. George, } Bloomsbury . . . | 1,296 | 1,669 | 1,934 | 1,633 | 768 | 4 0 | 870 | 15 0 | 892 | 7 8 | 0 10 | 11 11 |
| St. Dunstan, Westminster . . . | 115 | 113 | 122 | 117 | 24 | 0 8 | 35 | 5 10 | 32 | 18 7 | 0 5 | 8 8 |
| St. Clement Danes . . . | 395 | 524 | 494 | 471 | 112 | 19 10 | 86 | 3 4 | 106 | 19 4 | 0 4 | 6 6 |
| Bethnal Green . . . | 617 | 951 | 1,064 | 877 | 67 | 4 0 | 62 | 3 6 | 66 | 17 2 | 0 1 | 6 6 |
| St. Botolph, Aldersgate . . . | 140 | 168 | 160 | 156 | 60 | 8 4 | 45 | 10 0 | 54 | 13 8 | 0 7 | 7 7 |
| St. George, Hanover Sq. . . | 1,224 | 1,389 | 1,389 | 1,334 | 507 | 17 0 | 488 | 11 2 | 503 | 5 5 | 0 7 | 7 7 |
| St. Giles, Cripplegate . . . | 231 | 225 | 307 | 254 | 97 | 9 6 | 66 | 6 10 | 70 | 3 9 | 0 5 | 6 6 |
| St. Andrew, Holborn . . . | 587 | 586 | 847 | 673 | 324 | 14 1 | 223 | 15 2 | 284 | 16 5 | 0 8 | 6 6 |
| St. Catherine Creec . . . | 36 | 33 | 40 | 36 | 43 | 16 6 | 56 | 13 6 | 59 | 11 2 | 1 12 | 6 6 |
| St. Olave, Hart Street . . . | 22 | 19 | 28 | 23 | 37 | 4 0 | 32 | 2 0 | 43 | 4 8 | 1 17 | 7 7 |
| Allhallows Barking . . . | 50 | 64 | 66 | 60 | 7 | 19 0 | 15 | 16 6 | 18 | 11 8 | 0 6 | 2 2 |
| Total . . . | 7,864 | 9,224 | 9,965 | 9,016 | 3,202 | 0 2 | 2,563 | 5 9 | 2,781 | 16 3 | 0 6 | 2 2 |

* The Average for the previous six Years was £405.
† Increase of 1840, from two tablets.

N.B.—This List specifies only the Clergyman's Fees, not those paid to the Churchwardens, Clerk, or Sexton.

PAROCHIAL BURIAL-GROUNDS IN THE METROPOLIS.

| PLACES OF BURIAL. | Population in 1841. | Estimated Extent in Square Yards. | Annual Number of Burials. | No. of Burials per Acre. |
|--|---------------------|-----------------------------------|---------------------------|--------------------------|
| Allhallows Barking, Great Tower Street | 1,924 | 825 | 50 | 293 |
| Allhallows, Bread Street | 263 | 100 | {Seldom used.} | .. |
| Allhallows, Lombard Street | 516 | 350 | {Seldom used.} | .. |
| Allhallows, London Wall | 1,620 | 615 | 24 | 189 |
| Allhallows, Staining Lane | 502 | 619 | 20 | 156 |
| Allhallows-the-Great, Thames Street | 672 | 346} | 50 | 319 |
| Allhallows-the-Less, ditto | 181 | 412} | | |
| Alphage, St. London Wall | 976 | 388 | 50 | 624 |
| Andrew's, St. | 35,301 | 4,840 | 250 | 250 |
| Andrew's, St. Burial-ground, Gray's Inn Lane | .. | 9,258 | 312 | 163 |
| Andrew's, St. Undershaft | 1,163 | 265 | 70 | 1,278 |
| Andrew's, St. Wardrobe, and St. Ann, Blackfriars | 3,596 | 657 | 100 | 737 |
| Anne, St. and St. Agnes within Aldersgate | 513 | 1,650 | 70 | 205 |
| Ann's, St. Limehouse. | 19,337 | 24,500 | 150 | 30 |
| Anne's, St. Soho | 16,480 | 2,732 | 200 | 354 |
| Augustine's, St. and St. Faith's. | 1,070 | 3,700 | 30 | 39 |
| Bartholomew, St. the Great | 3,414 | 783 | 100 | 618 |
| Bartholomew, St. the Less | 744 | 183 | 8 | 212 |
| Benet, St. Fink | 383 | 277 | 6 | 105 |
| Benet, St. Paul's Wharf | 588 | 297 | 36 | 587 |
| Bennet, St. Sherehog. | 145 | 145 | {Seldom used.} | .. |
| Botolph, St. Aldersgate | 5,906 | 1,918 | 250 | 631 |
| Botolph, St. Aldgate | 9,525 | 1,545 | 250 | 783 |
| Botolph, St. Bishopsgate | 10,969 | 3,034 | 250 | 399 |
| Botolph, St. by Billingsgate | 278 | 266 | 3 | 55 |
| Bride's, St. Fleet Street | 6,126 | 1,472 | 130 | 427 |
| Ditto, Ground in Farringdon Street | .. | .. | .. | .. |
| *Bridewell Chapel | 529 | 2,400 | 10 | 20 |
| Broadway Chapel of Ease to St. Margaret's and St. John | .. | 7,220 | 500 | 335 |
| Catherine, St. Coleman Street | 322 | 388 | 36 | 449 |
| Catherine, St. Cree, or Christchurch | 1,740 | 1,100 | 100 | 440 |
| *Chapel Royal, Tower. | .. | 525 | 4 | 37 |
| Charlton Church | .. | 2,150 | 30 | 68 |
| Chelsea Hospital Burial-ground | Vide St. Luke. | 6,696 | 55 | 40 |
| Chelsea Old Church | .. | 1,210 | 6 | 24 |
| Christ Church, Blackfriars Road | .. | 8,448 | 520 | 298 |
| Christ Church, Newgate Street | 2,446 | 1,934 | 30 | 75 |
| Christ Church, Spitalfields | 20,436 | 6,413 | 350 | 264 |
| Clement, St. Danes | 15,459 | 1,736 | 100 | 279 |
| Clement, St. Danes, 2nd Ground, Portugal Street. | .. | 1,422 | 300 | 1,021 |
| Cripplegate Poor-ground, Warwick-place, St. Luke's | .. | 1,400 | 100 | 346 |
| Dionis, St. Backchurch | 806 | 132 | 20 | 733 |
| Dunstan, St. Fleet Street | 3,266 | 851 | 208 | 1,182 |
| Dunstan, St. in the East | 1,010 | 600 | 150 | 1,210 |
| Dunstan, St. Stepney | 63,723 | 21,795 | 200 | 44 |
| East India Company's Chapel Yard, High Street Poplar | .. | 6,447 | 60 | 45 |
| Edmund, St. the King | 391 | 164 | {Seldom used.} | .. |
| Ethelburga, St. | 669 | 240 | 30 | 605 |

* Extra-Parochial.

| PLACES OF BURIAL. | Population in 1841. | Estimated Extent in Square Yards. | Annual Number of Burials. | No. of Burials per Acre. |
|--|----------------------|-----------------------------------|---------------------------|--------------------------|
| Fulham Church | 9,319 | 12,000 | 200 | 81 |
| George's, St. Bloomsbury | 16,981 | 12,100 | 300 | 120 |
| George, St. Botolph Lane | 235 | 76 | 2 | 127 |
| George's, St. District Church, Camberwell | 39,868 | 11,640 | 100 | 42 |
| George, St. Hanover Square, Burial-ground, Uxbridge Road | 66,453 | 24,200 | 1,200 | 240 |
| George, St. in the East | 41,350 | 15,000 | 500 | 161 |
| George, St. the Martyr | {Vide St. Andrew's.} | 12,100 | 200 | 80 |
| George, St. Burial-ground, Old Kent Road | 46,644 | 1,368 | 130 | 460 |
| George, St. the Martyr, Southwark | .. | 4,050 | 470 | 562 |
| Giles, St. Camberwell | 39,868 | 16,000 | 500 | 151 |
| Giles, St. Cripplegate | 13,255 | 4,700 | 200 | 206 |
| Giles, St. in the Fields | 37,311 | 4,958 | 400 | 390 |
| Ditto, Burial-ground, St. Pancras | .. | 24,200 | 1,560 | 312 |
| Greenwich Church | 29,755 | 2,740 | 700 | 1,236 |
| *Greenwich Hospital Burial-ground | .. | 22,480 | 300 | 65 |
| Gregory, St. by St. Paul's | 1,444 | 1,095 | 100 | 442 |
| Grosvenor Chapel, South Audley Street | .. | 6,000 | 36 | 29 |
| *Guy's Hospital Ground, Snow's Fields | .. | 3,120 | 85 | 132 |
| Hackney, South | Vide St. John. | 3,300 | 100 | 145 |
| Hackney, West | .. | 6,534 | 200 | 148 |
| Helen, St. Great | 659 | 779 | 30 | 186 |
| Holy Trinity, Brompton | 9,515 | 26,524 | 100 | 18 |
| Islington Chapel of Ease | .. | 17,659 | 416 | 114 |
| James, St. Chapel of Ease, Clerkenwell | .. | 3,500 | 350 | 484 |
| James, St. Clerkenwell | 56,756 | 2,000 | 400 | 968 |
| James, St. Burial-ground, Ray Street, Clerkenwell | .. | 800 | 150 | 907 |
| James, St. Clerkenwell, 2nd Ground | .. | 1,000 | 300 | 1,452 |
| James, St. Duke's Place | 964 | 338 | 15 | 215 |
| James, St. Garlickhithe | 520 | 162 | 20 | 598 |
| James, St. New Church | .. | 8,100 | 260 | 155 |
| James, St. Piccadilly | .. | 4,840 | 60 | 60 |
| Ditto, Burial-ground, Hampstead Road | .. | 26,620 | 624 | 113 |
| John, St. Baptist, Savoy | 414 | 600 | 50 | 403 |
| John's, St. Chapel of Ease | .. | 26,000 | 1,560 | 290 |
| John's, St. Chapel, Walworth | .. | 6,400 | 150 | 113 |
| John's, St. Church, Waltham Green | .. | 3,600 | 15 | 20 |
| John's, St. Clerkenwell | Vide St. James. | 315 | 200 | 3,073 |
| Ditto, Burial-ground, Benjamin Street | .. | 1,079 | 12 | 54 |
| John, St. the Evangelist | 108 | 7,260 | 500 | 333 |
| John, St. the Evangelist, Horslydown | .. | 9,740 | 250 | 124 |
| John, St. the Evangelist, Great Waterloo Street | .. | 5,924 | 400 | 327 |
| John's, St. Hackney | 37,771 | 31,000 | 700 | 108 |
| John, St. the Baptist | 367 | 363 | 12 | 160 |
| John, St. High Street, Wapping | 4,108 | 6,600 | 250 | 183 |
| John's, St. Hoxton | .. | 6,050 | 600 | 480 |
| John, St. Zachary | 183 | 905 | 6 | 32 |

* Private.

| PLACES OF BURIAL. | Population in 1841. | Estimated Extent in Sq. Yards. | Annual Number of Burials. | No. of Burials per Acre. |
|--|---------------------|--------------------------------|---------------------------|--------------------------|
| King's Road, Chelsea | .. | 4,810 | 130 | 130 |
| Lawrence, St. Jewry | 625 | 200 | 35 | 847 |
| Leonard's, St. Ground, Hackney Road | .. | 2,000 | 225 | 544 |
| Leonard's, St. Shoreditch | 83,432 | 8,000 | 300 | 181 |
| Luke's, St. Burial-ground, Bath Street | .. | 1,240 | 200 | 781 |
| Luke, St. Chelsea, New Church | 40,179 | 19,360 | 468 | 117 |
| Luke's, St. Old Street | 49,829 | 9,287 | 500 | 261 |
| Magnus, St. | 239 | 44 | 6 | 660 |
| Margaret's, St. | .. | 5,000 | 50 | 48 |
| Margaret, St. Lothbury | 189 | 291 | 12 | 300 |
| Margaret, St. Pattens, with St. Gabriel, Fenchurch Street. | 553 | 81 | 'Closed' | .. |
| Mark's, St. Kennington | .. | 473 | 4 | 41 |
| Mark's, St. Kennington | .. | 8,960 | 500 | 270 |
| Martin, St. in the Fields, Burial-ground, Camden Town | .. | 19,360 | 832 | 208 |
| Ditto, Burial-ground, Drury Lane | .. | 1,269 | 40 | 153 |
| Martin, St. Orgars | 353 | 99 | 'Seldom used' | .. |
| Martin, St. Outwich | 135 | 123 | 12 | 472 |
| Martin, St. Vintry | 288 | 450 | 3 | 32 |
| Mary, St. Abbotts, Kensington | 26,834 | 6,620 | 330 | 241 |
| Mary, St. Abchurch, with St. Lawrence Pountney | 907 | 566 | 6 | 51 |
| Mary, St. Aldermanbury | 751 | 313 | 30 | 464 |
| Mary's, St. Burial-ground | .. | 2,776 | 200 | 349 |
| Mary, St. Aldermary | 494 | 173 | 8 | 224 |
| Mary, St. at Hill | 987 | 167 | 40 | 1,159 |
| Mary, St. at Bow | .. | 2,716 | 52 | 93 |
| Mary, St. Chapel, Hammersmith | .. | 8,960 | 20 | 11 |
| Mary, St. Haggerstone | .. | 7,260 | 100 | 67 |
| Mary, St. Lambeth | 115,888 | 2,400 | 250 | 504 |
| Mary, St. Islington | 55,690 | 7,450 | 750 | 487 |
| Mary, St. le-Strand, Burial-ground, Russell Court | .. | 473 | 90 | 921 |
| Mary, St. le-Strand | 2,520 | 200 | 12 | 290 |
| Mary, St. Love Lane | .. | 100 | 'Seldom used' | .. |
| Mary Magdalen, St. | .. | 288 | 12 | 202 |
| Mary Magdalen, St. Bermondsey | 34,947 | 9,184 | 600 | 316 |
| Mary's, St. Newington | 54,606 | 8,160 | 350 | 208 |
| Mary's, St. Paddington | 25,173 | 20,116 | 936 | 222 |
| Mary's, St. Rotherhithe, and Trinity District Church | 13,917 | 11,800 | 345 | 139 |
| Mary, St. Somerset | 375 | 389 | 'Seldom used' | .. |
| Mary, St. Staining | 268 | 423 | .. | .. |
| Mary's, St. Stoke Newington | .. | 3,000 | 50 | 81 |
| Mary's, St. Whitechapel | 34,053 | 4,219 | 150 | 172 |
| Ditto, Workhouse-ground | .. | 2,776 | 200 | 349 |
| Mary, St. Woolnoth | 317 | 33 | 'Very few' | .. |
| Mary, St. Woolwich | 25,785 | 12,800 | 600 | 227 |
| Mary-le-bone, St. | 138,164 | 13,500 | 520 | 186 |
| Mary-le-bone, St. Old Church, High Street | 138,164 | 2,000 | 36 | 87 |
| Mary-le-Bow, St. | 346 | 250 | 30 | 581 |
| Matthew, St. Bethnal Green | 74,088 | 12,100 | 600 | 240 |
| Matthew, St. Friday Street | 160 | 208 | 21 | 489 |
| Michael, St. Bassishaw | 687 | 222 | 30 | 654 |
| Michael, St. Cornhill | 454 | 240 | 6 | 121 |
| Michael, St. Queenhithe | 647 | 266 | 30 | 342 |
| Ditto, Burial-ground, Trinity Lane | .. | 158 | .. | .. |
| Mildred, St. Bread Street | 351 | 242 | 'Seldom used' | .. |

| PLACES OF BURIAL. | Population in 1841. | Estimated Extent in Square Yards. | Annual Number of Burials. | No. of Burials per Acre. |
|--|---------------------|-----------------------------------|---------------------------|--------------------------|
| Mildred, St. Poultry | 280 | 84 | .. | .. |
| Nicholas, St. Acon | 194 | 287 | .. | .. |
| Nicholas, St. Cole Abbey | 254 | 67 | 'Never used' | .. |
| Nicholas, St. Olave | 431 | 334 | 20 | 290 |
| Pancras, St. Old Church | 129,763 | 24,200 | 400 | 80 |
| Paradise Row Burying-ground | .. | 8,532 | 1,040 | 590 |
| *Paul's, St. Cathedral | .. | 3,745 | 'Seldom used' | .. |
| Paul's, St. Covent Garden | 5,718 | 4,064 | .. | .. |
| Ditto, Burial-ground contiguous to Workhouse | .. | 3,455 | 200 | 129 |
| Paul's, St. Deptford | .. | 12,000 | 360 | 145 |
| Paul's, St. Hammersmith | 9,888 | 6,888 | 200 | 141 |
| Paul's, St. Shadwell | 10,060 | 3,000 | 250 | 403 |
| †Penitentiary Burial Ground | .. | 432 | 10 | 112 |
| Peter, St. Cheap, corner of Wood St. | 227 | 96 | 'Never used' | .. |
| Peter, St. Cornhill | 656 | 287 | 40 | 674 |
| Peter, St. District Church, Walworth | .. | 7,800 | 300 | 186 |
| Peter-le-Poor, St. | 559 | 48 | 'Seldom used' | .. |
| Peter's, St. New Church, Hammersmith | 3,565 | 1,210 | 50 | 200 |
| Peter, St. Paul's Wharf | 341 | 292 | 'Seldom used' | .. |
| Poplar New Church | 20,342 | 14,686 | 300 | 99 |
| Olave, St. Hart Street | 816 | 462 | 36 | 377 |
| Olave, St. Jewry | 168 | 306 | 'Seldom used' | .. |
| Olave, St. Silver Street | 972 | 335 | 'Never used' | .. |
| Olave's, St. Tooley Street | 6,745 | 770 | 200 | 1,257 |
| Saviour's, St. | 18,219 | 2,700 | .. | .. |
| Ditto, Cross Bones Ground, Red Cross Street | .. | 4,500 | 244 | 143 |
| Ditto, College Park Street | .. | 1,040 | .. | .. |
| Sepulchre, St. | .. | 1,746 | .. | .. |
| Ditto, in Church Lane | 12,325 | 1,785 | 256 | 293 |
| Ditto, in Durham Yard | .. | 702 | .. | .. |
| Stephen, St. Walbrook | 322 | 306 | 50 | 791 |
| Swithin's, St. Cannon Street | 359 | 241 | 20 | 402 |
| Ditto, 2nd Ground | .. | 66 | 24 | 1,760 |
| Temple Church, St. Mary's | .. | 400 | 'Very few' | .. |
| Thomas Apostle, St. | 648 | 340 | 'Seldom used' | .. |
| †Thomas, St. Hospital Ground, Snow's Fields | .. | 1,449 | 84 | 282 |
| Trinity Church, Minorics | 579 | 302 | 7 | 112 |
| Vedast, St. | 427 | 108 | .. | 179 |

* Collegiate.

† Privat.

PROTESTANT DISSENTERS' BURIAL-GROUNDS AND OTHERS.

| PLACES OF BURIAL. | Estimated Extent in Sq. Yards. | Annual Number of Burials. | No. of Burials per Acre. |
|--|--------------------------------|---------------------------|--------------------------|
| EPISCOPALIANS. | | | |
| St. Leonard's, Chapel, Bromley | 270 | 52 | 932 |
| St. George's, Chapel, New Road | 3,250 | 125 | 186 |
| PRESBYTERIANS. | | | |
| Gravel Pit Chapel, Hackney | 3,300 | 100 | 147 |
| St. Andrew's, Scotch Church | 900 | 100 | 538 |
| CONGREGATIONALISTS OR INDEPENDENTS. | | | |
| Independent Chapel, Greenwich | 1,000 | 100 | 484 |
| Pulling's Chapel, Deptford | 400 | 50 | 605 |
| Wickliffe Chapel, Stepney | 600 | 150 | 1,210 |
| Ebenezer Chapel, Shadwell | 680 | 120 | 854 |
| Dr. Burder's, Hackney | 3,168 | 100 | 153 |
| Meeting House, Old Gravel Lane | 60 | 4 | 323 |
| Esher Street, Lambeth | 1,210 | 72 | 288 |
| Brunswick Chapel, Three Colts Street | 480 | 52 | 524 |
| Collier's Rents, Borough | 970 | 50 | 249 |
| Abney Chapel, Stoke Newington | 780 | 36 | 223 |
| Mile End Chapel | 2,420 | 52 | 104 |
| Trinity Chapel, Poplar | 1,200 | 36 | 145 |
| Stockwell Green | 725 | 'Very few' | .. |
| BAPTISTS. | | | |
| Enon Chapel, Woolwich | 112 | 25 | 1,080 |
| Worship Street Chapel | 720 | 30 | 202 |
| Regent Street, Lambeth | 320 | 12 | 181 |
| Cox's, Dr., Chapel, Hackney | 824 | 26 | 153 |
| Maze Pond | 650 | 10 | 74 |
| East Street Chapel | 140 | 2 | 69 |
| Hammersmith | 2,420 | 30 | 60 |
| WESLEYAN METHODISTS. | | | |
| Methodist Chapel, Woolwich | 1,226 | 100 | 395 |
| City Road Chapel | 2,148 | 150 | 338 |
| Stafford Street, Peckham | 336 | 16 | 230 |
| Wesleyan Chapel, Hammersmith | 2,430 | 18 | 36 |
| Southwark Chapel, Long Lane, Borough | 780 | 'Very few' | .. |
| ROMAN CATHOLICS. | | | |
| Parker Row, Dockhead | 300 | 100 | 1,613 |
| Moorfields | 120 | 30 | 1,210 |
| Poplar | 833 | 140 | 813 |
| QUAKERS. | | | |
| Long Lane, Bermondsey | 2,728 | 60 | 106 |
| Coleman Street | 4,759 | 35 | 35 |
| Hammersmith | 1,210 | 1 or 2 | 6 |

| PLACES OF BURIAL. | Estimated Extent in Sq. Yards. | Annual Number of Burials. | No. of Burials per Acre. |
|--|--------------------------------|---------------------------|--------------------------|
| Jews. | | | |
| Mile End Road | 4,840 | 52 | 52 |
| North Street, Mile End Road | 24,200 | 200 | 40 |
| Chelsea | 4,800 | 22 | 22 |
| Grove Street | 10,890 | 30 | 13 |
| FOREIGN. | | | |
| Swedish Chapel | 450 | 10 | 108 |
| UNDESCRIBED. | | | |
| Union Chapel, Woolwich | 1,500 | 100 | 323 |
| Cannon Street Road | 2,400 | 550 | 1,109 |
| Paradise Row, Lambeth | 8,532 | 1,040 | 590 |
| New Bunhill Fields, Islington | 4,300 | 520 | 585 |
| Ebenezer Chapel, Long Lane | 265 | 20 | 365 |
| Bunhill Fields | 18,150 | 600 | 160 |
| Zion Chapel, High Street, Borough | 210 | 2 | 46 |
| Poplar Chapel | 8,000 | 52 | 31 |
| Maberly Chapel | 270 | 3 | 54 |
| Brook Street, Ratcliffe Highway | 700 | 2 or 3 | 21 |
| Millyard Chapel | 960 | 1 | 5 |
| Whitfield's Chapel, St. Pancras | 4,650 | 300 | 312 |
| York Street Chapel, Lock's Fields | 1,860 | 'Very few' | .. |
| Denmark Row, Cold Harbour Lane | 400 | .. | .. |
| Salem Chapel, Woolwich | 360 | 'Seldom any' | .. |
| Little Alie Street, Goodman's Fields | 'Small' | 6 | .. |

GENERAL BURIAL-GROUNDS.

| PLACES OF BURIAL. | Estimated Extent in Sq. Yards. | Annual Number of Burials. | No. of Burials per Acre. |
|---------------------------------|--------------------------------|---------------------------|--------------------------|
| *Bunhill Fields, City | 8,000 | 1,000 | 605 |
| *Bunhill Fields, New | 3,250 | 1,560 | 2,323 |
| *John's, St. Borough | 1,440 | 142 | 477 |
| *London, North East | 24,200 | 250 | 50 |
| *Sheen's New Ground | 9,680 | 600 | 300 |
| *Spa Fields | 14,520 | 1,560 | 520 |

* Private.

CEMETERIES.

| PLACES OF BURIAL. | Estimated Extent in Sq. Yards. | Annual Number of Burials. | No. of Burials per Acre. |
|---|--------------------------------|---------------------------|--------------------------|
| Highgate Cemetery | 101,640 | 220 | 10 |
| Nunhead ditto | 242,000 | 208 | 4 |
| East London ditto, Beaumont Square, Mile End | 26,620 | 850 | 154 |
| City of London and Tower Hamlets ditto, Mile End | 135,520 | 624 | 22 |
| West of London and Westminster ditto, Earls Court, Brompton | 193,600 | 254 | 6 |
| South Metropolitan ditto, Norwood | 193,600 | 180 | 5 |
| Kensal Green, All Souls' Cemetery | 222,640 | 800 | 17 |
| Abney Park Cemetery | 145,200 | 200 | 7 |

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