# ENGLISH HOMES.

# LECTURE TO THE CONGRESS,

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THE objects for which The Sanitary Institute has been established have been so frequently and lucidly set forth in addresses, delivered from time to time at these Congresses and published in our Transactions, that this aspect of the duties devolving upon the Chairman of Council may be briefly disposed of. The Institute is making rapid strides in its development, and the good work done by it in spreading abroad sound views on the principles, and practical knowledge regarding the details of domestic and personal hygiene, is now generally acknowledged. There is still much to be done, however, before the public at large can be brought to see the enormous waste in money, and the suffering and privation entailed upon the people, and most of all upon the poor, by the prevalence of preventible disease. Why is this so? Why should a people, conspicuous for many of the best qualities which contribute to a nation's success, still fall far short of domestic virtues which were successfully cultivated in the infancy of the human race?

Canon Knox-Little lays stress on the fact that there are certain qualities and endowments which are peculiarly the heritage of our race, and which were conspicuous in those northern hordes who contributed so largely to overthrow the Roman Empire. Their sources of strength were truthfulness, plainness and simplicity of life, a strong sense of justice, impatience of affectation and pretence, dislike of exaggeration, and contempt for all forms of sham. "They valued the virtues of purity; the virtues which lead men to respect their own souls and bodies, and therefore the bodies and souls of others; which make friendship noble and enduring, and love ennobling and strong; which feed the fire of true affection between friend and friend, between lover and lover, between child and parent, and parent and child; out of which have been created those 'schools of goodness'—English homes."

Sprung from such men and inheriting such traditions, our homes ought to be considerably in advance of other nations. Are they so? In the imposing mansion in which I write, occupying a conspicuous position in one of the most fashionable inland watering-places in England, a stagnant atmosphere is but too perceptible in the corridors, while a vigorous use of open windows barely suffices to make the public rooms habitable. The picture of our English homes sketched by the Countess de Viesca in a paper read at the Congress at Leicester, and published in the Transactions for 1885-6, shows ample evidence of the pressing need that exists for further improvement in almost every detail of domestic sanitation.

But before discussing these points it may be well to notice briefly, the standard by which progress in sanitation may be best measured. The present practice is to depend almost entirely upon statistics of mortality. A death in a community is a fact which is not open to question, and the aggregate number of deaths in a given population is, undoubtedly, a reliable standard of comparison between one given section of the community and another. The population of Portsmouth, for example, in 1890 was 160,128; the births per 1000 were 34.3 and the deaths 18.9, a ratio which compares favourably with the 31 large towns at home, with which it is usually contrasted. If this mortality was attributable to natural causes, uniform in their operation in all communities, a reliable comparison could obviously be made; but, to quote Dr. Guthrie, "Few people die a natural death. Some are murdered, but the greater part, who have arrived at years of discretion, commit suicide of a sort, through the neglect of the ordinary rules of health, or the injudicious use of meat, drink, or medicine." The "discretion" possessed by those who commit suicide through self-indulgence is not, perhaps, an important factor in the calculation, still the Rev. Doctor's remark must not be overlooked when estimating the extent to which mortality is attributable to preventible causes, whether these be moral or physical. True, the moral microbe has not yet been differentiated by the scientist, although the medical practitioner will be the first to admit, with Dr. Guthrie, that the specific microbe would be, in the great majority of cases, harmless, were it not aided and abetted in its onslaught, by some indiscretion on the part of the sufferer.

Again, statistics as usually available are too generalized, to be a safe guide in judging of the sanitary condition of particular localities or dwellings. Groups of residential premises of particular types, occupied by families of equal, or nearly equal social status, furnish a fair standard of comparison; but in a large town like Portsmouth or London, statistics of general

mortality must be carefully sifted and arranged by districts, and even by streets, lanes, and alleys, in order to arrive at safe conclusions. The death-rate among women and children, if compiled by districts or blocks of residential buildings of a common type, and differentiated by ages of occupants, would be less open to objection; but the nature and extent of the sickness among these two classes would be still more reliable, because they are more continuously resident, and because children in particular are more susceptible of injury to health from insanitary surroundings. Sir James Crichton Browne has recently published some valuable observations on the differences of development between the two sexes, and on the injurious effects of over-pressure in schools, but I do not think he has made due allowance for the wide difference in the conditions under which the sexes spend the greater part of their time. Men are undoubtedly as a class much more in the open air than women, and to this is probably attributable the lessened appetites and weaker assimilative powers, which result in a weaker development of the latter.

But the differences between the physical development of rural and urban populations is the best test of surrounding health conditions, and up to the present the advantages are clearly in favour of the country. In both, however, there is evidence of progressive improvement, and this may be approximately estimated by the structural adaptations to be found in residential dwellings of different dates and epochs.

An attentive observer of what is passing around him will have noticed the rapidity with which structural changes in those hives of human industry—large towns—take place. "God made the country, but man made the town," has become a proverb among us, and like man himself, largely modified as he has been by his own action since he left the hand of his Maker, his handiwork, as presented by the earlier editions of our great cities, is by no means perfect. But we are improving. Streets and alleys in our more populous centres, which were the residences of the more cultured classes a century ago, have in many instances, passed into the hands of the speculative rack-renter, to be let out as tenements; while, in not a few, whole districts of such tenements are daily swept away, either because they are no longer habitable, or because they are unsuited to the growing needs of an ever-advancing civilization. But taking our homes as they are, and applying to them the hygienic rules which we know to be sound, and are easily accessible to all, what must be, in too many instances, our verdict? Clearly there is still room for improvement in the best of them.

Assuming that there is nothing structurally objectionable in a house, and that it is considered by the sanitary authorities

habitable, what are the conditions which must be observed if the inhabitants are to have a reasonable prospect of enjoying good health? First, as to externals. The house itself must stand on a healthy site. This consideration is no doubt present to the mind of anyone seeking a mansion, or a house of even much less pretensions, but it is too often altogether overlooked by the cottager; and anyone who takes note of the present system of disposing of so-called rubbish in and about great cities, and the rapidity with which ground made out of what was but yesterday a mere swamp, is covered by cottages, too often constructed without those safeguards devised to protect the inmates from damp and ground air, must see the danger which lurks beneath.

A free supply of fresh pure air is a requisite of first importance, and this cannot be secured unless the surroundings over which it must pass are also pure. Air polluted by emanations from decaying organic matter, is not only offensive to our senses, but also injurious to our health, because deprived of much of its oxygen, and in consequence rendered to a corresponding extent incapable of accomplishing those blood changes which are constantly taking place in the lungs, and without which health could not be preserved. The existence of open spaces in front and rear of every inhabited house, from which a free supply of fresh air can be drawn for purposes of ventilation, is therefore essential. Unfortunately the atmosphere of all large towns contains elements of impurity, such as products of combustion and decay of organic matter, which the dwellers in our cities appear to regard as necessary evils; and till better educated, and more thoroughly alive to the deleterious effects upon the public health of such products, the smoke abatement and refuse removal movements ought to receive every encouragement and

There is another aspect in which this subject must be viewed. Sunlight is a most important and essential element in regard to the salubrity, as well as the suitableness of a house for residential purposes. No apartment is really fit for human habitation which is not freely traversed by sunlight. If by the direct rays of the sun so much the better. Those of you who have studied the influence of light on the development of colour in the vegetable, and indeed in the animal world also, need not be told that healthy growth is not attainable without a reasonable supply of that vivifying influence. This requisite cannot be secured without free access through open spaces—a necessary condition apt to be too little regarded by builders, in their efforts to house an undue proportion of individuals on a given space. This subject of surface overcrowding, and undue

elevation of buildings in close proximity to each other, has been so ably treated by Dr. L. Parkes, in a paper published in the twelfth volume of our Transactions recently issued, that I need not follow it further here. The smoke-laden atmosphere of such towns as London, Manchester, and the larger manufacturing centres throughout the kingdom, is in itself such an impenetrable barrier to the free ingress of the sun's rays to our dwellings, throughout the greater part of the year, that we cannot afford to add the avoidable elements of overshadowing of

buildings, and overcrowding of surface spaces. A good water supply is an obvious necessity for every dwelling. The measure of our needs in this particular, and the best methods of providing for them, have been often discussed, but the subject is by no means exhausted. The rapid increase of town populations, and the consequent ever augmenting demands for a supply of this most essential requisite, have forced into prominence the question of water conservancy. What an important part this so-called element plays in the economy of nature, as well as in the life of man! It covers a large part of the earth's surface, and is universally diffused throughout the atmosphere; it drapes the heavens with curtains of the most gorgeous colours dyed in the rosy tints of morn, or in evening's golden hue; and it fills the floating reservoirs of the sky, to descend, when burst by lightning or breaking by their own weight, in refreshing showers upon the thirsty ground. And when it has so descended and refreshed the earth, it forms itself into rivulets and brooks, which, swelling as they proceed, bring health and gladness to our villages and towns scattered along their banks. It may, indeed, be truly added, in Dr. Guthrie's own words, "the circulation of this fluid is to the world what that of the blood is to the body, or grace to the soul. It is its life. Withdraw it, and all that lives would expire; forests, fields, beasts, man himself would die. This world would become one vast grave; for water constitutes as much the life as the beauty of the landscape; and it is true, both in a spiritual and in an earthly sense, that the world lives because heaven weeps over it." So far the picture is most attractive, but let man, in his thirst for gain, touch it, and see what it becomes—the common sewer, the filthy drain of the great city. In its infancy and purity, the rivulet swelling into the river brings nothing but leveliness and blessings, to be turned, as it leaves us, into a fruitful source of suffering, disease, and death. But it is ever thus. The willing servant becomes the selfish tyrant's slave. Water is of necessity forced to find its lowest level, and, as it

passes on its downward course, it is seized upon by the man it

has just served, to carry hence the filth which pollutes it, and the germs of disease, which are thus readily spread through the communities among whom it flows to its home in the great sea. At times, when we are threatened by a visitation of some pestilence, we are stirred with apprehension, and, awaking to our danger, cry out for a remedy. Royal Commissioners enquire and report, the evil is acknowledged, and remedies are suggested; but still the pollution of our water supply goes on, and a prime necessary of life is rendered unfit alike for man and beast.

Is it not strange that, in these times of political excitement, when men are energized by the merest fads, the greatest domestic question of the age should cause so little stir. Man in his ignorance and selfishness abuses that which God has given in purity and abundance, in order that all may be able to drink freely without money and without price. When it is no longer fit for its purpose and his needs, his neighbour seizes and reissues to him, purified it may be by some cunningly-devised system of filtration, that which was his birthright, but for which he must now pay; and so the circle widens till at the present moment our large towns have to procure their water supply from great distances and at enormous cost. No doubt the Water Companies are paying concerns, and in the main serve those who can pay satisfactorily. But visit the slums of our great cities, and look at the state of the poor who cannot so pay, and you will be able to realise what serious consequences result from an inadequate supply of reasonably pure water for drinking, to say nothing of other needful purposes.

Thanks to the liberality and Christian charity of some among us, drinking fountains for man and beast are to be seen in yearly increasing numbers along our great thoroughfares, and in places where the people are apt to congregate; but this is not enough; every street and alley, as well as every inhabited house, should have a continuous water supply as one of the necessary requisites to be provided by the owner, and his power to recover rent should be made conditional on the efficiency and sufficiency of this supply. Add to this an efficient water conservancy, with powers adequate to prevent the pollution of our rivers, and to enforce an effective scavenging, and suitable disposal of all sewage and other filth now permitted to drain into our watercourses, or foul our village wells, and there need be no fear of a water famine in this country, even with a further great increase of population.

Having thus briefly reviewed the surroundings, let us glance at the interior of a healthy home. The first point for consideration is space, and this must be regarded with reference chiefly to the numbers to be accommodated, the arrangements for ventilating, lighting, and heating each separate apartment, and the subsidiary but essential domestic and sanitary appliances necessary for health and comfort. I cannot do better than refer you for detailed information on this subject to the admirable lecture on "Ventilation and Measurement of Cubic Space," by Sir Douglas Galton, published in Vol. XII. of the Transactions of The Sanitary Institute. The points in that lecture which I desire to emphasize are: the cubic space per individual, and the provisions for changing the air in that space

by a continuous and adequate supply from without. The term "cubic foot" as a unit of space has often led to misapprehension, and occasionally to grave errors in calculating the number of individuals who can be conveniently and safely accommodated in a given building. Take for example an apartment ten feet square and ten feet high, and you have a cube of ten feet containing one thousand cubic feet of air. Such an apartment would suffice for a single individual so far as space is concerned; but suppose the apartment was ten feet long by four feet wide and twenty-five feet high, you would have precisely the same number of cubic feet of air, but how different the nature of the accommodation. In the cube of ten feet a man would live and breathe comfortably for say an hour, in the other space, containing the same number of cubic feet, he would feel the suffocating effects of the impure air in a very few minutes. The differences in the two cases depend upon the slowness with which the lower stratum of air, saturated with carbonic acid gas and other products of respiration, diffuses itself through the higher column, as contrasted with the cube of ten feet. A practical illustration of this occurred to me shortly after the mutiny in India, when, in allotting accommodation for my corps in new quarters, a building containing 35,000 cubic feet of space was handed over as a quarter for thirty-five men. A glance at the room satisfied me that the floor space did not afford accommodation for so many without excessive crowding, and on expressing my doubts the General commanding, directed the Quartermaster-General to show how the cots for thirty-five men could be placed; but on making the attempt he was unable to find space for more than twenty-five.

It is, of course, an advantage to have, in every inhabited apartment, an air space above the cube in which the occupants of the room move and breathe; but this must be regarded in the light of a reserve, and must not be secured at the expense of the floor space, which is still more essential. The principle involved is of great importance in estimating the numbers to be

allotted to bedrooms, and dormitories in public schools, and other buildings where numbers are accommodated in each apartment. If it be made a sine qud non that every individual is to have a separate bed, and every bed is to stand in the centre of a cube, the contents of which shall not be less than a given number of cubic feet—say 1,000,—and if such a room be ventilated so as to change the air in the whole compartment at least once in the hour, all that can be regarded as essential will have been secured.

In dealing with the ventilation of all apartments, and especially with day-rooms and dormitories, care must be taken so to arrange the inlets for fresh, and exits for foul air, that so-called draughts are not produced. This is not difficult in well-proportioned rooms; but in many instances draughts, of which complaints are made, are attributable to other causes than the ingress of fresh air. The chief of these, and the only one of any importance, is the extent of outer wall space filled with glass. In summer, when a common temperature obtains on both sides of the glass, these draughts are not felt, but in winter when the external air is at a low temperature, while the room is heated to a temperature many degrees higher, the escape of heat through the glass causes the air in contact with it to become heavier, and thus to sink to the floor, thereby creating a current in the air of the room, which is kept up by the fire or other source of heat. This current, moving from the window along the floor of the room, to replace the warmer air which rises when heated, is often so strong as to cause discomfort to invalids, and even to persons in health, who, not knowing the true reason, order every inlet for fresh air to be closed to their own eventual injury. A curtain or blind drawn over the glass is an effectual check to such a draught; but in the day time when light is needed this is not practicable, and the only radical cure for such draughts is the ventilation of the room by fresh air warmed before admission.

These draughts are more common in churches than perhaps anywhere else, and are as often caused by cold or damp walls as by the glass windows. The remedy in this case is obvious, though it is too much neglected. All such buildings should be kept dry, and warmed so as to heat the wall surface to the ordinary temperature which it is desired to keep up. If this is done by passing a sufficient current of dry and warm fresh air through the building, the congregation will find the air pure, and the place free from draughts; but if, as is sometimes the case, the stagnant air which has been shut up in the building since it was last used, is merely warmed by hot-water pipes passing through it, the atmosphere of the place will be both close and soporific.

In the absence of proper ventilation such rooms as are occupied, and necessarily warmed, require a constant supply of air from without, or if not so supplied, from the halls and passages within, to replace the air consumed by the fire; and this finds access through chinks round doors and windows, and even through the walls and ceilings. The sources of supply once detected, are apt to be regarded as offenders by persons susceptible of cold, and not unfrequently the consequences are troublesome. An old gentleman of my acquaintance, who was a sufferer from rheumatic gout, so dreaded all such draughts that he surrounded his easy chair with a screen, and closed as completely as he could every aperture through which air could gain access to his room. The fire naturally resented this, and, reversing the order of things, drew its supply down the chimney, and as a consequence blew the smoke in gusts into the room. The sweep was sent for, with partial relief. A cowl was tried, and proved a failure. Eventually an architect was consulted, who, recognising the cause, but knowing the peculiar views of my friend on the subject of ventilation, did not care to explain. Finding the room unoccupied he slipped behind a curtain and knocked a pane of glass out of the window. The effect was of course all that could be desired, till unfortunately the broken pane was discovered and repaired, when of course matters were restored to their original condition, and the chimney smoked as before. The practical lesson to be deduced from all this is to have no more glass in a room than is necessary for the free admission of the requisite light, and so to arrange for ventilation that the whole air in the room will be periodically replaced by fresh air from without, draughts being obviated in so far as the windows are at fault, by an arrangement of curtains or judiciously placed screens. In very cold climates it is not unusual to make the windows double, and this is occasionally done, even in England, in rooms in which an equable temperature is desired; but, as already suggested, all ordinary needs may be adequately provided for by a judicious arrangement of inlets, and properly adjusted blinds and curtains. The fact that draughts, often attended with much discomfort, can be so produced, should, however, receive more attention from architects than it does. It is only necessary to glance at the so-called villa residences, erected for the artizan and labouring classes, in the suburbs of our large towns, to see the undue proportion of glass which forms a part of the outer walls of those often very flimsy structures. 'A bow window is no doubt a desirable addition to a room of limited proportions, and in the summer it is much appreciated on account of the increased view thus secured; but in winter it is often a cause of much discomfort,

even when well constructed and furnished with shutters, which is not always the case in such cottages.

When such rooms are lighted with gas, the need for an ample supply of fresh air, and for the free escape of all products of combustion, is still greater. But this is a sanitary requisite which is not confined to the cottager. In many very good houses of the middle and upper classes it is a common grievance, and a source of danger to health not guarded against in the original construction of the house, and is therefore submitted to, rather than incur the expense necessary to remedy the evil. Fortunately, there is a near prospect of relief, for those who can afford it, in the electric light, but this will have to undergo further developments before it can be made generally applicable to domestic purposes at a reasonable cost. Meantime we have only the alternative of candles, or oil lamps, which some people regard as an effectual remedy. This is not so, however, except in so far as the lessened volume of combustion, with which those who use candles or lamps are satisfied, lessens to a corresponding extent the fouling of the air in the room. Free ventilation, and the removal of products of combustion, are as necessary in this case as when gas is used.

There are other points in domestic arrangements regarding which a few words may not be out of place here. The housing of the middle and lower classes in large towns has been in the past, and still is largely in the hands of speculative builders, who hope for a profitable return of capital so invested. Of such buildings it may be said, without attributing any improper motive to the builder, the cheapness of material, economy in their use, and on the class and quality of the labour expended on their construction, are ever present elements in the builder's estimate of cost. It is presumably to such considerations that leaking roofs, walls pervious alike to air and moisture, ill-fitting doors and windows, and badly jointed floors, are not uncommon defects in town houses rented at sums ranging from £100 to £20 annually. These defects must be remedied by the tenant as best he can, hence his resort to carpeting, curtains, wall papers, &c. These appliances have come down to us middle class people as luxuries, the more wealthy classes above us having wisely substituted impervious painted surfaces for paper, and solidly constructed, air-tight, and polished floors, for gaping boards covered with felt and carpeting. No doubt in the best houses, costly carpets, and rugs of elegant patterns and exquisite workmanship are still to be found strewn about the rooms, chiefly on the lines of traffic; but they are usually limited to such localities, the object being to deaden sound rather than to secure warmth and comfort, and they are in every case easily

removed for the purpose of dusting. From a sanitary point of view carpets as at present used are a questionable advantage, and the farther down the social scale their use extends, the less desirable they become. A limited experience of "spring cleanings" should suffice to make this obvious; but if we must have carpets, let them be limited in extent and so laid as to admit of their easy and frequent removal for dusting. A similar principle should regulate our use of curtains, lest they too become the happy hunting ground of the hostile microbe. Of furniture in general it may be said the safest limit is the utilitarian one. Ornamental additions in public day rooms may be tolerated, but in bedrooms the more Spartan the taste the better.

The man-made town is so irremediably defective in a hygienic sense that we turn from it to the country with a feeling of relief, and in the hope that here at least the members of those nomadic races, whom we claim as ancestors, may have left us more perfect specimens of what an English home ought to be. In this hope we are not disappointed. In many instances, no doubt, English country houses have been found wanting in some important sanitary particulars, attributable to the increasing luxuriousness of the age, and to the introduction of modern sanitary appliances into old buildings not originally designed for their reception; but in the more modern structures such oversights have been fairly remedied; and till the time comes when every mansion will include a sanitary pavilion, in which will be found all that is needful or desirable in this direction, we may rest satisfied if the drainage is reasonably effective.

With regard to the farmstead and the labourer's cottage, however, there is much need for improvement, mainly in their surroundings, and in the accommodation for the necessary farm stock and domestic animals. The rapid strides which have been made in the cultivation of sanitary science during the last half century, give good promise that within a comparatively short period the housing of farm stock and domestic animals of every class will be provided for on sound sanitary principles. That this is not yet realized is but too obvious, but the commercial interests involved will soon force forward the needful improvements.

At present the tendencies of all classes, who have to work for their living, seem to be to move into the towns, where higher incomes and social advantages are within reach; and it is only when repeated disappointments, terminating but too often in ruin and the poor-house, have opened their eyes, that the agricultural labourer and others so attracted recognize the mistake they have made. The causes of this are well

known, but the remedies are not so clear. A movement in the right direction has been recently made by Parliament in the Public Health and Allotments Acts, but the remedy is doomed to failure in so far as the allotments provided are not within easy reach of the cottager. What is really required is a plot of ground round every agricultural labourer's and artizan's cottage, sufficient to enable him to utilize profitably his idle hours and broken time, in the cultivation of garden produce for the use of his family. Such an arrangement would be a real boon, and would enable him to provide suitable accommodation for his pig, his hens, and his pigeons; turning to useful account kitchen refuse, and finding a convenient soil in which to bury all decaying organic matters and all so-called filth, to the relief and comfort of the cottagers, whose health will be thus protected, and to the enrichment of the garden soil, where all such matters can be turned to profitable purpose. Here too can be creeted without cost the "Gehenna" for the cremation of all organic tissues, house dust, and other refuse, the sure harbingers of ever-present dangers to health; and the earth closet from which waste products can be at once passed to the soil.

But when will these changes come? Not till our great landed proprietors see the folly of letting land only under conditions which make agricultural pursuits unremunerative. "General" Booth's scheme for the regeneration and salvation of the "submerged tenth" has this one great advantage overmost other efforts of this class, in that he attempts to replace the unemployed on the soil under conditions which promise the honest and industrious cultivator health, food, and clothing, with a reasonable prospect of a useful life. But why not begin at the other end of the problem, and deal with the agricultural labourer before he leaves the land, to become a town loafer suitable only for Salvation Army purposes? The city refuges with their workshop accompaniments, and farm colonies at home and abroad, are costly curative measures, intended no doubt to relieve suffering and thus to meet a pressing need. One hundred thousand pounds for their establishment, and thirty thousand a year for their working, but how much for the prevention of the evils which they are supposed to cure? These measures contemplate the redemption of poor Hodge and others who have wandered from their cottage homes in the country, and tumbled into a slum in the city, where, having lost money, hope, and character, they pass through the "public" to the prison, at the door of which they are fished out of the mire, and received into the refuge, where their regeneration begins, and from whence they may eventually hope to regain a cottage on some farm, possibly their own. All honour to the philanthropist who contemplates such a redemption, and works carnestly for its realization. But surely this is swimming in a circle which had better be broken! In such a case prevention would obviously be better than cure, and cheaper also, inasmuch as the cure must be problematical only, so long as agricultural pursuits do not pay. Better, as already suggested, begin at the other end of the problem, and try to keep the people on the land, rather than waste time and money in restoring them to it after social and financial shipwreck.

Some years ago I called attention to the pressing need for a land settlement, which would give to agriculture in this country the fair play it so much needs, to enable it to compete successfully with other food-producing countries, and thus cover these fair islands with a physically vigorous and contented population, which is after all the life of a nation. No doubt political economists say that this is impracticable, and that we must look to other regions having a better climate and a richer soil for our food products, securing an abundant supply by an open market. But is it true that a better land settlement would not enable the agriculturalist to compete successfully with the foreign foodproducer in our own markets? As to quantity he may not be able to do so, but as to quality the question has yet to be solved. The physical qualities of both man and beast are more closely associated with the soil from which they draw their subsistence, and the climate in which they are reared, than many are disposed to admit. At all events the country is rapidly passing out of cultivation, and the people are flocking into the towns to swell still further the ranks of the unemployed. Mr. Palmer, an English tenant farmer residing near Towcester, evidently considers this state of affairs remediable; for in writing to me on this subject, and after enumerating the causes which were throwing land out of cultivation, the more important of which were the restrictive terms imposed by the landlord, and the rapidly increasing cost of labour, he adds: "Why do not the papers advocate such fiscal reforms, freedom of cultivation, and security of tenure, as would attract capital to the soil? Let it be made profitable to cultivate, and waste lands will soon be brought under cultivation, and the producing capacity of all other lands increased; this would mean work for hundreds of thousands of workmen now unemployed. It would further mean a great wealth of home-produced food for our nation." There is also a consideration of vast national importance lying behind this which ought not to be overlooked. Our highest naval and military authorities place in the front of all other reasons, for maintaining in overwhelming force our first line of defence, the fact that if our ports were closed, and

our food supply from abroad cut off, a few weeks would suffice to starve the nation into surrender. Surely this argument should induce the people not to neglect a cheap and effective means of augmenting their resources, by an increased home supply of food, while spending lavishly on the defences necessary to keep their ports open and coasts clear.

And now let me add a few words regarding personal hygiene. When all that is possible in the way of sanitary surroundings has been secured, there is still much which must devolve upon the individual who desires to enjoy to the full a vigorous. healthy existence. "Hygiene," says Parkes, "is the art of preserving health; that is, of obtaining the most perfect action of body and mind during as long a period as is consistent with the laws of life." Canon Knox-Little carries us a little farther by pointing out, on the authority of the Church and the Bible, "that the individual life is soul and body, and that we can only neglect either at our peril. Close and wonderful is the union between the two; terrible is the divorce at death; certain is the meeting again in eternity; and our Lord is emphatically called in Scripture 'the Saviour of the body.'" If this be true—and I, at least, do not doubt it—Christianity is only doing half its duty when it organizes missions for the salvation of men's souls, while it neglects the equally obvious duty of saving their bodies. Without following further at present the theological aspect of the question, it may be pertinent to recal the old Latin adage. Mens sana in corpore sano, as the true definition of the conditions to be realized. A recent writer of distinction has attempted to carry natural law into the spiritual world; may not the sanitarian with even greater propriety carry the moral law into the physical world? In other words, are we not fully justified in maintaining, that perfect health of body and mind require perfect purity of life and conduct, as well as of all the physical essentials which are, in a physiological sense, necessary to the well-being of the individual. In these days of scientific research men are apt to forget this, and while hunting for the physical cause, assumed to exist in every case, to overlook those conditions, the presence of which give direction and force to its action. A vigorous, healthy frame will resist the hostile microbe, or the pestilent malaria, which would prostrate at once the sickly debauchee, whose constitution had been weakened by self-indulgence.

The first essential towards the raising of a physically well-developed individual is a healthy parentage, but in this free country a man is free to marry regardless of the consequences such a step may entail on his children. If a man desires to serve the Queen in the Army, Navy, or Civil Service, a certifi-

cate of good health is a necessary qualification. If he wish to insure his life he must, in addition to such a certificate, produce evidence of freedom from hereditary predisposition to disease, but in the case of marriage there is no such restriction. The consequences are obvious. Indiscreet unions between individuals in many cases so unsound in health, and so shattered in constitution, that the children, if any, are doomed from their birth to a life of suffering more or less acute, and possibly also to a premature death, are common occurrences. The prevalence of consumption and other forms of so-called hereditary disease, both mental and physical, furnishes familiar illustrations of this in the experience of everyone. But putting aside all such instances, and assuming that the great mass of children born into the world are free from hereditary disease, how can the enormous mortality which occurs among children during the first years of their existence be accounted for? Doubtless much of this is attributable to ignorance, on the part of mothers, as to the best method of rearing children; not a little also to vicious habits and cruel neglect; but a still larger proportion of the young fall victims to so-called infantile diseases, which would I hold be comparatively harmless, but for the insanitary surroundings to which the great mass of the people, both in town and country, are unnecessarily exposed.

Some of these have been already pointed out. Others, such as unsuitable or insufficient food and clothing, are well understood, but of the aggregate I would only instance two. The first, and most easily remedied, is the growing neglect of mothers to nurse their own children. To this cause is largely attributable the mortality among infants under one year; while injudicious feeding must be regarded as an ever-present factor in the imperfect development and premature decay of large numbers of the human race. Another point on which I wish to lay emphasis is, not so much the injudicious selection of articles suitable as food, as the impurity of the articles so selected. This is especially the case with milk, on which the young are so dependent. The penalties now inflicted for such adulterations have done much to check the practice, but the scale of prices at which milk can be purchased is conclusive evidence of the fact that, to the poor at least, the article sold must have been largely diluted. Were it always certain that the water used for this purpose is pure the consequences would be of less importance, but in too many instances this is not the case; and, in addition to the fraud perpetrated on the purchaser, the consumer is also the sufferer. The history of many outbreaks of enteric fever, which have been traced to infected milk, adulterated with water in which the germs of

this disease abounded, is conclusive proof of this. No doubt the law provides a remedy for this and other similar offences, but the machinery for enforcing it is defective.

When the food is good of its kind the methods of preparation are often faulty. Instruction in domestic economy, and in cooking, is now given in some schools and encouraged by several voluntary societies, but the want is greatly in excess of the supply, and, until cooking is generally taught in all girls' schools, we can hardly look for much improvement. There is at present much wasteful extravagance in the methods of collecting, storing, and preparing food for all classes, which would under a better system meet the cost involved in the training. The initial difficulty appears to be the disposal of the cooked food, were cooking classes to be organized on a large scale; but if the artizan and working classes were regularly supplied with suitable meals at prices within their reach, they would gladly resort to schools of cookery for all they require. Children at school might be similarly provided for, and the mothers, thus relieved of the trouble and waste of time in marketing and cooking, would be free to devote their energies to other pursuits. Possibly it may be said that this scheme, if followed to its logical conclusion, would break up the poor man's home, and leave him without those domestic comforts which add so largely to the joys of life. The scheme need not have any such consequences. All it need aim at is the profitable consumption of articles cooked at the schools of cookery. There are many instances in which young men and women have no convenient homes to which they can resort for their meals, when employed continuously in positions demanding all their time; to such, a restaurant, where cheap meals suitable to their needs could be readily procured, would be a great boon, while many married couples would find profitable employment if only the preparation of that midday meal could be provided for. In large manufacturing centres the scheme would, I have no doubt, work well and profitably, and the system once developed would soon become general, and meet a much-felt need. The morning and evening meals, consisting as they usually do of easily prepared articles of food, might still be enjoyed by the family at home, while the dinner of all might be obtained at the nearest school of cookery.

The London School Board have already done much to improve the training of the young, both intellectually and physically, but the most important advance which has yet been made in this direction seems to me to be the establishment of classes for teaching the girls cooking. Unfortunately the pupils may be withdrawn from school before they have arrived at an age most suitable for such training, but any knowledge, however elementary, and any practice in cooking, however limited, must be useful to them in after life. Meantime let us hope that the present elementary classes for cooking will soon be supplemented by more advanced classes, organized and equipped for the fuller instruction and training of such girls as are suitable, and intend to make cooking their profession. South Kensington and other Schools of Cookery are doing excellent work in this direction, but they do not meet the needs of the great mass of middle-class people, who require, and are able to give liberal wages to, a good plain cook, but cannot afford to pay a high salary, and at the same time provide a servant to wait upon the cook.

There is another class of practical instruction for girls which the London School Board have introduced, and for which they deserve much credit. In my address to the Congress at Brighton, two years ago, I alluded to the pressing need for reform in the laundry system—or rather want of system—in this country. For this the School Board is now endeavouring to provide a remedy, not without a promising measure of success.

Ample provision should be made for the physical and intellectual training of the young of both sexes, and all classes; but as has been already hinted, the perfect man cannot be secured without that continuous moral and social training which has its highest expression in perfect self-control and self-respect.

I am aware that many consider these latter qualities lie outside the sphere of the sanitarian, but I do not agree with this view; the salvation of the whole man is the problem to be solved, and if his body is to be kept in health and vigour he must cultivate those qualities which enable him to exercise moral, as well as physical control over all those appetites and pursuits which hurt the body or impair the mind. The training of the young is not all that it should be even in these days of progress. The race is for pre-eminence in something, without much consideration as to the ultimate result. The range of culture offered to pupils at our schools, of whatever class or sex they may consist, is greatly in excess of what many—I might almost say any—children can master. As a result the mentally strong gain pre-eminence in mathematics or some other cult, the physically well-developed shine in the cricket field, and all the others are dragged along at the chariot wheels of these two classes. Too little care seems to be taken to sort and classify and to train according to capacity, taking care to nourish and foster the weaker faculties, whether these be mental or physical. No doubt much of this is due to competition, and till a system can be devised which is less open to objection the weaker must go to the wall. But the system

is a bad one, and on it must rest some of the responsibility for the failures in life out of which our criminals, loafers, lunatics and cripples are manufactured.

But why dwell upon such matters? Life is to many hardly a blessing, why save it? Physical development is a possession of which a man may be proud, and which he may turn to profitable account, but after all it is a drug in the market. As for the halt, the maimed and the blind, the sick, the poor and needy, these seem almost a necessary part of a high civilization, and must be endured. Possibly so, but look at the cost. A tenth part of the money now spent in voluntary and benevolent efforts to put right that which is admittedly wrong would, if judiciously expended in the enforcement of sanitary requirements, do more to lessen sickness and suffering, and to rescue from an untimely grave the bread-winners on whom the happiness and comfort of so many homes depend, than can be realized by all the agencies of rescue and regeneration put together.

It would also sweep from our midst those insanitary slums in which the most degraded of the community crowd together, offering a congenial soil in which contagious disease is fostered,

and from which it spreads among the people.

The housing of the well-to-do working class is in a fair way of being satisfactorily provided for, but nothing has yet been done to provide suitable accommodation for the poorest class of the people not actually paupers. Many of them are infinitely worse off than the regular inmates of the workhouse; but some element of self-respect, or pride it may be, constrains them to endure hardship and privation, even to the verge of starvation, rather than take that last, and to them irretrievable, step of going to the workhouse. There is much need for active interference in favour of this class, and the best method of aiding them appears to be also the cheapest. House them in homes in which they will be provided with those prime necessaries, pure air, good water, light, and shelter, at rates which they can pay, while leaving a sufficient margin for food and clothing. The loafer should not be tolerated under any circumstances; his gregarious and filthy habits, and his hopeless laziness and moral degradation render his consignment to the workhouse a necessity. I do not include under this head the casual wanderer out of employ, for whom other arrangements should be made; or the blind and otherwise maimed, who make a profitable display of their misfortunes; the latter should of course be compulsorily consigned to asylums supported by the State. After all that can be done has been realized, benevolence will still have a wide field for its exercise.

# LENGTH OF DAYS.

# LECTURE TO THE WORKING CLASSES,

BY

PROF. W. H. CORFIELD, M.A., M.D.(Oxon).

# ABSTRACT.

HIS WORSHIP THE MAYOR OF PORTSMOUTH, in introducing the lecturer, said he was exceedingly pleased to see so many of his fellow-townsmen in attendance. A few days since, in the name of the inhabitants of the borough, he extended a hearty welcome to the members of the Congress, and he ventured to say that they fully approved of his action in that matter.

The dissemination of knowledge concerning the public health was a noble work, and it had been suggested that in Portsmouth they might make arrangements for periodical lectures on hygiene. He would be most happy to join any number of gentlemen interested in the matter in an effort to establish such a scheme. The meetings might be held in the Grand Juryroom, and he felt confident that his successor also would permit it to be used for that purpose.

Prof. Corfield, at the outset of his address, remarked upon the importance of the Sanitary Congress, which, he said, was brought together with one object—the prolongation of human life by the study of the various means by which health might be preserved and diseases prevented.

Was there any reason why they should not prolong life indefinitely? Why, when a person had grown to perfection, and by the food he consumed continuously replaced the losses in his body brought about by the use of its various parts, should he not go on for ever? The answer to that question was not an easy one. The reason was this: together with the process called life, there was always going on a process of hardening of the tissues of the body. That process commenced at the beginning of life, and went on until the individual was perfect; until the hard parts of the body were as hard as they should be, and the soft parts were as soft as they should be. It did not

stop there, however, and as time went on, the tissues of the skin became less elastic, the great arteries became hard and stiff, so that they could not send the blood through the body as they had done before, the nerves got hard, and the sensations became impaired. Even supposing the individual contracted no disease, the process went on until the hardening of the tissues of the hungs became such that respiration was stopped, or the hardening of the arteries offered such resistance to the flow of blood that the circulation could no longer go on, and the man died a natural death.

Hygiene, which was an art as well as a science, had been practised from the earliest times. They might even in these days learn most important lessons from the works of scientists of past centuries, and especially from the works of the Roman engineers, whose aqueducts conveyed a supply of unpolluted water from springs and lakes into their great cities. Some of their drainage works existed to the present day, and carried out the functions for which they were intended at the time of construction.

Although, as a science, hygiene was a thing of yesterday, they had by its aid arrived at great results. They had found out the causes of several of the communicable diseases, and, having discovered the causes, it was obvious that their prospect of preventing them was very much increased.

In commenting upon a few of the most important diseases by which mankind had been afflicted, he described the terrible effects of the Oriental plague, or "black death," which killed one-third of the inhabitants of the old world in one single invasion in the fourteenth century, and, appearing in London in 1665, killed 685,000 inhabitants. There could be no doubt, he said, that that disease had entirely disappeared as places had become more cleanly.

Scurvy was a disease which used to play havoc in the navies and armies of Europe until Captain Cook discovered that it was due to the absence of fresh vegetables, and now it never occurred, except, perhaps, when an expedition went to the polar regions, and rum was served out to the men instead of limejuice.

Typhus, or jail-fever, was formerly a terrible scourge, but it would not spread where there was no overcrowding, and was now rapidly becoming a disease of the past.

As to cholera, there were very few places in this country where sufficient filth existed to cause it to flourish, and it was not blown about by hurricanes, &c., but taken from place to place by people. The only real danger of the spread of the disease in England was the contamination of the water-supply

at its source. The most fertile source of typhoid fever was where the drainage of a house ended in a cesspool, and the well from which the water-supply was drawn was only a few feet away, both being in gravel soil.

All the diseases he had mentioned were nothing as compared with small-pox, of the extent of which in past centuries they could form no conception. It was no longer prevalent, because

they had protection against it in vaccination.

Scarlet fever was a disease of which they had heard much and were likely to hear more. At the present moment there were 3,300 cases in the beds of the Metropolitan Hospitals, Little was known about its causes, except that it was readily communicated from one to another, and that quite recently it was found that in some way or other it was connected with cattle. Milk could communicate it to the human system, and as a matter of precaution it was wise to insist that every drop of milk brought into a house should be boiled before it was consumed.

Diphtheria, which was akin to scarlet fever, and went with it, had unfortunately taken hold of large towns, including London, and was increasing rapidly. A great deal remained to be dis-

covered respecting that disease also.

Measles and whooping cough were not at present officially classed under the head of dangerous infectious diseases, although the former killed more children than any other sickness, and whooping cough was almost as fatal. Measles and scarlet fever could only be summarily stopped by the closing of the schools, at which they were chiefly spread. They did not spread in the open air to anything like the extent they did in houses or schools.

Epidemic influenza caused great mortality, and damaged a great number of people for the rest of their lives; and in referring to it he suggested whether while they were abolishing the conditions under which certain infectious diseases might exist, they might not by that very means create a condition of things in which other virulent and fatal diseases might flourish. That was certainly an alarming suggestion, but if true they could not help it, and the only course open to them was to continue to fight every disease as it came under their attention.

Passing on to consumption, "the great endemic plague of our climate," he stated that, although it had been shown by Dr. Koch to be caused by a living organism, it was spread by living in damp houses, by overcrowding, and by pursuing occupations in which much dust was produced, and he insisted upon the great importance of cleanliness in the prevention of this as well as of other diseases. Cleanliness had been described as "next to

godliness," but although a friend of his, an athletic divine, had said that it was a "very bad second," he himself maintained that without cleanliness there could not be much godliness.

After a short account of the mischiefs produced by overindulgence in food and drink, and neglect of bodily exercise, he gave it as his opinion that cleanliness in the widest sense of the term, and moderation in the indulgence of our appetites and a sufficient amount of bodily exercise and of mental work, were the most important factors in the prevention of disease and the

prolongation of life.

The mean length of life had been much increased in this country in recent years. We thought nothing now of the old limit of threescore years and ten, as we had so many instances of men living far beyond that period and yet possessed of all their faculties. He had calculated that the mean length of life in London during the last fourteen years had increased from 34½ to over 38½ years, a very important increase for so short a period. He attributed this increase to improved sanitary conditions, and insisted on the importance of sanitary legislation being continually brought up to the point at which public opinion would support it.

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# LECTURE TO SANITARY OFFICERS.

# INAUGURAL ADDRESS,

GIVEN AT

## WORCESTER

ON OCTOBER 1st, 1892,

ΒY

SIR DOUGLAS GALTON, K.C.B., D.C.L., LL.D., F.R.S.

THE Course of Lectures, of which this is the first, has been arranged by the County Council with the object of affording to the Sanitary Inspectors of the County an opportunity for preparing themselves to pass an examination so as to qualify them to obtain a certificate of competency in their duties.

In consequence of my position as Chairman of the Sanitary Committee of the County Council, I have been requested to give the opening Lecture, and I have accepted this proposal, because I thought that I should thereby have the opportunity of placing before the Inspectors a succinct view of the responsibilities which attach to their position, and of the duties which they have to perform.

The laws which regulate the health of the community may be said to date from the accession of Queen Victoria.

It was only at the beginning of the Queen's reign that the registration of births and deaths came into operation, thus affording the necessary data for ascertaining the relative intensity of epidemic diseases, and furnishing a basis for a scientific examination of the causes of the diseases. In 1839 disease was as prevalent in the rural villages as it was in the most filthy and crowded districts and towns; and the Poor Law Commissioners were directed to enquire into and report upon the

condition of the labouring classes. Their report recorded in all parts of the country much prevalent disease and consequent death.

In towns the people were crowded in courts and alleys, and swarmed in cellars, which were neither ventilated nor drained. The dead were buried in overcrowded churches, chapels, and churchyards in the middle of towns. The rural districts were no better. Parochial administration operated to degrade the inhabitants of the labouring class and to check tendencies to improvements. The window tax operated in all houses to shut out sun and air, and to foster darkness, want of ventilation, and consequently dirt. Each house had its cesspit, but in poor districts forcal matter was often allowed to accumulate for years to avoid the expense of emptying.

The provision of pure water and the disposal of water after it had been fouled had scarcely been thought about. The law, however, was not so much in fault. It defined a common nuisance as: "An offence against the public either by doing a thing which tends to the annoyance of all the King's subjects, or by neglecting to do a thing which the common good requires."

But the Commissioners reported that notwithstanding this full definition, and notwithstanding ample legal power through the operation of Courts Leet, almost every town in England found in a low sanitary condition, and every village marked as the abode of fever, presented an example of standing violations of the law and of the infliction of public and common as well as of private injuries; the tenements were overcrowded, the streets replete with injurious nuisances, the air rendered noisome by these and by the smoke from factory chimneys, and the streams of pure water were polluted.

In 1840—41 the first Vaccination law was passed, and in 1853 vaccination was made compulsory. Small-pox had destroyed 30,819 persons in England in 1838. The number who died in 1890 numbered only 15.

The General Board of Health, which has since been merged into the Local Government Board, was founded in 1848, and initiated the system which subsequent Acts of Parliament have supplemented, enabling towns and localities to borrow money from the Government for sanitary works. Further Acts were passed in 1858 and 1861 and in subsequent years, and all their provisions were embodied in the Public Health Act 1875. This was the commencement of one of the most important stages in

the sanitary progress of the nation, because it was the first effort made to deal with the health of the community as a whole.

LECTURE TO SANITARY OFFICERS.

The office of Inspector of Nuisances had existed for many years under the provisions of various Acts of Parliament. In 1872 the Local Government Board obtained power to issue orders for defining their duties more specifically, and the Act of 1875 summarised the functions and powers of the Sanitary Authorities and of their officers.

The Public Health Act of 1875 brought into one focus the various regulations which had been especially devised in previous years to be a safeguard mainly for urban populations. But in the rural districts the powers of that Act were more limited. Since 1875, however, additional Acts of Parliament have been passed, and increased powers have been conferred on all Sanitary Authorities both Urban and Rural. Amongst these, in addition to the Acts for the prevention of pollution of streams and rivers, I would refer to the following:

1st. Mr. Brown's Water Act 1878, which compels owners of house property in Rural districts to improve the water supply of their property, and to provide a water supply for all new houses and cottages. This Act is not sufficiently attended to in Rural districts.

2nd. The various Acts for improving the dwellings of the labouring classes, which have culminated in the Housing of the Working Classes Act 1890.

3rd. The Acts relating to the Adulteration of Food.

4th. The Acts governing the Notification of Infectious Disease, and especially those giving powers for compelling isolation of persons suffering from infectious disease, and the disinfection of clothing, bedding and rooms; and also those providing accommodation for persons temporarily turned out of their houses for purposes of disinfection.

The formation of County Councils all over the country produced a new departure; for the County Councils, through the appointment of their own Medical Officers of Health, have become a focus of Sanitation in each county, by means of which the Reports of the Medical Officers of Health of Sanitary Districts in the County are yearly collated and brought under review, and thus attention is drawn to any Sanitary short-comings in the Sanitary districts within the County. Although

the County Council has only limited executive powers in the Local Sanitary Districts, yet, the County Medical Officer, if appointed with judgment, if he is cautious not to interfere unduly, and if he remains independent of private practice, will obtain by degrees a wide influence, and gradually more and more become an adviser of the District Medical Officers of Health as well as of the Sanitary Inspectors, and be consulted in important cases by the Local Sanitary Authorities.

As an instance of the use which Local Sanitary Authorities have already made of the County Medical Officer of Health, I may instance the Notification of Infectious Diseases. In Worcestershire, all the Sanitary districts except three have adopted the Act for Notification of Infectious Diseases, and a record of all cases of infectious disease which occur in these Sanitary districts is sent by the District Medical Officers to the County Medical Officer, weekly; and he tabulates them and issues tabular statement weekly to each District Medical Officer, so that they are all kept aware of the state of infectious disease over the whole county. The County Medical Officer has also been called in to confer with District Medical Officers on various special matters in which Sanitary improvements were wanted, such as cases of polluted water supply, absence of drainage, defective house accommodation for the poorer classes, &c., &c. In regard to these I may mention that it is made especially the duty of the County Council to interfere as to the improvement or removal of insanitary dwellings, or as to the pollution of water, if the Local Authority fails in its duty.

From the analysis made by the County Medical Officer of the annual reports of the District Medical Officers, and from his own reports to the Sanitary Committee of the County Council on enquiries specially made by him, it became apparent that the several districts varied considerably in the conditions of their sanitation. Moreover, these various reports showed to the Sanitary Committee of the County Council, that there was a great want of uniformity in the knowledge and qualifications of the Inspectors themselves, and upon inquiry from the Sanitary Authorities, the Council ascertained that there are no uniform arrangements in the districts for ascertaining that an Inspector on appointment is necessarily conversant with the duties he has to perform. It therefore appeared desirable that some general instruction on these subjects should be offered by The Sanitary Institute.

The Public Health Act for London, passed in 1891, contains a provision affecting Inspectors in the Metropolis which undoubtedly will, on the first opportunity, be made applicable to the whole of the country. That Act enacts that all Inspectors in the Metropolis that are appointed after 1895, must possess a certificate of competency from some examining body authorised by the Local Government Board.

This provision, when extended to the whole country, will make it incumbent on all Sanitary Inspectors who desire to advance in their profession to obtain certificates of competency. The Sanitary Institute has been appointed by the Local Government Board, under this Act, an examining body to issue such certificates. And the Sanitary Institute has organised a system for the preliminary training of the Inspectors by means of lectures before the examination. The County Council is now offering to those of the Sanitary Inspectors of this County who desire it, the opportunity of obtaining a certificate of efficiency by means of these lectures and examinations. When that has been achieved, and certificates of competency have been obtained by all Sanitary Inspectors, the county will possess qualified Inspectors; and the public will reap great advantage from the employment of competent men, provided the Inspector is encouraged to make use of the knowledge he has acquired.

But there are certain disabilities which attach to the position of Sanitary Inspectors. Periodical house-to-house inspections are essential to the due performance of the duties of an Officer of Health or Inspector of Nuisances, in the neglected portions of his charge. And the duties which devolve on the Sanitary Inspectors, consequent on such inspection, may be of a nature to bring them not only into contact, but also into antagonism, with their employers; and influences are sometimes brought to bear upon them, which render it often a very unpleasant and ungracious duty to put in force the provisions of an Act which, although designed for the public benefit, may be opposed to the personal and private interests of the parishioners, many of whom may be members of the Vestry, Guardians of the Poor, or may sit on Local Boards of Health in the district. It thus follows that the support which the Inspectors have a right to expect from their superior officers, such as Local Surveyors and Medical Officers of Health, is sometimes grudgingly given or absolutely withheld in cases where influential members of the local authority are concerned. Consequently the preventive measures which it is so important to institute prior to the breaking out of epidemic disease, are often postponed till the disease itself has appeared; and the remedial measures are thus resorted to, when too late.

If the public is to have the full benefit from the education of

the Sanitary Inspectors, Sanitary Authorities must not allow consideration for individuals to weigh with them in making orders for the removal of sanitary evils. There is also this: If an Inspector incurs the labour and expense of studying for, and obtaining a certificate stating that he is qualified for his profession, he must expect reasonable remuneration for his work, and reasonable permanency in his situation.

The duties of the Inspectors of Nuisances (now more generally termed Sanitary Inspectors) have been defined by the Local Government Board briefly as follows:—

- I. They are to obey the directions of the Sanitary Authority and of the Medical Officer of Health, and they are to attend the Meetings of the Sanitary Authority when required.
- II. They are to inspect their Districts systematically, and keep themselves informed of the Sanitary condition of their District; and whenever they receive notice of the existence of a nuisance, or of a breach of bye-laws, or of regulations made by the Sanitary Authority, they are to inspect the locality and report thereon to the Sanitary Authority, as well as upon any noxious or offensive trades established in the District. They have to see that the provisions of the Common Lodging Houses Act are duly carried out. And under the Housing of the Working Classes' Act, they may be called upon to ascertain whether any dwelling-house is in a state so injurious to health as not to be fit for human habitation.
- III. They are to report to the Sanitary Authority when the water supply for domestic purposes is either wasted, or polluted, or defective.
- IV. They are to inspect slaughter-houses and all shops and markets for the sale of butcher's meat, poultry, fish, fruit, vegetables, corn, bread, flour, or milk; and they are to cause any such articles as may appear to be unfit for food, but which are intended for the food of man, to be dealt with by a Justice of the Peace, subject to the opinion of the Medical Officer of Health.
- V. They are to take samples of food and drugs when necessary, and they are to take any further proceedings required under the Sale of Food and Drugs Act.
  - VI. They are to give immediate notice to the Medical

Officer of Health of the appearance of any contagious, or infectious, or epidemic disease. They are to take necessary measures under the direction of the Medical Officer of Health for preventing the spread of such diseases; and when it appears to them that the intervention of such Officer is necessary, in consequence of the existence of any nuisance injurious to health, or of any over-crowding, or otherwise, they are forthwith to inform the Medical Officer of Health thereof.

VII. They are to be competent to superintend the execution of works for the suppression of nuisances, ordered by the Sanitary Authority, and to see that they have been duly executed.

VIII. They are to keep a record of the sanitary condition of houses in respect of which action has had to be taken under the Public Health Act of 1875, as well as to keep such other systematic records as are required by the Sanitary Authority; and they are to report fully on all matters to the Medical Officer of Health.

You will see by this summary that the Sanitary Inspector is intended to be the eye and right hand of the Medical Officer of Health; and it is only by keeping himself fully informed of the sanitary state of every part of his District, that he can bring to the notice of the Medical Officer all matters injurious to health in the District.

When I have advocated the importance of Sanitary Inspectors possessing a certain amount of technical education, I have often been met with the remark, that all that a Sanitary Inspector requires is common sense. Now common sense is a rare but most useful quality to possess, and combined with experience, common sense will go far to make up for want of special knowledge; but the duties laid on the Sanitary Inspector are wide; and since he has to keep the Medical Officer informed of any shortcomings in sanitation which occur in his District, he must possess special knowledge of the points which he has to observe and upon which he has to report to his chief.

Let us consider for a moment what is the special knowledge which the proper performance of the duties of a Sanitary Inspector involves.

He requires a knowledge of the laws which control Sanitary Administration; he requires a knowledge of the principles which govern sanitation; and he must be conversant with the methods which have been devised to give effect to those principles. Now this knowledge covers a very large field, and I purpose to explain briefly here what it implies.

- I. In the first place, his general education must be such as to enable him to keep accurate records, and make reports, accompanied if necessary with sketches illustrating such reports.
- II. He requires an accurate knowledge of the numerous Acts of Parliament which confer his duties upon him, as well as a knowledge of the model bye-laws of the Local Government Board.
- III. He must have a knowledge of the conditions which affect the health of dwellings, and must be cognizant of the various questions connected therewith, such as:
  - (a) Overcrowding; and he must be able to measure and calculate the cubic and floor space in rooms.
  - (b) He must understand the principles of ventilation, and know simple methods for applying these principles to houses.
  - (c) He must have a general knowledge of the constructional conditions affecting warmth; that is to say, both in respect of the generation and distribution of heat in the most favourable manner, as well as in respect of the methods of construction which prevent the loss of heat.
  - (d) He must understand construction as bearing upon light and window space; and the proportion which window space should bear to floor space and cubic space.
  - (c) He should be conversant with the conditions which foster damp, and with methods for preventing damp and dry rot.
  - (f) He must have a knowledge of the general conditions required for good drainage; he must be able to apply simple methods for testing drains.
  - (g) He must be able to advise upon the best forms for sanitary fittings and appliances, and understand how to test them effectually.

This knowledge involves a certain acquaintance with details of building construction, and a knowledge of what constitutes good plumbing.

IV. He must possess some knowledge of the physical characteristics of good drinking water, and of the various ways in which water may be polluted; either in consequence of the position of wells and streams in relation to nuisances, or by other sources of injury, either to the sources of supply of water, or from the retention of water in cisterns and in houses; and he must be acquainted with the means of preventing pollution of water.

V. He should understand the conditions to be observed in the construction and maintenance of dairies, cow-sheds, and slaughter-houses, so as to avoid sanitary dangers.

VI. He should be able to report upon noxious and offensive trades and manufactures, and whether the operations of the trade are carried on under due regulation.

VII. He should understand the best and most efficient method of scavenging, and be able to advise upon the storage and disposal of refuse.

VIII. He is also bound to know the general characteristics of good and bad food (such as meat, fish, milk, vegetables, &c.), as well as to understand the duties assigned to him under the Sale of Food and Drugs Act.

IX. He has, further, to possess a knowledge of the regulations affecting persons suffering from infectious diseases; he must be acquainted with the use and value of disinfectants, and he must be able to apply the various methods of disinfection suited to the circumstances of each case.

This brief statement of the various matters with which the Inspectors must be cognizant if they are to perform their duties efficiently, abundantly shows they must possess a certain amount of technical knowledge, and this is not to be obtained without special training; hence you will easily understand that something more than mere common sense is wanted. No doubt in many of these matters the Sanitary Inspector has at hand the advice and assistance of the Medical Officer of Health; but if he is to be an efficient help to that officer, and if his advice is to

be of value and to carry weight with the householder, he must himself possess a large amount of this technical knowledge, the heads of which I have enumerated.

For instance, in the matter of Sanitary Appliances, Sanitary Inspectors should know the reasons which have led to the adoption of the various appliances for sanitation, because you may sometimes, by advising remedies for one insanitary condition, introduce, through the want of such knowledge, fresh unforeseen causes of disease.

Thus, when some fifty or sixty years ago, the evils of cesspits in towns were seen to be very great, the proposal was made to turn the privies into water closets, and to send this refuse away in the sewers; but although until then, the sewers had only been constructed in a manner suitable for removing rain water, and had been only allowed to be so used, no one thought at that time whether the actual condition of the sewers was such as to permit of their being efficient carriers of this sort of refuse, nor was any thought given to the probable evils from sewer gas; and many deaths resulted from this ignorance. Indeed I know more than one case where the water closet soil pipe was led into the rain water pipe, which was connected with a water eistern under the house, the contamination of which caused much disease and some deaths. You cannot make a new departure in sanitary progress without much consideration, for each step you make introduces fresh conditions; this of itself is an evidence that it is highly important that the Sanitary Inspector should have sufficient knowledge of the principles of sanitation to enable him to appreciate these new conditions.

At the present time, one of the most important functions of the Sanitary Inspector is with reference to infectious and contagious disease. The Public Health Act of 1875 authorises the Local Sanitary Authority to provide hospitals and places for disinfection of bedding, clothing, &c., as well as ambulance carriages for the conveyance of sick persons. Recent Acts of Parliament enable Sanitary Authorities to require the notification of infectious diseases, and to isolate patients suffering from such diseases, as well as to pay the lodging of persons who must vacate their houses during the disinfection of the house and premises where a case has occurred.

I will give you an instance of the efficiency of isolation, and how that efficiency can be marred by the neglect of necessary precautions. We had a very serious epidemic of small-pox in London, 1884-5. According to the usual course of past

epidemics of small-pox, it should have recurred between 1889 and 1891 or 1892: but every case of small-pox in London, which cannot be isolated effectually in its own dwelling, is removed by ambulance carriages and steamers to ships placed in the lower Thames, and up to the present time the epidemic tendency has been kept under. There occurred, however, not many months ago a sudden outbreak of some ten or twelve cases, which afford a striking instance of how failure to isolate a patient may easily lead to a spread of the disease. The cases were all traced to one man who had fallen ill soon after landing from a foreign ship. His illness had not been recognised at once, and he had remained in his lodgings for some days before his case was notified, and before his removal to the hospital ships. The other cases were all traced to have had communication with this man, or his surroundings, under circumstances which showed that if he had been removed at once, probably all the others would have escaped the disease. Another case of the efficiency of isolation is also remarkable. You all, no doubt, know that the people of Leicester are much opposed to vaccination, and that a considerable proportion of the population is not vaccinated. They have, however, managed to escape during a long series of years from the ravages of small-pox, whilst epidemics of small-pox have raged in many towns and country districts of England. They have obtained this immunity, by paying very careful attention to the general sanitation of their town, and especially by maintaining a very efficient isolation in all cases where the disease manifests itself. They have an isolation hospital, to which anyone attacked with small-pox is removed, unless adequate isolation can be afforded at home; and they isolate not only the patient, but the family who have been in contact with the patient, paying their wages, and keeping them isolated under supervision for a sufficient period, to ascertain that they do not develop small-pox. Moreover, they do recognise the advantages of vaccination, in that they insist on vaccinating all such persons and their attendants. Inasmuch, however, as vaccination and revaccination afford an almost complete immunity from small-pox, the majority in this country wisely prefer the absolute safeguard of universal vaccination, to the risk of small-pox, which Leicester incurs; but we may learn from the Leicester practice in regard to small-pox, how to treat other infectious diseases, and by taking steps to isolate immediately every case of infectious disease, arrive at almost stamping them out.

The Sanitary Authorities who adopt the Act for the notification of disease, do, however, only part of the work necessary for

the prevention of infectious disease, unless they also provide isolation hospitals.

You must also remember that one of the conditions necessary to make isolation effective is the careful, immediate disinfection of premises, furniture, and clothing. Now this is especially the duty of the Sanitary Inspector. He must, therefore, possess adequate knowledge of the various materials to be used in disinfection, and how to apply them; he must also be furnished with adequate appliances for disinfection. It cannot be too strongly urged that if the notification of infectious disease is to be really effective as an instrument for preventing the spread of disease, careful immediate isolation and disinfection is imperative. I regret to say that in Worcestershire, many Sanitary Districts, and especially Rural Sanitary Districts, have only very partially recognised the importance of providing either isolation hospitals or adequate disinfecting appliances.

There is another point on which, I think, I can usefully say a few words, that is, on the disposal of house refuse. This subject is indeed one of growing importance, for our population increases rapidly, and the refuse which has to be disposed of increases in proportion. This refuse consists of 1st, feecal matter; 2nd, of house slops; and 3rd, ashes, kitchen waste, and other household refuse. In country districts, where houses are separate, the utilization of these matters is comparatively simple. They can generally be utilized without sanitary danger, in increasing the fertility of the garden and the field. But where houses are close together, as is the case in large villages and in towns, the difficulties are greater. You will hear in the course of these lectures what are the most effectual modes of disposing of these matters. I would only observe that the refuse, on sanitary grounds, ought never to be allowed to remain long in the house itself, nor ought it to be accumulated near the house, either in heaps where it contributes to pollute the air, or in pits where it may contribute to pollute the wells. The only safe plan is to place it in a metal receptacle and to have it removed to a distance, for purpose of utilization, every morning. In the final disposal of town refuse, it has sometimes been the custom to adopt very unsanitary proceedings. In the vicinity of many large towns this refuse has been sometimes used as the means of raising the level of the ground to afford a foundation for new houses. The continued rising of vapour from the ground makes this a most dangerous proceeding, and fevers and other diseases have been thereby occasioned in the dwellings built on such a foundation. This method of disposal is now fortunately comparatively rare.

The process of dust sorting by hand, which is still to some extent practised, is an insanitary occupation, and a large number of towns resort to destruction by fire as the simplest method of getting rid of it. Where refuse is burnt without smell the method is not insanitary, it saves trouble, and the refuse affords a fuel which may be utilized to assist in driving engines, to make electric light, or otherwise. Burning house refuse is, however, somewhat wasteful, and the insanitary part of dust sorting is obviated by the method of mechanical sorting invented by Messrs. Rosser and Russell. By this plan the refuse is discharged from the dust-cart into a sorting cylinder, by the aid of which, and of other ingenious appliances, the refuse is almost entirely sorted without being touched by hand, and the whole can be utilized; any usable articles are sold to assist various manufactures; some is sold as fuel and breeze, and the waste paper is passed through steam, by which it is disinfected, repulped, and made into rough cardboard or rough brown paper. This process is a further development of the principle of the utilization of waste, which is so important a feature of our civilization. We have long recognised that the application of sewage to land as a means of purifying it is absolutely essential, in order to enable us to dispose of the sewage of inland towns, villages, and districts, if our water supply is not to be injured; and this application of the principles of utilization to the refuse from the dust-cart, relieves us from a great difficulty which has hitherto governed the disposal of refuse.

This, however, is only one of the numerous inventions by which our Sanitary appliances are being daily altered and improved. Many of these improvements show us that what we have been accustomed to look upon as comparatively insignificant matters, are really of vast importance to the preservation of health.

But you will see from this summary that in order to deal intelligently with these apparently small matters, the Sanitary Inspector must possess a very considerable amount of technical knowledge, and each year these requirements are increasing. Now, although one of the chief functions of the Sanitary Inspector is to give attention to these apparently small causes in order to bring them to the notice of the Medical Officer of Health, and thus assist in preventing the spread of disease, you are all aware that if a house and its surroundings are to be kept in a healthy condition, it must be so kept by those who live in the house, that is to say, by the householder himself. But the householder is often careless about such matters; more

frequently, indeed, he is not aware of the evils which defective sanitation entails on himself and on his neighbours. The Sanitary Inspector is, however, or should be always at hand to point out the requirements of Sanitation to the householder when he is careless, and to teach him these requirements when he is ignorant of them. In carrying out the duty of explaining his shortcomings to the householder, something more than mere knowledge is required. If he is to spread the cause of Sanitation efficiently, he requires eminent tact.

There are two ways of approaching people under an Act of Parliament. One way is to threaten legal proceedings, and to order things to be done without explaining the object of the work required. That is a very injudicious way. It hinders rather than advances Sanitation. The other way is to use the position of a Sanitary Inspector as a means of teaching people and educating them in sanitary methods, so as to make them understand that they thereby diminish the causes which lead to preventable infectious disease. That is the true way to ensure proper attention to the subject. It is far better for people to do the work of sanitation willingly, and look upon the Sanitary Inspector as their friend, than to regard sanitation in a hostile spirit, and look on the Sanitary Inspector as a prying, intolerant autocrat, who would force upon them the principles of sanitation, whether or not they like and understand them.

I do not think that I can impress upon you too strongly that all our sanitary progress depends upon the recognition by the public that sanitation is desirable and necessary.

If you look into the Bible you will see that Moses included his sanitary precepts as a part of the religion of the people, and that he committed the duty of enforcing sanitary regulations to the care of the priests. We ought to take an example from that plan, and make sanitation distinctly a part of our elementary education; but meanwhile with us the Sanitary Inspector is the missionary upon whom devolves the duty of explaining to the people the importance of paying a close attention to sanitary details.

I look upon this duty, which lies upon the Sanitary Inspector, of educating the people in sanitation as a great and important mission, and I should like to impress upon all Sanitary Inspectors the importance of the educational position which they hold. They are continually in direct touch with the people, and they possess admirable opportunities ready to their hands for explaining to the people the importance of paying close attention

to sanitary details. Until the people themselves feel the importance of sanitation, very little real and substantial advance can be made by the nation.

Acts of Parliament may be necessary to assist sanitary progress and to enforce sanitary discipline, but laws can do little unless aided by the earnest, the strenuous co-operation of every individual member of the community. The Sanitary Inspector has it in his power, in the daily exercise of his duty, to explain, to teach, and to show practically to the artizan and to the labourer how, by care and attention to cleanliness in their persons, their food, their homes, and their surroundings, they can preserve their own health, and save their children and families from preventable sickness and death. Therefore, in conclusion, I would urge you to impress upon the minds of those under your charge the words of the poet, Goldsmith:—

"How small of all that human hearts endure
That part which laws or kings can cause or cure!
Still to ourselves in every place consigned,
Our own felicity we make or find,"

# EXAMINATIONS IN SANITARY KNOWLEDGE FOR LOCAL SURVEYORS AND INSPECTORS OF NUISANCES.

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Tun great and increasing importance of the duties devolving upon Local Surveyors and Inspectors of Nuisances, in connection with the various Acts relating to Public Health, Drainage and Water Supply, the Sale of Food and Drugs, &c., led The Sanitary Institute of Great Britain in 1877 to establish Voluntary Examinations, to appoint a Board of Examiners, and to grant Certificates of Competency in Sanitary knowledge.

The Sanitary Institute, in which the older body was incorporated in 1888,

is continuing this important work.

The Examinations are arranged in two grades, and are intended to enable Local Surveyors and Inspectors of Nuisances, or persons desirous of becoming such, or of obtaining the Certificate of the Institute, to prove their

competency on the subject of Examination. Many Boards and Corporations require Candidates, when making applications for appointments, to produce a certificate of this kind. A register of successful Candidates is kept at the Offices of the Institute, and a copy will be forwarded to Local Boards and Sanitary Authorities on application.

The Local Government Board have approved of The Sanitary Institute as a body, whose certificate, that a person has by Examination shown himself competent for the office of Sanitary Inspector, under the Public Health (London) Act, 1891, shall be sufficient for the purposes of the

requirements in Section 108 (d) of that Act.

Up to December 31st, 1892, 76 Examinations had been held—30 for Local Surveyors, and 46 for Inspectors of Nuisances. 2041 Candidates had been examined, 216 as Local Surveyors, and 1825 as Inspectors of Nuisances; of these 1238 passed the Examinations and received Certificates, 98 as Local Surveyors, and 1140 as Inspectors.

In order to make the Examinations for Inspectors more accessible to persons residing in the country, the Council now hold periodical Examinations in various centres, in addition to the Examinations held in London, provided that at least 20 Candidates send in applications for Examination. These Examinations are carried out in the same way as the Examinations in London, and no distinction is made in the Certificates granted.

Each Examination occupies a portion of two days. On the first day the Examination of Surveyors occupies six hours—viz., usually from 11 a.m. till 2 p.m., and from 3 till 6 p.m., and consists of written papers only. Inspectors of Nuisances have three hours' written Examination on the first day-viz., usually from 11 a.m. to 2 p.m. On the second day the Examination for each class is vivá voce, with one or more questions to be answered in writing, if deemed necessary.

#### REGULATIONS.

Every Candidate is required to furnish the Board of Examiners with satisfactory testimonials as to age and personal character, and to give two weeks' notice previous to presenting himself for Examination. He must be able to write legibly and spell correctly, and possess a fair knowledge of arithmetic, so that he may be able to prepare a report on any subject connected with his duties, creditable to himself and to the Authority employing him.

No one under 21 years of age is admitted to the Examinations.

The fees payable for the Examination are as follows:-

As Surveyors, £5. 5s. As Inspectors of Nuisances, £3. 3s.

But when the Examinations are held in Provincial Towns in or out of England, £1. 1s. extra will be charged to the Candidate in order to cover the expenses incurred in holding an Examination out of London. The fee for Examination must be paid to the Secretary; 10s. 6d. on making application, and the remainder at least one week before the day of Examination. On the receipt of the fee, a ticket will be forwarded admitting to the Examination.

A Certificate of Competency, signed by the Examiners, and bearing the Seal of the Institute, is granted to each successful Candidate.

Unsuccessful Candidates are allowed to present themselves at any other Examination within twelve months on payment of half fees.

Any person having passed the Examination and received the Certificate for Local Surveyor is, by virtue of having such Certificate, upon proposal and election as Member of the Institute, exempt from payment of the Entrance Fee, and will be called upon to pay only the reduced subscription of £1. Is, annually,

Any person having passed the Examination and received the Certificate for Inspector of Nuisances is, by virtue of having such Certificate, upon proposal and election as Associate of the Institute, exempt from payment of the Entrance Fee, and will be called only to upon pay the reduced subscription of 10s. 6d. annually.

#### **EXAMINATIONS ARRANGED FOR 1893.**

For Surveyors--London-Friday and Saturday, June 9th and 10th.

For Inspectors of Nulsances-

Worcester-Friday and Saturday, January 27th and 28th. London April 14th and 15th.

King's Lynn , April 28th and 29th. Exeter May 26th and 27th, Dublin June 23rd and 24th. Leeds July 7th and 8th. Cardiff July 28th and 29th. Newcastle-upon-Tyne November 10th and 11th. London December 1st and 2nd. Manchester ... December 15th and 16th.

The forms to be filled up before the Examination, by Candidates and by those persons recommending them, will be supplied on application to the Secretary. ...--

# SYLLABUS of SUBJECTS for EXAMINATION.

# FOR LOCAL SURVEYORS.

(1.) Laws and Bye-Laws—A thorough knowledge of the Acts affecting Sanitary Authorities, so far as they relate to the duties of Local Surveyors; also, of the Model By-Laws issued by the Local Government Board.
(2.) Sewerage and Drainage—The Sanitary arrangements of houses, including internal drainage, the construction of water-closets, privies, and dry-closets, the removal and disposal of refuse; the Sanitary defects of Builder's and Dhumbor's work; the Sanitary principles of Sewerage and Drainage and Plumber's work; the Sanitary principles of Sewerage and Drainage and their application in the preparation of schemes for, and in the construction of, Sewerage works; the flushing and ventilation of sewers, and the treatment and disposal of sewage.

WATER SUPPLY OF TOWNS AND HOUSES—The sources of water, methods of collecting, purification (filtration, softening, &c.), and distribution. The Sanitary principles of Water Supply, and their application in the preparation of schemes for, and in the construction of, Water-works; the various ways in which water is likely to become polluted, and the best means of ensuring its purity.

(4.) STRUCTURAL—Regulation of Cellar Dwellings and Lodging Houses, and of Baths and Wash-houses; General principles of Ventilation and their practical application; the amount of air and space necessary for men and cattle; the means of supplying air, and of ensuring its purity.

(5.) HIGHWAYS AND STREETS—The Sanitary principles which should be observed in the construction and cleansing of streets and roads. Candidates will be required to make free-hand sketches.

#### FOR INSPECTORS OF NUISANCES.

# Duties of Inspectors of Nulsances as defined by the order of the Local Government Board, March, 1891.

(1.) He shall perform, either under the special directions of the Sanitary Authority, or so far as authorized by the Sanitary Authority, under the directions of the Medical Officer of Health, or in cases where no such directions are required, without such directions, all the duties specially imposed upon an Inspector of Nuisances by the Public Health Act, 1875, or by any other Statute or Statutes, or by the Orders of the Local Government Board, so far as the same apply to his office.

the same apply to his office.

(2.) He shall attend meetings of the Sanitary

Authority when so required.

(3.) He shall by inspection of the District, both systematically at certain periods, and at intervals as occasion may require, keep himself informed in respect of the nuisances existing therein that require abatement.

(4.) On receiving notice of the existence of any nuisances within the District, or of the breach of any by-laws or regulations made by the Sanitary Authority for the suppression of nuisances, he shall, as early as practicable, visit the spot, and inquire into such alleged nuisance or breach of by-laws or regulations.

(5.) He shall report to the Sanitary Authority any noxious, or offensive businesses, trades, or manufactories established within the District, and the breach or non-observance of any by-laws or regulations made in respect of the same.

(6.) He shall report to the Sanitary Authority any damage done to any works of water supply, or other works belonging to them, and also any case of wilful or negligent waste of water supplied by them, or any fouling by gas, filth, or otherwise, of water used for

(7.) He shall from time to time, and forthwith upon complaint, visit and inspect the shops and places kept or used for the preparation or sale of butchers' meat, poultry, fish, fruit, vegetables, corn, bread, flour, milk, or any other article to which the provisions of the Public Health Act, 1875, in this behalf shall apply, and examine any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, milk, or any other article as aforesaid, which may be therein; and in case any such article appear to him to be intended for the food of man, and to be unfit for such food, he shall cause the same to be seized, and take such other proceedings as may be necessary in order to have the same dealt with by a Justice: Provided, that in any case of doubt arising under this clause, he shall report the matter to the Medical Officer of Health, with the view of obtaining his advice thereon.

(8.) He shall, when and as directed by the Sanitary Authority, procure and submit samples of food, drink, or drugs suspected to be adulterated, to be analysed by the analyst appointed under "The Sale of Food and Drugs Act, 1875," and upon receiving a certificate stating that the articles of food, drink, or drugs are adulterated, cause a complaint to be made, and take the other proceedings prescribed by that Act.

Syllabus of Subjects for Examination.

The Provisions of the Acts and Model By-Laws relating to the duties of Inspectors of Nuisances.

A knowledge of what constitutes a Nuisance.

Methods of Inspection, of Dwellings, Cellar Dwelfings, Dairies, Milk-shops, Markets, Slaughter-houses, Cow-sheds, Canal Boats and Nuisances especially connected with Trades and Manufactories.

The Physical Characteristics of good Drinking Water—the various ways in which it may be polluted, by Damage to Supply Works or in Houses, and the means of preventing pollution—Methods of Water Supply.

The Characteristics of good and bad Food (such as Meat, Fish, Milk, Vegetables).

The sale of Food and Drugs' Act.

(3) He shall give immediate notice to the Medical Officer of Health of the occurrence within the district of any contagious, infectious, or epidemic disease; and whenever it appears to him that the intervention of such officer is necessary in consequence of the existence of any nuisance injurious to health, or of any overcrowding in a house, he shall forthwith inform the Medical Officer of Health thereof.

(10.) He shall, subject to the directions of the Sanitary Authority, attend to the instructions of the Medical Officer of Health with respect to any measures which can be lawfully taken by an Inspector of Nuisances under the Public Health Act, 1875, or under any other Statute or Statutes, for preventing the spread of any contagious, infectious, or epidemic disease of a dangerous character.

(11.) He shall enter from day to day, in a book to be provided by the Sanitary Authority, particulars of his inspections and of the action taken by him in the execution of his duties. He shall also keep a book or books, to be provided by the Sanitary Authority, so arranged as to form, as far as possible, a continuous record of the sanitary condition of each of the premises in respect of which any action has been taken under the Public Health Act, 1875, or under any other Statute or Statutes, and shall keep any other systematic records that the Sanitary Authority may require.

may require.

(12.) He shall at all reasonable times, when applied to by the Medical Officer of Health, produce to him his books, or any of them, and render to him such information as he may be able to furnish with respect to any matter to which the duties of Inspector of Nuisances relate.

(13.) He shall, if directed by the Sanitary Authority to do so, superintend and see to the due execution of all works which may be undertaken under their direction for the suppression or removal of nuisances within the district.

(14.) He shall, if directed by the Sanitary Authority to do so, act as Officer of the said Authority as Local Authority under the Contagious Diseases (Animals) Act, 1886, and any Orders or Regulations made thereunder.

(15.) In matters not specially provided for in this Order, he shall observe and execute all the lawful orders and directions of the Sanitary Authority, and the Orders of the Local Government Board which may be hereafter issued, applicable to his office.

The Regulations affecting persons suffering or recovering from Infectious diseases, and some knowledge of such diseases—The principles of Ventilation, and simple methods of Ventilating Rooms—Measurement of Cubic Space.

Disinfectants and Methods of Disinfection.

A Knowledge of the General Duties of the Office, and Methods of keeping the necessary Books and Records. Writing and Spelling.

The proper conditions of good Drainage—The advantages and disadvantages of various Sanitary Appliplances for Houses—Inspection of Builder's and Plumber's work—Scavenging and the Disposal of Refuse.

# Particulars as to Local Boards requiring Candidates to hold Certificates.

For several years past it has been the practice of many Local Authorities to insert in their advertisements for Inspectors of Nuisances clauses similar to the following, or otherwise to definitely recognise the desirability of a Certificate:—

Extract from advertisements—

## POPLAR DISTRICT.

"... Candidates must possess a knowledge of building construction, and if not already in possession of the Certificate of The Sanitary Institute, must obtain such Certificate within twelve months of appointment..."

#### PADDINGTON PARISH.

"... Applicants must have passed a satisfactory examination and be in possession of Certificates from The Sanitary Institute. . . ."

Extract from Advertisements-Continued.

#### LIVERPOOL.

"... Candidates must hold the Certificate of The Sanitary Institute of Great Britain. . . ."

#### METROPOLITAN-29.

City of London, 1891.

Battersea, 1885—9--91—3.

Bethnal Green, 1889—90.

Camberwell, 1891—92.

Chelsea, 1893.

Fulham, 1890—90.

Greenwich, 1890—91—92.

Hackney, 1891—93.

Hampstead, 1891—92.

Kensington, 1891—92.

Lambeth, 1890.

Limehouse, 1890.
Marylebone, 1891.
Newington, 1891.
Paddington, 1881—89.
Poplar, 1890.
Rotherhithe, 1893.
St. George's, Hanover Square, 1891.
St. George's-in-the-East, 1892.
St. James's, Westminster, 1891.

St. Luke's, 1887—91—93.
St. Margaret, Westminster, 1692.
St. Mary, Islington—1892—93.
St. Olave's, 1889.
St. Paneras, 1885—87—90—92.
St. Saviour's, 1889.
Wandsworth (4), 1888—89—91—92.
Whitechapel, 1891.

#### PROVINCIAL-92,

Aberavon, 1893.
Alton, 1893.
Barnet, 1890.
Bath, 1890.
Bath, 1890.
Bedwellty, 1891—92.
Bexhill, 1892.
Birkenhead, 1891.
Birmingham, 1892.
Blackburn, 1892.
Blackburn, 1892.
Blackpool, 1889.
Blean, 1890.
Bolton, 1893.
Bournemouth, 1891—92.
Bradfield, 1891.
Brierley Hill, 1890—91.
Bristol, 1884—86.
Bromley, Kent, 1891—91.
Cardiff, 1890—93.
Carnarvon, 1891.
Chesterfield, 1892.
Chiswick, 1891.
Clay Lane, 1892.
Coventry, 1891.
Croydon, 1891.
Darwen, 1891.
Darwen, 1891.
Dorchester, 1892.
Eastbourne, 1889.
Ely, 1888.
Exeter, 1889.

Foleshill, 1891. Hailsham, 1886-91. Halifax, 1892. Hanley, 1891-92. Hartlepool, 1890, Hastings, 1892, Hebburn, 1892, Idle, 1892. Kingston - upon - Hull, 1884—90—90. Leeds, 1889. Liverpool, 1886-91. Lytham, 1887—92. Maidstone, 1889—80. Manchester, 1890-91-92. Margate, 1888—90. Margram, 1893. Midhurst, 1892. Milton-by-Sittingbourne, 1887. Nantyglo, 1891. Nelson, 1892. Newcastle-on-Tyne, 1891. Newmarket, 1887-88-90-92. Northampton, 1892. Norwich, 1892. Oswestry, 1887. Plymouth, 1892. Pontypool, 1892. Pontypridd, 1890—92. Poole, 1893.

Portsmouth, 1890. Pottersbury, 1893. Rhyl, 1890. Risbridge, 1893. Salford, 1891-92. Scarborough, 1888. Sheffield, 1890--91--93, Southampton, 1890--91. Southampton, 1890—91 Staffordshire County Council, 1892. Stockport, 1891—92. Stockton, 1887–90-91. Stretford, 1892. Stroud, 1892. Sunderland, 1885-92. Swansea, 1893. Tendring, 1891. Thakeham, 1890—90—92. Twickenham, 1887. Wakefield, 1891. Ware, 1891. Watford, 1887. West Bromwich, 1892. West Ham, 1891—93. Wigan, 1891. Willesden, 1891. Winslow, 1893. Wimbledon, 1890. Winslow, 1893. Wood Green, 1892. Worthing, 1890—91. Yorkshire, W.R., 1891.

COLONIAL-1.
Cape Colony, 1891.

Table shewing the number of Candidates examined and certified each year.

	Nm	nber Exam	ined.	Certificated.							
Year.				}	Number.	Per cent, of Total.					
	Survoyor	Inspector	Total.	Surveyor	Inspector	Total.	Surveyor.	Inspector			
1877	3	5	8	2	3	5	G7	60			
1878	11	10	21	3	10	13	27	100			
1879	4	6	10	2	4	6	50	67			
1880	10	3	13	6	2	8	co	67			
1881	7	7	14	2	6	8	29	86			
1882	6	15	21	3	13	16	50	87			
1883	7	13	20	3	11	14	43	85			
1884	14	36	50	7	27	34	50	75			
1885	20	44	64	5	33	38	25	75			
1836	19	105	124	9	86	95	47	83			
1887	17	122	139	7	75	82	41	61			
1888	25	124	149	8	77	85	33	62			
1889	9	165	174	5	89	94	56	54			
1890	18	307	325	8	151	159	44	49			
1891	11	350	361	8	238	246	73	68			
1892	35	513	548	20	315	335	57	61			
	216	1825	2041	93	1140	1238	45	62			

# Table and Diagram shewing the number of Candidates examined and certified each year. Relating to Inspectors' Examination only.

Үсаг.	Number Examined.	Number Certificated.	Per cent.				0					5
					88	89	1850	91	92	93	94	8
1877	5	3	60				Ī	_	_		٠.	
1878	10	10	100								Ŀ	
1879	6	4	67								Γ	
1830	3	2	67	. €00							一	c
1881	7	6	Se					-	<del> </del>		╁╌	
1882	15	13	87				-	<del> </del> —	├			
1883	13	111	85					_	┢	·	<u> </u>	
1884	36	27	75						_		_	
1885	44	33	75	500								
1886	105	86	83	300								
1887	122	75	GI.			Ī						
1888	124	77	63									
1889	165	89	54								-	
1890	307	151	49			·						
1891	350	238	<b>6</b> 8	400	,							4
1892	513	315	<i>61</i>									
				-   65						,	$\Box$	
	1825	1140	63									
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20								M	M			20
		anne		3.5.2.8.4.5.4.2.4.	3,75%	4,4.4	333	1.50	18.66			۷ ۲

NOTE.—The total number of Candidates is shewn by the whole height of the column shaded, and the number who have obtained Certificates by the lighter portion.

# LIST OF CANDIDATES WHO RECEIVED CERTIFICATES DURING 1892.

## LOCAL SURVEYORS.

- 1892, June 18. Brown, Edwin, Burgess Hill, Sussex.
- 1892, June 18. Connal, Eben, 49, Kerrsland Terrace, Hillhead, Glasgow.
- 1892, July 9. DAYE, JOHN, 3, Diana Street, Albany Road, Cardiff.
- 1892, June 18. DENDY, WILLIAM COOPER, Surveyors' Department, Lambeth.
- 1892, June 18. Dixon, Frances Edward, Walton-le-Dale Local Board, Preston.
- 1892, Apr. 29. Goddard, Joseph, Springfield Farm, Chinley, Chapel-en-le-Frith.
- 1892, Apr. 29. GREEN, WILLIAM SAMUEL, Idridgehay, Derby. 1892, June 18. GRIFFITHS, HAROLD, School Board Offices, Embankment, W.C.
- 1802, Apr. 20. Kilford, Henry James, Borough Surveyor, Ilkes-
- 1892, June 18. Kirk, John Whight, Vestry Offices, Battersea Rise.
- 1882, June 18. LLOYD, CHRISTOPHER, 2, St. Mark's Terrace, New Brompton.
- 1892, June 18. MILLER, HENRY, "The Wilderness," Carrow Hill, Norwich.
- 1892, June 18. MITCHELL, LEWIS, Hurlford, Kilmarnock.
- 1892, June 18. NEWMAN, REGINALD WILLIAM, 53, Barnmead Road, Beckenham.
- 1892, Apr. 29. Outram, Mason, Mill House, Dronfield, Sheffield. 1892, July 9. Riddway, Ernest Reginald, Long Eaton, Notting-
- ham.
- 1892, June 18. Stanbury, William Henry, Royal Engineers' Office, Freetown, Sierra Leone.
- 1892, July 9. WILLIAMS, WILLIAM ILTYD, Pentregwithel, Aber-
- 1892, July 9. Wilson, John A., 18, Rodney Terrace, Cheltenham.
- 1892, June 18. Yates, Fred Spencer, Assoc, M.Inst.C.E., City Surveyor's Office, York.

#### INSPECTORS OF NUISANCES.

- 1892, June 11. Ackernley, Joseph, Broughton Road, Skipton.
- 1892, Apr. 9. Adams, Albert Edward, 29, Alexander Road, Northampton.
- 1892, July 16. Allen, Thomas Holton, Strumpshaw, Norwich.
- 1892, June 11. Anderson, George Hart, Town Hall, Middlesboro'.

1892, Dec.	3.	Anderson,	Jasper	KIRTLE	r, 13,	Railway	Street,
	_	Beverley,	Yorkshi	re.			

1892, June 11. Armitage, Frederick L., Upper Spring Street, Huddersfield.

1892, June 11. Armitage, Thomas Albert, 12, South Parade, Huddersfield.

1892, June 11. Arnsby, William Edward, Long Acre, Bingham, Notts.

1892, Dec. 3. Ashley, Sydney, 14, Gower Street, W.C.

1892, Dec. 17. Ashurst, George Norman, 40, Allington Street, St. Michael's, Liverpool.

1892, Apr. 29. Atkins, Benjamin, 31, Russell Street, Leamington Spa.

1892, Dec. 3. Bache, Arthur Edward, 81, Elswick Rd., Lewisham.

1892, Dec. 3. BAGSHAW, ALLEN, Junn., 46, Beatrice Street, King Street, Plaistow.

1892, July 16. Baker, Henry Kirkham, 9, North Terrace, Cambridge.

1892, June 11. Baldwin, Parkinson, Farnbill, Kildwick.

1892, June 11. BARKER, WILLIAM THOMAS, Town Hall, Salford, 1892, Dec. 17. BARON, JOHN, 12, William Street, Little Lever.

1892, Dec. 3. Barth, Frederick Alfred, 17, Kensington Place, Campden Hill, W.

1892, Apr. 9. BATES, MATTHEW, Local Board Offices, Bromley, Kent.

1893, Dec. 3. Belcher, Charles Robert, 84, Loughborough Road, S.W.

1892, Apr. 9. Bennert, Albert, 138, Clarence Road, N.W.

1892. Dec. 3. Bennett, Henry Mariano, Victoria Street, Staple-Hill, Bristol.

1892, Dec. 3. BILLING, GEORGE TIMOTHY, 16, Olinda Street, Portsmouth.

1892, Dec. 17. BLYTHE, OSBORNE, Junr., Foxton Hall, Alnmouth, Northumberland.

1892, June 11. Bolton, Joseph, Sanitary Inspector, Otlev.

1892, June 11. Borras, Thomas, 5, Littlewoodhouse Street, Leeds. 1892, June 11. Bottomley, Albert Edward, 64, Ovenden Road,

Halifax.
1892, Apr. 9. Bowden, William George Frederick, 38, Crozier Street, Lambeth, S.E.

1892, June 11. Braithwaite, Thomas, Darton, Barnsley.

1892, Apr. 29. Bramham, William, Fern Cottage, Market Street, Clay Cross.

1892, Dec. 3. Braybon, Frederick William, 52, Grosvenor Street, Brighton.

1892, Apr. 9. Bromley, James, Rothwell Estate Office, Sharples Hall, Bolton.

1892, June 11. Brough, Richard, 28, Servia Grove, Leeds.

1892, Apr. 9. Brown, Reginald, Local Board, Ealing.

1892, Apr. 9. Brown, Robert Frederick, 130, Devonshire Street, Mile End.

1892, Apr. 9. Brown, Robert, Junr., 44, St. Ann's Hill, Wandsworth.

1892, June 11. Buck, Samuel, Dacro Banks, Leeds.

1892, Dec. 3. Buckton, Walten, 27, Ladbroke Square, W.

1892, Dec. 3. Busbridge, Harold, 96, Herbert Road, Plumstead. 1892, July 9. Bush, Spencer, High Roding, Dunmow, Essex.

1892, Apr. 9. Butcher, Charles Ernest, 17, Circus Road, St. John's Wood, N.W.

1892, Dec. 3. Butler, Charles Edward, Surveyor's Office, Shoreham.

1892, Apr. 9. Button, Walter.

1892, July 16. Cannell, Charles Stephen, 32, Knowsley Road, Magdalen Road, Norwich.

1892, Dec. 3. CARPENTER, ROBERT, Sergt.-Major, The Barracks, Hounslow.

1802, Mar. 5. CASELY, EDWIN JOHN, 46, Alpha Road, Southville, Bristol.

1892, June 25. CATTLIFF, WILLIAM, Town Hall, Newcastle-upon-Tyne.

1892, Dec. 3. Catton, Herbert, Sherfield House, Grays.

1892, Dec. 17. Chadwick, John, Petersfield, Hants.

1892, Apr. 9. Chark, Joseph, Waterworks Engineer's Department, Southampton.

1892, July 16. Challenger, Wilmam, Southery, Downham Market.

1892, June 11. CHAMBERS, FREDERICK, Local Board Offices, Goole.

1892, July 16. CHAPMAN, CECIL ROBERT WILLIAM, 5, Carshalton Road, New Lakenham, Norwich.

1892, July 9. Chapple, William Robert, 50, Rodney Street, Swansea.

1892, Dec. 17. Charlesworth, James Frederick, 11, Union Street, Southport.

1892, July 9. Charters, Robert H., The Moors, Cadoxton, Cardiff.

1892, Dec. 3. Chesterfield, William James, 32, Rosaville Road, Fulham.

1892, June 11. Clark, Arthur Edward, "The Sanatorium," York Road, Leeds.
1892, Dec. 3. Clarke, Charles Henry, 2, Rutland Terrace, High

Road, Leyton.
1892, June 11. Coates, Joseph Carter, New Brighton, Bramley,

Leeds.
1892, June 11. Coates, William Morfin, 13, Northbrook Street,

Chapeltown, Leeds.
1892, Apr. 9. Cook, WILLIAM GEORGE, Wetherell Cottage, Well Road, Hampstead.

1892, Dec. 17. Corrigan, Joseph, 24, Keble Street, Ince, Wigan.

1892, Mar. 5. Cotty, John Frederick, 40, Princes Street, Bristol.

1892, Apr. 9. Crofts, Thomas John, 50, Central Street, Landport, Portsmouth.

1892, Dec. 3. Cuckney, James Alfred, 37, Grosvenor Street, Brighton.

1892, Apr. 9.	CURRIE, THOMAS, Marshall Cottage, Hawkhill, Ayr.
1892, Dec. 3.	CURTIS, JAMES, Court House, Marylebone.
1892, Apr. 29.	DANE, SAMUEL, Primrose Lane, Glossop.
1892, Mar. 5.	DAVID, PHILIP, 23, North Luton Place, Cardiff.
1892, July 9.	DAVIES, DAN, Forndale, Rhondda Valley, Glamorgan.
1892, Dec. 3.	DAVIES, EDWARD PLUMMER, Ty-Eos-y-Cood, Llanover,
1000, 1000	Abergavenny.
1893, July 9.	DAVIES, LLEWELLYN, Priory House, Albany Road, Cardiff.
1892, Dec. 17.	DAVIES, SAMUEL, 6, Edith Road, Anfield, Liverpool.
1892, July 9.	DAVIES, WATKIN J., 4, Queen Street, Maesteg.
1892, June 25.	DAVISON, GEORGE WILLIAM, Boys' Industrial School, Sunderland.
1892, Dec. 3.	Dawes, Henry, 72, Rendlesham Road, Clapton.
1892, Mar. 5.	DAWSON, EDWARD HOWARD, A.R.L.B.A., 41, Market Street, Lancaster.
1892, Mar. 5.	DAYE, JOHN, 3, Diana Street, Albany Road, Cardiff.
1892, Dec. 3.	DEARSLEY, JAMES H., 46, Glenarn Road, Lower
	Clapton.
1892, June 11.	DENHAM, HODGSON, Aberford, Leeds.
1892, Apr. 29.	DEWHIRST, JAMES, 4, New Bridge Street, Keighley, Yorkshire.
1892, Dec. 17.	Dickinson, Arthur James, 456, Glossop Road, Sheffield.
1892, June 11.	DODGSON, WILLIAM, Woodside, Cononley, Keighley.
1892, Apr. 29.	Dolman, William, 15, Arundel Street, Derby.
1892, July 16.	Dowzard, Richard, 85, Esmond Street, Liverpool.
1892, Dec. 3.	DRAKE, FREDERICK, 64, King Street, Maidstone.
1892, June 11.	DUNIHLL, JOHN WILLIAM, 13, Berry Street, Hall
1002, 0 1110111	Lane, Bradford, Yorks.
1892, Dec. 3.	Edser, William, 15, Harrow Road, Dorking.
1892, June 25.	EGGLESTONE, WILLIAM MORLEY,
1892, Apr. 9.	ELLIS, STANLEY, 28, Chertsey Street, Guildford.
1892, Dec. 3.	Elms, Thomas Hood, 43, Mall Road, Hammersmith.
1892, Mar. 5.	Evans, John Isaac, 11, Blanche Street, Cacharris,
	Dowlais.
1892, Dec. 3.	Camberwell.
1892, Dec. 17.	Finch, John Thomas, 17, Cornwallis Street, Liverpool.
1892, July 9.	FLOOD, WILLIAM HOLSGROVE, 44, High Street, Crediton, Devon.
1892, Dec. 3.	FORTUNE, EDWARD ISAAC, 12, Frederick Street, Gray's Inn Road, W.C.
1892, Apr. 9.	FOSTER, EDWARD TRUMP, 29, St. Maur Road, Fulham.
1892, Dec. 3.	FREEMAN, WALTER, 31, Lamb's Conduit Street, W.C.
1892, Dec. 3.	FRENCH, HARRY C., 113, Shirland Rd., Paddington.
1892, Apr. 9.	FRIEND, ALICK EDWARD, 22, Hemingford Road,
	Barnsbury.

1892, Dec. 17. Gamble, David, Local Board, Ashton-in-Makerfield. 1892, Apr. 9. GARNHAM, ALBERT EDWARD, Beulah Place, Beulah Hill, Norwood. 1892, June 25. Gibson, John, Town Hall, Newcastle-upon-Tyne. 1892, Apr. 9. GOLDER, THOMAS COLLINGS, 5, Connaught Road, Folkestone. 1892, Dec. 3. GOODALL, NORMAN, Russell Street, Batley. 1892, June 25. GOODFELLOW, ROBERT HECTOR, Camp Street, Maryport. 1892, Dec. 3. Grant, Ernest Henry, Angmering, Worthing. 1892. Dec. 17. Grayson, Samuel, 5, Trajan Street, South Shields. 1892, June 11. GRIFFIN, THOMAS GULLIVER, Laurel Cottage, Clay Cross, Chesterfield. 1892, July 9. Griffiths, William, 56, Upper Aberdyberthi Street, Swansea. 1892, June 11. HAIGH, BENJAMIN, Town Hall, Huddersfield. 1892, June 25. HALL, GEORGE WILLIAM, The Workhouse, Cheadle, Stoke-on-Trent. 1892, July 9. HALL JOHN, Poundfield, Stonehouse, Gloucester. 1892, June 11. HALL, THOMAS JOHN, Rural Sanitary Authority, Barnsley. 1892, June 11. HAMMOND, WILLIAM HENRY, South Parade, Horbury. 1892, June 25. HARDING, JOHN, Baker Street, Haswell, Sunderland. 1892, July 16. HARDY, ALFRED, Yarmouth Road, Thorpe, Norwich. 1892, Dec. 17. HARGREAVES, JAMES WILLIAM, 296, New Church Road, Stacksteads. 1892, July 9. HARRISON, ROBERT COLCHESTER, Brynonen, Dowlais, Glamorgan. 1892, Apr. 9. HART, FREDERICK, 32, Wyndham Street, Bryanston Square, W. 1892, Dec. 3. HARVEY, WILLIAM, 117, Dunlace Road, Lower Clapton. 1892, Dec. 3. Heath, James, 85, Dennett Road, West Croydon. 1892, Apr. 9. Henley, Amos S., Camberwell Workhouse, Willowbrook Road, Peckham. 1892, Dec. 3. HERRIN, JOHN, 31, The Avenue, Acre Lane, Brixton. 1892, Apr. 9. HERRIOTT, HARRY, St. George's, Hanover Square. 1892. Apr. 29. HERROD, HERBERT, Barrow-on-Soar, Loughborough. 1892, July 9. HILL, CHARLES WILLIAM, 30, Donald Street, Cardiff. 1892, Dec. 17. HILL, SAMUEL GOSTAGE, 14, Aigburth Road, Grassendale, Liverpool. 1892, Dec. 3. HILLYARD, HENRY, 74, Duncombe Road, Hornsey Rise. 1892, June 25. Hindle, William James, Morton, Bingley, Yorks. 1892, June 11. Hirst, Frank S., 53, Kingeross Road, Halifax. 1892, Dec. 17. HITCHMOUGH, WILLIAM, 142, Tunhill Rd., Liverpool. 1892, Apr. 9. Hobbs, James Shotten, 61, New Road, Buckland, Portsmouth. 1892, Dec. 17. Holden, Timothy, 272, City Road, Manchester. 1892, June 11. Holdroyd, Alfred, Local Board, Cleckheaton.

- 1892, Dec. 3. Holland, Edward Louis Copeman, 118, St. James' Road. Portsmouth.
- 1892, June 11. Holmes, John Edward, North Collingham, Newark. 1892, June 11. Holkoyp, James Bates, Poor House, Barkisland.
- Yorks. 1892, Apr. 29. Hopkinson, Frederick, 11, Cross St., Chesterfield.
- 1892, Apr. 9. Horron, William, 22, Halsey Street, Chelsen. 1892, Dec. 3. Hoskins, Nandy W., 61, Plumstead Common
- Road, S.E.
- 1892, June 11. Hudson, Albert Edward, 28, Oxford Lane, Siddall. Halifax.
- 1892, Dec. 17. HUGHES, ROBERT JOHN, 105, Claughton Road. Birkenhead.
- 1892, Dec. 3. HUNTER, JOHN, Grove Road, Windsor.
- 1892, Dec. 17. HURST, John, 158, Palmerston Street, Beswick, Manchester.
- 1892, Mar. 5. HUTCHINGS, WILLIAM ARTHUR, 15, St. John's Park Terrace, Winchester.
- 1892, Apr. 29. Hype, George, 214, Osmaston Road, Derby.
- 1892, July 9. James, William Robert, Local Board Office, Abersychan, Pontypool,
- 1892, Dec. 3. JARRATT, EDWARD JOHN, 11, Albion Hill, Lewisham Road.
- 1892, June 25. Jemson, William, Hoskinshire, Out Rawcliffe, Garstang.
- 1892, Dec. 3. Jenkin, Charles Henry, 30, Little Russell Street, Bloomsbury.
- 1892, Dec. 3. Jevons, John Henry, Braintree, Essex. 1892, June 11. Jones, Joseph, 1, New Street, Pudsey.
- 1892, Apr. 9. Kelf, Charles H., 22a, Dorinda Street, Liverpool Road, N.
- 1892, Dec. 3. Kerslake, Charles Henry, 47, Relf Road, Peckham Rve.
- 1892, Apr. 9. KILLGALLIN, CHARLES J., Court House, St. Marylebone, W.
- 1892, Apr. 9. KNOX, CHARLES GEARY, 60, Lordship Road, Stoke Newington.
- 1892. Apr. 9. Lamport, Miss Ethel Frances, 55, Burton Crescent,
- 1892, Dec. 3. LAWRENCE JAMES, 12, Bridge Road West, Old Battersea, S.W.
- 1892, Apr. 9. LAWRENCE, WILLIAM JAMES, 71, Chadwick Road, Peckham.
- 1892, Dec. 3. Leach, Robert, 6, Barton Street, Westminster.
- 1892, Apr. 29. Lee, John, 64, St. Paul's Road East, Birkenhead. 1892, Dec. 17. Lee, Roger, 10, Thompson Street, Hendon, Sun-
- derland.
- 1892, Dec. 3. Lewis, Eli, Pendoylan, Cowbridge, South Wales.
- 1892, June 11. LIGHTFOOT, JAMES, Town Hall, Huddersfield.
- 1892, June 11. Lindley, Joseph, Cliffe Villa, Staincliffe, Dewsbury.

- 1892, July 16. Ling, Altred George, Hempstead, Holt, Norfolk.
- 1892, Dec. 3. Lintoff, John, 80, London Road, Brighton.
- 1892, Apr. 29. Little, William, 26, Overbury Street, Liverpool.
- 1892, Apr. 9. Loasny, Fred Walter, 30, Liverpool Street, King's
- 1892, Dec. 17. LORD, RALPH, 38, Alexandra Road, Ashton-under-Lyne.
- 1892, Dec. 3. LOVELOCK, HERBERT JOHN, 5, St. Edward's Terrace, Stamshaw, Portsmouth.
- 1802, Dec. 3. Lyon, Frederick, 616, Mile End Road, E.
- 1892, Apr. 9. Lyon, James Joseph, 6, Rice Lane, Walton, Liver-
- 1892, Mar. 5. Lyons, John Thomas, Eastwood Villa, Wentworth, Road, Bishopston, Bristol.
- 1892, Dec. 3. Madge, Frank Wm., 46, London Road, Forest Hill. 1892, June 11. Mallinson, Thomas, 95, Gowthorpe Street, Selby.
- 1892, Dec. 3. Marks, Charles Alfred, 7, Somerset Terrace,
- Merton Road, Wandsworth.
- 1892, Dec. 3. MARRABLE, HORACE, 16, Willenhall Road, Plumstead.
- 1892, Apr. 9. MARTIN, A. W., 3, Plumstead Road, Plumstead.
- 1892, Apr. 9. MARTIN, HENRY RICHARD, Essendine Road, Cater-
- 1892, June 11. Massey, William, Marine Hotel, Whitby.
- 1892, June 11. McMillan, John, 26, Park Street, Stockport.
- 1892, June 25. Meadows, John William, 52, Camden Street, North Shields.
- 1892, July 9. Meazey, Thomas, Grove Cottage, Stanwell Road, Penarth.
- 1892, Dec. 3. MILLARD, CHARLES K., M.D., Costock, Loughborough.
- 1892, Apr. 9. MILLER, FREDERICK WILLIAM, 137, Salcott Road, Clapham Common.
- 1892, Apr. 9. MILLER, WILLIAM J., 53, Balliol Road, Buckland, Portsmouth.
- 1892, June 11. MILLINGTON, THOMAS CHARLES, Crayen Terrace, Settle, Yorks.
- 1892, June 11. Mills, John William, 21, Victoria Mount, Woodsley Road, Leeds.
- 1892, Apr. 9. Mills, Ernest Edward, 4, Rugby Place, Brighton.
- 1892, Dec. 17. Mooney, Patrick, 353, Chester Road, Manchester.
- 1892, Dec. 3. Morley, Frederick William, 19, Tadmore Street, Shepherd's Bush.
- 1892, Apr. 29. Morley, William, 7, Shaw Street, Edgbaston Road,
- 1892, Apr. 29. Morrison, John William, Town Hall, Salford.
- 1892, Dec. 3. Nankivell, Herbert Henry, Hoe, Nr. Dereham, Norfolk.
- 1892, June 25. Newby, John, 1, Newton Terrace, Hebburn New
- 1892, Apr. 9. NEWNHAM, FRANK GEORGE, 9, York Place, Brighton.

- 1892, Apr. 9. Northcombe, James Webb, 15, Greenbrook Terrace, Taunton.
- 1892, Dec. 3. NORTON, ELIZABETH JANE, S, Clifton Gardens, W.
- 1892, June 11. Nowlin, Henry Clark, Health Office, Sheffield. 1892, Apr. 9. Odell, Arthur, 22, Dorset Street, Pimlico.
- 1892, Apr. 9. ORCHARDSON, ROBERT, 2, Manor Place, Ospringe, Faversham, Kent.
- 1892, June 25. OSBORNE, WALTER, 13, Third Street, Gateshead-on-Tyne.
- 1892, July 9. Owen, John Thomas, 9, Brynteg Terrace, Merthyr Tydfil.
- 1892, Dec. 17. Palliser, William Arthur, 55, Canning Street, Birkenhead.
- 1892, Dec. 3. Palmer, Herbert Albert, 315, Ivydalo Road, Nunhead.
- 1892, Apr. 9. Palmer, James, 35, King William Street, Greenwich.
- 1892, July 16. PANK, R. ARNOLD, St. Andrew's, Norwich.
- 1892, June 25. PARKER, JOHN EDWARD, Lanchester, Co. Durham.
- 1892, Dec. 3. Parkinson, Arthur Charles, 27, Southampton Row, W.C.
- 1892, July 16. PARROTT, JOHN STEPHEN, Downham Market, Norfolk.
- 1892, Dec. 3. PATCHING, WALTER C., 9, Chapel Road, Worthing.
- 1892, Dec. 3. Patching, William George, Belfort, Worthing.
- 1892, June 11. Pearson, Walter, 25, Milton Terrace, Hanson Lane, Halifax.
- 1892, Dec. 3. Phillips, Charles, 68, Swinton Street, Gray's Inn Road, W.C.
- 1892, Apr. 9. PIDWELL, ENGALL THOMAS, 13, Kelvin Grove, Sydenham.
- 1892, July 9. Pile, George Charles, Woodbine Cottage, Devizes.
- 1892, Apr. 9. Pilling, Edwin, 77, Tonge Moor Road, Bolton. 1892, Apr. 9. Pope, Thomas Stephen, 66, Toronto Terrace, Brighton.
- 1892, Dec. 3. PORTER, JOHN JAMES, Halse Road, Brackley, North-
- 1892, Dec. 17. Price, John Henry, 29, Balmoral Road, Fairfield, Liverpool.
- 1892, Apr. 9. Priest, Alfred, 64, Elswick Road, Lewisham.
- 1892, Dec. 17. Puddle, Walter Louis, Health Office, North Church Street, Sheffield.
- 1892, June 25. Purdie, Alexander, Lavery Street, Bill Quay, Northumberland.
- 1892, Dec. 3. Purnell, Arthur Edward, 26, Solent Crescent, West Hampstead.
- 1892, Dec. 3. RANCE, JOHN WALTER, 15, Vandon Street, Westminster.
- 1892, Dec. 3. Read, Walter Herbert, S, Alpha Place, Regent's Park, N.W.
- 1892, Apr. 9. Reading, George, 6, Windsor Terrace, Cottage Grove, Southsea.

- 1892, Dec. 17. Reid, Thomas Alexander, 81, High Street, Perth. 1892, Apr. 9. Richards, William, 18, Nunhead Grove, Peckham Rve.
- 1892, Apr. 29. RIDGWAY, ERNEST REGINALD, Long Heaton, Notting-
- 1892, Apr. 29. RIDOUT, ALFRED RICHARD, Wirksworth, Derby.
- 1892, June 11. Ribsdale, John William, Municipal Buildings, Leeds.
- 1892, Dec. 17. RITCHIE, PETER, 27, Jamaica Street, Edinburgh.
- 1892, Apr. 29. ROBERTS, DAVID, Ashbourne, Derbyshire.
- 1892, Dec. 17. Roberts, Evan, 48, Bangor Street, Carnarvon.
- 1892, Apr. 9. ROBERTS, WILLIAM HENRY, Brook Villa, Crossbrook Street, Waltham Cross.
- 1892, Apr. 9. ROBINS, HAROLD GRAY, 29, West End Lane, N.W.
- 1892, June 11. Rodwell, Ascough, Union Offices, Skipton.
- 1892, Apr. 9. ROPER, J. STANLEY, Greenway Court, Hollingbourn, Maidstone.
- 1892, July 16. Roshier, Edward, 31, York Street, Norwich.
- 1892, June 11. ROTHERA, FREDERICK, 71, Beech Road, Sowerby Bridge.
- 1892, Apr. 9. Row, EDMUND, 10, Granville Road, Hoe Street, Walthamstow,
- 1892, Apr. 9. ROWLAND, SAMUEL, Local Board, Pontypridd.
- 1892, Mar. 5. ROYLE, CHARLES, Wormgate, Boston, Lincolnshire.
- 1892, June 11. RUMMING, HENRY, Health Office, Sheffield.
- 1892, Dec. 3. Ruscoe, Frank Harvey, 6, Great Castle Street, W.
- 1892, Dec. 17. Rushton, Edbert, 9, Kendal Street, Blackburn.
- 1892, June 25. Sanderson, Isaac, 11, Percy Street, Sunnybrow, Willington, Durham.
- 1892, Apr. 9. Sandon, Edward H., 327, Harrow Road, W.
- 1892, Apr. 9. Scott, George Lattimore, 91, Queen's Road, Landport, Portsmouth.
- 1892, Dec. 17. Scott, Mrs. Sarah, 56, Irlam Road, Bootle.
- 1892, Apr. 9. Scudamone, George Washington, 26, Constance Road, East Dulwich.
- 1892, Dec. 17. Sharratt, James Bradley, Town Hall, Manchester.
- 1892, Dec. 17. Shawfield, Arthur, 47, St. Domingo Vale, Everton, Liverpool.
- 1892, Dec. 17. Sheldon, William, Town Hall, Workington.
- 1892, Apr. 9. Sheppard, Richard John, 49, Broke Road, Dalston.
- 1892, Apr. 9. Shortle, Richard, 5, Osborno Street, Sanmers Road, Southsea.
- 1892, Apr. 29. Simpson, Robert, 3, Aglionby Street, Carlisle. 1892, Dec. 17. Skidmore, Thomas, 24, Mawdsley Street, Bolton.
- 1892, June 25. Slater, William, 79, Borough Gate, Otley.
- 1892, June 11. Smith, Emmett, Mytholmroyd, Yorks.
- 1892, July 9. SMITH, FRED. W., 92, St. Leonard Gate, Lancaster.
- 1892, Dec. 3. SMITH, HAMILTON, 1, Oxford Road, Putney.
- 1892, Dec. 17. SMITH, JAMES PERCY, Blue Coat Hospital, Liverpool.

1892, Apr. 9. Smith, Percy, 474, New Cross Road, S.E.

1892, Apr. 9. SMITH, RICHARD, June., Saltern Road, Parkstone. Dorset.

1892, June 11. Smithles, Arthur, Albert Avenue, Starbeck, Har-

1892, Dec. 3. Souter, Charles, 7, David's Road, Forest Hill,

1892, Apr. 9. Spears, Henry Horatio, 48, Godwin Street, Bir-

1892, June 11. Speight, Harry, Kirkbamgate, Wakefield.

1892, Apr. 9. Spink, Joseph, Formby, Liverpool.

1892, Dec. 17. Stealer, Joseph, 44, Wilmslow Road, Rusholme, Manchester.

1892, Apr. 9. Stewart, James, 28, Crozier Street, Westminster Bridge Road.

1892, July 9. STEWART, ROBERT TOMLINSON, Thorpe-le-Soken,

1892, Dec. 17. Stoney, Joney, 79, Premier Street, Liverpool.

SURTEES, RICHARD T., Bolam Low House, Belsay, 1892, June 25. Newcastle-upon-Tyne.

1892, Apr. 9. Sweeney, John, 17, Brougham Street, Tranmere, Cheshire.

1892, July 9. Thomas, George, 57, Loudoun Square, Cardiff.

1892, Dec. 17. THORNTON, RICHARD, Royal Albert Asylum, Lan-

1892, Apr. 29. Treadgold, William Joseph, 37. Wilfred Street. Derby.

1892, June 11. Trow, Samuel, Sanitary Inspector, Otley.

TUFFEE, WILLIAM, Jun., 50, Parrock St., Gravesend. 1892, Dec. 3.

WADMORE, ALICE, 15, Fairfax Road, South Hamp-1892, Dec. 3.

1892, Dec. 3. WAKE, RICHARD, 619, Wandsworth Road, Clapham.

1892, Dec. 17. WALKER, ALLAN, 2, York Place, York Street, Wakefield.

1892, Dec. 3. WALKER, JAMES EDWARD, Vine Cottage, Hunstanton.

WALKER, WALTER BURGESS, 3, Leamington Terrace, 1892, June 11. New Wortley, Leeds.

Wallis, William, 13, Gilbert Road, Kennington. 1892, Dec. 3.

WANE, WILLIAM, 7, College Place, Crowndale Road, 1892, Dec. 3. Camden Town.

1892, June 11. WARD, WALTER, 275, Bowling Old Lane, Bradford.

WARE, HENRY WICKS, Waterworks, Maidstone. 1892, Dec. 3.

WARRAN, WILLIAM ERNEST, 5, Broad Park Terrace, 1892, Mar. 5. Tavistock.

1892, July 9. WARREN, THOMAS WILLIAM, 17. Rawden Place, Cardiff.

1892, Dec. 3. WARREN, WILLIAM THOMAS, 23, Sturry Street, Poplar, E.

1892, June 25. WAUGH, MATTHEW, Scotch Arms Inn, Haydon Bridge, Northumberland.

1892, Apr. 9. Wells, William James, Kingswood, Reigate. 1892, June 25. Whieldon, Edmund, Blakeley Farm, Blythe Bridge,

Stoke-on-Trent.

1892, June 11. Whinfield, Thomas Hood, Town Hall, Salford.

1892, July 9. White, Frank, 38, Maple Street, Northampton, 1892, Apr. 9. White, William, 27, Harvey Street, Folkestone.

1892, June 11. WHITELEY, THOMAS, Town Hall, Huddersfield.

1892, Mar. 5. Wilson, John Allen, 18, Rodney Terrace. Cheltenham.

1892, July 9. Windson, William, 13, Sutcliffe Street, Liverpool, E.

1892, Apr. 9. Winsborrow, Edwin James, Town Hall, Westminster.

1892, Apr. 9. Woltens, William John, 62, Huntingdon Street, Barnsbury, N.

1892, Apr. 9. Wood, Charles Frederick, 1, Cedar Villas, West Hampstead.

1892, June 11. WOODHEAD, FLETCHER, 13, Norman Street, Burnley.

1892, Dec. 3. Woolnough, Tom, Northolme, Aberdeen Road, Highbury.

1892, June 11. Wormald, John, Riding Head, Luddenden, via Manchester.

1892, Dec. 3. WRIGHT, JOHN HENRY, June., 54, Caledonian Rd., N.

1892, June 25. Young, James, West Boldon, Newcastle-upon-

1892, June 25. Young, Thomas, 17, California, Winlaton, Blaydonon-Tyne.

ច	1892. Portsmouth.	156	9,000	35,000	či	49,000	***	None.	*53	83
INSTITUTE	1890, Brighton.	108	1,000	30,000	18	35,000	31*	None.	99	5
	1680. Vorcester.	108	333	28,000	श	000 <b>:</b> %	ន	None.	្រ	1 5
OF THE	.1887. Bolton.	311	82	35,000	81	27,000	##	<b>G</b>	9	¥ 
	1886. York,	130	900	30,000	ອຸ	000 (15:	16	21	3	<u></u>
CONNECTION WITH THE CONGRESSES	1895. Lelecster.	135	1,000	30,000	17	37,000		11	13	119
	1884. Dublin.	13.4	900	40,000	61	35,000	sı	11	<b>3</b> 3	65 
	1883, WogsnIĐ	126	150	20,000	સ	20,000	ᆟ	13	S	#
	1882, Nowcastle.	110	000	14,520	3	8,373	13	71	51	15
NECTI	1880, Exeter.	106	500	9,725	19	8,955	ន	1~	0 <b>F</b>	8
	1879. Croydon.	189	710	•	17	:	51	G	8	7.5 61
SLD IN	1878. Stafford.	116	319		16	:	13	ာ	?]	1-
NS HI	1877. Leamington.	117	504		11		13	None.	None.	:
EXHIBITIONS HELD		Number of Exhibitors	Number of Exhibits	Space occupied (in square ft.)	Number of days Exhibition was open	Total number of Visitors	Number of Meduls awarded	Number of Special Certificates	Number of Certifi- cates	Number of Exhibits deferred for further trial

given for Exhibits selected for further practical trial.

# CONCRESS & EXHIBITION, PORTSMOUTH,

SEPTEMBER, 1892.

# JUDGES' REPORT OF MEDALS AND CERTIFICATES AWARDED.

# DIVISION A.

# SCIENCE IN RELATION TO HYGIENE.

Medals.

R. & J. Beck.
Improved Continental Microscope.

J. Swift & Sons. Microscope Lamp.

# DIVISION C.

# CONSTRUCTION AND SANITARY APPARATUS.

CLASS I.

BUILDING MATERIALS, CONSTRUCTION & MACHINERY.
Medals.

J. GREENALL.

Greenall's Steam Washer.

CLASS II.

WATER SUPPLY AND SEWERAGE.

Medals.

Broad & Co.

Enamelled Fireclay Water Cisterns.

Moule's Earth Closet Co.

Moule's Earth Closet.

CLASS 111.

HEATING, LIGHTING, AND VENTILATION.

Medals.

CROMPTON & Co.

Apparatus for Cooking by Electricity.

CROMPTON & Co.

Domestic Motor.

## DIVISION D.

# PERSONAL AND DOMESTIC HYGIENE.

Medals.

BLONDEAU ET CIE.

Vinolia Toilet Soap.

Sutton & Sons.

Vegetable Seeds.

Washington Lyon, Steam Disinfector.

Messas, Calvert & Co. Puro Carbolic Acid.

Morris Tube Ammunition Co.

Morris Circulating Principle of Water Filtration.

NORTH WILTS DAIRY COMPANY, Alpha Cream Separator.

NATHANIEL BLETCHLY.
Anatomical Boots.

Brand & Co.
Beef Essences.

Brown & Polson. Corn Flour.

BURROUGHS, WELLCOME & Co. Travelling Medicine Chest.

## DIVISION A.

# SCIENCE IN RELATION TO HYGIENE. Certificates of Merit.

J. DAVIS & Co.

American Forecast Barometer.

J. Swift & Sons.

Grove's Modification of Williams' Microtome.

# DIVISION B.

# HYGIENE OF SPECIAL CLASSES, TRADES, AND PROFESSIONS.

Certificates.

C. GROOM.

A Square Tent for Garden.

HUMPHREYS, LIMITED.

Iron Temporary Hospital Hut.

PORTSMOUTH WATER FITTINGS CO.

Water Curtain for Public Places of Entertainment.

ALFRED CARTER.

Model of Window with Removable Sashes to facilitate cleaning.

## DIVISION C.

# CONSTRUCTION AND SANITARY APPARATUS.

CLASS I.

BUILDING MATERIALS, CONSTRUCTION & MACHINERY.

Certificates.

S. S. WAY.

Terra-Cotta Door and Window Jambs.

## CLASS II.

## WATER SUPPLY AND SEWERAGE.

Certificates.

PORTSMOUTH WATER FITTINGS Co.
Sir Wm. Thomson's (Lord Kelvin's) Water Tap.

PORTSMOUTH WATER FITTINGS Co. Shanks' Enamelled Iron Bath.

PORTSMOUTH WATER FITTINGS Co.
Shanks' Independent Spray and Plunge Bath.

Broad & Co.
White Enamelled Fireclay Sink.

Broad & Co.

White Enamelled Straight and Curved Channels for Inspection Chambers to Drains.

THE TROTT VALVE & ENGINEERING Co.
Removable Valves for 11ot and Cold Water Cocks.

THE TROTT VALVE & ENGINEERING Co.
Combined Bath Valve, with Interlocking Gear for Waste.

Geo. Jennings.
Cabinet Lavatory Stand.

MILNE, SONS & MACFIE. Brass Siphon Traps.

COLEMAN & MORTON.
Improved Tumbler Sanitary Cart.

WATER CARRIAGE ENGINEERING Co. Flush Indicator.

W. CLEMENS ABELL & Co. Balanced Water Cart.

MILNE, SONS & MACFIE.
Standing Waste and Overflow, with Trapping Bend for Bath.

WATER CARRIAGE ENGINEERING Co.
Automatic Flushing Siphon, with Tipping Bucket at Outlet.

E. R. Palmer, Palmer's Automatic Flushing Siphon.

GEO, JENNINGS,
Joint for Connecting Closet Basin to Metal Pipe.

J. Tylor & Sons, Warwick Combined Slop Sink and W.C. with Lead Trap.

J. Tylor & Sons.
Lavatory with Lifting Standing Waste Outlet.

PORTSMOUTH WATER FITTINGS Co. Shanks' "Citizen" Combined W.C. and Slop Sink with P Trap.

Jour Jones.

Condensation Seal Cover for Bottom of Manholes.

J. Tylon & Sons.
Silent Arrangement for "Tower" Wasto Preventer.

Joun Knowles & Co.
The "Presto" Seat Action Siphon Waste Preventing Cistern.

PORTSMOUTH WATER FITTINGS Co.
Knight's Demonstration Model Showing Soil Pipe and Traps.

PORTSMOUTH WATER FITTINGS Co.
Tyndale's Rock Concrete Manholes for Sewers and Drains.

PORTSMOUTH WATER FITTINGS Co.
Trident Hopper Water Closet with P Trap.

PORTSMOUTH WATER FITTINGS Co.
Bayonet Joint for Connecting Closet Basin to Metal Pipe.

PORTSMOUTH WATER FITTINGS Co. Shanks' Reliable Water Waste Preventing Cistern.

JOHN JONES.

Bag Drain and Pipe Stopper.

JOHN JONES.
Expanding Screw Drain and Pipe Stopper.

J. CHADWICK.
Self-adjusting Tent Pole.

SAMUEL GROSSMITH.
The "Climax" Automatic Flushing Siphon.

#### CLASS III.

# HEATING, LIGHTING AND VENTILATION.

#### Certificates.

Eagle Range & Foundry Co.
No. 35 Eagle Regulator, for Regulating Draught to Eagle
Open Fire-grate.

EAGLE RANGE & FOUNDRY Co. Indicating Damper to Eagle Range.

W. Suga & Co.
"Westminster" Gas Cooking Stove, with Bunsen Burner.

Parkhouse Iron Co.
"Grecian" Kitchen Range.

Parkhouse Iron Co.
Dow's Kitchen Range.

PARKHOUSE IRON Co. Dublin Kitchen Range.

DAVIS GAS STOVE Co.
Thermo Hygienic Gas Stove.

T. Bailey, Junn. Cyclone Geyser.

II. Sulley.
Noiseless Safety Pavement.

C. KITE & Co.
Improved Box Inlet Ventilator.

C. KITE & Co.
Lock Valve Inlet Ventilator.

## DIVISION D.

# PERSONAL AND DOMESTIC HYGIENE.

Certificates.

Burnoughs, Wellcome & Co. Malt Extracts.

J. J. THORNTON & Co.

Men's India Rubber Boots, Ventilated and Lined with Felt.

J. J. THORNTON & Co.
Down-covered Air Cushions.

Messrs. Mackey, Mackey & Co. Oxychlorogene.

THE SANITAS Co.
Kingsett's Mercuric Bactericide.

T. Tyrer & Co.
Preparations of Thiocamph.

Berkefeld Filter Co.
The Berkefeld Filter.

Holden Bros.

Natureform Boots and Shoes for Children.

Francis Hy. Knight, European Dress Cutting Association, System of Hygienic Dress Cutting.

Herrs, Son & Co. Hygienic Corsets.

E. CLARK & Co. Coffee Extract.

JEYES' SANITARY COMPOUNDS COMPANY. Jeyes' Fluid.

Bugger & Co.
Disinfecting Sheet.

T. B. Vernon.

Ceres Automatic Letter and Card File Cabinet.

C. E. GITTENS, LIMITED. Porcelain Screw Tap for Filter.

CADBURY BROS.
Cocoa Essence.

ARCTIC FREEZER Co. Arctic Freezer.

The Judges desire to refer to the Specimens, displayed on the Walls of the Exhibition, of the Record Plans of the Sewerage and House Drainage of the Borough of Portsmouth, and to congratulate the Town Council on the way in which these Plans have been kept up, and on the possession of such a valuable record, not only of the Sewerage, but of the details of some thousands of House Drains.

Signed,

ERNEST TURNER, F.R.I.B.A., Chairman. E. WHITE WALLIS, F.S.S., Secretary.

October, 1892.

# LIST OF EXHIBITS

# SELECTED BY THE JUDGES FOR FURTHER PRACTICAL TRIAL.

Shone's Hydro-Pacumatic Ejector. Hughes & Lancaster.

Jackson's Grates and Stoves for Anthracite, Gwaun Cae Gurwen Colliery Co.

Street Sweeping Machine with Scraper. W. Clemens Abell & Co.

Hydraulic Cement from Sewage Sludge and Waste Gas Lime.
Arthur Angell.

Indurated Wood Fibre Tanks and Baths.
Milne, Son & Macfie.

Double Action Road Sweeping Machine. Coleman & Morton.

Tca.

Mazawattee Ceylon Tea Co.

Mineral Waters. C. Mumby & Co.

Mineral Waters. C. F. Perkins.

Rain Water Separator. Chas. G. Roberts.

Non-concussive and Self-closing Valve.
Trott Valve Engineering Co.

Outlet and Inlet Ventilator for Torpedo Vessels. Wm. Sugg & Co.

System of Ventilating Buildings. Wm. Sugg & Co.

Sun Knife Cleaner. Sun Knife Cleaner Co.

Eureka Acrated Flour. Coombe's Eureka Flour Co.

Prof. Wolpert's Smoke Exhauster. II. Heim.

Ventilators (except Bracket), Wheeler & Son,

D.D. Ventilating Chimney Top. John Jas. Downes.

Ventilating Cowls. C. Kite & Co.

Leggott & Marsh's Smoke Consuming Fire. Economic Smokeless Fire Co.

Closet of the Century. Geo. Jennings.

Sykes' Screw Joint for Earthenware Pipes, The Albion Clay Co.

Paragon Joint for Earthenware Pipes. The Albion Clay Co.

Silent Water Waste Preventer. D. T. Bostel & Sons.

Quick-filling Siphon Action Cistern with after Flush. Geo. Jennings.

Non-pneumatic Peckham Waste Preventing Cistern. Milton Syer.

Roof Ridge Ventilator. C. Kite & Co.

Under-Roof Ventilator. C. Kite & Co.

Exhaust Ventilator. C. Kite & Co.

Downcast Inlet Ventilator. C. Kite & Co.

New Simplex Water-jet Air Propeller. C. Kite & Co.

The Volume Fan. Wheeler & Son.

Electric Motor for Ventilating Purposes. Mackey, Mackey & Co.

Simmorell's Updraught Ventilator. Wm. Sugg & Co.

Injector Cowl. Wm. Sugg & Co.

Mosquera Julia Food. Mosquera Julia Food Co.

Scott's Midlothian Oat Flour. Andrew Scott & J. C. Lauder.

Blackman Ventilating Fan. Blackman Ventilating Co.

# CONTRIBUTIONS TO LIBRARY DURING 1892.

In addition to the works enumerated in the following list, valuable donations of Foreign Reports and other official publications have been received from the International Congress of Hygiene and Demography, London, Prof. W. 11. Corfield, M.A., M.D., and G. J. Symons, F.R.S.

\* For publications of Societies and Institutions, &c., see under "Academies."

ACADEMIES, ASSOCIATIONS, COLLEGES, SOCIETIES, &c. ACADEMIES (AMERICAN).

Concord. American Public Health Association. Public Health Papers and Reports, Vol. XVII., 1891. 321 p. 8vo. Concord, 1892.

The Association.

Manitoba, Historical and Scientific Society. Annual Reports for the years 1890, 1891, and 1892. 10 p., 8vo. Winnipeg, 1891.

The Society.

- Historical and Scientific Society. Older Geology of the Red River and Assiniboine Valleys. Paper by G. Bryce, LL.D., S p., Svo. Winnipeg, 1891. The Society.

— Historical and Scientific Society. An Account of the affair of Sevenoaks; the circumstances which led up to it; the Events and Conflict. 38 p., 8vo. Winnipeg, 1891. The Society.

- Historical and Scientific Society. The First Recorder of Rupert's Land. A Paper read before the Society on May 4th, 1890, by G. Bryce, LL.D. 5 p., Svo. The Society.

- Historical and Scientific Society. Surface Geology of the Red River and Assiniboine Valleys. A Paper read before the Society on January 22nd, 1891, by G. Bryce, LL.D. 7 p., 8vo.

The Society.

Massachusetts, Institute of Technology. Technology Quarterly and Proceedings of the Society of Arts, 1892. 8vo. Boston, 1892. The Institute.

Philadelphia. College of Physicians. Transactions, Vol. XIII., Third Series. 179 p., 8vo. Philadelphia, 1891. The College. Toronto, Canadian Institute. Annual Archæological Report (Session 1891), being an Appendix to the Report of the Minister of Education, Ontario. 101 p., Svo. Toronto, 1891. The Institute.

Canadian Institute. Transactions, 1892, Vol. II., Part II., and Vol. III., Part I. 363 p., Svo. Toronto, 1892. The Institute.

# ACADEMIES (Australian).

New South Wales. Australian Museum. Report of Trustees for the year 1890, 33 p., f. cap. 1891.

Royal Society of. Journal and Proceedings, Vol. XXV., 1891. 345 p., Svo. Sydney, 1892.

Department of Public Instruction. Report of the Curator of the Technological Museum for 1890, 52 p., f. cap. Sydney, 1892.

# ACADEMIES (BRITISH).

Chatham. Royal Engineers' Society. Professional Papers of the Corps of Royal Engineers. Occasional Papers, Vol. XVII. 1891. 238 p. (plates), Svo. Chatham, 1892, Royal Engineers' Institute. Glasgow. Institution of Engineers and Shipbuilders in Scotland. Transactions, Vol. XXXV., 1891—92. 388 p., Svo. (plates). Glasgow, 1892. The Institute. London. Anthropological Institute. Journal, 1875-82, 1884, 1886-90. Sir Douglas Galton. - Architects' Society of. Proceedings, 1892. 8vo. London. The Society. Chemical Society, Journal of, 1875-87 and 1889. Sir Douglas Galton. City of London College. Calendar for 1892-93, 191 p., 8vo. London, 1892. The College. - Engineers' Society of. Transactions for 1891. 243 p., 8vo. London, 1892. The Society. - Incorporated Association of Municipal and County Engineers. Proceedings, Vol. XVIII. 441 p., 8vo. London, 1892. The Association. - Medical Society of. Transactions, Vol. XV. 483 p. London, 1892. The Society. - Society of Medical Officers of Health. Transactions. Session, 1883—6. 135 p., Svo. London, 1886. Miss Greenhow. - Royal Botanic Society. Quarterly Record for 1880 to 1891. 4 Vols. The Society. - Royal College of Surgeons of England. Calendar for 1892. 397 p., 8vo. London, 1892. The College. - Royal Institute of British Architects. Transactions, Vol. VIII., 1892. 434 p., 4to. London, 1892. The Institute. - Royal Institution of Great Britain. Proceedings, Vol. XIII., Part II. 250 p., 8vo. London, 1892. The Royal Institution. – Royal Statistical Society. Journal, Vol. LV. London. The Society.

London. St. Thomas's Hospital. Reports, New Series, Vol. XX.
520 p., Svo. London, 1892. The Hospital.
—— The Surveyors' Institution. Transactions, Session 1891—92.
Svo. London. The Institution.
—— University College. Calendar, Session 1892—93. 410 p.,
Svo. London, 1892. The College.
Newcastle-on-Tyne. North of England Institute of Mining and
Mechanical Engineers. Transactions, 1892. The Institute.

# ACADEMIES (CONTINENTAL).

Amsterdam. Koninkliyke Akademie Van Wetenchappen. Verslagen en Mededeelingen, der Vol. VIII. 627 p., Svo. Amsterdam, 1891.

Royal Academy of Sciences.
Rome. R. Università. Annali dell' Istituto d' Igiene Sperimentale.
Vol. I. Svo. Roma, 1892.

Prof. Angelo Celli.

Abney's Chemistry of Building Materials. Notes on the Third Edition, revised by Capt. S. M. Maycock, R.E. 155 p., 8vo. Chatham, 1888. Purchased. Acland, Dr. H. N. Memoir on the Cholera at Oxford in the year 1851, with Considerations suggested by the Epidemic, 172 p. (maps). London, 1856. Miss Greenhow. Army Hospital Services Enquiry Committee. Report and Minutes of Evidence, Appendix and Index. 771 p., f. cap. London, 1883. Miss Greenhow. Bidlake, W. H. Dry Rot in Timber. 24 p., 8vo. London, 1889. Purchased. Blair, Dr. J. A. The Organic Analysis of Potable Waters. 120 p., Svo. London, 1891. The Author. Board of Agriculture. Agricultural Returns of Great Britain, with abstract returns for the United Kingdom, British Possessions and Foreign Countries, 1891. 187 p., Svo. London, 1891. The Board. - Agricultural Produce Statistics of Great Britain, showing the estimated total produce and average yield per acre of the principal crops, with abstract returns for the United Kingdom, 1891. 33 p., Svo. London, 1892. The Board. Agricultural Returns for 1892. 37 p., 8vo. London, 1892. The Board. - Annual Report of the Director of the Veterinary Department for the year 1891, with an Appendix. 205 p., Svo. London, 1892. Prof. G. T. Brown. Bucharest. Raport General asupra Igienei Publice si asupra Serviciului Sanitar al Capitalei per anul 1891. 136 p., Svo. Bucharest,

Canada. Inland Revenue Department, Laboratory of. Bulletins Nos.

1 to 30, 1887—1892.

Laboratory of the Inland Revenue.

Canada. Inland Revenue Department, Laboratory of. Act respecting Adulteration of Food, Drugs, and Agricultural Fertilizers, 1886, and Amending Acts. Laboratory of the Inland Revenue, - Inland Revenue Department, Laboratory of. Act respecting Agricultural Fertilizers, 1890. Laboratory of the Inland Revenue. Cattle Plague. Third Report of the Commissioners appointed to inquire into the Origin and Nature, &c., of, with an Appendix. 244 p., f. cap. London, 1866. Miss Greenhow, Cholera Epidemic. Report on the, as it has appeared in the Territories subject to the Presidency of Fort St. George (Madras). 212 p., 8vo. London, 1849. Miss Greenhow. - A Report on the Outbreak in Brecon in 1854, by Dr. Lucas Prestwood. 27 p., 8vo. London, 1855. Miss Greenhow. of 1854. Report on, as it prevailed in the City of London, by J. Simon. 19 p., 8vo. London, 1854. Miss Greenhow. Cholera Epidemics of London. Report on the last two, as affected by the consumption of Impure Water. 35 p., Svo. London, 1856. Miss Greenhow. Cholera. Report of the Commissioners appointed to inquire into the causes which have led to and have aggravated the late Outbreak of Cholera in the towns of Newcastle-upon-Tyne, Gateshead, and Tynemouth. 580 p., f. cap. London, 1854. Miss Greenhow. General Board of Health Reports, 1848-49. 500 p., Svo. London, 1848—49. Miss Greenhow. - Report on the Mortality of, in England, 1848-49. 300 p., Svo. London, 1852. Miss Greenhow. - Returns in Great Britain in the year 1832 (manuscript). Miss Greenhow. — in Tynemouth in 1831-2, 1848-9, and 1853, by Dr. E. Headlam Greenhow. 26 p., 8vo. Excerpt, Journal of Public Health, June, 1855. Miss Greenhow. — Report on the Outbreak in the Parish of St. James, Westminster, during the Autumn of 1854. 171 p., Svo. (maps and diagrams). London, 1855. Miss Greenhow. Quarantine and the Plague, being a Summary of the Report on these subjects recently addressed to the Royal Academy of Medicine in France, with introductory observations, extracts from Parliamentary Correspondence, and Notes, by Dr. Gavin Milroy. 71 p., 8vo. London, 1846. Miss Greenhow. The Cholera not to be arrested by Quarantine; a brief historical sketch of the great Epidemic of 1817 and its invasions of Europe in 1831-2 and 1847, with practical remarks on the treatment, preventive and curative, of the disease. 51 p., 8vo. London, 1847. Miss Greenhow. - Ireland. Report of the Commissioners of Health on the Epidemics of 1846 and 1850. 79 p., 8vo. Dublin, 1852.

Clarke, J. W. Clarke's Tables (for pocket). London, 1891.

Miss Greenhow.

The Author.

CONTRIBUTIONS TO LIBRARY.

Colver, F. Public Institutions: their Engineering, Sanitary, and other Appliances. 219 p., Svo. London, 1889. The Author. ---- Treatise on Water Supply, Drainage, and Sanitary Appliances of Residences. 92 p., Svo. London, 1889. The Author. Cornel, A. Celsus et q. serenus Samonicus de Medicina. 593 p., Miss Greenhow. 16mo, 1713. Contagious Diseases Acts. Report from the Select Committee on. together with the Proceedings of the Committee, Minutes of Evidence, and Appendix and Index to the Report. 750 p., f.cap. London, 1882. Miss Greenhow. Convicts, Employment of, in the United Kingdom. Report of a Committee appointed to consider certain questions relating to. 45 p. (maps), f. cap. London, 1882. Miss Greenhow. - Report of the Commissioners appointed to inquire into the treatment of Treason and Felony Convicts in English Prisons, together with Appendix and Minutes of Evidence. Vol. I.—The Report and Evidence, 60 p., f. cap. London, 1871. Vol. II.-Minutes of Evidence, 538 p., f. cap. London, 1870. Miss Greenhow. Deaths from specified causes in England and Wales. Average Annual Proportion during the ten years, 1851-60. Folio. Miss Greenhow. Annual Proportion during the ten years, 1861-70. Folio. Miss Greenhow. Dublin. Report of the Public Health Committee, Jan. 21st, 1892 (containing statement concerning Typhoid Fever Epidemic by W. R. Maguire). 44 p., 8vo. Dublin, 1892. W. R. Maquire. Dukes, Dr. Clement. The Preservation of Health. 222 p., 8vo. The Author. London, 1883. The Essentials of School Diet. 187 p., 8vo. London, 1891. The Author. Dulier, Col. Smoke and Fogs; a natural process of dissolution of. 7 p., Svo. London. The Author. Dve. F. A Practical Treatise upon Warming Buildings by Hot The Author. Water, 512 p., Svo. London, 1891. Egglestone, Wm. House Drainage and Sanitary Catalogue. 68 p., The Author. Svo. Stanhope, 1889. - Weardale, Names of Field and Fell. 168 p., 8vo. Stanhope, 1886. The Author. Factories and Workshops. Report of the Chief Inspector to Her Majesty's Principal Secretary of State for the Home Department for the year ending 31st October, 1887. 292 p., 8vo. London, Miss Greenhow. Fayrer, Sir Joseph. Presidential Address, Section I. Preventive Medicine, International Congress of Hygiene. 10 p., 8vo. The Author. London, 1891. Field, Rogers. Practical Suggestions as to the Water Supply, Drainage, and Sewage Disposal of Lunatic Asylums, issued by the Commissioners in Lunacy. 17 p., 8vo. London, 1892. The Author.

Fleming, Sandford. An Appeal to the Canadian Institute on the Rectification of Parliament. 173 p., Svo. Toronto, 1892.

The Canadian Institute, Fletcher, Prof. Banister. Quantities. 268 p. (plates), 8vo. London,

1888. The Author.

Metropolitan Building Acts. 219 p., Svo. London, 1882.

The Author.

Fleury, Louis. Cours d'hygiene fait à la faculté de médicine de Paris. 679 p., Svo. Paris, 1852--53.

Miss Greenhow.

Fyfe, Peter. The Progress of Death in Scotland and her Counties since 1855, a comparison. 14 p. (tables and map), 8vo. Glasgow, 1892.

The Author.

Garrett, E. The Law of Nuisances, 548 p., Svo. London, 1890.

Gillespie, Rev. C, G. R. The Claims of Sanitary Science upon Clergy, 23 p. Syo. London, 1891. The Author.

Clergy. 23 p., Svo. London, 1891.

Grant, John. On the Strength of Cement. 172 p. (plates), Svo. London, 1875.

Purchased.

Guy, W. A. Results of the Censuses of the Population of Convict Prisons in England, taken in 1862 and 1873. 38 p., 8vo. London, 1875.

Miss Greenhow.

Hall, E. T. Some Chief Causes of the Unhealthiness of Cities, with Suggestions for their Removal. 31 p., Svo. Reprint from the "Contemporary Review," February, 1892.

The Author.

Heberden, Dr. W. Observations on the Increase and Decrease of different Diseases, and particularly of the Plague. 151 p., 4to. London, 1801.

Miss Greenhow.

Hehir, Dr. Patrick. Microscopical Observations on the Hamotozöon of Malaria, with an appendix containing a series of plates, illustrations, and descriptions. 27 p., 4to. Hyderabad, 1892.

The Author.

Microscopical Observations on the Hamotozöon of Malaria.

27 p. (plates), 4to. Hyderabad, 1891.

The Author.

Hellyer, S. S. Principles and Practice of Plumbing. 294 p., 8vo. London, 1891.

The Author.

Hurst, John Thomas. Architectural Surveyors' Handbook. 477 p. London, 1892. Purchased.

Iowa State Board of Health. Monthly Bulletin, 1892. The Board. Ireland. Medical Charities: Third Annual Report of the Commissioners for administering the laws for relief of the poor in Ireland. 381 p., 8vo. Dublin, 1855.

Miss Greenhow.

James, Dr. R. Diseases of Tradesmen. 432 p., 16mo. London, Miss Greenhow.

Kansas, State Board of Health. Seventh Annual Report from January 1st, 1891, to December 31st, 1891. 230 p., Svo. Topeka, 1892.

The Board.

Leprosy. Medical Reports upon the Character and Progress of, in the East Indies, being answers to interrogatories drawn up by the Royal College of Physicians, London. 500 p., f. cap. Calcutta, 1865.

Miss Greenhow.

Report on, by the Royal College of Physicians, prepared for Her Majesty's Secretary of State for the Colonies, with an Appendix. 344 p., f. cap. London, 1867. Miss Greenhow.

Local Government Board. Mr. R. D. R. Sweeting's Report to the Local Government Board on an Outbreak of Diphtheria at Bourdon Buildings, in the Parish of St. George, Hanover Square. Sp., f. cap. London, 1891.

f. cap. London, 1891.

—— Twentieth Annual Report of the Local Government Board, 1890—91. Supplement containing the Report of the Medical

Officer for 1890. 296 p., 8vo. London, 1891.

——— Tabular Statement of Workhouse Dietaries, Lancashire, 1890. 59 p., f. cap. London, 1891.

Points to be attended to on the Construction of Workhouse Buildings. 12 p., f. cap. London, 1891.

Nursing in Workhouse Sick Wards. 2 p., f. cap. London, 1892.

Tabular Statement of Workhouse Dietaries, Kent, 1890.

24 p., f. cap. London, 1891.

Medical Department. Mr. T. W. Thompson's Report to the Local Government Board of the Sanitary Circumstances of the Crownhill's Urban Sanitary District, and upon Administration by the Sanitary Authority. 6 p., f. cap. London, June, 1892.

Dr. Parson's Report on the Prevalence of Enteric Fever and Diphtheria in the Ashby-de-la-Zouch Rural Sanitary District.

10 p., f. eap. London, June, 1892.

Condition of the Aylesbury Rural Sanitary District. 9 p., f. cap.

London, August, 1892.

—— Dr. Theodore Thomson's Report on an Outbreak of Enteric Fever in the Urban Sanitary Districts of Rotherham, Rawmarsh, and Greasbrough, in the West Riding of Yorkshire. 20 p., f. cap. London, August, 1892.

Typhus Fever in the Wigan and Ince-in-Makerfield Urban Sanitary Districts. 14 p. (charts) f. cap. London, October, 1892.

Dr. Parsons' Report on an Outbreak of Typhoid Fever at Newfield Moira, in the District of the Ashby Would Local Board.

4 p., f. cap. London, June, 1892.

- Dr. Bruce Low's Report on an Outbreak of Typhoid Fever in the Borough of King's Lynn, Norfolk. 21 p., f. cap. London, August, 1892.

The Board.

London, City of. Ten years growth of, 1881-1891. Report of the Day Census, 1891. 139 p., 8vo. London, 1891. J. D. Mathews.

London Water Supply. Minutes of Proceedings before the Com-
mittee for County Purposes of the Court of Common Council on
the Question of Water Supply, and Report to the Court of
Common Council from the County Purposes Committee, October
16th, 1890 417 p., f. cap. London, 1890.
County Purposes Committee—per Sir J. Monekton,
Longstaff, Dr. G. B. Studies in Statistics-Social, Political, and
Medical. 455 p., Svó. London, 1891. The Author.
Macleod, Miss. "Life or Death: or, Inspired Thoughts on Scien-
tific Subjects," 303 p., Syo. London, 1892. The Author.
Maguire, T. M. London Householder's Chart. 20 p., Svo. London,
1891. Parchased,
Massachusetts, State Board of Health. Forty-ninth Annual Report
to the Legislature of Massachusetts, relating to the registry and
return of Births, Marriages, and Deaths in the Commonwealth for
the year ending December 31st, 1890. 421 p., Svo. Boston,
1891. State Board of Health.
State Board of Health. Twenty-Third Annual Report.
927 p., 8vo. Boston, 1892. The Board.
McWilliam, Dr. J. O. Medical History of the Expedition to the
Niger during the years 1841-2, comprising an Account of the
Fever which led to its abrupt termination. 287 p., 8vo. London,
1843. Miss Greenhow.
Medical Acts. Report of the Royal Commissioners appointed to

# MEDICAL OFFICERS', ANALYSTS', AND SANITARY INSPECTORS' REPORTS.

430 p., f. cap. London, 1882.

inquire into the, with Minutes of Evidence, Appendices and Index.

Miss Greenhow.

Aberdeen, City of	Fohruar	Year. y, 1892.	Dr. M. Hay.
	I COI MAI	), 100 <b>2.</b>	2774 2124 224474
Aberdeen	• •	17	19
Acton Local Board		1891.	W, $B$ , $Prowse$ .
Birkenhead		11	Francis Vacher.
Birmingham	• •	11	Dr. A. Hill.
Blackpool	• •	99	Dr. A. J. Anderson.
Bolton	• •	71	Dr. F. E. Adams.
Calcutta	• •	,,	Dr. W. J. Simpson.
Chelmsford		**	Dr. J. C. Thresh.
Cornwall		91	S. Trevail.
Cromer Urban Sani-			
tary District		,,	S. T. Taylor.
Dumbarton, County			
Council for	• •	**	Dr. J. C. McVail.
Dublin	• •	••	Sir Charles Cameron.
Erpingham Union		**	S. T. Taylor.
Essex, County of	• •	11	Dr. J. C. Thresh.
Hastings	• •	11	G. R. Meadows.

MEDICAL OFFICERS, &c	., REPOR	${ m T.}$ — $Continue$	d.
Kensington	• •	1891.	Dr. T. O. Dudfield,
Kidderminster		1886 - 92	J. T. Cowderoy.
Lambeth		1890.	Dr. H. W. Verdon.
Liverpool Port Sani-			
tary Authority		1891.	Dr. J. Stopford Taylor.
Liverpool		"	1)
Merthyr Tydfil	• •	"	T. J. Dyke.
- Paddington, 1863, 1864	, half yea	ars ending 1	865, 1866, ditto monthly
— reports during 1863 (	imperfec	<b>(</b> )	Prof. W. H. Corfield.
River Tyne Port Sani-			
tary Authority	• •	1891.	Dr. II. E. Armstrong.
Scarborough (Rural)		. 59	Dr. R. Cuff.
Stirling County Counci	l	"	Dr. J. C. McVail,
St. Faith's Union	• •	11	S. T. Taylor.
St. George's, Hanover S	3quare		
(Analyst's)		11	C. E. Cassal.
	ipon the	outbreak o	of Enteric Fever at the
_ Foundling Hospital	• •		Dr. J. F. J. Sykes.
Torquay	• •	1891.	P. Q. Karkeek,
Wandsworth	• •	,,	The Board.
Warwick, County of	• •	11	Prof. A. B. Hill.
Watford	. •	11	Dr. A. T. Brett.
West Riding County County	ouncil	1890.	Dr. Whitelegge.
West Sussex		1891.	Dr. C. Kelly.
Whitechapel District.		11	Dr. Joseph Loane.
Wolverhampton		**	E. J. Franks.
Wolverhampton		1892.	Dr. II. Malet.
<del>-</del>			

Metropolitan Asylums Board. Reports for the year 1891 of the Statistical Committee and Medical Superintendents. 180 p., Svo. London, 1892.

Middleton, G. A. T. House Drainage. 63 p., Svo. London, 1892.

The Author.

Mines in Great Britain. Report of the Commissioners appointed to inquire into the condition of, to which the Provisions of the Act do not apply with reference to the health and safety of persons employed in such Mines, with Appendices. 24 p. (plates), 8vo.

London, 1864.

Miss Greenhow.

1864.

Miss Greenhow.

1864.

——— Epitome of Evidence of the above. 299 p., f. cap. London,

1864.

Appendix B of the above. 446 p., f. cap. London, 1864.

Miss Greenhow.

The Author.

Mitchell, Charles F. Forty Plates on Building Construction. 40 p., demy. London, 1891. The Author. Molesworth, Sir Guildford L. Pocket-book of Engineering Formula, Purchased. 763 p. London, 1891. Mortality, Tables of, Experience of, from 1847—1884, compiled by The British Empire Mutual Life Assurance Company. 40 p., f. cap. London, 1874. Miss Greenhow, Murphy, Shirley F. Our Homes, and how to make them Healthy. 947 p., 8vo. London, 1885. Netherlands. Lo 7mo congrès International d'Hygiene et de Démographie tenu a Londres du 10 au 17 aout 1891. Rapport présenté A. M. le Ministre de l'intérieur des pays-bas par MM. les Docteurs G. von, Overbeek de Meyer, W. P. Ruysch, et C. Stekoulis, délé-Dr. Overbeck de Mener. gués. 79 p., Svo. Bruges, 1892. Newsholme, Dr. A. Hygiene: a Manual of Personal and Public Health, 448 p., 8vo. London, 1892. The Author. New Jersey, State Board of Health, Fifteenth Annual Report for 1891. 489 p., Svo. Trenton (N.J.), 1891. The Bourd. New York, State Board of Health. Monthly Bulletin, 1892. The Board. New South Wales. Annual Report of the Department of Mines and Agriculture for the year 1891, 322 p., f. cap. Sydney, 1892. Agent-General for New South Wales. Nottingham. The Meteorology of, for the year 1891. 3 p. (tables), f. cap. Nottingham, 1892. A. Brown. - Meteorology for 1891. (Tables and Diagram), folio. Dr. P. Boobbyer. Parkes, Dr. Louis. Hygiene and Public Health. 3rd Edit., 523 p., 8vo. London, 1892. The Author. Parry, J. Water Supply. 184 p., 8vo. London, 1890. G. Phillip & Son. Patterson, Dr. T. On the Abolition of Smoke from Steam Boilers. 43 p., 8vo. Oldham, 1891. The Author. Penal Servitude Acts Commission. Report of the Commissioners appointed to inquire into the working of the Penal Servitude Acts. Vol. I.—Commissions and Report. 66 p. Svo. London, 1879. Vol. 11.—Minutes of Evidence. 699 p., 8vo. London, 1879. Vol. 111.—Minutes of Evidence (con.) and Appendix, together with Analysis of Evidence and Appendix. 640 p., Svo. London, 1879. Miss Greenhow. Penal Servitude and Transportation. Report of the Commissioners appointed to inquire into the operation of the Acts relating to, Vol. 1.—Report and Appendix. 281 p., Svo. Vol. II.—Minutes and Evidence. 658 p., Svo. — Index of Evidence and Appendix. 35 p., f. cap. — Report. 44 p., f. cap. London, 1863. Miss Greenhow.

Price, J. Scavenging and Disposal of Refuse, Lecture on. 27 p.,

The Author.

8vo. Liverpool, 1892.

Pringle, Dr. John. Observations on the Diseases of the Army, 500 p., Svo. London, 1764. Miss Greenhow. Prisons, Commissioners of, Reports with Appendix. Ninth, for year ending March 31st, 1886, 195 p., Svo. London, 1886. Tenth, for year ending March 31st, 1887, 229 p., 8vo. London, 1887. Eleventh, for year ending March 31st, 1888, 304 p., 8vo. London, 1888. Miss Greenhow. ---- Royal Commission on, in Ireland. Vol. I.—Reports with Digest of Evidence and Appendices. 258 p., f. cap. Dublin, 1884. Second Report. 34 p., f. cap. London, 1884. Vol. II.—Minutes of Evidence. 519 p., f. cap. London, 1884. Miss Greenhow. (Convict), Directors of Reports with Appendix for year 1886-7, 133 p., Svo. London, 1887. For year 1887-8, 147 p., Svo. London, 1888. Miss Greenhow. — (Convict), Reports on the Discipline and Management of, for year 1875, 609 p., Svo. London, 1876. For year 1876, 634 p., 8vo. London, 1877. For year 1877, 597 p., 8vo. London, 1878. For year 1879-80, 1011 p., Svo. London, 1880. For year 1880 81, 640 p., Svo. London, 1881. For year 1885-86, 284 p., Svo. London, 1886. Miss Greenhow. (Convict), Directors of, for Ireland. Annual Reports with Appendix for the following years ending December 31st. 1865. 78 p., Svo. Dublin, 1886. 1866, 75 p., Svo. Dublin, 1867. 1875, 48 p., Svo. Dublin, 1876. 1876, 47 p., Svo. Dublin, 1877. 1877, Miss Greenhow. 49 p., Svo. Dublin, 1878. - (Military). Report on the Discipline and Management of. for 1885, 37 p., 8vo. London, 1886. For 1886, 44 p., 8vo. London, 1887. Miss Greenhow. Prison Discipline. Copies of Correspondence between the Secretary of State for the Home Department and the Inspectors of Prisons relating to the Report of the Select Committee of the House of Lords on Prison Discipline and of the Report of a Committee appointed by the Secretary of State to inquire into the Dietaries of County and Borough Prisons. 78 p., f. cap. London, 1864. Miss Greenhow. Privy Council and Local Government Board. Reprints from Reports of the Medical Department for the years 1865-6 and Miss Greenhow. 1873. 35 p., Svo. London, 1884. Putzeys, Dr. Felix. La Construction des Casernes. 364 p., Svo. 8vo. Liege, 1892. (With folio of plans). The Author. Quarantine, General Board of Health. Reports on 1848—54. 300 p., 8vo. London, 1848-54. Miss Greenhow. Registrar-General, Scotland. Thirty-fifth detailed Annual Report of Births, Deaths, and Marriages in Scotland. 459 p., 8vo. Edinburgh, 1891. Weekly, Monthly, and Quarterly, 1892. - England. Weekly and Quarterly, 1892. - Ircland. Quarterly Returns, 1891; Weekly and Quarterly Registrar-General. Returns, 1892.

Reid, Dr. G. Practical Sanitation. 300 p., 8vo. London, 1892.

Rivers Pollution Prevention Act, 1876. Second Report to Local Government Board, by Dr. Angus Smith, on the Examination of Waters, 38 p. (plates), Svo. London, 1884, Miss Greenhow, Rivington's Building Construction, Notes on. Parts 1, 11, and 1V. 955 p., Svo. London, 1891. Parchased. Rome. La Ricerca del Gittajono e di alcuni altri semi ed elementi eterogenei nelle farine stacciate. 14 p., f. cap. Roma, 1892. Ministero dell' Interno, – Di alcune muove proprietà dello spirillo colerigeno di Koch e degli spirilli affini di Metschnikoff, Di Finkler e di Deneke nota del Dott Achille Sclavo. 15 p., 4to. 1892. Ministero dell' Interno. ----- Studi sperimentali sul latte nota preventiva dell Dott C. Gorini. 3 p., 4to. Ministero dell' Interno. — Direzione della sanita pubblicas Istruzioni per prevenire lo sviluppo e la diffusione del Colera nei Comuni del Regno. 15 p., 4to. September, 1892. Ministero dell' Interno. ----- Azione di alcune muffe sui composti fissi d'arsenico pel Dott B. Gosio. 32 p., 4to. Roma, 1892. Ministero dell' Interno, - Di alcune differenze esistenti fra gli spirilli del colera isolati in diverse epidemie. 12 p., 4to. 1892. Ministero dell' Interno. — Di un nuovo apparecchio per la presa dell'acqua, a profon-Ministero dell' Interno. dità. 6 p., 4to. Roma, 1892. - Della conversazione dei virus in glicerina. 7 p., 4to. Roma, 1891. Ministero dell' Interno. Russell, Hon. Rollo. Epidemics, Plagues and Fevers, their Causes and Prevention. 508 p., 8vo. London, 1892. The Author. Sanitary Commission dispatched to the Seat of War in the East. 1855-56. Report of the Proceedings of. 301 p., Svo. London, Miss Greenhow. School Ventilation, The problem of, with special reference to Ventilation by mechanical means. A Paper read before a Conference of School Board Clerks, Brighton, 1886. 20 p., Svo. W. Whitaker. Shapter, Dr. T. The History of the Cholera in Exeter in 1832. 296 p., Svo. London, 1849. Miss Greenhow. Shone, Isaac. The "Shone" System of Town Drainage. A Paper read before the Incorporated Association of Municipal and County Engineers, Peterborough, June, 1892. 24 p., 16mo. The Author. Simon, Sir John. Reports relating to the Sanitary Condition of the City of London. 312 p., Svo. London, 1854. Miss Greenhow. Small Pox and Fever Hospitals. Report of the Commissioners appointed to inquire respecting, with Minutes of Evidence and Appendix, 414 p., f. cap. London, 1882. Miss Greenhow. Stock, C. Haden. Shoring and Underpinning. 54 p., 8vo. London, 1889. Purchased. Suisse. Statistique de la, 84e livraison, les Résultats du recensement Fédéral du 1er Décembre, 1888. 287 p., 4to. Berne, 1892. Dr. Guillaume. Sutcliffe, J. D. Warming and Ventilation of Public Buildings with or without Motive Power. A Paper read before the Philosophical

Society of Glasgow, 18th January, 1892, 16 p., 8vo. W. Whitaker.

CONTRIBUTIONS TO LIBRARY,

Sykes, Dr. J. F. J. Public Health Problems. 370 p., Syo. London. 1892. (Contemporary Science Series.) W. Scott, Limited. Tarn, E. Wyndham. The Science of Building. 216 p., 16mo. London, 1890, Purchased. Thackrah, C. Tarner. The effects of Arts, Trades, and Professions and of Civic States and Habits of Living on Health and Longevity. 238 p., Svo. London, 1832. Miss Greenhow. Thompson, Sir Henry. Food and Feeding. 222 p., Svo. London, The Author. Thorne, Thorne Dr. Diphtheria, its Natural History and Prevention. 266 p., Svo. London, 1891. The Author. Thornton, B. The Comparative Climatology of London and the Chief English Health Resorts. 15 p., 8vo. London, 1891. The Author. Tredgold, J. Elementary Principles of Carpentry. 527 p. (Plates), Svo. London, 1890. Purchased. Trélat. M. Émile. Théorie du Chaussage des habitations. 11 p., 8vo. Paris, 1892. The Author. Vaccination. Papers relating to the History and Practice. 188 p., 4to. London, 1857. Miss Greenhow. - Papers relating to the History and Practice of, issued by the General Board of Health. 188 p., 4to. London, 1857. Miss Greenhow. Vaccination Returns. Norwich Public Vaccination Station. 69 p., Miss Greenhow. f. cap. London, 1882. Vacher, Francis. Defects in Plumbing and Drainage Work. 83 p., Svo. London, 1889. The Author. Wakefield. Reports of Course of Lectures to Sanitary Officers. 190 p., Svo. Wakefield, 1892. Waring, Col. G. E., Jun. The Sewerage of two New Hampshire Towns—Keene and Laconia. 14 p., Svo. Concord, 1892. The Author. Sewage Disposal of Wayne, Pa. 4 p., f. cap. Reprint from the American Architect, 2nd July, 1892. The Author. Sewage Disposal for Isolated Houses and large Institutions. 7 p., f. cap. Reprint from the American Architect, April, 1892. The Author. Warner, Dr. Francis. Abstracts of the Milroy Lectures, on an inquiry as to the physical and mental condition of school children. 14 p., Svo. London, 1892. The Author. Wharam, R. M. Hints on Sanitary Fittings and their Application. 31 p., Svo. London, 1891. The Author. Whitaker, W. Report on the Best Source for a Water Supply for the Town of King's Lynn. 8 p. Svo. King's Lynn, 1892. The Author. Whitelegge, Dr. B. A. Hygiene and Public Health. 531 p., Svo. London, 1890. The Author. Wilson, Dr. G. Handbook of Hygiene. 7th Edit., 751 p., 8vo. London, 1892.

### PERIODICALS.

### WEEKLY.

British Medical Journal. Builder. Contract Journal. County Council Times. Illustrated Carpenter and Builder Industries. Invention.

Journal d'Hygiène. Journal Society of Arts. Local Government Chronicle. Local Government Journal. Nursing Record. Surveyor.

### FORTNIGHTLY.

## Sanitary Record.

### MONTHLY,

Engineering Review. Health Record, Dublin. Hygiene. Ironmonger. Journal of the Royal Institute of Sanitarian. British Architects.

Meteorological Record. Plumber and Decorator. Practitioner. Public Health. Sci-i-Kwai Medical Journal.

## QUARTERLY,

Deutsche Vierteljahrsschrift für öffentliche Gesundheitpflege.

## LECTURES & MEETINGS FOR 1893.

### JANUARY.

2 M. Exhibition Committee.

7 S. Lecture to Sanitary Officers, King's

Lynn, 2 p.m. W. Finance Committee, 4 p.m.; Council, 5 p.m.
14 S. Lecture to Sanitary Officers, King's

Lynn, 2 p.m.
19 Th. Examination Committee.

21 S. Lecture to Sanitary Officers, King's Lynn, at 2 p.m.

23 M. Museum Committee.

27 F. Examination, Worcester.

23 S. Lecture to Sanitary Officers, King's

Lynn, 2 p.m. 31 Tu Lecture to Sanitary Officers, London, 8 p.m.

### FEBRUARY.

3 F. Lecture to Sanitary Officers, London, 8 p.m.

Lecture to Sanitary Officers, King's Lynn, 2 p.m. 6 M. Exhibition Committee.

7 Tu. Lecture to Sanitary Officers, London, 8 p.m. 8 W. Finance Committee, 4 p.m.; Coun-

cil, 5 p.m.; Sessional Meeting at 8 p.m.

10 F. Lecture to Sanitary Officers, London, 8 p.m.

11 S. Lecture to Sanitary Officers, King's Lynn, 2 p.m.
11 S. Visit of the Students to South

Norwood Irrigation Farm, 3p.m. 14 Tu. Lecture to Sanitary Officers, Lon-

don, 8 p.m. 15 W. Visit of the Students to an Inspection in the Parish of Chel-

sea, 2 p.m. 17 F. Lecture to Sanitary Officers, London, 8 p.m.

18 S. Lecture to Sanitary Officers, King's

Lynn, 2 p.m.

18 S. Visit of the Students to Express
Dairy Company's Establishment
at Heath Street, Hampstead, 3 p.m.

21 Tu. Lecture to Sanitary Officers, London, 8 p.m.

## FEBRUARY-(Continued).

22 W. Visit of the Students to an Inspection in the Parish of St. George's, Hanover Sq., 2 p.m.

24 F. Lecture to Sanitary Officers, Lon-

don, 8 p.m.
25 S. Lecture to Sanitary Officers, King's

Lynn, 2 p m.
25 S. Visit of the Students to East
London Water Works, Lea Bridge. 3 p.m. 25 S. Lecture to Sanitary Officers, Exe-

ter, 3 p.m.

27 M. Museum Committee.

28 Tu. Lecture to Sanitary Officers, London, 8 p.m.

### MARCH.

1 W. Visit of the Students to an Inspection in the Parish of Chelsea, 2 p.m.

3 F. Lecture to Sanitary Officers, London, 8 p.m.

Lecture to Sanitary Officers, King's

Lynn, 2 p.m.
4 S. Lecture to Sanitary Officers, Eve-

ter, 3 p.m.

4 S. Visit of the Students to Leyton
Sewage Works, 3 p.m.

6 M. Exhibition Committee.

7 Tu. Lecture to Ladies, 3 p.m. 7 Tu. Lecture to Sanitary Officers, London, 8 p.m.
8 W. Finance Committee, 3,30 p.m.
8 W. Council Meeting, 5 p.m.

8 W. Sessional Meeting, 8 p.m.

10 F. Lecture to Ladies, 3 p.m.
10 F. Lecture to Sanitary Officers, Lon-

don, 8 p.m.

11 S. Visit of the Students to the Shone
System of Drainage, Houses of

Parliament, 11.45 a.m. 11 S. Lecture to Sanitary Officers, King's

Lynn, 2 p.m.
11 S. Lecture to Sanitary Officers, Exeter, 3 p.m.

14 Tu. Lecture to Ladies, 3 p.m.
14 Tu. Lecture to Sanitary Officers, London, 8 p.m.
15 W. Visit of the Students to the

Disinfecting Station, Apparatus, &c., St. Paneras, 3.30 p.m.

### MARCH-(Continued),

- 17 F. Lecture to Ladies, 3 p.m.
- 17 F. Lecture to Sanitary Officers, London, 8 p.m.
- 18 S. Lecture to Sanitary Officers, King's Lynn, 2 p.m.
- 18 S. Lecture to Sanitary Officers, Exeter, 3 p.m.
- Lecture to Sanitary Officers, Dublin, 3 p.m. 21 Tu. Lecture to Sanitary Officers, Lon-
- don, 8 p.m. 22 W. Visit of the Students to an Inspection in the Parish of St.
- George's, Hanover Sq., 2 p.m. 24 F. Lecture to Sanitary Officers, Lon-
- don, 8 p.m. Lecture to Sanitary Officers, King's Lynn, 2 p.m.
- Lecture to Sanitary Officers, Exeter, 3 p.m.
- Lecture to Sanitary Officers, Dublin, 3 p.m.
- 25 S. Visit of the Students to the London Subways, 3 p.m.
- 27 M. Museum Committee. 28 Tu, Lecture to Sanitary Officers, Lon-
- don, 8 p.m. Visit of the Students to the Disinfecting Station, Apparatus, &c., St. Paneras, 3.30 p.m.

- 1 S Lecture to Sanitary Officers, Exeter, 3 p.m.
- 1 S. Lecture to Sanitary Officers, Dublin, 3 p.m.
- 1 S. Visit of the Students to the Express Dairy Company's Farm, Finchley.
- 3 M. Exhibition Committee.
- 7 F. Examination Committee. Lecture to Sanitary Officers, Exe-
- ter, 3 p.m. Lecture to Sanitary Officers, Dublin, 3 p.m.
- 12 W. Finance Committee, 4 p.m.; Council, 5 p.m.; Sessional Meeting, 8 p.m.
- 14 F. Examination, London. 15 S. Examination, London.
- Lecture to Sanitary Officers, Exeter, 3 p.m.
- Lecture to Sanitary Officers, Dublin, 3 p.m.
- 22 S. Lecture to Sanitary Officers, Exeter, 3 p.m.
- 22 S. Lecture to Sanitary Officers, Dublin, 3 p.m.
- 24 M. Museum Committee.
- 28 F. Examination, King's Lynn.

### APRIL-(Continued).

- 29 S. Examination, King's Lynn,
- 29 S. Lecture to Sanitary Officers, Exeter, 3 p.m.
- 29 S. Lecture to Sanitary Officers, Dublin, 3 p.m.

### MAY.

- 1 M. Exhibition Committee.
- 6 S. Lecture to Sanitary Officers, Exeter, 3 p.m.
- Lecture to Sanitary Officers, Dublin, 3 p.m.
- 10 W. Finance Committee, 4 p.m.; Council, 5 p.m.
- 13 S. Lecture to Sanitary Officers, Exc. ter, 3 p.m.
- Lecture to Sanitary Officers, Dublin, 3 p.m.
- 19 F. Examination Committee.
- 20 S. Lecture to Sanitary Officers, Dublin, 3 p.m.
- Museum Committee.
- 26 F. Examination, Exeter.
- 27 S. Examination, Exeter.
- Lecture to Sanitary Officers, Dublin, 3 p.m.

### JUNE.

- 3 S. Lecture to Sanitary Officers, Dublin, 3 p.m.
- 5 M. Exhibition Committee.
- 9 F. Examination for Surveyors, Lon-
- 10 S. Examination for Surveyors, Lon-
- Lecture to Sanitary Officers, Dublin, 3 p.m.
- 14 W. Finance Committee, 4 p.m.; Council, 5 p.m.
- 23 F. Examination, Dublin.
- 24 S. Examination, Dublin, 26 M. Museum Committee.
- 30 F. Examination Committee.

### JULY.

- 3 M. Exhibition Committee.
- 7 F. Examination, Leeds.
- 8 S Examination, Leeds.
- 12 W. Finance Committee, 4 p.m.; Council, 5 p.m.
- 17 M. Congress Committee.
- 24 M. Museum Committee.
- 28 F. Examination, Cardiff.
- 29 S. Examination, Cardiff.

### OCTOBER.

- 2 M. Exhibition Committee.
- 3 Tu. Lecture to Sanitary Officers, Loudon, 8 p.m.

### OCTOBER—(Continued).

- 6 F. Lecture to Sanitary Officers, Lon-
- don, 8 p.m. 10 Tu. Lecture to Sanitary Officers, London, 8 p.m.
- 11 W. Finance Committee, 4 p.m.; Council, 5 p.m.
- 13 F. Lecture to Sanitary Officers, London. 8 p.m.
- 16 M. Congress Committee.
- 17 Tu. Lecture to Sanitary Officers, London, 8 p.m.
- 20 F. Lecture to Sanitary Officers, London, 8 p.m. 23 M. Museum Committee.
- 24 Ta. Lecture to Sanitary Officers, London, 8 p.m.
- Lecture to Sanitary Officers, London, 8 p.m.
- 31 Tu. Lecture to Sanitary Officers, London, 8 p.m.

### NOVEMBER.

- 3 F. Examination Committee.
- 3 F. Lecture to Sanitary Officers, London, 8 p.m.
- 6 M. Exhibition Committee.
- 7 Tu. Lecture to Sanitary Officers, London, 8 p.m.

### NOVEMBER—(Continued).

- 8 W. Finance Committee, 4 p.m.; Coun-
- cil, 5 p.m.

  10 F. Examination, Newcastle-on-Tyne.
  10 F. Lecture to Sanitary Officers, Lon-
- don, 8 p.m.

  11 S. Examination, Newcastle-on-Tyne.
- 14 Tu. Lecture to Sanitary Officers, Lon-
- don, 8 p.m.

  17 F. Lecture to Sanitary Officers, London, 8 p.m.
- 21 Tu. Lecture to Sanitary Officers, London, 8 p.m.
- 24 F. Examination Committee.
- 24 F. Lecture to Sanitary Officers, London, 8 p.m.
- 27 M. Museum Committee.
- 23 Tu. Lecture to Sanitary Officers, London, 8 p.m.

### DECEMBER.

- 1 F. Examination, London.
- 2 S. Examination, London.
- 4 M. Exhibition Committee. 13 W. Finance Committee, 4 p.m.; Coun-
- cil, 5 p.m. 15 F. Manchester Examination.
- 16 S. Manchester Examination.
- 18 M. Museum Committee.

## LIST OF HON. FELLOWS, FELLOWS, MEMBERS, AND ASSOCIATES.

Additions and Corrections to December 31st, 1892.

Hox. Fellow	rs, 26;	Fellows,	146;
Members,	510;	Associates,	598.—

	aons, 20; Tianons, 140;
Members,	510; Associates, 598.—Total, 1280.
	HONORARY FELLOWS.
Reg. Date of No. Election.	AUSTRIA-HUNGARY.
<sup>13</sup> 1890. June.	von Grunen, Prof. Franz Ritter, 1, Tiefer Graben 3, Vienna.
<sup>16</sup> 1890. June.	FODOR, Dr., Professor of Hygiene, Buda-Pesth.
	BELGIUM,
<sup>23</sup> 1890. June.	Putzeys, Dr. Felix, Professor of Hygiene at the University of Liège.
	EGYPT.
<sup>33</sup> 1890. Dec.	Greene, Dr. H. R., Pasha, late Chief of the Sanitary Department, Cairo.
	FRANCE.
<sup>31</sup> 1892. Oct.	BECHMANN, M., Ingénieur en Chef des Ponts et Chaussées; Directeur des Service d'Assainissement de Paris; 9, Place de l'Hôtel-de-Ville, Paris.
<sup>2</sup> 1890. June.	BROUARDEL, Dr. Paul, Prof. and Dean of the Faculty of Medicine, Paris.
<sup>3</sup> 1890. June.	CORNIL, Dr. V., Senator, 19, Rue St. Guillaume, Paris.
<sup>1</sup> 1890. June.	PASTEUR, Prof. Louis, 25, Rue Dutot, Paris.
<sup>5</sup> 1890. June.	DE PIÉTRA SANTA, Dr. Prosper, Hon Sec. of the French Society of Hygiene, 30, Rue du Dragon, Paris.
<sup>7</sup> 1890. June.	VALIAN, Dr. Emile, Professor of Hygiene, Director of the School of the Military Sanitary Service, Lyons.
'1890. June.	MARIE DAVY, Dr. H., Hon. President of the French Society of Hygiene.

### GERMANY.

10 1890. June. von Hofmann, Prof. A. W., Professor of Chemistry,

31890. June. Hobrecht, Dr., Engineer, Berlin.

	Berlin.
11 1890. June.	Koch, Dr., Director of the Hygienic Institute, Berlin.
<sup>12</sup> 1890. June.	PETTENKOFER, Dr., Professor of Hygiene at the
	University of Munich.
<sup>13</sup> 1890. June.	Roth, Prof. Dr. W., Surgeon-General, 6, Kaizer
	Wilhelm Platz, Dresden.
111890. June.	VIRCHOW, Dr. Rudolph, Professor of Pathology,
	Berlin.

### HOLLAND.

23 1890. June. DE MEYER, Dr. van Overbeek, Professor of Hygiene at the State University of Utrecht, Netherlands,

### ITALY.

181800. June. Betocciii, Comre. Alessandro, Prof., Civil Engineer, Ministry of Public Works, Rome.

201890. June. PACCHIOTTI, Dr. Giacinto, Professor of Hygiene, Turin.

### ROUMANIA.

"1890. June. Felix, Dr. J., Professor of Hygiene, Bucharest.

### RUSSIA.

21890. June. Suzon, Comte de, Architect-in-chief, Lique de Cadets 21, St. Petersburgh.

### SWITZERLAND.

231890. June. Guillaume, Dr., Director of the Federal Bureau of Statistics, Berne.

### TURKEY.

21 1890. June. Zohros, A., Pasha, Professor at the School of Medicine, Director of the Bacteriological Institute, Secretary-General of the Administration of Public Medicine and Hygiene, Constantinople.

### UNITED STATES.

<sup>23</sup>1890. June. BILLINGS, Dr. John S., Washington, D.C. <sup>27</sup>1890. June. WALCOTT, Dr. Henry P., Cambridge, Massachusetts.

## FELLOWS (FELLOW SAN. INST.)

† Marked thus have passed the Examination of the Institute for Local Surveyors.

<sup>13</sup> 1889. Dec.	Abel, Sir Frederick, Bart., K.C.B., F.R.S., Imperial
	Institute, Imperial Institute Road, S. W., (40,
	Cadogan Place, S.W.)

<sup>361</sup>1891. Dec. ACLAND, SIR Henry W., K.C.B., M.D., D.C.L., F.R.S., Broad Street, Oxford.

ADAMS, G. E. D'Arey, M.D., D.P.H.CAMB., F.G.S., 131888. Oct. 1, Clifton Gardens, Maida Vale, W.

ALBANY, H.R.H. THE DUCHESS OF, Claremont, Esher. 16 1888. Oct. Angell, Lewis, M.Inst.c.E., F.K.C.LOND., Town Hall, 316 1888 Oct. Stratford, E.

Anningson, Bushell, M.A., M.D., Cambridge. <sup>27</sup>1890. Feb. ARCHER, John A., 79, Larkhall Rise, S.W. <sup>11</sup>1888. Oct.

<sup>77</sup>1888. Oct.

Reg. Date of No. Election. No. Electron. 23 1889. Dec. Armistead, William, M.B., M.O.H., Shelford, Cambridge. BARRY, Charles, v.s.A., 1, Victoria Street, S.W. "1889, Dec. Bass, Hamar Alfred, M.P., Burton-on-Trent. 363 1888. Dec. Belly Major C. W., J.P., D.L., Yewharst, East Grin-32 1888. Oct. stead, Sussex. Birch, R. W. Peregrine, M.INST.C.E., 5, Queen Anne's 33 1888. Oct. Gate, S.W. <sup>55</sup> 1889. Dec. Blomfield, Sir A. W., M.A., P.R.I.B.A., 6, Montague Place, W. 31 1888. Oct. Blyth, A. Wynter, M.R.C.S., L.S.A., Court House, Marylebone. 11888. Oct. †Boulnois, H. Perey, Manstreau, City Engineer, Liverpool. BOWMAN, SIR William, BART., M.D., LL.D., P.R.S., 5, 3741890, Jan. Clifford Street, Bond Street, W. BRETT, A. T., M.D., M.O.W., Watford House, Watford. 67 1890. Jan. BRIGHTEN, W. G., 108, Fenchurch Street, E.C. 331888. Oct. Brock, J. H. E., M.D., B.SCALOND., 115, Adelaide 325 1889, Dec. Road, South Hampstead. Brown, Harry, The Elms, Worsley Road, Hamp-36 1888. Oct. stead, N.W. <sup>37</sup> 1888. Oct. Browning, Benjamin, L.R.C.P., M.R.C.S., D.P.H.CAMB., M.O.H., 16, Royal Terrace, Weymouth. BURBERY, J. Stone, Trent House, West Cowes, I. of W. 341888. Oct. Burdett, Henry C., r.s.s., r.L.s., The Lodge, Por-33 1888. Oct. chester Square, W. Burgess, Peter, M.A., M.B., Driffield, Yorkshire. 40 1888. Oct. CAMBRIDGE, H.R.H. THE DUKE OF, K.G., Gloucester <sup>71</sup> 1888. Oct. House, Park Lane, W. Carew, R. R., Carpenders, Watford, Herts. 317 1888. Oct. CARTER, R. Brudenell, r.R.C.S., 27, Queen Anne <sup>73</sup>1888. Oct. Street, Cavendish Square, W. Cassal, Charles E., F.I.C., F.C.S., Town Hall, Ken-<sup>13</sup>1888. Aug. sington, W., (Vestry Hall, Mount Street, Grosvenor Square, W.), (Brenne House, Wandsworth Common, S. W.). Cates, Arthur, F.R.I.B.A., 7, Whitchall Yard, S.W. 59 1890. May. CLARK, F. Le Gros, F.R.S., The Thorns, Sevenoaks, Kent. <sup>71</sup>1888. Oct. COLLINS, II. II., P.R.I.B.A., 61, Old Broad Street, 313 188S. Oct. E.C., (5, Randolph Road, W.). Collins, Wm. J., M.D., B.Sc.Lond., D.P.H., 1, Albert <sup>87</sup>1889. Dec. Terrace, Regent's Park, N.W. COLMAN, J. J., M.P., Carrow House, Norwich. <sup>73</sup>1888. Oct. CORFIELD, PROF. W. H., M.A., M.D.OXON., F.R.C.P. <sup>7</sup>1888. Aug. LOND., 19, Savile Row, W. CRAWFORD, SIR Thomas, M.D., K.C.B., 5, St. John's <sup>76</sup>1888. Oct. Park, Blackheath.

CUTLER, Thomas William, F.R.I.B.A., 5, Queen

Square, Bloomsbury.

Date of Election. 1et 1888. Oct. Davey, Alexander George, M.D., L.R.C.P., M.R.C.S., 9, Belvedere Street, Rude, Isle of Wight. 311 1891. Mar. DE COURCY MEADE, Thomas, MAINST.C.E., 1, Park Villas, The Park, Highgate, N. DERBY, RT. HON. EARL OF, D.C.L., LL.D., F.R.S., 33, 102 1888. Oct. St. James' Square, S.W. 1011888. Oct. Doulton, Sir Henry, Lambeth, S.W. Dowson, A., 3. Gt. Queen Street, Westminster. 111 1890. Feb. Doyle, Patrick, c.E., F.G.S., Indian Engineering, 319 1888. Oct. Spence's Hotel, Calcutta, DUDTIELD, T. Orme, M.D., L.R.C.P., M.R.C.S., 14, 11 1888. Aug. Ashburn Place, Cromwell Road, S.W. DYKE, T. J., r.R.C.S., The Hollies, Merthyr Tydfil. 1011888, Oct. EATON, John, M.D., Montreal House, Cleator Moor, 1111888. Oct. Cumberland. 113 1888. Oct. Ellis, W. Horton, P.R.MET.SOC. EWART, Joseph, M.D., F.R.C.P., J.P., Montpelier House, 3111890. Dec. Montpelier Terrace, Brighton. 115 1888. Oct. FAYRER, SIR Joseph, K.C.S.I., M.D., F.R.C.P., F.R.C.S., LL.D., r.n.s., 53, Wimpole Street, W. 120 1888. Oct. Field, Basil, B.A., 36, Lincoln's Inn Fields, W.C. FIELD, Rogers, B.A., M.INST.C.E., 7, Victoria Street, 16 1888. Aug. Westminster, S.W. FLOWER, MAJOR Lamorock, Lee Conservancy Board. <sup>121</sup>1888. Oct. 12, Finsbury Circus, E.C. (48, Holland Road, W.). 111888. Nov. FORTESCUE, Rt. HON. EARL, 48, Grosvenor Gardens, S. W., (Castle Hill, South Molton, Devon). GALTON, SIR Douglas, K.C.B., D.C.L., LL.D., F.R.S., 12, <sup>1</sup>1888. Aug. Chester Street, Grosvenor Place, S.W. 132 1888. Oct. GOWERS, William Richard, M.B., 50, Queen Anne St., GRIMSHAW, Thomas Wrigley, M.D., Priorsland, <sup>131</sup>1888. Oct. Carrickmines, Dublin. 111 1888. Oct. HARKER, J., M.D., J.P., Hazel Grove, Carnforth, Lanc. 410 1890. May. HARRIS, Alfred E., L.R.C.P., L.R.C.S., M.O.H., Vestry Hall, Upper Islinaton. HARRIS, Thomas, F.R.I.B.A., 6, Southampton Street, 112 1888. Oct. Bloomsbury Square, W.C. HARRISON, C., M.D., D.P.H.CAMB., Newland, Lincoln. 130 1890. Jan. HART, Ernest, 38, Wimpole Street, W. 113 1888. Oct. 1111888. Oct. HAVILAND, A., M.R.C.S., Douglas, Isle of Man. 3"1890. June. Hehir, Patrick, M.D., F.R.C.S., D.P.H., Hyderabad, Deccan, India. <sup>131</sup>1890. Jan. HILL, Alfred, M.D., M.R.C.S., L.S.A., The Council House, Birmingham. HIME, Thomas Whiteside, A.B., M.B., L.R.C.S., 54, <sup>367</sup> 1388. Dec. Horton Road, Bradford.

116 1888. Oct.

Hodson, George, M.Inst.c.E., F.G.S., Abbey Buildings,

Princes Street, Westminster, (Loughborough).

434		FELLOWS.
Reg. Date No. Elect	of	
No. Elect	Dec.	Hope, E. W., M.D., D.P.H., Municipal Offices, Liverpool,
111 1888.	Oot	Humphry, Sir G. M., M.D., P.R.S., Cambridge.
<sup>161</sup> 1889.	Daa	Hunter, Str William Guyer, K.C.M.G., M.D., F.R.C.P.,
		21, Norfolk Crescent, Hyde Park, W.
<sup>163</sup> 1890.	Jan,	TLIFTE, William, M.R.C.S., 41, Osmaston Street, Derby,
168 1888.	Oct.	Jones, LaeutCol. A. S., U. C., Associalistical, Culverside, Carshalton, Survey.
<sup>6</sup> 1888.	Aug.	Judoe, Mark H., A.R.I.B.A., 15, Connaught Square, W.
<sup>167</sup> 1888.	Oct.	Kelly, Charles, M.D., P.R.C.P., Ellesmere, Gratwicke Road, Worthing.
3641888.	Dec.	KINGDON, J. A., Grocer's Hall, E.C.
<sup>169</sup> 1888.		LATHAM, Baldwin, M.INST.C.E., P.B.MET.SOC., P.O.S., F.S.S., 13, Victoria Street, S.W., (Duppas House, Croydon).
<sup>178</sup> 1888.	Oct.	Law, Henry, M.Inst.C.E., F.R.Met.Soc., 17, Victoria Street, S.W., (245, Vauxhall Bridge Road).
176 1889.	Dec.	LAWRENCE, SIR Trevor, BART., M.P., 57, Prince's Gate, S. W.
<sup>111</sup> 1888.	Oct.	Lawson, Inspector-General R., Ll.D., P.S.S., 20, Lansdowne Road, Notting Hill.
<sup>172</sup> 1888.	Oct.	LEAF, Charles J., T.L.S., T.S.A., 6, Sussew Place, Regent's Park, N.W.
<sup>370</sup> 1888.	Dec.	LEAF, W., LITT.DOC., 6, Sussex Place, Regent's Park, N. W.
<sup>3</sup> 1888.	Aug.	Lewis, Prof. T. Hayter, P.S.A., P.R.I.B.A., 12, Kensington Gardens Square, S.W.
<sup>173</sup> 1888.	Oct.	Lavesey, J., M.Inst.c.r., 2, Victoria Mansions, Victoria Street, Westminster, S.W.
363 1888.	Dec.	LONGSTAFF, G. B., M.D., M.A., D.P.H., Southfield Grange, Wandsworth, S. W.
<sup>371</sup> 1888.	Dec.	LUBBOCK, Rt. Hon. Sir John, Bart., M.P., D.C.L., F.R.S., Lombard Street, E.C.
<sup>185</sup> 1888.	Oct.	Mackey, John Alexander Dixie, B.A.oxon., 1, West- bourne Terrace, W.
<sup>157</sup> 1888.	Oct.	Mansergh, James, M.Inst.c.e., 5, Victoria Street, S. W.
<sup>183</sup> 1888.	Oct.	MEATH, Rt. Hon. Earl or, 83, Lancaster Gate, Hyde Park.
<sup>202</sup> 1892.	Oct.	MIDDLETON, Reginald Empson, M.INST.C.E., F.S.I., 17, Victoria Street, S.W.
<sup>211</sup> 1890.	Jan.	MURPHY, Shirley F., M.R.C.S., 41, Queen Anne Street, W.
501 1890.	June.	NEWSHOLME, Arthur, M.D., D.P.H., M.O.H., Town Hall, Brighton, (15, College Road, Brighton).
<sup>373</sup> 1S88.	Dec.	NIGHTINGALE, Miss F., 10, South Street, Grosvenor Square, W.
<sup>397</sup> 1890.	May.	NORTH, Samuel W., M.R.C.S., F.G.S., M.O.H., Mickle- gate, York.
¹1888.	Aug.	NORTHUMBERLAND, HIS GRACE THE DUKE OF, K.G., D.C.L., LL.D., 2, Grosvenor Place, S. W.

		FELLOWS, 4	(6)
Reg. Date	of		
No. Electle	on.		
<sup>231</sup> 1890.	Nov.	Notter, Prof. J. Lane, M.A., M.D., D.P.H., H	est
		Cliffe, Woolston, Southampton.	
	45		
<sup>-2</sup> 1888.	Oct.	OHREN, Magnus, ASSOC,M.INST.C.E., F.C.S., Lo	wer
		Sydenham."	
4.154.6	<b>α</b> .		_
<sup>121</sup> 1888.	Oct.	OLLARD, J. F., The Manor House, North Runch	lon,
		King's Lynn.	-
	<i>.</i>		
***1888.	Oct.	OLLARD, William Ludlam, Musticott House, W	ee-
		soken, Wisbeach, Norfolk.	
9 (9 <b>6</b> a (4)4)	<b>&gt;</b> T		
***1889 <b>.</b> .	Nov.	Pager, Charles Edward, M.R.C.S., D.P.H., M.O.	.H.,
		Town Hall, Salford.	
(1.1.4)414	Λ.		
·*1888,		Paget, J., J.r., Stuffynwood, Mansfield.	
121888,	Ano	Parkes, Charles Henry, Netherfield, Weybridge.	
221 1 4444	,		
<sup>121</sup> 1888.	Oct.	Parkes, Louis Coltman, M.D., M.R.C.S., D.P.H.,	σι,
		Cadogan Square, S.W.	
2.11000	/\ ·		, ,
** <sup>1</sup> 1888.	Oct.	Peggs, J. Wallace, Assoc.M.Inst.c.e., 9, Well	жек
		– Mansions, Cadogan Terrace, S.W., (21, Qt	teen
		Anne's Gate, S.W.).	
<sup>220</sup> 1888.	Oct.	Plumbe, Rowland, F.R.I.B.A., 13, Fitzroy Square,	W.
111888 <sub>6</sub>	Aug.	Poore, George Vivian, M.D., F.R.C.P., 30, Wim,	pow
		Street, W.	
<sup>4-1</sup> 1890.	Tan		Lin
1000.	0 HH.	Powell, Sir Francis Sharp, Bart., M.P., 1, Cambri	rige
		Square, W., (Horton Old Hall, Bradford).	
<sup>147</sup> 1888.	Oat-	PRITCHARD, E., MAINST.C.E., P.G.S., 1, Victoria St.	and I
1000*	Oct.		cci,
		S.W., (37, Waterloo Street, Birmingham).	
<sup>211</sup> 1888.	Oat	RAWLINSON, SIR Robert, K.C.B., M.INST.C.E., 11,	The
1000.	Ott.		Z NO
		Boltons, Brompton, S.W.	
<sup>250</sup> 1890.	Feb	Redwood, T. Hall, M.D., The Lawn, Rhymney.	
'''1891 <b>.</b>	Oct.	Reid, George, M.D., D.P.H., County Medical Officer	r of
		Health, Stafford.	•
3211000	$\Delta$		90
<sup>323</sup> 1888.	Oct.	REYNOLDS, PROF. J. Russell, M.D., F.R.C.P., F.R.S.,	აა,
		Grosvenor Street, W.	
3331000	Y		
313 1888.	7701	RICHARDSON, SIR Benjamin Ward, M.D., LL.D., F.1	1.5.,
		25, Manchester Square, W.	
<sup>213</sup> 1888.	Oat	RICHARDSON, J., M.INST.C.E., Methley Park, Leeds	0
<sup>252</sup> 1890.	Jan.	Ripon, Most Hon. Marquess of, k.g., d.c	).L.,
		r.n.s., 9, Chelsea Embankment, S.W.	•
1111 4 252521	ο.		
216 ISSS.	Oct.	Robins, Edward Cookworthy, F.S.A., F.R.I.B.A.,	46,
		Bernors Street, W.	
217 # Door	Λ.		• .
<sup>217</sup> 1888.	Oct.	Robinson, Prof. Henry, M.Inst.c.e., 13, Victo	mut
		Street, S. W., (54, Boundary Road, N.W.).	
628 1 O O O	Δ.		
$^{628}1892.$	Oct.	Roche, Anthony, M.R.C.P.I., L.R.C.S.I., 72, Harco	
		– Street, Dublin, Professor of Hygiene and also	of .
		Medical Jurisprudence in the Catholic Univers	
		– Examiner in Sanitary Science, Royal Univers	ity.
otasses	<b>.</b> .	Dublin,	•
<sup>215</sup> 1888.	Oct.	Russell, Hon. F. A. Rollo., f.r.met.soc., Dunro	zel,
		Haslemere.	-
321 1 0 0 0	ο.		
<sup>321</sup> 1888.	Oct.	Russell, James A., M.A., F.R.C.P.EDIN., M.B., B.	sc.,
		F.R.S.E., Woodville, Canaan Lane, Edinburgh.	
2544.000	т		
<sup>254</sup> 1890.	Jan.	Russell, J. B., M.D., LL.D., M.O.H., Glasyow.	
		· · · · ·	

436	FELLOWS.
Reg. Date of No. Election.	5 m 0 0 4 1 1 C 0 117
<sup>11</sup> 1889, Jan.	SALT, Thomas, M.P., 85, St. George's Square, S. W.
261 1889, Dec.	Seaton, Edward Cox, M.D., F.R.C.S., The Limes, 56, North Side, Clapham Common.
<sup>323</sup> 1888, Oct.	Shaw, George, 20, King Edward Street, Newgate Street, E.C.
374 1888. Dec.	Sievekino, Sir E. H., M.D., 17. Manchester Sq., W.
<sup>317</sup> 1889, Nov.	SMITH, James, Osborne, A.R.I.B.A., 34, Southampton Street, Strand, W.C., (65, Frithfield Gardens, Uxbridge Road, W.).
<sup>192</sup> 1892, Oct.	SMITH, William Howard, ASSOC.M.INST.C.E., City Engineer and Surveyor, Carlisle.
2 <sup>37</sup> 1888, Oct.	SMITH, PROP. William Robert, M.D., P.R.S.E., D.SC., Barrister-at-Law, 74, Great Russell Street, W.C., (Plumstead, Kent).
235 1888. Oct.	SNELL, H. Saxon, v.n.1.n.a., 22, Southampton Buildings, W.C., (Lynden Lodge, Elmfield Rd., Bromley, Kent).
160 1 0 2 0 3 Tan	Stephens, Henry C., M.P., Avenue House, Finchley.
160 1889. Mar.	Commence there have been been Coloured House The
<sup>260</sup> 1888. Oct.	Strong, Henry John, M.D., Colonade House, The Steyne, Worthing.
<sup>261</sup> 1888. Oct.	Sykes, J. F. J., M.D., B.Sc., 40, Camden Square, N.W.
11888. Aug.	SYMONS, G. J., P.R.S., 62, Camden Square, N. W.
<sup>283</sup> 1889. Dec.	Taylor, J. Stopford, M.D., M.O.H., 6, Grove Park, Liverpool.
250 1888. Oct.	TEMPLE, RIGHT REV. Frederick, D.D., LORD BISHOI OF LONDON, The Palace, Fulham.
<sup>201</sup> 1889, Dec.	Thompson, Sir Henry, M.B., 35, Wimpole Street, W.
2521000 Ant	THORNE, R. Thorne, C.B., M.B., 45, Inverness Ter., W.
<sup>242</sup> 1888, Oct.	THORNE, N. A ROTHE, C.B., M.D., 40, Internet & Co.
213 1888. Oct.	Turner, Ernest, F.R.I.B.A., 246, Regent Street, W.
'1888, Aug.	Twining, Thomas, Perryn House, Twickenham.
150 1889. Feb.	Tyndall, Prof. John, Ll.D., D.C.L., F.R.S., Hine Head House, Shotter Mill, near Petersfield.
113 1891. Nov.	Vacher, Francis, f.r.c.s., Birkenhead.
<sup>301</sup> 1889. Dec.	Walford, Edward, M.D., D.P.H.CAMB., M.R.C.S. M.O.H., Town Hall, Cardiff.
235 1888. Oct.	WARING, COL. G. E., Jun., M.INST.C.E., Newport Rhode Island, U.S. America.
<sup>236</sup> 1888. Oct.	WATERHOUSE, Alfred, R.A., 20, New Cavendist Street, W.
<sup>2</sup> 1888. Aug.	WESTMINSTER, HIS GRACE THE DUKE OF, K.G. Grosvenor House, W.
<sup>297</sup> 1888. Oct.	Whiteleage, Benjamin Arthur, M.D., B.SC.
2941600 0.4	D.P.H.CAMB., St. John's, Wakefield.
<sup>294</sup> 1888. Oct.	WILLIAMS, Dawson, M.D., 25, Old Burlington St., W
<sup>293</sup> 1888. Oct.	Wilson, George, M.A., M.D., F.R.S.E., 7, Avon Place Warwick.
413 1889. Jan.	WIX, H. A., 3, King's Bench Walk, Temple, E.C.

## ORDINARY MEMBERS (MEM. SAN. INST.)

† Marked thus have passed the Examination of the Institute for Local Surveyors.

1.3	arked thus have passed the Examination of the Institute for Inspectors of :	Nuisances.
Heg.	Date of	

No. Election. 1890. May. Adams, Frederick Edward, M.D., D.P.H., Town Hall, Bolton.

161 1889, Mar. Adams, James, M.D., M.O.H., Springwell, Barnes, Surrey.

1891. Dec. Adams, Prof. Henry, Mainst.c.e., f.s.i., 60, Queen Victoria Street, E.C.

Yealmpton, Plympton, Devon.

15 1888. Dec. Ainy, Hubert, M.A., M.D., Local Government Board, S. W.

<sup>151</sup> 1889. Feb. Aldwingkle, Thomas William, F.R.I.B.A., 1, Victoria Street, S. W.

131888. Oct. Alexander, W. C., Aubrey House, Campdon Hill, W.

1º1889. Apr. Allerey, Charles Henry, M.D., F.R.C.S., D.P.H., Plas Newydd, Princes Road, St. Leonards-on-Sea.

21 1888. Oct. Ames, 11. St. Vincent, M.A., Cost House, Westbury-on-Trym, Bristol.

21 1888. Oct. Anderson, Geo., c.e., 35a, Great George Street, Westminster, S.W.

1889. Jan. †Anderson, John Reid, The Cottage, Gibson's Hill, Norwood, S.E.

11 1800. Dec. Anderson, John, Assoc.M.Inst.c.e., Town Hall, Montrose, N.B.

<sup>23</sup>1888. Oct. Andresen, August F., Priory Cottage, Mill Lane, West Hampstead.

<sup>24</sup>1888. Oct. Andrew, Capt. C. W., 286, Kennington Park Road, S.E.

133 1889. Mar. Andrews, G. R., Surveyor, Johannesburg, South Africa.

<sup>25</sup>1888. Oct. Andrews, Jonathan, 10a, Mount Street, Berkeley Square, W.

<sup>26</sup>1888. Oct. †Angell, John A., Assoc.M.Inst.C.E., Borough Engineers' Office, West Ham, E.

13. Nov. Anson, Frederick Henry, M.A., ASSOC.M.INST.C.E., 15. Dean's Yard, Westminster, S. W.

<sup>752</sup>1892. Dec. Argles, Frank, M.R.C.P., M.O.H., Wanstead, Essex.

ARMSTRONG, Henry E., D. HYG., M.R.C.S., L.S.A., M.O.H., The Health Department, Town Hall, New-castle-on-Tyne.

<sup>20</sup> 1888. Oct. Armstrong, Prof. II. E., Ph.D., F.R.S., 55, Granville Park, Lewisham, S.E.

161 1890. Oct. Aspinall, Miles, Borough Engineer and Surveyor's Office, Worthing.

Date of Election. Reg. No.

ATKINS, Alfred, ASSOC.M.INST.C.E., F.R.I.B.A., Wan-632 1891. Nov. ganui, New Zealand. Aumonten, F., 110, High Street, Manchester Square.

<sup>11</sup>1888. Oct.

Balley, Thomas Castley, Lar.c.P., M.R.C.P., M.O.H., <sup>674</sup>1892, Jan. Crewe, Cheshire,

606 1892, Mar. Baine, Laurence Augustus, M.D., D.P.H., Dipton, Lintz Green, Durham.

"1888, Oct. Baker, Str Benjamin, K.C.M.O., LL.D., F.R.S., M.INST.C.E., 2, Queen's Square Place, Westminster.

<sup>42</sup>1888. Oct, BAKER, R., Ballington House, Green Lanes, N. 641 1892. Feb. Barchay, Arthur, assoc, Manst. C.E., 3, Castle Street, Oxford Street, W.

Barron, John Isaac, Ryde, (Ventnor), Isle of Wight. 391890. May. BARWISE, Sidney, M.B., D.P.H., M.O.H., Derbyshive 631 1891. July County Council, 61, Uttoxeter New Road, Derby.

<sup>501</sup>1890. May. Bateman, James, Assistant Engineer, Natal Government Railway.

BAUGH, Alfred C., Egerton Street, Wrewham. 171888. Oct.

Bean, Alexander Thomas, 7, Victoria Street, S.W. 141888. Oct.

ate 1888. Dec. †Beard, E. T., Wallsend, Pevensey, Sussex.

331 1888. Oct. Beard, George, Thickthorn, Kenilworth.

Beand, Neville, The Mount, Ashbourne. "1888. Oct.

<sup>531</sup>1889. Dec. Beardmore, George Russell, L.R.C.P.LOND., M.R.C.S., L.S.A., D.P.H.CAMB., Warwick House, Upper Street, Islington.

327 1888. Oct. Brck, Marcus, M.B., 30, Wimpole Street, W.

Beddoe, John, B.A., M.D., F.R.S., The Chantry, Brad-<sup>50</sup>1888. Oct. ford-on-Avon.

323 1888. Oct. Beryon, Mrs. Elizabeth, 129, Harley Street, W.

Bell, Thomas, L.R.C.P.LOND., Uppingham, Rutland. 311888. Oct. 113 1888. Dec. Benjamin, Horace Bernton, r.n.o.s., 28, Albemarle

Street, W., (37, Upper Grosvenor Street, W.).

<sup>52</sup>1888. Oct. Bennett, Hugh, M.R.C.S., Builth Wells, Brecon. 600 1892. Mar. Bennett, William Benjamin George, Assoc.M.Inst. C.E., Cranleigh, Portswood Road, Southampton.

Bernard, William Larkins, 3, St. Stephen's <sup>53</sup>1888. Oct. Chambers, Baldwin Street, Bristol.

<sup>31</sup>1888. Oct. †Berrington, R. E. W., Assoc, M. Inst. C.E., Graiseley, Wolverhampton.

634 1892. Mar. Berry, William Walton, Assoc.M.INST.C.E., Eccles, near Manchester.

BICKERSTETH, E. R., F.R.C.S., 2, Rodney St., Liver-<sup>36</sup> 1888. Oct.

<sup>c19</sup>1891. Mar. BILLINGHAM, J. A. L., Surveyor, R. Engineers, Royal Engineer Office, Colombo.

Black, Surg.-Majon W. G., 2, George Square, <sup>57</sup>1888. Oct. Edinburgh.

487 1889, Mar. Blair, William Nisbet, Assoc.M.Inst.c.e., Vestry Hall, Pancras Road, N. W.

MEMBERS. Date of Election. BLASHILL, T., F.R.I.B.A., Superintending Architect, 3, 1888. Oct. London County Council, Spring Gardens, S.W. BLIZARD, John Henry, ASSOC, M.INST.C.E., F.S.I., 735 1892. Oct. Castle Lane, Southampton. BLUMER, Frederick Milnes, B.A., M.B., M.O.H., Fore-453 1889, Mar. gate Street, Stafford. BOLDING, John T., 19, South Moulton Street, W. 111889, Feb. Bond, Fredk. Adolphus, M.B., C.M.EDIN., D.P.H.EDIN., 131888. Oct. Hetton Lodge, Ferndale, Tunbridge Wells. BOOBBYER, Philip, M.B., M.R.C.S., M.O.H., The Guild-551890. Apr. hall, Nottingham. BOSTOCK, II., The Oaklands, Rowley Avenue, Stafford. att 1888. Dec. 141888, Oct. Box, M. H.

BRACE, W. H., M.D., 7, Queen's Gate Terrace, S.W. 61888, Oct. BRACKETT, Wm., 42, London Road, (27, High Street, 111888. Oct.

Street, Tunbridge Wells).

Bradshaw, James D., B.A., M.B., M.R.C.P., M.R.C.S., 61 1888. Oct. 30. George Street, Hanover Square, W.

Braga, João Francisco, L.S.A., F.C.S., F.L.S., F.O.S., c151891. July. D.P.H., Glen Villa, Sunbury-on-Thames.

BREBNER, George Reith, M.D., D.P.H., Bensham Lodge, 159 1889. Mar. West Croudon.

BRIDGES, J. H., M.B., F.R.C.P., The Brambles, Wim-641888. Oct.

BRIGHT, Philip, ASSOC.M.INST.C.E., 2, Newgate Street, 617 1891. Jan.

<sup>217</sup> 1888. Nov. Bristowe, John Syer, M.D., F.R.S., 13, Old Burlington Street, W.

1889. Apr. Brodie, John Shanks, Assoc.M.INST.C.E., Town Hall, Whitchaven, Cumberland.

BROOKE, Walter, ASSOC.M.INST.C.E., Albany Build-<sup>114</sup>1889. Mar. ings, 39, Victoria Street, Westminster, S.W.

BROOKE, William, M.D., M.O.H., Shaw, near Oldham. 517 1889. Apr. BROWN, Arthur, M.INST.C.E., The Guildhall, Notting-<sup>611</sup>1892. Jan.

1892. Oct. †Brown, Edwin, Local Board Offices, Burgess Hill. BROWN, William Ibbs, St. Michael's Avenue and <sup>63</sup>1888. Oct.

Guildhall, Northampton. BRUCE, William, M.D., LL.D., M.O.H., Dingwall, 652 1S91. Dec.

Ross. BRYANT, Thomas, F.R.C.S., 65, Grosvenor Street, W. ™ 1888. Oct.

BUCKINGHAM, Edward de Vere, Architect, St. John 613 1S91. Oct. Street, Winchester.

Buckton, Mrs. 27, Ladbroke Square, W. <sup>373</sup>1888. Dec.

Bullis, William Daniel, Surveyor, 21, Finsbury 623 1891. May. Pavement, E.C.

633 1891. July. Bulstrode, Herbert Timbrell, M.A., M.D., D.P.H., Local Government Board, Whitehall, S.W.

115 1888. Dec. †Bunten, Charles, care of W. F. Watkins, 8, Park Road, East Hill, Wandsworth.

440 Reg. Date	of	MEMBERS,
Reg. Date No. Electi	ion. Apr.	Burdwood, James Watson, L.P.P.S., M.O.H., West Cottage, Bourne, Lincoln.
<sup>711</sup> 1892.	May.	Bungess, Samuel Edwin, Assoc.M.Inst.c.E., Town Hall, Banbury.
<sup>350</sup> 1888.	Dec.	Burmester, Miss E., 13, Sussex Square, Hyde Park, W.
867 1890.	Jan.	Burr, Alfred, v.r.1.b.A., 85, Gower Street, W.C.
<sup>511</sup> 1889.	-	Burton, Samuel Hubert, F.H.C.S., M.O.H., 50, St. Giles's Street, Norwich.
<sup>43</sup> 1889.	Jan.	†Burton, W. Kinninmond, Assoc.M.Inst.C.v. Professor of Sanitary Engineering, Imperial University, Tokio, Japan.
<sup>711</sup> 1892.	June.	
<sup>463</sup> 1889.	Feb.	†Campbell, Adam Horsburgh, Assoc.M.Inst.c.e., Borough Surveyor's Office, Stratford-on-Avon.
<sup>74</sup> 1888. (	Oct.	CAMPBELL, Charles, Queen Insurance Baildings, Church Street, Sheffield.
<sup>323</sup> 1888.	Oct.	CAMPBELL, Hox. Dudley, 1, Mitre Court Buildings, Temple.
470 1889. I		Campbell, Kenneth Findlater, associations. Borough Engineer, Stockton-on-Tecs.
<sup>713</sup> 1892.	Nov.	Canty, William Henry, Surveyor, 40, Cambridge Street, Prospect Hill, Tunbridge Wells, Kent.
<sup>19</sup> 1888. (	Oct.	Carline, John, Assoc.M.Inst.c.e., Board of Works, Lewisham, S.E.
<sup>300</sup> 1889. 3		Carlton, George Brody, Assoc.M.Inst.c.E., Knighton, Oak Hill Road, Beckenham.
<sup>314</sup> 1888. [		CARRITT, Ernest, 18 & 19, Great St. Helens, E.C.
<sup>650</sup> 1892.		CARROLL, John, M.B., C.M., D.P.H., M.O.H., 172, Station Road, Ilkeston.
703 1892. I	May.	Caws, Edward Isaac, Sca View, Isle of Wight.
607 1890. J		Chart, Robert Masters, Mitcham, Surrey.
<sup>11</sup> 1888. (		CHATTERTON, George, M.INST.C.E., 46, Queen Anne's Gate, S. W.
**1888. (		Chattock, Miss Frances C., Solibull, Birmingham.
<sup>53</sup> 1888. (		CLARKE, James Wright, S, Salcott Road, Wands-worth.
811888. (		CLARKSON, J. W., M.R.C.S.E., L.R.C.P.L., c/o Messrs.  H. S. King & Co., Pall Mall, S. W.
<sup>595</sup> 1890. (		†CLOTHIER, Samuel Thompson, Street, Somerset.
<sup>701</sup> 1892. A	-	Coales, Herbert George, Assoc.M.Inst.c.e., Market  Harborough, Leicester.
85 1888. (		Coates, C., F.R.C.P., 10, Circus, Bath.
<sup>86</sup> 1888. (		Cock, Frederick, M.D., 1, Porchester Houses, Por- chester Square.
<sup>332</sup> 1888. (		Collingridge, W., M.A., M.D., D.P.H., Port of London Sanitary Offices, Greenwich, S.E.
<sup>330</sup> 1888. (		Collinson, John, 90, Cromwell Road, S.W.
<sup>63</sup> 1888. (	Jet.	†Comber, P. F., M.Inst.C.E. Ireland, Fairy Hill, Bray, Co. Wicklow.

	MEMBERS.	441
Reg. Date of		
Nö. Election. 126 1892. Sept.	, †Connal, Eben, m.inst.c.e., 49, Ker Hillhead, Glasgow, Lanark, Scotlan	
"1888. Oct.	†Cooper, C. H., Assoc.M.Inst.c.e.,	
**1888. Oct.	Offices, Wimbledon. Cooper, Francis A., assoc.m.inst. Cooper, Nottingham and Notts Bank	
559 1888. Nov.		., =
<sup>05</sup> 1889. Jan.	†Cooper, William, 32, Cheetham St.	rcet, Cheetham,
<sup>21</sup> 1888. Oct.	Commett, Joseph, Borough Engined Salford.	er, Town Hall
311891. Nov.		2, High Street
166 1891. Dec.	Connen, John, 543, Cuyo, Bucnos A	yres.
<sup>11</sup> 1892, Mar.		
12 1888. Oct.	Corsan, John R., 80, Gray's Inn Ro	
<sup>53</sup> 1888, Oct.	Courtney, Major D. C., R.E., S. Gardens, Kensington, S.W.	
11 1889. Oct.	Cowan, Peter Chalmers, B.sc. (El Inst.c.e., County Surveyor, Downpa	
51 1888, Oct.	COWTAN, Frank, 309, Oxford Street,	W.
<sup>197</sup> 1890, Oct.	†‡Craio, G. A., Cambridge Villa, Win Cranbrook, the Rt. Hon. Vis	dermere.
<sup>33</sup> 1888, Oct.	17, Grosvenor Crescent, S.W.	
<sup>122</sup> 1891. Mar.	gcon-Major Indian Medical Service,	Bengal.
™1889. June	ley, Kent.	
161888. Oct.	†Crimp, W. Santo, M.Inst.c.e., f.g.s., Council, Spring Gardens.	
<sup>ca</sup> 1891, June	ham.	
<sup>57</sup> 1888. Oct.	Crombie, James, M.B., D.P.H.EDIN., &	
**1888. Oct.	CROWLEY, Frederick, Ashdell, Alton,	
<sup>152</sup> 1889. Mar.	Row, Scarborough.	
100 1888. Oct.	†Curwex, John F., 51, Highgate, Ken	
<sup>377</sup> 1890. Mar.	Highfields, Shanklin, I. of Wight.	
<sup>103</sup> 1888. Oct.	†DARCH, John, 74, Sursfield Road, Be	
<sup>703</sup> 1892. May.	Shrewsbury.	
500 1890. Oct.	†DAVIS, Neville Brookes, ASSOC.M.INS INST., Water Works Office, Leicester	•
106 1888. Oct.	Dawson, Charles James, Surveyor to Barking.	
<sup>163</sup> 1888. Oct.	DAY, Ernest, F.R.I.B.A., 5, Foregate S	
<sup>131</sup> 1892. Oct.	†DAYE, John, 117, Arran Street, Road	
<sup>163</sup> 1888, Oct.	DEBENHAM, F. G., Cheshunt Park, L.	ieris.

442 Reg.	Date	of	MEMBERS.
No.	Etect 1888.	ion.	no Conseque Min Anna Manuale Propositi
			DR CHAUMONT, Miss Anna Kennedy Francois, 86, Abingdon Road, Kensington, W.
721	1892.	Sept.	†Dendy, William Cooper, P.A.S.I., Surveyors' De- partment, Lambeth Vestry, Kennington Green, S.E., Survey.
110	1888.	Oct.	Dennis, Nelson F., Town Surveyor, West Cowes.
CED	1891.	Dec.	DENTON, Eardley Bailey, B.A., M.INST.C.E., 9, Bridge Street, Westminster.
313	1888.	Oct.	DE SOLDENHOUP, Richard, 12, Newport Road, Cardiff.
G)J	1892.	Apr.	Dickinson, Thomas Rusholm, Assoc.M.Inst.c.E., Borough Surveyor, Hertford, Herts.
634	1892.	Jan.	Dickinson, William Gilbert, Lar.C.r., M.R.C.s., D.P.R., 1, Wimbledon Road, Southfields, Wandsworth.
112	1889.	May.	DIXEY, Harry Edward, M.D., Woodgate, Great Malvern,
723	1892.	Sept.	†Dixon, Francis Edward, Local Board Offices, Bamber Bridge in Walton-le-Dale, Lancaster.
627	1891.	May.	Dodd, Peter, Assoc.M.Inst.c.E., Engineer and Surveyor, Wandsworth, S.W.
325	1889.	Apr.	Donovan, Dennis D., Lar.C.P., Lar.C.S., Superintendent Medical Officer of Health, City of Cork.
112	1888.	Oct.	Doviron, James Duncan, Lambeth.
616	1891.	Jan.	Drayson, Walter B. 11., 2, Newyate Street, E.C.
363	1890.	Jan.	Drummond, Edward, M.D., M.R.C.S., D.P.H.CAMB., The Toy House, Hampstead, (3, Piazza di Spagna, Rome).
316	1889.	Apr.	EATON-SHORE, George, ASSOC.M.INST.C.E., Borough Engineer, 190, Edlestone Road, Crewe.
117	1888.	Oet.	Enury, Rr. Hos. Lond, Moor Park, Rickmansworth.
331	1888.	Oct.	Eccles, Miss Jane Helen, 3, Dean's Yard, West-minster, S. W.
614	1891.	Feb.	Edge, Frederic James, Association, Public Offices, Cleator Moor, Cumberland.
	1888.		Eleond, John, Borough Surveyor, Poole, Dorset.
		June.	Elliot, Robert Henry, M.B.Lond., D.P.H., Madras Medical Service, Madras.
		Dec.	Emerson, W., P.R.I.B.A., S, The Sanctuary, S.W.
		Mar.	Extwistle, Henry, Local Board Offices, Swinton, Lancaster.
		Jan.	ERICHSEN, J. Eric, F.R.S., 6, Cavendish Place, W.
		Nov.	Evens, SungMajor B., care of Messrs. Watson Bros., 27, Leadenhall Street, E.C.
		Jan.	FARRER, SIR T. H., BART., 27, Bryanston Square, W.
		Mar.	FARRINGTON, William, Town Hall, Hoyland Nether, Yorkshire.
	1888.		FAWCETT, William Milner, M.A., F.R.I.B.A., 1, Silver Street, Cambridge.
637	1891.	July.	†‡Felkin, Howard Riley, 23, Brackley Road, Chiswick.
		Oct.	Fernie, C. W. B., Keythorpe, Leicester.
12)	1888.	Oct.	Field, Horace, 14, Gray's Inn Square, W.C.

443 MEMBERS. Date of Election. No. Electron. 123 1888. Oct. FISHER, T. J., 50, Thorne Road, South Lambeth. <sup>531</sup>1892, Sept. Fletcher, Walter John, F.R.I.B.A., Wimborne, Dorset. 131891, Oct. † Flower, Thomas James Moss, Carlton Chambers, Baldwin Street, Bristol. 131888, Oct. Forde, II. C., M.INST.C.E., 4, Great Winchester Street, E.U. 1891. Мау. Розвиоке, С. И., м.н.с.з., р.р.н., м.о.н., Тhe County Hall, Worcester. 12 1888. Oct. FOSTER, Reginald Le Neve, F.C.S., North Road, Droylsdon, Manchester. FOWLER, Alfred Mountain, MAINST.C.E., 1, St. <sup>711</sup>1892. Nov. Peter's Square, Manchester, Lancaster. FRANK, Philip, M.D., Cannes, France. 115 1888. Oct. Fraser, James, M.INST.C.E., 100, Castle Street, 131 1888. Oct. Inverness. 121889. Jan. Fraser, W. J., Assoc. M. Inst. C.E., 98, Commercial Road, E. 1331 Oct. GALTON, Francis, F.R.S., 42, Rutland Gate, S. W. <sup>171</sup>1889, Mar. GANGE, Frederick A., M.D., M.O.H., Faversham, Kent. GAY, John, M.R.C.S., L.R.C.P., D.P.H., 119, Upper <sup>111</sup>1892. Oct. Richmond Road, Patney, S.W. 18188. Oct. †Geen, Harry, Hillside, Okehampton, Devon. 1891. July, †1Ginns, Arthur Gordon, Surveyor's Office, Midhurst. 5 1889. Dec. †Gibson, William, Bonhay Road, Exeter. in 1889. Jan. †Gilby, Charles, Bath. <sup>137</sup>1888. Oct. Gill, D., Farleigh, Weston-super-Mare. <sup>C50</sup>1891. Nov. GILLILAND, William John, Architect, 74, Royal Avenue, Belfast. 341 1888. Dec. GLADSTONE, J. II., PH.D., F.R.S., 17, Pembridge Square, W. 676 1892. Jan. GLAISTER, John, M.D., D.P.H., 101, Great Russell Street, W.C. 385 1888. Dec. GLEN, A. W., 33, Davies Street, Berkeley Square, W. GODTREY, Robert, ASSOC.M.INST.C.E., King's Heath, <sup>373</sup>1890. Mar. Worcestershire. <sup>613</sup>1891. Jan. Going, Joseph A., M.R.C.S., B.A., M.O.H., Fox Bay, West Falkland Islands, South America. GOODYEAR, Herbert, ASSOC.M.INST.C.E., Colchester, <sup>516</sup>1889. Nov. <sup>515</sup>1889. Apr. GRANT, Ogilvie, M.B., C.M.EDIN., M.O.II., Queen Mary's House, Inverness, GRANTHAM, Richard Fuge, M.INST.C.E., Northumber-635 1892. Feb. land Chambers, Northumberland Avenue, S.W. GRAY, Alexander, 25, Greenhill Road, Hampstead, <sup>133</sup>1888. Oct. N.W. <sup>531</sup>1890. Apr. GREATOREX, Albert Daniel, Municipal Offices, South-

hampton.

713 1892. July. †Green, William Samuel, Idridgehay, Derby.

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	1

g. Date of Election.

No. Election.
703 1892. Apr. Grenson, John, Assoc.M.Inst.c.u., Woodbine House,
Padiham, Lancaster.

110 1888. Oct. Greller, William, F.R.I.B.A., 6, Queen Anne's Gute, S. W.

311 1888. Oct. Groves, Joseph, B.A., M.D., r.G.S., Carisbrooke, Isle of Wight,

500 1890. Jan. Greener, William, D.P.H., 11, Montpelier Road, Edling, W.

1337 1888. Oct. Hall, É. T., P.R.I.B.A., 57, Moorgate Street, E.C. Hall, Watkin, Assoc.M.Anst.c.v., Local Board Offices, College Road, Gt. Crosby, Lancashire.

<sup>612</sup>1891. Jan. Hamilton, Walter M., M.D., 456, Liverpool Road, Patricroft, Lancashire.

<sup>287</sup>1892. Mar. Hampton, Willie Thomas, v.s.t., Shakespeare House, Loughborough, and Hotel Street, Coalville, Leicester.

118188. Oct. Hancock, Charles, M.A.Oxon, 2, The Cloisters, Temple, E.C., and Reform Club, S.W.

Tis 1892. Nov. Hardwicke, William Wright, M.D. St. Andrews M.R.C.P., J.P., Medical Officer of Health for Harwich, Stour House, Dovercourt, Essex.

1890. Dec. Hanson, John, Victoria Chemical Works, Wakefield. Handing, J. R., M.Inst.c.e., Epsom, Surrey.

<sup>303</sup>1889. Apr. Hare, C. J., M.D., P.R.C.P., Berkeley House, 15, Manchester Square, W.

150 1889. Mar. HARPUR, William, M.INST.C.E., Town Hall, and 197, Severn Road, Cardiff.

<sup>379</sup>1800. Apr. Harris, Arthur Wellesley, M.R.C.S., L.S.A., D.P.H., M.O.H., High Street, Southampton.

<sup>151</sup>1888. Oct. Harrisson, Thomas Harnett, Assoc.M.Inst.C.E., Central Buildings, North John Street, Liverpool.

<sup>747</sup>1892. Nov. Harrison, William Joseph, Assoc.M.Inst.C.E., F.R.MET.SOC., 7, Carteret Street, Westminster, S.W.

357 1888. Dec. HARROLD, Miss C., 10, Church Road, Edghaston, Birmingham.

GIS 1891. Nov. HASLAM, Dryland, Junr., P.A.S.I., 17, Friar Street, Reading.

338 1888. Oct. HASLAM, Lewis, Ravenswood, near Bolton.

625 1891. Apr. Haship, George Ernest, M.D., M.R.C.S., L.R.C.P., D.P.H., 3, Southampton Street, Strand.

152 1888. Oct. HAYWARD, C. F., F.S.A., F.R.I.B.A., 47, Museum Street, Bloomsbury, W.C.

339 1888. Oct. Heap, Henry, Buckingham, Old Shorcham, Susser.

113 1889. Feb. Head, Mrs. H., Buckingham, Old Shoreham, Sussex. Hellyer, S. Stevens, 21, Newcastle Street, Strand, W.C.

477 1889. Mar. Herbert, Johnson, L.R.C.P., 3, Belle Vue Terrace, Whitby.

1888. Dec. Hill, Miss F. M. Davenport, 25, Belsize Avenue, N.W.

353 1888. Dec. HILL, Miss R. Davenport, 25, Belsize Avenue, N.W.

Reg. Date of No. Election.

121 1889. Jun. Hill, Pearson, 6, Pembridge Square, W.

11891. Jan. Hill, Prof. A. Bostock, M.D., D.P.H., M.O.H., Elmhurst, Olton, Birmingham.

131 1888. Oct. Hill, Samuel, A.R.I.B.A., 16, Russell Square, W.C.

15 1888. Oct. HILL, William H., Town Hall, Kensington.

1891. Oct. †Hills, Harry James, 14, Werrington Street, Camden Town, N. W.

1892, Feb. Honson, John Morrison, M.D., D.P.H., Croydon.

1389. Mar. Hodgetts, E. A. Brayley, 39, Redeliffe Square, South Kensington, S. W., and Agence Dalziel, 50, Rue des Victoires, Paris, N. W.

1 1888. Oct. Hongson, Shadworth H., 45, Conduit Street, W.

1891. July. Hongson, William James, Assoc.M.Inst.C.E., High Park, Near Ryde, Isle of Wight.

1800. Apr. Holberton, Henry Nelson, L.R.C.P., M.R.C.S., D.P.H., East Moulsey.

1888. Oct. Holmes, Timothy, M.A., F.R.C.S., 18, Great Cumberland Place, W.

151 1888. Oct. Holt, II. P., Assoc.M.Inst.C.E., F.G.S., The Cedars, Didsbury, Manchester.

1891. Nov. Holkoyde, John, M.R.C.S., L.S.A., D.P.H., M.O.H., Canden House, Chatham.

1889. Mar. Hooley, Cosmo C., Assoc. M. Inst. C. E., The Union Offices, Barton-upon-Irwell, Manchester.

1389. Nov. Hoopen, Charles, M.R.C.S., M.O.H., Aylesbury, Bucks. 1389. Jan. † Houghton, John, Poplar Road, King's Heath, near Birmingham.

161 1888. Oct. Howard, E., 84, Upper Whitecross Street, E.C.

1388. Oct. Howe, George, 41, Wigmore Street, W.

1890. June. ‡Hoy, Peter, 7, Park Place, Clarence Gate, N.W.

163 1888. Oct. †Hubber, Frank, 85, South Street, Exeter.

610 1891. Oct. †Hunt, John W., Maindee, Newport, Monmouth.

1802. Feb. Hunter, Alexander II., Surveyor and Sanitary Inspector, Oswestry, Salop.

1888. Dec. INGLIS, Cornelius, M.D., 1, Albert Mansions, Victoria Street, S.W.

661 1891. Nov. INGRAM, Matthew, Manchester.

"1890. May. IVOR-MOORE, T., Fairfield Gold Tops, Newport, Mons.

1890. Nov. †James, Arthur Charles, Borough Surveyor's Office, Cambridge.

James, Charles Alfred, L.R.C.P, M.R.C.S., D.P.H., 24, Cazenove Road, Stamford Hill, N.

Johnson, Samuel, M.D., C.M., M.O.H., Stoke-on-Trent. Jones, Charles, M.Inst.c.e., Local Board, Ealing,

Middlesex.
on 1891. Oct. †Kay, Walter Robert, Mount Sion House, Bury.

KEMPSTER, William Henry, M.D., M.O.H., Oak House, Battersea.

446 Reg. Date of	MEMBERS.
No. Election.	
<sup>701</sup> 1892, Apr.	Kendell, Daniel Burton, M.B.Cantab., Thornhill House, Walton, Wakefield.
16x1888, Oct.	Kennett-Barrington, Sir Vincent Hunter B., 65, Albert Hall Mansions, Kensington Gore,
473 1892, Jan.	Kenwood, Henry R., M.B., L.R.C.P., D.P.H., F.C.S., 189, Adelaide Road, Hampstead, N.W.
<sup>117</sup> 1892. July.	†Kilkord, Henry James, Borough Surveyor, Ilkeston, Derby.
33 1889. Dec.	Kuny, Oscar John, Engineer and Manager Water Works, Batley.
<sup>501</sup> 1889. Mar.	Kirwan, Surgeon-Major A., d.p.h., St. Lucia, West Indies.
47 1889. Mar.	Kyle, Thomas W., M.D., D.P.H., M.O.H., Measham, Atherstone.
174 1888, Oct.	LACY, William George, 82, East Hill, Wandsworth.
1892. May.	Lafran, George Bastable, assoc.m.inst.c.e., Local Board Offices, Queen's Road, Twickenham.
<sup>334</sup> 1889. May.	LAING, R., M.R.C.S., L.R.C.P., P.R.MET.SOC., M.O.H., 29, Waterloo Road, Blyth, Northumberland.
ast 1888. Dec.	LAVENDER, Charles Henry Nalder, 2, Ulster Terrace, Regent's Park, N. W.
7141892, Nov.	Law, Herbert Henry, Assoc.M.Inst.c.e., 17, Victoria Street, S.W.
433 1892. Mar.	LAWFORD, George Maxwell, Assoc.M.Inst.C.E., M.SOC.E., 13, Victoria Street, S.W.
<sup>173</sup> 1888. Oct.	LAWRENCE, Edwin, 10, Kensington Palace Gardens, W.
177 1888. Oct.	Le Grand, A., 125, Bunhill Row, E.C.
11s 1888. Oct.	Lemon, James, M.Inst.C.E., F.R.I.B.A., F.S.I., F.G.S., Lansdowne House, Southampton, (Palace Chambers, Westminster).
17.11888. Oct.	LEONARD, Hugh, 7, Hanover Square, W.
1501888. Oct.	LE ROSSIGNOL, Francis, r.s.1., 1, Gresham Buildings, Basinghall Street, E.C., (29, Penn Road Villas, Camden Road, N.).
<sup>136</sup> 1889. June.	LETTS, Thomas Hollins, 185, Earls Court Road, South Kensington.
<sup>742</sup> 1892. Oct.	Lewis, Thomas Laurence, Engineer and Surveyor, St. George, Gloucester.
182 1882. Oct.	LINGARD, J. Edward, Rodney Chambers, Derby.
473 1892. Jan.	LITTLE, John Fletcher, M.B., M.R.C.P., M.O.H., 60, Welbeck Street, W.
1431888. Oct.	LLOYD, Robert Samuel, S4 & S5, Whitecross Street, E.C.
<sup>575</sup> 1890. Mar.	Loane, Joseph, M.R.C.P.E., D.P.H., M.O.H., 98, Tressillian Road, St. John's, S.E.
<sup>507</sup> 1889. Apr.	Lockwood, Phillip Causton, M.INST.C.E., 1, Gloucester Place, Brighton.
<sup>700</sup> 1892. Apr.	Lowe, Louis J., Cassilla, 448, Buenos Ayres, Argentine Republic, South America.

	MEMBERS.	447
Reg. Date of		
No. Election.	Town May (II) Callant Discolar Town	
<sup>13</sup> 1889. Jan.	Lowe, Mrs. Thomas, Solikull, Birmingham.	
- <sup>04</sup> 1891, June.	LYNDE, Frederick Charles, ASSOC.MANST.C.E.,	25,
	— Cross Street, Manchester, (9, Victoria Street, 8,	$W_{\bullet}$ ).
1511888. Oct.	Lyon, Washington, 85, Asylum Road, Peck	
10000	S.E.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
501000 O.A		
151888. Oct.	Macassey, L. Livingston, M. Inst. C. E., 1, Plo	waen
	Buildings, Temple, E.C.	
100 1888. Oct.	#Mackenzie, F. Morell, M.R.C.S., L.S.A., 10,	Hans
	Place, S.W.	
1561891, Nov.	Mackenzie, William Leslie, M.A., M.B., C.M., D	.р.н
10011 21011	COUNTY M.O.H., Castle Douglas, N.B.	•••
hill farming AN I		٧
1211888. Oct.	MACKEY, John B., 2, Bouverie Street, Fleet S	street,
	E.C.	
45 1889. Mar.	Macnamara, Charles Edward, L.K.Q.C.P.L., D	.Р.Н.,
• • • • • • • • • • • • • • • • • • • •	95, Stephen's Green, Dublin.	·
1961888. Dec.	McArthur, A., M.P., 79, Holland Park, W.	
		L'lour
1890. Oct.	McBeath, William, M.A., M.D., D.P.H., 7,	r tora
	Place, Plymouth.	
15.1888. Oct.	McIntosu, James, Duncevan, Oatlands Park,	Wey-
	bridge,	
312 1888. Oct.	McKie, Hugh Umsworth, M.INST.C.E., 11, Vic	ctoria
100.01 0.00	Street, Westminster.	
101000 A		
<sup>100</sup> 1888. Oct.	McMorran, Alexander, Galloway House, Co	traton
	Road, Patney.	
~ ™1890. Apr.	McNeill, Roger, M.D., D.P.H., J.P., County Me	edical
•	and Sanitary Officer, Oban.	
1.63 1888. Oct.	†MAGUIRE, William Robert, F.R.MET.SOC., 10, De	neson
icc, otti	Street, Dublin, (Town Hill, Dalkey, Co. Dubli.	
D11000 A 4		
<sup>151</sup> 1888. Oct.	MALTBY, Frederic Thomas, ASSOC.M.INST.C.E.,	isur-
	veyor's Office, Guildford.	
<sup>42</sup> 1892. Jan.	Manley, Herbert, M.A., M.B., D.P.H., M.O.H.,	West
	Bromwich.	
<sup>554</sup> 1890. July.		.Р.Н.,
1000. 001.		,
181000 O :	M.O.H., Standish, Wigan, Lancashire.	
<sup>7.19</sup> 1892. Oct.	Marsden, Robert Sidney, M.B., D.SC., F.1	
	M.O.H., 65, Grange Mount, and Town	mall,
	Birkenhead.	
<sup>112</sup> 1888. Dec.	MARTINDALE, William, 10, New Cavendish S	Street,
	W.	·
103 1888. Oct.	MARTINEAU, E. H., F.R.I.B.A., 30, Weymouth &	Street
1888. Utt.		,,,,,,,,
1.44	Portland Place, W.	
<sup>106</sup> 1888. Oct.	Mason, Hugh H., M.R.C.S., Abbey Lodge, Bark	ing
1171889. Nov.	†‡Masser, Joseph Bennett, 64, Burns Street, Bur	rnley,
	Lancaster.	_
681 1892. Feb.	Massie, Frank, assoc.m.inst.c.e., f.s.i., f.r.met	.soc.
TODAL TODA	Tetley House, Wakefield.	,
197 1 0 0 0 0 1		manto
<sup>197</sup> 1888. Oct.	Mathews, J. Douglass, F.R.I.B.A., F.S.I., 11, Do	wyate
	Hill, E.C.	
<sup>20</sup> 1888. Oct.	†Mawbey, E. G., assoc.m.inst.c.e., Borough En	gıneer
	and Surveyor, Town Hall, Leicester.	
	· ·	

Street, Westmister, S.W.

F.R.S.E., Cowdenbeath, Fife.

NASMYTH, Thomas Goodall, M.B., C.M., D.P.H.,

<sup>525</sup>1889. May.

			MEMBERS. 4	49
Reg.	Date	of	1	10
No. - <sup>159</sup> 13	- Elcei 889	Mar.	Nelson, E. M., Hanger Hill House, Ealing.	
		Oct.	Nelson, George II., The Lawn, Warwick.	
			†‡Newman, Reginald William, 53, Barnmead Roa	7
• •	_,	.,,,,	Kent House, Beckenham, Kent.	((,
217 ] \$	888.	Oct.	NEWTON, Edward, r.n.c.s., 85, Gloucester Pla	ice
	•		Hyde Park, W.	,
220 18	388.	Oct.	†Nichols, H. Bertram, Assoc.M.Inst.C.E., Grosver	m
			Chambers, Corporation Street, Birmingham.	
212 [8	888.	Oct.	NICOL, W. E., Ballogie, Aboyne, Aberdeen.	
629 18	890.	Dec.	NUNN, F. C., ASSOC.M.INST.C.E., Eastnor, Sydenko	am
			Hill, Surrey.	
221 8	888.	Oct.	Page, Herbert Markant, M.D., D.P.H.CAMB., M.R.C.	.S.,
			16, Prospect Hill, Redditch.	
*10 18	888.	Oct.	PAGLIARDINI, T., 21, Alexander Street, Westbour	rne
			Park, $W$ .	
331 13	889.	May.	Parker, G. R., M.r.c.s., L.r.c.p., M.o.h., 34, Ki	ing
			Street, Lancaster.	
2018	589.	Mar.	Parker, John, Assoc.M.Inst.c.e., 42, Dryden Stre	eet,
10.00		•	Nottingham,	
31.18	590.	Mar.	†PARKER, John, ASSOC.M.INST.C.E., City Engine	er,
210.14			Hereford.	
19	592,	July.	PARKER, John Edward, Assoc.M.INST.C.E., Survey	/or
231 1 0	200	Oct.	and Sanitary Inspector, Lanchester, Durham.	
			PARKES, Miss P., S, Grove Road, Surbiton, S. W.	
10	ر شد ل ٦	July.		υj,
213 ] 6	रदद	Oct.	Derby. Pansons, H. Franklin, M.D., Local Governme	
	000.	Oct.	Board, Whitehall, S.W.	2HE
101 IS	889.	Mar.	Partridge, Thomas, M.R.C.P.I., M.K.Q.C.S.I., L.S.	4
•		*******	M.O.H., Strond, Gloucester.	а.,
<sup>522</sup> 18	892.	Sept.	Pasteur, William, M.D., P.R.C.P., 4, Chandos Stre	el.
		1,10	Cavendish Square, Middlesev.	٠٠,
530 18	889.	May.	Patter, Charles Arthur, L.R.C.P., M.O.H., Ealing.	
211   8	388,	Oct.	Pattinson, S., Ruskington, Sleaford, Lincoln.	
30418	388.	Dec.	Peake, Francis, The Waldrons, Croydon.	
710 18	892.	July.	Pearse, Thomas Frederick, M.D., F.R.C.S., M.R.C.	P.,
		_	D.P.H., 12, Norfolk Street, Southsea, Hants.	•
		Dec.	Peel, Edmund, Brynfys, Ruabon, North Wales.	
		Oct.	†Phillipson, Burton R., Baggot Street, Dublin.	
650 18	891.	Nov.	Pilley, John J., 2, Malfort Road, Denmark Hi	П,
710		3.7	S.E.	
"18	392.	Nov.	PLATT, Samuel Sydney, ASSOC.M.INST.C.E., Borough	gh
751 4 -	10.0	7.	Surveyor, Town Hall, Rochdale.	
18	592.	Dec.	‡Poulson, Frederick Thomas, County Sanitary I	n-
			spector, 9, Lime Tree Avenue, Tollington Stre	et,

<sup>237</sup>1888. Oet. POWELL, George Thompson, Rotherwood, Sydenham Hill, (28 and 29, St. Swithin's Lane, E.C.).

311 1888. Oct. Powell, J., 19, Castle Street, Liverpool.

Stafford.

Reg. Date of No. Election.

PRIESTLY, Mrs. Eliza, 17, Hertford Street, Manfair. 1888, Dec. PRITCHETT, G. E., F.S.A., F.R.I.B.A., Oak Hall, 313 1888. Oct. Bishop's Stortford, (1, Hanway Place, Oxford

Street, W.).

Pullar, Robert, J.P., P.R.S.E., Tayside, Perth. 2341888. Oct.

Pullin, T. H. S., M.D., P.R.C.S., P.S.A., Sidmouth, 213 1888. Oct. Devon.

PURNELL, W. J., Vincent Row, Vincent Street, 210 1888. Oct. Westminster.

PURNELL, E. W., Vincent Row, Vincent Street, S.W. 211 1888. Oct. Quain, Sir R., Baut., M.D., P.R.S., 67, Harley Street, <sup>213</sup>1888. Oct.

130 1889. Nov. †‡Ranchiffe, Joseph, f.r.met.soc., The Waterworks, Todmorden, Lancaster.

611890. Nov. Radford, John Charles, Assoc, M.Inst.C.E., Surveyor, 113, High Street, Patney.

219 1888. Oct. †Radford, W. H., Assoc.M. Inst. C.E., A. R. I. B. A., Pelham Chambers, Angel Row, Nottingham.

1841889. Mar. †RAILTON, James, Town Hall, Lower Edmonton. 181890. Apr. RAINGER, Charles Henry, 9, Bath Place, Cheltenham.

181 1889, Mar. Read, Richard, Associatinst.c.e., City Surveyor, Gloucester.

REDMAN, Robert Wilkins, Borough Surveyor, Deal, 70 1892. Oct. Kent.

REYNOLDS, Mrs. Russell, 38, Grosvenor Street, W. <sup>353</sup>1888. Nov. RHODES, John William, 7, Mitre Court Chambers, <sup>371</sup>1890. Mar.

Temple, E.C. RICHARDSON, William, M.D., BSC.P.H., Lunatic <sup>107</sup>1892. Apr.

Asylum, Union Mills, Isle of Man. 1892. Oct. †Ringway, Ernest Reginald, Long Eaton, Derby.

RIDINGS, H. Sadleir, M.A., M.INST.C.E., Care of H. S. <sup>211</sup>11888. Oct. King & Co., 65, Cornhill, E.C.

Roberts, Frederick F., M.D., 102, Harley Street, W. <sup>253</sup>1888, Oct. Roberts, Richard Lawton, M.D., D.P.H.CAMB., <sup>371</sup>1890. Jan.

M.H.C.S., L.S.A., Ruabon, North Wales. Robins, Edward, 22, Conduit Street, W.

103 1888. Dec. Robinson, James, Assoc.M.Inst.c.E., County Surveyor, <sup>703</sup>1892. Apr. Winchester, Hants.

ROE, SURGEON-MAJOR, E. A. H., 17, Whitehall <sup>401</sup> 1888. Dec. Place, S.W.

Rogers, George Arthur, M.R.C.S.E., L.S.A., M.O.H., <sup>315</sup>1889. Apr. 404, Commercial Road, E.

Ross, Percival, Assoc.M.Inst.c.e., Surveyor to North 7351892. Oct. Burley Local Board, Bradford.

Roth, W. M.D., 6, Kaizer Wilhelm Platz, Dresden, N. <sup>251</sup>1888. Oct.

Russell, Hon. Lady Agatha, Pembroke Lodge, Rich-<sup>253</sup>1888. Oct. mond Park, Surrey.

519 1891. Nov. †Saise, Alfred John, Stapleton, Bristol.

SANDELL, Henry W. Adrian, M.R.C.S., M.O.H., Leigh-481 1889. Mar. ton Buzzard.

Date of Election. No. Licenson 1892. Feb. SAUNDERS, Henry Ingatton, St. Regulus, Antiers Road, Southampton.

153 1889. Mar. Schoueld, Gerald, M.R.C.S., L.R.C.P., D.P.H., Durham House, Bournemouth,

\*\* 1888, Oct. Scott, Bowes, Broadway Chambers, S.W.

<sup>537</sup>1891. Nov. Scott, Conway, Executive Sanitary Officer, Town Hall, Belfast.

4541889, Mar. Scott, Hugh Hamilton, Assoc, M. INST.C.E., Town Hall, Hove, Brighton,

1411888. Oct. Scott-Moncrieff, W. D., M.I.M.E., 86, Newman Street, W.

<sup>111</sup>1892, Oct. SCOTT, Robert Smith, ASSOC.M.INST.C.E., Town Surveyor, Bishop Stortford.

2311888. Oct. Scriven, J. Barelay, M.R.C.S., 95, Oxford Gardens, North Kensington.

1111888. Dec. Searles-Wood, Herbert D., F.R.I.B.A., 157, Wool Exchange, E.U.

<sup>420</sup>1889. Jan. SELBY, Prideaux, Koroit, North Park, Croydon.

<sup>157</sup>1889, Mar. Sellers, William, June., M.D., M.O.H., Bank House, Radeliffe, Manchester.

141889. Mar. Shadwell, St. Clair B., LR.C.P., M.R.C.S., M.O.H., Lynhurst, Walthamstow,

151 1889. Mar. Shaw, Charles Knox, L.R.C.P., M.R.C.S., 19, Upper Wimpole Street, W.

<sup>524</sup>1889, Apr. Shaw, Josephus, M.R.C.S., L.S.A., M.O.H., 151, Lower Road, Rotherhithe,

611 1891. Oct. SHELBOURN, Michael, Architect and Surveyor, Belvoir, Grantham.

65 1891. Nov. SHIMELD, James, L.R.C.P. and S.E., M.O.H., Salisburg House, Hford,

1889. Mar. Shirtliff, Edward Matthew, M.D., M.O.H., Elm Side, Kingston-on-Thames.

430 1889. Jan. SHONE, Isaac, Assoc.M.INST.C.E., Gt. George Street Chambers, S.W.

248 1888. Oct. SHONKSMITH, John Henry, Micklegate, York.

SILLAR, W. C., St. James' Lodge, Kidbrooke Park <sup>267</sup> 1888. Oct. Road, Blackheath, S.E.

in 1888. Dec. SIMPSON, William John, M.D., D.P.H.CAMB., Health Officer, Calcutta,

<sup>263</sup>1888. Oct. SIORDET, James Lewis, M.B., F.R.C.P., Mentone, Alpes-Maritimes, France.

<sup>270</sup>1888. Oct. Skrine, Henry Duncan, Claverton Manor, Bath.

133 1889. June. † Smith, Charles Chambers, Surveyor's Office, Dalton-

617 1892. Jan. SMITH, James Dear, M.D., D.P.H., 16, Nelson Road, Southsea.

SMITH, John, ASSOC.M.INST.C.E., County Surveyor's <sup>97</sup>1892, Mar. Office, Ballinasloe, Galway.

<sup>271</sup>1888. Oct. SMITH, Percival Gordon, F.R.I.B.A., Highfield, Stonebridge Park, Willesden.

452	MEMBERS.
lleg. Date of Election.  272 1888. Oct.	SMITH, R. W., Mount Rundell, Harborne, Birming- ham.
<sup>27,3</sup> 1888, Oct.	Smith, Thos. Fredk. H., r.n.c.s., L.s.A., Farningham, Kent.
415 1889, Feb.	SMITH, T. V., 111, Grosvenor Road, S.W.
<sup>727</sup> 1892, Sept.	SMITH, Urban A., ASSOC,MANST.C.E., 2, Victoria
<sup>411</sup> 1889. Jan.	Mansions, Westminster. SNELL, Alfred, W., A.R.I.B.A., 1, Park Road, Wimbledon.
313 1889. Apr.	SOUTHAM, Arthur, ASSOC.M.INST.C.E., 60, Old Town, Clapham.
271 1888. Oct.	Stainthorpe, W. Waters, M.D., D.P.M.EDIN., Sall-horn-bu-the-Sea.
<sup>723</sup> 1892, Sept.	†Stanbury, W. H., Royal Engineer's Office, Freetown, Sierra Leone, W. Coast of Africa.
273 1888. Oct.	Stansfield-Brun, J., v.r.l.b.a., District Surveyor, Readford-on-Avon.
<sup>521</sup> 1889, Apr.	STEEL, William D., M.D., M.O.H., D.P.H., Neville Street, Abergavenny.
131889. Mar.	STEEVES, George Walter, B.A., M.D., M.O.U., 53, Parkfield Road, Liverpool.
276 1888. Oct.	Stephenson, J. Gurdon L., Assoc.M.Inst.C.E., M.I.M.E., F.O.S., 6, Drapers Gardens, E.C., (14, Maxilla Gardens, Notting Hill, W.).
602 1890. Oct.	Stryens, Joseph Wallace, Belph, Whitwett, war Chesterfield.
277 1888. Oct.	STEVENSON, Thomas, M.D., 45, Gresham Road, S.W.
1341889. Mar.	STEWART, Alan, Maldon, Essex.
433 1889. Jan.	STIFF, Ebenezer, London Pottery, Lambeth.
271 1888. Oct.	STONE, W. II., Lea Park, Godalming.
<sup>273</sup> 1888. Oct.	STREET, William C., A.R.I.B.A., ASSOC.INST.C.E., 7, Victoria Street, Westminster, S. W.
105 1888. Dec.	Sudeley, Right Hon. Lord, 7, Buckingham Gate, S.W.
43 1889. Jan.	†Swainson, John Henry, M.S.A., Assoc.Manst.C.E., 59, Hope Street, Wreeham.
<sup>435</sup> 1889. Jan.	†Swax, Harold, 114, Trinity Road, Upper Tooling.
436 1888. Dec.	Swinburne, C. A., Belgrave Mansions, Grosvenor Gardens, S.W.
697 1891. Dec.	SWINNERTON, Robert Allen William, Assoc.M.INST. C.E., M.I.M.E., Bolarum, Dekkan, India.
4" 1889. Mar.	Barnsley.
251 1888. Oct.	†Tattersall, W., 90, Arden Terrace, Accrington.
<sup>257</sup> 1888. Oct.	TAYLOR, Charles, M.R.C.S., L.S.A., 3, Lorraine Road, Holloway, N.
<sup>131</sup> 1889. Jan.	TAYLOR, Wm. Fredk., M.D., M.R.C.S., L.S.A., Brisbane, Queensland.
2551888. Oct.	Teale, T. Pridgin, M.A., M.B., F.R.C.S., F.R.S., 38, Cookridge Street, Leeds.

Reg. Date of No. Election.  2271882. Oct. Hommas, John, Assoc.M.Inst.C.E., Eagineer, Swansea R.S.A., 14, Finsbury Terrace, Swansea.  2271888. Oct. Hommas, Walter, Assoc.M.Inst.C.E., "Cringallt," Neath.  2271889. Oct. Hommas, W. E. C., Assoc.M.Inst.C.E., "Cringallt," Neath.  2271891. Mar. Hommson, George William, Assoc.M.Inst.C.E., 36, Wood Vale, Forest Hill, S.E.  2271890. June, Thomson, Gilbert, 75, Bath Street, Glasyow.  2271890. June, Thomson, Gilbert, 75, Bath Street, Glasyow.  2271888. Oct. Hommeycroft, LawyCold, Tettenhall Towers, Wolvechompton.  2271889. Jun. Homsey, John Clough, M.D., B.S., D.SC., F.L.C., F.C.S., M.O.H., Chelmsford.  2271889. July. Homsey, John Clough, M.D., B.S., D.SC., F.L.C., F.C.S., M.O.H., Chelmsford.  2271889. July. Homsey, John Walter, "Wendreda," Lancaster Road, Wimbledon.  2271888. Oct. Thys. William, 34, Grafton Street, W.C.  2271888. Oct. Thys. William, J. F.R.C.S., 2, Phillimore Gardens, W.  2271888. Oct. Thys. William, J. F.R.C.S., 2, Phillimore Gardens, W.  2271889. Mar. Homes, W. Walter Clifford, Assoc. M. Inst. C.E., Horse Guards, Whitchall, S.W., (St. Stephen's Road, Ealing).  2271889. Mar. Homes, Temple Avenue, E.C.  2271890. Mar. Prixton Hill, S.W.  2271890. Oct. Wallas, H. Walter, M.D., F.R.C.S., M.O.E., 47, Brixton Hill, S.W.  2271890. Oct. Wallas, H. Sowerby, F.R.Met.Soc., 25, Northwood Road, Highpate, N.  2271890. Apr. Wallas, I. Sowerby, F.R.Met.Soc., 25, Northwood Road, Highpate, N.  2271890. Apr. Wallas, Sheel White, 49, Clifton Hill, St. John's Wood, N.W.  2271890. Apr. Wallas, K.B.		MEMBERS.	453
Thomas, John, assoc.m.inst.c.e., Engineer, Swansea R.S.A., 14, Finsbury Terrace, Swansea.  Thomas, Walter, assoc.m.inst.c.e., Castleknowie, and Town Hall, Dover.  Thomas, W. E. C., assoc.m.inst.c.e., "Cringallt," Neath.  Thompson, George William, assoc.m.inst.c.e., 36, Wood Vale, Forest Hill, S.E.  Thompson, Thomas William, d.r.c.e., M.r.c.s., b.p.i., Moju., Med. Inspr., Local Government Board, S. W.  Thomson, Gilbert, 75, Bath Street, Glasgow.  Thomseveroft, LieutCol., Tettenhall Towers, Wolverhampton.  Thomseveroft, LieutCol., Tettenhall Towers, Wolverhampton.  Thomseveroft, LieutCol., Tettenhall Towers, Wolverhampton.  Thomseveroft, J. E., Lyndon, Bickenhill, Birmingham. M.O.H., John Clough, M.D., B.S., D.SC., F.I.C., E.C.S., M.O.H., John Clough, M.D., B.S., D.SC., F.I.C., E.C.S., Queen's Gate Gardens, S. W.  Thuss, John Clough, M.D., D.P.H., M.O.H., Shrewshary.  Thuss, William, 34, Grafton Street, W.C.  Townsend, Winhieldon.  Travers, William, M.D., F.R.C.S., 2, Phillimore Gardens, W.  Travers, William, M.D., F.R.C.S., 2, Phillimore Gardens, W.  Tress, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol).  Trydald, Walter Clifford, assoc.m.inst.c.e., Horse Guards, Whitehall, S. W., (St. Stephen's Road, Ealing).  Walley, Tipton  Valon, William A., assoc.m.inst.c.e., 140, Temple Chambers, Temple Avenue, E.C.  Verdon, H. Walter, M.D., F.R.C.S., M.O.R., 47, Brixton Hill, S. W.  Walley, Miss E. M., Broughton, Longdon, Rugely.  Waller, William, 27a, Old Bond Street, W.  Waller, Stephen's Moord, Rugely.  Waller, William, 27a, Old Bond Street, W.  Waller, Miss E. M., Broughton, Longdon, Rugely.  Waller, William, 27a, Old Bond Street, W.  Waller, M. J. W.  Waller, Sabel White, 49, Clifton Hill, St. John's Wood, N. W.  Waller, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Waller, Sabel White, 2, Lexham Gardens,	No. Election.		
Thomas, Walter, assoc.m.inst.c.e., Castleknowie, and Town Hall, Dover.  Thomas, W. E. C., assoc.m.inst.c.e., "Cringallt," Neath.  Thompson, George William, assoc.m.inst.c.e., 36, Wood Vale, Forest Hill, S.E. Thompson, Thomas William, b.r.c.p., m.r.c.s., b.p.h., m.o.h., Med. Inspr., Local Government Board, S. W.  Thompson, Gilbert, 75, Bath Street, Glasgow. Thomsen, Gilbert, 75, Bath Street, Glasgow. Thomety, J. E., Lyndon, Bickenhill, Birmingham. Thomety, J. E., Lyndon, Bickenhill, Birmingham. Thibsel, John Clough, M.B., b.s., d.sc., f.l.c., f.c.s., m.o.h., Chelmsford. Thibsel, Right Hox, Lord, K.C.B., f.l.c., f.c.s., m.o.h., Chelmsford. Thibsel, Right Hox, Lord, K.C.B., f.l.c., f.c.s., s. Queen's Gate Gardens, S. W. Thestield, W. N., m.d., d.p.h., m.o.h., Shrewsbury. Thas, William, 34, Grafton Street, W.C. Townsen, John Walter, "Wendreda," Lancaster Road, Wimbledon. Travers, William, M.D., f.r.c.s., 2, Phillimore Gardens, W. Tew, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol). Tyndle, Walter Clifford, assoc, m.inst.c.e., Horse Gaards, Whitchall, S. W., (St. Stephen's Road, Ealing). Undershill, A. S., m.b., b.a., m.r.c.s., d.p.h., Great Bridge, Tipton Valon, William A., assoc, m.inst.c.e., 140, Temple Chembers, Temple Avenue, E.C.  Verdon, H. Walter, M.D., f.r.c.s., m.o.f., 47, Brixton Hill, S. W. Wallas, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow. Wallas, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. Wallas, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. Walton, Rienzi G., m.inst.c.e., 2, Lexham Gardens,	121892, Oct.		
***1888. Oct. **Thomas, W. E. C., Associalistical, "Cringallt," Neath.  **Thompson, George William, Associalistical, 36, Wood Vale, Forest Hill, S.E.  **Thompson, Thomas William, Lirical, M.R.C.E., M.R.C.S., D.P.H., M.O.H., Med. Inspr., Local Government Board, S. W.  **Thomas of the thirty of th	2511888, Oct.	Thomas, Walter, assoc.m.inst.c.e., Cast	
Thompson, George William, Assoc.M.Inst.c.e., 36, Wood Vale, Forest Hill, S.E. Thompson, Thomas William, L.R.C.P., M.R.C.S., D.P.H., M.O.H., Med. Inspr., Local Government Board, S. W.  1889. June. †Thomson, Gilbert, 75, Bath Street, Glasgow. Thorneycroft, Lart-Coll., Tettenhall Towers, Wolverhampton. Molechampton. Thorney, J. E., Lyndon, Bickenhill, Birmingham. Thresh, John Clough, M.D., B.S., D.SC., F.I.C., F.C.S., M.O.H., Chelmsford. Thimso, Right Hon., Lord, K.C.B., F.R.G.S., 5, Queen's Gate Gardens, S. W.  1889. July. Thersteld, W. N., M.D., D.P.H., M.O.H., Shrewshay.  1888. Dec. Titmas, William, 34, Grafton Street, W.C. 1892. Feb. Townsind, John Walter, "Wendreda," Lancaster Road, Wimbledon. Travers, William, M.D., F.R.C.S., 2, Phillimore Gardens, W. Trew, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol).  1888. Oct. Tridal, Walter Clifford, Assoc.M.Inst.c.E., Horse Guards, Whitchall, S.W., (St. Stephen's Road, Edding).  1889. Mar. Underhill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton Valon, William A., Assoc.M.Inst.c.E., 140, Temple Chambers, Temple Avenue, E.C.  1892. Mar. Verdon, H. Walter, M.D., F.R.C.S., M.O.H., 47, Briston Hill, S. W.  Wallas, I. Walter, M.D., F.R.C.S., M.O.H., 47, Briston Hill, S. W. Wallas, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow.  Wallas, II. Sowerby, F.R.Met.Soc., 25, Northwood Road, Highyate, N. Walton, Rienzi G., M.Inst.c.E., 2, Lexham Gardens, Walton, Rienzi G., M.Inst.c.E., 2, Lexham Gardens,	2 <sup>10</sup> 1888. Oct.	Thomas, W. E. C., assoc.m.inst.c.e.,	" Crinyallt,"
Thompson, Thomas William, Lerch, Merch, Dephin, Mohl, Med, Inspr., Local Government Board, S. W.  Thomson, Gilbert, 75, Bath Street, Glasgow. Thomseveroff, LieutCol., Tettenhall Towers, Wolverhampton. Thomseveroff, LieutCol., Tettenhall Towers, Wolverhampton. Thomsey, J. E., Lyndon, Bickenhill, Birmingham. Thomsey, J. Elletter, Lorett, Col., Tettenhall Towers, W. Themsey, J. E., Lyndon, Bickenhill, Birmingham. Thomsey, J. E., Lyndon, Bickenhill, Towers, W. Letten, J. Enderford. Thomsey, J. E., Lyndon, Bickenhill, Birmingham. Thomsey, J. Elletter, Lorett, Glasgow.  Thomsey, J. E., Lyndon, Bickenhill, Birmingham. Thomsey, J. Elletter, Lorett, J. Elletter, J. Elletter, J. Elletter, W. C. Thomsey, J. Elletter, J. Cond., K. Elletter, W. Stephen's Road, Elleny.  Thomsey, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol).  Themsey, J. Elletter, M. B., F.R.C.S., A. D.P.H., Great Bridge, Tipton Valoe, Whitehall, S. W., (St. Stephen's Road, Ealing).  Valoe, W. Walter, M.D., F.R.C.S., M.O.E., J. P. Brixton Hill, S. W.  Walton, William, A., Assoc, M. Inst.C.E., 140, Temple Chambers, Temple Avenue, E.C.  Verdor, W. H. Walter, M.D., F.R.C.S., M.O.E., J. P. Brixton Hill, S. W.  Walton, William, A., Assoc, M. Inst.C.E., J. Walton, Rienzi G., M. Inst.C.E., 2, Lexham Gardens, Wood, W. W.  Walton, Rienzi G., M. Inst.C.E., 2, Lexham Gardens, Wood, W. W.	(#1891, Mar.	Thompson, George William, Assoc.M.1	NST.C.E., 36,
Thomson, Gilbert, 75, Bath Street, Glasgow. Thorneycroft, LieutCol., Tettenhall Towers, Wolcerhampton. Thorneycroft, LieutCol., Tettenhall Towers, Wolcerhampton. Thorney, J. E., Lyndon, Bickenhill, Birmingham. Thorney, J. Glarence, St. C., F.C.S., M.O.H., Shrews-bary. There, Sate Gardens, S.W. There, W. N., M.D., D.P.H., M.O.H., Shrews-bary. Thorney, William, J. Grafton Street, W.C. They, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol). Tyndale, Walter Clifford, Assoc. M. Inst. C. E., Horse Guards, Whitehall, S.W., (St. Stephen's Road, Ealing). Underhill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton Valox, William A., Assoc. M. Inst. C. E., 140, Temple Chambers, Temple Avenue, E.C.  Vanday, William A., Assoc. M. Inst. C. E., 140, Temple Chambers, Temple Avenue, E.C. Wallage, William, 27A, Old Bond Street, W.  Mallage, William, 27A, Old Bond Street, W.  Wallas, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glaspov.  Wallis, I., Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N.  Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., M.Inst.C.E., 2, Lexham Gardens,	**1889, Feb.	Thompson, Thomas William, L.R.C. D.P.H., M.O.H., Med. Inspr., Local Gover	
Thonneycroft, LieutCol., Tettenhall Towers, Wolverhampton. Thonneycroft, LieutCol., Tettenhall Towers, Molin, Bissol, M.S., L., Lyndon, Bickenhill, Birmingham. Thonneycroft, LieutCol., Tetten, Thonneycroft, M.S., L., Lyndon, Bickenhill, Birmingham. Thonneycroft, LieutCol., Tetten, Thonneycroft, M.S., L., Lyndon, Bickenhill, Birmingham. Thonneycroft, LieutCol., Tetten, Thonneycroft, M.S., L., Lyndon, Bissol, M.S., L., L., L., L., F.C.S., M.O.H., Shrewship, Jan. M.S., L., Lyndon, M.S., W. Thens, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol). Tyndle, William, M.D., F.R.C.S., 2, Phillimore Gardens, W. Thonneycroft Mills, S.W., (St. Stephen's Road, Ealing). Under Hill, A. S., M.B., B.A., M.B.C.S., D.P.H., Great Bridge, Tipton Valon, William A., Assoc, M.Inst.c.e., 140, Temple Chambers, Temple Avenue, E.C. Valon, William A., Assoc, M.Inst.c.e., 140, Temple Chambers, Temple Avenue, E.C. Walden, William, 27A, Old Bond Street, W. Maether, William, 27A, Old Bond Street, W. Mallis, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow. Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N. Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N.W. Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardens,	521890. June		syow.
Thonney, J. E., Lyndon, Bickenhill, Birmingham. Thrish, John Clough, M.B., B.S., D.SC., F.I.C., F.C.S., M.O.H., Chelmsford. Thrish, John Clough, M.B., B.S., D.SC., F.I.C., F.C.S., M.O.H., Chelmsford. Thrish, Right Hon, Lord, K.C.B., F.R.G.S., 5, Queen's Gate Gardens, S. W. Thursteld, W. N., M.D., D.P.H., M.O.H., Shrewshary. Ttymas, William, 34, Grafton Street, W.C. Townsend, Wimbledon. Travers, William, M.D., F.R.C.S., 2, Phillimore Gardens, W. Term, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol). Tyndle, Walter Clifford, Assoc. M.Inst.c.e., Horse Gaards, Whitehall, S. W., (St. Stephen's Road, Ealing). Underhill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton Valon, William A., Assoc, M.Inst.c.e., 140, Temple Chambers, Temple Avenue, E.C. Verdon, H. Walter, M.D., F.R.C.S., M.O.R., 47, Briston Hill, S. W. Wallas, M. Walter, M.D., F.R.C.S., M.O.R., 47, Briston Hill, S. W. Wallas, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow. Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N. Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardens,		THORNEYCROFT, LIEUTCol., Tetteni	
Thresh, John Clough, M.B., B.S., D.SC., F.I.C., F.C.S., M.O.M., Chelmsford. Thinso, Right Hon. Lord, K.C.B., F.R.G.S., 5, Queen's Gate Gardens, S. W. Thersteld, W. N., M.D., D.P.H., M.O.H., Shrewsbury. TIMAS, William, 34, Grafton Street, W.C. Townsend, Wimbledon. Travers, William, M.D., F.R.C.S., 2, Phillimore Gardens, W. Trew, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol). Thermale, Walter Chilford, Assoc. M. Inst. C.E., Horse Guards, Whitehall, S.W., (St. Stephen's Road, Ealing). Underhill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton Valon, William A., Assoc. M. Inst. C.E., 140, Temple Chambers, Temple Avenue, E.C. Verdon, H. Walter, M.D., F.R.C.S., M.O.H., 47, Briston Hill, S. W. Wallace, William, 27A, Old Bond Street, W. Mallas, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow. Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N. Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. Walton, Rienzi G., M.Inst.C.E., 2, Lexham Gardens,	2921888, Oct.		Birmingham. –
There of the control	<sup>vio</sup> 1890, Jan.	Thresu, John Clough, M.B., B.S., D.SC.,	F.1.C., F.C.S.,
hary. TITMAS, William, 34, Grafton Street, W.C. TOWNSEND, John Walter, "Wendreda," Lancaster Road, Wimbledon. TRAVERS, William, M.D., F.R.C.S., 2, Phillimore Gardens, W. TREW, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol). TYNDALE, Walter Clifford, Assoc. M. INST. C. E., Horse Guards, Whitehall, S. W., (St. Stephen's Road, Ealing).  UNDERHILL, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton VALON, William A., ASSOC. M. INST. C. E., 140, Temple Chambers, Temple Avenue, E.C. VERDON, H. Walter, M.D., F.R.C.S., M.O.K., 47, Brixton Hill, S. W. WALETELD, Miss E. M., Broughton, Longdon, Rugely. WALLACE, William, 27A, Old Bond Street, W. WALLACE, William, 27A, Old Bond Street, W. WALLACE, William, 27A, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow. WALLAS, II. Sowerby, F.R.MET.SOC., 25, Northwood Road, Highgate, N. WALLIS, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. WALTON, Rienzi G., M.INST.C.E., 2, Lexham Gardens,		Qucen's Gate Gardens, S.W.	
***1892. Feb. ‡Townsend, John Walter, "Wendreda," Lancaster Road, Wimbledon.  Travers, William, M.D., F.R.C.S., 2, Phillimore Gardens, W.  Trew, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol).  Tyndale, Walter Clifford, Assoc. M.Inst. C.E., Horse Guards, Whitchall, S. W., (St. Stephen's Road, Ealing).  Underhill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton  Valon, William A., Assoc, M.Inst. C.E., 140, Temple Chambers, Temple Avenue, E.C.  Verdon, H. Walter, M.D., F.R.C.S., M.O.R., 47, Brixton Hill, S. W.  Wakefield, Miss E. M., Broughton, Longdon, Rugely.  Wallage, William, 27A, Old Bond Street, W.  ****Malis, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow.  Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N.  Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., M.Inst.C.E., 2, Lexham Gardens,	·	bury.	-
Road, Wimbledon.  Travers, William, M.D., F.R.C.S., 2, Phillimore Gardens, W.  Trew, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol).  Tyndale, Walter Clifford, Assoc. M.Inst. C. E., Horse Guards, Whitehall, S. W., (St. Stephen's Road, Ealing).  Underhill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton  Valon, William A., Assoc, M.Inst. C. E., 140, Temple Chambers, Temple Avenue, E.C.  Verdon, H. Walter, M.D., F.R.C.S., M.O.R., 47, Brixton Hill, S. W.  Wakefield, Miss E. M., Broughton, Longdon, Rugely.  Wallage, William, 27A, Old Bond Street, W.  Wallis, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow.  Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N.  Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., M.Inst.C.E., 2, Lexham Gardens,		TITMAS, William, 34, Grafton Street, V	V.C.
dens, W.  TREW, J. Fletcher, 12, Clarence Street, Gloucester, (22, Broad Street, Bristol).  TYNDALE, Walter Clifford, Assoc. M. Inst. C. E., Horse Guards, Whitehall, S. W., (St. Stephen's Road, Ealing).  UNDERHILL, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton  VALON, William A., Assoc. M. Inst. C. E., 140, Temple Chambers, Temple Avenue, E.C.  VERDON, H. Walter, M.D., F.R.C.S., M.O.H., 47, Brixton Hill, S. W.  WALLACE, William, 27A, Old Bond Street, W.  ***1888. Oct.  WALLACE, William, 27A, Old Bond Street, W.  ***241888. Oct.  WALLACE, William, 27A, Old Bond Street, W.  ***4WALLAS, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow.  WALLIS, H. Sowerby, F.R.MET.SOC., 25, Northwood Road, Highgate, N.  WALLIS, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  WALTON, Rienzi G., M.Inst. C. E., 2, Lexham Gardens,	651892, Feb.	Road, Wimbledon.	
(22, Broad Street, Bristol).  Tyndale, Walter Clifford, Assoc.m.inst.c.e., Horse Guards, Whitehall, S.W., (St. Stephen's Road, Ealing).  Underhill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton  Valon, William A., Assoc.m.inst.c.e., 140, Temple Chambers, Temple Avenue, E.C.  Verdon, H. Walter, M.D., F.R.C.S., M.O.H., 47, Brixton Hill, S.W.  Walter, Miss E. M., Broughton, Longdon, Rugely.  Wallace, William, 27A, Old Bond Street, W.  Malace, William, 27A, Old Bond Street, W.  Malace, William, 27A, Old Bond Street, W.  Malis, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow.  Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N.  Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardens,	<sup>20</sup> 1888. Oet.		illimore Gar-
Tyndle, Walter Clifford, Assoc, M. Inst. C. E., Horse Guards, Whitehall, S. W., (St. Stephen's Road, Ealing).  Undershill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton  Valon, William A., Assoc, M. Inst. C. E., 140, Temple Chambers, Temple Avenue, E.C.  Verdon, H. Walter, M.D., F.R.C.S., M.O.K., 47, Brixton Hill, S. W.  Wakefield, Miss E. M., Broughton, Longdon, Rugely.  Wallace, William, 27A, Old Bond Street, W.  Wallace, William, 27A, Old Bond Street, W.  Soilson. Oct. †#Wallis, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow.  Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N.  Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., M.Inst.C.E., 2, Lexham Gardens,	<sup>164</sup> 1888. Dec.	(22, Broad Street, Bristol).	
Underhill, A. S., M.B., B.A., M.R.C.S., D.P.H., Great Bridge, Tipton Valon, William A., Assoc. M.Inst.c.e., 140, Temple Chambers, Temple Avenue, E.C. Verdon, H. Walter, M.D., F.R.C.S., M.O.H., 47, Brixton Hill, S. W. Wakefield, Miss E. M., Broughton, Longdon, Rugely. Wallace, William, 27A, Old Bond Street, W. Mallace, William, 27A, Old Bond Street, W. Mallas, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow. Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N. Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardens,	318 1888. Oct.	Tyndale, Walter Clifford, Assoc.M.ins Guards, Whitehall, S.W., (St. Step	st. c. e., Horse phen's Road,
Valon, William A., assoc. m. inst.c.e., 140, Temple Chambers, Temple Avenue, E.C.  Verdon, H. Walter, M.D., f.r.c.s., m.o.it., 47, Brixton Hill, S. W.  Wakefield, Miss E. M., Broughton, Longdon, Rugely.  Wallace, William, 27a, Old Bond Street, W.  Wallas, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow.  Wallis, H. Sowerby, f.r.met.soc., 25, Northwood Road, Highgate, N.  Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., m.inst.c.e., 2, Lexham Gardons,	<sup>156</sup> 1889, Mar.	Underhild, A. S., M.B., B.A., M.R.C.S., Bridge, Tipton	
Verdon, H. Walter, M.D., F.R.C.S., M.O.H., 47, Brixton Hill, S. W.  Wakefield, Miss E. M., Broughton, Longdon, Rugely.  Wallace, William, 27a, Old Bond Street, W.  Wallace, William, 27a, Old Bond Street, W.  Wallace, William, 27a, Old Bond Street, W.  Sanitary Association, 75, St. George's Place, Glasjow.  Wallis, H. Sowerby, F.R.Met.soc., 25, Northwood Road, Highgate, N.  Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardons,	2 <sup>11</sup> 1888. Oct.	VALON, William A., ASSOC. M. INST. C.E.,	140, Temple
Wakefield, Miss E. M., Broughton, Longdon, Rugely.  Wallace, William, 27a, Old Bond Street, W.  Wallace, Wallace, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasyow.  Walls, H. Sowerby, f.r.met.soc., 25, Northwood Road, Highgate, N.  Walls, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardens,	<sup>33</sup> 1892, Mar.	Verbon, II. Walter, M.D., F.R.C.S.,	м.о.н., 47,
163 1888. Oct. Wallace, William, 27a, Old Bond Street, W. 1890. Oct. †‡Wallis, Arthur Gray, Care of West of Scotland Sanitary Association, 75, St. George's Place, Glasjow. 1888. Oct. Wallis, H. Sowerby, f.r.met.soc., 25, Northwood Road, Highgate, N. 183 1890. Apr. Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. 184 1888. Oct. Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. 185 1892. Apr. Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardens,	355 1888. Oct.	WAKEFIELD, Miss E. M., Broughto	n, Longdon,
Sanitary Association, 75, St. George's Place, Glasjow.  Wallis, H. Sowerby, f.r.met.soc., 25, Northwood Road, Highgate, N.  Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W.  Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardens,	<sup>161</sup> 1888. Oct.		cet, W.
Wallis, H. Sowerby, f.r.met.soc., 25, Northwood Road, Highgate, N. Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. Walton, Rienzi G., m.inst.c.e., 2, Lexham Gardens,		†‡Wallas, Arthur Gray, Care of West Sanitary Association, 75, St. Geo	of Scotland
Wallis, Isabel White, 49, Clifton Hill, St. John's Wood, N. W. Walton, Rienzi G., M.Inst.c.e., 2, Lexham Gardens,	<sup>301</sup> 1888. Oct.	Wallis, H. Sowerby, f.R.Met.soc., 28	5, Northwood
1892. Apr. Walton, Rienzi G., M.Inst.C.E., 2, Lewham Gardens,	331890. Apr.	Wallis, Isabel White, 49, Clifton Ili	ll, St. John's
	<sup>703</sup> 1892. Apr.	Walton, Rienzi G., M.Inst.c.e., 2, Lexh	am Gardens,

Date of Election.

WARD, Arthur W., Lisburn, Merton Road, Southsea. 647 1891. Nov. WATSON, John Duncan, ASSOC. M. INST. C. E., County <sup>63</sup>1891. Dec. Buildings, Aberdeen.

Welch, Henry, M.D., B.SC., D.P.H.EDIN., Sheffer-<sup>117</sup> 1889. Jan. lands, Hulton, Lancaster.

Wells, Sir T. Spencer, Bart., M.D., P.R.C.S., 3, 354 1888. Nov. Upper Grosvenor Street, W.

<sup>711</sup>1892, Nov. Wetwan, William Albert, M.R.C.S., L.S.A., Medical Officer of Health for Bridlington, 9, Prospect Street, Bridlington Quay, Yorkshire (East Riding).

WHEELER, Charles, 12, Dovecote Villas, Wood Green, <sup>€ 3</sup>1890. Nov. WHITAKER, William, BA., P.R.S., F.G.S., 33, East en 1891. Nov. Park Terrace, Southampton, (28, Jermyn Street, S. IF.).

121888. Dec. †Whitcombe, Arthur, 48 & 50, Howland Street, Fitzroy Square, W.

WILLE, William, F.S.A., F.R.I.B.A., 30a, Wimpole 3 1888. Oct. Street, W.

Wightwick, Fallon Percy, M.B., M.R.C.S., L.R.C.P., \*\*1889. Apr. D.P.H., St. John's, Horsleydown, S.E.

WILKINSON, W. B., Northumberland Street, New-1888, Oct. castle-on-Tyne.

307 1888. Oct. #WILKINSON, William, Town Hall, Salford, (20, Aldren Street).

WILLIAMS, C. Theodore, M.A., M.D., F.R.C.P., F.R.MET. 3rd 1888. Oct. SOC., 2, Upper Brook Street, W.

Williams, Owen, Surveyor, Aberdare, Glamorgan. <sup>515</sup>1892. June. WILLIAMS, Roscoe A., M.D., State Board of Health, ete 1891. Dec. Olathe, Kansas, U.S.A.

WILLIAMS, William, M.A., M.B., D.P.H.OXON, M.R.C.S., <sup>552</sup>1889. Dec. L.S.A., 2, Southfields, Dolgelly, South Wales.

1892. Oct. †WILLIAMS, William Iltyd, Pentregwithel, Aberga-

WILLIS, George, L.T.P.S.G., M.O.H., Clifton House, <sup>525</sup>1889. Apr. Baillieston, Glasgow.

WILLIS, John, Frances Road, Windsor. <sup>712</sup>1892. June.

333 1888. Oct. †Wilson, J. B., Court House, Cockermouth.

137 1892. Oct. †Wilson, John Allen, 18, Rodney Terrace, Cheltenham.

WINDLE, Jabez Davenport, M.R.C.S., L.R.C.P., M.O.II., 6741892. Jan. Chippenham Lodge, Southall.

WITHERS, J. B. Mitchell, F.R.I.B.A., 73, Surrey 310 1888. Oct. Street, Sheffield.

311 1888. Oct. †#Witts, J. W., M.S.E., Borough Engineer's Office, Leeds.

Wood, Jacob, Highbury Park, N. <sup>312</sup>1888. Oct.

Wood, William, M.D., 99, Harley Street, W. 355 1888. Nov.

WOODMAN, John, M.D., P.R.C.S., M.O.H., Southernhay, <sup>107</sup>1889. Mar. Exeter.

Date of Election WOODWARD, Edward Francis, 43, Southwell Street, 1888, Oct. Bristol. 111889, Jan. †Worth, John Edward, Assoc.M.Inst.c.e., f.R.Met. soc., Coombes Croft House, High Road, Tottenham.

WYNDHAM, Rev. Francis M., M.A.OXON, St. Mary of at 1888. Oct. the Angels, Westmoreland Road, Bayswater.

YULL, W., ASSOC, M. INST.C.E., 3, Fenchurch Avenue, 311 1888. Oct.

## ASSOCIATES (Assoc. SAN. INST.)

# Marked thus have passed the Examination of the Institute for Inspectors of Nuisances.

11888. Oct. ‡Abrams, Henry, 5, Westmoreland Road, Browley,

1892. Sept. ‡Ackernley, Joseph, Broughton Road, Skipton, York.

212 1889. Nov. ‡Adams, Albert E., Local Board Offices, Wood Green.

21888. Oct. ADAMS, H. J., 13, Salcott Road, Wandsworth Common S.W.

311888. Oct. Adams, Miss Rose (Ladies' Sanitary Association), 22, Berners Street, Oxford Street, W.

1892. Nov. #ALLEN, Thomas Holtan, Stumpshaw, Norfolk. 135 1889. Jan. ‡ALLEN, William Henry, 22, Moira Street, Cardiff.

34 1890. Nov. ‡Amor, Alfred, Octagon Chambers, Nelson Street, Bath.

1888. Oct. \$\dagger Amor, Daniel C., "Beaulieu," The Polygon, Southampton.

615 1892. Oct. ‡Anderson, George Hart, 33, Borough Road West, Middlesborough.

170 1889. May. ‡Anderson, Tom, 32, Harrington Street, Hampstead Road, N.W.

121 1892. Feb. #Andrews, Daniel James, Court House, Marylebone.

3111890. July. Annert, William Fenn, 5, Church Street, Kensington. <sup>54</sup> 1892. Feb. ‡Anthony, Frederick Joseph, 33, Yattan St., Brom-

ley, E.

635 1892. Sept. ‡Armitage, Fredk. Lincoln, Upper Spring Street, Huddersfield, York.

637 1892. Sept. ‡Armitage, T. Albert, South Parade, Huddersfield,

311891. Apr. ‡Ashdown, Thomas, 22, Charlwood Street, Pimlico,

<sup>525</sup>1892. Feb. ‡Athey, Frederick, 47, Penge Road, South Norwood.

603 1892. June. ‡Atkins, Benjamin, 31, Russell Street, Leamington Spa.

156 Reg.	Date	۴o.	ASSOCIATES.
No. <sup>567</sup> 18	Elec 892.	May.	‡Atkins, Robert William, 32, Holmwood Road, South Norwood,
551 18	892.	May.	ATKINSON, Thomas Appleton, Sanitary Inspector, Darlington.
<sup>co7</sup> 18	892.	June.	Attribue, Henry L., Sanitary Engineer, Sea Point, Cape Town, South Africa,
503 18	892.	Feb.	‡Aylitte, Charles William Loveless, Vinc Cottage, Ascot.
200 18	889.	July.	BAILEY, William, 74, Wilmslow Road, Withington, Manchester,
1415	889.	June.	
164 [8	889.	Apr.	Baker, William, Mem. Soc. Arts, 1, Chetwynd Road, Lawrence Road, Southsea.
313 18	892,	Feb.	‡BAKER, William Kirkham, The Infectious Hospital, Mill Road, Cambridge.
<sup>cu</sup> 18	892.	Sept.	‡Baldwin, Parkinson, Farnhill, Kildwick, via Keighley, Yorkshire.
211 18	890.	Feb.	BALSTER, Herbert, Town Hall, Margate.
		Oct.	Bamlett, Adam Carlisle, Thirsk, Yorkshire.
<sup>104</sup> 18	889.	Jan.	‡Barroot, James, 100, Brook Street, Kennington Road, Lambeth, S.E.
618	388.	Oct.	BARRON, John, 81, Landor Road, Stockwell, S. W.
337 18	391.	Feb.	‡Bartlett, William John, 50, Cumming Street, E.C.
718	888.	Oct.	‡Bascombe, H. C., Wallasey Local Board, Egremont, Cheshire.
193 18	889.	June.	‡Bassett, William Joshua, 16, Elizabeth Street, Eaton Square, S. W.
ees 18	392.	June.	‡Bates, Matthew, Local Board Offices, Bromley, Kent.
203 18	390.	Apr.	BAXTER, Frank E., 374, Kennington Road, S.E.
° 18	888.	Oct.	‡Baxter, John, 374, Kennington Road, S.E.
		Jan.	‡Веск, William Coker, Hastings.
		Dec.	‡Beech, James, Ivy Cottage, Brownhills, Tunstall.
17218	889,	June.	‡Birch, John Ernest William, 107, Cobden Road, South Norwood, S.E.
49318	892.	Jan.	Bind, Sidney James, H. M. Convict Prison, Portland, Dorset.
217 18	890.	May.	‡Bird, William Frederick, The Island, Midsomer Norton.
313 18	890.	July.	‡Bishop, William F., S, Francis Place, Nine Tree Hill, Bristol.
¹º18	388.	Oct.	‡Black, Andrew E., 57, Academy Street, Inverness, N.B.
401 1S	391.	May.	‡Blackman, Henry, Catsfield, Battle.
<sup>99</sup> 18	388.	Dec.	Blake, E. T., M.D., 47, Seymour St., Hyde Park, W.
		Mar.	‡Blake, H. K., 1, Victoria Road, Stroud Green, N.
		June.	Bland, William, 420, Liverpool Road, Patricroft.
631 18	892.	Sept.	‡Bolton, Joseph, 15, Cambridge Terrace, Otley, York.
<sup>231</sup> 18	390.	Jan.	‡Bond, William Henry, St. Giles Board of Works, Holborn, W.C.
<sup>12</sup> 18	388.	Oct.	‡Bostel, G. Stanford, 18, Duke Street, Brighton.

		ASSOCIATES. 4	107
Reg. Date No. Elec	e of Hon		
No. Elec	Anr.	BOURNE, Edward, 256, High Street, Cheltenham.	
101889.		Boyey, William T., Acton, W.	
™ 1889.	Jule	BOWYER, Harry David, Park Street, Slough.	
<sup>14</sup> 1888.	Oai	BOYCE, W., 117, High Street, Poplar, E.	
		Boyn, Richard Wade, 105, New Bond Street, W.	
<sup>11</sup> 1888.			
<sup>352</sup> 1891.		BRALEY, Francis, 18, Woodbine Avenue, Leicester	
<sup>t10</sup> 1892.	o une.	‡Bramham, William, Fern Cottage, Market Sti	æ,
111000	Ο.	Clay Cross.	
<sup>11</sup> 1888.		Brieze, John, Pounton Lodge, Wellington, Salop.	,
<sup>35</sup> 1891.		BRINDLE, Thomas, 12, Ashfield Road, Chorley.	
<sup>14</sup> 1888.	Oct.	Broan, Clement B., Stamford Brook Lodge, Rav. court Park, W.	ens-
<sup>5.6</sup> 1891.	Apr.	‡Broadhead, S., 24, St. James' Street, Humbers	tone
211 L (-/L)	<b>3</b> 7 .	Gate, Leicester.	
<sup>311</sup> 1890,		BROOK, John, Albany Place, Stratford-on-Avon.	
<sup>311</sup> 1890,	Nov.	BROUGHTON, Thomas, Garston, near Liverpool.	1.
, <sup>34</sup> 1891.	Apr.	‡Brown, George William, SergMaj. R.E., 3, M. Hill Villas, Cheltenham.	arte
***1891.	Feb.	‡Brown, John, 8, Paddock, Whitby.	
310 1892.		‡Brown, Reginald, Local Board, Office, Eal	ing,
	•	Middlesex.	
<sup>55</sup> 1892.	May.	‡Brown, Robert Frederick, 130, Devonshire Sta Mile End.	,
511892.	May.	#Brown, Robert, Jun., 44, St. Ann's Hill, Wan	ાતીક-
		worth,	
<sup>17</sup> 1888.	Oct.	BROWN, R. Railston, 1, Blenheim Terrace, Br	rid-
181888.	Oat	lington Quay, Yorkshire. ‡Brown, W. E., 19, Havelock Road, Hastings.	
		BRYAN, George John, 4, South Norwood Hill, S.	E
***1890.		BRYAN, Joseph James, 27, Oxford Street,	กม
486 1892.		Trafford, Manchester.	
<sup>113</sup> 1891.	June.	‡Bubb, John Thomas, 1, James's Parade, Bristol.	
<sup>19</sup> 1888.	Oct.	Buchan, W. Paton, Fairyknowe, Cambusle Lanarkshire, N.B.	ıng,
<sup>20</sup> 1888.	Oet.	Buckeridge, Walter, 5, Alexander Street, Westhow	trne
		Park, W.	
<sup>21</sup> 1888.	Oct.	‡Bugler, W. J., Alpha House, Putney.	
<sup>101</sup> 1888.		Burn, Robert G. N., 24, Charing Cross, S.W.	
<sup>22</sup> 1888.		Burroughs, S. M., Snow Hill Buildings, E.C.	
<sup>210</sup> 1889.		‡Burscough, Frederick Peter, 42, Belmont Aver Blackpool.	nue,
<sup>521</sup> 1892.	18.5	‡Burslam, Randle, Congleton, Cheshire.	
<sup>303</sup> 1891.		BURTON, W. H., 59, Avenue Road, North Finchle	eu.
592 1892.	May.	‡Butcher, Charles Ernest, 17, Circus Road, St. Joi	lin's
	-	Wood, N.W.	
<sup>178</sup> 1889.		BUTLAND, R. J., Vestry Hall, Mount Street, W.	
<sup>350</sup> 1891.		‡Butler, Walter, Farcham, Hants.	
<sup>267</sup> 1890.	Apr.	‡Butterworth, Arthur, Board of Works, Ma Road, Plumstead.	хеу
112 1889.	Feb.	‡Buxton, Anthony, Carisbroke, Isle of Wight.	

458		ASSOCIATES.
	•	
Reg. Date of No. Election 213 1890. Fo	). 1	Callaway, Albert Henry, Grosvenor Villa Evesham
1890, F	eo.	Place, Stratford-on-Avon.
estados A		CANNELL, Charles Stephen, 32, Knowsky Road,
6311S92, O	et.	TO AND Prod Named
100 100 T		Magdalen Road, Norwich,
<sup>-120</sup> 1891, Ju		CARTER, Alfred, 71, Leighton Road, Kentish Town.
<sup>121</sup> 1891, Jy		CARY, Aquilla S., 1, Lily Villas, New Southgate.
<sup>30</sup> 1892. M	lay.	Cass, Robert William, 27, Park Avenue, Church
_		Lane, Padsey.
<sup>21</sup> 1888. O	et.	CATTEN, Joseph H., 32, Exeter Street, Sloane Street,
		$S_iW_i$
150 1892. Po	eb.	CAVE, James, Town Hall, Kensington.
***1892. D	ee.	‡Сильк, Joseph, Waterworks Engineer's Office,
		Southampton.
<sup>116</sup> 1891. N	ov.	CHALLONER, William, Blackpool, Lancaster.
**1892. Se	ept.	CHAMBERS, Frederick, Local Board Offices, Goole,
		Yorkshire.
<sup>521</sup> 1892, F	eb.	‡Chambers, Matthew, Millhouses, Sheffield.
$^{-161}1889. \ \ A$	pr.	CHANEY, William H., 36, Essea Street, Strand.
<sup>33</sup> 1892. M	lar.	CHAPPELL, William, 96, Grove Road, Holloway.
- <sup>69</sup> 1891. N	lov.	Cheshine, Alfred, 64, Church Street, Rugeley.
- 1941892. Ja	an.	CLARKE, Robert Edwyn, 5, Gibson Square, Isling-
		ton, N.
<sup>25</sup> 1888, O	et.	CLARKSON, Joseph, Churchfield Terrace, Batley,
		Yorks,
<sup>115</sup> 1889. J	an.	‡Clayton, Edward, Mansfield, Notts.
= <sup>≠4</sup> 1890. J	une.	CLIPTON, Henry Chas., 50, Porchester Road, Bays-
		water.
≈1888. C	et.	COMIAM, C., The Shrubbery, Gravesend.
**1888. C	let.	COMIAM, G. R., 3, Edwin Street, Gravesend.
$^{-263}1890,\ A$	lpr.	‡Cockburn, Henry Mace, Town Hall, Spa Road, S.E.
$^{-343}1891.\mathrm{J}$	an.	#Cole, A. C., 21, West Street, Docking.
$^{520}1892, \ { m F}$	čeb.	COLES, John Thomas, 18, St. George's Road,
		Winsford.
<sup>133</sup> 1891. J	Tuly.	COLLINS, Henry Beale, 16, Little Grosvenor Street, W.
1831891. I	Dec.	‡Collyer, J., Uttoxeler, Stafford.
55) 1892. A		‡Cook, Alfred, 103, Commercial Street, Е.
164 1891. A	Nov.	‡Cook, James, Warton, near Carnforth.
<sup>3,4</sup> 1892. J	Tune.	‡Соок, William George, Weatherall Cottage, Well
		Road Hawnstead
<sup>333</sup> 1890. I	Dec.	‡Соок, William Gough, "Enmore," The Grove,
		Clapham Road, S.W.
1 <sup>11</sup> 1889. 1	Feb.	‡Coopen, William George, Sanitary Inspector, Bourne-
		mouth.
<sup>223</sup> 1890. J	Tan.	‡Согезтіск, George Christopher, 47, Bateman Street,
10001	,	Derby.
220 1890.	โกบ	CORBETT, Richard Lawrence, Oakengates, Salop.
<sup>533</sup> 1892.	_	and the state of t
1002. 2	****	N. W.
<sup>135</sup> 1889. d	Jan.	‡Cordon, Robert Curtis, Hillside Cottage, Duffield,
1000.		Derby.
		· · · · · · ·

		ASSOCIATES.	459
Reg. Date o	ſ		
No. Election 111 1891. J		Core, James, 16, Harrington Square, N.W.	
<sup>161</sup> 1889. Å	une. L	Cottle, Arthur Thomas, Selly Oak, Near Birming	lum
		Court, Thomas Henry, 103, King's Road, Peck	
**1890, X	iar.		,,,,,
		(149, Tanners Hill, Deptford).	ard
<sup>105</sup> 1891. (		Cowdenoy, John Tatem, Kidderminster, Word	cster.
12 1889. J	an.	Cowper, Joseph, 181, Brixton Road.	1.1
***1891. J		COXILL, George E., Vestry Hall, Cable Street, I	9.
·**1892. J	an.	CRABBE, W. G., 44, St. Lawrence Road, Brixto	n.
- <sup>107</sup> 1891. J	une.	CRANE, Joseph, 93, Trafalgar Road, Gorleston, C	ireat
		Yarmouth.	
<sup>rts</sup> 1892. 1	Nov.	#Crane, Stephen, 8, Dighton Road, Wandsu	orth,
• / -• -		Surrey.	
<sup>511</sup> 1891, 1	čeb.	CRANE, William Henry, 14, Colonial Street, Hi	ıll.
°°1890, J		CROCKER, Thomas William, Borough of West L.	lam.
**1889. J	111111	‡CROCKWELL, George E., 14, Church Street, Ilfrac	ombe.
**1892. 7		CROPTS, Thomas John, 50, Central Street, Land	lnort.
1004.	uay.	Portsmouth,	,
	<b>X</b> 4	†Crooнan, Thomas Andrew, 37, Devonshive Gar	dens
*1888. (	æt.	4 CROGHAN, I HOMAS ANGIEW, 51, Decommer one	ec my
	. •	Buxton,	foul
<sup>50</sup> 1891, 2	Mar.	‡Chonk, Wm. Robert, Cranford House, Cran	yora,
_		Hounslow,	
<sup>217</sup> 1890. ]	Peb.	‡CROSSE, Hammond William, St. Mary's Co	uage,
		Putney,	7) 7
$^{-35}1890,\ 1$	l'eb.	CROSSLEY, James, 1, Maurice Street, Bolton	Road,
		Pendleton.	
<sup>216</sup> 1890.	Jan.	‡CROWTHER, William Christopher, 51, Hind &	Street,
		Stockton-on-Tees.	
***1892. ]	May.	‡CRUDEN, John, Berwick-upon-Tweed.	
<sup>355</sup> 1891.		CULVER, Thomas Henry, 34, Bradstone Av	enue,
10011		Folkestone, Kent.	
G11509	Tuna	‡Currie, Thomas, Marshall Cottage, Hawkhill,	$A\eta r$ .
1002.	Tuna	DALE, Duncan, 312, Camberwell New Road, S.	E.
		Dalton, George, 15, Histon Road, Cambridge.	
1511000	1700. T	‡Daltry, John, Sanitary Inspector, Wellington,	Salon.
1,1890	June. T	+1) Altrice, 50 mil, Santatary Tropictor, Westerny	Lane
·1892.	June.	‡Dane, Samuel, Bird Nest Cottage, Primrose	2311711
	Λ.	Glossop.	Lauce
**1888.	Oct.		toust,
		Leeds,	
<sup>561</sup> 1892. ∃	May.	‡DAVID, Philip, 23, North Luton Place, Cardiff.	
513 1892.	Oct.	‡Davies, Dan, Ferndale, Rhondda Valley, Glamo	rgan.
2°21890.	May.	‡Davies, T. Lane, 1, Albert Square, E.	
$^{562}1892.$	May.	DAWSON, Edward Howard, 41, Market	Street,
		Lancaster.	
$^{125}1891.$	June.	DAWSON, John Marshall, 93, Malpas Road, Bro	ekley.
<sup>300</sup> 1590	June	DAWSON, William, 6, Brooklands Road, Birker	rhead.
2H 1800	Mar	‡Dean, Samuel Saunders, Hugglescote, Ashby-	de-la-
1000	*******	Zouch.	
312 1 200	Juna	DEE, Thomas George, 17, Grosvenor Road, S. 1	V.
1000	Oot	‡DENHAM, Hodgson, Aberford, near Leeds.	
1892.	oct.	TDEVEUN' TIOUBSOU! TOOLLOW! WELL WELLOW	

460

Reg. Date of No. Election.

1888. Dec. Densham, Charles A., 42, Wellington Road, St. John's Wood, N. W.

621 1892. July. ‡Dewntust, James, Sanitary Inspector's Office, Plymouth.

270 1890. May. ‡Dick, William, Kirknewton, Midlothian.

482 1891. Dec. ‡Docking, Frederick Reynolds, 56, George Street, Croydon,

533 1892. Oct. #Dongson, William, Cononley, York.

<sup>231</sup>1890. Jan. Dover, John Henry, 13, King Street, Kensington Square, W.

131 1891. Nov. #Dowstxa, Alfred, 2, Mawney's Villas, Romford,

11 1889. Jan. ‡DRAKE, W. Medley, Kirkheuton, Huddersfield.

136 1889. June. ‡Duck, Albert George, 211, Tooley Street, Horsley-down, S.E.

211 1890, Feb. ‡Dunnan, David.

100 1891. Nov. ‡Duthie, Alexander, 93, High Street, Brechin, N.B.

115 1889. Feb. ‡Dyen, Samuel, 3, Wellington Road, Bridlington Quay.

108 1891. June. ‡Dyke, Alfred William, St. John's Wharf, Wandsworth, Bridge, Fulham.

112 1889. Jan. ‡Dyson, John Henry, Park Terrace, Thornhill, near Dewsburg.

112 1891. June. ‡EARWICKER, John Chas., Cambridge House, Drayton Place, Croydon, S. W.

400 1891. Nov. ‡Eccles, William Henry, 98, Kay Street, Darwen.

113 1889. Jan. ‡Edmonds, William H., Vestry Hall, Hampstead, N. W.

<sup>343</sup>1890. Nov. Edwards, John, 16, Gladstone Street, St. George's Rd., S.E.

306 1892. June. ‡Ellis, Stanley, 28, Chartsey Street, Guildford.

31 1888. Oct. #Emptage, Daniel, Dane Hill Sanitary Works, Margate.

32 1888. Oct. ‡Evans, John Evan, 37, Anchor Street, Southwark Park Road, 8.E.

<sup>563</sup>1892. May. ‡Evans, John Isaac, 11, Blanche Street, Cae Harris, Dowlais.

200 1890. May. ‡Evington, Charles William, 12, Bridlington Street, Hull.

<sup>31</sup>1888. Oct. ‡Fairchild, Samuel C. G., 569, Wandsworth Road, Clapham, S. W.

333 1891. Feb. ‡Fairey, Alfred Isaac, 5, Tavistock Street, Covent Garden.

<sup>252</sup>1890. Mar. Fixch, William, 44, Mason Street, Kingston-upon-Hull.

1111889. Jan. ‡FINCHER, John Gazeley, Aldershot.

<sup>572</sup>1892. May. ‡FISHER, Robert, 141, Greenwich Road, Greenwich, S.E.

<sup>476</sup>1891. Nov. ‡Foad, Cephas, Board of Works, 117, High Street, Poplar, E.

<sup>297</sup>1890. June. ‡Foliand, John Percy, 22, Liverpool Street, King's Cross.

<sup>35</sup>1888. Oct. ‡FORDHAM, Wm. Francis, Hampton House, High Road, Kilburn.

Reg. Date of No. Election. 21 1890, May, #FORRESTER, William, Staplehurst, Kent.

11892. June. Foster, Edward, 29, St. Maur Road, Fulham, S.W.

1888. Oct. France, T. W. Chapman, 36, Bristol Road, Edg-baston.

218 1890. Jan. ‡Fulchen, George, Rural Sanitary District, Rugby.

1888. Oct. Gairdner, Prof. W. T., M.D., LL.D., The University, Glasgow.

\*1888. Nov. #Gardner, C. T., Town Hall, Worthing.

57 1888. Oct. #Garland, Wm., 12, Higher Maudlin Street, Barn-staple.

1892. June. #GARNIAM, Albert Edward, Beulah Hill, Norwood, S.E.

31888. Oct. Gass, John Bradshaw, F.R.I.B.A., 19, Silverwell Street, Bolton.

131889. June. ‡Gathercole, William Henry Joseph, Sanitary Inspector, Guildhall, E.C.

1892. Mar. #Gerrard, John, 43, Woolton St., Woolton, Liverpool.

13 1889. Mar. #GILBEART, John Joseph, 11 & 12, Little Chester Street, Belgrave Square, W.

21 1890. Jan. #Gillies, Neill, Lochgilphead, Argyllshire, N.B.

11891. June. #GILLESPIE, REV. Charles George Knox, 2, Darwin Terrace, Derby.

1891. April. ‡Gonsall, Henry John, Park Road, Saltley, Birmingham.

1892. June. ‡Golden, Thomas Collings, 5, Connaught Road, Folkestone.

<sup>203</sup>1892. Feb. #Goodman, Herbert, 4, Clapton Common, N.E.

\*1888. Oct. #Goodwyn, Arthur Ayde, 34, Church Road, Richmond, Surrey.

1892. Feb. #GORNIOT, Thomas Arthur, 98, Bingfield Street, York Road, King's Cross.

1891. Feb. ‡Gouan, Joseph, 7, Malvern Terrace, St. Paul's Road, Tottenham.

151 1891. Nov. #Grant, Alexander, Town Hall, Chelsea.

111 1889. Jan. GRANT, Walter, 18, Gildredge Road, Eastbourne.

<sup>332</sup>1890. Nov. ‡Graves, Matthew Dodgson, 7½, College Street, York.
<sup>133</sup>1891. July. ‡Green, Edward Albert, 16, Rock Street, Bridge-houses, Sheffield.

1891. Feb. #Green, William, 6, Meredith Street, Clerkenwell,

151889. June. #Greenwell, Allan, Surveyor's Office, Frome.

10 1888. Oct. GRIBBLE, Miss Sarah C., 11, Willswood Park, Torquay.

1892. Mar. ‡GRIFFIN, George Frederick Augustus, Nottingham Road, Mansfield.

<sup>352</sup>1891. Feb. ‡GRIGG, William Henry, 2, Acford Road, South Falham, S. W.

302 1890. June. GRINHAM, Philip Boys, Tichborne Down, Alresford.

113 1891. June. ‡GRIVELL, Elias James, Storrington, Sussex.

162	Dat	eof	ASSOCIATES.
No.	Elec	tion.	401 William 121 117-117-117-117-117-117-117-117-
			‡Groom, William Edwin, 117, Wells Street, Camber-well.
11 13	888.	Oct.	#GUNN, Alexander, 118, King Street, Aberdeen.
239 ]	890.	Jan.	‡Hall, George Berringer, r.g.s., 10, Waldemar Avenue, Falham Road,
653 [	892,	Oct.	‡HALL, John, Poundfield, Stonehouse, Gloucester.
<sup>(29</sup> 1)	892,	Sept.	‡HALL, Thomas John, 17, Regent Street, Barnsley, Yorkshire.
<sup>(24</sup> 1)	892,	Sept.	
40:1:	891.	June.	#Harren, Frank, 39, Derby Road, Northampton.
េះត្រូ	889	June.	‡Harrison, George, Thurnly, Leicester.
373	891	Mar.	#HARRISON, Wm. Henry, Health Offices, Sheffield.
u j	888	Oct.	#HARRISON, Wm. L., 7, Dock Street, Hull.
111	888	Oct.	HART, W. S., 29, Coley Hill, Reading.
<sup>377</sup> 13	891.	Mar.	#HARTNOLL, Francis, 49, St. Paul's Road, Burdett Road, E.
441	891.	Oct.	‡Hatton, Chas., 14, Merton Road, Wandsworth, S. W.
210 j	s90.	Jan.	‡HAY, Alexander, 56, George Square, Glasgow.
" ]	SSS.	Oct.	‡Head, Robert H., 7, Upper Baker Street, N.W.
<sup>103</sup> 1	891.	Nov.	#HEAPS, William, Junr., 28, Parker Street, Chorley, Lancashire.
<sup>43</sup> 13	888.	Oct.	
15 1 2	888	Oct	‡Hearne, William, Buenos Ayres.
311 Î	892.	Mar.	‡Hender, Joseph Henry, 1, Eton Street, Hessle Road. Hall.
<sup>192</sup> 18	889.	June.	#Helsbon, Horace, 14, St. Edmunds Terrace, Primrose Hill, N.W.
		•	‡Henley, Amos S., Camberwell Workhouse, Willow Brook Road, Peckham.
<sup>363</sup> 13	391.	Feb.	#Hennen, Alfred, 37, Joseph Street, Gosport.
$^{167}$ 18	891.	Nov.	#Herbert, Harry, 10, Boughton Street, Sunderland.
<sup>315</sup> 13	892.	Mar.	‡High, George Fred., 28, Clifden Road, Lower Clapton.
<sup>258</sup> 18	890.	Mar.	‡Hills, Arthur Reginald, 24, Harley Street, Bow, E.
101 18	388.	Dec.	‡Honns, W. F., 36, Melbourne Street, Stalybridge.
23318	890.	Mar.	‡Hodges, Albert, 57, Hall Street, Blakenhall, Wolver- hampton.
$^{2^{*2}}13$	890.	May.	‡Holland, Percy, Fairstead Cottage, Newmarket.
<sup>634</sup> 18	392.	Sept.	‡Holmes, John Edward, North Collingham, Newark.
15118	889.	June.	‡Holmes, William, 43, Thornhill Street, Wakefield, Yorkshire.
121 18	389.	June.	‡Hoopen, Thomas Rowland, Redhill, Surrey.
222 18	890.	Jan.	‡Hooper, William, S, Lucas Road, St. John's Road, Penge, S.E.
<sup>510</sup> 18	892.	Feb.	‡Horlock, Charles William, Little Orsted, Uckfield.
		Oct.	Horncastle, Henry, Ash Lawn, Hamlet Road,
			Upper Norwood, S.E.

		ASSOCIATES	100
z Dato Elect	of ion		
1891.	Nov.	#Horner, Benjamin Roper, 2, St. Stephen's T	rerrace,
2000		West Bowling, Bradford, Yorks.	
1888.	Oct.	#11amporus Joseph, 10. Union Street, Southpe	rt.
1891.		#Horsman, Charles Edwin, 8, Bedford i	Square,
		Bishamvearmouth, Sunderland,	
11892.	Feb.	Horrox, Richard, S, Orford Street, Unctsea, E	š. W.
1892.		†Horrox, William, 22, Halsey Street, Unclsed,	•
°1889.		‡Houghton, Robert Alfred, 5, Merton Hall	! $Road,$
1170.171		Wimbledon.	
<sup>0</sup> 1890.	Nov.	#HUGHES, Edward J., 102, Camden Street, Birk	wnhead.
1891.		*Higgies Walter, Thompson Street, Bilston.	
<sup>a</sup> 1892.		HUNT, William Edward, 1, Ashmead Roo	ud, St.
10.00	21011	John's, S.E., Kent,	
°1892.	May.	#HUTCHINGS, William Arthur, 15, St. John	's Park
1 1/41		Terrace, Winchester,	
<sup>5</sup> 1892.	Nov.	LES, Alfred Robert, Sanitary Engineer	, 102,
1(1)201	21011	Maxman Road, Camberwell,	
<sup>a</sup> 1890.	Jan.	+txore Houry William, 28, Parry Place, Plu	imstead.
1890.		#INGRAM, William Jones, Goldsworth Road,	n oking.
· 1891.		#INSKIP, Frederick Thomas, Delhorne, Stoke-on	n- $Trent$ .
<sup>18</sup> 1892.		‡IRVING, William, Local Board, Wigton.	
<sup>11</sup> 1892.		+ Leggree William, Maidstone.	
<sup>n</sup> 1890.		Jacon, Oswald, Sanitary Inspector, Feltham,	Middle-
1000.	100	8€A'.	
<sup>6</sup> 1891.	Reb.	*Lyckson, Henry James, 4, Corn Street, Wit	ney.
<sup>13</sup> 1891.		JACKSON, William, 335, Glossop Road, Sheff	icld.
"1891.		+1 covey George Town Hall, Salford	
*1889.		JASPER, Robert Wevill, Withersfield Road, II.	averhill,
1000	1(0)	Suffoll:	
<sup>05</sup> 1890.	Jan.	+1 wite John 188. Uttoxeter Old Road, Derb	<i>y.</i>
1889.		‡JENNER, Richard Messenger, Parade Road	, Sand-
1000	o my .	gate.	
<sup>51</sup> 1891.	T&B.	+Iouxsox II Watts.	
· · · 1890	May.		l Road,
1000		Limchouse, E.	
<sup>tia</sup> 1890	Nov	**Johnson, Joseph Edward, Town Hatt, Hutt.	ı
<sup>63</sup> 1891		Johnson, Matthew, 31, Palmer Street, Jarre	วเบ.
$^{69}1891$		+ Lourson Stafford, 3. Percy Road, Leytonstor	ic.
<sup>1501</sup> 1891		- †Jones, Charles Bristow, Town Hall, Fulham	l <b>.</b>
$^{100}1890$	June	Toyus John 40 Sudney Street, Uncisca.	
$^{1000}_{1290}$			m Road,
		Bow, $E$ ,	
1801889	June	. ‡Jones, William, Cemlyn, Dolgelly, Merioneth	i.
254 1890		+ Large William Galeshette.	
$^{342}1890$			Bridge,
1000	. 47001	Grangen Road Pimlico, S. W.	
<sup>10</sup> 1888	. Oct.	- +17 net T Southenen Hill Road, Sutton, Sur	rey.
**11892		. †Kelf. Charles Harvey, The Garacus, 150a.	th Villa,
1002		Inner Civele Retent's Park, A. 1) .	
31 1 2 2 2	. Oct.	‡Kemsley, Jesse, 60, Chesterfield Grove, East	Dulwich.
1000		Ψ	

464ASSOCIATES. Date of No. Election. 523 1892. Mar. ‡Kennedy, Daniel, 19, Tremlett Grove, Junction Road, N. 407 1891. June. ‡Kershaw, Edward Baxter, 115, Wellfield Road, Streatham. <sup>32</sup>1888, Oct. ‡Kiell, John, 103, High Street, Barnstaple, <sup>382</sup>1892. May. ‡KILGALLIN, Charles J., 108, Charing Cross Road, W. 113 1891. July. ‡Kina, Albert S. W., 31, Mercan Road, Brixton, S. W. 149 1889. Feb. #K186, Frederick William, Heybridge, Maldon, Essex. 318 1891. Feb. ‡Kink, John Wright, Teg Villa, Park Road, Plumstead. 370 1892. May. ‡Ktrk, William Hugh, Town Hall, Newcastle-upon-Tune. 531888. Oct. Kite, Charles, 31, Barronsmere Road, East Finelley, 274 1890. May. ‡KN1GHT, Robert, Junr., Dunfermline, Fife. 150 1889, Feb. ‡Kniour, William Henry, "Dulce Domain," Gisburn Road, Hornsey, N. 303 1892. May. Knowles, James Edward, 9, System Street, Cardiff. \*13 1892. June. ‡Knox, Charles Geary, 60, Lordship Road, Stoke Newington, 603 1892. June. ‡Lamport, Miss Ethel Frances, 55, Burton Crescent, W.C. 150 1889. June. ‡Landen, James, 19, Millbank Street, Westminster. "1888. Oct. #Lapworth, J., Vestry Hall, Bethnal Green, E. 214 1889. Nov. #Laurie, John, 14, Poplars Avenue, Willesden Green. 135 1891. Nov. ‡Lean, Charles F. E., Alverstoke, Hampshire. 131 1889. Jan. #LEAR, James Walter, 122, Southyate Road, N. 139 1889, Mar. #Lux. James, 28, Franchise Street, Rochdale. 56 1888. Oct. ‡LEGO, S. C., 117, Powerscroft Road, Lower Clapton, N.E.316 1892. Feb. #LEIGH, Frederick George, The Sanatorium, Whiston, near Prescot. 162 ISSS. Dec. ‡LENNOX-CLARKE, A. 331 1891. Feb. ‡Lewis, Charles, Witham, Essex. 117 1889. Jan. Lewis, Arthur, Isham, Wellingborough. 371888. Oct. #Lightroot, Thos., 80, Vincent Square, Westminster. <sup>231</sup>1890. May. ‡Lioutroot, William Charles, 86, Harbut Road, St. John's Hill, New Wandsworth, S. W. <sup>235</sup>1890. Jan. ‡Lilly, William Gent, 5, Whitcomb Street, W.C. 549 1892. Mar. Lindley, Joseph, Cliffe Villa, Stanicliffe, Dewsbury. 319 1891. Feb. ‡Liscombe, Charles F., 24, Bishop Street, Bristol. 325 1890. Nov. \$Little, William, Health Office, North Church Street, Sheffield. 415 1891. July. ‡Inord, Christopher, 2, St. Mark's Terrace, New Brompton, Kent. 616 1892. June. ‡Loasny, Frederick W., 28, Millman Street, Bedford Row, W.C. <sup>256</sup>1890. Mar. ‡Lock, G. H., 64, Richards Terrace, Routh, Cardiff. 437 1891. July. ‡Locke, Walter Richard, Bedford House, Aylesbury. <sup>311</sup>1891. Jan. Longsdon, Ernest M., Surveyor, Town Hall, Bake-

	ASSOCIATES.	465
Reg. Date of No. Election.		100
1891. Nov.	‡Lowny, John, Bradmore, Wolverhampton.	
15 1892. Jan.	Lowry, Thomas Augustus, 6, Darlingt	low Street
*****	Wolverhampton.	on Bireei,
<sup>ns</sup> 1889, Jan.	LUKES, Arthur Henry, Town Hall, Graves	and
34 1890. Nov.	Lund, Clifton, 9, Bridge Street, Southport	icatte.
"1888. Oct.	Lund, Jeremiah, St. James's Vestry, Picco	• :7:11.,
<sup>ca</sup> 1892. July.	‡Lyos, James Joseph, 6, Rice Lane, Walton-o	w.tbg_11311
	Liverpool.	<i>ii</i> iiic-321ii,
4 1888. Oct.	MacIntosu, James, 38, Langham Street,	1V.
<sup>201</sup> 1889, July.	Mackay, George Archibald D., Inc	spector of
	Cleansing, Edinburgh.	quettor of
<sup>-171</sup> 1889, Apr.	MACKAY, James John, 186, Kensal Road,	1V.
<sup>237</sup> 1890. Feb.	MACLENNAN, John, Carnock House, Carn	
	fermline.	10010, 15411
m 1891. Nov.		
<sup>421</sup> 1891. June		Authoritu.
	Durngate Street, Dorchester.	,
<sup>272</sup> 1890, May,	#MALCOLM, Alfred, Clayton, near Manchesi	ler.
- <sup>0*</sup> 1892, Feb.	MALVERN, Thomas, Winchcombe Street, C	heltenham.
671891. Nov.	#Marsben, William Edward, 13, Springfi	eld Street.
	Darwen,	,
""1892. May.	‡Martin, Alexander William, 3, Plumste	ead Road.
·	Woolwich,	,
5141892. Feb.	‡Martin, Robert, 17, Wawne Street, Spr	ing Bank,
	Hull.	,
112 1891. Oct.	#MARTIN, William, Junr., Glenburn, Car	luke, N.B.
<sup>38</sup> 1891, Apr.	#Mason, Frederick William, 22, Main Ave	nue, Bush
-	Hill Park, Enfield.	•
<sup>251</sup> 1890. Apr.	Mason, Jonathan, 1, Grove Terrace, Gr	ove Road,
	Leytonstone,	
<sup>353</sup> 1891. Feb.	#Mason, William Allinson, Shildon, near L	arlington.
<sup>33</sup> 1888. Oct.	‡Mathias, H. D., 40, Southdown Road, Lie	verpool.
<sup>55</sup> 1892. Feb.	‡Matthews, Frederick, Kedleston, Derby.	_
<sup>373</sup> 1891. Feb.	‡Matthews, William, Kedleston, Derby.	
<sup>521</sup> 1892. Feb.	‡Maxwell, William Henry, Victoria Hou	sc, Locks-
242.4	brook, Bath.	
"1891. Mar.	MAYNE John William, Wimbledon, Surrey	/•
<sup>151</sup> 1889. Feb.		hall, E.C.
<sup>63</sup> 1888. Oct.	‡McDonald, A. L., 37, George Street, Gipsy	Hill, S.E.
***1892. Sept.	‡Meadows, John W., 52, Camden Street	et, North
\$H1000 O.4	Shields, Northumberland.	_
<sup>511</sup> 1892. Oct.		th.
<sup>103</sup> 1888. Dec.	MERRILL, John, Albany Road, Sheffield.	
<sup>534</sup> 1892. Mar.	‡MIDDLETON, H., 19, Broadley Terrace, I	3tandford
1351 QQQ T	Square, W.	7)
<sup>134</sup> 1889, Jan.	#MILLARD, William David, 1, Elswick Ville	ıs, Kams-
3911000 T	gate.	,, 7) 7
1092. June.	‡MILLER, Frederick William, 137, Salco	nt Road,
W1901 O-4	Clapham Common, S. IV.	37 . 1

117 1891. Oct. #MILLER, Henry, The Wilderness, Bracondale, Norwich.

Date of Election.

131892. Feb. \$MILLS, Joshua George, North Road, West Kirley, 403 1891. Apr. #MILLS, Walter Shephard, 38, Chaplin Road, Willes-

den Green, N.W.

355 1891. Feb. #Milke, George, County Buildings, Elgin. 132 1891. July. #Milken, Walter, 40, Nackville Street, W.

313 1890. Oct. #MILNER, William, 18, St. Paul's Road, Preston. 1891. Apr. #MINERS, Richard Eustace, Board of Works, Poplar, E.

21888. Oct. MINTY, Samuel, The Triangle, Bournemouth.

281 1891, Mar. Misselbrook, G. T., 1, Lilley Villas, Hartlands Road, Farcham, Hants,

810 1892. Sept. Mirchell, Charles Frederick, 92, Albert Street, Regent's Park, N.W., and The Polytechnic, Regent's Street, W.

MITCHELL, Edward, 25, St. Saviour's Road, Croydon, <sup>210</sup>1890, Feb. MITCHESER, Frederick Harry, 4, Charles Street, 285 1891, Mar.

Oxford Road, Islington.

Molineux, Walter Frank Yate, Shifnal, Salop. 63 1888. Oct.

3 1890. June. Moody, Henry Fred, 26, Carendish Street, Gt. Grimsby.

350 1891. Feb. #Moore, Arthur George, Superintendent of Casual Wards, Lower Road, Rotherhithe, E.C.

1892. July. ‡Morrison, John William, Town Hall, Salford, Lancaster.

420 1891. Apr. #Mosley, Abraham, care of E. Law, County Surveyor, Northampton.

\*1891. Dec. #Moss, Samuel, Williamson Street, Tunstall.

151892. Feb. #MUNRO, Andrew John, Churchbury House, Church-Jury Lane, Enfield.

500 1892, May, Naveer, Edward, 140, Lake Road, Landport, Partsmouth.

<sup>201</sup>1889. July. ‡Nettleton, Charles William, 16, Winchester Terrace, Westminster, S.W.

555 1892. May. ‡Newnham, Frank George, 14, South Norwood Hill,

1892. July. Newsome, Arthur, Architect's Assistant, Middles. brough-on-Tees, York.

573 1892. May. Newson, George John, 25, Gertrude Street, West Brompton.

381 1891. Mar. ‡Nicholas, David, 256, Essew Road, Canonbury, N. 197 1892. Feb. 3 NORMAN, Ernest William, 4, Dawes Road, Forest

Gate, E.

Norris, Joseph, Sunningdale, Surrey.

257 1890. Mar. ‡Norrish, John Thomas, 9, Cuthbert Road, Brighton. 255 1890. May. ‡Nurcombe, Benjamin, 1, Jasmine Terrace, Wurtem-

berg Street, Clapham.

235 1890. June. ‡NUTLEY, Charles Vernon, 11, Dalling Road, Hammer-

317 1890. Oct. ‡OLIVER, G., 14, St. John's Road, Waterloo, Liverpool.

160 1889. Mar. ‡OLLETT, John Henry, Sanitary Inspector, Eastbourne.

Date of Election. Reg. No. Election. 1892. Oct. ‡Orchardson, Robert, 2, Manor Place, Ospringe, Faversham,

-13 1889. Nov. Ord, James, 11, Portman Street, W., (41, Upper George Street, W.).

32 1892. Feb. &ORRELL, Thomas, Carr Cottage, Threlkeld, Keswick.

"1892. Sept. #Osborne, Walter, 13, Third Street, Bensham, Gateshead.

101 1891. Nov. #OUTRAM, Mason, 35, Stafford Street, Derby.

"1888. Oct. Pallishn, Christopher, Northallerton.

"1892. July. \$PALMER, James, 35, King William Street, Greenwich,

1892. Oct. #PANK, Richard Arnold, St. Andrew's, Norwich.

1 1891. June. PARAMOR, Robert Walter, 16, Randolph Gardens,

211 1890. May. #Parman, John, June., 14, Almack Road, Clapton Park, Hackney.

"1891. Dec. Parkinson, Herbert William, 11, Gloucester Road, South Kensington.

11 1889. Oct. ‡Parsons, William, St. Luke's Vestry Hall, City Road,

"1890, May. ‡Pattison, William Phillip, White House, Benwell, Newcastle-on-Time.

11 1891. June. PEAKE, Thomas Jones, 61, Wyburbury Road, Willaston, Nantwich,

127 1891. June. Pearce, Frederick James, Borough Surveyor's Office, Kingston-on-Thames.

"1888. Oct. PEARSON, John, Sanitary Inspector, Grace Hill, Folkestone.

\*1888. Nov. PERRY, Arthur, 45, Townshead Road, St. John's Wood.

13 1889. June. ‡Penny, Walter Harold, 10, Berkeley Avenue, Bishopston, Bristol.

1311889. Feb. ‡Pettit, George Mackness, Frederick Villa, Padua Road, Penge, S.E.

259 1890. May. ‡Phillips, Henry, 56, Campdon Street, Campdon Hill.

1892. Sept. ‡Pidwell, Engall Thomas, 13, Kelvin Grove, Sydenham, Kent.

130 1891. July. ‡Pilbeam, Francis Newcastle, 28, Rosaville Road,

116 1891. Oct. ‡Pool, Frederick, Sanitary Department, Town Hall, Manchester.

<sup>233</sup>1890. Jan. Poole, James, 2, Trafalgar Place, Kensington.

"1888. Oct. ‡Potter, Ben, Heathfield House, Broadway, Ealing.

121 1889. Jan. POTTER, Thomas Wickford, Estate Works, Thoresby Park, Ollerton, Notts.

<sup>151</sup>1889. Feb. Powerl, David Henry William, Surveyor, Pontypool.

<sup>123</sup>1889. Jan. ‡Pratt, Joseph, 12, Kirkdale, Sydenham.

161 1889. Mar. ‡Press, William James, Rose Villa, Abingdon Street, Burnham, Somerset.

615 1892. Oct. PRINGLE, Andrew, Cromwell House, Bealey Heath, Kent.

ASSOCIATES. Date of Election. PROGER, John L., 11, Cartiy-vie Road, Penarth, 64 1888. Oct. Cardiff. 1888, Oct. ‡Rains, Joseph, Kettering. 517 1892. Feb. REAVELL, Frank Noble, Maybank Road, South Woodford. 1888. Oct. ‡Reavell, George, Jun., Alnwick, Northumberland. "1888. Oct. RICHARDS, Daniel, Elwyn Villa, South Molton. 636 1892. June. ‡RICHARDS, William, 18, Nunhead Grove, Peckham Ruc, S.E.

504 1892. Feb. ‡Roberts, David Morris, Berlin House, High Street, Portmadoc. <sup>263</sup>1890. Apr. ‡Robertson, John Shirras, Princes Street, Thurso.

514 1892. July. ‡Romss, H. G., 29, West End Lane, London, N. W. 223 1890. Jan. ‡Robinson, John, 79, Larender Road, Clapham Junction.

507 1892. Feb. ‡Ronson, Lancelot, 12, Stockton Street, West Hartle-

\*1892. Sept. ‡Rodwell, Ascough, Union Offices, Skipton, Yorkshire. 10 1891. July. ‡Ror, Edward Charles, June., Rosenaw, Maswell Park, Hounslow, Middlesex.

72 1888. Oct. ‡Roours, Richard, Macs Helew, Carnarvon.

101892. May. ‡Roper, Joseph Stanley, Surveyor and Inspector to Rural Sanitary Authority, Greenway Court, Hollingbourne, Maidstone.

422 1891. June. ‡Rossiter, Robert Herbert, 15, Sloane Terrace, Sloane Street, Chelsen, S.W.

513 1892. Oct. ‡ROTHERA, Frederick, 71, Beach Road, Sowerby Bridge, Yorkshire.

1892. July. ‡Row, Edmund, 10, Granville Road, Hoe Street, Walthamstow, Essex.

Rowe, Wm. Thomas Ferdinand, Sanitary Engineer, 119 1891. Nov. 41, Old Town Street, Plymouth.

161 1891. Nov. ‡Rowland, Arthur, 5, Cambridge Street, Hull. 565 1892. May. ‡ROYLE, Charles, 51, Wormgate, Boston, Lincoln.

601 1892. June. ‡Rowland, Samuel, Pontypridd.

253 1890. May. ‡Ruscor, Ernest Henry, 6, Great Castle Street, Regent Street, W.

205 1889. July. ‡Ryder, Albert Thomas, Dudley Villa, Foster Hill Road, Bedford. 123 1889. Jan. \$Sadlein, Richard J., "Woodcote," Ormeley Road,

<sup>73</sup>1888. Oct. ‡Salter, Thomas, 2, King's Rd., St. Leonards-on-Sea.

550 1892. May. ‡Sandon, Edward II., 327, Harrow Road, W.

203 1890. May. ‡Saunders, Percy, 46, Jarvis Road, South Croydon.

203 1890. June. Savory, Charles, 6, Holford Place, W.C.

1891. Feb. ‡Scott, Margaret Eleanor, 133, Abbey Road, South Hampstead, N.W.

SEDGWICK, Sydney, 10, Mortimer Street, Cavendish 711888. Oct. Square, W.

ASSOCIATES. Date of Election. 1891. Nov. \$SENIOR, John Sidney, 3, Queen's Road, Gosport. 1888. Oct. 18hadrake, W. A., 8, Hind Street, Stainsby Road, Poplar, E. "1892, Apr. \$Shapley, William Gilbert, 37, Copeland Road, Peckham. 1892, Nov. Sharp, William Charles, Morecambe Villa, Great Grimsby, Lincoln. 210 1890. Feb. \$\\$\tan \\$\ Peter, 98, Church Street, Fulham Road, S.W. 126 1889. Jan. \$SHELDON, W. E., The Croft, Wantage, Berks. 313 1892, Feb. #Shill, Albert Edmund, 30, Dayton Grove, Peckham. "1888. Oct. 18nore, Ambrose J., 68, Adys Road, East Dulwich. 152 1889. Apr. \$Short, James Allen, Sanitary Department, Wigan. 150 1891. Nov. \$Shufflebotham, William, Roche House, Weston Street, Leck. "1892. Apr. #Shuttleworth, William, Town Hall, Salford, Lancashire. "1892. Mar. #Siddall, Joseph, Ashton-under-Lyne. 133 1889. Apr. \$Sidwell, Henry Thomas, Elm Cottage, Herne Bay, 125 1891. July. \$\pmonume \text{S1MMONS}, Edward John, 80, Paulet Rd., Camberwell.

\*1888. Oct. #Simmons, Nimrod, Glendale, Clifton, Bristol. 312 1892. Mar. \$Simmons, Thomas, 50, Victor Road, Seven Sisters

Road, N. 1890. May. \$Simpson, John, 30, Belmont Street, Aberdeen.

221 1890. Jan. ‡Simpson, John Thomas, 28, King's Road, Peckham.

1892. Feb. \$Simpson, R. D. J., Knott Street, Deptford.

155 1891. Nov. SINCLAIR, PROF. William A., M.D., A.M., Howard University, Washington D.C., U.S.A.

512 1892. Feb. \$SLATER, Herbert, 24, Bond Street, Leeds.

356 1891. Feb. ‡SMALL, Walter Herbert, Station Road, St. Dunstans, Canterbury.

1892. Oct. \$SMITH, Fred. William, 92, St. Leonard Gate, Lan-

502 1892. Feb. \$\\$MITH, George, 15, St. Ann's Terrace, St. John's Wood. 1888. Oct. #SMITH, George Allen, Vestry Hall, Hampstead.

532 1892. Apr. ‡SMITH, Joseph Charles, Sanitary Committee, County

Borough of Leeds, Yorkshire. 1890. June. ‡Smith, Joseph Sidney, 73, Elm Park, Brixton Hill, S,W

557 1892. May. \$\pm\$SMITH, Percy A., 474, New Cross Road, S.E.

1892. June. \$SMITH, Richard, Jun., Salterns Rd., Parkstone, Dorset.

33 1890. Nov. Smith, Sydney, Dorset Cotta je, Hastings Rd., Bewhill. 116 1891. June. \$SMITH, Warren B., 66, College Street, Chelsea.

213 1890. June. \$SMITH, W. H., 60, Alma Vale Road, Clifton, Bristol.

131 1892. Sept. \$\foat\text{Smithies}, Arthur, Albert Avenue, Starbeck, Harrogate.

\*01888. Oct. ‡Soper, Henry Charles, 108, Park Street, Camden Town, N.W.

55 1888. Oct. \$Sortwell, W., 14, Retreat Place, Paragon Road, Hackney, E.

Date of Election. No. Election. 11888. Oct. SOUTHFORT, The Mayor and Corporation of. \*12 1892. Sept. \$Speight, Harry, Kirkhamyate, Wakefield, York. 352 1891. Feb. #Spexers, Julius, 6, Lord Street, Keighley. 13 1892. June. ‡Spink, Joseph, Dale House, Formly, Liverpool. <sup>52</sup>1888. Oct. <sup>‡</sup>Stanley, A. W., Newington, Hull. 331892. Apr. \$STANLIN, Walter, 29, Somerville Terrace, Sheffield, Yorkshire. 311 1892. Feb. \$Stannard, Harry William, Market Place, Rugby. 10 1892. Mar. 4Stayspille, Alfred, 2, Tokenhouse Buildings, E.C. <sup>21</sup>1888, Oct. [‡Sterrs, George, 21, Breveton Road, Belford, 21888. Oct. 2Stevenson, John, Surveyor's Office, East Molescy, Surrey. 30 1892. May. \$STEWART, James, 28, Crozier Street, Westminster Bridge Road, S.E. <sup>532</sup>1892. Oct. ‡Stewart, Robert Tomlinson, Thorpe-le-Soken, Essex. 201891, Feb. 4STOLLERY, William, Dust Depot, Culvert Road, Buttersea. 120 1892. Feb. #STREATHER, William Turner, 4, Lismore Road, Gospel Oak, N.W. 171 1889. Apr. \$Strutt, Thomas Frederick, 5, Taxistock Street, Covent Garden, W.C. \*121892. Nov. #Surters, Richard Thos., 29, Old Gate Street, Morpeth, Northumberland. 15 1892. Jan. Surclive, Alfred, Thornton, Bradford. 25 1890. Feb. 2Sutherland, Walter, S. Voclas Street, Liverpool. 321 1890, Nov. †Suttle, Alfred, Manor Square, Otley. 181 1891. Dec. \$SWITZER, Sidney A., 9, Derby Street, Gray's Inn Road, W.C. 323 1890. Nov. \$Sydenham, Sydney, 37, Broad Street, Bath. 110 1889. Jan. ‡Tait, James, Roslyn Place, Dean Street, Kilmarnock. 125 1889. Jan. Tate, William, 29, Kenilworth Road, Kilburn. 163 1891. June. ‡Taylor, Albert, Vestry Hall, Mount Street, W. 1892, Nov. Taylor, Harry James, County Local Surveyor, Sturminster Newton, Dorset. 152 1891. Nov. ‡Taylor, Harry William, Town Surveyor's Office, Newmarket. 321 1890. Nov. ‡Taylor, Henry Thomas, 10, Higham Street, Everton, Livernool. 128 1889. Jan. ‡Taylor, James, 17, Oxford Street, Hereford. 278 1890. May. ‡Taylor, James, 10, Mount Pleasant, Waterloo, Liverpool.

123 1889. Jan. TEMPLE, William Herbert, Scarborough.

Palace, W.

Bristol.

139 1892. Mar. ‡Thatcher, Albert George Hendy, Hampton Court

25 1890. May. ‡Thomas, George, 356, Iverdale Road, Nunhead, S.E.,

\*1888. Oct. ‡Thomas, Thomas, 4, Chandos Road, Redlands,

and City of London Electric Lighting and Engin-

eering Office, Portland House, Basinghall Street, E.C.

Date of Election. Thomas, Thomas F., 32, West Square, St. George's Road, Lambeth. ‡Thomas, W. K., 42, 43 & 44, Triangle, Clifton, Bristol. <sup>51</sup>1888, Oct. THOMPSON, Bernard H., Royal Engineers' Office, 316 1890. Oct. Windsor. 134 1891. July. ‡Thompson, Ralph, 29, Hall Hill Bank, Hewham. 156 1889. Feb. Thorpe, James, 19, King Edward Street, Macelesfield. 1892. Apr. TINDELL, Robert L., 47, Burley Lodge Terrace, Leeds. 1892. Mar. TITMUSS, Joseph E., 59, Commerce Road, Wood Green, N. 241890. June. Tomkins, Alfred, 62, Church Street, Camberwell. 14 1891. Nov. TOMKYS, F. L., Yeovil, Somerset. 311 1892. Mar. Tomlinson, Frank, 59, Sheriff Street, Rochdale. W1892. Apr. Toms, William Charles, 14, Evandate Road, Brixton. 1892. Mar. Travis, David, Chief Sanitary Inspector, Halifax. 55 1892. Mar. TREVENA, George, Occiton, Marthorough. 322 1890, Nov. TRIGG, Henry John, Martock, Somerset. 13 1891. July. TROWSDALE, Tom James, 12, Leybourne Terrace, Stockton-on-Tees. Tuckey, George F., 47, Milk Street, Bristol. 51888. Oct. 23 1890. June. TURNER, Alfred, 49, Ellora Road, Streatham, S.E. 35 1891. Mar. Twaits, James, 21, Latham Street, Poplar, E. 11 1890. Dec. Veasey, Thomas Frederick, Assoc.M.Inst.c.E., care of O. H. Veasey, Bridge House, Huntingdon. 121 1891. June. ‡VINCENT, George Edwards Bussell, 55, Mayfield Road, Dalston. 201891. Mar. ‡Waddington, Thos. W., S, Albert Street, Padiham. 310 1890. June. WALKER, Francis, 23, Woodstock Road, Shepherd's Bush, W. 623 1892. Sept. ‡Wall, Samuel Edward, A.R.I.B.A., 26, Mount View Road, Stroud Green, London. Wallace, Miss J., 6, Hyde Park Gardens. \*\*1888. Oct. WALLAS, Irwin Clarke, 41, Cavendish Road, Clap-<sup>215</sup>1889. Nov. ham Common, S. W. Wallis, Thomas Wilkinson, Surveyor, Louth, Lincoln. 319 1890. Nov. <sup>273</sup>1890. May. ‡Wansbrough, Cecil Shartman, Arlington Villa, Barrow-in-Purness. 561 1892. May. ‡WARRAN, William Ernest, 5, Broad Park Villas, Whitchurch Road, Tavistock. 191892. Jan. ‡Watson, Harry John James, 5, Upper John Street, 531 1892. Mar. ‡Watson, Thomas, Kirkoswald, Cumberland. WATSON, William Hill, Vestry Hall, Piccadilly. 4921892, Jan. WATTS, George Nelson, 147, High Street, Notting 191 1888. Nov. 212 1890. Jan. ‡Watts, Gerald, Local Board of Health, St. George's, Bristol. 216 1890. Feb. ‡WATTS, William Frederick, Bitterne, Southampton. 571 1892. May. ‡Weatheritt, James, Town Hall, Newcastle-upon-

Tync.

Reg. Date of No. Election.

53 1888. Oct. ‡Webb, James A., Town Hall, Fulham.

<sup>313</sup>1890. Nov. ‡Weeks, Alfred James, Toularabia Road, Clapham Common, S. W.

90 1888. Oct. ‡Wells, G. F., 37, Prospect Street, Hull.

576 1892. May. #WELLS, William James, Lower Kingswood, Reigate.

533 1892. June. ‡WHITE, William, 27, Harvey Street, Folkestone, 371 1891. Feb. ‡WHITE, William Owen, 8, Albert Street, Banbury.

551 1892. Apr. ‡WHITEHEAD, James, 38, Raumarsh Hill, Park Gate, Rotherham.

3 3 1892. Feb. ‡WIITHAM, Joseph, Shelf, Halifax.

413 1891. June. ‡WIITTOME, Philip Alfred, The Chestnuts, Rothesay Road, Bedford.

511 1892. Mar. ‡Wilkinson, Georgo II., 83, Townsend Lane, Anfield, Liverpool.

91 1888. Oct. ‡Wilkinson, W., Ford Street, Derby.

574 1892. May. Wilkinson, William, Sanitary Inspector, Altofts.

220 1890. Nov. ‡WILLBOND, George Baines, Guildhall, Nottingham.

<sup>612</sup>1892. Oct. ‡Williams, George, 6, Priory Road, Everton, Liverpool.

433 1892. Feb. ‡Williams, Joseph, 30, Goldhurst Terrace, Finchley Road, N. W.

357 1891. Mar. Williams, Llewellyn A., 80, Easton Street, High Wycombe.

513 1892. Mar. ‡Williams, Richard Jun., 14, Lucerne Street, Lark Lane, Sefton Park, Liverpool.

162 1889. Mar. ‡Wilson, Charles Turle, 37, Burney Street, Greenwich, S.E.

1981889. June. ‡Wilson, John, Town Hall, Kensington.

204 1889. July. #WILSON, William, Grasington Terrace, South Shields.

<sup>372</sup>1891. Feb. ‡Windle, Thomas, S. Tennis Street, Burnley.

1892. Oct. #WINDSOR, William, 13, Sutcliffe Street, Liverpool, E.

52 1888. Oct. ‡Winser, F. Sawyer, 52, Buckingham Palace Road, S.W.

1892. June. ‡Winsborrow, Edwin James, Town Hall, West-minster.

173 1889. Apr. ‡WINTER, Edward, 19, King's Gardens, W. Brighton.

537 1892. Nov. ‡Wood, Alfred, Bury, Lancashire.

111 1891. July. ‡Wood, Charles Bruce, 37, Irene Road, Parsons Green, S. W.

coo 1892. June. ‡Wood, Charles Fred, 1, Cedar Villas, W. Hamp-stead.

131 1889. Jan. ‡Woop, Peter, 177, Ashmore Road, Paddington.

200 1889. July. Woodcock, Henry, 16, Steelhouse Lane, Birmingham.

431 1891. Nov. ‡Woodeson, William, 1A, Charles Street, Pendleton, Manchester.

379 1891. Mar. ‡Woodhouse, Tom, 25, Worsley Road, Leytonstone, E.

Westbourne Park. Woodman, Henry Frederick, 18, Burlington Road Westbourne Park.

163 1889. Mar. ‡Woonton, James, 64, Anthony Street, E.

13 1891. July. ‡Worrall, Ernest, 5, Beaconsfield Terrace, Seacombe, Liverpool.
13 1891. Nov. ‡Worrall, William Henry, 208, High Street, Harborne.
216 1890. May. ‡Wrack, Thomas Philip, 15, Great Alie Street, Whitecharel.

ASSOCIATES.

132 1889. Jan. #WRIGHT, John, Junr., 3, Surbiton Park Terrace, Kingston-on-Thames.

1802. Feb. ‡YATES, Robert, 42, Lupus Street, St. George's Sq., S.W.

1892. Jan. ‡Young, Frank Russell, 60, Elmsdale Road, Wal-thumstow. Essex.

334 1892. Mar. ‡Young, Isaac, 39, Dorothy Road, Lavender Hill.

Note.—It is particularly requested that the Secretary may be informed, in writing, of every decease and change of address; also of any errors or omissions that occur in the list of members.

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ROWE, William Thomas Ferdinand.
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MORLEY, Edwin.
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M.O.H.
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Lennox-Clarke, A.
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Mason, Jonathan.
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Crofts, Thomas John.
Fincher, John Gazeley.
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MUNCE, James, ASSOC.M.INST.C.E.
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REDMAN, Robert Wilkins.
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M.O.H.
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Fowler, Alfred Mountain, M.Inst.C.E.
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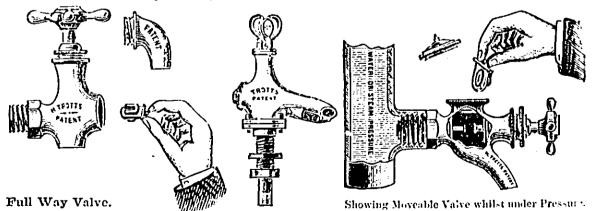
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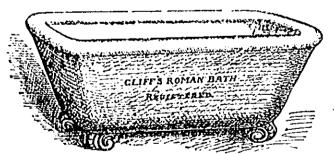
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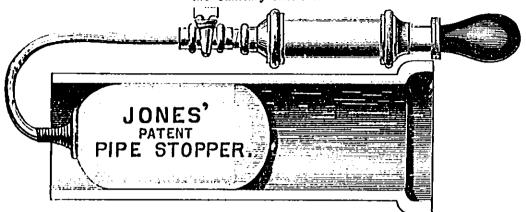
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#### Patent DRAIN & PIPE STOPPER.

Cartificate of Merit, 1890, and further Certificate of Merit for Improvements, 1892, from the Sanitary Institute.



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This invention consists of a cylindrical shaped bag for stopping pipes for the purpose of testing, &c., with water the soundness of drains, which is acknowledged to be the only reliable method. To the bag is attached a small flexible tube, with a tap at the end, connected to a strong hand pump. The bag is placed in the drain before initation, and by working the pumplit is quickly filled with air, under sufficient pressure, to dam the drain, and prevent any escape of water. By turning the tee tap the inflated bag remains in that state as long as a quired, and, when done with, a ball turn of the tap again releases the air, and the bag is withdrawn. Amongst its advantages may be named its lightness and flexibility, enabling it to be folded and carried in a small compass; it can be placed in syphons and other traps, where all other stoppers fail.

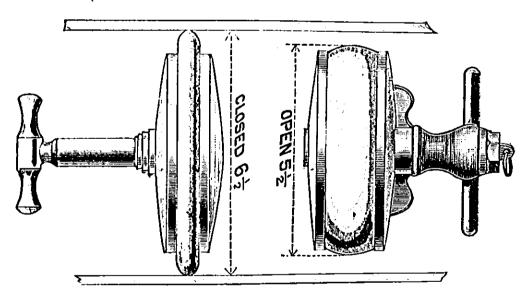
SEPARAIE PRICES—4-in., 20'-; 6-in., 22'-; 9-in., 286; 12-in., 386; 15-in., 486; 18-in., 58.6; Pumps, extra strong, 56 each, or Set of 4 in., 6-in. and 9-in., including Pump, 68.—

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## PATENT EXPANDING SCREW STOPPER

(FOR TESTING DRAINS WITH WATER).



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This Stopper consists of two plates or dires of Galvanized Iron, between which a special hollow rubber ting is fixed by means of grooves in the plates. It is screwed up by a key which causes the rubber to expand outward to the extent of One Inch. This will be found sufficient to plug any pipe according to size of stopper used. PRICES, each-4-in., 8'-; 5-in., 10'-; 6-in., 12'-; 9-in., 18'-; 12-in., 28'-

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JOHN JONES, Contractor and Patentee of Sanitary Appliances, 40. SYDNEY ST., FULHAM RD., CHELSEA; 3, PRINCES' MANSIONS; 68, VICTORIA ST., WEST-

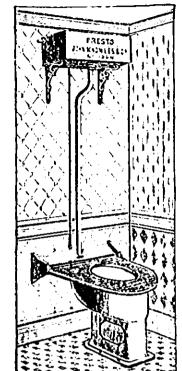
MINSTER. Offices & Warehouse: BURY ST., WALHAM RD., CHELSEA. Works: LEADER ST., and SELAH PLACE, CHELSEA, LONDON, S.W. All communications to 40, SYDNEY STREET.

#### KNOWLES & JOHN CO. Manufacturers.

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(PATENT.)

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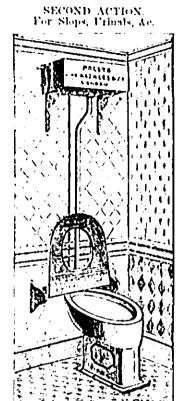
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For Press Notices, see The Builder, May 28th, 1892, and The Building News, June 3rd,

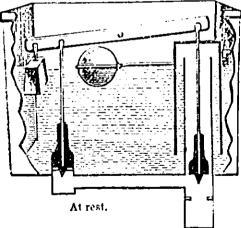
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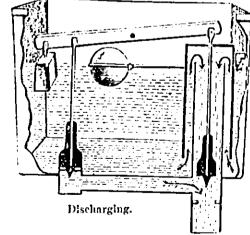
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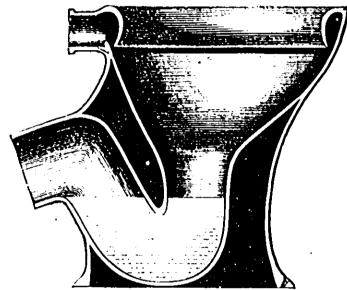
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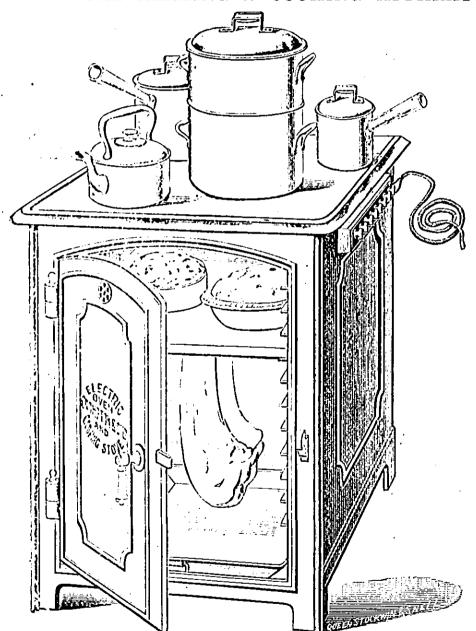
#### HUMPHERSON & CO.,

Sanitary Engineers, 297, FULHAM ROAD, LONDON, S.W. MEDAL SANITARY INSTITUTE, 1892.

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THE

# Bede Disinfectant."

(PATENTED. REGISTERED.

#### A REAL DISINFECTANT!

Used by Medical Officers of Health.

#### TESTIMONIALS.

REPORT BY DR. EDWARD SEATON ON THE "Sr. BEDE DISINFECTANT,"

Since it became established that the Per-Chloride of Mercury in the presence of a free acid. or its equivalent, was by far the most efficacious disinfectant, medical practitioners generally. and especially those who have to do with the prevention of fevers, have felt the great want of a convenient preparation which would contain the Per-Chloride of Mercury in the necessary strength together with a free acid, or its equivalent; and which would at the same time be in such a form as could be safely entrusted to Fever Nurses, Sanitary Inspectors and others by whom the processes of disinfection are usually carried out.

Such an article has now been prepared by the St, Bede Chemical Company. It is in the form of blocks, each weighing an ounce, and each containing 1755 grains, or 4 per cent. of Per-Chloride of Mercury. The block is composed mainly of anhydrous sodium sulphate (3924 grains), with which is combined 215 grains of sulphuric acid; the acid sulphate thus formed appearing to act like a free acid, and to give to the Per-Chloride of Mercury its full disinfecting or germ-destroying power. The block contains also 2°2 grains of encalyptus and thymol and T grains of indigo, so that when dissolved it has a strong, but pleasant, smell and a bright blue colour. I have had several of these blocks submitted to me for analysis, experiment, and report. I find the proportion of the Per-Chloride of Mercury in each to be as stated, viz., I per cent, or 17 grains in the ounce block. The block is rather slowly soluble in a quart of water. The resulting blue solution is described as a very strong disinfectant. In order to test this I have made experiments in conjunction with Dr. Klein, to ascertain the effect of the solution on certain well known organisms which have been proved to be pathogenic or constantly present in zymotic diseases. The tests were made with the bacilli and spores of anthrax, also with the organisms present in cases of cholera and enteric fever. On adding three drops of the culture fluids of these organisms to three cubic centimetres of the blue solution, consisting of one block dissolved in a quart of water, the organisms were destroyed after only five minutes' exposure. This is a very severe test and shows that the blue solution is a very strong disinfectant for infected linen, blankets, &c. We further tested its power of disinfecting the evacuations of enteric fever and cholera. Sterilised focal matter in a fluid condition was inoculated with as much as one-seventh part of the culture fluid of the organisms present in enteric fever. To this was added an equal quantity of the blue solution, and five minutes was found to be sufficient to destroy the organisms. I have also tested its antiseptic powers by dissolving a block in putrescible fluids, and I found that one block dissolved in twenty-five quarts of a putrescible fluid, retarded decomposition five days; and that when dissolved in twelve and a half quarts, there was no sign of decomposition in the putrescible fluid after eight days. further tested its power as a deodorant by noticing its effect upon heaps of fish refuse mixed with other decomposing animal and vegetable matters, and I found the solution was an excellent

The preparation called the "St. Bede Disinfectant" has most powerful disinfecting and antiseptic properties, and is also a valuable deodorant. At the same time its colour and smell are quite sufficient safeguards against the possibility of its mistaken use. I have therefore no hesitation in strongly recommending it on public grounds.

(Signed) EDWARD SEATON, M.D., F.A.,C.P., Pellow of the Institute of Chemistry. Medical Officer of Health for Chelsed, Lecturer on Sanitary Science and Public Health, St. Thomas' Hospital, Lendon THE DETAILS OF THE EXPERIMENTS REFERRED TO IN DR. SEATON'S REPORT ARE AS FOLLOWS :-

The "St. Bede Disinfectant" was now in solution, one block being dissolved in one quart

1.—The "killing power," i.e., the power to kill microbes, was tested on the following microbes: (a) bacillus antiracis without spores, (n) spores of bacillus antiracis, (c) the comma-bacillus found in Asiatic cholera, (b) the bacillus found in human typhoid fever

Of normal cultivations in broth of these several microbes, about three drops were added to about three cubic centimetres of the disinfectant solution, well mixed, and after the lapse of five minutes, one to two drops of the mixture were added to tubes containing about 10 c.c. normal sterile beef broth; for control similar normal sterile beef broth was inoculated with a mere trace of the same culture fluids used for the above experiments. All broth tubes were placed in the incubator at 37° C., while all the control tubes showed already after twenty-four hours' copious typical growth of the several microbes, the others were perfectly clear and remained so afterwards. It follows from these experiments that five minutes' exposure of bacillus anthracis, of spores of bacillus anthracis, of the choleraic bacilli, and of the typhoid fever bacilli to the "St. Bede Disinfectant" solution is sufficient to kill these microbes.

2.—An important and extremely severe test of the killing power of the "St. Bede Disinfectant" solution was made in the following experiments:—

fectant" solution was made in the following experiments:—

To normal human forcal matter in thick solution, previously sterilised and contained in test tubes, was added a certain quantity of normal culture fluid of the choleraic bacilli and of the typhoid fever bacilli respectively, about one-seventh of the culture fluid being added to six-sevenths of the forcal solution. After mixing well the disinfectant was added to each of the forcal mixtures in equal proportions, so that each of the test tubes contained \(\frac{1}{2}\) of the forcal matter plus culture fluid, and \(\frac{1}{2}\) of the disinfectant. After five minutes a number of test tubes containing sterile beef broth, as in the former series, were inoculated with a drop or two from these forcal mixture tubes, then placed in the incubator and kept at 37° C., but no growth appeared in them and the fluids remained sterile. At the same time that the above experiments were made, control broth tubes were inoculated with a trace of the forcal solution after the appeared in them and the nums remained sterne. At the same time that the above experiments were made, control broth tubes were inoculated with a trace of the focal solution after the addition to them of the culture fluids, but before the addition of the disinfectant, these control tubes were also placed in the incubator and kept at 37° C, they all showed abundant normal growth after twenty-four hours of the choleraic bacilli and of the typhoid bacilli respectively.

(Signed) F. KLEIN, M.D., F.R.S., Professor of Bacteriology at the College of State Medicine, London.

LABORATORY AND ASSAY OFFICE, 75, THE SIDE, NEWCASTLE-UPON-TYNE, July 6th, 1889.

I hereby certify that I have analysed a sample of the "St. Bede Disinfectant," manufactured by Messrs. The St. Bede Chemical Company (Limited), Newcastle-upon-Tyne, and that I find it contains as follows:--

Per Chloride of Mercury	••	••			4.01	per cen
Free Sulphurie Acid	••	••	• •	••	4.10	,,
Sulphate of Soda		••	••	••	87 25	"
Sulphate of Lime	••	••	••	••	1.30	• •
Oxide of Iron, &c	••	••		••	0.27	11
Chloride of Sodium	••	••	••	••	0.21	12
Insoluble Siliceous Matte	·1· ·-	••	••	••	0.54	7.
Thymol, Eucalyptus, Ind	••	••	5.65	11		
• • • • • •						

The principal active ingredient of this disinfectant is Per-Chloride of Mercury (corrosive sublimate) which is known to be the most certain and powerful destroyer of disease germs. When the "St. Bede Disinfectant" is dissolved according to the instructions given it forms a solution of the strength and character recommended by Dr. Buchanan, the Medical Officer of the Local Government Board, as being effective as a disinfectant. It is prepared and packed in a form which makes it convenient and easy to be used.

JOHN PATTINSON, F.I.C., F.C.S.
Public Analyst for Newcastle-upon-Tyne. (Signed)

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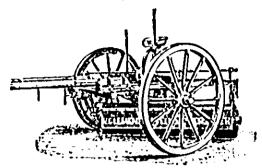
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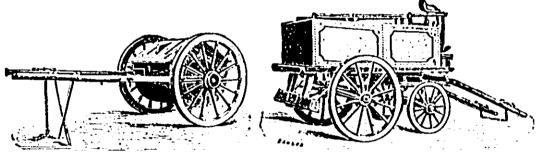
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