LECTURES TO SANITARY OFFICERS.

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WATER SUPPLY FOR DOMESTIC USE.

By J. WALLACE PEGGS, Assoo.M.INST.C.E.

Delivered 10th October, 1893.

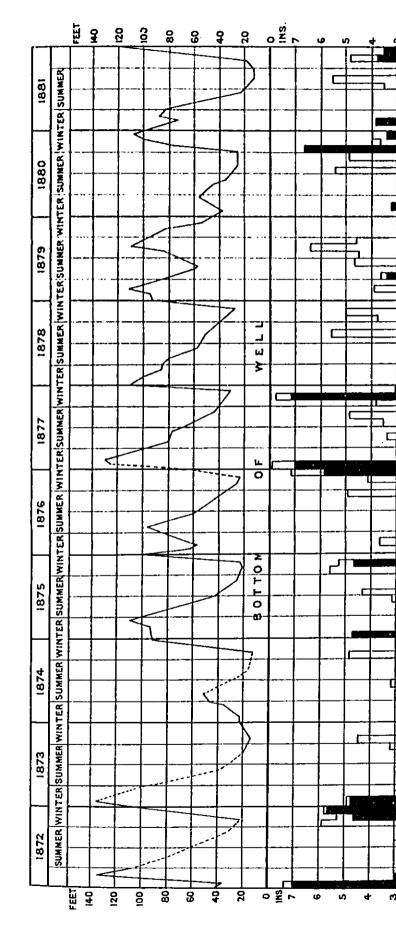
THE plentiful supply of water for domestic purposes of good quality is of paramount importance, as we now know that many diseases, cholera and typhoid fever especially, may be spread by drinking foul water.

drinking foul water. As all sources of water supply are derived from rainfall, a short consideration of this interesting subject will be necessary before proceeding to the various sources of supply themselves. The amount of rainfall varies in different parts of the world, and even in different parts of England. The average rainfall over England may be taken at 30 inches per annum, equivalent to 3,000 tons per acre. In parts of India, however, more than this amount has fallen in one day. It will be useful and instructive to explain here how rainfall is measured. The apparatus for measuring rainfall is called a

It will be useful and instructive to explain here how raintall is measured. The apparatus for measuring rainfall is called a rain-gauge, and the size usually adopted is 8 inches in diameter. The most generally useful pattern is made of copper, in two parts, and consists of a lower cylindrical part and an upper deep funnel part, with a strong truly-turned rim of brass, leading by a small pipe into a bottle within the copper cylinder, so placed as to be protected from breakage by frost and from evaporation. A small graduated glass of an area one-tenth of the mouth of the funnel is used to read off the amount of rain-fall direct in inches and decimals of an inch. fall direct in inches and decimals of an inch.

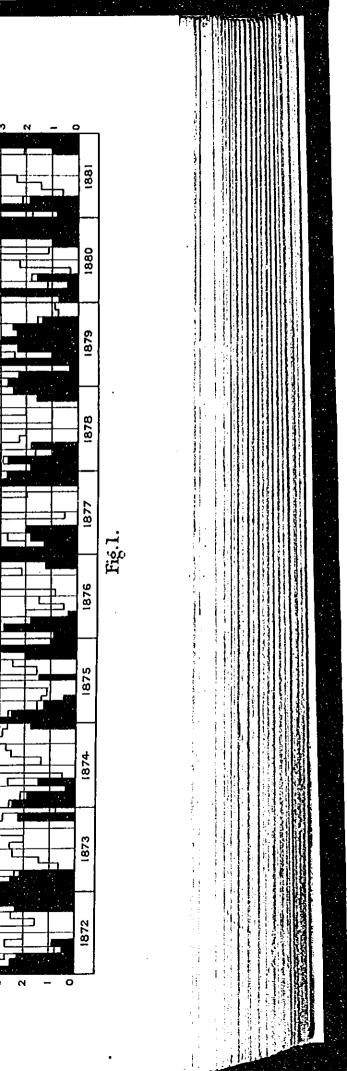
The rainfall over the British Isles varies considerably, and the best way of studying its distribution is from the map pre-pared by Mr. J. G. Symons, F.R.S., for the Sixth Report of the Rivers Pollution Commission.

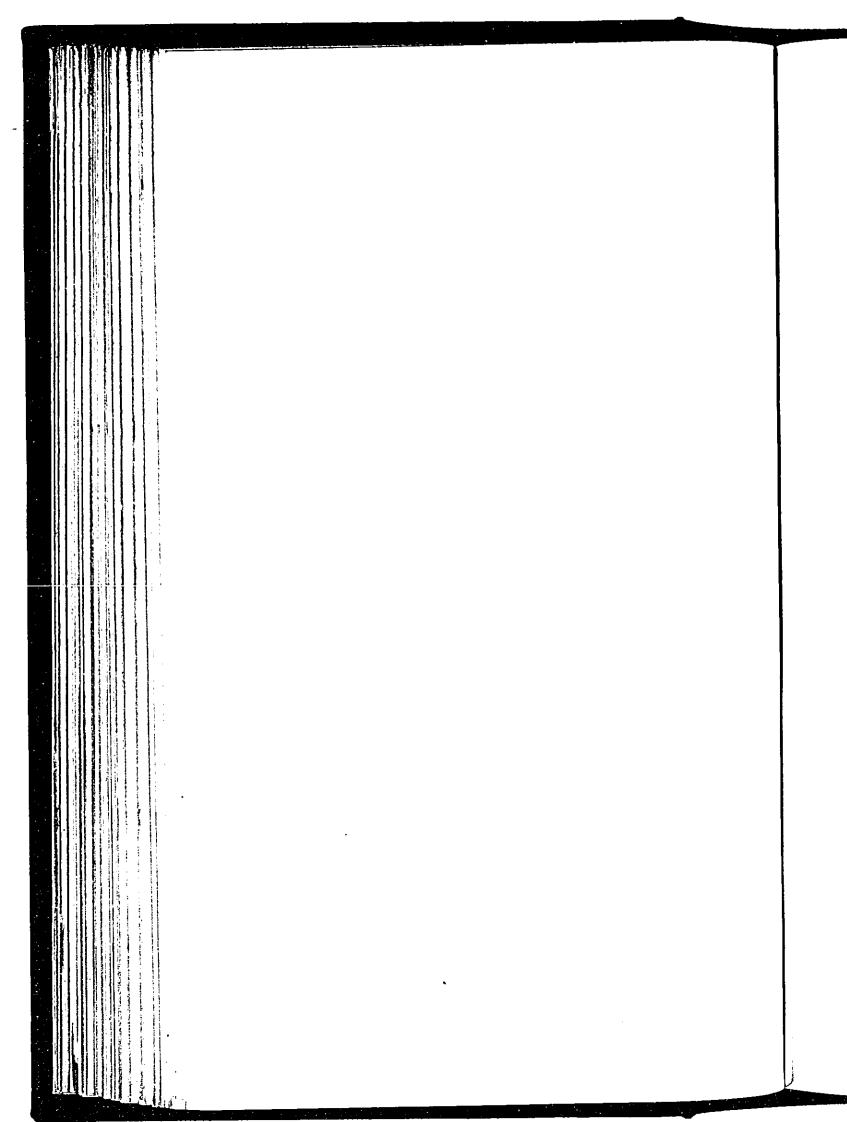
Upon this map rainfall contours or lines of equal rainfall are shown, and the spaces between or areas of equal rainfall are

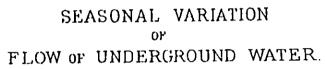


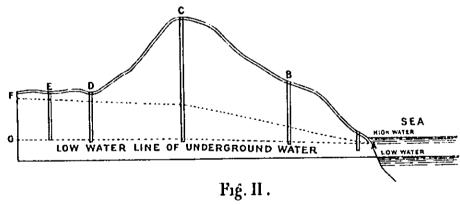
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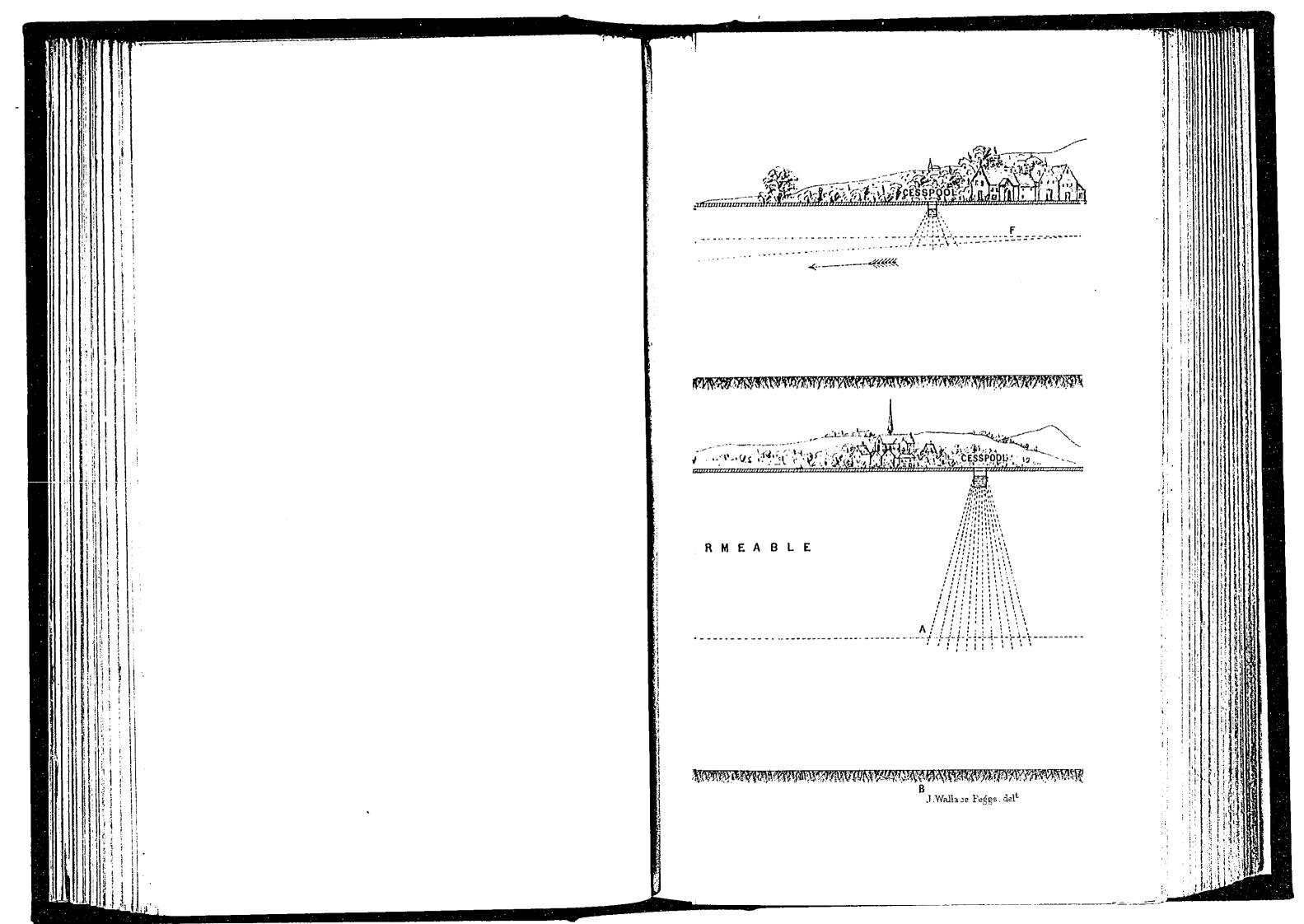
Rainfall Evapo-ration and Per-colation.

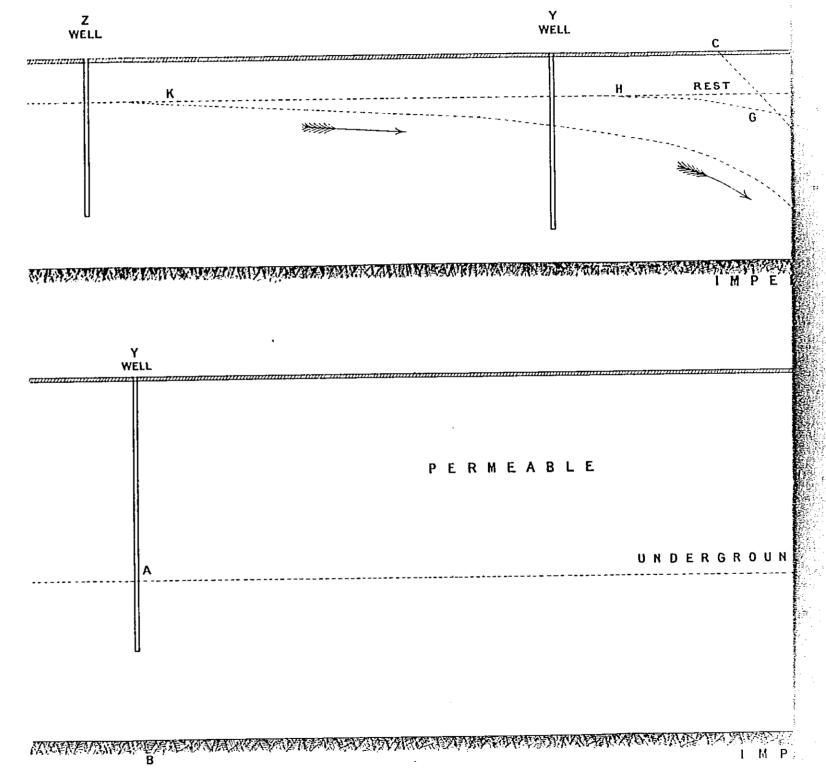


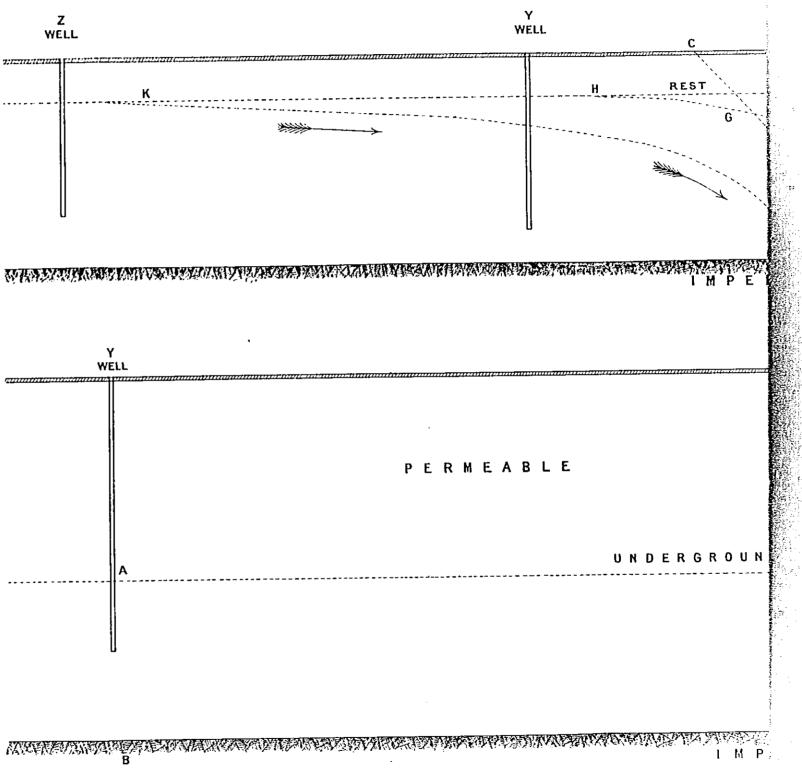


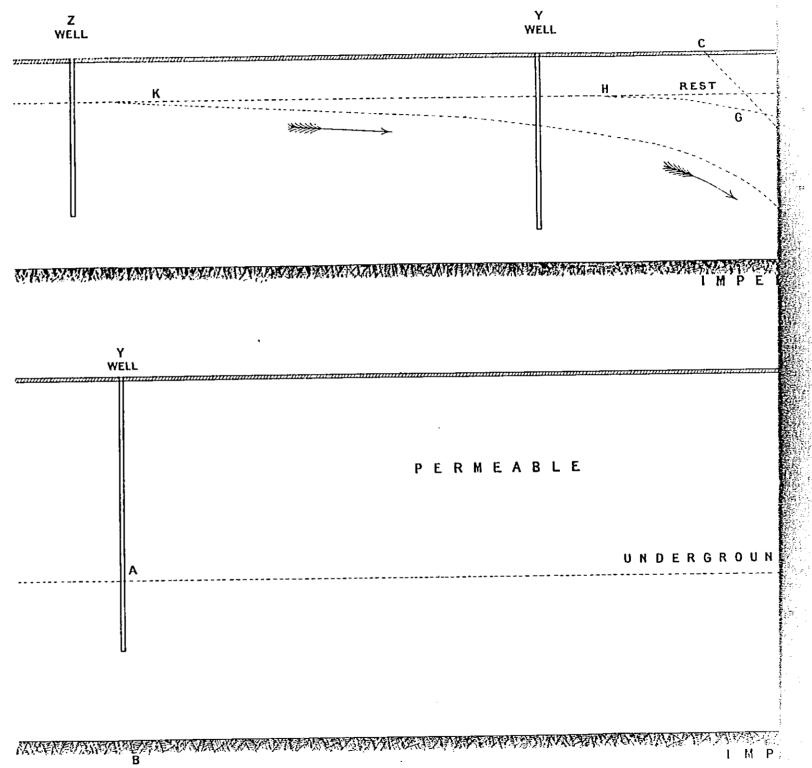




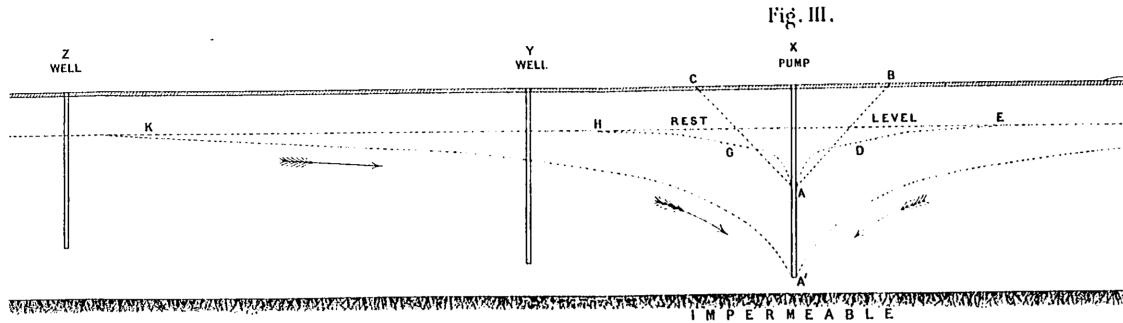




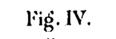


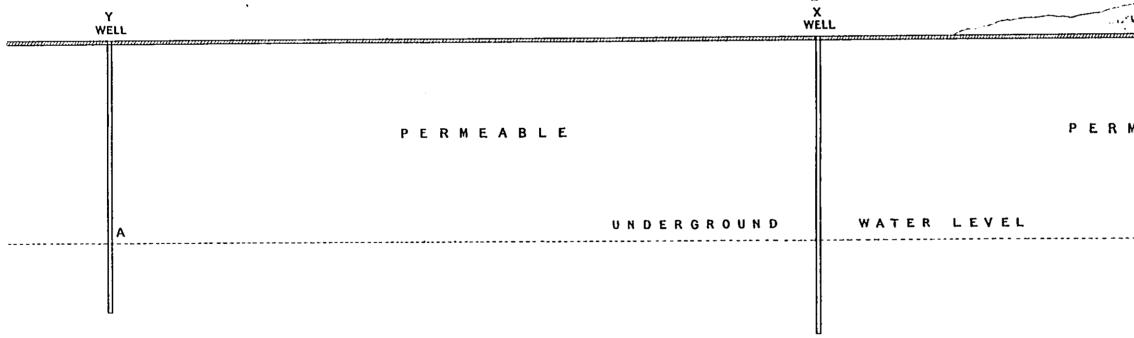


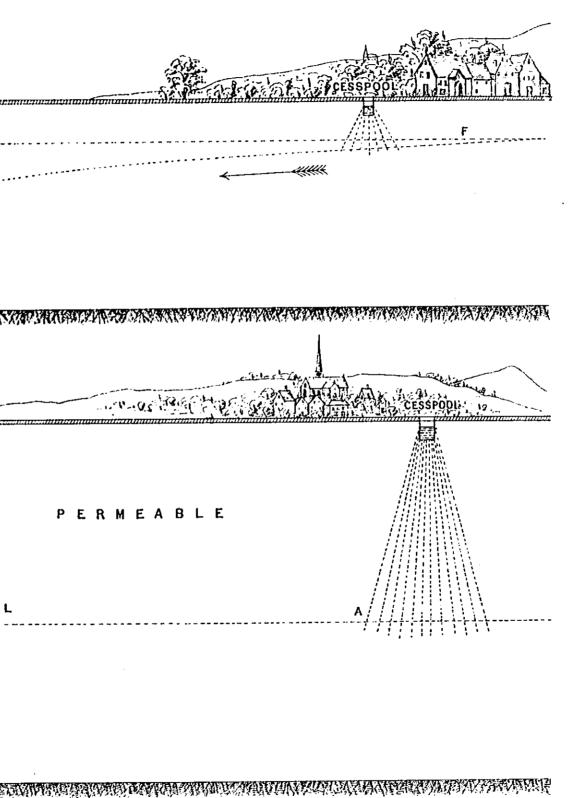
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coloured blue. The light blue are the area of and the darker blue tints the areas of heavy rain

A LACE LEVEL

On looking at the map, it will be seen that the the area east of a line from Newcastle to Re average of less than 25 inches. The portion west mary line has a rainfall of 30 inches and 40, wh and Cumberland mountains and Dartmoor have Stye Head Pass in Cumberland has as much as 1

The amount of rainfall varies also with the districts having a low average rainfall, 20 to 25 in greater part of the rain in summer, and, gene with a rainfall over 30 inches have most of it in the statement of the rain and the statement of the statement of

The following is a useful approximate rule.

The fall in the driest year is one-third less t fall.

The fall in the wettest year is one-third more fall.

Continual evaporation is going on from the st and sea, and this is eventually returned to the dew, or mist. The amount of evaporation dep temperature of the air, the higher the temperat the evaporation. It has been stated that from 100 inches per annum are evaporated.

The water which falls as rain or snow upon the posed of in three ways. A certain portion runs of to the streams and rivers, another portion siground or percolates and forms the vast "underga of which we shall have something to say later of portion is evaporated and absorbed by vegetation.

It has been stated that :----

One-third of the rainfall flows off the surface. One-third percolates forming the "undergroun One-third evaporates.

This, however, is only an approximation to the proportions differ enormously in different season and under different conditions.

The sources of water supply to which we shattention are as follows :---

1.—Gathering grounds.
 2.—Streams and rivers.
 3.—Springs.
 4.—Wells.
 5.—Rain-water from roofs.

The waters which drain off uncultivated lands in not manured, or only slightly manured, are ofte

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and the water supplies of some of our large manufacturing towns in Yorkshire and Lancashire form notable examples of such works. For example, the water supplies of Liverpool, Bradford, and Bolton. The city of Dublin is also supplied with water from the Wicklow Mountains, 26 miles distant.

These impounding reservoirs or lakes are formed by building a dam across the neck of a valley suitable to contain a supply of some months even in the driest year.

Peaty matters are frequently present in upland surface water, giving it a decided colour. Filtration through beds of sand is sometimes made use of to remove peaty matters and discolouration.

Waters supplied from natural lakes, such as Glasgow from Loch Katrine 34 miles distant north of the city, may also be considered as upland surface water. This Loch Katrine supply took the place of the much-polluted Clyde water, and the construction of the works was due to the genius of the late J. Frederick Bateman, F.R.S., Civil Engineer.

For engineering purposes in estimating the water supply from a catchment area the least rainfall has to be considered, as this is the crux of the question.

The rainfall which flows directly off the surface forms rivulets, which join to form the streams, which again flow to the river systems.

The rivers and streams were formerly the usual source of water supply, and London is the most notable example of a city supplied by river water. The city and county of London is supplied by eight water companies, five of which draw their entire supply from the River Thames above Teddington. It has been stated in evidence that during the summer of 1887 more than one-third of the entire flow of the river was taken for the water supply of London.

The water supply from rivers has been abandoned to a great extent, on account of the pollution of rivers by raw sewage, and this brings me to say a few words about the deplorable pollution of many of our beautiful rivers.

Unfortunately, the Public Health Act of 1848 encouraged the emptying of raw sewage into rivers. It is certain that, unless a more workable Act can be obtained, most of our rivers will become not only polluted but will be in many instances a danger to health.

The existing Rivers' Pollution Prevention Act has been adverted to in the late Royal Commission on London Water Supply by Dr. Ashby, Medical Officer of Health for Reading, as "more or less a dead letter."

We have seen already that the source of all water supply is springs and the from rainfall. Of the rain descending upon the ground, part flow of underpercolates into the soil and descends through it to a level where it is held up by an impervious stratum, such as many of the clay beds. The amount of percolation has been measured by what are called percolation gauges, the earliest form being that of Dr. Dalton, of Manchester,

Extensive experiments have also been made by Sir John Lawes and Sir II. Gilbert upon percolation gauges of an area of Land of an acre.

In order to bring before you in a graphic manner the relation between the rainfall and the rise and fall of the underground water, a diagram has been made which is from the one prepared by Mr. Rogers Field and the author for the article on "Water" in "Our Homes," * and is, as far as the author is aware, the only attempt to show graphically the connection between rainfall percolation and the rise and fall of the underground water.

It is commonly known to those who have to draw water from deep wells by means of a bucket and rope, that they have to wind up more rope in autumn than in winter; or to express this more carefully would be to state that the level of the water in the well is at its lowest in October and November, and then rises rapidly until February and March, when it is as a rule at its highest level, and then it gradually sinks through the summer to the autumn low level.

Referring now to the diagram, Fig. I., which is drawn out for ten years, it will be noticed that lines divide each year into four parts, and the divisions of winter and summer are also marked. The upper part of the diagram shows the heights of the underground water in the chalk, as measured at Chilgrove, Sussex, by Mr. Woods, and are plotted in feet above the bottom of the well, which is taken as the datum. The lower part of the diagram shows the rainfall and percolation in inches, the percolation amounts being the black portion. The rainfall is from the record kept at Chilgrove, and the percolation in the chalk is from the records kept at Nash Mills, Hemel Hempstead.

Now the first thing which will be noticed on examining the diagram is that the bulk of the percolation is in the winter (except in the year 1879), when the ground is already saturated, and that there is none in the summer, because of the evaporation and absorption by vegetation. The next noticeable feature is that the underground water is highest in the early part of the

* "Our Homes and how to make them healthy." Cassell & Company.

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year, January and February, and lowest in October and November, and that it follows the amounts of percolation.

Not only is the level of the underground water rising and falling as we have seen, but it is always moving slowly through the strata containing it with a definite gradient towards certain outlets, sometimes to a river, sometimes to the sea level, the latter case is well shown by the Brighton section, see Fig. 11. The general notion prevails that a well has only to be sunk at some desirable spot, and if you are fortunate you find water in some such way as you might find a nugget of precious metal, but a moment's consideration will show that this is not the case. Where water is found by sinking a well you are drawing from the general underground water. This is a very important point, as we shall see further on. The upper and lower dotted lines in the diagram, Fig. IL, show the high water and low water levels, from which it will be seen that great seasonal variations exist, the water in the wells B, C, D, E, rising and falling considerably. In the autumn months the underground water level would be along the dotted line on the diagram A, G, but in the winter it would have risen along the line A, D, E, F, the water standing in the wells at a higher level, and the gradient being much steeper towards the outlet A. In chalk districts the seasonal variations are from 50 to 100 feet.

In districts where an impermeable stratum underlies permeable or porous strata, such as the gravel "outliers," upon the clay around London, wells sunk into the porous strata will yield water at depths varying considerably according to circumstances. The distinction between shallow wells and deep wells is not very clearly defined, but, speaking generally, wells sunk into superficial beds are called shallow wells, and wells sunk into geological formations and deep beds are called deep wells. Such, for example, as the deep wells in the New Red Sandstone at Liverpool, and the deep wells in the chalk around London.

In some cases, owing to the position of the water-bearing strata, the water rises to the surface, and in some instances considerably above the surface, as at the celebrated well at Grenelle, near Paris, and many in our own country. These wells, the water from which rises above the surface, are called Artesian wells, so named from the province of Artois, where they have been long in use.

Tube wells, or Abyssinian wells, form a simple means of reaching water-bearing strata at moderate depths, and have much to recommend them from a sanitary point of view. They have in many instances yielded good supplies on a small scale.

Rain water collected from roofs in rural districts gives an excellent supply on account of its great softness. It is, however, quite insufficient under many circumstances, but where earth-closets are used it may sometimes be made sufficient. Great care should be taken to prevent leaves, soot, and refuse from entering the storage tank. The best way is to have a rough filter, constructed in two portions, one merely as a settling chamber, and the other a rough filter of small washed stones.

With reference to the quantity of water obtainable from roofs, this is entirely governed by the rainfall of the district in the driest year, and the area of the collecting roof. In the West of England the average rainfall may be assumed as 36 inches, and the fall in the driest year as 24 inches. Taking the loss from evaporation and absorption at two inches, we have 22 inches of rain left as available. In the East of England the average rainfall would be 24 inches, and the minimum 16 inches, and taking a loss of two inches as before, we have 14 inches as the available rain in a dry season.

There is a very simple rule by which the available quantity of rain-water may be calculated approximately. It is as follows: Multiply the area covered by the roof in square feet by the average annual rainfall, also in feet, and divide the result by 100, will give the average supply in gallons per diem for a very dry year.

The next most important point with reference to rain-water collection is to have sufficient storage or a tank of sufficient capacity to tide over the longest droughts. The simplest way is to calculate the capacity of the tank from the roof area, and it has been found by practical experience that two gallons for every square foot of roof area must be allowed for in constructing the tank.

Much interesting and useful information on the collection of rain-water from roofs will be found in a pamphlet by Mr. Rogers Field, International Health Exhibition Handbook, 1884. As rain-water has the quality of great softness care must be taken not to use any lead pipes or connections in pumps or fittings. Cases have been known of water pollution caused by a piece of lead pipe being used to join the iron suction pipe to the pump barrel, in fact, the ordinary piece of lead pipe supplied with hand pumps.

When water is pumped from a well the effect is first of all to Depression of lower the surface of the water in the well, and afterwards to ground water lower the underground water for a distance around the well, pumping. and if the stratum is fairly homogeneous this depression will be equal around the well, and will extend in a circle drawn with the well as a centre. In some cases, however, the figure would be more or less irregular and would not be a circle.

This depression has been likened to an inverted cone, as was

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Rain-Water from Roofs.

Wells-

Shallow wells.

Deep wells, Artesiau wells,

Tube wells.

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first pointed out by Robert Stephenson in his masterly report to the Liverpool Corporation in 1850. In the case of wells in the New Red Sandstone, which is fairly homogeneous, this coning would give a fairly correct idea. On referring to diagram No. III., the effect on the surrounding underground water of pumping a well to different levels is shewn by the curved lines. It is quite evident that the straight coned figure originally assumed was not correct.

It used to be assumed by writers on water supply that the depth and the influence of the well was the factor which regulated the area affected, but this is not so. What does affect it is the extent of pumping in lowering the underground water level. This is an important consideration, as the influence of a shallow well may extend much further than a deep well, if more water is pumped from the shallow well so as to lower the water level more. It will be seen, also, from the diagram No. III., that if the extent of the influence of pumping be represented approximately by a circle, the more the water is lowered the larger will the circle be. No general rule can be given as to the distance from the well to which the effect of the pumping extends, as it varies greatly according to the character of the strata and other circumstances. In order, however, to give an idea, it may be stated that

investigations into various cases in which the distance has been

ascertained, appear to shew that under ordinary circumstances

it varies from 20 times to 100 times the depression or more, i.e.,

if the water in the well is depressed five feet by pumping, the

Leakage from

Cesspools.

of one well up.

another.

distance from the well to which the effect of this pumping extends may vary from 100 feet to 500 feet or more. If the depression is 10 feet the influence would extend nearly twice as far. The great danger from a sanitary point of view as regards wells is that they may be polluted by sewage, leakage from drains or cesspools. This danger applies more to shallow wells than deep wells. At the same time deep wells are not safe from such pollutions, as shown by what took place at Liverpool in 1872. This is such a striking case that it will be interesting to give a few particulars. The deep well in question is the Dudlow Lane Well, belonging to the Liverpool Corporation, sunk into the New Red Sandstone formation, 443 feet deep, 247 feet being sunk as a well, and 196 feet being the depth of bore hole. The continuous pumping of this well dried all the wells belonging to the houses in the neighbourhood, and these dry wells were afterwards used as cesspools. The consequence was that the water in the deep well became polluted, and five years after the well had been constructed the pollution was so serious that the well had to be disused.

The Liverpool Corporation took measures to induce the Local Sanitary Authority to carry out a system of sewerage, and divert the drainage of the houses from the cesspools, and by these measures the quality of the water in the deep well was so improved that pumping was resumed, and the water from the deep well was again used for the supply of Liverpool.

The recent case at Worthing is another striking instance of the water in a deep well becoming polluted by sewage escaping from leaky sewers and drains.

In diagrams showing the pollution of water in wells by sewage, it is generally indicated by streams of sewage matter issuing from the sides of the well, indicating a direct passage of sewage from drains and cesspools into the well. Although as you are well aware this is sometimes the case, it is by no means the most usual mode of pollution.

The usual cases met with in practice are much less apparent, as the pollution is effected by the sewage passing into the underground water and not into the well direct.

The polluted underground water may reach the well in two ways. 1st-by the natural movement or flow of the underground water. 2nd-by the polluted water being drawn towards the well by the influence of pumping.

The diagram No. IV. has been prepared to show the firstmentioned case, where AA indicates the level of the underground water in permeable strata, BB being impermeable strata holding up the water. A porous cesspool at C is allowing sewage matter to percolate until it reaches the underground water. At X and Y are wells sunk into the underground water.

Now it has been previously explained that all underground water has a slow movement towards some outlet, and it therefore depends which way the underground water is supposed to be moving whether the wells are polluted or not. If the movement is from X to C no pollution takes place unless depression by pumping causes it. If on the other hand the movement is from U to X pollution must take place whether there is pumping or not.

Sending the sewage into a porous cesspool in permeable ground near a river will not prevent the river from being more or less polluted, inasmuch as the underground water will be polluted, and this will flow by its natural movement into the river.

The second case of polluted underground water reaching a well is shown by the diagram No. III. before referred to. If the well is pumped down to A it will not draw the water from beneath the cesspool, but if pumped down deeper to Λ^{i} it will

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influence the underground water to a greater distance, and

pollution will be drawn into the well from the cesspool. Another important consideration will be seen from the diagram, viz., that a well which gives good water when only slightly used may become seriously polluted if drawn upon largely so as to extend its sphere of influence to cesspools which were outside the sphere of influence when only slightly drawn upon; for instance, a well might give quite a good water for the supply of a house where a bucket or hand-pump is used, but if steam-pumping were resorted to for the supply of a village the water might become contaminated.

It is not proposed in treating of this part of our subject to water from yarious sources, go into the question of chemical analyses, but simply into the quality of water as affected by the gathering ground or the strata through which it passes. When rain has descended upon the earth it depends obviously upon the character of the gathering ground and the strata through which it passes for its hardness and impurities. The length of time also in which it is in contact with those surfaces, calcareous and magnesian soils

or strata cause water passing over them to be hard. The evils arising from the use of hard water are very apparent, not only in cooking and washing, but in hot-water apparatus for heating and hot-water supply, and also in steam boilers.

It has been calculated that a saving of £36,000 per annum in soap alone was effected in the city of Glasgow by the introduction of the soft water supply from Loch Katrine.

Water may be softened by distillation, by carbonate of soda, by boiling the water, and by the lime process of Dr. Clark. The first and second methods are effective but too expensive on a large scale. The third and fourth are efficient only with certain classes of water. The fourth, however, is cheap and applicable to large town supplies. Carbonates of lime or magnesia (temporary hardness) can be removed by Dr. Clark's process. The process known as the Porter-Clark process is largely used for softening water for manufacturing purposes, for ice making, and for use in locomotive engines on railways.

The quantity of water required for various purposes.

From a return made to Parliament in 1879 of the water supply of every urban sanitary district, the amount used was shewn to be from five gallons per head per diem to 50 gallons per head per diem.

The quantities of water supplied to various towns is as follows :---

London (average) 31.19 gallons, according to the recent Report of the Royal Commission on Metropolitan Water Supply.

Manchester 21:00, proposed to be 50 to 6

new works are finished. Norwich 14:50.

(Hasgow 50.00,

Ancient Rome is calculated to have been 300 head per diem.

A supply of from 20 to 25 gallons per her sufficient for ordinary houses with baths and wa for horses a separate allowance should be made required for watering a garden or for ornamen must be reckoned separately.

In country places if earth-closets are adop would be required, 15 to 20 gallons per head be ample. In cottages with earth-closets st would be required, and there 10 gallons a head suffice.

The allowance generally made for various follows :---

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Washing	• • •	••		•••	3
Baths		•••	•••	• • •	5
Water-closet	s		•••		5
Domestic	•••	•••		•••	- 9

By the term constant supply is meant that tinuously supplied to the house, i.e., that the s the houses are always kept full under pressure may be drawn by the taps at any time direct fro

By intermittent supply is meant that water is to the house at stated intervals, necessitating the to store the water.

The chief advantage of the constant system is can be drawn direct from the mains without stor so that the pollution which so often takes place be avoided. This pollution occurs in a numbe known to you, viz., the connection of the overflo cistern direct with the sewer; by dirt collecting by rats, mice, or birds. As an instance of the l a friend tells me that a bird entered his c the overflow pipe, and the bird died there as it cistern, and caused pollution to the water.

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advantages of the constant supply is that water may be drawn fresh and cool direct from the main. The cost of storage cisterns is avoided, and only flushing cisterns are required for W.C.'s.

Also the water is constantly on all the branch mains in case of fire.

The advantage of the intermittent supply was supposed to be prevention of waste of water, but recent experience has shown that the constant supply is as economical as the intermittent.

The intermittent was formerly the usual method of supply, but the constant supply is now being adopted, and even in London, the most striking instance of intermittent supply, the constant system is being largely introduced.

Water meters are in England generally only used for trade Supply 5 water by meter. and manufacturing supplies, the domestic supply being charged according to the rateable value of the house, with certain extras.

In Berlin and other places on the continent the whole supply is charged for by meter.

Contamination water mains.

Where service reservoirs are in the neighbourhood of towns in reservoirs and there is evidently always danger of the water in them being contaminated, and they should therefore always be of covered construction.

In the case of water mains it would at first sight appear that it is impossible for the water in them to become polluted, as if there were a bad joint or hole in the pipe, or even a broken pipe, water would escape under pressure and there would be no tendency for extraneous matter to enter the water main. This is not true even when the pipes are kept constantly full of water, as under certain conditions, which, however, do not often occur, the water rushing past a hole may create an insuction.

In practice, however, even with a constant supply, the pipes are not always kept full of water, as they have to be emptied for repairs and for making new branches, and when emptied an entirely new condition is introduced. A vacuum is often theu created, so that there is a powerful insuction into the pipes through any opening there may be.

If the main therefore passes through polluted ground, which is generally the case in towns, polluted matter will be sucked in. and when the water is turned on again into the mains it will become distributed with the general supply.

Many outbreaks of fever have been traced to contamination of the water supply in this way.

Waterworks filter beds generally consist essentially of a thick layer of sand over coarse gravel, in which porous pipes are laid to convey the filtered water to a storage reservoir. A film of

glutinous silt collects on the top of the sand, which gradually chokes the filter, and this has to be cleaned off at intervals. Waterworks filters if properly managed are very efficient, but it is very different in the case of domestic filters. These require cleaning and renewal as much if not more than the waterworks filters, but as a matter of fact they do not receive the proper attention, in fact, they are frequently not attended to at all. Consequently, they often collect so much objectionable matter that they make the water passing through them worse instead of better.

This is especially the case when animal charcoal is used, as the pores become clogged with putrescible organic matter, which forms a breeding ground for living organisms.

J. WALLACE PEGGS.

Filtera.

JOHN T. J. SYKES.

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OBJECTS AND METHODS OF INSPECTION.*

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In the General Order of the Local Government Board, dated March, 1891, set out in detail and included in the Syllabus of Examination of The Sanitary Institute, will be found enumerated the duties of Inspectors of Nuisances, and the subjects to which they relate. It will not be necessary, therefore, to occupy your time by reciting a long list of subjects for inspection, the principal objects of which are :--

1. The discovery and abatement of nuisances and of sanitary defects for the protection of health.

2. The prevention of the spread of infectious diseases.

3. The supervision of the quality and wholesomeness of foods.

The Inspector is set in motion by—(1) Complaints received; (2) Infectious diseases notified; (3) Instructions to inspect specified streets, &c., from house to house, and (4) Instructions to periodically inspect specified premises.

Method in inspection is important. Always take notes in writing, and record exactly what you find. Avoid all prejudice and the personal equation as much as possible. Distinguish what you find from what is told you, and note by whom you are told. Be exact as to names, places, hours, and dates, and details generally. Cultivate the art of observation and enquiry. Know your subject that you may know what to observe and what to enquire into. I will endeavour to illustrate my meaning by instances of observation and enquiry generally, and then describe more especially the inspection of dwelling places and other premises.

Overcrowding.—This is a constantly recurring nuisance, and in inspecting it is necessary always to ascertain the number of occupants of every room in every sub-let house. It is not always possible to get a correct statement from the occupant of any particular room, but enquiry of another occupier in the same house will frequently elicit not only the number living in a particular dwelling, but the number in the whole house.

* The Lecture was illustrated by diagrams, plans, sections, &c.

Corroboration is valuable in securing accuracy. The number and size of the beds are strong evidence. The size of a room need not always be exactly measured, with a little experience it may be mentally calculated with sufficient approximation for practical purposes. With this object in view the method of calculating area and capacity must be practised. It is well always to notice the number of air inlets and outlets in a room, and the situation and use of the door, window, and fireplace. The open space about the house itself should also be noted.

Smoke also requires special care in observation. For this purpose a diagram of smoke shades is useful, so that an idea of the density of the smoke may be conveyed to others in giving evidence, and as a permanent record. In making observations of smoke the following points must be noted. The date and time of day. The description of the premises upon which the chimney is situated, and the use to which the furnace or fireplace is put. The kind of sky or background against which the smoke is seen issuing. The density and variations in the density of the smoke according to corresponding numbers on the diagram. The duration in minutes of the prevalence of each particular shade of density. Furthermore, you must distinguish smoke from steam, or steam and smoke mixed. If the density and duration of the smoke be sufficient to constitute a marked nuisance, do not fail to enquire who has charge of the furnace at the time. The construction of the furnace and the quality of the fuel used are questions rather for an engineer.

Dangerous Infectious Disease .- In making an enquiry of this kind, in addition to the information contained in the Notification Certificate, the following facts should also be ascertained. Where the clothes are washed; whence the milk supply is obtained; the occupation of the patient; the school, workplace, or office attended, and date of last attendance; the date of the beginning of illness and the appearance of rash (if any); the probable source of infection. (For this purpose you should carry a table of the maximum, minimum, and mean incubation periods of the various diseases.) The room occupied by the patient, whether it is a bed-room or a living-room; other occupants of the room, and the name and address of the nurse or attendant and other duties of the attendant. Precautions taken to isolate the room and the patient, and if improperly isolated whether the medical attendant considers removal to hospital inadvisable, and if so, why? if removed, to what hospital and on what date; if not removed the probable date when disinfection will be required. (A table of the average duration of infectiousness in the various diseases is useful for this purpose. If intimation can be obtained from the medical attendant directly,

or indirectly through the person in charge, this is still more useful.) A record of the sanitary condition of the premises must be made, and the house inspected in detail as to the number of persons occupying each portion of it, their occupation, and the work-place, or school attended. In the case of Small Pox the Vaccination Officer must be notified. If the infectious sufferer be a child notification should be sent to the teacher of the school attended by the patient. The principal points of these details, in addition to the particulars on the Notification Certificate, should be kept consecutively in an Infectious Disease Register so that all essential references to any particular case may be seen at a glance.

Sampling Water .- As another illustration, it is frequently necessary in rural districts to ascertain the quality of the well water. For this purpose a sample of the water must be taken. The best method is to use a Winchester quart bottle, equal to a half gallon, with a ground glass stopper. The bottle should be well cleansed and prepared by being rinsed with hydrochlorie or other acid, and then be rinsed several times with water until the drippings are no longer acid to the tongue and taste, and at the time of use, rinsed with the water to be sampled. The bottle should then be filled with the water within an inch or so of the neck, the stopper inserted and tied down securely. Sometimes a luting of linseed meal or clean clay is laid round the stopper; but an india-rubber cap over all is the best. It should then be sealed, and securely packed in straw or hay in a wicker basket for transport.

Sampling Food .- Another instance, under the Sale of Food and Drugs Adulteration Act you must be familiar with the usual procedure. A sample is purchased in the ordinary way by yourself or by an agent. After paying for it, the vendor is informed for what object it has been purchased. Divide the sample into three parts; securely fasten and seal each part and number and letter them, taking note of the number and letter, and of the name and address of the vendor. Offer one of the parts to the vendor, take the other two parts away, sending one to the analyst and retaining the other to be produced in court if a prosecution be necessary. For the purpose of sampling, proper bottles and tins with labels attached must be carried in a bag, which should also contain a special notebook. The quantities necessary to be purchased are about a pint of milk, or a pound of butter, and other substances in proportion, but an ounce or two of condiment is sufficient. In sampling milk or other food in transit it is necessary only to take the sample without dividing it: but, in case of prosecution it is necessary for the consignee to give evidence as to what he had contracted to buy. Possibly the contract may have been for skim milk, for instance.

Unsound Food.—The method of procedure in the case of unsound food must not be confused with that of adulterated food. The unsound food may be an animal intended to be prepared for food, or any article, solid or liquid, intended for the food of man. Be quite satisfied in the first place that it is intended for food, and in the second that the food is unsound, and then seize it at once. After seizing it, if still in doubt the opinion of a colleague at hand may be asked, or the Medical Officer of Health be consulted. The food or a sample of it, if bulky, is then taken to a Justice who will condemn it, order its destruction, and issue a summons when necessary. It should be prevented from being used as food by saturating it with common carbolic acid or creosote, and then be buried or burned.

House Inspection generally.—In considering the inspection of premises it may be well to first give a general idea of the inspection of an ordinary house. First observe, externally, the access of light and air, the open space around, whether it is properly levelled and drained, and the guttering and roofing. Note any animals kept and their condition, any offensive accumulation, ditches or stagnant water, and whether any offensive trade is carried on or any effluvia is produced. Within the house, note any dampness, especially in garret or basement, the absence of any dry area or damp course, whether the basement is impervious and if there is any ventilation below the floor, and any underground sleeping room. In staircases, passages, and rooms, observe the soundness and cleanliness of the surfaces generally. In the last, the structural and decorative condition of the surfaces, the cubic capacity, and the number and ages of the occupants, and the purposes for which occupied. The points of lighting and ventilation must also be attended to. In reference to water-closets their number, situation, ventilation and cleanliness should be noted, the efficiency of the apparatus and the mode of water supply. The soundness, disconnection and ventilation of the house drain, the disconnection of waste pipes, overflow pipes, rainwater pipes, and the situation of gullies, the absence of receivers and cesspools. The wash-house floor should be smooth, sloped and drained, and the waste cut off. It should be ascertained whether the water supply is constant or intermittent, and whether from a main or from some other source, and the capacity, situation and cleanliness of the cisterns must be noted, and the course of the overflow and supply pipes therefrom. The ash receptacles will require attention, and, where dry systems of excreta-removal prevail, also the ash or dry earth-closet.

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Before speaking of premises in detail it will be well to give a few approximate definitions, the legal definitions are generally lengthy and complicated, but the following are useful to the practical understanding of certain points. Places of human habitation not only include places used for dwelling purposes, but also those used for other purposes of habitation. A dwelling is generally held to be so constituted by the act of sleeping, or of passing the night with intent to sleep. A building is a structure partly or wholly enclosing cubic space, and more or less a dwelling house, but also any building capable of being used for habitation. The curtilages and appartenances attached to a house, wholly or partly used as a dwelling, are generally held to form part of the house.

Dwellings.—In classifying dwellings they may be regarded as movable or fixed. Movable dwellings include canal boats on water; tents, vans, and sheds on land. Fixed dwellings include hop and fruit pickers' dwellings, cottages and luits, and larger houses.

Canal Boat Dicellings.—In inspecting a Canal Boat the points to be noted are :-- Is it a Canal Boat ? With the exception of ships registered under the Merchant Shipping Act any vessel, however propelled, for the conveyance of goods along any inland water way within the body of a country is a Canal Boat. It must be ascertained whether it is used as a dwelling, and, if so used, if it is registered. If registered, the word " registered," the name and place of registration, the registered number and the name of the boat should be found conspicuously painted on both sides of the cabin on the stern, so as to be plainly seen from both sides of the canal. If properly lettered and marked the master's certificate should tally, and state the maximum number of persons allowed in the dwelling. It should be ascertained that the dwelling is properly used. A cabin is not allowed to be occupied as a sleeping place at any time by a male over 14 and a female above 12 years, unless husband and wife. A cabin occupied as a sleeping place by husband and wife is not allowed to be occupied as a sleeping place by a male above 14 and a female above 12. There must be 40 cubic feet of free air space for each person under 12, and 60 cubic feet above 12. In a "fly" boat (worked by shifts) 180 cubic feet is required for two persons occupying a cabin at the same time as a sleeping place. These conditions are modified slightly for boats built before 1878. In inspecting a Canal Boat for registration the following conditions must be looked for :- That there is at least one dry clean weather-proof cabin in good repair. That the capacity of the after-cabin be 180 cubic feet and the fore-cabin 80, if intended to be used as a dwelling. That sufficient means are provided for ventilation in addition to the door. That adequate and convenient sleeping accommodation is fitted or constructed. That one cabin is fitted with a suitable stove and chimney. That a suitable tank for storing at least three gallons of water is provided. And, that if used for offensive cargo, a cabin used as a dwelling is separated by two bulk-heads, four inches apart, of which that next the cabin is water-tight, and the space between, open to the air and supplied with a pump. There are one or two other less important requisitions as to narrow and wide boats. A "narrow" boat is less, and a "wide" boat more than 7 feet 6 inches across. Any structural alteration voids the certificate. For the purpose of inspection the hours are from 6 a.m. to 9 p.m.

Morable Dwellings.—In reference to tents, vans, sheds, and similar structures it must be noted whether they are kept in a cleanly and habitable condition. That no nuisances arise in connection with them, and that no infectious disease is nursed therein. Under the Housing of the Working Classes Act, 1885, section 9 (2), the sanitary authorities may make bye-laws for this class of dwelling, and it is generally provided that they shall not be erected within 100 yards of a street or dwelling-house.

Hop Pickers' Lodgings.—The points for inspection and observation here are:—That the habitation is clean, dry, and weather proof, and is ventilated and lighted. That a floor space of 15 square feet is allowed each occupant, children under 12 being allowed one-half. That clean straw or other suitable material is supplied for bedding, and renewed when required. That the beds occupied by adults of different sexes are separated by a screen. That there is a sufficient supply of good water. That there is a separate cooking place for every 15 persons. That there is adequate privy accommodation for each sex. That immediately before occupation the premises and accessories have been thoroughly cleansed, and during occupation are kept cleansed.

Vegetable and Fruit Pickers' Lodgings require similar regulation and supervision.

Cottage Dwellings.—These are mainly to be found in rural districts but exist also in towns. Dampness, pollution of surface and of subsoil water are the great troubles here, and may be briefly considered under the heads of construction, refuse removal, and water supply. In addition to the general state of repair they must be kept wind and water-tight. In a waterlogged soil subsoil drainage may be necessary. A ventilated

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space between the floor and the earth, or a basement layer of concrete, are things not generally found. There should be an absence of earth or refuse matters against the outer walls, and a dry space, or area, 3 feet wide from 6 inches below the level of the floor upwards may be required. If then the walls require support this should be filled in with rubble, or the area may be arched over in places. Of course in new cottages a proper damp course would be inserted above ground level. In some cases it is desirable also to pave the surface outside for a distance of a few feet from the walls. Proper guttering and piping to carry off the rain water must be provided. The windows should be made to open properly, and the place where the food is kept should ventilate into the open air. The slop water should be cast into a proper sink, with the waste cut off and delivering into a culvert or drain which should deliver upon the land at a distance. There should be no sunken pit for excreta or refuse, but a proper ash or earth closet above ground, and the receptacle should preferably be movable rather than fixed, but in any case it should be impervious. Cesspools should on no account be permitted near a cottage. The object of cesspools is to intercept and retain solid excreta, but solid excreta should not be permitted to enter drains unless there is a proper sewerage system, and then cesspools are not necessary. In a rural district with available land, cows, pigs, and other animals should be kept at some distance. The manure should be heaped, away from the vicinity of the dwelling and of the well, and the surface of byres should be properly drained on to land, not into a stream or pond. The water used in cottages may be either rain water, surface water, well water, or high pressure water from the main. The surface from which the rain water is collected, and the receptacle in which it is kept should be observed to be cleanly and constructed of proper material. Surface water unless it comes from good grass land, moor land, or high uncultivated land is objectionable. Well water, if derived from a shallow well is open to suspicion, and its pollution is one of the commonest troubles of cottage dwellings. The only remedy then is to sink a properly steyned deep well, or to lay on a high pressure water supply from a main.

Larger Dwelling Houses .- Turning now to the larger type of dwelling houses, it is not necessary to take into consideration the duration of tenancy, whether nightly, weekly, monthly, or quarterly, but the external relative position and the internal relative occupation are most important points.

The External Relative Position of Dwelling Houses influences the number of fronts, whether they be 1, 2, 3, or 4. Taking the ordinary dwelling house to be constructed in rectangular form, houses are generally described as detached, semi-detached,

or terrace houses. These have respectively four, three, and two fronts, the two fronts of the last being on opposite sides. If these houses back immediately upon one another they form respectively semi-detached, four-group, and back-to-back houses, possessing three, two, and one front respectively. In a fourgroup house the two fronts, unlike those of the terrace house. are on contiguous sides, just as in corner houses formed at the return angles of a block of terrace houses. In the house with one front there can be no perflation of air, and in a house with two fronts on contiguous sides only a partial and diagonal perflation. This applies to four-group houses and corner terrace houses. The construction of back-to-back houses of more storeys than one intensifies their objectionableness, as the room below ventilates into the room above by means of the open staircase, and this is not even overcome by the enclosure of the staircase and the insertion of windows, if the house be occupied by several families acting independently. But a still greater drawback to this class of house is the absence of proper curtilage or open space for the deposit of refuse receptacles and for other domestic purposes.

The Internal Relative Occupation of Dwelling Houses is dependent upon whether they are constructed for one or many tenants, and they may be classified somewhat in this manner :---

1. The house constructed as one dwelling, that is a selfcontained house, which has been altered into a house let in separate lodgings (in which class of house the underground lodging or dwelling is generally found), or into the common lodging house.

2. The house constructed in separate dwellings, known as the common-stair house or model dwelling house, and which is large or small according to whether it is constructed as a common-stair block or a cottage block.

3. The house constructed as a common dwelling for many occupants, examples of which are the model common lodging house, and the shelter or refuge.

4. A special kind of dwelling house constructed to harbour animals and lodge human beings, namely the stable dwelling. Houses Let in Separate Lodgings, Tenements, or Dwellings require continuous supervision by the sanitary authority. To facilitate this they are in many cases registered under byelaws. The special point to be noted is that under these bye-laws the landlord is made liable for structural repairs. the maintenance of the drainage and means of ventilation. and the cleansing of all parts of the premises used by two or more tenants, whilst the tenant is held responsible for the

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management and cleansing of his own rooms, and the parts of the premises used solely by him. In addition to the ordinary conditions and requirements of a dwelling house the points to be observed during inspection are :- That at least 300 cubic feet of air space is allowed each person in a sleeping room, and 400 in a room used for sleeping and any other purpose. Children under 10 years of age are generally allowed half this amount, although children are far more susceptible to the effects of want of fresh air than adults. That every sleeping room is perflated daily by an open window for an hour or two, whenever possible. That the eisterns are kept cleansed. That one closet at least is provided for every 12 persons, and is kept clean and in good order and repair. That the ash receptacles are dry and clean, and in good repair, and contain no wet refuse. In reference to the state of cleanliness of the rooms, that the refuse matters, liquid and solid, are removed daily and the receptacles cleansed, and that the surfaces are kept clean, and the floors swept daily and washed weekly. As regards the cleansing of the house, this is done annually by whitewashing or washing where required, and renewing the paint when and where necessary. That no animals are kept so as to and mark necessary filthy. That yards and open spaces render the premises filthy. That yards and open spaces are clean and in good order, and the former properly paved and drained. Lastly, that the presence of infectious sickness is immediately reported.

It is generally in this class of house that underground dwellings exist, that is to say, any underground room let separately as a dwelling, the floor of which is more than three feet below the adjoining ground level. In inspecting such a dwelling to ascertain whether or not it is illegally occupied, it should be noted whether there is a bed in the room, and whether the room is let separately from any other room in the house, except an adjoining front or back underground room. It must be ascertained whether the cellar is seven feet high and whether it is three feet above the nearest ground level. If there be outside, and along the entire frontage, an open area two feet six inches wide, and whether the surface is six inches lower than the floor level. Whether the room is effectually drained. If there be the use of a closet and ash receptacle, and whether the room has a proper fire-place and flue, and an external window nine feet square, the upper half opening, or in the case of a back cellar half this size. Remember that steps for access to the cellar, and other means of access to any dwelling above, are allowed in or over the area provided they do not block the window. In addition to these requirements, in London there are others, although it is in the power of the sanitary authority to modify them. The principals are, that there is a proper damp course in the walls, that the area is properly paved, that the space beneath the floor (if any) is ventilated into the outer air, and that the room is secure against the rising of exhalations. It is extraordinary that the last two, especially the former of the two, should have been omitted from the requirements of the Public Heath Act, 1875. Even now there is no provision, as to the other side of a back area, that is to say beyond three feet of the house, to prevent the erection of high structures that may block out practically all light and air from the dwelling. This is a condition of things very commonly found in the metropolis.

There is another kind of lodging-house very similar to those just mentioned, namely, *scamen's lodging-houses*, and the Sanitary Authority of a seaport town, with the sanction of the Board of Trade, may make Bye-Laws and Regulations for licensing, inspecting, and for the sanitary condition of these. It is unnecessary to give such conditions in detail. They may be sufficiently appreciated from what has been already said in reference to other lodging-houses.

The Common Lodging House invites our attention next. This is a house kept for profit, in which sleeping and other accommodation is provided, more or less in common, for strangers, at a charge of a few pence per night. Here upon inspection you will ascertain, firstly, that the conditions of wholesomeness needed for dwelling houses in general are observed, and, secondly, that it possesses certain conditions in particular. You will look first for the words "Registered Common Lodging House" affixed outside, and inside for a copy of the Bye-Laws with respect to Common Lodging Houses affixed in a suitable and conspicuous position. In each room you will observe that a placard is affixed in a conspicuous position, stating the number and description of the room, and the maximum number of lodgers authorised to be received into it at one time. With regard to the furniture, that the number of beds and utensils sufficient for the maximum number of persons allowed is supplied in each room. With reference to the separation of sexes, it must be seen that only one male occupies each bed, that no male over ten years of age occupies a room used by females, that no female occupies a room used by males above ten, excepting a room set apart for married couples, in which case you will see that a wooden partition is fixed from six inches above the floor to a sufficient height above each bed, so as to act as an effectual screen. As to cleansing, note that the beds and bedding are kept clean and wholesome, and aired daily, vessels cleansed daily, all floors and stairs swept daily and washed weekly, and all

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surfaces of walls, furniture and effects kept cleansed, and that cleanliness and ventilation generally are maintained. That sufficient water is supplied for washing in basins, and that these as well as the towels are kept clean. That the sanitary conveniences, ash receptacles, and open spaces, are kept clean and in good order. When inspecting a house *for registration*, in addition to the ordinary conditions of wholesomeness, it should be specially observed that the ventilation is good, and that the bed rooms have proper ventilators and are above ground, that the kitchen accommodation is proper and the water supply sufficient, that there is one closet for at least every twenty lodgers, that there are sufficient ash receptacles, and that the washing accommodation is sufficient and separate from the bed rooms.

Another class of common dwelling, that has been brought more into prominence by the Salvation Army, is *night shelters* and *refuges*. Air space, ventilation, and cleanliness are much to be desired where human beings are closely congregated in buildings put to such use. The conditions are those of common lodging-houses, in fact rather more acute, but not being kept for profit it has been ruled by the Courts that they cannot be registered as such.

Common lodging-houses have hitherto been ordinary dwellinghouses converted to that use, and in the majority of instances are ill-adapted for the purpose. Glasgow led the way in the matter of improvement, but recently some improved models have been crected in London and are worthy of a visit, namely, the common lodging-house of the London County Council, Parker Street, Drury Lane, and Lord Rowton's Lodging-House, Bond Street, Vauxhall, the latter is even better appointed than the former.

In a similar manner the conversion of ordinary dwelling-houses constructed for one family to the use of many has been partly superseded by a number of large buildings specially constructed in separate dwellings. The conditions of construction required in this class of buildings are not even now settled, although there are certain points that are desirable. The limitation of the height of the building to about five storeys. The proper lighting of such dwellings, so that above lines, drawn from the bases of the rear and fore fronts, at an angle of 45° upwards, that is, half-way between the vertical fronts and the horizontal ground level, there should be no obstruction to light and air. All the habitable rooms should possess through ventilation. The minimum height of rooms nine feet, and the minimum area 144 square feet for living, and ninety-six square feet for sleeping rooms. On each floor there should be sufficient and proper water supply, and a sufficient and proper number of waterclosets. In new dwellings to be erected the latter should be cut off by a disconnecting lobby open to the external air, and they are best situated one above another in a tower. This is important, because such buildings are constructed on the flat, often in such a manner that the apartments communicate directly or indirectly with each other, having no ventilated staircase, well to separate them as in an ordinary house. The different manner in which various dwellings of this type are occupied render it difficult to generalise as to the exact details of arrangement and construction, but the addition of a balcony or open space, attached to each dwelling, or on each floor, for exclusive use, is a great advantage sanitarily.

It is held by many that these large blocks of dwellings are objectionable, and that smaller houses or cottage blocks should be crected. The immense value of land in the centre of cities militates against this, but outside this area a number of cottages or smaller dwellings for one, two, or three families have been erected in such a manner as to dispense with a common staircase. There is no reason why the Bye-Laws for houses let in lodgings should not be applied to dwellings of these last two types if necessity demands, but the occupants are generally of a provident and careful class, and a resident caretaker exercises constant supervision.

Stable dwellings of old date, and some of more recent, are in the majority of cases extremely objectionable in construction and arrangement, and you will experience some difficulty in remedying the objectionable conditions. However anxious you may be to remove gullies from outside dwelling houses you will find these invariably to exist inside stables, and the rooms over the stable are mostly entered by a staircase through the stable, so that dwelling over a stable is only an apology for dwelling in a stable. The effluvia produced by the animals, and by their exercta (which is frequently allowed to accumulate), ascend. The closet is usually situated under the stairs, and is seldom lighted or ventilated. Frequently the back dwelling rooms in the loft above have no proper skylights. These are matters which will require your attention to remedy, by proper outside manure-bins, and proper light and ventilation to closets and back rooms, and cleanliness generally. The ventilation of the stable may frequently be improved by the insertion of air bricks in the back wall, for stables are generally in the same condition of relative position as back to back houses, having only one front.

It is almost unnecessary to advise you that when you discover dwelling houses grossly unhealthy on account of bad construc-

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tion and repair, or grossly obstructive dwellings, or an area containing these, it is your duty to report the fact to the Medical Officer of Health for the purpose of putting the Housing of the Working Classes Act into force.

I must now direct your attention to certain classes of professional and trade premises. Schools require inspection from time to time. The area, space, and ventilation of the class rooms, and the situation and condition of the W.C.'s and drainage are points to be observed in all schools, whether day or residential. In the latter the ordinary sanitary conditions of a dwelling house are required in addition.

Factories, premises upon which steam, water, or other power is used for manufacturing, are under the supervision of the Factory Inspectors. But the supervision of Werkshops now falls within the duties of Sanitary Inspectors. A workshop includes any premises, room, or place within which any manual labour is exercised for the purpose of gain, and over which the employer has a right of access. You will observe that the use of power converts the premises into a factory. A Domestic Workshop is a workshop in a private house, room, or place that is used as a dwelling, and in which the only persons employed are members of the same family dwelling there. Bakehouses and Laundries are also regarded as Workshops. A retail bakehouse is any bakehouse or place in which the bakings are sold by retail in a shop or place occupied together with a bakehouse. It does not include wholesale bakehouses or baking factories. There is no special definition of a laundry.

You have power to inspect by day any place believed to be a workshop, and by night when any person is believed to be employed there, night meaning from 9 p.m. to 6 a.m. The points to be observed in inspecting are :- That the place is in a cleanly state. That the walls and tops of rooms, passages, and staircases are limewashed, or, if painted and varnished every seven years, are washed at least within every 14 months, and at other times when necessary for health. That no effluvia arise from excremental sources, or other nuisances dangerous to health. That it is not overcrowded, and is so ventilated as to render all impurities generated therein harmless as far as practicable. That if any child under 14, young person 14 to 18, or woman over 18 years, be employed it be reported in order that the Factory Inspector may be informed. That lists of out-workers are properly kept, notes of these should be taken. That the sanitary conveniences are sufficient, especially with regard to number, and that there is separate accommodation for each sex. It is common to find these in the form of latrines, troughclosets, and urinals, and it should be ascertained that they are properly attended to at frequent intervals.

In regard to Bakehouses they are not only subject to the requirements of workshops generally, but there are certain special requirements of which particular note should be taken. They are -That all the inside walls and tops of rooms, passages, and staircases are either painted or varnished or lime-washed. That, if the former, painted in oil of three coats and renewed every seven years and washed every six months: if the latter, limewhited at similar half-yearly intervals. That no place on the same level, which is part of the bakehouse premises, is used as a sleeping place, unless completely partitioned off, and possessing a window nine feet square, one-half opening. That there is no receptacle for excreta, or liquid, or solid refuse, within or communicating with the bakehouse, and that the cistern supplies no closet directly, and generally that the bakehouse is not unfit for use or occupation. If unfit the bakehouse cannot be compulsorily closed, but the offender can be fined until it be brought into conformity with the requirements of the Act. In London and other large towns numbers of bakehouses are situated underground, a condition of things which entails the enclosure of cellars, yards, and areas, the consequent exclusion of light and ventilation, and the placing of refuse receptacles and solid refuse as well as drain openings within or near the bakehouse, from inability to place them elsewhere. Unfortunately the regulation of bakehouses appears only to have contemplated the protection of the health of the workers therein, and to have overlooked the protection of the food, especially after it has left the ovens.

Slaughterhouses.—In inspecting slaughterhouses it is necessary to ascertain that the slaughterhouse premises have been licensed by the authority, and that the license has been duly registered. You will then proceed to ascertain that water is supplied to every animal in a lair previously to slaughtering. That there is proper means for securing the head of cattle to avoid suffering. That the ventilation, drainage, and water supply is in proper order and efficient. That the quantity of water especially is sufficient for cleansing purposes. That the walls and floor are in good repair so as to prevent absorption, and are cleansed within three hours of slaughtering. That all the internal surfaces are hot limewashed every three months. That no dog is kept in the slaughterhouse, nor any other animal except such as is intended for slaughter. Dogs are specially excluded because they harbour a tape worm (tania echinococcus) the cystic form of which (echinococcus hydatid) becomes parasitic in both ruminants and man. That animals are kept no longer than is

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necessary, and only in the lairs. That non-absorbent vessels with tight covers are provided and cleansed, and that all refuse matters are placed in them forthwith and removed every 24 hours. Similarly that all skin, fat, and offal are removed within the same period. In inspecting slaughterhouses previous to registration for the purpose of granting a license certain other points must be observed, namely : That the premises are not within 100 feet of any dwelling house, and are open to the air on two sides. That the floor of the slaughterhouse is not below the level of the ground, and that the approach is not through a dwelling house or shop, and not inclined more than one in four. That there is no room or loft over. That an ample receptacle for water is provided, the bottom of which is not less than 6 feet above the floor level. That there are means of thorough ventilation. That the floor is well paved with impervious material sloped towards a properly-trapped gully. That the inside walls are covered with a smooth impervious material to a sufficient height, say 5 or 6 feet. That no possible source of effluvia communicates with the slaughterhouse, and that every lair is properly drained, paved, and ventilated, and has no habitable room over.

Dairies, Cowsheds, and Milkshops are controlled under Orders of the Local Government Board, dated 1885 and 1886. These Orders have been made under the Contagious Diseases (Animals) Act, 1886, and it is compulsory for Dairymen to be registered and for the Sanitary Authority to keep a register. Furthermore, new dairy premises must be constructed to the satisfaction of the Sanitary Authority, and old buildings cannot be occupied unless they provide for the health of the cattle, cleanliness of the vessels, and the protection of the milk. An infected person, or one who has been in contact with an infected person, is not permitted to take part in the business. No receptacle for excreta may communicate with a dairy building, nor may the building be used for sleeping, or other improper purpose, and swine are not to be kept in it, and the milk of a diseased cow suffering from pleuro-pneumonia, cattle plague, or foot-andmouth disease, is not to be used for human food, nor, unless boiled, for the food of animals. This Order makes it permissive for the Sanitary Authority to make Regulations, and in such Regulations the points usually provided for, and that will require the attention of the Sanitary Inspector, are :- That the Coushed is sufficiently lighted. That the ventilation is thorough, and preferably by louvred ventilators inserted in a lantern roof. That each cow is allowed 800 cubic feet of air space, or 600 with perfect ventilation, any height above sixteen feet not being taken into account. That each cow has a superficial

space of eight feet by four, or two cows in one stall eight feet by seven. That the shed is properly paved with impervious material, sloped to a channel terminating at a trapped gully situated outside where practicable. That a properly covered tank, kept cleansed, and containing at least twelve gallons of water for each cow, is provided, the bottom being at least six feet from the floor, and the overflow disconnected. That each stall is provided with a water trongh of impervious material, supplied by a proper pipe, and emptying by a proper waste. That the walls, doors, etc., are covered with an impervious material to a height of five or six feet. That impervious receptacles properly drained are provided outside the cowshed for grains and also for dung, and that they are not kept inside. That the upper part of the inside surface is cleansed and limewashed every six months, and the lower five or six feet as frequently as necessary. That the floors and troughs are cleansed twice daily with water, the dung and offensive litter removed, and that all milk utensils are scalded or steamed as frequently each day as necessary.

With reference to *Dairies*, the lighting and ventilation must be sufficient and thorough, the inner surface of the walls of impervious material to a height of 5 or 6 feet, the floor properly drained and sloping to an opening leading to a properly trapped gully outside; for water, a properly covered tank, periodically cleansed, and of sufficient capacity, must be provided, the overflow discharging into the open; the upper parts of the buildings must be cleansed and lime washed, the lower parts of the walls, fixtures, and floors must be cleansed, and the milk utensils scalded or steamed as frequently as may be necessary to keep them cleanly. In *milk shops* it should be noted that the fixtures are kept in clean condition, that the milk utensils are thoroughly cleansed with boiling water or steam as frequently as may be necessary, and that the water supply is pure. To prevent infection or contamination it should be seen that immediate notice is given of infection amongst the employés or their families. In case of infection, all milk and utensils should be immediately removed from the infected building and thoroughly cleansed, and not replaced until the building itself has been thoroughly disinfected and cleansed. Offensive effluvia should be guarded against by providing that no milk or utensils are kept in any place where they are likely to arise.

Offensive trades and nuisances are dealt with in other lectures, therefore I will conclude with a few words as to equipment. It is useful to carry official visiting cards, and also a small official certificate of appointment and power of entry bearing the seal of the authority, although it may be rarely

JOHN F. J. SYKES,

required; also a few forms for taking verbal complaints when on duty, upon which should be entered the date, the name and address of the complainant, the subject and locality of the complaint, and your own signature. These can be entered in the complaint book at the office subsequently, and be careful to preserve these forms, as well as all letters of complaint, to defend yourself against any possible charge of spite or excess of duty. Also forms for enquiring into infectious cases, forms for the inspection of dwelling-houses, for underground dwellings, &c. These, probably, you will find already drawn up for you by the Medical Officer of Health, and the various office books necessary will also be arranged by the Clerk to the particular Authority in conjunction with him; but you will always carry with you a pocket note book, and from it transcribe your daily work into your diary or journal. You will also require certain appliances. For testing drains: odour tests, in bottles or tubes; smoke tests, cases or a machine; exploratory tests, tools and labourers for opening up; elastic plugs for the hy-draulic or water test; and a level for gradients. For measurement : a foot rule, a long tape measure (one chain or 66 feet), measuring rods (5 or 6 feet laths, marked to feet and inches). For smoke, a diagram of numbered shades. For meat and other food, perhaps a lens. For sampling, bottles, tins, &c., a special note book, and a bag. For disinfection, vaseline for metal surfaces, gummed paper for chinks, brown paper for fire-places, pans for sulphur or bleaching powder. The Authority to be properly equipped must provide certain accommodation, an infectious hospital, an ambulance, disinfecting vans, a disinfecting chamber and destructor furnace, and a temporary shelter; also an infections and a general mortuary, a postmortem room, and a Coroner's court.

Fully equipped in knowledge and appliances, it remains with you to perform your duties to the Public, the Authority, and the Medical Officer, faithfully and discreetly, combining the snaviter in modo with the fortiter in re.

REPORT OF A SPECIAL COMMITTEE OF THE INSTITUTE

237

On the Quantity of Water Required to Flush a Water-Closet, and on the Regulations Restricting the amount to Two Gallons.

Adopted by the Council, Nov. 1st, 1893.

YOUR Committee have to report, with reference to the question of the regulations under the Metropolis Water Act, 1871, restricting the quantity of water discharged from flushing cisterns for closets, that they have had before them, and considered in their bearing on the point, the following papers :-

- 1. The Metropolis Water Act, 1871.
- 2. The Report of the Commission appointed by the Board of Trade in 1872, and the evidence given before that Commission.
- 3. The Regulations made August, 1872, by the Board of Trade, under the Metropolis Water Act, 1871, which were based on this Report.
- 4. The Regulations in force in other large towns.
- 5. The correspondence on the subject from the Vestries of St. Giles, Islington, Paddington, Shoreditch, Marylebone, and St. Saviour's, Southwark.
- 6. The Correspondence from the seven associated Water Companies and from the Kent Waterworks.

The Committee have also attended at Deptford and at the New River Head, and witnessed demonstrations given by the Kent Waterworks Company and by the seven associated Water Companies. The Committee have further arranged and carried out a series of over 800 experiments, specially directed to the question under consideration.

In order to come to a reliable conclusion, it is, of course, essential, as pointed out in the communication from the Water Companies, to attend to the following matters :

- (a). The suitability of the flushing-cistern and watercloset on which observations are made.
- (b). The proper arrangement of the two, with regard to flush-pipe and connections.

These matters were carefully observed in the experiments made by the Committee.

The points that have to be considered with regard to the efficacy of a certain amount of flushing-water are :—

First.—The effect of the flush in removing the matters deposited in the closet basin, from such basin and the trap connected with it.

Second.—The effect of the flush in clearing the drain.

Third.—The effect of the flush in clearing the disconnecting trap.

Description of The special experiments for this purpose, alluded to above, experiments, were arranged as follows (see also Sketch plan) :---

At the head of each drain was fitted a simple short hopper basin of a good type, with an "S" trap having a 2-inch seal, leading with a bend into the drain, the top of the closet basin being 2 ft. 3 in. above the drain. A good Siphon Waste Preventer, discharging two gallons in 5° seconds and three gallons in 7 seconds, was placed 4 ft. 3 in. above the closet basin, and connected to the basin with a 14 in. flush-pipe, care being taken that there should be a clear waterway of this diameter from the cistern to the basin; at the lower end of each drain a disconnecting trap was fixed-two different forms of trap in ordinary use were employed at each gradient. Six hundred experiments were made in this series. Tables A and B and Diagrams A and B show the results of these experiments, first with a two-gallon flush, secondly with a two-anda-half-gallon flush, and thirdly with a three-gallon flush, the quantity of water in each case being carefully measured.

A further series of drains was laid 26 ft. long, partly pipes, and partly open channels, of the following sizes and gradients:----

4 in. 1 in 40 | 6 in. 1 in 40

The same closet and waste preventer were used, and the experiments were conducted, as in the longer drains, with two different forms of trap, 240 experiments being tried.

From this description it will be observed that these experi-

WATER-CLOSET FLUSHING,

ments have been conducted under certain conditions only, with respect to water-closet, flush pipe, application of flush, and gradient of drain. Time has not sufficed to extend the experiments beyond the scope so far adopted, but the Committee think that further experiments on a more extended-scale, would be of service in elucidating the entire question.

The method of conducting the experiments was to place in Method the basin three lumps of artificial excreta (a mixture of soft soap, ^{adopted} cocoa fibre, and clay) and five pieces of paper (newspaper). The contents of the flushing-cistern were then discharged, noting in each case how much material was left in the closet trap, how much in the drain, how much in the disconnecting trap, and how much passed through. All the materials were removed before the next experiment.

With reference to the materials used in the experiments, it should be observed that they would be more easily flushed out than actual healthy excretal matter.

The results of the experiments are as follows :— Dealing jirst with the closet trap, it will be seen from the closet Trap. tables and diagrams that when a large number of experiments is tried (as in the present case, where the average is taken over the whole of the experiments), a two-gallon flush does not always clear the material from the trap, even of a good type of short hopper closet, which clears more easily than any other form of closet. With a two-gallon flush the average amount retained is 5 per cent., and with a three-gallon flush the trap is practically cleared, the retention being only 1 per cent.

Dealing next with the drain and disconnecting trap, the experiments show little difference between the 4 in. and 6 in. drain and trap, so they may be considered together.

In the case of a drain 50 ft. long, which is an ordinary length when the drainage from the back of the house is taken to a disconnecting trap in front of the premises, and at a gradient of 1 in 40 (3 in. in 10 ft.), a steeper gradient than is commonly used in practice, it will be seen from the Tables B and C and Diagrams B and C,

1. That as regards the drain with a two-gallon flush the Drain. retention is 21 per cent., and with a three-gallon flush it is 3 per cent.

2. That as regards the disconnecting trap with a two-gallon Disconnecting flush the retention is 36 per cent., and with a three-gallon flush ^{Trap.} 26 per cent.

In the case of a drain 26 ft. long, which is a common length

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of a branch drain from a closet, and at the same gradient as before, 1 in 40, it will be seen from Tables C and D and Diagrams C and D.

1. That as regards the drain with a two-gallon flush the retention is 3 per cent., and with a three-gallon flush the drain is practically cleared, the retention being only 1 per cent.

Trap.

Drain.

Disconnecting 2. That as regards the disconnecting trap with a two-gallon flush the retention is 26 per cent., with a three-gallon flush 19 per cent.

> In drawing conclusions from the results obtained in these experiments it is important to bear in mind that the light flocculent floating matter containing mucus, which is characteristic of the diarrhœal evacuations occurring in typhoid fever and other infectious diseases, is more difficult to remove from closet pans by flushing than ordinary healthy evacuations, obviously therefore the provision of flushing water ought to be liberal as this will have a direct bearing on the prevention of the spread of diseases in which the infection is found in the evacuations.

THE CONCLUSIONS ARRIVED AT BY THE COMMITTEE ARE AS FOLLOWS :---

Regulations Metropolis.

I. With regard to the regulations made in 1872, it appears from the report of the proceedings before the Commissioners that no evidence at all was given as to the amount of water the waste preventers for closets should discharge in order to fulfil sanitary requirements, the main object in making the regulation about water-closet cisterns being to secure the abolition of the "Stool Cock," which was found to be very wasteful and objectionable. What actually took place was that the Water Companies proposed one-and-a-half gallons, the Metropolitan Board of Works and the City Corporation asked for two gallons, and this latter quantity was readily acceded to by the Water Companies. It should be borne in mind also that sanitary drainage was at that time scarcely understood, and that there was little or no experience as to the amount of flush necessary in order to meet sanitary requirements.

II. With regard to the regulations in other towns, although

in the majority of cases the amount of the flush is limited to two

gallons as in London, in several this limit of two gallons is exceeded. In Edinburgh the limit is three gallons, and in Carlisle the amount is unlimited, but must not be less than two gallons. This latter case is important as being one in which a minimum

Regulations in other towns.

is stated.

DIAGR ILLUSTRAT 6 inch drain Gradient of Drain Gr I in 30 h Close មី 5 9 33 53 2 1 20 77 0 20

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ards the drain with a two-gallon flush the cent., and with a three-gallon flush the drain red, the retention being only 1 per cent. ards the disconnecting trap with a two-gallon n is 26 per cent., with a three-gallon flush 19

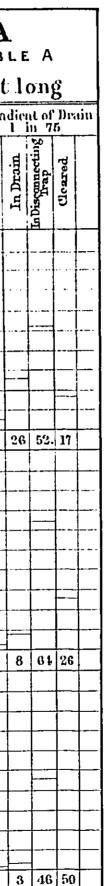
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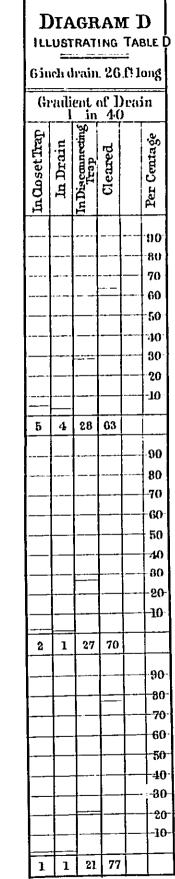
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DIAGRAM C ILLUSTRATING TABLE C 4 inch denin - 26 ft long Per Centage In Closet Trap In Closet Trap In Drain Cleared Cleared Cleared -Amount of Flush Water 80 80 70 60 2 50 40 Gallons -30 - 20 -10-5 1 24 70 . 90 -80 -70 -60-2½ -50 Gallons -40 -30 -20 -10 2 0 24 74 90 -80--70 -60 3 Gallons -60 40 -30-

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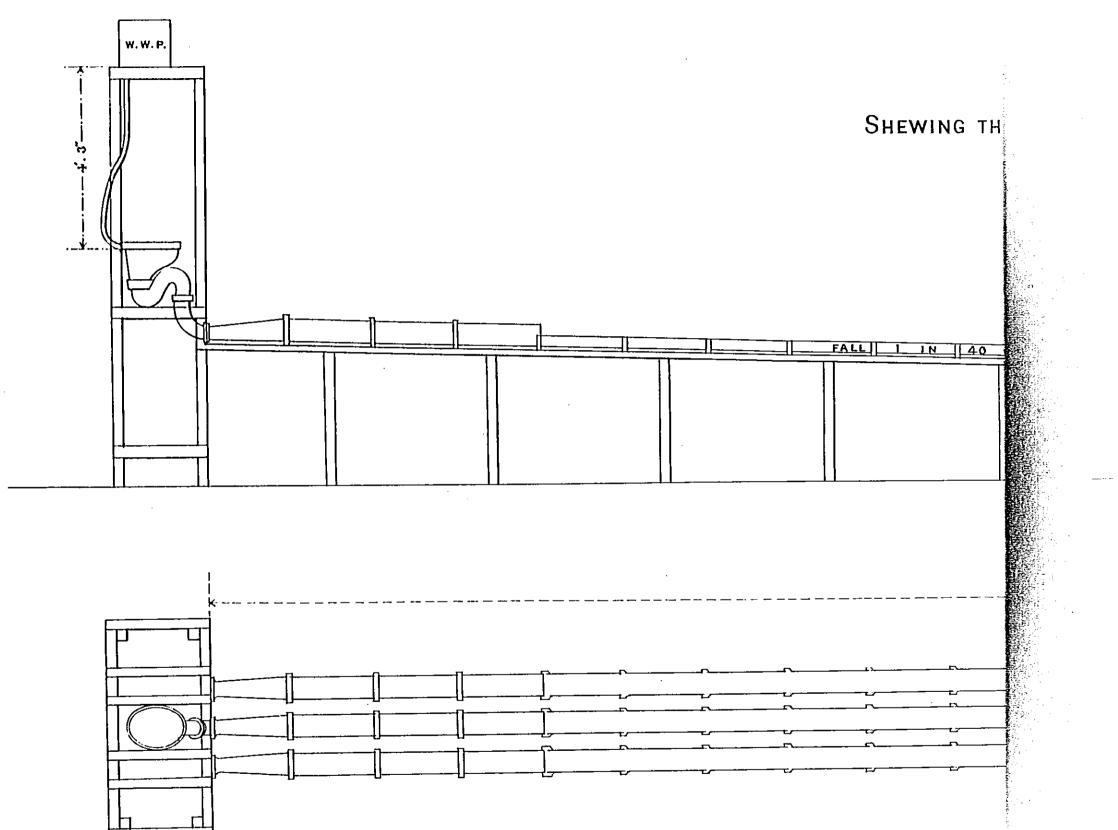
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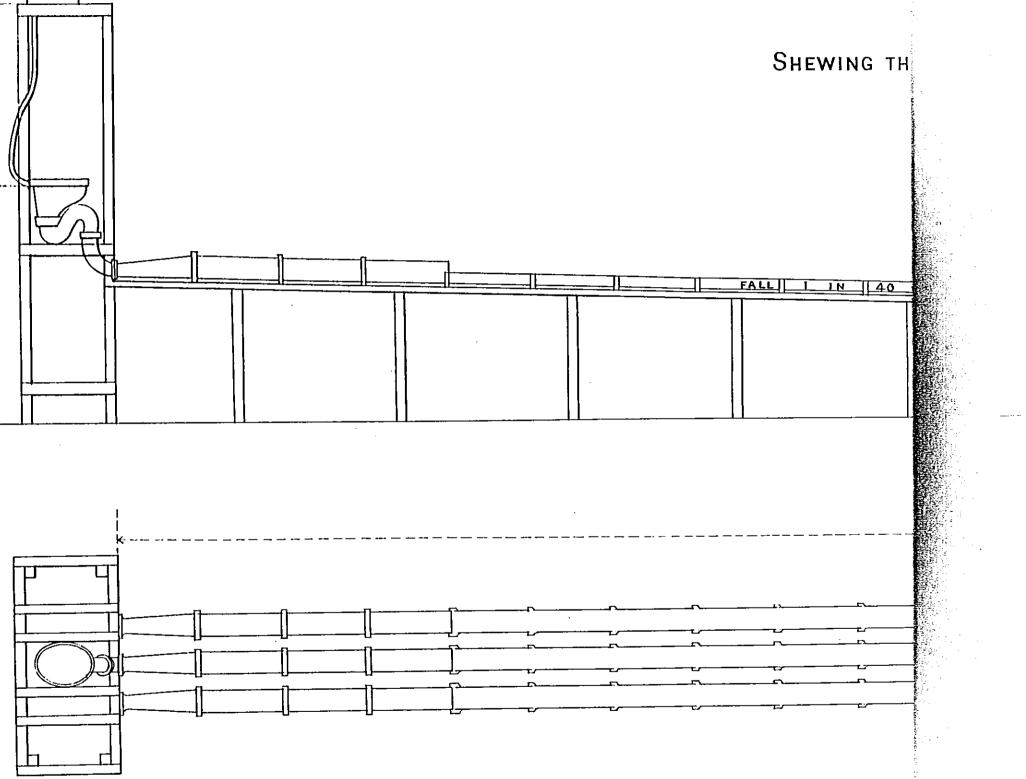
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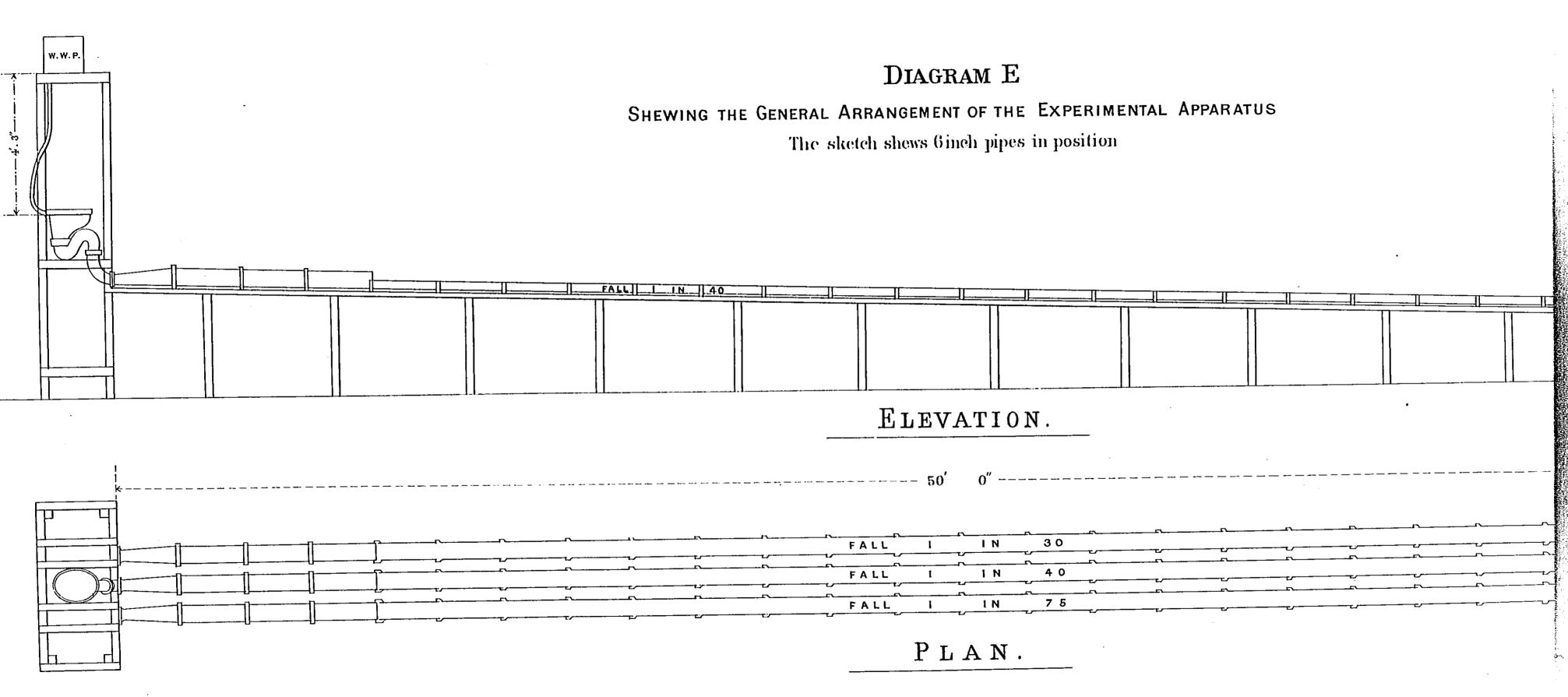
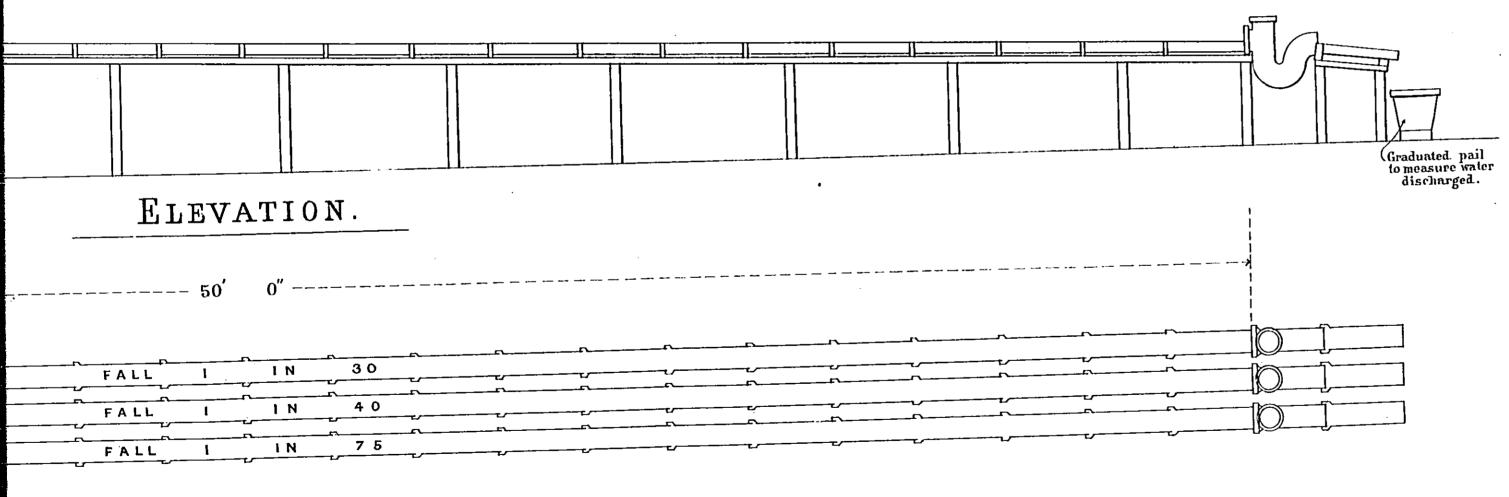


DIAGRAM E

NERAL ARRANGEMENT OF THE EXPERIMENTAL APPARATUS

The sketch shews 6 inch pipes in position



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III. As the Council is aware the thirteen Exhibitions which have been held by the Institute during the past sixteen years have given this Committee in their capacity as judges exceptional opportunities of forming an opinion upon Flushing Cisterns and Closets, inasmuch as nearly every variety of apparatus has come under their notice, and has been subjected to a uniform system of tests. The opinion they have formed is that the limit of the quantity of flushing water to two gallons is very undesirable for any kind of closet, and altogether prevents the use of a number of excellent forms of valveless closet, which are in accordance with the By-laws made by the London County Council under the Public Health (London) Act, 1891.

IV. The Committee are of opinion that on sanitary grounds it is essential that a minimum quantity of flushing water should be specified, as the regulations at present in force, which specify a maximum only, would allow the fixing of cisterns holding much less than two gallons.

V. They are also of opinion that it is desirable, in order to prevent waste of water, that a maximum should also be specified.

VI. With regard to the quantity, the Committee are of opinion that two gallons is not sufficient for a minimum, and certainly not for a maximum. It is therefore desirable that the regulations should be altered.

VII. The Committee are of opinion, both from long practical experience and after careful consideration of the results of the experiments described in this Report, that the minimum quantity of flushing water should be fixed at three gallons.

VIII. The Committee are of opinion that the maximum should not be less than three-and-a-half gallons.

IX. It is important for practical reasons that the words "capable of discharging," which occur in the present regulation, should be altered, and they would suggest that Clause 21 of the Regulations under the Metropolis Water Act, 1871, should be altered to read-

> "So constructed, as to discharge not less than three, nor more than three-and-a-half gallons of water at each flush."

> > ERNEST TURNER, Chairman of the Committee.

E. WHITE WALLIS, Secretary. Oct. 30th, 1893.

TABLE A .- Showing Results of 360 Experiments with 4-inch Drain Pipes and Channels. Drain 50 ft. long.

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TABLE B.—Showing Result of 240 Experiments with 6-inch Drain Pipes and Channels. Drain 50 ft. long.

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3 "	1	0	20	79	1	4	27	68

Gradient of Drain, 1 in 40. Percentage of Total Materials. Retained. Flush Water. In Closed In Drain. In Disconnect- ing Trap. Cleared. 2 0 24 74 2 0 24 74 3 1 0 16 83	BLE C.—Shou Drain Pi	ving Result				
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24 74 34 74 35 1 0 16 83 CABLE D. —Showing Result of 120 Experiments with 6-inch Drain Pipes and Channels. Drain 26 ft. long.		In Closet Trap.	In Drain.	In Disconnect- ing Trap.	Cleared.	
Image: Image:	łallons	5	1	24	70	
CABLE D.—Showing Result of 120 Experiments with 6-inch Drain Pipes and Channels. Drain 26 ft. long.	,,	2	0	24	74	
CABLE D.—Showing Result of 120 Experiments with 6-inch Drain Pipes and Channels. Drain 26 ft. long.		1	0	16	83	
			of 190 W	Tringuingante a	'd e i 1	
Gradient of Drain, 1 in 49. Percentage of Total Materials.			unnels. Di	rain 26 ft. lor		
Amount of Fluch Mater	Drain Pi		Gradient of	vain 26 ft. lor Drain, 1 in 49.		
In Closet. Trap. In Drain. In Disconnect- ing Trap.	Drain Pi		Gradient of Percentage of	vain 26 ft. lor Drain, 1 in 49.		
Gallons 5 4 28 63		pes and Cha	Gradient of Percentage of Retained.	Pain 26 ft. lon Drain, 1 in 40. Total Materials.	ıg.	
$\frac{1}{2}$,,	Drain Pi Amount ^{of} Flush Water.	pes and Cha	Gradient of Percentage of Retained. In Drain.	Drain 26 ft. lor Drain, 1 in 40. Total Materials.	lg. Cleared.	
, 1 1 21 77	Drain Pi Amount of Flush Water.	pes and Cha	Gradient of Percentage of Retained. In Drain. 4	Drain 26 ft. lon Drain, 1 in 40. Total Materials.	ng. Cleared. 63	

FABLE CShou		oset flushi of 120 E		,243 vith 4-inch		
Drain Pi	pes and Cha	nnels. Dr	ain 26 ft. lor	ng.		
		Gradient of	Drain, 1 in 40.			
Amount		Percentage of	Total Materials.			
of Flush Water.	<u> </u>	Retained.	<u>_</u>	Cleared.		1.1.4
<u></u>	In Cloret Trap.	In Drain.	In Disconnect- ing Trap.			
2 Gallons	5	1	24	70		
$\frac{21}{2}$,	2	0	24	74		
			10			
.,	1	0	16	83		
CABLE DShou	niny Result	of 120 E unnels. Dr	vperiments v	vith 6-inch		
Глвіе D.—Shou Drain Pij	niny Result	of 120 E unnels. Dr Gradient of 1	vperiments v vain 26 ft. lor Drain, 1 in 49.	vith 6-inch		
EABLE D.—Shou Drain Pij	niny Result	of 120 E unnels. Dr Gradient of Percentage of 7	vperiments v	vith 6-inch		
CABLE DShou	niny Result	of 120 E unnels. Dr Gradient of 1	vperiments v vain 26 ft. lor Drain, 1 in 49.	vith 6-inch		
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CABLE D.—Shou Drain Pij Amount of Flush Water.	ping Result pes and Cha 	i of 120 E unnels. Dr Gradient of Percentage of T Retained. In Drain. 4	xperiments a vain 26 ft. los Drain, 1 in 49. Total Materials.	vith 6-inch ng. Cleared.		

EXPLANATORY NOTE.

The desirability of altering the Regulations made under the Metropolis Water Act, 1871, so as to allow a larger quantity than two gallons of water to be used for flushing water-closets, was brought before the Local Government Board by several Metropolitan Sanitary Authorities, from Nov. 1892 to May 1893, and the matter was referred by the Local Government Board to the London County Council. The County Council applied to The Sanitary Institute for an opinion upon the question. before replying to the Local Government Board, and as the proposition was of considerable sanitary importance, the Council of the Institute thought it desirable to carry out some special' experiments on the subject and record the results for the general information of those interested in the question. The report containing these records is given in the preceding pages, and a copy was forwarded to the London County Council. After receiving this report and making some further enquiries, the County Council in December last sent in an expression of opinion to the Local Government Board that the Regulations made under the Metropolis Water Act, 1871, should be altered, and that every water-closet flush cistern should be so constructed as to be capable of discharging three gallons of water at each flush. This recommendation was referred back to the County Council by the Local Government Board as not being within the purport of the Regulations referred to, which have for their object the prevention of waste, misuse or contamination of water. The County Council have therefore slightly modified the wording, and have agreed on the recommendation of their Public Health Committee, to make application to the Water Companies to amend the Regulations in the direction required.

THE SANITARY INSTITUTE. FOUNDED 1876. INCORPORATED 1888. PARKES MUSEUM, 74a, MARGARET STREET, LONDON, W.

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

BOARD OF EXAMINERS. Chairman.

HENRY LAW, M.INST.C.E.

- A. WYNTER BLYTH, M.R.C.S., BARRIS- | LOUIS PARKES, M.D., D.P.H., MEDICAL TER-AT-LAW, MEDICAL OFFICER OF HEALTH, ST. MARYLEBONE. H. PERCY BOULNOIS, M.INST.C.E., CITY ENGINEER, LIVEBPOOL.
- PROF. W. II. CORFIELD, M.A., M. D. OXON, F. R. C. P., MEDICAL OFFICER OF HEALTH, ST. GEORGE'S, HANOVER SQUARE, W.
- T. DE COURCY MEADE, M.INST.C.E., SURVEYOR TO HORNSEY LOCAL BOARD.
- ARTHUR NEWSHOLME, M.D., M.R.C.S., L.S.A., D.P.H., MEDICAL OFFICER OF HEALTH, BRIGHTON.

PROF. H. ROBINSON, M.INST.C.E. II. SAXON SNELL, F.R.I.B.A. J. F. J. SYKES, D.SC., M.D., MEDICAL OFFICER HEALTH, ST. PANCRAS. ERNEST TURNER, F.R.I.B.A. BENJAMIN ARTHUR WHITELEGGE M.D., B.SC., D.P.H., MEDICAL OFFI-CER HEALTH, WEST RIDING COUNTY COUNCIL, R. W. PEREGRINE BIRCH, M.INST.C.E.

THE 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 $108^{(2)}$ (d) of that Act.

Up to December 31st, 1893, 89 Examinations had been held-33 for Local Surveyors, and 56 for Inspectors of Nuisances. 2579 Candidates had been examined, 244 as Local Surveyors, and 2335 as Inspectors of Nuisances; of these 1498 passed the Examinations and received Certificates, 118 as Local Surveyors, and 1380 as Inspectors.

In order to make the Examinations for Inspectors more accessible to

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Registrar. G. J. SYMONS, F.R.S.

OFFICER OF HEALTH, CHELSEA. GEORGE REID, M.D., D.P.H., MEDICAL OFFICER HEALTH, STAFFORDSHIRE COUNTY COUNCIL.



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. On the second day the Examination for each class is vivá roce, 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. Ile 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 for the Inspectors' Examination 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. 1s. 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.

Foi	r Surveyors— London—Frid	ay an	d Sa	aturday, Jun	; for 1894 are as follows : e 1st and 2nd.•	
LO.	r Inspectors o	กันก่าว	anc		Namah 48th and 17th	
	Nottingnam-	-Frida	y ai	na Saturaay,	March 16th and 17th.	
	London	**		,,	Appli oth and 7th	
	Durham				April 27th and 28th.	
		**		53	May 4th & 5th.	
	Bristol			91	may the count	
	Hull			**	May 25th and 26th.	
	Plymouth			=	June 22nd and 23rd.	
	riymouth			99	July 6th and 7th.	
	Norwich	,,		23	July our and rem	
	London	12		**	December 7th and 8th.	
	Cardiff				December 14th and 15th.	
		**		• •	December 21st and 22nd.	
	Liverpool	**		"	December 21st and 22nd	
The	forms to be	filled	មោ	before the	Examination, by Candidates a	n

nd by those The forms to b persons recommending them, will be supplied on application to the Secretary.

* The Examination for Local Surveyors will be discontinued after this date.

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
- Authorities, so far as they relate to the duties of Local Surveyors; also, of the Model By-Laws issued by the Local Government Board. 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 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 treat-ment and disposal of sewage.
- (3.) 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.) ILIGHWAYS 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 Nuisances 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. (2.) He shall attend all 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 re-spect 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 domestic purposes. (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,

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

Nuisance. factories.

Syllabus of Subjects for Examination.

A knowledge of what constitutes a

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

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.

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four, 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 certifi-cate 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.

(9.) He shall give immediate notice to the Medical " Officer of Health of the occurrence within the dis-trict of any contagious, infectious, or epidemic disease; and whenever it appears to him that the intervention of such officer is appears to min that the intervention 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 con-tinuous 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.

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

The sale of Food and Drugs' Act.

The Regulations affecting persons suffering or recovering from Infectious diseases, and some knowledge of such diseases-The principles of Ventilation, and simple methods of Venti-lating Rooms-Measurement of Cuble 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.

249Particulars 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. And if not already in possession of the Certificate of The Sanitary Institute, must obtain such Certificate within twelve months of appointment, PADDINGTON PARISH. LIVERPOOL. . Candidates must hold the Certificate of The Sanitary Institute of Great Britain. . . . METROPOLITAN-(30). St. Luke's, 1887-91-93. | Lambeth, 1890. St. Margaret, Westmin-ster, 1892-93. Battersea, 1885-9--91-3. | Limehouse, 1890. Marylebone, 1891. St. Mary, Islington-1892 Bethnal Green, 1889-90-93. Newington, 1891-93. --93. St. Olave's, 1889. Paddington, 1884-89. Poplar, 1890-93. St. Pancras, 1885-87-Rotherhithe, 1893. Greenwich, 1890-91-92. St. George's, Hanover Hackney, 1891-93. Square, 1891. 90-92. St. Saviour's, 1889. Hackney, 1891–93. Square, 1891. Hammersmith, 1891–2–3. St. George's-in-the-East, Hampstead, 1891–92. 1892. [1891. Wandsworth (4), 1888-89-91-92-93. Kensington, 1891-92-93. St. James's, Westminster, Whitechapel, 1891. PROVINCIAL-(102). Midhurst, 1892. [1887. Milton-by-Sittingbourne, Nantyglo, 1891. Cleethorpes, 1893. Coventry, 1891. Croydon, 1891. Nelson, 1892. Darwen, 1891. Dewsbury, 1886-90. Newcastle-on-Tyne, 1891. Newmarket, 1887-88-Dorchester, 1892. 90-92-93. Eastbourne, 1889. Northampton, 1892. Ely, 1888. Norwich, 1892-93. Exeter, 1889. Oswestry, 1887. Festiniog, 1893. Foleshill, 1891. Plymouth, 1892. Pontypool, 1892. Grimsby, 1893. Hailsham, 1886—91. Pontypridd, 1890-92. Poole, 1893. Halifax, 1892. Hanley, 1891—92. Portsmouth, 1890. Pottersbury, 1893. Hartlepool, 1890. Rhyl, 1890. Hastings, 1892. Risbridge, 1893. Hebburn, 1892. Salford, 1891-92. Idle, 1892. Kingston - upon - Hull, 1884—90—90. Scarborough, 1888. Settle, 1893. Sheffield, 1890-91-93. Leeds, 1889. Southampton, 1890-91, Liverpool, 1886–91. Lytham, 1887–92. Maidstone, 1889–89. Staffordshire County Council, 1892. Manchester, 1890-91-92-93 Stockport, 1891-92. Stockton, 1887-90-91. Margate, 1888-90. Stretford, 1892. Margam, 1893. [Continued on next page,

City of London, 1891. Bermondsey, 1893. Camberwell, 1891-92. Chelsea, 1893. Fulham, 1890-90.

Aberavon, 1893. Alton, 1893. Bangor, 1893. Barnet, 1890. Bath, 1890. Battle, 1890. Bedwellty, 1891-92. Bexhill, 1892. Bexley, 1893. Birkenhead, 1891. Birmingham, 1892. Blackburn, 1892. Blackpool, 1889. Blean, 1890. Bolton, 1893. Boutle, 1893. Bournemouth, 1891-92. Bradfield, 1891. Brierley IIill, 1890-91. Bristol, 1884-86. Bromley, Kent, 1891—91. Cardiff, 1890—91—93. Carlisle, 1890-93. Carnarvon, 1891. Chester-le-Street, 1893. ·Chesterfield, 1892. Chiswick, 1891. Clay Lane 1892.



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LOCAL BOARDS REQUIRING CERTIFICATES-Continued.

 Stroud, 1892—93.
 Twickenham, 1837.

 Sunderland, 1885—92.
 Wakefield, 1891—93.

 Swansea, 1893.
 Ware, 1891.

 Tendring, 1891.
 Watford, 1837—93.

 Thakeham, 1890—90—92.
 West Bromwich, 1892.

 Tonbridge, 1893.
 West Ham, 1891–93.

 Tunbridge Wells, 1893.
 Wigan, 1891.

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Willesden, 1891. Winslow, 1893. Winbledon, 1890. Winslow, 1893. Wood Green, 1892. Worthing, 1890-91-03. Yorkshire, W.R., 1891.

COLONIAL-(1).-Cape Colony, 1891.

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

	Number Examined.			('ertificated.				
Year.	Surveyor	Inspector	Total.	Number.			Per cent, of Total.	
				Surveyor	Inspector	Total.	Surveyor.	Inspector
1877	3	5	8	2	3	5	67	60
1878	11	10	21	3	10	13	27	100
1879	4	6	10	2	-1	6	50	67
1880	10	3	13	6	2	8	60	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
1886	19	105	124	9	86	9 5	47	82
1887	17	122	139	7	75	82	41	61
1888	25	124	149	8	77	85	32	62
1 8 89	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
1893	28	510	538	20	240	260	71	47
	- 244	2335	2579	118	1380	1498	48	<i>5</i> 9

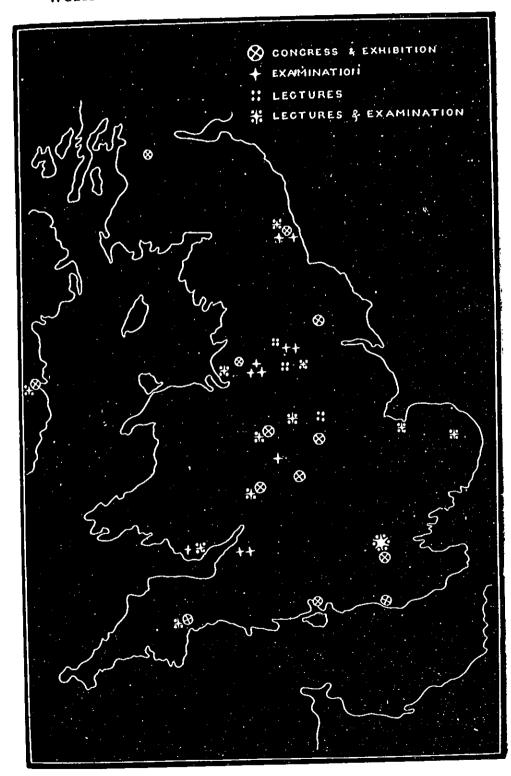
	Table ce	and Diag	jram shev ch year.	wing the n Relating	umber of Candidates examined and to Inspectors' Examination only.		
1877 5 3 60 1878 10 10 100 1890 3 2 67 1881 7 6 80 1883 13 11 85 1884 30 27 75 1884 30 27 75 1884 105 86 8.2 1885 144 33 75 1884 105 86 8.2 1887 122 75 61 1889 105 80 8.2 1890 307 111 40 1890 305 64 1890 305 64 1890 315 61 1802 513 315 61 1802 513 315 61 300 17 1380 50 60 60 60 60 610 60 60 60 60 60 60 60 60 <	Year.	Number Examined.	Number Certificated.	Per cent. of total.	88.89 8 91 92 93 94 8		
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18-10 3 2 67 6 60 18-10 11 87 13 11 87 18-32 15 13 11 85 13 11 85 18-33 13 11 85 13 11 85 13 11 85 18-33 105 86 8.2 900 90	-						
1831 7 6 89 1832 15 13 87 1833 13 11 86 1843 30 27 76 1854 30 27 76 1855 14 33 76 1860 1005 86 82 1871 122 75 67 1893 124 77 62 1890 307 161 40 1800 307 161 40 1800 307 161 40 1801 30.0 213 65 1802 510 211 47 2905 1380 69 60 60 200 1380 69 61 200 40 40 70 70 70 60 60 60 60 60 60 60 60 60 60 60 60 60 60 60 60 60			1				
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shaded, and the number who have obtained certificates by the lighter person	NOTE.	-The total	number of	Candidate	is shewn by the whole height of the column		
	sh	aded, and t	ho number	who have o	DIRING CERTINERIES by the indirect portion.		

DUBLIN, 1884. 1

List of Towns where Congresses have been held. LEICESTER, 1885. York, 1886. Bol.ton, 1887. Worcester, 1880. Brighton, 1890. LEAMINGTON, 1877. STAFFORD, 1878. CROYDON, 1879. EXETER, 1880. NEWCASTLE-UPON-TYNE, 1882. GLASGOW, 1883. Pontsmouth, 1892, 13 = List of Towns where Examinations have been held. FOR LOCAL SURVEYORS. 1 CARDIFF, 1892. 1 DUBLIN, 1893. 30 LONDON, 1877 to 1893.
1 DERBY, 1892. 33 FOR SANITARY INSPECTORS. 34 LONDON, 1887 to 1893.
3 MANCHESTER, 1889, 1891, 1893.
2 BRISTOL, 1890, 1892.
2 LEEDS, 1890, 1893.
1 BIRMINGHAM, 1891.
3 NEWCASTLE-UPON-TYNE, 1891,
1 STAFFORD, 1891. [1892, 1893.
1 DERBY, 1892. WAKEFIELD, 1892. CARDIFF, 1892, 1893. Norwich, 1892. Liverpool, 1892. Worcester, 1893. Lynn, 1893. 2 1 EXETER, 1893. 1 1 DUBLIN, 1893. **5**6 List of Towns where Courses of Lectures to Sanitary Officers have been given. Worcester, 1892. Lynn, 1893. Exeter, 1993. Dublin, 1893. 16 LONDON, 1885 to 1892. 1 STAFFORD, 1891. DERBY, 1892. WAKEFIELD, 1802. CARDIFF, 1892. KEIGHLEY, 1893. HUDDERSFIELD, 1893. NEWCASTLE-UPON-TYNE, 1892. NORWICH, 1892. NOTTINGHAM, 1894. 1 LIVERPOOL, 1892. 30

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Map showing the various Centres to which the work of the Institute has been extended.



	CANDII	DATES WHO RECEIVED CERTIFICATES IN 1893.
	1893, Dec. 2.	Asher, HARRY, Albert Metal Works, Ti Bath.
	1893, Jan. 28.	ASHFIELD, RALPH, 5, Lansdowne Street, Wo
1893.	1893, Nov. 11.	AUBIN, PERCY A., 29, St. James's Street, St. E Jersey.
	1893, Apr. 15.	AXTELL, ALFRED, 1, Gloucester Road, S.W.
	1893, Dec. 2.	BALFOUR, ALEXANDER, 17A, High Road, Kibu
nahu	<u>1893, Apr. 15.</u>	BALL, ALFRED JOHN, 25, Oriental Street, Eas Dock Road, Poplar, E.
nsby. et, E.C. ol.	1893, Apr. 15.	BARKER, FREDERICK, 5, Lawrence Street, Stoon-Tees.
l, Saltley,	1893, Dec. 2.	BARKER, GEORGE FORSTER, 68, Hillier Road, Worth Common.
lumstead.	1893, Dec. 2.	BARKER, HERBERT, 43, Meeson Rd., West H
's Office,	1893, Apr. 15.	BARRALET, THOS. CHAPMAN, Surveyor and Ins Godstone Rural Sanitary Authority.
id Road,	1893, Apr. 15.	BARRETT, HENRY JAMES, 20, Gowan Avenue, H
	1893, Dec. 2.	BARTON, JAMES HENRY, 14, Young's Road, stone.
use, Cork. Minster,	1893, July 8.	BEDFORD, EDWARD, Chapel Allerton, Leeds.
Ministery	1803, Apr. 15.	BENNETT, EDWARD, 43, Manor Park Road, Hai
Surveyor's	1893, Dec. 2.	BLACKBURN, THOMAS, Borough Engineer's ment, Brighton.
ottenham. ic Works	1893, Apr. 15.	BLAY, ERNEST BERRINGER, 116, Matthias Stoke Newington, N.
	1893, Dec. 2.	BLOWFIELD, ERNEST FREDERICK, 3, Cam Station Road, S.E.
, Redland,	1893, Dec. 2.	BODEN, WALTER JOHN, 133, Finchley Road,
nue, Shep-	1893, Apr. 29.	mersmith.
hitby.	1893, Apr. 15.	BRIDEL, HARRY FREDERICK, 3, Ballast Qua Greenwich, S.E.
load, S.E.	1893, Apr. 15.	BRIDGES, OSWALD ARTHUR, 14, Park Road Isle of Wight.
rd Street,	1893, July 8.	BRIERLEY, SAMUEL, 26, Elford Grove, Ro Road, Leeds.
race, Sea-	1893, Dec. 16.	BROOKE, JOHN, Town Surveyor and In Northwich.
	1893, Jan. 28.	BROWN, WALTER, 148, Green Lane, Small Birmingham.
	1893, Apr. 15.	BROWN, WILLIAM, 36, Clyde Road, Brighton
	1893, Dec. 16.	pool.
one Street,	1893, Dec. 2.	Budden, ALEXANDER, Junr., Mission House Road, Balham.
nent Road,	1893, July 29.	
	1893, Dec. 2.	
addington. ent, Kings-	1893, Apr. 15.	Gosport.
	1893, Apr. 15.	CAMPBELL, COLIN, 10, Edith Road, West Kens

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LIST OF CANDIDATES WHO RECEIVED CERTIFICATES DURING 1

LOCAL SURVEYORS.

1893, June10.	ADAMS, ALBERT EDWARD, Town Hall, Grimsby.
1893, Nov. 30.	ADAMS, HENRY C., 60, Queen Victoria Street, E.C.
1893, Nov. 30.	RALL CHARLES F., 51, Prince Street, Dristol.
1893, June 10.	BASSETT, GILBERT THOMAS, Highfield Road, Saltley
1898, June IV.	Birmingham.
1893, June 10.	BUSBRIDGE, HAROLD, 96, Herbert Road, Plumstead
1893, June 10.	ELFORD, ERNEST JOHN, City Engineer's Office Norwich.
1893, June10.	HADDOCK, HARRY FREDERICK, 9, Eland Road Lavender Hill, S.W.
1893, Nov. 30.	HILL, WILLIAM HENRY, Jun., Audley House, Cork
1893, June 10.	HOGBIN, LEONARD WILLIAM, Surveyor, Minster
μουο, σαποτοι	Ramsgate.
1893, Nov. 30.	KILLICK, WILLIAM HENRY, Borough Surveyor Office, Southampton.
1893, June 10.	LAMBERT, JOSHUA, Local Board Offices, Tottenham
1893, Nov. 30.	LEE, LENNIE HENRY, Supervisor, Public Work
до ю, пот. оо.	Department, Calcutta, India.
1893, Nov. 30.	PERKINS, THOMAS L., 1, West Shrubbery, Redland Bristol.
1893, June 10.	PHELPS, WILLIAM, 32, St. Stephen's Avenue, Shepherd's Bush.
1893, June10.	SCOTT, THOMAS KEAT, Town Surveyor, Whitby.
1893, Nov. 30.	SEWARD, WILLIAM B., 120, Camberwell Road, S.E
1893, June 10.	SPINK, JOSEPH, Formby, Liverpool.
1893, June 24.	TIGHE, MICHAEL J., 8, Upper Sherrard Stree
1000, 0000	Dublin.
1893, Nov. 30.	WILLIS, EDWARD, 124, High Street, Eton.
1893, June10.	WORRALL, ERNEST, 5, Beaconsfield Terrace, See
1000, 500010.	combe, Liverpool.
	· · · · · · · · · · · · · · · · · · ·
	INSPECTORS OF NUISANCES.
1893, Apr. 15.	ALLAN, GEORGE AWBURN, JUNR., 5, Clipstone Stree Gt. Portland Street, W.

Gt. Portland Street, W. 1893, Jan. 28. ANDREW, GEORGE WALTER, 211, Monumer Birmingham. 1893, Dec. 2. ANTHONY, THOMAS, 10, Hormead Road, Pad 1893, Apr. 15. ARMSTRONG JOSEPH, 3, Colveston Crescent land.

1893. 255	
rks, Tiverton,	
et, Worcester. et, St. Helier's,	
S.W. d, Kiburn. eet, East India	
eet, Stockton-	
Road, Wands-	
West Ham, E. and Inspector,	
venue, Fulham. Road, Folke-	
Leeds. ad, Harlesden. neer's Depart-	
atthias Road,	
3, Camberwell	
Road, N.W. Il Road, Ham-	
ast Quay, East	
k Road, Ryde,	
ve, Roundhay	
nd Inspector,	
Small Heath,	
righton. ge Hill, Liver-	
House, Larch	
Scarborough. ect, Swindon. ftesbury Road,	
est Kensington.	

CANDIDATES WHO RECEIVED CERTIFICATES IN 1893. 257ermouth. 10 Road, Poole Canton, Cardiff. ry Park, N. Brighton. Canning Street, A., Wimborne, Hornby Street, ndywood Road, is Road, Shep-Tiverton Road, Terrace, Roath, own Hall, Great reet, Blackburn. ce Store Corps, coe Rd., Merton. 34, St. Julien's load, Plumstead. nheim Terrace, load, Preston. Berry Street, itary Inspector, Street, South-Basuto Road, Vorfolk. sdale Road, St. Rd., Richmond Road, Edgehill, Liverpool. \mathbf{R}

256 CANDIDATES WHO RECEIVED CERTIFICATES IN 1893.
1893, Apr. 15. Cass, Thomas F., 6, Lansdowne Street, Hull. 1893, Dec. 2. CATTERALL, JAMES LAMB. 270, Vauxball Bridge Band Bimbion
Road, Pimlico. 1893, July 29. CAWSEY, THOMAS, 12, Coedpenmaen Road, Ponty- pridd.
1893, May 27. CHALLICE, GEORGE MARKS, 141, Sidwell Street,
1893, Apr. 29. CHESTERFIELD, HENRY JAMES, 1, Balfour Street, Hull.
1893, July 29. CHOULER, R. B., 1, Calthorpe Street, Gray's Inn Road, W.C.
1893, Jan. 28. Copling, HENRY, West Boldon, Co. Durham. 1893, Dec. 2. Collett, H. HENBERT, 77, Myrdle Street, Commer- cial Road, E.
1893, Dec. 2. Collins, ARTHUR WALTER, 172, High St., Peckham, 1893, Dec. 2. Collins, Edwin Richard, 4, Pembroke Villas, Un-
derhill Road, East Dulwich, 1893, Jan. 28. CONWAY, ISAAO HENRY BUGLER, Lillinton, Sher-
borne, Dorset. 1893, Dec. 2. Соок, Joseff, 20, Gowan Avenue, Fulbam. 1893, Dec. 16. Соок, WILLIAM, 7, Duddon Road, Askam-in-Furness.
1893, Apr. 15. Cooke, Charles, 152, St. Thomas Road, Finsbury Park, N.
1893, Apr. 15. COTTRELL, JOHN, Fallowfield, Manchester. 1893, July 29. Cowling, JOHN COOMBE, Penpont, Altarnun, Laun-
ceston. 1893, Dec. 2. Спатнопъ, Joseри, Gordon Street, Garrison Lane, Birmingham.
1893, Apr. 15. CRUTTENDEN, THOMAS FRANK, 9, Tower Road, W., St. Loopards-on-Sea.
1893, Dec. 2. CURD, ALBERT E., 24, David's Rd., Forest Hill, S.E. 1893, Apr. 15. DALRYMPLE, ALEXANDER, 17, Wellington Street,
Ayr, N.B. 1893, Dec. 16. DAVIES, ALBERT JOHN, 158, Severn Road, Cardiff. 1893, July 8. DAVIES, ANNIE M., The Gymnasium, Waterloo,
Liverpool. 1902 July 8 DAVIES THOMAS, 79, Walthall Street, Crewe.
1893, Apr. 15. DAVIS, JOHN EDWARD, 309, King's Road, Cheisea, S. W. 1893, Dec. 2. DEANE, LUCY ANNE EVELYN, 100, Fulham Road,
S.W. 1893, May 27. DILKE, FRANCIS HENRY, 24, City Road, Bristol.
1893, Jan. 23. DUNLOP, ANDREW, Park Farm, Witley, Stourport.
1893, Apr. 15. DUNN, JAMES STEPHEN, BOARd of Words, Poplar, 19. 1893, Dec. 2. EATON, HARBINGTON HOLLOWAY, 64, The Green,
Darlaston. 1893, Dec. 2. ELLETSON, JOHN MALAM, 131, Tachbrook St., S.W. 1893, Apr. 29. ELLIS, WILLIAM BAXTER, 31, Manbey Grove, Strat-
ford, E.

1893, Nov. 11.	ELLWOOD, WILLIAM, Brigham, Cocker
1893, Apr. 15.	EVANS, PERCIVAL BAKER, 16, Ireno
	Park, Fulham.
1893, July 29.	EVANS, SAMUEL, 36, Ryder Street, Ca
1893, Apr. 15.	Few, HERBERT ARTHUR, 19, Highbur
1893, Dec. 2.	FILLIS, EDGAR, 3, Chester Terrace, Br
1893, July 8.	FINDLAY, ALEXANDER BURNS, 97, C. Bridgeton, Glasgow.
1893, Jan. 28.	FLETCHER, WALTER JOHN, F.R.I.B. Dorset.
1893, Dec. 16.	Fowles, Joseph Henry, 13 & 15, J Heywood, Lancashire.
1893, Jan. 28.	FRANKS, EDWIN JAMES (deceased).
1893, Jan. 28.	FURBER, FRANK ARTHUR, 139, 12 Birmingham.
1893, Apr. 15.	GENTRY, HERBERT JOHN, 63, Loftu herd's Bush, W.
1609 May 97	GIBBARD, JOHN RICHARD, 5, Old J
1893, May 27.	Exeter.
1893, July 29.	GLOVER, FRANK, 8, Spring Gardens
1000, 000, 200	Cardiff.
1893, Jan. 28.	GODTREY, BERNARD, Droitwich.
1893, Dec. 2.	GOODERHAM, FRANCIS FREDERICK, TO
	Yarmouth.
1893, Dec. 16.	GRAHAM, JAMES, 53, Sarah Ellen Str
1893, May 27.	GRAY, ARTHUR HERBERT, Ordnanc Woolwich.
1893, Apr. 15.	GREGORY, EBWARD GEORGE, 11, Brise
1893, Apr. 15.	Gregory, FRANK,
1893, Dec. 2.	HALL, JAMES WILLIAM WHARTON,
·	Road, Kilburn,
1893, Dec. 2.	HAMLIN, HOURSTON, 203, Burrage Ro
1893, Apr. 15.	HANNANT, WILLIAM B., 34, Bler St. John's Wood, N.W.
1893, July 8.	- HARMAN JOUN 14 St. George's K
1893, July 8.	HARGREAVES, JOHN EMANUEL, 55, Burnley.
1893, Jan. 28.	HARRISON, EDWARD STANHOPE, Sani Swansea.
1893, July 8.	HARRISON, JOHN BENSON, 110, King port.
1893, Dec. 2.	HATTERSLEY, JESSE EARLAND, 1, Poole Park, Fulham.
1893, Apr. 29.	HAYNES, JOSIAH ERNEST, Watton, N
1893, Apr. 15.	HEAD, ARTHUR PARR, 39, Barns Peter's Park, W.
1893, Dec. 2.	HENLEY, SIDNEY H., 22, Grosvenor Surrey.
1893, Apr. 15.	HEWITT, FRANCIS JOSEPH, 9, Bridge

258 CANDIDATES WHO RECEIVED CERTIFICATES IN 1893.

CANDIDATES WHO RECEIVED CERTIFICATES IN 1893.

200	
1809 1	HIBBERT, THOMAS, New Road, Ware, Herts.
1893, Apr. 15.	Wignissos Fussk, 10, Birmingham Street, Douton,
1893, Dec. 16.	Thore Angener 35, Dale Street, Huddersnew,
1893, July 8.	HOLBOURN, STEPHEN J., 31, George Street, Docks,
1893, July 29.	Condiff
1893, Dec. 2.	Иолькоок, Joux William, 9, Freemantle Place, Stokes Croft, Bristol.
1893, July 29.	Holden, John White, 91, Strathnaum Street, Roath, Cardiff.
1893, Dec. 2.	HOLMES-WALKER, FREDERICK, 13, Sheen Date Villes Riddmond, Surrey,
1893, Apr. 15.	HOOPER, THOMAS HENRY, 61, Wandsworth Road,
10	S.W. Horsfield, Jonathan P., Salford Union Infirmary,
1893, Dec. 16.	Foolog
1602 1000 9	Howes, Enxest, 19, Flint Street, Walworth, S.E.
1893, Dec. 2.	HUTTON, ALBERT EDWARD, 38, Swamp, Queensbury.
1893, July 8.	Huerox Joux, 22, Highgate, Kendal.
1893, Dec. 16.	Treesex Thomas, 288, New Hall Road, Preston-
1893, Jan. 28.	JACKSON, THOMAS HENRY, 1, Badsworth Road, Cam-
1893, Dec. 2.	homeall
1893, May 27.	JARVIS, EDWARD JAMES, 78, Treville Street, Ply-
1000, 111, 111	mouth
1893, July 29.	JENKINS, DAVID, Port Sanitary Offices, Docks, Cardiff.
1893, Apr. 15.	TOPES WILLIAM GEORGE.
	JOHNS, DAVID JAMES, 28, Gelli Road, Tonpentre,
1893, Apr. 15.	South Wales
1893, Dec. 2.	Jounson, Gronge Edward, 1, Kingsley Road, Wil-
1000, Dect	losdon Lane, Kilburn,
1893, July 29.	Toxys Tuomas, Ty Ivor, Melincrythan, Acath.
1893, Apr. 15.	JONES, WILLIAM ROBERT, 49, Bowsfield Road, St. Catherine's Park, Hatcham.
1009 1000 9	
1893, Dec. 2.	atond
1893, Jan. 28.	KEASEY, HENRY, 41, Stirling Road, Edgbaston.
1000, 040, 20,	KENDALL, ALAN, 46, Sefton Street, Southport.
1893, July 8.	
1893, May 27.	Exotor
1009 Apr 15	Kang CLAUDE 24 Prince of Wales Road, Norwich,
1893, Apr. 15.	
1893, July 8.	Urson Green, Nottingham,
1893, Dec. 2.	KNAPPETT, BENJAMIN ALBERT, East View New Road, Weybridge.
1893, Apr. 15.	Terrace. Walmer.
1893, Apr. 15.	LAMBLE, PHILIP THOMAS, 14, Chichester Street, Paddington.
1893, Jan. 28.	- TI TI TI TI IN I ALLA COLLAGO LINIONA

1893, Jan. 28.	LATHAM, ASHTON, 12, Cable Street,
1893, July 8.	LATIMER, GEORGE COLLIN, 56, Salo
	dale, Liverpool.
1893, Jan. 28.	LAWSON, ARCHIBALD, 103, Leinste mines, Dublin.
	LAWSON, ROBERT, The Grove, No.
1893, June 24.	Dublin.
1802 Apr 15	LENEY, ALTRED EDWIN, Fothersby
1893, Apr. 15.	hurst, Kent,
1893, Apr. 15.	LEWIS, JAMES, 17, Heyford Avenue,
1000 1000	Road, S.W.
1893, Apr. 15.	LEWIS, JOHN, 22, Tower Road, Bo
10	month.
1893, Dec. 2.	LILL, GEORGE DAVEY, 167, Brunsy
1805, Dec. 4.	lar, E.
	Jar, 12. Lucia Europh Toux 97 St. Jo
1893, Dec. 2.	LALLIE, EDWARD JOHN, 97, St. Jo race, N.W.
1.000 11. 10	LAVESEY, HENRY, Primrose Villa, F
1893, Dec. 16.	LAOYD, THOMAS, 16, New Street, St
1893, Jan. 28.	Thorn, Inowns, 10, new briter, 6
1893, Apr. 15.	Lockwood, ARTHUR CHARLES, 49
	Crown Hill, Norwood.
1893, Apr. 15.	MANNING, FREDERICK HENRY, 12
	Brighton.
1893, Dec. 16.	MARKS, CHARLES WILLIAM, 27, SE Eccles.
1893, Dec. 2.	MATCHETT, WILLIAM EDWARD,
1800, Dec. 2.	Heathfield Road, Bromley, Kent.
1893, Jan. 28.	MATTHEWS, HENRY, Grimley, Wor
1893, Dec. 2.	MAY, WILLIAM JOHN, 29, Sandrin
1000, 1000 - 21	ston.
1000 1 0	MILLARD, WILLIAM, 1, Holmes
1893, Dec. 2.	TO DATAMA MINIAN, IN INCOMPEND
	Road, S.W.
1893, July 29.	MILLS, ARTHUR EDWARD, 2, Mark
-	Somerset.
1893, Dec. 2.	MILTON, JOHN, 47, Mount Row,
1000, 2001	W.
1893, Apr. 15.	MITCHENER, WILLIAM EDWARD,
1000, Apr. 10.	Street, Brighton.
1000 1) 0	MOFFATT, SIDNEY PAGET, Holy
1893, Dec. 2.	MOFFATT, SIDNET TRUE, 100
	Blackburn.
1893, Nov. 11.	Mole, Jons Henley, East Boldon,
	Tyne.
1893, July 29.	MOORE, CHARLES, Guildhall, Wrex
1893, July 29.	Morgan, Evan Thomas, I, Liv
1000,000 400	Graigwen Road, Pontypridd.
1009 1 15	Morgan Formes 62 Camden Stree
1893, Apr. 15.	
1893, Dec. 2.	MUNCKTON, UHARMES, WINDOING
1893, Nov. 11.	MUSE, JOHN GILL, 27, NORTH Har
	marnock.
1893, Apr. 15.	OLLIS, JOHN JAMES, Hill Farm, Sa
,r.,r.	•

259Southport. op Street, Kirker Road, Rathorthbrook Road, House, Hawk-, South Lambeth oscombe, Bournewick Road, Popohn's Wood Terfulwood, Preston. Stourport. J, Queen's Road, 2, Cobden Road, haftesbury Street, Aberdeen Villa, rcester. ngham Road, Dal-Place, Fulham ket Street, Wells, Berkeley Square, 27, New York Trinity Vicarage, Newcastle-uponxham. wynmadoc Street, eet, Camden Town. Minster, Dorset. milton Street, Kilaltford, Bristol.

260 CANDIDATES WHO RECEIVED CERTIFICATES IN 1893.

CANDIDATES WHO RECEIVED CERTIFICATES IN 1893.

1893, Nov. 11.	ORKNEY, WILLIAM CARNEGI, Monerieffe, Perth.
1893, Apr. 15.	OWEN, WILLIAM, Post Office, Glen Garth, Anglesea.
1893, Jan. 28.	PACY, WILLIAM, Worcester.
1893, May 27.	PALMER, ISAAC FAIRLEY, Ewell Road, Surbiton Hill.
1893, Apr. 15.	PARKER, WILLIAM ROE, 25, Trevillo Street, Ply-
1000, 1101, 101	mouth.
1893, Dec. 2.	PARSLOW, CHARLES JAMES, 39, Linver Rd., Fulham.
1893, Apr. 15.	PATERSON, ARTHUR WILLIAM, Station Road, New
1000, 11,111.00	Barnet.
1893, Jan. 28.	PEAKE, WILLIAM ALTREE, Assistant-Surveyor, Can-
1000, 000 = 51	nock, Staffordshire.
1893, May 27.	PEARSE, RICHARD BLAKE, 30, Portland Street,
1000, 100, 200	Exeter.
1893, June 24.	PEMBERTON, JOSEPH J., 23a, Charlemont Street,
	Dublin.
1893, May 27.	PENGELLY, JOHN ISAAC, 15, St. James's Road,
,	Exeter.
1893, Dec. 2.	PERRIN, WILLIAM JAMES, 12, Collier Street, Pen-
- ,	tonville.
1893, July 8.	PEXTON, EDWARD, Shop Lane, Kirkheaton.
1893, Apr. 15.	PIERCY, EDMUND ERNEST, 18, Fentiman Road, Clap-
•	ham.
1893, Apr. 15.	PIKE, WILLIAM HENRY, Ordnance Store Corps,
-	Woolwich.
1893, Jan. 28.	PITCHFORTH, SAMUEL ABRAHAM, 3, Chestnut Villa,
	Foleshill, Coventry.
1893, Dec. 2.	PLESTED, HORACE THOMAS, 6, Emily Terrace, Putney.
1893, Dec. 2.	PLUMER, WALTER, 14, Kennington Grove, S.E.
1893, Dec. 2.	POWELL, WILLIAM GEORGE, 19, Kingsfield Road,
	Southampton.
1893, July 29.	PRESTON, ALFRED PEARCE, 42, Arran Street, Cardiff.
1893, July 8.	PRINCE, S. E., 37, Warwick Street, Rotherham.
1893, Dec. 2.	PULTER, FREDERICK CHARLES, 16, Kitto Road, St.
	Catherine's Park, S.E.
1893, Dec. 2.	PUZEY, FREDERICK, 187, Brighton Road, Croydon.
1893, May 27.	QUICK, EDWARD HARE, Lympstone, Devon.
1893, Dec. 2.	RABBETTS, CHARLES GEORGE, 55, Middle Street, The
1000 4	Avenue, Southampton. RALPH. WILLIAM HOLDEN, 19, Howard Road,
1893, Apr. 15.	
1009 1 15	Brighton. RANDS, HAROLD WALTER, Whitby's School, Chich-
1893, Apr. 15.	•
1803 Dec 9	ester. Rarson, Thomas Henry, 28, Poynings Road, Upper
1893, Dec. 2.	Holloway, N.
1893, Apr. 29.	RAYNER. GEORGE, The Green, Downham Market.
1893, Dec. 16.	REID, WILLIAM JOHN, 99, Bradbury Place, Belfast.
1893, July 8.	REYNOLDS, ERNEST FRESHFIELD, Guildford House,
1000, 5 mj 01	Harrogate.
1893, Apr. 15.	RICHARDSON, FRED, High Street, Brasted, Sevenoaks.
1893. Dec. 2.	RICKETT, GEORGE, Roxburgh House, Westgate-on-Sea.
1000, 200, 21	

1893, July 29. RIGGS, JOHN WILLIAM, 3, Avenue Cottages, Torquay. 1893, Nov. 11. ROBSON, CHARLES, 3, Churton Road, North Shields. 1893, Dec. 2. ROMERIL, WILLIAM GEORGE, 20, Burney Street, Greenwich, S.E. 1893, Apr. 29. ROUSE, FRANK J., Student Inst.C.E., 3, Manor Way, Blackheath. 1893, Nov. 11. Ruga, Hugh DANIEL, 22, Woodstock Road, Poplar, London, E. 1893, Apr. 15. RUGG, SAMUEL HORACE, 165, Earls Court Road, S.W. 1893, Dec. 2. SCARTE, ROLAND, 19, The Chase, Clapham Common. 1893, Apr. 15. SCHLUND, WILLIAM THEODORE, 46, Kemp Street, Brighton. 1893, Dec. 2. SEXTON, CHARLES GEORGE, 3, Kildare Terrace, Hanworth Road, Hounslow. 1893, Apr. 15. SHARMAN, EDWARD MANSFIELD, 104, Acomb Street, Greenbeys, Manchester. 1893, Dec. 2. SHERVILL, JOHN ALFRED, 1, Arthur Villas, Queen's Road, Teddington. 1893, Apr. 15. SIMMS FREDERICK, 29, Adelaide Street, St. Giles, Oxford. 1893, Jan. 28. SINCLAIR, GEORGE ALFRED, 14, Mabel Terrace, Sunderland. 1893, July 29. SLADE, FRANK ROBERT, Princes Street, Bristol. 1893, Apr. 15. SMITH, EDWARD, 418, New Cross Road, S.E. 1893, Apr. 15. SMITH, HENRY JOHN, 91, Malvern Road, West Kilburn, N.W. 1893, Apr. 15. SMITH, WILLIAM, Preston, The Hyde, N.W. 1893, Apr. 15. SQUIRRELL, HENRY THOMAS, 5, Station Road, Bexhill. 1893, Apr. 15. STRATHON, WILLIAM HENRY, 3, Auburn Place, Plymouth. 1893, May 27. STREAT, JOHN, Ottery St. Mary, Devon. 1893, Dec. 2. SWINNOCK, WILLIAM JAMES, 218, Sultan Road, Landport, Portsmouth. 1893, July 8. Swine, HENRY, 30, Sheep Street, Skipton. 1893, May 27. SYKES, EDITH ELIZABETH, Woodleigh, East Dulwich Grove, S.E. 1893, Nov. 11. SYMON, GLORGE, 30, Mitford Street, Newcastleupon-Tyne. 1893, July 8. TAYLOR, JAMES, 267, Tong Moor Road, Tong, Bolton. 1893, Dec. 16. TERRY, JOHN, 24, Moorgate, Bury. 1893, Jan. 28. THOMAS CHARLES LLEWELLIN, 30, Berkeley Place, Clifton, Bristol. 1893, Nov. 11. TURNBULL, FRED R., 24, York Street, West Hartlepool. 1893, Jan. 28. TURNER, FREDERIC RICHARD, Plough Inn, Tewkesbury.

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1893, Apr. 15.	VEST, THEODORE, 75, Queen's Park Road, Brighton,
1893, July 8.	WAGSTAFF, WILLIAM HENRY, 16, Mapperley Road, Nottingham.
1893, Jan. 28,	WALKER, WILLIAM, 50, Artillery Street, Birming- ham.
1893, Dec. 2.	WALLIS, FRANCIS FREDERICK, 96, Archway Road, Highgate.
1893, Dec. 2.	WARD, ARTHUR, 14, Kemp Street, Brighton.
1893, Dec. 16.	WATERS, THOMAS, 12, Rylance Street, Ardwick, Manchester.
1893, July 8.	WATSON, JAMES SYKES, 17, Barelay Street, Sunder-
1893, Dec. 2.	land. WAY, WILLIAM, 159, Hartfield Road, Wimbledon.
1893, Apr. 15.	WEBSTER, JOHN WILLIAM, 3, Lanhill Road, Pad-
1893, Dec. 2,	dington. WHEATLEY, HARRY JAMES, 3, Townshend Terrace, Share Bard, Bishmand, Sumar
1893, July 8.	Sheen Road, Richmond, Surrey. WHINCUP, WILLIAM THOMPSON, 7, East Parade, Heworth, York.
1893, Jan. 28.	WHITE, WILLIAM LAMB, New Street, Upton-on-
1893, Apr. 15.	Severn. Wigos, Hennert Trenerse, 166, Railton Road, Herne Hill, S.E.
1893, Dec. 2.	WILLIS, EDWARD, 124, High Street, Eaton.
1893, Nov. 11.	WILSON, MARMADUKE TEMPLE, 69, Narrowgate, Alnwick.
1893, Dec. 2.	WINKWORTH, HARVEY, Goring Heath, Reading.
1893, Dec. 2,	WINKWORTH, JOHN, Goring Heath, Reading.
1893, Dec. 2.	WISE, SYDNEY EDWARD, 200, Burrage Road, Phum- stead.
1893, May 27.	WRIGHT, SAMUEL WILLIAM, 17, Melville Road, Ford, Devonport.

1892. ItrometroU	156	<u>2</u> ,0:0	35,000	÷.	10,000	*- [None.	-99	လို	
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** For publications of Societies and Institutions, &c., see under "Academics."

ACADEMIES, ASSOCIATIONS, COLLEGES, SOCIETIES, &c.

ACADEMIES (AMERICAN).

Philadelphia.College of Physicians.Transactions, 1892, Vol. XIV.,
243 p., 8vo.Philadelphia, 1892.The Society.Toronto.Canadian Institute.Transactions, Vol. III., Part II.
175 p., 8vo.Toronto.Canadian Institute.Transactions, Vol. III., Part II.
175 p., 8vo.Toronto.Canadian Institute.Transactions, Vol. III., Part II.
175 p., 8vo.Toronto.Canadian Institute.Transactions, Vol. III., Part II.
175 p., 8vo.Toronto.Storetty.The Institute.Toronto, 1893.The Institute.Toronto, 1893.The Institute.

ACADEMIES (AUSTRALIAN).

New South Wales. Royal Society of. Journal and Proceedings, Vol. XXV1., 1892. 425 p. (plates), 8vo. Sydney, 1892. The Society.

ACADEMIES (BRITISH).

Glasgow. Institution of Engineers and Shipbuilders in Scotland. Transactions, Vol. XXXVI. for the 36th Session. 1892–1893. 382 p. 8vo., Glasgow, 1893. The Institution.

THE REPORT AND A THE PROPERTY OF	Inspectors' Association
District. Sixth Annual	Report, 1892. 16 p.,
1893. Sanitaru Inspector	rs' Association, North-
Chairman's Address by	Ralph Norman. 8 p.,
1893.	
Presidential Address by	? Association, North-
Liverpool, 1893.	11, 1, 170((11013) 3(1110)
Manst, C.E. 13 p., 8vo.	Inaugural Address b
M.INST.C.E. 13 p., 8vo.	Liverpool, 1892.
London. British Associatio actions, 1880-84.	n for the Advancement of
Report of Conferen	ice on Temperance Leg
Svo. London, 1886.	
Middlesex Hospital.	meports, 1891. 398
1892. Royal Institution of	Great Britain. Procee
p., Syo. London, 1	893.
The Surveyors' Ins	titution. Transactions.
p., Svo. London, 1893. —— Architects, Society	of. Proceedings for J
London, 1893.	
City of London Coll	cyc. Calender 1893—1
London, 1893—1894.	nty Engineers, Incorpora
Proceedings, Vol. XIX.,	1892—1893. 365 p
1893.	
London, 1893.	of. Transactions, Vol.
Royal College of S	urgeons. Calender of,
Svo. London, 1893.	
Royal Institute of E 296 p., Svo. London, 18	393.
——————————————————————————————————————	ociety, Journal of. Vol.
London, 1893.	
Index 1861—1892. 285	rs. Transactions for 1 5 p., 8vo. London, 189
St. Thomas's Hosp	vital. Reports, New
607 p., Svo. London, 18	S93.
University College.	Calender, Session 189
8vo. London, 1893. Manchester & Salford.	Sanitary Associations.
1892. 107 p., Syo. Ma	anchester, 1892.
Newcastle-upon-Tyne. and Mechanical Enginee Vol. XLI1., Part II. an	North of England In
and Mechanical Enginee	rs. Transactions, Vol nd TII • Annual Reno
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n, North-Western Syo. Liverpool, The Association. Western District. 8vo. Liverpool, The Association. Vestern District. r.c.e. 8 p., 8vo. The Association. H. P. Boulnois, The Author. Science. Trans-Rogers Field. islation. 192 p., Rogers Field. p., Svo. London, The Hospital. lings. Vol. XIV. The Institution. Session 1892-93. The Institution. p., 8vo. 893. The Society. 894. 191 p., Svo. The College. ted Association of, ., Svo. London, The Association. XVI., 375p., Svo. The Society. or 1893. 341 p., The College. nder, 1893—1894. The Institute. LVI., 798 p., 8vo. The Society. 892 and General 3. The Society. Series, Vol. XXI., The Hospital. 3—1894. 439 р., The College. Annual Report, The Association. stitute of Mining XLI., Part VI.; rts, &c. The Institute.

ACADEMIES (CONTINENTAL),

Amsterdam. Royal Academy of Science. Register op de Verslagen en Mededeelingen der Koninklijko Akademio van Wetenschappen, Afd. Natuurkundo Derdo Reeks. Deel., 1-1X. 55 p., Svo. The Academy. Amsterdam, 1893.

- Verslagen en mededeelingen der Koninklijke Akademie van Wetenschappen, Afd. Natuurkundo Derdo Reeks, Deel. IX. 185 p., Svo. Amsterdam, 1892. The Academy. - Over net onderscheid in samenstelling tusschen artericel en

veneus Bloed door, Dr. H. J. Hamburger, 25 p., Svo. Amsterdam, 1892. The Academy,

- Verslagen der Zittengen van de wis-en natuurkundige afdeeling der Koninklijke Akademie van Wetenschappen van 25 Juni, 1892, tot 28 April, 1893. 207 p., Svo. Amsterdam 1893.

The Academy.

- Ueber die Butvlalkoholgährung und das Butvlferment von M. W. Beijerinck. 51 p., Svo. Amsterdam, 1893.

The Academy.

Leipzig. Landes-Medicinal Collegiums. Dreiundzwanzigster Jahresbericht über das Medicinalwesen im Königreiche Sachsen auf das Jahr, 1891. 308 p., 8vo. Leipzig, 1892. - F. W. C. Voyd. Rome. R. Università. Annali dell'istituto D'Igiene sperimentale. Vol. I. (Nuova Serie), Fasc. I., 11., 111., 1V., 492 p., 8vo. Roma, 1892. Vol. II., Fase. IV. 60 p., 8vo. Roma, 1893. Vol. III., Fase. I. & 11. 268 p., 8vo. Roma, 1892-93.

The Academy.

Albrecht, Dr. M. Bericht der Gesundheits-Commission für den Bezirk Uhlenhorst über ihre Thätigteit während der Cholera-Epidemie, 1892. 8 p. (tables), 4to. Hamburg, 1893.

The Author.

- Amines Process. Explanatory pamphlet. 30 p., 8vo. London. - Report on Experiments at Salford, July, 1891. 24 p., Svo. London.
- Arlidge, Dr. J. T. The Hygiene, Diseases and Mortality of Occupations. 568 p., 8vo. London, 1892. Dr. G. V. Poore. - Pottery Manufacture in its Sanitary Aspects. 18 p., 16mo.
- Hanley, 1893. The Author. Baxendell, J. Report and results of observations of the Southport
- Meteorological Department for the year 1892. 14 p., 4to. Southport, 1893. The Author.
- Bayard, F. C. English Climatology, 1881-1890. 23 p., 8vo. Excerpt Quarterly Journal of Royal Meteorological Society, Oct., The Author. 1892.
- Blyth, Prof. A. Wynter. Lectures on Sanitary Law. 287 p., 8vo. The Author. London, 1893.

CONTRIBUTIONS TO LIBRARY,

Board of Agriculture. Agriculture Produce, Statistics of Great The Board. itain, 1892. 33 p., Svo. London, 1893. *The Board.* — Agricultural Returns of Great Britain, with Abstract Britain, 1892. 33 p., Svo. London, 1893. Returns for the United Kingdom, British Possessions, and Foreign Countries, 1892. 191 p., 8vo. London, 1892. The Board. _____Annual Report of the Director of the Veterinary Department for the year 1892, with an Appendix. 217 p., Svo. Prof. G. T. Brown. London, 1893. _____ Agricultural Returns showing acreage under crops and grass, and the number of horses and cattle, sheep, and pigs in the United Kingdom, with particulars of each county of Gt. Britain (1893). 37 p., Svo. London, 1893. The Board. The Raspberry Moth. 3 p., Svo. London, 1893. The Board. Boyle, Robert. A Sanitary Crusade through the East and Australia. 44 p., 16mo. London, 1892. W. Whitaker. _____ A Sanitary Crusade through South Africa. 34 p., 16mo. The Author. London, 1891. Brighton. Reports on the Sewage and Sanitary Condition of. 82 p., Svo. Brighton, 1883. W. Whitaker. ------ Water Works. Inspection of Goldstone Bottom Pumping Station. Dec., 1884. 29 p., Svo. W. Whitaker. Burnley. A historical and detailed description of the Sewage Disposal Works (Burnley), by F. S. Button. 88 p., 4to. Burnley, 1893. The Author. Chadwick, Edwin. Paper on the Re-organization of the Civil Service, more especially on the results already obtained by Competitive Examinations for Appointments, and on the necessity of further Securities to insure Promotion for Merit in the Public Rogers Field. Service. 96 p., 8vo. London, 1855. Clarke, J. Wright. Lectures to Plumbers. 270 p., 4to. London, The Author. 1893. Dairies, Cowsheds, and Milkshops. Acts and Orders relating to. 35 p., Svo. London, 1886. Parchased. Eminson, T. B. Franklin. Epidemic Pneumonia at Scotter and neighbourhood : its history, causes, and future prevention. 66 p., G. J. Symons. 16mo. London, 1892. Felix, Dr. J. Raport General despre Igiena publica si despre serviciul sanitar ale regatului romaniei pe anul., 1892. 190 p., The Author. 8vo. Bucuresci, 1893. Foreign Meat. Report from the Select Committee on the Marking of, &c., together with the Minutes of Evidence. 220 p., f.cap. Purchased. London, 1893. Galton, Sir Douglas. Cremation. An Address delivered at the meeting of the Church Congress, Birmingham, October, 1893. The Author. with Hospital Construction. 287 p., Svo. Oxford and London. The Author. 1893.

6 p., Svo. London, 1893.

Gillespie, Rev. C. G. K. The Claims of Sanitary Science upon the Clergy. 23 p., 8vo. London, 1891. The Author.

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- CONTRIBUTIONS TO LIBRARY.
- Local Government Board. Dr. Bulstrode's Report upon the general Sanitary Condition of the Boro' of Poole and on Administration by the Sanitary Authority. 12 p., f.cap. London, 1893.

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----- Further Report and Papers on Epidemic Influenza 1889-92. 154 p., 8vo. London, 1893. The Board.

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- Mr. Sweeting's Report upon an outbreak of Enteric Fever at Temple Cloud, in the parish of Comeley, in the Clutton Rural Sanitary District. p., f. cap.
- Dr. W. E. Fletcher's Report on the Sanitary Condition of the Risca Urban Sanitary District. 3 p., f. cap. London, 1893.
- Mr. Evan Evans' Report on the Sanitary condition of the town of Amlwch, and on prevalence of "fever" there. 8 p. f.cap. London, 1893,

Greenwich Magnetical and Meteorological Observations, 1890. The Astronomer Royal. 153 p., 4to. London, 1892.

- Gruber, Dr. Max. Anhaltspunkte für die verfassung neuer Bauordnungen in allen die gesundheitspflege betreffenden beziehungen. The Author. 148 p. (plates), 4to. Wien, 1893.
- Die neue bauerdnung der aussenstadt, Frankfurt, a.m. 21 p., The Author. 4to. Wien, 1892.
- Haden, F. S. Cremation an Incentive to Crime. 24 p., Svo. Dr. Thorne Thorne. London, 1892.

Hampstead. Surveyor's Report on the Drainage of Fregnal and Oak Hill Park. 16 p., Svo. London, 1892. C. H. Lowe.

- Haviland, Alfred. On the Influence of Clavs and Limestones on Medical Geography; illustrated by the Geographical Distribution of Cancer among Females in England and Wales. 16 p., Svo. Excerpt from the Transactions of the International Congress of The Author. Hygiene. London, 1891.
- " 'Hurried to Death," especially addressed to Railway Travel-W. Whitaker. lers. 56 p., Svo. London, 1868.
- Health at Home. Report of the Training of Rural Health Missioners, and of their Village Lecturing and Visiting under the North Bucks Technical Education Committee of the Bucks County Council, 1891 and 1892. 50 p., Svo. Winslow, 1892.

Miss Florence Nightingale.

- Hodson, George. A consideration on some of the conditions requisite for obtaining underground Water Supplies. 36 p., 8vo. The Author. London, 1893.
- Hong Kong. Report of the Director of Public Works for 1892. 24 p. (plates), f.cap. Hong Kong, 1893. F. A. Cooper.
- Report of the Surveyor General's Department for the year 1891. 14 p. (plates), f. cap. Hong Kong, 1892. F. A. Cooper. ----- Report on Kowloon Water Supply. 8 p., f.cap. Hong F. A. Cooper. Kong, 1892.

----- Report of the Water and Drainage Department for the year 1891. 16 p., f.cap. Hong Kong, 1892. F. A. Cooper.

- Japan. The Annual Report of the Health of the Imperial Navy for the twenty-fourth year of meiji (1891). 61 p., 8vo. Tokyo, Central Sanitary Bureau, Navy Department, Japan. 1892.
- Kansas State Board of Health. Eighth Annual Report, Jan. 1st to Dec. 31st, 1892. 323 p., 8vo. Topeka, 1893. The Board.
- Kenwood, Dr. H. R. Public Health Laboratory Work. 491 p., The Author. 8yo., London, 1893.
- Knight's Annotated Model Bye-Laws. Fourth Edition. 25 p., Purchased. 8vo. London, 1893.
- Lobley, J. L. The Supply of Water to London in the near and distant future. 32 p., Svo. London, 1892. The Author.
- Local Government Board. Dr. Bruce Low's Report on the General Sanitary Condition of the Hendon Rural Sanitary District, and on Scarlatina and Diphtheria therein. 17 p., f. cap. London, The Board. 1893.

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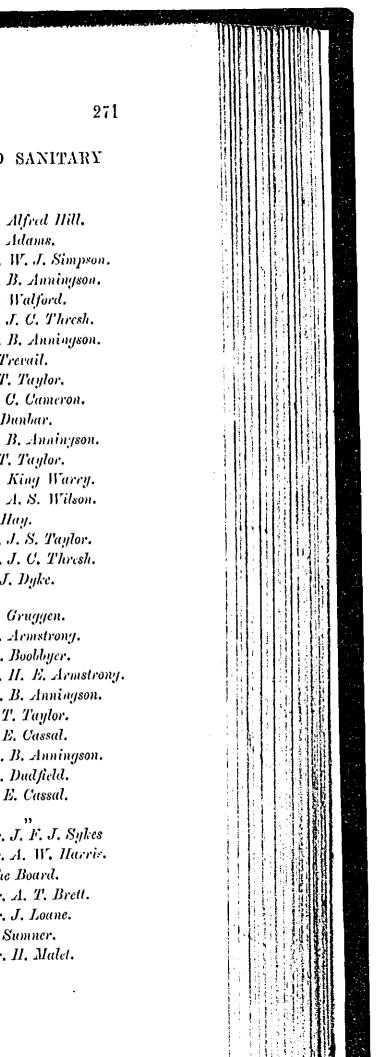
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Local Government Board. Dr. S. Monckton Copeman's Report	MEDICAL OFFICERS', ANALYSTS', AND SANI'
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of Diphtheria during a series of years. 9 p., f. cap. London,	Diminstern 1809 De dlford I
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f.cap. The Council.	Dumbarton County Council 1891, 1892. D. Dunbar.
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1878. 2 p., f. cap. London, 1891. The Council.	Southampton
Lynde, F. C. The Latest Sanitary Improvements in Drainage	Way Journal The Board.
Work. 7 p., (plates), f. cap. The Author.	
Malvern, T. Sanitary Dwellings. A Guide to Householders.	
35 p., 8vo. Cheltenham, 1893. The Author.	
Meade, T. de Courcy. Report to the Hornsey Local Board on	
Intercepting Traps and Water-tight Drains. 27 p. (plates), Svo. London, 1893. The Author.	Wolverhampton 1893. Dr. II. Mal

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- Metropolitan Asylums Board. Reports for the year 1892 of the Statistical Committee and the Medical Superintendents of the Infectious Hospitals and Imbecile Asylums; also of the Ambulance and Training Ship Exmouth Committees. 203 p., Svo. London, The Board. 1893.
- Miers, H. A. The Soil in relation to Health. 135 p., Svo. London, The Author. 1893.
- Mullins, George Lane. Registration of Still Births and the Protection of Infants. 8 p., 8vo. Sydney, 1892.
- New Jersey, State Board of Health. Sixteenth Annual Report and Report of Vital Statistics, 1892. 590 p., Svo. Trenton, New The Bourd. Jersev, 1892.
- New York, Board of Trade and Transportation on Quarantine. Report of the Special Committee. 82 p., Svo. New York, 1893. Dr. R. A. Williams.
- Newsholme, Dr. Arthur. The Brighton Life Table (based on the mortality of the ten years 1881-90). 39 p., Svo. Brighton, The Author. 1893.
- New South Wales. Fifth Annual Report of the Metropolitan Board of Water Supply and Sewerage, being for the year 1892. 76 p. (diagrams), f. cap. Sydney, 1893.
- Nottingham. The Meteorology of. 5 p. (plates), f. cap. Not-P. Boohlayer. tingham, 1892.
- Oliver, Dr. Thomas. Lead Poisoning in its acute and chronic forms. 121 p., Svo. Edinburgh and London, 1891. Purchased.
- Ottawa. Inland Revenue Department. Bulletin, No. 32 and 33. The Department.
- Patents. Abridgments of Specifications, 1877-83. 103 volumes, including Closets, Foods, Lamps, Medicine, Sewage Disposal, H.M. Patent Office. Ventilation, &c.
- Poore, Dr. G. V. Rural Hygiene. 318 p., Svo. London, 1893. The Author.
- Power, Dr. J. B. The Powers and Duties of Sanitary Inspectors. 16 p., Svo. Reprinted from Dublin "Journal of Medical Science," The Author. July, 1893.
- Public Health (Amendment) Act, 1890. Model Bye-laws. 60 p., Purchased. Svo. London, 1892.
- Putzeys, M. Felix. L'Épidémie de Trichinose de la prealle-herstal. 16 p., Svo. Extrait du Bulletin de l'Academie Royale de médecine The Author. de Belgique, année 1893.
- Redgrave, A. The Factory and Workshop Acts, 1878-91. 298 p., Purchased. 8vo. London, 1893.
- Registrar-General, England. Fifty-Fourth Annual Report of Births, Deaths, and Marriages in England, 1891. 229 p., 8vo. London, 1892; and Weekly and Quarterly Returns, 1893.

Registrar-General.

_____ Ireland. Twenty-Eighth detailed Annual Report, containing a general abstract of the numbers of Marriages, Births, and Deaths for 1891. 190 p., f. cap.; and Weekly and Quarterly Returns, Registrar-General. 1893.

CONTRIBUTIONS TO LIBRARY.

- Registrar-General, Scotland. Thirty-sixth Detailed Annual Report Births, of Deaths, and Marriages in Scotland, 1890; and Weekly, Monthly, and Quarterly Returns, 1893. Rome. Ministero dell' Interno. Di un rapido processo per la colorazione delle ciglia di alcuni micro organismi nota dell'Dott. Achille Sclavo. 8 p., f. cap. Roma, 1893. .---- Circa i fatti principali riguardanti l'igiene e la sanitá pubblica nel regno nei due ultimi quadrimestri 1892. 39 p., f. cap. Roma, 1892. ._____ Sulla conservazione della birra per mezzo dell'acido carbonico per Dott. B. Gosio. 19 p., f. cap. Roma, 1893. ----- Circa i fatti principalli reguardanti l'igiène è la sanità pubblica nel regno, nei mesi di Gennaio Febbraio, Marzo, Aprile e Maggio, 1893. 16 p., f.cap. Rome, 1893. Ministero dell' Interno. Roster, Prof. G. Sul Novo tipo brevettato di Latrina Igea. 11 p., 8vo. Torino, 1893. - Le acque di condotto di Firenze. 23 p., 8vo. Milan, 1893. ____ Le acque freatiche della pianura di firenze. 21 p., 8vo. _____ L'acide carbornico del suolo. 18 p., 8vo. Ruata, Dottor Carlo. Trattato d'Igiene pubblica. 270 p., Svo. Peru, 1892. Simon, Sir John. Public Health Reports. 1172 p., Svo. London, 1887. Simla Municipality. Bye-Laws under Punjab, Act XX. of 1891. 109 p., Svo. Simla, 1892. ----- Annual Reports for the years, 1884, 1888-89, 1889-90. Smith, J. Barker. Milk, a new system of rapid analysis. 24 p., Syo. London, 1892. Stevenson, Dr. T., and Shirley Murphy. Treatise on Hygiene and Public Health, Vol. 11. 847 p., Svo. London, 1893. Street, W. C. Some problems of Town Development. 12 p. 4to. Excerpt "Journal Royal Institute of British Architects," Vol. 1X., New series 19. Sworder, II. Popular Information concerning Infectious Diseases. 82 p., Svo. London, 1893. Dr. Thorne Thorne. Taylor, A. The Sanitary Inspector's Handbook. 243 p., Svo. London, 1893. Thomas, E. Lewis. The Public Health (London) Act, 1891, with full explanatory notes. 393 p., Svo. London, 1891. Parchased. Thorne, Dr. Thorne. Cholera Prospects and Prevention. 31 p., 16mo. London, 1893. United States Army. Index-Catalogue of the Surgeon-General's Office, Vol. XIII. 1005 p., 4to. Washington, 1892.

272

Registrar-General.

Ministero dell' Interno. Ministero dell' Interno.

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Dr. Thorne Thorne. The Sanitary Institute. A. Hale.

A. Hale.

The Author.

J. & A. Churchill. The Author.

Dr. Thorne Thorne. The Author.

The Author.

The Surgeon-General U.S. Army. \mathbf{S}

Vacher, Francis. The Food Inspector's Handbook. 140 p., Svo.

Ventilation. A paper read at the Royal United Service Institution

275 LECTURES & MEETINGS, JANUARY TO MARCH, 1894. FEBRUARY (Continued). JANUARY. 10 S. Lecture to Sanitary Officers, Not-1 M. Exhibition Committee, 5 p.m. tingham, 3 p.m. 6 S. Lecture to Sanitary Officers, Not-10 S. Visit of the Students to Express tingham, 3 p.m. 10 W. Finance Committee, 4 p.m. 3 p.m. 10 W. Council Meeting, 5 p.m. 13 Tu. Lecture to Sanitary Officers, Lon-10 W. Sessional Meeting at 8 p.m. R. don, 8 p.m. Thorne Thorne, C.B., on Diph-14 W. Visit of Inspection in the Parish theria: its causes & prevention. 13 S. Lecture to Sanitary Officers, Not-2 p.m. tingham, 3 p.m. 14 W. Finance Committee, 4 p.m. 20 S. Lecture to Sanitary Officers, Not-14 W. Council Meeting, 5 p.m. tingham 3 p.m. 14 W. Sessional Meeting, 8 p.m. F. J. 22 M. Museum Committee, 5 p.m. 26 F. Lecture to Sanitary Officers, London, 8 p.m. 27 S. Lecture to Sanitary Officers, Not-16 F. Lecture to Sanitary Officers, Lontingham, 3 p.m. don, 8 p.m. 30 Tu. Lecture to Sanifary Officers, London, 8 p.m. 17 S. Lecture to Sanitary Officers, Nottingham, 3 p.m. 17 S. Visit of the Students to Croydon FEBRUARY. 2 F. Lecture to Sanitary Officers, Lon-Sewage Farm, 2 p.m. don, 8 p.m. 20 Tu. Lecture to Sanitary Officers, Lon-3 S. Lecture to Sanitary Officers, Notdon, 8 p.m. tingham, 3 p.m. 21 W. Visit of the Students to Guinness 3 S. Visit of the Students to Friern Barnet Sewage Works, 3 p.m. 23 F. Lecture to Sanitary Officers, Lon-5 M. Exhibition Committee, 5 p.m. don, 8 p.m. 6 Tu. Lecture to Sanitary Officers, Lon-26 M. Museum Committee, 5 p.m. don, 8 p.m. 27 Tu. Lecture to Sanitary Officers, Lon-7 W. Visit of the Students to the Disinfecting Station, &c., at St. don, 8 p.m. Paneras, 3 p.m. 28 W. Visit of the Students to the 9 F. Lecture to Sanitary Officers, Lon-Paneras, 3 p.m.

December 7th, 1892. 54 p. Reprint from "Building News," December 22nd, January, 1893. W. Whitaker. Wallace, J. Sanitary Engineering in India. 238 p., Svo. Bombay, The Author. 1893. Wardle, T. Sewage Treatment and Disposal, 426 p., Svo. Man-The Author. chester and London, 1893. Waring, Col. G. E., Jun. The Memphis System of Sewage at Memphis and elsewhere. 18 p., Svo. Concord N.H., 1893. Reprint from Vol. XVIII, of the Transactions of the American Public The Author. Health Association. _____ Report on the Condition of the Sewers of Memphis, March 4th, 1893. 10 p., Svo. Memphis, 1893. The Author. Willoughby, Dr. E. T. The Health Officer's Pocket Book. 376 p., The Author. 16mo, London, 1893. Williams, Robert, London Rookeries and Colliers' Shuns. A plea for more breathing room. 82 p., 4to. London, 1893. The Author. Winwood, H. H. On some Deep Well Borings in Somerset and elsewhere. 10 p., Svo. Excerpt proceedings of the Bath Natural W. Whitaker. History and Antiquarian Field Club, 1893. PERIODICALS AND JOURNALS. WIEKLY. Journal d'Hygiène. Journal Society of Arts. Local Government Chronicle. Local Government Journal. Nursing Record. Surveyor. The Sanitary Record. MONTHLY. Meteorological Record. Engineering Review. Plumber and Decorator. Health Record, Dublin. Practitioner. Hygiene. Public Health. Ironmonger. Journal of the Royal Institute of Sanitarian. Sei-i-Kwai Medical Journal. British Architects. Medical Magazine.

QUARTERLY.

Deutsche Vierteljahrsschrift für öffentliche Gesundheitpflege. Technology Quarterly and Proceedings of Society of Arts (Massachussetts).

Quarterly Journal of the Royal Meteorological Society.

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London, 1893.

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

The Author.

don, 8 p.m.

- Dairy Co.'s Farm at Finchley,
- of St. George's, Hanover Square,
- Waldo, M.D., on Sanitation of places where food is stored and prepared, in Bakehouses, Kitchens, and Restaurants.
- Water Works and Beddington
- Buildings and Disinfecting Apparatus, Chelsea, 2 p.m.
- Disinfecting Station, &c., at St

LECTURES AND MEETINGS FOR 1893.

MARCH-(Continued). MARCH. 13 Tu, Lecture to Sanitary Officers, Lon-2 F. Lecture to Ladies, 3 p.m. don, 8 p.m. 2 F. Lecture to Sanitary Officers, Lon-14 W. Finance Committee, 4 p.m. don, 8 p.m. 14 W. Council Meeting, 5 p.m. 3 S. Visit of the Students to the 14 W. Sessional Meeting at 8 p.m. R. East London Water Works, Lea Thorne Thorne, C.B., on Cholers. Bridge. 14 W. Visit of the Students to Mitcham. 5 M. Exhibition Committee, 5 p.m. 16 F. Lecture to Sanitary Officers, Lon-6 Tu. Lecture to Ladies, 3 p.m. don, 8 p.m. 6 Tu. Lecture to Sanitary Officers, Lon-16 F.) Examination, Nottingham, 17 S.) don, 8 p.m. 7 W. Visit of Inspection in the Parish 17 S. Visit of the Students to the of St. George's, Hanover Square, Barking Sewage Outfall Works, 2 p.m. 19 M. Museum Committee, 5 p.m. 9 F. Lecture to Ladies, 3 p.m. 20 Tu. Lecture to Sanitary Officers, Lon-9 F. Examination Committee, 5 p.m. don, 8 p.m. 9 F. Lecture to Sanitary Officers, Lon-23 F. Good Friday. don, 8 p.m. 26 M. Easter Monday. 10 S. Visit of the Students to the 30 F. Examination Committee, 5 p.m.

- Ealing Sewage and Destructor Works, 2 p.m.
- 13 Tu. Lecture to Ladies, 3 p.m.

A subsequent list will be published giving Meetings for April and following months.

30 F. Lecture to Sanitary Officers, Lon-

don, 8 p.m.

ST OF H	ON. FELLOWS, FELLOWS, MEMBERS, AND ASSOCIATES.	
Additi	ons and Corrections to December 31st, 1893.	
Hon. Fell Members,	LOWS, 23; FELLOWS, 144;	
	HONORARY FELLOWS.	
Date of Election. [890, June.	AUSTRIA-HUNGARY. von Grußer, Prof. Franz Ritter, 1, Tiefer Graben 3,	
890. June.	Vienna. FODOR, Dr., Professor of Hygiene, Buda-Pesth.	
	BELGIUM.	
1890. June.	PUTZEYS, Dr. Felix, Professor of Hygiene at the University of Liège.	
1890. Dec.	EGYPT. GREENE, Dr. II. R., Pasha, late Chief of the Sanitary Department, Cairo.	
	FRANCE.	
1892. Oct.	BECHMANN, M., Ingénieur en Chef des Ponts et Chaussées ; Directeur du Service d'Assainissement de Paris ; 9, Place de l'Hôtel-de-Ville, Paris.	
1890. June.	BROUARDEL, Dr. Paul, Prof. and Dean of the Faculty of Medicine, Paris.	
1890. June.	CORNIL, Dr. V., Senator, 19, Rue St. Guillaume, Paris.	
1890. June. 1890. June.	PASTEUR, Prof. Louis, 25, Rue Dutot, Paris. DE PIETRA SANTA, Dr. Prosper, Hon Sec. of the French Society of Hygiene, 30, Rue du Dragon, Paris.	
1890, June.	VALLIN, Dr. Emile, Professor of Hygiene, Director of the School of the Military Sanitary Service, Lyons.	
	GERMANY.	
1890. June. 1890. June.	HOBRECHT, Dr., Engineer, Berlin. von Hofmann, Prof. A. W., Professor of Chemistry, Berlin.	
1890. June. 1890. June.	KOCH, Dr., Director of the Hygienic Institute, Berlin. PETTENKOFER, Dr., Professor of Hygiene at the University of Munich.	
1890. June.	VIRCHOW, Dr. Rudolph, Professor of Pathology, Berlin.	

, Date of Election.	AUSTRIA-HUNGARY.				
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	BELGIUM.				
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	ON. FELLOWS, FELLOWS, MEMBERS, AND ASSOCIATES.	
	ons and Corrections to December 31st, 1893. Lows, 23; FELLOWS, 144; 497; Associates, 655.—Total, 1319.	
o of tion. June. June.	HONORARY FELLOWS. AUSTRIA-HUNGARY. von GRUBER, Prof. Franz Ritter, 1, Tiefer Graben 3, Vienna. FODOR, Dr., Professor of Hygiene, Buda-Pesth. BELGIUM.	
June. Dec.	PUTZEYS, Dr. Felix, Professor of Hygiene at the University of Liège. EGYPT. GREENE, Dr. H. R., Pasha, late Chief of the Sanitary Department, Cairo.	
. Oct. June. June. June. June. June.	 FRANCE. BECHMANN, M., Ingénieur en Chef des Ponts et Chaussées; Directeur du Service d'Assainissement de Paris; 9, Place de l'Hótel-de-Ville, Paris. BROUANDEL, Dr. Paul, Prof. and Dean of the Faculty of Medicine, Paris. CORNIL, Dr. V., Senator, 19, Rue St. Guillaume, Paris. PASTEUR, Prof. Louis, 25, Rue Dutot, Paris. DE PIÉTRA SANTA, Dr. Prosper, Hon Sec. of the French Society of Hygiene, 30, Rue du Dragon, Paris. VALLIN, Dr. Emile, Professor of Hygiene, Director of the School of the Military Sanitary Service, Lyons. 	
. June. . June. . June. . June. . June.	GERMANY. HOBRECHT, Dr., Engineer, Berlin. von HOFMANN, Prof. A. W., Professor of Chemistry, Berlin. KOCH, Dr., Director of the Hygienic Institute, Berlin. PETTENKOFER, Dr., Professor of Hygiene at the University of Munich. VIRCHOW, Dr. Rudolph, Professor of Pathology, Berlin.	

	ON. FELLOWS, FELLOWS, MEMBERS, AND ASSOCIATES. ons and Corrections to December 31st, 1893.	
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MEMBERS,	· · · · · · · · · · · · · · · · · · ·	
	HONORARY FELLOWS.	
Reg. Date of No. Election.	AUSTRIA-HUNGARY.	
¹³ 1890, June.	von Gruber, Prof. Franz Ritter, 1, Tiefer Graben 3, Vienna.	
141890. June.	FODOR, Dr., Professor of Hygiene, Buda-Pesth.	
	BELGIUM.	
"1890. June.	PUTZEYS, Dr. Felix, Professor of Hygiene at the University of Liège.	
²⁰ 1890. Dec.	EGYPT. GREENE, Dr. II. R., Pasha, late Chief of the Sanitary Department, Cairo.	
	FRANCE.	
³¹ 1892. Oct.	BECHMANN, M., Ingénieur en Chef des Ponts et Chaussées ; Directeur du Service d'Assainissement de Paris ; 9, Place de l'Hôtel-de-Ville, Paris.	
² 1890. June.	BROUARDEL, Dr. Paul, Prof. and Dean of the Faculty of Medicine, Paris.	
31890. June.	CONNIL, Dr. V., Senator, 19, Rue St. Guillaume, Paris.	
⁴ 1890, June. ⁶ 1890, June.	PASTEUR, Prof. Louis, 25, Rue Dutot, Paris. DE PIETRA SANTA, Dr. Prosper, Hon Sec. of the	
	French Society of Hygiene, 30, Rue du Dragon, Paris.	
⁷ 1890, June.	VALLIN, Dr. Emile, Professor of Hygiene, Director of the School of the Military Sanitary Service, Lyons.	
	GERMANY.	
°1890. June. ™1890. June.	HOBRECHT, Dr., Engineer, Berlin. von Hofmann, Prof. A. W., Professor of Chemistry, Berlin.	
¹¹ 1890. June. ¹² 1890. June.	KOCH, Dr., Director of the Hygienic Institute, Berlin. PETTENKOFER, Dr., Professor of Hygiene at the	
¹¹ 1890. June.	University of Munich. VIRCHOW, Dr. Rudolph, Professor of Pathology, Berlin.	

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HON. FELLOWS.

Reg. Date of No. Election. ²³1890, Juno. DE MEYER, Dr. van Overbeek, Professor of Hygicae at the State University of Utrecht, Netherlands.

ITALY.

¹³1890. June. BETOCCUI, Com^{re.} Alessandro, Prof., Civil Engineer, Ministry of Public Works, Rome.

ROUMANIA.

221890. Juno. FELIX, Dr. J., Professor of Hygicae, Bucharest.

RUSSIA.

21890. Juno. Suzon, Comto do, Architect-in-chief, Lique de Cadets 21, St. Petersburgh.

SWITZERLAND.

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

TURKEY.

211890. June. Zoimos, A., Pasha, Professor at the School of Medicine, Director of the Bacteriological Institute, Scerclary-General of the Administration of Public Medicine and Hygiene, Constantinople.

UNITED STATES.

²³1890. June. BILLINGS, Dr. John S., Washington, D.C. 27 1890. June. WALCOTT, Dr. Henry P., Cambridge, Massachusetts.

FELLOWS (FELLOW SAN. INST.)

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

¹⁹ 1889. Dec.	ABEL, SIR Frederick, BART., K.C.B., F.R.S., Imperial
	Institute, Imperial Institute Road, S. W., (40,
	Cadogan Place, S.W.)
561 1891. Dec.	ACLAND, SIR Henry W., K.C.B., M.D., D.C.L., F.R.S.,
	Broad Street, Oxford.
¹⁵ 1888. Oct.	Adams, G. E. D'Arcy, M.D., D.P.H.CAMB., F.G.S.,
	1, Clifton Gardens, Maida Vale, W.
¹⁶ 1888. Oct.	ALBANY, H.R.H. THE DUCHESS OF, Claremont, Esher.
316 1888 Oct.	ANGELL, Lewis, M.INST.C.E., F.K.C.LOND., Town Hall,
	Stratford, E.
²⁷ 1890. Feb.	ANNINGSON, Bushell, M.A., M.D., Cambridge.
²³ 1889. Dec.	ARMISTEAD, William, M.B., M.O.H., Shelford, Cam-
	bridgeshire.
451889. Dec.	BARRY, Charles, F.S.A., 1, Victoria Street, S.W.
³⁶⁵ 1888. Dec.	BASS, Hamar Alfred, M.P., Burton-on-Trent.

	FELLOWS.
Reg. Date of No. Election.	
³² 1888, Oct.	BELL, MAJOR C. W., J.P., D.L., Yewh stead, Sussex.
²⁹ 1888, Oct.	BIRCH, R. W. Peregrine, M.INST.C.E. Gate, S. W.
¹⁴ 1889, Dec.	BLOMPTELD, SIR A. W., M.A., F.R.I.B Place, W.
²¹ 1888, Oct.	BLYTH, PROF. A. Wynter, M.R.C. House, Marylebone, N.
41888, Oct.	+Boulsons, H. Perey, M.INST.C.E., Liverpool.
91890, Jan.	BRETT, A. T., M.D., M.O.R., Walford
³⁵ 1888. Oct.	BRIGHTEN, W. G., 108, Fenchurch
** 1889, Dec.	BROCK, J. H. E., M.D., B.SCLOND. Road, South Hampstead, N.W.
21888, Oct.	BROWN, Harry, The Elms, Worsle stead, N.W.
#1888. Oct.	BROWNING, Benjamin, L.R.C.P., M.R. M.O.H., 16, Royal Terrace, Wegmo
*1888, Oct.	BURBERY, J. Stone, Trent House, We.
**1888. Oct.	BURDETT, Henry C., F.S.S., F.L.S., chester Square, W.
P1888. Oct.	BURGESS, Peter, M.A., M.B., Driffield
²¹ 1888, Oct.	CAMBRIDGE, H.R.H. THE DUKE OF House, Park Lane, W.
^{3,7} 1888. Oct.	CAREW, R. R., Carpenders, Watford
⁷⁴ 1888. Oct.	CARTER, R. Brudenell, r.n.c.s., Street, Cavendish Square, W.
¹³ 1888. Aug.	CASSAL, Charles E., F.I.C., F.C.S., Sington, W., (Vestry Hall, Mount Square, W.), (Brenne House, Wan S. W.).
¹⁹ 1890. May.	CATES, Arthur, F.R.I.B.A., 7, White
³¹⁴ 1888, Oct.	COLLINS, H. H., F.R.I.B.A., 61, Ol E.C., (5, Randolph Road, W.).
^{\$7} 1889. Dec.	COLLINS, Wm. J., M.D., B.SC.LOND., Terrace, Regent's Park, N. W.
¹¹ 1888. Oct.	COLMAN, J. J., M.P., Carrow House,
71888, Aug.	CORFIELD, PROF. W. H., M.A., M. LOND., 19, Savile Row, W.
⁷⁶ 1888. Oct.	CRAWFORD, SIR Thomas, M.D., K.C. 5, St. John's Park, Blackheath, S.
⁹⁵ 1893, June.	CRIMP, W. Santo, M.INST.C.E., George Street, S.W.
^{**} 1888. Oct.	CUTLER, Thomas William, F.R.I Square, Bloomsbury, W.C.
¹⁰ 1888. Oct.	DAVEY, Alexander George, M.D., L. Belvedere Street, Ryde, Isle of Wa
519 1891. Mar.	DE COURCY MEADE, Thomas, M.I Muswell Hill, Hornsey, N.
¹⁰³ 1888. Oct.	DOULTON, SIR Henry, Lambeth, S.

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City Engineer,

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y Road, Hamp-

C.S., D.P.H.CAMB., wth. st Cowes, I. of W. The Lodge, Por-

l, Yorkshire. , K.a., Gloucester

d, Herts. 27, Queen Anne

Town Hall, Ken-Street, Grosvenor dsworth Common,

hall Yard, S.W. ld Broad Street,

D.P.II., 1, Albert

Norwich. .D.OXON., F.R.C.P.

Э.В., Q.H.S., LL.D., E. F.G.S., 27, Great

I.B.A., 5, Queen

.R.C.P., M.R.C.S., 9, ight. ., INST.C.E., Belmont,

.W.



280	FELLOWS.
Reg Date of	
No. Election.	Downow A Restand Avenue Realing
No. Election. ¹¹⁴ 1890, Feb. ³¹⁹ 1888 Oct	Dowson, A., Eastern Avenue, Reading.
1000, 001.	DOYLE, Patrick, C.E., F.G.S., F.R.S.E., F.R.A.S., M.R.I.A, Indian Engineering, Calcutta.
¹¹ 1888, Aug.	DUDFIELD, T. Orme, M.D., L.R.C.P., M.R.C.S., 14, Ashburn Place, Cromwell Road, S.W.
¹⁰⁴ 1888, Oct.	DYKE, T. J., F.R.C.S., The Hollies, Merthyr Tydfil.
1141888, Oct.	EATON, John, M.D., Montreal House, Cleator Moor,
	Cumberland.
¹¹³ 1888. Oet.	ELLIS, W. Horton, F.R.MET.SOC.
3111890. Dec.	EWART, Joseph, M.D., F.R.C.P., J.P., Montpelier House, Montpelier Terrace, Brighton, Sussex.
1191888. Oct.	FAYRER, SIR Joseph, K.C.S.I., M.D., F.R.C.P., F.R.C.S., LL.D., F.R.S., 53, Wimpole Street, W.
120 1888. Oct.	FIELD, Basil, B.A., 36, Lincoln's Inn Fields, W.C.
¹⁹ 1888. Aug.	FIELD, Rogers, B.A., MAINST.C.E., 7, Victoria Street,
-	Westminster, S.W.
¹²¹ 1888. Oet.	FLOWER, MAJOR Lamorock, Lee Conservancy Board, 12, Finsbury Circus, E.C. (48, Holland Road, W.).
3111888. Nov.	FORTESCUE, RT. HON. EARL, 48, Grosvenor Gurdens,
	S.W., (Castle Hill, South Molton, Devon).
"1888. Aug.	GARTON, SIR Douglas, K.C.B., D.C.L., IL.D., F.B.S., 12, Chester Street, Grosvenor Place, S.W.
1341888. Oct.	GOWERS, Wm. Richard, M.B., 50, Queen Anne St., W.
134 1888. Oct.	GRIMSHAW, Thomas Wrigley, M.D., Priorsland,
	Carrickmines, Dublin.
¹¹ 1893. Jan.	HALL, Edwin Thomas, F.R.I.B.A., 57, Moorgate Street, E.C.
¹¹¹ 1888. Oct.	HARKER, J., M.D., J.P., Hazel Grove, Carnforth, Lanc.
¹⁴² 1888. Oct.	HARRIS, Thomas, F.R.I.B.A., 6, Southampton Street,
	Bloomsbury Square, W.C.
¹³⁰ 1890, Jan.	HARBISON, C., M.D., D.P.H.CAMB., Newland, Lincoln.
1141888. Oct.	HART, Ernest, 38, Wimpole Street, W.
¹⁴¹ 1888. Oct.	HAVILAND, A., M.R.C.S., Egremont House, Delamere Terrace, W.
^{3**} 1890, June.	HEHIR, Patrick, M.D., F.R.C.S., D.P.H., Hyderabad, Decean, India.
¹³¹ 1890. Jan.	HILL, Alfred, M.D., M.R.C.S., L.S.A., The Council
	House, Birmingham.
6111893. June.	HILL, Prof. Alfred Bostock, M.D., D.P.H., M.O.H., 14,
	Temple Street, Birmingham; and Elmhurst, Olton,
	Birmingham.
³⁶⁷ 1888. Dec.	HIME, Thomas Whiteside, A.B., M.B., L.R.C.S., 54, Horton Road, Bradford.
1461888. Oct.	Hobson, George, M.INST.C.E., F.G.S., Abbey Buildings,
160 1 QQA Doc	Princes Street, Westminster, S.W. (Loughborough). Hone E.W. M.D. D.M. Municipal Offices Livernool
¹⁶⁰ 1889. Dec.	HOPE, E. W., M.D., D.P.H., Municipal Offices, Liverpool.
¹⁴⁷ 1888. Oct.	HUMPHRY, SIR G. M., M.D., F.R.S., Cambridge.
¹⁶¹ 1889. Dec.	HUNTER, SIR William Guyer, K.C.M.G., M.D., T.R.C.P., 21 Novfoll: Conserve Hugle Payle W
	21, Norfolk Crescent, Hyde Park, W.

	FELLOWS.
Rez. Date of No. Election.	
No. Election. 163 J 890, Jan.	ILIFTE, William, M.R.C.S., 41, Osmas
¹⁶⁹ 1888. Oet.	JONES, LIEUTCOL. A. S., U. C., A
• • • • • • • • • •	Culverside, Carshalton, Surrey.
^e 1888, Aug.	JUDGE, Mark H., A.R.I.B.A., 15, Conn
107 [888, Oct.	KELLY, Charles, M.D., F.R.C.P., Elle
	Road, Worthing.
**1888, Dec.	KINGDON, J. A., Grocer's Hall, E.C.
¹⁰ 1888, Oct.	LATHAM, Baldwin, M.INST.C.E., F.I
	r.s.s., 13, Victoria Street, S.W., Croydon).
1888, Oct.	LIAW, Henry, M.INST.C.E., F.R.MET.S
1999' Out	Street, S. W., (70, St. George's Ro
17*1889, Dec.	LAWRENCE, SIR Trevor, BART., M
	Gate, S.W.
³⁷² 1888. Oct.	LEAF, Charles J., F.L.S., F.S.A.,
	Regent's Park, N.W.
¹⁰ 1888. Dec.	LEAF, W., LITT.DOC., 6, Sussex Pla
_	N. W.
¹⁷⁴ 1893, June.	LEMON, James, M.INST.C.E., F.R.I.I
	Lansdowne House, Southampton; o
\$1000 Jum	bers, Westminster, S. W. LEWIS, PROF. T. Hayter, F.S.A.
⁴ 1888. Aug.	Kensington Gardens Square, S.W
1731888, Oct.	IAVESEY, J., M.INST.C.E., 2, VE
TOUGH ANDIN	Victoria Street, Westminster, S.W
¹²² 1888, Dec.	LONGSTAFF, G. B., M.D., M.A., I
	Putney Heath, S.W., (Twitchen,
	N. Devon).
³⁷¹ 1888. Dec.	LUBBOCK, RT. HON. SIR John, B.
	F.R.S., Lombard Street, E.C.
143 1888. Oct.	MACKEY, John Alexander Dixie, B.
151000 O.L	bourne Terrace, W. MANSERGH, James, M.INST.C.F., 5
1571888. Oct.	S.W.
200 1893. Jan.	†MAWBEY, Enoch George, Assoc.M
1000.000	Hall, Leicester.
^{1**} 1888. Oct.	MEATH, RT. HON. EARL OF, S3, Lat
	Park, W.
²⁵² 1892. Oct.	MIDDLETON, Reginald Empson, 2
	17, Victoria Street, S.W.
²¹¹ 1890, Jan.	MURPHY, Shirley F., M.R.C.S., 22,
5011000 T	Tavistock Square, W.C.
⁵⁰¹ 1890. June.	NEWSHOLME, Arthur, M.D., D.P.H. 15, College Road, Brighton, (Town
³⁷³ 1888, Dec.	NIGHTINGALE, Miss F., 10, South
1000, 1000,	Square, W.
³³⁷ 1890. May.	NORTH, Samuel W., M.R.C.S., F.G.
,,*	gate, York.
¹ 1888, Aug.	NORTHUMBERLAND, HIS GRACE TI

NORTHUMBERLAND, HIS GRACE THE DUKE OF, K.G., D.C.L., LL.D., 2, Grosvenor Place, S. W.

281

ston Street, Derby. ASSOC.M.INST.C.E.,

naught Square, W. lesmere, Gratwicke

R.MET.SOC., F.G.S., , (Duppas House,

.soc., 17, Victoria oad, Pimlico). M.P., 57, Prince's

6, Sussev Place,

we, Regent's Park,

B.A., F.S.I., F.G.S., and Palace Cham-

., F.R.I.B.A., 12,

ictoria Mansions,

D.P.H., Highlands, Morthoe, R.S.O.,

ART., M.P., D.C.L.,

A.OXON., 1, West-

5, Victoria Street,

M.INST.C.E., Town

ncaster Gate, Hyde

M.INST.C.E., F.S.I.,

Endsleigh Street,

., M.R.C.P., M.O.H., In Hall, Brighton). Street, Grosvenor

s., M.O.H., Mickle-



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Reg. Date of No. Election.	
No. Election. ³³¹ 1890. Nov.	Norter, Prof. J. Lane, M.A., M.D., D.P.H., West Cliffe, Woolston, Southampton.
²²¹ 1888. Oct.	OHREN, Magnus, ASSOC.M.INST.C.E., V.C.S., Lower Sydenham, S.E.
³²² 1888. Oct.	OLLARD, J. F., Maragion, Cornwall,
²²² 1888, Oct.	OLLARD, William Ludlam, Musticott House, Wal- soken, Wisbeach, Norfolk.
²²³ 1889, Nov.	PAGET, Charles Edward, M.R.C.S., D.P.H., M.O.H., Town Hall, Salford.
²²⁵ 1888, Oct.	PAGET, J., J.v., Stuffynwood, Mansfield.
¹² 1888, Aug.	PARKES, Charles Henry, Netherfield, Weybridge,
²²¹ 1858. Oct.	PARKES, Louis Coltman, M.D., M.R.C.8., D.P.H., 61, Cadogan Square, S. W.
2231888. Oct.	PEGGS, J. Wallace, ASSOC.M.INST.C.E., 9, Welbeck Mansions, Cadogan Terrace, S.W., (Southbourne Lodge, near Christchurch, Hants).
²²³ 1888. Oct.	PLUMBE, Rowland, F.B.I.B.A., 13, Fitzroy Square, W.
¹¹ 1888. Aug.	POORE, George Vivian, M.D., F.R.C.F., 30, Wimpole Street, W.
401 1890. Jan.	POWELD, SIR Francis Sharp, BART., M.P., 1, Cambridge Square, W., (Horton Old Hall, Bradford).
217 1888. Oct.	PRITCHARD, E., MANST.C.E., V.O.S., 1, Victoria Street, S.W., (37, Waterloo Street, Birminyham).
²¹¹ 1888. Oct.	RAWLINSON, SIR Robert, K.C.B., M.INST.C.E., 11, The Boltons, Brompton, S.W.
²¹⁰ 1890, Feb.	Rebwood, T. Hall, M.D., The Lawn, Rhymney.
6081891. Oct.	REID, George, M.D., D.P.H., County Medical Officer of Health, Stafford.
³²³ 1888. Oct.	REYNOLDS, PROF. J. Russell, M.D., F.R.C.P., F.R.S., 38, Grosvenor Street, W.
³³⁶ 1888. Nov.	RICHARDSON, SIR Benjamin Ward, M.D., LL.D., F.R.S., 25, Manchester Square, W.
²¹⁵ 1888, Oct.	RICHARDSON, J., M.INST.C.F., Methley Park, Leeds.
²⁵² 1890, Jan.	RIPON, MOST HON. MARQUESS OF, K.G., D.C.L., F.R.S., 9, Chelsea Embankment, S.W.
²¹⁶ 1888. Oct.	ROBINS, Edward Cookworthy, F.S.A., F.B.I.B.A., 46, Berners Street, W.
²⁴⁷ 1888. Oct.	ROBINSON, PROF. Henry, MANST.C.E., 13, Victoria Street, S. W., (54, Boundary Road, N.W.).
⁶²¹ 1892. Oct.	ROCHE, Antony, M.R.C.P.I., L.R.C.S.I., 72, Harcourt Street, Dublin, Professor of Hygiene and also of Medical Jurisprudence in the Catholic University, Examiner in Sanitary Science, Royal University,
²¹³ 1888. Oct.	Dublin. Russell, Hox. F. A. Rollo., F.R.MET.SOC., Dunrozel, Unslement
³²¹ 1888. Oct.	Haslemere. Russell, James A., M.A., F.R.C.P.EDIN., M.B., B.SC.,
²³⁶ 1890. Jan.	F.R.S.E., Woodville, Canaan Lane, Edinburgh.
⁴¹⁷ 1889. Jan.	Russell, J. B., M.D., LL.D., M.O.H., Glasgow. Salt, Thomas, M.P., 85, St. George's Square, S.W.
inco, oan,	DADL, LUOMAS, M.F., OD, DI. UCOLGES DEMILE, D. H.

FELLOWS. Reg. Date of No. Election. 243 1889, Dec. SEATON, Edward Cox, M.D., F.R.C.S., The Limes, 56, North Side, Clapham Common, S.W. SHAW, George, 20, King Edward Street, Newyate ²²³1888. Oet. Street, E.C. SIEVEKING, SIR E. H., M.D., 17, Manchester Sq., W. ***1888, Dec. SMITH, James, Osborne, A.R.I.B.A., 34, Southampton 217 1889. Nov. Street, Strand, W.C., (65, Frithfield Gardons, Uxbridge Road, W.). SMITH, William Howard, ASSOC.M.INST.C.E., City 421892. Oct. Engineer and Surveyor, Carlisle. SMITH, PROF. William Robert, M.D., F.R.S.E., D.SC., 2571888. Oet. Barrister-at-Law, 74, Great Russell Street, W.C., (Plumstead, Kent). SNELL, H. Saxon, F.R.I.B.A., 22, Southampton Build-²³³1888. Oct. ings, W.U., (Lynden Lodge, Elmfield Rd., Bromley, Kent). STEPHENS, Henry C., M.P., Avenue House, Finchley. 4601889. Mar. STRONG, Henry John, M.D., Colonade House, The 260 1888. Oct. Sterne, Worthing. SYKES, J. F. J., D.SC., M.D., 40, Camden Square, ²⁶¹1888. Oct. N,WSYMONS, G. J., F.R.S., 62, Camden Square, N.W. 41888. Aug. TAYLOR, J. Stopford, M.D., 6, Grove Park, Liverpool. 2531889. Dec. TEMPLE, RIGHT REV. Frederick, D.D., LORD BISHOP 2391888. Oct. of LONDON, The Palace, Fulham, S.W. THOMPSON, SIR Henry, M.B., 35, Wimpole Street, W. 221 1889. Dec. THORNE, R. Thorne, C.B., M.B., F.R.C.P., F.R.S., 45, ²¹²1888. Oet. Inverness Terrace, W. 2531888. Oct. TURNER, Ernest, F.R.I.B.A., 246, Regent Street, W. TWINING, Thomas, Perryn House, Pwickenham. *1888. Aug. 419 1891, Nov. VACHER, Francis, r.R.C.S., Birkenhead. WALFORD, Edward, M.D., D.P.H.CAMB., M.R.C.S., ¹⁰¹1889. Dec. M.O.H., Town Hall, Cardiff. WARINO, COL. G. E., Jun., M.INST.C.E., Newport, ²³³1888. Oct. Rhode Island, U.S. America. WATERHOUSE, Alfred, R.A., 20, New Cavendish ²³⁶1888. Oct. Street, W. WESTMINSTER, HIS GRACE THE DUKE OF, K.G., ²1888, Aug. Grosvenor House, W. WHITELEGGE, Benjamin Arthur, M.D., B.SC., D.P.H.CAMB., St. John's, Wakefield. ²³⁷1888. Oct. WILLIAMS, Dawson, M.D., 25, Old Burlington St., W. ²³⁴1888. Oct. WILSON, George, M.A., M.D., F.R.S.E., 7, Avon Place, ²³³1888. Oct. Warwick. WIX, II. A., 3, King's Bench Walk, Temple, E.C. 4151889. Jan.

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	961	4		MEMBERS.
	284		Reg. Date of No. Election.	
			^{No.} Election. ^{cod} 1892, Mar.	BAINE, Laurence Augustus, M.D., D.P. Lintz Green, Durham.
OR	DINARY MEMBERS (MEM. SAN. INST.)		"1888. Oct.	BAKER, SIR Benjamin, K.C.M.G., LI M.INST.C.E., 2, Queen's Square Place, W
† Marked thus	s have passed the Examination of the Institute for Local Surveyors.		4*1888, Oct.	BAKER, R., Ballingdon House, Green Lan
	ve passed the Examination of the Institute for Inspectors of Nulsances.		1892. Feb.	BARCLAY, Arthur, Assoc.M.INST.C.E., 34, . Primrose Hill, N.W.
og. Date of o. Election. ⁵¹ 1889. Mar.			⁷⁹¹ 1893, Nov.	BARRETT, Ernest James, ASSOC.M.INST.C. Surveyor's Office, Richmond, Survey.
331891, Dec.	S.W. Adams, Pror. Henry, M.INST.C.E., r.S.L., 60, Queen		cu1891, July	BARWISE, Sidney, M.D., D.P.H., M.O.H. County Council, 61, Uttoxeter New Roa
**1889. Mar.				†BASSETT, Gilbert Thomas, Highfield Re Birmingham.
" 1889. Feb.	The Elms, Paignton, South Devon, ALDWINCKLE, Thomas William, F.R.I.B.A., 1, Victoria Neuro, S.W.		³⁹¹ 1890. May.	⁺ BATEMAN, James, Civil Engineer, 27 Buildings, Johannesburg, South Africa
³² 1888. Oct.	Street, S. W. ALEXANDER, W. C., Aubrey House, Campden Hill, W.		¹⁷ 1888. Oct.	BAUGH, Alfred C., Egerton Street, Wrea Wales.
²¹ 1888. Oct.	AMES, H. St. Vincent, M.A., Cote House, Westbury- on-Trym, Bristol.		"1888. Oct.	BEAN, Alexander Thomas, 7, Victoria S
²² 1888. Oct.	ANDERSON, Geo., C.E., 35a, Great George Street,		³⁷⁶ 1888, Dec.	[†] BEARD, E. T., Wallsend, Pevensey, Susse BEARD, George, Thickthorn, Kenilworth
	Westminster, S.W.		³³¹ 1888, Oct. ¹⁹ 1888, Oct.	BEARD, Neville, The Mount, Ashbourne.
¹⁹ 1889. Jan.	†ANDERSON, John Reid, The Cottage, Gibson's Hill, Norwood, S.E.		³⁶¹ 1889. Dec.	BEARDMORE, George Russell, L.R.C.P.LO.
¹¹ 1890, Dec.	ANDERSON, John, ASSOC.M.INST.C.E., Town Hall, Montrose, N.B.			L.S.A., D.P.H.CAMB., Warwick House, U Islington, N.
231888. Oct.	ANDRESEN, August F., Priory Cottage, Mill Lane, West Hampstead, N.W.	×.	⁵⁰ 1888. Oct.	BEDDOE, John, B.A., M.D., F.R.S., The Cha ford-on-Avon.
²¹ 1888. Oct.			³¹ 1888. Oct. ⁴¹³ 1888. Dec.	BELL, Thomas, L.R.C.P.LOND., Uppingha ‡BENJAMIN, Horace Bernton, F.R.G.S., 2 State W (27) Upper Computing State
"1889. Mar.	ANDREWS, G. R., Surveyor, Johannesburg, South		521888. Oct.	Street, W., (37, Upper Grosvenor Street BENNETT, Hugh, M.R.C.S., Builth Wells,
²³ 1888. Oct.	Africa. ANDREWS, Jonathan, 10A, Mount Street, Berkeley	and the second sec	630 1892. Mar.	BENNETT, William Benjamin George, A o.e., Cranleigh, Portswood Road, South
²⁶ 1888. Oct.	Square, W. †ANGELL, John A., ASSOC.M.INST.C.E., Borough		³³ 1888. Oct.	BERNARD, William Larkins, F.R.I.B.A., 3, Chambers, Baldwin Street, Bristol.
331889. Nov.			³¹ 1888. Oct.	
³² 1892. Dec.	15, Dean's Yard, Westminster, S.W. Angles, Frank, M.R.C.P., M.O.H., Wanstead, Essex.		^{©1} 1892. Mar.	BERRY, William Walton, ASSOC.M.INST
¹⁶ 1891. Oct.	ARMSTRONG, Henry E., D. HYG., M.R.C.S., L.S.A., M.O.H., The Health Department, Town Hall, New-	ورغور كاليم اللغر معروب	55 1888. Oct.	near Manchester. BICKERSTETH, E. R., F.R.C.S., 2, Re Liverpool.
20 1888. Oct.	castle-on-Tyne. ARMSTRONG, PROF. II. E., PH.D., F.R.S., 55, Granville		⁶¹⁰ 1891. Mar.	
⁰¹ 1890. Oct.	Park, Lewisham, S.E. Aspinall, Miles, Borough Engineer and Surveyor's		⁵⁷ 1888. Oct.	BLACK, SURGMAJOR W. G., 2, Ge Edinburgh.
³² 1891. Nov.		1	⁴⁵⁷ 1889. Mar.	
³¹ 1888. Oct.	ganui, New Zealand. AUMONIER, F., 110, High Street, Manchester Square,	s de la constante de la constante de la constante de la constante de la constante de la constante de la constan	⁵³ 1888. Oct.	BLASHILL, T., F.R.I.B.A., Superintendi London County Council, Spring Gard
⁷⁴ 1892. Jan.	W. BAILEY, Thomas Castley, L.R.C.P., M.R.C.S., M.O.H., Crewe, Cheshire.		⁷³⁰ 1892. Oct.	BLIZARD, John Henry, ASSOC.M.INS Castle Lane, Southampton.

Reg. Date of Election. No. Election. 434 1889. Mar. Adams, James, M.D., M.O.H., Springwell, S.W. 663 1891. Dec. ADAMS, PROF. Henry, MAINST.C.E., F.S.L., 60, Victoria Street, E.C. ⁴⁵³1889. Mar. Abkins, George, L.R.C.P.LOND., D.P.H., The Elms, Paignton, South Devon, 431 1889, Feb. ALDWINCKLE, Thomas William, F.R.I.B.A., 1, J Street, S.W. ³³²1888. Oct. ALEXANDER, W. C., Aubrey House, Campden I ²¹1888. Oct. AMES, H. St. Vincent, M.A., Cote House, We on-Trym, Bristol. ²²1888. Oct. ANDERSON, Geo., C.E., 35a, Great George Westminster, S.W. 410 1889. Jan. †ANDERSON, John Reid, The Cottage, Gibson Norwood, S.E. 611 1890, Dec. ANDERSON, John, ASSOC.M.INST.C.E., Town Montrosc. N.B. ANDRESES, August F., Priory Cottage, Mill ²³1888. Oct. West Hampstead, N.W. ²¹1888. Oct. ANDREW, CAFT. C. W., Rutland House, Terrace, Kennington Park, S.E. 4331889. Mar. ANDREWS, G. R., Surveyor, Johannesburg, Africa. ²³1888. Oct. ANDREWS, Jonathan, 10A, Mount Street, L Square, W. ²⁶1888. Oct. †ANGELL, John A., ASSOC.M.INST.C.E., L Engineers' Office, West Ham, E. 533 1889. Nov. Anson, Frederick Henry, M.A., ASSOC.M.IN 15, Dean's Yard, Westminster, S.W. ⁷³²1892. Dec. Angles, Frank, M.R.C.P., M.O.H., Wanstead, ARMSTRONG, Henry E., D. HYG., M.R.C.S., 6161891. Oct. M.O.H., The Health Department, Town Hall castle-on-Tyne. ²³1888. Oct. ARMSTRONG, PROF. H. E., PH.D., F.R.S., 55, G Park, Lewisham, S.E. ⁶⁰¹1890. Oct. ASPINALL, Miles, Borough Engineer and Su Office, Worthing. 632 1891. Nov. ATKINS, Alfred, ASSOC.M.INST.C.E., F.R.I.B.A. ganui, New Zealand. ³¹1888. Oct. AUMONIER, F., 110, High Street, Manchester W. 6741892. Jan. BAILEY, Thomas Castley, L.R.C.P., M.R.C.S., Crewe, Cheshire.

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H., Dipton,

D., F.R.S., estminster. nes, N. Fitzroy Rd.,

E., Borough

, Derbyshire d. Derby. oad, Saltley,

7, Evchange vham, North

Street, S.W. ex.

ND., M.R.C.S., Upper Street,

antry, Brad-

m, Rutland. 28, Albemarle et, W.). Brecon. ASSOC.M.INST. ampton. , St. Stephen's

E., Graiseley,

r.c.e., Eccles,

odney Street,

R. Engineers,

eorge Square,

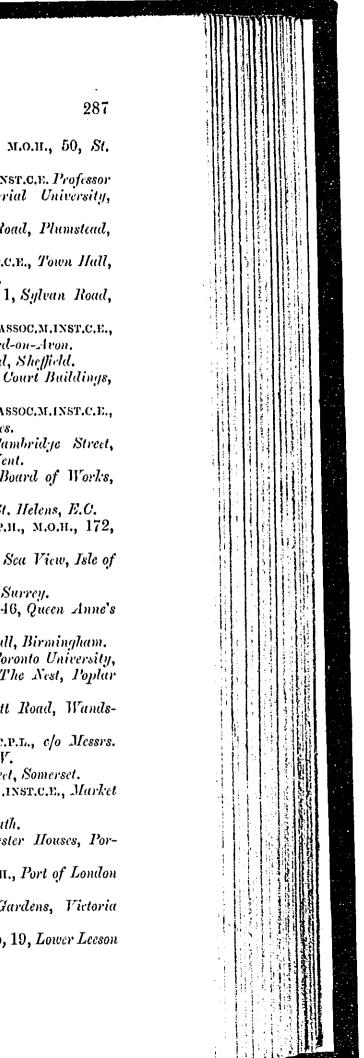
C.E., Vestry

ing Architect, ens, S.W. T.C.E., F.S.I.,

286		MEMBERS.	MEMBERS.
Reg. · Date	of		Reg. Date of No. Election. Date of the latter and a first state of the latter of the l
No. Elect 455 1889.		BLUMER, Frederick Milnes, B.A., M.B., M.O.H., St. Mary's Grove, Stafford.	Giles's Street, Norwich.
⁴¹⁷ 1889.	Eeb	BOLDING, John T., 19, South Moulton Street, W.	⁴⁰ 1889, Jan. †BURTON, W. Kinninmond, Assoc.M.IN
°1888.		BOND, Fredk. Adolphus, M.B., C.M.EDIN., D.P.H.EDIN.,	of Sanitary Engincering, Imper
10001		Hetton Lodge, Ferndale, Tunbridge Wells.	Tokio, Japan.
⁵¹⁰ 1890.	Apr.	BOOBBYER, Philip, M.B., M.R.C.S., M.O.R., The Guild- hall, Nottingham.	1893. July. †‡Busbridge, Harold, 96, Herbert Ro Kent.
377 1888.	Dec.	BOSTOCK, II., The Oaklands, Rowley Avenue, Stafford.	⁷¹⁴ 1892. June. BUTTON, Fred Smith, ASSOC.M.INSTA and 13, Palatine Square, Burnley.
°1888.	Oet.	Box, M. II.	¹⁰ 1893. Oct. †CAMERON, Donald, City Engineer,
° 1888.	Oet.	BRADSHAW, James D., B.A., M.B., M.R.C.P., M.R.C.S.,	Exeter,
	- ·	30, George Street, Hanover Square, W.	431889, Feb. †CAMPBELL, Adam Horsburgh, A
⁶³³ 1891.	July.	BRAGA, João Francisco, L.S.A., F.C.S., F.L.S., F.O.S.,	Borough Surveyor's Office, Stratford
100000	71	D.P.M., Glen Villa, Sunburg-on-Thames, Department Commen Paidle March 1994 Represented as	*1888. Oct. CAMPBELL, Charles, 7, Grange Road
4091889.	Mar.	BRENNER, George Reith, M.D., D.P.H., Bensham Lodge, West Croydon, S.W.	** 1888. Oct. CAMPBELL, HON. Dudley, 1, Mitre
⁶³ 1888.	Oct.	BRIDGES, J. H., M.B., P.R.C.P., 28, Ladbroke Gardens,	Temple.
10000	~~~	Notting Hill, W.	4701889, Mar. CAMPBELL, Kenneth Findlater, A
⁶¹⁷ 1891.	Jan.	BRIGHT, Philip, Assoc.MANST.C.E., 2, Newgate Street,	Borough Engineer, Stockton-on-Tee 1892. Nov. CANTY, William Henry, 24, Co
		E.C.	⁷¹³ 1892. Nov. CANTY, William Henry, 24, Co Prospect Hill, Tunbridge Wells, Ke
»¤1888.	Nov.	Bristowr, John Syer, M.D., r.R.s., 13, Old Burlington	¹⁹ 1888. Oct. CARLINE, John, ASSOC.M.INST.C.E., L
•··· ·		Street, W.	Lewisham, S.E.
⁵⁰⁵ 1889.	Apr.	BRODIE, John Shanks, ASSOC.M.INST.C.E., Town Hall,	"1888. Nov. CARRITT, Ernest, 18 & 19, Great St
411000	35	Whitehaven, Cumberland. BROOKE, Walter, Assoc.M.INST.C.E., Albany Build-	691892, Feb. CARROLL, Joseph, M.B., C.M., D.P.
493 1889.	лаг.	ings, 39, Victoria Street, Westminster, S.W.	Station Road, Ilkeston.
⁵¹⁷ 1889.	Apr.	BROOKE, Wm., M.D., M.O.IL, Crompton Local Board,	¹⁰¹ 1892. May. CAws, Edward Isaac, Coronation, Wight.
⁶⁷¹ 1892.	Ton	Shaw, near Oldham. Brown, Arthur, M.1887.C.E., The Guildhall, Notting-	⁶⁷ 1890. Nov. CHART, Robert Masters, Mitcham, S
1002.	oan,	ham.	³¹ 1888. Oct. CHATTERTON, George, M.INST.C.E., -
⁷²¹ 1892.	Oct.	t BROWN, Edwin, Local Board Offices, Burgess Hill.	Gate, S.W.
763 1893.		BROWN, Thomas, Alderman Norfolk County Council,	¹² 1888. Oct. CHATTOCK, Miss Frances C., Solihu
	- 1	King's Lynn, Norfolk.	⁷³⁴ 1893. Jan. CHEWETT, James Henry, C.E., of To Toronto, Ontario, Canada ; and I
⁶⁹ 1888.	Oct.	BROWN, William Ibbs, St. Michael's Avenue and	Plains Road, Toronto.
		Guildhall, Northampton.	"1888. Oct. CLARKE, James Wright, S, Salcot
¹¹¹ 1S93.	July.	BROWNRIDGE, Charles, ASSOC. M. INST. C.E., F.G.S.,	worth, S. W.
*** 000	<u>.</u>	Borough Engineer of Birkenhead, Cheshire.	"1888. Oct. CLARKSON, J. W., M.R.C.S.E., L.R.C.
**1888.		BRYANT, Thomas, F.R.C.S., 65, Grosvenor Street, W.	II. S. King & Co., Pall Mall, S.W
³⁷⁹ 1888.		BUCKTON, Mrs. 27, Ladbroke Square, W. BULLIS, William Daniel, Surveyor, 21, Finsbury	³⁰³ 1890. Oct. †CLOTHIER, Samuel Thompson, Stree
⁶²⁹ 1891.	piny.	Pavement, E.C.	⁷⁰¹ 1892. Apr. COALES, Herbert George, ASSOC.M.
⁶³³ 1891.	July.		Harborough, Leicester.
1001	e any i	Local Government Board, Whitehall, S.W.	⁵¹ 1888. Oct. COATES, C., F.R.C.P., 10, Circus, Ba
4161888	Dec.	†BUNTEN, Charles, St. Bernard, Cambridge Road,	⁸³ 1888. Oct. Соск, Frederick, м.р., 1, Porches chester Square, W.
		Aldershot.	³³² 1888. Oct. Collingridge, W., M.A., M.D., D.P.II
⁵³² 1890.	Apr.	BURDWOOD, James Watson, L.F.P.S., M.O.H., West	Sanitary Offices, Greenwich, S.E.
	-	Cottage, Bourne, Lincoln.	³³⁰ 1888. Oct. Collinson, John, 21, Ashley G
⁷¹¹ 1892.	May.		Street, S.W.
3 40 5 0 0 0	T	Hall, Banbury.	⁵³ 1888. Oct. [†] Comber, P. F., M.INST.C.E.IRELAND,
²³⁰ 1888		BURMESTER, Miss E., 13, Sussev Square, Hyde Park, W.	Street, Dublin.
567 1890	, Jan.	BURR, Alfred, F.R.I.B.A., 85, Gower Street, W.C.	

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	288	MEMBERS.	Reg. Date of	MEMBERS.
	lieg. Date of		No. Election.	
	No. Election. 724 1892. Sent.	CONNAL, Eben, M.INST.C.E., 49, Kerrsland Terrace,	1271888. Oet.	DEBENHAM, F. G., Cheshunt Park, He
· ·		Hillhead, Glasdow, Lanark, Scotana,	1971888. Oet.	DE CHAUMONT, Miss Anna Kenn
	"1888. Oct.	†COOPER, C. H., ASSOC.M.INST.C.E., Local Board		86, Abingdon Road, Kensington, W.
	10001 0000	Offices, Wimbledon, S.W.		†DENDY, William Cooper, P.A.S.I., &
	²⁰ 1888. Oct.	COOPER. Francis A., ASSOC, M.INST.C.E., Director of		partment, Lambeth Vestry, Kenn
!	10001 000	Pablic Works and Resident Engineer, Hong Kong		S.E.
·		(c/o II. F. Cooper, Nottingham and Notts Bank,	¹¹⁹ 1888. Oct.	DENNIS, Nelson F., Town Surveyor, 1
. <u>I</u>		Newark).	• 1892, Apr.	DICKINSON, Thomas Rusholm, ASSO
	319 1888. Nov.	COOPER, John, jun., Croydon, S.W.		Borough Surveyor, Hertford, Herts.
1 1	4131889. Jan.	†COOPER, William, 32, Cheethum Street, Cheethum,	•••1892, Jan.	DICKINSON, William Gilbert, L.R.C.P.,
		Manchester.		1, Wimbledon Road, Southfields, Was
	⁹¹ 1888. Oct.	CORDETT, Joseph, Borough Engineer, Town Hall,	⁵² 1889, May.	
4		Salford.	131000 S.u.4	Malvern. †Dixon, Francis Edward, Local Board
	6001891. Dec.	CORNER, John, 83, Lavender Sweep, Clapham June-	··· 1892. 5ept.	Bridge in Walton-le-Dale, Lancaster
-		tion, S.W.	^{c#} 1891, May	
	6111892. Mar.	CORNISH, William Robert, SURGGEN., F.R.C.S., C.I.E.,	1001, 2007	veyor, Wandsworth, S.W.
		Q.H.P., S, Creswell Gardens, S.W.	³²⁹ 1889, Apr.	
	²² 1888. Oct.		1000. 1101	dent Medical Officer of Health, City
- 1	²³ 1888. Oct.	COURTNEY, MAJOR D. C., R.E., 22, Collingham	¹¹² 1588, Oct.	DOULTON, James, Lambeth, S.W.
, I		Gardens, Kensington, S.W.	⁰¹⁴ [891, Jan.	
· .	³¹³ 1889. Oct.	Cowan, Peter Chalmers, n.sc. (EDIN.), ASSOC.M.	³¹⁴ 1889, Apr.	
		INST.C.E., County Surveyor, Downpatrick.		Engineer, 190, Edlestone Road, Crev
• •	⁹⁴ 1888. Oet.	Cowras, Frank, 309, Oxford Street, W.	³¹¹ 1888, Oet.	
		†‡CRA10, G. A., Market Drayton, Salop. CRANDROOK, THE RT. HON. VISCOUNT, O.C.S.I.,		minster, S.W.
	⁹³ 1888, Oct.	17, Grosvenor Urescent, S. W.	^{e1} 1891. Feb.	EDGE, Frederic James, ASSOC.M.IN
	⁷³³ 1893. Jan.			Offices, Cleator Moor, Cumberland.
	1000. 0411	The Guildhall, York.	⁵⁻¹ 1893. Oet.	†ELFORD, Ernest J., The City En
	310 1889. June	- $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$		Norwich, Norfolk.
		ley, Kent,	¹¹ 1888. Oct.	
	⁶³¹ 1891. Jun	e. CRISP, James Gregory, Anyle Villa, Leckhampton,	⁴⁰ 1892, June	
• ,		Cheltenham.		F.R.C.S.ENG., D.P.H.CANTAB., L.R.C.P.
	°*1888. Oct.	CROWLEY, Frederick, Ashdell, Alton, Hants.		Infantry, Decean, India.
	472 1889. Mar		²⁵³ 1888, Dee,	
		Row, Scarborough.	⁶³² 1892, Mar	ENTWISTLE, Henry, Local Board C Lancaster.
	¹⁰⁰ 1888. Oct		⁴²⁾ 1889, Jan.	
		Kendal.	³ ³ 1888. Nov	
	³⁷⁷ 1890, Mai	DABBS, George Henry Roque, M.B., M.R.C.S., M.O.H.,	1005.110	care of Messrs. Watson Bros., 27, Le
	_	Highfields, Shanklin, I. of Wight.		E.C.
	¹⁰³ 1888. Oct	. +DARCH, John, 74, Sursfield Road, Balham, S.W.	³²¹ 1889. Jan.	
	7091892. May		⁶⁴³ 1892. Mar	
	511000 T	Shrewsbury. . DAVIS, George Brown, Cambridge House, South		Yorkshire.
	7381893. Jan		⁷⁷⁴ 1893. Jan.	FAWCETT, Edmund Alderston Sam
	300 1 QUA Osk	Lambeth Road, S. W. †DAV18, Nevillo Brookes, ASSOC. M.INST.C.E., P.A.SURV.		INST.C.E., 13, Victoria Street, S.W.
	³⁰⁹ 1890. Oct	INST., Water Works Office, Leicester.	¹²³ 1888. Oet.	FAWCETT, William Milner, M.A., F.R.
	¹⁰⁶ 1888. Oct			Street, Cambridge.
	1000, 001	Local Board, Barking, Essex.	⁶³⁷ 1891. July	+‡FELKIN, Howard Riley, 23, B
l k k z k z	¹⁰³ 1888. Oct		19110/0	Chiswick.
5 * 	⁷³¹ 1892, Oct		¹²³ 1888. Oct.	FIELD, Horace, 14, Gray's Inn Squa
		• • •		

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289 , Herts. ennedy Francois, W. ., Surveyors' De-Kennington Green, , West Cowes. SSOC, M. INST. C. E., .P., M.R.C.S., D.P.H., Wandsworth, S. W. Woodyate, Great ard Offices, Bamber ster. Ingineer and Surn.c.s., Superinten-hty of Cork. ate Street, E.C. 1881.C.E., Borough Trewe. ean's Yard, West-LINST.C.E., Public Engineer's Office, Poole, Dorset. ry, M.B., B.S.LOND., C.P.LOND., Madras Sanctuary, S.W. 1–Offices, Swinton, ndish Place, W. ., C.M., D.P.H.CAMB. , Leadenhall Street, nare, W. l, Hoyland Nether, Sandford, Assoc.M. W. F.R.I.B.A., 1, Silver Brackley Road, quare, W.C. \mathbf{T}

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290 Reg.	Date	o of	MEMBERS.
No. 127 18	Elec SS.	uon. Oct.	FISHER, T. J., 50, Thorne Road, South Lambeth,
⁷²¹ 18	92.	Sept.	S.W. FLETCHER, Walter John, F.R.I.B.A., Wimborne, Dorset.
^{\$39} 18	91.	Oct.	†‡FLOWER, Thomas James Moss, Carlton Chambers, Baldwin Street, Bristol.
¹²⁴ 18	ss.	Oet.	FORDE, H. C., MAINST.C.E., 4, Great Winchester Street, E.C.
⁶³⁰ 18	91.	May.	
¹²⁾ 18	SS.	Oct.	Fosten, Reginald Le Neve, r.c.s., North Road, Droylsdon, Manchester.
⁷¹³ 18	92.	Nov.	FowLER, Alfred Mountain, M.INST.C.E., 1, St. Peter's Square, Manchester.
13918	SS.	Oct.	FRANK, Philip, M.D., Cannes, France.
¹⁰¹ 18			FRASER, James, M.INST.C.E., 100, Castle Street, Inverness, N.B.
42218	89.	Jan.	FRASER, W. J., ASSOC.M.INST.C.E., 98, Commercial Road, E.
¹³³ 18	88.	Oct.	GALTON, Francis, F.R.S., 42, Rutland Gate, S.W.
		Mar.	GANGE, Frederick A., M.D., M.O.H., Faversham, Kent.
⁷³² 18	92.	Oct.	GAY, John, M.R.C.S., L.R.C.P., D.P.H., 119, Upper Richmond Road, Patney, S.W.
13618	88.	Oct.	+GEES, Harry, Hillside, Ökehampton, Devon.
⁶³⁶ 18	91.	July.	†‡Gunns, Arthur Gordon, Surveyor's Office, Midhurst.
³⁶⁰ 18	89.	Dec.	†G1BSON, William, Bonhay Road, Excter.
- ⁴⁰ 18	\$9.	Jan.	†GILBY, Charles, Bath.
137 18	88.	Oct.	GILL, D., Farleigh, Weston-super-Marc.
⁶³⁰ 18	91.	Nov.	GILLILAND, William John, Architect, 74, Royal Avenue, Belfast.
³⁵³ 18	888.	Dec.	GLADSTONE, J. H., PH.D., F.R.S., 17, Pembridge Square, W.
⁶⁷⁶ 18	92.	Jan.	GLAISTER, John, M.D., D.P.H., 101, Great Russell Street, W.C.
³⁴⁶ 1S	888.	Dec.	GLEN, A. W., 33, Davies Street, Berkeley Square, W.
⁵⁷³ 18	<u>90.</u>	Mar.	
⁵¹³ 18	391.	Jan.	GOING, Joseph A., M.R.C.S., B.A., M.O.H., Fox Bay, West Falkland Islands, South America.
³¹⁶ 18	389.	Nov.	
³¹³ 18	389.	Apr.	GRANT, Ogilvie, M.B., C.M.EDIN., M.O.II., Queen Mary's House, Inverness, N.B.
⁶³⁶ 18	392.	Feb.	GRANTHAM, Richard Fuge, M.INST.C.E., Northumber- land Chambers, Northumberland Avenue, S.W.
¹³⁹ 18	888.	Oct.	GRAY, Alexander, 25, Greenhill Road, Hampstead, N.W.

		MEMBERS.
Reg. Dat No. Flor	e of Hon	
Reg. Da [*] No. Etec ³³¹ 1890,	Apr.	GREATOREX, Albert Daniel, Loca Public Hall, Sutton, Surrey.
^{##} 1892,	July.	+GREEN, William Samuel, Idridgeho
⁷⁰³ 1892,	Apr.	GREASON, John, ASSOC.M.INST.C.E., Padiham, Lancaster.
⁴¹⁰ 1888.	Oct.	GRELLIER, William, F.R.I.B.A., 6, Q N.W.
^{an} 1888,	Oet.	GROVES, Joseph, B.A., M.D., F.G.S., of Wight.
^{3/3} 1890.	Jan,	GRUGGES, William, D.P.H., 11, 2 Eding, W.
⁷⁷⁵ 1893.	July.	#Пловоск, Harry Frederick, 9, Ela der Hill, S. W.
⇔1891 .	Mar.	HALL, Watkin, Assoc.M.INST.C.E., La College Road, Gt. Crosby, Lancash
^{c12} 1891,	Jan.	HAMILTON, Walter M., M.D., D.P.H
^{e#} 1892.	Mar.	Road, Patricroft, Lancashire. HAMPTON, Willio Thomas, F.S.I., L ville, Leicester.
¹¹ 1888,	Oct.	HANCOCK, Charles, M.A.OXON, 2, Temple, E.C., and Reform Club, S
^{c10} 1890.	Dec	HANSON, John, Victoria Chemical 1
¹³ 1859.		HARDING, J. R., M.INST.C.E., Ashle
³⁰⁵ 1889,	Apr.	Surrey. HARE, C. J., M.D., F.R.C.P., Ber. Manuscherter Science W
¹⁷⁶ 1889.	Mar.	Manchester Square, W. HARPUR, William, M.INST.C.E., Tow Senson Road, Claydiff
³⁷⁹ 1890,	Apr.	Severn Road, Cardiff. HARRIS, Arthur Wellesley, M.R.C.
¹³¹ 1888 .	Oet.	M.O.H., High Street, Southampton. HARRISSON, Thomas Harnett, F F.R.I.B.A., Central Buildings, No.
⁷⁰⁷ 1892,	Nov.	Liverpool. HARRISON, William Joseph, A
		F.R.MET.SOC., 7, Carteret Stree S.W.
** 1888.		HARROLD, Miss C., 10, Church I Birmingham.
^{***} 1893,	Oct.	HARVEY, Thomas Fletcher, Assoc. gincer and Surveyor to the Merth Board, Merthyr Tydfil, Glamorya
⁶¹³ 1891.	Nov.	HASLAM, Dryland, Junr., F.S.I., Fr. bers, Reading.
³³⁴ 1888,	Oct.	HASLAM, Lewis, Ravenswood, near I
⁶²⁶ 1S91.	Apr.	IIASLIP, George Ernest, м.D., м D.P.H., 3, Southampton Street, Stra
¹⁵² 1888.	Oct.	HAYWARD, C. F., F.S.A., F.R.I.B. Street, Bloomsbury, W.C.
³³³ 1888.	Oct	HEAD, Henry, Backingham, Old Sh
⁴¹³ 1889,	Feb.	HEAD, Mrs. II., Buckingham, Old S

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al Board Offices,

uay, Derby. , Woodbine House,

Queen Anne's Gute,

Carisbrooke, Isle

Montpelier Road,

and Road, Laven-

Local Board Offices, hire. I., 456, Liverpool

Hotel Street, Coal-

2, The Cloisters, S.W. Works, Wakefield. ley Road, Epsom,

rkeley House, 15,

vn Hall, and 197,

.s., L.s.A., D.P.II.,

ASSOC.M.INST.C.E., orth John Street,

ASSOC.M.INST.C.E., eet, Westminster,

Road, Edgbaston,

C.M.INST.C.E., En-thyr Tydfil Local anshire. riar Street Cham-

Bolton. M.R.C.S., L.R.C.P., and, IV.C. .A., 47, Muscum

horcham, Sussew. Shorcham, Sussew.

Reg. No.	Date of Election.	
1591	\$88. Oct.	HELLYER, S. Stevens, 21, Newcastle Street, Strand,
		W,C,
^{3.19}]	888. Dec.	HILL, Miss F. M. Davenport, 7, Upper Wimpole Street, W.
a]	ISSS. Dec.	HILL, Miss R. Davenport, 7, Upper Wimpole Street, W.
121	889, Jan,	11115, Pearson, 6, Pembridge Square, W.
111	SSS, Oct.	HILL, Samuel, A.R.I.B.A., 16, Russell Square, W.C.
154	888. Oct.	H11.1., William II., Town Hall, Kensington, W.
	1891, Oct.	+HILLS, Harry James, 97, Camden Street, Camden
670 1	892, Feb.	Town, N.W. Honson, John Morrison, M.D., D.P.H., Croydon, S.W.
437 j	889, Mar.	Hongarrs, E. A. Brayley, 39, Redeliffe Square, South
1	toor mary	Kensington, S.W., and Agence Dalziel, 59, Rue des Victoires, Paris.
137]	888. Oct.	Hondson, Shadworth IL, 45, Conduit Street, W.
	891. July.	HobGSON, William James, ASSOC.MAINST.C.R., High Park, Near Ryde, Isle of Wight.
³⁵¹]	1890. Apr.	HOLBERTON, HENRY Nelson, L.R.C.P., M.R.C.S., D.P.U., East Moulsey, Surrey.
134]	1888. Oet.	HOLMES, Timothy, M.A., F.R.C.S., 18, Great Cumber- land Place, W.
152]	1888. Oct.	HOLT, H. P., ASSOC.M.INST.C.E., F.O.S., The Cedars, Didshury, Manchester.
¢;1	1891. Nov.	HOLROYDE, John, M.R.C.S., L.S.A., D.P.H., M.O.H., Camden House, Chatham.
474	188 9. Mar.	HOOLEY, Cosmo C., Assoc.M.INST.C.E., The Union
553	1889. Nov.	Offices, Barton-upon-Irwell, Manchester, HOOPER, Charles, M.R.C.S., M.O.H., Aylesbury, Bucks.
		†#HOUGHTON, John, Poplar Road, King's Heath, near
	iccor oun	Birmingham.
101	1888. Oct.	HOWARD, E., 84, Upper Whitecross Street, E.C.
	1890. June	, ‡Hoy, Peter, 7, Park Place, Clarence Gate, N.W.
163	1888. Oct.	†HUBBER, Frank, 85, South Street, Excter.
619	1891. Oct.	†HUNT, John W., Maindee, Newport, Monmouth.
652	1892, Feb.	HUNTER, Alexander H., Craiglands, West Kirby.
	1893, Feb.	HUNTER, John, 9, Lincoln's Inn, W.C.
3 •1	1888. Dec.	INGLIS, Cornelius, M.D., 1, Albert Mansions, Victoria Street, S.W.
-61	1891. Nov.	INGRAM, Matthew, Hygcia Works, and Durham Lodge, Old Trafford, Manchester.
317	1890. May.	
601	1890. Nov.	+JAMES, Arthur Charles, ASSOC, MAINST.C.E., Local
527	1889. May	
654	1801 No	Cazenove Road, Stamford Hill, N. JOHNSON Samuel M.D. C.M. M.O.H. Steles-on-Teent.
	1891. Nov.	
	1892. Apr. 1891. Oct.	†KAY, Walter Robert, Mount Sion House, Bury.

MEMBERS. Reg. Date of No. Election. No. Election. ³⁰⁴1889, Mar. KEMPSTER, William Henry, M.D., M.O.H., Oak House, Battersea, S.W. KENDELL, Daniel Burton, M.B.CANTAB., Thornhill ⁴⁰¹1892, Apr. House, Walton, Wakefield. KENNETT-BARRINGTON, SIR Vincent Hunter B., ¹⁰1888. Oct. 65, Albert Hall Mansions, Kensington Gore, W. KENWOOD, Henry R., M.B., L.R.C.P., D.P.H., T.C.S., ⁶³³1892, Jan. 189, Adelaide Road, Hampstead, N.W. "1893, June. Kibb, Thomas, Assoc.M.INST.C.E., City Engineer of Ripon, 8, Gladstone Terrace, Ripon, Yorkshire. 11 1892. July. +KILFORD, Henry James, Borough Surveyor, Ilkeston, Derby. KINNY, Oscar John, Kelvin Grove, Staincliffe, Dows-³³⁴1889, Dec. bury. 191893. Feb. †‡KIRK, John Wright, Town Hall, Caxton Street, Westminster, S.W. KIRWAN, SURG.-LT.-COL. A., D.P.H., F.R.C.S.EDIN., ³⁰¹1889, Mar. 10, Wenlock Terrace, York. KYLE, Thomas W., M.D., D.P.H., M.O.H., Measham, 4741889, Mar. Atherstone. LACY, William George, 82, East Hill, Wands-¹⁷¹1588. Oct. worth, S.W. LATTAN, George Bastable, ASSOC.M.INST.C.E., Local ¹¹⁰1892. May. Board Offices, Queen's Road, Twickenham. ³³¹1889, May. LAING, R., M.R.C.S., L.R.C.P., F.R.MET.SOC., M.O.H., 29, Waterloo Road, Blyth, Northumberland. LAKE, W. Wellington, M.R.C.S.(ENG.), D.P.H.(CAMB.), ⁷⁷³1893, July, Medical Officer of Health, Broad Street Common, near Guildford. "1893. July. †LAMBERT, Joshua, Local Board Offices, Tottenham, N. ³³³1888. Dec. LAVENDER, Charles Henry Nalder, 72, St. Ermin's Mansions, Westminster, S.W. ⁷⁴⁵1892, Nov. LAW, Herbert Henry, ASSOC.M.INST.C.E., 17, Victoria Street, S.W. ⁶³³1892. Mar. LAWFORD, George Maxwell, ASSOC.M.INST.C.E., M.SOC.E., 13, Victoria Street, S.W. ¹⁷¹1888. Oct. LAWRENCE, Edwin, 10, Kensington Palace Gardens, W. LAW-GREEN, Charles, ASSOC.M.INST.C.E., Surveyor, ⁷³⁹1893, Jan. Swindon Highway Board, Swindon, Wilts, and Oundle, Northampton. ¹⁷⁷1888. Oct. LE GRAND, A., 125, Bunhill Row, E.C. ¹⁵³1888. Oct. LEONARD, Hugh, 7, Hanover Square, W. LE ROSSIGNOL, Francis, F.S.I., 1, Gresham Buildings, ¹³⁰1888. Oct. Basinghall Street, E.C., (29, Penn Road Villas, Camden Road, N.). LETTS, Thomas Hollins, 185, Earls Court Road, 5361889. June. South Kensington, S.W. ⁷¹²1892. Oct. LEWIS, Thomas Laurence, Engineer and Surveyor, St. George, Gloucester.

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1	294		MEMBERS.		li		MEMBERS.
	lleg. Date o		21112010112004		Reg. I	ate of	
	No. Electio	1.		h. l .	$\frac{N_{0}}{44188}$	s. Dec.	MARTINDALE, William, 10, New Can
-	¹⁵² 1888. C		b, J. Edward, Rodney Chamb			· · · · · · · ·	II.
	6731892, J		John Fletcher, M.N., M.1 arley Street, Cavendish Square,	, H'.	123 1883	s. Oet.	MARTINEAU, E. H., F.R.I.B.A., 30, We Portland Place, W.
	⁷⁰¹ 1893, N	to the	stone, George, Assoc.M.INST. Vestry of St. George's, Ha alico Road, London, S.W.		⁷⁷ 1893	3. May.	MASON, Charles, ASSOC.M.INST.CE., A. SOC.ENG., Surveyor to the Vestry of S
	⁷⁶⁷ 1893. N	ay. †‡Lioyb,	Christopher, 2, St. Mark's ston, Kent.	Terrace, New			the-Fields, The Town Hall, Charin don, S.W.
ł	^{1*1} 1888, O		Robt, Samuel, 84 & 85, White	ceross St., E.C.	116188	8, Oef,	MASON, Hugh H., M.R.C.S., Abbey Lod
1 2 1 1	573 1890. N	ar. Loane,	Joseph, M.R.C.P.E., D.P.H., M. Road, St. John's, S.E.		•••1S0:	2, Feb.	MASSIE, Frank, ASSOC.M.INST.C.E., F.S.I Tetley House, Wakefield.
* * *	³⁰⁷ 1889, A	pr. Lockwo Place,	oop, Phillip Causton, MANST.C.F Brighton, Sussex.		***189	3, May.	veyor to the Local Board, Dorkiny, 3
• • •	⁷⁰⁹ 1892. A	Correo	Louis J. McKenzie, MANST.C. 665, Buenos Ayres, Argen Amanim		¹⁹⁷ 188	8. Oct.	Dorking, Surrey. MATHEWS, J. Douglass, F.R.I.B.A., F.S. Hill, E.C.
	⁴²³ 1889. Ja	n. – Lowr, I	America. Mrs. Thomas, Solihull, Birming		***188	8. Oct.	MELISSENOS, G. C. A. Melisurgo, ASS Palazzo Cocozzo, 76, Via Poerio, Naj
	⁶³² 1891, Ji	Cross /	Frederick Charles, Assoc.M. Street, Manchester, (9, Victoria	Street, S.W.).	201185	s. Oct.	
::: ::::::::::::::::::::::::::::::::::	¹⁺³ 1888. O	<i>S.E.</i>	Washington, 85, Asylum Ro		²⁷¹ 188	8. Oet.	MINEARD, George Edward, F.R.H.S., Gardens, Earl's Court, S.W.
- - :	¹⁹³ 1888. O	t. ‡Mackes Place,	zie, F. Morell, m.r.c.s., l.s. .s.w	.A., 10, Hans	75189	2. Oet.	
	1891, N	ov. Mackey	хли, William Leslie, м.л., м.н х м.о.н., <i>Castle Douglas, N.B.</i>			1. Dec.	MITCHELL, Robert, Consulting Sani Cape Town, South Africa.
ļ	¹⁰¹ 1888. O		, John B., 2, Bouverie Street, Fl		253 188	8. Oct.	MOCATTA, F. D., 9, Connaught Place,
	⁴⁵⁴ 1889. M	ar. Macsay	MANA, Charles Edward, L.K.Q cphen's Green, Dublin.		²⁶⁷ 188	8. Oet.	Montaou, Samuel, 12, Kensington F W.
1	³⁹⁵ 1888. D	ee. McÁrt	nun, A., J.P., D.L., 79, Holland		°"189	1. Dec.	Mone, James, Jun., Assoc.M.INST.C.E.
1	••• 1890. O	Place,	rn, William, M.A., M.D., D.F Plymouth.	p.11., 7, Flora	¢24189	1. May.	
	¹⁹⁴ 1888. O	bridge		•	⁵¹² 188	9. July.	
	³¹² 1888. O		Hugh Umsworth, M.INST.C.E Westminster, S.W.	., 11, Victoria			Albans. †Morter, Edwin, Town Hall, Walthar
	¹⁶⁰ 1888. O		RAN, Alexander, Galloway I Putney, S.W.	louse, Carlton			†Morley, J. G., Assoc.M.INST.C.E., Tot ford, E.
	5471890. A	pr. McNeii	M., Roger, M.D., D.P.H., J.P 9 Medical and Sanitary Officer.			1. Jan.	Morris, Albert, M.r.c.s., L.r.c.P. Buildings, Southend.
	¹⁰³ 1888. O	et. †Maguin	e, William Robert, F.R.MET.So Dublin, (Town Hill, Dalkey, C	ic., 10, Dawson	710189	2. Nov.	[‡] Morris, Griflith John, R.E. Establ badoes.
	¹⁹⁴ 1888, O	et. Маллву	, Frederic Thomas, Assoc.M.I Office, Guildford.		^{52*} 1S8	9. May.	MORRIS, Pryce Jones Langford, M. M.O.H., Halesworth, Suffolk.
	6721892. J		r, Пerbert, м.а., м.в., д.р.н.,	, M.O.H., West	²¹⁰ 188	8. Oct.	MOUAT, F. J., M.D., 12, Durham Vill W.
	5041890. J	ily. Marsdf	сан. x, James Aspinall, м.н.с.s., , Standish, Wigan, Lancashire.	L.S.A., D.P.H.,	211 188	S. Oct.	MOUAT, SURGEON-GENERAL J., C.B., Palace Gardens Terrace, W.
	7361892. 0	et. Marsde	х, Robert Sidney, м.в., 1).SC., F.R.S.E.,	213 188	8. Oct.	MUMBY, B. II., M.D., D.P.H., M.R.C.S. Hall, Portsmouth.
-		Birken	, 65, Grange Mount, and blead.	sown sinn,	⁵¹² 188	9. Apr.	

$\mathbf{295}$

- Cavendish Street,
- , Weymouth Street,
- E., A.R.I.B.A., MEM. of St. Martin's-inharing Cross, Lon-
- 1 Lodge, Barking. F.S.I., F.R.MET.SOC.,
- oc.m.inst.c.n., Suroy, 35, High Street,
- F.S.I., 11, Dowgate
- , ASSOC.M.INST.C.E., , Naples. NST.C.E., Surveyor,
- n.s., 70, Philbeach
- marnock, N.B. Sanitary Engineer,
- lace, W. on Palace Gardens,
- r.C.E., F.R.MET.SOC., W. Assoc. M. INST. C. E.,
- Victoria Street, St.
- ilthamstow. , Town Hall, Strat-
- n.c.p., Post Office
- Stablishment, Bar-
- l, M.R.C.S., L.R.C.P.,
- Villas, Kensington,
- C.B., F.R.C.S., 108,
- п.с.з., м.о.п., Тошп
- , Town Hall, Belfast.

MEMBERS.

296	MEMBERS.		MEMBERS.
Reg. Date of	1117.A. (P17A.C.)	Reg. Date of	
No. Election.	Marrie Marrie Hanne 09 Oallas Caran VIII	No. Election. 701509 Doo	POULSON, Frederick Thomas, Co
³⁶³ 1889. Dec.		. 1995' Dec.	spector, 58, Wolverhampton Roa
²¹³ 1888. Oct.	NANSON, Tom, 9, Park Crescent, Stockwell Park	=1888. Oet.	
2021000 N	Road, S. W.	- 1000, 000,	1111, S.E., (28 and 29, St. Swith
3621888. Nov.		***1888. Oct.	
10000 35	Street, Westminster, S.W.	⁴⁰⁴ 1888, Dec.	
529 1889. May.			fair, W.
	County Buildings, Cupar, Fife, N.B.		
²¹⁶ 1888. Oct.		³¹¹ 1888. Oct.	Bishop's Stortford, (1, Hanw
³³ 1892, Oct.	†‡NEWMAN, Reginald William, ASSOCMANST C.E.,	i	
	3, Kempton Villas, Hampton, Middlesex.		Street, W.). PULLAR, Robert, J.P., F.R.S.E., Ta
²²⁰ 1888, Oct.		= 1888, Oct.	
	Chambers, Corporation Street, Birmingham.	²¹⁰ 1888, Oct.	
²¹⁹ 1888. Oct.	NICOL, W. E., Balloyic, Aboyne, Aberdeen, N.B.		Westminster, S.W.
•••1890. Dec.	NUNN, F. C., ASSOC.M.INST.C.E., Eastnor, Sydenham	²¹¹ 1888. Oct.	
	1170, S.E.		S.W.
⁷³⁷ 1893. Jan.	O'NEILL, Henry, M.D., M.CH., 6, College Square	^{≠17} 1888. Oct.	
	E., Belfast.		
²²⁴ 1888, Oct.	PAGE, Herbert Markant, M.D., D.P.H.CAMB., M.R.C.S.,	³⁵⁰ 1889, Nov.	†‡RADCLIFFE, Joseph, F.R.MET.SOC.
	16, Prospect Hill, Redditch.		Todmorden.
²³⁰ 1888, Oct.	PAULANDINI, T., 21, Alexander Street, Westbourne	504 1890. Nov.	
	Park, W.		153, High Street, Patney, S.W.
³¹ 1889. May.		²¹⁹ 1888. Oet.	
	Street, Lancaster.	10000 31	Pelham Chambers, Angel Row,
³⁰³ 1889. Mar.	PARKER, John, Assoc.M.INST.C.E., 42, Deyden Street,	¹⁴² 1889, Mar.	+RALLTON, James, East Barnet P
	Nottinyham.		Station Road, New Barnet.
^{**} 1890. Mar.	†PARKER, John, ASSOC.M.INST.C.E., City Engineer,	5** 1890. Apr.	
	Hereford.	4-31889. Mar.	
201892. July.			Gloucester.
	and Sanitary Inspector, Lanchester, Ducham.	⁷⁰ 1892. Oct.	
7161892. July.			Kent.
	Derby.	³⁵³ 1888. Nov.	
501893. July.		³⁷¹ 1890, Mar.	
	minster Bridge Road, S. W.	*/71000	Temple, E.C.
²³³ 1888. Oct.	PARSONS, II. Franklin, M.D., Local Government	⁷⁰⁷ 1892. Apr.	RICHARDSON, William, M.D.,
	Board, Whitehall, S.W.	500 1 0 0 0 Th 1	Asylum, Union Mills, Isle of Mo
³¹ 1889. Mar.	PARTRIDGE, Thomas, M.R.C.P.I., M.R.C.S.E., L.S.A.,	⁷⁰⁰ 1893. Feb.	
	M.O.N., Stroud, Gloucester.	710 1 000 0 1	Westminster, S.W.
²² 1892. Sept.		⁷¹⁰ 1892. Oct.	
	Cavendish Square, W.	²³¹ 1888. Oct.	
5301889. May.		******	King & Co., 65, Cornhill, E.C.
³¹ 1888. Oct.	PATTINSON, S., Ruskington, Sleaford, Lincoln.	²³³ 1888. Oct.	
³⁹³ 1888. Dec.	PEAKE, Francis, The Waldrons, Croydon, S.W.	⁵⁷¹ 1890. Jan.	
100 1888. Dec.	PEEL, Edmund, Brynfys, Ruabon, North Wales.	1031000 T	M.R.C.S., L.S.A., Ruabon, North
^{շու} 1893, July,		⁴⁶³ 1888. Dec.	
	W	²⁰³ 1892, Apr.	
²³⁶ 1888. Oct.		1011000 T	Winchester, Hants.
660 1891. Nov.		⁴⁰¹ 1888. Dec.	
104.000 **	S.E.	5151000 t	Place, S. W.
⁷⁴⁹ 1892. Nov.		513 1889. Apr.	
	Surveyor, Town Hall, Rochdale.		404, Commercial Road, E.
		1	

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omas, County Sanitary Inpton Road, Stafford. pson, Rotherwood, Sydenham , St. Swithin's Lanc, E.C.). Street, Liverpool. 17, Hertford Street, May-

A., F.R.I.B.A., Oak Hall, , Hanway Place, Oxford

n.s.n., Tayside, Perth, N.B. acont Row, Vincent Street,

cent Row, Vincent Street,

.n., F.R.S., 67, Harley Street,

.MET.SOC., The Waterworks,

ASSOC.M.INST.C.E., Surveyor,

OC.M.INST.C.E., A.R.I.B.A., el Row, Nottingham. Barnet Valley Local Board,

, 9, Bath Place, Cheltonham. M.INST.C.E., City Surveyor,

ns, Borough Surveyor, Deal,

38, Grosvenor Street, W. 7, Mitre Court Chambers,

M.D., B.SC.P.H., Lunatic Isle of Man. itect, 7, Great College Street,

ald, Long Eaton, Derby. A., M.INST.C.E., Care of II. S. ill, E.C.

M.D., 102, Harley Street, W. awton, M.D., D.P.H.CAMB., North Wales. nduit Street, W. M.INST.C.E., County Surveyor,

E. A. H., 17, Whitehall

IF, M.R.C.S.E., L.S.A., M.O.H., *E.*

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MEMBERS.

298		MEMBERS,
Reg. Dato No. Elect	of	
⁷³³ 1892,	Oet.	Ross, Percival, Assoc.M.INST.C.E., Surveyor to North Bierley Local Board, Bradford.
²³³ 1888.	Oet.	RUSSELL, HON, LADY Agatha, Pembroke Lodge, Rich- mond Park, Surrey.
⁶¹⁹ 1891.	Nov	†SAISE, Alfred John, Stapleton, Bristol.
⁴³¹ 1889,		SANDELL, Henry W. Adrian, M.R.C.S., M.O.N., Leigh- ton Buzzard.
⁶⁴¹ 1892, [Feb.	SANDERS, Henry Ingalton, St. Regulus, Archers Road, Southampton.
⁶¹⁷ 1891.	Nov.	Scorr, Conway, B.E., Executive Sanitary Officer, Town Hall, Belfast.
4** 1 889 . [Mar.	Scorr, Hugh Hamilton, Assoc.M.INST.C.E., Town Hall, Hove, Brighton.
^{2*3} 1888. (Oct.	Scorr-Monchierr, W. D., M.I.M.E., 86, Newman Street, W.
⁷³⁹ 1892. (Oet.	Scorr, Robert Smith, Assoc.M.INST.C.E., Town Sur- veyor, Bishop Stortford.
***1893.	Oct.	†Scorr, Thomas Keat, Town Surveyor, 3, Albion Terrace, Whitby, Yorkshire.
²⁵¹ 1888. (Oet.	SCRIVEN, J. Barclay, M.R.C.S., 95, Oxford Gardens, North Kensington, W.
4 ¹¹ 1888. [Dec.	SEARLES-WOOD, Herbert D., F.R.I.B.A., 157, Wool Exchange, E.C.
[⁴²⁹ 1889, 4	Jan	SELBY, Prideaux, Koroit, North Park, Croydon, S.W.
⁴ **1889.	Mar.	SELLERS, William, Junr., M.D., M.O.M., Bank House, Radeliffe, Manchester.
***1889. 2	Mar.	SHADWELL, St. Clair B., L.R.C.P., M.R.C.S., M.O.H., Lynhurst, Walthamstow.
⁴³⁹ 1889, .	Mar.	SHAW, Charles Knox, L.R.C.P., M.R.C.S., 19, Upper Wimpole Street, W.
³²¹ 1889	Apr.	SHAW, Josephus, M.R.C.S., L.S.A., M.O.H., 151, Lower Road, Rotherhithe, S.E.
en 1891. (Oet.	SHELBOURN, Michael, Architect and Surveyor, Belvoir, Grantham.
⁶³⁹ 1891.]	Nov.	SHIMELD, James, L.R.C.P. and S.E., M.O.H., Salisbury House, Ilford.
4301889.	Jan.	SHONE, ISaac, ASSOC.M.INST.C.E., 47, Victoria Street, Westminster, S.W.
²⁶⁶ ISSS. (Oct.	SHONKSMITH, John Henry, Mickleyate, York.
257 1888.		SILLAR, W. C., St. James' Lodge, Kidbrooke Park Road, Blackheath, S.E.
411 1888 . [Dec.	SIMPSON, William John, M.D., D.P.H.CAMB., Health Officer, Calcutta.
²⁶³ 1888. (Oct.	SIONDET, James Lewis, M.B., F.R.C.P., Villa Cabrolles, Mentone, Alpes-Maritimes, France.
²⁷⁰ 1888. (Oct.	SKRINE, Henry Duncan, Claverton Manor, Bath.
		TSMITH, Charles Chambers, Surveyor's Office, Dalton- in-Furness.
⁶⁹⁷ 1892.]	Mar.	SMITH, John, ASSOC.M.INST.C.E., County Surveyor's Office, Ballinasloe, Galway.

Reg. Date of	
Reg. Date of No. Election. 2711888. Oct.	SMITH, Percival Gordon, F.R.I.B.A., L
	bridge Park, Willesden.
²⁷² 1858. Oct.	SMITH, R. Wagstaff, Mount Run Birmingham.
2731888. Oct.	SMITH, Thos. Fredk. II., F.R.C.S., L.S./ Kent.
491889, Feb.	SMITH, T. V., 111, Grosvenor Road,
**1892. Sept.	SMITH, Urban A., ASSOCMAINST.C.I Mansions, Westminster, S.W.
⁴⁹ 1889, Jan.	SNELL, Alfred, W., A.R.I.B.A., 1, Pa bledon, S. W.
⁷⁹¹ 1893, Dec.	South, Andrew, Surveyor, Carn Road, Ealing, W.
³¹² 1889. Apr.	SOUTHAM, Arthur, ASSOC.M.INST.C.E., Clapham, S.W.
** 1893, Oct.	†‡SPINK, Joseph, Formby, Liverpool.
⁷²³ 1892, Sept.	†STANBURY, W. H., Royal Engineer's (
273 1888, Oet.	STANSFIELD-BRUN, J., F.R.I.B.A., Cir
	Architect, Mumbles, Swansea.
⁵²¹ 1889. Apr.	STEEL, William D., M.D., M.O.H., D.P.H Abergavenny.
4931889, Mar.	STEEVES, George Walter, B.A., M.D., M. field Road, Liverpool.
270 1888. Oct.	STEPHENSON, J. Gurdon L., AS
	M.I.M.E., T.G.S., 6, Drapers Gard
1000 A 1	Maxilla Gardens, Notting Hill, W.
6021890. Oct.	STEVENS, Joseph Wallace, Belph, Chesterfield.
2171888. Oct.	STEVENSON, Thomas, M.D., 45, C S.W.
4941889. Mar.	STEWART, Alan, Maldon, Essex.
4331889, Jan.	STIFF, Ebenezer, London Pottery, La
279 1888. Oct.	STREET, William C., A.R.I.B.A., ASS Victoria Street, Westminster, S.W.
4191889. Jan.	†Swainson, John Henry, M.S.A., AS 3A, High Street, Wreaham, N. Wal
4331889. Jan.	†Swan, Harold, 114, Trinity Road, U
406 1888. Dec.	SWINBURNE, C. A., Belgrave Mans
10000 2000	Gardens, S.W.
667 1891. Dec.	SWINNERTON, Robert Allen William C.E., M.I.M.E., Bolarum, Dekkan, In
493 1889. Mar.	STKES, Matthew Carrington, L.n.C.P., Barnsley.
231 1888. Oct.	†TATTERSALL, W., 90, Arden Terrace,
² ³⁷ 1888. Oct.	TAYLOR, Charles, M.R.C.S., L.S.A., 3,
	Holloway, N.
⁷⁵³ 1893. Oct.	TAYLOR, Michael Henry, L.R.C.P., D.P.H.CAMB., 16, Church Road, Ric
431 1889. Jan.	TAYLOR, Wm. Fredk., M.D., M.R.C.S Ontario, Edward Street, Brisbane, G
	Onderto, manual burely madenty

MEMBERS.

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Highfield, Stonendell, Harborne, .х., Farningham, S.W. .E., 2, Victoria ark Road, Wimbrae, Hamilton , 60, Old Town, Office, Gibraltar. vil Engincer and H., Neville Street, м.о.н., 53, Park-SSOC.M.INST.C.E., dens, E.C., (14, Whitwell, near Gresham Road, ambeth, S.W. ssoc.inst.c.e., 7, SSOC.M.INST.C.E., les.

Upper Tooting. isions, Grosvenor

m, ASSOC.M.INST. idia. , M.R.C.S., D.P.H.,

, Accrington. Lorraine Road,

, L.R.C.S.EDIN., chmond, Surrey. S., L.S.A., D.P.H., Queensland.

300	MEMBERS.
lieg. Date of	
No. Election. 2551888. Oct.	TEALE, T. Pridgin, M.A., M.B., F.R.C.S., F.R.S., 38,
1885. (161.	Cookridge Street, Leeds.
⁷³³ 1893, Dec.	TEW, James Scott, M.D., D.P.H., M.O.H., 22, Burns Street, Nottinghum.
7291892. Oet.	THOMAS, John, Assoc.M.INST.C.E., Engineer Swansea
2131888. Oet.	R.S.A., 14, Finsbury Terrace, Swansea. THOMAS, Walter, ASSOCMAINST.C.E., Castleknowie, and
	Town Hall, Dover.
²⁰⁰ 1888. Oet.	†THOMAS, W. E. C., ASSOC.M.INST.C.E., Cringallt, Neath,
4341889, Feb.	THOMPSON, Thomas William, L.R.C.P., M.R.C.S.,
	D.P.II., Med. Inspector, Local Government Board, S.W.
⁵⁰⁰ 1893. Oct.	THOMPSON, John Henry, M.O.H., Mytholmroyd, Yorkshire.
5921890 June	THOMSON, Gilbert, 75, Bath Street, Glasyow,
³¹⁹ 1888. Oct.	THORNEYCROFT, LAEUT COL., Tettenhall Towers,
10001 0001	Wolverhampton,
3701890. Jan.	THRESH, John Clough, M.B., B.S., D.SC., F.I.C., F.C.S., M.O.H., Chelmsford.
¹³³ 1889, Jan.	THRING, RIGHT HON. LORD, K.C.B., F.R.G.S., 5, Queen's Gate Gardens, S.W.
³¹³ 1889. July.	THURSTIELD, W. N., M.D., D.P.H., M.O.H., Shrews- bury.
793 1893. Nov.	TIGHE, Michael J., S, Upper Sherrard Street, Dublin.
⁴⁰⁷ 1888. Dec.	TITMAS, William, 34, Grafton Street, W.C.
⁷⁹⁹ 1893. Oct.	Townson, Samuel, Surveyor to the Cheshunt Local
1000. 000.	Bourd, Cheshunt, Herts.
6111892. Feb.	Townsend, John Walter, Wendreda, Lancaster Road, Wimbledon, S.W.
203 1888. Oct.	TRAVERS, William, M.D., F.R.C.S., 2, Phillimore Gar- dens, W.
⁴⁰³ 1888. Dec.	TREW, J. Fletcher, 12, Clarence Street, Gloucester,
*:11000 T-1.	(22, Broad Street, Bristol).
^{7,1} 1893. Feb.	TROW, Samuel, Engineer and Surveyor to the Otley Local Board, Otley, Yorkshire.
7631893. Feb.	TURNER, Rev. Samuel William, Little Ellingham,
313 1888. Oct.	Norfolk. TYNDALE, Walter Clifford, ASSOC.M.INST.C.E., Horse Guards, Whitehall, S.W., (St. Stephen's Road,
¹⁰⁶ 1889. Mar.	Ealing, W.). Undernill, A. S., M.B., B.A., M.R.O.S., D.P.H., Great
	Bridge, Tipton
⁷⁷³ 1893. June.	
²³¹ 1888. Oct.	Valor, William A., Assoc. M. INST. C.E., 140, Temple

⁶⁴⁹1892. Mar. VERDON, II. Walter, M.D., F.R.C.S., M.O.H., 47, Brixton Hill, S.W.

	MEMBERS.
Reg. Date of No. Election.	
^{3.3} 1888. Oct.	WALLACE, William, 27A, Old Bond
- **1890. Oet. †	WALLIS. Arthur Gray. Care of
10001 0000 1	WALLAS, Arthur Gray, Care of Sanitary Association, 75, St.
	Glasyow.
2011888. Oet.	WALLIS, II. Sowerby, F.R.MET.SOC
	Road, Highgate, N.
³³³ 1890, Apr.	WALLIS, Isabel White, 49, Olifton
Terot athu	Wood, N. W.
¹⁰⁰ 1892, Apr.	WALTON, Rienzi G., M.INST.C.E., 2,
toon after	Kensington, S. W.
471891. Nov.	WARD, Arthur W., ASSOC.M.IN
10011 10011	Merton Road, Southsea.
¹⁹⁷ 1889, Jan.	WELCH, Henry, M.D., B.SC., D.P.
	lands, Halton, Lancaster.
""1888. Nov.	WELLS, SIR T. Spencer, BART., 1
	Upper Grosvenor Street, W.
¹¹¹ 1892. Nov.	WITWAN, William Albert, M.R.C.S
1002, 1001	Officer of Health for Bridlington
	nade, Bridlington Quay, Yorkshir
531891. Nov.	WHITAKER, William, B.A., F.R.S., F.
10011 20011	C.E., 33, East Park Terrace, S
	Jermyn Street, S. W.).
4021888, Dec.	†WHITCOMBE, Arthur, 48 5 50,
	Fitzroy Square, W.
⁷¹¹ 1893. May.	WHITE, John, ASSOC.M.INST.C.E., B
	29, Dover Road, Folkestone, Kent.
^{a>3} 1888, Oct.	WHITE, William, F.S.A., F.R.I.B.A
	Street, W.
5031889, Apr.	WIGHTWICK, Fallon Percy, M.B.,
I	D.P.H., 5, Curlew Street, Horsleydd
³¹⁶ 1888. Oet.	WILKINSON, W. B., Northumberl
	castle-on-Tyne.
³⁵⁷ 1888, Oct.	‡WILKINSON, William, Town Ha
	Park Place, Cross Lane, Salford)
³¹⁴ 1888, Oct.	WILLIAMS, C. Theodore, M.A., M.D.,
	soc., 2, Upper Brook Street, W.
⁷¹³ 1892, June	WILLIAMS, Öwen, Surveyor, Abero
670 1891. Dec.	WILLIAMS, Roscoe A., M.D., State
	Olathe, Kansas, U.S.A.
⁵⁶² 1889. Dec.	WILLIAMS, William, M.A., M.B., D.
	L.S.A., Glamorgan County Office
	Cardiff.
⁷³¹ 1892. Oct.	†WILLIAMS, William Iltyd, 4, N
	Brighton.
⁵²³ 1889. Apr.	WILLIS, George, L.F.P.S.G., M.O.I
	Baillieston, Glasgow.
⁷¹² 1892. June.	WILLIS, John, Stansfield, Clewer,
³⁹³ 1888. Oct.	†WILSON, J. B., Court House, Cocke
⁷³⁷ 1892, Oct.	
	ham,

l Strect, W. West of Scotland George's Place,

c., 25, Northwood

n Hill, St. John's

Lexham Gardens,

ST.C.E., Lisburn,

.H.EDIN., Sheffer-

M.D., F.R.C.S., 3,

S., L.S.A., Medical n, 17, The Promere (East Riding). G.S., ASSOC.M.INST. Southampton, (28,

Howland Street,

Borough Surveyor,

A., 30a, Wimpole

, M.R.C.S., L.R.C.P., lown, S.E. land Street, New-

all, Salford, (21,).

., F.R.C.P., F.R.MET.

dare, Glamorgan. 2 Board of Health,

.P.H.OXON, M.R.C.S., e, Westgate Street,

Vorton Road, West

II., Clifton House,

, Windsor. ermouth. y Terrace, Chelten-

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MEMBERS.

Reg. Date of No. Election. ³¹⁰ 1888, Oct.		Mitchell,	F.R.I.B.A.,	73,	Surrey
	Street, Sh		•		U U

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

- ³¹²1888, Oct. Woop, Jacob, 186, Highbury New Park, N.
- ³⁰³1888, Nov. WOOD, William, M.D., 99, Harley Street, W.
- 407 1889, Mar. WOODMAN, John, M.D., F.R.C.S., M.O.H., Southernhay, Exeter.
- ³¹³1888. Oct. WOODWARD, Edward Francis, 43, Southwell Street, Bristol.
- ¹⁷⁶1893. July. †‡WORUALL, Ernest, 5, Beaconsfield Terrace, Seacombe, Liverpool.
- 1111889. Jan. †Worth, John Edward, M.INST.C.E., F.R.MET.SOC., District Engineer, London County Council, Spring Gardens, S.W.
- ³¹⁴1888. Oct. WYNDHAM, REV. Francis M., M.A.OXON, St. Mary of the Angels, Westmoreland Road, Bayswater, W.
- ³¹³1888. Oct. YUILL, W., ASSOC.M.INST.C.E., 3, Fenchurch Avenue, E.C.

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ASSOCIATES (Assoc. SAN. INST.)

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

1888.	Oct.	‡ABRAMS, Henry, Sanitary Inspector, Bealey, Kent.
6a0 IS92.	Sept.	‡ACKERNLEY, Joseph, Broughton Road, Skipton, York
²¹² 1889.	Nov.	‡ADAMS, Albert E., Local Board Offices, Town Hall Wood Green, N.
²1888.	Oct.	‡ADAMS, H. J., 13, Salcott Road, Wandsworth Com- mon S. W.
³¹ 1888.	Oct.	ADAMS, Miss Rose (LADIES' SANITARY ASSOCIATION) 22, Berners Street, Oxford Street, W.
7591893.	June.	*ALLAN, George Awburn, Junr., 5, Clipstone Street Great Portland Street, W.
⁵³³ 1892.	Nov.	‡ALLEN, Thomas Holtan, Stumpshaw, Norfolk.
¹³⁷ 1889.	Jan.	‡ALLEN, William Henry, 8, St. John's Square, Cardiff
³³⁷ 1890.	Nov.	‡Amon, Alfred, Octagon Chambers, Nelson Street, Bath
⁴ 1858.		‡Amon, Daniel C., Beaulieu, The Polygon, South- ampton.
¹⁸ 1892.	Oct.	‡ANDERSON, George Hart, 33, Borough Road West, Middlesborough.
²³ 1892.	Feb.	‡ANDREWS, Daniel James, Court House, Marylebone, W., (97, Hall Place, Paddington, W.).
¹¹ 1890.	July.	ANNETT, William Fenn, 5, Church Street, Kensington, W.

		13.11.
^{con} 1892,	June.	‡ATKINS, Benjamin, 31, Russell &
\$67.1000	31	Spa. + Amurang Dolout William 20 Hole
	мау.	‡ATKINS, Robert William, 32, Holm Norwood, S.E.
^{\$44} 1892.	May.	ATKINSON, Thomas Appleton, S
671000	T	Darlington.
1892.	June.	ATTRIDGE, Henry L., Sanitary I Road, Sca Point, Cape Town, Son
^{sos} 1892,	Feb.	‡AYLIFFE, Charles William Lovele
2010en	T	Road, S.W. ‡BAILEY, William, 76, Wilmslow I
1000.	əmy.	Aanchester.
¹³¹ 1889,	June.	‡BAINTON, John, Sanitary Office,
1611000	.	caster.
	дрг.	BAKER, William, MEM.SOC.ARTS, 1 Lawrence Road, Southsea.

Michael's, Liverpool.

- 131892. Sept. ‡BALDWIN, Parkinson, 16, Montana Sircet, Higher Openshaw, Manchester.
- ²¹¹1890. Feb. ‡BALSTER, Herbert, Town Hall, Margate. ³1888. Oct. BAMLETT, Adam Carlisle, Thirsk, Yorkshire.
- ¹⁰³1889. Jan. ‡BARFOOT, James, 100, Brook Street, Kennington Road, Lambeth, S.E.
- ¹³⁷1893. June. [±]BARRALET, Thomas Chapman, Surveyor and Inspector, Godstone.
- ³³⁰1893. July. ⁺BARRETT, Henry James, 20, Gowan Avenue, Fulham, S.W.
- ⁶1888. Oct. ‡BARRON, John, 33, Landor Road, Stockwell, S.W.
- ⁷¹⁹1893. Apr. ‡BARTH, Frederick Alfred, St. Luke's Vestry Hall, City Road, E.C. 317 1891. Feb. ‡BARTLETT, William John, 50, Cumming Street,
 - E.C.
- ⁷1888. Oct. [‡]BASCOMBE, II. C., Wallasey Local Board, Egremont, Cheshire.

ASSOCIATES.

ley, E.

Huddersfield.

Yorkshire.

land, N.E.

wark, S.E.

W.C.

S. 12

Date of Election,

Reg.

303

No. Election. 301 1892. Feb. ‡ANTHONY, Frederick Joseph, 33, Yattan St., Brom-

1892. Sept. ‡ARMITAGE, Frederick Lincoln, 126, South Street,

"1892, Sept. ‡ARMITAGE, T. Albert, South Parade, Huddersfield,

*201893. Dec. #Aumstrong, Joseph, 3, Colectone Crescent, Kings-

"1891, Apr. ‡Ashnows, Thomas, Vestry Hall, St. Olaves, South-

³²²1893. May. ‡ASHFIELD, Ralph, 5, Lansdowne Street, Worcester. "1893. Feb. #Asnuny, Sydney, 14, Gower Street, Bedford Square,

³¹⁴1893. Apr. ‡AshURST, George Norman, 40, Allington Street, St.

³²³1892, Feb. ‡ATHEY, Frederick, 47, Penge Road, South Norwood,

Street, Leamington

nwood Road, South

anitary Inspector,

Engineer, Firmont ath Africa. ess, 19, Brompton

Road, Withington,

Scunthorpe, Don-

, Chetwynd Road,

304	1	ASSOCIATES.			ASSOCIATES.
Reg.	Date of	•	Reg.	Date of	
No. 193 -	Election. 1880 June	, ‡BASSETT, William Joshua, 16, Elizabeth Street, Eaton	No. 1 572189	9 May	BROWS, Reginald, Local Board Office, Ea
-	1000. 0 (mea	Square, S.W.			#Brows, Robert, Jun., 44, St. Ann's Hi
604	1809 June	. ‡BATES, Matthew, Local Board Offices, Bromley, Kent.	100		worth, S. W.
201	1800 Ane	BAXTER, Frank E., 374, Kennington Road, S.E.	0188	s Oct	#BROWN, R. Railston, 1, Blenheim Terr
9	1888 Oct	BAXTER, John, 374, Kennington Road, S.E.	1 Oc	0, 000	lington Quay, Yorkshire.
605	1803 Nov	BEDFORD, Edward, Chapel Allerton, Leeds, Fork-	PIES	s. Oet.	
	10001 10011	shire.		0. Jan.	
479	1801 Dec	BEECH, James, Tey Cottage, Brownhills, Tunstall.		2. Jan.	
751	1893 July	BENNETT, Edward, 43, Manor Park Road, Harles-	100		Trafford, Manchester.
	1000. 0 119	den, N.W.	49180	1 June	, ‡BUBB, John Thomas, 1, James's Parade,
153	1889 June	. #BIRCH, John Ernest William, 107, Cobden Road,		8. Oet.	
	1000, 0 unc	South Norwood, S.E.	100		Lanarkshire, N.B.
493	1892, Jan.		10193	S. Oct.	BUCKERIDGE, Walter, Jey Grange, Sidle
	1000, oun	Dorset.	100	er ven	Chickester.
247	1800 May	, BIRD, William Frederick, The Island, Midsomer	0180	9 Jan	BUCKTON, Walter, 27, Ladbroke Square,
	1000 Maya	Norton.	100 1100	s Oat	+BUGLER, W. J., G, Burstock Road, Putney
313	1800 July	, ‡BISHOF, William F., Margam Local Board, Taibach,		S. Dec.	
	1600. 0419.	Port Talbot.		S. Det.	
10	1888 Oct	‡ВLACK, Andrew E., 16, Bank Street, Inverness, N.B.			⁺ BURSLAM, Randle, Congleton, Cheshire.
401	1801 Mag	#Вылскиля, Henry, Catsfield, Battle.	502 T Q D	2. 100. 9 31	⁺ BUTCHER, Charles Ernest, 17, Circus Road
	1888. Dec.		1020	- nay.	
373	1801 Man	BLAKE, H. K., 1, Victoria Road, Stroud Green, N.	174100	0 11.00	Wood, N. W. + Dum and D. I. Wann Hall Louis Educ
103	1894. Mar. 1996. Tana	BLAND, William, 420, Liverpool Road, Patricroft.		э. мау. 3. Feb.	*BUTLAND, R. J., Town Hall, Lower Edmo
733	1802 June	* BLAY, Ernest Berringer, 116, Matthias Road, Stoke	100	o. ren.	
	1090, oune	Newington, N.	3591.00	1 31	ham, Sussee. +Duranne Walton Onen Street Rowham 1
631	1200 8.44	. ‡BOLTON, Joseph, 15, Cambridge Terrace, Olley, York.			+BUTLER, Walter, Quay Street, Farcham, J
777	тона терс	BONE, William Homersham, 35, Mall Road, Ham-	100	o. apr.	BUTTERWORTH, Arthur, Board of Wor
•••	1595, 5400	mersmith, W.	112100	0 72-1	Road, Plumstead, S.E.
12	1000 04	BOSTEL, G. Stanford, 18, Duke Street, Brighton.			Buxton, Anthony, Carisbroke, Isle of Wi
392	1801 Am	BOURNE, Edward, 256, High Street, Cheltenham.	100	2. Oct.	CANNELL, Charles Stephen, Thorpe St
- 204	1001, APL 1000 July	BOWYER, Harry David, Park Street, Slough.	100100	1 T	Norwich.
13	1000.004	BOYCE, W., 117, High Street, Poplar, E.	100	1. June.	, ‡CARTER, Alfred, 60, Ashbrook Road, Up
14	1888. Oct.	BOYD, Richard Wade, 105, New Bond Street, W.	422 1 00	1 1.1.	way, N. + Construction Anni Mar S. 1 Liber Viller New Son
3-3	1800. UCG	BRALEY, Francis, 18, Woodbine Avenue, Leicester.	303 1 60	i, July. O Atus	CARY, Aquilla S., 1, Lily Villas, New Son
610	1001, Dian 1000 Tumo	. ‡Вилинам, William, Fern Cottage, Market Street,	100	in shilly.	‡Cass, Robert William, 27, Park Aven
	1592. June	Clay Cross.	23100	6 O.t	Lane, Pudsey.
12	1888. Oct.	BREEZE, John, Poynton Lodyc, Wellington, Sulop.	100	S. Oct.	
767	1888, OCG	e. ‡BRIDEL, H. F., 3, Ballast Quay, East Greenwich, S.E.	: 300 1 00	อ านน	S.W.
703	1099. June 1909. June	BRIDGES, Oswald Arthur, Engineer and Surveyor's			CAVE, James, Town Hall, Kensington, W.
	1999, 9400	Office, Lymington, Hants.	100	9. TAOA"	‡CAWSEY, Thomas, 12, Coedpenmaen Rod
605	1209 Nov	. ‡BRIERLEY, Samuel, 26, Elford Grove, Roundhay	691190	a n	pridd, Glamorganshire.
	1959' 101	Road, Leeds.	100	<i>∠</i> . Dec.	‡CHALK, Joseph, Waterworks Engince
16	1000 0.4			1	Southampton.
	1888. Oct.	court Park, W.	100	1. Nov.	
331	11000 Nor	. ‡Вкоок, John, Albany Place, Stratford-on-Avon.	623100	a g	caster.
			189	2. Sept.	‡CHAMBERS, Frederick, Local Board Offi
	91890. Nov		533 1 0 0	יר ס	Yorkshire.
301	1001	Liverpool. . ‡Brown, George William, SengMaj. R.E., 3, Marle	189	z. Mar.	CHAPPELL, William, 243, Elgin Avenue, L
	1991. дрг.	Hill Villas, Cheltenham.	710 1 00	י די ס	
121	1001 1.1.		139	3. Feb.	
	91891. Feb.	+DROWN' DOURD OF THERMORY HINHORD	1		Fulham, S.W.

305ding, W. ill, Wandsrace, Bridings. Hill, S.E. Street, Old Bristol. Tambuslang, esham, near W. y, S.W. , S.W. , E.C. d, St. John's onton. New Shore-Hants. rks, Maxey ight. I. Andrew, pper Hollouthgate. we, Church loanc Street, ad, Pontyer's Office, pool, Lanices, Goolc, laida Vale, hurst Road, U

ASSOCIATES.

306	ASSOCIATES.
Reg. Date of	
No. Election.	CHOULER, Ridgway Bentley, 1, Calthorpe Street,
593. Nov.	Gware Inn Road, W.C.
⁷²⁰ 1893, Apr.	CLARK, John Edwin, 31, Dalmore Road, West Dulwich, S.E.
6721893, Jan.	CLARKE, Charles Henry, 2, Rutland Terrace, High Road, Leyton.
4001892, Jan.	[‡] CLARKE, Robert Edwyn, 5, Gibson Square, Isting-
²³ 1888. Oct.	CLANKSON, Joseph, Churchfield Terrace, Battey, Vorks.
1101889. Jan.	CLAYTON, Edward, Sanitary Inspector, Mansfield, Notis.
²⁰⁴ 1890. June	CLAFTON, Henry Chas., 50, Porchester Road, Bays- water, W.
201888. Oct.	COMIAM, C., The Shrubbery, Gravesend.
271888. Oet.	COBITAM, G. R., 3, Edwin Street, Gravesend.
²⁵³ 1890, Apr.	‡Cockburns, Henry Mace, Town Hall, Spa Road, S.E.
⁷³³ 1893. May	
³¹⁶ 1891. Jan.	COLE, A. C., 21, West Street, Dorking.
4331891, July	ston-on-Thames.
4*31891. Dec.	
747 1893. May	Lorne, Dorset.
5581892. Apr.	‡Соок, Alfred, 35, White Lion St., Norton Folgate, E.
461 1891. Nov.	‡Соок, James, Warton, Carnforth.
333 1890. Dec.	Road S.W.
1111889. Feb.	COOPER, William George, Sanitary Inspector, Bourne- mouth.
229 1890. Jan.	‡Corestick, George Christopher, 47, Bateman Street, Derbu.
220 1890. Jan.	+Convert Richard Lawrence, Oakengates, Salop.
133 1889. Jan.	Conpos, Robert Curtis, Hillside Cottage, Duffield, Derby.
40.1801 Jun	+Coup James, 72. St. George's Avenue, N.
707 1893. Feb.	CORRIGAN, Joseph, 24, Keble Street, Ince, Wigan, Lancashire.
161 1 0 0 NEar	and the first of the Oak Dissectation
¹⁶¹ 1889. Mar	
7391893. Jun	
413 1891. Oct.	
6101893. Nov	
¹³³ 1889. Jan	
3131891. Jan	, TOXILL, George E., Vestry man, Cane Street, St.
⁴¹⁷ 1891. Jun	Yarmouth.
6361892. Nov	v. ‡CRANE, Stephen, 8, Dighton Road, Wandsworth, S.W.
351 1891. Fet	+CRANE, William Henry, 14, Colonal Street, Hua.
291888. Oct	
2000.00	Buxton.

	ASSOCIATES.
Reg. Date of	
Reg. Date of No. Election 393 1891, Mar	. ‡Скохк, Wm. Robert, Cranford I Hounslow,
2171890, Feb.	
2131890, Feb.	
a*1890, Jan.	
4791892, May	. ‡CRUDEN, John, Inspector of Nuisance Tweed.
334891, Feb.	
^{- 64} 1892, June	. ‡CURRIE, Thomas, Marshall Cottage,
471891, Dec.	DALTON, George, 3, Ferns Aven Nottinghum.
¹⁵¹ 1889, June	e. ‡DALTRY, John, 12, King Street, We
***1893, June	Ayr, N.B.
⁵³¹ 1893, May	DANCE, Edwin Hubert, Architect an Quadrant Road, Thornton Heath, S
⁰² 1892, June	Glossop.
**1888. Oct.	Leeds.
³⁰¹ 1892, May	. ‡DAV10, Philip, 83, Elm Street, Care
³¹³ 1892. Oct.	2 DAVIES, Dan, Ferndale, Rhondda Vo
en 1893, Jan,	[‡] DAVIES, Edward Plummer, Ty Eos-y Abergavenny.
^{sn} 1893, Nov	Waterloo, Liverpool.
^{- 13} 1893, Apr.	‡DAVIES, Samuel, 6, Edith Road, Ar
^{\$12} 1893. Nov	. [‡] DAVIES, Thomas, 79, Walthall Cheshire.
²³² 1890. May	. ‡DAVIES, T. Lane, 1, Albert Square,
⁷⁷⁸ 1893, June	e. ‡DAV18, John Edward, 309, <i>King's</i> S.W.
	Dawes, Henry, 36, Paignton Road, South Tottenham.
	. ‡Dawson, Edward Howard, 41, Lancaster.
	e. ‡Dawson, John Marshall, 93, Brockley.
^{***} 1890, June	e. ‡DAwson, William, 6, Brooklands Re
	. ‡DEAN, Samuel Saunders, Hugglesco Zouch.
^{**1890} . June	. ‡DEE, Thomas George, 17, Grosvenor
··· 1892. Oct.	‡DENHAM, Hodgson, Sanitary Inspa Aberford, near Leeds.
***1888. Dec.	DENSHAM, Charles A., 42, Wellin John's Wood, N.W.

307

House, Cranford,

lor Road, Putney,

cet, Bolton Road,

51, Hind Street,

es, Berwick-upon-

den Road, South

, Hawkhill, Ayr. 1110, Carrington,

Tellington, Salop. Tellington Street,

nd Surveyor, 10, Surrey. , Primrose Lane,

treet, Woodhouse,

rdiff. Talley, Glamorgan. -y-Coed, Llanover,

The Gymnasium,

nfield, Liverpool. Street, Crewe,

E. 's Road, Chelsea,

Stamford Hill,

Market Street,

Malpas Road,

oad, Birkenhead. ote, Ashby-de-la-

r Road, S.W. ector & Surveyor,

ngton Road, St.

308			ASSOCIATES,
Reg.	Date		
No. 621 18	Elect 592,	July.	DEWHIRST, James, Woodbine Cottage, Merrow, Guild-
752.1 (203	July.	ford, Surrey. ‡Dilke, Francis Henry, 24, City Road, Bristol.
		Dec.	DOCKING, Frederick Reynolds, 56, George Street,
1		1900	Croydon, S.W.
		Oct.	Dobgson, William, Conoulcy, York.
²¹¹ 1	890.	Jan.	DOVER, John Henry, 13, King Street, Kensington
			Square, W.
		Nov.	[‡] Dowsing, Alfred, 2, Mawney's Villas, Romford, [‡] DRAKE, W. Medley, Fisher Street, Spring Dale,
10	000.	Jan.	Huddersfield.
211 13	s90.	Feb,	DUNBAR, David, 24, George Square, Glasgow, N.B.
		Nov.	DUNN, James Stephen, The Poplar Board of Works,
	_		London, E.
1551	\$91,	Nov.	‡DUTHIE, Alexander, Kirkealdy District Committee, Markinch, Fife, N.B.
113]	889.	Feb.	‡DYER, Samuel, 3, Wellington Road, Bridlington Quay.
13418	891.	June.	[‡] DYKE, Alfred William, St. John's Wharf, Wands-
11-2-4	000	Ŧ	worth Bridge, Fulham, S.W.
1.1	889.	Jan.	Dyson, John Henry, St. George's Terrace, Thornhill, near Dewsbury.
133]	839	Jan.	‡EDMONDS, William H., Vestry Hall, Hampstead, N.W.
		Nov.	EDWARDS, John, 16, Gladstone Street, St. George's Rd.,
			<i>S.E.</i>
		June.	‡ELLIS, Stanley, 28, Chertsey Street, Guildford.
1381	893.	May.	‡ELMS, Thomas Hood, 43, Mall Road, Hammer- smith, W.
³¹ 1	888.	Oet.	‡Емртлов, Daniel, Dane Hill Sanitary Works, Margate.
³² [888.	Oct.	[‡] Evans, John Evan, 99, Prince of Wales Roud, N.W.
⁵³³ 1	\$92.	May.	‡Evans, John Isaac, Surveyor's Office, 2, Talbot
771.1	509	т	Street, Aberavon, Port Talbot. ‡Evans, Percival Baker, 16, Irene Road, Poole Park,
1	ວ ນວ.	a une.	Fulham, S. W.
270 1	S90.	May.	‡EVINGTON, Charles William, 12, Bridlington Street,
		•	Hull,
21 I	888.	Oct.	[‡] FAIRCHILD, Samuel C. G., 569, Wandsworth Road, Clapham, S.W.
373]	S91 .	Feb.	‡FAIREY, Alfred Isaac, 5, Tavistock Street, Covent
			Garden, W.C.
			‡Frw, Herbert Arthur, 19, Highbury Park, N.
		Mar.	FINCH, William, 172, Beverley Road, Hull.
		Jan.	[‡] FINCHER, John Gazeley, 30, Edward St., Aldershot.
··-]	109Z	May.	[‡] FISHER, Robert, 9, King William Street, Greenwich, S.E.
476]	1891.	Nov.	‡FOAD, Cephas, Board of Works, 117, High Street,
			Poplar, E.
297]	1890	June	, ‡FOLLAND, John Percy, 22, Liverpool Street, King's Cross, N. W.
32	1888	Oct.	‡Fordham, Wm. Francis, Hampton House, High Road, Kilburn, N. W.
			$\Delta u u u n_1 \Delta v n_2 $

Reg.	Date	e of	
- 204 - 204 1	- 14ee	May.	‡FORRESTER, William, Staplehurst, I
36]]	888.	Oct.	FRANCE, T. W. Chapman, 36, Br. buston.
729]	893.	Apr.	#FRENCH, Harry Cramphorn, 13, Paddington, W.
°†]	888.	Oet.	GAIRDNER, PROF. W. T., M.D., L University, Glasgow.
141	leee	Nov.	GARDNER, C. T., Town Hall, Worth
	888.		[‡] GARLAND, Wm., 12, Higher Maud
4	("i"i"+	OUE.	staple.
c13 [\$92	June.	‡GARNHAM, Albert Edward, Beulah II
		Oet.	GASS, John Bradshaw, F.R.I.B.A. Street, Bolton.
[16]	[889,	June.	[‡] GATHERCOLE, William Henry J Inspector, Guildhall, E.C.
723	1893.	Apr.	[‡] GEARY, Reginald, 4, Hampstead Sq N. W.
1 1	[893,	June.	
1 17	1893.	July.	[‡] GIBBARD, John Richard, 5, Old Exeter.
200.	1890.	Mar.	[‡] GIBSON, John, Health Offices, Nor- Sheffield.
155	1889.	Mar.	[‡] GILBEART, John Joseph, 11 & 1 Street, Belgrave Square, W.
414	1891.	June.	
391 <u>-</u>	1891.	April.	#GODSALL, Henry John, Park Road, ham.
60 1	1892.	June.	[‡] GOLDER, Thomas Collings, 5, 6 Folkestone.
101	1893.	Oet.	[‡] Golps, Thomas William, 13, Crom dington, W.
\$13	1893.	May.	‡GOODALL, Norman, Russell Street,
503	1892.	Feb.	GOODMAN, Herbert, 4, Clapton Con
		Oet.	[‡] Goodwyx, Arthur Ayde, 34, Chu mond, Surrey.
519	1892.	Feb.	[‡] GORNIOT, Thomas Arthur, 59, Gr Lisson Grove, N.W.
3 \$0	1891.	Feb.	[‡] Gough, Joseph, 7, Malvern Terrace Tottenham.
471	1891.	Nov.	
		Nov.	
			Sussex.
		Jan.	‡GRANT, Walter, 18, Gildredge Roa
		July.	
•			houses, Sheffield.
351	1891.	Feb.	‡GREEN, William, 6, Meredith St., C
111	1889.	June.	‡GREENWELL, Allan, Surveyor's Offic
40	1888.	Oct.	GRIBBLE, Miss Sarah C.

ASSOCIATES.

309

Kent. •istol Road, Edy-Lanhill Road, LL.D., F.R.S., The hing. llin Street, Barn-Hill, Norwood, S.E. ., 19, Silverwell Joseph, Sanitary quare, Hampstead, Road, Shepherd's Tiverton Road, th Church Street, 2, Little Chestor Knox, 2, Darwin , Saltley, Birming-Connaught Road, npton Street, Pad-Batley, Yorkshire. mmon, N.E. wrch Road, Richreat James Street, e, St. Paul's Road, helsea, S.W. Hall, Worthiny, ad, Eastbourne. ck Street, Bridge-Clerkenwell, E.C. ice, Frome.

		310	ASSOCIATES.	ASSOCIATES.
		Reg. Date of		Reg. Date of No. Election.
ſ		No. Election. 73#180rt Max	‡GRIFFIN, Thomas Gulliver, Laurel Cottage, Thanct	"1888. Oct. #HEARNE, William, Buenos Ayres.
		1000. 2007	Street, Clay Cross, Derby.	m1892. Mar. #HEBDEN, Joseph Henry, 6, Ma
ļ		331801 E.h	\$GRIGG, William Henry, 2, Acford Road, Nouth	South Boulevard, Hull.
	1 1 1 1	1001, 100,	Fulham, S.W.	1841889. June. ‡HELSDON, Horace, 14, St. Edmu
ŝ		3221800 Juno	GRINHAM, Philip Boys, Tichborne Down, Alresford,	rose Hill, N.W.
	÷	4191801 June	\$GRIVELL, Elins James, Storrington, Sussex.	³¹⁷ 1892. May. ‡HENLEY, Amos S., 57, Lessada S
			#GUNN, Alexander, 118, King Street, Aberdeen.	Victoria Park, E.
-		¹⁰ 1893, Oct.	HALE, Alexander, Chief Sanitary Inspector of the	15 1891. Nov. ‡HERBERT, Harry, 39, Westbourne
		1000, 011,	Municipality of Simla, in the Panjab Province of	^{7#} 1893, Apr. ‡H1LL, Samuel Gostage, 14, Aig
			British India, Myrtle Villa, Simla, Panjab, British	sendale, Liverpool.
	÷		India,	²³³ 1890. Mar. ‡HILLS, Arthur Reginald, 24, Ha
		230 1890. Jan.	[‡] HALL, George Berringer, v.a.s., 10, Waldemar	1893, Jan. #HILLYARD, Henry, 74, Duncom
	i. 	iccor dum	Avenue, Falham Road, S.W.	Rise, N.
		633 1892. Oct.	HALL, John, Poundfield, Stonchouse, Gloucester.	1611888. Dec. ‡Honns, W. F., 36, Melbourne Sti
			#HALL, Thomas John, 17, Regent Street, Barnsley,	²¹³ 1890. Mar. ‡Honores, Albert, 57, Hall Street,
	: :		Yorkshire.	hampton.
	y.	⁷¹⁰ 1893, May.		¹⁰ 1893. May. ‡Holder, Timothy, 272, City Rod
- 1 - 1		•	Street, Elsternwick, near Melbourne, Victoria,	2521890, May. ‡HOLLAND, Percy, Fairstead Cotta
: : : :			Australia.	1892. Sept. ‡HOLMES, John Edward, North C
:	•	⁶⁴⁴ 1892. Sept.	[‡] HAMMOND, William Henry, South Parade, Horbury,	¹²⁰ 1893. July. ‡HOOPER, Thomas Henry, 84, Bor
	4	-	Wakefield, Yorkshire.	S, W,
) • 		⁷⁴¹ 1893. July.	⁺ HANNANT, William B., 34, Blenheim Terrace, St.	131 1889. June. ‡Hoopen, Thomas Rowland, Redl.
1			John's Wood, N.W.	²²² 1890. Jan. [‡] HOOPER, William, 8, Lucas Road
		⁷²⁶ 1893, Apr.	‡HANSON, J. H., 6, Trinity Terrace, Camp Hill,	³¹⁰ 1892. Feb. ‡HonLock, Charles William, Little
1' . 1		-	Birmingham.	"1888. Oct. HORNCASTLE, Henry, Lindisaye
: :		⁷⁰¹ 1893. Feb.	#HANGREAVES, James Wm., 296, New Church Road,	Woking.
:			Stacksteads, Lancashire.	452 1891. Nov. ‡HORNER, Benjamin Roper, Sanit
•		*11893. Nov.	#HARRISON, Edward Stanhope, The Guildhall, Swan-	Hall, West Bromwich.
			sea, Glamorganshire.	⁴⁹ 1888. Oct. [‡] HORROCKS, Joseph, 10, Union St ⁴⁹ 1892. Feb. [‡] HORTON, Richard, 8, Orford Stre
		¹⁹⁷ 1889, June	HARNISON, George, Thurnby, Leicester.	15 1892, Feb. 4 Honros, William 99 Haleen St
۰ ۱			‡HARRISON, William Henry, Health Offices, 6, North	⁵¹³ 1892. May. ‡Horrox, William, 22, <i>Halsey St.</i> ⁶¹⁹ 1893. Feb. ‡Hoskins, Nandy William, 7,
: ,			Uhurch Street, Sheffield.	Chatham.
			HARRISON, Wm. L., 7, Dock Street, Hull.	¹¹⁶ 1889. Jan. [‡] Houghton, Robert Alfred, 5,
		**1893. Feb.	‡HART, John William, 12, Andalus Road, Stock-	Wimbledon, S. W.
		111000 01	well, S.W.	³¹¹ 1890. Nov. ‡HUGHES, Edward J., 102, Camder
:		⁴³ 1888. Oct.		473 1891. Nov. ‡IIUGHES, Walter, Thompson Stre
		371891. Mar.	[‡] HARTNOLL, Francis, 49, St. Paul's Road, Burdett	⁶³¹ 1892. Nov. ‡HUNT, William Edward, 1, 2
. '		N01000 0 4	Road, E.	John's, S.E.
ł		⁸⁰⁰ 1893. Oct.	• • • • • • •	573 1893. Jan. HUNTER, John, New Windsor.
ļ		481001 O.4	N.E.	²¹³ 1890. Feb. [‡] INGRAM, William Jones, Goldsw
•	÷ .	⁴¹³ 1891. Oct.	• • •	⁴⁴¹ 1891. Dec. [‡] INSKIP, Frederick Thomas, Dilha
;		2191000 Tam	S. W. ‡HAY, Alexander, 56, George Square, Glasgow.	³¹⁵ 1892. Mar. ‡IRVING, William, Town Hall, Sh
-			⁺ HAA, Alexander, 50, George Square, Gausgow. ⁺ HEAD, Arthur Parr, 39, Barnsdale Road, Padding-	611 1892. June. ‡JACKLING, William, Inspector's C
۱		1099, 94116	ton, W.	Maidstone.
• ;		411888 Mat	THEAD, Robert H., 7, Upper Baker Street, N.W.	³¹⁷ 1891. Feb. ‡JACKSON, Henry James, Ryc Road
÷	1		HEARS, William, Junr., 28, Parker Street, Chorley,	⁷¹² 1893, May. ‡JACKSON, Thomas, 288, New 1
		1001, 1108,	Lancashire.	Lancashire.

⁴³1888. Oct. HEARN, Walter, 62, Grove Park Terrace, Grove Park, Chiswick, W., (27, Mecklenburgh Sq., W.C.). arlborough Terrace,

nds Terrace, Prim-

Street, Roman Road,

r Road, Sunderland. Jourth Road, Gras-

urley Street, Bow, E. nbe Road, Hornsey

reet, Stalybridge. Blakenhall, Wolver-

oad, Manchester. age, Newmarket. Collingham, Newark. ond Street, Vauxhall,

hill, Surrey. d, Penge, S.E. tle Horsted, Uckfield. e, Palmerston Road,

tary Inspector, Town

Street, Southport, reet, Chelsea, S.W. treet, Chelsea, S.W. 7, Boundary Road,

Merton Hall Road,

n Street, Birkenhead. eet, Bilston. Ashmead Road, St.

vorth Road, Woking. orne, Stoke-on-Trent. hrewsbury. Office, Fair Mcadow,

ad, Hoddesdon, Herts. Hall Lane, Preston,

¹¹³1891. Oct. [‡]JACKSON, William, Health Office, North Church St., Sheffield, (181, Clough Road, Sheffield.)

312 Reg. Dat		ASSOCIATES.
No. Elec ²¹¹ 1890,	tion. Feb.	JACOB, Oswald, Sanitary Inspector, Feltham, Middle- sex.
7231893.	Apr.	JANRATT, Edward John, Morden Lodge, Albion Hill, Lewisham Road, S.E.
4#1891.	Oet.	‡JARVEY, George, Town Hall, Salford.
²³⁵ 1890.		‡JELIAS, John, 11, Arodene Road, Brixton, S. W.
***1893.		JENKINS, David, Port Sanitary Offices, Docks, Cardiff, Glamorganshire.
207 1889.	July,	JENNER, Richard Messenger, Parade Road, Sandyate,
⁶⁷⁴ 1893.		#JEVONS, John H., Braintree, Essee.
		Jonns, David James, 28, Gelli Road, Ton Pentre, Rhondda Valley, Glamorganshire.
³⁷⁴ 1891,		JOHNSON, H. Watts, Manor House, Little Berkhamp- stead, Herts.
²⁴³ 1890.	-	mercial Road, E.
³¹⁰ 1890.		Department, Town Hall, Hull.
4331891.		
²¹² 1890.		
³²³ 1890,		Kennington Park, S.E.
¹⁴⁹ 1889,	June.	JONES, William, Cemlyn, Dolgelly, Merioneth.
²³³ 1890.		‡Jours, William, Town Hall, Gateshead-on-Tyne.
³¹² 1890.		‡JUNY, H. A., North-East Lodge, Chelsea Bridge, Grosvenor Road, Pimlico, S.W.
⁵⁰ 1888.		‡KEAL, J., Southview Hill Road, Sutton, Surrey.
⁵³¹ 1892.	•	Park, Essex.
		‡KEMSLEY, Jesse, 76, Qucen's Road, Bayswater, W.
		*KENNEDY, Daniel, 19, Tremlett Grove, Junction Road, N.
		‡KERSHAW, Edward Baxter, Hinton, 64, Theale Road, Streatham, S. W.
		‡KIELL, John, 103, High Street, Barnstaple.
⁵⁹² 1892.	May.	‡KILGALLIN, Charles J., 55, Marylebone Road, W.
		‡KING, Albert S. W., 31, Mervan Road, Brixton, S. W.
		[‡] KING, Claude, 24, Prince of Wales Road, Norwich, Norfolk.
¹⁴⁹ 1889.		‡KING, Frederick William, Heybridge, Maldon, Essex.
⁵⁷⁰ 1892.	•	‡Kırк, William Hugh, Town Hall, Newcastle-upon- Tyne.
⁸¹⁷ 1893.		‡Кикк, William Willey, 17, Waterway Street West, Nottingham.
⁵³ 1888.		KITE, Charles, 31, Barronsmere Road, East Finchley.
²⁷⁴ 1890.	May.	‡KNIGHT, Robert, Junr., Abbot House, Dunfermline, Fife.

- 1501889. Feb. ‡KNIGHT, William Henry, Dulce Domun, Gishurn Road, Hornsey, N. ⁵⁶³1892. May. KNOWLES, James Edward, 9, System Street, Cardiff.

			ASSOCIATES.
2	Reg. Dal		
	No. Elec 594,893.	don. June.	HADD, H. F. B., 5, Crompton Terra
	701893	June.	LAMBLE, Phillip T., 14, Chichester
	⁶⁴ 1892.	June.	‡LAMPORT, Miss Ethel Frances, 55
	100-1		W.U.
	1º21889.	June.	‡LANDER, James, 19, Millbank Stre
	¹¹ 1888.		‡LAPWORTH, J., Vestry Hall, Bethn
	²¹⁴ 1889.	Nov.	LAURIE, John, The Lawn, Iffley, O
	[™] 1893.	Apr.	‡LAWRENCE, James, 12, Beidge
	• · · · · ·	1	Battersea, S.W.
	⁷⁰ 1893,	May.	#LAWSON, Archibald, 103, Leinster
	1111000	4	Dublin.
	¹⁹⁷ 1893.	Apr.	There, Charles F. E., Alverstoke, I
	⁴⁵ 1891. ¹⁵¹ 1889.	NOY. L.s.	LEAR, James Walter, 122, Southy
	221859. 221859,		TLEE, James, 28, Franchise Street, 2
	- 1550, - ³⁶]558,		#LAGO, S. C., 117, Powerscroft Rod
	הספרן,	Oct.	N.E.
	²¹ °1892.	Ebb	‡Lanan, Frederick George, Cottage
	وشراوي ال	100.	Kent.
	1021888	Dee	‡Lennox-Clarke, A.
	···1893.	Feh	#Laverton, John Henry, Sanite
	1000		John's, Hampstead, Vestry Hall
			and 45, Lisburne Road, Hampste
	^{n†} 1859.	Jan.	‡LEWIS, Arthur, Isham, Wellingbor
	**1891.	Feb.	‡Lawis, Charles, Newland Street, J
	**1893	July.	LEWIS, James, 17, Heyford Aven
		•	Road, S.W.
	**1888.	Oct.	‡LAGHTFOOT, Thos., 1, Langsyne V
			Kew,
	²⁹¹ 1890,	May.	‡Lightroor, William Charles, 37
		•	King's Road, Chelsea, S.W.
	***1890,	Jan.	‡LILLY, William Gent, 5, Whitcom
	⁵¹⁹ 1892.	Mar.	#LANDLEY, Joseph, Cliffe Villa, Sta
	$^{74}1893$	May.	‡LINTOTT, John, 80, London Road,
	³²⁴ 1890,	Nov.	[±] LATTLE, William, Health Office, No
	417 1 00 1	т.,1.,	Sheffield. ‡Locke, Walter Richard, Bedford
	417 1891, 764 1802	Juny.	⁺ LOCKWOOD, Arthur Charles, 49, Qu
	1000,	, aune,	Hill, Norwood, S.E.
	***1891.	Jan	Longsbon, Ernest M., Surveyor,
	1001	o vani	well.
	^{\$14} 1893	Nov	Loubox, John Baird, Rosslyn Vill
	1.000		Coventry.
	4031891.	Nov.	
	^{us} 1889.	Jan.	LUKES, Arthur Henry, Town Hall
	³²⁷ 1890.	Nov.	‡Lund, Clifton, 9, Bridge Street, S
	^{5*} 1888.	Oct.	‡LUND, Jeremiah, St. James's Vesti
	⁶²³ 1892	July.	‡Lyon, James Joseph, 6, Rice Lane,
		-	Liverpool.
	⁶¹ 1888.	Oct.	MACINTOSH, James, 38, Langham

ace, Walmer, Kent. • Street, W. 5, Burton Crescent,

cet, Westminster. nal Green, E. Oxon. Road West, Old

Road, Rathmines,

Westminster, S.W. Westmatuster, 5.07. Hampshire. gate Road, N. Rochdale. ad, Lower Clapton,

e Hospital, Dover,

tary Inspector, St. I, Haverstock Hill, Jead, N.W. rough. Witham, Essex. ne, South Lambeth

'illas, Forest Road,

, Fernshaw Road,

mb Street, W.C. anicliffe, Dewsbury. I, Brighton, Sussex. Sorth Church Street,

House, Aylesbury. ucen's Road, Crown

Town Hall, Bake-

lla, Warwick Road,

nre, Wolverhampton. 11, Gravesend. Southport. try, Piccadilly, W. Walton-on-the-Hill,

Street, W.

314	ASSOCIATES.
Reg. Date of No. Fleetlan	
Reg. Date of No. Election. ¹⁷¹ 1889, Apr.	MACKAY, James John, 186, Kensal Road, W.
2371890, Feb.	*MACLENNAN, John, Carnock House, Carnock, Dan- fermline.
⁶³⁰ 1893. Jan.	<pre>#MADGE, Frank William, 46, London Road, Forest Hill, S.E.</pre>
471 1891. Nov.	MADIN, William B., Town Hall, Leck.
	[‡] MAGER, Frederick Walter, Rural Sanitary Authority, Durngate Street, Dorchester.
²⁷² 1890. May.	*MALCOLM, Alfred, Clayton, Manchester.
4931892, Feb.	#MALVERS, Thomas, Winchcombe Street, Cheltenham,
6021893, Feb.	⁺ MARRABLE, Horaco, 130, Latchmere Road, Clapham Junction, S.W.
³¹⁴ 1892. Feb.	[‡] MARTIN, Robert, 17, Wawne Street, Spring Bank, Hull.
4121891. Oct.	#MARTIN, William, Junr., Glenburn, Carluke, N.B.
3941891, Apr.	[‡] MASON, Frederick William, 22, Main Avenue, Bush Hill Park, Enfield.
²³¹ 1890, Apr.	MASON, Jonathan, 1, Grove Terrace, Grove Road, Leytonstone.
331888. Oct.	‡MATHIAS, H. D., 140, Smithdown Road, Liverpool.
3031892. Feb.	*MATTHEWS, Frederick, Kedleston, Derby.
7131893. May.	[‡] MATTHEWS, Henry, Grimley, Worcester.
373 1891. Feb.	#MATTHEWS, William, Kedleston, Deeby.
3231892, Feb.	[‡] MAXWELL, William Henry, Local Board, Town Hall, Leyton, E.
3191891, Mar.	[‡] MAYNE John William, Sanitary Inspector, Wimble- don, S.W.
131 1889. Feb.	#MAY, William H., Inspector's Office, Guildhall, E.C.
60 1888. Oct.	[‡] McDonald, A. L., 37, George Street, Gipsy Hill, S.E.
⁶²³ 1892. Sept.	[‡] MEADOWS, John W., 52, Camden Street, North Shields, Northumberland.
611 1892. Oct.	[‡] MEAZEY, Thomas, 1, Stanwell Road, Penarth.
¹⁰³ 1888. Dec.	
133 1889. Jan.	[‡] MILLARD, William David, Roslin, Ellington Road, Ramsgute.
³⁹⁴ 1892. June.	[‡] MILLER, Frederick William, 137, Salcott Road, Clapham Common, S.W.
499 1892. Feb.	[‡] MILLS, Joshua George, North Road, West Kirby, Cheshire.
4321891. July.	[‡] MILNER, Walter, 40, Sackville Street, W.
^{\$13} 1890. Oct.	\$MILNER, William, 116, Park Road, Chorley.
	\$MINTY, Samuel, The Triangle, Bournemouth.
	‡Misselbrook, G. T., 2, Percy Road, Fawcett Road, Southsea.
⁶¹⁰ 1892. Sept.	MITCHELL, Charles Frederick, 55, Qucen's Crescent, Haverstock Hill, N.W., and The Polytechnic,
²¹³ 1890. Feb.	Regent's Street, W. MITCHELL, Edward, 25, St. Saviour's Road, Croydon, S. W.

	A55001A11/5
Reg Date or No Election.	
^{3es} 1890. June.	[±] Moony, Henry Fred, 37, Hay
	[‡] Moony, Henry Fred, 37, Han Grimsby.
⁷⁶⁹ 1893, Feb.	‡MOONEY, Patrick, 353, Chester Roa
**1893, Oct.	#MORGAN, William, 11, Bute Cro
	Glamoryanshire.
491892, July.	#MORRISON, John William, Town
1002, 001,	Lancaster.
⁴⁰² 1891, Apr.	#MosLey, Abraham, Goodyear Cha
TOWN THE	Square, Northampton.
4591891. Dec.	#Moss, Samuel, Williamson Street,
1811892. Feb.	#MUSRO, Andrew John, Fairlight,
Tenni Teni	Enfield.
¹⁰¹ 1892, May.	NAYLER, Edward, 140, Lake
10021 20031	Portsmouth.
2111889, July.	
10.0.000	Westminster, S.W.
301892. May.	· · · · · · · · · · · · · · · · · · ·
10021 20031	<i>S.E.</i>
573 1892. May.	NEWSON, George John, 25, Gert
1002, 240,1	Brompton, S.W.
**1891. Mar.	\$Nicholas, David, 256, Essev Road
¹⁰⁷ 1892, Feb.	‡NORMAN, Ernest William, 4, Da
1002, 100	Gate, E.
¹⁶³ 1888, Dec.	Nonus, Joseph, Sunningdale, Asc
²³⁷ 1890, Mar.	‡Norrish, John Thomas, 9, Cuthber
³¹³ 1893, Feb.	‡Norton, Elizabeth Jane, Maida
1000, 100,	W.
213 1800 May	‡NURCOMBE, Benjamin, 1, Jasmine
1000. 11113.	berg Street, Clapham, S.W.
225 1890 June	‡NUTLEY, Charles Vernon, 11, Dallin
1000, 0 000,	smith, W.
³¹⁷ 1890, Oct.	
¹⁶⁰ 1889. Mar.	‡OLLETT, John Henry, Sanitary Ins
⁵⁶⁴ 1893 June	‡OLLIS, John James, Hill Farm, Sa
⁶¹⁹ 1809 Out	‡ORCHARDSON, Robert, 88, North
	Lancashire.
213 1889. Nov.	
1000, 1004	George Street, W.).
³²² 1892 Feb	‡ORRELL, Thomas, 44, Vernon Stre
6331892 Sent	[‡] Osborne, Walter, 13, Third Street
1002, 0000.	head.
455 1891 Nov	‡OUTRAM, Mason, 35, Stafford Stra
7761893 June	. ‡OWEN, William, Glyn Garth Post
751893 May	[‡] PACY, William, Verona Villas,
1000, 110).	Worcester.
⁶¹ 1888. Oct.	
⁷⁰⁹ 1893. Feb.	[‡] PALMER, Herbert Albert, 70, Leand
1000, 100,	Avenue, Brixton Hill, S.W.
⁵⁹¹ 1893 July	⁺ PALMER, Isaac Fairley, Ewell Ro
1000, 01113.	S.W.
	Nett i

ASSOCIATES.

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315

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are Street, Great

oad, Manchester. rescent, Pontyclun,

vn Hall, Salford,

hambers, Abingdon

, Tunstall. 1, Birkbeck Road,

Road, Landport,

Winchester Terrace,

outh Norwood Hill,

rtrude Street, West

id, Canonbury, N. Jawes Road, Forest

scot, Surrey. pert Road, Brighton. la Vale Mansions,

e Terrace, Wurtem-

ing Road, Hammer-

Waterloo, Liverpool. aspector, Eastbourne. Saltford, Bristol. a Road, St. Helens,

t, W., (41, Upper

reet, Darwen. et, Bensham, Gates-

rect, Derby. t Office, Anglesca. Arboretum Road,

rton. nder Road, Josephine

load, Surbiton Hill,

فلتكارز بأريد والمراجع والمتحد والمحادي		
	316 Associates.	ASSOCIATES.
	Reg. Date of No. Election.	Reg. Date of
	622 1892. July. ‡PALMER, James, 1, Tanner's Hill, Broadway, Dept- ford, S.E.	Ter 1893. Oct. ⁺ POTTER, Edwin James, Honiton J Crescent, W.
	⁶⁵⁰ 1892. Oct. ⁺ ¹ PANK, Richard Arnold, St. Andrew's, Norwich. ⁴⁶⁹ 1891. June. ⁺ PARAMOR, Robert Walter, 16, Randolph Gardens,	1889. Jan. [‡] Porrier, Thomas Wickford, Estate 1 Park, Ollerton, Notts.
	Dover. 2771890. May. ‡PARHAM, John, Junr., 5, Edison Road, Crouch Ead,	 ¹²³1889, Jan. [‡]PRATT, Joseph, 12, Kirkdale, Sydenl ¹²⁴1889, Mar. [‡]PRESS, William James, Rose Villa, ²
	⁶⁰³ 1893, Jan. [‡] PARKINSON, Arthur Charles, 27, Southampton Row, W.C.	Burnham, Nomerset. ** 1893. Nov. ‡PRESTON, Alfred Pearce, 42, Arran Glamorganshire.
	^{47*} 1891. Dec. PARKINSON, Herbert William, 11, Gloucester Road, South Kensington, S.W.	⁶¹¹ 1892. Oct. PHINGLE, Andrew, Cromwell House, Kent.
	⁷⁰³ 1893. Feb. #PARSLEY, Frederick Wm., 3, Upper Montaga Street, Montaga Square, W.	91888. Oct. PROGER, John L., 11, Cartiy-vie Cardiff.
	⁶⁷⁰ 1893, Jan. ⁺ PATCHING, Walter C., 9, <i>Chapel Road</i> , Worthing. ⁶⁷¹ 1893, Jan. ⁺ PATCHING, William George, <i>Belfort, Worthing</i> .	521893. Feb. PUDDLE, Walter Louis, 17, Somervill field, Yorkshire.
	⁷⁶³ 1893. June. ‡PATERSON, Arthur William, Station Road, New Barnet, Herts.	¹³ 1893. May. [‡] PURNELD, Arthur Edward, 123, Has Wandsworth, S. W.
	^{2**} 1890. May. ‡PATTISON, William Phillip, White House, Benwell, Newcostle-on-Type.	S21893. Oct. ‡QUICK, Edward Hare, Sanitary Inspe Devon.
	 ⁴¹⁴1891. June. ‡PEAKE, Thomas Jones, 61, Wybunbury Road, Willas- ton, Nantwich, ⁴²⁷1891. June. PEARCE, Frederick James, Borough Surveyor's Office, 	¹⁸⁸⁸ Oct. ‡RAINS, Joseph, <i>Kettering.</i> 1893. Feb. ‡RANCE, John Walter, 111, Page Stre S.W.
	⁶⁵ 1888. Oct. ⁺ PEARSON, John, Sanitary Inspector, Grace Hill, Folke-	⁷¹¹ 1893. July. ‡RAYNER, George, The Green, Dou Norfolk.
	stone. 7**1893, July. ‡PENGELLY, John Isaac, 15, St. James's Road,	⁵¹ 1893. Feb. ‡READ, Walter Herbert, 1, Cornwall ³¹⁷ 1892. Feb. ‡REAVELL, Frank Noble, 97, Benthe
	Exeter. **1888. Nov. #PERRY, Arthur, 45, Townshend Road, St. John's Wood,	Newington, N. †1888. Oct. – ‡REAVELL, George, Jun., Alnwick, N
	N.W. ¹³³ 1889. Feb. ‡Perrir, George Mackness, 22, Chesterton Road,	⁷³¹ 1893. Apr. ‡REID, Thomas Alexander, Care of Hallyburton, Coupar-Angus.
	North Kensington, W. ⁶⁴¹ 1893. Feb. ‡PHILLIPS, Charles, 68, Swinton Street, Gray's Inn Road, W.C.	⁷¹ 1888. Oct. ‡RICHARDS, Daniel, Elwyn Villa, Son ⁶¹⁶ 1892. June. ‡RICHARDS, William, 18, Nunhead Rye, S.E.
	^{2*3} 1890. May. ‡PHILLIPS, Henry, 66, Park Lanc, Earlham Road, Norwich.	1893. Oct. ‡RICHARDSON, Frederick, High Street, oaks, Kent.
	⁶²⁷ 1892. Sept. ‡PIDWELL, Engall Thomas, 12, Peak Hill Avenue, Sydenham, S.E.	⁷²⁹ 1893. Apr. ‡Ritcuire, Peter, 23, Georgiana Street N. W.
	^{\$19} 1893. Nov. [‡] PIERCY, Edmund Ernest, 20, Fentiman Road, Clap- ham, S.W.	⁷³¹ 1893. May. ‡ROBERTS, Peter James, 141, Union under-Lyne, Lancashire.
	4331891. July. ‡PILBEAM, Francis Newcastle, 72, Davenport Road, Shepherd's Bush, W.	²⁶³ 1890. Apr. ‡ROBERTSON, John Shirras, Princes S ⁶¹⁴ 1892. July. ‡ROBINS, H. G., 29, West End Lane,
	³⁶⁷ 1891. Feb. ‡PILLOW, Mrs. Margaret Eleanor, 2, Carlton Terrace, Mill Hill Road, Norwich. ³⁹⁹ 1892. App. ‡Programmer Semuel A. 2. Chastrast Willing Wales	²²³ 1890. Jan. ‡ROBINSON, John, 79, Lavender 1 Junction, S.W. ³³¹¹⁸⁰⁰ Ech. ‡Robson Langelot 12 Stockton Stre
	 ⁷³⁰1893. Apr. [‡]PITCHFORTH, Samuel A., 3, Chestnut Villas, Foles- hill, Warwick. ²³³1890. Jan. POOLE, James, 2, Trafalyar Place, Kensington, W. 	 ⁵⁰⁷1892. Feb. ‡Robson, Lancelot, 12, Stockton Strepool. ⁶³³1892. Sept. ‡Robwell, Ascough, Union Offices, Sk.
	⁷⁶² 1893. Feb. [‡] PORTER, John James, Halse Road, Brackley, North- ampton.	¹¹⁹ 1891. July. ‡Ror, Edward Charles, Junr., 23, 6 <i>Fulham</i> , S.W.
	67 1888. Oct. [‡] Potter, Ben, 17, Ranelagh Road, Ealing, W.	⁷² 1888. Oct. ‡Rovens, Richard, Maes Helew, Carn

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n House, Saltram
te Works, Thoresby
denham, S.E. la, Abingdon Street,
ran Street, Cardiff,
nuse, Boxley Heath,
vie Road, Penarth,
rville Terrace, Shef-
Harbut Road, New
nspector, Lympstone,
Street, Westminster,
Downham Market,
vall Terrace, N.W. mthall Road, Stoke
, Northumberland. of D. Reid, Ley of
South Molton. ad Grove, Peckham
reet, Brasted, Seven-
reet, Camden Town,
tion Street, Ashton-
res Street, Thurso. tne, N.W. r Road, Clapham
Street, West Hartle-
Skipton, Yorkshire. 3, Oxberry Avenue,
arnarvon.

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318 Reg. No. 513 18

Reg. No.	Date Elec	e of Hon	
3.51	892.	May.	‡ROPER, Joseph Stanley, Surveyor and Inspector to
		•	Rural Sanitary Authority, Greenway Court,
			Hollingbourne, Maidstone.
705]	893.	Feb.	*ROSHIER, Edward, 31, York Street, Unthanks Road,
			Norwich,
422]	891,	Juno.	‡Rossiten, Robert Herbert, 15, Sloane Terrace, Sloane
			Street, Chelsea, S.W.
¢1+1	892.	Oct.	
		- 1	Bridge, Yorkshire.
***]	892.	July.	
	04.1	37	Esser,
•••1	591.	Nov.	Rowe, William Thomas Ferdinand, 41, Old Town
463 1	601	Nou	Street, Plymouth, ‡RowLAND, Arthur, 5, Cambridge Street, Hall.
603 J	601 600	Nov.	‡ROWLAND, Arthur, 5, Cambridge Street, Hatt. ‡ROWLAND, Samuel, Local Board Offices, Pontypridd.
503 1	904) 909	Mar	‡ROYLE, Charles, 51, Wormgate, Boston, Lincoln.
100 j	893	June	‡Rugo, John Edward, The Vestry of St. Luke's,
1	000.	o unca	City Road, E.C.
792]	893.	July.	‡RUGG, Samuel Horace, 165, Earls Court Road, Ken-
-		<i></i> , .	sington, W.
²³³ 1	890.	May.	\$Ruscor, Ernest Henry, 6, Great Castle Street, Regent
		•	Street, W.
^{co1} 1	893.	Feb.	‡Ruscor, Frank Harvey, 6, Great Castle Street,
			Regent Street, W.
⁷²¹ 1	893.	Apr.	‡RUSHTON, Egbert, 9, Kendal Street, Blackburn.
893]	SS9.	July.	‡RYDER, Albert Thomas, 2, Carendish Street,
		-	Bedford.
123]	889.	Jan.	\$SADLEIR, Richd. J., Woodcote, Ormeley Road, Balham,
73 1	000	Oct.	S.W. +Strong 9 Finds Band St. Longuela on
· · 1	000.	Uct.	[‡] SALTER, Thomas, 2, King's Road, St. Leonards-on- Sea.
749 1	893	May.	
550]	892.	May.	[‡] SANDON, Edward II., 327, Harrow Road, W.
233	S90.	May.	\$SAUNDERS, Percy, 46, Jarvis Road, South Croydon,
		•* -	<i>S.W.</i>
733]	893.	July.	‡SCHLUND, William Theodore, 46, Kemp Street,
		-	Brighton.
639	893.	Feb.	\$COTT, Sarah, 130, Strand Road, Bootle, Liverpool,
	_		Lancashire.
74]	S88.	Oct.	SEDGWICK, Sydney, Sidmouth Villa, 195, Tulse Hill,
5 0 3 -		.	S.W.
195	893.	July.	[‡] SHARMAN, Edward Mansfield, 104, Acomb Street,
660 1	000	N	Greenheys, Manchester.
]	.09 Z .	Nov.	SHARPE, William Charles, Morecambe Villa, Great
210 1	800	Feb.	Grimsby, Lincoln. +Susy Potor 98 Church Street Fulham Road
1	.000.	. CU.	[‡] SHAW, Peter, 98, Church ^{Street} , Fulham Road, S.W.
676 1	893	Jan.	SHEARING, Arthur George, 308, Kentish Town
		OHIII	71 1 W W

Road, N.W.

Reg. Date of No. Election.	
No. Election. 123 ISS9, Jan.	[‡] SHELDON, W. E., c/o R. J. Sheldo Villa, Buckhurst Hill.
^{ar} 1892, Feb.	‡SIILL, Albert Edmund, 108, College
#1888, Oct.	[‡] Shone, Ambrose J., 68, Adys Road S.W.
¹¹² 1889, Apr.	‡SHORT, James Allen, Sanitary Depa
³³ 1892, Apr.	[‡] Snurtleworth, William, Town Lancashire.
¹⁷³ 1889, Apr.	[‡] SIDWELL, Henry Thomas, Blean Di Office, near Railway Station, Herm
4241891, July.	[‡] SIMMONS, Edward John, 80, Paule well, S.E.
^{**} 1888, Oct.	\$SIMMONS, Nimrod, Glendale, Clifton
521593 Nov.	² SIMMS, Frederick, 29, Addaide & Oxford.
²⁷¹ 1890, May.	\$SIMPSON, John, 56, Chapel Street, 2
**1892, Feb.	\$SIMPSON, R. D. J., Knott Street, Dep
4301S91. Nov.	SINCLAIR, PROF. William A., M.D. University, Washington D.C., U.S.
5121892. Feb.	\$SLATER, Herbert, 24, Bond Street, I
351891, Feb.	[‡] SMALL, Walter Herbert, Station Rod Canterbury.
6311892. Oct.	[‡] SMITH, Fred. William, 92, St. Leon caster.
³¹² 1892, Feb.	[‡] Smith, George, 6, Henry Street, 8 N.W.
¹⁹ 1888. Oct.	‡SMITH, George Allen, Vestry Hall, I.
⁶⁵¹ 1893, Feb.	\$\$MITH, Hamilton, 1, Oxford Road,
⁷⁹⁴ 1893, July.	‡SMITH, Henry J., 91, Malvern Road N.W.
³³² 1892, Apr.	‡Sмити, Joseph Chas., 28, Livingston hay Road, Leeds.
³⁰⁵ 1890. June.	
⁷³² 1893. May.	[‡] SMITH, Joseph Weedy, 8, St. Jame Cumberland.
571892. May.	\$SMITH, Percy A., 474, New Cross Id
307 1892. June.	, \$\$MITH, Richard, Jun., Salterns Rd.,
³³³ 1890. Nov.	Sмітн, Sydney, Dorset Cottage, Bexhill.
401891, June	. ‡SMITH, Warren B., 66, College S.W.
²³⁴ 1890, June.	, ‡Smith, W. H., 60, Alma Vale Road
⁷⁷⁴ 1893, June	. ‡Smith, William, Preston, The Hyde
⁶³¹ 1892. Sept.	\$SMITHIES, Arthur, Local Board, C shire.
⁸⁰ 1888. Oct.	‡SOPER, Henry Charles, 108, Park Town, N.W.
⁹³ 1888. Oct.	[‡] SORTWELL, W., 14, Retreat Place, Hackney, E.

ASSOCIATES.

Date of

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on, Esq., Thanet

- e Place, N.W. d, East Dulwich,
- artment, Wigan. Hall, Salford,
- istrict Surveyor's ne Bay, Kent. et Road, Camber-
- , Bristol. Street, St. Giles,
- Aberdeen. ptford, S.E. b., л.м., Howard S.A. Leeds.
- ad, St. Dunstans,
- mard Gate, Lan-
- St. John's Wood,
- Hampstead, N.W. Putney, S.W. ad, West Kilburn,
- me Place, Rouna-
- urk, Brixton Hill,
- es Road, Carlisle,
- Road, S.E. Parkstone, Dorset. Hastings Road,
- Street, Chelsea,
- l, Clifton, Bristol. e, N.W. Castleford, York-
- k Street, Camden
- Paragon Road,

320	ASSOCIATES.
Rez. Date of	
No. Election. 653 1893. Jan.	\$Souter, Charles, Kingsnorth House, West Malling,
1890. Juli	Kent
^{\$1} 1888. Oct.	SOUTHFORT, The Mayor and Corporation of, South- port.
3121891. Feb.	*Springer, Julius, 6, Lord Street, Keighley.
⁷³³ 1893. July.	[*] SQUIRRELL, Henry T., 5, Station Road, Bexhill, Sussex.
**1888. Oet.	\$STANLEY, A. W., Newington, Hull.
3101892, Mar.	[±] STASSTELD, Alfred, 2, Tokenhouse Buildings, E.C.
⁵⁰⁴ 1893, Oct.	STAR, William Frost, 143, Brivton Road, 8, 9,
331888. Oct.	\$STEERS, George, 21, Brercton Road, Bedford,
*1888. Oet.	\$STEVENSON, John, Surveyor's Office, East Molescy, Survey.
3331892. May.	\$STEWART, James, 28, Crozier Street, Westminster Bridge Road, S.E.
5321892. Oct.	\$STEWART, Robert Tomlinson, Thorpe-le-Soken, Essea.
***1893. Nov.	⁺ STEWART, T. D., Sanitary Inspector, Cupar Pye, N.B.
***1891. Feb.	\$STOLLERY, William, Dust Depot, Culvert Road, Bat- tersea, S.W.
7951893. July.	\$STONE, Alfred William, Glenview, Long Ashton, Clifton, Bristol.
⁸²⁷ 1893. Dec.	STRATHON, William Henry, 3, Auburn Place, Phy- mouth.
523 1893. Nov.	‡STREAT, John, Ottery St. Mary, Devon.
¹⁷⁴ 1889. Apr.	STRUTT, Thomas Frederick, 5, Tavistock Street, Covent Garden, W.C.
6321892. Nov.	\$SURTERS, Richard Thos., 29, Old Gate Street, Morpeth, Northumberland.
437 1892. Jan.	\$SUTCLIFFE, Alfred, Featherstone Local Board, Ponte- fract.
233 1890, Feb.	SUTHERLAND, Walter, S, Voclas Street, Liverpool.
³²¹ 1890. Nov.	\$SUTTLE, Alfred, Manor Square, Olley.
⁸²¹ 1893. Nov.	\$SWIRE, Henry, 30, Sheep Street, Skipton, Yorkshire.
⁴³¹ 1891, Dec.	⁺ SWITZER, Sidney A., 3, Marcham Road, Horncastle, Lincolnshire.
3251800 Nov	\$SYDENHAM, Sydney, 37, Broad Street, Bath.
⁷³⁹ 1893. July.	[‡] SYKES, Miss Edith Elizabeth, Woodleigh, East Dulwich Grove, S.E.
110 1889. Jan.	TAIT, James, Roslyn Place, Dean Street, Kilmarnock.
1271880 Jan	TATE, William, 29, Kenilworth Road, Kilburn, A.W.
4051891 June.	TAYLOR, Albert, Vestry Hall, Mount Street, W.
639 1892. Nov.	TAYLOR, Harry James, Sturminster Newton, Dorset.
⁴⁷² 1891. Nov.	
³²¹ 1890. Nov.	TAYLOR, Henry Thomas, 7, Wilton Road, Rock Ferry, Cheshire.
¹²³ 1889, Jan.	TAYLOR, James, 17, Oxford Street, Hereford.
²⁷³ 1890. May.	TAYLOR, James, 10, Mount Pleasant, Waterloo, Liverpool.

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Reg. Date of No. Election.	
³⁰¹ 1892, Mar.	‡THATCHER, Albert George Hendy, Hampton Court Palace, W.
^{na} 1893, Apr.	THOMAS, Charles L., 30, Berkely Place, Clifton, Bristol.
2701890, May.	[‡] THOMAS, George, 17, de Beauvoir Square, de Beauvoir Town, N., and City of London Electric Lighting and Engineering Office, Portland House, Basinghall Street, E.C.
**1888, Oct.	THOMAS, Thomas, 4, Chandos Road, Redlands, Bristol.
"1888, Oct.	‡Тномля, W. K., 42, 43 & 44, Triangle, Clifton, Bristol.
^{ate} 1890, Oct.	THOMPSON, Bernard II., 28, St. Mark's Terrace, New Brompton, Kent.
^{cu} 1893, Feb.	THORNTON, Richard, Sanitary Inspector, Kuton, Staffordshire.
13ª1889, Feb.	‡THORPE, James, 19, King Edward Street, Macclesfield.
³⁰⁷ 1892, Mar.	TITMUSS, Joseph E., 31, Trinity Road, Wood Green, N.
²⁹³ 1890, June.	‡Томкіхs, Alfred, 62, Church Street, Camberwell, S.E.
⁴³² 1891, Nov.	
3341892, Mar.	TRAVIS, David, Chief Sanitary Inspector, Halifax.
³²² 1890, Nov.	‡TRIGG, Henry John, 6, Palmerston Road, Hayling
1361891, July.	Island, Hants. ‡TROWSDALE, Tom James, 12, Leybourne Terrace, Stockton-on-Tees.
*71888, Oct.	TUCKEY, George F., 47, Milk Street, Bristol.
⁶⁹ 1893. Feb.	[‡] TUTTEE, William, Junr., 50, Parrock Street, Graves- end, Kent.
³⁰³ 1890, June.	[‡] TURNER, Alfred, 49, Ellora Road. Streatham, S.E.
7161893 May	TURNER, Frederic Richard, The Plough Inn,
	Tewkesbury.
	TWAITS, James, 25, Leopold Street, Burdett Road, Mile End, E.
³¹³ 1890. Dec.	VEASER, Thomas Frederick, ASSOC.M.INST.C.E., care of O. II. Veasey, Bridge House, Huntingdon.
⁷⁷³ 1893, June.	‡VEST, Theodore, 75, Queen's Park Road, Brighton, Sussex.
³ "1891. Mar.	‡WADDINGTON, Thos. W., 8, Albert Street, Padiham.
⁷¹¹ 1893, Feb.	[‡] WADMORE, Alice, 15, Fairfax Road, South Hamp- stead, N.W.
⁵²⁵ 1893. Dee.	[‡] WAGSTAFF, William Henry, 16, Mapperley Road, Nottingham.
⁷¹² 1893. Feb.	^{‡WAKE} , Richard, 619, Wandsworth Road, Clapham, S. W.
⁶²⁵ 1892. Sept.	^{‡WALL,} Samuel Edward, A.R.I.B.A., 26, Mount View Road, Stroud Green, N.
*1888. Oct.	WALLACE, Miss J., 6, Hyde Park Gardens, W.
²¹³ 1889. Nov.	WALLAS, Irwin Clarke, 41, Cavendish Road, Clap-
2000, 2001,	ham Common, S.W.

ASSOCIATES.

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Reg. Date of No. Election 1893. Feb. #WALLIS, William, 13, Gilbert Road, Kennington, S.E. 1893. Feb. WANE, William, 26, Manchester Street, Southampton. 273 1890. May. ‡WANSBROUGH, Cecil Shartman, Arlington Filla, Barrow-in-Furness. 361 1892. May, ‡WARRAN, William Ernest, 5, Broad Park Villas, Whitchurch Road, Tavistock. 1893. Jan. ‡WARREN, William Thomas, Sanitary Inspector's Office, Vestry Hall, Chiswick, S.W. 13 1892. Jan. ‡Watson, Harry John James, 5, Upper John St., W. 33 1892. Mar. ‡WATSON, Thomas, Kirkoswald, Cumberland. WATSON, William Hill, Vestry Hall, Piccadilly, W. ⁴⁰²1892, Jan. WATTS, George Nelson, 147, High Street, Notting ²⁴1888. Nov. 1111, W. 232 1890. Jan. #WATTS, Gerald, 44, London Road, Grays, Esser. 215 1890. Feb. ‡WATTS, William Frederick, Bitterne, Southampton. 371 1892. May. ‡WEATHERITT, James, Town Hall, Newcastle-upon-Time. "1888. Oct. #WEIB, James A., Town Hall, Fulham, S.W. ^{\$23}1893. Nov. ‡WEBSTER, John William, 3, Lanhill Road, Paddington, W. 11/1890. Nov. ‡WEEKS, Alfred James, Clovelly, The Grove, Earlsfield Road, Wandsworth, S.W. 20 1888. Oct. ‡WELLS, G. F., 37, Prospect Street, Hull. 376 1892. May. ‡WELLS, William James, Lower Kingswood, Reigate. 333 1892, June. ‡WHITE, William, 27, Harvey Street, Folkestone. *** 1893. May. ‡WHITE, William L., New Street, Upton-on-Severn, Worcester. ** 1891. Feb. ‡WHITE, William Owen, 8, Albert Street, Banbury. 331892. Feb. ‡WHITHAM, Joseph, Shelf, Halifax. 13 1891. June. ‡WIIITTOME, Philip Alfred, The Chestnuts, Rothesay Road, Bedford. 311 1892. Mar. ‡WILKINSON, George II., 83, Townsend Lane, Anfield, Liverpool. ⁹¹1888. Oct. ‡WILKINSON, W., Ford Street, Derby. 371 1892. May. WILKINSON, William, Altofts, Normanton. ³³⁴1893. May. WILKS, Henry, Bramham, Boston Spa, Yorkshire. 323 1890. Nov. ‡WILLBOND, George Baines, Guildhall, Nottingham. 612 1892. Oct. ‡WILLIAMS, George, 6, Priory Road, Everton, Livernool. 193 1892. Feb. ‡WILLIAMS, Joseph, 30, Goldhurst Terrace, Finchley Road, N.W. 513 1892. Mar. ‡WILLIAMS, Richard Jun., Little Woolton Local Board,

Gatcacre, Liverpool.

1931889. June. ‡WILSON, John, Town Hall, Kensington, W.

wich, S.E.

Road, S.W.

¹⁵²1889. Mar. ‡WILSON, Charles Turle, 37, Burney Street, Green-

206 1889. July. ‡WILSON, William, 5, Windsor Terrace, South Shields.

*** 1892. Oct. ‡WINDSOR, William, 13, Sutcliffe Street, Liverpool, E.

²²1888. Oct. ‡WINSER, F. Sawyer, 52, Buckingham Palace

Reg. D: No, Ek	ate of ection.	
⁶⁰² 1892	June.	[‡] WINSBORROW, Edwin James, Town Hall, West- minster, S. W.
***1889	Apr.	#WINTER, Edward, 82, Church Road, Hove, Brighton.
	Nov.	Woon, Alfred, Bury, Lancashire.
	. July.	#Wood, Charles Bruce, 37, Irene Road, Parsons Green, S. W.
**1892	. June,	[‡] Woon, Charles Fred, 1, Cedar Villas, W. Hamp- stead, N. W.
¹³¹]889	Jan.	WOOD, Peter, 177, Ashmore Road, Paddington, W.
	July.	WOODCOCK, Henry, 16, Steelhouse Lane, Birmingham.
¹³¹ 1891	Nov.	[‡] WOODESON, William, 1A, Charles Street, Pendleton, Manchester.
-631893	. Jan.	#WOODHEAD, Fletcher, 56, Gordon Street, Burnley.
^{a1} 1892		[‡] WOODMAN, Henry Frederick, 41, Glengall Road, Kilburn, N.W.
^{es†} 1893	. Feb.	[‡] WOOLNOUGH, Tom, Northolme, Aberdeen Road, High- bury, N.
**1893	. Jan.	‡WRIGHT, John Henry, Junr., 2, Grosvenor Place, Beatley Heath, Kent.
¹³⁴ 1880), Jan.	‡WRIGHT, John, Junr., 3, Surbiton Park Terrace, Kingston-on-Thames.
***1895	3. Oct.	#WRIGHT, Samuel William, 17, Melville Road, Ford, Decomport.
³⁹¹ 1892	. Feb.	[‡] YATES, Robert, 42, Lupus Street, St. George's Sq., S.W.
¹⁴¹ 1892	. Jan.	[‡] YouNo, Frank Russell, 60, Elmsdale Road, Wal- thamstow, Essex.
³³² 1892	. Mar.	Vouna, Isaac, 39, Dorothy Road, Lavender Hill,

S.W.

Nore.-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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ASSOCIATES.

ASSOCIATES.

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BERKSHIRE.

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OLLARD, J. F.

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Mer

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ON OF MEMBERS. 325	
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PATTISON, William Phillip.	
Ronson, Lancelot. SANDERSON, Isaac.	
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WILSON, William.	
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M.O.H. SHIMELD, James, L.R.C.P. and S.E., M.O.H.	
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