

Foods.

BOWDEN, WILLIAM, *London*, Indian Teas, Chutney, and Sliced Mangoes.
 EDMUNDS, J., *London*, Currie Powders.
 IRVINE & CO., *Gateshead*, Mustard.

Filters.

HARRISON, J. & H., *Newcastle-upon-Tyne*, Cheavin's Self-Acting Cistern Filter.
 MAIGNEN, P. A., *London*, Improved Filtre Rapide.
 MATHER & ARMSTRONG, *Newcastle-upon-Tyne*, Slack and Brownlow's Patent Compressed Charcoal Filter.

Mineral Waters.

BRADY & MARTIN, *Newcastle-upon-Tyne*, Pitt's Mineral Waters.
 BRITISH & FOREIGN MINERAL WATERS COMPANY, *Glasgow*, Mineral Waters.

Disinfectants.

ANTISEPTIC APPARATUS MANUFACTURING CO., *London*, Red Cross Antiseptic Fluid.
 SANITAS COMPANY LIMITED, *London*, Sanitas Disinfectant.
 SELLERS, JOHN, *London*, Potash, Coal Tar, and Carbolic Soaps.
 STANDEN, RICHARD, *Preston*, Disinfecting Powder.

W. H. CORFIELD, *Chairman*.
 W. EASSIE.
 ROGERS FIELD.
 J. WALLACE PEGGS.

APPENDIX.

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

BOARD OF EXAMINERS.

Chairman.

CAPT. DOUGLAS GALTON, R.E., C.B., D.C.L., F.R.S.

H. C. BARTLETT, PH.D., F.C.S.
PROF. W. H. CORFIELD, M.A. LOND., M.D. OXON.
PROF. F. S. B. F. DE CHAUMONT, M.D., F.R.S.
ROGERS FIELD, B.A., M.INST. C.E.
W. H. MICHAEL, Q.C., F.C.S.
PROF. H. ROBINSON, M.INST. C.E.
M. OGLE TARBOTTON, M.INST. C.E., F.G.S.
ERNEST TURNER, F.R.I.B.A.

Registrar.

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

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, the Sale of Food and Drugs Act, &c., has led the Council of the Sanitary Institute of Great Britain to establish Voluntary Examinations, to appoint a Board of Examiners, and to grant Certificates of Competency to Local Surveyors and Inspectors of Nuisances.

Visitors duly appointed by the Local Government Board and various bodies connected with the practical application of sanitary science are invited to be present at the Examinations.

The Examinations, which are arranged in two grades, 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 in the subjects of Examination. Successful Candidates will be placed on the Register of persons so certificated; this Register will be kept at the Offices of the Institute, and a copy will be forwarded to Local Boards and Sanitary Authorities on application.

Each Examination occupies a portion of two days. On the first day the Examination of Surveyors occupies four hours—viz., from 2 till 4, and from 6 till 8 p.m., and consists of written papers only. Inspectors of Nuisances have two hours' written examination on the first day—viz., from 4 till 6 p.m. On the second day the Examination, for both classes, commences at 11 a.m., and is *viva voce*,

with one or more questions to be answered in writing, *if deemed necessary*. A Certificate of competency, signed by the examiners, is granted to successful Candidates, entitling them to be designated as "Certificated by the Sanitary Institute of Great Britain."

As Rural Sanitary Authorities are able, under the Public Health Act, 1875, to obtain almost all the powers of Urban Sanitary Authorities, it is not considered advisable to make any distinction in the examination of the two classes of Surveyors.

As one person may, under the Public Health Act, 1875, be both Local Surveyor and Inspector of Nuisances, Candidates wishing to obtain the double qualification may enter for both Examinations on the same occasion.

Candidates are required to furnish to the Board of Examiners satisfactory testimonials as to personal character, and to give two weeks' notice to the Registrar previous to presenting themselves for Examination, stating whether they wish to be examined as Surveyors, as Inspectors of Nuisances, or as both. The fee for Examination must be paid to the Secretary, by Post-Office order or otherwise, at least six days before the day of Examination. On the receipt of the fee, a ticket will be forwarded admitting to the Examination.

The fees payable for the Examinations are as follows:—

For Surveyors	£5 5s.
For Inspectors of Nuisances	£2 2s.

Unsuccessful Candidates are allowed to present themselves a second time for one fee.

Examinations during the year 1882 are appointed to be held at the Rooms of the Institute:—

On Thursday and Friday, June 7th and 8th, 1883.

On Thursday and Friday, November 1st and 2nd, 1883.

Forms to be filled up by Candidates previous to Examination will be supplied on application to the Secretary, 9, Conduit Street, W.

SYLLABUS of SUBJECTS for EXAMINATION.

FOR LOCAL SURVEYORS.

LAWS AND BYE-LAWS—A thorough knowledge of the Acts affecting Sanitary Authorities, as far as they relate to the duties of Local Surveyors; also, of the Model Bye-Laws issued by the Local Government Board.

SEWERAGE AND DRAINAGE—The Sanitary principles which should be observed in the preparation of schemes for, and the construction of, Sewerage works; the ventilation and flushing of sewers and drains; the internal drainage and other Sanitary arrangements of houses, privies, water-closets, dry-closets, and the removal of refuse; the Sanitary details of Builders' and Plumbers' work.

WATER SUPPLY OF TOWNS AND HOUSES—The Sanitary principles which should be observed in the preparation of schemes for, and the construction of, Water-works; the various ways in which water is likely to become polluted, and the best means of ensuring its purity.

REGULATION OF CELLAR DWELLINGS AND LODGING HOUSES—General principles of Ventilation; the amount of air and space necessary for men and animals; the means of supplying air, and of ensuring its purity.

HIGHWAYS AND STREETS—The Sanitary principles which should be observed in the construction and cleansing of streets and roads.

All persons who have passed the above Examination and received the Certificate for Local Surveyors are, by virtue of having so passed, entitled to become Members of the Institute for Life, upon payment of Five Guineas (without Annual Subscription), in addition to the fee paid for the Examination.

FOR INSPECTORS OF NUISANCES.

A thorough knowledge of the Provisions of the Acts and Model Bye-Laws relating to the duties of Inspector of Nuisances—also of the working of the Sale of Food and Drugs Act.

A fair knowledge of the principles of Ventilation, and the simple methods of Ventilating Rooms—Measurement of Cubic Space.

A knowledge of the Physical Characteristics of Good Drinking Water—the various ways in which it may be polluted, and the means of preventing pollution—Methods of Water Supply.

A knowledge of the proper conditions of good drainage.

The advantages and disadvantages of various Sanitary Appliances for Houses—Inspection of Builders' and Plumbers' work.

A knowledge of what constitutes a Nuisance, arising from any Trade, Business, or Manufacture.

A fair knowledge of the characteristics of good and bad Food (such as Meat, Fish, Milk, Vegetables), so as to be able to recognise unsoundness.

Some knowledge of Infectious Diseases, and of the Regulations affecting persons suffering or recovering from such diseases.

A knowledge of the best Methods of Disinfection.

Methods of Inspection, not only of Dwellings, Dairies, and Milk-Shops, but of Markets, Slaughter-Houses, Cow-Sheds, and offensive Trades.

Scavenging and the Disposal of Refuse.

All persons who have passed the above Examination and received the Certificate for Inspectors of Nuisances are, by virtue of having so passed, entitled to become Associates of the Institute for Life, upon payment of Three Guineas (without Annual Subscription), in addition to the fee paid for the Examination.

LIST OF BOOKS SUGGESTED BY THE EXAMINERS AS USEFUL
TO CANDIDATES.

SURVEYORS.

LAWS AND BYE-LAWS.

The principal Acts affecting Sanitary Authorities, viz:—

Gas Works Clauses Acts, 1847. Price 6d.	} Sold by Eyre & Spottiswoode.
Water Works " " 1847. Price 1s.; & 1863, price 3d.	
Public Health Act, 1875. Price 5s. 7½d.	
" " Water, 1878. Price 4½d.	
Rivers Pollution Act, 1876. Price 6d.	
Artizans' and Labourers' Dwelling Acts, 1868. Price 7½d.; and 1875, price 1s.	

Local Government Board. Model Bye-Laws for Sanitary Authorities. *Eyre & Spottiswoode.* Price 4s. 6d.

†CHAMBERS, GEORGE F. Digest of the Law relating to Public Health and Local Government. 7th Edition. *Stevens & Son.* Price £1 8s.

†FITZGERALD, VESEY. Public Health Act and Local Government Act, 1875. 3rd Edition. *Waterlow Bros. & Layton.* Price 12s. 6d.

†GLEN, W.C., Q.C. Public Health Act. *Knight.* Price £1 16s.

†LUMLEY. Public Health Act, 1875. *Shaw & Son.* Price £1 5s.

†MICHAEL & WILL. On Gas and Water. *Butterworth.* Price £1 5s.

STRATTON'S Public Health Acts, 1875. 1880 Edition. *Knight.* Price 3s. 6d.

†WOOLRYCH. On the Metropolis Local Management Acts. 2nd Edition. *Shaw & Son.* Price £1 1s.

SEWERAGE AND DRAINAGE.

BOULNOIS, H. P., M.INST.C.E. Dirty Dust-Bins and Sloppy Streets. *E. & F. N. Spon.* Price 3s. 6d.

BUCHAN, W. PATON. Plumbing. *Crosby, Lockwood & Co.* Price 3s. 6d.

DENTON, J. BAILEY, M.INST.C.E. Sanitary Engineering. *E. & F. N. Spon.* Price £1 5s.

FIELD, ROGERS, M.INST.C.E. Bye-Laws and Regulations with reference to House Drainage. *E. & F. N. Spon.* Price 1s.

FOX, CORNELIUS B., M.D. Disposal of the Slop Water of Villages. *J. & A. Churchill.* Price 1s. 6d.

GALTON, DOUGLAS, C.B., F.R.S. Observations on the Construction of Healthy Dwellings. *Henry Frowde.* Price 10s. 6d.

HELLYER, S. S. The Plumber, and Sanitary Houses. 2nd Edition. *B. S. Batsford.* Price 10s. 6d.

KNIGHT & Co. Annotated Model Bye-Laws of the Local Government Board relating to—I. Cleansing of Privies, &c. II. Nuisances. III. New Buildings. *Knight & Co.* Price 8s. 6d.

LATHAM, BALDWIN, M.INST.C.E. Sanitary Engineering. *E. & F. N. Spon.* Price £1 10s.

RAWLINSON, ROBT., C.B. Suggestions as to Drainage, Sewerage, and Water Supply. *Knight.* Price 3s.

†Report of the Committee of The Local Government Board on Treatment of Town Sewage. *Hansard & Co.* Price, Report 1s.; Plans 10s.

RUSSELL, J. A. Two Lectures to Builders and Plumbers. *Simpkin, Marshall & Co., 1878.* Price 1s. 6d.

WATER SUPPLY OF TOWNS AND HOUSES.

†BUCHAN, A. Introductory Text Book of Meteorology. 2nd Edition. *W. Blackwood & Sons.* Price 4s. 6d.

†HUMBER, WILLIAM, ASSOC.M.INST.C.E. Water Supply of Cities and Towns. *Crosby, Lockwood & Co.* Price £6. 6s.

PARRY, JOSEPH, C.E. Water: its Composition, Collection, and Distribution. *F. Warne.* Price 2s. 6d.

†Sixth Report of the Royal Commissioners on Pollution of Rivers. *Hansard & Co.* Price 16s.

REGULATION OF CELLAR DWELLINGS AND LODGING HOUSES,
VENTILATION, &c.

GALTON, DOUGLAS, C.B., F.R.S. Observations on the Construction of Healthy Dwellings. *Henry Frowde.* Price 10s. 6d.

HARTLEY, W. NOEL. Air and its Relation to Life. *Longmans, Green & Co.* Price 6s.

†PARKES, E. A., M.D., F.R.S., and F. DE CHAUMONT, M.D., F.R.S. A Manual of Practical Hygiene (Chapters on Air). *J. & A. Churchill.* Price 18s.

HIGHWAYS AND STREETS.

BOULNOIS, H. P., M.INST.C.E. Dirty Dust-Bins and Sloppy Streets. *E. & F. N. Spon.* Price 3s. 6d.

CODRINGTON, T., M.INST.C.E. Maintenance of Macadamised Roads. *E. & F. N. Spon.* Price 6s.

GENERAL.

†PARKES, E. A., M.D., F.R.S., and F. DE CHAUMONT, M.D., F.R.S. A Manual of Practical Hygiene. *J. & A. Churchill.* Price 18s.

†WILSON, G., M.A., M.D. Handbook of Hygiene and Sanitary Science. *J. & A. Churchill.* Price 10s. 6d.

INSPECTORS OF NUISANCES.

The Principal Acts relating to the Duties of Inspectors, viz:—

- | | |
|---|--|
| Public Health Act, 1875. Price 5s. 7½d. | } Sold by
<i>Eyre & Spottiswoode.</i> |
| " " " Water, 1878. Price 4½d. | |
| Canal Boats Act, 1877. Price 3d. | |
| Sale of Food and Drugs Acts, 1875. Price 6d.; and 1879, price 3d. | |
| Rivers Pollution Act, 1876. Price 6d. | |
| Artizans' and Labourers' Dwellings Acts, 1868. Price 7½d.; and 1875, price 1s. | |
| Alkali, &c., Works Regulations Act, 1881. Price 5d. | |
| Nuisances Removal Acts, 1855. Price 1s.; 1860, price 3d.; and 1866, price 1½d. | |
| Local Government Board. Model Bye-Laws for Sanitary Authorities. <i>Eyre & Spottiswoode.</i> Price 4s. 6d | |
| Local Government Board. General Orders relating to Duties of Inspectors of Nuisances, issued March 10th and 13th, 1880. | |
| Metropolitan Board of Works. Bye-Laws under the Slaughter-houses, &c., Act; eight in number. | |
| Metropolitan Board of Works. The Dairies Cowsheds, and Milkshops Order of July, 1879. | |
| STRATTON'S Public Health Acts, 1875. 1880 Edition. <i>Knight.</i> Price 3s. 6d. | |
| †WOOLRYCH. On the Metropolis Local Management Acts. 2nd Edition. <i>Shaw & Son.</i> Price £1. 1s. | |
| BOULNOIS, H. P., M.INST.C.E. Dirty Dust-Bins and Sloppy Streets. <i>E. & F. N. Spon.</i> Price 3s. 6d. | |
| CORFIELD, W. H., M.A., M.D. The Laws of Health. <i>Longman & Co.</i> Price 1s. 6d. | |
| CORFIELD, W. H., M.A., M.D. Dwelling Houses: their Sanitary Construction and Arrangements. <i>H. K. Lewis.</i> Price 3s. 6d. | |
| F. DE CHAUMONT, F.S.B., M.D., F.R.S. Manuals of Health. The Habitation in Relation to Health. <i>Society for Promoting Christian Knowledge.</i> Price 1s. | |
| FIELD, ROGERS, M.INST.C.E. Bye-Laws and Regulations with Reference to House Drainage. <i>E. & F. N. Spon.</i> Price 1s. | |
| KNIGHT & Co. Annotated Model Bye-Laws of the Local Government Board relating to—I. Cleansing of Privies, &c. II. Nuisances. III. New Buildings. <i>Knight & Co.</i> Price 8s. 6d. | |
| HARTLEY, W. NOEL. Water, Air, and Disinfectants. <i>Society for Promoting Christian Knowledge.</i> Price 1s. | |
| †PARKES, E. A., M.D., F.R.S., and F. DE CHAUMONT, M.D., F.R.S. A Manual of Practical Hygiene. (Chapters on Water, Air, Food, and Sewage). <i>J. & A. Churchill.</i> Price 18s. | |

† Books marked thus are Works of Reference.

It is not necessary that Candidates should study all the works mentioned in this List, as two or three are quoted in some subjects to afford greater facilities for obtaining the information.

CANDIDATES WHO HAVE RECEIVED CERTIFICATES AS LOCAL SURVEYORS.

- 1880, Nov. 5, BOULNOIS, H. PERCY, M.INST.C.E., Exeter.
 1880, Nov. 5, BURTON, W. KINNINMOND, Adam Street, Adelphi.
 1879, June 4, CAMERON, DONALD, Exeter.
 1880, June 2, CLARE, JESSE, Sleaford.
 1882, Nov. 3, COOPER, C. H., Wimbledon.
 1878, June 5, GAMBLE, S. G., A.M.I.C.E., Grantham.
 1881, June 3, GRIMLEY, SAMUEL S., Ashby-de-la-Zouch.
 1878, Nov. 7, HARGER, R., Skipton.
 1880, Nov. 5, HARLAND, A., A.R.I.B.A., Stanhope Street, N.W.
 1882, June 9, HUBBER, FRANK, Exeter.
 1880, Nov. 5, INNES, COSMO, M.INST.C.E., Adam Street, Adelphi.
 1878, June 5, JENKINS, W. J. P., Bodmin.
 1880, June 2, NICHOLS, H. B., Handsworth.
 1877, Oct. 29, PARKER, J., Town Hall, Bridgewater.
 1877, Oct. 29, ROBINSON, H. W., Ulverston.
 1879, June 4, TOUZEAU, E. M., Strand, W.C.
 1881, June 3, WHITCOMBE, A., A.R.I.B.A., John St., Adelphi.
 1882, June 9, WITTS, J. W., Market Harborough.

CANDIDATES WHO HAVE RECEIVED CERTIFICATES AS INSPECTOR OF NUISANCES.

- 1882, June 9, ABRAMS, H., Arthur Road, South Hornsey.
 1882, June 9, ATKINS, W., Kettering.
 1882, June 9, BAXTER, J., Walnut Tree Walk, S.E.
 1877, Oct. 29, BLANCHARD, THOMAS, Evesham.
 1879, Nov. 7, BOLT, BENJAMIN, Aston, Birmingham.
 1877, Oct. 29, BOOKER, F., St. Mary's Hall, Coventry.
 1882, Nov. 3, BROWN, JOHN, Geneva Terrace, Brixton.
 1878, Nov. 7, CHUBB, T. T., Whitchurch.
 1880, June 2, CLARE, J., Sleaford.
 1879, Nov. 7, CLARKE, A. LENNOX, Union Buildings, Selly Oak.
 1881, June 3, COWDEROY, J. T., Wolverhampton.

1878, June 5,	DALE, T. H.,	Town Hall, Hull.
1878, Nov. 7,	DAVIES, H.,	Wrexham.
1882, June 9,	FAIRCHILD, S. G.,	Chesson Road, W., Kensington.
1882, June 9,	FINLAY, A.,	Town Hall, Scarborough.
1878, Feb. 7,	GANDER, C.,	Alcester.
1880, Nov. 5,	HARLAND, A.,	Stanhope Street, N.W.
1878, Nov. 7,	HARRIS, W.,	Solihull.
1878, June 5,	HAWKES, C.,	Hackney
1881, Nov. 4,	HORROCKS, J.,	Chicago.
1879, Nov. 7,	LAPWORTH, J.,	Bethnal Green.
1882, Nov. 3,	LEGG, J. C.,	Gayhurst Road, E.
1882, June 9,	LIGHTFOOT, F.,	Trevor Square, Knightsbridge.
1879, Nov. 7,	OSBORNE, J.,	Carlisle.
1877, Oct. 29,	PREBBLE, W. S.,	Blackburn.
1881, June 3,	RAINS, J.,	Kettering.
1882, Nov. 3,	RICHARDS, DANIEL,	Spencer Street, S.W.
1878, Feb. 7,	ROBINSON, J.,	Farm Street, Berkeley Square.
1881, Nov. 4,	SORTWELL, W.,	Retreat Place, Hackney.
1882, June 9,	STEERS, G.,	Wellington Street, Bedford.
1882, Nov. 3,	TAYLOR, ALBERT,	Bolton.
1882, Nov. 3,	WATSON, JAMES,	Exeter.
1878, Feb. 7,	WATTS, W. F.,	South Stoneham.
1878, Feb. 7,	WETHERILL, W.,	Norfolk Street, Batley.
1878, Feb. 7,	WILKINSON, W.,	Salford.
1881, June 3,	WILKINSON, W.,	Bury, Lancashire.
1881, Nov. 4,	WITTS, J. W.,	Market Harborough.
1882, June 9,	WRIGHT, NOAH,	Coventry.

EXAMINATION QUESTIONS, 1882.

The following questions were required to be answered in writing. A *viva voce* examination took place on the following day.

JUNE 8th, 1882.

SURVEYORS—PAPER I. 2 TO 4 P.M.

1.—State the principal provisions of the Public Health Act of 1875. Is it applicable to the whole country? Has it been modified by subsequent legislation, and if so, how?

2.—Give the substance of the Model Bye-laws issued by the Local Government Board, regulating the construction and management of slaughter-houses.

3.—A twelve-inch pipe sewer is running half full, and the sewage has a velocity of three feet per second, how many gallons will be discharged per minute? Also, how many gallons per minute will be discharged from a six-inch pipe drain under the same conditions? Give your calculations in full.

4.—Describe and give a sketch of the form of man-hole which you consider best adapted for ordinary town sewers, and state the rule which you adopt for determining the amount of ventilation to be afforded in a main street sewer.

5.—Describe (with diagram) three typical forms of disconnecting traps for drains, and explain their action.

6.—What are the chief points to be looked at in order to determine whether a water-closet is satisfactory, from a sanitary point of view? Illustrate your answer by sketches.

SURVEYORS—PAPER II. 6 TO 8 P.M.

1.—What is an Artesian well? Under what circumstances would you advise the construction of such a well?

2.—How is drinking water most likely to become polluted—

(a) In a town with a public water supply?

(b) In a rural district?

What precautions would you take in each case to prevent the pollution?

3.—What circumstances favour the entrance of "ground air" into a building? Why is it necessary to exclude it, and what are the principal modes of doing so?

4.—Give a clear and concise definition of good ventilation, stating how much air is required per head per hour.

5.—Sketch plan and section of a hospital ward and its offices for twelve patients, and state how you would propose to ventilate it.

6.—Sketch sections of roadways constructed of different materials, and state the advantages and disadvantages of each.

INSPECTORS OF NUISANCES—4 TO 6 P.M.

1.—What diseases are considered infectious? What is the law with reference to the exposure of persons affected with infectious diseases?

2.—What are the provisions of the Public Health Act of 1875 with regard to cellar dwellings?

3.—Why is ventilation necessary? What is the greatest number of people that should be allowed to sleep in a dormitory 30-ft. by 15-ft. by 12-ft. high?

4.—Under what circumstances is it necessary to have butts or cisterns for the storage of drinking water, of what materials are they usually made, and in what ways may the water in them become contaminated?

5.—What are the relative advantages and disadvantages of pipe and brick drains? What do you consider the least fall that a house drain should have?

6.—What are the most important points to be observed in inspecting a cow-shed?

7.—You are sent for to a house where there is a case of small-pox. What steps would you take?

8.—If you are refused entrance into premises where you have reason to believe that a nuisance exists, what would you do?

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NOVEMBER 2nd, 1882.

#### SURVEYORS—PAPER I. 2 TO 4 P.M.

1.—What are the chief Sanitary Acts in force?

(a) In the Metropolis.

(b) In other parts of England.

What are their chief provisions?

2.—What are the principal provisions of the model bye-laws issued by the Local Government Board with reference to—

(a) Building construction.

(b) House drainage.

(c) Ventilation.

3.—What is the primary principle to be observed in the drainage

of a town or district, and how would you proceed to determine the size and capacity of the outfall sewer?

4.—What rules should be adhered to in regard to gradients, man-holes, lamp-holes, ventilators, and flushing, in a sewerage system? Illustrate your answer by sketches.

5.—Describe the rules that govern the question of sewage disposal at the outfall.

6.—How far is a separate system of sewerage desirable?

7.—Describe the essential points to be observed in carrying out a system of house drainage. What are the desiderata of a good form of water-closet? Illustrate your answer by sketches.

#### SURVEYORS—PAPER II. 6 TO 8 P.M.

1.—What are the first considerations in designing and constructing water-works?

2.—Describe the conditions to be kept in view in selecting a source of water supply.

3.—How much water has been proved by experiment to be used per head in an average household by constant and by intermittent supply? Compare this with the average expenditure of a large town, and explain the cause of the difference, if any.

4.—Describe the best means of casting and testing water pipes, and of making joints.

5.—What amount of cubic space per head is required for healthy sleeping rooms? Why is it necessary to have a certain amount? What limit of height should be allowed to reckon in the calculation?

6.—Describe by a sketch the best transverse section of a paved and of a Macadamised street, each 40 feet wide. How should Macadam be formed and laid?

7.—What is the most economical mode of watering and cleansing streets?

#### INSPECTORS OF NUISANCES.—4 TO 6 P.M.

1.—What are the provisions of the Public Health Act with regard to cellar dwellings?

2.—In inspecting a stream which is complained of as a nuisance, to what points would you direct your attention with the view of making a report?

3.—Give the dimensions of a sleeping room which you would consider suitable for six adults, and state your reasons.

4.—Describe some of the simple forms of ventilating valves in general use, and explain their action.

5.—In what ways may water become polluted after delivery into houses?

6.—What are the objections to brick house-drains? How should house-drains be constructed?

7.—What sanitary defects would you look for in inspecting a house where there has been a case of Diphtheria?

8.—What are the characteristics of various kinds of unsound meat and fish?

## EXHIBITIONS OF SANITARY APPARATUS AND APPLIANCES.

THE Exhibitions of Sanitary Appliances are held annually in connection with the Autumn Congress, and unpatented exhibits are protected by a certificate granted by the Board of Trade, under the Protection of Inventions Act, 1878.

Judges are appointed by the Council to examine the several exhibits, and award Medals and Certificates of Merit to such objects as they may consider worthy.

In addition to the Ordinary Medals, a special Medal—the Richardson Gold Medal—is offered by the Institute, for a selected exhibit from the entire exhibition, and will be awarded by the Judges in cases of pre-eminent merit only. Selected exhibits of such a nature as to require practical trials which cannot be carried out on the spot, are submitted to such trials upon the Exhibitors defraying the necessary expenses.

The Exhibits are arranged in the following Classes:—

### CLASS I.—CONSTRUCTION AND MACHINERY.

Construction and Materials.  
Paints and other Protectives.  
Wall Papers.  
Decorative Materials.  
Machinery adapted for Sanitary Purposes.  
Washing Machines.

### CLASS II.—SEWERAGE AND WATER SUPPLY.

Water Closets.  
Dry Closets.  
Urinals.  
Sewage Treatment.  
Traps.  
Sinks.  
Baths and Lavatories.  
Apparatus for Water Supply.  
Cisterns.  
Flushing and Watering.  
Miscellaneous Sanitary Goods.

### CLASS III.—HEATING, LIGHTING, AND VENTILATION.

Heating Apparatus.  
Cooking Apparatus.

Smoke Preventing Appliances.  
Lighting, including Electric Lighting.  
Ventilation.

### CLASS IV.—PERSONAL HYGIENE, FOODS AND DISINFECTANTS.

Clothing.  
Beds, &c.  
Educational Appliances.  
Domestic Appliances.  
Foods.  
Filters, and Arrangements for Softening Water.  
Mineral Waters.  
Disinfectants.  
Disinfecting Apparatus.

### CLASS V.—MISCELLANEOUS.

*Articles of Sanitary interest not included in the above Classes, such as:—*

Scientific Instruments.  
Books on Sanitation.  
Prevention of Accidents.  
Methods for the Disposal of the Dead, &c., &c., &c.



The following are the Regulations made for the Exhibition at Glasgow, in September, 1883:—

- 1.—The Scale of Charge for Floor Space will be 12s. 6d. per foot frontage, with a depth of six feet; Corners and Special Places will be charged at higher rates; Wall Space 6d. to 1s. per square foot. No Floor Space will be allotted for a less sum than £1 5s., or Wall Space for less than 5s. All charges must be paid at the time of Allotment.
- 2.—Applications for Space must be made on the official form, and under the proper class. They must be sent to Mr. E. L. Box, the Curator of the Exhibition, at the Offices of the Institute, 9, Conduit Street, Regent Street, London, W., not later than Saturday, August 25th, 1883. No application after this date will be received unless accompanied by an extra payment of 5s. per foot frontage.
- 3.—A full and accurate description of the articles proposed to be shown must be forwarded with each application for space. (See No. 12.)
- 4.—In addition to Articles and Inventions of a strictly technical character, articles of a general character relating to domestic comfort and economy, and life and labour saving apparatus, as well as books, drawings, and photographs, illustrative of the same, may be exhibited.
- 5.—Exhibits will be received at the Exhibition Building, Glasgow, from Tuesday, September 11th, to Tuesday, September 18th. Exhibits arriving after September 18th will only be admitted on payment of a fine of 5s. per foot frontage; but no exhibit will, under any circumstances, be admitted after Friday, September 21st. No exhibits shall be removed before MONDAY, the 22nd of OCTOBER, and all exhibits must be removed by WEDNESDAY, the 24th OCTOBER, or they will be sold to pay expenses.
- 6.—The position occupied by each Exhibitor will be determined by the Committee.
- 7.—Every Article exhibited shall bear a descriptive label, corresponding with the description forwarded with the application (See No. 3), and giving also the retail price at which the article can be obtained. The objects exhibited shall be either the actual Articles, Models, or Drawings.
- 8.—The Exhibition Committee reserve the right to refuse, or order the removal of, any article not deemed suitable.
- 9.—The Committee will not be responsible for insurance against fire, or in any way for the safety of any articles exhibited. The cost of conveying goods into, placing them in position in, and removing them from, the Exhibition, including unpacking and packing, must be borne by the Exhibitors.
- 10.—Under the supervision and control of the Curator, Exhibitors will be permitted to erect benches or other contrivances for displaying their exhibits, and to make connections with the main drain, but will be responsible for the removal of their Exhibits and Fittings at the close of the Exhibition, and must make good, to the satisfaction of the Master of the Works, any damage caused thereby. Gas and Water will be supplied to the Exhibitors, for use in connection with their Exhibits, and charged for.
- 11.—Exhibitors are permitted to employ persons to explain their exhibits and such persons may receive orders, but are prohibited from soliciting them.
- 12.—A Catalogue will be published under the authority of the Committee, mainly compiled from the information given by the Exhibitors on their application forms. A few pages in the Catalogue will be reserved for approved Advertisements. For Terms for Advertisements apply to J. MASON, 144, Fleet Street, London, E.C. Advertisements to be forwarded not later than SATURDAY, 8th SEPTEMBER, 1883.
- 13.—PRIZE MEDALS and CERTIFICATES OF MERIT will be awarded at the discretion of the Judges, and their decisions will in all cases be final. The List of Awards will be published in the Transactions of the Institute for 1883.

14.—It may be impossible for the Judges to come to a satisfactory decision as to the merits of certain exhibits without practical trial, involving special testing and other investigations. In all such cases the following regulations will be adopted:—

- (a) The Judges have power to take from the Exhibition any specimens they may require for testing.
- (b) The Judges will select such Exhibits for further practical trial as they may deem desirable. Exhibitors of such selected Exhibits will then be communicated with, and if they desire to submit their Exhibits to a deferred practical trial they will be required to pay such an Entrance Fee as the Committee may determine, for the purpose of defraying the necessary expenses of testing the Exhibits; and also to furnish the Committee with a written or printed statement of the grounds upon which they claim special merit for their Exhibits; and in the case of Patented Inventions, a copy of the Printed Specification of the Patent.

15.—THE RICHARDSON GOLD MEDAL for an EXHIBIT SELECTED FROM THE ENTIRE EXHIBITION will be awarded by the Judges in case of pre-eminent merit only.

16.—SILVER MEDALS OFFERED BY THE EXETER GAS COMPANY.—Three Silver Medals are offered by the Exeter Gas Company for best Gas Stoves exhibited under the following classes:—

1. For the best Gas Stove or Gas Apparatus for cooking purposes for families, including a sufficient supply of hot water.
2. For the best Gas Cooking Stove for an artisan's family of from four to eight persons.
3. For the best and most economical Open Gas Fire.

17.—Protection in accordance with the Protection of Inventions Act, 1870, will be obtained from the Board of Trade for persons desirous of Exhibiting New Inventions.

Table giving particulars with reference to the exhibitions already held.

TABLE A.

|                                                      | 1877.<br>Leamington. | 1878.<br>Stafford. | 1879.<br>Croydon. | 1880.<br>Exeter. | 1882.<br>Newcastle. |
|------------------------------------------------------|----------------------|--------------------|-------------------|------------------|---------------------|
| Number of Exhibitors ...                             | 117                  | 116                | 189               | 106              | 110                 |
| „ of Exhibits ...                                    | 294                  | 319                | 710               | 500              | 600                 |
| Space occupied (in square ft.)                       | .....                | .....              | .....             | 9725             | 14520               |
| Number of days Exhibition was open... ..             | 14                   | 16                 | 17                | 19               | 25                  |
| Total number of Visitors ...                         | .....                | .....              | .....             | 8955             | 8373                |
| Number of Medals awarded .                           | 13                   | 13                 | 12                | 12               | 12*                 |
| Number of Certificates awarded ... ..                | None.                | 27                 | 47                | 47               | 70*                 |
| Number of Exhibits deferred for further trial ... .. | .....                | 7                  | 52                | 30               | 37                  |

\* These numbers do not include any Medals or Certificates which may be awarded for Exhibits deferred for practical trial.

## CLASSIFIED LIST OF MEDALS AWARDED AT THE EXHIBITIONS.

### RICHARDSON MEDAL.

- NEWCASTLE, 1882. MATHER & ARMSTRONG, *Newcastle-upon-Tyne*, for Siemens's Regenerative Gas Burner.  
 STAFFORD, 1878. SILICATE PAINT COMPANY, *Cannon Street, E.C.*, for Griffiths' Patent White.

### SILVER MEDAL.

Offered by the Exeter Gas Company.

- EXETER, 1880. SANITARY & ECONOMIC SUPPLY ASSOCIATION, for Dr. Bond's Euthermic Ventilating Gas Stove.

## CLASS I.—CONSTRUCTION AND MACHINERY.

### (1). Construction and Materials.

- NEWCASTLE, 1882. WILKINSON, W. B., *Newcastle-upon-Tyne*, for Damp-proof Concrete Pavement.  
 CROYDON, 1879. WILLCOCKS & Co., *Burmantofts, Leeds*, for Silica Glazed and Enamelled Fire Clay Bricks and Faience.

### (2). Paints and other Protectives.

- STAFFORD, 1878. SILICATE PAINT COMPANY, *Cannon Street, E.C.*, for Griffiths' Patent White, and for their preparations of Silicate Paint, Enamel Paint, and Petrifying Liquid.

### (3). Wall Papers.

- CROYDON, 1879. WOOLAMS & Co., *High Street, Marylebone*, for Paper Hangings free from Arsenic.

### (4). Decorative Materials.

- EXETER, 1880. WEBB, H. CHALK, *Worcester*, for Colouring Patterns through the Substance of Wood.

### (5). Machinery adapted for Sanitary Purposes.

- CROYDON, 1879. AVELING & PORTER, *Rochester*, for Improved Six-Ton Steam Road Roller.

- NEWCASTLE, 1882. MANLOVE, ALLIOTT, FRYER & Co., *Nottingham*, for Fryer's Patent Destructor, Fryer's Patent Carbonizer, and Firman's Patent Dessicating and Rendering Apparatus.

### (6). Washing Machines.

- LEAMINGTON, 1877. BORWELL, J., *Britannia Foundry, Burton-on-Trent*, for Improved Washer, with table complete.  
 LEAMINGTON, 1877. BRADFORD, T. & Co., *High Holborn, W.C.*, for New Patent "Shuttle" Steam Power Washing Machine.  
 NEWCASTLE, 1882. BRADFORD, THOMAS, & Co., *London*, for Washing Machines.

## CLASS II.—SEWERAGE AND WATER SUPPLY.

### (1). Water Closets.

- LEAMINGTON, 1877. BOSTEL, D. T., *Duke Street, Brighton*, for Excelsior Water Closet.  
 NEWCASTLE, 1882. HAYWARD, TYLER & Co., *London*, for Full-flush Valveless Closet.  
 NEWCASTLE, 1882. WARD, O. D., *London*, for Household Water Closet.

### (2). Dry Closets.

- NEWCASTLE, 1882. BRITISH SANITARY COMPANY, *Glasgow*, for Dry Earth Closets.  
 LEAMINGTON, 1877. HARESCEUGH, B. B. & Co., *Bentinch Street, Leeds*, for Excreta Pail (oak) with Spring Lid.  
 EXETER, 1880. MOSER, L., *Southampton*, for Dry Closet, suitable for Ashes or Disinfecting Powder.  
 STAFFORD, 1878. MOULE'S PATENT EARTH CLOSET COMPANY, *5a, Garrick Street, W.C.*, for their Earth Closets.  
 LEAMINGTON, 1877. PARKER, J., *Woodstock, Oxford*, for Dry Earth Closet.  
 STAFFORD, 1878. SANITARY APPLIANCE COMPANY, *Salford*, for Sifting Ash Closet, with Soil Pail.

### (3). Urinals.

### (4). Sewage Treatment.

### (5). Traps.

### (6). Sinks.

No awards.

### (7). Baths and Lavatories.

- LEAMINGTON, 1877. GALBRAITH, T., *Crawford Square, Londonderry* for Hot-Air Bath.

CROYDON, 1879. LASCELLES, W., *Bunhill Row, E.C.*, for Concrete Bath in one piece.

EXETER, 1880. TYLOR & SONS, *Newgate Street, E.C.*, for Flushing Rim Lavatory Basin and Apparatus.

(8). Apparatus for Water Supply.

CROYDON, 1879. DOULTON & Co., *Lambeth, London*, for Anti-Per-  
cussion High Pressure Valves.

LEAMINGTON, 1877. LE GRAND & SUTCLIFFE, *Bunhill Row, E.C.*, for  
Improvements in Well Sinking Apparatus.

(9). Cisterns.

(10). Flushing and Watering.

No awards.

(11). Miscellaneous Sanitary Goods.

EXETER, 1880. BEAN, A. T., 5, *Cannon Row, S.W.*, for Direct  
Acting Valveless Waste Preventer.

STAFFORD, 1878. DOULTON & Co., *Lambeth, London*, for Stanford's  
Patent Joints for Stoneware Pipes.

CLASS III.—HEATING, LIGHTING, AND VENTILATION.

(1). Heating Apparatus.

EXETER, 1880. DOULTON & Co., *Lambeth, London*, for Ventilating  
Tile Stove.

NEWCASTLE, 1882. ROSS, J. A. G., *Newcastle-upon-Tyne*, for Silicate  
Cotton (Slag-wool).

EXETER, 1880. SANITARY & ECONOMIC SUPPLY ASSOCIATION,  
*Gloucester*, for Dr. Bond's Euthermic Gas  
Stove.

(2). Cooking Apparatus.

STAFFORD, 1878. BILLING & Co., *Hatton Garden, E.C.*, for Appa-  
ratus for Cooking by Gas.

LEAMINGTON, 1877. HARRIS, G. H., *Bristol Street, Birmingham*, for  
Economical Cooking Range.

STAFFORD, 1878. HASSALL & SINGLETON, *Birmingham*, for Phoenix  
Portable Range, and the Birmingham Range  
with Reducible Fire without Gas.

STAFFORD, 1878. LEONI, S. & Co., *Strand*, for Apparatus for Cook-  
ing by Gas.

CROYDON, 1879. WENHAM, W. P., *Church Street, Croydon*, for an  
Improved Open or Close Range Kitchener.

EXETER, 1880. WILSON ENGINEERING COMPANY, *Holborn, W.C.*,  
for Wilson Portable Close Cooking Range.

NEWCASTLE, 1882. WILSON ENGINEERING COMPANY, *London*, for  
improved Wilson Range with Steel Boiler and  
non-conducting Jacketting.

(3). Lighting.

CROYDON, 1879. HAMILTON & Co., *Leadenhall Street, E.C.*, for  
Patent Prismoidal Pavement and Floor Lights

NEWCASTLE, 1882. MATHER & ARMSTRONG, *Newcastle-upon-Tyne*,  
for Siemen's Patent Regenerative Gas Burner.

NEWCASTLE, 1882. STOTT, JAMES, & Co., *Oldham*, for Patent Mercury  
Gas Governor.

(4). Ventilation.

STAFFORD, 1878. ELLISON, J. E., *Leeds*, for Conical Ventilators.

EXETER, 1880. HUNT, NATHAN, *Bristol*, for Auto-Pneumatic Ven-  
tilation.

EXETER, 1880. MOORE, J., *St. James' Walk, Clerkenwell, E.C.*,  
for Glass Louvre Ventilators.

STAFFORD, 1878. PRITCHETT, G. E., 20, *Spring Gardens, S.W.*, for  
Economic Hollow Flooring.

CLASS IV.—PERSONAL HYGIENE FOODS, AND  
DISINFECTANTS.

(1). Clothing.

No awards.

(2). Beds, &c.

LEAMINGTON, 1877. CHORLTON & DUGDALE, *Manchester*, for Excelsior  
Spring Mattress.

STAFFORD, 1878. POCOCK BROS., *Southwark Bridge Road*, for Uni-  
versal Invalid Tubular Water and Air Bed.

(3). Educational Appliances.

EXETER, 1880. COLMAN & GLENDENNING, *Norwich*, for School  
Furniture.

(4). Domestic Appliances.

EXETER, 1880. CARTER, J., 6a, *Cavendish Street, W.*, for Invalid  
Furniture.

LEAMINGTON, 1877. HANCOCK, F. & C., *Dudley, Worcester*, for Machine  
for Washing and Cooling Butter.

CROYDON, 1879. READ, JEFFERSON, *Birmingham*, for Arcanum  
Process of Silver Plating Steel.

(5). Foods.

No awards.

(6). Filters and Arrangements for Softening Water.

CROYDON, 1879. MAIGNEN, P. A., *Great Tower Street, E.C.*, for  
Filtre Rapide.

LEAMINGTON, 1877. SPONGY IRON WATER PURIFYING COMPANY, *Oxford Street, W.C.*, for Bischof's Spongy Iron Filter.

(7). Mineral Waters.

No awards.

(8). Disinfectants.

LEAMINGTON, 1877. CALVERT & Co., *Bradford, Manchester*, for Calvert's Carbolic Acid for disinfecting purposes.

STAFFORD, 1878. MORRIS, LITTLE & Co., *Doncaster*, for Little's Soluble Phenyle.

LEAMINGTON, 1877. SOCIÉTÉ FRANÇAISE D'HYGIÈNE, *Paris*, for Chemical Preparations and Apparatus.

(9). Disinfecting Apparatus.

CROYDON, 1879. FRASER BROS., *Commercial Road, E.*, for Portable Disinfecting Apparatus.

CROYDON, 1879. WALKER, CHAS. W., *Wandsworth Common*, for Acid Pump and Syphon.

CLASS V.—MISCELLANEOUS.

Articles of Sanitary Interest not included in the above Classes, such as:—

(1). Scientific Instruments.

No awards.

(2). Books on Sanitation.

NEWCASTLE, 1882. SOCIÉTÉ D'HYGIÈNE, *Paris*, for their exhibit of Books on Hygiène.

(3). Prevention of Accidents.

(4). Methods for the Disposal of the Dead.

No awards.

(5.) Sundries.

STAFFORD, 1878. DUNCAN, Maj. F., *The Common, Woolwich*, for Ambulance Wheeled Litter.

CROYDON, 1879. SINCLAIR, J., *Leadenhall Street, E.C.*, for Tyn-dall's Smoke Respirator.

CERTIFICATES AWARDED AT THE EXHIBITIONS.

\* Medal Awarded at a Previous Exhibition.

CLASS I.—CONSTRUCTION AND MACHINERY.

(1). Construction and Materials.

CROYDON, 1879. ADAMS, R., 7, *Great Dover Street, S.E.*, for Adjustable Shoe, and Regulating Spring Hinge for Swinging Doors.

CROYDON, 1879. ADAMS, R., 7, *Great Dover Street, S.E.*, for Fan-light Openers and Casement Fasteners.

EXETER, 1880. CANDY & Co., *Newton Abbot*, for Granite Vitri-fied Bricks and Paving.

CROYDON, 1879. \*PRITCHETT, G. E., F.S.A., 20, *Spring Gardens, S.W.*, for Improvements in Hollow Tile Flooring.

EXETER, 1880. \*SALMON, BARNES & Co., *Ulverston*, for Revolving Shutters with Patent Balance Weight Motion.

NEWCASTLE, 1882. WHITE, WILLIAM, *Abergavenny*, for Hygeian Rock Building Composition.

(2). Paints and other Protectives.

No award.

(3). Wall Papers.

NEWCASTLE, 1882. \*WOOLLAMS & Co., *London*, for Non-arsenical Wall Papers.

(4). Decorative Materials.

CROYDON, 1879. DOULTON & Co., *Lambeth, London*, for Decorative Tiles for Covering Walls and Floors.

(5). Machinery adapted for Sanitary Purposes.

EXETER, 1880. McCALLUM, J. B., *Stafford*, for Improved Non-Absorbent Tub or Pail Van.

(6). Washing Machines.

STAFFORD, 1878. \*BRADFORD, THOMAS, & Co., *Salford*, for Shuttle Steam-Power Washing Machine.

EXETER, 1880. GARTON & KING, *Exeter*, for Vowel E. Bradford's Family Washing Machine.

NEWCASTLE, 1882. KIRSOP & Co., *Newcastle-upon-Tyne*, for Paragon Washing Machine with Canadian Washer.

NEWCASTLE, 1882. MITCHELL, JAMES, *Newcastle-upon-Tyne*, for Mitchell's Patent Steam Washer.

## CLASS II.—SEWERAGE AND WATER SUPPLY.

## (1). Water Closets.

- CROYDON, 1879. BEARD, DENT & HELLYER, 21, *Newcastle Street, W.C.*, for Artizan Closet.
- STAFFORD, 1878. \*BOSTEL, D. T., *Duke Street, Brighton*, for "Excelsior" Water Closet.
- EXETER, 1880. DOULTON & Co., *Lambeth, London*, for an Economical Flush-Out Closet.
- NEWCASTLE, 1882. DOULTON & Co., *London*, for their Flush-out Closet.
- NEWCASTLE, 1882. HARRIMAN, W. & Co., *Blaydon-upon-Tyne*, for Fowler's Patent Water-closet.
- EXETER, 1880. TYLOR, J., & SONS, 2, *Newgate Street, E.C.*, for "Clear Way" Regulator Valve Water Closet, without overflow communicating with Valve Box.
- NEWCASTLE, 1882. WATSON, HENRY & SON, *Newcastle-upon-Tyne*, for the "National" Water-closet.
- NEWCASTLE, 1882. WATSON, HENRY, & SON, *Newcastle-upon-Tyne*, for "Crown" Cottage Water-closet.

## (2). Dry Closets.

- EXETER, 1880. BRITISH SANITARY COMPANY, *Glasgow*, for Self-Acting Earth Closet.
- STAFFORD, 1878. \*HARESCEUGH, B. B. & Co., *Leeds*, for Excreta Pail (oak) with Patent Spring Lid.
- CROYDON, 1879. \*MOULE'S PATENT EARTH CLOSET COMPANY (LIMITED), 5a, *Garrick Street, W.C.*, for Earth Closet.
- CROYDON, 1879. ONIONS, J. C., (LIMITED), *Birmingham*, for Moser's Patent Self-Acting Dry Closet.
- EXETER, 1880. PARKER, J., *Woodstock*, for Dry Earth Commode without Separator.
- CROYDON, 1879. \*SANITARY APPLIANCE COMPANY, *Factory Lane, Salford*, for Patent Cinder-Sifting Ash Closet.
- EXETER, 1880. \*WIPPELL BROS. & ROW, 231 and 232, *High Street, Exeter*, for Moule's Earth Closet.

## (3). Urinals.

- NEWCASTLE, 1882. TYLOR, J. & SONS, *London*, for Patent Flush-out Urinal Basin.

## (4). Sewage Treatment.

- STAFFORD, 1878. SHONE, ISAAC, *Wreaham*, for Pneumatic Liquid Ejector.

## (5). Traps.

- CROYDON, 1879. BEARD, DENT & HELLYER, 21, *Newcastle Street, W.C.*, for Patent Ventilating Drain Syphon.
- NEWCASTLE, 1882. BUCHAN, W. P., *Glasgow*, for Patent Disconnecting Drain-trap.

- EXETER, 1880. CRAIG, J. & M., *Kilmarnock*, for Buchan's Patent Trap.
- NEWCASTLE, 1882. CRAIG, J. & M., *Kilmarnock*, for Buchan's Patent Drain-trap and Drain-pipes, with Access Cover.
- CROYDON, 1879. DOULTON & Co., *Lambeth, London*, for Disconnecting Gully, with back and side Entrances and iron grating.
- NEWCASTLE, 1882. DOULTON & Co., *London*, for Reversible Inlet Gully, with Dished Stoneware Cover and Iron Grating.
- CROYDON, 1879. EDWARDS, J. C., *Trefynant Ruabon*, for Dean's Patent External Drain Traps, with movable receptacle.
- NEWCASTLE, 1882. FELL, J. & Co., *Wolverhampton*, for Smith's Patent Cast Lead Syphon Traps.
- CROYDON, 1879. HAMMOND & HUSSEY, *High Street, Croydon*, for Hornibrook's Patent Catchment Grating for Steep Gradients.
- CROYDON, 1879. HYGIENIC STOVE AND GRATE COMPANY, 15, *Peel Buildings, Birmingham*, for "Eagle" Sanitary Trap, for superseding Bell Traps.
- STAFFORD, 1878. POTTS & Co., *Handsworth, Birmingham*, for the Edinburgh Air-Chambered Sewer Trap.
- NEWCASTLE, 1882. RIMINGTON BROS. & Co., *Newcastle-upon-Tyne*, for Dean's Gully Trap.
- STAFFORD, 1878. STIFF, JAMES, & SONS, *Lambeth, London*, for Weaver's Ventilating Sewer Air Trap.

## (6). Sinks.

- NEWCASTLE, 1882. CRAIG, J. & M., *Kilmarnock*, for White Enamel-Fire Clay Sinks.
- CROYDON, 1879. JENNINGS, G., *Stangate, London*, for "Artizans' Dwellings Sink."
- CROYDON, 1879. STIDDER & Co., 50, *Southwark Bridge Road, S E.*, for Swivel, Lock Plug, and Overflow for Sinks.
- EXETER, 1880. TYLOR, J. & SONS, 2, *Newgate Street, E.C.*, for Improved Enamelled Iron Slop Sink, with Patent Regulator Supply Valve.
- NEWCASTLE, 1882. TYLOR, J. & SONS, *London*, for Hospital Slop Sink with Patent Waste-not Regulator Valve.
- CROYDON, 1879. WILLCOCK & Co., *Burmantofts, Leeds*, for Fire-Clay Sanitary Sinks, and Water Troughs.

## (7). Baths and Lavatories.

- NEWCASTLE, 1882. DINNING & COOKE, *Newcastle-upon-Tyne*, for Jennings's Universal Shampooing Apparatus.
- NEWCASTLE, 1882. DOULTON & Co., *London*, for Tip-up Lavatory Basin.



- NEWCASTLE, 1882. FELL, J. & Co., *Wolverhampton*, for Clark's Patent Anti-splash Tip-up Lavatory Basin.
- STAFFORD, 1878. GILLOW & Co., *Oxford Street, W.*, for Lavatory.
- NEWCASTLE, 1882. HAYWARD, TYLER & Co., *London*, for Shower and Douche Bracket.
- CROYDON, 1879. JENNINGS, G., *Stangate, London*, for "Universal" Shampooing Apparatus.
- EXETER, 1880. \*LASCELLES, W., 121, *Bunhill Row, London*, for Concrete Bath, in one piece.
- NEWCASTLE, 1882. MALING, C. T., *Newcastle-upon-Tyne*, for Lavatory Basin with Flushing Rim.
- NEWCASTLE, 1882. MALING, C. T., *Newcastle-upon-Tyne*, for his exhibit of Sanitary Earthenware.
- NEWCASTLE, 1882. RIMINGTON BROS., & Co., *Newcastle-upon-Tyne*, for Enamelled Fire Clay Bath.
- STAFFORD, 1878. RUFFARD & Co., *Clay Works, Stourbridge*, for Porcelain Baths, moulded and glazed in one piece.
- NEWCASTLE, 1882. TYLOR, J. & SONS, *London*, for Flushing-rim Lavatory Basin with Quick Waste.

## (8). Apparatus for Water Supply.

- CROYDON, 1879. BRAITHWAITE & Co., *Leeds*, for Patent Syphon for Water Closet Cisterns.
- EXETER, 1880. \*DOULTON & Co., *Lambeth, London*, for Anti-percussion High Pressure Draw-off Valves.
- NEWCASTLE, 1882. DOULTON & Co., *London*, for Anti-percussion High-pressure Bib Valves.
- NEWCASTLE, 1882. DOULTON & Co., *London*, for Bath Locking Valves, for preventing waste of water.
- NEWCASTLE, 1882. DOULTON & Co., *London*, for Iatham's Flap Valve.
- NEWCASTLE, 1882. FELL, J. & Co., *Wolverhampton*, for their exhibit of Water-taps.
- CROYDON, 1879. FINCH & Co., 181, *High Holborn, W.C.*, for large Way Waste Plug, with Protective Cover.
- CROYDON, 1879. HEADLEY & SONS, *Cambridge*, for Patent Hose Reel.
- CROYDON, 1879. \*LE GRAND & SUTCLIFFE, 100, *Bunhill Row, London*, for Improvements in Internal driving of Tube Wells.
- EXETER, 1880. TYLOR, J. & SONS, 2, *Newgate Street, E.C.*, for Improved Full-Way Stop Valve.
- EXETER, 1880. TYLOR, J. & SONS, 2, *Newgate Street, E.C.*, for "Waste Not" Regulator Valve.
- NEWCASTLE, 1882. TYLOR, J. & SONS, *London*, for Bath Locking Valves for preventing Waste of Water.
- NEWCASTLE, 1882. TYLOR, J. & SONS, *London*, for Waste-not Regulator Valve.

## (9). Cisterns.

No awards.

## (10). Flushing and Watering.

- NEWCASTLE, 1882. WATSON, HENRY & SON, *Newcastle-upon-Tyne*, for Waste-preventing Flushing Syphon.
- NEWCASTLE, 1882. WRIGHT & STEVENS, for Syphon Flushing Cistern.
- (11). Miscellaneous Sanitary Goods.
- NEWCASTLE, 1882. ANGELL, A. T., *London*, for Patent Air-tight Man-hole Door.
- EXETER, 1880. BRANKSEA ISLAND POTTERY COMPANY (LIMITED), *Poole, Dorset*, for Stoneware Pipes
- NEWCASTLE, 1882. BUCHAN, W. P., *Glasgow*, for improved Drain-pipe with Access Cover.
- NEWCASTLE, 1882. CAPPER, SON, & Co., *London*, for Brian Jone's Patent Joint for connecting Closet with Soil-pipe.
- NEWCASTLE, 1882. CRAIG, J. & M., *Kilmarnock*, for Maguire's Patent Cradle Joint for Drain-pipes.
- NEWCASTLE, 1882. DINNING & COOKE, *Newcastle-upon-Tyne*, for Cast Iron Channels for Stable Drainage.
- EXETER, 1880. \*DOULTON & Co., *Lambeth, London*, for Stanford's Patent Joints for Stoneware Pipes.
- NEWCASTLE, 1882. DOULTON & Co., *London*, for Patent Joint for Drain-pipes.
- STAFFORD, 1878. OATES & GREEN, *Horley Green Fire Clay Works, Halifax*, for Patent Drain-cleaning Rods and Stoneware Horse Manger.
- CROYDON, 1879. PATENT VICTORIA STONE COMPANY, *Kingsland Road, E.*, for Artificial Stone Tubes.
- CROYDON, 1879. SHARP, JONES & Co., *Bourne Valley Pottery, Poole, Dorset*, for Rock Concrete Tubes.
- NEWCASTLE, 1882. STRAKER & LOVE, *Newcastle-upon-Tyne*, for their Exhibit of large Fire-clay Drain-pipes.
- NEWCASTLE, 1882. THOMASSON & KEY, *Worcester*, for Cup Grating for Sinks.
- NEWCASTLE, 1882. TYLOR, J. & SONS, *London*, for Patent Joint for Lead Pipes.
- NEWCASTLE, 1882. TYLOR, J. & SONS, *London*, for Terry's Patent Pedal-action for Water-closets.
- NEWCASTLE, 1882. \*WARD, O. D., *London*, for Bean's Direct Acting Valveless Waste Preventer.
- EXETER, 1880. WIPPELL BROS. & ROW, 231, *High Street, Exeter*, for Ransome's Artificial Stone Air Brick.

## CLASS III.—HEATING, LIGHTING AND VENTILATION.

## (1). Heating Apparatus.

- NEWCASTLE, 1882. DINNING & COOKE, *Newcastle-upon-Tyne*, for George's Calorigen.



- NEWCASTLE, 1882. DINNING & COOKE, *Newcastle-upon-Tyne*, for their exhibit of Grates, Mantel-pieces, and Overmantels.
- NEWCASTLE, 1882. \*DOULTON & Co., *London*, for Ventilating Tile Stoves.
- NEWCASTLE, 1882. MATHER & ARMSTRONG, *Newcastle-upon-Tyne*, for Steam Heating Apparatus, combining heating and ventilating.
- STAFFORD, 1878. PRITCHETT, G. E., 20, *Spring Gardens, S.W.*, for Warming and Ventilating Appliances.
- EXETER, 1880. PRITCHETT, G. E., 20, *Spring Gardens, S.W.*, for Corrugated Iron Hot-Water Warming Appliances.
- NEWCASTLE, 1882. SMITH, JAMES, *Liverpool*, for Open Grate for consuming Smoke.
- STAFFORD, 1878. SNELL, H. SAXON, *Southampton Buildings*, for the Thermhydric Ventilating Hot-water Open Fire Grate.
- NEWCASTLE, 1882. THORNBURN WILLIAM, *Borough Bridge*, for Tubu-Calorifer for Greenhouses.
- EXETER, 1880. WIPPELL BROS. & Row, *Exeter*, for Conservatory Boiler, with Hot-Water Pipe.
- NEWCASTLE, 1882. WRIGHT, JOHN & Co., *Birmingham*, for the "Cozey" Portable Open Gas Fire, with Platinum Wire and Asbestos Packing.

## (2). Cooking Apparatus.

- NEWCASTLE, 1882. ARDEN, HILL, & Co., *Birmingham*, for Solid Flame Boiling Stove.
- CROYDON, 1879. \*BILLING & Co., *Hatton Garden, E.C.*, for the "Workman's" Cooking Stove, and other Improvements in Gas-Cooking Stoves.
- EXETER, 1880. CHOILTON & DUGDALE, 19, *Blackfriars Street, Manchester*, for "Sunlight Stove."
- EXETER, 1880. CONSTANTINE, T. J., *Fleet Street, E.C.*, for the Devonshire Cooking Range.
- STAFFORD, 1878. \*HARRIS, G. H., *Bristol Street, Birmingham*, for Economical Cooking Range.
- CROYDON, 1879. LEWIS, MRS. A., *Manchester*, for Tin Cooking Utensils.
- CROYDON, 1879. WALLER, THOS., 47, *Fish Street Hill, E.C.*, for Cooking Stove with Warm-Air Chamber.
- EXETER, 1880. WIPPELL BROS. & Row, 231 and 232, *High Street, Exeter*, for Cottage Range.

## (3). Lighting.

- CROYDON, 1879. BRAY & Co., *Blackman Lane, Leeds*, for Improved Gas Burners.

- CROYDON, 1879. CLARKE, F. W., PORTABLE GAS APPARATUS COMPANY (LIMITED), *Great Queen Street, W.C.*, for Patent Portable Gas Apparatus for Manufacturing Gas from Gasoline.
- NEWCASTLE, 1882. FORREST, WILLIAM, *Newcastle-upon-Tyne*, for the Albo Carbon Light.
- NEWCASTLE, 1882. HERON, T., *Manchester*, for Patent Duplex Burner.
- STAFFORD, 1878. LEONI, S. & Co., *Strand, W.C.*, for the "Rheometer" Street Lamp Regulator.
- NEWCASTLE, 1882. MATHER & ARMSTRONG, *Newcastle-upon-Tyne*, for Hink's Patent Duplex Lamp with Extinguisher.
- CROYDON, 1879. RANSOME, S. E., & Co., 10, *Essex Street, W.C.*, for "Milwaukee" Glass Lantern or Hurricane Lantern.
- EXETER, 1880. WILLEY & Co., *Exeter*, for their Exhibit of Gaseliers and Gas Brackets.
- EXETER, 1880. WIPPELL BROS. & Row, 231, *High Street, Exeter*, for Chappuis Daylight Reflector.

## (4). Ventilation.

- CROYDON, 1879. BIRD, PETER HINCKES, 1, *Norfolk Square, W.*, for his Method of Costless Ventilation.
- NEWCASTLE, 1882. CREGEEN, H. S., *Bromley*, for Patent Air Inlet Head for Drain Ventilation.
- CROYDON, 1879. \*ELLISON, J. E., *Victoria Square, Leeds*, for Conical Ventilators.
- CROYDON, 1879. KNELL, U., 77, *Fore Street, E.C.*, for "Imperial" Ventilating Window.
- NEWCASTLE, 1882. NAILSWORTH FOUNDRY COMPANY, *Bristol*, for Morgan's Stench Exhaust.
- EXETER, 1880. SHARP, C. H. & Co., *High Holborn, E.C.*, for Ornamental Inlet Ventilators.
- CROYDON, 1879. WENHAM & Co., *Church Street, Croydon*, for Boyle's Mica-Valved Outlet Ventilator.

## CLASS IV.—PERSONAL HYGIENE, FOODS, AND DISINFECTANTS.

## (1.) Clothing.

- STAFFORD, 1878. BARTRUM, HARVEY & Co., *London*, for Patent Ventilatorium Waterproof Garments.

## (2). Beds, &amp;c.

- STAFFORD, 1878. ALLEN, THOMAS, *St. Augustine's Parade, Bristol*, for Metallic Tubular Bedsteads and Invalid Bedrests.

- CROYDON, 1879. BALL, ANCELL, *Spalding*, for Folding Invalid Bed.
- NEWCASTLE, 1882. BRADY & MARTIN, *Newcastle-upon-Tyne*, for Central Tube Water Mattress.
- EXETER, 1880. BROCK, WILLIAM & Co., 177, *Fore Street, Exeter*, for Bed Rest with Movable Arms.
- EXETER, 1880. BROCK, WILLIAM, & Co., 177, *Fore Street, Exeter*, for "Nonsuch" Adjustable Chair.
- CROYDON, 1879. BUSSEY & Co., *Museum Works, Peckham, S.E.*, for Patent Spring Mattress.
- STAFFORD, 1878. \*CHORLTON & DUGDALE, *Manchester*, for "Excelsior" Spring Mattress.
- CROYDON, 1879. \*CHORLTON & DUGDALE, *Manchester*, for "Excelsior" Spring Mattress Hospital Bed.
- EXETER, 1880. CHORLTON & DUGDALE, *Manchester*, for "Invalid?" Adjustable Bed.
- EXETER, 1880. \*CHORLTON & DUGDALE, *Manchester*, for "Excelsior" Spring Mattress.
- NEWCASTLE, 1882. \*CHORLTON & DUGDALE, *Manchester*, for "Excelsior" Spring Mattress.
- EXETER, 1880. COLMAN & GLENDENNING, *Norwich*, for Patent Automaton Seat for Drapers.
- STAFFORD, 1878. HAMILTON, W., *Brighton*, for Invalid "Grasshopper" Couch.
- NEWCASTLE, 1882. HAMILTON, WILLIAM, *Brighton*, for Invalid "Grasshopper" Couch.
- CROYDON, 1879. \*POCOCK BROS., *Southwark Bridge Road, S.E.*, for "Universal" Tubular Air and Water Bed.
- EXETER, 1880. WIPPELL BROS. & Row, *Exeter*, for Fernby's "Paragon" Camp Furniture.

## (3). Educational Appliances.

- STAFFORD, 1878. COLMAN & GLENDENNING, *Norwich*, for School Desks with Shifting Seats.
- STAFFORD, 1878. LARMOUTH, THOMAS, & Co., *Salford*, for Dual Desk, with Separate Gangway Seat.

## (4). Domestic Appliances.

- NEWCASTLE, 1882. BOWDEN, WILLIAM, *London*, for Patent Automatic Chariot for Children.
- STAFFORD, 1878. COMPOSTELLA FIRE LIGHT COMPANY, *Fenchurch Street, E.C.*, for the Compostella Fire Lights for Lighting Fires.
- STAFFORD, 1878. \*HANCOCK, F. & C., *Dudley, Worcester*, for Machine for Washing and Cooling Butter.
- EXETER, 1880. HANCOCK, F. & C., *Dudley, Worcester*, for Dough Kneading Machine.
- EXETER, 1880. HANCOCK, F. & C., *Dudley, Worcester*, for New Propellor Churn.

- NEWCASTLE, 1882. HANCOCK, F. & C., *Dudley*, for Patent Machine for Washing and Peeling Potatoes.
- STAFFORD, 1878. HILTON, W. H., *Leamington*, for Various Inventions for Promoting Domestic Economy.
- EXETER, 1880. HUTCHINSON, A. & Co., *Great Winchester Street, E.C.*, for India Rubber Gas Tubing.
- NEWCASTLE, 1882. MURTON, H. A., *Newcastle-upon-Tyne*, for exhibit of Indiarubber Vessels for hospital use.
- NEWCASTLE, 1882. TOWNSEND & Co., *Newcastle-upon-Tyne*, for their Exhibit of China Cups and other Vessels for invalid use.
- EXETER, 1880. WIPPELL BROS. & Row, *High Street, Exeter*, for Improved Housemaid's Box with Sifter.

## (5). Foods.

- EXETER, 1880. FRY, J. S., & SONS, *Union Street, Bristol*, for Cocoa Extract and Preparations of Chocolate.

## (6). Filters and Arrangements for Softening Water.

- EXETER, 1880. MAIGNEN, P. A., 20 & 23, *Great Tower Street, E.C.*, for "Bijou" Filtre Rapide.
- EXETER, 1880. \*MAIGNEN, P. A., 20 & 23, *Great Tower Street, E.C.*, for Filtre Rapide.
- EXETER, 1880. SILICATED CARBON FILTER COMPANY, *Battersea*, for Silicated Carbon Double Chambered Table Filters.
- NEWCASTLE, 1882. SILICATED CARBON FILTER COMPANY, *London*, for Silicated Carbon Filtering Material.
- EXETER, 1880. STEPHAN, J. A., *Worcester*, for Carbonised Iron Stone Mound Filter for Water.
- STAFFORD, 1878. THORN & Co., *Stafford*, for Artificial Stone Filters, for Cleansing Rain Water for Domestic Use.

## (7). Mineral Waters.

- EXETER, 1880. CARTER & Co., *Old Refinery, Bristol*, for Preparations of Lime Juice, Aromatic Ginger Ale, and Quinine Tonic.
- CROYDON, 1879. EVANS & Co., *Wrexham*, for Zoedone. (Patentee David Johnson, F.C.S.)
- CROYDON, 1879. GULLIVER & Co., *Aylesbury*, for Lemonade, Lime Juice, and Ginger Ale.
- STAFFORD, 1878. JEWSBURY & BROWN, *Manchester*, for Seltzer Water.
- CROYDON, 1879. NEWRY MINERAL WATER COMPANY (LIMITED), *Liverpool*, for Ginger Ale and Lemonade.
- EXETER, 1880. SKINNER, G. H., 13, *North Street, Exeter*, for Seltzer, Soda, and Potash Waters, and Orange Quinine Tonic.

## (8). Disinfectants.

- CROYDON, 1879. CALVERT, F. C. & Co., *Bradford*, for Carbolic Acid.
- EXETER, 1880. CALVERT, F. C. & Co., *Bradford*, for Carbolic Acid and preparations of it.
- CROYDON, 1879. JEYES' SANITARY COMPOUND COMPANY, *Bishopsgate Street, E.C.*, for Jeyes' Perfect Purifier.
- NEWCASTLE, 1882. JEYES' SANITARY COMPOUND COMPANY, *London*, for Jeyes' Perfect Purifier.

## (9) Disinfecting Apparatus.

- EXETER, 1880. CALVERT, F. C., & Co., *Bradford*, for Improved Vaporiser for Disinfecting.
- NEWCASTLE, 1882. MAGUIRE & SON, *Dublin*, for Dr. Scott's Disinfecting Apparatus.
- NEWCASTLE, 1882. MANLOVE, ALLIOTT, FRYER, & Co., *Nottingham*, for Lyon's Patent Disinfectant.

## CLASS V.—MISCELLANEOUS.

Articles of Sanitary Interest not included in the above Classes, such as:—

## (1). Scientific Instruments.

- EXETER, 1880. BIRD, P. HINCKES, 1, *Norfolk Square, N.W.*, for Large Legible Spirit Thermometer.
- NEWCASTLE, 1882. BRADY & MARTIN, *Newcastle-upon-Tyne*, for their exhibit of Instruments used by Medical Officers of Health.
- NEWCASTLE, 1882. DAVIS, JOSEPH & Co., *London*, for New Oven Pyrometer.
- STAFFORD, 1878. PRITCHETT, G. E., 20, *Spring Gardens, S.W.*, for Thermometrical Instruments.
- CROYDON, 1879. PRITCHETT, G. E., 20, *Spring Gardens, S.W.*, for Barometrical and Thermometrical Instruments.
- EXETER, 1880. PRITCHETT, G. E., 20, *Spring Gardens, S.W.*, for Improvements in Thermometrical and Barometrical Instruments.
- CROYDON, 1879. WEBSTER & Co., *Nottingham*, for Webster's Patent Photometer.

## (2). Books on Sanitation.

- STAFFORD, 1878. LADIES' SANITARY ASSOCIATION, *Berners Street, W.*, for their Publications.
- NEWCASTLE, 1882. SMITH, ELDER, & Co., *London*, for their Exhibit of Sanitary Publications.

## (3). Prevention of Accidents.

- CROYDON, 1879. SELIG, SONNENTHAL & Co. (Limited), *Lambeth Hill, Queen Victoria Street, E.C.*, for Patent Safety Belt Shippers.
- CROYDON, 1879. SINCLAIR, J., 104, *Leadenhall Street, E.C.*, for Chemical Fire Exterminator.

## (4). Methods for the Disposal of the Dead.

- STAFFORD, 1878. LONDON NECROPOLIS COMPANY, *Strand, W.C.*, for Patent "Earth to Earth" Coffins.
- CROYDON, 1879. STRETTON, S., *Kidderminster*, for a Folding Bier and Car for Simplifying Funerals.

ALPHABETICAL LIST OF MEDALS AWARDED AT THE  
EXHIBITIONS.

RICHARDSON MEDAL.

|                                                                                                 |            |       |
|-------------------------------------------------------------------------------------------------|------------|-------|
| MESSRS. MATHER & ARMSTRONG, <i>Newcastle-upon-Tyne</i> , for Siemens's Regenerative Gas Burner. | NEWCASTLE, | 1882. |
| SILICATE PAINT COMPANY, <i>Cannon Street, E.C.</i> , for Griffiths' Patent White.               | STAFFORD,  | 1878. |

SILVER MEDAL.

Offered by the Exeter Gas Company.

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| SANITARY AND ECONOMIC SUPPLY ASSOCIATION for Dr. Bond's Euthermic Ventilating Gas Stove.              | EXETER,     | 1880. |
| AVELING & PORTER, <i>Rochester</i> , for Improved Six-Ton Steam Road Roller.                          | CROYDON,    | 1879. |
| BEAN, A. T., 5, <i>Cannon Row, S.W.</i> , for Direct Acting Valveless Waste Preventer.                | EXETER,     | 1880. |
| BILLING & Co., <i>Hatton Garden, E.C.</i> , for Apparatus for Cooking by Gas.                         | STAFFORD,   | 1878. |
| BORWELL, J., <i>Britannia Foundry, Burton-on-Trent</i> , for Improved Washer, with table complete.    | LEAMINGTON, | 1877. |
| BOSTEL, D. T., <i>Duke Street, Brighton</i> , for Excelsior Water Closet.                             | LEAMINGTON, | 1877. |
| BRADFORD, T. & Co., <i>High Holborn, W.C.</i> , for New Patent "Shuttle" Steam Power Washing Machine. | LEAMINGTON, | 1877. |
| BRADFORD, THOMAS & Co., <i>London</i> , for Washing Machines.                                         | NEWCASTLE,  | 1882. |
| BRITISH SANITARY COMPANY, <i>Glasgow</i> , for Dry Earth Closet.                                      | NEWCASTLE,  | 1882. |
| CALVERT & Co., <i>Bradford, Manchester</i> , for Calvert's Carbolic Acid for disinfecting purposes.   | LEAMINGTON, | 1877. |
| CARTER, J., 6a, <i>Cavendish Street, W.</i> , for Invalid Furniture.                                  | EXETER,     | 1880. |
| CHORLTON & DUGDALE, <i>Manchester</i> , for Excelsior Spring Mattress.                                | LEAMINGTON, | 1877. |

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| COLMAN & GLENDENNING, <i>Norwich</i> , for School Furniture.                                                                                                                   | EXETER,     | 1880. |
| DOULTON & Co., <i>Lambeth, London</i> , for Stanford's Patent Joints for Stoneware Pipes.                                                                                      | STAFFORD,   | 1878. |
| DOULTON & Co., <i>Lambeth, London</i> , for Anti-Per-<br>cussion High Pressure Valves.                                                                                         | CROYDON,    | 1879. |
| DOULTON & Co., <i>Lambeth, London</i> , for Ventilating<br>Tile Stove.                                                                                                         | EXETER,     | 1880. |
| DUNCAN, Maj. F., <i>The Common, Woolwich</i> , for<br>Ambulance Wheeled Litter.                                                                                                | STAFFORD,   | 1878. |
| ELLISON, J. E., <i>Leeds</i> , for Conical Ventilators.                                                                                                                        | STAFFORD,   | 1878. |
| FRASER BROS., <i>Commercial Road, E.</i> , for Port-<br>able Disinfecting Apparatus.                                                                                           | CROYDON,    | 1879. |
| GALBRAITH, T., <i>Crawford Square, Londonderry</i> ,<br>for Hot-Air Bath.                                                                                                      | LEAMINGTON, | 1877. |
| HAMILTON & Co., <i>Leadenhall Street, E.C.</i> , for<br>Patent Prismoidal Pavement and Floor<br>Lights.                                                                        | CROYDON,    | 1879. |
| HANCOCK, F. & C., <i>Dudley, Worcester</i> , for Machine<br>for Washing and Cooling Butter.                                                                                    | LEAMINGTON, | 1877. |
| HARESCUEGH, B. B. & Co., <i>Bentinck Street, Leeds</i> ,<br>for Excreta Pail (oak) with Spring Lid.                                                                            | LEAMINGTON, | 1877. |
| HARRIS, G. H., <i>Bristol Street, Birmingham</i> , for<br>Economical Cooking Range.                                                                                            | LEAMINGTON, | 1877. |
| HASSALL & SINGLETON, <i>Birmingham</i> , for Phoenix<br>Portable Range, and the Birmingham Range<br>with Reducible Fire without Gas.                                           | STAFFORD,   | 1878. |
| HAYWARD, TYLER & Co., <i>London</i> , for Full-flush<br>Valveless Closet.                                                                                                      | NEWCASTLE,  | 1882. |
| HUNT, NATHAN, <i>Bristol</i> , for Auto-Pneumatic<br>Ventilation.                                                                                                              | EXETER,     | 1880. |
| LASCELLES, W., <i>Bunhill Row, E.C.</i> for Concrete<br>Bath in one piece.                                                                                                     | CROYDON,    | 1879. |
| LE GRAND & SUTCLIFFE, <i>Bunhill Row, E.C.</i> , for<br>Improvements in Well Sinking Apparatus.                                                                                | LEAMINGTON, | 1877. |
| LEONI, S. & Co., <i>Strand</i> , for Apparatus for Cook-<br>ing by Gas.                                                                                                        | STAFFORD,   | 1878. |
| MAIGNEN, P. A., <i>Great Tower Street, E.C.</i> , for<br>Filtre Rapide.                                                                                                        | CROYDON,    | 1879. |
| MANLOVE, ALLIOTT, FRYER & Co., <i>Nottingham</i> ,<br>for Fryer's Patent Destructor, Fryer's Patent<br>Carbonizer, and Firman's Patent Dessicating<br>and Rendering Apparatus. | NEWCASTLE,  | 1882. |
| MATHER & ARMSTRONG, <i>Newcastle-upon-Tyne</i> ,<br>for Sieman's Patent Regenerative Gas<br>Burner.                                                                            | NEWCASTLE,  | 1882. |
| MOORE, J., <i>St. James' Walk, Clerkenwell, E.C.</i> ,<br>for Glass Louvre Ventilators.                                                                                        | EXETER,     | 1880. |
| MORRIS, LITTLE & Co., <i>Doncaster</i> , for Little's<br>Soluble Phenyle.                                                                                                      | STAFFORD,   | 1878. |

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| MOSER, I., <i>Southampton</i> , for Dry Closet, suitable for Ashes or Disinfecting Powder.                                                                            | EXETER,     | 1880. |
| MOULE'S PATENT EARTH CLOSET COMPANY, 5a, <i>Garrick Street, W.C.</i> , for their Earth Closets.                                                                       | STAFFORD,   | 1878. |
| PARKER, J., <i>Woodstock, Oxford</i> , for Dry Earth Closet.                                                                                                          | LEAMINGTON, | 1877. |
| POCOCK, BROS., <i>Southwark Bridge Road</i> , for Universal Invalid Tubular Water and Air Bed.                                                                        | STAFFORD,   | 1878. |
| PRITCHETT, G. E., 20, <i>Spring Gardens, S.W.</i> , for Economic Hollow Flooring.                                                                                     | STAFFORD,   | 1878. |
| READ, JEFFERSON, <i>Birmingham</i> , for Arcanum Process of Silver Plating Steel.                                                                                     | CROYDON,    | 1879. |
| ROSS, J. A. G., <i>Newcastle-upon-Tyne</i> , for Silicate Cotton (Slag-wool).                                                                                         | NEWCASTLE,  | 1882. |
| SANITARY APPLIANCE COMPANY, <i>Salford</i> , for Sifting Ash Closet, with Soil Pail.                                                                                  | STAFFORD,   | 1878. |
| SANITARY & ECONOMIC SUPPLY ASSOCIATION, <i>Gloucester</i> , for Dr. Bond's Euthermic Gas Stove.                                                                       | EXETER,     | 1880. |
| SILICATE PAINT COMPANY, <i>Cannon Street, E.C.</i> , for Griffiths' Patent White, and for their preparations of Silicate Paint, Enamel Paint, and Petrifying Liquids. | STAFFORD,   | 1878. |
| SINCLAIR, J., <i>Leadenhall Street, E.C.</i> , for Tyn-dall's Smoke Respirator.                                                                                       | CROYDON,    | 1879. |
| SOCIÉTÉ FRANÇAISE D'HYGIÈNE, <i>Paris</i> , for Chemical Preparations and Apparatus.                                                                                  | LEAMINGTON, | 1877. |
| SOCIÉTÉ FRANÇAISE D'HYGIÈNE, <i>Paris</i> , for their exhibit of Books on Hygiène.                                                                                    | NEWCASTLE,  | 1882. |
| SPONGY IRON WATER PURIFYING COMPANY, <i>Oxford Street, W.C.</i> , for Bischof's Spongy Iron Filter.                                                                   | LEAMINGTON, | 1877. |
| STOTT, JAMES & Co., <i>Oldham</i> , for Patent Mercury Gas Governor.                                                                                                  | NEWCASTLE,  | 1882. |
| TYLOR & SONS, <i>Newgate Street, E.C.</i> , for Flushing Rim Lavatory Basin and Apparatus.                                                                            | EXETER,     | 1880. |
| WALKER, CHAS. W., <i>Wandsworth Common</i> , for Acid Pump and Syphon.                                                                                                | CROYDON,    | 1879. |
| WARD, O. D., <i>London</i> , for Household Water Closet.                                                                                                              | NEWCASTLE,  | 1882. |
| WEBB, H. CHALK, <i>Worcester</i> , for Colouring Patterns through the Substance of Wood.                                                                              | EXETER,     | 1880. |
| WENHAM, W. P., <i>Church Street, Croydon</i> , for an Improved Open or Close Range Kitchener.                                                                         | CROYDON,    | 1879. |
| WILKINSON, W. B. & Co., <i>Newcastle-upon-Tyne</i> , for Damp-proof Concrete Pavement.                                                                                | NEWCASTLE,  | 1882. |
| WILLCOCKS & Co., <i>Burmantofts, Leeds</i> , for Silica Glazed and Enamelled Fire Clay Bricks and Faïence.                                                            | CROYDON,    | 1879. |

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| WILSON ENGINEERING COMPANY, <i>Holborn, W.C.</i> , for Wilson Portable Close Cooking Range.                             | EXETER,    | 1880. |
| WILSON ENGINEERING COMPANY, <i>London</i> , for improved Wilson Range, with Steel Boiler and non-conducting Jacketting. | NEWCASTLE, | 1882. |
| WOOLAMS & Co., <i>High Street Marylebone</i> , for Paper Hangings free from Arsenic.                                    | CROYDON,   | 1879. |



ALPHABETICAL LIST OF CERTIFICATES AWARDED AT THE EXHIBITIONS.

\* Medal Awarded at a Previous Exhibition.

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| ADAMS, R., 7, <i>Great Dover Street, S.E.</i> , for Adjustable Shoe, and Regulating Spring Hinge for Swinging Doors.          | CROYDON,   | 1879. |
| ADAMS, R., 7, <i>Great Dover Street, S.E.</i> , for Fanlight Openers and Casement Fasteners.                                  | CROYDON,   | 1879. |
| ALLEN, THOMAS, <i>St. Augustine's Parade, Bristol</i> , for Metallic Tubular Bedsteads and Invalid Bedrests.                  | STAFFORD,  | 1878. |
| ANGELL, A. T., <i>London</i> , for Patent Air-tight Man-hole Door.                                                            | NEWCASTLE, | 1882. |
| ARDEN, HILL & Co., <i>Birmingham</i> , for Solid Flame Boiling Stove.                                                         | NEWCASTLE, | 1882. |
| BALL, ANCELL, <i>Spalding</i> , for Folding Invalid Bed.                                                                      | CROYDON,   | 1879. |
| BARTRUM, HARVEY, & Co., <i>London</i> , for Patent Ventilatorium Waterproof Garments.                                         | STAFFORD,  | 1878. |
| BEARD, DENT, & HELLYER, 21, <i>Newcastle Street, W.C.</i> , for Artizan Closet.                                               | CROYDON,   | 1879. |
| BEARD, DENT, & HELLYER, 21, <i>Newcastle Street, W.C.</i> , for Patent Ventilating Drain Syphon.                              | CROYDON,   | 1879. |
| BIRD, PETER HINCKES, 1, <i>Norfolk Square, N.W.</i> , for his Method of Costless Ventilation.                                 | CROYDON,   | 1879. |
| BIRD, PETER HINCKES, 1, <i>Norfolk Square, N.W.</i> , for Large Legible Spirit Thermometer.                                   | EXETER,    | 1880. |
| *BILLING & Co., <i>Hatton Garden, E.C.</i> , for the "Workman's" Cooking Stove, and other Improvements in Gas-Cooking Stoves. | CROYDON,   | 1879. |
| *BOSTEL, D. T., <i>Duke Street, Brighton</i> , for "Excelsior" Water Closet.                                                  | STAFFORD,  | 1878. |
| BOWDEN, WILLIAM, <i>London</i> , for Patent Automatic Chariot for Children.                                                   | NEWCASTLE, | 1882. |
| *BRADFORD, THOMAS & Co., <i>Salford</i> , for Shuttle Steam-Power Washing Machine.                                            | STAFFORD,  | 1878. |
| BRADY & MARTIN, <i>Newcastle-upon-Tyne</i> , for Central Tube Water Mattress.                                                 | NEWCASTLE, | 1882. |
| BRADY & MARTIN, <i>Newcastle-upon-Tyne</i> , for their exhibit of Instruments used by Medical Officers of Health.             | NEWCASTLE, | 1882. |

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| BRAITHWAITE & Co., <i>Leeds</i> , for Patent Syphon for Water Closet Cisterns.                                                                                  | CROYDON,   | 1879. |
| BRANKSEA ISLAND POTTERY COMPANY (LIMITED) <i>Pool, Dorset</i> , for Stoneware Pipes.                                                                            | EXETER,    | 1880. |
| BRITISH SANITARY COMPANY, <i>Glasgow</i> , for Self-Acting Earth Closet                                                                                         | EXETER,    | 1880. |
| BROCK, WILLIAM, & Co., 177, <i>Fore Street, Exeter</i> , for Bed Rest with Movable Arms.                                                                        | EXETER,    | 1880. |
| BROCK, WILLIAM, & Co., 177, <i>Fore Street, Exeter</i> , for "Nonsuch" Adjustable Chair.                                                                        | EXETER,    | 1880. |
| BRAY & Co., <i>Blackman Lane, Leeds</i> , for Improved Gas Burners.                                                                                             | CROYDON,   | 1879. |
| BUCHAN, W. P., <i>Glasgow</i> , for Improved Drain-pipe, with Access Cover.                                                                                     | NEWCASTLE, | 1882. |
| BUCHAN, W. P., <i>Glasgow</i> , for Patent Disconnecting Drain-trap.                                                                                            | NEWCASTLE, | 1882. |
| BUSSEY & Co., <i>Museum Works, Peckham, S.E.</i> , for Patent Spring Mattress.                                                                                  | CROYDON,   | 1879. |
| CALVERT, F. C., & Co., <i>Bradford</i> , for Carbolic Acid.                                                                                                     | CROYDON,   | 1879. |
| CALVERT, F. C., & Co., <i>Bradford</i> , for Carbolic Acid and preparations of it.                                                                              | EXETER,    | 1880. |
| CALVERT, F. C., & Co., <i>Bradford</i> , for Improved Vaporiser for Disinfecting.                                                                               | EXETER,    | 1880. |
| CANDY & Co., <i>Newton Abbot</i> , for Granite Vitri-fied Bricks and Paving.                                                                                    | EXETER,    | 1880. |
| CAPPER, SON & Co., <i>London</i> , for Brian Jones's Patent Joint for connecting Closet with Soil-pipe.                                                         | NEWCASTLE, | 1882. |
| CARTER & Co., <i>Old Refinery, Bristol</i> , for Preparations of Lime Juice, Aromatic Ginger Ale, and Quinine Tonic.                                            | EXETER,    | 1880. |
| *CHORLTON & DUGDALE, <i>Manchester</i> , for "Excelsior" Spring Mattress.                                                                                       | STAFFORD,  | 1878. |
| *CHORLTON & DUGDALE, <i>Manchester</i> , for "Excelsior" Spring Mattress Hospital Bed.                                                                          | CROYDON,   | 1879. |
| CHORLTON & DUGDALE, <i>Manchester</i> , for "Sun-light Stove."                                                                                                  | EXETER,    | 1880. |
| CHORLTON & DUGDALE, <i>Manchester</i> , for "Invalids'" Adjustable Bed.                                                                                         | EXETER,    | 1880. |
| *CHORLTON & DUGDALE, <i>Manchester</i> , for "Excelsior" Spring Mattress.                                                                                       | EXETER,    | 1880. |
| *CHORLTON & DUGDALE, <i>Manchester</i> , for "Excelsior" Spring Mattress.                                                                                       | NEWCASTLE, | 1882. |
| CLARKE, F. W., PORTABLE GAS APPARATUS COMPANY (LIMITED), <i>Great Queen Street, W.C.</i> for Patent Portable Gas Apparatus for Manufacturing Gas from Gasoline. | CROYDON,   | 1879. |
| COLMAN & GLENDENNING, <i>Norwich</i> , for School Desks with Shifting Seats.                                                                                    | STAFFORD,  | 1878. |



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| COLMAN & GLENDENNING, <i>Norwich</i> , for Patent Automaton Seat for Drapers.                                       | EXETER,    | 1880. |
| COMPOSTELLA FIRE-LIGHT COMPANY, <i>Fenchurch Street, E.C.</i> , for the Compostella Fire Lights for Lighting Fires. | STAFFORD,  | 1878. |
| CONSTANTINE, T. J., <i>Fleet Street, E.C.</i> , for the Devonshire Cooking Range                                    | EXETER,    | 1880. |
| CRAIG, J. & M., <i>Kilmarnock</i> , for Buchan's Patent Trap.                                                       | EXETER,    | 1880. |
| CRAIG, J. & M., <i>Kilmarnock</i> , for Maguire's Patent Cradle Joint for Drain-pipes.                              | NEWCASTLE, | 1882. |
| CRAIG, J. & M., <i>Kilmarnock</i> , for Buchan's Patent Drain-trap and Drain-pipes, with Access Cover.              | NEWCASTLE, | 1882. |
| CRAIG, J. & M., <i>Kilmarnock</i> , for White Enamelled Fire Clay Sinks.                                            | NEWCASTLE, | 1882. |
| CREGEEN, H. S., <i>Bromley</i> , for Patent Air Inlet Head for Drain Ventilation.                                   | NEWCASTLE, | 1882. |
| DAVIS, JOSEPH & Co., <i>London</i> , for New Oven Pyrometer.                                                        | NEWCASTLE, | 1882. |
| DINNING & COOKE, <i>Newcastle-upon-Tyne</i> , for Cast Iron Channels for Stable Drainage.                           | NEWCASTLE, | 1882. |
| DINNING & COOKE, <i>Newcastle-upon-Tyne</i> , for George's Calorigen.                                               | NEWCASTLE, | 1882. |
| DINNING & COOKE, <i>Newcastle-upon-Tyne</i> , for Jennings's Universal Shampooing Apparatus.                        | NEWCASTLE, | 1882. |
| DINNING & COOKE, <i>Newcastle-upon-Tyne</i> , for their exhibit of Grates, Mantel-pieces, and Over-mantels.         | NEWCASTLE, | 1882. |
| DOULTON & Co., <i>Lambeth, London</i> , for Decorative Tiles for Covering Walls and Floors.                         | CROYDON,   | 1879. |
| DOULTON & Co., <i>Lambeth, London</i> , for Disconnecting Gully, with back and side Entrances and iron grating.     | CROYDON,   | 1879. |
| DOULTON & Co., <i>Lambeth, London</i> , for an Economical Flush-Out Closet.                                         | EXETER,    | 1880. |
| *DOULTON & Co., <i>Lambeth, London</i> , for Anti-percussion High Pressure Draw-off Valves.                         | EXETER,    | 1880. |
| *DOULTON & Co., <i>Lambeth, London</i> , for Stanford's Patent Joints for Stoneware Pipes.                          | EXETER,    | 1880. |
| DOULTON & Co., <i>London</i> , for Anti-percussion High-pressure Bib Valves.                                        | NEWCASTLE, | 1882. |
| DOULTON & Co., <i>London</i> , for Bath Locking Valves, for preventing waste of water.                              | NEWCASTLE, | 1882. |
| DOULTON & Co., <i>London</i> , for Latham's Flap Valve.                                                             | NEWCASTLE, | 1882. |
| DOULTON & Co., <i>London</i> , for Patent Joint for Drain-pipes.                                                    | NEWCASTLE, | 1882. |

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| DOULTON & Co., <i>London</i> , for Reversible Inlet Gully, with Dished Stoneware Cover and Iron Grating.       | NEWCASTLE, | 1882. |
| DOULTON & Co., <i>London</i> , for their Flush-out Closet.                                                     | NEWCASTLE, | 1882. |
| DOULTON & Co., <i>London</i> , for Tip-up Lavatory Basin.                                                      | NEWCASTLE, | 1882. |
| *DOULTON & Co., <i>London</i> , for Ventilating Tile Stoves.                                                   | NEWCASTLE, | 1882. |
| EDWARDS, J. C., <i>Trefynant, Ruabon</i> , for Dean's Patent External Drain Traps, with movable receptacle.    | CROYDON,   | 1879. |
| *ELLISON, J. E., <i>Victoria Square, Leeds</i> , for Conical Ventilators.                                      | CROYDON,   | 1879. |
| EVANS & Co., <i>Wrexham</i> , for Zoedone. (Patentee David Johnson, F.C.S.)                                    | CROYDON,   | 1879. |
| FELL, J. & Co., <i>Wolverhampton</i> , for Clark's Patent Anti-splash Tip-up Lavatory Basin.                   | NEWCASTLE, | 1882. |
| FELL, J. & Co., <i>Wolverhampton</i> , for Smith's Patent Cast Lead Syphon Traps.                              | NEWCASTLE, | 1882. |
| FELL, J. & Co., <i>Wolverhampton</i> , for their exhibit of Water-taps.                                        | NEWCASTLE, | 1882. |
| FINCH & Co., 181, <i>High Holborn, W.C.</i> , for large Way Waste Plug, with Protective Cover.                 | CROYDON,   | 1879. |
| FORREST, WILLIAM, <i>Newcastle-upon-Tyne</i> , for the Albo Carbon Light.                                      | NEWCASTLE, | 1882. |
| FRY, J. S., & SONS, <i>Union Street, Bristol</i> , for Cocoa Extract and Preparations of Chocolate.            | EXETER,    | 1880. |
| GARTON & KING, <i>Exeter</i> , for Vowel E. Bradford's Family Washing Machine.                                 | EXETER,    | 1880. |
| GILLOW & Co., <i>Oxford Street, W.</i> , for Lavatory.                                                         | STAFFORD,  | 1878. |
| GULLIVER & Co., <i>Aylesbury</i> , for Lemonade, Lime Juice, and Ginger Ale.                                   | CROYDON,   | 1879. |
| HAMILTON, W., <i>Brighton</i> , for Invalid "Grasshopper" Couch.                                               | STAFFORD,  | 1878. |
| HAMILTON, WILLIAM, <i>Brighton</i> , for Invalid "Grasshopper" Couch.                                          | NEWCASTLE, | 1882. |
| HAMMOND & HUSSEY, <i>High Street, Croydon</i> , for Hornibrook's Patent Catchment Grating for Steep Gradients. | CROYDON,   | 1879. |
| *HANCOCK, F. & C., <i>Dudley, Worcester</i> , for Machine for Washing and Cooling Butter.                      | STAFFORD,  | 1878. |
| HANCOCK, F. & C., <i>Dudley, Worcester</i> , for New Propellor Churn.                                          | EXETER,    | 1880. |
| HANCOCK, F. & C., <i>Dudley, Worcester</i> , for Dough Kneading Machine.                                       | EXETER,    | 1880. |
| HANCOCK, F. & C., <i>Dudley</i> , for Patent Machine for Washing and Peeling Potatoes.                         | NEWCASTLE, | 1882. |

- \*HARESCUGH, B. B. & Co., *Leeds*, for Excreta Pail (oak) with Patent Spring Lid. STAFFORD, 1878.
- HARRIMAN, W. & Co., *Blaydon-upon-Tyne*, for Fowler's Patent Water-closet. NEWCASTLE, 1882.
- \*HARRIS, G. H., *Bristol Street, Birmingham*, for Economical Cooking Range. STAFFORD, 1878.
- HAYWARD, TYLER & Co., *London*, for Shower and Douche Bracket. NEWCASTLE, 1882.
- HEADLEY & SONS, *Cambridge*, for Patent Hose Reel. CROYDON, 1879.
- HERON, T., *Manchester*, for Patent Duplex Burner. NEWCASTLE, 1882.
- HILTON, W. H., *Leamington*, for various Inventions for Promoting Domestic Economy. STAFFORD, 1878.
- HUTCHINSON, A. & Co., *Great Winchester Street, E.C.*, for India Rubber Gas Tubing. EXETER, 1880.
- HYGIENIC STOVE AND GRATE COMPANY, 15, *Peel Buildings, Birmingham*, for "Eagle" Sanitary Trap, for superseding Bell Traps. CROYDON, 1879.
- JENNINGS, G., *Stangate, London*, for "Artizans' Dwellings Sink." CROYDON, 1879.
- JENNINGS, G., *Stangate, London*, for Universal Shampooing Apparatus. CROYDON, 1879.
- JEWSBURY & BROWN, *Manchester*, for Seltzer Water. STAFFORD, 1878.
- JEYES' SANITARY COMPOUND COMPANY, *Bishopsgate Street, E.C.*, for Jeyes' Perfect Purifier. CROYDON, 1879.
- JEYES' SANITARY COMPOUND COMPANY, *London*, for Jeyes' Perfect Purifier. NEWCASTLE, 1882.
- KIRSOP & Co., *Newcastle-upon-Tyne*, for Paragon Washing Machine, with Canadian Washer. NEWCASTLE, 1882.
- KNELL, U., 77, *Fore Street, E.C.*, for "Imperial" Ventilating Window. CROYDON, 1879.
- LADIES' SANITARY ASSOCIATION, *Berners Street, W.*, for their Publications. STAFFORD, 1878.
- LARMOUTH, THOMAS, & Co., *Salford*, for Dual Desk, with Separate Gangway Seat. STAFFORD, 1878.
- \*LASCELLES, W., 121, *Bunhill Row, London*, for Concrete Bath, in one piece. EXETER, 1880.
- \*LE GRAND & SUTCLIFFE, 100, *Bunhill Row, London*, for Improvements in Internal driving of Tube Wells. CROYDON, 1879.
- LEONI, S. & Co., *Strand, W.C.*, for the "Rheometer" Street Lamp Regulator. STAFFORD, 1878.
- LEWIS, MRS. A., *Manchester*, for Tin Cooking Utensils. CROYDON, 1879.
- LONDON NECROPOLIS COMPANY, *Strand, W.C.*, for Patent "Earth to Earth" Coffins. STAFFORD, 1878.
- MAGUIRE & SON, *Dublin*, for Dr. Scott's Disinfecting Apparatus. NEWCASTLE, 1882.

- MAIGNEN, P. A., 20 & 23, *Great Tower Street, E.C.*, for "Bijou" Filtre Rapide. EXETER, 1880.
- \*MAIGNEN, P. A., 20 & 23, *Great Tower Street, E.C.*, for Filtre Rapide. EXETER, 1880.
- MALING, C. T., *Newcastle-upon-Tyne*, for his exhibit of Sanitary Earthenware. NEWCASTLE, 1882.
- MALING, C. T., *Newcastle-upon-Tyne*, for Lavatory Basin with Flushing Rim. NEWCASTLE, 1882.
- MANLOVE, ALLIOTT, FRYER & Co., *Nottingham*, for Lyon's Patent Disinfecter. NEWCASTLE, 1882.
- MATHER & ARMSTRONG, *Newcastle-upon-Tyne*, for Hink's Patent Duplex Lamp, with Extinguisher. NEWCASTLE, 1882.
- MATHER & ARMSTRONG, *Newcastle-upon-Tyne*, for Steam Heating Apparatus, combining heating and ventilating. NEWCASTLE, 1882.
- MITCHELL, JAMES, *Newcastle-upon-Tyne*, for Mitchell's Patent Steam Washer. NEWCASTLE, 1882.
- MCCALLUM, J. B., *Stafford*, for Improved Non-Absorbent Tub or Pail Van. EXETER, 1880.
- \*MOULE'S PATENT EARTH CLOSET COMPANY (LIMITED), 5a, *Garrick Street, W.C.*, for Earth Closet. CROYDON, 1879.
- MURTON, H. A., *Newcastle-upon-Tyne*, for exhibit of Indiarubber Vessels for hospital use. NEWCASTLE, 1882.
- NAILSWORTH FOUNDRY COMPANY, *Bristol*, for Morgan's Stench Exhaust. NEWCASTLE, 1882.
- NEWRY MINERAL WATER COMPANY (LIMITED), *Liverpool*, for Ginger Ale and Lemonade. CROYDON, 1879.
- OATES & GREEN, *Horley Green Fire Clay Works, Halifax*, for Patent Drain-cleaning Rods and Stoneware Horse Manger. STAFFORD, 1878.
- ONIONS, J. C., (LIMITED), *Birmingham*, for Moser's Patent Self-Acting Dry Closet. CROYDON, 1879.
- PARKER, J., *Woodstock*, for Dry Earth Commode without Separator. EXETER, 1880.
- PATENT VICTORIA STONE COMPANY, *Kingsland Road, E.*, for Artificial Stone Tubes. CROYDON, 1879.
- \*POCOCK BROS., *Southwark Bridge Road, S.E.*, for "Universal" Tubular Air and Water Bed. CROYDON, 1879.
- POTTS & Co., *Handsworth, Birmingham*, for Edinburgh Air-Chambered Sewer Trap. STAFFORD, 1878.
- PRITCHETT, G. E., 20, *Spring Gardens, S.W.*, for Warming and Ventilating Appliances. STAFFORD, 1878.
- PRITCHETT, G. E., 20, *Spring Gardens, S.W.*, for Thermometrical Instruments. STAFFORD, 1878.

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| *PRITCHETT, G. E., 20, <i>Spring Gardens, S.W.</i> ,<br>for Improvements in Hollow Tile Floor-<br>ing.                        | CROYDON,   | 1879. |
| PRITCHETT, G. E., 20, <i>Spring Gardens, S.W.</i> ,<br>for Barometrical and Thermometrical In-<br>struments.                  | CROYDON,   | 1879. |
| PRITCHETT, G. E., 20, <i>Spring Gardens, S.W.</i> ,<br>for Corrugated Iron Hot-Water Warming<br>Appliances.                   | EXETER,    | 1880. |
| PRITCHETT, G. E., 20, <i>Spring Gardens, S.W.</i> ,<br>for Improvements in Thermometrical and<br>Barometrical Instruments.    | EXETER,    | 1880. |
| RANSOME, S. E., & Co., 10, <i>Essex Street, W.C.</i> ,<br>for "Milwaukee" Glass Lantern or Hur-<br>ricane Lantern.            | CROYDON,   | 1879. |
| RIMINGTON BROS. & Co., <i>Newcastle-upon-Tyne</i> ,<br>for Dean's Gully Trap.                                                 | NEWCASTLE, | 1882. |
| RIMINGTON BROS. & Co., <i>Newcastle-upon-Tyne</i> ,<br>for Enamelled Fire Clay Bath.                                          | NEWCASTLE, | 1882. |
| RUFFARD & Co., <i>Clay Works, Stourbridge</i> , for<br>Porcelain Baths, moulded and glazed in one<br>piece.                   | STAFFORD,  | 1878. |
| *SALMON, BARNES & Co., <i>Ulverston</i> , for Revolving<br>Shutters with Patent Balance Weight Motion.                        | EXETER,    | 1880. |
| *SANITARY APPLIANCE COMPANY, <i>Factory Lane</i> ,<br><i>Salford</i> , for Patent Cinder-Sifting Ash<br>Closet.               | CROYDON,   | 1879. |
| SELIG, SONNENTHAL & Co. (Limited), <i>Lambeth<br/>Hill, Queen Victoria Street, E.C.</i> , for Patent<br>Safety Belt Shippers. | CROYDON,   | 1879. |
| SHARP, JONES & Co., <i>Bourne Valley Pottery</i> ,<br><i>Poole, Dorset</i> , for Rock Concrete Tubes.                         | CROYDON,   | 1879. |
| SHARP, C. H. & Co., <i>High Holborn, E.C.</i> , for<br>Ornamental Inlet Ventilators.                                          | EXETER,    | 1880. |
| SHONE, ISAAC, <i>Wreatham</i> , for Pneumatic Liquid<br>Ejector.                                                              | STAFFORD,  | 1878. |
| SILICATED CARBON FILTER COMPANY, <i>Battersea</i> ,<br>for Silicated Carbon Double Chambered Table<br>Filters.                | EXETER,    | 1880. |
| SILICATED CARBON FILTER COMPANY, <i>London</i> ,<br>for Silicated Carbon Filtering Material.                                  | NEWCASTLE, | 1882. |
| SINCLAIR, J., 104, <i>Leadenhall Street, E.C.</i> , for<br>Chemical Fire Exterminator.                                        | CROYDON,   | 1879. |
| SKINNER, G. H., 13, <i>North Street, Exeter</i> , for<br>Seltzer, Soda, and Potash Waters, and Orange<br>Quinine Tonic.       | EXETER,    | 1880. |
| SMITH, ELDER & Co., <i>London</i> , for their exhibit<br>of Sanitary Publications.                                            | NEWCASTLE, | 1882. |
| SMITH, JAMES, <i>Liverpool</i> , for Open Grate for<br>consuming Smoke.                                                       | NEWCASTLE, | 1882. |

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| SNELL, II. SAXON, <i>Southampton Buildings</i> , for<br>the Thermohydric Ventilating Hot-Water Open<br>Fire Grate.                                        | STAFFORD,  | 1878. |
| STEPHAN, J. A., <i>Worcester</i> , for Carbonised Iron<br>Stone Mound Filter for Water.                                                                   | EXETER,    | 1880. |
| STIDDER & Co., 50, <i>Southwark Bridge Road, S.E.</i> ,<br>for Swivel, Lock Plug, and Overflow for Sink.                                                  | CROYDON,   | 1879. |
| STIFF, JAMES, & SONS, <i>Lambeth, London</i> , for<br>Weaver's Ventilating Sewer Air Trap.                                                                | STAFFORD,  | 1878. |
| STRAKER & LOVE, <i>Newcastle-upon-Tyne</i> , for their<br>exhibit of large Fire-clay Drain-pipes.                                                         | NEWCASTLE, | 1882. |
| STRETTON, S., <i>Kidderminster</i> , for a Folding<br>Bier and Car for Simplifying Funerals.                                                              | CROYDON,   | 1879. |
| THOMASSON & KEY, <i>Worcester</i> , for Cup Grating<br>for Sinks.                                                                                         | NEWCASTLE, | 1882. |
| THORN & Co., <i>Stafford</i> , for Artificial Stone<br>Filters, for Cleansing Rain Water for Do-<br>mestic Use.                                           | STAFFORD,  | 1878. |
| THORNBURN, WILLIAM, <i>Borough Bridge</i> , for<br>Tubular Calorifer for Greenhouses.                                                                     | NEWCASTLE, | 1882. |
| TOWNSEND & Co., <i>Newcastle-upon-Tyne</i> , for their<br>exhibit of China Cups and other Vessels for<br>Invalid use.                                     | NEWCASTLE, | 1882. |
| TYLOR, J., & SONS, 2, <i>Newgate Street, E.C.</i> , for<br>"Clear Way" Regulator Valve Water Closet,<br>without overflow communicating with Valve<br>Box. | EXETER,    | 1880. |
| TYLOR, J., & SONS, 2, <i>Newgate Street, E.C.</i> , for<br>Improved Enamelled Iron Slop Sink, with<br>Patent Regulator Supply Valve.                      | EXETER,    | 1880. |
| TYLOR, J., & SONS, 2, <i>Newgate Street, E.C.</i> , for<br>Improved Full-Way Stop Valve.                                                                  | EXETER,    | 1880. |
| TYLOR, J. & SONS, 2, <i>Newgate Street, E.C.</i> , for<br>"Waste Not" Regulator Valve.                                                                    | EXETER,    | 1880. |
| TYLOR, J. & SONS., <i>London</i> , for Hospital Slop<br>Sink, with Patent Waste-not Regulator Valve.                                                      | NEWCASTLE, | 1882. |
| TYLOR, J. & SONS, <i>London</i> , for Bath Locking<br>Valves for preventing waste of water.                                                               | NEWCASTLE, | 1882. |
| TYLOR, J. & SONS, <i>London</i> , for Flushing-rim<br>Lavatory Basin, with Quick Waste.                                                                   | NEWCASTLE, | 1882. |
| TYLOR, J. & SONS, <i>London</i> , for Patent Flush-<br>out Urinal Basin.                                                                                  | NEWCASTLE, | 1882. |
| TYLOR, J. & SONS, <i>London</i> , for Patent Joint for<br>Lead Pipes.                                                                                     | NEWCASTLE, | 1882. |
| TYLOR, J. & SONS, <i>London</i> , for Terry's Patent<br>Pedal-action for Water-closets.                                                                   | NEWCASTLE, | 1882. |
| TYLOR, J. & SONS, <i>London</i> , for Waste-not Regu-<br>lator Valve.                                                                                     | NEWCASTLE, | 1882. |
| WALLER, THOS., 47, <i>Fish Street Hill, E.C.</i> , for<br>Cooking Stove with Warm-Air Chamber.                                                            | CROYDON,   | 1879. |

- \*WARD, O. D., *London*, for Bean's Direct Acting Valveless Waste Preventer. NEWCASTLE, 1882.
- WATSON, HENRY & SON, *Newcastle-upon-Tyne*, for the "National" Water-closet. NEWCASTLE, 1882.
- WATSON, HENRY & SON, *Newcastle-upon-Tyne*, for Waste-preventing Flushing Syphon. NEWCASTLE, 1882.
- WATSON, HENRY & SON, *Newcastle-upon-Tyne*, for "Crown" Cottage Water-closet. NEWCASTLE, 1882.
- WHITE, WILLIAM, *Abergavenny*, for Hygeian Rock Building Composition. NEWCASTLE, 1882.
- WEBSTER & CO., *Nottingham*, for Webster's Patent Photometer. CROYDON, 1879.
- WENHAM & Co., *Church Street, Croydon*, for Boyle's Mica-Valved Outlet Ventilator. CROYDON, 1879.
- WILLCOCK & Co., *Burmantofts, Leeds*, for Fire-Clay Sanitary Sinks, and Water Troughs. CROYDON, 1879.
- WILLEY & Co., *Exeter*, for their Exhibit of Gaseliers and Gas Brackets. EXETER, 1880.
- \*WIPPELL BROS. & Row, 231, *High Street, Exeter*, for Moule's Earth Closet. EXETER, 1880.
- WIPPELL BROS. & Row, 231, *High Street, Exeter*, for Ransome's Artificial Stone Air Brick. EXETER, 1880.
- WIPPELL BROS. & Row, 231, *High Street, Exeter*, for Conservatory Boiler, with Hot-Water Pipe. EXETER, 1880.
- WIPPELL BROS. & Row, 231, *High Street, Exeter*, for Cottage Range. EXETER, 1880.
- WIPPELL BROS. & Row, 231, *High Street, Exeter*, for Chappuis Daylight Reflector. EXETER, 1880.
- WIPPELL BROS. & Row, 231, *High Street, Exeter*, for Fernby's "Paragon" Camp Furniture. EXETER, 1880.
- WIPPELL BROS. & Row, 231, *High Street, Exeter*, for Improved Housemaid's Box with Sifter. EXETER, 1880.
- \*WOOLLAMS & Co., *London*, for Non-Arsenical Wall Papers. NEWCASTLE, 1882.
- WRIGHT & STEVENS, for Syphon Flushing Cistern. NEWCASTLE, 1882.
- WRIGHT, JOHN & Co., *Birmingham*, for the "Cosey" Portable Open Gas Fire, with Platinum Wire and Asbestos Packing. NEWCASTLE, 1882.

## PAPERS AND ADDRESS READ AT THE CONGRESSES OF THE INSTITUTE.

### PRESIDENT'S ADDRESS.

- B. W. RICHARDSON, M.D., F.R.S. A Theory as to the Natural or Glandular Origin of the Contagious Diseases. LEAMINGTON, 1877.
- E. CHADWICK, C.B. The need of reform in the Administrative Organisation of the Sanitary Service, with special reference to the Appointment of Medical Officers of Health. STAFFORD, 1878.
- B. W. RICHARDSON, M.D., F.R.S. Salutland, an Ideal of a Healthy People. CROYDON, 1879.
- EARL FORTESCUE. Address to Congress. EXETER, 1880.
- CAPTAIN DOUGLAS GALTON, R.E., C.B., D.C.L., F.R.S. Address to the Congress. NEWCASTLE-UPON-TYNE, 1882.

### ADDRESSES TO SECTIONS.

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|---------------------------------------------|------------------------|-----------------|-------|
| SIR ANTONIO BRADY.                          | President Section III. | EXETER,         | 1880. |
| DR. ALFRED CARPENTER.                       | " "                    | I. CROYDON,     | 1879. |
| PROF. F. S. B. F. DE CHAUMONT, M.D., F.R.S. | " "                    | I. EXETER,      | 1880. |
| DENNIS EMBLETON, M.D., F.R.C.S.             | " "                    | I. NEWCASTLE,   | 1882. |
| CAPT. DOUGLAS GALTON, R.E., C.B., F.R.S.    | " "                    | II. CROYDON,    | 1879. |
| ARTHUR MITCHELL, M.A., M.D., LL.D., F.R.S.  | " "                    | III. NEWCASTLE, | 1882. |
| R. RAWLINSON, C.B.                          | " "                    | II. EXETER,     | 1880. |
| PROF. HENRY ROBINSON, M.INST.C.E.           | " "                    | II. NEWCASTLE,  | 1882. |
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DR. LADREIT DE LA CHARRIÈRE, Médecin-en-Chef des Sourds-muets, 1, Rue Bonaparte, Paris.

A. DURAND CLAYE, Ingénieur des Ponts et Chaussées, 69, Rue de Clichy, Paris.

MARIE-DAVY, President Société Français d'Hygiène a l'Observatoire de Montsouris.

DR. P. L. DURANT, Professeur d'Hygiène, Geneva.

P. DUVERNEY, 8, Place l'Anvers, Paris.

LUIGI GADDA, Milan.

DR. GALEZOWSKI, 29, Boulevard Haussman, Paris.

J. C. JÄGER, Heerengracht, Amsterdam.

ALPHONSE JOLTRAIN, Séc. de la Société Française d'Hygiène, 49, Avenue Wogram, Paris.

BARRON LARREY, 91, Rue de Lille, Paris.

DR. MALACHIA DE CRESTOFORIS, Milan.

MOUTARD MARTIN, 9, Rue de l'Echelle, Paris.

MARIANI, 41, Boulevard Haussman, Paris.

EMILÉ MULLER, 19, Rue des Martyrs, Paris.

PROF. GIACENTO PACCHIOTTI, Turin.

DR. PASSANT, 39, Rue de Grenelle, St. Germain, Paris.

PROF. DR. JAETANUS PENI, Milan.

DR. C. RICORD, 6, Rue de Bournon, Paris.

HENRY ROGER, Président de l'Association des Médecins de France, 17 Boulevard de la Madeleine, Paris.

PROF. DR. GEORGIO ROSTER, All'Instituto, Florence.

DR. CHARLES SAFFRAY, Secrétaire de la Société Française d'Hygiène, 19, Rue Gerande, Paris.

DR. PROSPER DE PIÉTRA SANTA, Redacteur, en Chef du Journal d'Hygiène, 79, Boulevard de Courselles, Paris.

C. SARODI, Ingegnere, Genoa.

LUIGI DEL SARTO, Directeur dell'Uffizio d'Arte Municipale, Florence.

CAVALIERE EMILIO BIGNAMI SORMANI, 18, Via del Pesce, Milan.

LÉON TEMPLE, Montpellier.

M. TRÉHYON, 71, Rue St. Anne, Paris.

PROF. COMMENDATORE SALVATORE TOMMASI, Senatore, Regno d'Italia All'Università di Napoli, Italia.

PROF. CAVALIERE MARINO TURCHI, All'Università di Napoli, Italia.

## FELLOWS.

Date of Election.

1881. Dec. ADAMS, G. E. D'Arcy, M.D., S.S.C., CERT. CAMB., 1, *Clifton Gardens, Maida Vale, W.*
1880. May. AITKEN, PROF. William, M.D., F.R.S., *Woolston, near Southampton.*
1880. Dec. ANGELL, Lewis, M.INST.CE., *Town Hall, Stratford, E.*
1880. Dec. BARTLETT, GEN., J.P., *Exmouth, Devon.*
1878. Dec. BARTLETT, H. Critchett, PH.D., F.C.S., 39, *Duke Street, Grosvenor Square, W.*
1879. Jan. BASS, Hamar, M.P., *Burton-on-Trent.*
1878. Dec. BELL, C. W., J.P., D.L., *Bramblehurst, East Grinstead, Sussex.*
1878. Dec. BRABAZON, RT. HON. LORD, 83, *Lancaster Gate, Hyde Park.*
1880. Jan. BRAYE, RT. HON. LORD, 40, *Grosvenor Street, London' and Stanford Sard, Rugby.*
1878. Dec. BRIGHTEN, W. G., 4, *Bishopsgate Street Without, E.C.*
1881. Nov. BROWNING, Benjamin, L.R.C.P., M.R.C.S., F.C.S., S.S.C., CERT. CAMB., 70, *Union Road, Rotherhithe.*
1878. Dec. BURBERY, J. Stone, *Beatrice Villa, Lorn Road, Southsea, Hants.*
1878. Dec. BURDETT, Henry C., F.S.S., 39, *Gloucester Road, Regent's Park, N.W.*
1882. Feb. BURGESS, Peter, M.A., M.B., *Commercial Bank of Scotland, Wishaw, Lanarkshire, N.B.*
1878. Dec. CAREW, R. R., *Carpenters, Watford, Herts.*
1880. Feb. CARPENTER, Alfred, M.D. LOND., M.R.C.S., S.S.C. CERT. CAMB., *Duppas House, Croydon.*
1878. Dec. CARTER, R. Brudenell, F.R.C.S., 69, *Wimpole Street, Cavendish Square, W.*
1878. Dec. CHADWICK, Edwin, C.B., *Park Cottage, East Sheen, Mortlake, S.W.*
1880. July. CHILDS, CAPT. James, *The Terrace, Clapham Common.*
1878. Dec. CLARK, Daniel, *Carlisle.*

1881. July. COLES, William R. E., 44, *Berners Street, Oxford Street, W.*
1880. Dec. COLLINS, H. H., F.R.I.B.A., 5, *Randolph Road, W.*
1878. Dec. COLMAN, J. J., M.P., *Carrow House, Norwich.*
1878. Dec. CORFIELD, PROF. W. H., M.A., M.D. OXON., F.R.C.P. LOND., 10, *Bolton Row, Mayfair, W.*
1881. May. DAVEY, Alexander George, M.D., L.R.C.P., M.R.C.S., 9, *Belvedere Street, Ryde, Isle of Wight.*
1878. Dec. DE CHAUMONT, PROF. F. S. B. F., M.D., F.R.S., *Woolston Lawn, Southampton.*
1878. Dec. DENISON, A., 6, *Albermarle Street, W.*
1883. Jan. DERBY, RT. HON. EARL OF, P.C., 23, *St. James' Square, London, S.W.*
1878. Dec. DOULTON, Henry, *Lambeth.*
1878. Dec. DREWRY, G. Overend, M.D.
1878. Dec. DYKE, T. J., F.R.C.S., *The Hollies, Merthyr Tydfil.*
1878. Dec. EASSIE, William, C.E., F.L.S., F.G.S., 11, *Argyll Street, Regent Street, W.*
1881. Oct. EATON, John, M.D., *Orchard House, Cleator Moor, Cumberland.*
1880. Apr. ELLIS, W. Horton, F.M.S., *Hartwell House, Exeter.*
1878. Dec. EVANS, T. W., *Allestree Hall, Derby.*
1878. Dec. FIELD, Rogers, B.A., M.INST.C.E., 5, *Cannon Row, Westminster, S.W.*
1879. Jan. FORTESCUE, RT. HON. EARL, 20, *Charles Street, Berkeley Square, London; and Castle Hill, South Molton, Devon.*
1878. Dec. GALTON, CAPT. Douglas, R.E., C.B., D.C.L., F.R.S., 12, *Chester Street, Grosvenor Place, S.W.*
1878. Dec. GILCHRIST, J., M.D., *Crichton House, Dumfries.*
1880. July. GRANTHAM, R. B., M.INST.C.E., 22, *Whitehall Place, London, S.W.*
1878. Dec. GRIFFITHS, E. F. G., ASSOC.M.INST.C.E., *Abingdon Street, S.W.*
1880. Jan. GRIMSHAW, Thomas Wrigley, M.D., *Priorsland, Carrickmines, Dublin.*
1878. Dec. HARKER, J., M.D., *King Street, Lancaster.*
1881. May. HARRIS, Thomas, F.R.I.B.A., 20, *High Holborn, W.C.*
1879. Feb. HAVILAND, A., M.R.C.S.
1880. Apr. HIME, Thomas Whiteside, A.B., M.B., L.R.C.S., 217, *Glossop Road, Sheffield.*

1881. May. HODGSON, George, ASSOC.M.INST.C.E., *Town Hall, Loughborough.*
1878. Dec. HOWARD, James, *Clapham Park, Bedfordshire.*
1878. Dec. JONES, LIEUT.-COL., V.C., ASSOC.M.INST.C.E., *Hafod-y-wern Farm, Wrexham.*
1878. Dec. LEAF, Charles J., F.L.S., F.S.A., *Pain's Hill, Cobham, Surrey.*
1878. Dec. LEAF, W., *Pain's Hill, Cobham, Surrey.*
1883. Jan. LEWIS, PROF. T. Hayter, F.S.A., F.R.I.B.A., 12, *Kensington Garden Square.*
1878. Dec. LIVESEY, J., M.INST.C.E., 9, *Victoria Chambers, Westminster, S.W.*
1878. Dec. LONGSTAFF, G. B., M.B., M.A., CERT. PREV. MED., *Southfield Grange, Wandsworth, S.W.*
1878. Dec. LUBBOCK, SIR JOHN, BART., D.C.L., F.R.S., *Lombard Street, E.C.*
1878. Dec. MACKAY, John Alexander Dixie, *Christ Church, Oxford.*
1878. Dec. MARSH, Lory, M.D., *Greenhithe, Kent.*
1878. Dec. MASON, J., J.P., *Lynsham Hall, Witney, Oxford.*
1878. Dec. MOLYNEUX, HON. Francis G., *Earl's Court, Tunbridge Wells.*
1880. Dec. NORTHCOTE, RT. HON. SIR STAFFORD, *Carlton Club, and Pynes House, Exeter.*
1878. Dec. NORTHUMBERLAND, HIS GRACE THE DUKE OF, D.C.L., LL.D., 2, *Grosvenor Place, S.W.*
1878. Dec. OHREN, Magnus, ASSOC.M.INST.C.E., F.C.S., *Lower Sydenham.*
1878. Dec. OLLARD, J. F., *Lloyds, E.C.*
1878. Dec. OLLARD, William Ludlam, *Musticott House, Walsoken, Wisbeach.*
1878. Dec. PAGET, J., J.P., *Stuffynwood, Mansfield.*
1880. Dec. PEGGS, J. Wallace, ASSOC.M.INST.C.E., 21, *Queen Anne's Gate, S.W.*
1878. Dec. RICHARDSON, Benjamin Ward, M.D., LL.D., F.R.S., 25, *Manchester Square, W.*
1878. Dec. RICHARDSON, J., M.INST.C.E., *Methley Park, Leeds.*
1881. Jan. ROBBINS, W. Morgan, 107, *High Street, Ilfracombe.*
1881. Oct. ROBINS, Edward Cooksworthy, F.S.A., F.R.I.B.A., 14, *John Street, Adelphi.*
1882. May. ROBINSON, Henry, PROF. M.INST.C.E., 7, *Westminster Chambers, S.W.*

1878. Dec. RUSSELL, HON. F. A. Rollo, *Pembroke Lodge, Richmond Park.*
1878. Dec. RUSSELL, James A., M.A., M.B., B.SC., *Canaan Lane, Woodville, Edinburgh.*
1878. Dec. SALT, Thomas, M.P., 85, *St. George's Square, S.W.*
1878. Dec. SCOTT, MAJ.-GEN. H. Y. D. Scott, R.E., C.B., F.R.S., *Ealing.*
1881. Nov. SMITH, William Robert, M.D., F.R.S.E., F.C.S., S.SC. CERT. CAMB., 15, *Imperial Square, Cheltenham.*
1880. Jan. SNELL, H. Saxon, F.R.I.B.A., 22, *Southampton Buildings, W.C.*
1878. Dec. STEPHENS, Henry C., F.C.S., *Avenue House, Finchley.*
1879. July. SYMONS, G. J., F.R.S., 62, *Camden Square, N.W.*
1880. Dec. TEMPLE, RIGHT REV. Frederick, D.D., LORD BISHOP OF EXETER, *The Palace, Exeter.*
1880. June. THOMPSON, John, M.D., F.R.C.S., J.P., *Lynton House, Bideford.*
1878. Dec. TURBERVILL, COL. T. Picton, *Ewenny Priory, Bridgend, Glamorgan.*
1878. Dec. TURNER, Ernest, F.R.I.B.A., 246, *Regent Street, W.*
1879. Aug. URE, J., LORD PROVOST OF GLASGOW, *Helensburgh, N.B.*
1881. June. VARLEY, Cromwell F., F.R.S., M.INST.C.E., *Cromwell House, Bexley Heath.*
1880. Dec. WARING, COL. G. E., JUN., C.E., *Newport, Rhode Island, U. S. America.*
1882. Feb. WHITELEGGE, Benjamin Arthur, B. SC., M.D., S.SC. CERT. CAM., *Knutsford, Cheshire.*
1879. Jan. WILSON, George, M.A., M.D., 23, *Claremont Road, Leamington.*
1878. Dec. WYATT-EDGELL, REV. E., B.A., 40, *Grosvenor Street, W.*

## MEMBERS.

\* Life Members.

† Passed examination for Local Surveyor.

‡ Passed examination for Inspectors of Nuisances.

1879. Dec. ADDIS, William Judson, C.E., M.S.A., R.A.S., *Prome, British Burmah.*
1882. July. ALCOCK, Samuel, *Sunderland.*
1877. Mar. ALLEN, Henry Robert, *North Street, Hackney, E.*



1882. Oct. ANDERSON, Alexander McGlashan, M.D., L.R.C.S., 26, South Tay Street, Dundee.
1882. July. ANDREW, CAPT. C. W., 286, Kennington Park Road, S.E.
1876. July. ANNINGSOON, Bushell, M.A., M.D., Cambridge.
1876. July. ATKINS, F. H., 62, Fleet Street, E.C.
1878. July. ATWOOD, J., Sydney Lodge, Farncombe Road, Worthing.
1878. July. BAKER, R., Ballingdon House, Green Lanes, N.
1876. . . . BALL, F., 18, Bell Street, Henley-on-Thames.
1878. Jan. BANNER, E. G., 11, Billiter Square, E.C.
1876. July. BARBER, Samuel J., Eastwood, Notts.
1877. . . . BARROW, B., F.R.C.S., J.P., Southlands, Ryde, Isle of Wight.
1879. Dec. BARR, William Alexander, M.D., M.R.C.S., 45, Abington Street, Northampton.
1877. July. BARRY, J. G., 87, Cannon Street, E.C.
1882. Jan. BARTLETT, Robert V. O., 1, St. John's Place, Newport, Isle of Wight, and Brixton, S.W.
1878. Oct. BAUGH, Alfred Charles, C.E., 3, Temple Row, Wrexham.
1877. . . . BEARD, Neville, The Mount, Ashbourne.
1876. July. BELL, Thomas, L.R.C.P. LOND., Uppingham, Rutland.
1878. Oct. BEMROSE, Henry H., Lonsdale Hill, Uttoxeter Road, Derby.
1877. . . . BENNET, J. Henry, M.D., The Ferns, Weybridge.
1877. July. BENNETT, Hugh, M.R.C.S., Builth Wells, Brecon.
1876. July. BERESFORD, Robert, M.D., Oswestry, Salop.
1877. Aug. BERRINGTON, R. E. W., 10, Bank Square, Chepstow.
1876. July. BEST, Frederick A., M.R.C.S., Church Hill, Walthamstow.
1878. July. BICKERSTETH, E. R., F.R.C.S., 2, Rodney Street, Liverpool.
1878. Oct. BINDLEY, CAPT., Burton-on-Trent.
1881. June. BINDON, William J. Vereker, D.SC. PUB. HEALTH EDIN., M.D., Appins, West End Lane, Hampstead.
1878. Sept. BIRCH, R. W. Peregrine, M.INST.C.E., 2, Westminster Chambers, S.W.
1877. Sept. BIRD, Peter Hinckes, F.R.C.S., S.SC. CERT. CAMB., 1, Norfolk Square, W.
1881. Nov. \*BOND, Frederick Adolphus, M.B., C.M. EDIN., S.SC. CERT. EDIN., Brinklow, Coventry.
1877. . . . BOSTEL, D. T., 19, Duke Street, Brighton.
1878. Oct. BOSTOCK, H., The Oaklands, Rowley Avenue, Stafford.

1880. Nov. †\*BOULNOIS, H. Percy, M.INST.C.E., 2, Mount Radford Crescent, Exeter.
1877. Oct. BOWER, Thomas, Lytham, Lancashire.
1876. July. BRETT, A. T., M.D., Watford House, Herts.
1881. Jan. BROOKS, James, F.R.I.B.A., 35, Wellington Street, Strand.
1876. July. BROWN, P., M.D., Blaydon House, Blaydon-on-Tyne.
1876. . . . BURNS, R. Scott, C.E., Oak Lea, Edgeley Road, Stockport.
1876. Aug. BURNEY, G., Millwall Docks, E.
1880. Dec. †\*BURTON, W. Kinninmond, 1, Adam Street, Adelphi, W.C.
1878. Oct. BUTLER, G. J., Shrewsbury.
1876. Aug. CARLINE, John, ASSOC.M.INST.C.E., Lewisham Board of Works, S.E.
1882. Jan. CARRITT, Ernest, 4, Lime Street Square, E.C.
1876. July. CARTER, W. Allan, 5, St. Andrew's Square, Edinburgh.
1878. Oct. CHAMPION, A. J., 6, Westminster Chambers.
1881. May. CHESTON, Horace, A.R.I.B.A., 1, Great Winchester Street, London, E.C.
1883. Feb. CHRISTIE, James, A.M., M.D., 2, Great Kelvin Terrace, Hillhead, Glasgow.
1880. Jan. COLLINGRIDGE, W., M.R.C.S., M.A., M.B., S.SC. CERT. CAMB., Port of London Sanitary Offices, Greenwich.
1878. Sept. COLLINS, SIR W., 3, Park Terrace, East Glasgow.
1876. . . . COLLINS, W. J., M.D., 1, Albert Terrace, N.W.
1882. Nov. †\*COOPER, C. H., Local Board Offices, Wimbledon.
1878. Sept. CORBETT, J., 24, Barton Arcade, Manchester.
1877. . . . CROOKES, W., F.R.S., 7, Kensington Park Gardens, W.
1877. Sept. CROWLEY, Frederick Ashdell, Alton, Hants.
1877. Oct. ‡DAVIES, Hugh, 1, Hill Street, Wrexham.
1881. Oct. DAY, Ernest, 5, Foregate Street, Worcester.
1878. Sept. DELAHUNTY, James, Waterford.
1878. May. DENNIS, W., M.INST.C.E., 3, Victoria Street, Westminster.
1877. July. DODD, J., 6, Thomas Street, Liverpool.
1878. Oct. DOUGLAS, George, Burslem.
1877. . . . DOULTON, James D., Lambeth, S.W.
1876. Dec. DOWSON, A., ASSOC.M.INST.C.E., 3, Great Queen Street, Westminster, S.W.
1877. Aug. DYER, F., 66, High Street, Camden Town, N.W.
1877. Aug. EBURY, RT. HON. LORD, P. C., Moor Park, Rickmansworth.
1882. Oct. ELLISON, Ralph Carr, J.P., Dunster Hill, Gateshead-on-Tyne.



1882. Oct. EMBLETON, Dennis, M.D., F.R.C.P., 4, Eldon Square, Newcastle-on-Tyne.
1881. Dec. FARR, Archer, L.R.C.P. EDIN., S.S.C. CERT. EDIN., 37, Queen Street, E.C., and 370, Coldharbour Lane, Loughboro' Park, S.W.
1878. June. FORSHAW, Edward, Bank Chambers, Hanley.
1879. Dec. \*FOSTER, Reginald Le Neve, F.C.S., North Road, Droylson, Manchester.
1878. July. FRY, Miss C. A., St. Catherine's, Oxford.
1878. .... GENTLES, Thomas Lawrie, L.F.P.S. GLASG., Wellington House, Derby.
1878. June. GILL, D., Farleigh, Weston-super-Mare.
1878. Oct. GRIFFITHS, Robert, County Surveyor, Stafford.
1878. July. GRIFFITHS, Thomas, Silverdale, Oxton, Birkenhead.
1878. Mar. GRIGGS, R., 11, Gray's Inn Square, W.C.
1877. Aug. HAMILTON, SIR, R. N. C., K.C.B., Avon Cliffe, Stratford-on-Avon.
1881. June. HAMMOND, Frederick, 2, Coleman Street Buildings, Moorgate Street, E.C.
1876. July. HARKER, THE REV. W.
1880. Nov. †\*HARLAND, A., 170, Stanhope Street, N.W.
1882. June. HARRIS, Alfred E., L.R.C.S., L.R.C.P., M.O.H., 14, The Avenue, Sunderland.
1877. Sept. HARRISON, C., M.D., S.S.C. CERT. CAMB., Newland, Lincoln.
1882. June. HARRISON, Thomas Harnett, ASSOC.M.INST.C.E., 21, Harrington Street, Liverpool.
1876. July. HARTLEY, R., L.R.C.P. EDIN., Pemberton, Wigan, Lancashire.
1878. May. HOLT, H. P., ASSOC.M.INST.C.E., F.G.S., Fairlea, Palatine Road, Didsbury, Manchester, and 5 Westminster Chambers, S.W.
1878. July. HOOKER, J., F.C.S., 104, Upper Thames Street, E.C.
1877. July. HOOPER, Rev. R. P., M.A., F.R.G.S., 31, Cambridge Road, Hove, Brighton.
1877. Mar. HOWARD, E., 84, Upper Whitecross Street, E.C.
1882. June. †\*HUBBER, Frank, George Street, Exeter.
1878. Mar. HUMPHREY, PROF. G. M., M.D., F.R.S., Cambridge.
1878. June. HUSBAND, H. Aubrey, M.R.C.S., 27, Chalmers Street, Edinburgh.
1878. Sept. HYDE, Samuel, M.R.C.S., Clifford Lodge, Buxton.
1877. June. LIFFE, W., M.R.C.S., Hartington Street, Derby.

1878. Sept. INGILBY, SIR Henry D., BART., 9, Hereford Gardens, Park Lane, W.
1882. July. JONES, John Watkin, Maesyffynon, Tonalaw, near Pont-y-pridd, South Wales.
1877. .... LAKE, W. C., M.D., Teignmouth, Devon.
1876. July. LATHAM, Baldwin, M.INST.C.E., F.M.S., F.G.S., 7, Westminster Chambers, S.W.
1878. May. LAW, Henry, M.INST.C.E., 5, Queen Anne's Gate, S.W.
1877. .... LAWS, J., Blyth, Northumberland.
1878. July. LAWSON, R., Lansdowne Road, Notting Hill.
1877. Oct. LAYTON, Thomas, Kew Bridge, Middlesex.
1878. Oct. LEE, John, Church Street, Ashbourne.
1876. July. LE GRAND, A., 100, Bunhill Row, E.C.
1878. Oct. LEMON, James, M.INST.C.E., F.R.I.B.A., Lansdowne House, Southampton.
1877. .... LEON, George I., 1, First Avenue, Hove, Brighton.
1881. Dec. LEONARD, Hugh, 7, Hanover Square, W.
1880. Dec. \*LINGARD, J. Edward, ASSOC.M.INST.C.E., Rodney Chambers, Derby.
1877. July. LLOYD, Thomas, The Square, Winchester.
1882. Apr. LYTE, F. Maxwell, F.C.S., F.I.C., Union Club, Trafalgar Square.
1878. July. McARTHUR, A., M.P., Raleigh Hall, Brixton Rise.
1882. Oct. MCCARTHY, J. Desmond, M.D., F.C.S., F.R.G.S., Darlington; and Laryos, West Africa.
1879. July. MACFARLANE, Walter, Saracen Foundry, and 22, Park Circus, Glasgow.
1878. Nov. MACKAY, John B., 2, Bouverie Street, Fleet Street, E.C.
1878. Oct. MACLAGAN, James McGrigor, M.D., Riding-Mill-on-Tyne, Northumberland.
1878. May. MANSERGH, James, M.INST.C.E., 3, Westminster Chambers, Victoria Street, S.W.
1878. Oct. MARTEN, H. J., M.INST.C.E., The Birches, Codsall, Wolverhampton.
1878. Sept. MARTIN, J. M., C.E., Castle Chambers, Exeter.
1878. Sept. MASON, Hugh H., M.R.C.S., Abbey Lodge, Barking.
1876. .... MEGGET, A., 7, Huntris Row, Scarborough.
1878. .... MEIKLEJOHN, J., Dalkeith, N.B.
1877. Oct. MELISSEOS, G. C. A., Melisurgo, ASSOC.M.INST.C.E., Palazzo Cocozzo, 76, Via Pocio, Naples.

1878. Sept. MILLER, John Faure, M.D., 28, *Rue de Matignon, Faubourg St. Honoré, Paris.*
1873. June. MOORE, J. H., *St. Michael's Lodge, Bournemouth.*
1883. Jan. MORCOM, Augustus, L.R.C.S., *Montpelier House, Dunstable, Beds.*
1879. Feb. \*MOSELEY, George, F.R.C.S., *Breadalbane Lodge, Spencer Road, Eastbourne.*
1882. Oct. \*MYNORS, Walter Charles Towers, *Little Ingestre, Stafford.*
1882. Apr. NANSON, Thomas, 9, *Park Crescent, Stockwell Park Road, S.E.*
1877. Sept. NELSON, E. M., *Hanger Hill House, Ealing.*
1877. Sept. NELSON, George H., *The Lawn, Warwick.*
1878. Sept. NICHOLS, G. B., C.E., *Handsworth, Birmingham.*
1876. July. NIXON, Charles J., *Addiscombe, Cranborne Road, Bournemouth.*
1878. May. NORMAN, W. S., 13, *Warwick Road, W.*
1882. Nov. NUTTALL, John Henry, ASSOC.M.INST.C.E., *Fernsholme, Bury, Lancashire.*
1877. Sept. OGLE, William, M.A., M.D., F.R.C.P., *Somerset House, London, W.C.*
1881. Mar. \*PAGE, Herbert Markant, M.D., S.SC. CERT. CAMB., M.R.C.S., 16, *Prospect Hill, Redditch.*
1877. .... PAGLIARDINI, T., 75, *Upper Berkeley Street, Portman Square, W.*
1878. May. PARKER, J., *Woodstock.*
1877. .... PARKER, W. C., M.INST.C.E., *Whitehall Club, S.W.*
1878. .... PATTINSON, S., *Ruskington, Sleaford, Lincoln.*
1877. June. PEEL, Edmund, *Brynfys Ruabon, North Wales.*
1882. Jan. PERRY, Henry Robert, A.R.I.B.A., *Oak Cottage, Western Bank, Derby.*
1881. June. PERRY, John Tavenor, A.R.I.B.A., 9, *John Street, Adelphi.*
1883. Mar. PLUMBE, Rowland, F.R.I.B.A., 13, *Fitzroy Square, W.*
1879. Dec. \*POWELL, George Thompson, *Rotherwood, Sydenham Hill, and 11, Pancras Lane, E.C.*
1877. .... \*POWELL, J., 10, *St. George's Crescent, Liverpool.*
1878. June. PRITCHARD, E., C.E., F.G.S., 27, *Great George Street, Westminster, S.W.*
1877. .... PRITCHETT, G. E., F.S.A., 20, *Spring Gardens, S.W., and Oak Hall, Bishop's Stortford.*
1877. Aug. PULLIN, T. H. S., M.D., *Sidmouth.*
1877. Sept. RAE, Robert, 337, *Strand, W.C.*

1881. Jan. RAINGER, Charles Henry, 9, *Bath Place, Cheltenham.*
1876. July. REDWOOD, T. Hall, M.D., *The Lawn, Rhymney.*
1881. June. REED, Frederick H., A.R.I.B.A., 10, *Belmont Hill, Lee, S.E.*
1878. Oct. RICHARDS, E. M., ASSOC.M.INST.C.E., *Town Hall, Leamington.*
1878. Oct. RUSSELL, J. B., M.D., *Medical Officer of Health, Glasgow.*
1878. July. SANDYS, MAJOR M., 87, *Jermyn Street, S.W.*
1881. July. SCHMIDT, E. W. C. F., A.R.I.B.A., *Eastbourne, Sussex.*
1876. Oct. SHAFTESBURY, RT. HON. EARL OF, K.G., 24, *Grosvenor Square, W.*
1876. July. SHONE, Isaac, ASSOC.M.INST.C.E., *Wrexham.*
1878. Oct. SHRIMPTON, Charles, M.D. PARIS, 11, *Willswood Park, Torquay.*
1877. .... SILLAR, W. C., *St. James' Lodge, Kidbrooke Park Road, Blackheath, S.E.*
1882. Nov. SIMPSON, William John, M.D., S.SC.CERT.CAMB., 110, *Crown Street, Aberdeen.*
1878. Nov. SKRINE, Henry Duncan, *Claverton Manor, Bath.*
1877. .... SLADE-KING, Edwyn, M.D., LIC. IN STATE MED., R.C.P. EDIN., *Croft Side, Ilfracombe.*
1883. Mar. SLATER, John, B.A., 14, *Bedford Row, W.C.*
1877. June. SMITH, R. W., *Mount Rundell Harborne, Birmingham.*
1877. May. SMITH, W. R., *Clifton House, Clifton-by-Ashbourne, Derbyshire.*
1878. Oct. SPRUCE, Samuel, *Beech House, Tamworth.*
1878. July. STAINTHORPE, W. Waters, M.D., S.SC. CERT. EDIN., *Kirkleatham, Redcar.*
1876. July. STIFF, E., *London Pottery, Lambeth.*
1876. July. SUTcliffe, R., 100, *Bunhill Row, E.C.*
1877. Sept. SWETE, Horace, M.D., S.SC. CERT. CAMB., F.C.S., *The Grove, Worcester.*
1880. Jan. \*SYKES, J. F. J., B.SC. PUB. HEALTH, M.B., L.R.C.P., M.R.C.S., 7, *Thayer Street, Manchester Square.*
1876. Oct. TAYLOR, John W., M.D., D.SC., *Rothsay House, Scarborough.*
1881. Nov. TAYLOR, Shepherd T., M.B. LOND., L.R.C.P., M.R.C.S., *Grove House, Norwich.*
1877. .... TEMPLETOWN, GEN. RIGHT HON. VISCOUNT, K.C.B., 49, *Charles Street, Berkeley Square.*
1878. July. THOMAS, W. Cave, 53, *Welbeck Street, W.*
1878. .... THORNLEY, J. E. Lyndon, *Bickenhill near Birmingham.*
1878. Oct. TROTTER, Arthur E. H., *Stockton-on-Tees.*

1879. July. TYLOR, William Alfred, 2, *Newgate Street, E.C.*  
 1882. July. VIGERS, Edward, A.R.I.B.A., F.S.I., 38, *Parliament Street, S.W., and 79, Elgin Road, Paddington.*  
 1877. June. WALKER, J. H., L.R.C.P. EDIN., *Pickering, Yorkshire.*  
 1877. Sept. WALLER, Thomas, 47, *Fish Street Hill, E.C.*  
 1881. May. WEBB, Phillip, 1, *Raymond Buildings, Gray's Inn, W.C.*  
 1878. Oct. WELFORD, J., 4, *Warwick Place, Paddington, W.*  
 1880. May. WHITE, William, F.S.A., F.R.I.B.A., 30A, *Wimpole St., W.*  
 1877. Sept. WHITWILL, Mark, *Redland House, Durdham Park, Bristol.*  
 1878. July. ‡ WILKINSON, William, *Town Hall, Salford.*  
 1881. July. \* WITHERS, J. B. Mitchell, F.R.I.B.A., 5, *Surrey Street, Sheffield.*  
 1882. July. ‡†\* WITTS, J. W., *Market Harborough.*  
 1877. Sept. WOOD, Jacob, M.P.S., 186, *Highbury Park, N.*  
 1882. Jan. WORSNOP, Frederick, 48, *Westfield Road, Burley Road, Leeds.*  
 1878. Sept. \* YUILL, W., ASSOC.M.INST.C.E., 3, *Fenchurch Avenue, E.C.*

## ASSOCIATES.

- \* Life Associates. ‡ Passed Examination for Inspectors of Nuisances.
1881. May. BAMLETT, Adam Carlisle, *Thirsk, Yorkshire.*  
 1882. June. ‡\* BAXTER, John, 2, *Walnut Tree Walk, Kennington Road, S.E.*  
 1879. Dec. \* BLAKE, Edward Thomas, M.D., 47, *Seymour Street, Hyde Park, W.*  
 1879. Aug. BOLDING, John T., 19, *South Moulton Street, W.*  
 1879. Nov. ‡\* CLARKE, A. Lennox, *Union Buildings, Selly Oak, King's Norton.*  
 1882. Mar. DENSHAM, Charles A., 55, *Cochrane Street, St. John's Wood.*  
 1880. Feb. EMPTAGE, Daniel, *Dane Hill Sanitary Works, Margate.*  
 1882. Oct. GODDARD, Frederick K., *Newcastle-on-Tyne.*  
 1881. Nov. ‡\* HORROCKS, Joseph, *Chicago.*

1882. Feb. KENNINGTON, Thomas, 47, *Colmore Row, Birmingham.*  
 1880. Feb. KINSEY, W. Barns, *Hop Exchange, Southwark, S.E.*  
 1879. Nov. ‡\* LAPWORTH, J., *Vestry Hall, Bethnal Green, E.*  
 1882. July. ‡\* LIGHTFOOT, Thomas, 3, *Trevor Square, Knightsbridge.*  
 1881. Nov. ‡\* RAINS, Joseph, *Kettering.*  
 1882. Nov. ‡\* RICHARDS, Daniel, 3, *Spencer Street, Park Road, Battersea.*  
 1881. Nov. ‡\* SORTWELL, W., 9, *Retreat Place, Paragon Road, Hackney, E.*  
 1882. June. ‡\* STEERS, George, *Wellington Street, Bedford.*  
 1883. Jan. WALLIS, Arthur Gay, 45, *Gough Road, Edgbaston.*  
 1883. Feb. WELCH, Henry, M.D., B.SC. EDINBURG, 4, *Queen Street Lancaster.*  
 1881. June. ‡\* WILKINSON, W., 48, *Canning Street, Bury.*

## SUBSCRIBERS.

\* Life Subscribers.

1879. Oct. ANGELL, A. Torrington, 144, *Fulham Road, S.W.*  
 1879. Oct. BATTEN, MAJ.-GEN. S. J., 14, *Notting Hill Square.*  
 1879. Sept. BOURNE, Stephen, *Atherley, Wallington, Surrey.*  
 1879. . . . COBHAM, George R., *Gravesend.*  
 1879. June. COLES, Cowper, C.B., 95, *Wigmore Street, W.*  
 1879. Apr. DENHAM, W. Hempson, F.L.S., F.S.S., *Southsea.*  
 1881. Jan. DIXON, Joshua, *Winslade, Exeter.*  
 1880. . . . DOMENICHETTI, Richard, M.D., *Trinity Lodge, Louth, Lincolnshire.*  
 1877. Sept. FLEETWOOD, The Local Board of.  
 1879. Mar. GOODALL, Abraham, F.R.C.S., F.R.G.S., INSP.-GENL., 4, *Elvaston Place, Queen's Gate.*  
 1879. June. HALL, Alexander Lyons, F.R.G.S., *Lyons Court, Ladbroke Road, W., and Lyons Court, co. Antrim, Ireland.*  
 1879. Oct. JENKINS, B., 37, *Outram Road, Croydon.*  
 1879. Sept. JEWEL, J.  
 1877. . . . LADIES SANITARY ASSOCIATION, 22, *Berners Street, Oxford Street, W.*

1879. .... MIDDLETON, Reginald E., ASSOC.M.INST.C.E., 5, Westminster Chambers, S.W.  
 1879. Sept. \*PRATT, M., Brigstock House, Thornton Heath, Croydon.  
 1877. .... RIVERS PURIFICATION ASSOCIATION, 232, Gresham House, E.C.  
 1878. Oct. SOUTHPORT, The Mayor and Corporation of.  
 1880. .... STEPHENSON, F. C., Hill House, Little Heath, Charlton, S.E.  
 1877. Sept. TOTTENHAM SANITARY ASSOCIATION, High Cross, Tottenham.  
 1879. Feb. WALLACE, Miss, 6, Hyde Park Gardens.

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