

APPENDIX.

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

BOARD OF EXAMINERS.

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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, &c., 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 are arranged in two grades, and are intended to enable Local Surveyors and Inspectors of Nuisances, or persons desirous of becoming such, or of obtaining the Certificate of the Institute, to prove their competency in the subjects of Examination. A register of Successful Candidates is kept at the Offices of the Institute, and a copy will be forwarded to Local Boards and Sanitary Authorities on application.

Each Examination occupies a portion of two days. On the first day the Examination of Surveyors occupies four hours—viz., from 11 a.m. till 1 p.m., and from 4 till 6 p.m., and consists of written papers only. Inspectors of Nuisances have two hours' written examination on the first day—viz., from 1.30 p.m. till 3.30 p.m. On the second day the Examination, for both classes, commences at 11 a.m.,

and is *visá 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 one person may, under the Public Health Act, 1875, be both Local Surveyor and Inspector of Nuisances, the Examinations are so arranged that Candidates who desire to do so, *can* enter for both Examinations on the same occasion, but they are not advised so to do.

Candidates are required to furnish the Board of Examiners with satisfactory testimonials as to personal character, and to give two weeks' notice 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:—

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

Unsuccessful Candidates are allowed to present themselves a second time without additional payment.

Examinations are appointed to be held for the year 1887:—

On Thursday and Friday, June 2nd and 3rd.

On Thursday and Friday, November 10th and 11th.

The Forms to be filled up by Candidates and their recommenders previous to Examination will be supplied on application to the Secretary, 74A, Margaret 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 Life Members of the Institute, upon payment of Five Guineas, 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 for Dwellings, Cellar 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 Life Associates of the Institute, upon payment of Three Guineas, in addition to the fee paid for the Examination.

EXAMINATIONS FOR LOCAL SURVEYORS AND INSPECTORS OF NUISANCES.

The following Candidates received Certificates during the year 1885.

LOCAL SURVEYORS.

- June 4, ANGELL, JOHN A., A.M.Inst.C.E., Leytonstone, Essex.
 Nov. 13, BERRINGTON, R. E. W., Wolverhampton.
 Nov. 13, CRIMP, W. SANTO, A.M.Inst.C.E., Wimbledon.
 June 4, FRASER, WILLIAM, Liverpool.
 June 4, HOUGHTON, J. MOSELEY, Birmingham.

INSPECTORS OF NUISANCES.

- Nov. 13, BARTLETT, W. J., Clerkenwell, E.C.
 June 4, BASTIMAN, J., Scarborough.
 June 4, BATEMAN, JAMES, Pewsey, Wilts.
 June 4, BEEL, J. H., Gosport.
 Nov. 13, BUGLER, W. J., Putney, S.W.
 Nov. 13, DEE, T. G., Clapham, S.W.
 Nov. 13, DIMOND, SOLOMON O., Bristol.
 Nov. 13, DYER, SAMUEL, Bridlington Quay.
 Nov. 13, EMPTAGE, D., Margate.
 Nov. 13, GASKELL, PETER, Hornsea, Hull.
 Nov. 13, GOODWYN, ARTHUR A., Highgate Road, N.W.
 June 4, GRATY, T. D., Bromley, Kent.
 Nov. 13, GRIST, ARTHUR A., South Hackney.
 June 4, HART, W. S., Reading.
 June 4, HAWKINS, J. T., Chichester.
 Nov. 13, HAZELL, JOHN T., Bristol.
 Nov. 13, JONES, DAVID H., Llanrwst.

- Nov. 13, LOWICK, WILLIAM M., Westbury-on-Trym.
 June 4, LOWTHER, THOMAS, Whitby, Yorkshire.
 June 4, MITCHELL, COLIN G., Tavistock Street, W.C.
 Nov. 13, MORRIS, JOHN E., Bury St. Edmunds.
 June 4, PEARSON, JOHN, Newcastle-on-Tyne.
 Nov. 13, REAVELL, GEORGE, Jun., Alnwick.
 Nov. 13, SIMMONS, NIMROD, Clifton, Bristol.
 June 4, SKINNER, JAMES, Brighton.
 June 4, SORTWELL, EDWIN, Clapton Park, E.
 Nov. 13, STANLEY, ALFRED W., Hull.
 June 4, TAIT, JAMES, Paisley.
 June 4, THOMPSON, RALPH, Sunderland.
 Nov. 13, TREPES, FRANCIS P., Warwick.
 Nov. 13, WESTON, BENJAMIN S., St. Luke's, E.C.
 June 4, WILSON, GEORGE, Newark.
 Nov. 13, WITTS, THOMAS W., Skelton-in-Cleveland.

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 Patents Designs and Trade Marks Act, 1883.

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 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.—BUILDING MATERIALS, CONSTRUCTION AND MACHINERY.

Materials and Construction.
Damp-proof Courses.
Paints and other Protectives.
Wall Papers and Coverings.
Flooring.
Decorative Materials.
Machinery adapted for Sanitary Purposes.
Laundry Appliances.

CLASS II.—WATER SUPPLY AND SEWERAGE.

Apparatus for Water Supply.
Filtering and Softening Water.
Water Waste Preventors.
Flushing and Watering.
Sinks.
Baths and Lavatories.
Water Closets.
Urinals.
Drain Pipes.
Traps.
Dry Closets.
Sewage Treatment.
Miscellaneous Sanitary Goods.

CLASS III.—HEATING, LIGHTING, AND VENTILATING.

Heating Apparatus.
Cooking Apparatus.
Smoke Preventing Appliances.

Lighting, including Electric Lighting.
Ventilating Gas Burners.
Ventilators.

CLASS IV.—PERSONAL HYGIENE, FOODS, FILTERS & DISINFECTANTS.

Clothing.
Beds and other Furniture.
Hospital and Sick Room Appliances.
Domestic Appliances.
School Fittings.
Gymnastic Apparatus.
Foods.
Domestic Filters.
Mineral Waters.
Soaps and other Detergents.
Antiseptics and Disinfectants.
Disinfecting Apparatus.

CLASS V.—MISCELLANEOUS.

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

Scientific Instruments.
Books and Periodicals.
Models and Drawings.
Prevention of Accidents.
Respirators and Face Guards for Unhealthy Occupations.
Fire-preventing Appliances.
Methods for the Disposal of the Dead, &c., &c., &c.

EXHIBITIONS HELD IN CONNECTION WITH THE CONGRESSES OF THE INSTITUTE.

	1877. Leamington.	1878. Stafford.	1879. Croydon.	1880. Exeter.	1882. Newcastle.	1883. Glasgow.	1884. Dublin.	1885. Leicester.
Number of Exhibitors	117	116	189	106	110	126	134	135
Number of Exhibits	294	319	710	500	600	750	900	1,000
Space occupied (in square ft.) ... ..	.....	.....	.....	9,725	14,520	20,000	40,000	30,000
Number of days Exhibition was open	14	16	17	19	25	25	19	17
Total number of Visitors ... ..	.....	.....	.....	8,955	8,373	20,000	35,000	37,000
Number of Medals awarded	13	13	12	12	15	21	17	29
Number of Special Certificates	None.	6	9	7	4	13	11	11
Number of Certificates	None.	21	38	40	72	58	84	81
Number of Exhibits deferred for further trial ... ..	.....	7	52	30	37	44	39	119

CLASSIFIED LIST OF MEDALS AWARDED AT THE
EXHIBITIONS.

RICHARDSON MEDAL.

- Siemens's Regenerative Gas Burner. Mather & Armstrong, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
Griffiths' Patent White. Silicate Paint Company, *Cannon Street, E.C.* STAFFORD, 1878.
Swann's Incandescent Electric Lamps. J. Edmundson & Co., *Dublin*. DUBLIN, 1884.

SILVER MEDAL.

Offered by the Exeter Gas Company.

- Large Gas Cooking Stove with Boiler. The General Gas Heating and Lighting Co., *66, St. Paul Street, N.* LEICESTER, 1885.
Fibre Asbestos Open Gas Fire. H. & C. Davis & Co., *200, Cumberlandwell Road, S.E.* LEICESTER, 1885.
Dr. Bond's Euthermic Ventilating Gas Stove. Sanitary & Economic Supply Association, *Gloucester*. EXETER, 1880.
Eureka Gas Cooking Stove. J. Wright & Co., *Birmingham*. DUBLIN, 1884.

SILVER MEDALS OFFERED BY THE GAS DEPARTMENT OF THE CORPORATION OF LEICESTER.

- Large Gas Cooking Stove with Boiler. Thomas Fletcher, *Thynne Street, Warrington*. LEICESTER, 1885.
Eureka Artisan Gas Cooking Stove. J. Wright & Co., *Broad Street, Birmingham*. LEICESTER, 1885.
Fibre Asbestos Open Gas Fire. The General Gas Heating and Lighting Co., *66, St. Paul Street, N.* LEICESTER, 1885.

MEDALS AND SPECIAL CERTIFICATES.

In cases where awards are made at subsequent Exhibitions for the same Exhibits, only the name of the town and date are given. Exhibits which have already received Medals at previous Exhibitions of the Institute are excluded from awards of Medals; but those Exhibits to which a second Medal would otherwise be awarded receive Special Certificates, and these are distinguished in the following list by asterisks placed against the name of the town at which the Exhibition was held.

CLASS I.—BUILDING MATERIALS, CONSTRUCTION
AND MACHINERY.

(1). Materials and Construction.

- Aluminium Crown Metal. Aluminium Crown Metal Co., *Glasgow*. GLASGOW, 1883.
Delta Metal. Alex. Dick, *London*. GLASGOW, 1883.
Artistic Domestic Iron Work, Elgood Bros., *Leicester*. LEICESTER, 1885.
Barrow Blue Lias Hydraulic Lime. J. Ellis & Sons, *Barrow-on-Soar*. LEICESTER, 1885.
Cotton Machine Belting. Maurice Gandy, *Liverpool*. DUBLIN, 1884.
Opener for Fanlights and Skylights. W. & R. Leggott, *Bradford*. LEICESTER, 1885.
Silicate Cotton (Slag-wool). J. A. G. Ross, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
Scottish Asbestos. Scottish Asbestos Co., *Glasgow*. GLASGOW, 1883.
Victoria Artificial Stone Paving. Victoria Stone Co., *London*. LEICESTER, 1885.
Damp-proof Concrete Pavement. W. B. Wilkinson & Co., *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
Silica Glazed and Enamelled Fire Clay Bricks and Faience. Willcocks & Co., *Burmantofts, Leeds*. CROYDON, 1879.

(2). Damp-Proof Courses.

No awards.

(3). Paints and other Protectives.

- Griffiths' Patent White, and for their preparations of Silicate Paint, Enamel Paint, and Petrifying Liquid. Silicate Paint Company, *Cannon Street, E.C.* STAFFORD, 1878.
Leadless "Charlton White" Paint and Dryers. J. B. Orr & Co., *Charlton, London*. GLASGOW, 1883.
Arcanum Process of Silver Plating Steel. Jefferson Road, *Birmingham*. CROYDON, 1879.

(4). Wall Papers and Coverings.

- Paper Hangings free from Arsenic. Woollams & Co., *High Street, Marylebone, London*. CROYDON, 1879. *NEWCASTLE, 1882.
*GLASGOW, 1883.

(5). Flooring.

- Peto Fireproof Flooring. Doulton & Co., *Lambeth*. LEICESTER, 1885.
Economic Hollow Flooring. G. E. Pritchett, *20, Spring Gardens, London, S.W.* STAFFORD, 1878. *CROYDON, 1879.

(6). Decorative Materials.

- Art Pottery. Doulton & Co., *London*. DUBLIN, 1884.
*LEICESTER, 1885.

Wedgwood Ornamental Tiles. W. B. Morrison, *Glasgow*.
GLASGOW, 1883.
Embossed Tiles. E. Smith & Co. LEICESTER, 1885.
Colouring Patterns through the Substance of Wood. H. Chalk Webb,
Worcester. EXETER, 1880.

(7.) Machinery adapted for Sanitary Purposes.

Improved Six-Ton Steam Road Roller. Aveling & Porter, *Rochester*,
CROYDON, 1879.
Fryer's Destructor, Fryer's Carbonizer, and Firman's Dessicating and
Rendering Apparatus. Manlove, Alliott, Fryer & Co., *Not-*
tingham. NEWCASTLE, 1882.

(8.) Laundry Appliances.

Improved Washer, with table complete. J. Borwell, *Britannia*
Foundry, Burton-on-Trent. LEAMINGTON, 1877.
New "Shuttle" Steam Power Washing Machine. T. Bradford & Co.,
London and Manchester. LEAMINGTON, 1877. *STAFFORD, 1878.
Washing Machines. Thomas Bradford & Co., *London and Man-*
chester. NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884.
*LEICESTER, 1885.
Steam Washer. J. Greenall, *Manchester*. LEICESTER, 1885.

CLASS II.—WATER SUPPLY AND SEWERAGE.

(1.) Apparatus for Water Supply.

Anti-percussion High Pressure Valves. Doulton & Co., *Lambeth*,
London. CROYDON, 1879. *EXETER, 1880. *GLASGOW, 1883.
*DUBLIN, 1884.
Anti-percussion Ball Valve. Doulton & Co., *London*.
NEWCASTLE, 1882.
Improvements in Well Sinking Apparatus. Le Grand & Sutcliffe,
Bunhill Row, E.C. LEAMINGTON, 1877. *CROYDON, 1879.
Buck's Automatic Rain-water Separator. C. G. Roberts, *Haslemere*,
Surrey. NEWCASTLE, 1882. *GLASGOW, 1883.
White Enamelled Fireclay Cistern. Bourtreehill Coal Co., *Dreghorn*,
Ayrshire. LEICESTER, 1885.

(2.) Filtering and Softening Water.

No awards.

(3.) Water Waste Preventers.

Direct Acting Valveless Waste Preventer. A. T. Bean, 5, *Cannon*
Row, S.W. EXETER, 1880. *NEWCASTLE, 1882.
Siphon-action Water Waste Preventers. Shanks & Co., *Barrhead*,
N.B. DUBLIN, 1884.

(4.) Flushing and Watering.

No awards.

(5.) Sinks.

Enamelled Fireclay Sinks. J. & M. Craig, *Kilmarnock*.
DUBLIN, 1884.

(6.) Baths and Lavatories.

Porcelain Bath. Joseph Cliff & Sons, *Leeds*. GLASGOW, 1883.
Hot-Air Bath. T. Galbraith, *Crawford Square, Londonderry*.
LEAMINGTON, 1877.
Concrete Bath in one piece. W. H. Lascelles, *Bunhill Row, E.C.*
CROYDON, 1879. *EXETER, 1880.
Fire-Clay Enamelled Bath. John Hall & Co., *Stourbridge*.
GLASGOW, 1883.
Flushing Rim Lavatory Basin and Apparatus. J. Tylor & Sons, *New-*
gate Street, E.C. EXETER, 1880.

(7.) Water Closets.

"Excelsior" Water Closet. D. T. Bostel, *Duke Street, Brighton*.
LEAMINGTON, 1877. *STAFFORD, 1878.
Full-flush Valveless Closet. Hayward, Tyler & Co., *London*.
NEWCASTLE, 1882.
"Household" Water Closet. O. D. Ward, *London*. NEWCASTLE, 1882.
" " " H. Trott, *Battersea, London*.
*LEICESTER, 1885.

(8.) Urinals.

No awards.

(9.) Drain Pipes.

Stanford's Joints for Stoneware Pipes. Doulton & Co., *Lambeth*,
London. STAFFORD, 1878. *EXETER, 1880.
Stoneware Pipes with Stanford's Joint. J. Stewart, Sen., *Glasgow*.
*GLASGOW, 1883.
Acme Sewer Pipes. H. Percy Boulnois, *Portsmouth*.
GLASGOW, 1883.

(10.) Traps.

Exhibit of Stoneware Disconnecting Traps. J. Stewart, Sen., *Glas-*
gow. GLASGOW, 1883.

(11.) Dry Closets.

Dry Earth Closets. British Sanitary Company, *Glasgow*.
NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884.
Excreta Pail (oak) with Spring Lid. B. B. Haresceugh & Co., *Ben-*
tinck Street, Leeds. LEAMINGTON, 1877. *STAFFORD, 1878.
Dry Earth or Ashes Closet. R. R. Heap, *Manchester*.
GLASGOW, 1883. *DUBLIN, 1884.
Dry Closet, suitable for Ashes or Disinfecting Powder. L. Moser,
Southampton. EXETER, 1880.

- Moule's Earth Closets. Moule's Patent Earth Closet Company, 5a, Garrick Street, W.C. STAFFORD, 1878. *CROYDON, 1879. *LEICESTER, 1885.
- Moule's Earth Closet. Wippell Bros. & Row, 231 and 232, High Street, Exeter. *EXETER, 1880.
- Dry Earth Closet. J. Parker, Woodstock, Oxford. LEAMINGTON, 1877.
- Portable Cinder Sifting Ash Closet, with Soil Pail. Sanitary Appliance Company, Salford. STAFFORD, 1878. *CROYDON, 1879. *LEICESTER, 1885.

(12). Sewage Treatment.
No awards.

(13). Miscellaneous Sanitary Goods.

- Sanitary Appliances, Exhibit of. W. P. Buchan, Glasgow. GLASGOW, 1883.
- Sanitary and Domestic Appliances, Exhibit of. Maguire & Son, Dublin. DUBLIN, 1884.
- Roberts's Street Orderly Bin. Sanitary and Highway Appliance Co., Sheffield. LEICESTER, 1885.
- Roberts's Sand Distributor for 2-horse Tram-track. Sanitary and Highway Appliance Co., Sheffield. LEICESTER, 1885.
- Sand Distributor for Roads. R. Willacy, Preston. LEICESTER, 1885.

(14). Cisterns.

CLASS III.—HEATING, LIGHTING, AND VENTILATING.

(1). Heating Apparatus.

- Ventilating Tile Stove. Doulton & Co., Lambeth, London. EXETER, 1880. *NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884. *LEICESTER, 1885.
- Horizontal Spiral Lavatory Heater. Thomas Fletcher, Thynne Street, Warrington. LEICESTER, 1885.
- Fibre Asbestos Open Gas Fire. General Gas Heating and Lighting Co., 66, St. Paul Street, N. LEICESTER, 1885.
- Challenge Hot-water Boiler. J. Keith, London and Edinburgh. GLASGOW, 1883.
- Slow Combustion Stoves. Musgrave & Co., Belfast. DUBLIN, 1884.
- Dr. Bond's Euthermic Gas Stove. Sanitary & Economic Supply Association, Gloucester. EXETER, 1880.
- Lump Asbestos Open Gas Fire. J. Wright & Co., Broad Street, Birmingham. LEICESTER, 1885.

(2). Cooking Apparatus.

- Apparatus for Cooking by Gas. Billing & Co., Hatton Garden, E.C. STAFFORD, 1878. *CROYDON, 1879.

- Artisan Gas Cooking Stove. H. & C. Davis & Co., 200, Camberwell Road, S.E. LEICESTER, 1885.
- Large Gas Cooking Stove with Boiler. Thomas Fletcher, Thynne Street, Warrington. LEICESTER, 1885.
- Large Gas Cooking Stove with Boiler. General Gas Heating and Lighting Co., 66, St. Paul Street, N. LEICESTER, 1885.
- Economical Cooking Range. G. H. Harris, Bristol Street, Birmingham. LEAMINGTON, 1877. *STAFFORD, 1878.
- Phoenix Portable Range, and the Birmingham Range with Reducible Fire without Gas. Hassall & Singleton, Birmingham. STAFFORD, 1878.
- Apparatus for Cooking by Gas. S. Leoni & Co., Strand. STAFFORD, 1878.
- "Sine qua non" Open and Close Fire Range. A. Shaw & Son, Glasgow. GLASGOW, 1883.
- Crabtree's Kitchen Range. E. & J. M. Verity, Leeds. LEICESTER, 1885.
- Artisan Cooking Range. Walker, Turnbull & Co., Falkirk. GLASGOW, 1883.
- Improved Open or Close Range Kitchener. W. P. Wenham, Church Street, Croydon. CROYDON, 1879.
- Wilson Portable Close Cooking Range. Wilson Engineering Company, Holborn, W.C. EXETER, 1880.
- Improved Wilson Range with Steel Boiler and non-conducting Jacketing. Wilson Engineering Company, London. NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884.
- Eureka Gas Cooking Stove. J. Wright & Co., Birmingham. DUBLIN, 1884.
- Eureka Artisan Gas Cooking Stove. J. Wright & Co., Broad Street, Birmingham. LEICESTER, 1885.
- Cooking Range with Revolving Fire for the Prevention of Smoke. Whyte & Bradford, Bowness. GLASGOW, 1883.

(3). Smoke Preventing Appliances.

- Mechanical Stoker. G. Sinclair, Leith. GLASGOW, 1883.

(4). Lighting, including Electric Lighting.

- Swann's Incandescent Electric Lights. J. Edmundson & Co., Dublin. DUBLIN, 1884.
- Prismoidal Pavement and Floor Lights. Hamilton & Co., Leadenhall Street, E.C. CROYDON, 1879.
- Siemens's Regenerative Gas Burner. Mather & Armstrong, Newcastle-upon-Tyne. NEWCASTLE, 1882.
- Miners' Safety Lamp. W. Purdy, Eastwood, Notts. LEICESTER, 1885.
- Mercury Gas Governor. James Stott & Co., Oldham. NEWCASTLE, 1882. *LEICESTER, 1885.
- "Stott" Gas Governor. A. Brown & Co., Glasgow. *GLASGOW, 1883.

Stott's Mercury Gas Governor. Smallman, John L., *Dublin*.
*DUBLIN, 1884.
Incandescent Electric Lamp. Woodhouse & Rawson, *London*.
LEICESTER, 1885.

(5). Ventilating Gas Burners.

Wenham's Ventilating Gas Lamp. Wenham's Patent Gas Lamp
Co., *London*. DUBLIN, 1884.

(6). Ventilators.

Blackman Air Propeller. F. Ashwell, *Leicester*. LEICESTER, 1885.
Conical Ventilators. J. E. Ellison, *Leeds*. STAFFORD, 1878.
*CROYDON, 1879. *GLASGOW, 1883. *DUBLIN, 1884,
*LEICESTER, 1885.
Auto-Pneumatic Ventilation. Nathan Hunt, *Bristol*. EXETER, 1880.
Glass Louvre Ventilators. J. Moore, *St. James' Walk, Clerkenwell*.
E.C. EXETER, 1880.

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

(1). Clothing.

Innocuously-dyed Woollen Goods. Donegal Industrial Fund.
DUBLIN, 1884.

(2). Beds and other Furniture.

Excelsior Spring Mattress. Chorlton & Dugdale, *Manchester*.
LEAMINGTON, 1877. *STAFFORD, 1878. *CROYDON, 1879.
*EXETER, 1880. *NEWCASTLE, 1882. *GLASGOW, 1883.
*DUBLIN, 1884.
"Swing" Woven Wire Mattress. Chorlton & Dugdale, *Manchester*.
DUBLIN, 1884.
"Universal" Invalid Tubular Water and Air Bed. Pooock Bros.,
Southwark Bridge Road. STAFFORD, 1878. *CROYDON, 1879.
Furniture, Exhibit of. Pim Bros., *Dublin*. DUBLIN, 1884.

(3). Hospital and Sick Room Appliances.

Invalid Furniture. J. Carter, *6a, Cavendish Street, W.* EXETER, 1880.
Hospital and Sick Room Appliances, Exhibit of. W. B. Hilliard &
Sons, *Glasgow*. GLASGOW, 1883.
Ambulance Wheeled Litter. Maj. F. Duncan, *The Common, Wool-*
wich. STAFFORD, 1878.

(4). Domestic Appliances.

Machine for Washing and Cooling Butter. F. & C. Hancock, *Dudley*,
Worcestershire. LEAMINGTON, 1877. *STAFFORD, 1878.
Exhibit of Machines for Domestic use. F. & C. Hancock, *Dudley*,
Worcestershire. GLASGOW, 1883. *LEICESTER, 1885.

Ornamental Domestic Appliances. W. F. Johnson, *Leicester*.
LEICESTER, 1885.
Flat Webb Knitting Machine, and Rothwell Knitting Machines,
W. Rothwell, *Bolton*. DUBLIN, 1884.
Friction Driving Attachment, for Sewing Machines. Singer Manu-
facturing Company, *London*. GLASGOW, 1883.
Dairy Appliances, Exhibit of. Vipan & Headly, *Leicester*.
LEICESTER, 1885.

(5). School Fittings.

School Furniture. Colman & Glendenning, *Norwich*. EXETER, 1880.

(6). Gymnastic Apparatus.

Bicycles and Tricycles, Exhibit of. Humber & Co., *Nottingham*.
LEICESTER, 1885.
Cruising Canoe. R. J. Turk, *Kingston-on-Thames*. LEICESTER, 1885.

(7). Foods.

Powders for Peptonizing Milk. Burroughs, Wellcome & Co., *London*.
DUBLIN, 1884.

(8). Domestic Filters.

Filtre Rapide. P. A. Maignen, *Great Tower Street, E.C.*
CROYDON, 1879. *EXETER, 1880. *GLASGOW, 1883.
*DUBLIN, 1884. *LEICESTER, 1885.
Bischof's Spongy Iron Filter. Spongy Iron Water Purifying Com-
pany, *Oxford Street, W.C.* LEAMINGTON, 1877.

(9). Mineral Waters.

(10). Soaps and other Detergents.

No awards.

(11). Antiseptics and Disinfectants.

Calvert's Carbolic Acid for Disinfecting purposes. Calvert & Co.,
Bradford, Manchester. LEAMINGTON, 1877. *CROYDON, 1879.
*EXETER, 1880. *GLASGOW, 1883. *DUBLIN, 1884.
*LEICESTER, 1885.
Jeyes' Perfect Purifier. Jeyes' Sanitary Compounds Co., *London*.
LEICESTER, 1885.
Strype's Process for Drying Blood. Dublin and Wicklow Manure
Co., *Dublin*. DUBLIN, 1884.
Chemical Substances used for Disinfection. Mackey, Mackey & Co.,
London. DUBLIN, 1884.
Little's Soluble Phenyle. Morris, Little & Co., *Doncaster*,
STAFFORD, 1878.
Antiseptic Preparations, Exhibit of. J. Richardson & Co., *Leicester*.
LEICESTER, 1885.
Sanitas Oil. Sanitas Company (Limited), *London*. NEWCASTLE, 1882.
Chemical Preparations and Apparatus. Société Française D'Hygiène,
Paris. LEAMINGTON, 1877.

(12). Disinfecting Apparatus.

Portable Disinfecting Apparatus. Fraser Bros., *Commercial Road, E. CROYDON, 1879.*
 Steam Disinfector. J. W. Lyon, *London. LEICESTER, 1885.*
 Acid Pump and Syphon. Chas. W. Walker, *Wandsworth Common. CROYDON, 1879.*

CLASS V.—MISCELLANEOUS.

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

(1). Scientific Instruments.

No awards.

(2). Books and Periodicals.

Books on Hygiene. Société Française d'Hygiène, *Paris. NEWCASTLE, 1882.*
 Sanitary Engineer of New York, Newspaper. H. C. Meyer, *New York. GLASGOW, 1883.*

(3). Models and Drawings.

No awards.

(4). Prevention of Accidents.

"Kredemnon" Life-saving Garments. F. Wentworth & Co., *London. GLASGOW, 1883.*

(5). Respirators and Face Guards for Unhealthy Occupations.

Tyndall's Smoke Respirator. J. Sinclair, *Leadenhall Street, E.C. CROYDON, 1879.*

(6). Fire Preventing Appliances.

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

(8.) Sundries.

No awards.

CERTIFICATES AWARDED AT THE EXHIBITIONS.

CLASS I.—BUILDING MATERIALS, CONSTRUCTION AND MACHINERY.

(1). Materials and Construction.

Adjustable Shoe and Regulating Spring Hinge for Swinging Doors. R. Adams, 7, *Great Dover Street, London, S.E. CROYDON, 1879.*
 Fanlight Openers and Casement Fasteners. R. Adams, 7, *Great Dover Street, London, S.E. CROYDON, 1879.*
 Norton Door Spring. R. Adams, *London. DUBLIN, 1884.*
 Adjustable Pivot for Fanlights. R. Adams, *London. DUBLIN, 1884.*
 "Victor" Spring Hinge. R. Adams, *London. LEICESTER, 1885.*
 Side Gussets for Fanlights. R. Adams, *London. LEICESTER, 1885.*
 White Enamelled Bricks. Bourtnehill Coal Co., *Dreghorn, Ayrshire. DUBLIN, 1884.*
 White Glazed Facing Bricks. Broad & Co., *Paddington. LEICESTER, 1885.*
 Granite Vitrified Bricks and Paving. Candy & Co., *Newton Abbot. EXETER, 1880.*
 Willesden Waterproof Paper and Canvas. W. Carson & Sons, *Dublin. DUBLIN, 1884.*
 Granite Concrete Pavement. T. Cordingley & Sons, *Bradford. DUBLIN, 1884.*
 White Enamelled Bricks. J. & M. Craig, *Kilmarnock. DUBLIN, 1884.*
 The Croft Artificial Stone Paving. Croft Stone Quarry & Brick Co., *Croft, Leicestershire. LEICESTER, 1885.*
 Silicon Tread For Steps. Doulton & Co., *Lambeth, London. GLASGOW, 1883. DUBLIN, 1884. LEICESTER, 1885.*
 Cotton Machine Belting. M. Gandy, *Liverpool. GLASGOW, 1883.*
 Steil's Fastener for Machine Belting. M. Gandy, *Liverpool. GLASGOW, 1883.*
 Opener for Fanlights and Skylights. W. & R. Leggott, *Bradford. GLASGOW, 1883. DUBLIN, 1884.*
 Glazing without Putty. Pennycook Patent Glazing & Engineering Company, *Glasgow. GLASGOW, 1883. DUBLIN, 1884.*
 Revolving Shutters, with Balance Weight Motion. Salmon, Barnes & Co., *Ulverston. EXETER, 1880.*
 Red Building Bricks. E. Smith & Co., *Coalville. LEICESTER, 1885.*
 Hygeian Rock Building Composition. William White, *Abergavenny. NEWCASTLE, 1882.*
 Terra Cotta, Exhibit of. Whitwick Colliery Co., *Coalville, Leicester. LEICESTER, 1885.*
 Chain Belting for Machinery. W. Wilby, *Dublin. DUBLIN, 1884.*
 Red Building Bricks. Whitwick Colliery Co., *Coalville, Leicester. LEICESTER, 1885.*

(2). Damp Proof Courses.

- (3). Paints and other Protectives.
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- No awards.

(4). Wall Papers and Coverings.

- "Linerusta Walton." F. Walton & Co., *London*. GLASGOW, 1883.
 Cheap Artistic Non-Arsenical Washable Wall Papers. Thomas
 Dockrell, Sons & Co., *Dublin*. DUBLIN, 1884.

(5). Flooring.

- Parquet Flooring. A. Gardner & Son, *Glasgow*. GLASGOW, 1883.
 Hospital Flooring. T. Jennings, *Lambeth*. LEICESTER, 1885.
 Method of Wood Block Flooring. Nightingale & Co., *Great Grimsby*.
 LEICESTER, 1885.
 Solid Oak Parquet Flooring. F. R. Scott & Co., *Dublin*.
 DUBLIN, 1884.

(6). Decorative Materials.

- Decorative Tiles for Covering Walls and Floors. Doulton & Co.,
Lambeth, London. CROYDON, 1879.
 Marsden Tiling for Wall Decoration. Maguire & Son, *Dublin*.
 DUBLIN, 1884.
 Repoussé and other Brass Work, Exhibit of. W. F. Johnson, *Leicester*.
 LEICESTER, 1885.
 Photographic Embossed and Incised Tiles. E. Smith & Co., *Coal-*
ville, Leicester. LEICESTER, 1885.
 Architectural Terra Cotta, Exhibit of. J. Stiff & Sons, *Lambeth*.
 LEICESTER, 1885.

(7). Machinery adapted for Sanitary Purposes.

- Improved Non-Absorbent Tub or Pail Van. J. B. McCallum,
Stafford. EXETER, 1880.

(8). Laundry Appliances.

- White Enamelled Fireclay Laundry Trough. Bourtreehill Coal Co.,
Dreghorn, Ayrshire. DUBLIN, 1884.
 Washing Machine, Heated by Gas. Thomas Fletcher, *Warrington*.
 LEICESTER, 1885.
 "Vowel E." Bradford's Family Washing Machine. Garton & King,
Exeter. EXETER, 1880.
 Paragon Washing Machine with Canadian Washer. E. N. Ken-
 worthy & Co., *Oldham*. LEICESTER, 1885.
 Paragon Washing Machine with Canadian Washer. Kirsop & Co.,
Newcastle-upon-Tyne. NEWCASTLE, 1882.
 Mitchell's Patent Steam Washer. James Mitchell, *Newcastle-upon-*
Tyne. NEWCASTLE, 1882.

CLASS II.—WATER SUPPLY AND SEWERAGE.

(1). Apparatus for Water Supply.

- Hydraulic Ram. W. Baird, *Dublin*. DUBLIN, 1884.
 Latham's Flap Valve. Doulton & Co., *London*. NEWCASTLE, 1882.
 Water-taps. J. Fell & Co., *Wolverhampton*. NEWCASTLE, 1882.
 Large Way Waste Plug, with Protective Cover. Finch & Co.,
 181, *High Holborn, W.C.* CROYDON, 1879.
 Double Valves for Flow and Return in Hot-water Circulation.
 Goode & Co., *Loughborough*. LEICESTER, 1885.
 Hose Reel. Headley & Sons, *Cambridge*. CROYDON, 1879.
 Improved Paragon Valve. W. Ross, *Glasgow*. GLASGOW, 1883.
 Bib Valves for Hot and Cold Water. H. Trott, *Battersea*.
 LEICESTER, 1885.
 Improved Full-Way Stop Valve. J. Tylor & Sons, 2, *Newgate Street*,
E.C. EXETER, 1880.
 Vacuum Flushing Cistern for Closet, with Seat-action Arrangement.
 Doulton & Co., *Lambeth, London*. DUBLIN, 1884.
 Anti-percussion High-pressure Bib Valves. Doulton & Co., *London*,
 NEWCASTLE, 1882.
 Lever Nut for Boiler Cock. J. Warner & Son, *London*.
 LEICESTER, 1885.

(2). Filtering and Softening Water.

- Anti-Calcaire Powders for Softening Water. P. A. Maignen, *London*.
 GLASGOW, 1883.
 Porous Carbon for Filtering Water. Patent Porous Carbon Co.,
London. LEICESTER, 1885.

(3). Water Waste Preventers.

- Waste-preventing Flushing Syphon. Henry Watson & Son, *New-*
castle-upon-Tyne. NEWCASTLE, 1882.
 Syphon for Water Closet Cisterns. Braithwaite & Co., *Leeds*.
 CROYDON, 1879.
 Bath Locking Valves, for preventing Waste of Water. Doulton & Co.,
Lambeth, London. NEWCASTLE, 1882.
 "Waste Not" Regulator Valve. J. Tylor & Sons, 2, *Newgate Street*,
E.C. EXETER, 1880. NEWCASTLE, 1882.
 Bath Locking Valves for preventing Waste of Water. J. Tylor &
 Sons, *London*. NEWCASTLE, 1882.

(4). Flushing and Watering.

- "Invicta" Flushing Cistern. Goode & Co., *Loughborough*.
 LEICESTER, 1885.
 Syphon Flushing Cistern. F. Humpherson, *Chelsea, London*.
 LEICESTER, 1885.
 Syphon Flushing Cistern. Wright & Stevens. NEWCASTLE, 1882.

(5). Sinks.

- Butler's Sink, lined with Block Tin. W. Baird, *Dublin*.
DUBLIN, 1884.
- White Enamelled Fireclay Sinks. W. Baird, *Dublin*. DUBLIN, 1884.
- White Enamelled Fireclay Sinks. Bourtreehill Coal Co., *Droghda, Ayrshire*.
DUBLIN, 1884. LEICESTER, 1885.
- White Enamelled Fire Clay Sinks. J. & M. Craig, *Kilmarnock*.
NEWCASTLE, 1882. GLASGOW, 1883.
- Cheap Glazed Stoneware Sinks. Doulton & Co., *Lambeth, London*.
DUBLIN, 1884.
- "Artisans' Dwellings Sink." G. Jennings, *Stangate, London*.
CROYDON, 1879.
- White Enamelled Fireclay Sinks. Maguire & Son, *Dublin*.
DUBLIN, 1884.
- Swivel, Lock Plug, and Overflow for Sinks. Stidder & Co., *59, Southwark Bridge Road, S.E.*
CROYDON, 1879.
- Cup Grating for Sinks. Thomasson & Key, *Worcester*.
NEWCASTLE, 1882.
- Improved Enamelled Iron Slop Sink, with Regulator Supply Valve. J. Tylor & Sons, *2, Newgate Street, London, E.C.*
EXETER, 1880.
- Hospital Slop Sink with Waste-not Regulator Valve. J. Tylor & Sons, *London*.
NEWCASTLE, 1882.
- Slop Sinks. T. Twyford, *Hanley*. DUBLIN, 1884.
- Fire-Clay Sanitary Sinks, and Water Troughs. Willecock & Co., *Burmantofts, Leeds*.
CROYDON, 1879.

(6). Baths and Lavatories.

- Bath, with Shower Douche and Spray Fittings combined. W. Baird, *Dublin*.
DUBLIN, 1884.
- Lavatory, with Shampooing Apparatus. W. Baird, *Dublin*.
DUBLIN, 1884.
- Improved Horizontal-Pull Fittings to Baths and Lavatories. W. Baird, *Dublin*.
DUBLIN, 1884.
- Jennings's Universal Shampooing Apparatus. Dimming & Cooke, *Newcastle-upon-Tyne*.
NEWCASTLE, 1882.
- Locking Apparatus for Bath Fittings. Doulton & Co., *Lambeth, London*.
DUBLIN, 1884.
- Tip-up Lavatory Basin. Doulton & Co., *London*. NEWCASTLE, 1882.
- Clark's Anti-splash Tip-up Lavatory Basin. J. Fell & Co., *Wolverhampton*.
NEWCASTLE, 1882.
- "Shanks's" Porcelain Lavatory Fittings. Fergusson & Starkey, *Leicester*.
LEICESTER, 1885.
- Shanks's "Eureka" Spray and Plunge Bath. Fergusson & Starkey, *Leicester*.
LEICESTER, 1885.
- "Unbreakable" Fire-clay Lavatory Basins for Schools, &c. Fergusson & Starkey, *Leicester*.
LEICESTER, 1885.
- Lavatory. Gillow & Co., *Oxford Street, W.* STAFFORD, 1878.

- Well and Dry-Platform Sponge Bath. Groom & Co., *London*.
LEICESTER, 1885.
- Shower and Douche Bracket. Hayward, Tyler & Co., *London*.
NEWCASTLE, 1882.
- "Universal" Shampooing Apparatus. G. Jennings, *Stangate, London*.
CROYDON, 1879.
- Lavatory Basin with Flushing Rim. C. T. Maling, *Newcastle-upon-Tyne*.
NEWCASTLE, 1882.
- Enamelled Fire Clay Bath. Rimington Bros. & Co., *Newcastle-upon-Tyne*.
NEWCASTLE, 1882.
- Porcelain Baths, moulded and glazed in one piece. Ruffard & Co., *Clay Works, Stourbridge*.
STAFFORD, 1878.
- Cast Iron Bath. Shanks & Co., *Glasgow*. GLASGOW, 1883.
- Porcelain Lavatories, with moveable caps for access to fittings. Shanks & Co., *Glasgow*.
GLASGOW, 1883. DUBLIN, 1884.
- "Eureka" Spray and Plunge Bath. Shanks & Co., *Glasgow*.
GLASGOW, 1883.
- Lavatory Basins. T. Twyford, *Hanley*. DUBLIN, 1884.
- Flushing Rim Lavatory Basin with Quick Waste. J. Tylor & Sons, *London*.
NEWCASTLE, 1882.

(7). Water Closets.

- Improved Shape of Trough for Water Closets. Adams & Co., *York*.
LEICESTER, 1885.
- Artisan Closet. Beard, Dent & Hellyer, *21, Newcastle Street, London, W.C.*
CROYDON, 1879.
- Economical Flush-Out Closet. Doulton & Co., *Lambeth, London*.
EXETER, 1880. NEWCASTLE, 1882.
- "Lambeth" Flush-out Closet. Doulton & Co., *Lambeth, London*.
GLASGOW, 1883.
- "Lambeth" Trough Closet with Automatic Flush Tank. Doulton & Co., *Lambeth, London*.
GLASGOW, 1883.
- Lambeth Combination Water Closet. Doulton & Co., *Lambeth, London*.
DUBLIN, 1884.
- Economical Combination Closet in two pieces. Doulton & Co., *London*.
LEICESTER, 1885.
- Improved Seat for Water Closets. E. & A. E. Gilbert, *Broughty Ferry, Forfarshire*.
GLASGOW, 1883.
- Fowler's Water-closet. W. Harriman & Co., *Blaydon-upon-Tyne*.
NEWCASTLE, 1882.
- "Beaufort" Flush-down Closet. F. Humpherson, *London*.
LEICESTER, 1885.
- Willecock's Automatic Flushing Closet. Maguire & Son, *Dublin*.
DUBLIN, 1884.
- "National" Water Closet. W. B. Morrison, *Glasgow*.
GLASGOW, 1883.
- "Clear Way" Regulator Valve Water Closet, without overflow communicating with Valve Box. J. Tylor & Sons, *2, Newgate Street, London, E.C.*
EXETER, 1880.

- Terry's Pedal-action for Water Closets. J. Tylor & Sons, *London*.
NEWCASTLE, 1882.
"National" Water Closet. Henry Watson & Son, *Newcastle-upon-Tyne*.
NEWCASTLE, 1882.
"Crown" Cottage Water Closet. Henry Watson & Son, *Newcastle-upon-Tyne*.
NEWCASTLE, 1882.

(8). Urinals.

- Flush-out Urinal Basin. J. Tylor & Sons, *Newgate Street, London*.
NEWCASTLE, 1882.

(9). Drain Pipes.

- Large Fire-clay Drain Pipes. Straker & Love, *Newcastle-upon-Tyne*.
NEWCASTLE, 1882.
Stoneware Pipes. Branksea Island Pottery Company (Limited), *Poole, Dorset*.
EXETER, 1880.
Improved Drain Pipe with Access Cover. W. P. Buchan, *Glasgow*.
NEWCASTLE, 1882.
Salt-glazed Fire-clay Sewer Pipes, Exhibit of. J. Binnie, *Gartcosh, Glasgow*.
GLASGOW, 1883.
Stoneware Drain Pipes. Bourtreehill Coal Co., *Dreghora, Ayrshire*.
DUBLIN, 1881.
London-made Stoneware Pipes. Doulton & Co., *Lambeth, London*.
DUBLIN, 1884.
Cast-iron Drain Pipes, coated with Angus Smith's Preparation. Maguire & Son, *Dublin*.
DUBLIN, 1884.
Maguire's Cradle Joint for Drain Pipes. J. & M. Craig, *Kilmarnock*.
NEWCASTLE, 1882.
Cast Iron Channels for Stable Drainage. Dinning & Cooke, *Newcastle-upon-Tyne*.
NEWCASTLE, 1882.
Joint for Drain Pipes. Doulton & Co., *London*.
NEWCASTLE, 1882.
Artificial Stone Tubes. Patent Victoria Stone Company, *Kingsland Road, London, E.*
CROYDON, 1879.
Rock Concrete Tubes. Sharpe, Jones & Co., *Bourne Valley Pottery, Poole, Dorset*.
CROYDON, 1879.
Mawbey's Joint for Stoneware Pipes. T. Wragg & Sons, *Burton-on-Trent*.
LEICESTER, 1885.

(10). Traps.

- Potts' Edinburgh Sewer Trap. Adams & Co., *York*. LEICESTER, 1885.
Ventilating Drain Syphon. Beard, Dent & Hellyer, 21, *Newcastle Street, W.C.*
CROYDON, 1879.
White Enamelled Fire-clay Gullies. Broad & Co., *Paddington*.
LEICESTER, 1885.
Disconnecting Drain Trap. W. P. Buchan, *Glasgow*.
NEWCASTLE, 1882. GLASGOW, 1883.
Grease Trap for Kitchen Sinks. W. P. Buchan, *Glasgow*.
GLASGOW, 1883.

- Buchan's Disconnecting Trap. J. & M. Craig, *Kilmarnock*.
EXETER, 1880. DUBLIN, 1884.
Buchan's Disconnecting Drain Trap and Drain Pipes, with Access Cover. J. & M. Craig, *Kilmarnock*.
NEWCASTLE, 1882.
Exhibit of Stoneware Disconnecting Traps. J. & M. Craig, *Kilmarnock*.
GLASGOW, 1883.
Disconnecting Gully, with back and side Entrances and iron grating. Doulton & Co., *Lambeth, London*.
CROYDON, 1879.
Reversible Inlet Gully, with Dished Stoneware Cover and Iron Grating. Doulton & Co., *London*.
NEWCASTLE, 1882.
Dean's External Drain Traps, with moveable receptacle. J. C. Edwards, *Trefynant, Ruabon*.
CROYDON, 1879.
Gordon's Disconnecting Trap. J. J. Ellis, *Ellistown Collieries*.
LEICESTER, 1885.
Smith's Cast Lead Syphon Traps. J. Fell & Co., *Wolverhampton*.
NEWCASTLE, 1882.
Morris's Cast Iron Gully, with moveable Dip Pipe. Foster & Pearson, *Nottingham*.
LEICESTER, 1885.
Hornibrook's Catchment Grating for Steep Gradients. Hammond & Hussey, *High Street, Croydon*.
CROYDON, 1879.
"Eagle" Sanitary Trap, for superseding Bell Traps. Hygienic Stove and Grate Company, 15, *Peel Buildings, Birmingham*.
CROYDON, 1879.
Edinburgh Air-Chambered Sewer Trap. Potts & Co., *Handsworth, Birmingham*.
STAFFORD, 1878.
Dean's Gully Trap. Rimington Bros. & Co., *Newcastle-upon-Tyne*.
NEWCASTLE, 1882.
Disconnecting Chamber for House Drains, with open Stoneware Channels. J. Stewart, Sen., *Glasgow*.
GLASGOW, 1883.
Weaver's Ventilating Sewer Air Trap. James Stiff & Sons, *Lambeth, London*.
STAFFORD, 1878. LEICESTER, 1885.
Gordon's Disconnecting Trap. T. Wragg & Sons, *Burton-on-Trent*.
LEICESTER, 1885.

(11). Dry Closets.

- Self-Acting Earth Closet. British Sanitary Company, *Glasgow*.
EXETER, 1880.
Moser's Self-Acting Dry Closet. J. C. Onions (Limited), *Birmingham*.
CROYDON, 1879.
Dry Earth Commode without Separator. J. Parker, *Woodstock*.
EXETER, 1880.

(12). Sewage Treatment.

- Iron Basket Sewage-strainer. T. Harnett Harrison, *Liverpool*.
GLASGOW, 1883.
Pneumatic Liquid Ejector. Isaac Shone, *Wrexham*.
STAFFORD, 1878.

(13). Miscellaneous Sanitary Goods.

- Airtight Man-hole Door. A. T. Angell, *London*. NEWCASTLE, 1882.
GLASGOW, 1883.
- Watts's Asphyxiator for Testing Drains with Smoke. Baird, Thompson & Co., *Glasgow*. DUBLIN, 1884.
- White Enamelled Straight and Curved Channels for Inspection Chambers to Drains. Broad & Co., *Puddington*. LEICESTER, 1885.
- Brian Jones's Joint for connecting Closet with Soil-pipe. Capper, Son & Co., *London*. NEWCASTLE, 1882.
- Enamelled Ware Open Channels for Manholes. Doulton & Co., *Lambeth, London*. DUBLIN, 1884.
- Manhole for Drains, with connections complete. Doulton & Co., *Lambeth, London*. DUBLIN, 1884.
- Galvanized Iron Dust-Bin. W. F. Johnson, *Leicester*. LEICESTER, 1885.
- Cold Metal Double Cone Mechanical Lead Pipe Joints. Elliott, Edminson, & Olney, *Manchester*. LEICESTER, 1885.
- Improved method of connecting Lead Pipes with Stoneware Pipes. T. Harnett Harrison, *Liverpool*. GLASGOW, 1883.
- Clip Pipe Joint. Humpherson & Co., *London*. LEICESTER, 1885.
- Night Soil Receptacle with Spring Lid. E. G. Kirk, *Huddersfield*. LEICESTER, 1885.
- Sanitary Earthenware. C. T. Maling, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
- Working Model of Cattle Drinking Trough. R. Pringle, M.D., *Blackheath*. LEICESTER, 1885.
- Drain-cleaning Rods, and Stoneware Horse Manger. Oates & Green, *Horley Green Fire Clay Works, Halifax*. STAFFORD, 1878.
- Roberts's Asphalte Cauldron. Sanitary & Highway Appliance Co., *Sheffield*. LEICESTER, 1885.
- Closed Sectional Sanitary Van. J. Smith & Sons, *Wolverhampton*. LEICESTER, 1885.
- India-Rubber Connection for joining Lead and Earthenware Pipes. T. Twyford, *Hanley*. DUBLIN, 1884.
- Joint for Lead Pipes. J. Tylor & Sons, 21, *Newgate Street, London*. NEWCASTLE, 1882.
- White Enamelled Straight and Curved Channels, and Channel Junctions for Inspection Chambers to Drains. Wortley Fire Clay Co., *Leeds*. LEICESTER, 1885.
- Gordon's Junction Blocks for Lamp-holes and Inlets to Sewers. T. Wragg & Sons, *Burton-on-Trent*. LEICESTER, 1885.
- Gordon's Ventilating Manhole Covers for Sewers with Annular Dirt Box. Wright Bros., *Leicester*. LEICESTER, 1885.
- Gordon's Iron Ventilating Cover for Disconnecting Trap. Wright Bros., *Leicester*. LEICESTER, 1885.

CLASS III.—HEATING, LIGHTING AND VENTILATING.

(1). Heating Apparatus.

- Gas Cooking Stove, lined with White Tiles. Arden Hill & Co., *Birmingham*. DUBLIN, 1884.
- Lamp Asbestos Open Gas Fire. Arden Hill & Co., *Constitution Hill, Birmingham*. LEICESTER, 1885.
- Steam Kettle with specially arranged Tap for drawing Boiling Water. Frank Ashwell, *Leicester*. LEICESTER, 1885.
- Silicate Cotton Composition for Covering Steam Pipes. C. Cadle, *Dublin*. DUBLIN, 1884.
- Tortoise Slow Combustion Stoves. W. Carson & Sons, *Dublin*. DUBLIN, 1884.
- George's Calorigen. Dimming & Cooke, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
- Grates, Mantelpieces, and Over-mantels. Dimming & Cooke, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
- Glazed Ware Mantelpiece, with Slow Combustion Grate. Doulton & Co., *Lambeth, London*. DUBLIN, 1884.
- Tortoise Slow Combustion Stoves. Hydes & Wigfull, *Sheffield*. GLASGOW, 1883.
- Tortoise Laundry Stove. Hydes & Wigfull, *Sheffield*. GLASGOW, 1883.
- Laundry Stove and Copper Boiler. Maguire & Son, *Dublin*. DUBLIN, 1884.
- Steam Heating Apparatus, combining heating and ventilating. Mather & Armstrong, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
- Warming and Ventilating Appliances. G. E. Pritchett, 20, *Spring Gardens, London, S.W.* STAFFORD, 1878.
- Corrugated Iron Hot-Water Warming Appliances. G. E. Pritchett, 20, *Spring Gardens, S.W.* EXETER, 1880.
- Heating Apparatus for Small Greenhouses. T. Sharman, *Leicester*. LEICESTER, 1885.
- Thermhydric Ventilating Hot-water Open Fire Grate. H. Saxon Snell, *Southampton Buildings*. STAFFORD, 1878.
- Tubular-Calorifer for Greenhouses. William Thornburn, *Borough Bridge*. NEWCASTLE, 1882.
- Conservatory Boiler, with Hot-Water Pipe. Wippell Bros. & Row, *Exeter*. EXETER, 1880.
- "Cosoy" Portable Open Gas Fire, with Platinum Wire and Asbestos Packing. John Wright & Co., *Birmingham*. NEWCASTLE, 1882.
- Ventilating Open Gas Fire. J. Wright & Co., *Birmingham*. DUBLIN, 1884.

(2). Cooking Apparatus.

- Solid Flame Boiling Stove. Arden Hill & Co., *Birmingham*. NEWCASTLE, 1882.
- Combined Close Fire and Gas Cooking Range. Carron Co., *Falkirk*. GLASGOW, 1883.

- "Sunlight Stove." Chorlton & Dugdale, 19, *Blackfriars Street, Manchester.* EXETER, 1880.
 Devonshire Cooking Range. T. J. Constantine, *Fleet Street, E.C.* EXETER, 1880.
 Artisan Gas Cooking Stove. General Gas Heating and Lighting Co., 66, *St. Paul Street, N.* LEICESTER, 1885.
 Tin Cooking Utensils. Mrs. A. Lewis, *Manchester.* CROYDON, 1879.
 Dow's Close and Open Fire Cooking Range. W. McGeech & Co., *Glasgow.* GLASGOW, 1883.
 Simplex Cooking Range. Walker, Turnbull & Co., *Falkirk.* GLASGOW, 1883.
 Cooking Stove with Warm-Air Chamber. Thos. Waller, 47, *Fish Street Hill, E.C.* CROYDON, 1879.
 Cottage Range. Wippell Bros. & Row, *Exeter.* EXETER, 1880.
 Large Gas Cooking Stove with Boiler. J. Wright & Co., *Broad Street, Birmingham.* LEICESTER, 1885.

(3). Smoke Preventing Appliances.

- Open Grate for consuming Smoke. James Smith, *Liverpool.* NEWCASTLE, 1882.

(4). Lighting, including Electric Lighting.

- Improved Gas Burners. Bray & Co., *Blackman Lane, Leeds.* CROYDON, 1879.
 Portable Gas Apparatus for Manufacturing Gas from Gasoline. F. W. Clarke's Portable Gas Apparatus Company (Limited), *Great Queen Street, London, W.C.* CROYDON, 1879.
 Albo Carbon Light. William Forrest, *Newcastle-upon-Tyne.* NEWCASTLE, 1882.
 Albo-Carbon Light. Osbert Henderson, *Glasgow.* GLASGOW, 1883.
 Duplex Burner. T. Heron, *Manchester.* NEWCASTLE, 1882.
 "Rheo-meter" Street Lamp Regulator. S. Leoni & Co., *Strand, W.C.* STAFFORD, 1878.
 Hink's Duplex Lamp with Extinguisher. Mather & Armstrong, *Newcastle-upon-Tyne.* NEWCASTLE, 1882.
 "Milwaukee" Glass Lantern or Hurricane Lantern. S. E. Ransome & Co., 10, *Essex Street, W.C.* CROYDON, 1879.
 Gaseliers and Gas Brackets. Willey & Co., *Exeter.* EXETER, 1880.
 Chappuis Daylight Reflector. Wippell Bros. & Row, 231, *High Street, Exeter.* EXETER, 1880.
 Magnetic Cut Out for Electric Lighting. Woodhouse & Rawson, *London.* LEICESTER, 1885.

(5). Ventilating Gas Burners.

No awards.

(6). Ventilators.

- Method of Costless Ventilation. Peter Hinckes Bird, 1, *Norfolk Square, W.* CROYDON, 1879.

- Glass Revolving and Sliding Ventilators. H. W. Cooper & Co., *London.* GLASGOW, 1883.
 Air Inlet Head for Drain Ventilation. H. S. Cregeen, *Bromley.* NEWCASTLE, 1882.
 "Radiator" Ventilator, with Screw Action. J. E. Ellison, *Leeds.* GLASGOW, 1883. DUBLIN, 1884.
 Double Current Ventilators. Hill & Hey, *Halifax.* GLASGOW, 1883.
 Outlet Ventilator. C. Kite & Co., *London.* NEWCASTLE, 1882.
 Noiseless Chimney Breast Outlet Ventilator. Kite & Co., *London.* GLASGOW, 1883. DUBLIN, 1884.
 Wall Inlet Ventilator. C. Kite & Co., *London.* GLASGOW, 1883. DUBLIN, 1884.
 Telescoped Wall Inlet Ventilator. C. Kite & Co., *London.* LEICESTER, 1885.
 "Imperial" Ventilating Window. U. Knell, 77, *Fore Street, E.C.* CROYDON, 1879.
 Morgan's Stench Exhaust. Nailsworth Foundry Company, *Bristol.* NEWCASTLE, 1882.
 Ventilating and Warming Appliances. G. E. Pritchett, 20, *Spring Gardens, S. W.* STAFFORD, 1878.
 Ransome's Artificial Stone Air Brick. Wippell Bros. & Row, 231, *High Street, Exeter.* EXETER, 1880.
 Ornamental Inlet Ventilators. C. H. Sharp & Co., *High Holborn, E.C.* EXETER, 1880.
 Boyle's Mica-Valved Outlet Ventilator. Wenham & Co., *Church Street, Croydon.* CROYDON, 1879.

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

(1). Clothing.

- Crocodile Hide Leather. Borough Leather Warehouse Co., *London.* GLASGOW, 1883.
 Ventilatorium Waterproof Garments. Bartrum, Harvey & Co., *London.* STAFFORD, 1878.
 Ventilated Hats. W. Graham, *Dublin.* DUBLIN, 1884.
 Improved shape of Boot. J. Hotblack & Son, *Norwich.* DUBLIN, 1884.
 Pith Helmet. J. Morgan, *Dublin.* DUBLIN, 1884.
 Rhinoceros Hide "S" Boot. Patrick Short, *Dublin.* DUBLIN, 1884.
 Boot and Shoe Uppers. Staynes & Sons, *Leicester.* LEICESTER, 1885.
 Furs. Brooke Tyrrell, *Dublin.* DUBLIN, 1884.
 "Natural" Boot for Ladies. A. Webb, *Dublin.* DUBLIN, 1884.

(2). Beds and other Furniture.

- Spring Mattresses. Billington Bros., *Liverpool.* GLASGOW, 1883.
 Portable Bed, with Liverpool Spring Mattress. Billington Bros., *Liverpool.* DUBLIN, 1884.

- Central Tube Water Mattress. Brady & Martin, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
 Bed Rest with Movable Arms. Willam Brock & Co., 177, *Fore Street, Exeter*. EXETER, 1880.
 "Nonsuch" Adjustable Chair. Willam Brock & Co., 177, *Fore Street, Exeter*. EXETER, 1880.
 Spring Mattress. Bussey & Co., *Museum Works, Peckham, S.E.* CROYDON, 1879.
 "Excelsior" Ships' Berth. Chorlton & Dugdale, *Manchester*. GLASGOW, 1883.
 Pitch Pine Lath Mattress. Chorlton & Dugdale, *Manchester*. DUBLIN, 1884.
 Automaton Seat for Drapers. Colman & Glendenning, *Norwich*. EXETER, 1880.
 Combination Bedstead. W. Fleming, *Dublin*. DUBLIN, 1884.
 Spring Mattress. A. Gardner & Son, *Glasgow*. GLASGOW, 1883.
 Invalid "Grasshopper" Couch. William Hamilton, *Brighton*. STAFFORD, 1878. NEWCASTLE, 1882.
 Institution Bed, with Woven-Wire Mattress. Pearson & Co., *Dublin*. DUBLIN, 1884.
 Hinged Cot. Pim Bros., *Dublin*. DUBLIN, 1884.
 Furniture. Scott & Co., *Dublin*. DUBLIN, 1884.
 Fernby's "Paragon" Camp Furniture. Wippell Bros. & Row, *Exeter*. EXETER, 1880.

(3). Hospital and Sick Room Appliances.

- Metallic Tubular Bedsteads and Invalid Bed Rests. Thomas Allen, *St. Augustine's Parade, Bristol*. STAFFORD, 1878.
 Folding Invalid Bed. Ansell Ball, *Spalding*. CROYDON, 1879.
 Absorbent Cotton and Antiseptic Sponges. Burroughs, Wellcome & Co., *London*. DUBLIN, 1884.
 "Invalid's" Adjustable Bed. Chorlton & Dugdale, *Manchester*. EXETER, 1880.
 Hospital Bed, fitted with Raising Appliances. Chorlton & Dugdale, *Manchester*. DUBLIN, 1884.
 Hospital Bed, with new Spring Mattress. Chorlton & Dugdale, *Manchester*. DUBLIN, 1884.
 Self-acting Sick Bed. E. K. Groves, *Bristol*. GLASGOW, 1883.
 Burn and Wound Boxes. W. B. Hilliard & Sons, *Glasgow*. GLASGOW, 1883.
 Isolating Curtain. W. B. Hilliard & Sons, *Glasgow*. GLASGOW, 1883.
 India Rubber Vessels for hospital use. H. A. Murton, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
 China Cups and other Vessels for invalid use. Townsend & Co., *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
 Stypium Absorbent Antiseptic Surgical Dressings. Stephenson & Travis, *Liverpool*. DUBLIN, 1884.

(4). Domestic Appliances.

- "Unique" Folding Box. T. P. Bethell, *Liverpool*. LEICESTER, 1885.
 Automatic Chariot for Children. William Bowden, *London*, NEWCASTLE, 1882.
 Revolving Shuttle for Sewing Machines. Bradbury & Co., *Oldham*. GLASGOW, 1883.
 Black Diamond Boot and Shoe Cleaning Machine. T. Bradford & Co., *Salford*. LEICESTER, 1885.
 Conical Knitting Machine. T. Coltman, *Leicester*. LEICESTER, 1885.
 Electric Bells, Exhibit of. J. T. Gent & Co., *Leicester*. LEICESTER, 1885.
 Compostella Fire Lights for Lighting Fires. Compostella Fire Light Company, *Penchurch Street, E.C.* STAFFORD, 1878.
 Porpoise Oil Dubbin. J. T. Dales, *London*. LEICESTER, 1885.
 Bower's Potato Steamer. Groom & Co., *London*. DUBLIN, 1884.
 Self-Indicating Tea or Coffee Infuser. Groom & Co., *London*. DUBLIN, 1884.
 Stoneware Churns. F. Grosvenor, *Glasgow*. GLASGOW, 1883.
 Dough Kneading Machine. F. & C. Hancock, *Dudley, Worcester*. EXETER, 1880.
 New Propellor Churn. F. & C. Hancock, *Dudley, Worcester*. EXETER, 1880.
 Machine for Washing and Peeling Potatoes. F. & C. Hancock, *Dudley*. NEWCASTLE, 1882.
 Knitting Machines. Harrison Patent Knitting Machine Co., *Manchester*. DUBLIN, 1884.
 Pendulous Food Warmers. Osbert Henderson, *Glasgow*. GLASGOW, 1883.
 Various Inventions for Promoting Domestic Economy. W. H. Hilton, *Leamington*. STAFFORD, 1878.
 India Rubber Gas Tubing. A. Hutchinson & Co., *Great Winchester Street, London, E.C.* EXETER, 1880.
 Victoria Knitting Machine. Pim Bros. Limited, *Dublin*. DUBLIN, 1884.
 Heavy Steel Railway Churn, with Malleable Top and Dust-proof Lid. Vipan & Headly, *Leicester*. LEICESTER, 1885.
 Danish Cream Separator. Vipan & Headly, *Leicester*. LEICESTER, 1885.
 "Noiseless Ware." Vernon's Patent China and Glass Company, *London*. GLASGOW, 1883.
 Improved Housemaid's Box with Sifter. Wippell Bros. & Row, *High Street, Exeter*. EXETER, 1880.

(5). School Fittings.

- School Desks with Shifting Seats. Colman & Glendenning, *Norwich*. STAFFORD, 1878.
 Dual Desk, with Separate Gangway Seat. Thomas Larmouth & Co., *Salford*. STAFFORD, 1878.
 "Reliance" Lift-up Desk. Midland Educational Co., *Leicester*. LEICESTER, 1885.
 "Simplex" Desk with Adjustable Foot Board. Taylor & Co., *Driffield & London*. LEICESTER, 1885.

(6). Gymnastic Apparatus.

- Tricycles, W. Carson & Sons, *Dublin*. DUBLIN, 1884.
 Tricycles. Fletcher Bros., *Dublin*. DUBLIN, 1884.
 Bicycles and Tricycles, Exhibit of. J. Parr & Co., *Leicester*. LEICESTER, 1885.

(7). Foods.

- Soluble Dutch Cocoa. Bendorp & Co., *London*. DUBLIN, 1884.
 Pickles and Sauces. Beveridge & Co., *Glasgow*. GLASGOW, 1883.
 Miller's Pride Oatmeal. Binns & Armitage, *Derby*. LEICESTER, 1885.
 Kepler's Extract of Malt and Combinations of it with Pepsine, Chocolate, and Cod Liver Oil. Burroughs, Wellcome & Co., *London*. DUBLIN, 1884.
 Optimus Coffee Extract. E. Clarke & Co., *Battersea*. DUBLIN, 1884. LEICESTER, 1885.
 Currie Powders. J. Edmunds, *London*. NEWCASTLE, 1882.
 Cocoa Extract and Preparations of Chocolate. J. S. Fry & Sons, *Union Street, Bristol*. EXETER, 1880.
 Indian Tea. Indian Tea Co., *Glasgow*. GLASGOW, 1883.
 Mustard. Irvine & Co., *Gateshead*. NEWCASTLE, 1882. GLASGOW, 1883.
 Midlothian Oat Flour. A. & R. Scott, *Glasgow*. GLASGOW, 1883.
 Rusks, Shortbread, and Oatcakes. W. H. Torrance, *Edinburgh*. LEICESTER, 1885.

(8). Domestic Filters.

- "Bijou" Filtre Rapide. P. A. Maignen, *Great Tower Street, London, E.C.* EXETER, 1880.
 Improved Filtre Rapide. P. A. Maignen, *Great Tower Street, E.C.* NEWCASTLE, 1882.
 Soldier's Filter. P. A. Maignen, *London*. LEICESTER, 1885.
 Field Hospital Filter. P. A. Maignen, *London*. LEICESTER, 1885.
 Silicated Carbon Double Chambered Table Filters. Silicated Carbon Filter Company, *Battersea, London*. EXETER, 1880.
 Silicated Carbon Filtering Material. Silicated Carbon Filter Company, *London*. NEWCASTLE, 1882.
 Carbonised Iron Stone Mound Filter for Water. J. A. Stephan, *Worcester*. EXETER, 1880.
 Artificial Stone Filters, for Cleansing Rain Water for Domestic Use. Thorn & Co., *Stafford*. STAFFORD, 1878.

(9). Mineral Waters.

- Potash, Soda and Seltzer Waters and Lemonade. British Mineral Water Company, *Glasgow*. NEWCASTLE, 1882.
 Preparations of Lime Juice, Aromatic Ginger Ale, and Quinine Tonic. Carter & Co., *Old Refinery, Bristol*. EXETER, 1880.
 Zoedone. (Patentee, David Johnson, F.C.S.) Evans & Co., *Wrexham*. CROYDON, 1879.
 Lemonade, Lime Juice, and Ginger Ale. Gulliver & Co., *Aylesbury*. CROYDON, 1879.

- Seltzer Water. Jewsbury & Brown, *Manchester*. STAFFORD, 1878.
 Ginger Ale and Lemonade. Newry Mineral Water Company (Limited), *Liverpool*. CROYDON, 1879.
 Seltzer, Soda, and Potash Waters, and Orange Quinine Tonic. G. H. Skinner, 13, *North Street, Exeter*. EXETER, 1880.

(10). Soaps and other Detergents.

- Olive Oil Soap. W. Bowden, *London*. LEICESTER, 1885.
 Soaps. S. Boyd, *Dublin*. DUBLIN, 1884.
 Carbolic Soaps. F. C. Calvert & Co., *Manchester*. DUBLIN, 1884.
 Hydroleine Soap Powder. F. J. Harrison & Co., *Leicester*. LEICESTER, 1885.
 Tooth Soap. F. C. Calvert & Co., *Manchester*. LEICESTER, 1885.
 Jeyes' Household Disinfecting Soaps. Jeyes' Sanitary Compounds Co., *London*. LEICESTER, 1885.

(11). Antiseptics and Disinfectants.

- Red Cross Yellow Fluid. Antiseptic Apparatus Manufacturing Co. *London*. NEWCASTLE, 1882.
 Chemical Substances used in Disinfection. S. Boyd, *Dublin*. DUBLIN, 1884.
 50% Carbolic Disinfecting Powder. F. C. Calvert & Co., *Manchester*. GLASGOW, 1883.
 Soluble Cresol. F. C. Calvert & Co., *Manchester*. DUBLIN, 1884.
 Alum Cake. Dublin and Wicklow Manure Co., *Dublin*. DUBLIN, 1884.
 Jeyes' Perfect Purifier. Jeyes' Sanitary Compounds Company, *Bishopsgate Street, London, E.C.* CROYDON, 1879. NEWCASTLE, 1882. GLASGOW, 1883. DUBLIN, 1884.
 Pixene. J. Wheeler, *Ilfacombe*. GLASGOW, 1883. DUBLIN, 1884.
 Sanitary Night Lights. A. Wright, *London*. LEICESTER, 1885.

(12) Disinfecting Apparatus.

- Improved Vaporiser for Disinfecting. F. C. Calvert & Co., *Manchester*. EXETER, 1880.
 Dr. Scott's Disinfecting Apparatus. Maguire & Son, *Dublin*. NEWCASTLE, 1882. DUBLIN, 1884.
 Lyon's Disinfectant. Manlove, Alliot, Fryer & Co., *Nottingham*. NEWCASTLE, 1882.

CLASS V.—MISCELLANEOUS.

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

(1). Scientific Instruments.

- Large Legible Spirit Thermometer. P. Hinckes Bird, 1, *Norfolk Square, London, N.W.* EXETER, 1880.

- Instruments used by Medical Officers of Health. Brady & Martin,
Newcastle-upon-Tyne. NEWCASTLE, 1882.
New Oven Pyrometer. Joseph Davis & Co., *London.*
NEWCASTLE, 1882.
Thermometrical Instruments. G. E. Pritchett, 20, *Spring Gardens,*
London, S.W. STAFFORD, 1878.
Barometrical and Thermometrical Instruments. G. E. Pritchett, 20,
Spring Gardens, London, S.W. CROYDON, 1879.
Improvements in Thermometrical and Barometrical Instruments,
G. E. Pritchett, 20, *Spring Gardens, S.W.* EXETER, 1880.
Webster's Photometer. Webster & Co., *Nottingham.*
CROYDON, 1879.

(2). Books and Periodicals.

- Exhibit of Drawings and Books Relating to Disposal of Sewage
in Paris. A. Durand Claye, *Paris.* GLASGOW, 1883.
Publications. Ladies' Sanitary Association, *Berners Street, London, W.*
STAFFORD, 1878.
Sanitary Publications. Smith, Elder, & Co., *London.*
NEWCASTLE, 1882. GLASGOW, 1883. DUBLIN, 1884.

(3). Models and Drawings.

No awards.

(4). Prevention of Accidents.

- Leander Life Belt. J. W. Elvery & Co., *Dublin.* DUBLIN, 1884.
Method of Rendering Timber Non-inflammable. A. Gardner & Son,
Glasgow. GLASGOW, 1883.
Hand Ambulance. Leicester Ambulance Corps, *Leicester.*
LEICESTER, 1885.
Safety Belt Shippers. Selig, Sonmenthal & Co. (Limited), *Lambeth*
Hill, Queen Victoria Street, London, E.C. CROYDON, 1879.

(5). Respirators and Face Guards for Unhealthy Occupations.

No awards.

(6). Fire Preventing Appliances.

- Dicks' L'Extincteur. J. Hildesheim, *Glasgow.* GLASGOW, 1883.
Chemical Fire Exterminator. J. Sinclair, 104, *Leadenhall Street,*
London, E.C. CROYDON, 1879.

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

- "Earth to Earth" Coffins. London Necropolis Company, *Strand,*
London, W.C. STAFFORD, 1878.
Folding Bier and Car for Simplifying Funerals. S. Stretton, *Kidder-*
minster. CROYDON, 1879.

ALPHABETICAL LIST OF MEDALS AWARDED AT THE EXHIBITIONS.

RICHARDSON MEDAL.

- Edmundson, J., & Co., *Dublin,* for Swann's Incandescent Electric
Lamps. DUBLIN, 1884.
Messrs. Mather & Armstrong, *Newcastle-upon-Tyne,* for Siemens's
Regenerative Gas Burner. NEWCASTLE, 1882.
Silicate Paint Company, *Cannon Street, E.C.,* for Griffiths' Patent
White. STAFFORD, 1878.

SILVER MEDALS.

- Offered by the Gas Department of the Corporation of Leicester.
Fletcher, Thomas, *Thynne Street, Warrington,* for Large Gas Cooking
Stove with Boiler. LEICESTER, 1885.
The General Gas Heating and Lighting Co., 66, *St. Paul Street, N.,*
for Fibre Asbestos Open Gas Fire. LEICESTER, 1885.
Wright, J., & Co., *Broad Street, Birmingham,* for Eureka Artisan Gas
Cooking Stove. LEICESTER, 1885.

SILVER MEDALS.

Offered by the Exeter Gas Company.

- Davis, H. & Co., & Co., 200, *Camberwell Road, S.E.,* for Fibre Asbestos
Open Gas Fire. LEICESTER, 1885.
The General Gas Heating and Lighting Co., 66, *St. Paul Street, N.,*
for Large Gas Cooking Stove with Boiler. LEICESTER, 1885.
Sanitary and Economic Supply Association, for Dr. Bond's Euthermic
Ventilating Gas Stove. EXETER, 1880.
Wright, J. & Co., *Birmingham,* for Eureka Gas Cooking Stove.
DUBLIN, 1884.

MEDALS AND SPECIAL CERTIFICATES.

In cases where awards are made at subsequent Exhibitions for the same Exhibits, only the name of the town and date are given. Exhibits which have already received Medals at previous Exhibitions of the Institute are excluded from awards of Medals; but those Exhibits to which a second Medal would otherwise be awarded receive Special Certificates, and these are distinguished in the following list by asterisks placed against the name of the town at which the Exhibition was held.

- Aluminium Crown Metal Co., *Glasgow,* for Aluminium Crown Metal,
GLASGOW, 1883.

- Ashwell, F., *Leicester*, for Blackman Air Propeller. LEICESTER, 1885.
 Aveling & Porter, *Rochester*, for Improved Six-Ton Steam Road Roller. CROYDON, 1879.
 Bean, A. T., 5, *Cannon Row, S.W.*, for Direct Acting Valveless Waste Preventer. EXETER, 1880.
 Billing & Co., *Hatton Garden, E.C.*, for Apparatus for Cooking by Gas. STAFFORD, 1878. *CROYDON, 1879.
 Borwell, J., *Britannia Foundry, Burton-on-Trent*, for Improved Washer, with table complete. LEAMINGTON, 1877.
 Bostel, D. T., *Duke Street, Brighton*, for Excelsior Water Closet. LEAMINGTON, 1877. *STAFFORD, 1878.
 Boulnois, H. Percy, *Portsmouth*, for "Acme" Sewer Pipes. GLASGOW, 1883.
 Bourtreehill Coal Co., *Dreghorn, Ayrshire*, for White Enamelled Fireclay Cistern. LEICESTER, 1885.
 Bradford, T. & Co., *High Holborn, W.C.*, for New "Shuttle" Steam Power Washing Machine. LEAMINGTON, 1877. *STAFFORD, 1878.
 " " for Washing Machines. NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884. *LEICESTER, 1885.
 British Sanitary Company, *Glasgow*, for Dry Earth Closet. NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884.
 Brown, A. & Co., *Glasgow*, for "Stott" Gas Burner. *GLASGOW, 1883.
 Buchan, W. P., *Glasgow*, for his exhibit of Sanitary Appliances. GLASGOW, 1883.
 Burroughs, Wellcome & Co., *London*, for Powders for Peptonizing Milk. DUBLIN, 1884.
 " " *London*, for Kepler's Extract of Malt, and combinations of it with Pepsine, Chocolate, and Cod Liver Oil. DUBLIN, 1884.
 Calvert & Co., *Bradford*, for Calvert's Carbolic Acid for disinfecting purposes. LEAMINGTON, 1877. *CROYDON, 1879. *EXETER, 1880. *GLASGOW, 1883. *DUBLIN, 1884. *LEICESTER, 1885.
 Carter, J., 6a, *Cavendish Street, W.*, for Invalid Furniture. EXETER, 1880.
 Chorlton & Dugdale, *Manchester*, for Excelsior Spring Mattress. LEAMINGTON, 1877. *STAFFORD, 1878. *CROYDON, 1879. *EXETER, 1880. *NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884.
 " " for "Swing" Woven Wire Mattress. DUBLIN, 1884.
 Cliff, Joseph & Sons, *Leeds*, for Porcelain Bath. GLASGOW, 1883.
 Colman & Glendenning, *Norwich*, for School Furniture. EXETER, 1880.
 Craig, J. & M., *Kilmarnock, N.B.*, for Enamelled Fireclay Sinks. DUBLIN, 1884.
 Davis, H. & C., & Co., 200, *Camberwell Road, S.E.*, for Artisan Gas Cooking Stove. LEICESTER, 1885.

- Dick, Alex., *London*, for Delta Metal. GLASGOW, 1883.
 Donegal Industrial Fund, for Innocuously-dyed Woollen Goods. DUBLIN, 1884.
 Doulton & Co., *Lambeth, London*, for Stanford's Joints for Stone-ware Pipes. STAFFORD, 1878. *EXETER, 1880.
 " " for Anti-Percussion High Pressure Valves. CROYDON, 1879. *EXETER, 1880. *GLASGOW, 1883. *DUBLIN, 1884.
 " " for Ventilating Tile Stove. EXETER, 1880. *NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884. *LEICESTER, 1885.
 " " for Anti-Percussion Ball Valve. NEWCASTLE, 1882.
 " " for Art Pottery. DUBLIN, 1884. *LEICESTER, 1885.
 " " for Peto Fireproof Flooring. LEICESTER, 1885.
 Dublin & Wicklow Manure Co., *Dublin*, for Strype's Process for Drying Blood. DUBLIN, 1884.
 Duncan, Maj. F., *The Common, Woolwich*, for Ambulance Wheeled Litter. STAFFORD, 1878.
 Edmundson, J. & Co., *Dublin*, for their Exhibit of Swann's Incandescent Electric Lights. DUBLIN, 1884.
 Elgood, Bros., *Leicester*, for Artistic Domestic Iron Work. LEICESTER, 1885.
 Ellis, J., & Sons, *Barrow-on-Soar*, for Barrow Blue Lias Hydraulic Lime. LEICESTER, 1885.
 Ellison, J. E., *Leeds*, for Conical Ventilators. STAFFORD, 1878. *CROYDON, 1879. *GLASGOW, 1883. *DUBLIN, 1884. *LEICESTER, 1885.
 Fletcher, Thomas, *Thynne Street, Warrington*, for Large Gas Cooking Stove with Boiler. LEICESTER, 1885.
 Fletcher, Thomas, *Thynne Street, Warrington*, for Horizontal Spiral Lavatory Heater. LEICESTER, 1885.
 Fraser Bros., *Commercial Road, E.*, for Portable Disinfecting Apparatus. CROYDON, 1879.
 Galbraith, T., *Crawford Square, Londonderry*, for Hot-Air Bath. LEAMINGTON, 1877.
 Gandy, Maurice, *Liverpool*, for Cotton Machine Belting. DUBLIN, 1884.
 General Gas Heating and Lighting Co., 66, *St. Paul Street, N.*, for Large Gas Cooking Stove with Boiler. LEICESTER, 1885.
 " " Heating and Lighting Co., 66, *St. Paul Street, N.*, for Fibre Asbestos Open Gas Fire. LEICESTER, 1885.
 Greenall, J., *Manchester*, for Steam Washer. LEICESTER, 1885.
 Hall, John & Co., *Stourbridge*, for Fire-Clay Enamelled Bath. GLASGOW, 1883.
 Hamilton & Co., *Leadenhall Street, E.C.*, for Prismoidal Pavement and Floor Lights. CROYDON, 1879.
 Hancock, F. & C., *Dudley, Worcester*, for Machine for Washing and Cooling Butter. LEAMINGTON, 1877. *STAFFORD, 1878. *GLASGOW, 1883. *LEICESTER, 1885.
 " " for Machines for Domestic use. *LEICESTER, 1885.

- Harescough, B. B. & Co., *Bentick Street, Leeds*, for Excreta Pail (oak) with Spring Lid. LEAMINGTON, 1877. *STAFFORD, 1878.
- Harris, G. H., *Bristol Street, Birmingham*, for Economical Cooking Range. LEAMINGTON, 1877. *STAFFORD, 1878.
- Hassall & Singleton, *Birmingham*, for Phoenix Portable Range, and the Birmingham Range with Reducible Fire without Gas. STAFFORD, 1878.
- Hayward, Tyler & Co., *London*, for Full-flush Valveless Closet. NEWCASTLE, 1882.
- Heap, R. R., *Manchester*, for Dry Earth or Ashes Closet. GLASGOW, 1883. DUBLIN, 1884.
- Hilliard, W. B., & Sons, *Glasgow*, for Hospital and Sick Room Appliances. GLASGOW, 1883.
- Humber & Co., *Nottingham*, for their Exhibit of Bicycles and Tricycles. LEICESTER, 1885.
- Hunt, Nathan, *Bristol*, for Auto-Pneumatic Ventilation. EXETER, 1880.
- Jeyes' Sanitary Compounds Co., *London*, for Jeyes' Perfect Purifier. LEICESTER, 1885.
- Johnson, W. F., *Leicester*, for Ornamental Domestic Appliances. LEICESTER, 1885.
- Keith, J., *London and Edinburgh*, for Challenge Hot-water Boiler. GLASGOW, 1883.
- Lascelles, W. H., *Bunhill Row, E.C.*, for Concrete Bath in one piece. CROYDON, 1879. *EXETER, 1880.
- Le Grand & Sutcliffe, *Bunhill Row, E.C.*, for Improvements in Well Sinking Apparatus. LEAMINGTON, 1877. *CROYDON, 1879.
- Leggott, W. & R., *Bradford*, for Opener for Fanlights and Skylights. LEICESTER, 1885.
- Leoni, S., & Co., *Strand*, for Apparatus for Cooking by Gas. STAFFORD, 1878.
- Lyon, J. W., *London*, for Steam Disinfecter. LEICESTER, 1885.
- Mackey, Mackey & Co., *London*, for Chemical Substances used for Disinfection. DUBLIN, 1884.
- Maguire & Son, *Dublin*, for their Exhibit of Sanitary and Domestic Appliances. DUBLIN, 1884.
- " " *Dublin*, for Wilcocks' Automatic Flushing Closet. DUBLIN, 1884.
- Maignen, P. A., 20 & 23, *Great Tower Street, E.C.*, for Filtre Rapide. CROYDON, 1879. *EXETER, 1880. *GLASGOW, 1883. *DUBLIN, 1884. *LEICESTER, 1885.
- Manlove, Alliot, Fryer & Co., *Nottingham*, for Fryer's Destructor, Fryer's Carbonizer, and Firman's Dessicating and Rendering Apparatus. NEWCASTLE, 1882.
- Mather & Armstrong, *Newcastle-upon-Tyne*, for Siemens's Regenerative Gas Burner. NEWCASTLE, 1882.
- Meyer, H. C., *New York*, Sanitary Engineer of New York, Newspaper. GLASGOW, 1883.
- Moore, J., *St. James' Walk, Clerkenwell, E.C.*, for Glass Louvre Ventilators. EXETER, 1880.

- Morris, Little & Co., *Doncaster*, for Little's Soluble Phenyle. STAFFORD, 1878.
- Morrison, W. B., *Glasgow*, for Wedgwood Ornamental Tiles. GLASGOW, 1883.
- Moser, L., *Southampton*, for Dry Closet, suitable for Ashes or Disinfecting Powder. EXETER, 1880.
- Moule's Patent Earth Closet Company, 5a, *Garrick Street, W.C.*, for Earth Closets. STAFFORD, 1878. *CROYDON, 1879. *LEICESTER, 1885.
- Musgrave & Co., *Belfast*, for Slow Combustion Stoves. DUBLIN, 1884.
- Orr, J. B., & Co., *Charlton, London*, for Leadless "Charlton White" Paint and Dryers. GLASGOW, 1883.
- Parker, J., *Woodstock, Oxford*, for Dry Earth Closet. LEAMINGTON, 1877.
- Pim Bros., *Dublin*, for their Exhibit of Furniture. DUBLIN, 1884.
- Pocock, Bros., *Southwark Bridge Road*, for "Universal" Invalid Tubular Water and Air Bed. STAFFORD, 1878. *CROYDON, 1879.
- Pritchett, G. E., 20, *Spring Gardens, S.W.*, for Economic Hollow Flooring. STAFFORD, 1878. *CROYDON, 1879.
- Purdy, W., *Eastwood, Notts.*, for Miners' Safety Lamp. LEICESTER, 1885.
- Read, Jefferson, *Birmingham*, for Arcanum Process of Silver Plating Steel. CROYDON, 1879.
- Richardson, J., & Co., *Leicester*, for their Exhibit of Antiseptic Preparations. LEICESTER, 1885.
- Roberts, C. G., *Haslemere, Surrey*, for Rain-water Separator. NEWCASTLE, 1882. *GLASGOW, 1883.
- Ross, J. A. G., *Newcastle-upon-Tyne*, for Silicate Cotton (Slag-wool). NEWCASTLE, 1882.
- Rothwell, W., *Bolton*, for Flat Web Knitting Machine, and Rothwell Knitting Machines. DUBLIN, 1884.
- Sanitary Appliance Company, *Salford*, for Portable Cinder Sifting Ash Closet, with Soil Pail. STAFFORD, 1878. *CROYDON, 1879. *LEICESTER, 1885.
- Sanitary & Economic Supply Association, *Gloucester*, for Dr. Bond's Euthermic Gas Stove. EXETER, 1880.
- Sanitary & Highway Appliance Co., *Sheffield*, for Roberts's Street Orderly Bin. LEICESTER, 1885.
- Sanitary & Highway Appliance Co., *Sheffield*, for Roberts's Sand-distributor for 2-horse Tram-track. LEICESTER, 1885.
- Sanitas Company (Limited), *London*, for Sanitas Oil. NEWCASTLE, 1882.
- Scottish Asbestos Co., *Glasgow*, for Scottish Asbestos. GLASGOW, 1883.
- Shanks & Co., *Barrhead, N.B.*, for Siphon-action Water Waste Preventer. DUBLIN, 1884.
- Shaw, A., & Son, *Glasgow*, for "Sine qua non" Open and Close Fire Range. GLASGOW, 1883.
- Silicate Paint Company, *Cannon Street, E.C.*, for Griffiths' White, and for their preparations of Silicate Paint, Enamel Paint, and Petrifying Liquids. STAFFORD, 1878.

- Sinclair, G., *Leith*, for Mechanical Stoker. GLASGOW, 1883.
 Sinclair, J., *Leadenhall Street, E.C.*, for Tyndall's Smoke Respirator. CROYDON, 1879.
 Singer Manufacturing Company, *London*, for Friction Driving Attachment for Sewing Machines. GLASGOW, 1883.
 Smallman, John L., *Dublin*, for Stott's Mercury Gas Governor. *DUBLIN, 1884.
 Smith, E., & Co., *Coalville*, for Embossed Tiles. LEICESTER, 1885.
 Société Française D'Hygiène, *Paris*, for Chemical Preparations and Apparatus. LEAMINGTON, 1877.
 " " *Paris*, for Books on Hygiène. NEWCASTLE, 1882.
 Spongy Iron Water Purifying Company, *Oxford Street, W.C.*, for Bischof's Spongy Iron Filter. LEAMINGTON, 1877.
 Stewart, J., Sen., *Glasgow*, for Stoneware Disconnecting Traps. GLASGOW, 1883.
 " " *Glasgow*, for Stoneware Pipes with Stanford's Joint. *GLASGOW, 1883.
 Stott, James, & Co., *Oldham*, for Mercury Gas Governor. NEWCASTLE, 1882. *LEICESTER, 1885.
 Trott, H., *Battersea, London*, for the "Household" Closet. LEICESTER, 1885.
 Turk, R. J., *Kinyston-on-Thames*, for Cruising Canoe. LEICESTER, 1885.
 Tylor & Sons, *Newgate Street, E.C.*, for Flushing Rim Lavatory Basin and Apparatus. EXETER, 1880.
 Verity, E. & J. M., *Leeds*, for Crabtree's Kitchen Range. LEICESTER, 1885.
 Victoria Stone Co., *London*, for Victoria Artificial Stone-Paving. LEICESTER, 1885.
 Vipar & Headly, *London*, for their Exhibit of Dairy Appliances. LEICESTER, 1885.
 Walker, Chas. W., *Wandsworth Common*, for Acid Pump and Syphon. CROYDON, 1879.
 Walker, Turnbull & Co., *Falkirk*, for Artizan Cooking Range. GLASGOW, 1883.
 Ward, O. D., *London*, for Household Water Closet. NEWCASTLE, 1882.
 " " for Bean's Direct Acting Valveless Waste Preventer. *NEWCASTLE, 1882.
 Webb, H. Chalk, *Worcester*, for Colouring Patterns through the Substance of Wood. EXETER, 1880.
 Wenham, W. P., *Church Street, Croydon*, for Improved Open or Close Range Kitchener. CROYDON, 1879.
 Wenham's Patent Gas Lamp Co., *London*, for Wenham Ventilating Gas Lamp. DUBLIN, 1884.
 Wentworth, F., & Co., *London*, for "Kredemnon" Life-saving Gargements. GLASGOW, 1883.
 Whyte & Bradford, *Bowness*, for Cooking Range with Revolving Fire for the Prevention of Smoke. GLASGOW, 1883.
 Wilkinson, W. B. & Co., *Newcastle-upon-Tyne*, for Damp-proof Concrete Pavement. NEWCASTLE, 1882.

- Willacy, R., *Preston*, for Sand-distributor for Roads. LEICESTER, 1885.
 Willcocks & Co., *Burmantofts, Leeds*, for Silica Glazed and Enamelled Fire Clay Bricks and Faience. CROYDON, 1879.
 Wilson Engineering Company, *Holborn, W.C.*, for Wilson Portable Close Cooking Range. EXETER, 1880.
 " " for Improved Wilson Range. with Steel Boiler and non-conducting Jacketing. NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884.
 Wippell Bros. & Row, 231, *High Street, Exeter*, for Moule's Earth Closet. *EXETER, 1880.
 Woollams & Co., *High Street, Marylebone*, for Paper Hangings free from Arsenic. CROYDON, 1879. *NEWCASTLE, 1882.
 " " for Non-Arsenical Pigments and Paper Hangings. *GLASGOW, 1883.
 Woodhouse & Rawson, *London*, for their Incandescent Electric Lamp. LEICESTER, 1885.
 Wright, J., & Co., *Birmingham*, for "Eureka" Gas Cooking Stove. DUBLIN, 1884.
 Wright, J., & Co., *Broad Street, Birmingham*, for "Eureka" Artisan Gas Cooking Stove. LEICESTER, 1885.
 Wright, J., & Co., *Broad Street, Birmingham*, For Lump Asbestos Open Gas Fire. LEICESTER, 1885.

ALPHABETICAL LIST OF CERTIFICATES AWARDED AT THE EXHIBITIONS.

- Adams, R., 7, *Great Dover Street, S.E.*, for Adjustable Shoe, and Regulating Spring Hinge for Swinging Doors. CROYDON, 1879.
- " " for Fanlight Openers and Casement Fasteners. CROYDON, 1879.
- " " for the Norton Door Spring DUBLIN, 1884.
- " " for Adjustable Pivot for Fanlights. DUBLIN, 1884.
- " " for "Victor" Spring Hinge. LEICESTER, 1885.
- " " for Side Gussets for Fanlights. LEICESTER, 1885.
- Adams & Co., *York*, for Potts' Edinburgh Sewer Trap. LEICESTER, 1885.
- " " for Improved Shape of Trough for Water Closets. LEICESTER, 1885.
- Allen, Thomas, *St. Augustine's Parade, Bristol*, for Metallic Tubular Bedsteads and Invalid Bedrests. STAFFORD, 1878.
- Angell, A. T., *London*, for Air-tight Man-hole Door. NEWCASTLE, 1882. GLASGOW, 1883.
- Antiseptic Apparatus Manufacturing Co. (Limited), for Red Cross Yellow Fluid. NEWCASTLE, 1882.
- Arden Hill & Co., *Birmingham*, for Solid Flame Boiling Stove. NEWCASTLE, 1882.
- " " for Gas Cooking Stove, lined with White Tiles. DUBLIN, 1884.
- " " for Lump Asbestos Open Gas Fire. LEICESTER, 1885.
- Ashwell, Frank, *Leicester*, for Steam Kettle with specially arranged Tap for drawing Boiling Water. LEICESTER, 1885.
- Baird, W., *Dublin*, for Butler's Sink, lined with Block Tin. DUBLIN, 1884.
- " " for White Enamelled Fireclay Sinks. DUBLIN, 1884.
- " " for Bath, with Shower Douche and Spray Fittings combined. DUBLIN, 1884.
- " " for Lavatory, with Shampooing Apparatus. DUBLIN, 1884.
- " " for Hydraulic Ram. DUBLIN, 1884.
- " " for Improved Horizontal-Pull Fittings for Baths and Lavatories. DUBLIN, 1884.

- Baird, Thompson & Co., *Glasgow*, for Watts's Asphyxiator for Testing Drains with Smoke. DUBLIN, 1884.
- Ball, Ancell, *Spalding*, for Folding Invalid Bed. CROYDON, 1879.
- Bartrum, Harvey & Co., *London*, for Ventilatorium Waterproof Garments. STAFFORD, 1878.
- Beard, Dent & Hellyer, 21, *Newcastle Street, W.C.*, for Artisan Closet. CROYDON, 1879.
- " " for Ventilating Drain Syphon. CROYDON, 1879.
- Bensdorp & Co., *London*, for Soluble Dutch Cocoa. DUBLIN, 1884.
- Bethell, T. P., *Liverpool*, for the "Unique" Folding Box. LEICESTER, 1885.
- Beveridge & Co., *Glasgow*, for Pickles and Sauces. GLASGOW, 1883.
- Billington Bros., *Liverpool*, for Spring Mattresses. GLASGOW, 1883.
- " " for Portable Bed, with Liverpool Spring Mattress. DUBLIN, 1884.
- Binnie, J., *Gartcosh, Glasgow*, for Salt-glazed Fire-clay Sewer Pipes. GLASGOW, 1883.
- Binns & Armitage, *Derby*, for Miller's Pride Oatmeal. LEICESTER, 1885.
- Bird, Peter Hinckes, 1, *Norfolk Square, N.W.*, for Method of Costless Ventilation. CROYDON, 1879.
- " " for Large Legible Spirit Thermometer. EXETER, 1880.
- Borough Leather Warehouse Company, *London*, for Crocodile Hide Leather. GLASGOW, 1883.
- Bourtnehill Coal Co., *Dreghorn, Ayrshire*, for Stoneware Drain Pipes. DUBLIN, 1884.
- " " for White Enamelled Fireclay Sinks. DUBLIN, 1884.
- " " for White Enamelled Sinks and Wash Tubs. LEICESTER, 1885.
- " " for White Enamelled Fireclay Laundry Trough. DUBLIN, 1884.
- " " for White Enamelled Bricks. DUBLIN, 1884.
- Bowden, William, *London*, for Automatic Chariot for Children. NEWCASTLE, 1882.
- " " for Olive Oil Soap. LEICESTER, 1885.
- Boyd, S., *Dublin*, for Soaps. DUBLIN, 1884.
- " " for Chemicals used in Disinfection. DUBLIN, 1884.
- Bradford, T., & Co., *Salford*, for Black Diamond Boot & Shoe Cleaning Machine. LEICESTER, 1885.
- Bradbury & Co., *Oldham*, for Revolving Shuttle for Sewing Machines. GLASGOW, 1883.
- Brady & Martin, *Newcastle-upon-Tyne*, for Central Tube Water Mattress. NEWCASTLE, 1882.
- " " for Instruments used by Medical Officers of Health. NEWCASTLE, 1882.
- Braithwaite & Co., *Leeds*, for Syphon for Water Closet Cisterns. CROYDON, 1879.

- Branksea Island Pottery Company, Limited, *Poole, Dorset*, for Stone-ware Pipes. EXETER, 1880.
- Bray & Co., *Blackman Lane, Leeds*, for Improved Gas Burners. CROYDON, 1879.
- British and Foreign Mineral Water Company, *Glasgow*, for Potash, Soda and Seltzer Waters, and Lemonade. NEWCASTLE, 1882.
- British Sanitary Company, *Glasgow*, for Self-Acting Earth Closet. EXETER, 1880.
- Broad & Co., *Paddington*, for White Glazed Facing Bricks. LEICESTER, 1885.
- " " for White Enamelled Straight and Curved Channels for Inspection Chambers to Drains. LEICESTER, 1885.
- " " for White Enamelled Fire-clay Gullies. LEICESTER, 1885.
- Brock, W., & Co., 177, *Fore Street, Exeter*, for Bed Rest with Moveable Arms. EXETER, 1880.
- " " for "Nonsuch" Adjustable Chair. EXETER, 1880.
- Buchan, W. P., *Glasgow*, for Improved Drain Pipe, with Access Cover. NEWCASTLE, 1882.
- " " for Disconnecting Drain Trap. NEWCASTLE, 1882. GLASGOW, 1883.
- " " for Grease Trap for Kitchen Sinks. GLASGOW, 1883.
- Burroughs, Wellcome & Co., *London*, for Absorbent Cotton and Antiseptic Sponges. DUBLIN, 1884.
- " " for Kepler's Extract of Malt and combinations of it with Pepsine, Chocolate, and Cod Liver Oil. DUBLIN, 1884.
- Bussey & Co., *Museum Works, Peckham, S.E.*, for Patent Spring Mattress. CROYDON, 1879.
- Cadle, C., *Dublin*, for Silicate Cotton Composition for covering Steam Pipes. DUBLIN, 1884.
- Calvert, F. C., & Co., *Bradford*, for Improved Vaporiser for Disinfecting. EXETER, 1880.
- " " for 50% Carbolic Disinfecting Powder. GLASGOW, 1883.
- " " for Carbolic Soaps. DUBLIN, 1884.
- " " for Soluble Cresol. DUBLIN, 1884.
- " " for Tooth Soap. LEICESTER, 1885.
- Candy & Co., *Newton Abbot*, for Granite Vitriified Bricks and Paving. EXETER, 1880.
- Capper, Son & Co., *London*, for Brian Jones's Joint for connecting Closet with Soil-pipe. NEWCASTLE, 1882.
- Carron Company, *Falkirk, N.B.*, for Combined Close Fire and Gas Cooking Range. GLASGOW, 1883.

- Carson, W., & Sons, *Dublin*, for their exhibit of Tricycles. DUBLIN, 1884.
- " " for Willesden Waterproof Paper and Canvas. DUBLIN, 1884.
- " " for Tortoise Slow Combustion Stoves. DUBLIN, 1884.
- Carter & Co., *Old Refinery, Bristol*, for Preparations of Lime Juice, Aromatic Ginger Ale, and Quinine Tonic. EXETER, 1880.
- Chorlton & Dugdale, *Manchester*, for "Sun-light Stove." EXETER, 1880.
- " " for "Invalids'" Adjustable Bed. EXETER, 1880.
- " " for "Excelsior" Ship's Berth. GLASGOW, 1883.
- " " for Hospital Bed, fitted with Raising Appliances. DUBLIN, 1884.
- " " for Pitch Pine Lath Mattress. DUBLIN, 1884.
- " " for Hospital Bed, with New Spring Mattress. DUBLIN, 1884.
- Clarke, E., & Co., *Battersea*, for "Optimus" Coffee Extract. DUBLIN, 1884. LEICESTER, 1885.
- Clarke, F. W., Portable Gas Apparatus Company (Limited), *Great Queen Street, W.C.*, for Portable Gas Apparatus for Manufacturing Gas from Gasoline. CROYDON, 1879.
- Colman & Glendenning, *Norwich*, for School Desks with Shifting Seats. STAFFORD, 1878.
- " " for Automaton Seat for Drapers. EXETER, 1880.
- Coltman, T., *Leicester*, for Conical Knitting Machine. LEICESTER, 1885.
- Compostella Fire-Light Company, *Fenchurch Street, E.C.*, for Compostella Fire Lights for Lighting Fires. STAFFORD, 1878.
- Constantine, T. J., *Fleet Street, E.C.*, for Devonshire Cooking Range. EXETER, 1880.
- Cooper, H. W., & Co., *London*, for Glass Revolving and Sliding Ventilators. GLASGOW, 1883.
- Cordingley, T., & Sons, *Bradford*, for Granite Concrete Pavement. DUBLIN, 1884.
- Craig, J. & M., *Kilmarnock*, for Buchan's Trap. EXETER, 1880.
- " " for Maguire's Cradle Joint for Drain Pipes. NEWCASTLE, 1882.
- " " for Buchan's Drain Trap and Drain Pipes, with Access Cover. NEWCASTLE, 1882.
- " " for White Enamelled Fire-Clay Sinks. NEWCASTLE, 1882. GLASGOW, 1883.
- " " for Stoneware Disconnecting Traps. GLASGOW, 1883.
- " " for White Enamelled Bricks. DUBLIN, 1884.
- " " for Buchan's Disconnecting Trap. DUBLIN, 1884.

- Cregeen, H. S., *Bromley*, for Air Inlet Head for Drain Ventilation. NEWCASTLE, 1882.
- Croft Stone Quarry & Brick Co., *Croft, Leicestershire*, for the Croft Artificial Stone Paving. LEICESTER, 1885.
- Dales, J. T., *London*, for Porpoise Oil Dubbin. LEICESTER, 1885.
- Davis, Joseph & Co., *London*, for New Oven Pyrometer. NEWCASTLE, 1882.
- Dinning & Cooke, *Newcastle-upon-Tyne*, for Cast Iron Channels for Stable Drainage. NEWCASTLE, 1882.
- " " for George's Calorigen. NEWCASTLE, 1882.
- " " for Jennings's Universal Shampooing Apparatus. NEWCASTLE, 1882.
- " " for Grates, Mantel-pieces, and Over-mantels. NEWCASTLE, 1882.
- Dockrell, Thomas, Sons & Co., *Dublin*, for Cheap Artistic Non-arsenical Washable Wall Paper. DUBLIN, 1884.
- Doulton & Co., *Lambeth, London*, for Decorative Tiles for Covering Walls and Floors. CROYDON, 1879.
- " " for Disconnecting Gully, with back and side Entrances and iron grating. CROYDON, 1879.
- " " for Economical Flush-Out Closet. EXETER, 1880.
- " " for Anti-Percussion High - pressure Bib Valves. NEWCASTLE, 1882.
- " " for Bath Locking Valves, for preventing waste of water. NEWCASTLE, 1882.
- " " for Latham's Flap Valve. DUBLIN, 1884.
- " " for Joint for Drain-pipes. NEWCASTLE, 1882.
- " " for Reversible Inlet Gully, with Dished Stoneware Cover and Iron Grating. NEWCASTLE, 1882.
- " " for "Lambeth" Flush-out Closet. NEWCASTLE, 1882. GLASGOW, 1883.
- " " for Tip-up Lavatory Basin. NEWCASTLE, 1882.
- " " for "Lambeth" Trough Closet with Automatic Flush Tank. GLASGOW, 1883.
- " " for Silicon Tread for Steps. GLASGOW, 1883.
- " " for Glazed Ware Mantelpiece, with Slow Combustion Grate. DUBLIN, 1884.
- " " for Vacuum Flushing Cistern for Closet, with Seat-action Arrangement. DUBLIN, 1884.
- " " for cheap Glazed Stoneware Sinks. DUBLIN, 1884.
- " " for "Lambeth" Combination Water-closet. DUBLIN, 1884.
- " " for Enamelled Ware Open Channels for Manholes. DUBLIN, 1884.

- Doulton & Co., *Lambeth*, for Manhole for Drains, with connections complete. DUBLIN, 1884.
- " " for London-made Stoneware Pipes. DUBLIN, 1884.
- " " for Economical Combination Closet in two pieces. LEICESTER, 1885.
- Dublin & Wicklow Manure Co., for Alum Cake. DUBLIN, 1884.
- Durand Claye, A., *Paris*, for Drawings and Books Relating to Disposal of Sewage in Paris. GLASGOW, 1883.
- Edmunds, J., *London*, for Currie Powders. NEWCASTLE, 1882.
- Edwards, J. C., *Trefynant, Ruabon*, for Dean's External Drain Traps, with moveable receptacle. CROYDON, 1879.
- Elliott, Edminson & Olney, *Manchester*, for Cold Metal Double Cone Mechanical Lead Pipe Joints. LEICESTER, 1885.
- Ellis, J. J., *Ellistown Collieries*, for Gordon's Disconnecting Trap. LEICESTER, 1885.
- Ellison, J. E., *Leeds*, for "Radiator" Ventilator, with Screw Action. GLASGOW, 1883. DUBLIN, 1884.
- Elvery, J. W., & Co., *Dublin*, for the Leander Life Belt. DUBLIN, 1884.
- " " for Gentlemen's Ventilated Waterproof Overcoats. DUBLIN, 1884.
- Evans & Co., *Wrexham*, for Zoedone. (Patentee, David Johnson, F.C.S.) CROYDON, 1879.
- Fell, J., & Co., *Wolverhampton*, for Clark's Anti-splash Tip-up Lavatory Basin. NEWCASTLE, 1882.
- " " for Smith's Cast Lead Syphon Traps. NEWCASTLE, 1882.
- " " for Water-taps. NEWCASTLE, 1882.
- Fergusson & Starkey, *Leicester*, for "Shanks's" Porcelain Lavatory Fittings. LEICESTER, 1885.
- " " for Shanks's "Eureka" Spray and Plunge Bath. LEICESTER, 1885.
- " " for "Unbreakable" Fire-clay Lavatory Basins for Schools, &c. LEICESTER, 1885.
- Finch & Co., 181, *High Holborn, W.C.*, for Large Way Waste Plug, with Protective Cover. CROYDON, 1879.
- Fleming, W., *Dublin*, for the Combination Bedstead. DUBLIN, 1884.
- Fletcher Bros., *Dublin*, for Exhibit of Tricycles. DUBLIN, 1884.
- Fletcher, Thomas, *Warrington*, for Washing Machine, Heated by Gas. LEICESTER, 1885.
- Forrest, William, *Newcastle-upon-Tyne*, for The Albo-Carbon Light. NEWCASTLE, 1882.
- Foster & Pearson, *Nottingham*, for Morris's Cast Iron Gulley, with Moveable Dip Pipe. LEICESTER, 1885.
- Fry, J. S., & Sons, *Union Street, Bristol*, for Cocoa Extract and Preparations of Chocolate. EXETER, 1880.
- Gandy, M., *Liverpool*, for Cotton Machine Belting. GLASGOW, 1883.
- " " for Steil's Fastener for Machine Belting. GLASGOW, 1883.

- Gardner, A., & Son, *Glasgow*, for Spring Mattress. GLASGOW, 1883.
 " " for Parquet Flooring. GLASGOW, 1883.
 " " for Method of Rendering Timber Non-inflammable. GLASGOW, 1883.
 Garton & King, *Exeter*, for Vowel E. Bradford's Family Washing Machine. EXETER, 1880.
 General Gas Heating and Lighting Co., 66, *St. Paul Street, N.*, for Artisan Gas Cooking Stove. LEICESTER, 1885.
 Gent, J. T., & Co., *Leicester*, for their Exhibit of Electric Bells. LEICESTER, 1885.
 Gilbert, E. & A. E., *Broughty Ferry, Forfarshire*, for Improved Seat for Water Closets. GLASGOW, 1883.
 Gillow & Co., *Oxford Street, W.*, for Lavatory. STAFFORD, 1878.
 Goode & Co., *Loughborough*, for "Invicta" Flushing Cistern. LEICESTER, 1885.
 " " for Double Valves for Flow and Return in Hot-water Circulation. LEICESTER, 1885.
 Graham, W., *Dublin*, for Ventilated Hats. DUBLIN, 1884.
 Groom & Co., *London*, for Bower's Potato Steamer. DUBLIN, 1884.
 " " for Self-indicating Tea or Coffee Infuser. DUBLIN, 1884.
 " " for Well and Dry-Platform Sponge Bath. LEICESTER, 1885.
 Grosvenor, F., *Glasgow*, for Stoneware Churns. GLASGOW, 1883.
 Groves, E. K., *Bristol*, for Self-acting Sick Bed. GLASGOW, 1883.
 Gulliver & Co., *Aylesbury*, for Lemonade, Lime Juice, and Ginger Ale. CROYDON, 1879.
 Hamilton, W., *Brighton*, for Invalid "Grasshopper" Couch. STAFFORD, 1878. NEWCASTLE, 1882.
 Hammond & Hussey, *High Street, Croydon*, for Hornibrook's Catchment Grating for Steep Gradients. CROYDON, 1879.
 Hancock, F. & C., *Dudley, Worcester*, for New Propellor Churn. EXETER, 1880.
 " " for Dough Kneading Machine. EXETER, 1880.
 " " for Machine for Washing and Peeling Potatoes. NEWCASTLE, 1882.
 Harriman, W., & Co., *Blaydon-upon-Tyne*, for Fowler's Water-closet. NEWCASTLE, 1882.
 Harrison, F. J., & Co., *Leicester*, for Hydroleine Soap Powder. LEICESTER, 1885.
 Harrison Patent Knitting Machine Co., *Manchester*, for Knitting Machines. DUBLIN, 1884.
 Harriison, T. Harnett, *Liverpool*, for Iron Basket Sewage-strainer. GLASGOW, 1883.
 " " for Improved Method of Connecting Lead Pipes with Stoneware Pipes. GLASGOW, 1883.
 Hayward, Tyler & Co., *London*, for Shower and Douche Bracket. NEWCASTLE, 1882.

- Headley & Sons, *Cambridge*, for Hose Reel. CROYDON, 1879.
 Henderson, Osbert, *Glasgow*, for Albo-Carbon Light. GLASGOW, 1883.
 " " for Pendulous Food Warmers. GLASGOW, 1883.
 Heron, T., *Manchester*, for Duplex Burner. NEWCASTLE, 1882.
 Hildesheim, J., *Glasgow*, for Dicks' L'Extincteur. GLASGOW, 1883.
 Hill & Hey, *Halifax*, for Double Current Ventilators. GLASGOW, 1883.
 Hilliard, W. B., & Sons, *Glasgow*, for Isolating Curtain. GLASGOW, 1883.
 " " for Burn and Wound Boxes. GLASGOW, 1883.
 Hilton, W. H., *Leamington*, for various Inventions for Promoting Domestic Economy. STAFFORD, 1878.
 Hotblack, J., & Son, *Norwich*, for an Improved Shape of Boot. DUBLIN, 1884.
 Hutchinson, A., & Co., *Great Winchester Street, E.C.*, for India Rubber Gas Tubing. EXETER, 1880.
 Humpherson, F., *London*, for "Beaufort" Flush-down Closet. LEICESTER, 1885.
 " " for Siphon Flushing Cistern. LEICESTER, 1885.
 " " for Clip Pipe Joint. LEICESTER, 1885.
 Hydes & Wigfull, *Sheffield*, for Tortoise Slow Combustion Stoves. GLASGOW, 1883.
 " " for Tortoise Laundry Stove. GLASGOW, 1883.
 Hygienic Stove and Grate Company, 15, *Peel Buildings, Birmingham*, for "Eagle" Sanitary Trap, for superseding Bell Traps. CROYDON, 1879.
 Indian Tea Company, *Glasgow*, for Indian Tea. GLASGOW, 1883.
 Irvine & Co., *Gateshead*, for Mustard. NEWCASTLE, 1882. GLASGOW, 1883.
 Jennings, G., *Stangate, London*, for "Artisans' Dwellings Sink." CROYDON, 1879.
 " " for Universal Shampooing Apparatus. CROYDON, 1879.
 Jennings, T., *Lambeth*, for Hospital Flooring. LEICESTER, 1885.
 Jewsbury & Brown, *Manchester*, for Seltzer Water. STAFFORD, 1878.
 Jeyes' Sanitary Compounds Company, *Cannon Street, E.C.*, for Jeyes' Perfect Purifier. CROYDON, 1879. NEWCASTLE, 1882. GLASGOW, 1883. DUBLIN, 1884.
 " " for Jeyes' Household Disinfecting Soaps. LEICESTER, 1885.
 Johnson, W. F., *Leicester*, for his Exhibit of Repoussé and other Brass Work. LEICESTER, 1885.
 " " for Galvanized Iron Dust-Bin. LEICESTER, 1885.
 Kenworthy, E. N., & Co., *Oldham*, for Paragon Washing Machine with Canadian Washer. LEICESTER, 1885.
 Kirk, E. G., *Huddersfield*, for Night Soil Receptacle with Spring Lid. LEICESTER, 1885.
 Kirsop & Co., *Newcastle-upon-Tyne*, for Paragon Washing Machine, with Canadian Washer. NEWCASTLE, 1882.

- Kite, C., & Co., *London*, for Outlet Ventilator. NEWCASTLE, 1882.
 " " for Noiseless Chimney Breast Outlet Ventilator. NEWCASTLE, 1882.
 " " for Wall Inlet Ventilator. NEWCASTLE, 1882.
 " " for Telescoped Wall Inlet Ventilator. GLASGOW, 1883. DUBLIN, 1884.
 Knell, U., 77, *Fore Street, E.C.*, for "Imperial" Ventilating Window. LEICESTER, 1885.
 Ladies' Sanitary Association, *Berners Street, W.*, for Publications. CROYDON, 1879.
 Larmouth, Thomas, & Co., *Salford*, for Dual Desk, with Separate Gangway Seat. STAFFORD, 1878.
 Leggott, W. & R., *Bradford*, for Opener for Fanlights and Skylights. STAFFORD, 1878.
 Leicester Ambulance Corps, for Hand Ambulance. GLASGOW, 1883. DUBLIN, 1884.
 Leoni, S., & Co., *Strand, W.C.*, for "Rheometer" Street Lamp Regulator. LEICESTER, 1885.
 Lewis, Mrs. A., *Manchester*, for Tin Cooking Utensils. STAFFORD, 1878.
 London Necropolis Company, *Strand, W.C.*, for "Earth to Earth" Coffins. CROYDON, 1879.
 McCallum, J. B., *Stafford*, for Improved Non-Absorbent Tub or Pail Van. STAFFORD, 1878.
 McGeoch, W., & Co., *Glasgow*, for Dow's Close and Open Fire Cooking Range. EXETER, 1880.
 Maguire & Son, *Dublin*, for Dr. Scott's Disinfecting Apparatus. GLASGOW, 1883.
 " " for White Enamelled Fireclay Sinks. NEWCASTLE, 1882. DUBLIN, 1884.
 " " for Cast-iron Drain Pipes, coated with Angus Smith's Preparation. DUBLIN, 1884.
 " " for Marsden Tiling for Wall Decoration. DUBLIN, 1884.
 " " for New Laundry Stove and Copper Boiler. DUBLIN, 1884.
 " " for Wilcocks' Automatic Flushing Closet. DUBLIN, 1884.
 Maignen, P. A., 20 & 23, *Great Tower Street, E.C.*, for "Bijou" Filtre Rapide. EXETER, 1880.
 " " for Improved Filtre Rapide. NEWCASTLE, 1882.
 " " for Anti-Calcaire Powders for Softening Water. GLASGOW, 1883.
 " " for the Soldier's Filter. LEICESTER, 1885.
 " " for Field Hospital Filter. LEICESTER, 1885.
 Maling, C. T., *Newcastle-upon-Tyne*, for Sanitary Earthenware. NEWCASTLE, 1882.
 " " for Lavatory Basin with Flushing Rim. NEWCASTLE, 1882.
 Manlove, Alliott, Fryer & Co., *Nottingham*, for Lyon's Disinfecter. NEWCASTLE, 1882.

- Mather & Armstrong, *Newcastle-upon-Tyne*, for Hink's Duplex Lamp, with Extinguisher. NEWCASTLE, 1882.
 " " for Steam Heating Apparatus, combining heating and ventilating. NEWCASTLE, 1882.
 Midland Educational Co., *Leicester*, for the "Reliance" Lift-up Desk. LEICESTER, 1885.
 Mitchell, James, *Newcastle-upon-Tyne*, for Mitchell's Steam Washer. NEWCASTLE, 1882.
 Morgan, J., *Dublin*, for Pith Helmet. DUBLIN, 1884.
 Morrison, W. B., *Glasgow*, for "National" Water Closet. GLASGOW, 1883.
 Murton, H. A., *Newcastle-upon-Tyne*, for 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.
 Nightingale & Co., *Great Grimsby*, for Method of Wood Block Flooring. LEICESTER, 1885.
 Oates & Green, *Horley Green Fire Clay Works, Halifax*, for Drain-cleaning Rods, and Stoneware Horse Manger. STAFFORD, 1878.
 Onions, J. C. (Limited), *Birmingham*, for Moser's Self-Acting Dry Closet. CROYDON, 1879.
 Parker, J., *Woodstock*, for Dry Earth Commode without Separator. EXETER, 1880.
 Parr, J., & Co., *Leicester*, for their Exhibit of Bicycles and Tricycles. LEICESTER, 1885.
 Patent Porous Carbon Co., *London*, for Porous Carbon for Filtering Water. LEICESTER, 1885.
 Patent Victoria Stone Company, *Kingsland Road, E.*, for Artificial Stone Tubes. CROYDON, 1879.
 Pearson & Co., *Dublin*, for the Institution Bed with Woven-Wire Mattress. DUBLIN, 1884.
 Pennycook Patent Glazing and Engineering Co., *Glasgow*, for the system of Glazing without Putty. GLASGOW, 1883.
 Pim Bros., Limited, *Dublin*, for the Victoria Knitting Machine. DUBLIN, 1884.
 " " for the Hinged Cot. DUBLIN, 1884.
 Potts & Co., *Handsworth, Birmingham*, for Edinburgh Air-Chambered Sewer Trap. STAFFORD, 1878.
 Pringle, R., M.D., *Blackheath*, for Working Model of Cattle Drinking Trough. LEICESTER, 1885.
 Pritchett, G. E., 20, *Spring Gardens, S.W.*, for Warming and Ventilating Appliances. STAFFORD, 1878.
 " " for Thermometrical Instruments. STAFFORD, 1878.
 " " for Barometrical and Thermometrical Instruments. CROYDON, 1879.
 " " for Corrugated Iron Hot-Water Warming Appliances. EXETER, 1880.

- Pritchett, E. G., for Improvements in Thermometrical and Barometrical Instruments. EXETER, 1880.
- Ransome, S. E., & Co., 10, *Essex Street, W.C.*, for "Milwaukee" Glass Lantern or Hurricane Lantern. CROYDON, 1879.
- Rimington Bros. & Co., *Newcastle-upon-Tyne*, for Dean's Gully Trap. NEWCASTLE, 1882.
- " " for Enamelled Fire Clay Bath. NEWCASTLE, 1882.
- Ross, W., *Glasgow*, for Improved Paragon Valve. GLASGOW, 1883.
- Ruffard & Co., *Fire-Clay Works, Stourbridge*, for Porcelain Baths, moulded and glazed in one piece. STAFFORD, 1878.
- Salmon, Barnes & Co., *Ulverston*, for Revolving Shutters with Balance Weight Motion. EXETER, 1880.
- Sanitary & Highway Appliance Co., *Sheffield*, for Roberts's Asphalte Cauldron. LEICESTER, 1885.
- Scott, A. & R., *Glasgow*, for Midlothian Oat-flour. GLASGOW, 1883.
- Scott, F. R., & Co., *Dublin*, for Solid Oak Parquet Flooring. DUBLIN, 1884.
- " " for exhibit of Furniture. DUBLIN, 1884.
- Selig, Sonenthal & Co. (Limited), *Lambeth Hill, Queen Victoria Street, E.C.*, for Safety Belt Shippers. CROYDON, 1879.
- Shanks & Co., *Glasgow*, for Cast Iron Bath. GLASGOW, 1883.
- " " for Porcelain Lavatories, with moveable caps for access to fittings. GLASGOW, 1883. DUBLIN, 1884.
- " " for "Eureka" Spray and Plunge Bath. GLASGOW, 1883.
- Sharman, T., *Leicester*, for Heating Apparatus for Small Greenhouses. LEICESTER, 1885.
- Sharp, C. H., & Co., *High Holborn, E.C.*, for Ornamental Inlet Ventilators. EXETER, 1880.
- Sharp, Jones & Co., *Bourne Valley Pottery, Poole, Dorset*, for Rock Concrete Tubes. CROYDON, 1879.
- Shone, Isaac, *Wrexham*, for Pneumatic Liquid Ejector. STAFFORD, 1878.
- Short, Patrick, *Dublin*, for the Rhinoceros Hide "S" Boot. DUBLIN, 1884.
- Silicated Carbon Filter Company, *Battersea*, for Silicated Carbon Double Chambered Table Filters. EXETER, 1880.
- " " for Silicated Carbon Filtering Material. NEWCASTLE, 1882.
- Sinclair, J., 104, *Leadenhall Street, E.C.*, for Chemical Fire Exterminator. CROYDON, 1879.
- Skinner, G. H., 13, *North Street, Exeter*, for Seltzer, Soda and Potash Waters, and Orange Quinine Tonic. EXETER, 1880.
- Smith, E., & Co., *Coalville*, for Red Building Bricks. LEICESTER, 1885.
- " " for Photographic Embossed and Incised Tiles. LEICESTER, 1885.
- Smith, Elder & Co., *London*, for Sanitary Publications. NEWCASTLE, 1882. GLASGOW, 1883. DUBLIN, 1884.

- Smith, James, *Liverpool*, for Open Grate for consuming Smoke. NEWCASTLE, 1882.
- Smith, J., & Sons, *Wolverhampton*, for Closed Sectional Sanitary Van. LEICESTER, 1885.
- Snell, H. Saxon, *Southampton Buildings*, for Thermhydic Ventilating Hot-Water Open Fire Grate. STAFFORD, 1878.
- Staynes & Sons, *Leicester*, for Boot and Shoe Uppers. LEICESTER, 1885.
- Stephan, J. A., *Worcester*, for Carbonised Iron Stone Mound Filter for Water. EXETER, 1880.
- Stephenson & Travis, *Liverpool*, for Stypium Absorbent Antiseptic Surgical Dressings. DUBLIN, 1884.
- Stewart, J., Sen., *Glasgow*, for Disconnecting Chamber for House Drains, with open Stoneware Channels. GLASGOW, 1883.
- Stidder & Co., 50, *Southwark Bridge Road, S.E.*, for Swivel, Lock Plug, and Overflow for Sink. CROYDON, 1879.
- Stiff, James, & Sons, *Lambeth, London*, for Weaver's Ventilating Sewer Air Trap. STAFFORD, 1878. LEICESTER, 1885.
- " " " " for their Exhibit of Architectural Terra Cotta. LEICESTER, 1885.
- Straker & Love, *Newcastle-upon-Tyne*, for Large Fire-clay Drain-pipes. NEWCASTLE, 1882.
- Stretton, S., *Kidderminster*, for Folding Bier and Car for Simplifying Funerals. CROYDON, 1879.
- Taylor & Co., *Driffield & London*, for "Simplex" Desk with Adjustable Foot Board. LEICESTER, 1885.
- Thomasson & Key, *Worcester*, for Cup Grating for Sinks. NEWCASTLE, 1882.
- Thorn & Co., *Stafford*, for Artificial Stone Filters, for Cleansing Rain Water for Domestic Use. STAFFORD, 1878.
- Thornburn, William, *Borough Bridge*, for Tubular Calorifer for Greenhouses. NEWCASTLE, 1882.
- Torrance, W. H., *Edinburgh*, for Rusks, Shortbread, and Oatcakes. LEICESTER, 1885.
- Townsend & Co., *Newcastle-upon-Tyne*, for China Cups and other Vessels for Invalid use. NEWCASTLE, 1882.
- Trott, H., *Battersea*, for Bib Valves for Hot and Cold Water. LEICESTER, 1885.
- Twyford, T., *Hanley*, for Lavatory Basins. DUBLIN, 1884.
- " " for Slop Sinks. DUBLIN, 1884.
- " " India-Rubber Connection for Joining Lead and Earthenware Pipes. DUBLIN, 1884.
- Tylor, J., & Sons, 2, *Newgate Street, E.C.*, for "Clear Way" Regulator Valve Water Closet, without overflow communicating with Valve Box. EXETER, 1880.
- " " for Improved Enamelled Iron Slop Sink, with Regulator Supply Valve. EXETER, 1880.
- " " for Improved Full-Way Stop Valve. EXETER, 1880.
- " " for "Waste Not" Regulator Valve. EXETER, 1880. NEWCASTLE, 1882.

- Tylor, J., & Sons, for Hospital Slop Sink, with Waste-not Regulator Valve. NEWCASTLE, 1882.
- " " for Bath Locking Valves for preventing waste of water. NEWCASTLE, 1882.
- " " for Flushing-rim Lavatory Basin, with Quick Waste. NEWCASTLE, 1882.
- " " for Flush-out Urinal Basin. NEWCASTLE, 1882.
- " " for Joint for Lead Pipes. NEWCASTLE, 1882.
- " " for Water-closets. NEWCASTLE, 1882.
- Tyrrell, Brooke, *Dublin*, for exhibit of Furs. DUBLIN, 1884.
- Vernon's Patent China and Glass Company, *London*, for Noiseless Ware. GLASGOW, 1883.
- Vipan & Headly, *Leicester*, for Heavy Steel Railway Churn, with Malleable Top and Dust-proof Lid. LEICESTER, 1885.
- " " for Danish Cream Separator. LEICESTER, 1885.
- Walker, Turnbull & Co., *Falkirk*, for Simplex Cooking Range. GLASGOW, 1883.
- Waller, Thomas, 47, *Fish Street Hill, E.C.*, for Cooking Stove with Warm-Air Chamber. CROYDON, 1879.
- Walton, F., & Co., *London*, for "Linerusta Walton." GLASGOW, 1883.
- Warner, J., & Sons, *London*, for Lever Nut for Boiler Cock. LEICESTER, 1885.
- Watson, Henry & Son, *Newcastle-upon-Tyne*, for "National" Water-closet. NEWCASTLE, 1882.
- " " for Waste-preventing Flushing Syphon. NEWCASTLE, 1882.
- " " for "Crown" Cottage Water-closet. NEWCASTLE, 1882.
- Webb, A., *Dublin*, for the "Natural" Boot for Ladies. DUBLIN, 1884.
- Webster & Co., *Nottingham*, for Webster's Photometer. CROYDON, 1879.
- Wenham & Co., *Church Street, Croydon*, for Boyle's Mica-Valved Outlet Ventilator. CROYDON, 1879.
- Wheeler, J., *Ilfracombe*, for "Pixene." GLASGOW, 1883.
- White, William, *Abergavenny*, for Hygeian Rock Building Composition. NEWCASTLE, 1882.
- Whitwick Colliery Co., *Coalville, Leicester*, for their Exhibit of Terra Cotta. LEICESTER, 1885.
- " " for Red Building Bricks. LEICESTER, 1885.
- Wilby, W., *Dublin*, for Chain Belting for Machinery. DUBLIN, 1884.
- Willcock & Co., *Burmantofts, Leeds*, for Fire-Clay Sanitary Sinks and Water Troughs. CROYDON, 1879.
- Willey & Co., *Exeter*, for Gaseliers and Gas Brackets. EXETER, 1880.
- Wippell Bros. & Row, 231, *High Street, Exeter*, for Ransome's Artificial Stone Air Brick. EXETER, 1880.
- " " for Conservatory Boiler, with Hot-Water Pipe. EXETER, 1880.

- Wippell Bros. & Row, for Cottage Range. EXETER, 1880.
- " " for Chappuis' Daylight Reflector. EXETER, 1880.
- " " for Fernby's "Paragon" Camp Furniture. EXETER, 1880.
- " " for Improved Housemaid's Box with Sifter. EXETER, 1880.
- Woodhouse & Rawson, *London*, for their Magnetic Cut Out for Electric Lighting. LEICESTER, 1885.
- Wortley Fire Clay Co., *Leeds*, for White Enamelled Straight and Curved Channels, and Channel Junctions for Inspection Chambers to Drains. LEICESTER, 1885.
- Wragg, T., & Sons, *Burton-on-Trent*, for Gordon's Junction Blocks, for Lamp-holes and Inlets to Sewers. LEICESTER, 1885.
- " " for Gordon's Disconnecting Trap. LEICESTER, 1885.
- " " for Mawbey's Joint for Stoneware Pipes. LEICESTER, 1885.
- Wright, A., *London*, for Sanitary Night Lights. LEICESTER, 1885.
- Wright, Bros., *Leicester*, for Gordon's Ventilating Manhole Covers for Sewers, with Annular Dirt Box. LEICESTER, 1885.
- " " for Gordon's Iron Ventilating Cover for Disconnecting Trap. LEICESTER, 1885.
- Wright & Stevens, for Syphon Flushing Cistern. NEWCASTLE, 1882.
- Wright, John & Co., *Birmingham*, for "Cosey" Portable Open Gas Fire, with Platinum Wire and Asbestos Packing. NEWCASTLE, 1882.
- " " for Ventilating open Gas Fire. DUBLIN, 1884.
- " " for Large Gas Cooking Stove with Boiler. LEICESTER, 1885.

ADDRESSES AND PAPERS READ BEFORE THE INSTITUTE AT
THE CONGRESS & OTHER MEETINGS DURING 1885.

PROFESSOR F. S. B. F. DE CHAUMONT, M.D., F.R.S.	President's Address to the Congress.	LEICESTER, 1885.
ARTHUR RANSOME, M.A., M.D., L.S.A., F.R.S.	Address to Section I.	LEICESTER, 1885.
PERCIVAL GORDON SMITH, F.R.I.B.A.	" "	II. LEICESTER, 1885.
WILLIAM MARCET, M.D., F.R.MET.SOC., F.C.S., F.R.S.	" "	III. LEICESTER, 1885.

ANGELL, LEWIS, M.INST.C.E.	Impediments to Sanitary Progress.	LEICESTER, 1885.
BUCK, W. E., M.D.	Infantile Diarrhoea.	LEICESTER, 1885.
BUCKLEY, J. H.	Ambulance Work.	LEICESTER, 1885.
CARPENTER, ALFRED, M.D., M.R.C.P., C.S.S.CAMB.	(Address). Annual Meeting, 1885.	LEICESTER, 1885.
CASSAL, CHARLES E., F.C.S., F.I.C.	Hygienic Analysis.	LEICESTER, 1885.
COLES, W. R. E.	Smoke Abatement.	LEICESTER, 1885.
CORFIELD, PROF. W. H., M.A., M.D.	The Water Supply of Ancient Roman Cities. (Address). Anniversary Meeting, July, 1885.	LEICESTER, 1885.
DE VIESCA, COUNTESS.	Sanitary House Management.	LEICESTER, 1885.
GALTON, CAPTAIN DOUGLAS, R.E., C.B., F.R.S.	Prevention is better than Cure. Address to the Working Classes.	LEICESTER, 1885.
GORDON, J., M.INST.C.E.	Drainage of Continental Towns.	LEICESTER, 1885.
HART, ERNEST.	The Essentials of Local Government Reform. Lecture to the Congress.	LEICESTER, 1885.
LAWRENCE, REV. F.	The Danger to Health arising from Burial in Imperishable Coffins.	LEICESTER, 1885.
LYTE, F. MAXWELL, F.C.S.	The use of Sodium Aluminate for Softening and Purifying Sewage and Waste Water from Factories.	LEICESTER, 1885.
PAUL, JOHN D., F.G.S.	The Valley of the Soar.	LEICESTER, 1885.
PRINGLE, R., M.D.	Vaccination versus Isolation as a preventive of outbreaks of Small-pox.	LEICESTER, 1885.
ROBINS, E. C., F.S.A., F.R.I.B.A.	Ventilation of Chemical Laboratories and Science Schools generally.	LEICESTER, 1885.
SCOTT, F.	Sanitary Reform and Voluntary Effort.	LEICESTER, 1885.
SCOTT, F.	Plumbing and Plumbers' Work.	LEICESTER, 1885.
SNELL, H. SAXON, F.R.I.B.A.	Circular Hospital Wards.	LEICESTER, 1885.
UNDERWOOD, JOHN.	History of Sewerage and Sewage Treatment, Leicester.	LEICESTER, 1885.
WHITAKER, W., B.A., F.G.S.	On a recent Legal Decision of importance in connection with water supply from wells.	LEICESTER, 1885.

LIST OF DONATIONS.

DONATIONS TO LIBRARY DURING 1885.

TITLE.	PRESENTED BY
Aberdeen Royal Infirmary, Report on.	W. J. SIMPSON, M.D.
American Public Health Association, Thirteenth Annual Report.	IRVING A. WATSON.
Australian Health Society, Ninth and Tenth Annual Report, 1884.	AUSTRALIAN HEALTH SOCIETY.
Corfield, Prof. W. H., M.A., M.D., Dwelling Houses, their Sanitary Construction and Arrangement.	PROF. W. H. CORFIELD, M.A., M.D.
Corfield, Prof. W. H., M.A., M.D., La Science Ennemie de la Maladie.	PROF. W. H. CORFIELD, M.A., M.D.
Cutts, W. Henry, M.D., Injurious Effects of Close Confinement and Overwork.	AUSTRALIAN HEALTH SOCIETY.
Doyle, Patrick, C.E., Paper Making in India.	PATRICK DOYLE.
Eaton, J., M.D., Remarks on Hospitals.	J. EATON, M.D.
Engineers, Society of, Transactions for 1884.	SOCIETY OF ENGINEERS.
Ferrière, M. le Dr. F., Rapport sur les Visites Sanitaires Instituées par le Conseil Administratif de la Villa de Genève.	M. LE DR. F. FERRIÈRE.
Health Exhibition, Guide to the Sanitary and Insanitary Houses in.	PURCHASED.
Hospital Association, First Annual Report of the.	THE HOSPITALS' ASSOCIATION.
Hospital Association, Journal of.	J. L. CLIFFORD SMITH.
Inebriety, Society for the Study and Cure of, Proceedings.	SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.
Inebriates, Report of the Homes for.	H. K. LEWIS.
Italie, Les Institutions Sanitaires en.	SOCIETA ITALIANA D'IGIENE.
Jackson, W., Leicester Castle, Kirby Muxloe Castle, Trinity Hospital.	W. JACKSON.

- Jerram, G. B., Third Inaugural Address to the Association of Public Sanitary Inspectors. G. B. JERRAM.
- Kramer, Folkert N., Die Radikalheilung der Diphtheritis ohne Nachkrankheiten im Kindesalter. AUTHOR.
- Lambeth, Report of the Medical Officer of Health of the Parish of. J. BAXTER.
- Lincoln, Report of the Medical Officer respecting the Water Supply of the City of. C. HARRISON, M.D.
- Maguire, W. R., Plumbing. W. R. MAGUIRE.
- Medical Officers of Health, Transactions of the Society of. SHIRLEY F. MURPHY.
- Medical Science in Japan, Supplement to the Transactions of the Society for the advancement of. SOCIETY FOR THE ADVANCEMENT OF MEDICAL SCIENCE IN JAPAN.
- Merryweather, J. C., Fire Protection of Mansions. J. C. MERRYWEATHER.
- Metropolitan Board of Works, Report of, for 1884. J. BAXTER.
- Metropolitan Sewage Discharge, Minutes of Evidence before the Royal Commission. PROF. F. DE CHAUMONT, M.D., F.R.S.
- Metropolitan Sewage Discharge, Second and Final Report of the Commissioners on. PROF. F. DE CHAUMONT, M.D., F.R.S.
- New Hampshire State Board of Health Reports, 1883. STATE BOARD OF HEALTH.
- National Board of Health, Annual Report, 1881. RUDOLPH HERING.
- North of England Society of Mining and Mechanical Engineers, Transactions of the. NORTH OF ENGLAND SOCIETY OF MINING AND MECHANICAL ENGINEERS.
- Ohren, Magnus, Assoc. M. Inst. C. E., Advantages of Gas for Cooking and Heating. MAGNUS OHREN, A.M. Inst. C. E.

PERIODICALS:—

- British Architect (weekly). THE EDITOR.
- British Mail (monthly). THE EDITOR.
- Journal d'Hygiene (weekly). THE EDITOR.
- Journal of Medicine (monthly). THE EDITOR.
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- Sanitary Engineer, New York (weekly). THE EDITOR.
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- Sanitary Record (monthly). THE EDITOR.
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- Society of Arts Journal (weekly). THE SOCIETY.
- Statistisches amt der Stadt, Berlin (weekly). THE EDITOR.
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- Public Sanitary Inspectors, Association of, Second Annual Report. G. B. JERRAM.
- Robins, E. C., F.S.A., F.R.I.B.A., The Growing Importance and Responsibility of Public Sanitary Inspectors. E. C. ROBINS, F.S.A.
- Robins, E. C., F.S.A., F.R.I.B.A., on The Impermeable Construction of Roofs, Walls, and Basement Floors, with reference to Ventilation and Warming incidental thereto. E. C. ROBINS, F.S.A.
- Robinson, Prof. H., M. Inst. C. E., The Lower Thames Valley Main Sewerage. PROF. H. ROBINSON.
- Royal Meteorological Society Quarterly Journal, 1885. ROYAL METEOROLOGICAL SOCIETY.
- Royal Institution of Great Britain, Proceedings of the, Vol. XI., Part 1. ROYAL INSTITUTION OF GREAT BRITAIN.
- Roster, Dott Giorgio, Il Pulviscolo Atmosferico ed i suoi microrganismi studiati dal lato Fisico chimico e biologico. DOTT GEORGIO ROSTER.
- Sanitary Science. W. J. SIMPSON, M.D.
- Simpson, W. J., M.D., Report to the Members of the Public Health Committee on an outbreak of Typhoid Fever in Aberdeen. W. J. SIMPSON, M.D.
- Société d'Hygiène de Genève, Publications de la, Nos. 3 and 4. SOCIETE D'HYGIENE DE GENEVA.
- Societa Italiana d'Igiene Giornale Della. SOCIETA ITALIANA D'IGIENE.
- Springthorpe, J. W., M.A., M.D., Unseen Enemies, and how to fight them. AUSTRALIAN HEALTH SOCIETY.
- Standfield, John, Chief Cause of Want of Employment and Loss of Revenue. JOHN STANDFIELD.
- Strata of Northumberland and Durham, an Account of the, as proved by Boring and Sinking. NORTH OF ENGLAND INSTITUTE OF MINING AND MECHANICAL ENGINEERS.

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| Surveyors' Institution, Transactions.
Sydney, New South Wales, The Australian
Sanitary Conference of 1884. | SURVEYORS' INSTITUTION.
J. A. THOMPSON. |
| Sydney, New South Wales, Report and
Minutes of Proceedings of the Wood
Pavement Committee. | J. A. THOMPSON. |
| Topley, William, F.G.S., A.M.Inst.C.E.,
The National Geological Surveys of
Europe. | WILLIAM TOPLEY,
M.Inst.C.E. |
| Torre, Le Dr. F. La, L'Alimentation du
Soldat en Temps de Paix. | DR. F. LA TORRE. |
| Tottenham Sanitary Association, Eleventh
Annual Report of the. | J. HOWARD. |
| Traitment des Eaux D'Égouts et assain-
issement des Fleuves et Rivières par le
procédé de l'Ingénieur Stoffel. | AUTHOR. |
| Waring, Col. G. E., Jun., How to Drain
a House; Practical information for
Householders. | COL. G. E. WARING, JUN. |
| Waring, Col. G. E., Jun., Sewerage and
Sewage Disposal. | COL. G. E. WARING, JUN. |
| Watford Local Board, Twelfth Annual
Report of the. | A. T. BRETT, M.D. |
| Whitechapel District, Report on the
Sanitary Condition of the. | J. LOANE. |
| Whitelaw, W., M.D., Directions for Pre-
venting the spread of Asiatic Cholera. | W. WHITELAW, M.D. |

LIST OF FELLOWS, MEMBERS, ASSOCIATES, AND SUBSCRIBERS
ELECTED DURING THE YEAR 1885.

FELLOWS.

1885. Feb. STRONG, Henry John, M.D., *Whitgift House, George Street, Croydon.*

MEMBERS.

* Life Members.

† Passed Examination for Local Surveyors.

1885. Sep. *†ANGELL, John A., A.M.Inst.C.E., 50, *Leyspring Road, Leytonstone, Essex.*
1885. Jul. BRACKETT, William, F.S.A., 42, *London Road, and 27, High Street, Tunbridge Wells.*
1885. Dec. BROWN, W. Ibbs, *St. Michael's Avenue, and Guildhall, Northampton.*
1885. Oct. CAMERON, SIR Charles A., F.R.C.S.I., C.S.S., 15, *Pembroke Road, Dublin.*
1885. Jul. *CASSAL, C. E., F.I.C., (Exam.) F.C.S., 34, *Castlebar Road, Ealing.*
1885. Jan. *COOPER, John, Jun., *Croydon.*
1885. Feb. JERRAM, George B., A.M.Inst.C.E., *Town Hall, Walthamstow.*
1885. Apr. *LE ROSSIGNOL, F., 1, *Gresham Buildings, Basinghall Street, E.C.*
1885. Jan. LONDON, Thomas, *Beeston Hill, Leeds.*
1885. Oct. MARCET, William, M.D., F.R.S., 39, *Grosvenor Street, W.*
1885. Sep. MILL, William, M.B.C.S., L.R.C.P., *Newbold, Shipston-on-Stour.*
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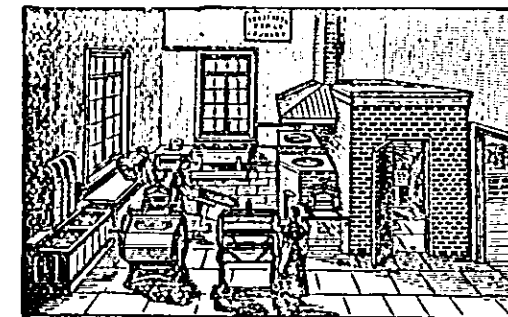
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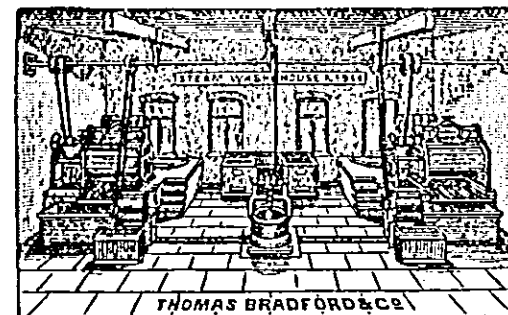
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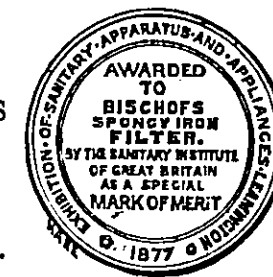


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"Fort George.—The Water at Fort George has at length been remedied by filtration through Spongy Iron Filters. The analyses after filtration were very favourable, and all complaints, so loud before, have ceased."

XIX. "Army Medical Report," pp. 170-171.

SPONGY IRON.—"This is a very powerful filtering substance. . . . The water filtered shows no tendency to favour the growth of low forms of life, and may be stored with impunity; water may also be left in contact with the medium for an indefinite period without undergoing any deterioration."

VI. "Report on Rivers' Pollution," p. 220.

ANIMAL CHARCOAL.—"The property, which Animal Charcoal possesses in a high degree, of favouring the growth of the low forms of organic life, is a serious drawback to its use as a filtering medium for potable waters." (See also XIX. Army Med. Rep., p. 170.)

?? Is it reasonable to assume, without proof, that Animal Charcoal, which upon the above official evidence FAVOURS the development of ?? Bacteria, will DESTROY such Bacteria as the Bacillus of Cholera or Typhoid? ??

THE
SPONGY IRON FILTER COMPANY,
22, NEW OXFORD STREET, LONDON, W.C.,

Sole Purveyors  by Appointment.

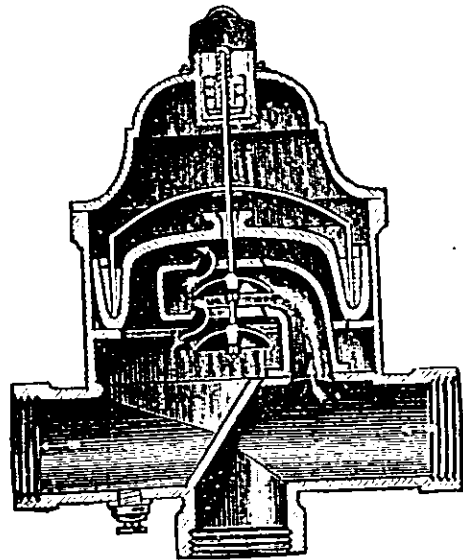
PRICE LIST, &c., FREE.

GG

For the awards given by the Institute see Appendix, page 422.

IMPORTANT NOTICE.

Messrs. JAMES STOTT & Co. beg to draw the attention of Architects, Builders, Gas and Sanitary Engineers, and all Gas Consumers, to the advantages to be derived from the adoption of



"THE STOTT" Patent Automatic GAS GOVERNOR,

Which is the only effectual means of reducing Gas Bills without diminution of light, saving from 15 to 40 per cent. in the Gas Bill.

"THE STOTT" has been awarded the highest prize of the Sanitary Institute of Great Britain for four successive years, also thirty-seven Gold, Silver, and Bronze Medals in seven years; and has been adopted by the Governments of Great Britain, the Colonies, France and Belgium; by Post and Telegraph Offices, Prisons, Barracks, Castles and Dock-yards; most of the large Railway Companies, including the London and North Western, Midland, Great Northern, North Eastern, London, Chatham, and Dover, Manchester, Sheffield, and Lincolnshire, Lancashire and Yorkshire, and Great Eastern; also by the School Boards of London, Leicester, Nottingham, Glasgow, Oldham, and Tottenham (over 200 London Board Schools fitted). Colleges, Hospitals, Asylums, Union Workhouses, Churches, Chapels, Schools, Halls, Mansions, Hotels, Banks, Manufactories, and business places of all kinds and sizes, having from 5 light to 1000 light meters, and everywhere gives the greatest satisfaction.

It controls the pressure, allowing one steady uniform flow to the burners, and thus prevents the hissing and roaring of flames that is so commonly noticed, and so frequently breaks the most artistic and expensive shades or globes. By using "The Stott" you get a brighter, clearer, and steadier light, with less heat, less smoke, and less smell, and consequently a purer and more healthy atmosphere, with less damage to pictures, paintings, furniture, curtains, drapery, and ornamental goods.

Therefore "THE STOTT" is a Boon and a Blessing to every user, as it saves him Time, Trouble, Pain, and the Pocket.

For Prospectus, Price Lists, Testimonials, &c.—

JAMES STOTT & CO.,
174, FLEET STREET, LONDON.
10, MARKET PLACE, MANCHESTER,
ESKELL CHAMBERS, NOTTINGHAM,
And VERNON WORKS, OLDHAM.

For the awards given by the Institute see Appendix, page 435.

Awarded HIGHEST HONOURS at all the Principal SANITARY EXHIBITIONS. South Kensington and Brighton, 1881; Newcastle-on-Tyne, 1882; Glasgow, 1883.

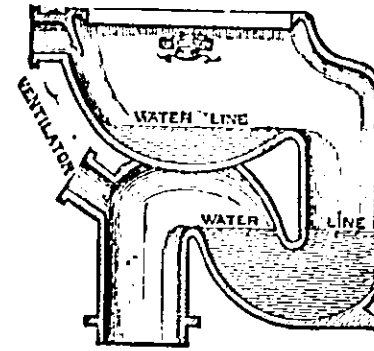
TWYFORD'S "NATIONAL" SIDE OUTLET CLOSET.

With Improved Flush (registered).

ADVANTAGES:—

Simplicity, Cleanliness, Efficiency, Cheapness.

Forming in itself a COMPLETE WATER CLOSET BASIN and TRAP, it has no complicated metal working parts to FOUL or get OUT OF ORDER, hence its SIMPLICITY and CLEANLINESS are apparent. Its EFFICIENCY is proved by the fact that the DEMAND is continually INCREASING; and while thousands are being sold annually, wherever properly fixed they have given the most complete SATISFACTION. Prices are much lower than those of any other first-class Closet claiming the same advantages.



Where a Front Outlet is preferred to a Side Outlet, a new Closet called the "ALLIANCE," on the same principle as the "National," can be substituted. Made either complete in one piece of earthenware, or in two pieces with Basin and Trap separate. In two pieces it can be had with either S or P Trap.

THE "CROWN" CLOSET.

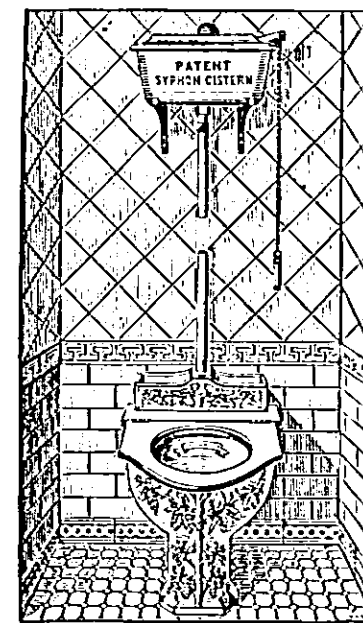
On same principal as "National," but made in two pieces only.
STRONG. CHEAP. SIMPLE.

THE PERFECTION OF CLEANLINESS, UTILITY, AND SIMPLICITY.

THE "UNITAS,"

FRONT OUTLET CLOSET BASIN AND TRAP,

Combining W. C. BASIN and TRAP with URINAL, has the following special advantages:—



It is not enclosed with woodwork, hence no filth can accumulate or escape detection, everything about it being kept sweet and clean with very little attention.

All joints and connections are in sight, and easy of access, and any leakage or other defect can be at once detected and remedied.

By lifting the hinged seat the Basin can be used as a Urinal without any risk of wetting the seat.

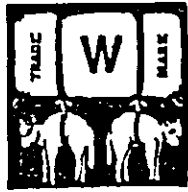
Made in three ways:—

- No. 1. With Raised Ornamentation, as shown, White or Ivory.
- No. 2. Plain—White, Ivory, or with Printed Pattern.
- No. 3. In Strong Fireclay—Specially adapted for Factories, Workhouses, Hospitals, Asylums, Schools, and all Public Buildings.

Every Closet is tested before leaving the Works with a two gallon Syphon Cistern, connected to the basin with a one inch flush pipe, and is guaranteed to immediately remove the soil from the Basin, and clear it out of the Trap, which is an important matter with closets of this kind; the whole of the Basin being thoroughly washed, and sufficient water being left in it to receive soil.

Sole Maker—TWYFORD, Hanley, Staffordshire.

For the awards given by the Institute see Appendix, page 423.



Non-Arsenical WALL PAPERS.

To be obtained of all the principal Decorators and Contractors,
and wholesale only of

WM. WOOLLAMS & CO., MANUFACTURING PAPERSTAINERS.

Original Makers of Artistic Wall Papers, guaranteed free from arsenic, hand-
made, of superior quality, including their

*New Patent Embossed Flocks, Dado Decorations,
Raised Flocks for Painting over,
Embossed Imitation Leather Papers, and
Real Embossed Leather.*

SPECIAL FACILITIES FOR PRINTING ARCHITECTS' PRIVATE PATTERNS.

Non-Arsenical Colors for Decorative Distemper Work.

Agents for and Printers of

Mr. J. ALDHAM HEATON'S
PRIVATE DESIGNS IN WALL AND CEILING PAPERS.

SIXTEEN MEDALS,

Including GOLD MEDAL, International Health Exhibition, 1884, and GOLD
MEDAL, Society of Architects, 1886, for PAPER-HANGINGS and
COLORS FREE FROM ARSENIC.

All Decorators should see

"TERGORINE," an artificial Leather,

A New Material for Wall-hangings, Screens, and other purposes, embossed,
painted, and lacquered, closely resembling leather in appearance, non-poison-
ous, free from unpleasant odour, and washable, as exhibited at the International
Inventions Exhibition, 1885, Stand 1662—SILVER MEDAL awarded.

Sole Address: 110, HIGH STREET,
Near Manchester Square, LONDON, W.

Messrs. WM. WOOLLAMS & CO. specially desire to caution the Trade
against Pattern Books closely resembling their own in general appearance,
and invite attention to their "Trade Mark" and Sole Address, as above.

For the awards given by the Institute see Appendix, page 419.

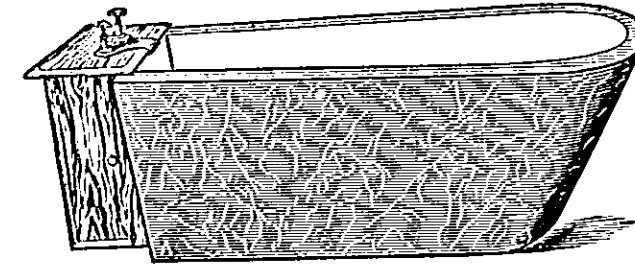
HALL'S PATENT PORCELAIN FIRE CLAY BATH,

MOULDED AND GLAZED IN ONE PIECE.

Length 67 inches. Width 30 inches. Depth 23 inches.

Price, with Fittings complete - - - - £12 10s.

PRIZE MEDALS
AWARDED.



International Health
Exhibition, 1883.
Glasgow Sanitary
Exhibition, 1884.

This Bath, being enamelled on the outside, requires no wood casing; can be easily
cleaned outside as well as inside, which is impossible with Baths cased in the ordi-
nary way. This, from a sanitary point of view, is an important fact. It is thus
suitable and strongly recommended for use in Hospitals, Infectious Wards, Work-
houses, Prisons, Schools, Asylums, Hotels, Public Baths, Private Houses, &c.
There is a great saving of expense in dispensing with the casing.

JOHN HALL & CO.,
STOURBRIDGE.

For the awards given by the Institute see Appendix, pages 420 and 431.

By Special Appointment to the Royal Commission for the Colonial and Indian Exhibition, London, 1885.
29 PRIZE MEDALS AND FIRST-CLASS CERTIFICATES FOR EXCELLENCE.
Prize Medal and Certificates of Merit of the Sanitary Institute of Great Britain.
Authorised by H. M. Board of Trade; also H. M. Government of India.

JEYES' 'PERFECT PURIFIER'

THE BEST AND CHEAPEST DISINFECTANT, DEODORISER, CURATIVE, AND CLEANSER.

Used by Government Establishments, the Royal Household, Corporation of London, Hospitals,
Sanitary Authorities, Markets, Railways, and Shipping Companies. Non-corrosive and Non-
poisonous in use. (SEE TESTIMONIALS.)

Supersedes Carbolic, being four times as efficacious. Prevents Contagion by destroying
its cause. Instantly Removes Bad Smells. It is an unfailing Destroyer of Insects and
Vermin, and although Poisonous to Parasites, is harmless to the higher animals.

Jeyes' 'Perfect Purifier.'

SIR ROBERT RAWLINSON, C.B., C.E., Local
Government Board.—"Undoubtedly the Disin-
fectant of the future. The best in use."

Jeyes' 'Perfect Purifier.'

DR. BARNARDO'S INFIRMARY.—"Most efficacious
in skin diseases and ulcerated wounds."
J. R. PRANKERD, M.D.

Jeyes' 'Perfect Purifier.'

PROFESSOR DUGALD CAMPBELL.—"Superior to
all Disinfectants and Antiseptics."

Jeyes' 'Perfect Purifier.'

SIR C. A. CAMERON, M.D., M.O.H., Dublin.
—"A most powerful sanitary agent, which I
strongly recommend to ward off the attacks of
contagious disease."

JEYES' SANITARY COMPOUNDS consist also of—

Jeyes' Sanitary Powder.

Jeyes' Sheep Dip.

Jeyes' Dog Soap.

Jeyes' Disinfectant Soaps.

For Household, Toilet, Stable, and

Veterinary uses.

THE BEST AND CHEAPEST! FREE FROM POISON!! MOST EFFICACIOUS AND HEALTHFUL!!!
Sold by all Chemists, Druggists, Stores, &c.

JEYES' SANITARY COMPOUNDS CO., Limited,
43, CANNON STREET, LONDON, E.C.

For the awards given by the Institute see Appendix, page 420.

GOLD MEDAL—HEALTH EXHIBITION.

PURE WATER SUPPLIES.

“ABYSSINIAN” AND ARTESIAN TUBE WELLS.

NORTON'S Patent “ABYSSINIAN” and ARTESIAN TUBE WELLS, which were awarded the Gold Medal at the Health Exhibition, have been for many years in successful operation at the Burton Breweries of Messrs. Allsopp & Sons, Bass & Co., Truman, Hanbury & Buxton, and numerous other Breweries throughout the Kingdom. The Tube Well System has also been adopted for the Town Waterworks of Aldershot, Watford, Hertford, Shrewsbury, Skegness, Alnwick, Wallingford, St. Albans, Abbott's Langley, Southwold, and Cirencester. Tube Wells can be sunk through rock, and have been made to a depth of over 800 feet.

ARTESIAN TUBE WELLS have been sunk on the estates of the Duchess of Montrose, the Rt. Hon. the Marquis of Salisbury, Earl Lonsdale, Earl of Cadogan, Earl of Lovelace, Earl Brownlow, Earl of Egmont, Lord Vernon, Lord Ebury, Lord Ashburton, Lord Justice Lindley, Hon. E. A. Pelham, Hon. W. Gerard, Rt. Hon. W. H. Smith, M.P., Corporation of London, &c. The Engineer of the Southampton Waterworks certified that two 12-in. Tube Wells, after being pumped continuously for a week, night and day, showed a calculated capacity of yield equal to an average supply of 1,500,000 gallons in 24 hours.

BORINGS BY STEAM POWER.

Geological Opinions and Estimates given on application to

LE GRAND & SUTCLIFF, Hydraulic Engineers,

Contractors to H.M. War Department,

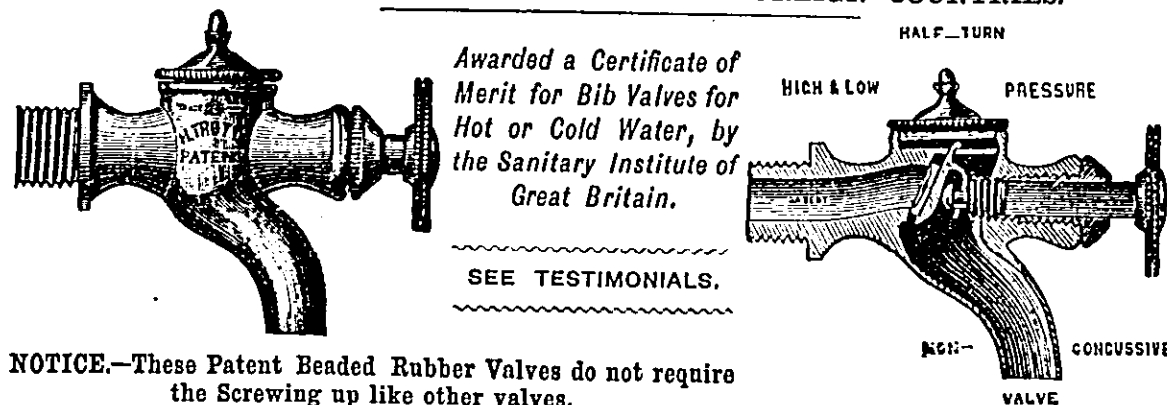
100, Bunhill Row, LONDON, E.C.

For the awards given by the Institute see Appendix, page 435.

H. TROTT'S PATENT QUICK FILLING BIB & OTHER VALVES FOR HIGH AND LOW PRESSURE WATER,

Approved by the New River and other Water Companies,

PATENTED IN ALL THE PRINCIPAL FOREIGN COUNTRIES.



NOTICE.—These Patent Beaded Rubber Valves do not require the screwing up like other valves.

DESCRIPTION.

These Patent Valves are strongly made, and consist of a sliding swinging valve in a chamber covered with a screwed cap, the unscrewing of which facilitates the removal of the inner valve, and the insertion of a new Patent Beaded Rubber when necessary, a work of the greatest simplicity and ease.

IMPORTANT ADVANTAGES.

1. H. Trott's Patent Valves are the most perfect, simple and effective Valves now in use.
2. They are quick filling.
3. The inner valve can be taken out from the top, by simply removing the top cap only.
4. The beaded rubber is simply pressed against the flat metal Bevel seating, there being no metal cutting edge which destroy the rubbers.
5. These valves only require a slight half turn for closing, and **DO NOT REQUIRE TO BE SCREWED UP LIKE OTHER VALVES.**
6. The seating being bevelled allowing all grit sediment in the pipes to pass, as there is a clear water way.

