

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 1886.

LOCAL SURVEYORS.

- Nov. 12, ANDERSON, JOHN REID, Norwood, S.E.
 June 4, BEARD, E. T., Lincoln.
 Nov. 12, CURWEN, JOHN F., Hampstead, N.W.
 Nov. 12, METCALF, JOHN W., York.
 June 4, MORLEY, J. G., Forest Gate, E.
 June 4, PARRY, W. HENRY, Monkstown, Co. Dublin.
 Nov. 12, SMITH, CHARLES CHAMBERS, Skipton.
 June 4, TULLOCH, F. H., A.M.Inst.CE., Southend.
 June 4, WITTS, T. W., Skelton-in-Cleveland.

INSPECTORS OF NUISANCES.

- June 4, ANDERSON, TOM, Camden Town, N.W.
 June 4, ASHDOWN, T., Brighton.
 Nov. 12, BARFOOT, JAMES, Battersea, S.W.
 Nov. 12, BARRON, JOHN, Stockwell, S.E.
 June 4, BARTLETT, GEORGE, Brixton.
 June 4, BASCOMBE, H. C., Bristol.
 June 4, BATEMAN, C. G., Pewsey, Wilts.
 June 4, BLACK, A. E., Inverness.
 Nov. 12, BOSTEL, DANIEL BARTLEY, Brighton.
 Nov. 12, BOSTEL, G. STANFORD, Charing Cross, S.W.
 Nov. 12, BOWYER, HARRY D., Slough.
 Nov. 12, BRADSHAW, EDMUND, Liverpool.

- June 4, BROOKE, J. W., Marlborough, Wilts.
 Nov. 12, BROWN, CHARLES E., Holloway, N.
 June 4, BROWNING, H., Brighton.
 June 4, BULL, A. R., Chelsea, S.W.
 June 4, BURSCOUGH, F. P., Oswaldtwistle.
 Nov. 12, CHADDERTON, ALBERT, Oldham.
 June 4, CHAMBERLAIN, R., Hammersmith.
 Nov. 12, CHRISTIE, DAVID, Hull.
 June 4, CLAYTON, EDWARD, Mansfield.
 Nov. 12, CLAYTON, WILLIAM HATCH, Cardiff.
 Nov. 12, COBIAM, G. W., Gravesend.
 June 4, COOPER, JAMES, Liverpool.
 June 4, COOPER, W. W., Hinckley.
 June 4, COX, CHARLES, Mile End, E.
 June 4, CRANE, S., Battersea, S.W.
 June 4, DARLEY, G., Leeds.
 Nov. 12, ELLIOTT, JOHN J., South Shields.
 June 4, EVANS, J. EVAN, Battersea, S.W.
 June 4, FREEMAN, T. H., Battersea.
 June 4, GARLAND, WILLIAM, Barnstaple.
 June 4, GREEN, WILLIAM, Cardington St., Euston Square, N.W.
 June 4, GUNN, ALEXANDER, Aberdeen.
 June 4, HAMPSON, M., Oldham.
 Nov. 12, HART, JOHN WILLIAM, Clapham.
 June 4, HAWORTH, JOHN, Whitefield.
 June 4, HILDRETH, J. W., Bishop's Road, E.
 Nov. 12, HODGES, A., Wolverhampton.
 Nov. 12, HUXLEY, JOSEPH, Bootle.
 Nov. 12, JAMESON, JOSHUA, Birmingham.
 Nov. 12, JONES, WILLIAM, Bangor.
 Nov. 12, JURY, EDGAR E., Chelsea Bridge, S.W.
 June 4, LEVERTON, J. H., Kilburn, N.W.
 Nov. 12, LINDOP, RICHARD C., Stoke-on-Trent.
 Nov. 12, LUKES, ARTHUR HENRY, Gravesend.
 Nov. 12, MACMAHON, CHARLES, Torquay.
 June 4, MASSEY, J. B., Burnley.
 Nov. 12, McCULLOCH, R., Liverpool.
 Nov. 12, McDONALD, ADAM LUKE, Gipsy Hill, S.E.

- June 4, MELLOW, S. W., St. Luke's, E.C.
 June 4, MUNRO, A. J., Enfield.
 Nov. 12, NEWBERRY, W. E., Ashford, Staines.
 June 4, NEWMAN, C. F., Tooting.
 Nov. 12, OLLETT, J. HENRY, Highgate Road, N.
 June 4, WREFORD, W. J. G., Exeter.
 Nov. 12, PARSONS, WILLIAM, Brighton.
 Nov. 12, PEARSON, WILLIAM ROBERT, Whitby.
 June 4, PHIMISTER, G., Lower Tooting.
 Nov. 12, POOLE, CHARLES, Battersea.
 June 4, PRESS, W. J., Burnham, Somerset.
 June 4, RADCLIFFE, J., Rochdale.
 Nov. 12, RAIMES, CHRISTOPHER, Westoo.
 Nov. 12, RUSSELL, GEORGE, Kensington.
 June 4, SALTER, T., St. Leonards-on-Sea.
 June 4, SARGENT, JOHN J., Camden Town, N.W.
 Nov. 12, SHORE, AMBROSE J., Peckham Rye.
 Nov. 12, SMITH, CHARLES CHAMBERS, Skipton.
 Nov. 12, SMITH, EDWIN, Acton.
 June 4, SMITH, J. C., Leeds.
 Nov. 12, SOPER, HENRY CHARLES, Camden Town, N.W.
 Nov. 12, SPADACCINI, HENRY, Popular, E.
 Nov. 12, STONE, A. W., Bromley, Kent.
 Nov. 12, TATE, WILLIAM, Kilburn, N.W.
 June 4, TAYLOR, S., Euston Grove, N.W.
 June 4, THOMPSON, A.M., Birmingham.
 June 4, TREADWELL, W. J., Westbury, Brackley.
 Nov. 12, TUNSTALL, JOHN, Liverpool.
 Nov. 12, TURNER, SAMUEL, Birmingham.
 June 4, WARREN, T. BUDD, Southam, near Rugby.
 Nov. 12, WEBB, JAMES A., Shepherd's Bush.
 June 4, WHEELER, W. F., Hackney, E.
 June 4, WILKINSON, J., Blackpool.
 Nov. 12, WILSON, CHARLES TURLE, Highbury.
 Nov. 12, WOOD, CHARLES BRUCE, Chelsea Bridge Road, S.W.

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.	1886. York.
Number of Exhibitors	117	116	189	106	110	126	134	135	130
Number of Exhibits	294	319	710	500	600	750	900	1,000	900
Space occupied (in square ft.) ... ..	.....	.....	.....	9,725	14,520	20,000	40,000	30,000	30,000
Number of days Exhibition was open	14	16	17	19	25	25	19	17	23
Total number of Visitors ... ..	.....	.....	.....	8,955	8,373	20,000	35,000	37,000	30,000
Number of Medals awarded	13	13	12	12	15	21	17	29	11*
Number of Special Certificates	None.	6	9	7	4	13	11	11	11
Number of Certificates	None.	21	38	40	72	58	84	81	56*
Number of Exhibits deferred for further trial ... ..	.....	7	52	30	37	44	39	119	42

* These do not include any awards which may be given for Deferred for further practical trial Exhibits.

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, Cambridgewell 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.
- Dæker Portable Hospital. Dæker Hospitals and Huts Factory,
London. YORK, 1886.
- 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. *YORK, 1886.
- 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.
- Willesden Paper Roofing. Waterproof Paper and Canvas Company,
London. YORK, 1886.
- Damp-proof Concrete Pavement. W. B. Wilkinson & Co. *Newcastle-*
upon-Tyne. NEWCASTLE, 1882.
- Silica Glazed and Enamelled Fire Clay Bricks and Faience. Will-
cocks & 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 Com-
pany, *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 Read, *Birming-*
ham. 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.
- Moulded Wood Decoration. J. F. & G. Harris, *London*.
YORK, 1886.
- 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.
- Faija's Cement Testing Machine. Casebourne & Co., *West Harle-*
pool. YORK, 1886.
- Fryer's Destructor, Fryer's Carbonizer, and Firman's Desiccating 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. *YORK, 1886.
- Equipoise Wringing and Mangling Machine. E. N. Kenworthy &
Co., *Oldham*. YORK, 1886.

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 Preventors.

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, 1881.

(6). Baths and Lavatories.

Porcelain Bath. Joseph Cliff & Sons, Leeds. GLASGOW, 1883. *YORK, 1886.
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, Newgate 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, Battersca, 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., Glasgow. 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. Harescough & Co., Bentinck 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. *YORK, 1886.
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. *YORK, 1886.

(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.

Fibre Asbestos Open Gas Fire. H. C. Davis & Co., London. *YORK, 1886.
Ventilating Tile Stove. Doulton & Co., Lambeth, London. EXETER, 1880. *NEWCASTLE, 1882. *GLASGOW, 1883. *DUBLIN, 1884. *LEICESTER, 1885.

- Horizontal Spiral Lavatory Heater. Thomas Fletcher, *Thymne 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.
 Enamelled "Metropolitan" Gas Cooking Stove. H. C. Davis & Co., *London.* YORK, 1886.
 Large Gas Cooking Stove with Boiler. Thomas Fletcher, *Thymne 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.
 Crabtree Kitchen Range. E. Foulds, *Leeds.* *YORK, 1886.
 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. *YORK, 1886.
 Magnetic Cut Out for Electric Lighting. Woodhouse & Rawson Electric Supply Company of Great Britain, *Bradford.* YORK, 1886.

(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.
 Sanitary Clothing. Dr. Jaeger's Sanitary Woollen System Co., *London.* YORK, 1886.
 Exhibit of Sanitary Clothing. E. Ward & Co., *Bradford.* YORK, 1886.

(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. Pockock 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.

- Exhibit of Dairy Appliances. Aylesbury Dairy Company, *London*.
YORK, 1886.
- 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.
*YORK, 1886.
- 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.
- Wickerwork and Brushes. Wilberforce School for the Blind, *York*.
YORK, 1886.

(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.

- Filtro Rapido. 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. *YORK, 1886.
- 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. *YORK, 1886.
- 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 Hygiène. 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.
Steel Wheel for Sanitary Carts. H. J. Barrett, *Hull*. YORK, 1886.
White Enamelled Bricks. Bourtreehill Coal Co., *Dreghorn, Ayrshire*.
DUBLIN, 1884.
White Glazed Facing Bricks. Broad & Co., *Paddington*.
LEICESTER, 1885.
Granite Vitriified 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.
Acme Door Check and Spring (double action). Hindle Norton &
Co., *Oldham*. YORK, 1886.
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.
Vitreous Floor Tiles. E. Smith & Co., *Coalville*. YORK, 1886.
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.
 Salt-Glazed Bricks. Wortley Fire Clay Company, *Leeds*.
 YORK, 1886.
 Fireproof Fixing Blocks. Wright & Co., *London*. YORK, 1886.
 White and Coloured Glazed Bricks. Wortley Fire Clay Company,
Leeds. YORK, 1886.

(2). Damp Proof Courses.

(3). Paints and other Protectives.

No awards.

(4). Wall Papers and Coverings.

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

(5). Flooring.

Immovable "Acme" System of Solid Wood Block Flooring. Duffy
 & Son, *London*. YORK, 1886.
 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. YORK, 1886.
 Solid Oak Parquet Flooring. F. R. Scott & Co., *Dublin*.
 DUBLIN, 1884.

(6). Decorative Materials.

Hall's Hanging Tiles. J. Cliff & Sons, *Leeds*. YORK, 1886.
 Improved Fibrous Plaster Work. Cordingley & Son, *Bradford*.
 YORK, 1886.
 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. YORK, 1886.
 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. YORK, 1886.
 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.

- Siphon Action Water-waste Preventer. H. Braithwaite & Co.,
Leeds. YORK, 1886.
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.

- Combined Flush-tank and Grease Interceptor. Adams & Co., *York.*
YORK, 1886.
"Invicta" Flushing Cistern. Goode & Co., *Loughborough.*
LEICESTER, 1885.
Siphon Flushing Cistern. F. Humpherson, *Chelsea, London.*
LEICESTER, 1885.
Siphon 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., *Dreghorn,*
Ayrshire. DUBLIN, 1884. LEICESTER, 1885.
White Enamelled Fire Clay Sinks. J. & M. Craig, *Kilmarnock.*
NEWCASTLE, 1882. GLASGOW, 1883.
White Enamelled Sinks. J. Cliff & Sons, *Leeds.* YORK, 1886.
"Imperial" Slop Sink. J. Cliff & Sons, *Leeds.* YORK, 1886.
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., 50, *South-*
wark 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. Willcock & Co.,
Burmantofts, Leeds. CROYDON, 1879.
White Enamelled Sinks. Wortley Fire Clay Company, *Leeds.*
YORK, 1886.

(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. Dinning & 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., *Walver-*
hampton. 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. Fer-
gusson & 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, Lon-*
don. 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.
DUBLIN, 1884.
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.
- Wilcock'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 com-
municating 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., *Dreghorn, Ayrshire*.
DUBLIN, 1884.
- 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, *New-*
castle-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. YORK, 1886.

(10). Traps.

- Potts' Edinburgh Sewer Trap. Adams & Co., *York*.
LEICESTER, 1885.
- Simplex Reversible Gully. J. Cliff & Sons, *Leeds*.
YORK, 1886.
- 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 & Pear-
son, *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
Chamels. J. Stewart, Sen., *Glasgow*. GLASGOW, 1883.
- Weaver's Ventilating Sewer Air Trap. James Stiff & Sons, *Lam-*
beth, London. STAFFORD, 1878. LEICESTER, 1885.
- Simpson's Street Gully. Wortley Fire Clay Company, *Leeds*.
YORK, 1886.
- Gordon's Disconnecting Trap. T. Wragg & Sons, *Burton-on-Trent*.
LEICESTER, 1885.

(11). Dry Closots.

- Self-Acting Earth Closet. British Sanitary Company, *Glasgow*.
EXETER, 1880.
- Moser's Self-Acting Dry Closet. J. C. Onions (Limited), *Birming-*
ham. 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.

- Air-tight Man-hole Door. A. T. Angell, *London*. NEWCASTLE, 1882.
GLASGOW, 1883.
- Woodman's Stoneware Screw Plug and Collar, for access to Drains.
Bailey & Co., *London*. YORK, 1886.
- Watts's Asphyxiator for Testing Drains with Smoke. Baird, Thomp-
son & Co., *Glasgow*. DUBLIN, 1884.
- White Enamelled Straight and Curved Channels for Inspection
Chambers to Drains. Broad & Co., *Paddington*.
LEICESTER, 1885.
- "Eclipse" Apparatus for Testing Drain and other Pipes. Burn &
Baillie, *London*. YORK, 1886.
- Galvanized Cast-iron Air-tight Inspection Chamber and Drain Pipes.
Burn & Baillie, *London*. YORK, 1886.
- Brian Jones's Joint for connecting Closet with Soil-pipe. Capper,
Son & Co., *London*. NEWCASTLE, 1882.
- White Enamelled Urinal Floor Channel. J. Cliff & Sons, *Leeds*.
YORK, 1886.
- Indiarubber Expanding Plug for Drain Testing. Burn & Baillie,
London. YORK, 1886.
- 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.
- Bronte's Air-tight Cast-iron Man-hole Cover. W. Phillips & Son,
London. YORK, 1886.
- "Siphozella" Pipe Fastening. G. W. Potter, *London*. YORK, 1886.
- 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.
- Nicholl's Hospital Pail. W. P. White & Co., *London*. YORK, 1886.
- White Enamelled Straight and Curved Channels, and Channel Junc-
tions 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.
- Lump 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. Dinning & Cooke, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
- Grates, Mantelpieces, and Over-mantels. Dinning & Cooke, *Newcastle-upon-Tyne*. NEWCASTLE, 1882.
- Glazed Ware Mantelpiece, with Slow Combustion Grate. Doulton & Co., *Lambeth, London*. DUBLIN, 1884.
- Marsh Greenall Regenerative Gas Heating Stove. J. Greenall, *Manchester*. YORK, 1886.
- Alcazar Vertical Steam Engine. E. S. Hindley, *Bornton, Dorset*. YORK, 1886.
- 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.
- Radiating Gas Fire. Chas. Wilson & Sons, *Leeds*. YORK, 1886.
- Conservatory Boiler, with Hot-Water Pipe. Wippell Bros. & Row, *Exeter*. EXETER, 1880.
- "Cosey" 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. McGeoch & 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.
- Large Gas Cooking Stove. Wright & Co., *Birmingham*. YORK, 1886.

(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.
- Cunningham Woodhouse & Rawson Magnetic Cut Out for Electric Lighting. Woodhouse & Rawson, *London*. LEICESTER, 1885.
- Combination Plug and Metre Bridge (Davies & Moynhan's Patent). Woodhouse & Rawson Electric Supply Company of Great Britain, *Bradford*. YORK, 1886.

(5). Ventilating Gas Burners.

No awards.

(0). 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.
- Ventilating Corsets. E. & C. Dillon, *York.* YORK, 1886.
- Ventilated Hats. W. Graham, *Dublin.* DUBLIN, 1884.
- Improved shape of Boot. J. Hotblack & Son, *Norwich.* DUBLIN, 1884.
- Camel's Hair Clothing and Bedding. Dr. Jaeger's Sanitary Woollen System Company, *London.* YORK, 1886.
- 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.
- Hygeia Corset. E. Ward & Co., *Bradford.* YORK, 1886.
- "Arachno" Flannel. E. Ward & Co., *Bradford.* YORK, 1886.
- "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.
- Wood's Double Woven Galvanized Steel Wire Spring Mattress. Longford Wire, Iron and Steel Company, *Warrington.* YORK, 1886.
- 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. Ancell 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, 1881.

(4). Domestic Appliances.

- Butter Squeezing Machine. Aylesbury Dairy Company, *London*. YORK, 1886.
 "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, *Fenchurch 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.
 New Cooker and Steamer. F. & C. Hancock, *Dudley*. YORK, 1886.
 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.
 Fishburn's Tubular Refrigerators. King & Co., *Hull*. YORK, 1886.

- Fishburn's Scarboro' Freezer. King & Co., *Hull*. YORK, 1886.
 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.
 Westminster Single Desk, with Sliding Top and Convex Support to the Seat. North of England School Furnishing Company, *Darlington*. YORK, 1886.
 "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. Bensdorp & Co., *London*. DUBLIN, 1884.
 Pickles and Sauces. Beveridge & Co., *Glasgow*. GLASGOW, 1883.
 Miller's Pride Oatmeal. Binns & Armitage, *Derby*. LEICESTER, 1885.
 Chocolate Paste. A. J. M. Bolonachi, *London*. YORK, 1886.
 Kepler's Extract of Malt and Combinations of it with Pepsine, Chocolate, and Cod Liver Oil. Burroughs, Wellcome & Co., *London*. DUBLIN, 1884.
 Preparations of Digestive Ferments. Burroughs, Wellcome & Co., *London*. YORK, 1886.
 Optimus Coffee Extract. E. Clarke & Co., *Battersca*. DUBLIN, 1884. LEICESTER, 1885. YORK, 1886.
 Currie Powders. J. Edmunds, *London*. NEWCASTLE, 1882.
 Chutneys. Jos. Edmunds, *London*. YORK, 1886.
 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.

Improved Oat Cakes. A. & R. Scott, *Glasgow*. YORK, 1886.
 Preserved Fruits. C. H. Senn & Co., *London*. YORK, 1886.
 Rusks, Shortbread, and Oateakes. W. H. Torrance, *Edinburgh*.
 LEICESTER, 1885. YORK, 1886.

(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, *Battersca, London*. EXETER, 1880.
 Silicated Carbon Filtering Material. Silicated Carbon Filter Com-
 pany, *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.
 "Lanolin" Soap. Burroughs, Wellcome & Co., *London*.
 YORK, 1886.
 Carbolic Soaps. F. C. Calvert & Co., *Manchester*. DUBLIN, 1884.
 LEICESTER, 1885. YORK, 1886.
 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.
 Preparations from Carbolic Acid. F. C. Calvert & Co., *Manchester*.
 YORK, 1886.
 Alum Cake. Dublin and Wicklow Manure Co., *Dublin*. DUBLIN, 1884.
 Jeyes' Perfect Purifier. Jeyes' Sanitary Compounds Company, *Cannon*
Street, London, E.C. CROYDON, 1879. NEWCASTLE, 1882.
 GLASGOW, 1883. DUBLIN, 1884. YORK, 1886.
 Pixene. J. Wheeler, *Hfracombe*. GLASGOW, 1883. DUBLIN, 1884.
 Sanitary Night Lights. A. Wright, *London*. LEICESTER, 1885.

(12) Disinfecting Apparatus.

Improved Vaporiser for Disinfecting. F. C. Calvert & Co., *Man-*
chester. 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.
 Schaible's Apparatus for the Estimation of Carbonate of Lime in
 Cement. Casebourne & Co., *West Hartlepool*. YORK, 1886.
 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). Provention 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, Sonnenthal & 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.
Silicato 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.
- Aylesbury Dairy Company, *London*, for Exhibit of Dairy Appliances. YORK, 1886.
- 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. P., *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.
- Calvert & Co., *Bradford*, for Calvert's Carbolic Acid for disinfecting purposes. LEAMINGTON, 1877. *CROYDON, 1879. *EXETER, 1880. *GLASGOW, 1883. *DUBLIN, 1884. *LEICESTER, 1885. *YORK, 1886.
- Carter, J., 6a, *Cavendish Street, W.*, for Invalid Furniture. EXETER, 1880.
- Casebourne & Co., *West Hartlepool*, for Faija's Cement Testing Machine. YORK, 1886.
- 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. *YORK, 1886.
- Colman & Glendenning, *Norwich*, for School Furniture. EXETER, 1880.
- Craig, J. & M., *Kilmarnock, N.B.*, for Enamelled Fireclay Sinks. DUBLIN, 1884.

- Davis, H. & Co., & Co., 200, *Camberwell Road, S.E.*, for Artisan Gas Cooking Stove. LEICESTER, 1885.
- Davis, H. & Co., & Co., *London*, for Fibro Asbestos Open Gas Fire. *YORK, 1886.
- Davis, H. & Co., & Co., *London*, for Enamelled "Metropolitan" Gas Cooking Stove. YORK, 1886.
- Dick, Alex., *London*, for Delta Metal. GLASGOW, 1883.
- Daker Hospitals and Huts Factory, *London*, for Daker Portable Hospital. YORK, 1886.
- Donegal Industrial Fund, for Innocuously-dyed Woollen Goods. DUBLIN, 1884.
- Doulton & Co., *Lambeth, London*, for Stanford's Joints for Stoneware 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.
- Foulds, E., *Leeds*, for Crabtree's Kitchen Range. *YORK, 1886.
- 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.
- General Gas Heating and Lighting Co., 66, *St. Paul Street, N.*, for Fibro Asbestos Open Gas Fire. LEICESTER, 1885.

- Greenall, J., *Manchester*, for Steam Washer.
LEICESTER, 1885. *YORK, 1886.
- 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.
" for Machines for Domestic use. GLASGOW, 1883.
*LEICESTER, 1885. *YORK, 1886.
- Haresceugh, 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.
- Harris, J. F. & G., *London*, for Moulded Wood Decoration.
YORK, 1886.
- 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.
- Dr. Jaeger's Sanitary Woollen System Company, *London*, for Sanitary Clothing.
YORK, 1886.
- 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.
- Kenworthy, E. N., & Co., *Oldham*, for Equipoise Wringing and Mangling Machine.
YORK, 1886.
- 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. *YORK, 1886.
- Leoni, S., & Co., *Strand*, for Apparatus for Cooking by Gas.
STAFFORD, 1878.
- Lyon, J. W., *London*, for Steam Disinfector.
LEICESTER, 1885. *YORK, 1886.
- 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.
- 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. *YORK, 1886.
- 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. *YORK, 1886.
- 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 "Sino quâ 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., *Kingston-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.
- Vipan & 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, E., & Co., *Bradford*, for Exhibit of Sanitary Clothing. YORK, 1886.

- Ward, O. D., *London*, for Household Water Closet. NEWCASTLE, 1882.
- " " for Bean's Direct Acting Valveless Waste Preventer. *NEWCASTLE, 1882.
- Waterproof Paper and Canvas Company, *London*, for Willesden Paper Roofing. YORK, 1886.
- 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 Garments. GLASGOW, 1883.
- Whyte & Bradford, *Bowness*, for Cooking Range with Revolving Fire for the Prevention of Smoke. GLASGOW, 1883.
- Wilberforce School for the Blind, *York*, for Wickerwork and Brushes. YORK, 1886.
- 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 Faïence. 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.
- Wollams & 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. *YORK, 1886.
- Woodhouse and Rawson Electric Supply Company of Great Britain, *Bradford*, for Magnetic Cut Out for Electric Lighting. YORK, 1886.
- 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.
- " " for 30 Gallon Combined Flush-tank and Grease
Interceptor. YORK, 1886.
- 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.
- Aylesbury Dairy Company, *London*, for Butter Squeezing Machine. YORK, 1886.
- Bailey & Co., *London*, for Woodman's Stoneware Screw Plug and
Collar, for access to Drains. YORK, 1886.
- 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.

- Baird, W., *Dublin*, 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.
- Barrett, H. J., *Hull*, for Steel Wheel for Sanitary Carts. YORK, 1886.
- 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 Cost-
less Ventilation. CROYDON, 1879.
- " " for Large Legible Spirit Thermometer. EXETER, 1880.
- Bolonachi, A. J. M., *London*, for Chocolate Paste. YORK, 1886.
- 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.
- " " " " for Siphon Action Water-waste Preventor. YORK, 1886.
- 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 Movable 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.
- Burn & Baillie, *London*, for Galvanized Cast-iron Air-tight Inspection Chamber and Drain Pipes. YORK, 1886.
- " " " " for "Eclipse" Apparatus for Testing Drain and other Pipes. YORK, 1886.
- " " " " for Indiarubber Expanding Plugs for Drain Testing. YORK, 1886.
- 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.
- " " " " for preparations of Digestive Ferments. YORK, 1886.
- " " " " for "Lanolin" Soap. YORK, 1886.

- 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.
- " " " " " " LEICESTER, 1885. YORK, 1886.
- " " " " for Soluble Cresol. DUBLIN, 1884.
- " " " " for Tooth Soap. LEICESTER, 1885.
- " " " " for Preparations from Carbolic Acid. YORK, 1886.
- Candy & Co., *Newton Abbot*, for Granite Vitrified 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.
- Casebourne & Co., *West Hartlepool*, for Schaible's Apparatus for the Estimation of Carbonate of Lime in Cement. YORK, 1886.
- 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. YORK, 1886.
- Clarke, F. W., Portable Gas Apparatus Company (Limited), *Great Queen Street, W.C.*, for Portable Gas Apparatus for Manufacturing Gas from Gasoline. CROYDON, 1879.
- Cliff, J., & Sons, *Leeds*, for Hall's Hanging Tiles. YORK, 1886.
- " " " " for White Enamelled Sinks. YORK, 1886.
- " " " " for White Enamelled Urinal Floor Channel. YORK, 1886.

- Cliff, J., & Sons, *Leeds*, for Simplex Reversible Gully. YORK, 1886.
 " " for White and Coloured Glazed Bricks. YORK, 1886.
 " " for "Imperial" Slop Sink. YORK, 1886.
 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, 1886.
 Cooper, H. W., & Co., *London*, for Glass Revolving and Sliding Ventilators. GLASGOW, 1883.
 Cordingley, T., & Sons, *Bradford*, for Granito Concrete Pavement. DUBLIN, 1884.
 " " for Improved Fibrous Plaster Work. YORK, 1886.
 Craig, J. & M., *Kilmarnock*, for Buchan's Trap. EXETER, 1880.
 " " for Maguire's Cradlo 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.
 Dillon, E. & C., *York*, for Ventilating Corsets. YORK, 1886.
 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-Perussion 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.
 " " 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.
 Duffy & Son, *London*, for Immovable "Acme" System of Solid Wood Flooring. YORK, 1886.
 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.
 " " for Chutneys. YORK, 1886.
 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 Gully, 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.
- Greenall, J., *Manchester*, for Marsh Greenall Regenerative Gas Heating Stove. YORK, 1886.
- 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.
- " " for New Cooker and Steamer. YORK, 1886.
- 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.
- Harrisson, 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.
 Hindle Norton & Co., *Oldham*, for Acme Door Check and Spring (double action). YORK, 1886.
 Hindley, E. S., *Bornton, Dorset*, for Alcazar Vertical Steam Engine. YORK, 1886.
 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.
 Dr. Jaeger's Sanitary Woollen System Company, *London*, for Camel's Hair Clothing and Bedding. YORK, 1886.
 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. YORK, 1886.
 " " 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. YORK, 1886.
 King & Co., *Hull*, for Fishburn's Tubular Refrigerators. YORK, 1886.
 " " for Fishburn's Scarborough Freezer. YORK, 1886.
 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. GLASGOW, 1883. DUBLIN, 1884.
 " " for Wall Inlet Ventilator. LEICESTER, 1885.
 " " for Telescoped Wall Inlet Ventilator. LEICESTER, 1885.
 Knell, U., 77, *Fore Street, E.C.*, for "Imperial" Ventilating Window. CROYDON, 1879.
 Ladies' Sanitary Association, *Berners Street, W.*, for Publications. STAFFORD, 1878.
 Larmouth, Thomas, & Co., *Salford*, for Dual Desk, with Separate Gangway Seat. STAFFORD, 1878.
 Leggott, W. & R., *Bradford*, for Opener for Fanlights and Skylights. GLASGOW, 1883. DUBLIN, 1884.
 Leicester Ambulance Corps, for Hand Ambulance. LEICESTER, 1885.
 Leoni, S., & Co., *Strand, W.C.*, for "Rheometer" Street Lamp Regulator. STAFFORD, 1878.
 Lewis, Mrs. A., *Manchester*, for Tin Cooking Utensils. CROYDON, 1879.
 London Necropolis Company, *Strand, W.C.*, for "Earth to Earth" Coffins. STAFFORD, 1878.
 Longford Wire, Iron and Steel Company, *Warrington*, for Wood's Double Woven Galvanized Steel Wire Spring Mattress. YORK, 1886.
 McCallum, J. B., *Stafford*, for Improved Non-Absorbent Tub or Pail Van. EXETER, 1880.
 McGeoch, W., & Co., *Glasgow*, for Dow's Close and Open Fire Cooking Range. GLASGOW, 1883.
 Maguire & Son, *Dublin*, for Dr. Scott's Disinfecting Apparatus. NEWCASTLE, 1882. DUBLIN, 1884.
 " " for White Enamelled Fireclay Sinks. 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, Alliot, 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. YORK, 1886.
 North of England School Furnishing Company, *Darlington*, for Westminster Single Desk, with Sliding Top and Convex Support to the Seat. YORK, 1886.
 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.
 Phillips, W., & Son, *London*, for Bronte's Air-tight Cast-iron Man-hole Cover. YORK, 1886.
 Pim Bros., Limited, *Dublin*, for the Victoria Knitting Machine. DUBLIN, 1884.
 " " for the Hinged Cot. DUBLIN, 1884.

- Potter, G. W., *London*, for "Siphozella" Pipe Fastening. YORK, 1886.
 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.
 " " for Improved Oat Cakes. YORK, 1886.
 Scott, F. R., & Co., *Dublin*, for Solid Oak Parquet Flooring. DUBLIN, 1884.
 " " for exhibit of Furniture. DUBLIN, 1884.
 Selig, Sonnenthal & Co. (Limited), *Lambeth Hill, Queen Victoria Street, E.C.*, for Safety Belt Shippers. CROYDON, 1879.
 Senn, C. H., *London*, for Preserved Fruits. YORK, 1886.
 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.
- " " " for Vitreous Floor Tiles. YORK, 1886.
- 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 Anti-septic 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.
- " Cotta. " " for their Exhibit of Architectural Terra Cotta. LEICESTER, 1885.
- Straker & Love, *Newcastle-upon-Tyne*, for Large Fire-clay Drain-pipes. NEWCASTLE, 1882.
- Strelton, 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 Green-houses. NEWCASTLE, 1882.

- Torrance, W. H., *Edinburgh*, for Rusks, Shortbread, and Oateakes. LEICESTER, 1885. YORK, 1886.
- 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. YORK, 1886.
- 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.
- " " " 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.
- Ward, E., & Co., *Bradford*, for Hygeia Corset. YORK, 1886.
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LIST OF MEMBERS AND ASSOCIATES ELECTED DURING THE
YEAR 1886.

MEMBERS.

* Life Members.

† Passed Examination for Local Surveyors.

- *BERNARD, William Larkins, 39, *Broad Street, Bristol.*
 *†CRIMP, W. Santo, A.M.INST.C.E., *Local Board Offices, Wimbledon.*
 CRUTTENDEN, Henry Edward, *Brittany House, London Road, St. Leonards-on-Sea.*
 *†CURWEN, John F., 69, *Highgate, Kendal.*
 CUTLER, Thomas W., F.R.I.B.A., 5, *Queen Square, Bloomsbury, W.C.*
 EDWARDS, J. Vickers, *West Riding Surveyor, Wakefield.*
 EWAN, J. Fraser, M.B., CERT.S.SC.CAMB., *care of E. A. Levy & Co., 67, Cornhill, E.C.*
 LINGARD, Alfred, 49, *Lambeth Palace Road, S.E.*
 MACNAMARA, Charles E., S.SC.CERT., M.R.C.P.I., *Columbia House, Essequibo, British Guiana.*
 *†MORLEY, J. G., 302, *Romford Road, Forest Gate, E.*
 *†NICHOLS, H. Bertram, *Grosvenor Chambers, Corporation Street, Birmingham.*
 NORTH, Samuel W., M.R.C.S., F.G.S., 84, *Micklegate, York.*
 *POWELL, Francis Sharp, M.P., 1, *Cambridge Square, W.*
 PULLIN, F. B., L.R.C.P., 5, *Cambridge Park, Guernsey.*
 ROBERTS, William Charles, 28, *Disraeli Road, Putney, S.W.*
 WALLACE, William, 27a, *Old Bond Street, W.*
 *WALLIS, H. Sowerby, F.R.MET.SOC., 25, *Northwood Road, Highgate, N.*

ASSOCIATES.

* Life Associates.

† Passed Examination for Inspector of Nuisances.

- *†BASCOMBE, H. C., 18, *Oxford Street, Totterdown, Bristol.*
 *†BATEMAN, James, *Southcott Lodge, Pewsey, Wilts.*
 *†BLACK, Andrew E., 57, *Academy Street, Inverness.*
 BLACK, William Galt, *Surgeon-Major, F.R.C.S.E., 2, George Square, Edinburgh.*
 BUCKERIDGE, Walter, 5, *Alexander Street, Westbourne Park, W.*
 CHEEK, Philip, 4, *Wharves, Goods Station, King's Cross.*
 *†DARLEY, George, 44, *Ridge Road, Meanwood Road, Leeds.*
 *†EVANS, J. Evan, 100, *Bridge Road, Battersea, S.W.*
 FITCH, Charles Frederic, *Cheapside, E.C., and Westwood, Clapham, S.W.*
 *†GOODWYN, Arthur Adye, 81, *Burghley Road, N.W.*
 *†GUNN, Alexander, 123, *King Street, Aberdeen.*
 *†LOWICK, W. Morris, *The Firs, Westbury-on-Trym.*
 *MACINTOSH, James, 38, *Langham Street, W.*
 *†REAVELL, George, Jun., *Alnwick, Northumberland.*
 *†SALTER, Thomas, 2, *King's Road, St. Leonards-on-Sea.*
 *†WEBB, James A., 33, *Askew Crescent, Shepherd's Bush, W.*

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LANOLINE.

Lanoline is the fat natural to the hair and skin, and is absorbed by these at once. It is the best basis known for ointments, salves, &c. Of desirable consistence, it does not melt below body heat, and does not "run" like ordinary ointments. Being homogeneous, and devoid of hard crystalline bodies and free from fatty acids, it is soothing and acceptable in the most irritable conditions of the skin. It is miscible with water and all medicaments indifferently, is preservable, slightly tenacious and adhesive, and perfectly bland and soothing.

PRICE PER POUND TIN, 3s. 6d.

A Descriptive Pamphlet and Specimen of Lanoline will be sent post-free to any Physician upon request.

LANOLINE TOILET SOAP.

Ordinary soaps often cause pimples, blotches, and sores on the face, and prevent eruptions already formed from healing. They remove the fat and dry the skin, so that it becomes hard, inelastic, and rough, and loses its natural colour.

Lanoline Toilet Soap is made with *Lanoline*. Lanoline, being the natural fat of the skin, is acknowledged by dermatologists to be the very best preservative of this tissue, restoring its soft, pliable, and elastic nature, and healthful gloss. The process of its manufacture precludes the possibility of adulteration, as with resin, &c., and affords a most superior product.

LANOLINE COLD CREAM.

This is emollient, protective, and healing. It supplies the skin with a "cream" natural to it, and is highly praised for abrasions, mucous patches, herpes, chapped hands, roughness and hardness, &c.

PRICE PER DOZEN JARS, 20s.

LANOLINE POMADE.

Hair anointed with this presents no shiny greasy gloss, and does not stain the hat or anything else that comes in contact with it, for Lanoline Pomade is absorbed at once. It soon makes the hair smooth, silken, and strong, and after employing it a little time the scalp becomes perfectly healthy and free from dandruff. In alopecia it has recently been commended in medical journals.

PRICE PER DOZEN JARS, 20s.

~~~~~  
**BURROUGHS, WELLCOME & CO.,**

SNOW HILL BUILDINGS, LONDON, E.C.

GG

*For the awards given by the Institute see Appendix, pages 418, 427, 428.*

GOLD MEDAL, LIVERPOOL EXHIBITION, 1886.  
LONDON, 1862.] [PARIS, 1867.  
PARIS, 1878—Three Medals and Honourable Mention.

International Health Exhibition, London, 1894—One Gold, Three Silver, and Two Bronze Medals.

SANITARY INSTITUTE OF GREAT BRITAIN, Glasgow, 1883, the only Prize Medal for Imperial Porcelain Baths; York, 1886, Highest Award for Baths, and Six Certificates of Merit for Sinks, &c.

## JOSEPH CLIFF & SONS, WORTLEY, LEEDS. (Established 1795.)

IMPERIAL PORCELAIN WARE.—Baths, Sinks, Stable Mangers, &c.

GLAZED BRICKS.—White, Moulded, and Ornamental.

WORTLEY FAIENCE, for Panels, Dados, Hearths, &c.

DRAIN PIPES, highly glazed, true in form, and good thickness—Circular, from 2 in. to 36 in.; egg or oval shape, from 8 in. by 6 in. to 36 in. by 24 in. INVERT BLOCKS, &c.

FIRE BRICKS for resisting the most intense heat, Blast Furnace Lumps. Patent Gas Retorts, Chimney Tops.

ARCHITECTURAL AND OTHER TERRA-COTTA.

HALL'S PATENT HANGING TILES, Glazed, in all colours.

BLUE AND RED STAFFORDSHIRE WARE of all descriptions.

SANITARY EARTHENWARE of every description.

POTTS' PATENT EDINBURGH AIR-CHAMBERED SEWER TRAPS.

ILES' PATENT INTERCEPTING TRAPS.

THE "CERUS" PATENT TRAPS AND GULLIES.

LONDON OFFICES AND CHIEF DEPOT:

2 & 4 WHARFS, G. N. GOODS STATION, KING'S CROSS, N.

CITY DEPOT:

L. & N. W. GOODS STATION, WORSHIP STREET, E.C.

LIVERPOOL:

LIGHTBODY STREET.

LEEDS:

QUEEN STREET.

Sole Manufacturers of

POTTS' PATENT EDINBURGH SEWER TRAPS AND ELLISON'S PATENT CONICAL AIR BRICKS.

ILES' PATENT INTERCEPTING TRAPS, &c.

WINNER'S CHANNEL BENDS AND TRAPS FOR MANHOLES.

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

SEVENTEEN GOLD, SILVER, AND BRONZE MEDALS.

## WM. WOOLLAMS & CO., ORIGINAL MAKERS OF GUARANTEED NON-ARSENICAL WALL PAPERS.

TO BE OBTAINED OF ALL DECORATORS AND CONTRACTORS.

SPECIAL FACILITIES FOR PRINTING ARCHITECTS' PRIVATE PATTERNS.

*Non-Arsenical Colors for Decorative Distemper Work.*

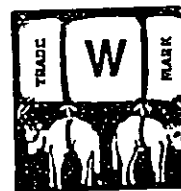
Agents for and Printers of

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

All Decorators should see

"CORIACENE" (Registered).

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



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

For the awards given by the Institute see Appendix, page 421.

# Little's Patent Soluble Phenyle

(NON-POISONOUS).

SEVENTEEN AWARDS.

Stafford, 1878.

Christchurch, 1882.

Calcutta, 1884.



Special Merit.

Gold Medal.

Silver Medal.

Pronounced by the Committee of the American Health Association, sitting in Session at the Johns Hopkins University, Baltimore, 1885, to be

## THE BEST DISINFECTANT.

On examination it was found to be

**THREE TIMES STRONGER THAN ANY OTHER DISINFECTANT.**

Superior to Carbolic Acid; containing the same good properties without its disadvantages.

Destroys the infection of all fevers, and all contagious and infectious diseases.

It is not like many so-called disinfectants, a mere disguiser of bad smells, and not only removes the foul odours, but destroys the disease germs, thus removing all fear of infection.

It is a splendid healer of all kinds of Skin Diseases.

In 6d., 1s., and 2s. 6d. Bottles; and in Quart Tins, 2s. 6d.;

Half-Gallon Tins, 4s.; and One Gallon Drums, 7s. 6d.

## LITTLE'S SANITARY PHENYLE POWDER

This is a disinfectant of the highest order, and is a preparation of the Soluble Phenyle in Powder form.

It acts immediately on all foul odours, completely subduing them, and destroying infection.

It gives off a refreshing and invigorating odour, and will be found very valuable in the sick room.

It is highly suitable for general domestic purposes, and will drive away Ants, Bugs, and all other noxious insects.

Sold in 6d. and 1s. Tins; also in Cwt. Casks or Bags.

LITTLE'S PHENYLE HOUSEHOLD SOAP.

LITTLE'S PHENYLE TOILET SOAP.

LITTLE'S PHENYLE DOG SOAP.

These Soaps are of Superior Quality, and give every satisfaction.

SOLD BY ALL CHEMISTS.

MANUFACTURERS:

**MORRIS, LITTLE & SON, Doncaster**

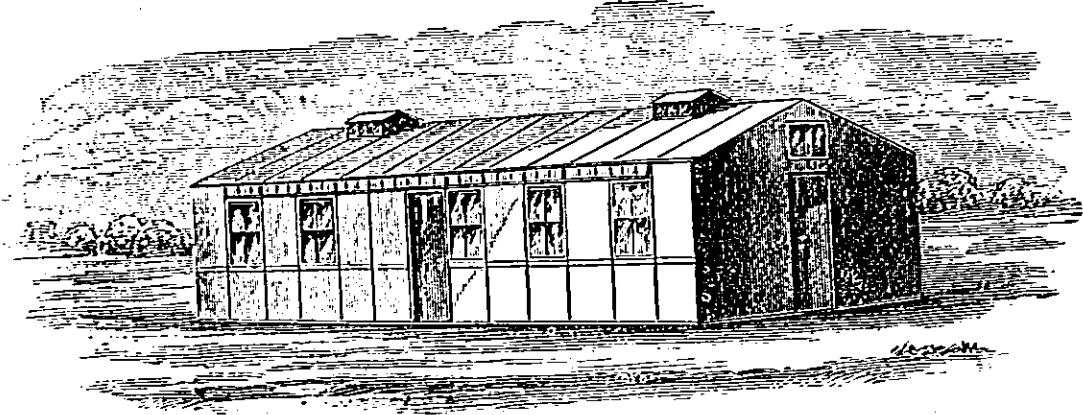
For the awards given by the Institute see Appendix, page 419.

# DÖCKER'S

PATENT

## Portable Hospitals, Houses, &c.

AWARDED 7 GOLD MEDALS FROM 1883 TO 1886.  
PRIZE MEDAL OF SANITARY INSTITUTE OF GREAT  
BRITAIN, YORK, 1886.



These structures are designed for the special purpose of meeting sudden requirements, to avoid overcrowding in permanent buildings, and, during outbreaks of epidemics, will be found especially useful for isolating purposes. They consist of light wooden frames, covered with a special kind of felt, lined with canvas. The smaller ones can be erected in a very few minutes, whilst the larger ones do not take more than two days. They have been specially selected for mention in lecture by Sir Robert Rawlinson, C.B., C.E., and have been most favorably reported upon by Doctor Horace Swete, M.D., S.S.c., Medical Officer of Health, &c., in his report to the Rural Sanitary Authority of Droitwich. They have been supplied to H.M. Government War Office, &c., and are especially suitable for Medical Authorities, Local Authorities, Artists' Studios, Shooting Boxes, Fishing Boxes, Bathing Cabins, Billiard Rooms, Small Summer Houses, &c.

For further particulars, Prices, &c., apply to the

SOLE AGENTS FOR GREAT BRITAIN,

**BANNER SANITATION CO.,**

WESSEX HOUSE, NORTHUMBERLAND AVENUE,

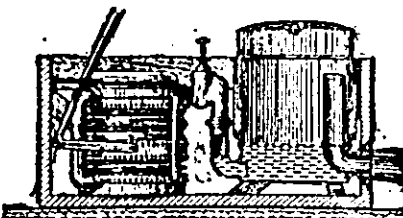
CHARING CROSS, LONDON, W.C.

(Opposite entrance to Hotel Metropole.)

Telegraphic Address:—"BANNERS, LONDON."

For the awards given by the Institute see Appendix, page 426.

# THE ECLIPSE DRAIN TESTING APPARATUS. PATENT.



THE ONLY RELIABLE SMOKE MACHINE  
FOR TESTING DRAINS, SOIL-PIPES, &c.

The operator can ascertain whether drain is  
tight or not without leaving the apparatus.

Price £4 4s.

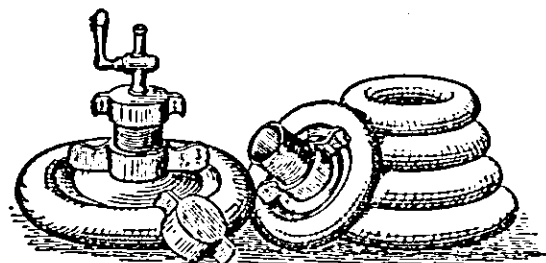
Deal painted Case, fitted for Machine, Tube, and Fumigating Material, 10s. extra.

## IMPROVED EXPANDING PLUGS

FOR

### DRAIN TESTING.

Manufactured and Sold by consent of Patentee.



PER SET—Comprising two sizes of  
brass flanges, six India-rubber rings,  
from 3 in. to 6½ in., and Test Cock—  
£1 14s.

## PATENT COMBINATION BATH,

With Canopy, giving Shower, Douche, Plunge, and Needle Bath.

Including Cabinet Work, from £28.

By our Patent Arrangement, only one handle, in addition to the necessary two for  
hot and cold water, is required to manipulate these baths. The bather is therefore  
saved the trouble of studying a bewildering array of eight or ten pulls or handles,  
as hitherto.

3 Silver and 2 Bronze Medals, and Honorable Mention, Edinburgh Exhibition, 1886.  
Highest Award in Sanitary Section.

**BURN & BAILLIE,**  
SANITARY ENGINEERS, &c.

LONDON:  
23, CHARLWOOD STREET,  
S.W.

EDINBURGH:  
63 & 65, HANOVER STREET,  
and 34, ALVA STREET.

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

# PATENT VICTORIA STONE COMPANY.

ESTABLISHED 1868.

REGISTERED TRADE MARK, "VICTORIA STONE."

Bronze Medal: Sanitary Exhibition, 1883.  
The only Medal at the International Health Exhibition  
for Artificial Flag Stone, 1884.

Gold Medal: International Exhibition, Crystal  
Palace, 1884.

Gold Medal: International Exhibition, Alexandra  
Palace, 1885.

The only Medal for Artificial Stone Paving at the  
Leicester Exhibition, 1885.

Gold Medal: Building Trades' Exhibition, 1886.  
Diploma of Honor: International Fisheries Exhibition,  
1883.

By Appointment to the Health Exhibition, 1884.  
By Appointment to the Royal Agricultural Society.

This Paving is always laid in "flags," and never in a plastic condition.  
The Stone has been used as paving to an enormous extent during the  
last seventeen years, equal in length to ninety miles, mostly for eighteen  
of the London Vestries and Boards of Works.

Its cost is 15 per Cent. less than York Stone, and its  
durability has been proved to be 33 per Cent. greater.

It has two fair sides, and can be easily laid.

SIXTEEN YEARS' evidence of wear in London.

TENSILE STRAIN.—The Average of ten briquettes (*vide* Reid on  
Concrete) was 794 lbs. per square inch in 1879, but has now reached  
1,125 lbs. per square inch.

ABSORPTION.—See "Wray on Stone." Bulk of water absorbed  
as compared with bulk of stone, per cent., 7.6.

For Prices see LAXTON and other Price Books.

THE

## PATENT VICTORIA STONE COMPANY,

WHARF: 283a, KINGSLAND ROAD.

WORKS: STRATFORD BRIDGE, ESSEX.

And at GROBY QUARRIES, near LEICESTER.

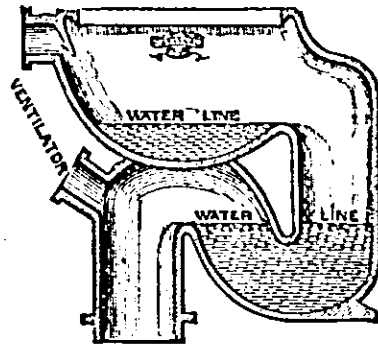
FOREIGN ASPHALTE IMPORTERS.



For the awards given by the Institute, see Appendix, page 434.

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.**

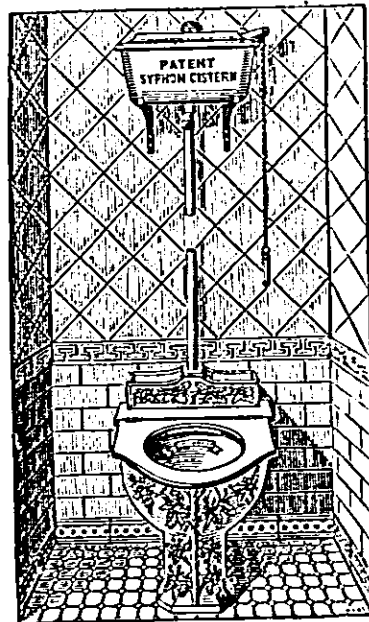
On same principle as "National," but made in two pieces only.  
**STRONG. CHEAP. SIMPLE.**

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.

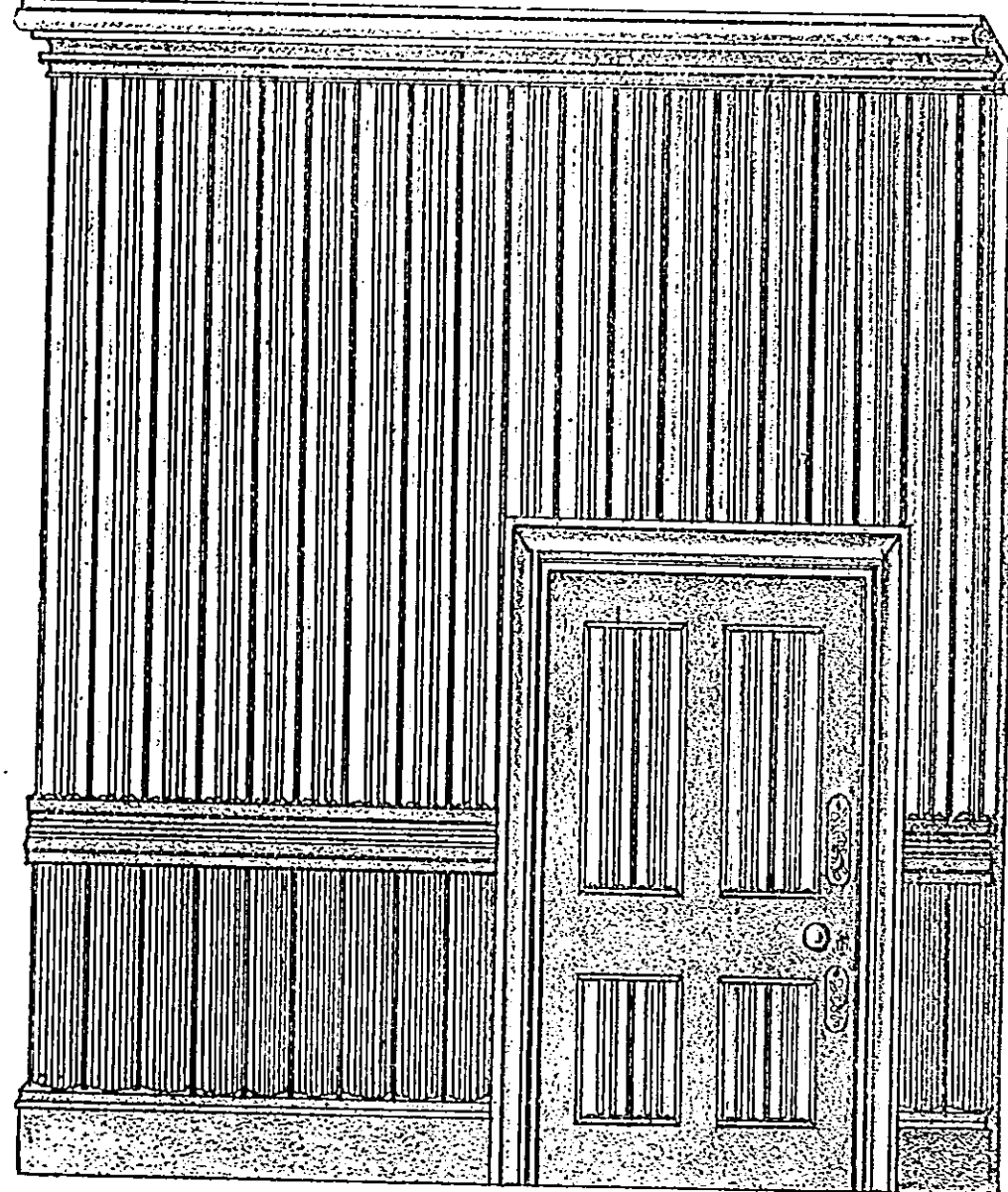
Every Closet is tested before leaving the Works with a two-gallon Syphon Cistern, connected to the Basin with a one-inch flush pipe, and is guaranteed to immediately remove the soil from the Basin, and clear it out of the Trap, which is an important matter with closets of this kind; the whole of the 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 420.



**J. F. & G. HARRIS'S**  
**REGISTERED FANCY WOOD DECORATIONS.**  
BEST PINE, DEAL, MAHOGANY, and HARDWOOD  
MOULDINGS OF EVERY DESCRIPTION.



Mouldings Made to Architects' Special Designs.

**J. F. & G. HARRIS,**  
MAHOGANY & GENERAL TIMBER MERCHANTS & MOULDING MANUFACTURERS,  
Offices { 58, Wilson Street, Finsbury, E.C.  
AND { Orange Street, Gravel Lane, Southwark, S.E.  
Mills { Victoria Wharf, Twigg Folly Bridge, Bethnal Green, E. } LONDON.



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

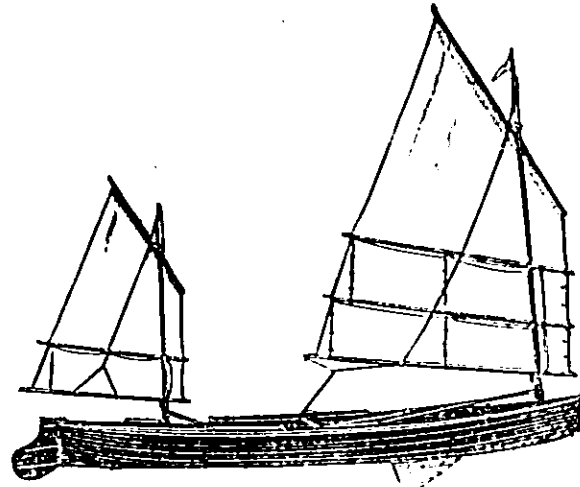
# R. J. TURK,



By Appointment.

## BOAT, PUNT, AND CANOE BUILDER, KINGSTON-ON-THAMES.

Boats and Canoes of every description, with all the latest improvements.



CRUISING CANOE.

Gold Medal, Edinburgh, 1886.  
Gold Medal, Glasgow, 1886-1887.  
Silver Medal, Liverpool, 1886.  
Gold Medal, Paris International Exhibition, 1885.  
Silver and Bronze Medals, Falmouth Exhibition, 1885.  
The Medal of the Sanitary Institute of Great Britain, Leicester, 1885.  
Only Prize Medal, Inventions Exhibitions, 1885, for Construction of Boats.

HEAD QUARTERS  
OF THE  
**Royal Canoe Club.**

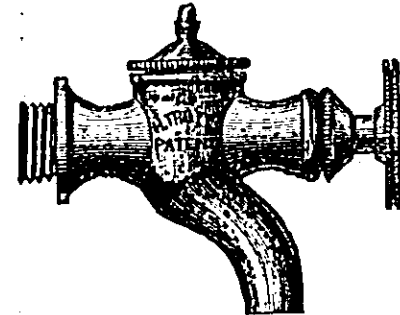
For the awards given by the Institute see Appendix, page 426.

|                                         |           |                                       |
|-----------------------------------------|-----------|---------------------------------------|
| White Enamelled Channel Bends           | - -       | Certificate awarded, Leicester, 1885. |
| White Enamelled Gully Traps             | - - -     | " " " "                               |
| White Enamelled Sinks and Wash Tubs     | " "       | " " " "                               |
| White Enamelled Drinking Water Cisterns | - - - - - | Medal " " " "                         |
| White Glazed Bricks                     | - - - - - | Certificate " " " "                   |
| "Rock" Buff Facing Bricks               | - - -     | " " " "                               |

**BROAD & CO.,**  
BRICKMAKERS, SANITARY SPECIALISTS,  
*Lime and Cement Merchants,*  
2 & 4, SOUTH WHARF, PADDINGTON, W.  
*Brickfields and Gravel Pits—WEST DRAYTON.*

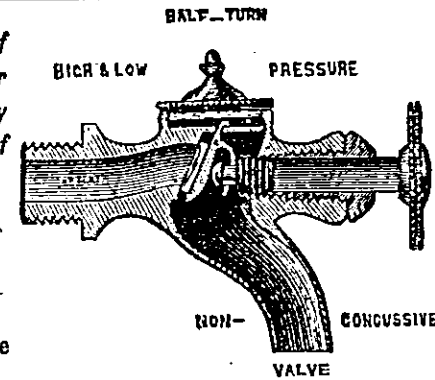
For the awards given by the Institute, see Appendix, page 437.

## 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.



Awarded a Certificate of Merit for Bib Valves for Hot or Cold Water, by the Sanitary Institute of Great Britain.

SEE TESTIMONIALS.



NOTE.—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.

**H. TROTT, 75 & 76, HIGH STREET, BATTERSEA, LONDON, S.W.**

For the awards given by the Institute, see Appendix, page 431.

SOLE AGENTS FOR DR. WOLPERT'S LÜFT PRÜFER, OR AIR TESTER.

To Her Majesty the Queen,  To their Royal Highnesses  
H.R.H. the late Prince Consort,  the Prince and Princess of Wales.

## HILL & HEY,

The Patent "EXCELSIOR" and "WATSON" SYPHON  
VENTILATOR WORKS, HALIFAX,

Successors to Mr. CHARLES WATSON. Established 1852.

Prices, Descriptive Pamphlets, Testimonials, &c., on application.



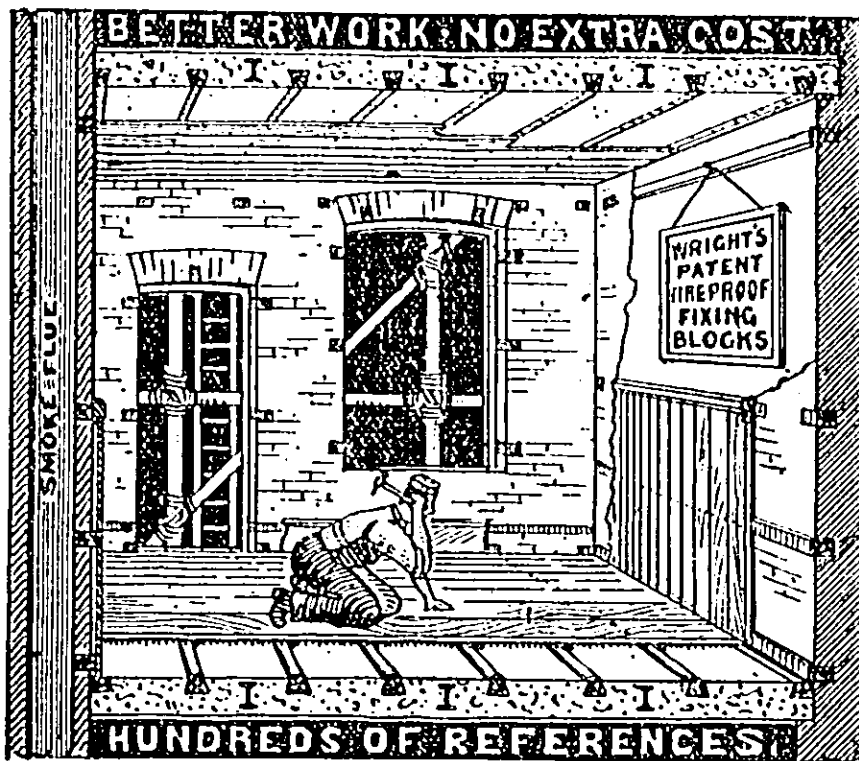
From HENRY LEA, Esq., C.E., 38, Bennett's Hill, Birmingham.  
To Messrs. HILL & HEY, April 11th, 1883.  
The "Excelsior" Siphon Ventilators which I have had from you for the Magdalen Institution and for St. Thomas's Schools in this town, and for the lobby of these offices have given complete satisfaction.  
The result in the schools is most marked, and has called forth expressions of surprise and pleasure from many who know what the atmosphere of the room was before the introduction of the Ventilators.

From Mr. J. R. BANKS, Builder, Maryport. May 23rd, 1884.

In ordering the "Excelsior" Siphon Ventilator for the additional class-room to British Schools, I may just state that those already fixed on the schools have given great satisfaction. Though there are 500 scholars in the school at one time, there is never any unpleasant smell; a great contrast to other schools I have visited. The members of the Flimby Board were so impressed with the value of the Ventilators on a visit to our school that they have decided to have your Ventilators fixed on all their schools and class-rooms.

For the awards given by the Institute, see Appendix, page 439.

Extensively employed for several years past (in works of the highest class) by eminent Architects, Engineers, H.M. War Department, &c., &c., and now universally acknowledged by practical men to be the best and safest Fixings ever introduced. Never urn, split, rot, or decay.



N.B.—Architects and Contractors are very respectfully cautioned against infringements of our Patent and Registration Rights.

PATENTED JUNE, 1881.

**J. WRIGHT & CO.,**

3, WESTMINSTER CHAMBERS, VICTORIA STREET, LONDON, S.W.

For the awards given by the Institute, see Appendix, pages 376A, 438.

# THOMAS WRAGG & SONS,

*Manufacturers of*

Glazed Stoneware Drain Pipes and all descriptions of Sanitary Ware.

Also of Stanford's and Mawbey's Patent Pipes.

Gordon's Patent Disconnecting Syphons,

And Hassall's Patent Safety Joint for Water-tight Sewers.

Terra-Cotta Chimney Tops, Vases, Garden Edgings, etc.

Fire Bricks. Lumps. Tiles.

Crucible and Cement Clays, &c. Glazed Bricks.

Blue Bricks.

Ridge and Roofing Tiles, etc.

WORKS—SWADLINCOTE, near BURTON-ON-TRENT.  
LOXLEY, near SHEFFIELD.

LONDON OFFICES—10, BEAUFORT BUILDINGS, STRAND

DEPOTS—HAMMERSMITH & CHISWICK, North London Railway.  
STOKE NEWINGTON, Great Eastern Railway.  
MIDLAND ROAD, SHEFFIELD.

