

# THE SANITARY INSTITUTE.

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ILLUSTRATED LIST OF EXHIBITS TO WHICH MEDALS AND CERTIFICATES  
HAVE BEEN AWARDED AT THE EXHIBITIONS HELD IN CONNECTION  
WITH THE ANNUAL CONGRESS.

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## JUDGES OF THE EXHIBITIONS.

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ERNEST TURNER, F.R.I.B.A., *Chairman*.  
R. W. PEREGRINE BIRCH, M.INST.C.E.  
PROF. A. WYNTER BLYTH, M.R.C.S., L.S.A.  
PROF. W. H. CORFIELD, M.A., M.D.  
THOMAS W. CUTLER, F.R.I.B.A.  
ROGERS FIELD, M.INST.C.E.  
BALDWIN LATHAM, M.INST.C.E.  
HENRY LAW, M.INST.C.E.  
ARTHUR NEWSHOLME, M.D., D.P.H.  
LOUIS PARKES, M.D., D.P.H.

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## PREFACE.

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This Illustrated List has been published by the Institute in the belief that it will be a useful guide to Professional Men and to the Public in the selection of Appliances and Articles included in the extensive scope of these Sanitary and Domestic Exhibitions.

Most of the new improvements and recent developments in Sanitary matters have been brought forward at the Exhibitions which have been held nearly every year since 1877. The present List refers only to the Awards made since the Incorporation of the Institute in 1888, but a classified List (not illustrated) of the whole

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of the objects to which Awards have been given previously to 1888 can be obtained from the Secretary.

The Institute has, by inaugurating a carefully devised system of judging, endeavoured to avoid the unreliability which so often attaches to Awards given at Public Exhibitions.

In the first place, uniformity in the principle upon which the Awards have been based is ensured, as far as possible, by giving stability to the Court of Judges—that is to say, that while gradual changes are made in the personnel of the judges, the larger number remain in office for several years. This method, of course, also gradually forms a very experienced body of judges.

In the next place the Institute has always been careful that the Board of Judges shall be composed of men of different professions—Engineers and Architects, as well as Medical Officers of Health and Chemists.

Lastly, the judges have laid it down as a guiding principle that the Awards are to be made primarily in the interests of the Public, and that the great point to be aimed at is to afford a trustworthy Guide to the Public as to what is good and reliable amongst the Sanitary Appliances and other Exhibits which have come before the judges. In order to effect this object no Award is, as a rule, given to any Exhibit unless some of the judges know by their own experience that it is of value, or unless it has been subjected to special practical tests carried out at the time of the Exhibition or subsequently.

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ILLUSTRATED LIST OF EXHIBITS

TO WHICH MEDALS AND CERTIFICATES HAVE BEEN AWARDED AT THE EXHIBITIONS

HELD IN CONNECTION WITH THE

ANNUAL CONGRESSES.

In the following pages all the Exhibits for which Awards were given at the Exhibitions at Worcester, Brighton, and Portsmouth are mentioned, but in many cases it is obviously unnecessary, for practical purposes, to insert an Illustration, and in these cases the description or name only of Exhibits are given.

DIVISION A.—SCIENCE IN RELATION TO HYGIENE.

DIVISION A.—Section 6. Medicine (Preventive).

Sanitary Publications.  
Medal, 1890.

To W. H. ALLEN & Co., 13, Waterloo Place, S.W.

DIVISION A.—Section 7. Meteorology.

American Forecast Barometer.  
Certificate of Merit, 1892.

To JOSEPH DAVIS & Co.

DESCRIPTION.—The Instrument is made in oak or walnut frame and has a large column of mercury, having on each side an index and pointer; the index next the tube registers the height of the mercury. The long hand or pointer moving with it enables a reading to be taken without the use of a vernier. It also "forecasts" the approaching weather. On the right side of the dial predicting for summer, and on the left for winter. The larger letters in each division indicating the most probable weather. The dial has an aluminium surface. A floating compass is fixed in the base of the Instrument.

SIZE.—41 in × 12 in.

PRICE.—£4 4s.

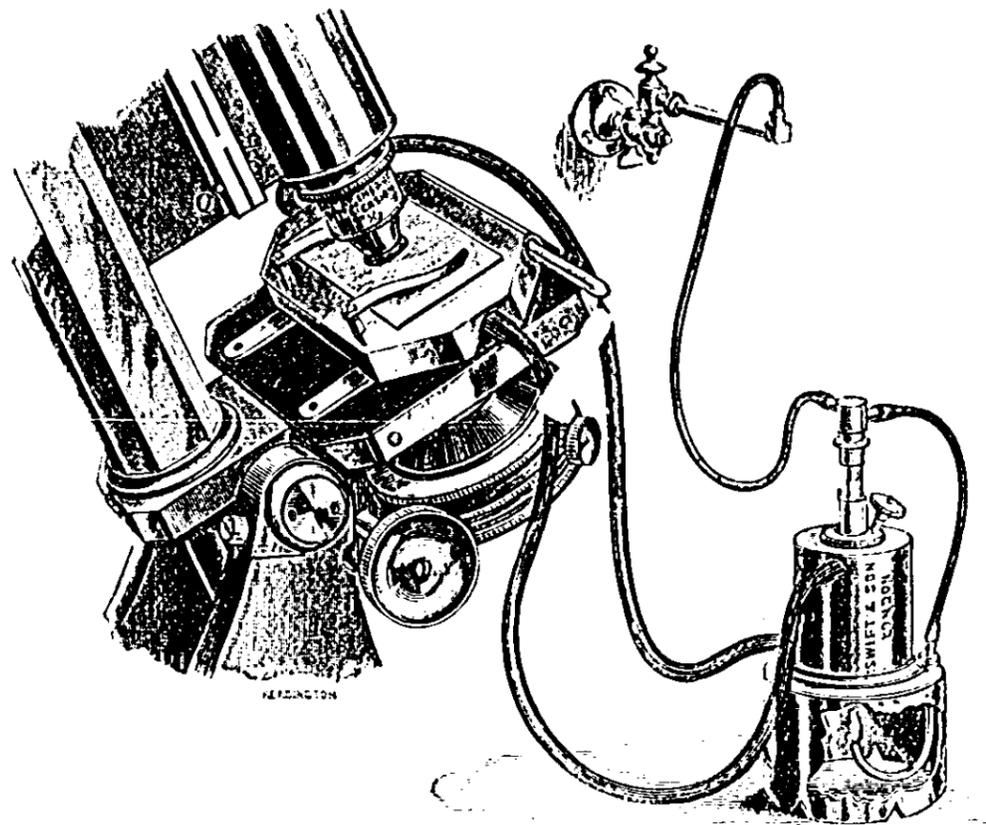
Manufactured by JOSEPH DAVIS & Co., 6, Kennington Park Road, S.E.

DIVISION A.—Section 8. Microscopy.

Microscopic Apparatus.

Medal, 1890.

To J. SWIFT & SON.



DESCRIPTION.—Professor Schaffer's Hot-water Circulation Stage can be readily adapted with a Regulator for maintaining even temperature for any length of time. This Stage is made so that the Abbe Condenser can be used in conjunction with it.

PRICE.—£3.

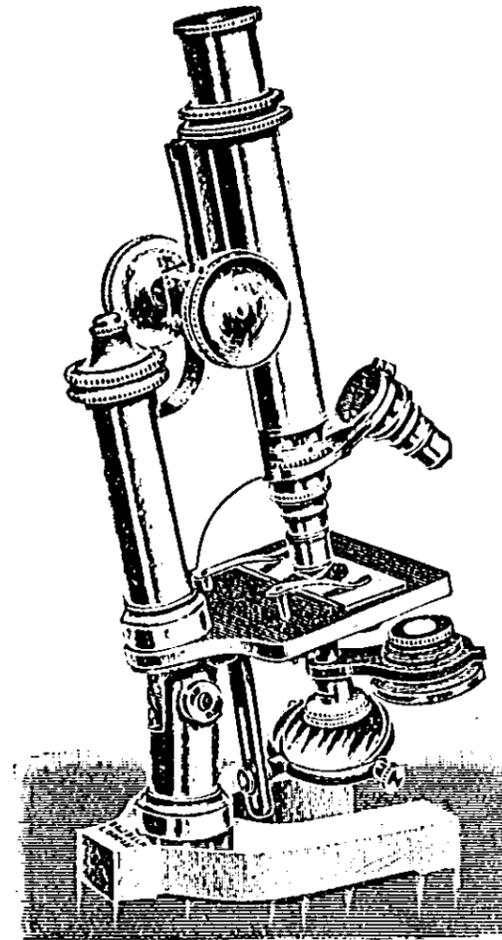
Manufactured by JAMES SWIFT & SON, Tottenham Court Road, W.

DIVISION A.—Section 8. (Continued.)

Improved Continental Microscope.

Medal, 1892.

To R. & J. BECK.



DESCRIPTION.—The Improved Continental Microscope Stand, with rack and pinion, coarse adjustment, fine adjustment by screw; double mirror on sliding bar; complete substage with focussing and swinging adjustments; Abbé condenser and iris diaphragm; two eye-pieces; two object glasses  $\frac{2}{3}$  in. and  $\frac{1}{8}$  in. In strong case, handle, and lock.

PRICE.—£8 15s.

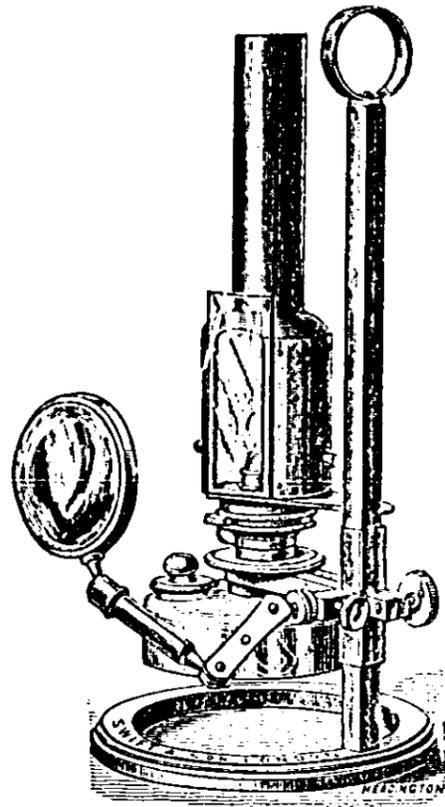
Manufactured by R. & J. BECK, 68, Cornhill, E.C.

DIVISION A.—Section 8. (Continued.)

Microscope Lamp.

Medal, 1892.

To J. SWIFT & SON.



DESCRIPTION.—Designed for direct illumination without the use of the mirror, the flat container enabling it to go very low down, which moves in an arc equal to 90 in., so that either the flat side or the edge of the flame may be used. Revolving metal chimney, which takes the ordinary 3 in. × 1 in. glass slip bull's-eye condenser, can be supplied at an extra cost of 12s.

PRICE.—£2 10s. The same lamp, with ordinary glass chimney and shade, £1 3s. Polished Pine Case, 4s. extra.

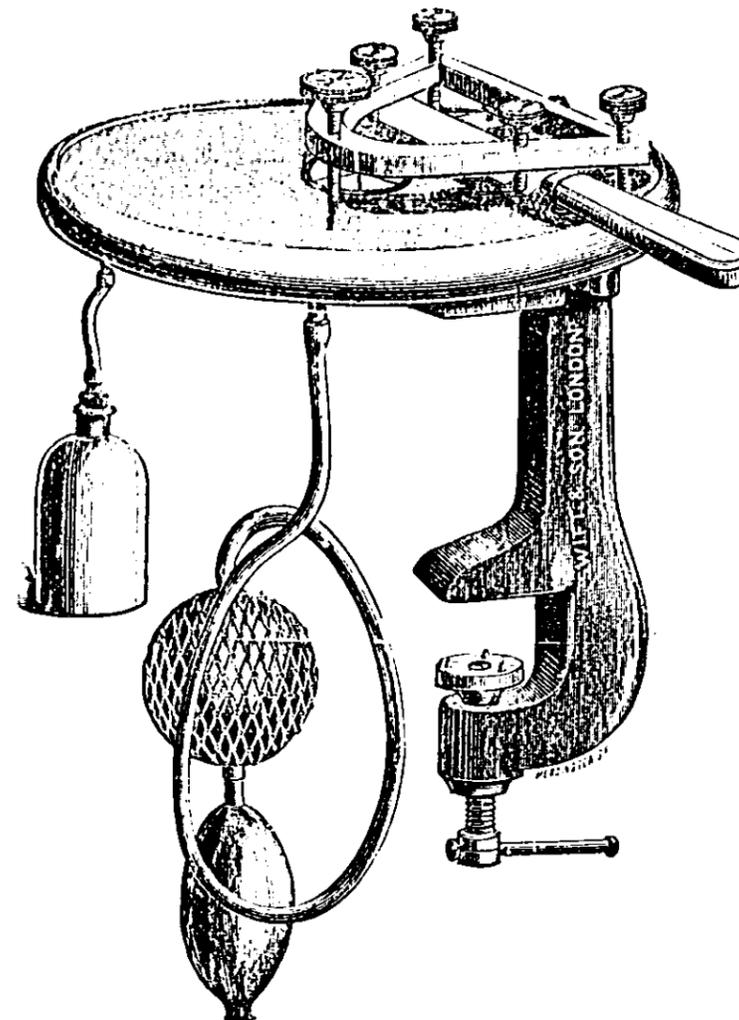
Manufactured by JAMES SWIFT & SON, Tottenham Court Road, W.

DIVISION A.—Section 8. (Continued.)

Groves' Modification of Williams' Microtome.

Certificate of Merit, 1892.

To J. SWIFT & SON.



PRICES.—Groves' modification of Williams' Microtome, for use with ether spray, £3 3s. A vulcanite chamber can be supplied for freezing with ice and salt at an additional cost of £1.

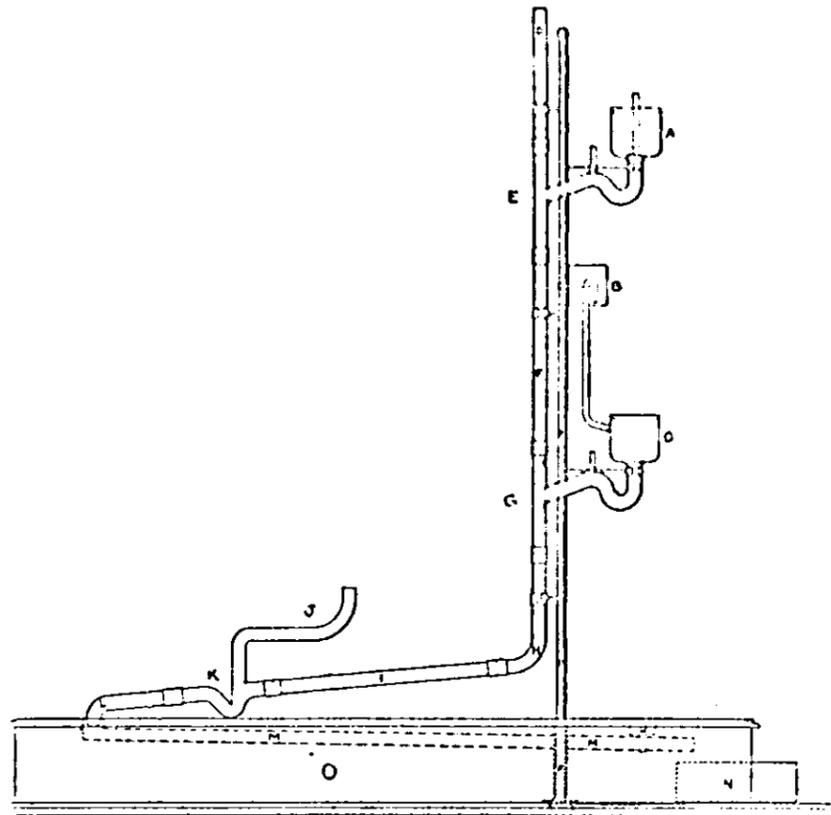
Manufactured by JAMES SWIFT & SON, Tottenham Court Road, W.

DIVISION A.—Section 0. Physies.

Knight's Demonstration Model Showing Soil Pipes and Traps.

Certificate of Merit, 1892.

To PORTSMOUTH WATER FITTINGS Co.



A—Valve Closet. B—Siphon Flushing Cistern. C—Wash-down Closet. D—Ventilating Shaft. E—Branch for W.C. F—Soil Pipe. G—Branch for W.C. H—Bend or Foot of S.P. I—Drain. J—Air Shaft. K—Intercepting Trap. L—Drain to Sewer. N—Reservoir. O—Base Box. P—Brass Support.

DESCRIPTION.—The model is made in glass, and designed for the purpose of demonstrating the behaviour of water in drain pipes and traps under various conditions of ventilation and non-ventilation, and illustrates the unsealing of Traps by compression and Siphonic action. The model is supplied in a case, which forms a convenient base for setting up the model.

PRICE.—£3 3s.

Made by W. H. KNIGHT, "Dulce Domum," Gisburn Road, Hornsey.

DIVISION B.—HYGIENE OF SPECIAL CLASSES,  
TRADES AND PROFESSIONS.

DIVISION B.—Section 2. Various Trades and Manufactures.

Exhibit of Models of Railway Rolling Stock and Appliances.

Medal, 1890.

To LONDON, BRIGHTON, AND SOUTH COAST RAILWAY, London.

Specimens of Photography.

Certificate of Merit, 1890.

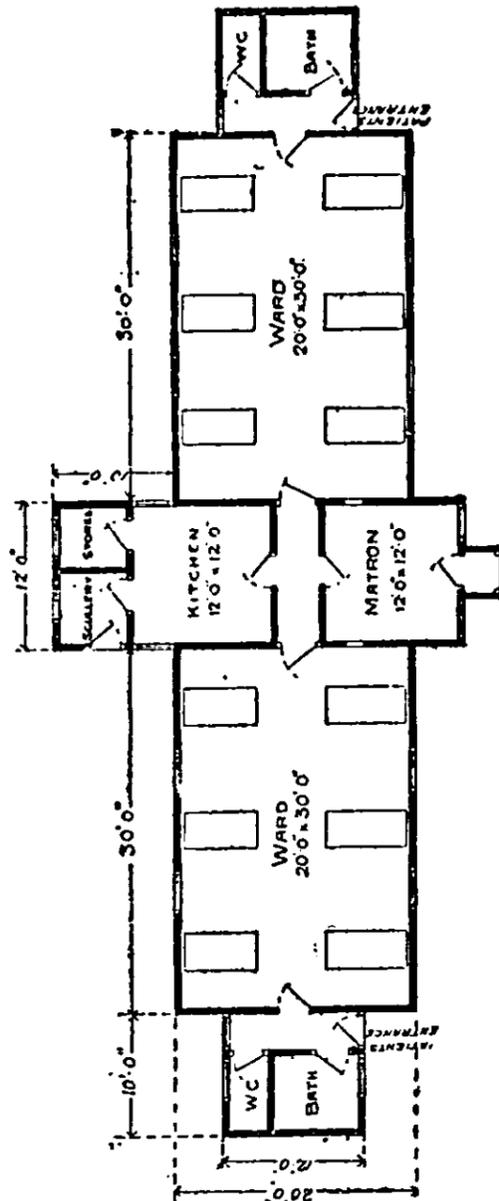
To BURT SHARP, 79, West Street, Brighton.

DIVISION B.—Section 3. Hospitals.

Iron Temporary Hospital Hut.

Certificate of Merit, 1892.

To HUMPHREYS, LIMITED.



DESCRIPTION.—The hospital is made of timber framing, covered with galvanized corrugated iron, and is lined inside with felt and match-board stained and varnished, and is built on the one-storeyed pavilion plan, having the administrative block in the middle and a ward on each side. The further end of each ward opens into a lobby, beyond which are placed the w.c. and bath room. The wards are warmed by an open stove. About half-way up the roof on each side and at a distance of 15 ft. apart Dormer ventilators are inserted, which are provided with perforated zinc plates and "hit and miss" shutters. Inlet tubes similar to those of Tobin's system are provided, and gable ventilators are also fixed in such a manner as to allow the whole of the opening to be used as an air space. Ventilation at the ridge is also provided for. The laundry and mortuary are cottages standing apart from the main building.

PRICE.—Including Matron's Room, Kitchen, and Offices, 4 beds, £223; 8 beds, £323; 12 beds, £342; 16 beds, £394; 20 beds, £444; 24 beds, £494.

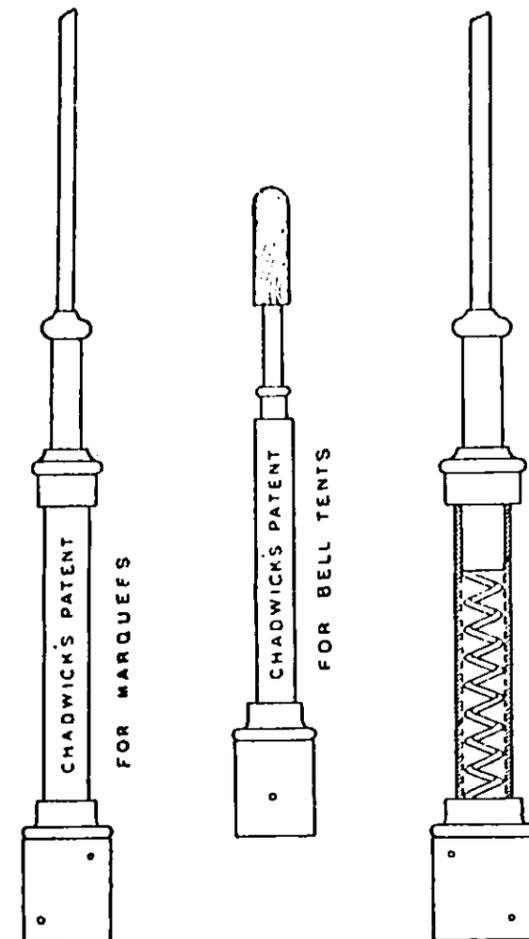
Manufactured by HUMPHREYS, LIMITED, Iron Building Works, Knightsbridge, Hyde Park, London, S.W.

DIVISION B.—Section 5. Barracks and Camps.

Self-Adjusting Tent Pole.

Certificate of Merit, 1892.

To J. CHADWICK.



DESCRIPTION.—The upper part of the Pole is telescoped and bears upon a strong spring, so that the Pole yields by shortening when any exceptional strain is put on the rope, and recovers itself when the strain ceases.

PRICES.—From 15s. to £2 10s.

Manufactured by JOHN CHADWICK, 32, Victoria Street, Landport, Portsmouth.

DIVISION B.—Section 5. (Continued.)

A Square Tent for Gardon.  
Certificate of Merit, 1892.

To C. GROOM & Co.

SIZE.—10 ft. × 10 ft.

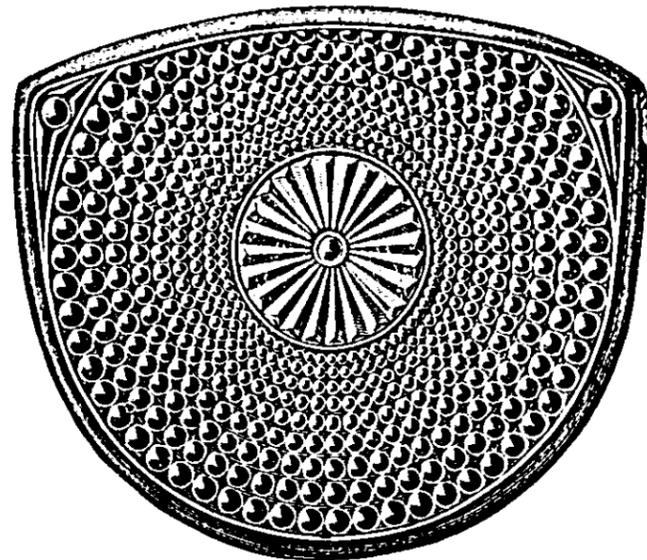
PRICE.—£9 10s. each.

Manufactured by CHARLES GROOM & Co., Broad Street, Portsmouth.

DIVISION B.—Section 11. Prevention of Accidents.

India-Rubber Pad for Carriage Stops.  
Certificate of Merit, 1889.

To HENRY WALL.



DESCRIPTION.—The Cover is moulded in one piece, and fits on the top of the Step and round the edge, with a lip or flange to secure it. The surface is moulded in the form of small cones, thus affording a secure tread. The Cover is easily adjusted, and may be removed at pleasure.

SIZES.—From 5 in. diameter.

PRICES.—From 5s. 6d.

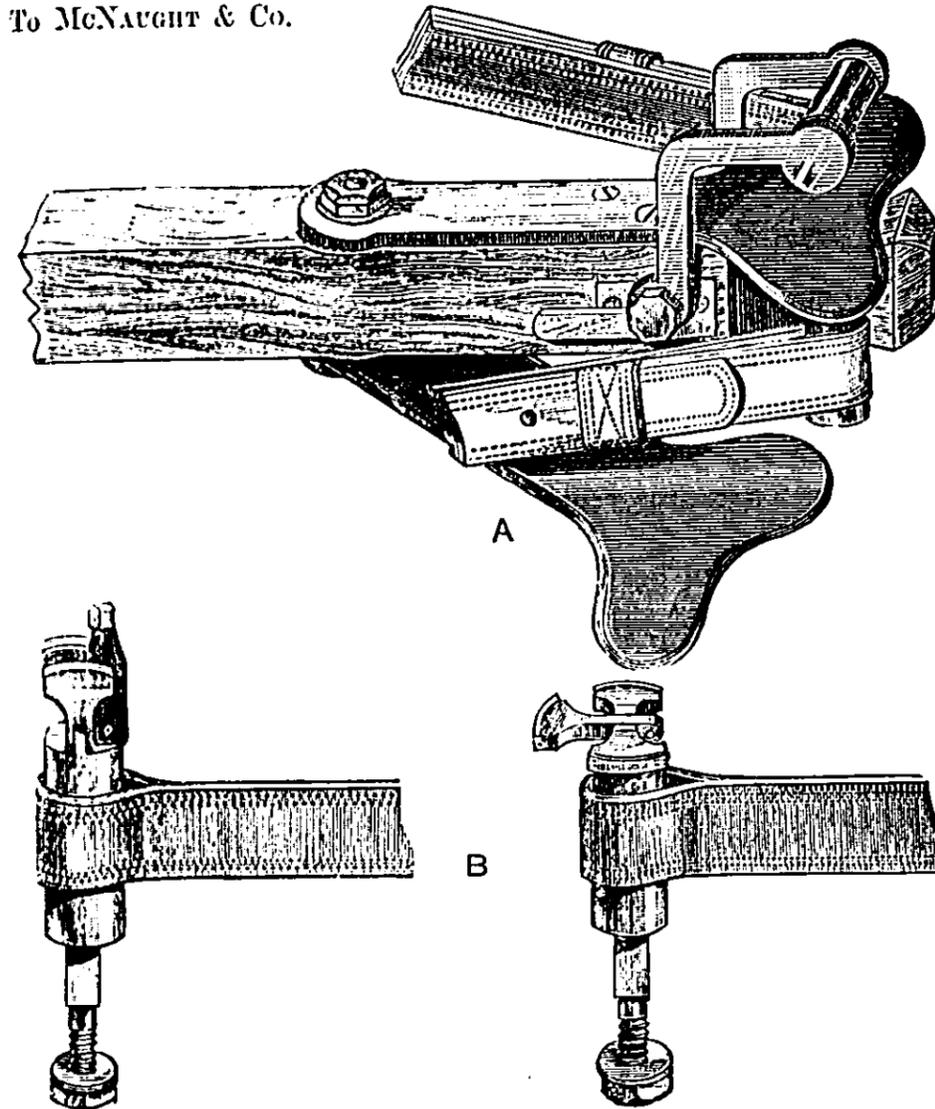
Manufactured by THE BIRMINGHAM INDIA-RUBBER Co., 124, New Street, Birmingham.

DIVISION B.—Section 11. (Continued.)

Arrangement for Releasing Horses from Vehicles in cases of Accident.

Certificate of Merit, 1889.

To McNAUGHT & Co.



DESCRIPTION.—The end of the Carriage-Pole is fitted with two flat Iron Plates, the upper one of which is a fixture, having two Studs upon it pointing downwards, to which the Pole-Chains or Straps are attached; the Under Plate is made to Revolve so that either horse can be set free, as by turning back this Revolving Plate the Pole-Chains or Straps drop off of their own accord. The Plate is kept in its place by means of a small Clamp which grips the Pole on either side of both the Upper and Lower Plates (Fig. A). The Roller Bolt has an invertible head, which, somewhat in the form of a Greek cross when open, can, by a touch of the hand, be inverted, allowing the trace to be instantly slipped off (Fig. B).

PRICES.—For Double Harness, per set complete, including fixing, £3 3s.; for Dog Carts, per set complete, including fixing, £1 1s.

Manufactured by McNAUGHT & Co., Worcester, & 10, Park Lane, Lond., W.

DIVISION B.—Section 12. Prevention of Fires.

Exhibit of Fire Extinguishing Appliances.

Medal, 1890.

To BRIGHTON VOLUNTEER FIRE BRIGADE.

Hand Chemical Fire Extinguisher.

Certificate of Merit, 1890.

To THE HASLAM FIRE EXTINGUISHER CO.

DESCRIPTION.—It is made in a Conical form to allow of a large base for it to stand upon; the Cover is an outside Shell which revolves round the top of the Nozzle, and Locks the same on the Fastenings. The India Rubber Joint Ring is so made that the pressure in the Extinguisher forces it against the side of the Nozzle and makes its own joint. The Acid Bottle inside is broken by a Screw-Plunger, the latter being operated by a Handle on the outside; the Discharge-Pipe is carried from the bottom of the Extinguisher.

PRICES.—From 7s. 6d. to £2; recharges 2s. each.

Manufactured by THE HASLAM FIRE EXTINGUISHER CO., Tonge Road,  
Bolton.

Water Curtain for Public Places of Entertainment.

Certificate of Merit, 1892.

To PORTSMOUTH WATER FITTINGS CO., Portsmouth.

DIVISION C.—CONSTRUCTION AND SANITARY APPARATUS.

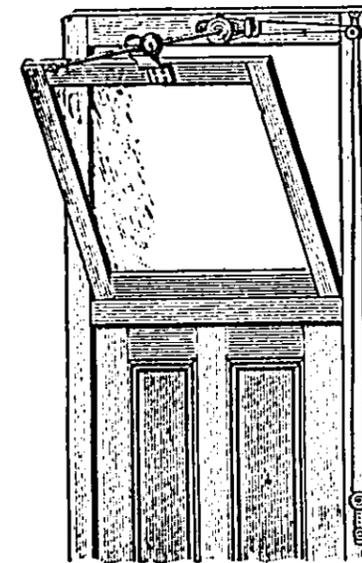
CLASS I.—BUILDING MATERIALS, CONSTRUCTION AND MACHINERY.

DIVISION C.—CLASS I.—Section 1. Materials and Construction.

“Grahtryx” Securo Fanlight Opener.

Medal, 1889.

To J. WARD & SONS.



DESCRIPTION.—An Endless Cord passing over a Grooved Pulley, and worked by hand, causes the Screw to revolve, thereby opening the Fanlight to the required distance, and locking it at any Angle.

SIZES.—Opening from  $\frac{1}{2}$  in. to 20 in.

PRICES.—From 7s. 6d.

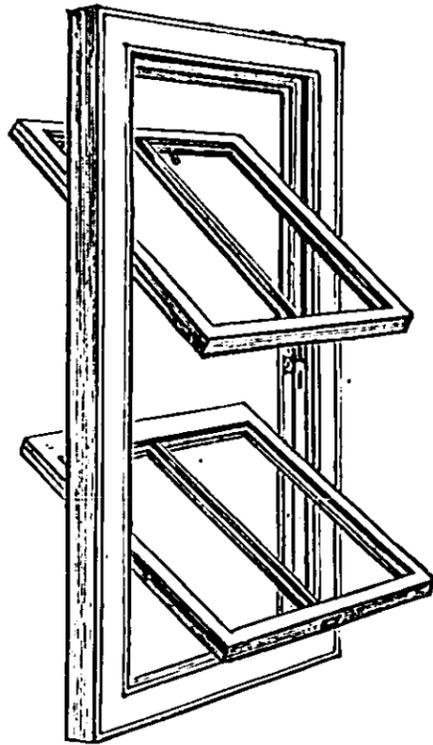
Manufactured by BAIRD, THOMPSON, & Co., Ventilating Engineers,  
London and Glasgow.

## DIVISION C.—CLASS I.—SECTION 1. (Continued.)

## Millar's Reversible Windows.

Certificate of Merit, 1889.

To MILLAR'S REVERSIBLE WINDOW CO.



DESCRIPTION.—The outside of each Sash can be reversed into the room and cleaned from the inside, thus avoiding risk of accident. Being self-balanced, they can be opened for the purposes of ventilation, and they can be taken off the stiles altogether and replaced without taking off any of the beads or disturbing the woodwork about the frame. Existing windows can be adapted to this principle.

PRICES.—According to description of Sash, from 15s. per Window opening *extra* over ordinary double hung sashes.

IN PARTS.—Hinged Stiles, 6s. 3d. per Pair; Teak ditto, 8s. 4½d.; or Brass Joints, 3s. 9d. per Pair.

Manufactured by THE REVERSIBLE WINDOW CO., 9, Hart Street, Bloomsbury.

## DIVISION C.—CLASS I.—SECTION 1. (Continued.)

## Model of Window with removable Sashes to facilitate Cleaning.

Certificate of Merit, 1892.

To A. CARTER.

DESCRIPTION.—The Window Frame and Sashes are made the same as ordinary ones, with the exception that one side of the window frame is fitted with a double pulley stile, the face of which is cut and hinged, so that it can be opened out and forms a recess for sashes to go in, enabling them thus to pass the beads on the opposite side of window frame. It can be applied to existing window frames.

PRICES.—1½ in., 10½d.; 1¾ in., 11d.; 2 in., 11½d. per super foot; with Oak Sills, 1d. per foot extra.

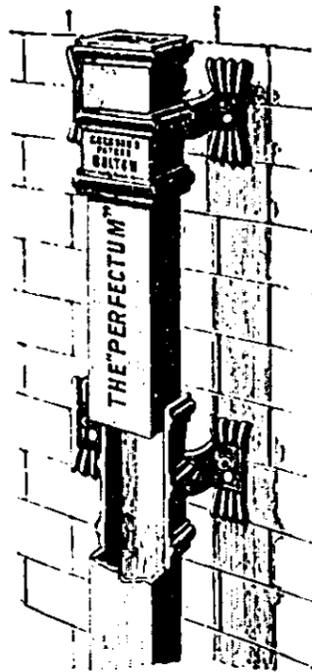
Manufactured by ALFRED CARTER & SON.

## DIVISION C.—CLASS I.—Section 1. (Continued.)

## Removable Rain-Water Pipes, Heads, Clips, and Hangers.

Certificate of Merit, 1889.

To JAMES GREGSON.



DESCRIPTION.—These Pipes have Ears with Slotted Nail-holes, so that they can be lifted from the wall, and are made with long Sockets so that the Ears can be adjusted to the joints in the brickwork. The projecting Ears set the Pipe out from the wall so as to allow of painting the back of the Pipes, and to prevent escaping water running down the wall.

SIZES.—3 × 2½ in., 3½ × 2½ in., 4 × 3 in.

PRICES.—3s., 3s. 3d., 3s. 9d. per yard.

Manufactured by JAMES GREGSON, Bath Street, Bolton.

## DIVISION C.—CLASS I.—Section 1. (Continued.)

## Wire Wove Roofing.

Certificates of Merit, 1889 and 1890.

To NEW WIRE WOVE ROOFING Co.

DESCRIPTION.—It consists of a fine net-work of woven wire, coated with a translucent waterproof compound. It is of various tints, and although only one-third the weight of ordinary glass will bear more weight.

SIZES.—In sheets 2 ft. and 4 ft. wide, and 5 ft. and 10 ft. in length.

PRICES.—Ordinary quality, 5½d. per square ft.; superfine, 6½d. per square ft.

Manufactured by THE NEW WIRE WOVE ROOFING Co., LIMITED, 75A, Queen Victoria Street, E.C.

## Robinson's Cement for Plastering.

Certificate of Merit, 1889.

To J. ROBINSON &amp; Co.

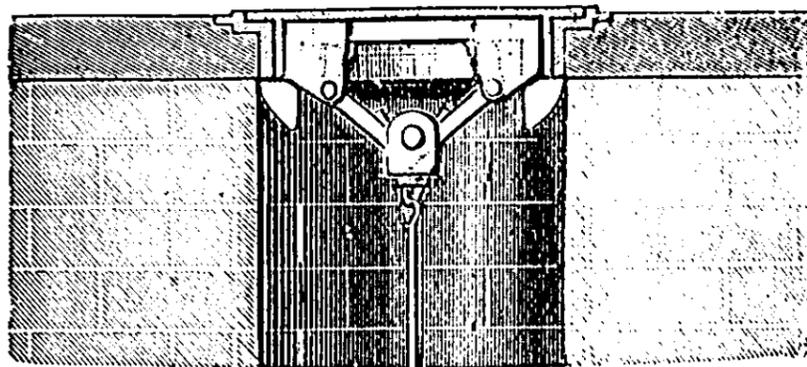
Manufactured by J. ROBINSON & Co., Knothill, near Carlisle.

DIVISION C.—CLASS I.—Section 1. (Continued.)

Self-Locking Coal Plate.

Medal, 1890.

To HAYWARD BROTHERS & ECKSTEIN.



DESCRIPTION.—It consists of a frame fixed in the pavement, into which the Plate is dropped and secured or locked by projecting bolts on each side, actuated by an arrangement of two small levers with a weight in the centre. The Coal Plate can be pushed out with a stick, or a rod connected to the centre weight.

SIZES.—Outside diameter, 12 in. to 18 in.

PRICE.—6s. to £1 5s.

Manufactured by HAYWARD BROTHERS & ECKSTEIN, 187, 189, 191, & 193, Union Street, Borough, London, S.E.

Terra Cotta Door and Window Jambs.

Certificate of Merit, 1892.

To S. S. WAY, Portsmouth.

DIVISION C.—CLASS I.—Section 3. Paints and other Protectives.

Antioxide.

Certificate of Merit, 1889.

To PETERS, BARTSCH & Co.

DESCRIPTION.—For making into paint to be used for preventing Rust on Iron, Steel, and other Metals; as a paint for protecting Wood; and for preserving Placards exposed to the weather.

PRICES.—7s. 6d. per Tin of  $\frac{1}{2}$  Gallon.

Manufactured by PETERS, BARTSCH & Co., Derby.

Carbolineum Avonarius.

Certificate of Merit, 1889.

To PETERS BARTSCH & Co.

USE.—For preserving Wood and Ropes, and preventing dampness in Walls.

SIZE AND PRICE.—4s. 3d. per 1 Gallon Tin.

Imported by PETERS, BARTSCH & Co., Derby.

Aspinal's Enamel and Lacquers.

Certificate of Merit, 1890.

To ASPINALL, ASPINALL & Co.

DESCRIPTION.—Enamel made in various Colours for painting and protecting Ironwork, Woodwork, &c., and for Decorative purposes.

PRICES.—2d., 5d., 1s. 3d., and 2s. 6d. per Tin; and £1 per Gallon.

Manufactured by ASPINALL'S ENAMEL Co., Limited, New Cross, S.E.

DIVISION C.—CLASS I.—Section 4. Wall Paper and Coverings.

Excellence of Design and Colour in Wall Papers and Silk Hangings.

Medal, 1890.

To D'OYLY & Co.

DIVISION C.—CLASS I.—Section 5. Flooring.

Solid Wood-Block Floor Paving.

Certificate of Merit, 1889.

To HOLLOWAY BROS.

DESCRIPTION.—This Paving is laid in Blocks, each Block having two of its sides splayed or tapered one way, and the two other sides the reverse way, so that they may be interlocked without the aid of ties or fastenings.

SIZES OF BLOCKS.— $1\frac{1}{2}$  in. to 4 in. in thickness, and from 12 in. to 18 in. square, superficial.

PRICE.— $1\frac{1}{2}$  in. thick, 6s. 6d. per yd. super.

*Manufactured by HOLLOWAY BROS., Queen's Road, Battersea.*

DIVISION C.—CLASS I.—Section 6. Decorative Materials.

Wood Moulding.

Certificate of Merit, 1890.

To BEVES & Co.

DESCRIPTION.—Wood Mouldings wrought both in hard and soft woods.

*Manufactured by BEVES & Co., Church Street, Brighton.*

DIVISION C.—CLASS I.—Section 6. (Continued.)

Exhibit of Art Porcelain.

Medal, 1889.

To THE WORCESTER ROYAL PORCELAIN Co.

*Manufactured by THE WORCESTER ROYAL PORCELAIN Co.*

Exhibit of Flooring and Wall Tiles.

Medal, 1889.

To WEBB'S WORCESTER TILERIES Co.

*Manufactured by WEBB'S WORCESTER TILERIES Co., Worcester.*

Enamelled Iron Plates for Decorative Purposes.

Certificate of Merit, 1889.

To HERMANN HEIM, 405 Oxford Street, W.

Decorative Tiles and Pottery.

Certificate of Merit, 1890.

To H. CRESSWELL.

*Manufactured by VARIOUS FIRMS.*

DIVISION C.—CLASS I.—Section 6. (Continued.)

Exhibit of Decorative Pottery and Faience.  
Medal, 1890.

To BURMANTOFF'S WORKS.

*Manufactured at BURMANTOFF'S WORKS, LEEDS FIRECLAY CO., LIMITED.*

Good Design and Colour in Upholstery Silks.  
Certificate of Merit, 1890.

To F. OLIVER & Co.

Artistic Pottery and Porcelain.  
Certificate of Merit, 1890.

To J. HAINES, 70, Church Road, Brighton.

Fancy Wood Decorations.  
Certificate of Merit, 1890.

To J. F. & G. HARRIS.

DESCRIPTION.—Adapted for Ceilings, Walls, Dados, &c. They can be fixed either straight or on a curve, being constructed for secret nailing.

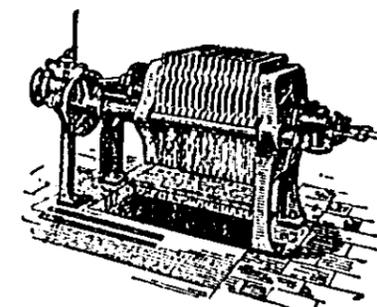
SIZE.—Made from  $\frac{1}{2}$  in. to any thickness and in various woods.

*Made by J. F. & G. HARRIS, 58 & 60, Wilson Street, Finsbury, E.C.*

DIVISION C.—CLASS I.—Section 7. Machinery and Mechanical Appliances.

Paton's Filter Press, with Pneumatic Attachment.  
Medal, 1889.

To MANLOVE, ALLIOTT & Co.



DESCRIPTION.—The Filter-Press is an apparatus designed to filter sewage sludge through cloth or other similar filtering medium, which is fixed on movable frames arranged in such a manner that a large amount of filtering surface is provided in a small compass. The cloth being firmly supported, the liquid may be forced through under considerable pressure. The Press is intended to deal with the sludge as it comes from the settling tanks, and to discharge it in the form of dry cakes.

*Manufactured by MANLOVE, ALLIOTT & Co., Limited, Engineers, Nottingham.*

## DIVISION C.—CLASS I.—Section 7. (Continued.)

## Fryer's "Destructor" with Jones's "Cremator."

Medal, 1889.

To MANLOVE, ALLIOTT &amp; Co.

DESCRIPTION.—The "Destructor" consists of a series of Furnaces or Cells with Sloping Hearth, so constructed that the refuse is fed on to the back or upper portion of the furnace, direct from the carts in which it is collected, without any sorting or handling.

The "Cremator" is a Supplementary Furnace, through which all the gases produced in the burning of the refuse are made to pass on their way to the chimney, and the gases being thus raised to a very high temperature, are rendered innocuous and inoffensive before being allowed to escape through the chimney into the atmosphere.

PRICE.—Varies from £400 to £1500 per Cell.

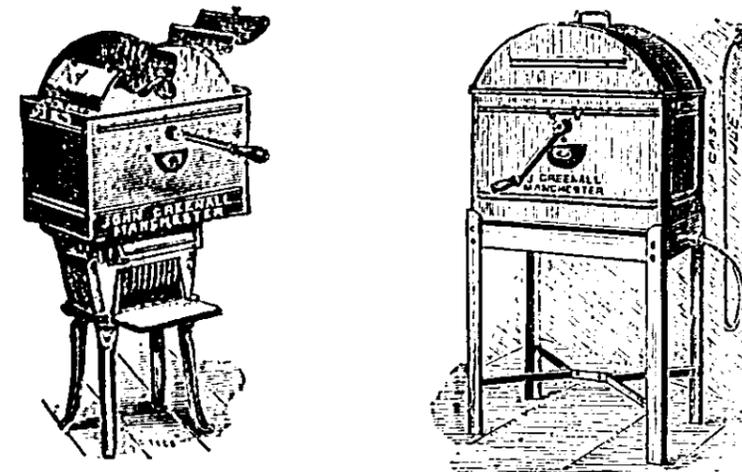
Manufactured by MANLOVE, ALLIOTT & Co., Limited, Engineers,  
Nottingham.

## DIVISION C.—CLASS I.—Section 8. Laundry Appliances.

## Gronall's Steam Washer.

Medals, 1890 and 1892.

To JOHN GREENALL



DESCRIPTION.—The Steam Washer is a combination of Boiler and Washing Machine, which boils and washes the clothes at one operation. The clothes, well soaked and soaped, are put into a cylinder which revolves in steam, generated from water in the bottom of the Washer, heated by gas or a coal or coke stove, and the cylinder is then turned slowly for ten minutes. The water by which the clothes are saturated is thus converted into steam, and the expansion (caused by this conversion of water into steam) loosens and carries off the particles of dirt.

PRICES.—From £4 4s. to £12 12s. Domestic and Hand power.

Manufactured by JOHN GREENALL, 120, Portland Street, Manchester.

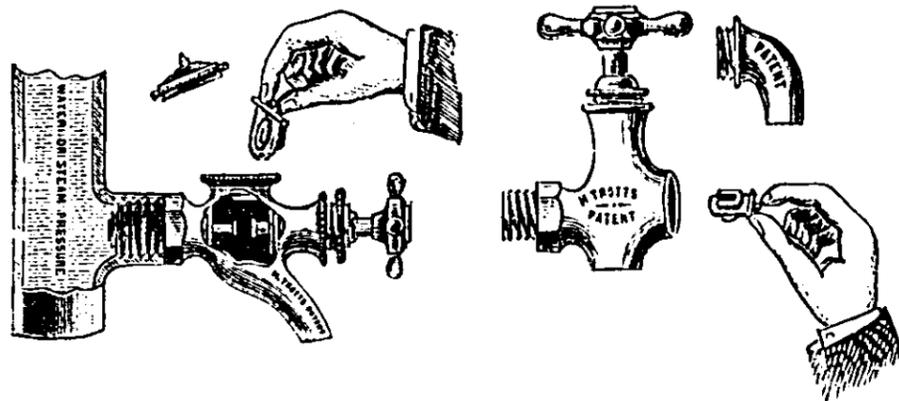
DIVISION C.—CLASS II.—WATER SUPPLY AND SEWERAGE.

DIVISION C.—CLASS II.—Section 1. Apparatus for Water Supply.

Removable Valves for Hot and Cold Water Cocks.

Certificates of Merit, 1889 and 1892.

To H. TROTT.



DESCRIPTION.—These Valves consist of a Sliding or Swinging Valve in a chamber covered with a screwed Cap or Nozzle, the unscrewing of which facilitates the removal of the inner Valve, and the insertion of new Asbestos or Metal Discs, when necessary.

SIZES.— $\frac{3}{5}$  in.,  $\frac{1}{2}$  in.,  $\frac{3}{4}$  in., 1 in.

PRICES.— 6/3    8/-    10/3    16/3

Manufactured by H. TROTT, 75, 77, and 79, High Street, Battersea, S.W.

DIVISION C.—CLASS II.—Section 1. (Continued.)

Combined Bath Valve with Interlocking Gear for Waste.

Certificate of Merit, 1892.

To TROTT VALVE AND ENGINEERING CO.

DESCRIPTION.—The Apparatus is operated by one handle turning round a front indexed dial-plate, and supplies hot, cold, and tepid water in any required proportions to the Bath through the same outlet, and also controls the waste valve which, by a simple interlocking arrangement, cannot be opened unless the inlet valves are closed.

PRICES.—Without waste, £5; Including waste, &c., £5 10s. and £6.

Manufactured by THE TROTT PATENT VALVE AND ENGINEERING CO.,  
LTD., Battersea, London, S.W.

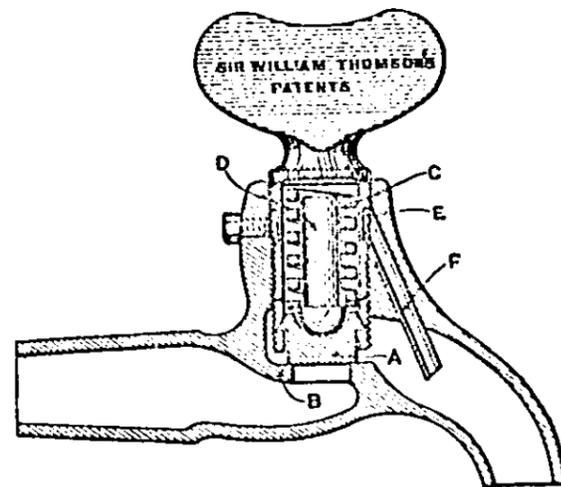
DIVISION C.—CLASS II.—Section 1. (Continued.)

Sir Wm. Thomson's Water Tap.

Certificates of Merit, 1890 and 1892.

To BOSTEL BROS. (1891).

To PORTSMOUTH WATER FITTINGS Co. (1892).



DESCRIPTION.—The metal valve A on reaching the seat B, also of metal, is not suddenly arrested, and compelled to seat itself haphazard, but continues to turn upon its seat as the handle is turned, receiving meanwhile a gradually increasing pressure from the spring C, centrally applied through the medium of the rounded head of the stop D. The valve is thus rubbed upon its seat at every opening and closing. No packing is used to prevent upward leakage. All water which passes the screw when the tap is open enters the annular space E, and is drawn off into the bib through the eduction tube F, in which a current is induced by the velocity of the water flowing through the bib.

SIZES.— $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{5}{8}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$ , 2.  
 PRICES.—3s., 4s. 2d., 5s. 3d., 6s., 8s. 9d., 18s., 26s., 44s.

Manufactured by PALATINE ENGINEERING Co., 10, Blackstock Street, Liverpool.

DIVISION C.—CLASS II.—Section 1. (Continued.)

Self-Acting Air Valves.

Certificate of Merit, 1889.

To GUEST & CHRIMES.

Manufactured by GUEST & CHRIMES, Rotherham.

Improved Chain Pump.

Certificate of Merit, 1890.

To W. CLEMENS ABELL & Co.

DESCRIPTION.—Consists of an Endless Chain with Discs of iron fixed at the joints, which is drawn through the barrel of the Pump.

SIZES.—2 in. to 4 in.

PRICES.—Pump 12 ft., £4 to £3; for extra length 5s. to 10s. 6d. per Foot.

Manufactured by W. CLEMENS ABELL & Co., Worcester Wagon Works, Worcester.

Baker's Water Hydrant.

Certificate of Merit, 1890.

To BRIGHTON WATER WORKS COMPANY.

DIVISION C.—CLASS II.—Section 1. (Continued.)

Armoured India Rubber Hose.

Certificate of Merit, 1890.

To MERRYWEATHER & SONS.



DESCRIPTION.—A Hose of India Rubber with Canvas Plies bound on the outside with Wire of Spring-Steel or Brass, the coil being self-holding and preventing wear of the Rubber by abrasion, and enabling the Hose to stand great internal pressure.

SIZES.—Made in all sizes from  $\frac{1}{2}$  in. upwards.

PRICE.—2s. per foot, 1 in. internal diameter.

Manufactured by MERRYWEATHER & SONS, LIMITED, Greenwich Road, S.E., and 63, Long Acre, W.C., London.

Enamelled Fireclay Cisterns.

Medal, 1892.

To BROAD & Co.

DESCRIPTION.—The Cisterns are enamelled and glazed on the inside surfaces of sides, and bottom, all sharp angles being avoided.

SIZES.—36 × 24 × 18; 42 × 24 × 20; 42 × 24 × 24.

PRICES.— £3 10s.      £4 5s.      £5

Manufactured by BROAD & Co., South Wharf, Paddington.

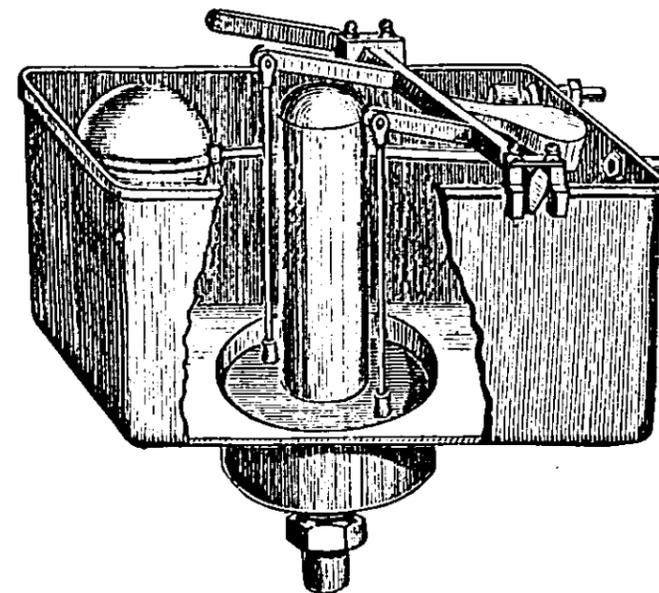
DIVISION C.—CLASS II.—Section 3. Water Waste Preventers.

Shanks's "Reliable" Water-Waste Preventer.

Certificates of Merit, 1889 and 1892.

To J. WARD & SON, 1889.

To PORTSMOUTH WATER FITTINGS Co., 1892.



DESCRIPTION.—Is made entirely without valves, on the Siphon principle. There is a Well or Dip, in which an Annular Disc works but does not fit closely, and through the centre of this Disc stands the Siphon-Pipe. The Disc being depressed by the Lever, forces the water into the Pipe and starts the Siphon.

	Painted,	Glass Enamelled,	Galvanized,	Porcelain Enamld.
PRICES.—2 Galls.,	19/6	24 -	24/6	26/6
3 "	21/6	26/-	27/-	29/-
4 "	25/-	30/-	32/-	33/-

Manufactured by SHANKS & Co., Barrhead, N.B.

DIVISION C.—CLASS II.—Section 3. (Continued.)

"Tornado" Water-Waste Provontor.  
Certificate of Merit, 1889.

To R. W. TOMLINSON, Worcester.

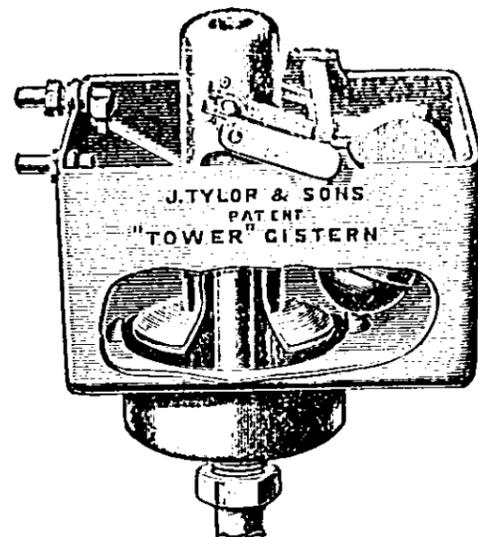
The Winsor After-Flush Cistern.  
Certificate of Merit, 1889.

To WINSER & Co.

Manufactured by WINSER & Co., 52, Buckingham Palace Road, S.W.

"Tower" Waste Provontor.  
Medal, 1890.

To J. TYLOR & SONS, LIMITED.



DESCRIPTION.—This is an Annular Siphon Cistern; by pressing the iron dome into the well in which it works, the water is driven into the pipe and starts the Siphon.

SIZES.—1 Gallon (for Urinals), 2 Gallons, and 3 Gallons.

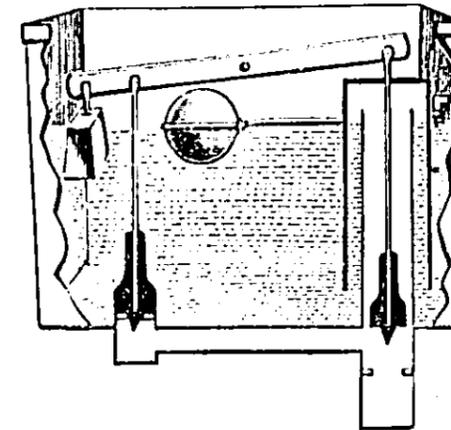
PRICES.—1 Gallon from 18s.; 2 Gallons from 19s.; 3 Gallons from £1 4s.

Manufactured by J. TYLOR & SONS, LIMITED, 2, Newgate Street, E.C.

DIVISION C.—CLASS II. Section 3.—(Continued.)

The Prosto Seat Action Siphon Waste Prevonting Cistern.  
Certificate of Merit, 1892.

To JOHN KNOWLES & Co.



DESCRIPTION.—The apparatus (which is adaptable to any kind of wash-down or washout closet) consists of four parts, viz., a Seat, a Rocking Board pivotted in two side brackets, the latter having each a vertical slot and a round hole in it. The Seat is pivotted loosely in these slots, and midway on each side of the seat underneath is an indiarubber "boss," which rests on the rim of the closet pan and serves as a fulcrum on which the seat will rock. The front of the Seat being pressed down, the back part is raised, and here the Rocking Board is brought into action. This Rocking Board extends across the whole length of the back part of the seat, and is pivotted in the holes of the side brackets. It has at each end (right and left) a projecting arm which overlies and rests upon the cam piece attached to the seat pin. When the Seat is pressed upon in front these arms are lifted and the back part of the Rocking Board depressed. The chain, which moves the cistern lever being attached to the back part of the Rocking Board, is thereby pulled. The Seat has however a *double action*, for on being *lifted up* (for the purpose of using the closet as a urinal or for emptying slops, &c.) the metal cam pieces attached to the seat pins force up the projecting arms of the Rocking Board, and a pull on the chain is again secured. When the Seat is returned to its normally horizontal position a discharge of water again takes place. The cistern discharges are effected by a siphon set in action in the following manner:—Two valves attached to a lever are used, one valve (called the siphon valve) being inside the discharge arm of the siphon, the other valve (called the cistern valve) being in the cistern at the other end of the lever. The chain pull opens the cistern valve and closes the siphon valve, and the water runs through a duct at the bottom of the cistern into the siphon. When the chain is released the weight closes the cistern valve, raises the siphon valve, and the water contained in the duct starts the siphon, and the contents of the cistern are discharged.

PRICE.—£3 10s.

Manufactured by JOHN KNOWLES & Co., 38, King's Road, St. Pancras, N.W.

DIVISION C.—CLASS II.—Section 3. (Continued.)

Silent Arrangement for Tower Waste Preventor.

Certificate of Merit, 1892.

To J. TYLOR & SONS, LIMITED.

DESCRIPTION.—A Valve, with weight and float, is attached to dome of Siphon. When the dome is pulled down to start the Siphon, the weight keeps the Valve closed; but when the water level falls in the Cistern, below the float, the Valve is opened, admitting air into the top of the Siphon, and preventing the gurgling noise formerly made when air and water entered together at the bottom of the Siphon.

PRICE.—6s. 6d. in addition to price of Cistern.

Manufactured by J. TYLOR & SONS, LTD., 2, Newgate Street, London, E.C.; and Belle Isle, York Road, N.

Quick Filling Siphon Flush Cistern for Closets.

Certificate of Merit, 1892.

To G. JENNINGS.

Manufactured by G. JENNINGS, Stangate, Lambeth.

DIVISION C.—CLASS II.—Section 4. Flushing and Watering.

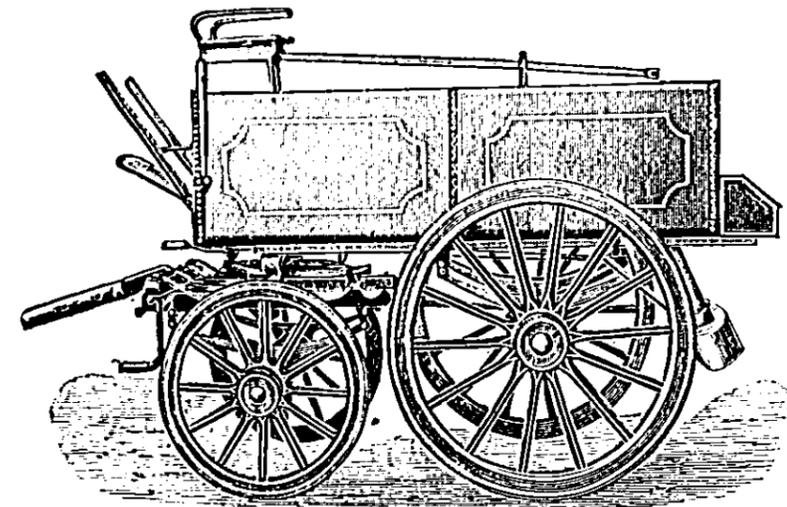
Improved Street Watering Van with Double Distributors and Valves.

Certificates of Merit, 1889 and 1890.

Balanced Water Cart.

Certificate of Merit, 1892.

To W. CLEMENS ABELL & Co.



DESCRIPTION.—Constructed with bodies of flanged steel plates, riveted to the iron frame of channel, and Tee Bars, fitted with Double Distributors and Valves for watering the whole or any section of the road. Either of the Valves can be instantly stopped by the driver.

SIZES.—300 Gallons, 350 Gallons, 400 Gallons, and 460 Gallons.

PRICES.—£40, £41 10s., £43, £45.

Manufactured by W. CLEMENS ABELL & Co., Worcester Wagon Works, Worcester.

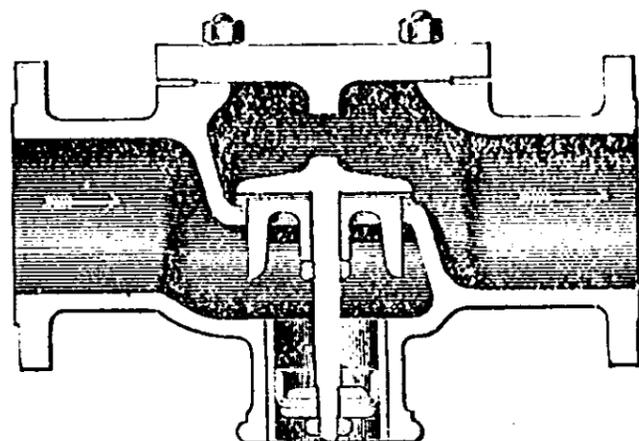
DIVISION C.—CLASS II.—SECTION 4. (Continued.)

Excellence in Manufacture of Water Fittings.

Medal, 1889.

To GUEST & CHRIMES.

Pressure-Reducing Valve.



DESCRIPTION.—By varying the size of the Piston underneath the Valve at the inlet side, the pressure in water mains beyond the Valve or in house service pipes be may reduced to any extent desired. Made with Cast Iron body and Gun Metal working parts.

PRICES.—From £2 2s. to £7 each.

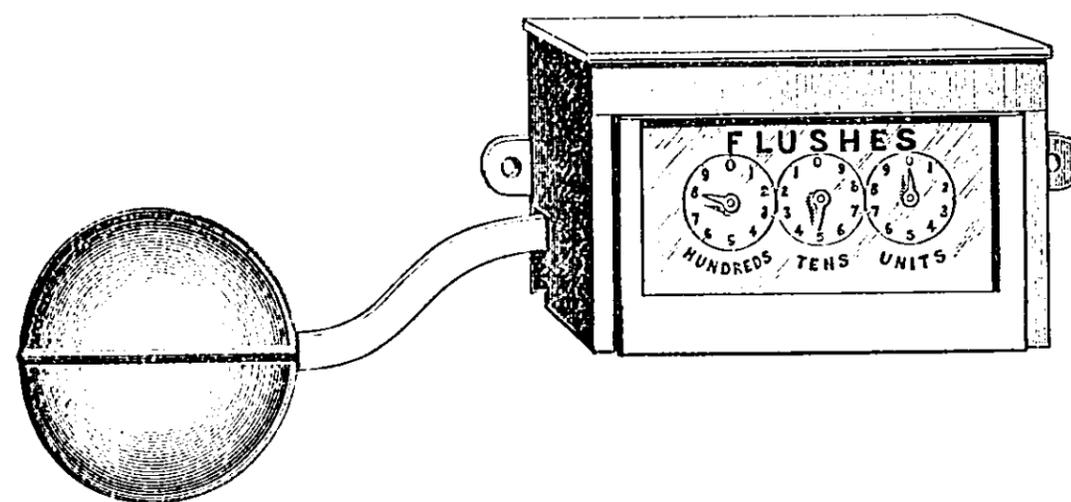
Manufactured by GUEST & CHRIMES, Rotherham.

DIVISION C.—CLASS II.—SECTION 4. (Continued.)

Flush Indicator.

Certificate of Merit, 1892.

To WATER CARRIAGE ENGINEERING Co.



DESCRIPTION.—This instrument is constructed so as to record, by the action of a floating ball, exactly the number of flushes given from a flush Tank. It enables a meter to be dispensed with, as the number of flushes recorded, multiplied by the capacity of the cistern in gallons, give the consumption of water.

SIZE.—(Illustration) Half Full Size.

PRICE.—No. 7, 12s. 6d.

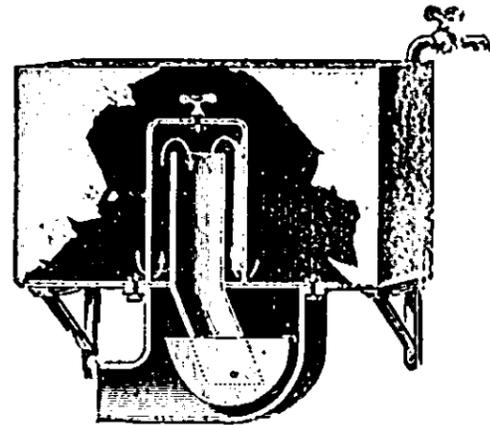
Manufactured by THE WATER CARRIAGE ENGINEERING Co., LIMITED, Sheffield.

DIVISION C.—CLASS II.—SECTION 4. (Continued.)

Automatic Flushing Siphon with Tipping Bucket at Outlet.

Certificate of Merit, 1892.

To WATER CARRIAGE ENGINEERING CO.



DESCRIPTION.—When the feed water has risen in the tank as high as the bend of the siphon, it runs down the long leg into the tipping bucket, which is placed in the chamber underneath. When it has risen in this tipping bucket to the bottom of the long leg it traps the siphon. In the act of trapping it slightly compresses the air in the pipe, and as a consequence the feed ceases to run down the long leg until the water in the tank has risen sufficiently high to form a head with a pressure sufficient to overcome the air pressure in the siphon. This slight head, forces more water down into the tipping bucket, which compresses the air in the siphon still more, and consequently requires a greater head to force more water down. When the tank is filled to the required level the tipping bucket is also filled to its tipping point, and it then cants over and discharges its contents, untrapping the siphon and releasing the compressed air contained in it, the head of water in the tank instantly charging the siphon.

SIZES.—15 Gallons to 200 Gallons.

PRICES.—From £2 10s. to £13.

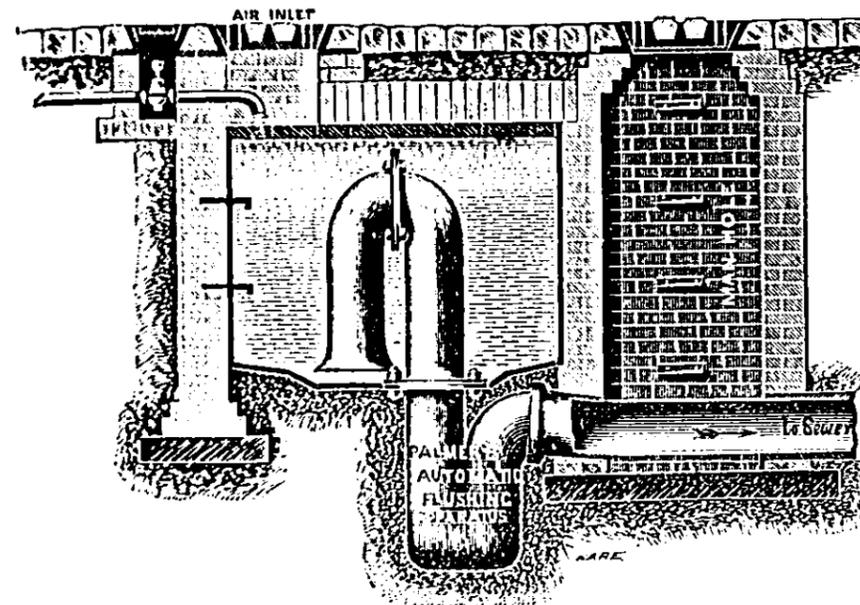
Manufactured by THE WATER CARRIAGE ENGINEERING CO., LIMITED,  
Sheffield.

DIVISION C.—CLASS II.—SECTION 4. (Continued.)

Palmer's Automatic Flushing Siphon.

Certificate of Merit, 1892.

To E. R. PALMER.



SIZES.—2 ft. to 36 ft. diameter.

PRICES.—From £2 upwards according to size.

IN PARTS.—Three parts.

Manufactured by E. R. PALMER, Hygiene Works, Beckenham.

The Climax Automatic Flushing Siphon.

Certificate of Merit, 1892.

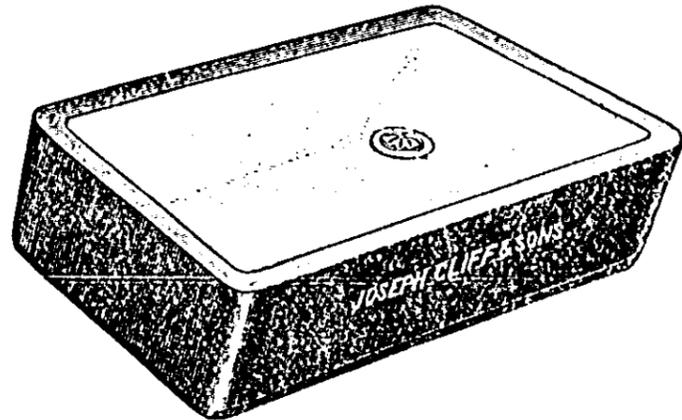
To S. GROSSMITH, Daniel Street, Portsea.

DIVISION C.—CLASS II.—Section 5. Sinks,

Yorkshire Salt-Glazed Sink.

Certificate of Merit, 1889.

To JOSEPH CLIFF & SONS.



DESCRIPTION.—Made in Salt-Glazed Stoneware in various shapes and sizes.

SIZE.—24 in. × 18 in.; 6 in. outside.

PRICE.—6s.

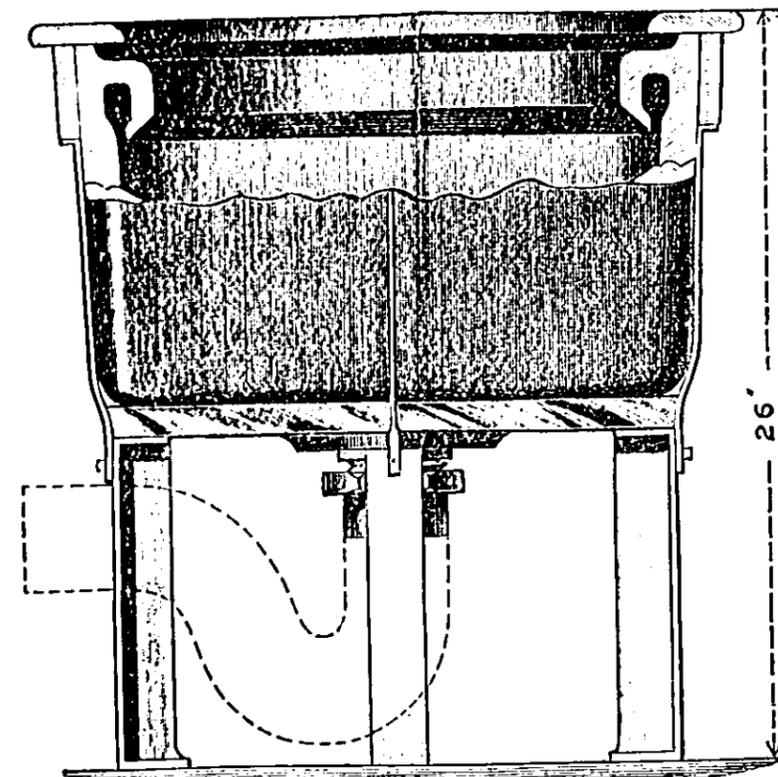
Manufactured by JOSEPH CLIFF & SONS, Wortley, Leeds.

DIVISION C.—CLASS II.—Section 5. (Continued.)

“Cocil” Slop Sink.

Medals, 1889 and 1890.

To JOSEPH CLIFF & SONS.



DESCRIPTION.—The chief feature in this Sink is the flushing rim which is made in the material and is part of the Sink itself. The Sink is fixed with a lead trap above the level of the floor.

No. 2. No. 1.  
SIZES.—18 in. × 18 in. and 22 in. × 22 in. outside.

PRICES.—£1 17s. 6d. and £3 10s.

IN PARTS.—Galvanized Iron Frame and Legs, including Iron Straps and Tie Rods, 15s.; Pitch-pine Top, 15s.; Brass Outlet and Union, 11s. extra per set.

Manufactured by JOSEPH CLIFF & SONS, Wortley, Leeds.

DIVISION C.—CLASS II.—Section 5. (Continued.)

Enamelled Fire Clay Hospital Sink.  
Certificate of Merit, 1889.

White Enamelled Fire Clay Sink.  
Certificate of Merit, 1890.

To JOSEPH CLIFF & SONS.

DESCRIPTION.—Made in "Imperial" Ware.

SIZES.—20 in. × 16 in.; 13 in. outside.

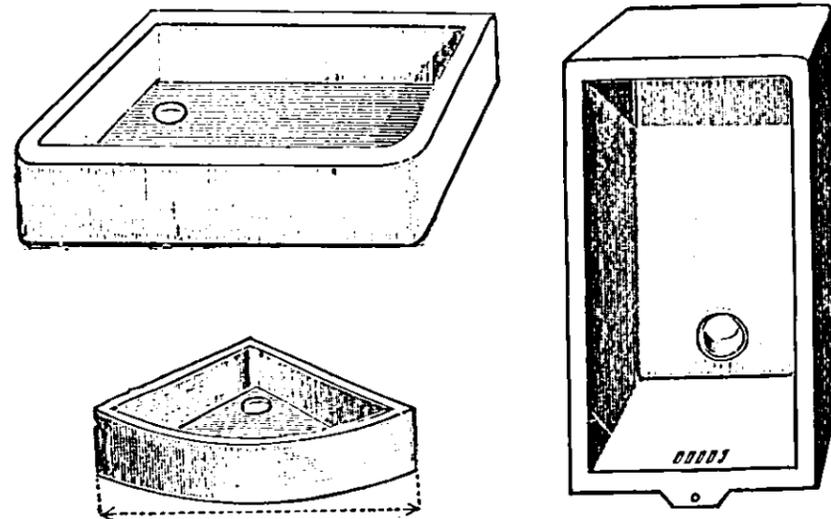
PRICE.—£1 5s.

Kitchen, Housemaid, Butler's, and other forms are made in same ware.

Manufactured by JOSEPH CLIFF & SONS, Wortley, Leeds.

White Enamelled Fireclay Sinks.  
Certificate of Merit, 1892.

To BROAD & Co.



SIZES AND PRICES.—20 × 15 × 6½ in. to 48 × 24 × 8 in. outside, 10s. to £2 10s.;  
21 × 15 × 8½ in. to 48 × 24 × 12 in. outside, 14s. to £3. White enamel, 2 ft.,  
12s., 2 ft. 4 in., 15s. Cane glazed, 2 ft., 6s., 2 ft. 4 in., 7s. 6d.

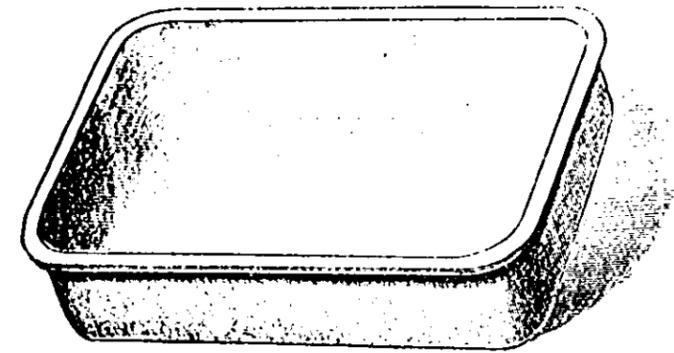
Manufactured by BROAD & Co., South Wharf, Paddington.

DIVISION C.—CLASS II.—Section 5. (Continued.)

Indurated Wood Fibre Sinks.

Certificate of Merit, 1892.

To MILNE, SONS & MACFIE.



DESCRIPTION.—Moulded in one piece and made without joint or seam. The pores of the Fibre are filled with a hardened or indurating material and subjected to a high degree of heat. The inner surface is lined with eburite enamel. The material for Sinks is made about half-inch thick and is very light; made also in Closet Seats, Wash Tubs, and Baths.

SIZE.—Outside 19 × 26 × 7 inches deep.

PRICE.—£2.

Manufactured by MILNE, SONS & MACFIE, 60, Holborn Viaduct, E.C.; and  
JAMES MILNE & SON, Milton House Works, Edinburgh.

DIVISION C—CLASS II.—Section 6. Baths and Lavatories.

Rufford's Porcelain Bath.

Medals, 1889.

To R. W. TOMLINSON, Worcester.  
To J. WARD & SON, Worcester.

DESCRIPTION.—Moulded in one piece of Porcelain, and glazed inside and out.

SIZE.—68 in. long outside.

PRICES.—From £6 10s. to £10.

Manufactured by RUFFORD & Co., Stourbridge.

Imperial Spray Bath.

Certificate of Merit, 1890.

To J. SMEATON, SON & Co.

DESCRIPTION.—This Bath has Circular End and Spray Hood, which is so arranged that all the water from the various Needles and Spray Jets concentrates itself towards the centre.

PRICES.—With all the Valves and arrangements for Shower, Spray, Douche, Wave, Sitz, Rose, and Plunge, with extra quick waste valve, and brass rod pipe, waste and overflow, in extra strong zinc, £22 10s.; ditto, with Copper Bath and Hood, £35 10s.

DIVISION C.—CLASS II.—Section 6. (Continued.)

Imperial Porcelain Bath.

Medals, 1889 and 1890.

Roman Bath.

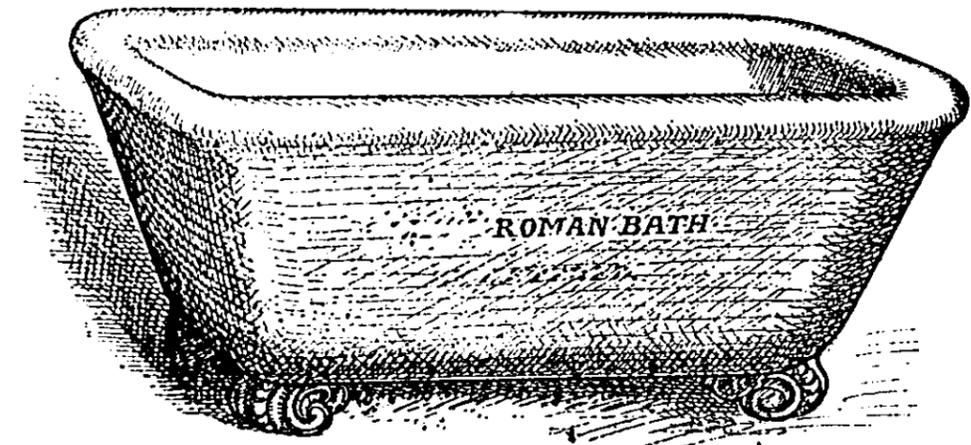
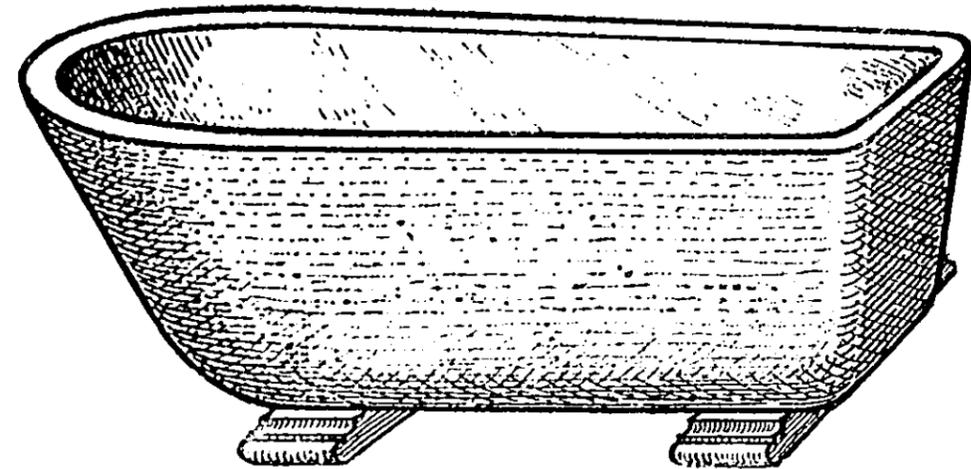
Medal, 1889.

The Nursery Bath.

Medal, 1889.

To J. CLIFF & SONS.

IMPERIAL BATH.



DESCRIPTION.—These Baths are made of Imperial Porcelain Ware, with flat unglazed edge, for enclosing in wood casing, or with glazed roll edge and outside left plain for decorating without any enclosing woodwork.

SIZES.—Taper or Parallel Bath, 5 ft., 5 ft. 7 in., and 6 ft. long.

PRICES.—£7, £7 10s., £8, and £9 10s.; glazed roll, £1 10s. extra.

SIZE.—Roman Bath, 5 ft. 3 in. long.

PRICES.—£8; with glazed roll, £1 10s. extra.

SIZE.—Nursery Bath, 4 ft. 6 in. long.

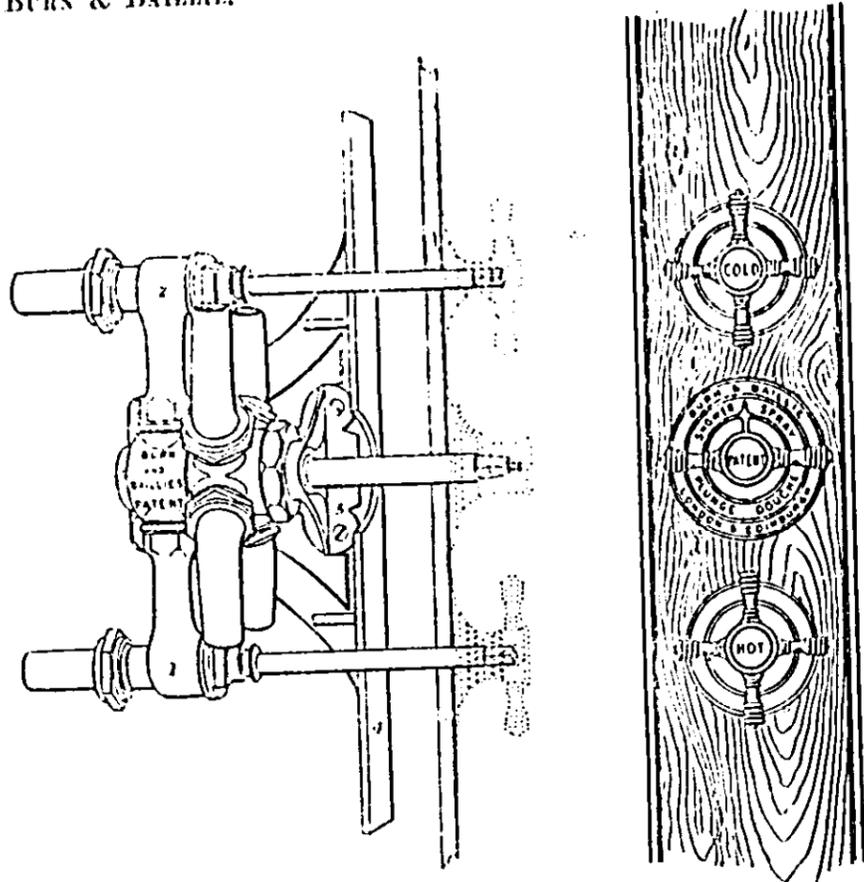
PRICES.—£6; glazed roll, £1 10s. extra.

Manufactured by J. CLIFF & SONS, Wortley, Leeds.

DIVISION C.—CLASS II.—Section 3. (Continued.)

Combination Bath.  
Certificate of Merit, 1890.

To BURN & BAILLIE.



DESCRIPTION.—Only one handle is required in addition to the ordinary hot and cold water taps. When the temperature of the water has been regulated, by means of this handle, plunge, spray, shower, wave or douche may be obtained by simply turning the indicator to either on the dial plate. Enamelled iron canopy, combination supply apparatus with four outlets for plunge, shower, spray, and wave or douche, with unions for hot and cold services.

SIZE.—5 ft. 9 in. long, inside.

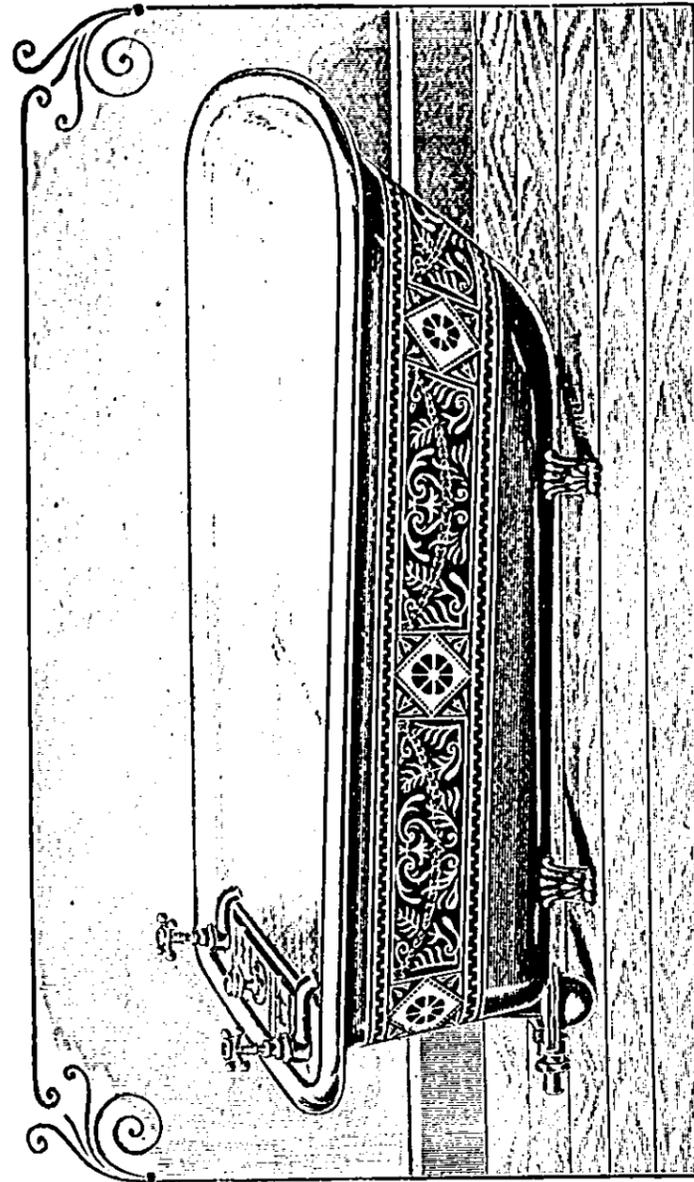
PRICE.—£16 15s.

Manufactured by BURN & BAILLIE, 14, Newcastle Street, Farringdon Street, E.C.

DIVISION C.—CLASS II.—Section 3. (Continued.)

Shanks' Enamelled Iron Bath.  
Certificate of Merit, 1892.

To PORTSMOUTH WATER FITTINGS CO.



DESCRIPTION.—Fitted with hot, cold, and waste fittings, soap dishes, standing waste and overflow in one piece with the Bath. Adjustable trap. With rolled edge, ornamental feet, and outside decorations. To stand without wood enclosure.

SIZE.—5 ft. 6 in.

PRICE.—Japanned, £3 9s. 6d. and £4; metallic enamelled, 2nd quality, £4 15s. 6d. and £5 8s.; metallic enamelled, 1st quality, £5 12s. 6d. and £6 5s. 0d.; porcelain enamelled, £7 4s. and £7 17s. 6d. respectively. Taper and parallel sided, nickel-plated fittings, 3s. extra; trap above floor line, 1s. 6d. extra.

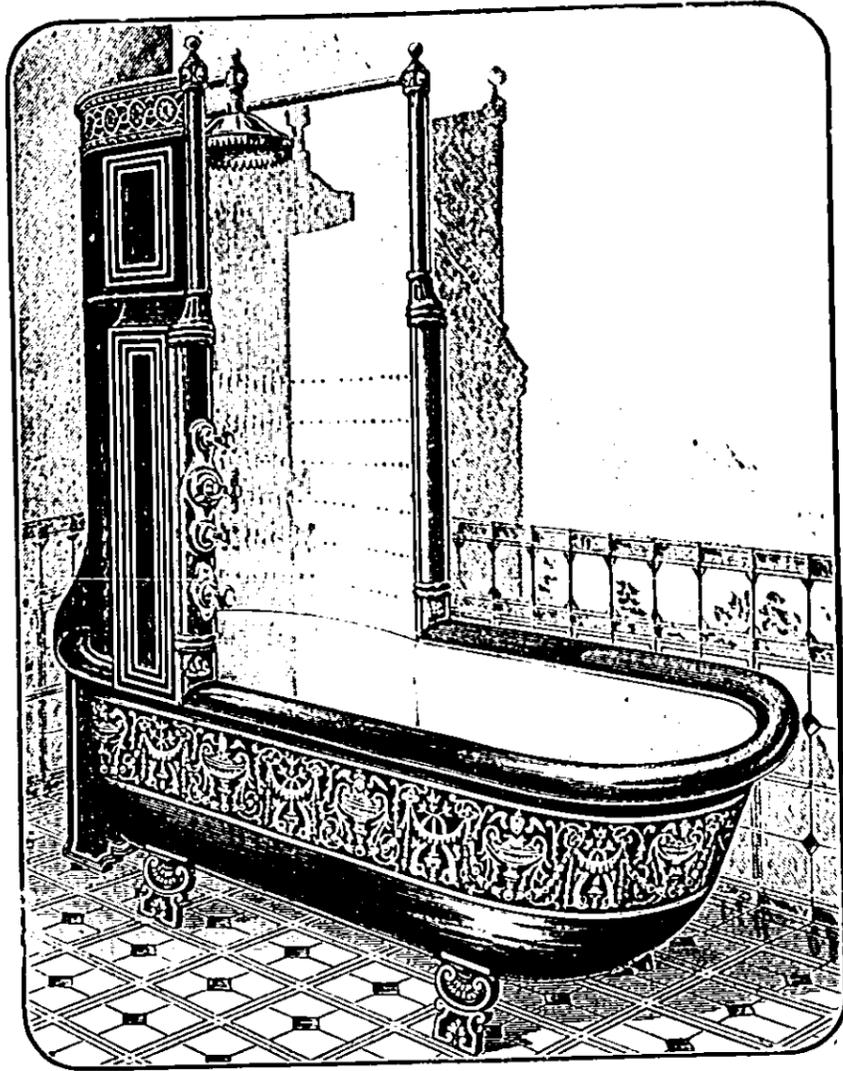
Manufactured by SHANKS & Co., Barrhead, N.B.

DIVISION C.—CLASS II.—Section 6. (Continued.)

Shanks' Independent Spray and Plunge Bath.

Certificate of Merit, 1892.

To PORTSMOUTH WATER FITTINGS Co.



DESCRIPTION.—Plunge is of cast-iron, with waste and overflow. Spray of zinc or copper. Fittings are the Eureka Fittings. Plunge, Spray, and Shower, with rolled edge and ornamented outside, to stand without enclosure. Fitted with Circular Spray.

PRICE.—Independent Bath, with Cast-Iron Plunge and Plate Zinc Spray, Metallic Enamelled inside and Japanned outside, with Nickel-Plated Shower and Tube, and Eureka Fittings, £27 10s.; with Copper Spray, £35.

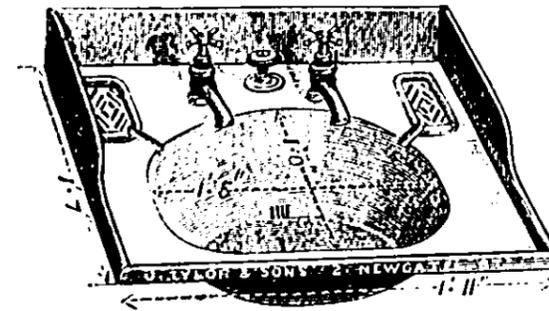
Manufactured by SHANKS & Co., Barrhead, N.B.

DIVISION C.—CLASS II.—Section 6. (Continued.)

Lavatory Basin and Fittings.

Certificate of Merit, 1890.

To J. TYLOR & SONS, LIMITED.



DESCRIPTION.—The Supply and Waste-Valves are fixed to it; by unscrewing the Cap of the Waste Pull-up the Overflow and Waste-Valves can be lifted out for cleaning. There is no metal in the Basin.

SIZES.—Basin, 14 in. × 11 in.; 17 in. × 12 in.; 18½ in. × 13 in.; 20 ins. × 14 in.; 28 in. × 21 in.

PRICES.—With Valves, £2 12s., £3, £3 10s., and £4, with Skirting, and £2 4s., £2 12s., £2 15s., and £3 3s. without Skirting. Plated Fittings, 5s. extra.

Manufactured by J. TYLOR & SONS, LIMITED, 2, Newgate Street, E.C.

Lavatories.

Certificate of Merit, 1890.

To BOSTEL BROS.

Manufactured by BOSTEL BROS., 18, Duke Street, Brighton.

DIVISION C.—CLASS II.—Section 3. (Continued.)

Lavatory with Lifting Standing Waste Outlet.

Certificate of Merit, 1892.

To J. TYLOR & SONS, LIMITED.



DESCRIPTION.—The Waste and Overflow Valve is placed in a recess in the basin, which allows of the valves being cleaned, and leaves the whole area of the basin available for use.

SIZES.—Four Sizes varying from 14 in. × 11 in. to 20 in. × 14 in.

PRICES.—From £1 10s. 6d. to £2 15s. 6d. Plated Mountings, 4s. 6d. extra.

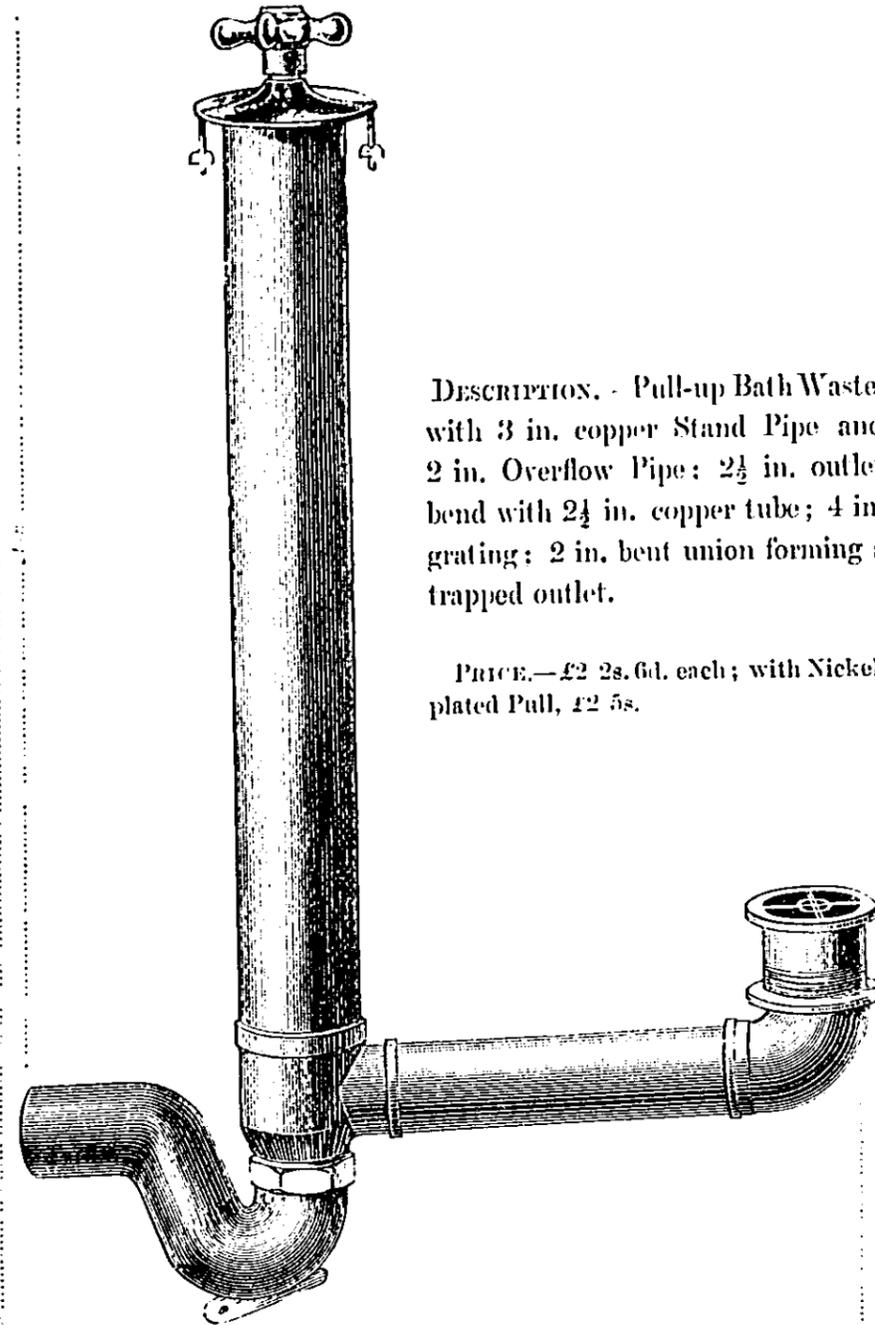
Manufactured by J. TYLOR & SONS, LIMITED, 2, Newgate Street, E.C.; and Belle Isle, York Road, N.

DIVISION C.—CLASS II.—Section 3. (Continued.)

Standing Waste and Overflow, with Trapping Bend for Bath.

Certificate of Merit, 1892.

To MILNE, SONS & MACFIE.



DESCRIPTION.—Pull-up Bath Waste with 3 in. copper Stand Pipe and 2 in. Overflow Pipe; 2½ in. outlet bend with 2½ in. copper tube; 4 in. grating; 2 in. bent union forming a trapped outlet.

PRICE.—£2 2s. 6d. each; with Nickel-plated Pull, £2 5s.

Manufactured by MILNE, SONS & MACFIE, 60, Holborn Viaduct, E.C.; and JAMES MILNE & SON, LIMITED, Milton House Works, Edinburgh.

DIVISION C.—CLASS II.—Section G. (Continued.)

Hinged Grating for Overflow of Bath.

Certificate of Merit, 1890.

To BURN & BAILLIE.

DESCRIPTION.—The grating of overflow is hinged so as to permit of the overflow pipe being thoroughly cleansed by means of a brush.

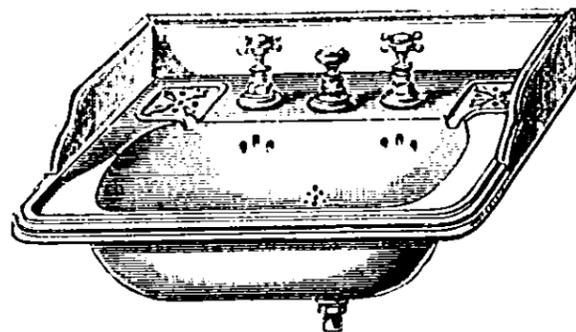
PRICES.—For Iron Bath, 10s. 6d.; For Fireclay Bath, 12s. 6d.

Manufactured by BURN & BAILLIE, 14, Newcastle Street, Farringdon Street, E.C.; and BURN BROTHERS, 23 & 24, Charing Cross, S.W.

Imperial Lavatory.

Certificate of Merit, 1889.

To J. WARD & SON.



DESCRIPTION.—It has a vertical stand-pipe, with waste and overflow made in one piece with the basin and table-top, and containing tubular plug, which acts as waste valve and overflow. The channels for the inlet of water are formed in the earthenware.

PRICE.—No. 90A Basin, 24½ × 18½ in., with Bowl, 18 × 12 in., £3 8s.  
 „ 91A „ 27½ × 20 „ „ 20½ × 13½ „ £3 15s.

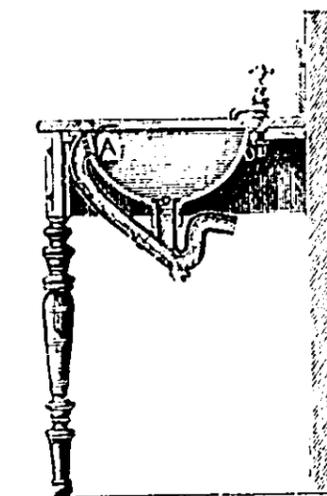
Manufactured by SHANKS & Co., Barrhead, N.B.

DIVISION C.—CLASS II.—Section G. (Continued.)

Lavatory with Overflow which can be cleansed.

Certificate of Merit, 1890.

To BURN & BAILLIE.



DESCRIPTION.—The movable grating A affords easy access to the overflow pipe, which may be cleaned out down to the brass trap, which is arranged with the overflow pipe entering directly opposite the outlet, so that a free passage, without check, is provided for overflow water. The waste grating is made to lift out, and there is a brass cleansing screw in the bottom of the trap beyond.

SIZE AND PRICE.—Lavatory Basin, 14 ins. diameter inside, complete, and ready for fixing, from £3 7s. 6d. each.

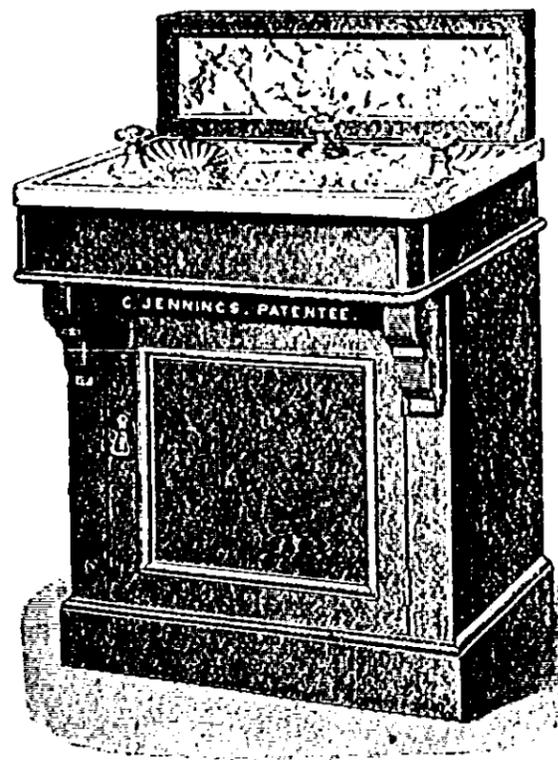
Manufactured by BURN & BAILLIE, 14, Newcastle Street, Farringdon Street, E.C.; and BURN BROTHERS, 23 & 24, Charing Cross, S.W.

DIVISION C.—CLASS II.—SECTION 3. (Continued.)

Cabinet Lavatory Stand.

Certificate of Merit, 1892.

To G. JENNINGS.



DESCRIPTION.—The basin is square at back, rounded in front. Direct delivery of the supply over the edge of basin without projection, concealed overflow, earthenware outlet arm, removable discharge plug, and grating.

PRICES.—Rectangular, from £3 7s. 6d.; Angular, from £3 5s.

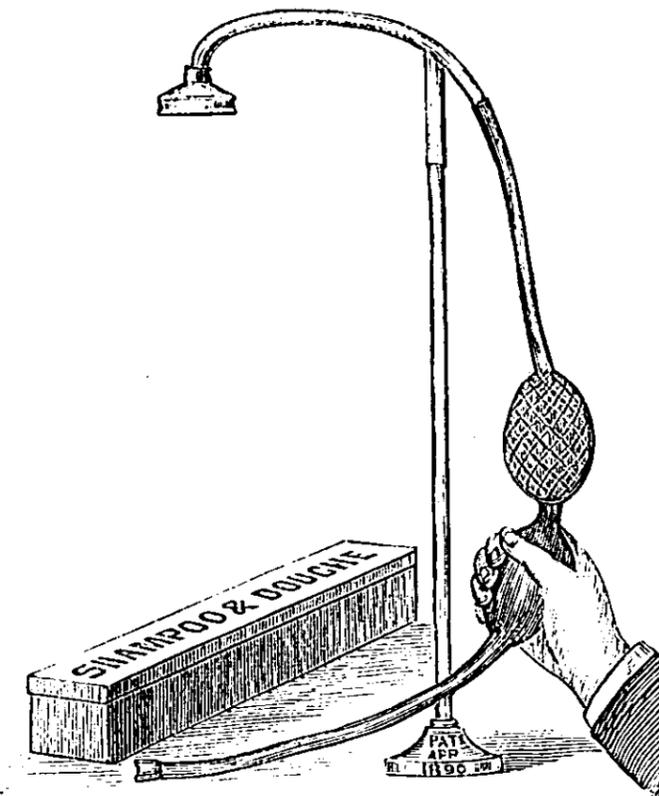
Manufactured by G. JENNINGS, Stangate, London, S.E.

DIVISION C.—CLASS II.—SECTION 3. (Continued.)

Shampoo and Douche.

Certificate of Merit, 1890.

To R. HOLBROOK.



DESCRIPTION.—Consists of a Stand and Spreader, with India Rubber Pumping Arrangement.

PRICE.—10s. 6d., in Box.

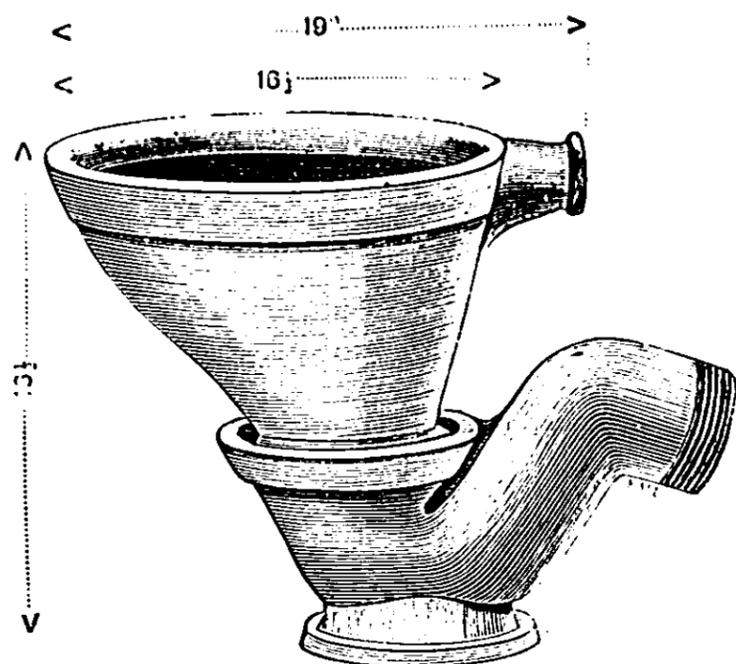
Manufactured by SPONG & Co., High Holborn, London, W.C.

DIVISION C.—CLASS II.—Section 7. Water Closets.

Household Water Closet.

Certificate of Merit, 1889.

To R. W. TOMLINSON.



DESCRIPTION.—The Closet and Trap are made separately in earthenware. The Basin has a flushing rim. The water stands in the Trap, not in the Basin.

PRICES.—White Basin and white Trap, 12s. 3d.; white Basin (printed) and white Trap, 14s. 9d.; white Basin (gold lines) and white Trap, 18s.; Traps with Ventilating Pipe, 9d. extra.

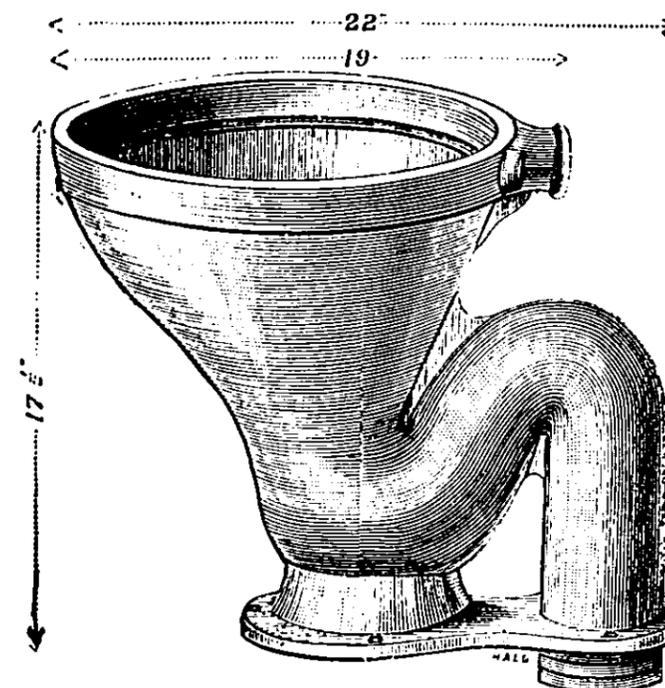
Manufactured by SHARPE BROS. & Co., Swadlincote Potteries; London Office, 76, Finsbury Pavement, E.C.

DIVISION C.—CLASS II.—Section 7. (Continued.)

Burton Water Closet.

Certificate of Merit, 1889.

To R. W. TOMLINSON.



DESCRIPTION.—The Closet and Trap are made in one piece of earthenware with Flushing-rim, and Trap above Floor-line.

PRICES.—Cane and White, 18s. 9d.; Cane and Printed, £1 2s. 6d.; White, £1 4s. 9d.; White and Printed, £1 8s. 9d.; White and Gold, £1 13s.

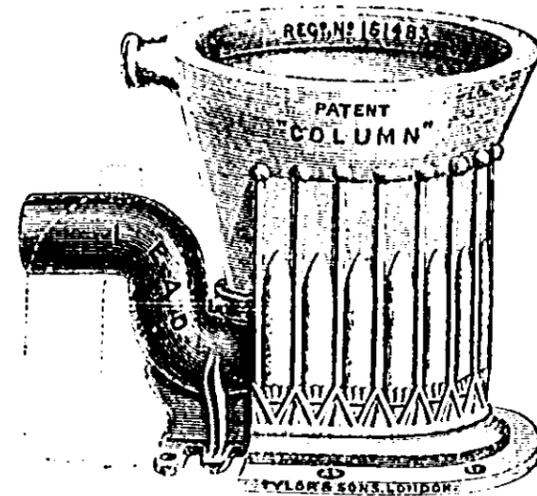
Manufactured by SHARPE BROS. & Co., Swadlincote, Burton-on-Trent.

DIVISION C.—CLASS II.—SECTION 7. (Continued.)

Column Water Closet.

Certificate of Merit, 1890.

To J. TYLOR & SONS, LIMITED.



DESCRIPTION.—This Closet is made with Lead Trap to shoot either out or down. The use of a Lead Trap enables a wiped-joint between the trap and the soil-pipe to be well made. The Lead Trap is joined to the earthenware basin by a brass collar, as in the ordinary Valve closet.

PRICES.—From £1 19s. to £2 12s. 6d.

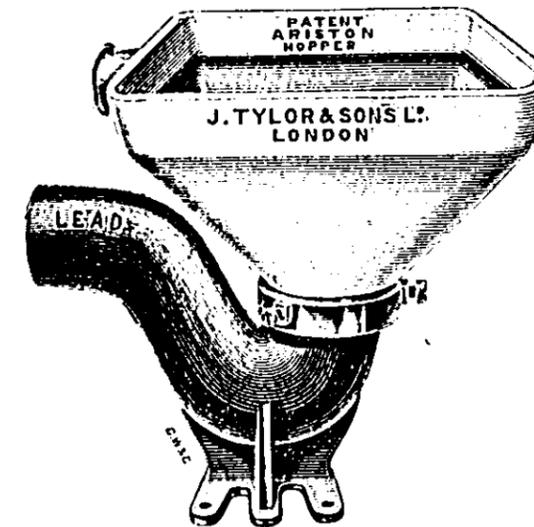
Manufactured by J. TYLOR & SONS, LIMITED, 2, Newgate Street, E.C.

DIVISION C.—CLASS II.—SECTION 7. (Continued.)

The "Ariston" Slop-Sink Water Closet.

Medal, 1890.

To J. TYLOR & SONS, LIMITED.



DESCRIPTION.—Square Earthenware Basin with Flushing Rim; separate Reversible Lead Trap, to enable wiped-joint to be made with soil pipe; all fixed above floor line.

SIZES.—Top of basin (outside measure), 14 in. × 16 in.; Outlet (inside measure), 3½ in. Depth of basin, 10 in.; Total height of top of basin above floor when fixed, 17 in.

PRICE OF CLOSET.—White, £2.

Manufactured by J. TYLOR & SONS, LIMITED, 2, Newgate Street, London, E.C.

## DIVISION C.—CLASS II.—SECTION 7. (Continued.)

## Shanks' Tubal Wash-Out Closet.

Certificate of Merit, 1889.

To J. WARD &amp; SON.

SIZES.—Top of Basin, outside measure, 2 ft.; Outlet, inside measure, 3½ in.; Depth of Basin, 7 in.; Total height of top of Basin above floor when fixed, 17½ in.

PRICES.—Fine Earthenware, White, £2 2s. 6d.; Printed, £2 14s.; Strong Fire-clay, White Enamelled inside and Buff Glazed outside, £1 16s. 6d.

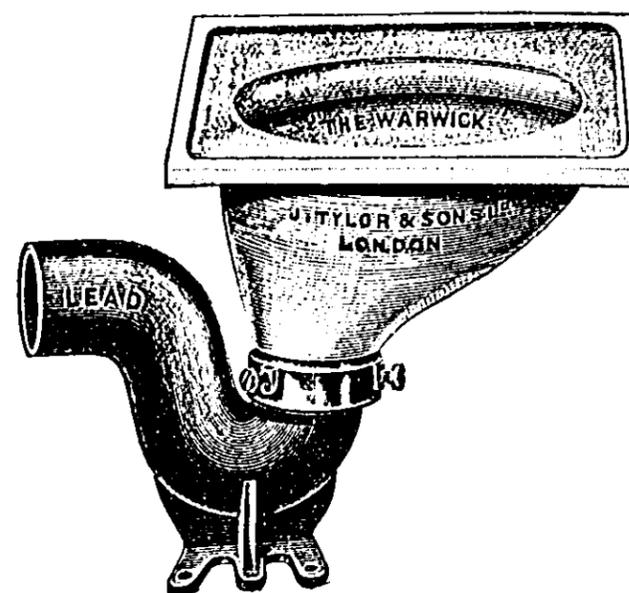
Manufactured by SHANKS & CO., Barrhead, N.B.

## DIVISION C.—CLASS II.—SECTION 7. (Continued.)

## Warwick Combined Slop Sink and W.C. with Lead Trap.

Certificate of Merit, 1892.

To J. TYLOR &amp; SONS, LIMITED.



DESCRIPTION.—This Slop Sink is made of white earthenware, with lead trap to shoot either out or down. The lead trap is joined to the earthenware basin by a simple brass collar and red lead or putty joint, as in an ordinary valve closet. This joint between earthenware and metal is above the trap, and the whole is above the level of the floor. The water stands higher than the joint between closet and trap.

SIZE.—One size only.

PRICE.—£1 16s.

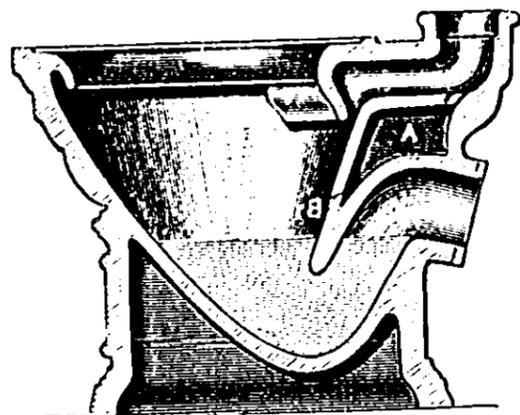
Manufactured by J. TYLOR & SONS, LIMITED, 2, Newgate Street, E.C.; and Belle Isle, York Road, N.

DIVISION C.—CLASS II.—Section 7. (Continued.)

Shanks' Citizen Combined W.C. and Slop Sink with "P" Trap.

Certificate of Merit, 1892.

To PORTSMOUTH WATER FITTINGS Co.



DESCRIPTION.—The Basin and Trap are so constructed that a large surface and depth of water is secured in the basin and trap. The special formation and sweep of the trap render it washed out by the flush of water, which, by means of the spreader or fan, washes the basin and falls with force in the centre. To prevent the trap remaining empty if siphoned, a service box is constructed, which catches part of the flush, and allows its contents to percolate through a little hole arranged for the purpose, after the flush is past.

PRICE.—No. 82 Closet, as shown, £2 7s. 6d.; with decorations in colours and gilding, £3 2s. 6d.

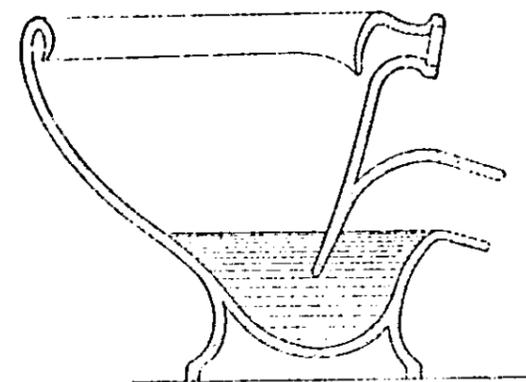
Manufactured by SHANKS & Co., Barrhead, N.B.

DIVISION C.—CLASS II.—Section 7. (Continued.)

Trident Hopper Water Closet with "P" Trap.

Certificate of Merit, 1892.

To PORTSMOUTH WATER FITTINGS Co.



DESCRIPTION.—The Closet and Trap are made in one piece of Earthenware, with Flushing Rim and Trap above floor line.

PRICES.—Fireclay, £1; Plain White or Ivory Basin, £1 5s.; Printed Pattern £1 16s.

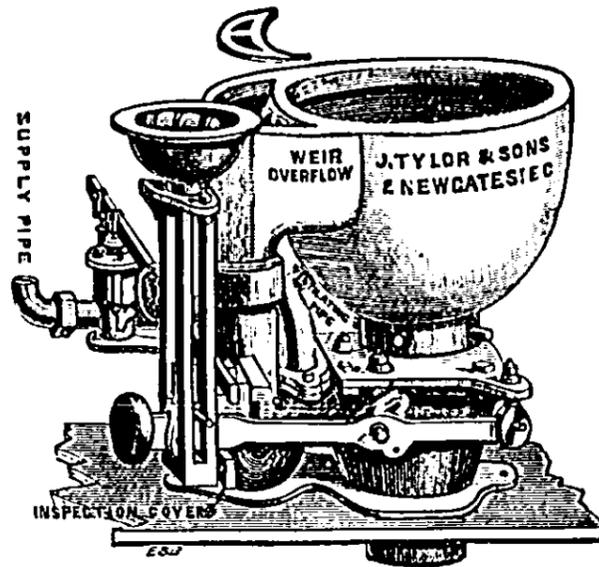
Manufactured by THOMAS W. TWYFORD, Cliffe Vale Pottery, Hanley, Staffordshire.

DIVISION C.—CLASS II.—Section 7. (Continued.)

Weir Overflow, Valve Water Closet for Load Trap.

Certificate of Merit, 1890.

To J. TYLOR & SONS, LIMITED.



DESCRIPTION.—With parallel action adjustable pull, and anti-friction guide; full-sized flushing rim basin, with large Weir overflow, which is flushed each time the handle is raised. This overflow can be examined and cleaned.

SIZES.—Top of Basin, outside measure, 14 in. × 16 in.; Outlet, inside measure, 3½ in.; Depth of Basin, 11 in.; Total height of top of Basin above floor when fixed, 17 in.

PRICES.—From £5 2s.

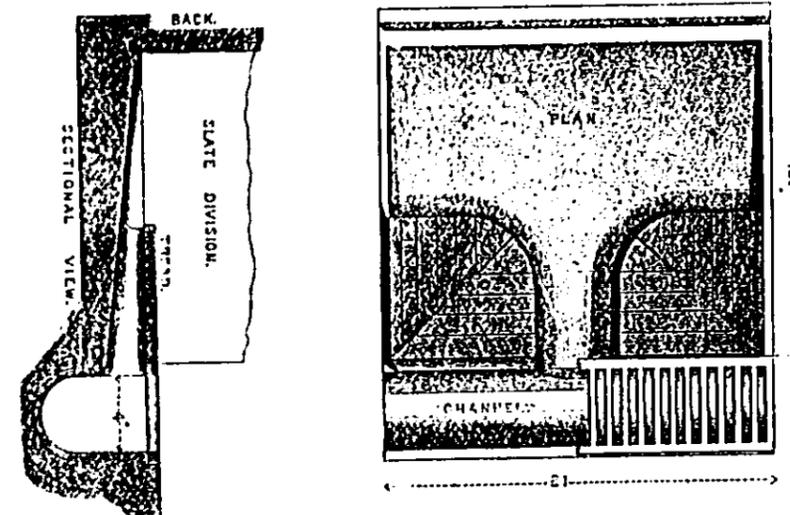
Manufactured by J. TYLOR & SONS, LIMITED, 2, Newgate Street, E.C.

DIVISION C.—CLASS II.—Section 8. Urinals.

Boancliffe Urinal Base.

Certificate of Merit, 1889.

To J. CLIFF & SONS.



DESCRIPTION.—The Bases are independent of the Channel for carrying away the water, and can be set at one and the same level throughout. Every part is accessible for cleaning, and the Channel can be swept out from end to end upon removing the gratings.

PRICES.—Single Stall Bases, with Treads, £1 5s.; Double, £2 10s.

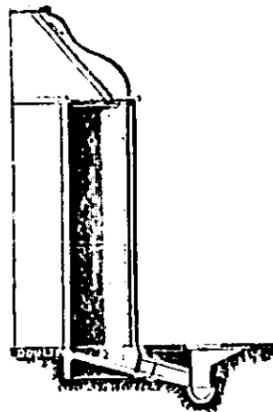
Manufactured by JOSEPH CLIFF & SONS, Wortley, Leeds.

DIVISION C.—CLASS II.—Section 8. (*Continued.*)

Special Urinal.

Certificate of Merit, 1890.

To DOULTON & Co.



DESCRIPTION.—The Back forms a segment of a circle, and the Base is well dished, both being made in strong Salt-Glazed Stoneware. A copper Sparge-Pipe is carried round the back (protected by the Slate top), and flushes both Back and Base.

PRICES.—From £7 15s., Single.

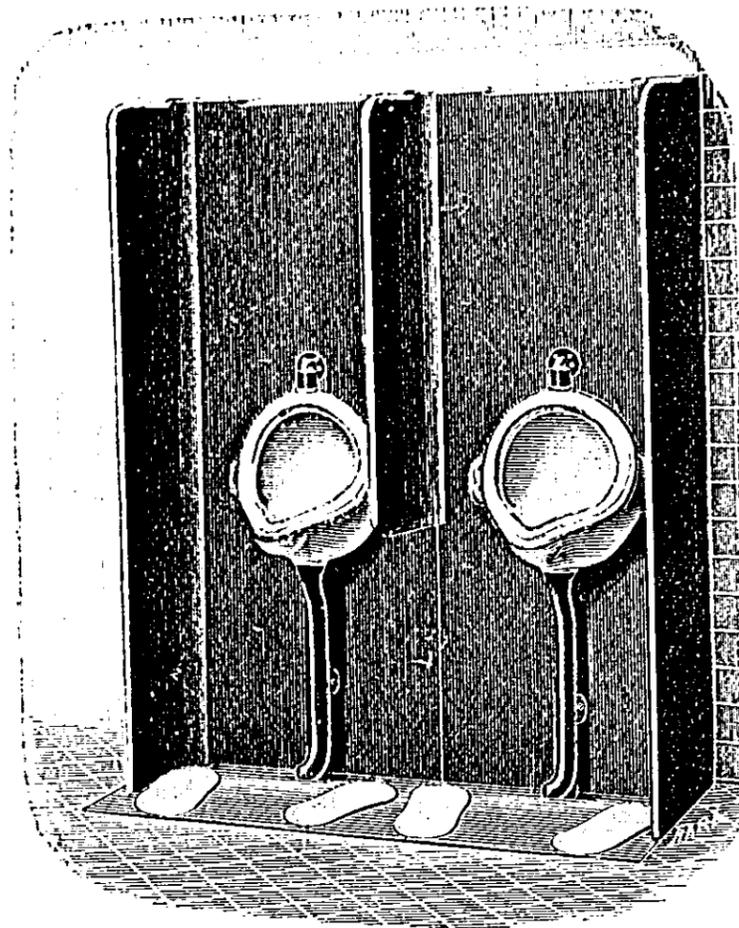
*Manufactured by DOULTON & Co., Lambeth.*

DIVISION C.—CLASS II.—Section 8. (*Continued.*)

Improved Urinal.

Certificate of Merit, 1890.

To BURN & BAILLIE.



DESCRIPTION.—The Foot-plates, which are placed so that a person using the Urinal is not comfortable unless standing upon them, are intended to keep the user well forward to the basin to ensure its being used, thus avoiding the splashing of urine against the Enamelled Slabs; the outlet gratings of the Basin and of the Channels are movable.

PRICES.—From £6 15s. to £8 10s.

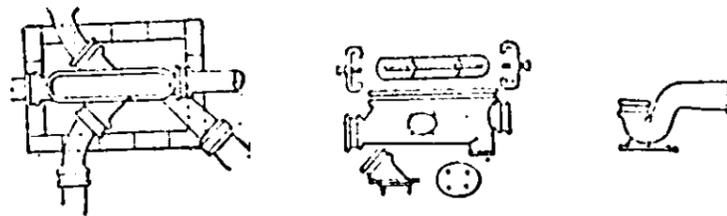
*Manufactured by BURN & BAILLIE, 14, Newcastle Street, Farringdon Street, E.C.; BURN BROS., 23 and 24 Charing Cross; 53, Hanover Street; and Edinburgh.*

DIVISION C.—CLASS II.—Section 9. Sewers, Drain Pipes, & Accessories.

Cast Iron Drain-Pipes, Inspection-Chamber, and Traps.

Certificate of Merit, 1890.

To BURN & BAILLIE.



DESCRIPTION.—They are made of the strength of water-pressure mains, three-eighths of an inch thick; the joints being caulked with yarn and run with molten lead. The Inspection Cap is fixed with Iron Clamps and Screws.

SIZE.—Pipes in 6 ft. lengths.

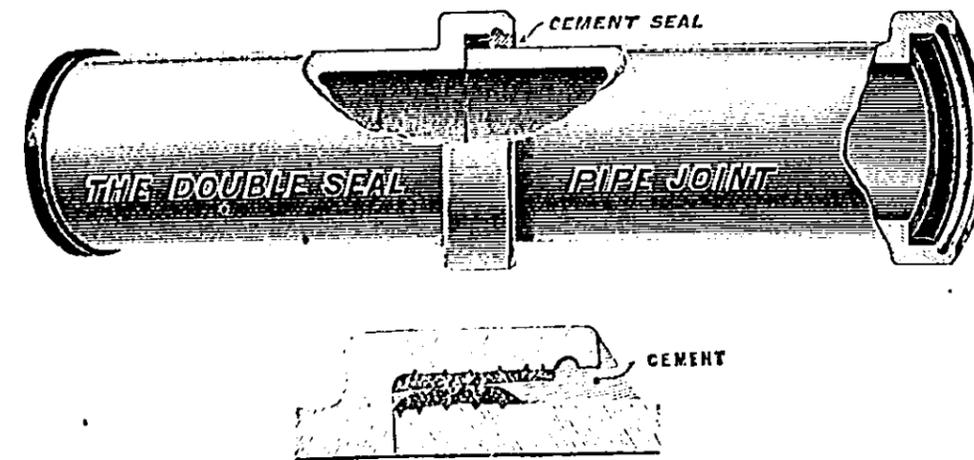
Manufactured by BURN & BAILLIE, 14, Newcastle Street, Farringdon Street, E.C.; and BURN BROS., 23 and 24, Charing Cross, S.W.

DIVISION C.—CLASS II.—Section 9. (Continued.)

Double Seal Pipe Joints.

Medal, 1890.

To JOSEPH CLIFF & SONS.



DESCRIPTION.—These pipes are similar to the Stanford jointed pipes, but have in addition a deeper and undercut socket, so that after the pipes have been laid and tested, an ordinary cement joint can be made in addition to the Stanford joint.

SIZES.—4 in., 6 in., 9 in., 12 in., 15 in., 18 in. diameter.

PRICES.—7d., 10d., 1s. 3½d., 2s. 1d., 3s. 4d., 4s. 6d. per foot.

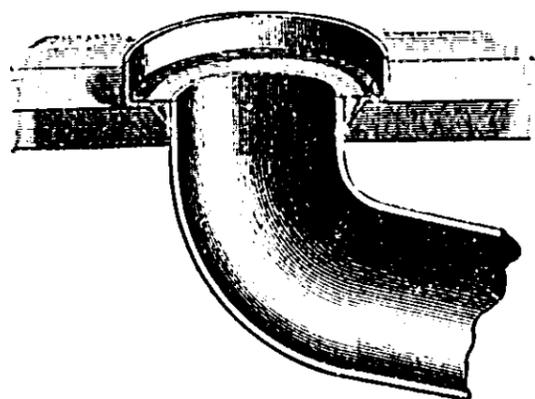
Manufactured by JOSEPH CLIFF & SONS, Wortley, Leeds.

DIVISION C.—CLASS II.—SECTION 9. (Continued.)

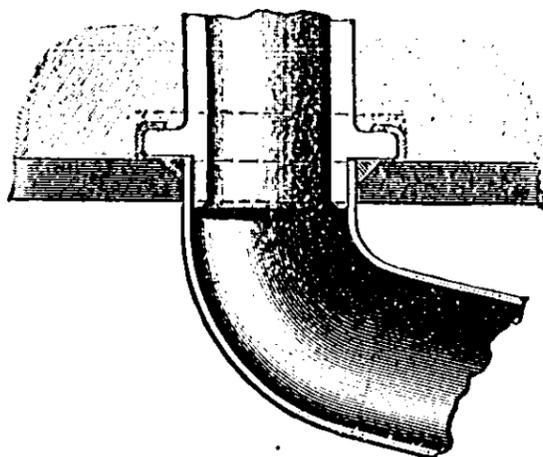
Collar Joint for connection of Soil-Pipe to Water-Closet.

Certificate of Merit, 1890.

To BOSTEL BROS.



Showing Joint ready to receive W.O.



Showing Joint with Closet in place.

DESCRIPTION.—The Lead Collar is wiped with plumbers' metal to the Soil-Pipe and then bossed over the flange of the trap, the closet being previously bedded in the usual way.

PRICE.—From 2s. 6d.

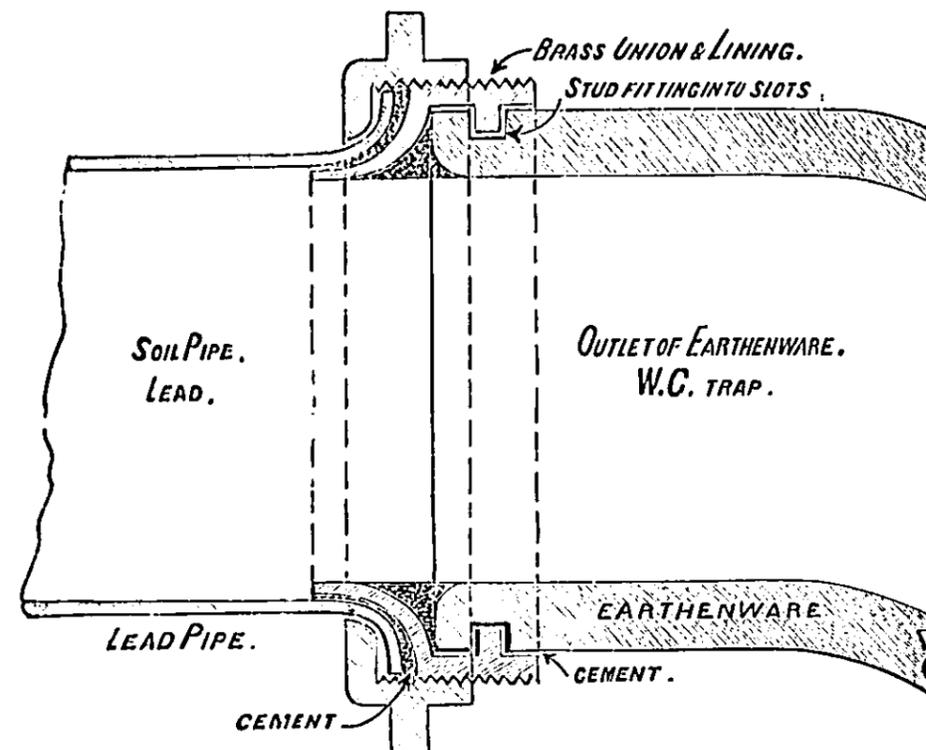
Manufactured by BOSTEL BROS., Brighton.

DIVISION C.—CLASS II.—SECTION 9. (Continued.)

Union Joint for Connection of Soil-Pipe to Water-closet.

Certificate of Merit, 1890.

To D. T. BOSTEL.



DESCRIPTION.—This Joint is for the purpose of connecting an earthenware P trap with a lead soil-pipe. It is made in Brass-work, and consists of two parts, one of which fits on to the outlet of the trap and is fixed by three Studs cast on the inside which slip into Grooves made in the earthenware, and by a half-turn it is fixed. The other part forms a Cap with a Female Thread to fit a Male Thread on the first part, after this part is fixed to the Trap. To make the Joint slip the Cap on to the soil-pipe, which is then opened with a Tan Pin and painted inside. The water-closet is then placed in position and the whole screwed up, the Joint being above the floor. Cement used: Red lead and gold size cement.

PRICE.—11s. each.

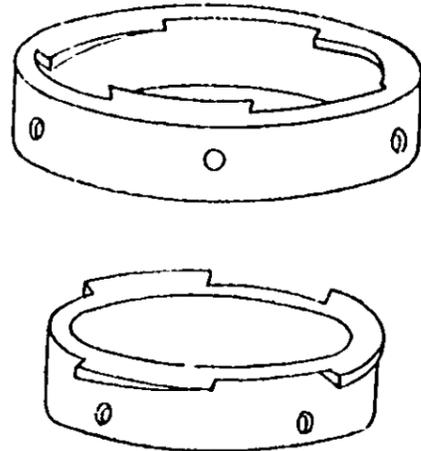
Manufactured by D. T. BOSTEL & SOX, 73, Ebury Street, London, S.W.

DIVISION C.—CLASS II.—Section 9. (Continued.)

Bayonet Joint for Connecting Closet Basin to Metal Pipe.

Certificate of Merit, 1892.

To PORTSMOUTH WATER FITTINGS Co.



DESCRIPTION.—Consists of two metal flanges made to fix with wedge-shaped ribs on outside of smaller flange and on inside of the large flange, tightening the joint like the thread of a screw.

PRICES.—Cast Iron, 3s. 6d. and 4s. 6d.; Brass, 10s.

Manufactured by THOMAS W. TWYFORD, Cliffe Vale Pottery, Hanley, Staffordshire.

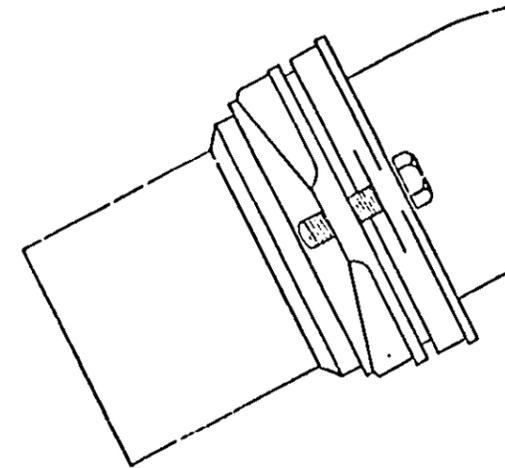
DIVISION C.—CLASS II.—Section 9. (Continued.)

Joint for Connecting Closet Basin to Metal Pipe.

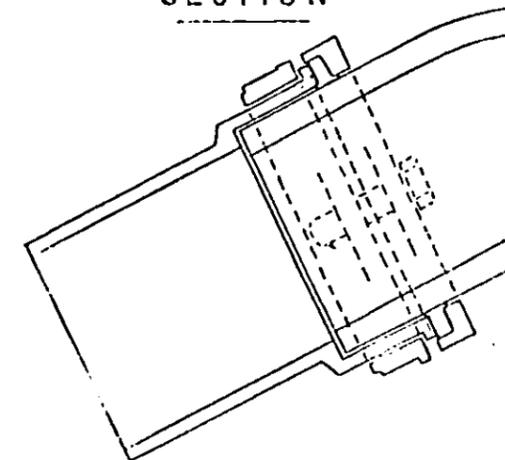
Certificate of Merit, 1892.

To G. JENNINGS.

ELEVATION.



SECTION



DESCRIPTION.—The joint is made with an India-rubber Ring, which is tightly compressed against the flange of the lead soil pipe and the earthenware trap by means of two galvanized-iron collars, which are placed one above and the other below the ring and drawn together by two screw bolts.

PRICE.—From 10s.

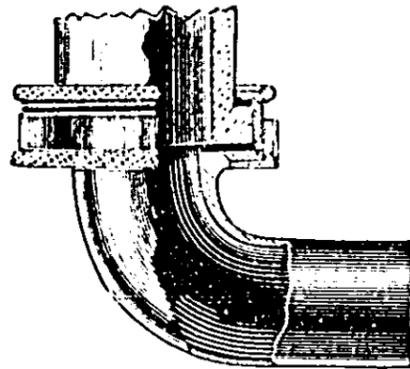
Manufactured by G. JENNINGS, Stangate, London, S.E.

DIVISION C.—CLASS II.—Section 9. (Continued.)

Union Joint with Divided Gland for Coupling Flush Pipe with Basin of W.C.

Certificate of Merit, 1892.

To QUIRK & SHARP.



DESCRIPTION.—This connection consists of a split collar threaded on the outer surface, which is placed round the flush inlet immediately behind the beading. Over this is screwed up an ordinary union carrying a brass bend flanged at the bottom. Between the face of the brass bend and the earthenware inlet a rubber washer is inserted.

SIZES.—Various.

PRICE.—7s. 6d.

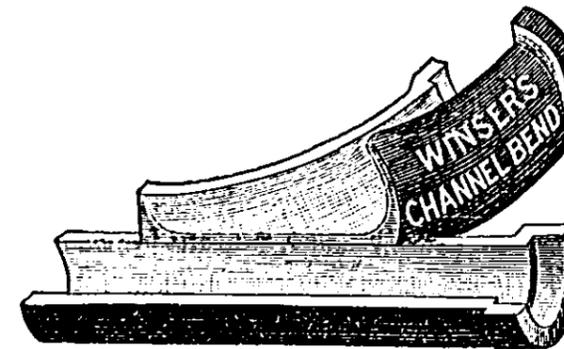
Manufactured by QUIRK & SHARP, 31, Islington, Liverpool.

DIVISION C.—CLASS II.—Section 9. (Continued.)

Enamelled Drain Channels.

Certificates of Merit, 1889 and 1890.

To WINNER & Co., and J. CLIFF & SONS.



DESCRIPTION.—The outer side is carried higher than the inner, and curved over, so that the sewage, as it rises in passing round the bend, is concentrated and folded over like a wave, and turned in the direction of the out-go. They are all made with sockets and a broad flat rebated base.

SIZES.—4 in., 6 in., and 9 in. (straight channels).

PRICES.—2s., 2s. 8d., and 4s. each.

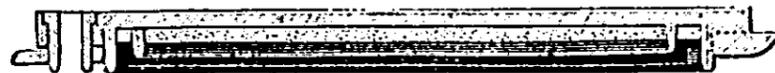
Manufactured by WINNER & Co., 52, Buckingham Palace Road, S.W.

DIVISION C.—CLASS II.—SECTION 9. (Continued.)

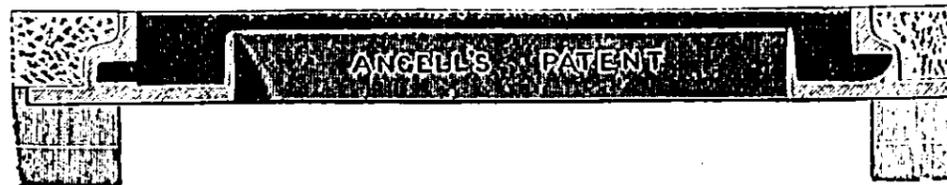
Improved Air-tight Manhole Cover.

Certificate of Merit, 1889.

To A. T. ANGELL.



This cover, although removable, is locked and firmly fastened when closed.



SIZES.—16 in. × 14 in. up to 3 ft. × 2 ft.

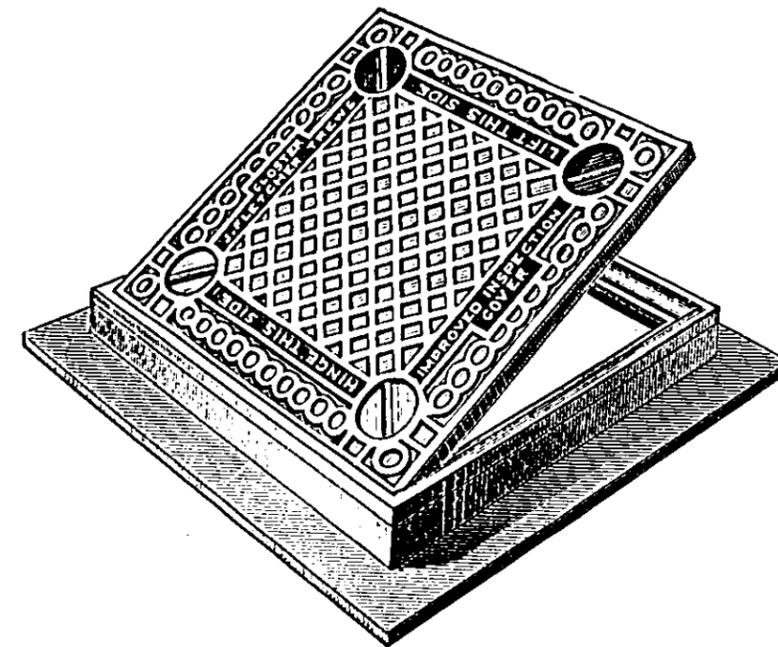
Manufactured by A. T. ANGELL, 2, Drayton Gardens, S.W.

DIVISION C.—CLASS II.—SECTION 9. (Continued.)

Trow's Manhole Cover.

Certificate of Merit, 1889.

To THE SANITARY AND ECONOMIC ASSOCIATION, LIMITED.



DESCRIPTION.—This is made in two parts; one forms the frame, which is a fixture; the other the movable cover, which is without hinge. The cover consists of a casting 18-inch square, having a flange on each side. When the cover is closed, the flange fits into a corresponding groove in the frame. One of these flanges is rounded and forms a substitute for a hinge. It is made air-tight by filling the groove with grease.

SIZE.—18 in. × 18 in.

PRICES.—Black Iron, £1 2s.; Galvanised, £1 15s.

Manufactured by THE SANITARY AND ECONOMIC ASSOCIATION, LIMITED,  
Gloucester.

DIVISION C.—CLASS II.—Section 9. (Continued.)

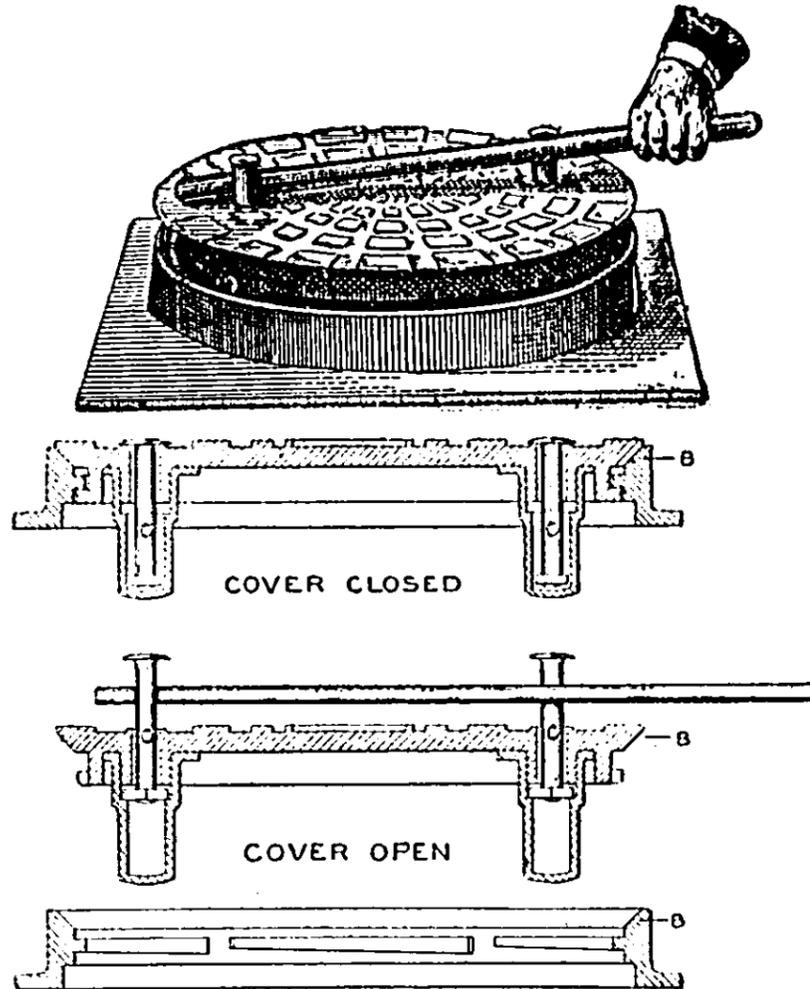
Durrans' Metallic Jointed Air-Tight Cover.

Certificate of Merit, 1889.

Manhole Cover with Metal-faced Joint.

Certificate of Merit, 1890.

To H. DEAN and T. H. DURRANS & Co.



DESCRIPTION.—The Cover and Frame have truly turned and ground bevelled faces **B**, which are brought together by a bayonet joint fastening (with ribs and inclined planes). To open the Cover the two drop handles **C** are raised, and a bar of iron serves as a lever to turn the Cover. It is locked when down, and cannot be opened without the lever.

SIZES.—18 in., 20 in., and 24 in. diameter.

PRICES.—£2, £2 10s., and £2 15s.; Locking extra.

Manufactured by HOUSE SANITATION COMPANY, 15A, Upper Baker St., N.W.

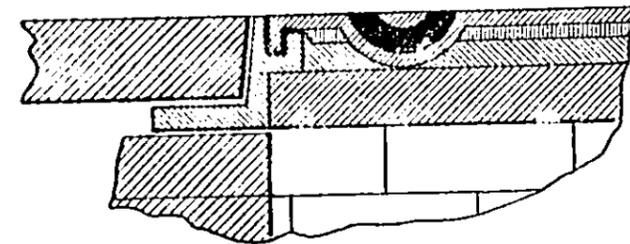
DIVISION C.—CLASS II.—Section 9. (Continued.)

Air-tight Manhole Cover.

Certificate of Merit, 1889.

To WINNER & Co.

N<sup>o</sup> 1.



DESCRIPTION.—The Covers are made with a grooved joint all round, as shown in the section, which can be filled with oil or glycerine, or fitted with india-rubber packing. They are made with two forms of outer flange. The one shown is generally used when the Cover is fitted in concrete or similar paving.

SIZES.—1 ft. 10 in. × 1 ft. 4 in. to 3 ft. 6 in. × 2 ft. 6 in.

PRICES.—15s. to £3 3s. each.

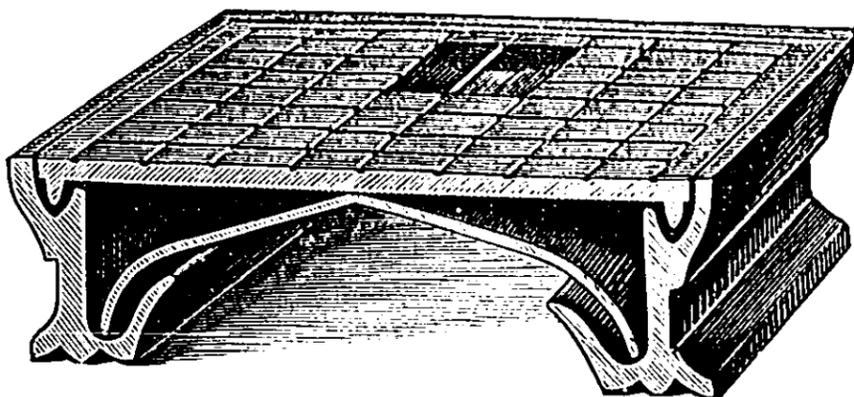
Manufactured by WINNER & Co., 52, Buckingham Palace Road, S.W.

DIVISION C.—CLASS II.—Section 9. (Continued.)

Manhole Cover for Drains.

Certificate of Merit, 1890.

To JOHN JONES.



DESCRIPTION.—The Inner Cover is arched, which allows the moisture from the drain, which condenses on it, to run down to the Groove, into which the Cover fits, and thus makes an air-tight joint. The top Cover is flat with the surface of the ground, and also fits into another groove that may be filled with any suitable material, thus forming a second seal. Where required the Covers are made in one piece.

SIZE.—23 in. × 13½ in., 24 in. × 17 in., 26 in. × 20 in., 27½ in. × 18½ in., 34½ in. × 22½ in., 36 in. × 20 in., 57 in. × 39 in.

PRICE.—From £1 7s.

Manufactured by JOHN JONES, 40, Sydney Street, Chelsea.

DIVISION C.—CLASS II.—Section 9. (Continued.)

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

Certificate of Merit, 1892.

To BROAD & Co.

DESCRIPTION.—These are designed for use in Inspection Chambers.

SIZE.—4 in., 6 in., and 9 in.

Manufactured by BROAD & Co., South Wharf, Paddington, W.

Tyndale's Rock Concrete Manhole for Sewers and Drains.

Certificate of Merit, 1892.

To PORTSMOUTH WATER FITTINGS Co.

DESCRIPTION.—Made in Rock Concrete Rings in sections to enable manholes of any depth to be constructed cheaply and quickly.

PRICES.—From 6s. 6d. per foot.

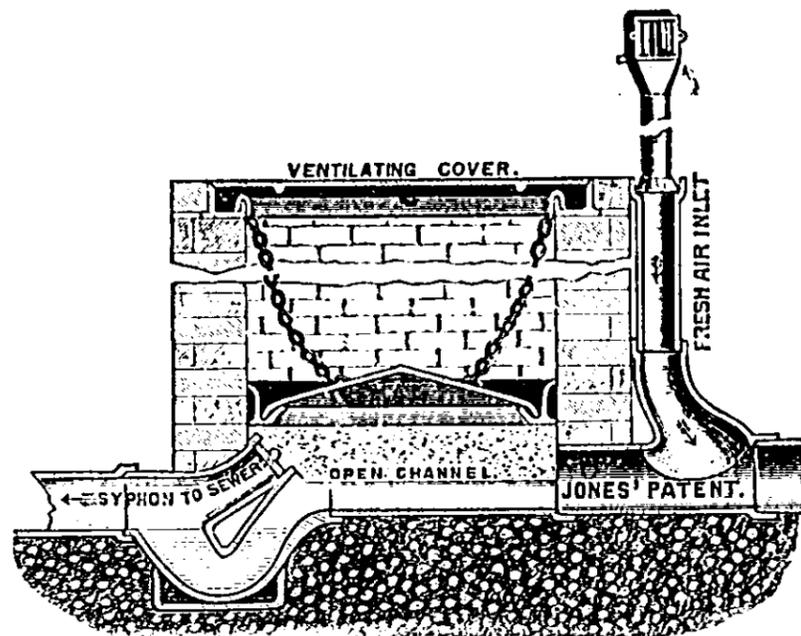
Manufactured by HENRY SHARP, JONES, & Co., LIMITED, Bourne Valley Works, Poole.

DIVISION C.—CLASS II.—Section 9. (Continued.)

Condensation Seal Cover for Bottom of Manholes.

Certificate of Merit, 1892.

To JOHN JONES.



DESCRIPTION.—Intended for bottom of deep Manholes, to be fixed about one and a half feet above open channel, thus limiting the space in which foul gases can accumulate.

SIZE.—26 in. × 20 in. and 36 in. × 24 in.

PRICE.—25s. and 35s. Galvanised Chain and hooks 1s. per lb.

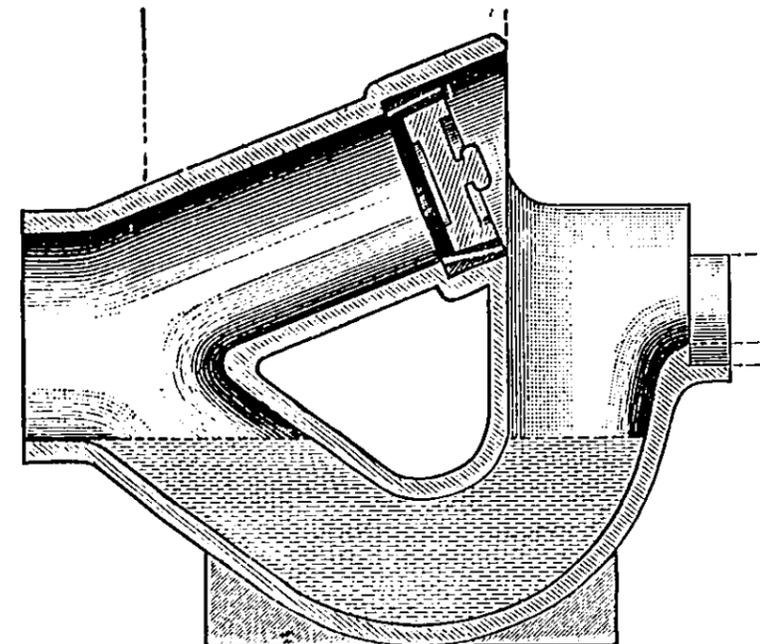
Manufactured by JOHN JONES, 40, Sydney Street, Chelsea, S.W.

DIVISION C.—CLASS II.—Section 10. Traps and Gulleys.

“Boancliff” Disconnecting Trap.

Certificates of Merit, 1889 and 1890.

To JOSEPH CLIFF & SONS.



SIZES.—4 in., Brown Glaze inside and outside (4 in. Inlet and Waterway, 6 in. Outlet); 6 in., Brown Glaze inside and outside (6 in. Inlet and Outlet, 5½ in. Waterway); 4 in., White Glaze outside, White inside; 6 in., White Glaze outside, White inside.

PRICES.—8s., 10s. 6d., 12s., and 15s. each.

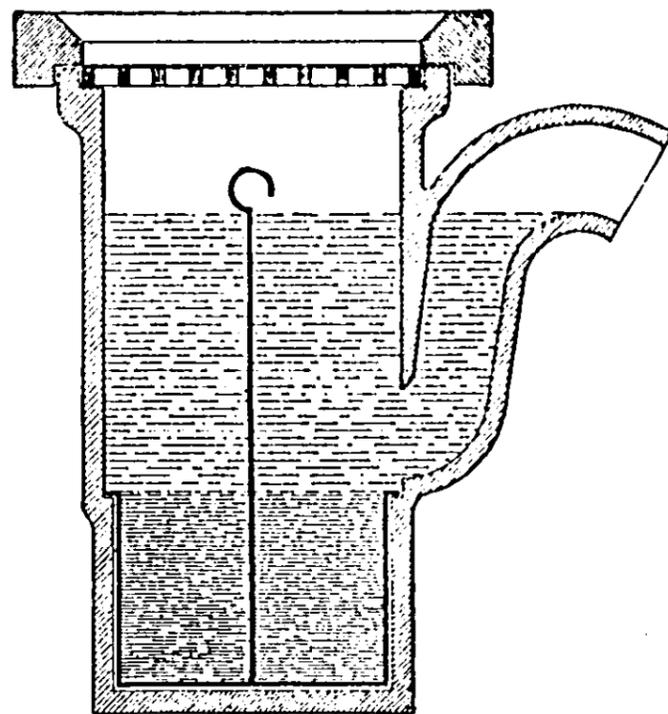
Manufactured by JOSEPH CLIFF & SONS, Wortley, Leeds.

DIVISION C.—CLASS II.—Section 10. (Continued.)

Doan's Silt Gully.

Certificate of Merit, 1889.

To H. DEAN.



DESCRIPTION.—This Trap is made in two parts, the outer part is made of Stoneware, and the receptacle inside of Galvanised Iron. The receptacle is so placed in the Trap that no solid matters can rest anywhere but in the receptacle, which can be removed and cleaned.

SIZES.—6 in. to 18 in. circular.

PRICES.—From 7s. to £2 each.

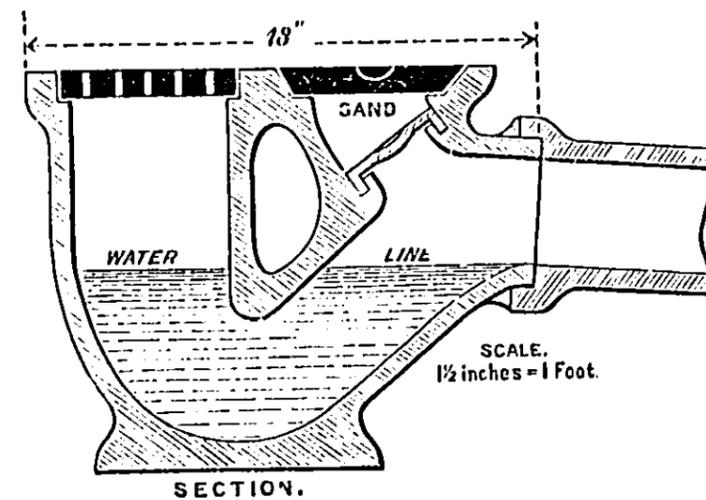
Manufactured by J. C. EDWARDS, Terra Cotta Works, Ruabon.

DIVISION C.—CLASS II.—Section 10. (Continued.)

"Stokes" Gully Trap.

Certificates of Merit, 1889 and 1890.

To WINNER & Co. and J. CLIFF & SOXS.



DESCRIPTION.—This Trap affords ready means of access to the outer side of Trap. The Inspection Cap, which has a double cover, allows the drain to be inspected without the necessity of breaking the Trap or pipes.

PRICE.—In Brown-ware, with painted Grid and Plate (4 in.), 12s. 6d.

Manufactured by J. CLIFF & SOXS, Wortley, Leeds.

Brass Traps for Baths and Sinks.

Certificate of Merit, 1890.

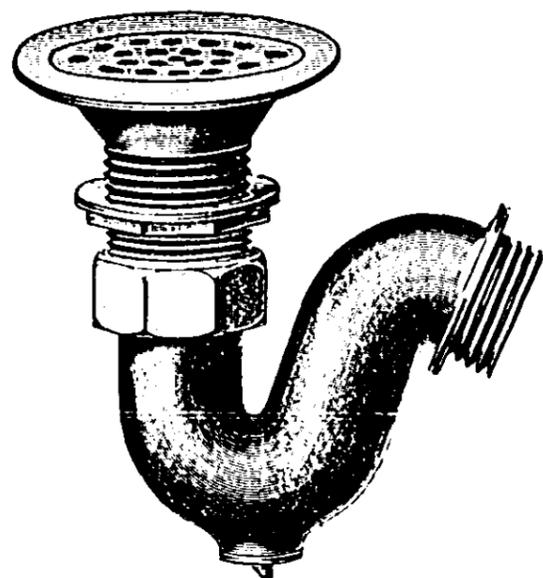
To BURN & BAILLIE, 14, Newcastle Street, Farringdon Street, E.C.

## DIVISION C.—CLASS II.—Section 10. (Continued.)

## Brass Siphon Traps.

Certificate of Merit, 1892.

To MILNE, SONS &amp; MACFIE.



DESCRIPTION.—Brass Scullery Sink Outlet with Bell mouth and movable Flush Grating, union and jam nut for fixing under sinks, brass trap with cleansing screw, outlet end of Trap screwed male for iron barrel, or with caps and lining for lead pipe.

SIZES.— $1\frac{1}{2}$  in. and 2 in.

PRICES.—15s., and 17s.

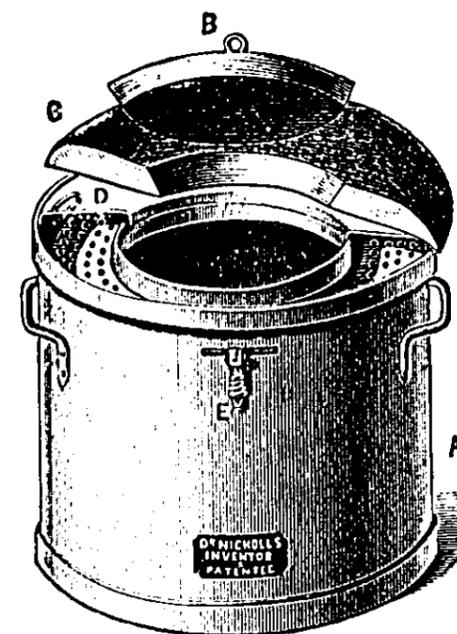
Manufactured by MILNE, SONS & MACFIE, 60, Holborn Viaduct; and JAMES MILNE & SON, LIMITED, Milton House Works, Edinburgh.

## DIVISION C.—CLASS II.—Section 11. Dry Closets.

## Nicholls' Eclipse Soot and Salt Closet.

Medal, 1889

To H. DEAN.



DESCRIPTION.—The Container A of the Closet is made of Galvanized Iron fitted with a Metal Tray D, which works upon a Ring inside of the Closet Pan, and within an inch of the top of the Closet. The Tray is perforated all over the bottom, and contains Antiseptic Mixture for the deodorization of fecal matter. By the action of the Tray D, the Antiseptic Mixture is showered all over the contents of the Pan A. The accurate fitting of the Cover B on the Hole of the Seat C prevents the Antiseptic Mixture lodging on the top of the Seat.

SIZE.—Diameter  $18\frac{3}{4}$  in., depth  $15\frac{3}{4}$  in.

PRICES.—From £1 19s. to £3.

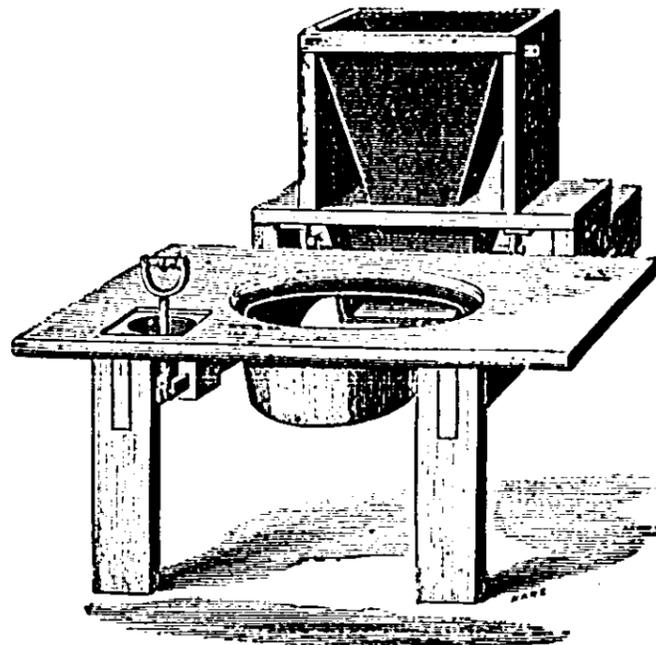
Manufactured by NICHOLLS & Co., 289, Strand, W.C.

DIVISION C.—CLASS II.—Section 11. (Continued.)

Moule's Earth Closets.

Medals, 1890 and 1892.

To MOULE'S PATENT EARTH CLOSET COMPANY, LIMITED.



DESCRIPTION.—The Receptacle at the top is intended for fine earth, which is used as a deodorant. A Pail is placed under the Seat, and when the handle is pulled up a certain amount of earth is thrown into this pail.

PRICES.—From £1 5s. to £8 10s.

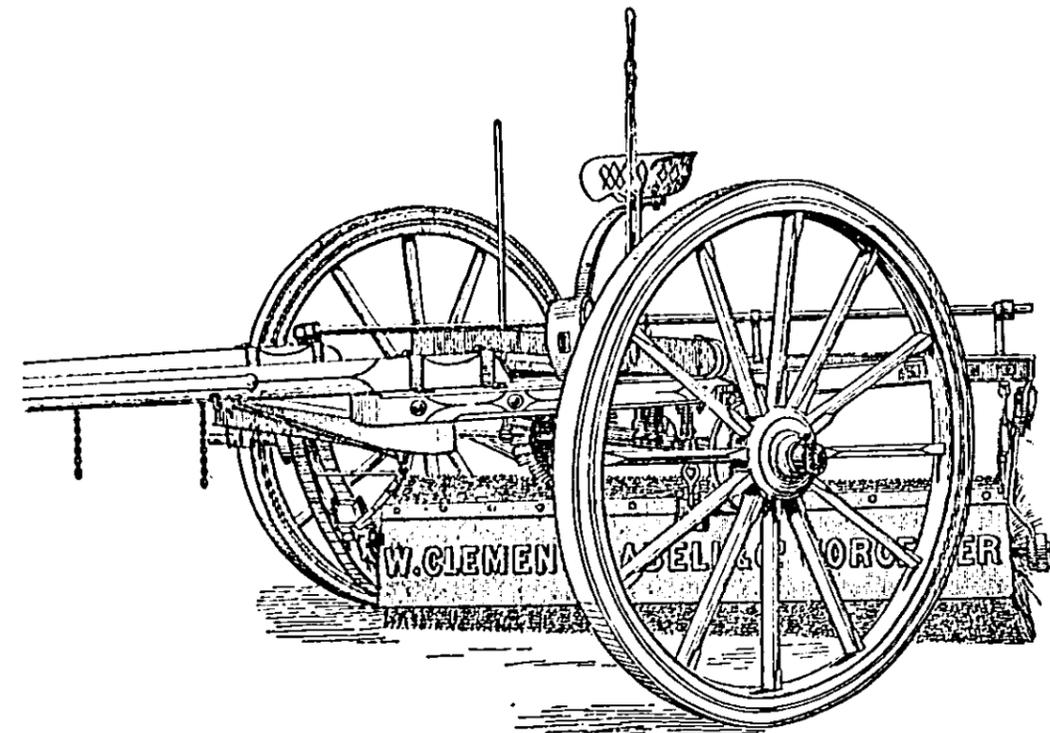
Manufactured by MOULE'S PATENT EARTH CLOSET COMPANY, LIMITED,  
5A, Garrick Street, Covent Garden, London, W.C.

DIVISION C.—CLASS II.—Section 13. Miscellaneous Sanitary Goods.

Street-Sweeping Machine.

Medals, 1889 and 1890.

To W. CLEMENS ABELL & Co.



DESCRIPTION.—The Brushes are made in six sections and interchangeable. The Spindle on which the Brushes are placed is jointed, so that the Brushes adjust themselves to the hollows in the roads. Made with bent shafts to level the action of the machine. Foot lever for throwing Brush in and out of gear.

SIZES.—Wheel, 4 ft. 8 in. high; tyres, 3 in. wide; brushes, 7 ft. long.

PRICE.—£36.

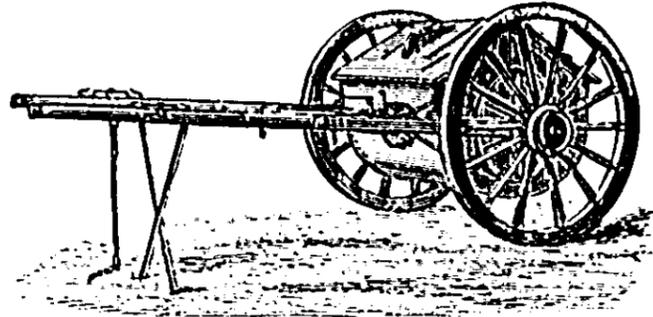
Manufactured by W. CLEMENS ABELL & Co., Worcester Wagon Works,  
Worcester.

DIVISION C.—CLASS II.—Section 13. (Continued.)

Improved Tumbler Cart.

Certificate of Merit, 1889.

To W. CLEMENS ABELL & Co.



DESCRIPTION.—This Cart is made to nearly balance when full, and can be easily turned completely over.

SIZES.—To hold 150 Gallons, 200 Gallons, 260 Gallons.

PRICES.— £24 10s., £26, £28.

Manufactured by W. CLEMENS ABELL & Co., Worcester Wagon Works, Worcester.

Improved Tumbler Sanitary Cart.

Certificate of Merit, 1892.

To COLEMAN & MORTON.

DESCRIPTION.—The Body Plate is made of stout steel, swings on a strong frame behind the axles, and is free from obstruction inside. The chain-tipping arrangement will turn the body entirely over or fix it at any required angle.

SIZES.— 100, 150, 200, and 280 gallon capacity.

PRICES.—£19, £23, £28, and £32.

Manufactured by COLEMAN & MORTON, Chelmsford.

DIVISION C.—CLASS II.—Section 13. (Continued.)

Watlings and Abell's Tip Wagon for Scavengers.

Certificate of Merit, 1889.

To W. CLEMENS ABELL & Co.

DESCRIPTION.—This Van is built so that the load is equally distributed over the four wheels. It is hung on springs. The body is arranged so that it can easily be moved over a frame on which are fixed six rollers, until the weight causes it to tip itself.

SIZES.—8 ft. × 4 ft. × 2 ft. 4 in. deep.

PRICE.—£50.

Manufactured by W. CLEMENS ABELL & Co., Worcester Wagon Works, Worcester.

Air-tight Soil Pail.

Certificate of Merit, 1889.

To W. BENNETT & Co., Worcester.

Fancy Stationery, Bindings, and Machine Rulings.

Certificate of Merit, 1890.

To J. BEAL & SON.

Manufactured by J. BEAL & SON, 55, East Street, Brighton.

DIVISION C.—CLASS II.—Section 13. (Continued.)

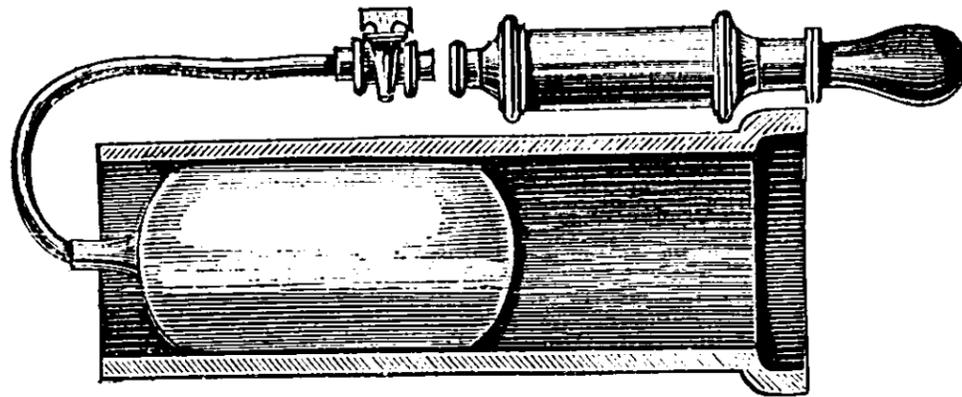
Drain Stopper.

Certificate of Merit, 1890.

Bag Drain and Pipe Stopper.

Certificate of Merit, 1892.

To JOHN JONES.



DESCRIPTION.—The Stopper consists of a cylindrical-shaped Bag, which is placed in the pipe and inflated with a small Air-Bellows or Pump, for stopping pipes for the purpose of testing, &c.

SIZES.—Made for 4 in., 6 in., 9 in., 12 in., 15 in., and 18 in. pipes.

PRICES.— £1, £1 2s., £1 8s. 6d., £1 18s. 6d., £2 8s. 6d., £2 18s. 6d. £3 3s. per set complete. Air Inflators 4s. and 5s. 6d. each. Set, comprising 4 in., 6 in., 9 in., and Best Inflator, £3 8s.

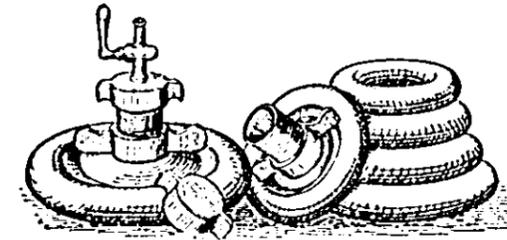
Manufactured by JOHN JONES, 40, Sydney Street, Chelsea.

DIVISION C.—CLASS II.—Section 13. (Continued.)

India Rubber Expanding Plug for Drain Testing.

Certificate of Merit, 1890.

To BURN & BAILLIE.



DESCRIPTION AND USE.—These are used for plugging up drains and for testing either with water, smoke, or other tests. Instead of having a bolt and nut by which to draw up the flanges a brass tube and nut are used, to which an india-rubber tube can be connected.

They are made in sets comprising two sizes of brass flanges and six moulded india-rubber rings (with which any sized pipe from 3 in. to 6½ in. diameter may be plugged), and one test cock.

SIZES.—3, 4, 4½, 5, 6, 6½ inches.

PRICE COMPLETE.—£1 14s. per set. 9 in. expanding plug with test cock, £1.

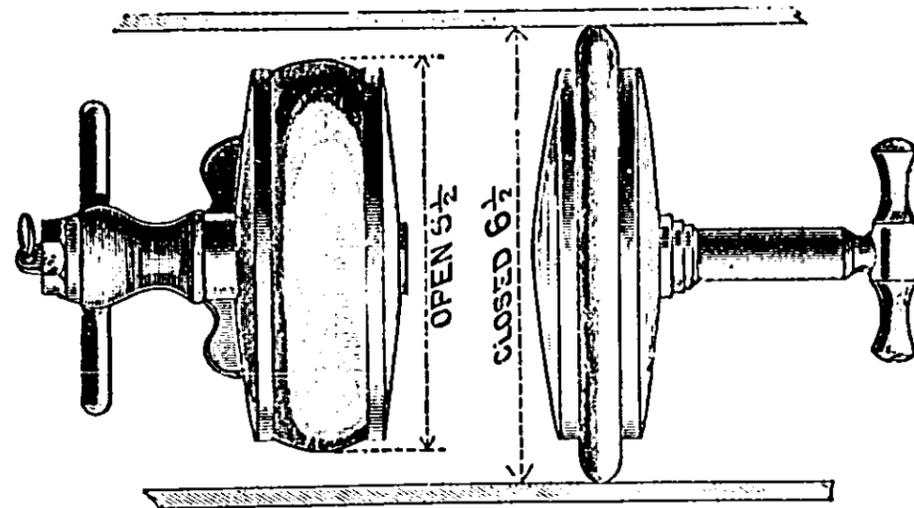
Manufactured by BURN BROTHERS, 24, Charing Cross, S.W., and BURN AND BAILLIE, Newcastle Street, Farringdon Street, E.C.

DIVISION C.—CLASS II. Section 13. (Continued.)

Expanding Screw Drain and Pipe Stopper.

Certificate of Merit, 1892.

To JOHN JONES.



DESCRIPTION.—This Stopper consists of two galvanized iron plates or discs, between which a HOLLOW rubber ring of special construction is fixed by means of grooves in the plates. It is screwed up by a T handle, the rubber expanding quite an *inch*. Made with or without outlets.

SIZES.— 4 in., 5 in., 6 in., 9 in., 12 in.

8s., 10s., 12s., 18s., 28s.

PRICE OF COMPLETE SET.— £3 16s.

Manufactured by JOHN JONES, 40, Sydney Street, Chelsea, S.W.

DIVISION C.—CLASS II.—Section 13. (Continued.)

Adjustable Gradient Indicator.

Certificate of Merit, 1890.

To THOMAS JAMES MOSS FLOWER.



DESCRIPTION.—For the purpose of laying drain pipes at a given inclination. Generally used in conjunction with straight edge.

SIZES.—About 10 to 15 inches long.

PRICES.—A Pattern, £2 15s. 0d. C Pattern, £1 1s. 0d.  
B „ £1 17s. 6d. D „ £1 10s. 0d.

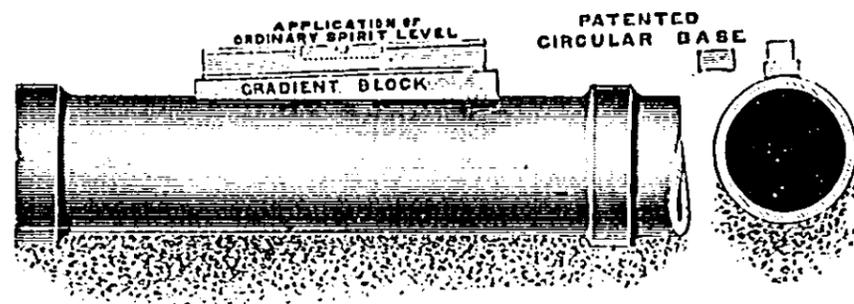
Manufactured by T. J. MOSS FLOWER, Carlton Chambers, Bristol.

DIVISION C.—CLASS II.—Section 13. (Continued).

Indicating Gradient Blocks.

Certificate of Merit, 1890.

To THE SANITARY AND DOMESTIC ENGINEERING COMPANY.



DESCRIPTION AND USE.—Wedge-shaped Blocks made for placing on Drain-pipes, for the purpose of laying them at a given inclination with the aid of an ordinary spirit level.

SIZES.—Made in sets consisting of one block, 11 inches long, of each of the following gradients: one inch in 12, 15, 18, 24, 30, 36, 42, 48, 54, 60, and 70 inches.

PRICE.—£3 3s. per set, in case.

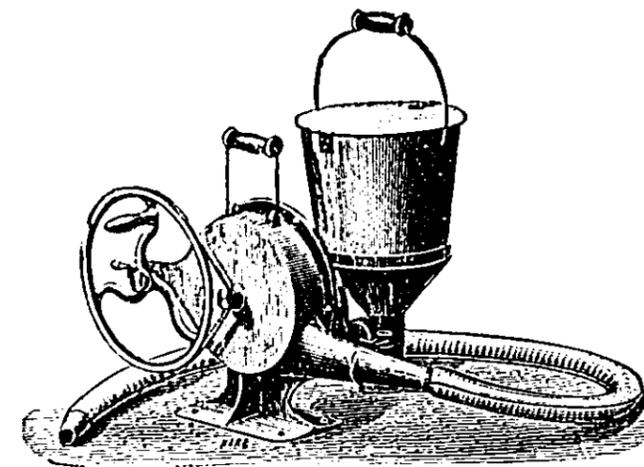
Made by IRWIN C. WALLAS.

DIVISION C.—CLASS II.—Section 13. (Continued.)

Watts' Asphyxiator for Testing Drains.

Certificate of Merit, 1890.

To T. J. MOSS FLOWER.



DESCRIPTION.—A machine for Testing Drains by smoke. The nozzle at the end of the flexible hose attached to the machine is inserted into a gully or opening in the Drain. Lighted sulphur or smoke paper is placed in the Combustion Chamber. By turning the handle, which is connected with a revolving fan, the smoke is discharged into the drain.

SIZES.—1¼ in. and 1½ in. pipe.

PRICES.—From £2 15s. to £4 10s.

Manufactured by J. WATTS & Co., Broad Weir Works, Bristol.

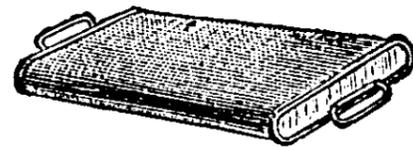
CLASS III.—HEATING, LIGHTING, AND VENTILATING.

DIVISION C.—CLASS III.—Section 1. Heating Apparatus.

Chemical Heat Retainers.

Certificates of Merit, 1889 and 1890.

To PETERS, BARTSCH & Co.



DESCRIPTION.—These Warmers are hermetically sealed; they contain a Chemical Substance which possesses the property of giving out an equable heat from 4 to 16 hours, according to size. The Warmers have to be put into boiling water, and left in it until the chemicals inside are perfectly liquid, which can be ascertained by shaking the warmer.

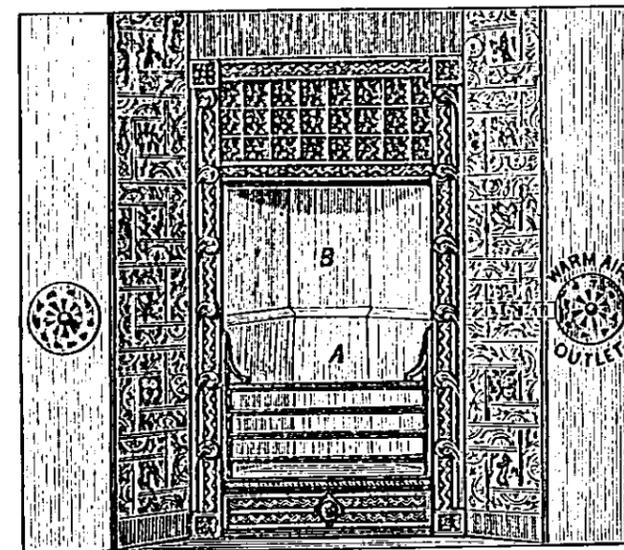
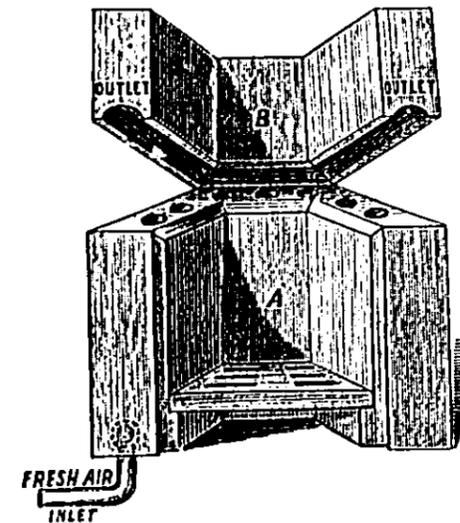
PRICES.—From 17s. 6d. to £1 16s.

Manufactured by PETERS, BARTSCH & Co., Derby.

DIVISION C.—CLASS III.—Section 1. (Continued.)

Lloyd's Winchester Grate.  
Certificate of Merit, 1889.

To THE WORCESTER SANITARY AND VENTILATING Co.



DESCRIPTION.—The body of the Stove is manufactured in fire-clay; and having a series of tubes moulded in the fire-clay, which are supplied with fresh air from the outside, throws an amount of warmed air into the apartment. The warmed air admitted is passed into the apartment through vertical tubes in the body of the Grate. The only metal employed in the construction is in the front and bars, the bottom being moulded in fire-clay.

SIZES.—14 in. 16 in. 18 in. 20 in. fires.

PRICES.—16/- 18/- 20/- each.

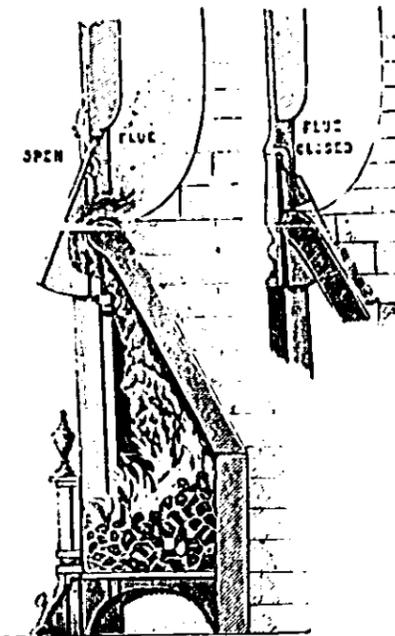
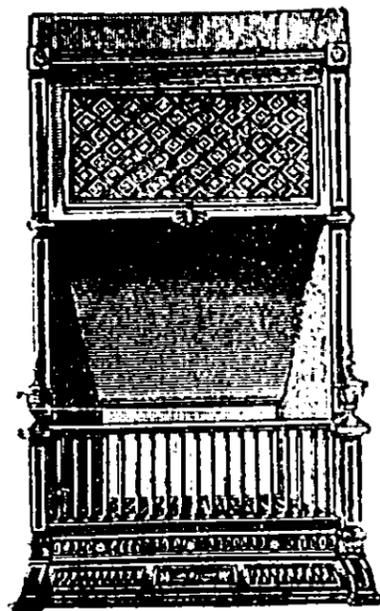
Manufactured by T. LLOYD & Sons, Winchester.

DIVISION C.—CLASS III.—Section 1. (Continued.)

Marlborough Grate.

Certificate of Merit, 1889.

To J. WARD & SONS.



DESCRIPTION.—In the construction of this Grate the brick back constitutes a heating surface, and is made to project over the fire to deflect the heat. The projecting canopy is removable and adjustable, so as to give access to the chimney for building up the back of the fire, and for sweeping the chimney.

SIZES.—Made with 12 in., 15 in., 18 in., 21 in., or 24 in. fires.

PRICES.—From £1 17s. 6d.

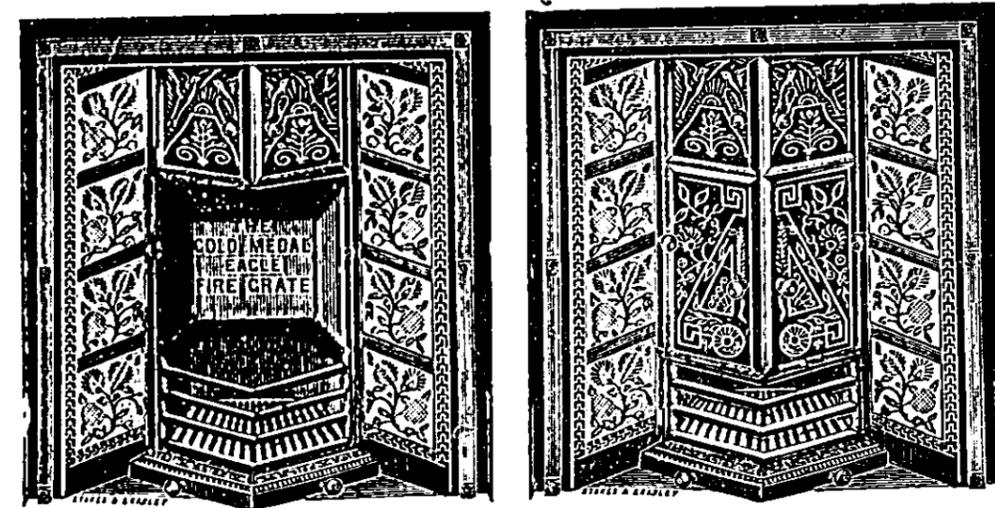
Manufactured by STEEL & GARLAND, Wharnccliffe Works, Sheffield; Show Rooms, 18, Charterhouse Street, Holborn Circus, London, E.C.

DIVISION C.—CLASS III.—Section 1. (Continued.)

Eagle Grate.

Certificate of Merit, 1890.

To THE EAGLE RANGE AND FOUNDRY Co.



DESCRIPTION.—By means of Regulating Doors in front the fire can be made to burn fast or slow, and it can be used as an open fire or a closed stove.

SIZES.—In all sizes to fit existing or new Mantelpieces.

PRICES.—From £5 to £20 in Black, Bronze, and Brass.

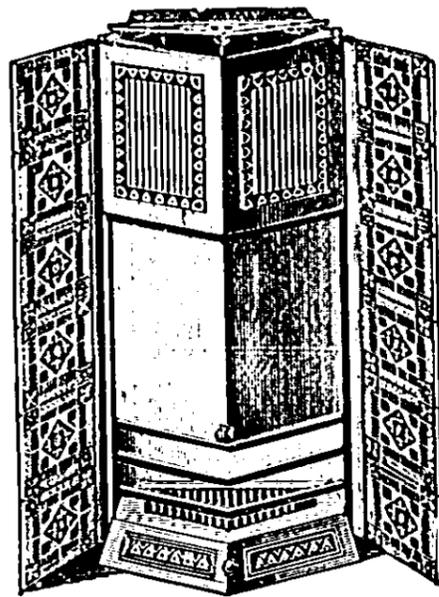
Manufactured by THE EAGLE RANGE AND FOUNDRY Co., 176, Regent Street, W.

DIVISION C.—CLASS III.—Section 1. (*Continued.*)

No. 35 Eagle Regulator, for Regulating Draught to Eagle Open Firegrate.

Certificate of Merit, 1892.

To EAGLE RANGE AND FOUNDRY Co.



DESCRIPTION.—When the regulating shutter is raised at its highest it becomes a slow combustion Grate. When it is desired to increase the speed of combustion the shutter is lowered as much as may be found necessary; or in lighting the fire it can be lowered until it rests on the front fire bars, as in the illustration. The shutter can be fixed at any position required.

*Manufactured by* EAGLE RANGE AND FOUNDRY Co., 176, Regent Street, and 58, St. Paul's Churchyard, London; 2, St. Augustens Parade, Bristol; Works, Catherine Street, Aston, Birmingham.

DIVISION C.—CLASS III.—Section 1. (*Continued.*)

Decorative Glazed Faience Fire-places.

Medal, 1890.

To BURMANTOFT'S WORKS, THE LEEDS FIRECLAY Co.

SIZES.—Width of Grates, 15 in., 18 in., 21 in., and 24 in.

*Manufactured at* BURMANTOFT'S WORKS, THE LEEDS FIRECLAY Co., LIMITED.

Stoves, Mantelpieces, and Brass-work.

Certificate of Merit, 1890.

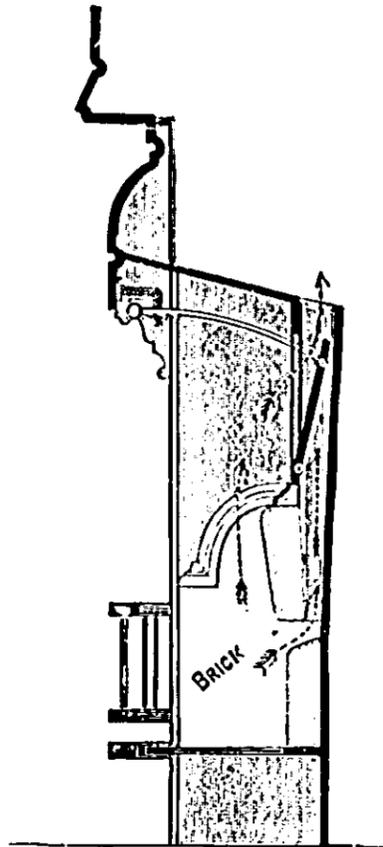
To C. G. REED & SON, 26, North Street, Brighton.

DIVISION C.—CLASS III.—Section 2. (Continued.)

Jackson's Grates for Burning Anthracite Coal.

Medal, 1892.

To E. A. CLEEVES & Co.



SECTION THRO' CENTRE.

DESCRIPTION.—This Grate is designed for burning anthracite coal. By an arrangement of the flue, the position of a damper (moved easily from the front of the Grate) regulates the draught so that, whether fast or slow burning fuel is used, the fire may be made great or small. The economical advantages claimed for this Grate apply to any sort of coal which may be burned in it; but it is specially adapted for burning anthracite coal.

PRICES.—16 in. fire, 34 in. wide, £3 11s. 6d.; 18 in. fire, 36 in. wide, £3 16s. 6d.

Manufactured by E. A. CLEEVES & Co., 3, Mileage Wharf, Westbourne Park Road, W.

DIVISION C.—CLASS III.—Section 1. (Continued.)

Open Gas Fire.

Certificate of Merit, 1890.

To CHARLES WILSON & SONS.



DESCRIPTION.—Metal Gratings of peculiar construction are placed between the bars in front and a Corrugated Fire-Brick Slab at the back of the fire. The iron bars are raised to a glowing heat by a series of Bunsen flames, and the heat reflected into the room by a Fire-Brick Slab. The fire can also be fitted on the hearth in front of the bars of a grate, on the tops of the bars, inside the grating, or on the Stands or Pedestals. The Burners are of an atmospheric type.

SIZES.—11 in. wide, 15 in. high; 13 in. wide, 15 in. high; 15½ in. wide, 15 in. high; 19 in. wide, 16 in. high.

PRICES.—£1 1s., £1 5s., £1 10s., £2.

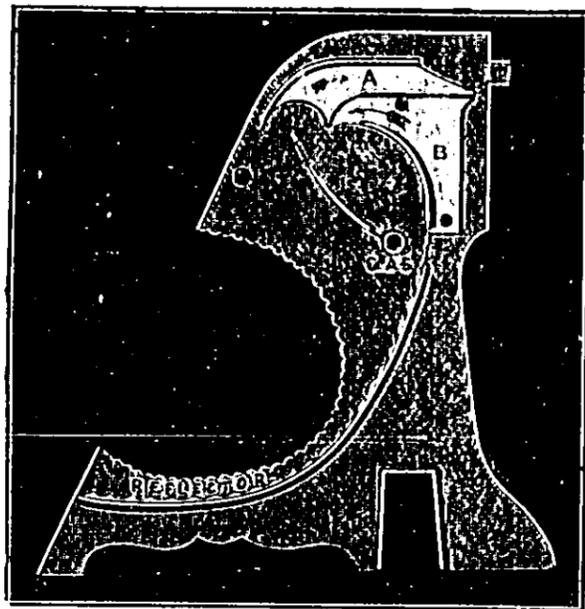
Manufactured by CHARLES WILSON & SONS, 76, Queen Street, Cheapside, E.C., and Carlton Works, Leeds.

DIVISION C.—CLASS III.—Section 1. (Continued.)

Marsh-Greenall Regenerating Gas Heating Stove.

Certificate of Merit, 1890.

To GREENALL & Co.



Sectional View of "M.G. 2" Size.

DESCRIPTION.—Iron Plates with 24 Gills A are fixed across the Stove as shown. The Gas pipe has three ordinary Bray's No. 4 Burners in it. The products of combustion from the flames pass up the 24 Flues A, heating the Gills red hot. The air entering at the back of the Stove to feed the flames is heated as it ascends the 24 Passages B. The Burners are of the luminous type.

SIZES.—"MG 2," "MG 3," "MG 4," "MG 6," and "Clarence."

PRICES.—£1 10s., £1 17s., £1 13s., £2 5s., £5 8s., and £8 8s.

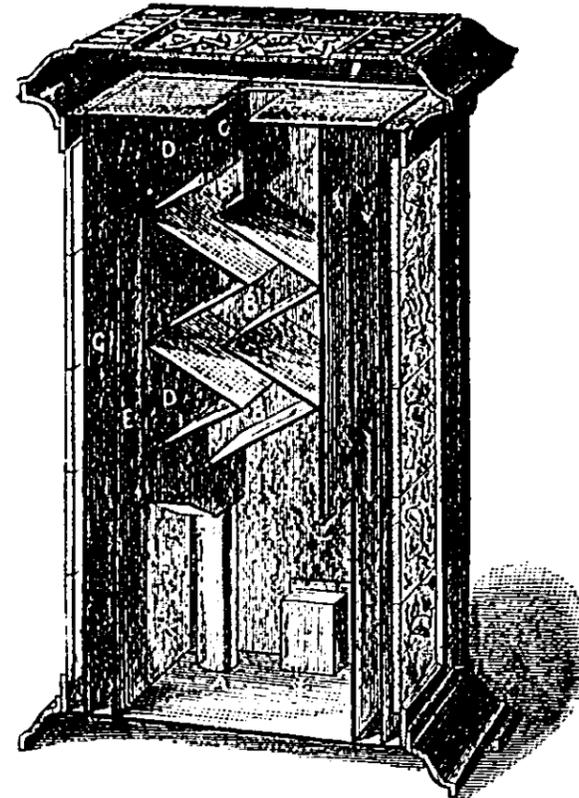
Manufactured by GREENALL & Co., Gas Engineers, 120, Portland Street, Manchester.

DIVISION C.—CLASS III.—Section 1. (Continued.)

Thermo Hygienic Gas Stove.

Certificate of Merit, 1892.

To DAVIS GAS STOVE CO.



DESCRIPTION.—The interior is designed so that the greatest amount of heat may be extracted from a given quantity of gas before the products of combustion are allowed to escape to the outer air. The fresh air is drawn through the fresh air inlet A, and warmed in its passage by passing into the heating chamber B (surrounded by the chamber D). The warmed fresh air rising in the room from the outlet C causes a large proportion of the air vitiated by breathing to descend, and is then drawn in by the burner in front of A, and carried off by means of the chamber D to the ascending flue E and descending flue G to the burnt air outlet H, from which it is carried outside the building. Fitted with an arrangement so that the gas cannot be turned on before the burner is drawn out for lighting.

SIZES.—Outside measurements, 2 ft. 5 in. high, 1 ft. 7 in. wide, 1 ft. 3½ in. deep. 2 ft. 10½ in. high, 1 ft. 10 in. wide, 1 ft. 5½ in. deep. 3 ft. 3½ in. high, 2 ft. 0½ in. wide, 1 ft. 6½ in. deep.

PRICES.—£4 16s., £6 15s., £8 15s. 6d.

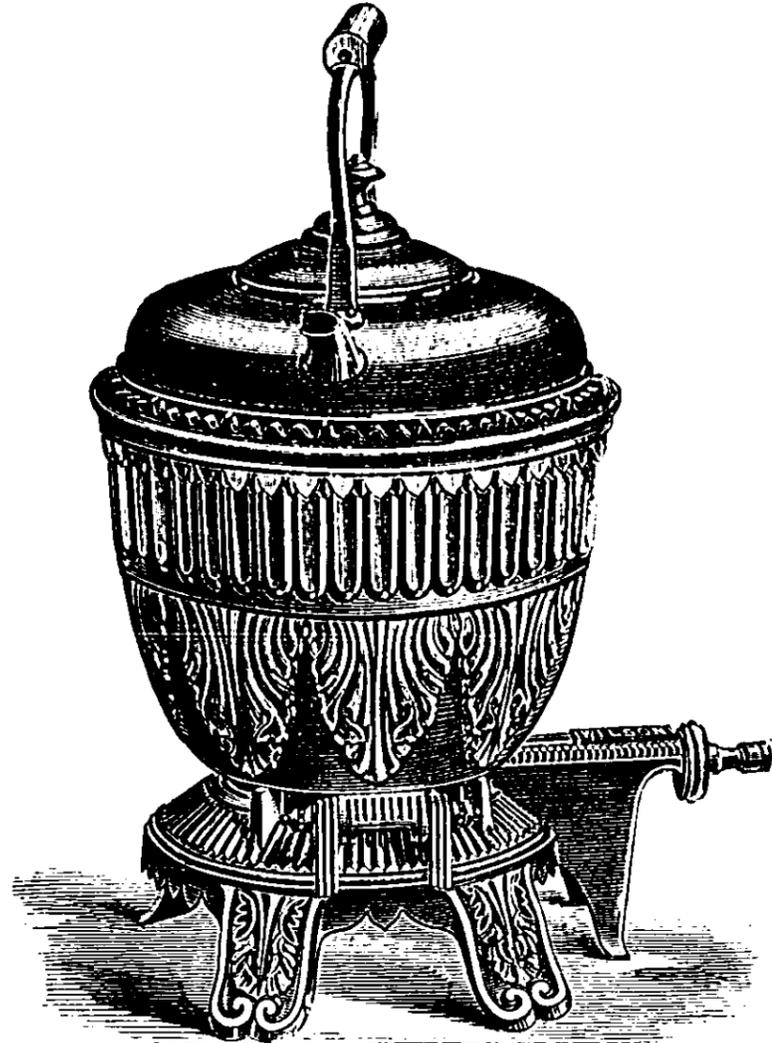
Manufactured by THE DAVIS GAS STOVE CO., LIMITED, Camberwell, S.E.

DIVISION C.—CLASS III.—Section 1. (*Continued.*)

Gas Kettle.

Certificate of Merit, 1890.

To CHARLES WILSON & SONS.



DESCRIPTION.—This is a strong Copper Kettle, placed within a Cast Iron Case, which is attached to a powerful atmospheric Gas Burner by a hinge.

SIZES.—1 Gallon and 2 Gallons.

PRICES.—15s. £1 5s.

Manufactured by CHARLES WILSON & SONS, 76, Queen Street, Cheapside, E.C., and Carlton Works, Leeds.

DIVISION C.—CLASS III.—Section 1. (*Continued.*)

Cyclone Geyser.

Certificate of Merit, 1892.

To T. BAILEY, JUNR.

SIZES.—Various.

PRICES.—According to size.

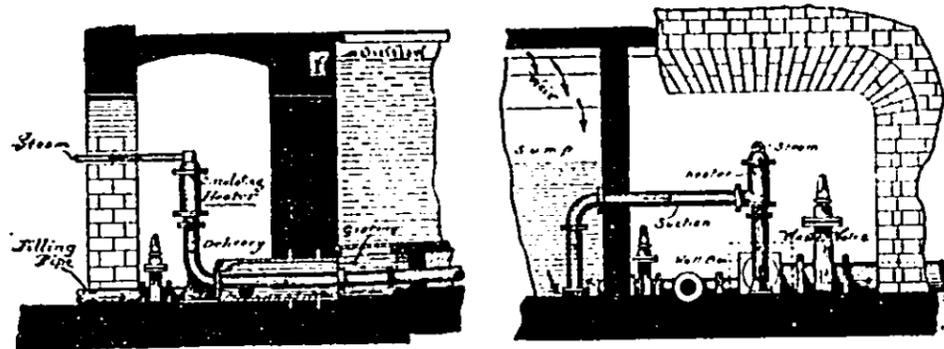
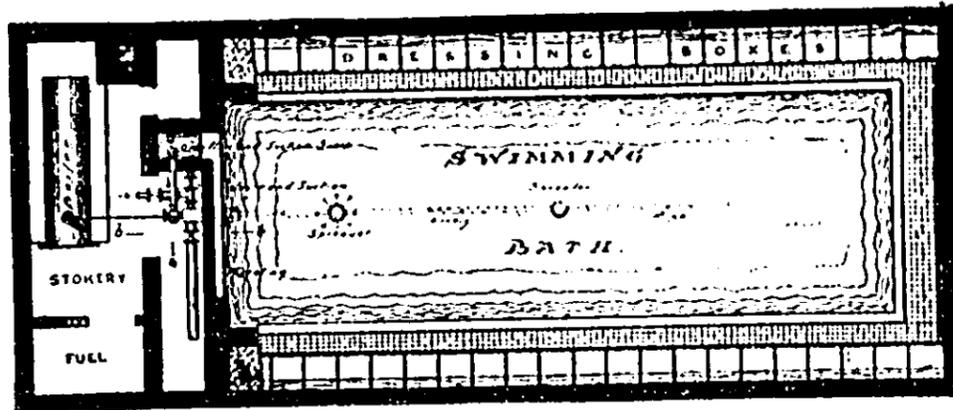
Manufactured by T. BAILEY, JUNR., 65, Commercial Road, Landport, Portsmouth.

DIVISION C.—CLASS III.—Section 1. (Continued.)

Rosher System of Heating and Circulating Water in Baths.

Medal, 1890.

To RAINBOW ENGINEERING Co.



DESCRIPTION.—The System consists of a forced circulation of the water by means of a "circulating heater" (or a pump in combination with a heater). The water is drawn from the Bath at suitable points and re-delivered through "spreaders" placed flush with the Bath floor. While filling the Bath the water is drawn from the bottom; when filled, the upper stratum of water is made to pass out over a "weir overflow," and is then returned to the Bath (by the action of the heater or pump as the case may be) *via* the spreaders. In some cases a specially constructed aerating filter is interposed between the overflow and the pump which returns the water to the Bath.

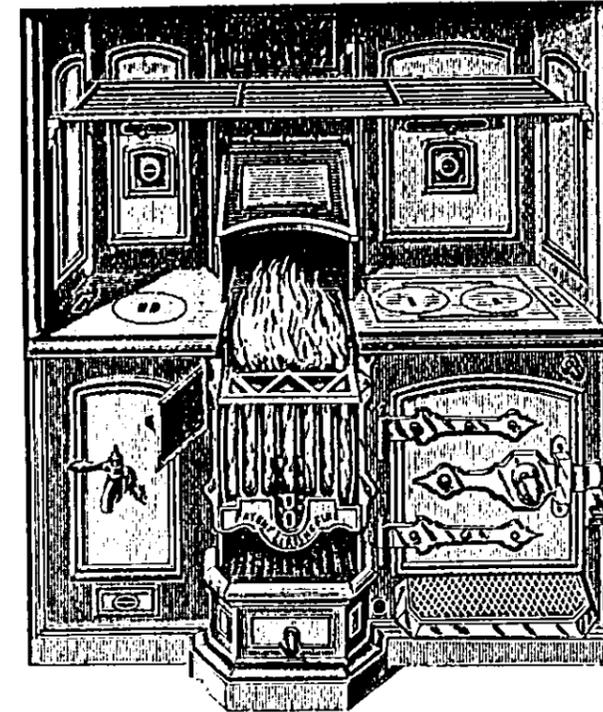
*Schemes and estimates furnished on application.*

Manufactured by THE RAINBOW ENGINEERING Co., 39, Victoria Street, S.W.

DIVISION C.—CLASS III.—Section 2. Cooking Apparatus.

Herald Kitchen Range.  
Certificate of Merit, 1889.

To J. WARD & SONS.



DESCRIPTION.—It is Constructed with an Improved Lifting Bottom Grating which works upon two Projecting Studs *underneath* the Grate. The fire is shallow from back to front, and the Range is made with combined open and close fire. The Hot Plates over the fire are made to slide back. There is also a Cinder Sifter under the fire.

SIZE.—4 ft.

PRICE.—£16 5s. 6d.

Manufactured by R. RUSSELL & SONS, Peel Foundry, Derby.

Badger's Kitchener.

Certificate of Merit, 1889.

To WORCESTER SANITARY AND VENTILATING Co.

DESCRIPTION.—Can be converted into an open or closed Stove.

SIZES.—3 ft. to 7 ft.

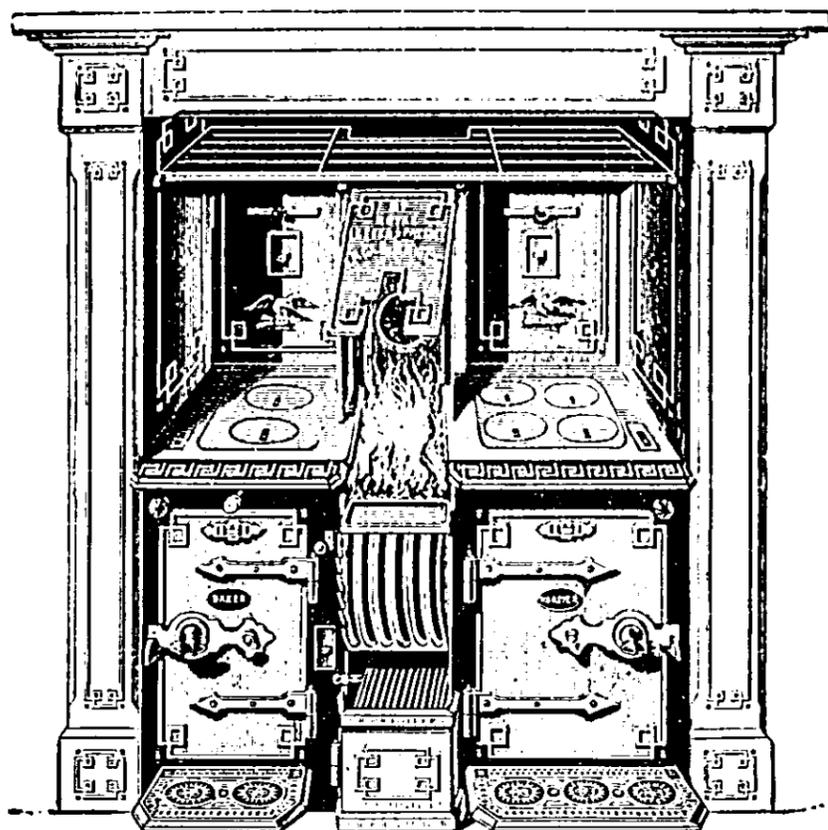
PRICES.—£7 to £18.

DIVISION C.—CLASS III.—Section 2. (Continued.)

Improvements in Eagle Ranges.

Certificate of Merit, 1890.

To THE EAGLE RANGE AND FOUNDRY CO.



DESCRIPTION.—The size of the fire can be increased or diminished as required. It can be used as an open range, as shown in the sketch, or made into a close stove by closing the hot plate over the fire, and closing the doors of the smoke hood at the back.

SIZES.—In sizes from 2 ft. upwards.

PRICES.—From £4 10s. to £150.

Manufactured by THE EAGLE RANGE CO., 176, Regent Street, W.

DIVISION C.—CLASS III.—Section 2. (Continued.)

Indicating Damper to Eagle Range.

Certificate of Merit, 1892.

To EAGLE RANGE AND FOUNDRY CO.



DESCRIPTION.—This shows on the front of the Range exactly at what draught the Range is working by indicating the position of the damper.

PRICE.—6s. 6d. per damper.

Manufactured by EAGLE RANGE AND FOUNDRY CO., 176, Regent Street, and 58, St. Paul's Churchyard, London; 2, St. Augustens Parade, Bristol; Works, Catherine Street, Aston, Birmingham.

Groecian Kitchen Range.

Certificate of Merit, 1892.

To PARKHOUSE IRON CO.

DESCRIPTION.—Fitted with two doors and canopy, open and close fire, large oven on left hand, coves, and best plate-rack. Hole  $\frac{5}{8}$  in. thick. Long damper. Rods and knobs, ashpit lining. Back boiler flue, cinder sifter to ashpan, cone ventilators, bright edge to roof-plate, sliding fire cover, round loose fire bars.

SIZE.—42 in. × 26 in. × 56 in.

PRICE.—

Manufactured by PARKHOUSE IRON CO., Falkirk, N.B.

## DIVISION C.—CLASS III.—Section 2. (Continued.)

## Dow's Kitchen Range.

Certificate of Merit, 1892.

To PARKHOUSE IRON Co.

DESCRIPTION.—Double oven reversing flue to large oven. Hobs  $\frac{3}{4}$  in. thick, coves and polished plate-rack. Bright moulding on front of roof-plate and edges of coving. Two cone ventilators, ashpit linings, ashpan with cinder sifter, patent back boiler flue, dampers with rods and knobs, heavy fire cover, cups and rings, round loose bars, hobs ground, and range Berlin blacked.

SIZE.—60 in.  $\times$  30 in.  $\times$  60 in.

PRICE.—

Manufactured by PARKHOUSE IRON Co., Falkirk, N.B.

## Dublin Kitchen Range.

Certificate of Merit, 1892.

To PARKHOUSE IRON Co.

DESCRIPTION.—Fitted with two doors and canopy, open and close fire arrangement, double oven or large oven with revolving flue, covings with brown and white tiles, having polished plate-rack. "Eagle" fire, with polished front and heavy fall-bar (bottom fitted to drop ashes through), ashpit with linings, and cinder sifter to ashpan. Heavy fire cover with cups and rings. Heavy hobs, roof-plate with two cone ventilators. Dampers with long rods and knobs, sliding fire cover, patent back boiler flue.

SIZE.—54 in.  $\times$  30 in.  $\times$  60 in.

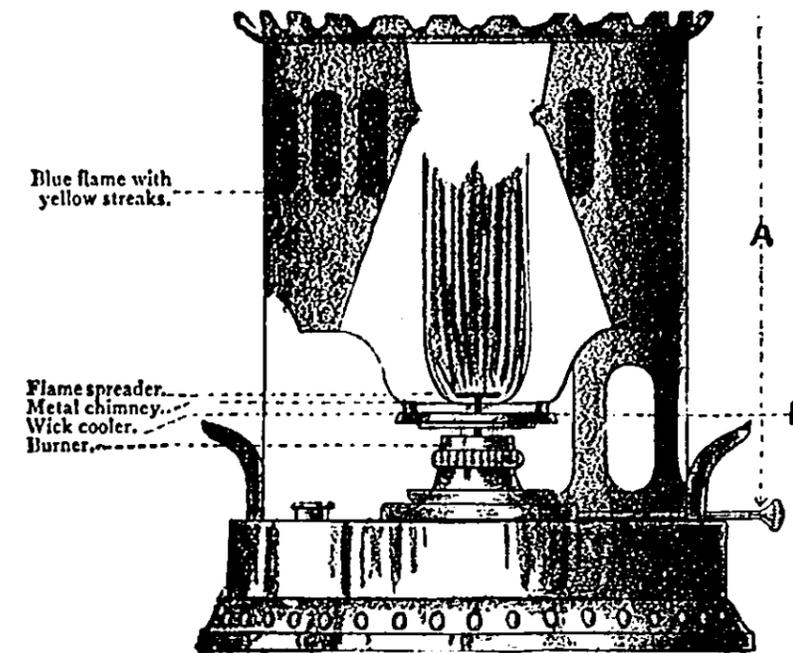
Manufactured by PARKHOUSE IRON Co., Falkirk, N.B.

## DIVISION C.—CLASS III.—Section 2. (Continued.)

## Dofries Petroleum Cooking Stove.

Certificate of Merit, 1889.

To G. HARRISON.

SECTION.  
Shewing flame at full power.

DESCRIPTION.—The object is to burn air with gas generated from oil, so as to produce a blue flame without throwing off smoke or smell. The wick is surrounded with a ring of peculiar construction, that causes a large volume of air to be drawn over the wick, thus preventing the outer surface of the wick from getting alight; the outer surface thus gives off gas which is burned on the top of the wick in combination with the air that has passed over the wick.

SIZE.—Height, 11 in.

PRICES.—From 17s.

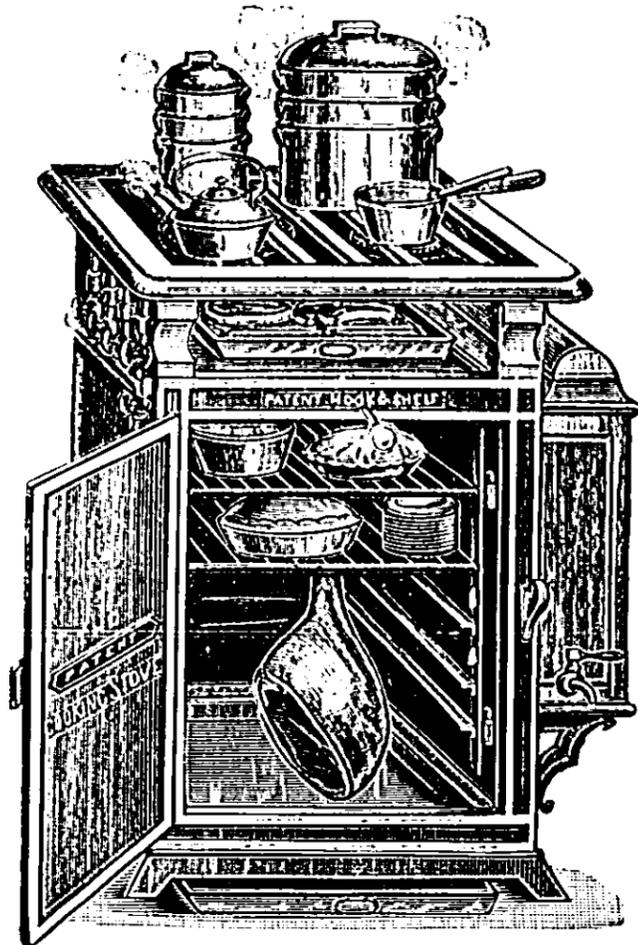
Manufactured by THE METROPOLITAN LIGHT COMPANY, 43, Holborn Viaduct, E.C.

DIVISION C.—CLASS III.—Section 2. (Continued.)

The "Beacon" Gas Cooker.

Medal, 1890.

To FREEMAN, EMERY & Co.



DESCRIPTION.—Enamelled inside and outside, Wrought or Cast Iron. Double-cased and jacketed with the Patent Non-Conductor. The Shelves are made to draw out the full depth of the Oven without tilting or falling. New Rise and Fall Grilling Burners for Broiling Chops and Steaks, Toasting Bread, Boiling Kettles, &c., fitted to all these Stoves. The Burners are of the atmospheric type.

SIZES.—High: 27, 30, 34, 35, 37, 38 in.  
Wide: 15, 20, 22, 26, 28, 30 in.  
Deep: 15, 19, 20, 23, 24, 26 in.

PRICES.— £2 5s., £3 10s., £5 10s., £6 10s., £8 10s., £10 10s.

Manufactured by FREEMAN, EMERY & Co., Birmingham.

DIVISION C.—CLASS III.—Section 2. (Continued.)

Artizan Gas Cooker.  
Certificate of Merit, 1890.

To FREEMAN, EMERY & Co.

DESCRIPTION.—This Artizan Stove is the Beacon Stove in a cheaper make, being made of lighter material and single cased. The Burners are of the atmospheric type. See page 84.

SIZE.—28 × 18 × 16 in.

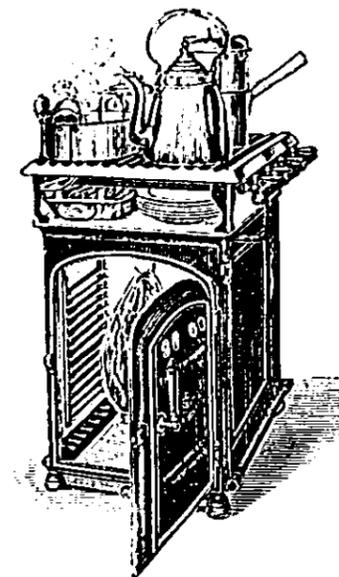
PRICE.—£2 10s.

Manufactured by FREEMAN, EMERY & Co., Birmingham.

Westminster Gas Cooker.  
Certificate of Merit, 1890.

Westminster Gas Cooking Stove, with Bunsen Burner.  
Certificate of Merit, 1892.

To W. SUGG & Co.



DESCRIPTION.—The Oven is ventilated, and lined with Special Double Enamelled Iron Plates. The top of the Oven, under the Hot-plate, is fitted with Sugg's Enamelled Ribbed Top-plate; this also is specially enamelled pure White. These Kitcheners can, therefore, always be cleaned immediately after use, and an offensive accumulation of grease and dirt is consequently prevented. The Burners in the Oven are of the luminous type, and those of the Hot-plate are atmospheric.

SIZES.—High—31 in., 34 in., 35 in. Wide—20 in., 22 in., 24 in.  
Deep—18 in., 21 in., 22 in.

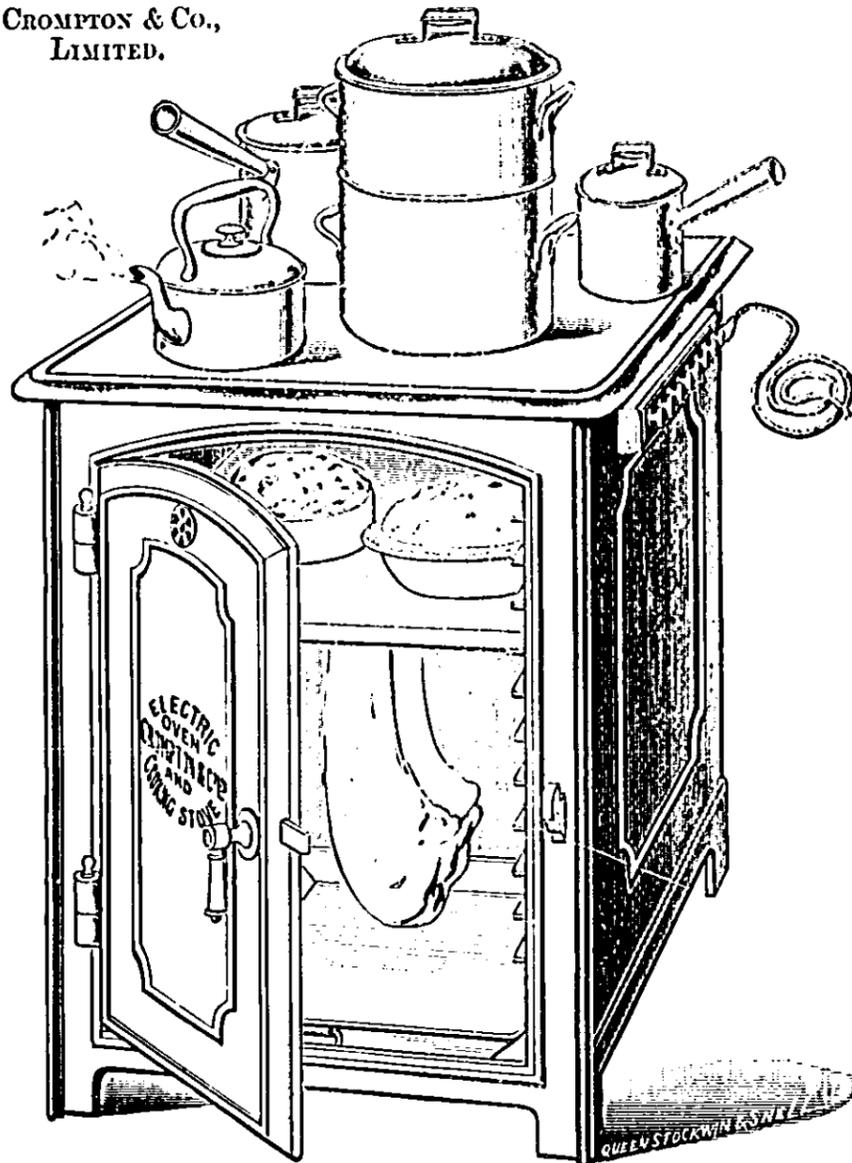
PRICES.—£5 14s., £6 15s., £7 17s. 6d.

Manufactured by WILLIAM SUGG & Co., Vincent Works, Westminster.

DIVISION C.—CLASS III.—Section 2. (Continued.)

Apparatus for Cooking by Electricity.  
Medal, 1892.

To CROMPTON & Co.,  
LIMITED.



DESCRIPTION.—The Electric Oven is one of the applications of the use of Electric Cooking Apparatus. As no combustion takes place, the oven is enclosed with the exception of a small opening for ventilation. The inside plates of the oven are heated by electricity and made radiating surfaces, and can be turned on or off at will. When once the oven is heated to the required degree, nearly the whole of the current may be turned off, owing to the fact that a very small amount only is required to make up for loss by radiation. The heated air cannot escape, there being no chimney. To heat up the oven in the first instance with all the switches on, the cost may be more than gas, but after the first fifteen or twenty minutes, when the desired heat is attained, the cost of maintaining the oven at this heat is very small. The food is cooked in an absolutely pure atmosphere. The principle is also applied to kettles, hot plates, and grills.

PRICE.—From £7 10s.

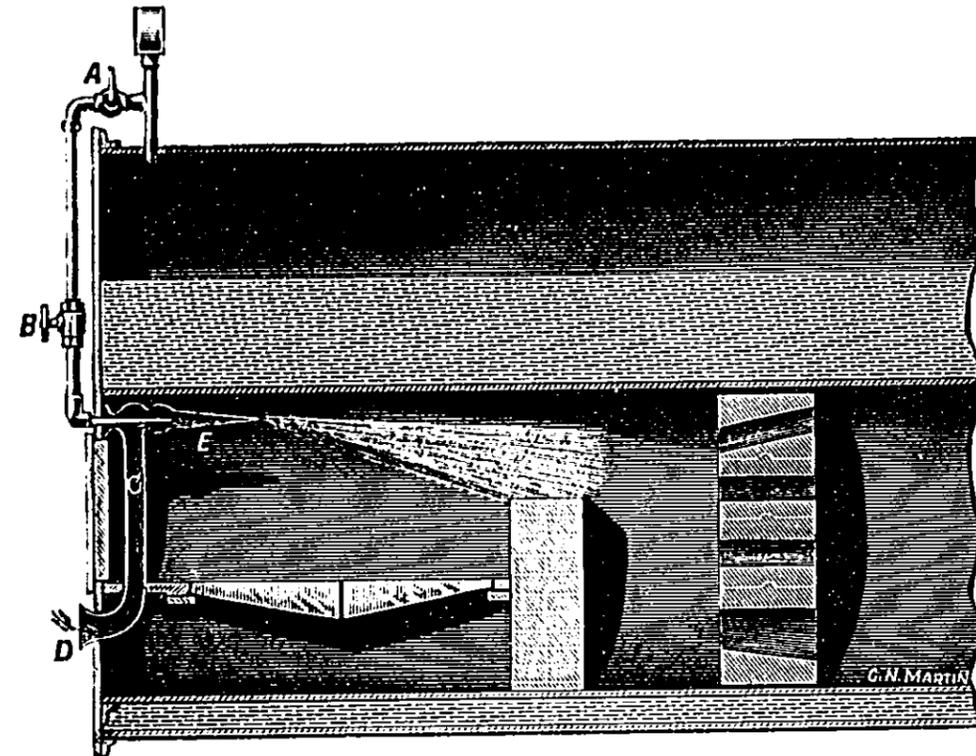
Manufactured by CROMPTON & Co., LIMITED, Show Rooms, 148, Brompton Road, S.W.

DIVISION C.—CLASS III.—Section 3. Smoke Preventing Appliances.

“Invicta” Smoko-Consumer and Fuel Economizer.

Certificate of Merit, 1890.

To THE IMPERIAL SMOKE-CONSUMER Co.



DESCRIPTION.—The Apparatus consists of a Hot-air Injector, E, fitted inside the Furnace. Air is conducted to the body of the Injector by a series of Curved Pipes, C, inside the Furnace, having their Orifices or Inlets, D, below the Dead-Plate and turned outwards. The air is injected over the Furnace by the aid of a small jet of steam which, mixing with the heated air in the body of the Injector, is discharged into the Furnace above the fire-grate, and in the direction of the Bridge, in a dry state.

SIZE.—It can be adapted to any Furnace.

PRICES.—“Invicta” Hot-air Injector, without Bridge, £8; with Barnes' Sectional Bridge, complete, £12.

Manufactured by THE IMPERIAL SMOKE-CONSUMER Co., 69, Falmouth Road, S.E.

DIVISION C.—CLASS III.—Section 3. (Continued.)

**Boiler-Covering Bricks.**

Certificate of Merit, 1890.

To THE IMPERIAL SMOKE-CONSUMER Co.

DESCRIPTION.—These Bricks are made with Special Studs so as to form a Hot-Air Chamber over the Boiler. In case of leakage in the Boiler or accident, the Covering can be taken off and replaced without deterioration.

SIZES.—The Bricks are 9 in. × 4½ in. × 2½ in. thick.

PRICES.—3d. each, or 10d. per Super Foot.

Manufactured for THE IMPERIAL SMOKE-CONSUMER Co., 69, Falmouth Road, S.E.

**Barnes' Sectional Bridge for Boilers.**

Certificate of Merit, 1890.

To THE IMPERIAL SMOKE-CONSUMER Co.

DESCRIPTION.—It consists of a series of specially prepared Sections of Fire-Clay, arranged to interlock each other. The Sections or Blocks are so constructed that the hot gases are prevented from being carried too rapidly away, and the Blocks absorbing or retaining the heat impart the same to the surrounding Boiler-Tube, whilst the formation of the orifices in the Sections direct the passing gases and flames to traverse the walls or sides of the Tube.

SIZES.—For Boilers, Tubes, 2 ft. 4in. up to 3 ft. diameter.

PRICES.—£6.

Manufactured for THE IMPERIAL SMOKE-CONSUMER Co., 69, Falmouth Road, S.E.

**Improved Fire Bars and Bridge.**

Certificate of Merit, 1890.

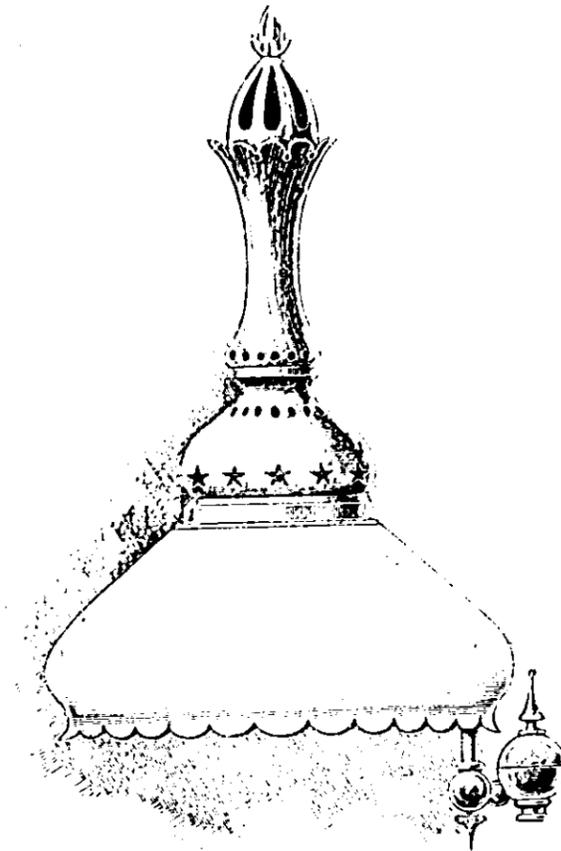
To J. SMEATON, SON & Co.

DIVISION C.—CLASS III.—Section 4. Lighting, including Electric Lighting.

**"Cromartie" Library Lamp.**

Medal, 1890.

To WILLIAM SUGG & Co.



"Tanjore" Pattern.

DESCRIPTION.—Suitable for use as a Library Reading Lamp, &c. Can be readily fitted to any pillar, bracket, or pendant. Each Lamp is fitted with a Patent Automatic Governor, for the purpose of correcting any variation of pressure. The Lamp is made in a variety of forms, ventilating and non-ventilating, suited to different requirements. The "Tanjore," shown above, has a Nickelled Body and 10½ in. Albatrine Shade.

SIZES AND PRICES of "Tanjore" Lamp.—

3 cubic feet (16 candle gas) per hour, £1 10s. 0d.

4 " " " " £1 16s. 6d.

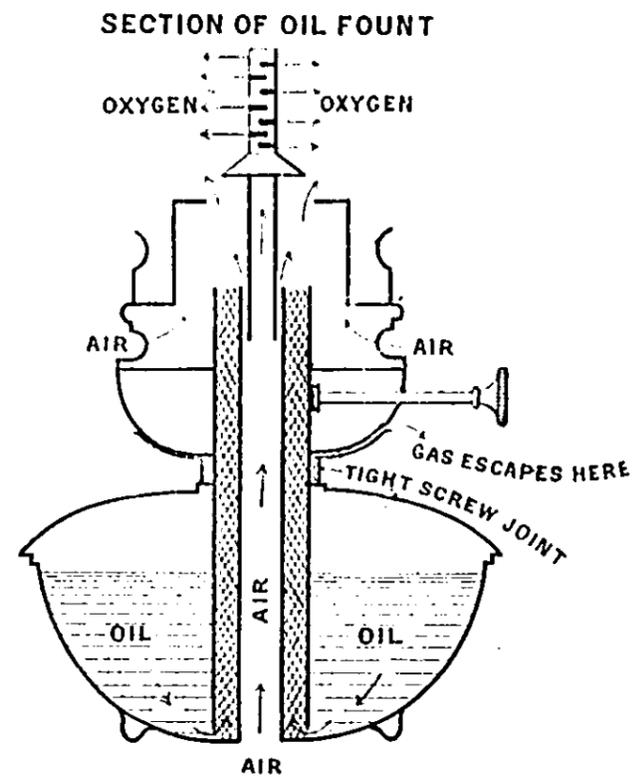
Manufactured by WILLIAM SUGG & Co., Vincent Works, Westminster.

DIVISION C.—CLASS III.—Section 4. (Continued.)

Dofries Safety Lamp.

Medal, 1889.

To G. HARRISON.



DESCRIPTION.—It consists of an inner tube fixed to the reservoir over which the cotton goes, and to the burner is fixed another tube which goes down over the wick to within one-eighth of an inch of the bottom of the reservoir. Air is admitted into the reservoir from a groove placed outside the burner. The result obtained is that no vapour from the oil can come in contact with the flame. No oil is spilt if the lamp be overturned.

PRICES.—From 1s. 6d. to £9 5s.

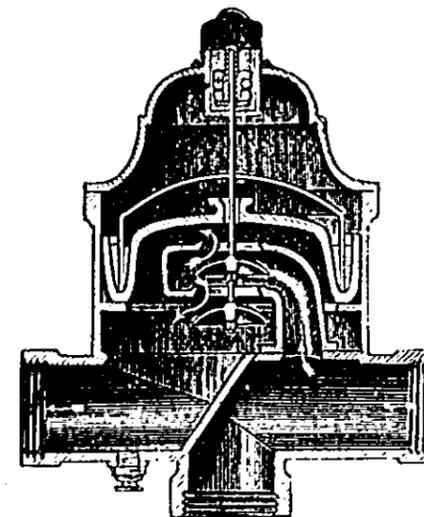
Manufactured by THE METROPOLITAN LIGHT Co., 43, Holborn Viaduct, E.C.

DIVISION C.—CLASS III.—Section 4. (Continued.)

Mercury Gas Governor.

Medal, 1890.

To JAMES STOTT & Co.



DESCRIPTION.—An inverted Metal Cup, sealed in an annular trough filled with mercury. To the centre of the Cup a spindle is fixed, carrying at its lower end a Double Valve. Increased pressure from the main or fewer lights raises the Cup and partially closes the Valve. Diminished pressure or more lights open the Valve, which is regulated by weights on the upper end of the spindle.

SIZES.—From  $\frac{1}{2}$  in. to 8 in., controlling 10 to 5,000 lights.

PRICES.—From £1 19s. ( $\frac{1}{2}$ -in.) to £17 11s. 6d. (4 in.).

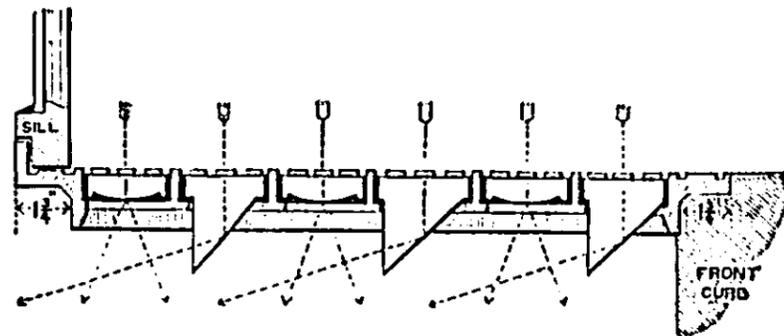
Manufactured by JAMES STOTT & Co., Fleet Street, London, E.C.;  
and Vernon Works, Oldham.

DIVISION C.—CLASS III.—Section 4. (Continued.)

Semi-Prism Reflecting Pavement and Roadway Lights.

Medal, 1890.

To HAYWARD BROS. & ECKSTEIN.



DESCRIPTION.—The Reflecting Prisms throw the daylight in the direction indicated by the arrows, and distribute it over the back portion of the apartment, while the Convex Lenses diffuse the light.

Manufactured by HAYWARD BROS. & ECKSTEIN, 187, Union Street, Borough, S.E.

Exhibit of Electric Lighting.

Medal, 1890.

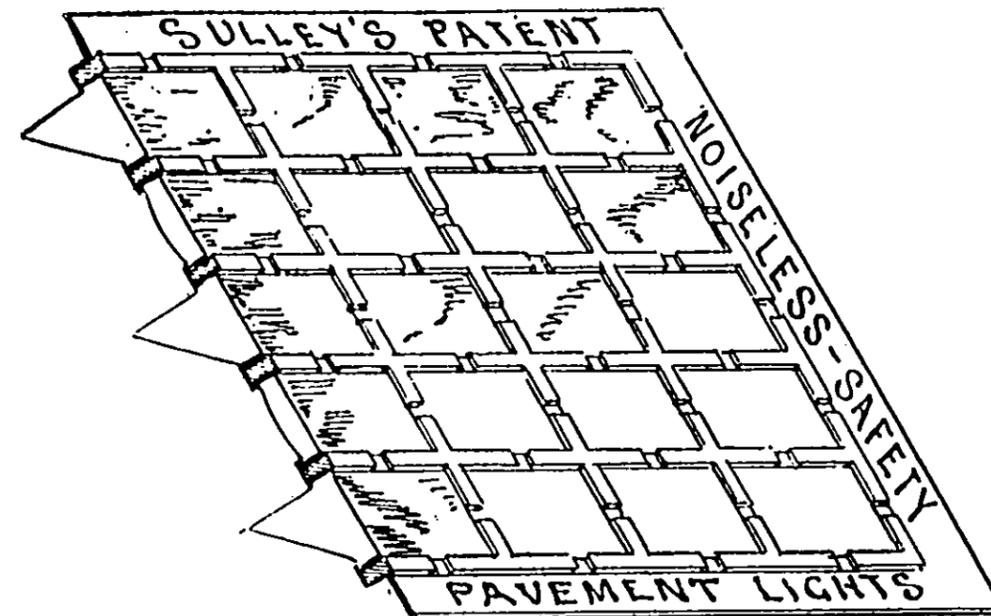
To C. G. REED & SON, 26, North Street, Brighton.

DIVISION C.—CLASS III.—Section 4. (Continued.)

Noiseloess Safety Pavement.

Certificate of Merit, 1892.

To H. SULLEY.



DESCRIPTION.—Pieces of wood are inserted in the iron framing between the squares of glass to prevent slipping.

PRICES.—From 7s. to 10s. per superficial foot.

Manufactured by H. SULLEY, 6, Albert Street, Nottingham.

Cainks' Automatic Gas Governor.

Medal, 1889.

To GUEST & CHIRMES.

DESCRIPTION.—This invention is to secure a means by which the pressure of gas in the mains issuing from the Gas Governor may be increased and diminished automatically, at such times and to such extent as the consumption of gas supplied therefrom requires, and thus prevent what frequently happens—an excess or deficiency of pressure, arising from the impossibility of the man in charge at the gas works being able always to anticipate the precise time and extent the pressure is required, consequent on the variation of the consumption which takes place in a town from time to time.

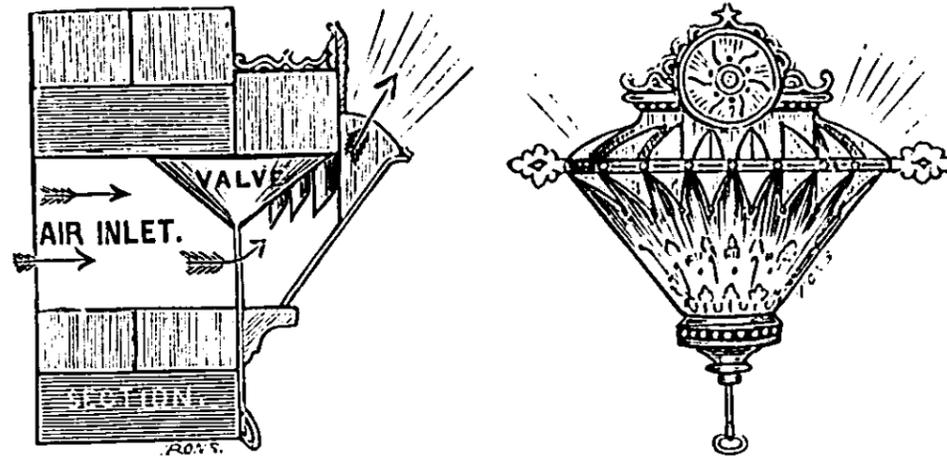
Manufactured by GUEST & CHIRMES, Rotherham.

DIVISION C.—CLASS III.—Section 3. Ventilators.

Thomasson's Inlet Ventilator.

Certificate of Merit, 1889.

To W. BENNETT & Co.



DESCRIPTION.—An Ornamental Semi-Circular Bracket with a number of openings separated by Gills or Divisions for diffusing the incoming air. The supply of air can be regulated by a Conical Valve which slides down behind the Division.

PRICE.—10s. and upwards.

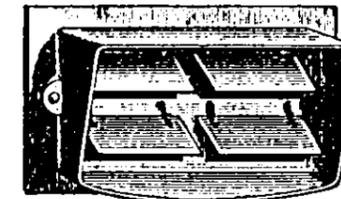
Supplied by W. BENNETT & Co., Ironfounders and Patentees, 8, Nicholas Street, Worcester.

DIVISION C.—CLASS III.—Section 3. (Continued.)

Mica Flap Outlet Ventilator, with Hit-and-Miss Front.

Certificate of Merit, 1890.

To HAYWARD BROS. & ECKSTEIN.



DESCRIPTION.—For the discharge of heated and vitiated air from rooms into the smoke flue. The Valves are made of Mica, and open with the up current in the flue, but close against down draughts, and prevent smoke entering the room.

SIZES.—11 × 5 in.; 11 × 7 in.; 11 × 9 in.; 11 × 11 in.; 16 × 11 in.

PRICES.— 4/-            6/-            9/-            11/-            16/-

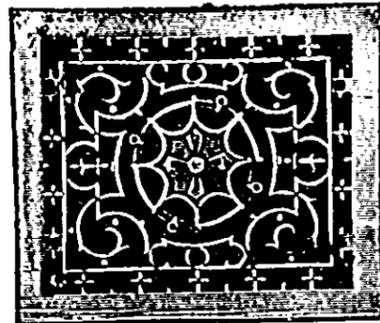
Manufactured by HAYWARD BROS. & ECKSTEIN, Union Street, Borough, London, S.E.

DIVISION C.—CLASS III.—Section 6. (Continued.)

Southwark Universal Venetian Ventilator.

Certificate of Merit, 1890.

To HAYWARD BROS. & ECKSTEIN.



SHUT



Outlet Section.

DESCRIPTION.—They act as “outlet” or “inlet,” by reversing them when fixing. The Venetians can be set at any angle, and will remain in that position without the aid of a cleat hook.

SIZES.—10 × 8 in.; 12 × 10 in.; 14 × 12 in.; 16 × 14 in.; 18 × 12 in.

PRICES.— 6/6      8/6      12/6      17/-      18/6

Manufactured by HAYWARD BROS. & ECKSTEIN, 187, 189, 191, and 193,  
Union Street, Borough, London, S.E.

DIVISION C.—CLASS III.—Section 6. (Continued.)

Ornamental Hit-and-Miss Air Bricks.

Certificate of Merit, 1890.

To HAYWARD BROS. & ECKSTEIN.



DESCRIPTION.—Consists of an Iron Box, with pierced front, fitted with a sliding diaphragm behind.

SIZES.—9 in. × 3 in. to 18 in. × 9 in.

PRICES.—From 1s. to 7s. each.

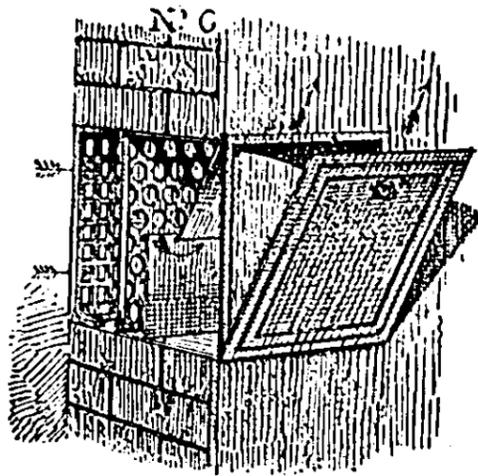
Manufactured by HAYWARD BROS. & ECKSTEIN, 187, 189, 191, and 193,  
Union Street, Borough, London, S.E.

DIVISION C.—CLASS III.—Section C. (Continued.)

Wall Inlet Ventilator.  
Certificate of Merit, 1890.

Improved Box Inlet Ventilator.  
Certificate of Merit, 1892.

To C. KITE & Co.



DESCRIPTION.—Made of Sheet Iron, it is fixed in an opening in the wall, with an ordinary air grating on the outside. The Drawing represents the Ventilator open; the Spandrils or Cheeks are pressed closely to the sides by Springs to prevent leakage of air, and hold the movable front in any position open to closed; internally the Ventilators are fitted with Baffle-Plates, by which outside wind force is checked; the clear way through them is about half their external measurement.

SIZES.—6 in. × 9 in.; 8 in. × 6 in.; 10 in. × 6 in.

PRICES.—8s. 6d. and 10s. 6d.

Manufactured by C. KITE & Co., Christopher Works, Chalton Street, N.W

DIVISION C.—CLASS III.—Section C. (Continued.)

Cast and Sheet-Iron Ventilating Gratings with Louvre Valves.  
Certificate of Merit, 1890.

To H. HEIM.

Registered No., 147303.

DESCRIPTION.—This is bricked in the wall and acts as an outlet from a shaft rising from the heating chamber. It essentially consists of cast-iron frame with horizontal iron ledges, acting like a Venetian blind, and is opened and closed by means of a chain.

SIZES.—8 × 13½ in.; 12½ × 18½ in.

PRICES.—8s. 4d. 13s. 4d.



Manufactured by H. HEIM, 95 and 97, Oxford Street, W.

Round Ventilating Valves.

Certificate of Merit, 1890.

To H. HEIM.

DESCRIPTION.—An ornamental cast-iron frame, with two wing-flaps moved by key or fixed handle; or eight fan-shaped flaps moved by a spring, acted on by a handle in the centre in front.

SIZES.—9½ in. 12 in. 14 in. diameter.

PRICES.—5s. 6s. 8d. 8s. 6d.



Manufactured by H. HEIM, 95 and 97, Oxford Street, W.

DIVISION C.—CLASS III.—Section C. (Continued.)

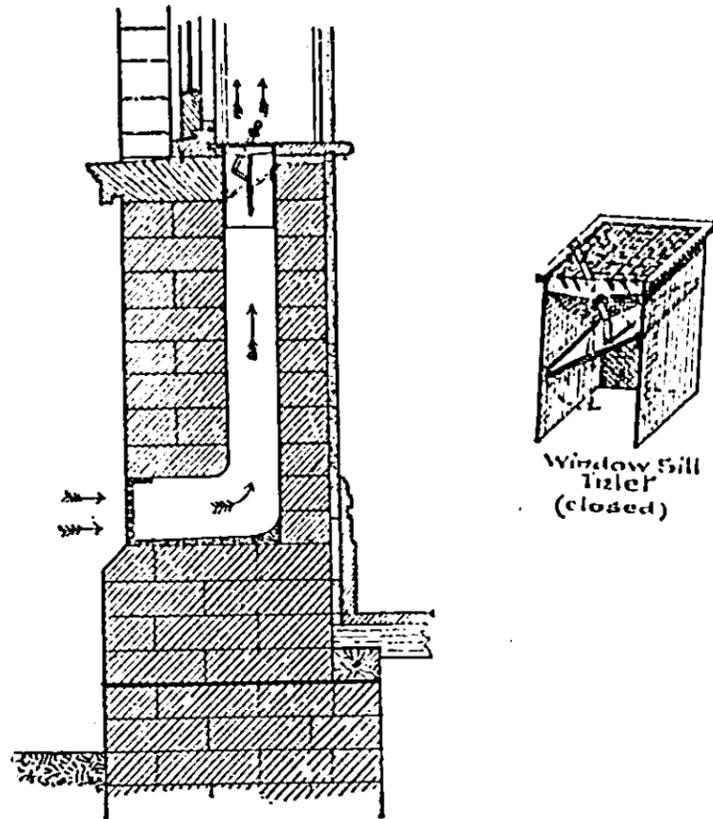
Lock Valve Inlet Ventilator.

Certificate of Merit, 1892.

To C. KITE & Co., Chalton Street, N.W.

N<sup>o</sup> 6H.

Window Sill Inlet.



DESCRIPTION.—Made to fit any openings, but specially suitable for window sills of Churches, Schools, &c. The drawing represents the Ventilator closed, the locking-lever pressing the valve tightly on its seating, thus preventing any leakage of air. To open same, the lever is pulled over, bringing the valve perpendicularly in the centre, thus giving a clear full way through the Ventilator.

PRICE AND SIZE.—From 13s. 6d.; 9 in. x 4½ in.

Manufactured by C. KITE & Co., Christopher Works, Charlton Street London, N.W.

DIVISION D.—PERSONAL AND DOMESTIC HYGIENE.

DIVISION D.—Section 1. Clothing.

Anatomical Boots.

Certificate of Merit, 1889; Medal, 1892.

To NATHANIEL BLETCHLY.



DESCRIPTION.—The Boots are designed to fit the natural shape of the feet, and are noiseless.

PRICES.—From £1 2s. Directions for self-measurement on application. Manufactured by NATHANIEL BLETCHLY, 89, Northgate Street, Gloucester.

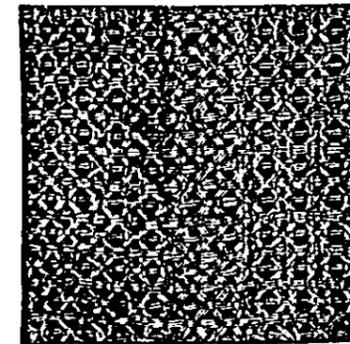
Cellular Clothing.

Medal, 1889.

Cellular Fabrics.

Medal, 1890.

To THE CELLULAR CLOTHING CO.



DESCRIPTION.—The Fabric is made so that the outside presents an open Cellular appearance, while the reverse side is more closely woven. The material being porous, retains a film of warm air around the body, and at the same time allows the excretions to pass off from the skin. It is made in Cotton, Merino, Wool, or Silk.

PRICES.—Shirts, 5s. 6d. to £1 5s.; Pyjamas, £1 6s. to £2 12s.

Manufactured by THE CELLULAR CLOTHING CO., 124, London Wall, E.C.

DIVISION D.—Section 1. (Continued.)

Sanitary Hat Linings.

Certificates of Merit, 1889 and 1890.

To D. W. WALL.



DESCRIPTION.—The Lining suspends the Hat. A larger surface than usual being in contact with the head, weight is distributed and therefore less at any given point. The forehead, the part unprotected by a cushion of hair, is relieved of all pressure.

PRICES.—From 5s. 6d. upwards.

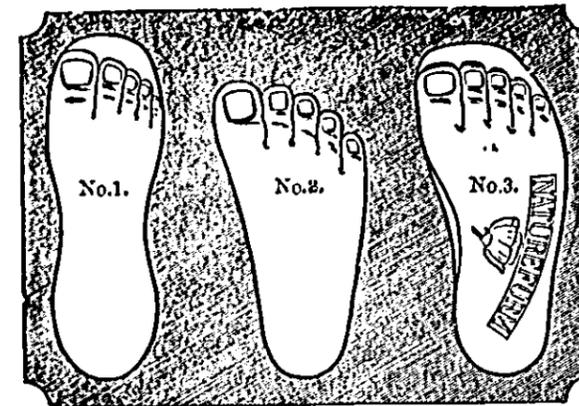
Manufactured by D. W. WALL, 2, Camberwell Gate, S.E.

DIVISION D.—Section 1. (Continued.)

Naturo-form Boots and Shoes for Children.

Certificate of Merit, 1892.

To HOLDEN BROS.



No. 1—"Straight" Shoe, as commonly worn. No. 2—A Natural Foot of a Child.  
No. 3—"Nature-form" Shoe.

DESCRIPTION.—These are made upon the lasts corresponding exactly to the natural form of the foot, and in four different widths to each length, thus ensuring a fit whether the foot is broad or narrow.

PRICE.—From 3s.

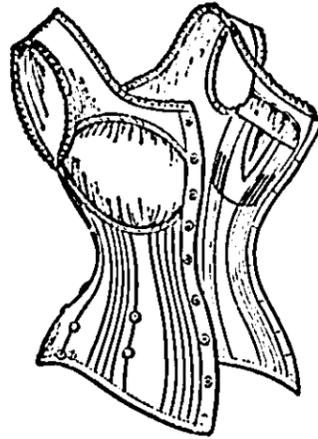
Manufactured by HOLDEN BROS., 223 & 223A, Regent Street, W.

DIVISION D.—Section 1. (Continued.)

Hygienic Corsots.

Certificate of Merit, 1892.

To HERTS, SON & Co.



DESCRIPTION.—A Corset and Bodice combined (known as the Platinum Anti-Corset), fitted with unbreakable bones, so arranged that all are removable for washing. In cotton, pure wool, Turkey red, and other materials.

PRICE.—From 6s. 11d.

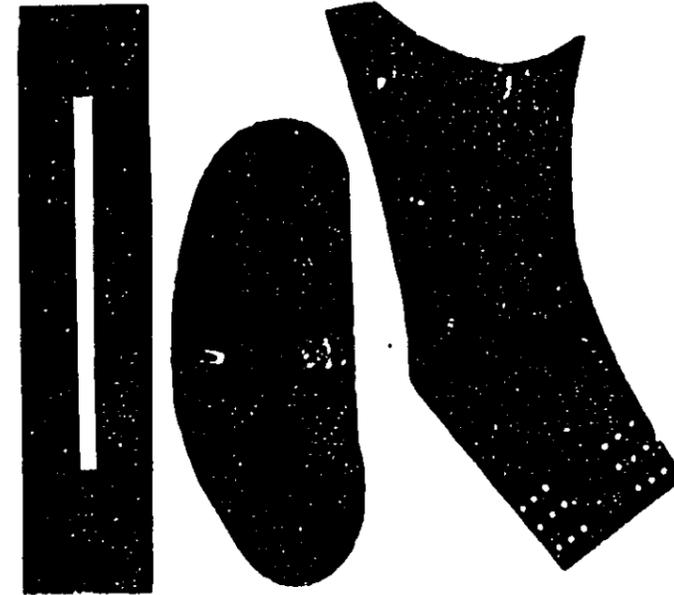
Manufactured by HERTS, SON & Co., LIMITED, Ridgmount Street, W.C.

DIVISION D.—Section 1. (Continued.)

System of Hygienic Dress Cutting.

Certificate of Merit, 1892.

To F. H. KNIGHTS.



DESCRIPTION.—The pattern for the Bodice is made in three pieces called Scale used for straight lines only, and has on it calculations for Back on one side and for Front on the other, and the Chart which represents all the curves required are used with it. The Sleeve Chart has on its right side the top part of sleeve, and on the left side the under position. The System also includes a Skirt Cutter, which is suitable for designing twelve different styles of skirts. The material of which the Charts are made is unbreakable.

PRICE.—10s. 6d. for complete System, including Book of Instructions.

Manufactured by KNIGHTS' EUROPEAN DRESS CUTTING ASSOCIATION, Reading.

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

Certificate of Merit, 1892.

To J. J. THORNTON & Co.

DESCRIPTION.—These India Rubber Boots are ventilated by means of tubes down the sides and about the feet. They are made without seams.

SIZES.—In all sizes.

PRICE.—25s. per pair.

Manufactured by J. J. THORNTON & Co., Southsea and Brighton.

DIVISION D.—Section 2. Beds and other Furniture.

Exhibit of Church Fittings.

Certificate of Merit, 1890.

To G. M. HAMMER & Co.

DESCRIPTION.—Lecterns, Altar Tables, Pulpits, Church Seatings, Prayer Desks, Reading Desks, Vestry Fittings, Brass Work Fabrics, &c.

*Manufactured by G. M. HAMMER & Co., 370, Strand, W.C.*

Down Covered Air Cushions.

Certificate of Merit, 1892.

To J. J. THORNTON & Co.

DESCRIPTION.—These Cushions are an improvement upon the old style of airproof Cushions, being made or covered in fancy materials, and also having a covering of down.

SIZES.—Made in all sizes and shapes.

PRICES.—From 10s. 6d.

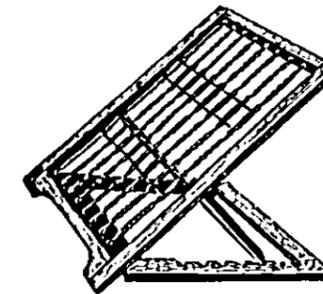
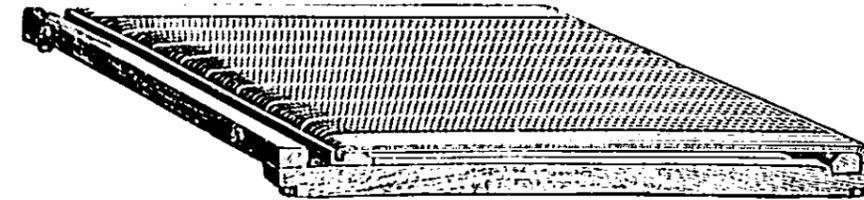
*Manufactured by J. J. THORNTON & Co., India-Rubber Manufacturer, Southsea and Brighton.*

DIVISION D.—Section 2. (Continued.)

Wiro Mattresses and Adjustable Bed Rests.

Certificate of Merit, 1890.

To WALTER WALKER.



DESCRIPTION.—The tension of the web is alterable at will, by tightening or slackening the adjustable screws. The Mattress can be quickly taken to pieces for shipment or removal.

SIZES.—3 ft. to 5 ft.

PRICES.—From 12s. 6d. to £1 6s. 6d.

*Manufactured by WALTER WALKER, Grambian House, 163, 164, 165, Western Road, Brighton.*

Bath Chair.

Certificate of Merit, 1890.

To J. L. BRIGDEN & Co.

DESCRIPTION.—Suitable for sitting or lying posture, Spring Back and Cushion; for drawing by Hand, Donkey, or Pony.

PRICE.—For Hand-drawing, £52 10s. Shafts and Bar for Donkey or Pony, £2 2s.

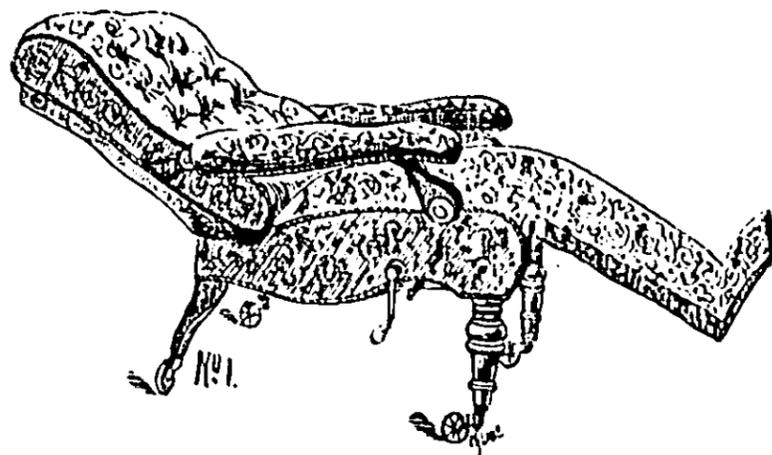
*Manufactured by J. L. BRIGDEN & Co., 187, Western Road, Brighton.*

DIVISION D.—Section 3. Hospital and Sick Room Appliances.

Excelsior Adjustable Invalid Chair and Couch.

Certificate of Merit, 1890.

To J. MILLS.



PRICES.—From £9 to £15.

Manufactured by J. MILLS, 24, North Road, Brighton.

Crutch with Side Handle.

Certificate of Merit, 1890.

To E. A. B. BEAUMONT.

DIVISION D.—Section 3. (Continued.)

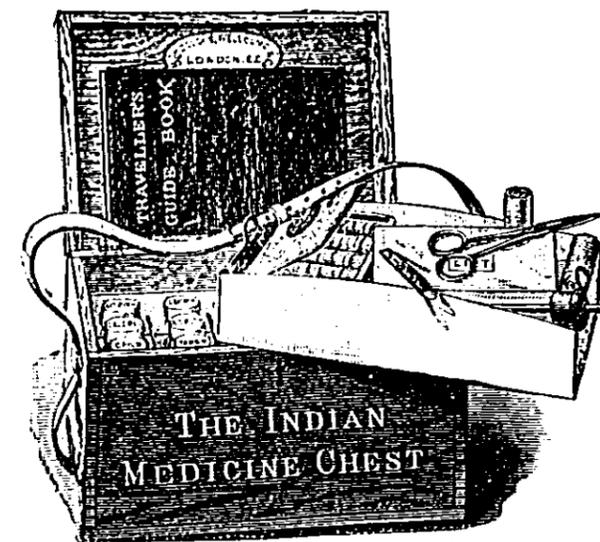
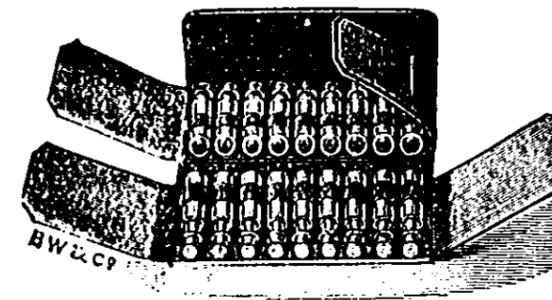
Medicine Chest and Pocket Cases.

Certificate of Merit, 1890.

Travelling Medicine Chests.

Medal, 1892.

To BURROUGHS, WELLCOME & Co.



DESCRIPTION.—The "Indian" Medicine Chest is made of matured teak wood, fitted with metal trays, and contains a supply of medicines.

PRICES.—B. W. & Co. Calf-covered Pocket Case, containing sixteen ½-oz. vials, from 20s. each; "Indian" Medicine Chest, fitted with 20 × 2 oz. Stoppered Bottles only, £1 15s., retail; ditto, complete with Medicines, Instruments, and Guide Book, &c., from £3 15s., retail; B. W. & Co. "Antidote" Case, £3 3s.; B. W. & Co. Urinary Test Case, £2; "Congo" Medicine Chest, without medicines, £3 5s., retail; "Livingstone" Medicine Chest, from £2 each.

Manufactured by BURROUGHS, WELLCOME & Co., Snow Hill Buildings, E.C.

## DIVISION D.—Section 3. (Continued.)

## Surgical Dressings.

Medal, 1889.

To THE LIVERPOOL LINT Co.

DESCRIPTION AND USE.—*Lints* for Surgical Purposes, manufactured from Flax and Cotton Yarns, absorbent, pure, and tearable. *Bandages* in open porous material, both grey and bleached, absorbent, and of close heavy cloth. Cotton Wools, absorbent, bleached, and grey. Surgeon's Tow, Carbolised Tow, an antiseptic dressing. Splint Padding, a combination of tow and absorbent wool. Protective Lint—ordinary Lint having attached a waterproof backing.

Manufactured by THE LIVERPOOL LINT COMPANY, Mark Street Mills,  
Liverpool.

## Prepared China Grass for Surgical Purposes.

Certificate of Merit, 1889.

To THE LIVERPOOL LINT Co.

DESCRIPTION.—A vegetable fibre possessing natural absorbent properties in excess of any absorbent power that can be given to cotton fibre.

Manufactured by THE LIVERPOOL LINT COMPANY, Mark Street Mills,  
Liverpool.

## DIVISION D.—Section 4. Domestic Appliances.

## Hygionie Dust Bin.

Certificate of Merit, 1889.

To HENRY DEAN.

## "Bland" Copying Machine.

Certificate of Merit, 1889.

To W. BLAND &amp; Co.

Manufactured by W. BLAND & Co., Highfield Works, Leicester.

## Venetian Blind Fittings.

Certificate of Merit, 1890.

To SMITH, COLLIER &amp; Co.

DESCRIPTION.—These Fittings dispense with the ordinary fixed head-piece, and can be removed easily. They can be re-laddered or re-corded without unscrewing.

PRICE.—2s. 6d., consisting of 3 Polished Brass Pulley-Wheels, 2 Brass Slotted Brackets and Steel End-Caps.

Manufactured by SMITH, COLLIER & Co., 29, Aldermanbury, E.C.

## China Slop Pails.

Certificate of Merit, 1890.

To J. HAINES, Brighton.

DIVISION D.—Section 4. (Continued.)

Embroidery Machine.  
Certificate of Merit, 1890.

To A. WILLIAMS.

Excelsior Dust Chute.  
Certificate of Merit, 1890.

To J. SMEATON, SON & CO.

DESCRIPTION.—On the Chute being opened for the purpose of receiving ashes, all connection with the Ash Flue is shut off; no dust can escape, owing to draught or other causes, or in cases of ashes being deposited from Chutes connected with the same flue, placed in upper or lower rooms. Made of cast-iron, the door being sealed when shut with a rubber flange on front.

PRICES.—Large, 18s. 6d.; Small, 15s. 6d.; Special, suitable for Artisans' Dwellings, 12s. 6d.

Manufactured by J. SMEATON, SON & Co., 56, Great Queen Street, W.C.

Model Working Dairy.  
Certificate of Merit, 1889.

To MISS McCLEOD SPOONER, Worcester.

Model Dairy.  
Medal, 1890.

To ARTHUR DANN.

DESCRIPTION AND USE.—Cream separating by centrifugal force; the Jersey Creamer; Churning Butter; Working same, and weighing and making up; Cream Cheese making.

DIVISION D.—Section 4. (Continued.)

Victoria Churn.  
Certificate of Merit, 1890.

To ARTHUR DANN.



DESCRIPTION.—This Churn is in the form of a barrel, without heaters either fixed or movable, and revolves over end ways. The entire end of the Churn forms the lid; hence, there are no corners out of sight, and it is easy to keep it clean. Set into the lid is a glass window which admits of the contents inside the Churn being seen, thereby preventing overchurning.

SIZES.— 2, 3, 4, 6, 9, 12 Gallons.

PRICES.—£2 10s. £3 £3 10s. £4 5s. £4 15s. £5 5s.

Manufactured by DAIRY SUPPLY Co., Museum Street, London, W.C.

Arctic Freezer.  
Certificate of Merit, 1892.

To ARCTIC FREEZER SYNDICATE.

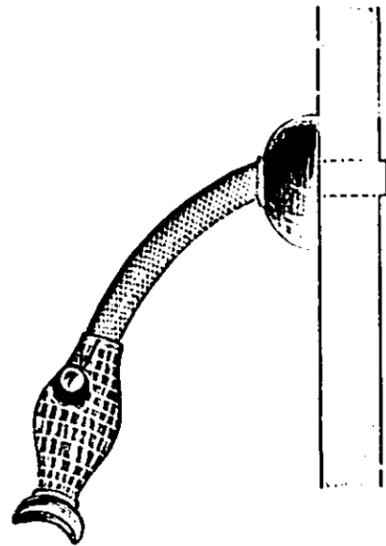
DESCRIPTION.—Consists of a cylinder containing ice, which dips into a shallow saucer containing cream or syrup. As the cylinder is revolved it carries away some of the syrup, which freezes on to its surface, and is removed by a scraper before that part of the surface again reaches the syrup. The syrup is slowly poured in, to supply the quantity taken up by the cylinder.

DIVISION D.—Section 4. (Continued.)

Black's Signalling and Speaking Tube Apparatus.

Certificate of Merit, 1889.

To R. W. TOMLINSON.



DESCRIPTION.—The Speaking Apparatus and Bell are combined in one. It can be used as a Signal Bell only, or as a Speaking Tube. By pressing the india-rubber ball at the mouthpiece a bell is rung at each end of the Tube. When the mouthpiece is lifted a little valve falls out of the seat or neck of the mouthpiece, and the Tube is clear for speaking.

PRICES.—10s. 6d. and 15s. 6d. each end. With Indicator, 1s. 6d. extra.

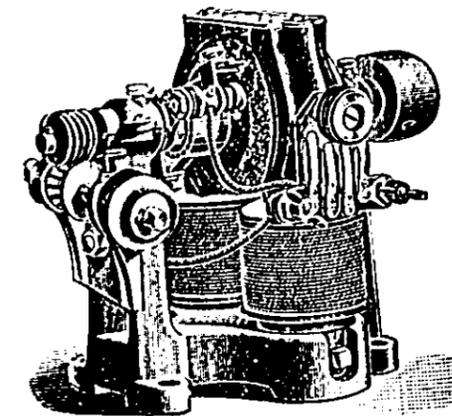
Manufactured by BAXENDALE & Co., Miller Street, Manchester.

DIVISION D.—Section 4. (Continued.)

Domestic Motor.

Medal, 1892.

To CROMPTON & Co., LIMITED.



DESCRIPTION.—The Electro-motor is a little machine made on the principle of the dynamo, but instead of producing currents of electricity, it uses them. Thus electricity on being passed to the Motor causes it to work, and the armature rotating at considerable speed gives out power. Sewing machines, boot cleaning machines, polishers, ventilators, pumps, coffee grinders, hair brushing machines, and a multitude of other applications of mechanical power may be used in combination with the electro-motor.

SIZES.— $\frac{1}{2}$  to any size.

PRICES.—From £7 10s.

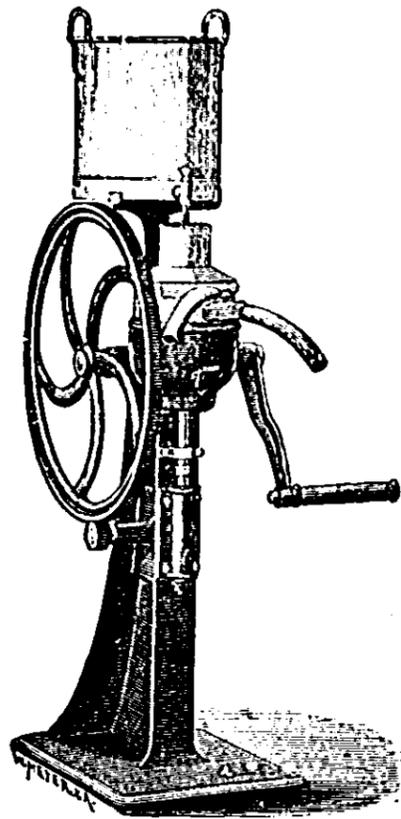
Manufactured by CROMPTON & Co., LIMITED, 148, Brompton Road, S.W., Queen Victoria Street, E.C., and Chelmsford.

DIVISION D.—Section 4. (Continued.)

Alpha Cream Separator.

Medal, 1892.

To NORTH WILTS DAIRY Co.



DESCRIPTION.—This machine is fitted with Alpha improvements.

PRICE.—Hand power, separates 65 gallons per hour, complete, £29.

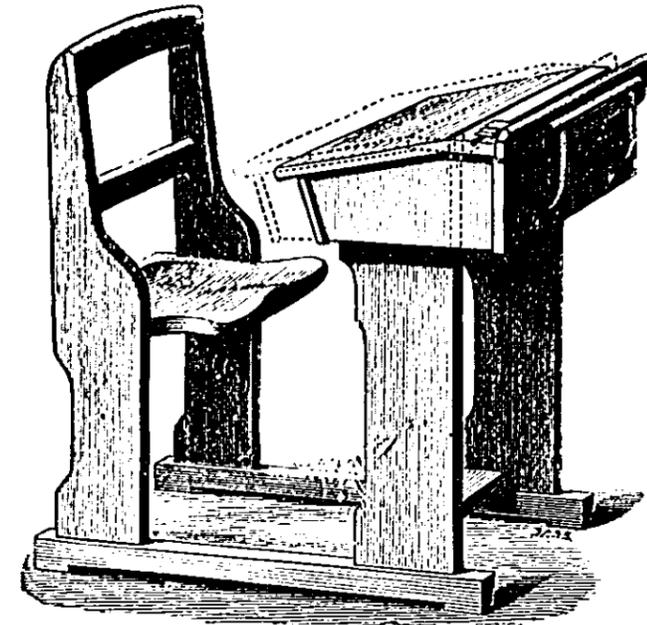
Sold by THE DAIRY SUPPLY Co., LIMITED, Sole Agents, 28, Museum Street, London.

DIVISION D.—Section 5. School Fittings.

School Furniture.

Medal, 1890.

To G. M. HAMMER & Co.



DESCRIPTION.—The "Louise" Single Desk is fitted with Metal Runners, on which the Desk slides backwards and forwards, allowing ample room for ingress and egress, and yet when drawn close to the scholar preventing stooping, and having a comfortably shaped back to the seat, securing a healthy position of the body. Many other kinds of Desks, including Convertible Desks, forming Tables, Seats, &c., and all kinds of School apparatus.

SIZES.— 31 in., 33 in., 35 in.

PRICES.—Varnished deal, £1, £1 1s., £1 2s.

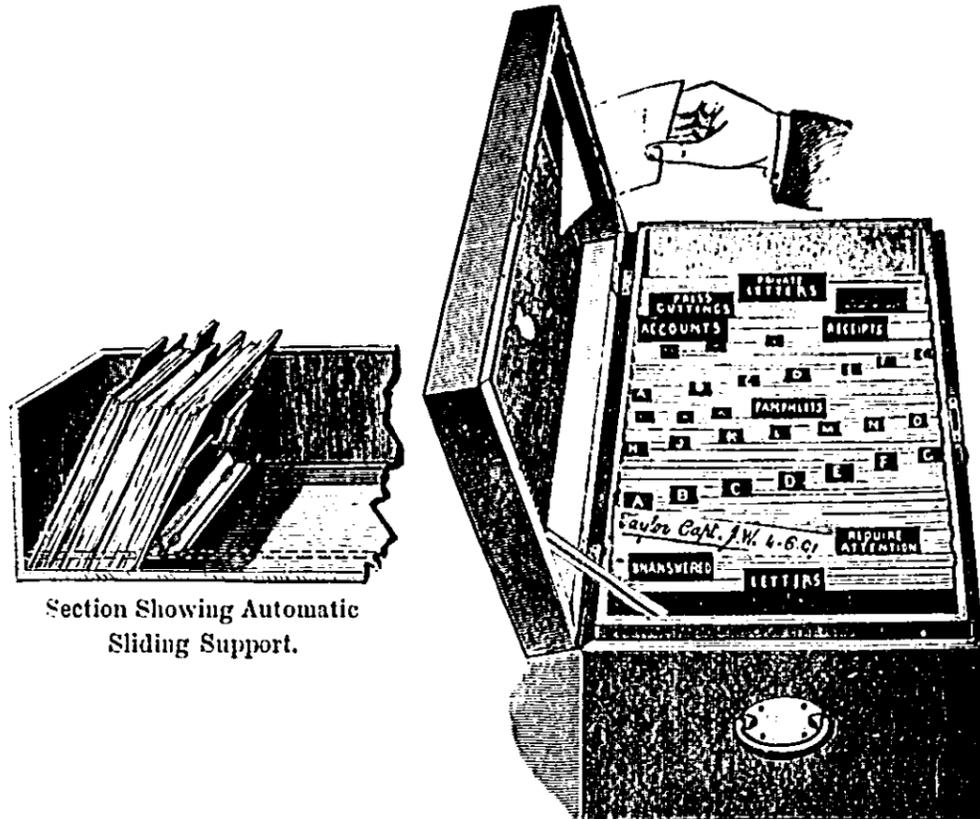
Manufactured by G. M. HAMMER & Co., Strand, W.C.

DIVISION D.—Section 5. (Continued.)

The "Ceres" Automatic Letter and Card File Cabinet.

Certificate of Merit, 1892.

To T. BOWATER VERNON, the Inventor and Patentee.



Section Showing Automatic Sliding Support.

No. 1 Letter File. Dimensions 20x12x9½ in. high.

DESCRIPTION.—A method of keeping Letters and Documents; also Card Files with Automatic Slide, with or without the rod, for indexes, lists, &c. The system is worked in File Boxes, Cabinets of Drawers, Writing Tables, or other receptacles, the Letters being arranged, standing up, at a convenient slope against a sliding support. The order of arrangement may be either alphabetical or numerical, or blank headings can be supplied to suit individual requirements.

PRICES.—In Wood (covered cloth)—No. 1, for 2,000 Letters, £1 5s. 6d. No. 2, 1,000 Letters, 17s. 6d.; Yale Lock (unpickable), 4s. 6d. extra. Some twenty other patterns are made with capacity up to 25,000 Letters in a single alphabet.

Full Descriptive Catalogue, with suggestions as to keeping papers and utilising the Card System, on application.

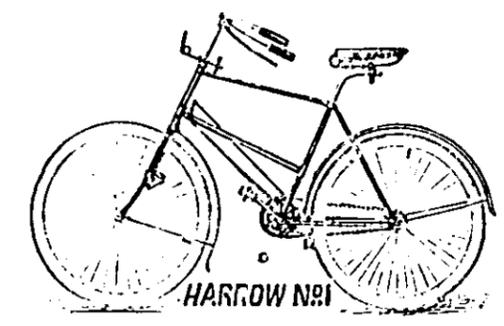
Manufactured by T. BOWATER VERNON, Albany Buildings, 39, Victoria Street, S.W.

DIVISION D.—Section 6. Gymnastic Appliances.

"Harrow" Safety Bicycle.

Certificate of Merit, 1890.

To HALLIWELL & Co.



DESCRIPTION.—Each Machine weighs, with Saddle and Pedals, from 36lbs. to 40lbs. 26 inch Driving-Wheel, 28 inch Steering-Wheel, Warwick's Rims, Ball Bearings throughout, including Head and Pedals, 1¼ inch Cushion, Tyres with ¼ inch hole, Brighton Adjustable Spring Footrests, "Harrow" Steering Lock, Bottom Bracket with Bearings outside of Chain Wheel; Band-Brake on Crank-Axle.

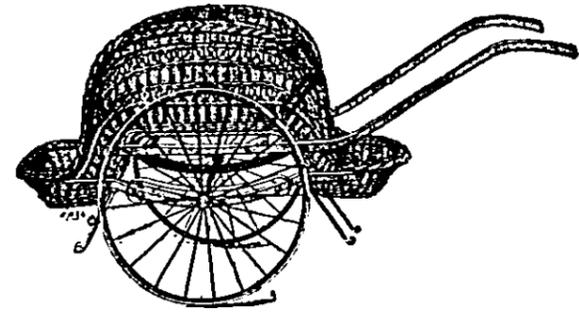
SIZE.—Geared, 58 in.

PRICES.—£21 15s.; Boothroyd Pneumatic Tyres, £1 10s. extra. Dunlop Pneumatic Tyres, £3 15s. extra.

Wicker Mail Cart.

Certificate of Merit, 1890.

To HALLIWELL & Co.



PRICE.—£3 7s. 6d.

Manufactured by HALLIWELL & Co., Pool Valley, Brighton.

DIVISION D.—Section 7. Foods.

**Florador Food.**

Certificate of Merit, 1889.

To McLEAN & SON, Edinburgh.

DESCRIPTION.—It is made from Wheat by a special process, whereby the nutritious parts are presented in a granular form.

SIZES.— $\frac{1}{4}$  lb.,  $\frac{1}{2}$  lb., 1 lb. packets.

PRICES.—1 $\frac{1}{2}$ d., 3d., 6d.

*Manufactured by* FLORADOR FOOD COMPANY, 10, Washington Street, Glasgow.

**Frame Food Extract.**

Certificate of Merit, 1889.

To FRAME FOOD COMPANY, LIMITED.

DESCRIPTION.—The nutritious matter is extracted from Wheat Bran by a mechanical (not chemical) process. The Extract is supplied in the form of a fine powder for adding to Bread Flour (1 oz. Extract to 5 lbs. flour), Corn Flour, Cocoa, and all farinaceous food stuffs; also to soups, gravies, &c. It is the specially nutritive feature in "Frame Food" Diet.

SIZES.— $\frac{1}{4}$  lb.,  $\frac{1}{2}$  lb., 1 lb. Tins.

PRICES.—10d. 1s. 6d. 2s. 10d.

*Manufactured by* FRAME FOOD COMPANY, LIMITED, Lombard Road, Battersea, London, S.W.

DIVISION D.—Section 7. (Continued).

**Preserved Fruits.**

Medal, 1889.

To VALE OF EVESHAM FRUIT PRESERVING Co.

Packed in Glass Bottles.

*Manufactured by* VALE OF EVESHAM FRUIT PRESERVING Co., Pershore.

**Cocoa.**

Certificate of Merit, 1889.

Cocoa Essence.

Certificate of Merit, 1892.

To CADBURY BROS.

*Manufactured by* CADBURY BROS., Birmingham.

**Edwards' Desiccated Soup.**

Certificate of Merit, 1889.

To FREDERICK KING & Co.

*Made by* FREDERICK KING & Co., Belfast.

**Case showing the Relative Constituents of Various Milks.**

Certificate of Merit, 1890.

To EDWARD WYBORN.

## DIVISION D.—Section 7. (Continued.)

**Currie Powder and Paste.**

Certificate of Merit, 1890.

To J. EDMUNDS.

DESCRIPTION.—“The Empress” Currie Powder is prepared from an old Indian recipe, with Oriental seeds, spices, etc. “The Empress” Currie Paste is also prepared from an old Indian recipe, with Indian and other fruits amalgamated with the “Empress” Currie Powder. It is used in dishes of Currie to give a piquant flavour.

PRICES.—1d. Packets; 4d., 6d., 1s., 1s. 6d., 2s. 6d., Bottles; 1lb., 4lb., 7lb., 14lb., 28lb., Tins; 1 cwt. and 2 cwt. Casks.

*Manufactured by* JOSEPH EDMUNDS, “Empress” Indian Condiment Warehouse, Belper Street, Barnsbury, N.

**Germ Bread and Flour.**

Certificate of Merit, 1890.

To J. J. CLARK.

DESCRIPTION.—“Germ Flour” consists of the separated Germ of Wheat, partly cooked by the action of super-heated steam, and then mixed with fine wheat flour. The Bread is prepared from the Flour by a process of rapid fermentation, which ensures the retention of the flavour. From “Germ Flour” is prepared a Yellow Bread. It is also suitable for making into Biscuits, Scones, and Infants’ Food.

SIZE.—Made in ordinary loaf and biscuit sizes.

PRICES.—Sold at same price as “best” bread.

*Manufactured at* J. J. CLARK, Goldstone Bread Factory, Brighton.

## DIVISION D.—Section 7. (Continued.)

**Assam Tea.**

Certificate of Merit, 1890.

To THE META CHA TEA COMPANY.

PRICES.—From 2s. per pound.

*Manufactured by* THE META CHA TEA Co., Dibrugarh, Assam.

**Essence of Beef.**

Certificate of Merit, 1890.

To H. K. EDGE.

DESCRIPTION.—Essence of Beef is made from meat juice, without the addition of water, gelatine, or any other extraneous substances. It is put up in bottles instead of tins, and does not come into contact with metal.

PRICES.—In Bottles, 2s. 6d. and 3s. 6d. respectively.

*Manufactured by* H. K. EDGE, Farringdon Road, E.C.

**Rizine Food.**

Certificate of Merit, 1890.

To RIZINE FOOD COMPANY, LIMITED.

DESCRIPTION.—Rice of a special kind is subjected to a high, moist temperature, and afterwards dried and pressed into flaky shapes by means of hot cylindrical rollers. This process partly cooks the Rice and removes a portion of the excessive starchy element.

SIZE.—1 lb. packets.

PRICE.—6d. each.

*Manufactured by* RIZINE FOOD COMPANY, LIMITED, 87, Borough High Street, S.E.

DIVISION D.—Section 7. (*Continued.*)

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**Meat Preparation.**

Medal, 1890.

**Beef Essences.**

Medal, 1892.

To BRAND & COMPANY.

DESCRIPTION.—Specialties for Invalids, consisting of Essences of Beef, Mutton, Veal and Chicken, Concentrated Beef Tea and other Broths, Savoury Meat Lozenges, Turtle Soup and Jelly, Calf's Foot Jelly, Albuminous Extract of Beef.

*Manufactured by* BRAND & COMPANY, Mayfair.

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**Improvements in Bread Making.**

Medal, 1890.

To J. J. CLARK.

DESCRIPTION.—These Improvements consist essentially in the building of a large factory, specially designed for the manufacture of Bread and Confectionery, which is fitted throughout with ovens and machinery of approved kind.

*Manufactured by* CLARK'S BREAD FACTORY, West Brighton.

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**Delft Rye Yeast.**

Medal, 1890.

To A. BARHAM.

*Manufactured by* DELFT RYE YEAST Co., Delft.

DIVISION D.—Section 7. (*Continued.*)

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**Coffee Extract.**

Certificate of Merit, 1892.

To E. CLARK & Co.

SIZES.—3 oz., 6½ oz., 13 oz., 27 oz. bottles.

PRICES.—6d., 1s., 2s., and 4s.

*Manufactured by* E. CLARK & Co., Queen's Road, Battersea.

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**Malt Extracts.**

Certificate of Merit, 1892.

To BURROUGHS, WELLCOME & Co.

DESCRIPTION.—Kepler Extract of Malt, made from barley. Kepler Solution of Cod Liver Oil in Malt Extract. The Kepler Essence of Malt: This is a liquid preparation of about the same consistency as glycerin, and is virtually a saturated solution of diastase and the natural phosphates as existing in barley malt.

SIZES.—¾ lb. and 1½ lb.

PRICES.—2s. 6d. and 4s.

*Manufactured by* BURROUGHS, WELLCOME & Co., Snow Hill Buildings, E.C.

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**Corn Flour.**

Medal, 1892.

To BROWN & POLSON.

DESCRIPTION.—Manufactured from maize by a process patented by them, and which is designed to secure the absence from it of the oil and fatty matter, and render it essentially the same in all respects as arrowroot.

PRICE.—Lists to be had on application.

*Manufactured by* BROWN & POLSON, Royal Starch Works, Paisley, N.B.; 99, Queen Victoria Street, London, E.C.

DIVISION D.—Section 7. (Continued.)

Vegetable Seeds.

Medal, 1892.

To SUTTON & SONS.

Manufactured by SUTTON & SONS, Reading.

“Mosquera” Beef Meal.

Medal, 1892.

To MOSQUERA-JULIA FOOD CO.

DESCRIPTION.—Mosquera's Beef Meal is a desiccated Powdered Beef, artificially digested by aid of certain vegetable ferments.

SIZE.—In  $\frac{1}{2}$  lb. packages or bulk.

PRICE.—2s. 6d. per  $\frac{1}{2}$  lb. package.

Manufactured by MOSQUERA-JULIA FOOD CO., Detroit, U.S.A., and 21, North Audley Street, W.

Mazawattee Ceylon Tea.

Certificate of Merit, 1892.

To MAZAWATTEE CEYLON TEA COMPANY.

PRICES.—From 1s. 10d. per lb.

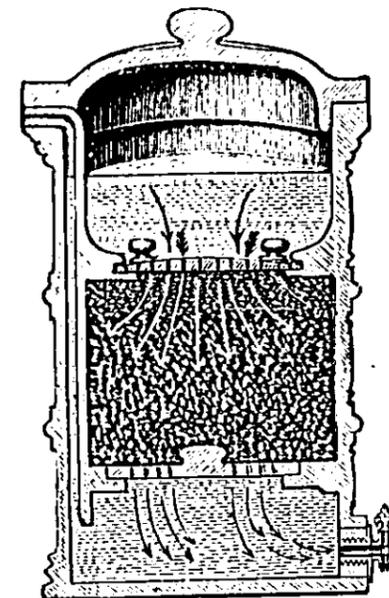
Manufactured by MAZAWATTEE CEYLON TEA CO., 49, Eastcheap, E.C.

DIVISION D.—Section 8. Domestic Filters.

Cheavin's Water Filter, with Removable Plate.

Certificate of Merit, 1889.

To J. WARD & SON.



DESCRIPTION.—The Removable Plate Filters can be taken to pieces, cleansed (leaving the whole of the interior open for inspection), and re-charged with new Idiocarthartes. Nothing comes in contact with the water but Stoneware and the new Idiocarthartes and Asbestos.

SIZES.— $\frac{1}{2}$  Gallon to 36 Gallons.

PRICES.—11s. 6d. to £7 3s.; re-charges, from 1s. 6d. to £1 1s.

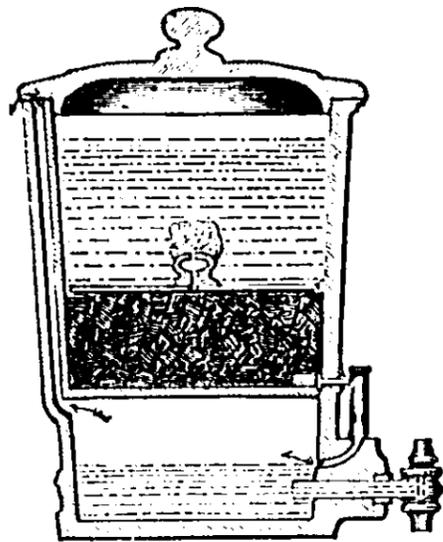
Manufactured by THE FULHAM POTTERY AND CHEAVIN FILTER CO., LIMITED, Fulham, S.W.

DIVISION D.—Section 8. (Continued.)

Bond's Regulating Filter.

Certificate of Merit, 1889.

To THE SANITARY AND ECONOMIC ASSOCIATION, LIMITED.



DESCRIPTION.—Consists of an Earthenware Jar, divided into two unequal sized Chambers by a slate diaphragm cemented in. The upper Chamber is partly filled with the filtering material "Carferal." A perforation in the earthenware is made in the lower portion of the upper chamber, and a corresponding perforation is also made in the lower chamber. An aluminium tube connects the two chambers, and is fixed externally, having one end placed through each perforation, the tube being fitted with a regulating tap, which governs the rate of flow and filtration. A glass in the tube permits the flow to be seen.

SIZES.—2 and 4 Gallons.

PRICES.—From 18s. 6d.

Manufactured by THE SANITARY AND ECONOMIC ASSOCIATION, LIMITED,  
Gloucester.

DIVISION D.—Section 8. (Continued.)

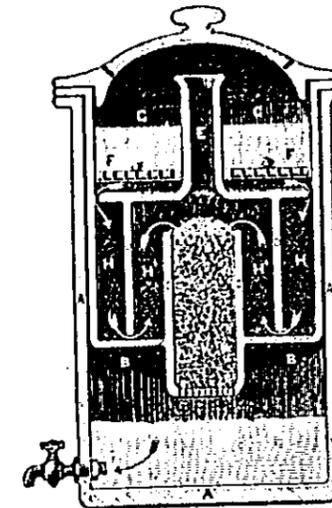
Circulating Arrangement for Filters.

Certificate of Merit, 1890.

Morris Circulating Principle of Water Filtration.

Medal, 1892.

To THE MORRIS TUBE AMMUNITION Co.



DESCRIPTION.—The Filter is arranged with Vertical Annular Divisions, so that the water has to pass through a large quantity of the filtering material in the directions indicated by the arrows in the drawing.

SIZES.—From 2 Quarts to 12 Gallons.

PRICES.—From 14s. to £4 10s.

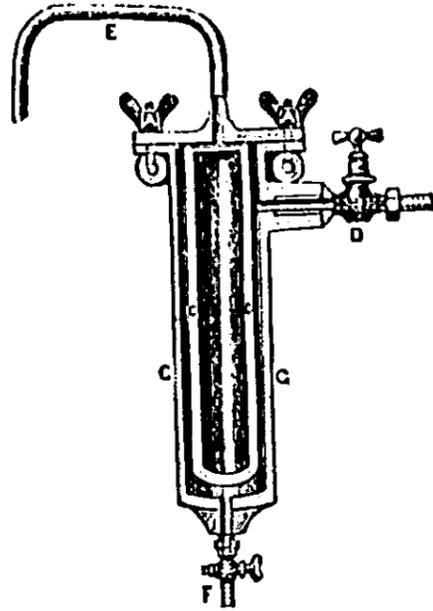
Manufactured by THE MORRIS TUBE AMMUNITION Co., 11, Haymarket,  
S.W.

DIVISION D.—Section 8. (Continued.)

Berkfeld Filter.

Certificate of Merit, 1892.

To BERKEFELD FILTER Co.



DESCRIPTION.—This Filter consists of Cylinders made from Fossil Earth obtained from Kieselguhr mines in Hanover. The Cylinders can be burned or boiled at any time to ensure a complete purification and sterilisation. House Filter, style II, to attach to supply pipe; specially designed for household purposes; made of cast iron, bronzed, and enamelled inside; taps and fittings nickel-plated. These Cylinders are made in two sizes, Candle A (8 in. by 1 in.) specially designed for laboratory use, and Candle B (10½ in. by 2 in. diam., 1½ in. bore), giving an actual filtering surface of half a square foot, and capable of filtering six hundred gallons of water a day under a pressure of forty-five pounds.

SIZES.—Height, 18 in. Diameter, 3 in.

PRICE.—£2 2s.

Manufactured by THE BERKEFELD FILTER Co., LIMITED, 121, Oxford Street, W.

DIVISION D.—Section 8. (Continued.)

Porcelain Screw Tap for Filters.

Certificate of Merit, 1892.

To C. E. GITENS, LIMITED.

DESCRIPTION.—This Tap screws directly into the earthenware of the Filter.

Manufactured by C. E. GITENS, LIMITED, 18, Paper Street, Redcross Street, E.C.

DIVISION D.—Section 9. Mineral Waters.

Mineral Waters.

Certificate of Merit, 1890.

To SHELVEY & Co.

PRICES.—Soda Water, 2s. 6d. per doz.; Lithia Water, 3s. per doz.; Seltzer Water, 3s. per doz.; Potass Water, 2s. 6d. per doz.

Manufactured by SHELVEY & Co., Brighton.

Potash, Seltzer, and Soda Waters.

Certificate of Merit, 1892.

To C. MUMBY & Co.

Manufactured by C. MUMBY & Co., The Hard, Portsmouth.

## DIVISION D.—Section 9. (Continued.)

Potash, Soda, Seltzer, and Lithia Waters.  
Certificate of Merit.

To A. F. PERKINS.

The above-named waters are available through town and country agents, in screw-stoppered, corked, and syphon bottles, at uniform prices: one quality is alone manufactured.

*Manufactured by A. F. PERKINS, Hyde Park Factory, Southsea.*

## DIVISION D.—Section 10. Soaps and other Detergents.

Carbolic Soaps.  
Medal, 1889.

To F. C. CALVERT &amp; Co.

PRICES.—Carbolic Toilet Soap, 6d. per Tablet; Carbolic "Anti-Mosquito" Soap, 6d. per Tablet; Carbolic Nursery Soap, 6d. per Tablet; Carbolic Shaving and Tooth Soap, 6d. and 1s. per Tablet or Stick; Carbolic "Prickly-Heat" Soap, 6d. and 1s. per Bar; Carbolic Domestic Soap, 6d. per 1lb. Bar; Carbolic Scouring Soap, 4d. per 1lb. Bar; Carbolic Soft Soap, 1s. and 2s. per 1-lb. and 2-lb. Jars.

*Manufactured by F. C. CALVERT & Co., Manchester.*

## Vinolia Soap.

Certificate of Merit, 1889; Medal, 1892.

To BLONDEAU ET CIE.

DESCRIPTION.—A white Toilet Soap, neutral, milled and superfatted; the basis made with edible fats, and only pure essential oils used as scents.

PRICES.—Premier, 4d; Floral, 6d.; Balsamic, 8d.; Toilet (Otto), 10d.; and Vestal, 2s. 6d. per Tablet. Shaving Soap: Sticks, 6d., 1s., 1s. 6d., and 2s. 6d. per Stick; Flat Cakes, 1s., 2s., and 3s.

*Manufactured by BLONDEAU ET CIE., Ryland Road, London, N.W.*

## DIVISION D.—Section 10. (Continued.)

## Sunlight Soap.

Certificates of Merit, 1889 and 1890.

To LEVER BROS.

*Made by LEVER BROS., Port Sunlight, Birkenhead.*

## Toilet Soaps.

Medal, 1889.

To EDWARD COOK &amp; Co.

DESCRIPTION.—Savon de Luxe (made by a new process), and Toilet Soaps of every description; also Soap-Cream for infants and Shaving-Cream, scented, suitable for the Nursery and Toilet.

*Manufactured by EDWARD COOK & Co., Soap Makers, London, E.*

## Primrose Soap.

Certificate of Merit, 1890.

To JOHN EVERSIED &amp; SON.

DESCRIPTION.—Made from "Tallow" and Alkali.

*Manufactured by J. EVERSIED & SON, Brighton.*

## DIVISION D.—Section 10. (Continued.)

## Lanoline, and Preparations containing it.

Certificate of Merit, 1890.

To BURROUGHS, WELLCOME, &amp; Co.

DESCRIPTION.—“Lanoline” is a preparation of the fat obtained from sheep’s wool, and being natural to the skin and hair, is absorbed by them at once.

PRICES.—“Lanoline,” 1-lb. and 7-lb. Tins, any quantity, 2s. 8d. per lb.; “Lanoline” (Anhydrous), 1-lb. Tins, 3s. 4d. per lb.; “Lanoline” Ointment Base, 2s. 2d. per lb.; “Lanoline” Pomade, 1s. 6d. each; “Lanoline” Cold Cream, in Bottles, 1s. 6d. each; “Lanoline” Toilet Soap, from 6d. per Cake; Toilet “Lanoline,” 6d. and 1s. each.

Manufactured by BURROUGHS, WELLCOME, & Co., Snow Hill Buildings,  
E.C.

## Hydroleine.

Certificate of Merit, 1890.

To H. K. EDGE.

DESCRIPTION.—A Cleansing and Water-softening preparation in the form of Soap Powder.

PRICES.—16s. 9d. per cwt.; and in 1d. and 3d. Packets.

Manufactured by THE NEW HYDROLEINE Co., LIMITED, Ashby-de-la-Zouch.

## DIVISION D.—Section 11. Antiseptics and Disinfectants.

## Carbolic Acid Preparations.

Medals, 1889 and 1890.

## Puro Carbolic Acid.

Medal, 1892.

To F. C. CALVERT &amp; Co.

DESCRIPTION.—No. 5 Concentrated Carbolic must be *well mixed* with water, in proportion of one ounce of Acid to two quarts of water; and forms a solution of sufficient strength for deodorising drains, stables, &c. and for cleansing rooms infested with insects.

Fifteen per cent. Carbolic Disinfecting Powder is an inert non-cohesive base, combined with fifteen per cent. of Genuine Carbolic in a free state.

PRICES.—No. 5 Carbolic Acid, in ribbed Bottles, from 1s. to 6s. 6d. Fifteen per cent. Carbolic Disinfecting Powder, from 6d. to 1s. 6d.

Manufactured by F. C. CALVERT & Co., Bradford, Manchester.

## Jeyes' Perfect Purifier.

Certificate of Merit, 1889.

## Jeyes' Fluid.

Certificate of Merit, 1892.

To JEYES' SANITARY COMPOUNDS Co.

DESCRIPTION.—It is a mixture of such portions of Distilled Coal Creosote as contain the maximum of neutral basis and other antiseptic principles, used for disinfecting purposes. It is not poisonous, and can be mixed with water in any proportion.

PRICES.—In Bottles, 6d. and 1s. each; 6s. per Gallon.

Manufactured by JEYES' SANITARY COMPOUNDS Co., LIMITED, 43, Cannon  
Street, London, E.C.

## DIVISION D.—Section 11. (Continued.)

## Improvements in Pharmaceutical Preparations.

Medals, 1889 and 1890.

To BURROUGHS, WELLCOME, &amp; Co.

PRICES.—“Tabloids” of Compressed Drugs—Beef and Iron Wine, 2s. 6d. per  $\frac{1}{2}$  lb. Bottle, 4s. 6d. per lb. Bottle. Beef and Iron Wine with Quinine, 3s. per  $\frac{1}{2}$  lb. Bottle, 5s. 6d. lb. Bottle. Kepler Extract of Malt, 2s. 6d. per  $\frac{1}{2}$  lb. Bottle, 4s. per lb. Bottle. Kepler Solution of Cod Liver Oil in Malt Extract, from 2s. 6d. per Bottle. Pure Trypsin (Fairchild), 2s. per  $\frac{1}{2}$  oz., 6s. per 1oz. Hamamelis Virginica (Witch Hazel) Hazeline, 1s. 6d. per  $\frac{1}{2}$  lb. Bottle, 4s. 6d. lb. Bottle. Hazeline Cream (prepared with “Lanoline”), 1s. 6d. per 2oz. Pots. “Vaporoles,” for Inhalation and Fumigation, 2s. 6d. per Box, retail.

Manufactured by BURROUGHS, WELLCOME, & Co., Snow Hill Buildings,  
E.C.

## St. Bede Disinfectant.

Certificate of Merit, 1889.

To ST. BEDE CHEMICAL Co.

DESCRIPTION.—Perchloride of Mercury Mixture: By the use of Eucalyptus and Thymol the ozone-producing properties and perfume of these articles are obtained, while the risk of accident is reduced to a minimum by the solution being coloured dark blue, and by its containing a strong purgative in the form of Glauber Salts.

SIZES.—Small Boxes containing four Cubes, and large ones containing eight Cubes, each Cube capable of making 1 Quart of Disinfectant Solution equal to 1 in 1000 of Perchloride of Mercury.

PRICES.—Small Boxes, 1s. each; and large size, 1s. 9d. each.

Manufactured by THE HEDWORTH BARIUM Co., LIMITED, 1, St. Nicholas  
Buildings, Newcastle-on-Tyne.

## DIVISION D.—Section 11. (Continued.)

## Lano-Creolin.

Certificate of Merit, 1889.

To BURROUGHS, WELLCOME &amp; Co.

DESCRIPTION.—An Ointment containing 5 per cent. of Creolin (a non-poisonous substitute for Iodoform, Corrosive Sublimate, and Carbolic Acid.)

SIZE.—2 oz. Collapsible Metal Tubes.

PRICE.—1s. each.

Manufactured by JEYES' SANITARY COMPOUNDS Co., LIMITED, 43, Cannon  
Street, London, E.C.

## Preparation of Eucalyptol.

Certificate of Merit, 1890.

To J. TUCKER &amp; COMPANY.

PRICES.—Eucalyptus Disinfectant Fluid (A) in 4 oz., 1s. 6d.; 8 oz., 2s. 6d.; 16 oz., 4s. 6d. Bottles; and in  $\frac{1}{2}$  Gallon and 1 Gallon Tin Bottles. Eucalyptus Disinfectant Fluid (B) in 1 Pint 1s. Glass Bottles, and in  $\frac{1}{2}$  Gallon and 1 Gallon Tin Bottles. Eucalyptus Disinfectant Powder in 2lb. 1s. Tin Canisters.

Manufactured by J. TUCKER & COMPANY, 51, Paddington Street, W.

DIVISION D.—Section 11. (Continued.)

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Preparations of Thiocamf.

Certificate of Merit, 1892.

To T. TYRER & Co.

DESCRIPTION.—Liquid Combination of Sulphur Dioxide, Camphor, and some other Aromatic Disinfectants.

SIZES.—In Bottles.

PRICES.—1s. and 2s.

*Manufactured by* THOS. TYRER & Co., Stirling Chemical Works, Stratford, E.

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Oxychlorogene.

Certificate of Merit, 1893.

To MACKAY, MACKAY & Co.

DESCRIPTION.—Prepared as a non-poisonous Deodorizer, Antiseptic, and Disinfectant.

PRICES.—5s. per gallon; 10 gallons, 5 per cent. dis.; 20 gallons, 10 per cent. dis.; 100 gallons, 20 per cent. dis.

*Manufactured by* MACKAY, MACKAY & Co. 2, Bouverie Street, Fleet Street, E.C.

DIVISION D.—Section 11. (Continued.)

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Kingzett's Mercurio Bactericido.

Certificate of Merit, 1892.

To SANITAS Co.

DESCRIPTION.—Five per cent. Mercuric Perchloride in a solution of Peroxide of Hydrogen of 5 vol. strength, and is preserved by Kingzett's patented process.

PRICES.—In patent stoppered pint bottles, 2s. each; in bulk, 10s. per gallon.

*Manufactured by* THE SANITAS CO. LIMITED, Three Colt Lane, Bethnal Green, E.

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DIVISION D.—Section 12. Disinfecting Apparatus.

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Disinfecting Sheet.

Certificate of Merit, 1892.

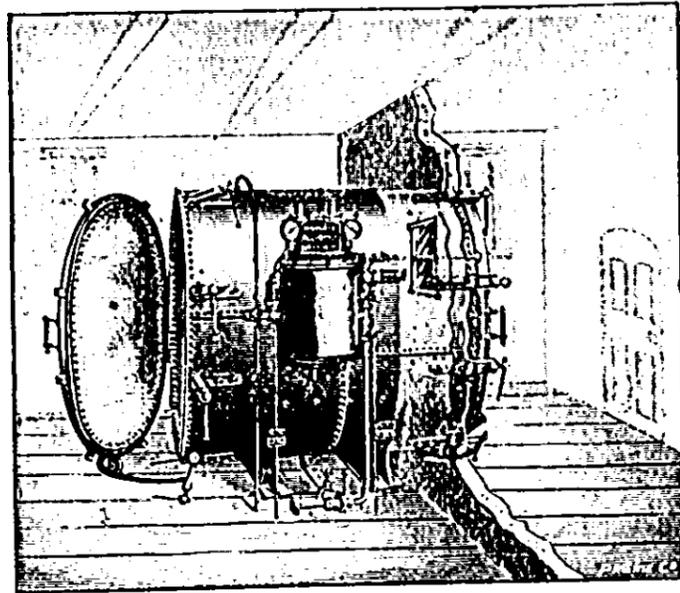
To BUGLER & Co.

*Manufactured by* BUGLER & Co., Putney.

DIVISION D.—Section 12. (Continued.)

Washington Lyon's Steam Disinfector.  
Medals, 1889, 1890, and 1892.

To MANLOVE, ALLIOTT & Co. (1889); and WASHINGTON LYON  
(1890 and 1892).



DESCRIPTION.—The Apparatus consists essentially of a Steam Jacketted Disinfecting Chamber. The process of disinfection is performed in the Chamber by means of High Pressure Steam. Steam is also admitted into the Jacket, and as the Steam in the Jacket is always maintained at a higher temperature than the Steam in the Chamber, the latter is kept dry. The Valves and Fittings are all self-acting, so that steam is automatically admitted into both the Chamber and the Jacket at the required pressure. The Apparatus is strongly constructed of Iron or Steel Boiler-Plates, with strong Steel Ends capable of resisting the working pressure. The Fastenings are simple, and the Apparatus can be opened and closed very quickly, and is perfectly self-contained, requiring no brickwork setting. The usual arrangement is to have a Door at each end, each Door opening into a different room, so that the infected articles are placed in the Machine in one room, and the disinfected articles taken out into another room, and the two need not come in contact with each other, or disinfected articles be re-infected while being removed through a room in which infected articles have been placed.

PRICES.—From £100 to £233.

Manufactured by MANLOVE, ALLIOTT & Co., LIMITED, Engineers,  
Nottingham.

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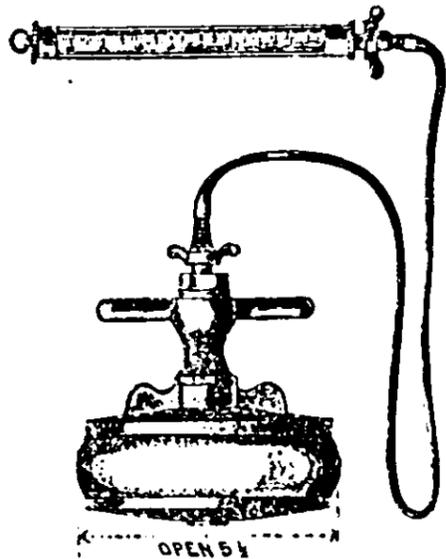


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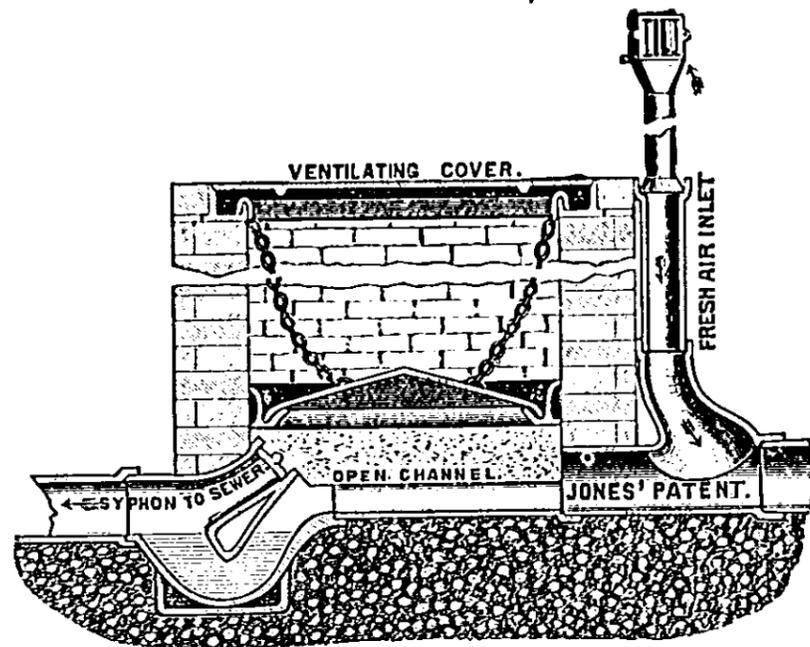
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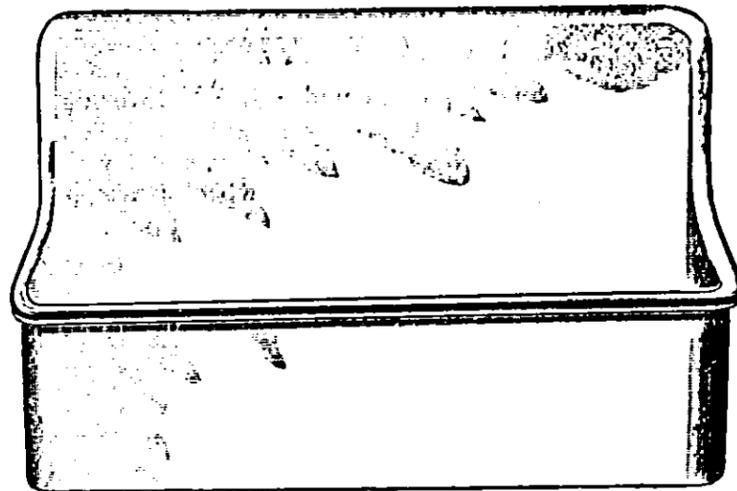
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Such an article has now been prepared by the St. Bede Chemical Company. It is in the form of blocks, each weighing an ounce, and each containing 17.5 grains, or 4 per cent. of Per-Chloride of Mercury. The block is composed mainly of anhydrous sodium sulphate (392.4 grains), with which is combined 24.5 grains of sulphuric acid; the acid sulphate thus formed appearing to act like a free acid, and to give to the Per-Chloride of Mercury its full disinfecting or germ-destroying power. The block contains also 2.2 grains of eucalyptus and thymol and .9 grains of indigo, so that when dissolved it has a strong, but pleasant, smell and a bright blue colour. I have had several of these blocks submitted to me for analysis, experiment, and report. I find the proportion of the Per-Chloride of Mercury in each to be as stated, viz., 4 per cent., or 17 grains in the ounce block. The block is rather slowly soluble in a quart of water. The resulting blue solution is described as a very strong disinfectant. In order to test this I have made experiments in conjunction with Dr. Klein, to ascertain the effect of the solution on certain well known organisms which have been proved to be pathogenic or constantly present in zymotic diseases. The tests were made with the bacilli and spores of anthrax, also with the organisms present in cases of cholera and enteric fever. On adding three drops of the culture fluids of these organisms to three cubic centimetres of the blue solution, consisting of one block dissolved in a quart of water, the organisms were destroyed after only five minutes' exposure. This is a very severe test and shows that the blue solution is a very strong disinfectant for infected linen, blankets, &c. We further tested its power of disinfecting the evacuations of enteric fever and cholera. Sterilised faecal matter in a fluid condition was inoculated with as much as one-seventh part of the culture fluid of the organisms present in enteric fever. To this was added an equal quantity of the blue solution, and five minutes was found to be sufficient to destroy the organisms. I have also tested its antiseptic powers by dissolving a block in putrescible fluids, and I found that one block dissolved in twenty-five quarts of a putrescible fluid, retarded decomposition five days; and that when dissolved in twelve and a half quarts, there was no sign of decomposition in the putrescible fluid after eight days. I further tested its power as a deodorant by noticing its effect upon heaps of fish refuse mixed with other decomposing animal and vegetable matters, and I found the solution was an excellent deodorant.

The preparation called the "St. Bede Disinfectant" has most powerful disinfecting and antiseptic properties, and is also a valuable deodorant. At the same time its colour and smell are quite sufficient safeguards against the possibility of its mistaken use. I have therefore no hesitation in strongly recommending it on public grounds.

(Signed) EDWARD SEATON, M.D., F.R.C.P.,  
Fellow of the Institute of Chemistry,  
Medical Officer of Health for Chelsea,  
Lecturer on Sanitary Science and Public Health, St. Thomas' Hospital, London

THE DETAILS OF THE EXPERIMENTS REFERRED TO IN DR. SEATON'S REPORT ARE AS FOLLOWS:—

The "St. Bede Disinfectant" was now in solution, one block being dissolved in one quart of water.

1.—The "killing power," i.e., the power to kill microbes, was tested on the following microbes: (A) bacillus anthracis without spores, (B) spores of bacillus anthracis, (C) the comma-bacillus found in Asiatic cholera, (D) the bacillus found in human typhoid fever.

Of normal cultivations in broth of these several microbes, about three drops were added to about three cubic centimetres of the disinfectant solution, well mixed, and after the lapse of five minutes, one to two drops of the mixture were added to tubes containing about 10 c.c. normal sterile beef broth; for control similar normal sterile beef broth was inoculated with a mere trace of the same culture fluids used for the above experiments. All broth tubes were placed in the incubator at 37° C., while all the control tubes showed already after twenty-four hours' copious typical growth of the several microbes, the others were perfectly clear and remained so afterwards. It follows from these experiments that five minutes' exposure of bacillus anthracis, of spores of bacillus anthracis, of the choleraic bacilli, and of the typhoid fever bacilli to the "St. Bede Disinfectant" solution is sufficient to kill these microbes.

2.—An important and extremely severe test of the killing power of the "St. Bede Disinfectant" solution was made in the following experiments:—

To normal human faecal matter in thick solution, previously sterilised and contained in test tubes, was added a certain quantity of normal culture fluid of the choleraic bacilli and of the typhoid fever bacilli respectively, about one-seventh of the culture fluid being added to six-sevenths of the faecal solution. After mixing well the disinfectant was added to each of the faecal mixtures in equal proportions, so that each of the test tubes contained  $\frac{1}{4}$  of the faecal matter plus culture fluid, and  $\frac{3}{4}$  of the disinfectant. After five minutes a number of test tubes containing sterile beef broth, as in the former series, were inoculated with a drop or two from these faecal mixture tubes, then placed in the incubator and kept at 37° C., but no growth appeared in them and the fluids remained sterile. At the same time that the above experiments were made, control broth tubes were inoculated with a trace of the faecal solution after the addition to them of the culture fluids, but before the addition of the disinfectant, these control tubes were also placed in the incubator and kept at 37° C., they all showed abundant normal growth after twenty-four hours of the choleraic bacilli and of the typhoid bacilli respectively.

(Signed) E. KLEIN, M.D., F.R.S.,  
Professor of Bacteriology at the College of State Medicine, London.

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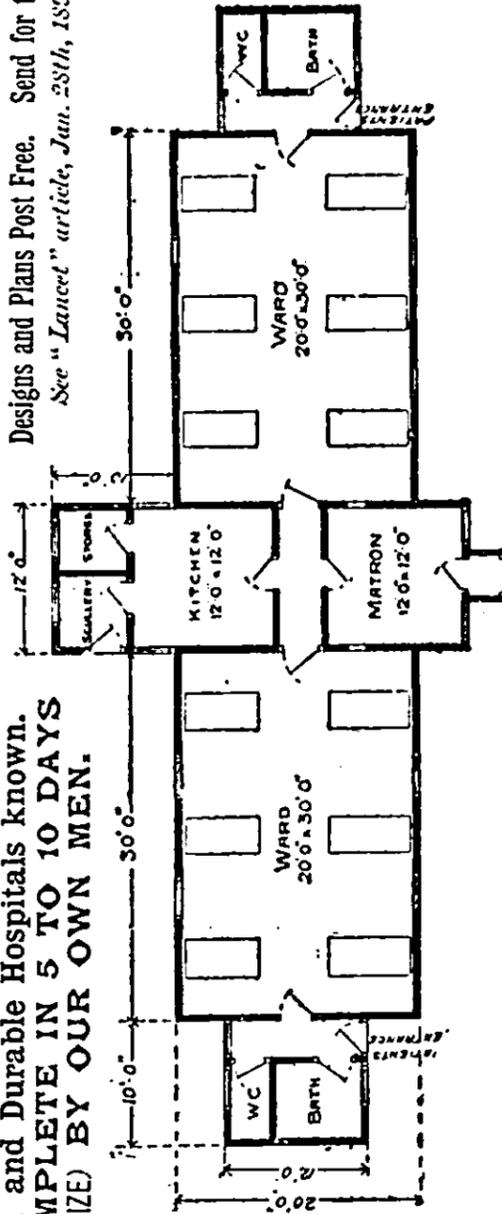
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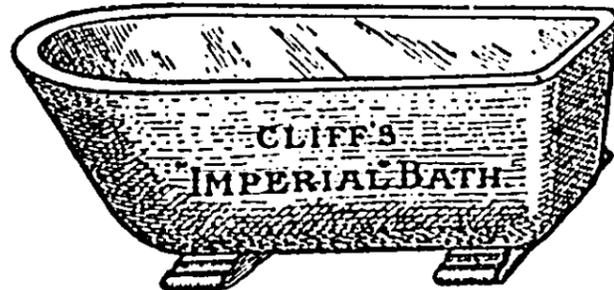
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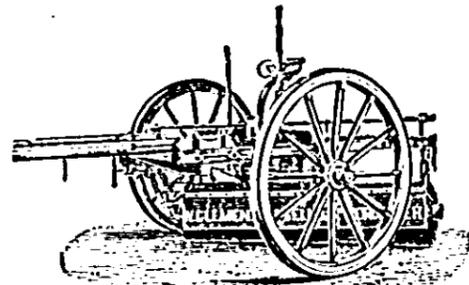


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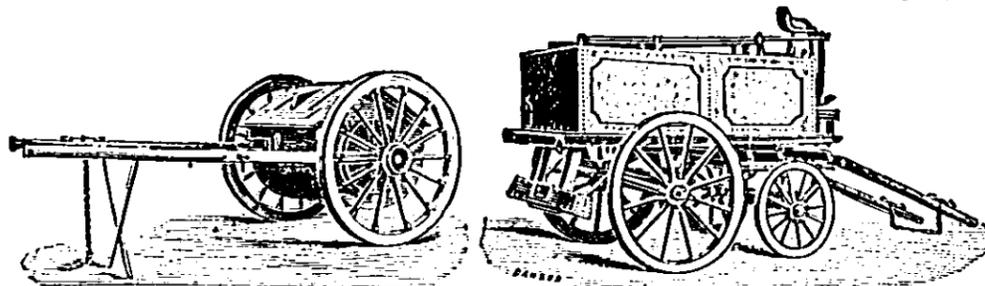
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