

W. B. Böhmer



THE
BRITISH SECTION
AT THE
VIENNA UNIVERSAL EXHIBITION, 1873.

[FINE ART GALLERIES, INDUSTRIAL, AGRICULTURAL
AND MACHINERY HALLS, AND PARK.]

OFFICIAL
CATALOGUE,

WITH PLANS, AND ILLUSTRATIONS.

SECOND EDITION.

PRINTED AND PUBLISHED FOR THE BRITISH ROYAL COMMISSION
By J. M. JOHNSON & SONS,
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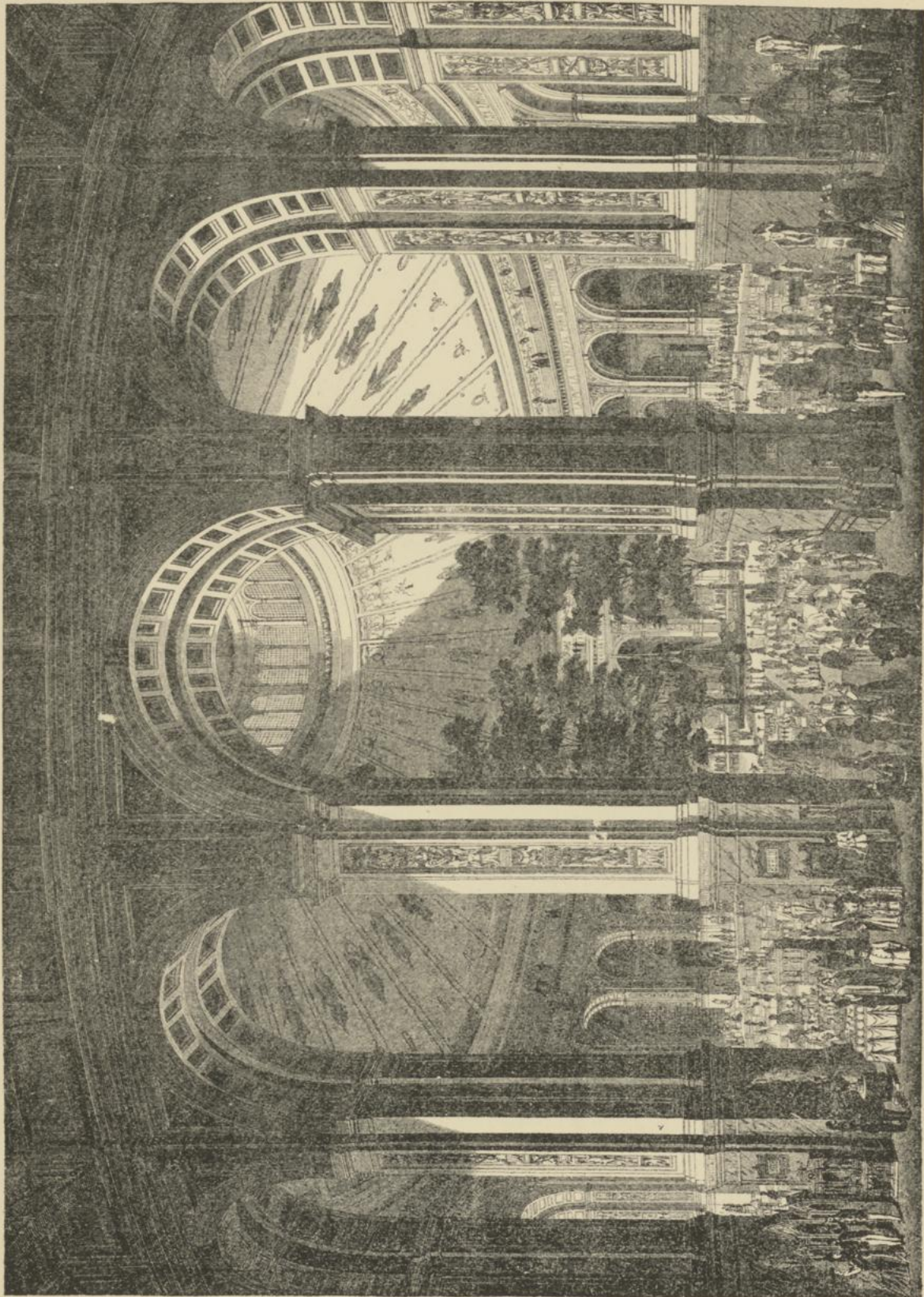
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REGULATIONS

AS TO

ADMISSION TO THE VIENNA UNIVERSAL EXHIBITION, 1873.

I. The Exhibition will be opened on the 1st May, and closed on the 31st October, 1873.

II. The hours of opening and closing the Exhibition each day will be published on the first of each month.

III. The entrances are as follows :—

1. Through the Wurstelprater in the western portal of the Industrial Hall.
2. Through the western portal at the end of the Machinery Hall, at the extremity of the Ausstellungsstrasse.
3. Through the southern portal in the principal avenue of the Prater.
4. Through the Rondeau Gate.
5. From the Exhibition Station.

IV. Holders of season and weekly tickets enter the Exhibition by the west and south entrances.

V. No change will be given at the entrances. For the convenience of the public an exchange office is established at each entrance.

VI. Season tickets are not transferable. The holder must sign his ticket and also a register, if required to do so by the proper officer. No compensation will be given for lost season tickets.

VII. Season ticket holders subject themselves by their signatures to the observance of all the provisions of these regulations.

VIII. The office for season tickets, 42, Praterstrasse, will be opened on the 21st April.

IX. A ticket is forfeited if used by anyone but the rightful owner, and such an offence is punishable by the Austrian law.

X. A weekly ticket costs five florins, available for seven consecutive days, seven coupons being attached to it. The holder of such a ticket may use one coupon a day, or may exhaust his seven coupons by allowing other persons to use them, provided always that one coupon is equivalent to one visit.

XI. Weekly tickets will be issued on and after the 2nd May. They cannot be used, however, until the 4th May.

XII. A person cannot leave the Exhibition and return thereto without repayment.

XIII. The Prices of admission are as follows:—On Sundays and holidays, fifty kreuzers = 1 shilling; on each of the other six week-days, one florin = 2 shillings. The days of the opening, and of the distribution of prizes are excepted, the entrance price on those days being 25 florins = £2 10s. On the 2nd and 3rd May the entrance price is five florins = 10 shillings; and on the 4th May, two florins = 4 shillings. A season ticket for the whole time of the Exhibition costs 100 florins = £10 for a gentleman, and 50 florins = £5 for a lady. Tickets for ladies are, however, delivered only to those gentlemen who are already supplied with a season ticket.

XIV. Exhibitors' tickets are delivered only according to the general regulations of 27th January, 1873, to an Exhibitor, or to his representative, duly acknowledged as such by the Director-General.

XV. Representatives of Exhibitors will only be acknowledged and provided with a ticket on a written application of the Exhibitor, to be addressed to the commission of his country. The Exhibitor will be responsible for any abuse of the ticket held by his representative.

XVI. Non-residents in Vienna, whether Exhibitors or their agents, can only receive admission tickets for the term of their stay in Vienna.

XVII. Each Exhibitor of a collective exhibition is entitled to a ticket of free admission. Firms of two or more members can only claim *one* such ticket.

XVIII. Assistants, actually employed in the Exhibition, will be supplied during the time of their employment, with monthly tickets, at the price of 6 florins = 12 shillings.

XIX. Exhibitors who contribute to temporary exhibitions will receive free tickets available only for the time that such temporary exhibition lasts.

XX. The tickets for the Jury and the Experts of the Jury will be available from the 1st of May to the end of August.

XXI. The President, the Vice-President, the Members of Foreign Commissions, as well as the Representatives of the Press, will receive honorary tickets of admission.

XXII. For the Administrative Officers of Foreign Commissions, the necessary number of tickets will be placed at the disposal of their Commissions. Assistants of foreign countries must, however, pay 6 florins for their monthly tickets, in accordance with Section XVIII.

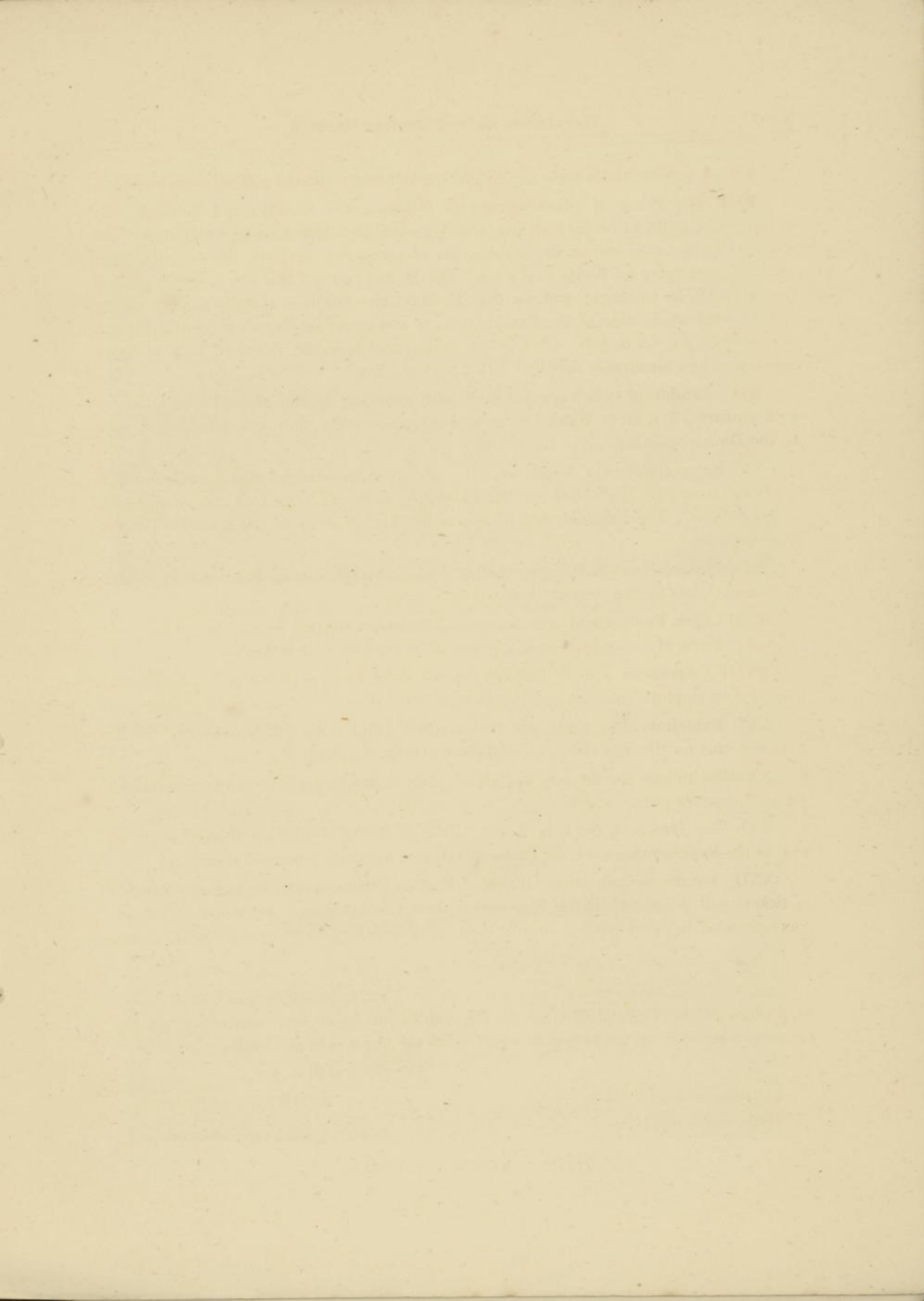
* * * * *

XXIV. All tickets (with the exception of the weekly tickets) will be issued on personal application at the Ticket Office of the General Direction, or to a messenger bearing the written authority of the person in whose name the ticket is to be issued.

The General Manager,

SCHWARZ-SENBORN.

42, Praterstrasse,
Vienna, April, 1873.





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* * * *A List of the Commissioners appointed by the Government of Victoria to promote the interests of the Exhibition in the Colony will be found at page 193.*

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LANE, MRS., 19, *Gloucester Terrace, Campden Hill, London.*
LEIGHTON, JOHN, ESQ., F.S.A., 12, *Ormond Terrace, Regent's Park, London.*
LEWIS, C. G., ESQ., 53, *Charlotte Street, Portland Place, London.*
NICHOLLS, G. P., ESQ., *Aldine Chambers, Paternoster Row, London.*
RIDGWAY, W., ESQ., 3, *Denmark Villas, Acton, Middlesex.*
ROSE, JAMES ANDERSON, ESQ., 11, *Salisbury Street, Strand, London.*
SADLER, J., ESQ., 6, *Southampton Street, Fitzroy Square, London.*
SAUNDERS, A. N., ESQ., 12, *Surrey Terrace, Lewisham High Road, New Cross, London.*
SAUNDERS, G., ESQ., 12, *Surrey Terrace, Lewisham High Road, New Cross, London.*
SIMMONS, W. H., ESQ., 247, *Hampstead Road, London.*
SLOCOMBE, C. P., ESQ., 31, *King Henry's Walk, Islington, London.*
SLOCOMBE, E., ESQ., 31, *King Henry's Walk, Islington, London.*
SLOCOMBE, F., ESQ., 31, *King Henry's Walk, Islington, London.*
STOCKS, LUMB, ESQ., R.A., 9, *Richmond Villa, Seven Sisters' Road, Holloway, London.*
SWAIN, JOSEPH, ESQ., 6, *Bouverie Street, Whitefriars, London.*
TOMKINS, C. A., ESQ., 8, *Dover Terrace, Cold Harbour Lane, Camberwell, London.*
VINTER, J. A., ESQ., 29, *Monmouth Road, Westbourne Grove, London.*
WARD, G. R., ESQ., 38, *Fitzroy Square, London.*
WILLMORE, A., ESQ., 4, *Compton Street, Regent Square, London.*
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THE BRITISH COMMISSION IS INDEBTED TO THE FOLLOWING FIRMS FOR THE EXHIBITS SPECIFIED BELOW, WHICH HAVE BEEN LENT FOR USE IN THE EXHIBITION.

- ADAMSON, D., & COMPANY, *Newton Moor Iron Works, Hyde, near Manchester*.—Two Steam Boilers of 40 horse-power each, one with steel shell plates, solid welded flue-rings and circulating pipes.
- APPLEBY, BROTHERS, *Emerson Street, Southwark, London*.—Portable Steam Crane for lifting 3 tons, one for lifting 5 tons, and one for lifting 7 tons. Each of these Cranes can perform the following operations by steam:—1, Lifting loads at different speeds, in proportion to weight; 2, Turning completely round in either direction without stopping or reversing the engines, so that the load may be lifted or lowered at the same time as it is being turned—the larger Cranes have two speeds of turning; 3, Raising and lowering the jib head, thus altering the radius of the crane; 4, Travelling by steam along a line of railway of any gauge.
- AVELING & PORTER, *Rochester, and 72, Cannon Street, London*.—Three-ton Steam Crane for roads; one Steam Traction Engine and three Waggons; one Steam Road Roller of 7½ tons.
- BARNARD, BISHOP & BARNARDS, *Norfolk Iron Works, Norwich*.—Two bays of Wrought Iron Palisade, designed by Alfred Barnard; Wash-stand of Wrought Iron, in the style of the Fourteenth Century; Candle Holder; Flower Stand of Wrought Iron; Wrought Iron Dressing Table, with Looking-Glass (the Ornamental parts of this are of Iron bent cold); Studies from Nature in Wrought Iron, a Bracket of Wrought Iron, all designed by T. Jeckyll, Esq., F.R.I.B.A.; Reading Stand of Wrought Iron, designed by Alfred Barnard; 22-inch Improved Geared Lawn Mower, fitted for a Donkey; and 30-inch Improved Geared Lawn Mower, fitted for a Pony.
- BLACKWOOD & SONS, *Edinburgh*.—Educational and other Books. (*See also page 138.*)
- BRADFORD, T., & COMPANY, *63, Fleet Street, London*.—Model of Laundry House, such as would be suitable for a Family Mansion, and fitted up with Bradford's Patent Apparatus for Washing, Boiling, Rinsing, Blueing, Wringing and Drying the clothes, the system adopted in conjunction with these appliances ensuring the absolute cleanliness and good colour of the fabric, with great economy of labour and materials employed in the washing process; and as proved by the reports of several large Public Establishments in London, effecting a saving of 50 per cent. in the wear and tear of the fabric. As will be seen upon inspection, one small fire supplies all the Hot Water, Dries the Clothes, and also heats the Smoothing and Polishing Irons for finishing the Linen. Many other similar Laundries have been built upon the same model in various parts of England, including one upon a large scale adjoining the Crystal Palace, London, which employs some 70 women and girls.
- BROTHERHOOD & HARDINGHAM, *53 and 56, Compton Street, Goswell Road, London*.—Patent Paragon Steam Pump, erected for supplying Messrs. Cater & Walker's Steam Boiler of 50 horse-power. This Pump, capable of delivering 1200 gallons per hour, consists of a steam cylinder 5½ inches diameter, placed on the top of a hollow column which contains the pump. The chief peculiarity of the Steam Engine is, that the working parts are enclosed and protected from injury, the crank working in a bonnet on the upper cover of the cylinder, and the connecting rod being coupled direct to the piston. The pressure keeping the crank disc against the inner face of the bearing prevents the escape of steam, thus dispensing with the use of stuffing boxes and reducing friction. The Pump is of the Bucket and Plunger Class, with all the working parts of best gun-metal, the plunger being worked by a steel rod attached to the piston and passing through the lower cylinder cover. On the up stroke of the plunger the full contents of the pump barrel is drawn in and half of it delivered, the remaining half being delivered on the down stroke of the ram, the pump is thus double acting and produces a constant stream. Paragon 3-Cylinder Engine (Brotherhood's Patent), of 35 Horse-power, supplied for driving a section of shafting; the special advantages of this Engine are, that it will start in any position, there being no "dead centre," and that a perfectly uniform motion of the crank shaft is obtained, without the use of a fly-wheel; no wire-drawing of steam takes place before acting on the pistons, and the connecting rods being always in tension there is no blow or back-lash on the crank pin at either end of the stroke, no matter how loose the fit may be, or at what speed the engine may be running; perfect self-adjustment for wear is maintained in the crank shaft and rotary slide valve, the pressure always insuring a steam-tight joint. All stuffing boxes are dispensed with, the working parts are entirely enclosed and protected from injury, and the lubrication is carried by the steam to every part; very high speeds may be attained and great power thereby developed in proportion to the small size of the Engine; that exhibited, has three cylinders, 9 inches diameter and 8 inches stroke, and running at 225 revolutions per minute with a mean steam pressure of 40 lbs. per square inch, develops a power of 35 horse-power.

- BROWN BROTHERS & COMPANY, *Rosebank Iron Works, Edinburgh*.—Patent Steam Pump for feeding boilers and raising water for other purposes.
- BURNEY & COMPANY, *Tank Factory, Millwall Docks, London*.—Wrought Iron Tank, for Water, as used in the British Navy; Galvanized Iron Tank, mostly used for holding spirit; Painted Wrought Iron Cistern, for factory, house, or farm purposes; Galvanized Iron Cistern; Cattle Drinking Trough, with Burney's safety edge.
- CATER & WALKER, *Grove Steam Boiler Works, Southwark, London*.—Steam Boiler of 50 horse-power.
- CLARK & COMPANY, *Rathbone Place, Oxford Street, London, & 8, Kärnthnerstrasse, Vienna*.—Patent Self-coiling Shutters in one Sheet of Steel; Self-coiling Wood Shutters, lined with Steel Bands; Louvre Venetian Shutters.
- COALBROOKDALE COMPANY, *Coalbrookdale, Shropshire*.—Grand Entrance in Mediæval style, consisting of a pair of Wrought Iron Gates, 2 Hand Gates, 4 Pillars, and short lengths of Railing to match, executed from designs by B. J. Talbert, Esq., with enrichments of cast iron, applied, and twisted bars produced by Tuddenham's patent process; and the two lengths of Wrought and Cast Railing on either side. (The above enclose the space between the two North entrances to the British section.) The Gates, Railings, Gas Pillars, &c., enclosing the house of the Royal British Commission, viz.:—The principal entrance of cast sheet fence and gates, terminated by 2 gas pillars; the 2 lengths improved cast palisade fence on either side; a length of cast sheet balcony railing on east side; the west entrance to the building, of patent twisted angle bar fence and gates; a length of the same fence of various designs, on west and north sides; a length of bracket railing, on east side within the grounds. Various coats of arms and trophies in and about the house of Royal British Commission. Garden Chairs in grounds and park:—Osmunda Regalis, Water Plant, Mediæval, Midsummer Night's Dream, Nasturtium, Horse Chestnut, and Medallion. Vases in grounds and park:—Milton, Night and Morning, Classic, and Jardinière. Flower Stands in grounds and park.
- COLLINGS & WALLIS, *King Edward's Road, Birmingham*.—Portable Smith's Forge for use in erecting Iron Work, &c.
- COOKE, SONS, & LAW, 12, *Friday Street, London*.—Mats in British Section of Industrial Palace, Agricultural Hall and Machinery Hall, and Matting for the Office of the Royal Commission and Fine Art Galleries.
- COOKE, T., & SONS, *Buckingham Works, York*.—Clocks for Machinery Hall, and Workmen's Houses.
- COOPER & HOLT, 48, 49, 50, *Bunhill Row, London*.—Two Mahogany Dwarf Bookcases, the mouldings and inlays of Ebony, the centre doors decorated with hand-painted Medallions; A 12-feet by 4 feet 6 inches Mahogany Telescope Dining Table, with Patent Screw; Five 4 feet 6 inches Mahogany Writing Tables, the top covered with Green Morocco and Gilt Edgings; Mahogany Settee, stuffed with best Horse Hair and Springs, and covered with hard-grain Green Morocco; Easy Chairs; Chairs; Patent Reversible Billiard Table, of polished Walnut with black Mouldings, and Adjusting Feet, with Slate Bed and India Rubber Cushions, covered with best Cloth, and Brass, Cues, Rest, Ivory Balls, Tips, Cue Stand, Brush Marking Board, Green Holland Cover, and a Book on Billiards; Polished Walnut Settee, stuffed with Horse Hair and Springs, and covered in Green Persian Cretonne; Two Polished Walnut Couches and Easy Chairs; Twelve Stuffed-back Chairs; Two Amboyne Occasional Tables; and Two Chess Top Tables; Polished Oak and Black Registered Writing Table and Desk Chair; Stuffed-back Chair, in Brown Leather; Inlaid Embossed Dwarf Bookcase, with Ormolu Mouldings; Polished Mahogany Pedestal Writing Table, with Leather Top; Bookcase, with Glass Doors; Polished Mahogany Cylinder Writing Table; and Stuffed-back Chairs, in Maroon Worsted Rep.
- COPESTAKE, MOORE, CRAMPTON & COMPANY, *Nottingham and Bow Churchyard, London*.—Thirty-six Pairs of Nottingham Lace Curtains, in the Prince's Room, Public Room, Ante Room, and Secretary's Room.
- DENNIS, W., & COMPANY, 19, *Holborn, London*.—Patent Pneumatic Fire Extinguishers, and Garden Irrigators.
- DERHAM, JOHN J., *Blackburn*.—Horizontal non-condensing Expansion Steam Engine of 20 nominal Horse Power, for driving Printing Machinery, Cylinder 16 inches in diameter, and 3 feet stroke, Steam Jacketed Cylinder, Adjustable Expansion Valves, &c. Horizontal non-condensing Expansion Steam Engine of 25 nominal Horse Power, for driving wood-working machinery, Cylinder 18 inches diameter, and 3 feet stroke; Steam Jacketed Cylinder, fitted with Patent Expansion "Cut-off Valves," and motion for maintaining a uniform speed of Engine under the extreme variations of load, dispensing with Throttle Valve, and ensuring the full boiler pressure of steam on piston at the beginning of stroke, thus working with the greatest economy of fuel. The Engines have balanced Cranks, large wearing surfaces, all parts easily accessible and adjustable, improved Metallic Piston, Steel Piston Rods, Crank Pins, &c., and are mounted upon strong Cast-iron Foundation Frames, planed for receiving the usual parts.

- EDGINGTON, JOHN, & COMPANY, 48, *Long Lane, Smithfield, London*.—Improved Marquee Hospital, 40 feet by 20, of Double White Canvas; Improved Campaigning Tents, 10 feet by 7, of White Canvas; Patent Lawn Tent, of Striped Material, requiring no Lines, Ropes, or Separate Poles.
- ELKINGTON & COMPANY, *Newhall Street, Birmingham*.—A Kettle Drum Silver Gilt Tea Service, consisting of Coffee and Tea Pot, Sugar Basin, Cream Ewer, Silver Waiters, Tea Spoons, Sugar Tongs, Tea Cups and Saucers. A Luncheon Tray with Decanters, Biscuit Box and Wine Glasses, Soda Water Stand, Decanter and Glasses. A Bronze Statuette of Her Majesty the Queen; Bronze Statuettes of Their Royal Highnesses the Prince and Princess of Wales. Four 7-light Candelabra; two 2-light branches; twelve gilt candlesticks.
- FEETHAM, M., & COMPANY, 9, *Clifford Street, Bond Street, London, W.*—Bright Ventilating Warm-air Grate for Fire-place in H.R.H. the Prince of Wales' Room; Bright Ventilating Warm-air Grate, combined with a Mantel-piece, for Fire-place in the Exhibitors' Club Room; two Feetham's Circular Camp Cooking Stoves for Kitchens in Workmen's Dwellings; Grill Stove for Cooking Chops and Steaks.
- FIELD, J. C. & J., *Upper Marsh, Lambeth, London*.—Candles and Soap.
- FOX, J. CAYEN, *Royal Horticultural Gardens, South Kensington, London*.—Rustic Summer House.
- GALLOWAY, W. & J., & SONS, *Knott Mill Iron Works, Manchester*.—Pair of Compound High and Low Pressure Engines to indicate 100 horse-power, designed specially to secure economy in fuel and simplicity of construction. The whole of the Engines self-contained, and the Governor, by being placed in direct communication with the Slide Valve for the admission of steam into the high-pressure Cylinder, does away with the necessity of a Throttle Valve, and thus gets the full pressure of steam effectually upon the Piston. The Exhaust Valves for both high and low-pressure Cylinders are worked off separate eccentrics, and the Air Pump is placed horizontally in rear of the Engine, and is of simple construction, so as to enable the Engine to be run at very high rates of speed if required. Two Patent Galloway Boilers, each of 50 horse-power, and each capable of giving off sufficient steam to drive about 200 indicated horse-power, suitable for an ordinary working pressure of 5 atmospheres. The especial feature of these Boilers consists of the "Galloway" Tubes, which are largely introduced into the flues, the Boiler being formed in the front similar to a plain two-flued Boiler, but immediately in rear of the fire-bars, these two furnaces uniting into an oval back flue, in which are placed 24 "Galloway" Tubes and 4 Side Pockets. These Tubes cause a rapid circulation of water, and prevent, in a great measure, the wear and tear which always takes place in a two-flued Boiler where there is so great a difference in temperature in the water above and below the flues. This form of Boiler is being rapidly introduced into England, about 4000 of them being now working. The "Galloway" Tubes are also largely applied to the ordinary Cornish and two-flued Boilers, as they have the advantage of strengthening the flues, improving the circulation, and increasing the power of the Boiler. These Boilers have been found, from careful experiment, to evaporate upwards of 10 lbs. of water per lb. of coal, the water having been let in at 60 degrees temperature.
- HEMBRY, B., & COMPANY, 91, *Newgate Street, London*.—Linoleum Floor Cloth and Cement.
- HEMMING, S. C., & COMPANY, 25, *Moorgate Street, London*.—Iron Buildings, namely, two Workmen's Houses; Royal Commission Pavilion, and Offices of British Commission; and a Club Room.
- HILL & SMITH, *Brierley Hill Iron Works, Brierley Hill, Staffordshire*.—Ornamental Iron Railings and Gates for one of the Open Courts, and Wire Fencing for Workmen's Houses.
- HOBBS, HART & COMPANY, 76, *Cheapside, London*.—Fire-proof Safes.
- HOWARD, J. & F., *Britannia Works, Bedford*.—Safety Steam Boiler of 30 horse-power.
- HUDSPITH, WILLIAM, *South Tyne Works, Haltwhistle, Northumberland*.—Tazzi, for Arboretums; Fern and Floral Arboretums; and Garden Border Tiles.
- JACKSON & GRAHAM, 29, 33, 34, 35, 37, and 38, *Oxford Street, London, W.*—Furniture in the Royal Commissioners' Pavilion.—Three Pile Carpets and Borders, designed by Mr. Owen Jones, architect. Three Pile Carpets and Borders, designed by Mr. C. Berger. Three fine Patent Axminster Carpets, designed by Mr. Owen Jones. Three fine Patent Axminster Carpets, designed by Mr. Owen Jones. Ebony Cabinet, inlaid with box, purple, orange wood, &c.; Wardrobe of Tuya Wood, inlaid with lemon, purple, and black; 5 feet 6 inches Brass Bedstead, designed by Mr. Owen Jones. Ebony Cabinet, inlaid with ivory, and engraved; Cabinet of Tuya Wood, inlaid with ivory, box and other woods, and engraved; Vitrine of Figured Ebony, inlaid; Oval Amboyana Table, inlaid and engraved; Figured Ebony Writing Table, inlaid; Amboyana Cabinet, inlaid and mounted with marble; Amboyana Cabinet, inlaid and engraved; Sideboard of Olive, walnut, and black, inlaid with red wood, designed by Mr. A. Losmier. Ebony and Ivory Secrétaire; Cabinet, with plaques of porcelain; Olive Wood Cabinet, inlaid; Olive Wood Table, inlaid, designed by Mr. E. Prignot. Hall Chairs of Walnut, inlaid with ebony; Satin Wood Table, inlaid; Octagon Table of Figured Ebony, inlaid; Table Cabinet of Figured Ebony, inlaid; Oblong Amboyana Table, inlaid; Octagon Amboyana Table, inlaid; Small Brass Bedstead; Suite of Bedroom Furniture, oak inlaid, designed by Mr. C. Berger.

- JACOBY, MORITZ, & COMPANY, *Stoney Street, Nottingham*.—Muslin Curtains for Decoration of British Section.
- JENNINGS, G., & COMPANY, *Lambeth, London*.—Sanitary Arrangements, Lavatories, &c., for Offices and Workmen's Houses.
- KENT, G., 199, 200, 201, *High Holborn, London*.—Rotary Knife Cleaners, Ventilated Refrigerators, Bread Slicing Machines, Egg Beaters, Cinder Sifting Machines, and various other domestic labour-saving appliances for the Workmen's Houses.
- KENT, G. B., & COMPANY, 11, *Great Marlborough Street, London*.—Brushes and Combs.
- LAWRENCE, W., & COMPANY, 14, *St. Mary Axe, London*.—Refrigerators, Water Purifiers, &c.
- LEWIS, JOHN, *India Buildings, Halifax*.—Paintings in H.R.H. the Prince of Wales' Room. Royal Wilton Carpet of special design, in the same room and offices adjoining; Brussels Carpet of Oriental design, in the Exhibitors' room and adjoining offices; Royal Wilton Carpet, conventional flowers, in Rotunda.
- LLOYD, EDWIN, *Horticultural Works, Grantham*.—Conservatory of a new mode of construction recently patented by the Exhibitor. A wood sill forms the base of the building, and may be either secured by bolts and nuts to wood sleepers, or on a concrete bed in which the bolts are imbedded. The rafters are about six feet apart, and are constructed of two fitches of wrought iron, with a fitch of wood between, well bolted together, the iron on each side being slightly raised above the wood to form a channel for the water, there being no coping used to cover the meeting styles of the sashes. The rafters and mullions are formed in one piece, the ends of the mullions being flanged at the ends, and bolted to the sills, and the ends of the rafters secured in a similar manner, with this difference, that both ends of the rafters meet together at the apex of the roof, and are bolted together through the ridge. The ends are constructed of extra strength, so as to require no framework, and the whole of the building is strongly braced together by light round wrought-iron rods passed through the rafters and end framing, and through lengths of wrought-iron tubing fitted between the rafters; the rods have threads at one end, with washers and nuts, by which the whole building is strained tightly together, and rendered rigid by the iron tubing. The sashes are all grooved, and the glass fixed without putty in a manner recently patented by the manufacturer. A moveable wood slip is fixed on the bottom rail of each sash, by which the lower end of each square of glass is secured from slipping, and protected from breakage. The gutters are of cast iron, and secured by bolts and nuts to the gutter plate and upright mullions, the down pipes from the gutter forming a column at each corner of the building; the ridge has ornamental cresting in cast-iron, and at each end is fixed an ornamental wrought-iron finial. The ends have a moulded coping and fascia, and a projecting corbel at the eaves, concealing the end of the gutters. The building is so portable and simple in construction, that two men of ordinary capacity can fix and glaze it ready for use in a week.
- MERRYWEATHER & SONS, 63, *Long Acre, London*.—Steam and Manual Fire Engines, including such as are used by the London Fire-brigade, &c.
- MILNER, T., & SON, *Phoenix Works, Liverpool*.—First Class Extra Strong Holdfast and Fire-resisting Safe, "Milner's Patent," with Drawers. Door $1\frac{1}{4}$ inches thick, formed of $2\frac{1}{2}$ inch wrought iron plates with $\frac{1}{4}$ inch hardened steel between them. Body of Safe constructed throughout of $\frac{1}{2}$ inch and $\frac{1}{4}$ inch wrought iron, with $\frac{1}{4}$ inch of hardened steel between them, making 1 inch in thickness, bolted together with hardened steel bolts, and lined throughout with double, treble, or quadruple chambers, 3, $4\frac{1}{2}$, or 6 inches in thickness.
- MINTON, HOLLINS & COMPANY, *Stoke-upon-Trent*.—Encaustic Paving Tiles for Verandah of Royal Commissioners' House.
- MINTONS, *Stoke-upon-Trent*.—Jardinières, Garden Seats, &c.
- PATENT IMPROVED FIRE EXTINGUISHER COMPANY, 19, *Holtorn, London*.—Smith and Langley's Patent Steam Sentinel.
- PATENT GAS COMPANY (LIMITED), 25, *Fenchurch Street, London*.—Complete Apparatus for Manufacturing Gas by Dr. Eveleigh's Patent Process, which consists in distilling coal at a comparatively low temperature, by which a considerable quantity of gas of a superior quality is produced, and also a certain proportion of rich oily matter. This oily matter is then distilled by a secondary process, and a further quantity of gas produced, which is afterwards mixed with that resulting from the first distillation. The practical advantages that are claimed for this over the ordinary process are the following:—1st. A larger quantity of gas is obtained per ton of coal; 2nd. A much higher illuminating power is obtained without the use of Cannel; 3rd. Greater purity of gas; 4th. An increased quantity of coke of better quality; 5th. No tar is left as a residue, but instead a proportionate quantity of pitch.

- PAVY'S PATENT FELTED FABRIC COMPANY (LIMITED), 14, *Hansell Street, Falcon Square London*.—Wall Decorations and Window Draperies in Exhibitors' Room, Corridor, and Jury Room, (large corner Pavilion).
- PERKINS, B., & SONS, 141, *Cannon Street, London*.—Self-heating Gas Bath and Fittings, japanned and marbled, sienna and rouge royal.
- PILLISCHER, M., 88, *New Bond Street, London*.—Two 4-light Silver-plated Table Lamps, two 2-light Silver-plated Table Lamps, two 1-light Silver-plated Reading and Microscope Lamps, and one Bronzed; Barometrograph and several Thermometers.
- POWIS, CHARLES, & COMPANY, *Cyclops Works, Millwall Pier, and 60, Gracechurch Street, London*.—3-ton Locomotive Steam Crane; and 20 horse-power Steam Engine.
- PRICE'S PATENT CANDLE COMPANY (LIMITED), *Belmont Works, Battersea, London*.—Palmitine and Paraffine Candles, Toilet Soaps, and Glycerine.
- READING IRON WORKS COMPANY (LIMITED), *Reading, Berkshire*.—Twenty-five Horse-Power Class A. High Pressure Condensing Steam Engine. The bed is in the form of a massive moulded girder rounded at one end and square at the other. The crank shaft is of forged scrap iron, with the fly wheel keyed to same, and turned on the face so as to act as a driving wheel if required. The bearings throughout are of gun metal, and adjustable, to compensate for wear. The feed pump is worked by an eccentric on the crank shaft, having double valves, trial and suction taps. The governors are connected with a throttle valve which effectually controls the admission and regularity of the steam supply. The cylinder is 17 inches in diameter, and is steam jacketted so as to keep the working steam in the cylinder quite dry, and consequently free from condensation. The piston is metallic, and the rod of steel, the stroke 30 inches. The Engine is also furnished with an extra expansion valve, which can be set and altered whilst the engine is running, so as to cut off the steam at any point varying from 1-10th to one-half of the volume necessary to fill the cylinder. The condenser forms an important element in the economical working of this Engine, as by its use the back pressure on the piston is relieved, and an increase of power is gained or a saving of fuel effected equal to 20 per cent.
- SHAND, MASON & COMPANY, 75, *Upper Ground Street, Blackfriars-road, London*.—Patent Equilibrium Steam Fire Engine, capable of delivering 1,000 gallons per minute, throwing to a height of 200 feet through a jet of 1½ inch diameter, fitted with Patent inclined Water Tube Boiler, by which Steam is raised to a pressure of 100lb. to the square inch, in 6½ to 7 minutes from the time of lighting the fire, the Boiler being supplied with cold water, fitted with Giffard Injector, Feed Pump, Suction Pipe and Hose complete, and constructed to be drawn by horses at great speed. Steam Fire Engine of the same description, capable of delivering 670 gallons per minute, and of throwing to a height of 185 feet through a jet 1½ inch diameter. These Engines are fitted with a set of Treble Pumps worked direct by a corresponding set of Treble Steam Cylinders, by use of which, perfect uniformity is obtained in the flow of water through Hose and Suction Pipes. The use of three Steam Cylinders, besides securing the above advantages, enables the fly wheel to be dispensed with. Great economy of steam, and consequently of boiler space and fuel, is thus obtained, and the weight of the whole machine is greatly reduced. A Patent Vertical London Brigade Steam Fire Engine, constructed on the same principle as the above, but fitted with one steam and one water cylinder only, will deliver 350 gallons per minute, and throw to a height of 160 feet, through a jet 1½ inch diameter. Patent Horizontal Steam Fire Engine, consisting of a Strong Gun Metal Pump placed horizontally, and worked direct by a Steam Cylinder fitted with patent maintaining motion, so that the fly wheel is not required; it has large waterways, and the valves are removed and replaced with the utmost facility, which renders it also well adapted for irrigation purposes. It is fitted with the same description of boilers as the other engine, and is carried on a strong wrought iron frame, and adapted for rapid travelling, and is drawn by a pair of horses. It will deliver 300 gallons per minute, and throw to a height of 150 feet, through a jet 1 inch diameter. Manual Fire Engine of the same construction as those in use by the London Metropolitan Fire Brigade, and also by Municipal and Volunteer Fire Brigades in Great Britain, and all parts of the world.
- SHARP, STEWART & COMPANY, *Atlas Works, Manchester*.—Improved Giffard Injector, 12 inch, or brass throughout, adapted for feeding a range of boilers and for working with any steam pressure; the Injector is capable of drawing the feed-water from a depth of six feet, with steam pressure under 50 lbs.; it will work with feed-water heated to 130° Fahrenheit.
- SILICATED CARBON FILTER COMPANY, *Church Row, Battersea, London*.—Two Silicated Carbon Main Service Filters; Two Silicated Carbon Dining-room Filters; Two Large Silicated Carbon Dining-room Filters; Two Large Domestic Filters.

- SIMON, MAY & COMPANY, *Nottingham*.—Lace Curtains, in a variety of widths, styles, and designs.
- SIMPSON, W. B., & SONS, 456, *West Strand, London*.—Art Tile Chimney Piece for Her Majesty's Commissioners' Office; the Chimney Piece is of American walnut wood and marble, with upper and lower shelves and clock bracket, projecting side shelves, supported by turned columns, a bevelled mirror above the lower shelf; the panels filled with art tiles, fable subjects, painted in deep blue relieved with yellow, the chimney linings of art tiles; Encaustic Tile Hearth, arranged for open grate and marble fender. Designed and executed by W. B. Simpson & Sons.
- SPICE, R. P., C.E., 21, *Parliament Street, Westminster, London*.—Gas making Apparatus and Fittings.
- SUTTON & SONS, *Reading, Berkshire (Queen's Seedsmen)*.—Grass Seeds, for sowing the lawns and the greater part of the Prater. Flower Seeds and Gladioli—A choice assortment, specially prepared by Messrs. Sutton for planting round the Prince of Wales's Pavilion. Vegetable Seeds—A large assortment, especially prepared for sowing in the gardens adjoining the Workmen's Houses, belonging to the Royal British Commission.
- TALL & COMPANY (LIMITED), 8, *Lawson Street, Great Dover Street, London*.—Labourers' Cottage in concrete.
- TANGYE, BROTHERS, & HOLMAN, 10, *Laurence Pountney Lane, London*.—Hydraulic Lifting Jacks, Pulley Blocks, &c.
- TEMPLETON, JAS., & COMPANY, *Glasgow and London*.—Curtains for Decorations of Industrial Buildings.
- TYLER, HAYWARD, & COMPANY, *Upper Whitecross Street, London*.—Independent Steam Pumping Engine, consisting of a steam engine 5 inches in diameter, and double acting pump, the plunger of which is 3 inches in diameter. The motion is communicated from one to the other by a piston-rod, to one end of which is attached the steam piston, and to the other the pump plunger. It works independently of all other machinery, only requiring to be connected with the steam pipe to set it in motion. The Steam Engine is remarkable for its simplicity. The piston is long and hollow, containing a cylindrical slide valve, by which the distribution of the steam to the two ends of the cylinder is effected. The piston and slide valve are the only moving parts of the Engine. The piston passes at each end of its stroke over steam and exhaust ports in the sides of the cylinder by which the steam enters, and causes the slide valve to move into the position in which the steam supply and the exhaust of the piston are reversed. Both the main piston and the slide valve are thoroughly cushioned with steam at the end of their travel, so that the machine works without the concussion of any parts, and the positions of the valve faces are so arranged that the longer the Engine works the more perfectly do they fit. The Engine has no dead points, for in whatever direction the piston may be moving, it is evident that it will continue to move until it has passed over the ports which reverse the slide valve. As soon as this is the case the motion of the piston is absolutely reversed, by which we mean that the slide valve cannot alter its position until the piston reaches the other end of the stroke. The pump is double-acting. The valves are so arranged that by undoing four bolts, and removing the air vessel, they are all exposed to view without interfering with any of the pipes. In the middle of the barrel of the pump is a gland entirely separating the two ends of the barrel, and provided with arrangements for being easily tightened up when the end cover of the pump is removed. Through this gland works the plunger of the pump, each end of the plunger working in its own half of the barrel as a single acting plunger; thus the pump consists of two single acting plunger pumps. The object of this arrangement in preference to the ordinary piston working in a bored barrel, is that the plunger is much less liable to be worn, through the presence of impurity in the water than the piston, and in case of its requiring to be tightened, the gland can be readily tightened up by only removing the end cover of the pump. No parts are liable to wear but the plunger and gland, which can be removed without interfering with the body of the pump. These pumps are applied to many purposes, but for boiler feeding they possess important advantages. The motion being dependent solely on the action of the steam on the piston, they have no dead point, so that the Engine runs very slowly. The speed regulates itself according to the work it has to do. The Engine if stopped either by want of steam, or by the exit of water being closed, starts of itself as soon as the obstacle is removed. The pump may therefore be made self-acting, dependent on a float arrangement, and will keep the water to a uniform height in the boilers.
- UNITE, JOHN, 291, *Edgware Road, London, W.*—Two best White Duck Marquees, 30 feet by 15 feet, waterproof, one used by Her Majesty's British Commissioners as a Workmen's Refreshment Tent; Square Garden Tent, 8 feet by 8 feet, no centre-pole, and easily erected, thoroughly waterproof; Alpine Tent, 6 feet square, weight 20lb., very portable and waterproof; Emigrant's Tent, 6 feet square, waterproof; Military Camp Tent, 36 feet circumference, waterproof and durable.

WARNER, JOHN, & SONS, 8, *Crescent, Cripplegate, London.*—Three Garden Engines, with Lawn Spreaders; Three Water Barrows, with Lawn Spreaders.

WINFIELD, R. W., & COMPANY, *Cambridge Street Works and Rolling Mills, Birmingham.*—A Handsome Massive Egyptian Sphinx Chandelier, with Five Lights and Four Brackets to match, with richly Ornamented Glasses complete, for the apartments specially prepared for His Royal Highness the Prince of Wales, K.G., President; Large Mediaeval Chandelier, with Nine Lights and Trefoil Burners projecting from each arm, for the Exhibitors' Meeting Room; Chandelier, with Five Lights, and Table Stand, for the Secretary's Office; Two massive Billiard Pendants, with Six Lights each, for the Smoking Room; Three Light Chandelier, for the Ante-Room; Two large Two Light Pendants, for the Clerks' Offices; Hexagon Lamp, with Swing Bottom, for convenience of lighting, for the Entrance Hall; Lamp for the Vestibule, and Brackets for the Passages, &c., and sundry other Chandeliers and Brackets for the Artizans' Dwelling Houses; Fourteen large Chandeliers in the Nave and Rotunda, consisting of five, six, seven, and eight Lights.

WOODBURY PERMANENT PRINTING PROCESS COMPANY, 9A, *Hereford Square, Brompton.*—Frames of Permanent Photographs for decorating the British Workmen's Houses.

MEMORANDUM FOR THE RECORD

DATE: [Illegible] SUBJECT: [Illegible]

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The reverse of all

**PRIZE MEDALS TO BE AWARDED AT THE VIENNA UNIVERSAL
EXHIBITION.**

ACCORDING to the General Programme of the Exhibition, there will be five different kinds of Medals awarded as Prizes by the International Jury, namely—

1. MEDAL FOR FINE ARTS;
2. MEDAL FOR GOOD TASTE;
3. MEDAL FOR PROGRESS;
4. MEDAL FOR CO-OPERATORS;
5. MEDAL FOR MERIT.

The Medals will all be of the same size, each seven centimeters in diameter. They will all be in bronze, and will bear on the obverse the portrait of His Majesty the Emperor, with the inscription, in German:

“FRANZ JOSEPH I., KAISER VON OESTERREICH, KOENIG VON BOEHMEN, ETC., APOST. KOENIG
VON UNGARN.”

(Francis Joseph I., Emperor of Austria, King of Bohemia, &c., Apostolic King of Hungary).

The reverse side of all five medals will be adorned with artistic emblems, the design of which has been left to the respective artists.

These emblems on the reverse side of the Medals will bear the following inscriptions:

1. On the Medal for Fine Arts—“Weltausstellung, 1873, Wien. Für Kunst.” (*Universal Exhibition, 1873, Vienna. For Fine Art.*)
2. On the Medal for Good Taste—“Weltausstellung, 1873, Wien. Für guten Geschmack.” (*Universal Exhibition, 1873, Vienna. For Good Taste.*)
3. On the Medal for Progress—“Weltausstellung, 1873, Wien. Dem Fortschritte.” (*Universal Exhibition, 1873, Vienna. For Progress.*)
4. On the Medal for Co-operators—“Weltausstellung, 1873, Wien. Dem Mitarbeiter.” (*Universal Exhibition, 1873, Vienna. To the Co-operator.*)
5. On the Medal for Merit—“Weltausstellung, 1873, Wien. Dem Verdienste.” (*Universal Exhibition 1873, Vienna. For Merit.*)

The Medal for *Fine Arts* is for distinguished art productions exhibited in Group XXV. It represents on the reverse side the Goddess of the capital of Vienna, with the mason's crown, by her side a genius, on whose lap rests a cushion with wreaths. Around the Goddess are representatives of sculpture, architecture, and painting, whom she crowns with laurel wreaths.

The Medal for *Good Taste* is for Exhibitors of Articles of Industry, the form and colour of which constitute the characteristic features for adjudication. It shows on the reverse side three Greek female figures (Muses and Graces), surrounded by objects of Art and Artistic Industry, which they are admiring.

The Medal for *Progress* is for Exhibitors in Groups I. to XXIII., and in Group XXVI., whose new inventions testify marked progress in the introduction of novel materials, contrivances, &c., as compared with similar productions shown at previous Exhibitions. It represents a female figure followed by Immortality passing the Goddess of the country, who sends a genius with a laurel wreath to meet her.

The Medal for *Co-operators* is for such persons who, as managers of manufactories, as foremen, designers of patterns, modellers, or as general assistants, are nominated on the part of the Exhibitors, on account of the leading part they have taken in the features of excellence of the productions, or in the increase of their sale. It shows on the reverse side a mechanic examining the parts of a machine, which his assistant has just finished, and for the completion of which he is crowned by the genius of labour with a laurel wreath.

The Medal of *Merit* will be awarded to Exhibitors who can lay claim to excellence and perfection in material and workmanship, large extent of production, the opening of new markets, the employment of improved tools and machinery, and cheapness of produce. It shows on its reverse side the reward for labour and domestic industry.

THE INTERNATIONAL JURIES.

I.—EXAMINATION OF THE OBJECTS EXHIBITED.

The objects exhibited in Groups I.--XXV., with the exception of those exhibited in Group XXIV. (Exposit' on des amateurs), will be examined by an International Jury.

II.—ADDITIONAL AND TEMPORARY EXHIBITIONS.

Special Juries, chosen from the members of the International Jury, will be formed for the following additional exhibitions:—

1. History of Inventions.
2. History of Industry.
3. Statistics of Prices.
4. Exhibition of the Use of Waste Materials and their products.
5. Representation of the Commerce and Trade of the World.
6. The Infants' Pavilion.
7. Female Work.

For the two last-named Exhibitions Ladies also may be invited to act on the Jury as Experts.

There will be no Jury appointed for the Cremona instruments exhibited.

Special Juries will be formed of members of the International Jury, in accordance with the several Programmes for the Temporary Exhibitions of Live-stock, Dairy Produce, Horticulture, Cultivation of the Vine and of Fruit.

III.—APPOINTMENT OF JURORS OF THE AUSTRO-HUNGARIAN MONARCHY.

The Jurors of the kingdoms and countries represented in the Austrian Reichsrath will be elected, one half by the Exhibitors of each of the different Groups, and the other half will be officially appointed. Should the number of Jurors to be elected for one Group be uneven, half of the total number, less one, will be elected.

The voting papers must be sent sealed to the General Manager, who will submit them to the Executive Committee of the 16th Section of the Imperial Exhibition Commission, who will act for the time as Election Committee.

The persons elected will be confirmed by His Imperial Highness the Archduke-President of the Imperial Exhibition Commission.

The selection of the officially appointed members of the Jury will be made by His Imperial Highness the Archduke-President of the Imperial Exhibition Commission.

The mode of appointing the Hungarian members of the Jury will be decided by the Royal Hungarian Government, and respectively by the Hungarian Exhibition Commission. The names of the Jurors must be sent to the General Manager by the 15th April next.

IV.—NOMINATION OF JURORS OF FOREIGN COUNTRIES.

The Foreign Commissions for the Exhibition are invited to appoint in a manner they may deem most appropriate the number of Jurors allowed to their respective Countries, and to send in the list of names to the General Manager not later than the 15th April next.

V.—NUMBER OF JURORS.

The number of Jurors for Austria and Hungary, as well as for the different Foreign Countries, will be in proportion to the number of Exhibitors of each State, as shown in the following table:—

There will be chosen in each group:

One Juror	for 10 to 100 Exhibitors.
Two Jurors	„ „ 101 to 200 „
Three „	„ „ 201 to 300 „
Four „	„ „ 301 to 400 „
&c.	&c.

Every Foreign Country represented in the Exhibition is invited to nominate Deputy Jurors to take the place of any absent Jurors. Should a Juror as well as his substitute be prevented from continuing their attendance at the meetings of the Jury, His Imperial Highness the President of the Imperial Commission will, if necessary, fill up the vacancy.

The list of names of all the members of the International Jury will be published by the end of April, 1873.

VI.—EXPERTS.

The Section Juries may increase their numbers by the addition of Jurors from other sections of any of the different groups, and also by inviting the co-operation of Experts who are not members of the Jury.

The Experts must be proposed at a full meeting forming a quorum of the respective Section Juries by a member or the Representative of the Director-General, and elected by an absolute majority.

The names of these Experts chosen will be published by the General Manager.

VII.—REPRESENTATION OF THE GENERAL MANAGER AT THE JURY MEETINGS.

The General Manager will appoint Delegates, who will be entitled to take part in the deliberations of the Jury with a consultative voice. These Delegates will have to provide everything necessary for the different trials and decisions of the Jury.

VIII.—REPRESENTATION OF THE FOREIGN COMMISSIONS AT THE JURY MEETINGS.

The Commissioners of Foreign States are entitled to take part in the deliberations of the Jury, either personally or by a Delegate appointed by themselves.

IX.—SECTIONAL JURIES.

The classification of the Groups published on the 16th September, 1871, will be taken as a basis for the proceedings of the Jury. In order to facilitate the examination of the objects exhibited, the Juries of the single Groups will be subdivided into Sections. [See pages 28, *et seq.*]

In judging the Working Machines (Group XIII., Section 2), as also the plans, models, and arrangements of Industrial Buildings and other objects to be examined from several points of view, competent persons who are judges of the performances and productions of the respective machines, manufactories, &c., are to be selected from the other Sections of the Jury with the right of voting.

X.—ORGANISATION AND SPHERE OF ACTION OF SECTIONAL JURIES.

Each Sectional Jury on being constituted chooses from among its members a Chairman, a Deputy Chairman, and one or more Reporters.

A Sectional Jury can be constituted as soon as there are at least three regular members to form a quorum.

In default of this number of members, the work of the section will be delegated by the Group Jury to one or several of the other Sections.

Each Sectional Jury has to examine the objects which are classed in their respective Sections, and to propose, after the completion of the examination, the prizes to be awarded.

These propositions must be submitted to the Group Jury for approval.

XI.—ORGANISATION AND SPHERE OF ACTION OF THE GROUP JURIES.

Every Group Jury is to consist of all the members of the Sections into which the respective Groups are subdivided.

The President and the two Vice-Presidents of each Group Jury will be nominated by his Imperial Highness the Archduke-President of the Imperial Commission.

The Reporters of the Group Juries are elected by the members from their own number.

The Group Jury decides on the distribution of the work to be done by the Sections which have not yet constituted themselves, on the propositions of the Sectional Juries, and proposes the award of the Diplomas of Honour.

XII.—THE PRESIDENTS' COUNCIL.

The President, the Vice-Presidents, and the Reporters of the Group Juries form the Council of Presidents.

The President and two Vice-Presidents of this Council will be appointed by His Imperial Highness the Archduke-President of the Imperial Austrian Commission.

The Council of Presidents will decide on questions of principle which may be proposed by the Group Juries; they will decide on the propositions for awarding the Diploma of Honour, and will receive the final reports of the Group Juries which are to be submitted to His Imperial Highness the Archduke President of the Imperial Austrian Commission.

XIII.—FUNCTIONS OF THE JURY.

The President or, in his absence, the Vice-President, will convene the meetings, preside over the debates, control the correct entry by the Secretary of the propositions and resolutions as well as the reasons for the same in the "Minute Book."

The minutes of the meetings, after having been verified, will be submitted to the General Manager.

XIV.—DECISIONS OF THE JURY.

In order to pass a resolution a quorum of at least half the number of all members, besides the Chairman, President, or his Deputy, must be present at each Sectional or Group Jury, as also at the Presidents' Council.

The decisions of the jury must be passed by an absolute majority of votes; in case of an equal number of votes the President or Chairman has a casting vote.

XV.—EXCLUSION OF THE JURORS AND EXPERTS FROM THE COMPETITION FOR PRIZES.

Exhibitors acting as members of the Jury can in no case compete for awards. The same restriction applies to Experts, but only for the Section for which they are acting. This exclusion may be marked on the goods exhibited.

The same rule applies also to the partners and managers of firms being Exhibitors.

XVI.—VOLUNTARY RENUNCIATION ON THE PART OF EXHIBITORS TO COMPETE FOR PRIZES.

Every Exhibitor is at liberty to withdraw his exhibits from the examination of the Jury. This wish of the Exhibitor must, however, be expressly stated on the Question Paper with the words "Hors-Concours." Should this declaration not be made it will be presumed that he wishes his exhibits to be adjudicated upon.

With reference to objects which may be classed in different Groups or Sections, Exhibitors are required to state on the Question Form in which Group or Section they wish to have them adjudicated upon.

XVII.—AWARDS FOR COLLECTIVE EXHIBITIONS.

As a rule, Collective Exhibitions will be judged in their entirety as one, and are therefore subject to the same Regulations.

Should, however, any of the several Exhibitors of such an exhibition desire to have his exhibits judged separately, he must supply the Jury with the data required for that purpose.

XVIII.—INSTRUCTIONS PREPARATORY TO THE PROCEEDINGS OF THE JURY.

Every Exhibitor will receive from his Commission a Form of Questions, which will give him an opportunity of supplying the Jury with every information in respect to his exhibits.

It is in the Exhibitor's own interest that this form should be filled up as completely and as fully as possible, and, above all, that it should be sent to the proper authorities in due time, lest he run the risk that his exhibits be not properly judged on account of insufficient information. The various Commissions are requested to send in the Question Forms, duly filled up, to the General Manager at the very latest by the 1st May.

XIX.—TIME ALLOWED FOR THE LABOURS OF THE JURY.

The International Jury will assemble on the 16th June, 1873, and their proceedings must be finished by the end of July.

XX.—PUBLICATION OF THE JURY AWARDS.

The distinctions awarded to Exhibitors will be made known in due form at a special public ceremonial on the 18th August, 1873, and, after that date, they will be attached to the respective objects.

XXI.—SPECIFICATION OF AWARDS.

The prizes awarded by the Jury will consist of:—

1. A Diploma of Honour of the Vienna Universal Exhibition of 1873.
2. A Medal for Progress.
3. A Medal for Merit.
4. A Medal for Fine Arts.
5. A Medal for Good Taste.
6. A Medal for Co-operators.
7. A Diploma of Merit, equivalent to "Honourable Mention."

An Exhibitor is entitled to only one prize for his productions in any one branch of industry.

XXII.—RULES RESPECTING THE AWARD OF PRIZES.

In making the awards the following principles will be observed :—

1. The *Diploma of Honour of the Universal Exhibition of 1873 in Vienna* is to be considered as a particular distinction for eminent merits in the domain of science, its application to the education of the people, and its conducement to the advancement of the intellectual, moral, and material welfare of man. This distinction can only be awarded by the Presidents' Council on the proposition of one of the Group Juries.
2. The *Medal for Progress* is for Exhibitors in Groups I. to XXIII., and in Group XXVI., who, compared with the productions exhibited at previous Exhibitions, can prove noticeable progress in new inventions, in the introduction of new materials and contrivances, &c.
3. The *Medal for Merit* will be awarded to Exhibitors who can lay claim to excellence and perfection in material and workmanship, large extent of production, the opening of new markets, the employment of improved tools and machinery, and cheapness of produce.
4. The *Medal for Fine Arts* is for distinguished art productions exhibited in Group XXV.
5. The *Medal for Good Taste* is for Exhibitors of articles of industry the form and colour of which constitute the characteristic features for adjudication.
6. The *Medal for Co-operators* is for such persons who, as managers of manufactories, foremen, designers of patterns, modellers, or as general assistants, are nominated on the part of the Exhibitors on account of the leading part they have taken in the features of excellence of the productions, or in the increase of their sale.
7. The *Diploma of Merit, or Honourable Mention*, will be awarded to Exhibitors who have given proof of meritorious accomplishments, but not in such a degree as to justify their title to either the Medal for Progress or for Merit.

XXIII.—CENTRAL OFFICE OF THE JURY.

For the purpose of transacting the business, &c., of the Jury as regards their constitution, deliberations, and proceedings, the Delegates of the Director-General (Section VII.) will form a Bureau, which will collect and submit to them all documents intended for the members of the Jury, send out the invitations for the Jury meetings, inform the Foreign Commissioners and the Exhibitors of the arranged examination of their Exhibition objects by the Jury, keep the minutes of the meetings, and carry on the whole correspondence, giving all manner of information, and procuring all assistance and appliances necessary for making the awards

The President of the Imperial Commission.
(Signed) ARCHDUKE RAINER.

Director-General,
(Signed) BARON SCHWARZ-SENBORN.

42, PRATERSTRASSE,
15th February, 1873.

KEY TO GROUND PLAN.

LIST OF BUILDINGS IN THE EXHIBITION GROUNDS.

BEHIND THE MACHINERY HALL.

1. Bakery of Carl Heilfinger.
2. Machine Building.
- 2a. United States School House.
3. Waiting Rooms.
4. American Boiler House.
5. English Workmen's Dwellings.
- 5a. English Domestic Laundry and Fittings.
6. English Boiler House.
7. English Gas Factory.
8. Pavilion of Belgian Commission.
9. French Boiler House.
10. Machinery Workshops.
11. Swiss Boiler House.
12. Cloak Rooms.
13. Belgian Boiler House.
14. German Boiler House.
15. Pavilion of the Trade of the World.
16. German Empire Pavilion (Pavilion for Brickmaking and Ice Factory).
17. Waiting Rooms.
18. Austrian Boiler House.
19. Northern Railway Pavilion.
20. North Western Railway Pavilion.
21. Machinery Building.
22. Pavilions of Mr. Ringhoffer of Prague.

ON THE OTHER SIDE OF THE HEUSTADL WATERS.

1. Entrance.
2. Kriau (*Sacher's* Restaurant).
3. Collective Exhibition of the Styrian proprietors of forests.
4. Shareholder's Company for Forest Industry.
- 4a. Shareholder's Company "Agricola" (Farming).
5. Russian Peasant's Hut.
6. Machinery Building.
7. Swedish Peasant's Hut.
8. Pavilion of Hungarian Forest produce.
9. Cracow Peasant's Hut.
10. *Von Ganahl's* Farm-house in Feldkirchen.
11. Hungarian Peasants' Huts:—
 - a. Hungarian.
 - b. Saxon.
 - c. Geydelerhouse.
 - d. Roumanian.
 - e. Geydelerhouse.
 - f. Soldier's Houses of the Military Frontier.
12. Baron Pittel's Stable.
13. Cloak Room.
14. Borkowsky, Labourer's Cottage.
15. *Chevalier de Mlodecky's* Farm House.
16. *Walne*, and Alpine Hut.
17. Farm of the Agricultural Society of Vienna.
18. Horse and Cattle Show.
19. Vienna Photographers' Association.
20. Military Building Yard.
21. Military Barracks.

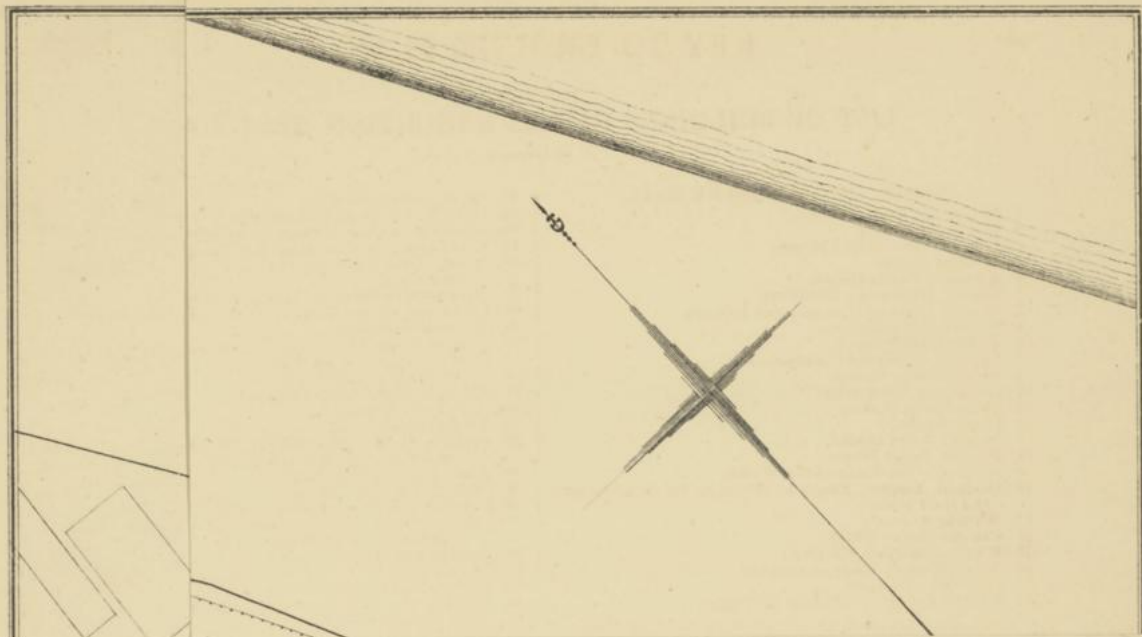
BETWEEN THE MACHINERY HALL AND THE INDUSTRIAL HALL.

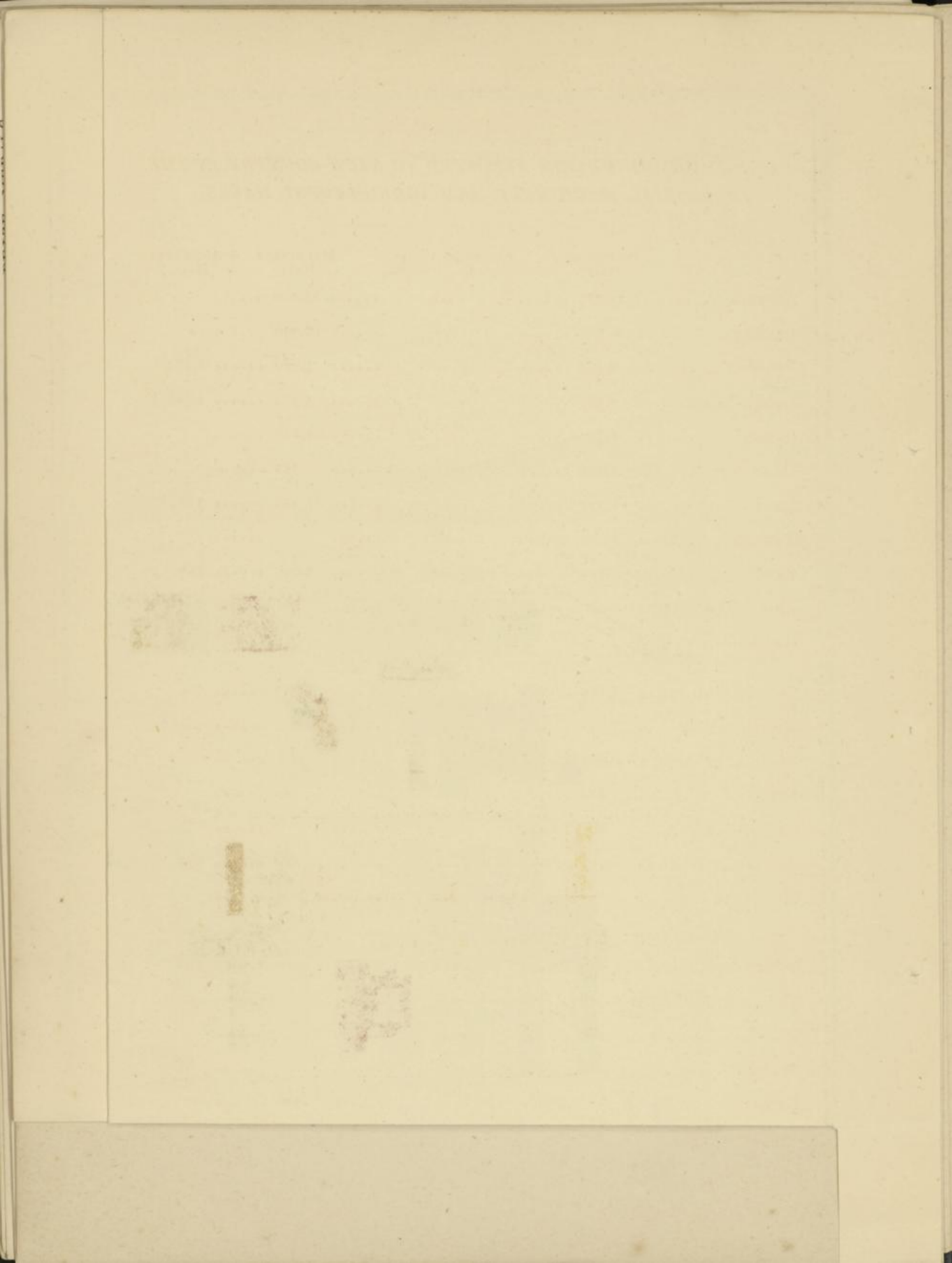
1. Western Entrance.
2. American Restaurant.
3. Court Bakery of *Roman Uhl*.
4. *Cook's* Tourists' Pavilion.
5. Seed Pavilion, *see Trophy*.
6. Watertower.
7. English Commissioners' House.
8. Western Agricultural Hall (including Great Britain).
9. Cloak Room.
10. Swedish Restaurant (*Café Blanche*).
11. Norwegian Fishery.
12. Lapland Hut (*Laplatta*).
13. Swedish Fishery.
14. Norwegian Garden Pavilion (*Jacoben & Haneburg*).
15. German School House.
16. German Empire (Mining Industry).
17. *Dreher's* Beer-Tasting Hall.
18. *The Duke of Saxe-Coburg-Gotha's* Pavilion.
19. Prince *J. Adolphus Schwarzenberg's* Pavilion.
20. Pavilion *Mauthner* (Son).
21. *Jacob Mung & Company* (Pavilion).
22. *Waagner's* Stable.

23. *Curti*, Cement Obelisk.
- 23a. *Chailly* House of Artificial Stone.
24. Industrial Society of Prague, formerly *Dauck*.
25. Vordernberg-Koflach Mining Industry Company.
26. Board of the Innerberg Shareholders' Company (Mining Industry).
27. Shareholder's Brewery, *Silberech* (Bar).
28. Carinthian Mining Industry Society (*Huttenberger*).
29. Mr. Bosch's Pavilion.
30. *Vincent Wenzel's* Pavilion for Fireproof Roofing.
31. Pavilion, *Steffen's* (Machine).
32. Witkowitz Railway Bridge.
33. Baron de *Rothschild's* Pavilion.
- 33a. *Lederer & Nesenyl*.
34. *English Restaurant*.
35. Pavilion of the Shareholders' Company for the construction of Bridges and Roads.
36. *John Schubert's* Pavilion.
37. *Steinor*, Tyrolese Cottage.
38. Imperial and Royal State Railway.
39. Pavilion for the Representation of the History of Inventions in Women's Work.
40. Agricultural Ministry.
41. Cloak Room.
42. Alsatian Farm-house.
43. Danubian Steam Navigation Company.
44. Wine-Testing Hall.
45. Eastern Agricultural Hall.
46. Cloak Room.

BEFORE THE INDUSTRIAL PALACE.

1. American Restaurant of *Mr. Kune*.
2. Private Brewery of Pilsen.
3. Shareholders' Brewery of Pilsen.
4. Hungarian Shepherd's Cottage.
5. American Kiosk.
6. New Free Press.
7. Liesing Beer Saloon.
8. Rosshard's Swiss Bar.
9. Swiss Music Hall.
10. Cloak Room.
11. Boiler House.
12. French Restaurant.
13. Sodawater Pavilion.
14. Prince of Monaco's Pavilion.
15. Swedish Hunting Box.
16. Swedish Army Exhibition.
17. Swedish School House.
18. Pavilion of the Domain Finspong.
19. Mining Products.
20. Monument of Wasserburger.
21. Martin Kien, Portable Dwelling House.
22. Kiosk of the Southern Railway.
23. Chevalier de Stark's Pavilion.
24. Pavilion of the Savings Bank.
25. Infants' Pavilion.
26. Pavilion for Metal Industry.
27. Austrian Medicinal Springs.
28. Trade in Specialities.
29. Russian Pavilion of *Mr. Sidorot*.
30. Russian Pavilion of *M. Reimers*.
31. Russian Dwelling-house.
32. Russian Restaurant of *Mr. Engel*.
33. Charles Hochstetter—Products of the Perlmoser Cement Manufactory, Limited.
34. Waiting Rooms.
35. French Restaurant of *M. Goyard*.
36. Italian Restaurant.
37. Italian Wine Saloon.
38. Styrian Wine Saloon.
39. American Tent (Bech and Dommat).
40. Music Hall.
41. Austrian Lloyd's.
42. Egyptian Buildings.
43. Waagner Glasshouse.
44. Oriental Clubhouse of *Dr. Hardt*.
45. Lighthouse of the Maritime Board.
46. Turkish Buildings.
47. Persian Villa.
48. Restaurant of *Mr. Arnstein* of Trieste.





*SPACE IN SQUARE METRES ALLOTTED TO EACH COUNTRY IN THE
INDUSTRIAL, MACHINERY, AND AGRICULTURAL HALLS.*

	INDUSTRIAL HALL.	ADJOINING Covered.	COURTS. Open.	MACHINERY HALL.	AGRICULTURAL HALL.
AUSTRIA	14,767 .....	.....	.....	11,000 .....	.....
GERMANY	6,714 .....	.....	.....	10,000 .....	.....
FRANCE	6,308 .....	.....	.....	5,580	2,500
ENGLAND	6,369 .....	.....	.....	5,305	4,500
RUSSIA	3,319 .....	.....	.....	1,250 .....	.....
HUNGARY	2,972 .....	.....	.....	350 .....	.....
ITALY	2,972 .....	.....	.....	950	950
TURKEY	2,938 .....	.....	.....	.....	.....
BELGIUM	2,613 .....	.....	.....	3,000	356
CHINA, SIAM, & JAPAN	1,350 .....	.....	.....	.....	.....
UNITED STATES OF AMERICA	1,358 .....	.....	.....	1,250	115
SWITZERLAND	1,125 .....	.....	.....	3,049	475
SOUTH AMERICA ..	1,090 .....	.....	.....	.....	.....
EGYPT & MID-AFRICA	1,003 .....	.....	.....	.....	.....
HOLLAND.....	880 .....	.....	.....	240 .....	.....
GREECE	867 .....	.....	.....	.....	.....
SWEDEN & NORWAY	865 .....	.....	.....	280	260
ROUMANIA	657 .....	.....	.....	.....	.....
SPAIN	605 .....	.....	.....	.....	640
PORTUGAL	519 .....	.....	.....	.....	350
PERSIA & MID-ASIA	346 .....	.....	.....	.....	.....
TUNIS	259 .....	.....	.....	.....	.....
MOROCCO.....	86 .....	.....	.....	.....	.....
DENMARK .....	.....	.....	.....	300	170

AUSTRIAN CLASSIFICATION.

GROUP I.

MINING, QUARRYING, AND METALLURGY.

Preliminary Arrangement.

Mineral fuels (coals, shales, and mineral oils).
 Mineral ores and metals.
 Other minerals (as salt, sulphur, graphite, &c.); not including building materials; *vide* group 18.
 Natural alloys.
 Drawings and models of objects relating to mining, metallurgy, and mineral industry, mining engineering, surveying, and map making.
 Geological works, and geological maps, &c.
 Tools and inventions for mining and metallurgy for underground and surface work.
 Statistics of production.

Sections for the Juries.

1st Section. Mining.
 2nd Section. Iron Works.
 3rd Section. Other kinds of Metallurgy.

GROUP II.

AGRICULTURE, HORTICULTURE, AND FORESTRY.

Preliminary Arrangement.

Plants for food and physic (excluding fresh fruits and vegetables, which are to be the subjects of temporary exhibitions).
 Tobacco and other narcotic plants.
 Vegetable fibre (as cotton, flax, hemp, jute, china grass, &c.); and other plants of commerce in their raw state.
 Cocoons of silk worms.
 Animal products in a raw state (skins, hides, feathers, bristles, &c.).
 Wool.
 Products of forestry (timber, wood or cabinet work, tanning substances, resin in a raw state, dyeing woods, barks, charcoal tinder).
 Peat and its products.
 Manures.
 Drawings and models of objects used in agriculture, horticulture, and forestry; farm maps.
 Works of the experimental stations, woodland and forest doom books, statics of forests, &c.
 Processes and inventions for producing, transporting, and storing the above-mentioned products.
 Plans of gardens, drawings, and models of horticultural implements, hot-houses, conservatories, irrigation, &c.
 New methods of horticultural cultivation.
 Statistics of production.

Sections for the Juries.

1st Section. Agriculture.
 2nd Section. Animal Products.
 3rd Section. Forestry.
 4th Section. Cultivation of the Vine, Fruit, Vegetables, and Horticulture.

Vide Temporary Exhibitions, No. 4).

GROUP III.

CHEMICAL INDUSTRY.

Preliminary Arrangement.

Chemical products for technical and pharmaceutical purposes (acids, salts, chemical preparations of all sorts).
 Raw substances and products of pharmacy, mineral waters, &c.
 Fats and their products (stearine, oil, acids, glycerine, soaps, candles, and tapers, &c.).
 Products of dry distillation (as refined petroleum, slate oil, paraffine, phenylic acid, benzoine, aniline, &c.).
 Etheral oils and perfumeries.
 Matches, &c.
 Dye-stuffs, mineral and organic.
 Resins (washed, dyed, or bleached) sealing-wax, varnish, albumen, isinglass, glue, starches, dextrine, &c.
 Contrivances and processes used in chemical production.
 Statistics of production.

Sections for the Juries.

1st Section. Chemical Products for Technical Purposes.
 2nd Section. Pharmaceutical Preparations; Etheral Oils; Perfumeries; Drugs and other Raw Products for Pharmacy and Chemical Industry.
 3rd Section. Fat Industry.
 4th Section. Products of Dry Distillation.
 5th Section. Explosive Materials; Dry Stuffs; Varnishes and other Products of Chemical Industry.

GROUP IV.

SUBSTANCES OF FOOD AS PRODUCTS OF INDUSTRY.

Preliminary Arrangement.

Flour and other farinaceous products, malt and its products.
 Sugar and its products.
 Spirits and spirituous liquors, &c.
 Wines.
 Ale, beer, porter, &c.
 Vinegars.
 Preserves and extracts (extracts of meat, portable soups, condensed milk, preserved vegetables, preserved meat, &c.).
 Tobacco, and similar manufactures.
 Confectionery, ginger-bread, chocolate, coffee substitutes, &c.
 Processes and inventions for preparing all these articles.
 Statistics of production.

Sections for the Juries.

1st Section. Flour and other Farinaceous Products
 2nd Section. Sugar, Confectionery, and Chocolate.
 3rd Section. Wine and its Substitutes; Beer and other Fermented Liquors and Vinegar.
 4th Section. Preserves, Extracts and Meats.
 5th Section. Tobacco Manufactures.

GROUP V.

TEXTILE INDUSTRY AND CLOTHING.

Preliminary Arrangement.

Washed wool and hair used for textile fabrics, carded wool and worsted, combed wool and woollen fabrics, felt carpets, blankets, hair tissues, mixed fabrics, including shawls.
 Cotton, cotton substitutes, cotton thread, cotton fabrics, and cords.
 Flax, hemp, jute, and other fibres, yarns, threads, and fabrics of the same straw, fabrics for bonnets, screens, and mats, webs and cords of reed, cane, bass, hair, wire, &c.

Sections for the Juries.

1st Section. Woollen Fabrics.
 2nd Section. Cotton Fabrics.
 3rd Section. Linen Fabrics.
 4th Section. Silk Fabrics.
 5th Section. Fringe Work; Gold and Silver Webs; Lace and Loose Woven Fabrics; Embroideries; Ornamental Feathers and Artificial Flowers made of various kinds of Stuffs—Paper, Leather, &c.
 6th Section. Linen; Articles of Clothing, Fur, Hats and Bonnets, Gloves.

GROUP V—*continued.**Preliminary Arrangement.*

Raw silk, spun silk, and manufactures of silk, silk wastes.
 Small ware manufacturers, gold and silver cloths, and embroideries.
 Lace.
 Hosiery, milled and unmilled.
 Finished objects of clothing (clothes, gowns, hats, bonnets, shoes and boots, gloves, and linen &c.
 Upholstery, carpeting, curtains, bed-furniture, &c.
 Artificial flowers and feather ornaments.
 Processes and inventions used in the production of these manufactures.
 Statistics of production.

Sections for the Juries.

7th Section. Shoe and Bootmakers' Articles.
 8th Section. Upholstery.

GROUP VI.

LEATHER AND INDIA-RUBBER INDUSTRY.

Preliminary Arrangement.

Leather, articles of leather, harness, saddles, trunks, and other leather goods (excluding clothing and fancy goods); parchment and goldbeater skin.
 Skins and furs.
 India-rubber and gutta percha articles (excluding philosophical and mechanical instruments, and parts of machinery), water-proof stuffs and cloths.
 Processes and inventions used in the production of these manufactures.
 Statistics of production.

Sections for the Juries.

1st Section. Leather and Rough Skins.
 2nd Section. Leather Wares.
 3rd Section. India-rubber and Gutta Percha Wares.

GROUP VII.

METAL INDUSTRY.

Preliminary Arrangement.

Goldsmiths' and Silversmiths' work, and jewellery, &c.
 Iron and steel wares (excluding machinery, building materials, philosophical and musical instruments.
 Manufactures from other metals and alloys.
 Weapons of every description, except military arms.
 Processes and inventions used in the production of these manufactures.
 Statistics of production.

Sections for the Juries.

1st Section. Gold and Silver Wares and Jewellery.
 2nd Section. Iron and Steel Wares.
 3rd Section. Arms, with the exception of War Armature.
 4th Section. Other kinds of Metal Wares.

GROUP VIII.

WOOD INDUSTRY.

Preliminary Arrangement.

Cabinet work (inlaid floors, windows, doors, &c.).
 Joiners' work.
 Cleft woodwork (casks, shingles, sieves, &c.
 Small staves and their products, matches, &c.
 Veneers and marquetry.
 Cut and turned wood.
 Chisel work and carved work.
 Cork manufactures.
 Basket work.
 Woodwork painted, stained and gilt.
 Processes and inventions used in the production of these manufactures.
 Statistics of manufacture.

Sections for the Juries.

1st. Section. Carpenters' and Cabinet Work; Veneers; Cut, Turned, Chisel and Carved Work;
 2nd Section. Productions of Cleft Woodwork
 Cork Manufactures and Basket Wickerwork.
 3rd Section. Coloured, Painted, Stained, and Gilded Woodwork.

GROUP IX.

STONE, EARTHENWARE, AND GLASS INDUSTRY.

Preliminary Arrangement.

Stones, natural and artificial; slate and cement works, natural and imitated stones and marbles, paving stones and floor tiles, ornaments and decorations, pipes, grinding stones, &c.
 Earthenware, pipes, cooking vessels, stoves, plastic productions, terra cottas, &c.
 Glass manufactures; glass for household use and fancy purposes, imitation gems and pearls, unset, &c.
 Processes and manufactures used in the production of the above articles.
 Statistics of production.

Sections for the Juries.

1st Section. Stone and Cement Wares.
 2nd Section. Earthenware.
 3rd Section. Glass Wares.

GROUP X.

SMALL WARE AND FANCY GOODS.

Preliminary Arrangement.

Manufactures of ivory, meerschaum, tortoise-shell, mother-of-pearl, whalebone, wax wares, japanned goods, &c.
 Fancy goods, of leather, bronze, &c.
 Umbrellas, parasols, fans, canes, whips, &c.
 Combs and brushes.
 Toys.
 Processes and inventions used in the production of these manufactures.
 Statistics of production.

Sections for the Juries.

1st Section. Manufactures of Meerschaum, Tortoise-shell, Horn, Bone, Ivory, Mother-of-Pearl, Whalebone, etc.
 2nd Section. Toys and Wax Works.
 3rd Section. Small Ware and Fancy Goods of Leather and Bronze, Lacquered Work.
 4th Section. Canes, Whips, Umbrellas, and Parasols.

GROUP XI.

PAPER INDUSTRY AND STATIONERY.

Preliminary Arrangement.

Paper pulp, paper, and pasteboard.
 Coloured papers, paper hangings, tapestry, playing cards, &c.
 Papier-mâché goods, card, and millboard.
 Articles for writing, drawing, and painting.
 Bookbinding and similar work.
 Processes and manufactures used in the production of the above manufactures.
 Statistics of production.

Sections for the Juries.

1st Section. Paper Wares, Pasteboard, and Paper.
 2nd Section. Coloured Paper, Paperhangings, Playing Cards, Cartoon Paper.
 3rd Section. Writing and Drawing Paper, and Painters' Requisites.
 4th Section. Bookbinders', Portefolio and Papier Mâché Goods.

GROUP XII.

GRAPHIC ARTS AND INDUSTRIAL DRAWING.

Preliminary Arrangement.

Book printing.
 Xylography.
 Copper-plate and steel-plate printing.
 Lithography and chromo-lithography.
 Photography.
 Engraving and guilloche work.
 Pattern-drawing and drawing for decoration.
 Tools and apparatus.
 Statistics of production.

Sections for the Juries.

1st Section. Book, Copper, Steel-plate, and Music Printing; Lithography, Chromography.
 2nd Section. Engraving and Guilloche work, Xylography.
 3rd Section. Photography.
 4th Section. Pattern Drawing and Paintings for Decoration.

GROUP XIII.

GENERAL AND AGRICULTURAL MACHINERY.

Preliminary Arrangement.

- Prime movers (steam generators, steam-engines, water-wheels, turbines, pressure engines, air, wind, and electro-magnetic engines, gas machines).
- Machines for transmitting power (shafts, wheels, pulleys, bands, &c).
- Machinery for working special kinds of materials (machines for mining, metallurgy, metal work, and wood work; machines for spinning, weaving, knitting, sewing, and embroidering; machines for fulling, cleansing, shearing, dyeing; machines for bleaching, leather-dressing, &c.; machines for paper manufactures and bookbinding, for type-founding, printing, lithography, copper-plate printing, colour printing, &c.; machines and apparatus for sugar-making, oil manufacture, breweries distilleries, stearine, soap, candles, starch, ice-making, match-making, corn mills, and agricultural machinery and apparatus).
- Other machinery not belonging to the above-mentioned (blast-engines, fire engines, pumps, ventilators, &c.).
- Materials and parts of machinery.
- Railway machinery (locomotives, tenders, railway velocipedes and parts of them, railway carriages and parts composing them, special machinery and apparatus for railway workshops and railway contrivances; for making and maintaining railway plant; snow ploughs, &c.).
- Steam gauges, dynamometers, radiometers, &c.
- All sorts of vehicles not concerned with rail.
- Statistics of production.

Sections for the Juries.

- 1st Section. Prime-movers machines for transmitting power; parts of machinery.
- 2nd Section. Machines for working special kinds of material (with the exception of Agricultural Machines, which are classified in Group II).
- 3rd Section. Means of Transport and other plant for Railways.
- 4th Section. Street Locomotives, and other kinds of transport.

GROUP XIII.

AGRICULTURAL MACHINERY.

GROUP XIV.

PHILOSOPHICAL, SURGICAL INSTRUMENTS.

Preliminary Arrangement.

- Mathematical, astronomical, physical, and chemical instruments (instruments for measuring, weighing, and dividing, for optical purposes and electric telegraphy).
- Surgical instruments and apparatus (artificial limbs, teeth, &c.).
- Horological instruments, clocks, watches, and their parts (chronoscopes, chronographs, electric clocks).
- Statistics of production.

Sections for the Juries.

- 1st Section. Mathematical, Astronomical, and Physical Instruments. Chemical Apparatus.
- 2nd Section. Clocks and Watches.
- 3rd Section. Surgical Instruments.

GROUP XIII.

GENERAL AND AGRICULTURAL MACHINERY.

Preliminary Arrangement.

Prime movers (steam generators, steam-engines, water-wheels, turbines, pressure engines, air, wind, and electro-magnetic engines, gas machines).
 Machines for transmitting power (shafts, wheels, pulleys, bands, &c.).
 Machinery for working special kinds of materials (machines for mining, metallurgy, metal work, and wood work; machines for spinning, weaving, knitting, sewing, and embroidering; machines for fulling, cleansing, shearing, dyeing; machines for bleaching, leather-dressing, &c.; machines for paper manufactures and bookbinding, for type-founding, printing, lithography, copper-plate printing, colour printing, &c.; machines and apparatus for sugar-making, oil manufacture, breweries distilleries, stearine, soap, candles, starch, ice-making, match-making, corn mills, and agricultural machinery and apparatus).
 Other machinery not belonging to the above-mentioned (blast-engines, fire engines, pumps, ventilators, &c.).
 Materials and parts of machinery.
 Railway machinery (locomotives, tenders, railway velocipedes and parts of them, railway carriages and parts composing them, special machinery and apparatus for railway workshops and railway contrivances; for making and maintaining railway plant; snow ploughs, &c.).
 Steam gauges, dynamometers, radiometers, &c.
 All sorts of vehicles not concerned with rail.
 Statistics of production.

Sections for the Juries.

1st Section. Prime-movers machines for transmitting power; parts of machinery.
 2nd Section. Machines for working special kinds of material (with the exception of Agricultural Machines, which are classified in Group II).
 3rd Section. Means of Transport and other plant for Railways.
 4th Section. Street Locomotives, and other kinds of transport.

GROUP XIIIa.

AGRICULTURAL MACHINERY.

GROUP XIV.

PHILOSOPHICAL, SURGICAL INSTRUMENTS.

Preliminary Arrangement.

Mathematical, astronomical, physical, and chemical instruments (instruments for measuring, weighing, and dividing, for optical purposes and electric telegraphy).
 Surgical instruments and apparatus (artificial limbs, teeth, &c.).
 Horological instruments, clocks, watches, and their parts (chronoscopes, chronographs, electric clocks).
 Statistics of production.

Sections for the Juries.

1st Section. Mathematical, Astronomical, and Physical Instruments. Chemical Apparatus.
 2nd Section. Clocks and Watches.
 3rd Section. Surgical Instruments.

GROUP XV.

MUSICAL INSTRUMENTS.

Preliminary Arrangement.

Musical instruments.
 Parts of them (strings, bows, moulding boards, membranes, keys, pipes, &c.).
 Sound carrying apparatus (speaking pipes, signal whistles, &c.)
 Bells, chime of bells.
 Statistics of Production.
 (*Vide* Additional Exhibition, No. 3.)

Sections for the Juries.

1st Section. Keyed Instruments (as Pianos, Organs, Harmoniums).
 2nd Section. Stringed Instruments (as Harps, Guitars, Zithers).
 3rd Section. Wind Instruments, Musical Boxes, &c.

GROUP XVI.

THE ART OF WAR.

Preliminary Arrangement.

Organisation and recruiting of armies.
 Equipment of troops, accoutrements, and armour.
 Artillery.
 Military engineering.
 Sanitary contrivances.
 Military education, training, and instruction.
 Cartography and historiography.

Sections for the Juries.

1st Section. Equipment of Troops.
 2nd Section. General Armament, Artillery, and Military Engineering.
 3rd Section. Sanitary Arrangements.
 4th Section. Military Education and Instruction, Cartography and Historiography.

GROUP XVII.

THE NAVY.

Preliminary Arrangement.

Materials for naval architecture.
 Models and drawings of boats and ships for inland lake and river navigation; sea-going ships, coasting vessels, merchant ships and ships of war, stores and fittings for equipment, outfit, and armament or ships.
 Tools and apparatus used in shipbuilding.
 Land and waterworks for navigation (models and drawings of docks, harbours, sluices, floating docks, floating batteries, and coast defences).
 Clothing, outfit, and accommodations for crews.
 Hydrography, charts, meteorological instruments; education of seamen and officers.

Sections for the Juries.

1st Section. Naval Architecture and Equipment.
 2nd Section. Structures for Navigations: Hydrography.

GROUP XV.

MUSICAL INSTRUMENTS.

Preliminary Arrangement.

Musical instruments.
 Parts of them (strings, bows, moulding boards, membranes, keys, pipes, &c.).
 Sound carrying apparatus (speaking pipes, signal whistles, &c.)
 Bells, chime of bells.
 Statistics of Production.
 (*Vide* Additional Exhibition, No. 3.)

Sections for the Juries.

1st Section. Keyed Instruments (as Pianos, Organs, Harmoniums).
 2nd Section. Stringed Instruments (as Harps, Guitars, Zithers).
 3rd Section. Wind Instruments, Musical Boxes, &c.

GROUP XVI.

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Preliminary Arrangement.

Organisation and recruiting of armies.
 Equipment of troops, accoutrements, and armour.
 Artillery.
 Military engineering.
 Sanitary contrivances.
 Military education, training, and instruction.
 Cartography and historiography.

Sections for the Juries.

1st Section. Equipment of Troops.
 2nd Section. General Armament, Artillery, and Military Engineering.
 3rd Section. Sanitary Arrangements.
 4th Section. Military Education and Instruction, Cartography and Historiography.

GROUP XVII.

THE NAVY.

Preliminary Arrangement.

Materials for naval architecture.
 Models and drawings of boats and ships for inland lake and river navigation; sea-going ships, coasting vessels, merchant ships, and ships of war, stores and fittings for equipment, outfit, and armament or ships.
 Tools and apparatus used in shipbuilding.
 Land and waterworks for navigation (models and drawings of docks, harbours, sluices, floating docks, floating batteries, and coast defences).
 Clothing, outfit, and accommodations for crews.
 Hydrography, charts, meteorological instruments; education of seamen and officers.

Sections for the Juries.

1st Section. Naval Architecture and Equipment.
 2nd Section. Structures for Navigations: Hydrography.

GROUP XVIII.

CIVIL ENGINEERING, PUBLIC WORKS, AND ARCHITECTURE.

Preliminary Arrangement.

Building materials; processes and apparatus for quarrying, brickmaking; iron girder work; preparation and preservation of wood; artificial stone, terra-cotta work, &c.

Materials and appliances for foundations (pile-drivers, screw-piles, coffer-dams, caissons, pneumatic and diving apparatus).

Contrivances and tools for earth-works (excavators, dredging machines, apparatus for raising, carrying, and transporting earth and materials).

Materials and apparatus used for roads and railways (road rollers; railway superstructure, switches, crossings, turn-tables, traversing-tables, inclined planes, lifts; pneumatic and other modes of propelling; water stations and their apparatus, railway station buildings of all kinds, and systems of railway signals).

Hydraulic engineering works, excluding sea works (river works, canal works, dikes, locks, dams, &c.).

Models and plans of viaducts, bridges, and aqueducts, &c.

Plans, models, and drawings of public buildings, dwelling-houses, barracks, penitentiaries, prisons, and hospitals, schools and theatres, labourers' cottages; apparatus for lifting and moving heavy weights in buildings, as lifts, &c.; plans and models of cheap dwelling-houses; tools and implements of artisan builders.

Apparatus and inventions for health, comfort, and convenience in buildings (for lighting, water supply, drainage, waterclosets, lightning conductors, &c.)

Agricultural engineering; plans for culture, fencing, draining; farm buildings; buildings for cattle breeding; stores, stables, manure tanks, &c.

Industrial buildings; spinning mills, weaving mills, grinding mills; distilleries, breweries, sugar manufactories; warehouses, sawmills and docks, &c.

Sections for the Juries.

1st Section. Above ground Building.
 2nd Section. Hydraulic Architecture.
 3rd Section. Making of Roads and Construction Railways.

GROUP XIX.

THE PRIVATE DWELLING HOUSE, ITS INNER ARRANGEMENT AND DECORATION

Preliminary Arrangement.

Models, drawings, and finished buildings representing dwelling-houses of civilized nations.

Drawings, models, and examples of thoroughly furnished apartments.

Sections for the Juries.

The Private Dwelling House.

GROUP XX.

THE FARM HOUSE, ITS ARRANGEMENTS, FURNITURE, AND UTENSILS.

Preliminary Arrangement.

Finished buildings, models, and drawings of farm-houses of the different nations of the world.

Drawings, models, and examples of peasant rooms, furnished and fitted out with their furniture and apparatus.

Sections for the Juries.

The Farm House.

GROUP XXI.

NATIONAL DOMESTIC INDUSTRY.

*Preliminary Arrangement.**Sections for the Juries.*

Pottery and porcelain.
 Fabrics, tapestry, embroidery, lace, and other needle-work.
 Metal articles and ornaments.
 Carved work and utensils.

National Domestic Industry.

GROUP XXII.

EXHIBITION SHOWING THE ORGANISATION AND INFLUENCE OF MUSEUMS OF FINE ART AS APPLIED TO INDUSTRY.

*Preliminary Arrangement.**Sections for the Juries.*

The various methods and means by which the different modern Museums (viz.: the South Kensington Museum in London, and the similar Museums in Vienna, Berlin, Moscow, &c.) endeavour to carry out the improvement of the general taste of the people, and the manner in which they promote the art, industry, and public instruction of their countries.

Representation of the Influence of Museums on Art Industry.

Exhibition of the objects which have been produced and propagated by these modern Museums.

GROUP XXIII.

ART APPLIED TO RELIGION.

*Preliminary Arrangement.**Sections for the Juries.*

Decoration of Churches (wall decoration, stained glass, glass painting, &c.).
 Church furniture (altars, organs, pulpits, pews, shrines for enclosing sacred vessels, &c.).
 Ornaments for altars, pulpits, crucifixes, chalices, liburiums, candlesticks, altar hangings and carpets, pulpit hangings, &c.
 Objects used in baptism and funerals, &c.

Ecclesiastical Art.

Note 1.—The objects exhibited in Groups XIX., XX., XXI., XXII., and XXIII. will be judged by special juries formed of members of the juries of those Groups to which the objects, considered from an industrial point of view, belong.

GROUP XXIV.

OBJECTS OF FINE ARTS OF THE PAST, EXHIBITED BY AMATEURS AND OWNERS OF COLLECTIONS (EXPOSITION DES AMATEURS).

*Preliminary Arrangement.**Sections for the Juries.*

Paintings of ancient masters
 Objets d'art. Bronzes, enamels, miniatures, majollicas, porcelain, faïence, &c., &c.

Not subject to the Cognisance of a Jury.

GROUP XXV.

FINE ARTS OF THE PRESENT TIME, WORKS PRODUCED SINCE THE SECOND LONDON EXHIBITION OF 1862.

*Preliminary Arrangement.**Sections for the Juries.*

Architecture, including models, designs, sketches, and surveys of architectural works of the present time.
 Sculpture, including figures and groups of small sizes; engraving, medals, &c.
 Paintings, including miniatures and enamels.
 Graphic Arts, including copper and steel engravings, etchings, woodcuts, &c.

1st Section. Architecture.
 2nd Section. Sculpture.
 3rd Section. Painting. †
 4th Section. Drawing.

GROUP XXVI.

EDUCATION, TEACHING AND INSTRUCTION.

Preliminary Arrangement.

Education, exhibition of all the arrangements and contrivances for the better nursing, training, and rearing of children; their physical and mental development from the first days of their life up to school-time; their nourishment. Cradles, nurseries, &c.; child gardens, (kinder-garten), child games and amusements, child gymnastics.

Teaching. Exhibition of school houses and school apparatus in models, drawings, and examples. Exhibition of means of instruction. The works and journals of instruction. Description and illustrations of methods of instruction. History and statistics of a school, its organisation and laws.

- (1.) Elementary schools. This department will include apparatus for the instruction of the blind, deaf, dumb, and idiots.
- (2.) Middle schools, comprehending gymnasiums, "Realschulen," or schools wherein exact science and modern languages are taught.
- (3.) Professional and technical colleges.
- (4.) Universities.

Instruction in the more limited sense; instruction of adults through literature, the public press, public libraries, and educational societies, and associations for instruction.

All machinery is contained in Group 13, but, nevertheless the machines for working special kinds of material will be examined by the jury of the professional group to which they may belong, with the assistance also of competent machine builders. It is left to the free will of the exhibitor to choose the group in which he wishes his object to be placed, should it be susceptible of being placed in more than one group.

Sections for the Juries.

- 1st Section. Plans, Organization, means of instruction, and performances of National Schools.
- 2nd Section. Middle Class Schools.
- 3rd Section. Technical Colleges and Universities.
- 4th Section. Auxiliary means for the improvement of Adults.

ADDITIONAL EXHIBITIONS.

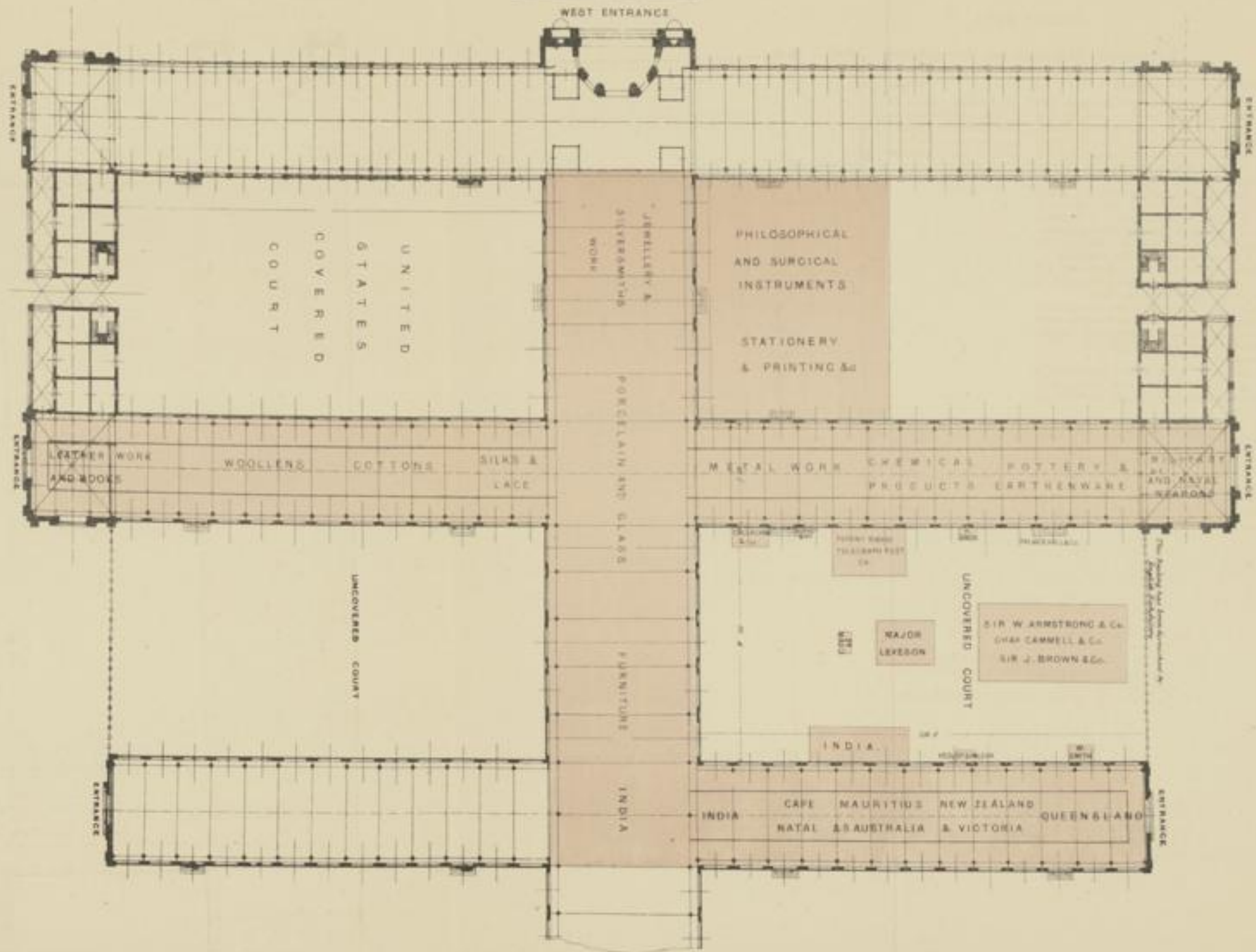
1. The history of inventions.
2. The history of industry.
3. Exhibition of musical instruments of Cremona.
4. Exhibition of the use of waste materials and their products.
5. The history of prices.
6. The representation of the commerce and trade of the world.

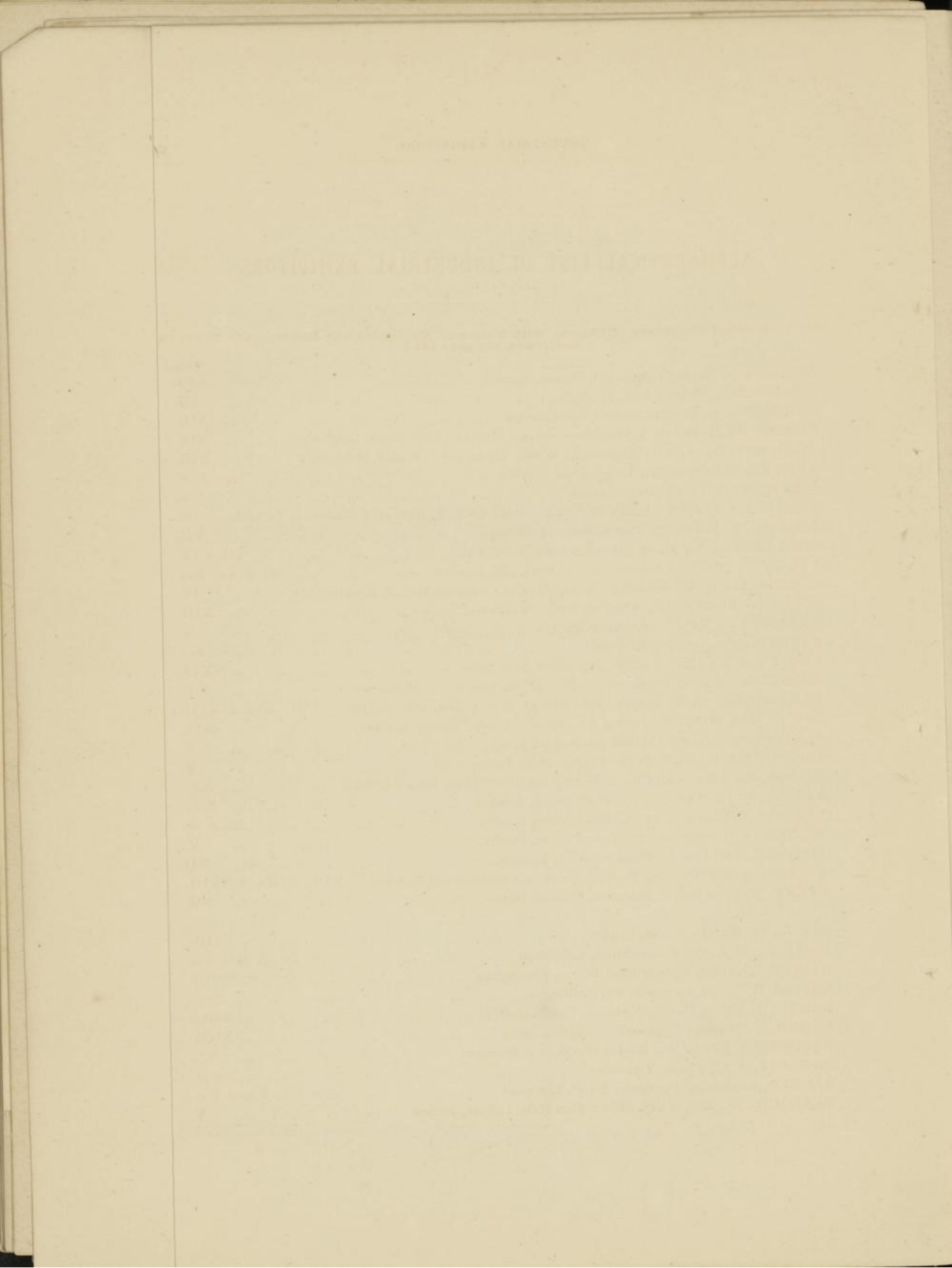
TEMPORARY EXHIBITIONS.

1. Live Animals (horses, cattle, sheep, pigs, dogs, fowls, game, fish, &c.).
2. Butcher's meat, venison, poultry, pork, &c.
3. Dairy produce.
4. Garden produce (fresh fruits, fresh vegetables, flowers, plants, &c.).
5. Living plants injurious to agriculture and forestry.

VIENNA UNIVERSAL EXHIBITION 1873

SPACE ALLOTTED TO GREAT BRITAIN, INDUSTRIAL BUILDING.





ALPHABETICAL LIST OF INDUSTRIAL EXHIBITORS.

[For a Classified Dictionary of Objects, with Names of Exhibitors and References to Pages in Catalogue, see page 141.]

	Group.
ADAMS AND Co. (LIMITED), 391, Strand, London	XVI.
ADAMS. JNO., Victoria Park, Sheffield.. .. .	III.
ADAMS, R., 31, Strutton Ground, Westminster	XIII.
ADAMS, W. MARSHAM, 3, Pennistone Street, Shepherd's Bush Green, London	XIV.
ADAMSON, D., AND Co., Engineering Works, Hyde, Junction near Manchester	XIII.
AHRENS, BERNHARD, 24, Ludgate Hill, London	XIV.
AINSWORTH, T., Cleator, Carnforth	V.
AIRE AND CALDER GLASS BOTTLE COMPANY (E. BREFFIT), Castleford, Yorkshire	IX.
AITCHISON, JAMES, 23, Princes Street, Edinburgh	VII.
ALEXANDER, R., 23, St. James's Square, Edinburgh	III. & IV.
ANDRADÉ, DE COSTA AND Co., 7, Cripplegate, London	V., & Add. Exs.
ANGLO-BAVARIAN BREWERY COMPANY, Shepton Mallett, Somersetshire	IV.
APPLEBY, BROTHERS, Emerson Street, Southwark, London	XIII.
APPLEYARD, HENRY, 36, Lower Sackville Street, Dublin	V.
ARCHER, JOHN KNIGHT, Liverpool	II., & Add. Exs.
ARMITAGE, DR., British and Foreign Blind Association	XXVI.
ARMITAGE, SIR ELKANAH, AND SONS, 48, Moseley Street, Manchester	V.
ARMSTRONG, SIR W. G., AND Co., Elswick Works, Newcastle-on-Tyne	XIII., XVI. & XVII.
ASH, C., AND SONS, 7, 8, and 9, Broad Street, Golden Square, London	XIV.
ASHTON AND Co., 45, Chorlton Street, Manchester	V.
ASHWORTH, E., AND SONS, Egerton Mills, Bolton	V.
ATKINS, CHARLES, AND Co., 1, Water Lane, Great Tower Street, London	XV.
ATKINS, F. H., AND Co., 62, Fleet Street, London	XVI.
ATKINSON, J. AND E., 24, Old Bond Street, London	III. & X.
ATKINSON, R., AND Co., 31, College Green, Dublin	V.
AUGENER AND Co., 86, Newgate Street, London.. .. .	XII
AVELING AND PORTER, Rochester, and 72, Cannon Street, London	XIII., XIIIa. & XVIII.
AVERY, W., AND SONS, Redditch, Worcestershire	VII.
BACON, G. W., 127, Strand, London	XIII.
BAILDON, H. C., 73, Princes Street, Edinburgh	III., & Add. Exs.
BAINES, WILLIAM, Railway Plant Works, Birmingham	XVIII.
BAINES, W. N., 78, Lancefield Street, Glasgow	XIII.
BAKER, J., Falcon Works, Wisbeach, Cambridgeshire	XIIIa.
BAKER, T., Whitewall Ironworks, Compton, Berks.	XIIIa.
BALDWIN, E. P. AND W., Wilden Works, near Stourport	VII.
BAMLETT, A. C., Thirsk, Yorkshire.. .. .	XIIIa.
BANNER, SAMUEL, 4, Fazakerley Street, Liverpool	III., & Add. Exs.
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ROYAL PORCELAIN WORKS, Worcester	IX.
RUNCORN SOAP AND ALKALI WORKS COMPANY, Runcorn	III.
RUNDELL, J. B., 34A, Pembroke Square, Kensington, London	XXVI.
RUSSELL, JAS., AND SONS, Crown Tube Works, Wednesbury	VII.
RUSTON, PROCTOR, AND CO., Sheaf Ironworks, Lincoln	XIII A.
SAGF, FREDERICK, 80 to 84, Gray's Inn Road, London	VIII. & X.
SALOMONS, LEOPOLD AND CO., 9, Friday Street, London	V.
SALT AND SON, 21, Bull Street, Birmingham	XIV.
SAMUELSON AND CO., Britannia Works, Banbury, Oxford	XIII A.
SAMUELSON, E., Liverpool	IV., & Add. Exs.
SANDERS, H. G., Albany Works, Little Albany Street, Regent's Park, London	VII.
SANDERSON. A., AND CO., Albert Dock Colour Works, Hull	III.

	Group.
SANGSTER & Co., 140, Regent Street, London	X.
SAUNDERS, T. H., Dartford, Kent	XI.
SAXBY AND FARMER, Canterbury Road, Kilburn, London	XVIII.
SCARBOROUGH, BROTHERS, Trafalgar Works, Halifax	V.
SCHLETTER AND Co., Birmingham	VI., VII. and X.
SCIENCE AND ART DEPARTMENT OF THE COMMITTEE OF COUNCIL ON EDUCATION, South Kensington Museum, London	XXII.
SCOTT'S SEWAGE COMPANY, Ealing, London	III. & IX.
SCOTT, GEO. L., Crown Tube Works, Heywood Street, West Gorton, Manchester.. .. .	XIII.
SHAND, MASON AND Co., 75, Upper Ground Street, Blackfriars, London	XIII.
SHANKS, F. AND R., 70 & 71, Great Queen Street, London	XIII.
SHARP, STEWART AND Co., Atlas Works, Manchester	XIII.
SHAW AND FISHER, 43, Suffolk Road, Sheffield	VII.
SHIPLEY, JOHN, 187, Regent Street, London	XVI.
SIBREE, PETER, River Head Foundry, Great Driffield, Yorkshire	XIII.
SIEBE AND GORMAN, 5, Denmark Street, Soho, London	XIII. & XVIII.
SIEBE AND WEST, 17, Mason Street, Lambeth, London	XIII.
SIEMENS, BROTHERS, 3, Great George Street, Westminster, London	XIV.
SIEMENS, C. W., C.E., 3, Great George Street, Westminster, London	I.
SILICATED CARBON FILTER Co., Church Road, Battersea	IX. & XXI.
SIMMONDS, PETER LUND, 29, Cheapside, London	XXVI., & Add. Exs.
SIMON, H., C.E., 7, St. Peter's Square, Manchester	II. & XIII.
SIMON, MAY AND Co., Nottingham	V. & VI.
SIMPSON, W. B., AND Co., 456, West Strand, London	IX.
SINGLEHURST, R., AND Co., 11, Red Cross Street, Liverpool	IV., & Add. Exs.
SISSONS, BROTHERS, & Co., Sculcoates, Hull	III.
SIVEL AND WALTER, 121, Patrick Street, Cork	XIV.
SKELTON, T. A., 37, Essex Street, Strand, London	XVIII.
SLATER, BUCKINGHAM & Co., 35, 36, Wood Street, Cheapside, London	V.
SMALE, JOSIAH, AND SONS, Macclesfield	V.
SMALE, WILLIAM, Macclesfield	V.
SMITH AND COVENTRY, Manchester	XIII.
SMITH AND TURNER, 50, Bartholomew Close, London	VII.
SMITH AND WRIGHT, Birmingham	X.
SMITH, F. AND Co., Caledonian Works, Halifax, Yorkshire	VII.
SMITH, JOHN WRIGHT, 121, Belgrave Gate, Leicester	VII.
SMITH, R. M., Leith	II., IV., & Add. Exs.
SMITH, R., AND Co., Porter Works, Sheffield	VII.
SMITH, T. & H., AND Co., 21, Duke Street, Edinburgh, and 12, Worship Street, London	III.
SMITH, WASTENEYS, 22, Grey Street, Newcastle-on-Tyne	XVII.
SMITH, GEORGE J., 16, St. Aubyn's Road, Upper Norwood, London	V.
SMITH, J. K., AND Co., 63, Vincent Street, Glasgow	VII.
SMITH, T. O., 11, Grass Market, Edinburgh	III.
SMITH, W., JUNIOR, Gillroyd Mills, Morley, near Leeds	V.
SMYTH, J., AND SONS, Peasenhall, Suffolk	XIII A.
SMYTH AND Co., Balbriggan, and 36 & 37, Lower Abbey Street, Dublin	V.
SOCIETY FOR IMPROVING THE CONDITION OF THE LABOURING CLASSES (C. PAYNE, SEC.), 21, Exeter Hall, Strand, London	XVIII.
SOMMERVILLE AND SMITH, 34, Eagle Street, Red Lion Square, London	VIII.

	Group.
SOPER, W., 23, Friar Street, Reading	XVI.
SOUTH OF ENGLAND OYSTER CULTIVATING COMPANY, 61, Gracechurch Street, London	IV.
SPEAR AND JACKSON, Etna Works, Sheffield. [Rotunda.]	VII.
SPENCE, J., BERGER AND CO., 108, King Street, Manchester	III.
SPICE, R. P., C.E., 21, Parliament Street, Westminster, London	XIII.
STADE, H. AND L., 13, Darley Street, Bradford	V.
STAMP, E. B., 29, High Street, Hampstead, London	III.
STEAD, BROTHERS, 11, Peter's Buildings, Liverpool	II., & Add. Exs.
STEINER, F., AND CO., Church, near Accrington	V.
STEPHENS, H. C., 171, Aldersgate Street, London	III. & XI.
STEPHENSON, BLAKE AND CO., Sheffield and London	XII.
STEWART, S. R., AND CO., Hutcheson Street, Aberdeen	X.
STORER, JOSEPH, Hammersmith, London	XIII.
STRACHAN AND CO., Lodgemore Mills, Stroud	V.
STREETER, EDWIN W., 37, Conduit Street, London	XIII.
STRETTON AND CO., Bridgewater Place, Manchester	V.
SUMNER, J. M., AND CO., 2, Brazenose Street, Manchester	XIII.
SUNDAY SCHOOL UNION, 56, Old Bailey, London	XII.
SUTTON AND SONS, Reading, Berkshire	II.
SWAINE AND ADENEY, 185, Piccadilly, London	VI. & X.
SWAINSON, BIRLEY AND CO., Preston, Lancashire	V.
SWAN, BROTHERS, Kirkcaldy, N. B.	II., & Add. Exs.
TALL AND Co. (LIMITED), 8, Lawson Street, Great Dover Street, London	XVIII.
TANGYE BROTHERS AND HOLMAN, 10, Laurence Pountney Lane, London	XIII.
TANNED LEATHER COMPANY, THE (LIMITED), Armley Works, Greenfield, near Man- chester	VI.
TAPLING, T., AND CO., 1 to 8, Gresham Street West, London	V.
TAYLER, D. F., AND CO., New Hall Works, George Street, Birmingham	VII.
TAYLOR, R. MINTON, Fenton, near Stoke-upon-Trent	IX.
TAYLOR, BROTHERS, Adelaide Works, Sheffield	VII.
TELEGRAPH CONSTRUCTION & MAINTENANCE COMPANY (LIMITED) (PER BARON ERLANGER), Rue Taitbout, Paris	XIV.
TEMPLETON, JAS., AND CO., Glasgow, and 77, Newgate Street, London	V.
TEMPLETON, J. AND J. S., Glasgow, and 77, Newgate Street, London	V.
THOMAS, RICHARD, & CO., Tin Plate and Iron Works, Lydbrook, near Ross	VII.
THOMAS, W. J., 28, Old Bond Street, London	VII.
THOMSON & CO., Crown Iron Works, Glasgow	XIII.
THORN, C., St. Giles's Gate, Norwich	XIII.
THWAITES AND CARBUTT, Vulcan Iron Works, Bradford	XIII.
TICKLE, ROBT. P., 3, Poppin's Court, Fleet Street, London	XIII.
TIN PLATE DECORATING COMPANY, Neath, Wales	VII.
TOBIN, J. A., Water Street, Liverpool	III., & Add. Exs.
TOMKINSON AND ADAM, Kidderminster	V.
TURNER, A., AND CO., Bow Bridge Works, Leicester	V.
TURNER, E. R., AND F., St. Peter's Iron Works, Ipswich	XIII.
TURNER, WILLIAM, Carnarvon	IX.
TWIBILL, JOSEPH, Chester Road, Manchester	XIII.
TWYMAN, AARON, 25 Walbrook, London	XVIII.

	Group.
TWYMAN, C., 36, High Street, Ramsgate	XII.
TYLER, HAYWARD AND Co., Upper Whitecross Street, London	XIII.
UNITE, J., 291, Edgware Road, London	VI. & XVI.
UNIVERSAL PAINT COMPANY, Old Mill, Farnworth, near Warrington	III.
VAVASSEUR, J., AND Co., London Ordnance Works, Bear Lane, Southwark, London	XVI.
"VICTORY" PRINTING AND FOLDING MACHINE MANUFACTURING COMPANY, 1, North John Street, Liverpool	XIII.
VYSE, SONS, AND Co., 76, Wood Street, London	V.
WALKER, CAMPBELL AND Co., 59, Bridgewater Street, Liverpool	VII.
WALKER FORGED SCREW AND BOLT COMPANY (LATE H. P. BOYD & Co., LIMITED), Newcastle-on-Tyne	VII. & XVII.
WALKER, P., AND SON, 105, Duke Street, Liverpool	IV.
WALKER, W., 119, Bunhill Row, London, E.C.	VIII.
WALLIS AND STEEVENS, North Hants Iron Works, Basingstoke	XIIIA.
WANE, MARSHALL, 4, Finch Road, Douglas, Isle of Man	XII.
WANZER, R. M., AND Co., Hamilton, Canada; <i>see</i> Doubleday, Son, & Co.	XIII.
WANZER SEWING MACHINE COMPANY, 4, Great Portland Street, London	XIII.
WARBURG AND Co., 9, Lloyd Street, Manchester	V.
WARD, J., 5 & 6, Leicester Square, London	XIV.
WARD, HENRY, 2, Vere Street, Oxford Street, London	VIII.
WARD AND PAYNE, 114, West Street, Sheffield	VII.
WARD, EDWIN, Wigmore Street, London	VIII.
WARD, T., St. John's Schools, New Wortley, Leeds	XXVI.
WARNE AND Co., 9, Gresham Street West, London	VI.
WARNER, JOHN, AND SONS, 8, Crescent, Cripplegate, London	XIII.
WATERS, J. AND E., AND Co., Talbot Mills, Ellesmere Street, Hulme, Manchester	V.
WATKINS, ALFRED T., 20, Budge Row, London	III.
WATSON, HENRY, Highbridge Works, Newcastle-on-Tyne	VII. & XIII.
WATSON, BONTOR, AND Co., 35 & 36, Old Bond Street, London	V.
WATTS, J., AND Co., 6, Broad Weir, Bristol	VII.
WEBB AND SON, Combs Tannery, Stowmarket	VI & XIII.
WEBLEY, P., AND SON, 82, 83, 84, Weaman Street, Birmingham	XVI.
WEBSTER, HENRY, Litchfield Street, Soho, London	XI.
WEBSTER, J., AND SON, Old Hall Mills, Gildersome, Leeds, Yorkshire	V.
WEDGWOOD, JOSIAH, AND SONS, Etruria, Stoke-on-Trent	IX.
WEDNESBURY TUBE WORKS, Wednesbury	VII.
WEETMAN, JNO., Ipswich, Suffolk	XIIIA.
WEICHERT, WILLIAM, 119, Rothsay Terrace, Bute Docks, Cardiff	XIV.
WELCH, ALFRED, 11, Bank Buildings, Metropolitan Cattle Market, London	XIII.
WELCH, MARGETSON AND Co., 16 and 17, Cheapside, London	V.
WELSH SLATE COMPANY, 19, Spring Gardens, Charing Cross, London	IX.
WHITE, JOHN, King Street, Stroud, Gloucestershire	XII.
WHITEHEAD, R. R., AND BROTHERS (LIMITED), 14, Hanover Street, Long Acre, London	V.
WHITELEY, WILLIAM, Westbourne Grove, London	VII.
WHITLEY, PARTNERS, Hunslet Road, Leeds, Yorkshire	XIII.
WHITWELL, THOMAS, Thornaby Iron Works, Stockton-on-Tees	I.

	Group.
WHITWORTH, SIR JOSEPH, AND Co., Manchester	XIII.
WIDNELL, HENRY, AND Co., Lasswade, near Edinburgh	V.
WIGAN AND Co., 2, Budge Row, London	II., & Add. Exs.
WILKIN AND CLARK, 44, Finsbury Circus, London	III.
WILKINSON, J., SON, AND Co. (LIMITED), St. Helen's Mills, Leeds	V.
WILLANS, T. B., 19, Lawrence Lane, London, and Vale Mills, Rochdale	V.
WILLIAMS AND Co. (LIMITED), 33, King William Street, City, London	XIII.
WILLS, A. W., Park Mills, Nechells, Birmingham	VII.
WILLSHER, JNO. CHAPLIN, Braintree, and 40, Gracechurch Street, London	XIII A.
WILSON, ALEXANDER, AND Co., Vauxhall Iron Works, Wandsworth Road, London	XIII.
WILSON, J. H., AND Co., Cornhill, Liverpool	XIII. & XVII.
WILSON-HAWKSWORTH, ELLISON AND Co., Carlisle Works, Sheffield	VII.
WINDOVER, C. S., 32 & 33, Long Acre, London	XIII.
WINFIELD, R. W., AND Co., Cambridge Street Works, Birmingham	VII.
WOOD AND IVERY, Albion Brick Works, West Bromwich, Staffordshire	IX.
WOODBURY PERMANENT PRINTING PROCESS COMPANY, 9a, Hereford Square, London	XII.
WOODFIELD, W., AND SONS, Easemore Works, Redditch	VII.
WOODHAMS, MACQUEEN AND JOHNSON, Hope's Carr, Stockport	V.
WOODS, COCKSEGE AND WARNER, Suffolk Iron Works, Stowmarket	XIII A.
WOODWARD, GROSVENOR AND Co., Stour Vale Mills, Kidderminster	V.
WORSSAM, S., AND Co., Oakley Works, King's Road, Chelsea, London	XIII.
WORTLEY, COLONEL H. STUART, Rosslyn House, Grove End Road, London	XII.
WOULDHAM CEMENT COMPANY, Wouldham, near Rochester, Kent	IX.
WRIGHT FREEMAN, Needham Market, Suffolk	III.
WRIGHT, SUTCLIFFE AND SON, Halifax, Yorkshire	XVIII.
WYNDHAM, F., AND Co., 37, Eastcheap, London	IV.
WYON, J. S. AND A. B., 287, Regent Street, London	XII. & XXV.
YATES, HAYWOOD AND Co., 95, Upper Thames Street, London, and Effingham Works, Rotherham	VII.
YOUNGER, W., AND Co., Edinburgh, Scotland, and Belvedere Road, London	IV.
YOUNG'S PARAFFINE, LIGHT, AND MINERAL OIL COMPANY, 69, St. George's Place, Glasgow	III.
YUILLE, ANDREW, 132 Irongate, Glasgow, Scotland	IV.
ZAEHNSDORF, J., Catherine Street, Strand, London	XI.
ZIMDARS, C.E., 28, Red Lion Square, London	XVIII.
ZOSSENHEIM, BROTHERS, Huddersfield and Leeds	V.

[For a Classified Dictionary of Objects, with Names of Exhibitors and References to Pages in Catalogue, see page 141.]

GROUP I.

Mining, Quarrying, and Metallurgy.

MINERAL FUELS (Coals, Shales, and Mineral Oils). MINERAL ORES AND METALS. OTHER MINERALS (as Salt, Sulphur, Graphite, &c.); not including Building Materials; *vide* Group 13. NATURAL ALLOYS. DRAWINGS AND MODELS OF OBJECTS RELATING TO MINING, METALLURGY, AND MINERAL INDUSTRY, MINING ENGINEERING, SURVEYING AND MAP MAKING. GEOLOGICAL WORKS, AND GEOLOGICAL MAPS, &c. TOOLS AND INVENTIONS FOR MINING AND METALLURGY—FOR UNDERGROUND AND SURFACE WORK. STATISTICS OF PRODUCTION.

NOTE.—The figures inserted after the Catalogue entries represent the British Rotation Numbers of the Exhibitors. The Austrian Official Numbers will be added in a later edition.

INSOLE, G., & SON, *Cardiff, Wales*.—Coals—Merthyr Smokeless Steam Coal, Abergorki Locomotive Steam Coal, Low Main Smelting and Coking Coal; Foundry and Smelting Coke; Fossils and Fractures from the Steam Coal Seam. (1)

CWMAMAN COAL COMPANY (per Palmer, Hall, and Company), *Newcastle-on-Tyne*; and *Cardiff, Wales*.—Section of Upper Four Foot Seam Coal from Aberdare Colliery. (2)

BROAD, W., *Austro-Hungarian Vice-Consul, Woodlane Terrace, Falmouth*.—Mineralogical Specimens from Cornwall; Plans and Drawings, and Works on the Mineralogy of Cornwall and Devonshire, and on Mining and Quarrying. (3)

SIEMENS, C. WILLIAM, C.E., F.R.S., D.C.L., 3, *Great George Street, Westminster*.—Models of Furnaces and Apparatus for the direct production of Iron and Steel from the Ore, by the Siemens Process; with specimens of Iron and Steel made by this process, and the Materials employed in their production. (4)

WHITWELL, THOMAS, *Stockton-on-Tees*.—Drawings and Models of Patent Hot Blast Fire Brick Stoves; Blast Furnace; Apparatus for Utilization of Blast Furnace Gases; Whitwell's Regenerators for Smelt-

ing Copper, Lead, and Zinc, and for other Metallurgical operations producing fumes; Bessemer, Charcoal, and other Pig Iron produced by furnaces with Whitwell's Fire Brick Stoves. (5)

(See Appendix.)

EATON, J. R., 24, *Old Square, Lincoln's Inn, London*.—Model of a Coal Mine. (321)

MCCRAW, E. C., & COMPANY, *Royal Salt Works, Winsford, Cheshire*.—Salt in various forms. (18)

CORBETT, JOHN, *Stoke Prior Salt Works, near Bromsgrove, Worcestershire*.—Salt of various descriptions. (109)

NEWTON, KEATS & COMPANY, 28, *King Street, Liverpool*.—Metallic Ores. (740*)

(See also Additional Exhibitions.)

JOHNSON, MATTHEY & COMPANY, *Halton Garden Works, London*.—Metals. (740*)

(See also Group III., Additional Exhibitions and Appendix.)

PATENT PLUMBAGO CRUCIBLE COMPANY, *Battersea, London*.—Plumbago. (740*)

(See also Additional Exhibitions.)

GROUP II.

Agriculture, Horticulture, and Forestry.

PLANTS FOR FOOD AND PHYSIC (excluding Fresh Fruits and Vegetables which are to be the subject of temporary exhibitions). TOBACCO AND OTHER NARCOTIC PLANTS. VEGETABLE FIBRE (as Cotton, Flax, Hemp, Jute, China Grass, &c.); and other Plants of Commerce in their raw state. COCOONS OF SILK WORMS. ANIMAL PRODUCTS IN A RAW STATE (Skins, Hides, Feathers, Bristles, &c.). WOOL. PRODUCTS OF FORESTRY (Timber, Wood for Cabinet Work, Tanning Substances, Resin in a raw state, Dyeing Woods, Barks, Charcoal Tinder). PEAT AND ITS PRODUCTS. MANURES. DRAWINGS AND MODELS OF OBJECTS USED IN AGRICULTURE, HORTICULTURE, AND FORESTRY; FARM MAPS. WORKS OF THE EXPERIMENTAL STATIONS, WOODLAND AND FOREST DOOM BOOKS, STATICS OF FORESTS, &c. PROCESSES AND INVENTIONS FOR PRODUCING, TRANSPORTING, AND STORING THE ABOVE-MENTIONED PRODUCTS. PLANS OF GARDENS, DRAWINGS AND MODELS OF HORTICULTURAL IMPLEMENTS, HOT-HOUSES, CONSERVATORIES, IRRIGATION, &c. NEW METHODS OF HORTICULTURAL CULTIVATION. STATISTICS OF PRODUCTION.

(Vide Temporary Exhibitions, No. 4.)

SUTTON & SONS (the Queen's Seedsmen), *Reading, Berkshire*.—Agricultural and Horticultural Seeds; Dried Specimens of Grasses, Cereals and other Plants, cultivated in England; Models of Roots, &c. (6)

(See Appendix.)

ORMEROD, Miss ELEANOR, *Sedbury Park, Chepstow*.—Models of Potatoes, &c., in Messrs. Sutton & Sons' case. (6*)

CARTER, DUNNETT & BEALE, 237 and 238, *High Holborn, London*.—Models (natural size and coloured) of all the leading roots and plants in cultivation in the United Kingdom in profitable agriculture; Specimens of Agricultural Seeds and Plants; Growing examples of Grass Seed for pastures, towns, &c., and collection of specimens grown under sewage irrigation from exhibitors' seeds, in the Romford Sewage Farm of W. Hope, Esq. (7)

(See Appendix.)

RAYNBIRD, CALDECOTT, BAWTREE, DOWLING & COMPANY (LIMITED), *Basingstoke*.—Seed Corn, Grass, and other Agricultural Seeds, with Descriptive Catalogue. (8)

RADCLYFFE, DICK, & COMPANY, 129, *High Holborn, London*.—Seeds;

Garden Tools and Implements; Fern Cases; Horticultural Decorations. (761)

LOVEY, EDWARD, *Ponsnooth, Perran-ar-worthal, Cornwall*.—Beehives. (10)

MUNN, MAJOR W. AUG., *Churchill House, Dover*.—Beehive, called "Bar and Frame" Hive, or "Hive within Hive;" sheltering the Bees from cold and wet, and providing easy means of hiving swarms, and removing Combs and Bees. (792)

LONDON MANURE COMPANY, 116, *Fenchurch Street, London*.—Manures and the materials used in their manufacture—Peruvian, Mexican, and Curaco Guano; Phosphates and Superphosphates of Lime; Ammoniacal Manures; Blood Manure; Coprolites and Pseudo-Coprolites; Bone Ash and Dissolved Bone; Turnip and other special manures. (11)

PACKARD, E., & COMPANY, *Ipswich, Suffolk*; *London Office: 155, Fenchurch Street*.—Artificial Manures, Phosphates of Lime, &c., from which they are made; Drawings and Photographs of exhibitors' works, and Models of Machinery. (12)

GIBBS, JAMES, & COMPANY, 16, Mark Lane, London; Works: London, Plymouth, Newport, and Bristol.—Patent Ammonia-fixed Guano; Chemical Manures and their constituents; Sulphuric Acid, &c.

(See Appendix.) (13)

FOWLER, GEORGE & THOMAS, 25, Great Dover Street, London.—Preparations for Destruction and Prevention of Insect Blights and Mildew on Plants; Horticultural Manures.

(See also Group III.) (377)

LLOYD, E., Grantham, Lincolnshire.—Horticultural Structures; Drawings of Iron Transportable Dwelling Houses for working men.

(See Appendix.) (14)

HUDSPITH, W., South Tyne Works, Haltwhistle, Northumberland.—Fern and Flower Stands of "Imperishable" Terracotta.

(15)

CLAYTON, SON & HOWLETT, Atlas Works, Woodfield Road, Harrow Road, London.—"Condensed" Peat for fuel or for conversion into Charcoal, prepared by patented Machinery, with samples of Raw Peat, as dug from Cambridgeshire, Yorkshire, Somersetshire, and Ireland; Photographic Illustration of the Peat Machine.

(324)

DOWN & COMPANY, Woburn, Bedfordshire.—"Down's Farmers' Friend," a dressing for seed-wheat, for the prevention of smut, and the ravages of the slug, grub, and wire-worm.

(344)

SIMON, H., C.E., 7, St. Peter's Square, Manchester.—Paget's Patent Garden Pumps and Fire Engines.

(See also Group XIII.) (541)

FOX, J. CAVAN, Royal Horticultural Gardens, South Kensington, London.—Rustic Summer House.

(82)

CLARKE, G. B., Woburn, Beds.—Wheat Protector for preserving seed wheat from smut and insects.

(29)

(See also Groups III. and IV.)

SWAN, BROTHERS, Kirkcaldy, N.B.—Baltic Flax.

(740*)

(See also Additional Exhibitions.)

MINIER, NASH & NASH, Strand, London.—Flower Roots.

(740*)

(See also Additional Exhibitions.)

BOWES, J. L., & BROTHER, Queen's Buildings, Liverpool.—Wools. (740*)

(See also Additional Exhibitions.)

BENCKE & SHARMAN, 7, Rumford Street, Liverpool.—Fibres, various. (740*)

(See also Additional Exhibitions.)

STEAD, BROTHERS, 11, Peter's Buildings, Liverpool.—Cotton Wool. (740*)

(See also Additional Exhibitions.)

DARBYSHIRE, MCKINNEL & COMPANY, Tower Buildings, Liverpool.—Series of Animal Products, imported into Great Britain from the River Plate, South America

(740*)

(See also Additional Exhibitions.)

NEILSON, H., 7, Brunswick Street, Liverpool.—South American Cotton. (740*)

(See also Additional Exhibitions.)

LEWIS & PEAT, 11, Mincing Lane, London.—Colonial Produce. (740*)

(See also Group III. and Additional Exhibitions.)

MEYERS & DAVIS, 56, Southwark Street, London.—Canes, Sticks, and Rattans in the rough, for walking and umbrella sticks, furniture, and fishing-rods

(740*)

(See also Additional Exhibitions and Appendix.)

MYERS, M., 12, Minories, London.—Ivory, Tortoiseshell, Shells, &c. (740*)

(See also Additional Exhibitions.)

WIGAN & COMPANY, 2, Budge Row, London.—Isinglass. (740*)

(See also Additional Exhibitions.)

PATRY & PASTEUR, 38, Mincing Lane, London.—Indigo. (740*)

(See also Additional Exhibitions.)

HEAL & SON, 195 and 198, Tottenham Court Road, London.—Bed-feathers.

(740*)

(See also Group VIII. and Additional Exhibitions.)

GARDINER, JOSEPH, & COMPANY, 5, New London Street, London.—Hard Woods. (740*)

(See also Additional Exhibitions.)

EATON, H. W., & SONS, 33, Old Broad Street, London.—Cocoons of Silkworms. (740*)

(See also Group V. and Additional Exhibitions.)

GORDON, J., & COMPANY,
5, Grosvenor Buildings, Liverpool.—Cotton
Wool. (740*)

(See also Additional Exhibitions.)

SMITH, R. M., Leith.—Flax, Tow,
and other fibres. (740*)

(See also Group IV. and Additional Exhibitions.)

CUNNINGHAM, J. & J., 102,
West Bow, Edinburgh.—Collection of Oil
Cakes and Manures imported into Great
Britain. (740*)

(See also Additional Exhibitions.)

LAWSON SEED & NURSERY
COMPANY, Edinburgh.—Collection of
Agricultural Seeds imported into Great
Britain. (740*)

(See also Additional Exhibitions.)

HUME, JOHN, Edinburgh.—Bristles.

(See also Additional Exhibitions.) (740*)

DUNDEE SEAL & WHALE FISH-
ING COMPANY (David Bruce, Manager),

Dundee.—Whalebone, Narwhal Horn, Oils,
&c. (740*)

(See also Additional Exhibitions.)

GILROY, BROTHERS, Dundee.—
Jute. (740*)

(See also Additional Exhibitions.)

HARRIS, S. & H., 57, Mansell
Street, London.—Sponges from Turkey and
the Bahamas. (740*)

(See also Additional Exhibitions and Appendix.)

EDINBURGH ROPERY COM-
PANY, Leith.—Hemp and other fibres.
(740*)

(See also Additional Exhibitions.)

ARCHER, JOHN KNIGHT, Liverpool.
—Dye Woods. (740*)

(See also Additional Exhibitions.)

PATENT CORK COMPANY,
1, Great Winchester Street Buildings, London.
—Cork. (16)

GROUP III.

Chemical Industry.

CHEMICAL PRODUCTS FOR TECHNICAL AND PHARMACEUTICAL PURPOSES (Acids, Salts, Chemical Preparations of all sorts). RAW SUBSTANCES AND PRODUCTS OF PHARMACY, MINERAL WATERS, &c. FATS AND THEIR PRODUCTS (Stearine, Oil, Acids, Glycerine, Soaps, Candles, and Tapers, &c.). PRODUCTS OF DRY DISTILLATION (as Refined Petroleum, Slate Oil, Paraffine, Phenyllic Acid, Benzoine, Aniline, &c.). ETHEREAL OILS AND PERFUMERIES. MATCHES, &c. DYE-STUFFS, MINERAL AND ORGANIC. RESINS (Washed, Dyed, or Bleached), SEALING-WAX, VARNISH, ALBUMEN, ISINGLASS, GLUE, STARCHES, DEXTRINE, &c. CONTRIVANCES AND PROCESSES USED IN CHEMICAL PRODUCTION. STATISTICS OF PRODUCTION.

SCOTT'S SEWAGE COMPANY,
Ealing, London.—Dried Sewage Deposit,
precipitated by means of lime from ordi-
nary sewage water, prepared for calcina-
tion; calcined sewage deposit, tender burnt;
the same burnt to Portland cement; the
burnt sewage cements reduced to powder;
the same cements set neat. (19)

(See also Group IX.)

FLEMING, A. B., & COMPANY,
Leith.—Printing and Lithographic Inks,
Varnishes and Oils; Black Ink for News-
papers, Books and Commercial Forms;
Coloured Ink for Fancy Printing and Litho-
graphy; Lamp and Vegetable Blacks; Vege-
table Machinery Oil; Printed specimens.
(20)

(See Appendix.)

CALVERT, F. C., & COMPANY, *Tower Chemical Works, Bradford, near Manchester*.—Acids—Carbolic, Rozalic, Picric, Cresylic; Dyes and Colours derived from the above acids; Carbolic Soaps, Disinfecting Fluid and Powder, Sheepwash, &c. (21)

CORNELISSEN & TALLE, 22, *Great Queen Street, London*.—Printing Ink and Varnishes; Colours for Chromo-Lithography and general Lithographic Materials. (22)

DENTON & JUTSUM, 8, *New Broad Street, London*.—Varnishes, Colours, Gums, Oils, and Greases. (23)

BORWICK, G., & SONS, 24, *Chiswell Street, London*.—Knife Powder. (70)
(See also Group IV. and Appendix.)

PICKERING, JOSEPH, *Mowbray Street, Sheffield*.—Plate Powder, Polishing Paste, Furniture Polish, Harness Blacking, Razor-strop Paste, and Knife Powder. (25)
(See Appendix.)

BOND, M. A., 75, *Southgate Road, London*.—Marking Inks, and Appliances for their use. (26)
(See Appendix.)

HUTCHINSON, JOHN, & COMPANY, *Widnes, Lancashire*.—Chemical Products of Alkali Manufacture—Soda, Caustic Soda, Sulphur, recovered from Alkali waste and Bleaching Powder. (27)

JOHNSON, MATTHEY & COMPANY, *Halton Garden Works, London*.—Platinum Refining Boilers, Sulphuric Acid Apparatus, Crucibles, Assay Apparatus, Syphons, and Condensing Coils; Measures and Weights in Iridio-Platinum for international use; Mineral Platinum, Palladium, Iridium, &c. (28)
(See also Group I. Additional Exhibitions and Appendix.)

CLARKE, G. B., *Woburn, Beds.*—Sheep Dipping Composition. (29)
(See also Groups II. and IV.)

DINNEFORD & COMPANY, 172, *New Bond Street, London*.—Magnesia, Fluid Magnesia, Salts of Magnesia, Granules, and other Pharmaceutical Preparations. (30)
(See also Group V.)

NEWCASTLE CHEMICAL WORKS COMPANY, THE (LIMITED), *Newcastle-on-Tyne*.—Bicarbonate of Soda, Refined and Unrefined Alkali, Bleaching Powder, Soda Crystals, Caustic Soda, and Chloride of Calcium. (31)

SMITH, T. & H., & COMPANY, 21, *Duke Street, Edinburgh*, and 12, *Worship Street, London*.—Chemical Products and Pharmaceutical Preparations; Morphine, Codeine, Cryptopia, and all Principles of Opium; Chloroform, Cantharidine, Aloine, Alkaloids, Pure Resins, Bromide of Potash, &c. (32)

CROY, ANDREW, 58, *North Hanover Street, Glasgow*.—Non-conducting Cement. (786)

WILKIN & CLARK, 44, *Finsbury Circus, London*.—Bichromate of Potash, with the chrome ore from which it is made. (33)

WATKINS, ALFRED T., 20, *Budge Row, London*.—Washing Fluid, called "Pan-katharon," to supersede soap and soda. (34)

BUSH, W. J., & COMPANY, 21 and 22, *Artillery Lane, Bishopsgate Street, London*.—Fruit Essences, Essential Oils, Quintessences for culinary purposes, Harmless Vegetable Colours for Confectionery, Effervescent Citrate of Magnesia, and other granular preparations. (35)

DUNCAN, FLOCKHART & COMPANY, 52, *North Bridge, Edinburgh*.—Chloroform; Medicated Pessaries, Suppositories, and Bougies; White Gutta-percha for Stopping Teeth. (36)

CARSON, W., & SONS, *Belle Sauvage Yard, Ludgate Hill, London*.—Paint—Anti-corrosive Paint for Iron Work, Porous Stone, Brick, and Wood; Improved Paint Pot. (37)

ALEXANDER, RICHARD, 23, *St. James's Square, Edinburgh*.—Furniture Polish. (38)

(See also Group IV.)

JACKSON, T. S., 199, *High Street, Southwark, London*.—Wood Stains, in Bottles. (806)

(See also Group VIII.)

SPENCE, J. BERGER, & COMPANY, *London, Manchester, and Glasgow*.—Natural Phosphate of Alumina; Phosphate of Ammonia; 45 per cent. Ammonia Phosphate Manure; Alum. (762)

RUNCORN SOAP AND ALKALI WORKS COMPANY, *Runcorn*.—Soap, Alkali, Refined and Carbonated Soda Ash; Refined Rosin, Bleaching Powder, Soda Crystals, Sulphate of Soda. (763)

(See Appendix.)

STEPHENS, H. C., 171, *Aldersgate Street, London*.—Wood Staining Fluids. (399)

(See also Group XI.)

UNIVERSAL PAINT COMPANY, *Oldmill, Farnworth, near Widnes, Lancashire*.—Paints. (5a)

COOPER, W. T., 26, *Oxford Street, London*.—Effervescing Lozenges. (16)

BRITISH SEAWEED COMPANY (LIMITED), *Whitecrook Chemical Works, Dalmuir, Glasgow*.—Chemical Products from Seaweed obtained by Stanford's Patent Process; Products obtained by means of Stanford's Patent Carbon System from House Refuse and Town Sewage. (39)

(See Appendix.)

BELL, J., & COMPANY, 338, *Oxford Street, London*.—Pharmaceutical Preparations, consisting of Extracts, Juices, Fluid Extracts, Oils, and Granular Salts. (40)

COHNÉ, S., & COMPANY, (per H. C. Haddon), 62, *Falmouth Road, London*.—Chemical Disinfecting Soap. (41)

FIELD, J. C. & J., *Upper Marsh, Lambeth, London*.—Sealing Wax; Wax and Sperm Candles; Composition Candles; Ozokerit, crude and refined; Ozokerit and Paraffine Candles; Wax and Stearine Tapers, and Toilet Soaps. (42)

(See Appendix.)

CLARKE, Rev. JAMES LANGTON. *The Common, Ealing, near London*.—"Lychnophylax," an improved method of, and apparatus for, preventing candles from guttering. (Exhibited by J. C. & J. Field, sole Agents for Great Britain and Austria.) (42*)

POLS, J. A., *Nye's Wharf, Old Kent Road, London*.—Refined Nut, Seed, Fish, and Animal Oils, free from Acid; Cotton Seed, raw as imported from Egypt; Cleansed and Ground Nuts. (44)

PRICE'S PATENT CANDLE COMPANY (LIMITED), *Belmont Works, Battersea, London*.—Candles, Night Lights, Oils, Perfumed Soaps; Paraffine, Stearine, Glycerine; Liquid Oils for use on Machinery, and for oiling Wool; also Ozokerit. [Rotunda.] (45 & 740*)

(See also Additional Exhibitions.)

YOUNG'S PARAFFINE LIGHT AND MINERAL OIL COMPANY.—69, *St. George's Place, Glasgow*.—Shale Mineral Oils for Burning and Lubricating; Candles, Paraffine, crude and refined; Sulphate of Ammonia; Sulphuric Acid; Paraffine Oil Lamps. (46)

ATKINSON, J. & E., 24, *Old Bond Street, London*.—Perfumes, Fancy Soaps, Toilet Powders; Preparations for the Hair, Skin and Teeth; Toilet Requisites and Perfumeries of every description. (47)

(See also Group X.)

PIESSE & LUBIN, 2, *New Bond Street, London*.—Ethereal Oils, Perfumery, Commercial Products of Flowers, Transferred Odours, and Fumigants; the "Odophone," or Gamut of Odours. [Rotunda.] (48 & 740*)

(See also Additional Exhibitions and Appendix.)

RIMMEL, EUGÈNE, 96, *Strand, London*.—Perfumery, Fancy Soaps, &c. [Rotunda.] (50)

STAMP, E. B., 29, *High Street, Hampstead, London*.—Myrrhine Tooth-Paste; Dentrifices, various; "Véritable Vinaigre anglais de Stamp;" Styptic Paper; Essential Salt of Celery. (51)

ROWLAND, A., & SONS, 20, *Hatton Garden, London*.—Macassar Oil, for the hair; Kalydor, for the complexion; Odonto Tooth Powder. [Rotunda.] (52)

CROWN PERFUMERY COMPANY 40, *Strand, London*.—Perfumes; Toilet Soap and Toilet Requisites. (53)

BRYANT & MAY, *Fairfield Works, Bow, London*.—Safety Wood and Wax Matches; Match Holders, Cigar Lights, Coloured Tapers, &c. (54)

SMITH, T. O., 11, *Grass Market, Edinburgh*.—Liquid Blue, for clearing and beautifying cotton and linen after washing. (55)

(See Appendix.)

BEWICKE, D., & COMPANY, *Wallace Road, Hackney Road, London*.—Varnishes, Pigments; Lithographic, Letterpress, and Copperplate Printing Inks; Endorsement Ink; Boiled Oils, &c. (56)

COLMAN, J. & J., 108, *Cannon Street, London*.—Starch and Starch Products made from Rice; Blues. (57)

(See also Group IV.)

GREEN, J., 12, *Graham Terrace, Ridley Road, Kingsland, London*.—Gelatine in Sheets, prepared for tracing, for artificial flowers, &c.; Wrappers for Bonbons, Confections, &c. (58)

JONES, ORLANDO, & COMPANY, *York Road, Battersea, London*.—Starch made from Rice. (43)

MANDER BROTHERS, *Wolverhampton*.—Varnishes, with the Gums used in their manufacture, and specimens of Varnished Work. (59)

PARSONS, FLETCHER & COMPANY, *Gravel Lane, Southwark, London*.—Indian Starch. (60)

SANDERSON, A., & COMPANY, *Albert Dock Colour Works, Hull*.—Painters' Colours and Varnishes. (61)

NICOLL, D., & COMPANY, 58 and 59, *Paternoster Row, London*.—Uninflammable Starch—Ladies' Muslin Dresses, Mosquito Net, Muslin Window Curtains, Cotton Prints, Timber, Laths, Flooring and Partitions rendered fireproof. (62)

(See also Group V.)

SISSONS BROTHERS & COMPANY, *Sculcoates, Hull*.—Varnishes for Railway and other Carriages and Painters, with Gums from which they are made; and Drying Oils. (63)

WRIGHT, FREEMAN, *Needham Market, Suffolk*.—Glue for Cabinet Makers and Carpenters, known as "Crown Glue," with specimens of the Waste Hides, &c., from which it is made, and examples of its application. (64)

BERGER, SAMUEL, & COMPANY, *Bromley-by-Bow, London*.—Rice Starch; Improved Patent Rice Starch in powder; Air-dried Starch; samples of the Rice used in the manufacture, and of gluten and fibre derived from it. (65)

ADAMS, JOHN, *Victoria Park, Sheffield*.—Furniture Polish, Plate Powder, Brass Polish. Citrate of Magnesia. (66)

(See Appendix.)

HEMINGWAY, S., & COMPANY, *Trafalgar Street, Bradford, Yorks*.—Dry Soap and Starch. (764)

(See also Group IV. and Appendix.)

MATTHEWS, J., & COMPANY, *Hatton Garden Works, Liverpool*.—Oils and Dyalteries. (740*)

(See also Additional Exhibitions.)

BANNER, SAMUEL, 4, *Fazakerley Street, Liverpool*.—Petroleum Spirit and Oils; Rosin, Turpentine, Cotton Seed Oil, and Olive Oil. (740*)

(See also *Additional Exhibitions*.)

TOBIN, J. A., *Water Street, Liverpool*.—African Oil Seeds. (740*)

(See also *Additional Exhibitions*.)

EVANS, LESCHER, & EVANS, 60, *Bartholomew Close, London*, and EVANS, SONS, & COMPANY, *Liverpool*.—Collection of the Substances imported into Great Britain for Medicinal Purposes. (740*)

(See also *Additional Exhibitions*.)

LEWIS & PEAT, 11, *Mincing Lane, London*.—Drugs, Gums, and Drysalteries. (740*)

(See also *Group II. and Additional Exhibitions*.)

ROSE & WILSON, 31, *Threadneedle Street, London*.—Oil Seeds and Oils. (740*)

(See also *Additional Exhibitions*.)

BAILDON, H. C., 73, *Prince's Street, Edinburgh*.—Mineral Waters imported into Great Britain from the Continent of Europe, with Salts derived from them; Two Specimens of American Mineral Waters. (740*)

(See also *Additional Exhibitions*.)

FOWLER, GEORGE & THOMAS, 25, *Great Dover Street, London*.—Preparations for Destruction and Prevention of Parasites infesting Man, Animals, and Organic Materials; Phosphor Paste. (377)

(See also *Group II.*)

GROUP IV.

Substances of Food as Products of Industry.

FLOUR AND OTHER FARINACEOUS PRODUCTS, MALT AND ITS PRODUCTS. SUGAR AND ITS PRODUCTS SPIRITS AND SPIRITUOUS LIQUORS, &c. WINES. ALE, BEER, PORTER, &c. VINEGARS. PRESERVES AND EXTRACTS (Extracts of Meat, Portable Soup, Condensed Milk, Preserved Vegetables, Preserved Meat, &c.). TOBACCO AND SIMILAR MANUFACTURES. CONFECTIONERY, GINGER-BREAD, CHOCOLATE, COFFEE SUBSTITUTES, &c. PROCESSES AND INVENTIONS FOR PREPARING ALL THESE ARTICLES. STATISTICS OF PRODUCTION.

COLMAN, J. & J., 108, *Cannon Street, London*.—Mustard; Corn Flour made from Rice. (57)

(See also Group III.)

BORWICK, G., & SONS, 24, *Chiswell Street, London*.—Baking Powder, Custard Powder, Spices. (70)

(See also Group III., and Appendix.)

KEILLER, JAMES, & SON, *Dundee*.—Confections, Preserves, Candied Peel, and Marmalade. (765 & 740*)

(See also Additional Exhibitions.)

MCGREGOR, JAMES, & SON. *Dumfries*.—Confectionery and Preserves. (766)

DUNVILLE & COMPANY, *Royal Irish Distilleries, Belfast, Ireland; and Beaufort Buildings, Strand, London*.—Matured Old Irish Whiskey. (71)

ROBUR DISTILLERY COMPANY (LIMITED), *Camden Town Station, London*.—Spirit called "Robur," containing Alcohol, Tannin, Theine, tonic and flavouring principles, Sugar and Water; entirely free from fusil or essential oil or acidity; Robur liqueur, distilled and compounded in 1873. (72)

PARKINGTON, J. R., & COMPANY, 24, *Crutched Friars, London*.—Champagne produced by Roper, Frères & Cie., "Carte Blanche," at 26 frs. per dozen; "Lion d'Or," at 35 frs. per dozen. James

Anderson & Co.'s Champagne at 60s., and extra quality ditto at 77s. per dozen. (17)

WYNDHAM, F., & COMPANY, 37, *Eastcheap, London*.—"Esprit des Œufs." (343)

HENLEY & SON, *Joiner Street, Southwark, London*.—Devonshire Cyder, Herefordshire Perry, and London Vinegar. (73)

YOUNGER, WM., & COMPANY, *Edinburgh and Belvedere Road, London*.—India Pale Ale, strong Edinburgh Ale, and Extra Stout, in bottles. (74)

(See Appendix.)

BARNARD, W., *Sawbridgeworth, Hertfordshire*.—Malt, Pale and Brown. (75)

ANGLO-BAVARIAN BREWERY COMPANY, *Shepton-Mallet, Somersetshire*.—Light family Ale, export Pale Ale, and strong Ale, in cask; bottled Ale, for home consumption and exportation. (76)

NEVILLE, REID & COMPANY, *Brewery, Windsor*.—Ale and Stout. (767)

GARTON, RUSSELL & COMPANY, *Laurence Hill, Bristol*.—Ale and Beer. (768)

WALKER, P., & SON, 105, *Duke Street, Liverpool*.—Monro & Co.'s "Falstaff" Strong Mild Ale. (341)

- CLARKE, G. B., *Woburn*.—Woburn Sauce. (29)
(See also Groups II. and III.)
- CROSSE & BLACKWELL, *Soho Square, London*.—Pickles, Sauces, Vinegar; Jams, Jellies, Marmalade; Preserved Fruits, Preserved Meat, Fish, Soup, Vegetables, &c. (77)
- GOODALL, BACKHOUSE & COMPANY, *Boar Lane, Leeds*.—Yorkshire Relish; Orange Quinine Wine; Table-Salt, and Baking Powder. (78)
(See Appendix.)
- MCCALL, JOHN, & COMPANY, *Houndsditch, London*.—Preserved Meat from Australia and South America; Preserved Fish from North America. (79)
- MOIR, JOHN, & SON, 56, *Virginia Street, Aberdeen, Scotland, and 14, Commercial Street, London*.—Preserved Provisions—Meats, Soups, Fish, Jams, Jellies, Marmalades, Pickles, Sauces, and Fruits. (80)
(See Appendix.)
- BATTY & COMPANY, 15 and 16, *Pavement, Finsbury, London*.—Pickles, Sauces, Jellies, Marmalade, Olives, Spices, Mustard, Currie Powder, Anchovies, Cambridge Pork Sausages, Christmas Plum Pudding, Mincemeat, and Preserved Provisions. (81)
- HEWITSON & COMPANY, 17, *Harp Lane, Great Tower Street, London*.—Patent Solid Pea Soup, and Beef Fat prepared without salt. (83)
- ENGLISH CONDENSED MILK COMPANY (LIMITED), 96, *Leadenhall Street, London*.—"Aylesbury" Condensed Milk, and preparations of the same with Cocoa, Chocolate, and Coffee; "Aylesbury" Essence of Coffee. (84)
- ALEXANDER, RICHARD, 23, *St. James's, Edinburgh*.—Chutney; Currie Powder and Sauce. (38)
(See also Group III.)
- MCCOMBIE, J., & COMPANY, *Peterhead*.—Cured Herrings; Cod Liver Oil; Carriers' Fish Oil. (770)
- GEYELIN & COMPANY, *Belgrave House, Argyle Square, London*.—Concentrated Food, exhibited for portability and economy. (771)
- MACKAY, JOHN, 119, *George Street, Edinburgh*.—Flavouring Essences and other preparations for domestic purposes, and Articles of Diet for invalid and table use, &c. (92)
- KING, FREDERICK, & SON, 140, *Leadenhall Street, London*.—Potatoes, preserved as for the British Army and Navy; Patent Dessicated Soup, Beef, and Vegetables, reduced to one-thirteenth of their original bulk. (323)
- GRUNEBAUM, J., 31, *Sackville Street, London*.—Havannah Cigars. (85)
- FRY, J. S., & SONS, 12, *Union Street, Bristol, and 252, City Road, London*.—Chocolate and Cocoa. (86)
- HUNTLEY & PALMERS, 9, *Road Lane, London, and Reading*.—Biscuits, plain and fancy, manufactured by improved steam machinery. (87)
(See Appendix.)
- YUILLE, ANDREW, *Glasgow*.—Essences of Coffee, pure; of Coffee and Chicory, Coffee and Cocoa, Chicory, Coffee with Milk and Sugar; Essences for flavouring; Extracts of Celery, Shallots, Orange and Lemon Peel, Ratafia, Cinnamon, Cochineal, Vanilla, Garlic, Sage and Thyme. (88)
- PEEK, FREAN & COMPANY, *London*.—Fancy Biscuits. (89)
- BROTCHIE, R., & COMPANY, *Leith*.—Chicory, raw and in various stages of manufacture. (49 & 740*)
(See also Additional Exhibitions.)
- PLUNKETT, JOHN, & COMPANY, *Portland Works, Portland Street, Dublin*.—Pale Malt for brewing Ale and Porter; Patent Roasted Malt, for colouring and flavouring Ale and Porter. (90)

HEMINGWAY, S., & COMPANY,
Bradford.—Baking Powder. (764)
(See also Group III., and Appendix.)

SAMUELSON, E., *Liverpool*.—
Tobaccos. (740*)
(See also Additional Exhibitions.)

HUBBUCK, J., *Liverpool*.—Samples
of Foreign Grain and Breadstuffs, imported
into *Liverpool*. (740*)
(See also Additional Exhibitions.)

BOSTOCK & ABINGTON, 20,
James Street, Liverpool.—Hops. (740*)
(See also Additional Exhibitions.)

BRANCKER, J. B., *Liverpool*.—
Colonial Sugars and Coffees. (740*)
(See also Additional Exhibitions.)

BARUCHSON, ARNOLD, &
COMPANY, *London, Liverpool, and Greenock*.
—Beetroot Sugar, imported from France,
Belgium, Germany, and Austria. (740*)
(See also Additional Exhibitions.)

SOUTH OF ENGLAND OYSTER
CULTIVATING COMPANY, 61, *Grace-
church Street, London*.—Oysters. (186)

McANDREWS & COMPANY,
Liverpool.—Dried Fruits and Nuts. (740*)
(See also Additional Exhibitions.)

JOHNSTONE, S. P., *Liverpool*.—
Brazilian Sugar. (740*)
(See also Additional Exhibitions.)

SINGLEHURST, R., & COM-
PANY, *Liverpool*.—Brazilian Fruits. (740*)
(See also Additional Exhibitions.)

HOW & BARCLAY, *Liverpool*.—
Cocoas. (740*)
(See also Additional Exhibitions.)

FORTNUM, MASON & COM-
PANY, 182, *Piccadilly, London*.—Tea,
Coffee, Foreign Pickles, Nuts, Preserved
Fruits and Vegetables, and various Foreign
Products. (740*)
(See also Additional Exhibitions.)

SMITH, R. M., *Leith*.—Baltic Grain
and Pulse. (740*)
(See also Group II. and Additional Exhibitions.)

FERGUSON, ALEXANDER, *Melbourne
Place, Edinburgh*.—Spices. (740*)
(See also Additional Exhibitions.)

CANTRELL & COCHRANE, 25,
Bank Street, Belfast.—Aërated Beverages.
(793)

BEWLAY & DRAPER, 23, *St.
Mary Street, Dublin*.—Aërated Waters as
Beverages and in Imitation of Natural
Mineral Waters; Soda, Seltzer, Kali, and
Lithia Waters; Lemonade, Ginger Beer, and
Ginger Ale. (342)

GROUP V.

Textile Industry and Clothing.

WASHED WOOL AND HAIR USED FOR TEXTILE FABRICS, CARDED WOOL AND WORSTED, COMBED WOOL AND WOOLLEN FABRICS, FELT CARPETS, BLANKETS, HAIR TISSUES, MIXED FABRICS, INCLUDING SHAWLS. COTTON, COTTON SUBSTITUTES, COTTON THREAD, COTTON FABRICS, AND CORDS. FLAX, HEMP, JUTE, AND OTHER FIBRES, YARNS, THREADS, AND FABRICS OF THE SAME, STRAW FABRICS FOR BONNETS, SCREENS, AND MATS, WEBS AND CORDS OF REED, CANE, BASS, HAIR, WIRE, &c. RAW SILK, SPUN SILK, AND MANUFACTURES OF SILK, SILK WASTES. SMALL WARE MANUFACTURES, GOLD AND SILVER CLOTHS AND EMBROIDERIES. LACE. HOSIERY, MILLED AND UNMILLED. FINISHED OBJECTS OF CLOTHING (Clothes, Gowns, Hats, Bonnets, Shoes and Boots, Gloves and Linen, &c.). UPHOLSTERY, CARPETING, CURTAINS, BED-FURNITURE, &c. ARTIFICIAL FLOWERS AND FEATHER ORNAMENTS. PROCESSES AND INVENTIONS USED IN THE PRODUCTION OF THESE MANUFACTURES. STATISTICS OF PRODUCTION.

NEWELL, C. J., *Newtown, Montgomeryshire, Wales*.—Welsh Gauze and Flannel. (95)

DINNEFORD & COMPANY, 172, *New Bond Street, London*.—Horsehair Friction Gloves, Belts, Bath Brushes, and Pads. (30)

(See also Group III.)

BLISS, W., & SON, *Chipping Norton*.—Tweeds, Coatings, Military Serges, Shawls, Coverlets, Travelling Rugs, Sadlers' Woollens, &c. (96)

DAY, HOWGATE & HOLT, *Devesbury*.—Woollen and Mixed Fabrics.—Presidents, Pilots, Reversible and Single Naps; Sealskins, Witneys, Friezes, Woollen Velvets; Meltons, Deerskins, Devon Naps. (97)

COGSWELL, J., & COMPANY, *Travbridge, Wiltshire*.—Doeskins, wool-dyed black, 5s. 9d. to 7s. 6d. per yard; Treble Doeskins and Indigo-Blue, milled, 8s.; Superfine, wool-dyed black milled, single and half-milled, 10s. and 7s. 6d. per yard. (98)

BIRCHALL, J. D., & COMPANY, *Leeds*.—Woollen Coatings, plain and fancy. (99)

ZOSSENHEIM, BROTHERS, *Huddersfield and Leeds; Works, Mirfield*.—Woollen Goods; Imitation Furs, Sealskin, Otterskin, Dogskin, Astrakan, &c., woven and finished. (101)

ENGERT & ROLFE, *Barchester Street, Poplar, London*.—Felts for covering boilers and roofs, and for ship-sheathing; Fibrous Asphalte for anti-damp course in walls. (102)

(See Appendix.)

KING, W., *Gillroyd and Springfield Mills, Morley, Leeds*.—Union Cloths, Meltons, Deerskins, &c. (103)

PGOLE, H., & COMPANY, *Saville Row, London*.—Woollen Goods. (104)

SMITH, W. JUN., *Morley, near Leeds, and 11, Aire Street, Leeds*.—Union, Melton, and Deerskin Cloths. (106)

STRETTON & COMPANY, *Bridgewater Place, Manchester*.—Cotton Cords—drab-coloured, fancy cut, fancy wove, printed, and self-colours; Lambskins—grey, white, and coloured; Diagonal Cantoons; Fancy Bedford Cotton Cords; Moleskins—drab, fancy bordered, coloured, embossed, printed, self-colours; Merinos—black silk finished, and coloured

Coloured Pocketings; Silicias—black, coloured, coloured diagonal, and printed; Satins—printed, coloured, new coloured fancy figured, watered; White Twills; Common and Patent Black Velvets; Velveteens—plain black patent, twilled black patent, imitation patent, black common, printed patent, embossed plain black patent, embroidered ditto, and coloured ditto. (The Cords, Moles, and Velveteens printed by John Whitehead.) (107)

WEBSTER, J., & SON, *Old Hall Mills, Gildersome, Leeds*.—Union Pilot Cloths, Plain, Printed, Cut, and Embossed; Woollen and Union Poncho Cloths. (108)

WHITEHEAD, R. R., & BROTHERS, (LIMITED), 14, *Hanover Street, Long Acre, London*.—Felt for Pianofortes and Harmoniums, Saddles, Gold Polishing, Shoes and Slippers, Gun Wadding, Filtering; Woollen Fabrics for mechanical purposes; Cloths for pianos; Woollen Driving Belts; Spongio-piline for medical purposes; Felt for Lung Protectors and Corn Plasters. (139)

STEINER & COMPANY, *Church, near Accrington*.—Turkey-red Cambrics; Twilled Cloth; Velvets; Muslins and Handkerchiefs, plain and printed. (110)

JONES, T. & J. H., EVANS & COMPANY, *Newtown, Montgomeryshire, North Wales*.—White and Coloured Welsh Flannels and Fancy Shirtings; Welsh Shawls, plain, coloured, and striped; Welsh Tweeds. (111)

(See Appendix.)

HEPWORTH, B., & SON, *New Wakefield Mills, Dewsbury*.—Travelling and Carriage Rugs in Lambskin, Merino, Cloth, Mohair, and Blanket; Siberian Fur and Seal-skin Horse Rugs. (112)

WILKINSON, J., SON & COMPANY (LIMITED), *St. Helen's Mills, Leeds*.—Felt Carpets and Felted Cloth, Patent Brussels, Velvet, and Floor Carpets. (113)

STRACHAN & COMPANY, *Lodge-more Mills, Stroud*.—Woollen Cloths, Coatings, Trouserings, &c. (114)

ROSS & DUNCAN, *Abercorn Thread Factory, Abercorn Street, Paisley*.—Cotton Thread on Spools. (206)

SCARBOROUGH, BROTHERS, *Trafalgar Works, Halifax, Yorkshire*.—Fancy Dress Goods, &c.; Worsted Coatings, Dress and Furniture Damasks, Repps, &c.; Coloured Worsted Wefts and Knitting Yarns. (115)

MITCHELL, BROTHERS, *Albert Carpet Works, Waterfoot, near Manchester*.—Felt Carpets, without seams. (116)

HOOVER, C., & COMPANY, *Eastington Mills, near Stroud, Gloucestershire*.—West of England Superfine Broadcloths, Military and Hunting Cloths, Doeskins, Cassimeres and other Trouserings, Carriage Lining and Livery Cloths, Beavers, Meltons, Venetian, Kerseys, &c. (117)

LEES, R., *Lime Place, Galashiels*.—Tweeds. (772)

JONES, PRYCE, *Newtown, Montgomeryshire*.—Welsh Flannels, Shawls, Handkerchiefs, Yarns, Friezes, Cloaks, and Petticoats; Specimens of Welsh Needlework. (118)

HITCHCOCK, WILLIAMS, & COMPANY, 71 to 74, *St. Paul's Churchyard, London*.—Woollen Goods; Ladies' Costumes, &c. (119)

KERR, SCOTT & SON, 8, *Cannon Street, London*.—Shawls, Fancy Fabrics, and Travelling Rugs. (121)

NEAVE, S., & SONS, 7, *Pal Street, Manchester*.—Wools washed and carded, prepared for felt hat making, &c., dyed and undyed. Vicuna, similarly prepared. (122)

WILLANS, THOS. B., 19, *Lawrence Lane, London, and Vale Mills, Rochdale*.—Flannels, plain, fancy, coloured; Twilled Flannel for cricketing dresses; Fancy Woven, and Fancy Printed Flannels. (123)

SMYTH & COMPANY, *Balbriggan, Ireland, and 36 and 37, Lower Abbey Street, Dublin*.—Hosiery known as Balbriggan Hose. (289a)

BEHRENS, LOUIS, 41, *Portland Street, Manchester*.—Cotton Velvets, Patent Silk-finished Velvets, Velvettas, and Velveteens, black and coloured. [Rotunda.] (322)

PEEL, BROTHERS, & COMPANY, *Bradford*.—Woollen Materials and Mixed Fabrics for Ladies' Dresses. [Rotunda.] (617)

CLARK & COMPANY, *Anchor Thread Works, Paisley*.—Cotton Thread for Hand and Machine Sewing; Crochet, Tatting and Embroidery Cotton. (144)

(See also Group XIII.)

WARBURG & COMPANY, 9, *Lloyd Street, Manchester*.—Cotton Fabrics; Velvets, black and coloured; Mohair Cloth, and Sleeve Linings. (125)

KESSELMAYER, W. & C., 1, *Peter Street, Manchester*.—Cotton Velvets and Velveteens, superfine and improved, plain and twilled back, in black, colours, and printed, embossed, and embroidered; Silk Face Velvets, in black and colours. (126)

HORROCKSES, MILLER & COMPANY, 9, *Bread Street, Cheapside, London—Manchester, Preston, Lancashire*.—Longcloths, Calicoes, Twills, Shirtings, Plain and Twilled Sheetings. (127)

JOHNSON, JABEZ, & FILDES, 44, *Spring Gardens, Manchester*.—Toilet, Marseilles, and Alhambra Quilts, Counterpanes, Toilet Covers, Quiltings, Dimities, Damasks, Skirts, Velvets, Linens, Towels, Perched Toilettings, Printed Cretonnes and Muslins. (See Appendix.) (715)

WATERS, J. & E., & COMPANY, *Talbot Mills, Ellesmere Street, Hulme, Manchester*.—Sewing Cottons; Cotton, Worsted, and Mohair Braids; Cotton and Worsted Smallwares. [Rotunda.] (129)

(See Appendix.)

BROOK, JONAS, & BROTHERS, *Meltham Mills, Huddersfield*.—Patent Glacé and Six Cord Sewing Cotton for hand and machine work, white and coloured; Crochet and Embroidery Cotton. (130)

(See Appendix.)

CARLILE, J., SONS & COMPANY, *Bank End Mills, Paisley*.—Sewing, Crochet and Embroidery Cotton. (131)

CLARK, J., & COMPANY, "*Paisley Thread Works*," *Paisley*.—Sewing Threads and Cottons of various descriptions. (132)

DEWHURST, JOHN, & SONS, *Belle Vue Mills, Skipton*.—Sewing Cotton, in white, black, and colours, with specimens in the various stages of manufacture from raw Sea-island and Egyptian Cotton. (133)

COATS, J. & P., *Ferguslie Thread Works, Paisley*.—Cotton Thread, white, black, and coloured, for hand and machine work; Extra Glacé Thread for machine use; Crochet Cotton, and Shoemakers' Thread. (134)

(See Appendix.)

EVANS, WALTER, & COMPANY, *Derby*.—Sewing, Knitting, Tatting, Crochet, Embroidering, and Machine Cottons; Glacé Thread. (135)

ASHTON & COMPANY, 45, *Chorlton Street, Manchester*.—Cotton Goods, dyed and printed; Velvets, Fustians, Linings, Cords, and Beaverteens; Satins, Shirtings, Twilled Silecia, Serges, and Cambrics, dyed and printed. (136)

BOWMAN BROTHERS, *Halifax, Yorkshire*.—Cotton Yarns, illustrating processes of carding, combing, spinning, doubling, &c. (137)

ARMITAGE, SIR ELKANAH, & SONS, 48, *Moseley Street, Manchester*.—Cotton Duck for sail cloth, Rubber Belting, Hose, and American Leather Cloth; Cotton Fabrics made of dyed yarns, for dress goods and other garments. (138)

CLARKE, I. P., & COMPANY, *King Street Mills, and Branch Mills, Leicester*.—Cotton Thread for sewing machines and for hand sewing. (139a)

ERMEN & ENGELS, *Manchester*.—Cotton Thread, white and coloured, for

Sewing, Crochet, Knitting, and Mending, and Cotton on spools, cards, and in balls. (140)

KERR, PRICE & COMPANY, *Underwood and Oakshaw Mills, Paisley*.—Cotton Thread for hand and machine sewing. (479)

(See also Group XIII.)

OGDEN, T., & COMPANY, *Werneth Iron Works, Lees Hall, and Busk Mills, Oldham*.—Fishing Nets, Fishing Net Twines; Cable, Heald Yarns, Crochet, Sewing and Knitting Cottons; Carpet Yarns, Cotton Banding, Cloth in natural state, with Doll dressed in the same; Cotton in its various stages, from the bale to the Spinning Jenny. (141)

DICKINS & COMPANY, 8, *Marsden Street, Manchester; Works, Middleton*.—Dyed and Polished Cotton Yarns: Sewings, &c. (shown in Case No. 141). (141*)

SWAINSON, BIRLEY & COMPANY, *Preston*.—Cotton Long Cloths, 36-inches wide; Heavy Shirting Cloths, 33 and 36 inches wide. (805)

ASHWORTH, E., & SONS, *Egerton Mills, Bolton*.—Cotton, raw, and illustrating the process of manufacture; Yarns, grey, bleached, and dyed; Polished Yarns; Sewing, Embroidery, and other Cotton. (773)

DICKSONS, FERGUSON & COMPANY, *Linen Hall Street, Belfast*.—Linen, unbleached, bleached, and printed; Drills, Hollands, Sheetings, Towels, Dress Linens, Cambrics, Handkerchiefs, Diapers and Damasks. (142)

AINSWORTH, T., *Cleator, Carnforth*.—Linen Threads and Linen Towels. (143)

(See Appendix.)

JAFFÉ, BROTHERS, *Warehouses, Belfast and Dundee; Works, Lurgan and Banford*.—Linen—Brown, White, and Printed; Cambric Handkerchiefs—White and Printed; Linen Yarns; Jute Fabrics and Sacks. (144a)

FENTON, SON, & COMPANY, and FENTON, S. G., & COMPANY, *Linen Hall, Belfast*.—Linen Yarns, bleached and unbleached; Linens, Fronting, Medium and Heavy Family Linen; Drills, Damasks, Linen and Cambric Handkerchiefs, and Diapers. (145)

PEGLER, C., JUNIOR, & COMPANY, 58, *Briggate, Leeds*.—Linen and Damask Table Linen. (146)

MOORE & WEINBERG, *Belfast, Ireland, and Dundee, Scotland*.—Flax, Hemp, and Jute Yarns; Linens; Linen and Cambric Handkerchiefs, bleached, dyed, tinted, and printed; Damask Table Linen; Jute Carpets, Sacking, &c.; Wool-packs; Cotton, Guano, Grain, Flour, and Sugar Bags; Shoe and Tailors' Threads. (147)

BARBOUR, W., & SONS, *Hilden Flax Mills, Lisburn, Ireland*.—Linen Thread for Shoemaking and for Cloth, for machine as well as hand work. (148)

BETZOLD, GEORGE, & COMPANY, *Belfast, Ireland*.—Linen Fabrics, white and printed; Linen and Cambric Handkerchiefs, white and printed; Hemstitched Handkerchiefs, white, printed and embroidered. (149)

BRUCE & COMPANY, *South Shields*.—Sailcloth. (151)

BARROW FLAX & JUTE COMPANY (LIMITED), *Barrow-in-Furness, Lancashire*.—Jute Yarns, Jute Sackings, Baggings, and Hessians; Sacks, Bags, and Packs. (152)

MARSHALL & COMPANY, *Leeds, and Shrewsbury*.—Linen Threads and Sewing Machine Threads. (153)

GOLDSCHMIDT & SIPMAN, *Nottingham*.—Raw Silks; Organzines; Grenadines, and Trams. (154)

EVANS, D., & COMPANY, 1, *Wood Street, Cheapside, London*.—Printed Silk Handkerchiefs; Chinese Silks made under the exhibitors' direction; English manufactured Silks. (155)

SALOMONS, L., & COMPANY, 9, *Friday Street, London*.—Spun Silk, dyed and undyed; Black dyed Cordonnet for Fez Tassels, Fringes, &c.; China Thrown Silk; Straw Plait, and Finished Articles. (156)

(See Appendix.)

JACKSON, J. & F., *Sutton Mills, Macclesfield*.—Silk Scarfs, Mufflers, Surats, and Handkerchiefs. (157)

PATTERSON, WILLIAM, & SONS, *Nottingham*.—Thrown Silks—China and Bengal Organzine and Tram, Cordonnets and Cords for the manufacture of Machine-made Lace; Grenadines made of Bengal Silk. (158)

MACCLESFIELD CHAMBER OF COMMERCE.—Trophy of Silks, comprising the following 9 entries:— (159) [Rotunda.]

BROCKLEHURST & SONS, *Macclesfield*.—Thrown Silk; Patent Spun Silk Yarns; Silk Handkerchiefs, Scarfs, Mufflers; Silk Terrée, Shirting, Dresses, and Sashes. (159a)

POTTS, WRIGHT & COMPANY, *Macclesfield*.—Silk—China, Tram, and Organzine; Silk and Sarcenet Goods; China Twills, &c. (159b)

CRITCHLEY, BRINSLEY & COMPANY, *Macclesfield*.—Ladies' and Gentlemen's Silk Goods—Cravats; Squares, &c., for the neck; Handkerchiefs; Pugarees &c. (159c)

CORNES, W. W., & COMPANY, *Macclesfield*.—Dress Silks, Glacé Silks, Cut-up Cloths, Mufflers, Sashes, Scarfs, and Ties; Silk Shawls, Handkerchiefs, &c. (159d)

PEARSON, SAMUEL, & COMPANY, *Macclesfield*.—Thrown Silk and Silk Fabrics. (159e)

MELLOR, JAMES, 7, *Chestergate Street, Macclesfield*, and 16, *Dale Street, Manchester*.—Silk Neckties and Scarfs. (159f)

SMALE, JOSIAH, & SON, *Macclesfield*.—Pure Silk and Mixed Goods; Poplins, Scarfs, Sashes, &c.; Machine and Hand Sewing and Embroidery Silks. (159g)

NICHOLSON, J. O., *Macclesfield*.—Silk Scarfs and Neckerchiefs; Pocket-handkerchiefs; Plain, Figured, and Brocaded Silks; Silk and Spun Silk Mufflers; Silk Sashes Brocaded; Damascene and Roman Mogadore. (159h)

SMALE, WILLIAM, *Macclesfield*.—Silk Scarfs, Ties, Handkerchiefs, Sarcenet Linings. (159i)

RICKARDS, C. A., *Bell Busk Mills, near Leeds*.—Sewing Silks for Hand and Machine use, pure and unweighted; Embroidery and Knitting Silks, Buttonhole Machine Twists, and Machine Silk Twists. (160)

PIM BROTHERS & COMPANY, *Dublin*.—Irish Poplins—plain, single, double, brocaded, checked, figured, terry, satin-striped, tartan plaid, and watered; Silk Brocatelles and Terrys for Curtains, Furnishing and Upholstery purposes. (161)

(See Appendix.)

ATKINSON, R., & COMPANY, 31, *College Street, Dublin*.—Irish Poplins, specimen of Tissued Poplin brocaded in gold and colours with the Austrian Imperial Eagle, crown and monogram of their Majesties the Emperor and Empress of Austria; double, terrie, plain, ribbed, plaid check, figured, and brocaded poplins. (162)

(See Appendix.)

HADWEN, JOHN, & SONS, *Kelroyd Mills, Halifax, Yorkshire*.—Silk and Silk Yarns; Waste Silk in the raw state; Yarns spun from waste silk. (164)

CARINGTON, THE LADY, 8, *Whitehall Yard, London*.—Folding Screen of Guipure Lace in coloured Silks, worked by the needle and *appliqué* on White Satin; the pattern taken from an old Venetian velvet. Colours arranged and work executed by the exhibitor. Screen with Leaves, designed and worked by the exhibitor. (165)

STADE, H. & L., 13, *Darley Street, Bradford*.—Lace Handkerchiefs, original designs, worked by hand. (166)

JACOBY, MORITZ, & COMPANY, *Stoney Street, Nottingham*.—Patent Valenciennes and other Lace; Curtains, Bedcovers, Shawls, Veils, Scarfs; Silk Guipure Nets; Shetland Wool Shawls, &c. [Rotunda.] (167)

(See Appendix.)

SIMON, MAY & COMPANY, *Nottingham*.—Lace, Curtains, Plain and Fancy Nets, Shetland Shawls, and Vitrages. (168)

(See also Group VI.)

SMITH, G. J., 16, *St. Aubyn's Road, Upper Norwood, London*.—Irish Laces of all descriptions. (169)

LESTER, C. & T., *High Street, Bedford*.—Hand-made Lace, Italian Point Flounces, &c.; Maltese Coifs, Handkerchiefs, Lappets, and Fancy Collars. (170)

COPESTAKE, MOORE, CRAMPTON & COMPANY, *Bow Churchyard, London, and Nottingham*.—Lace Curtains, Shawls, and Dresses; Imitation Valenciennes Lace; White and Black Silk Lace; Cotton Lace. [Rotunda.] (163)

POSSELT, PETERS & COMPANY, *City Road Mills, Derby, and Laxton Street Works, Leicester*.—Elastic Webs for Boots; Elastic Belts, Garters; Thrown Silk and Woven Webs. (171)

WELCH, MARGETSON & COMPANY, 16 & 17, *Cheapside, London*.—Shirts and Collars; Fancy, Woollen, and Cotton Shirtings; Neckties, Mufflers, Silk Scarfs, Silk and Cambric Pocket Handkerchiefs, Braces, Rugs, and Umbrellas. (172)

(See Appendix.)

SLATER, BUCKINGHAM & COMPANY.—35 and 36, *Wood Street, Cheapside, London*.—Silk Scarfs and Cravats; Umbrellas. (173)

WOODHAMS, MACQUEEN & JOHNSON, *Hope's Carr, Stockport*.—Felt Hats; Silk Hats. (174)

MITCHELL, JAMES, & COMPANY, *Tweed Place Mills, Galashiels, Scotland*.—Scotch Tweeds, Worsted Coatings and Trowserings, Cheviots, Japanese Coatings, Patent Yarn Tweeds, Scotch Shepherd Trowsering and Argyle Trowserings. (176)

NICOLL, D., & COMPANY, 58 and 59, *Paternoster Row, London*.—Woollens—Coatings, Tweeds, Frieze, Angola and Llama Cloths; Pilots, Beavers, Diagonals, Worsted Goods, Imitation Furs; Sanitary Cloths, impervious to rain but not to perspiration; Hydropellis Cloth for very cold countries. (161a)

(See also Group III.)

LOBB, JOHN, 296, *Regent Street, London*.—Boots and Shoes for Ladies and Gentlemen. (177)

NORMAN, S. W., 116, *Westminster Bridge Road, London*.—Boots and Shoes—court, dress and walking, for ladies and gentlemen; Cork-soled and "Surgical" Boots. (547)

(See also Group XIII.)

VYSE, SONS, & COMPANY, 76, *Wood Street, London; Luton, Bedfordshire; St. Albans, Herts; Paris; and Prato, Italy*.—Straw, Chip, and Felt Hats and Bonnets. (178)

CHRISTY, J. E. & W., & COMPANY, 35, *Gracechurch Street, London*.—Hats, Caps, and Helmets, in Felt, Silk, &c.; Hatmakers' materials and goods in various stages of manufacture. (180)

APPLEYARD, HENRY, 36, *Lower Sackville Street Dublin*.—Balbriggan Hose for Ladies; Embroidered and "Peculiar Lace;" one Pair exhibited only weighs half an ounce. (181)

MORLEY, J. & R., 18, *Wood Street, Cheapside, London, and Fletcher Gate, Nottingham*.—HOSIERY—Stockings, Socks, and Underclothing in Cotton, Wool, and Silk. (182)

LLOYD, ATTREE & SMITH, 32, *Wood Street, Cheapside, London*.—Silk Cravats and Scarfs, Linen Collars and Wristbands. (183)

(See Appendix.)

CUMBERLAND, ROBERT, 3 *Rue Scribe, Paris*.—Riding Habits; Hunting Coats; Driving Capes; Hunting and Racing Breeches; Racing Jackets and Caps. (184)

LICHTSCHEINDE & COMPANY, 10, *Upper Weymouth Street, London*.—Patent Twin Spring Mattresses; Hair and Wool Mattresses. (185)

(See also Group VII.)

PAVY'S PATENT FELTED FABRIC COMPANY, 13 to 15, *Hamsell Street, Falcon Square, London*.—Felted Fabric for Window Curtains, Bed Hangings, Blinds, Wall Hangings, Bookbinding, Bed Quilts, and in Imitation of Leather. (187)

TAPLING, THOMAS, & COMPANY, 1 to 8 *Gresham Street West, London, and Glasgow*.—Tapestry for Ecclesiastical Wall Decorations, 40 feet by 15 feet, and Axminster Carpets for Saloons, each woven in one piece, by machinery. (188)

(See Appendix.)

TEMPLETON, JAMES, & COMPANY, *Glasgow, and 77, Newgate Street, London*.—Patent Axminster Carpets and Hearth Rugs. (189)

(See Appendix.)

TEMPLETON, J. & J. S., *Glasgow, and 77, Newgate Street, London*.—Wilton and Brussels Carpets, Portières, and Window Curtains. (190)

(See Appendix.)

WOODWARD, GROSVENOR & COMPANY, *Stour Vale Mills, Kidderminster*.—Brussels and Velvet Pile Carpets. (191)

(See Appendix.)

LEWIS, JOHN, *Halifax, Yorkshire, and 78, Watling Street, London*.—Carpets: Royal Wilton, Anglo-Indian, Axminster; Rugs; Real Indian Carpets and Rugs; Turkey Carpets. (192)

BRINTON, JOHN, & COMPANY, *Kidderminster*.—Wilton Carpets and Rugs. (193)

COOKE, SONS & LAW, 12, *Friday Street, London; Liversedge, Yorkshire; and Hadleigh, Suffolk*.—Carpets—Velvet Pile, Brussels, Tapestry, Kidderminster, Felt, Venetian, and Dutch; Rugs, Cocoa Matting, and Mats. (194)

MORTON & SONS, *Kidderminster*.—Carpets. (195)

WIDNELL, HENRY, & COMPANY, *Lasswade, Edinburgh*.—Tapestry Carpets; Velvet Table Covers, and Sofa Carpets. (196)

CORBIÈRE, E., & SON, 30, *Cannon Street, London*.—Cretonne Prints, Cotton Satins, Plain Cotton Satins, Tapestries, Silk Poplins. (197)

LYLE, J., & COMPANY, 10, *Forneuk Street, Glasgow*.—Patent Axminster Carpeting and Rugs, Sofa Carpets, Church Mats, and Brussels Carpeting. (198)

GOWER, WOODWARD & COMPANY, *Kidderminster*.—Carpets and Rugs; Hohenzollern Carpets, a new variety; Brussels and Velvet Carpets, woven without seams. (199)

WATSON, BONTOR, & COMPANY, 35 and 36, *Old Bond Street, London*.—Carpets—Turkey, Persian, and Velvet Pile. (200)

HENDERSON & COMPANY, *Durham*.—Velvet, Scotch, and Venetian Carpets. (201)

HUMPHRIES, JAMES, & SONS, *Kidderminster, & 3 King Edward Street, Newgate Street, London*.—Wilton Carpets. (202)

LAPWORTH BROTHERS, 22, *Old Bond Street, London*.—Real Indian Carpets and Rugs. 69)

TOMKINSON & ADAM,
Kidderminster.—Carpets woven in one piece,
without seam. (120)

LAYBOURN, W. J., 60, *St. John's
Street, West Smithfield, London*.—Ostrich
Feathers. (800)

HARVEY, J., *Kidderminster*.—De-
sign for Carpet. (265)

DEED, J. S., & SONS 451, *Oxford
Street, London*.—Cocoa Fibre Mats. (222)

(See also Group VI.)

ANDRADÉ, DE COSTA, & COM-
PANY, 7, *Cripplegate, London*.—Feathers
for Ornament. (740*)

(See also Additional Exhibitions.)

EATON, H. W., & SONS, 33, *Old
Broad Street, London*.—Silk, raw, thrown,
spun, and waste. (740*)

(See also Group II. and Additional Exhibitions.)

TURNER, ARCHIBALD, & COM-
PANY, *Bow Bridge Works, Leicester*.—
Elastic Fabrics; Boot-gusset Webs; Cotton
and Silk Frills; French Webs; Pocket
Book and Porte-monnaie Webs; Surgical
Webs; Cords and Braids in Silk, Lustres,
Cotton, Mohair, &c. (776)

(See Appendix.)

GROUP VI.

Leather and India-Rubber Industry.

LEATHER, ARTICLES OF LEATHER, HARNESS, SADDLES, TRUNKS, AND OTHER LEATHER GOODS
(excluding Clothing and Fancy Goods); PARCHMENT AND GOLDBEATERS' SKIN. SKINS AND FURS,
INDIA-RUBBER AND GUTTA PERCHA ARTICLES (excluding Philosophical and Mechanical Instruments,
and parts of Machinery), WATER-PROOF STUFFS AND CLOTHS. PROCESSES AND INVENTIONS USED
IN THE PRODUCTION OF THESE MANUFACTURES. STATISTICS OF PRODUCTION.

LENNAN, W., & SON, 29 to 31,
Dawson Street, Dublin.—Carriage Harness,
Saddles for Ladies and Gentlemen, Hunting
Saddles, Racing Saddles, Safety Driving
Reins, Stirrups, Muzzles; Noseband, anti-
pulling, and other bridles. (207)

ELLAM, B., 213, *Piccadilly, London*.
—Saddlery, Harness, Whips, &c. (208)

WEBB & SON, *Combs Tannery,
Stowmarket*.—Leather, and Articles made of
Leather. (209)

(See also Group XIII.)

COLTMAN WILLIAM, 22, *Prome-
nade Villas, Cheltenham*.—Improved Ladies'
Portmanteaus. (210)

SWAINE & ADENEY, 185, *Picca-
dilly, London*.—Saddlery and Sporting Ap-
paratus. (211)

(See also Group X.)

RABBITS, W., *St. Thomas's Works,
White's Ground, Bermondsey, London*.—Boot
and Shoe Upper Leathers. (212)

HUXHAMS & BROWN, *Commer-
cial Road, Exeter*.—Ground Bark, Valonia,
and Myrabolans for tanners and leather
dressers. (213)

(See also Group XIII.)

DIXON, JOHN, & SON, *Manning
Street, Bermondsey, London*.—Enamelled and
Japanned Hides, Split Hides, and Splits.
(214)

NEWTON, GOUGH & COMPANY, *Manchester*.—Leather—English tanned for Boot and Shoe Soles and Inner Soles; English curried for Upper Leathers of Boots and Shoes; English tanned Walrus Hide. (215)

(See also Group XIII.)

EVANS, P. & S., & COMPANY, *Avonside Tannery, Bristol*.—British Army Sole Leather; Engine Backs for Colliery Pumps, &c.; Ordinary Sole Leather; Hippopotamus Leather, and Foreign Bellies. (216)

SCHLETTER & COMPANY, *Birmingham*.—Saddlery, Harness, and general Leather Goods; Saddlers' Ironmongery and Whips; Leather Cloth and Floor Cloth; India Rubber Goods. (217)

(See also Group VII. and X.)

BRACE, H., & COMPANY, (Limited), 3, *Bridge Street, Walsall*.—Leather, Saddlery, Harness; Webs and Woollen Goods for Saddlery; Whips, Bits, Spurs, Stirrups; Horse and Carriage Brushes. (218)

MIDDLEMORE, W., *Holloway Road, Birmingham*.—Saddlery, Harness, and Leather Goods; English Hunting Saddle, and Indian Riding Saddle, on patent spring seats; Australian and South American Saddles; Side Saddles with spring seat; Racing Saddle; Cape of Good Hope Saddle, with patent iron tree; Machine-made Harness for Europe, the Colonies, &c.; Travelling necessities; Hogskins and Enamelled Hides. (219)

(See also Group XIII.)

TANNED LEATHER COMPANY, *Armley Works, Greenfield, near Manchester*.—Leather prepared for making mill bands, straps, &c., for shoe soles and tops; Tanned Hides for various purposes for carriers. (220)

ECROYD, W., & SON, *Tyer's Gate-way, Bermondsey, London*.—Morocco Leather for Bookbinding, Furniture Covering, and Coach Fitting. Goat Skins in "crust" ready for dyeing. (221)

DREW, JOHN, 33, *Regent Street, London*.—Trunks and Portmanteaus in solid Leather; Military Camp and Travelling Equipages—an officer's room fitted up as in England; Patent Square-mouthed "Bags," with or without Dressing Case Fittings; Dressing Case Portmanteaus; Patent Railway Companion Table, including card and chess table, luncheon case, writing materials, dressing case fittings, and railway lamp, with space for a hat, the whole not exceeding the size of a square hat box, and will go under the seat of the carriage. (750)

(See also Group VIII.)

CHRISTIE, WILLIAM, *Walsall and London*.—Saddles for hunting, park, racing &c.; Colonial Saddles; Military Saddles, Ladies' Saddles; Pads, Pilches, and Chairs for Children; Saddle Trees, &c. (321a)

DEED, J. S., & SONS, 451, *Oxford Street, London*.—Skins, Mats, and Rugs; Morocco and other Leather. (222)

(See also Group V.)

CLARK, SON & MORLAND, *Glastonbury*.—Sheep and Angora Skins dressed and dyed for hearth, door and carriage rugs, Chamois Leather, Leather Leggings, and Wool-lined Slippers. (223)

BIRNBAUM, B., 21, *New Broad Street, London*.—India-rubber Clothing—Coats, Capes, Aprons, Rugs, Leggings; Waterproof Cloth of all descriptions. (225)

INDIA RUBBER, GUTTA PERCHA, & TELEGRAPH WORKS, COMPANY, (LIMITED), *Silvertown, Essex, and 100, Cannon Street, London*.—India Rubber and Gutta Percha Manufactures; Submarine and Torpedo Telegraph Cable; Insulated Telegraph Wires. (775)

(See also Group XIV.)

LEATHER CLOTH COMPANY, 4, *Cannon Street, London*.—Crockett's Leather Cloth—Muslins, Drills, Ducks, Moleskins; double japanned and printed Table Covers. (226)

DAFT, T. B., C.E., *Failsworth, near Manchester*.—Elastic Fabrics, with model of the machinery used in making the web. (227)

WARNE, WM., & COMPANY, 9, *Gresham Street West, London*.—India-rubber Manufactures—Air-proof Articles; Magnetic Cut India-rubber thread in warps for elastic webs; waterproof cloths, and garments, surgical, mechanical, veterinary, and domestic appliances, tobacco pouches, and jars; Solid India-rubber Tubing and Suction and Delivery Hose of India-rubber and Canvas combined. Emery Wheels for grinding, polishing, &c. (228)

LEE, H. N. & E., 27, *Walling Street, and 138, High Holborn, London*.—India-rubber Garments and Fabrics; Beds, Cushions, Surgical and Domestic Appliances. (229)

HEMBRY, B., & COMPANY, 91, *Newgate Street, London*.—Linoleum Floor Cloth, Billiard Mats, Toilet and Bath Mats, Stair Cloth, and Borders; Linoleum Cement. (In use in the Hall of the Royal British Commission.) (230)

HARRY, W. D., & Co., *Lower Road, Deptford, Kent*.—Kamptulicon Floor Cloths, Knife Boards, and Toilet Mats. (231)

UNITE, JOHN, 291, *Edgware Road, London*.—Marquee, waterproof, 30 ft. by 15 ft.; Square Garden Tent, Alpine Tent, Emigrant's Tent; Models of Tents, Marquees, and Rick Cloths; Samples of small white and tarred Hemp Rope and Twine; Trophy of Bunting Flags. (232)

(See also Group XVI.)

EDGINGTON, JOHN, & COMPANY, 48, *Long Lane, Smithfield, London*.—Hospital Tent for collection of Military Equipment and Sanitary Appliances; Lawn Tent, on the Umbrella principle, called "Ritchie's Patent Tent." (233)

(See also Group XVI.)

SIMON, MAY & COMPANY, *Nottingham*.—Elastic Web Fabrics. (168)

(See also Group V.)

NORTH BRITISH RUBBER COMPANY (Limited), *Castle Mills, Fountain Bridge, Edinburgh*.—India Rubber Goods. (235)

GROUP VII.

Metal Industry.

GOLDSMITHS' AND SILVERSMITHS' WORK, AND JEWELLERY, &c. IRON AND STEEL WARES (excluding Machinery, Building Materials, Philosophical and Musical Instruments). MANUFACTURES FROM OTHER METALS AND ALLOYS. WEAPONS OF EVERY DESCRIPTION, except Military Arms. PROCESSES AND INVENTIONS USED IN THE PRODUCTION OF THESE MANUFACTURES. STATISTICS OF PRODUCTION

HANCOCKS & COMPANY, 38 and 39, *Bruton Street, London*.—Diamonds and Pearls; Jewellery; Gold and Silver-smiths' Work; Electro-Plated Goods. (240)

ELKINGTON & COMPANY, *Birmingham*.—Silver Plate; Electro-gilt Plate; Bronze and Enamelled Works; Plated Goods; Bronzes, cast and electro-deposited; Artistic objects in all metals. (241)

THOMAS, W. J., 28, *Old Bond Street, London*.—Jewellery, Silver Plate, Precious Stones, Watches. (242)

AITCHISON, JAMES, 23, *Princes Street, Edinburgh*.—Gold and Silver Jewellery; Highland Ornaments set with Scotch Pearls, Pebbles, Cairngorm, &c. (243)

DAVIS, G., SON & COMPANY, 37, 37½, & 38, *Sun Street West, Birmingham*.—Whip Handles; Umbrella and Walking Stick Mounts and Handles; Whip Sticks, Whip Thongs, and Materials used in the making of Whips. (244)

GOGGIN, JEREMIAH, 74, *Grafton Street, Dublin*.—Bog Oak; Albums, Writing Desks, Dressing Cases, &c.; Celtic Ornaments for personal wear, set with gems. (245)

WHITELEY, WILLIAM, 31 to 49, *Westbourne Grove, London*.—Black Glass Ornaments—Coronets, Aigrettes, Brooches, Bracelets, Combs, Chatelaines, Earrings, Buckles, Necklets, &c. (246)

FRANCHI, G., & COMPANY, 15, *Myddleton Street, Clerkenwell, London*.—Electrotype Plate; Reproductions of Works of Art, &c. (247)

BETJEMANN, G., & SONS, 36 and 38, *Pentonville Road, London*.—Caskets, Candelabra. (808)

(See also Group VIII.)

NEAL, JOHN, 44, 46 and 48, *Edgware Road, London*.—Pyro-silver Cutlery. (324a)

TAYLOR BROTHERS, *Adelaide Works, Sheffield*.—Circular Saw, 7 ft. 2½ in. in diameter, best cast steel, perforated, hardened and tempered, and ground by patented machinery. (248)

JOHNSON, RICHARD, & NEPHEW, 27, *Dale Street, Manchester*.—Wire Rods; a Weldless Wire Rod, 1,770 yards long; Galvanized Telegraphic Wire. (249)

JOHNSON, RICHARD, CLAPHAM & MORRIS, 27, *Dale Street, Manchester*.—Iron, Copper, and Brass Cloth; Wire Netting; Cloth for Paper-making and other Wirework; fine Copper and Brass Wire. (249*)

MILWARD, J. F., 160, *Great Hampton Row, Birmingham*.—Awl Blades; Sewing Machine Turnscraws; Harness Makers' Awls. (777)

FUSSELL, JAMES, SONS, & COMPANY, *Mells Iron Works, near Frome, Somersetshire*.—Agricultural Edge Tools, such as Hay, Chaff, Engine and Machine, and Thatchers' Knives; Bagging, Bean, Brushing, Eaves, Hewing, Reaping, and Furze Hooks; Scythes, Patent Adjusting Scythe Snead. (250)

LEONARDT, D., & COMPANY, 69, *George Street, Parade, Birmingham*.—Gold Pens, Pencilcases, Penholders, and Steel Pens. (251)

YATES, HAYWOOD & COMPANY, 95, *Upper Thames Street, London, and Effingham Works, Rotherham*.—Stable Fittings in Iron; Stoves, Fenders, and Fire Irons. (252)

SMITH, ROBERT, & COMPANY, *Porter Works, Sharrow Vale, Sheffield*.—Crucible Cast Steel; Steel for Tools, Taps and Dies, Drills, Spindles, and Sewing Machines; Cast Sheet Steel, Bessemer Steel, Cold Rolled Steel; Spindles; Cast Steel Hammers and Files; Cast Steel in ingots. (253)

MILWARD, H. & SONS, *Redditch, Worcestershire*.—Needles, Fish-hooks, Sewing Machine Needles, Fishing Tackle, Crochet-hooks, and Fancy Goods. (254)

BUDDE, C., & COMPANY (LIMITED), *Birmingham*.—Sheet Iron, Iron Wire, and Tubing; Hoop Iron, Tin Plates, Bar, Angle, and Channel Iron. (255)

BRANDAUER, C., 401, *New John-street West, Birmingham*.—Pens and Penholders. (266a)

COLLINGS & WALLIS, *King Edward's Road, Birmingham*.—Wrought Iron Chains, Anvils, Nails, Spades and Shovels; Steel Spades and Shovels, Edged and other Tools, Cutlery, Files, Rasps, Corkscrews, and Steel Toys; Cast Iron Umbrella Stands, Iron Fenders and Fire Irons; Cast Steel Axles, Hay, Dung, and Digging Forks; Portable Forge; Brass-foundry. (257)

(See also Group X.)

BROWN & COMPANY, *The Wednesbury Tube Works, Wednesbury*.—Boiler Tubes of Charcoal Iron; Staffordshire and Yorkshire Iron, Steel, and Howell's Homogeneous Metal; Gas Tubes and Fittings; Steam and Water Tubes and Fittings; Hydraulic Tubes; Artesian Well Boring Tubes; Taper Telegraph Posts; Heating and Condensing Coils; Roller Tubes; Loom Beams, &c. (258)

(See Appendix.)

WOODFIELD, W., & SONS, *Easemore Works, Redditch*.—Needles for Hand and Machine Sewing; Fish Hooks. (259)

CLARKE, EDWARD, *Patent Crank Works, Lincoln*.—Crank for Engines, Thrashing Machines, Pumps, Looms, Ships' Winches, &c., bent out of round bars by patent hydraulic machinery. (376)

BENHAM & SONS, 50, 52, and 54, *Wigmore Street, London*.—Stoves, Fenders, Fire Irons, Papier-Mâché and Japanned Ware; Lavatory Table, Water Closet, Ventilating Gas Lamps; Electro-plated Goods; Pneumatic Bell Apparatus. (261)

(See also Group IX.)

CLARK, WILLIAM, 232, *Oxford Street, London*.—Horse Clippers, worked by hand or other power. (778)

SMITH, JOHN WRIGHT, 121, *Belgrave Gate, Leicester*.—Self-Acting Needles for the Manufacture of Hosiery. (779)

BROWN, JOHN, & COMPANY, (LIMITED), *Sheffield*.—Bessemer Steel Rails, Axles, and Tyres; Iron Axles and Tyres; Railway Waggon Springs and Buffers; Engine Springs; Iron Boiler Plates; Armour Plates, Bolts, and Screws; Shot. (794)

FIRTH, THOMAS, & SONS, *Norfolk Works, Sheffield*.—Homogeneous Steel Core, for 35-ton gun; Forgings of the same metal, for artillery, rifle barrels, &c.; Illustrations of Tensile Strain and Elongation of the Homogeneous Steel. (807)

KENYON, JOHN, & COMPANY,
Millsands, Sheffield.—Steel, Files, Saws, and
Edge Tools. (262)

(See Appendix.)

SHAW & FISHER, 43, *Suffolk Road,
Sheffield.*—Britannia Metal and Electro-Silver
Plate; Dinner, Tea, and Coffee Sets; Waiters;
Tea-Kettles; Lamp-Stands; Hot Water and
other Dishes; Soup Tureens, Cruet-Stands,
and other Table-Ware; Candlesticks, &c.
(263)

AVERY, W., & SON, *Redditch.*—
Needles, Needlecases and Pincases. (264)

WINFIELD, R. W., & COM-
PANY, *Birmingham.*—Brass and Copper
Tubes, Iron and Brass-cased Tubes, Brass
and Copper Wire, Sheets, Plates, Rods, and
Rolled Metal; Gas Chandeliers and Gas
Fittings for Lighting and Heating; Iron
Bedsteads; Brass and Copper Bedsteads
and Metallic Furniture; general Brass-
foundry. (266)

RUSSELL, JAMES, & SONS, *Crown
Tube Works, Wednesbury, and 3, Southwark
Street, London.*—Wrought-Iron Tubes;
Steam Boiler Tubes; Gas Tubes and Fit-
tings; Steam and Water Tubes; Iron
Telegraph-Poles; Hydraulic Press Tubes;
Pneumatic Buffer Tubes; Steam Fittings in
Gun-metal, Brass, and Plain and Galvanised
Iron; Stocks, Taps, and Dies for cutting
Tube Screws. (267)

PIGALL, FRANZ, 22, *Tichborne
Street, London.*—Cutlery, Knives, and Forks;
Pen, Pocket, and Hunting Knives; Razors,
Scissors, with flexible bows, &c. (268)

LEMPART, MAURICE, 150, *Leaden-
hall Street, London, and Sheffield.*—Cutlery.
(321b.)

HOBBS, HART & COMPANY,
76, *Cheapside, London.*—Locks made by

machinery; Permutating and Endless-
change Key Locks; Iron Safes, for use of
jewellers, &c.; Fire-resisting Safes. (269)

PATENT NUT & BOLT COM-
PANY (LIMITED), *Birmingham & West Brom-
wich, England; and Cwm Bran Works: Cwm
Bran Blast Furnaces, and Cwm Bran Collieries,
South Wales.*—Fish Bolts, Fishplates, Sole-
plates, Spikes, Fang Bolts, and all other kinds
of Railway Fastenings; every description of
Bolts and Nuts, Rivets, Set Screws, Coach
Screws, Washers, Telegraphic Ironwork,
&c.; Hand and Machine-made, in Steel,
Iron, Copper, Brass, and Yellow Metal,
black, bright, and galvanised, as used by
Engineers, Railway Companies, Telegraphic
Constructors, Contractors, Shipbuilders,
Carriage and Wagon Builders, and others.
(270)

(See Appendix.)

WILSON-HAWKSWORTH,
ELLISON & COMPANY, *Carlisle Works,
Sheffield.*—Steel; Steel Wire; Files; Rail-
way Springs; Hammers, &c. (271)

MOSER, H. & R. J., *New Road,
Wandsworth Road, London.*—Horse Nails of
all forms and sizes, made with the patent
machinery of Messrs. J. and J. A. Huggett.
(272)

BROADHEAD, R., & COMPANY,
Britannia Works, Sheffield.—Britannia Metal
and electro-plated Goods; Thompson's
Patent mounted Earthenware Jugs. (273)

MILNER, THOS., & SON, *Phoenix
Works, Liverpool.*—Fire-resisting and Hold-
fast Wrought-iron Safes, and Gunpowder
Magazines. (274)

BROOKES & CROOKES, *Atlantic
Works, Sheffield.*—Knives, Razors, Scissors,
and Dressing Case Instruments. (275)

MACDANIEL & COMPANY, 343,
Oxford Street, London.—Fine worked Steel
Cutlery; Ladies' Étuis; Razors; Hunting,
Pen, and Pocket Knives; Scissors; Table
Cutlery. (276)

BOWLING IRON COMPANY (LIMITED), Bradford, Yorkshire.—Iron and Steel—Boiler Plates; Steel and Iron Tires, Axles and Bar Iron; Steel Castings. Illustrations of proportions of Coal, Ironstone, and Limestone employed to produce the cube of iron shown. Drawings of Engines, and Photographs of the Works. (277)

COALBROOKDALE COMPANY, Coalbrookdale, Shropshire.—Grand Entrance in Mediæval style, consisting of a pair of Wrought Iron Gates, 2 Hand Gates, 4 Pillars, and short lengths of Railing to match, executed from designs by B. J. Talbert, Esq.; the enrichments are of cast iron, applied, and the twisted bars are produced by Tuddenham's patent process, with two lengths of Wrought and Cast Railing on either side. (The above enclose the space between the two North entrances to the British section). The Gates, Railings, Gas Pillars, &c., enclosing the house of the Royal British Commission, viz.:—The principal entrance of cast sheet fence and gates, terminated by 2 gas pillars; the 2 lengths improved cast palisade fence on either side; a length of cast sheet balcony railing on east side; the west entrance to the building of patent twisted angle bar fence and gates; a length of the same fence of various designs on west and north sides; a length of bracket railing on east side within the grounds. Various coats of arms and trophies in and about the house of Royal British Commission. Garden Chairs in grounds and park:—Osmunda Regalis, Water Plant, Mediæval, Midsummer Night's Dream, Nasturtium, Horse Chestnut, and Medallion. Vases in grounds and park:—Milton, Night and Morning, Classic, and Jardinière. Flower Stands in grounds and park, with shelves and dishes. Garden Rollers on improved principle (in Agricultural Hall). (278)

(See Appendix.)

SMITH, J. K., & COMPANY, 63, St. Vincent Street, Glasgow.—Galvanized and Corrugated Sheet Iron. (279)

KIRKSTALL FORGE COMPANY, Leeds.—Iron Wheels, Axles and

Tyres for railway carriages and other vehicles. Specimens of best Yorkshire Iron. (280)

(See also Group XIII. and Appendix.)

SPEAR & JACKSON, Etna Works, Sheffield.—Steel, Steel Forgings, &c.; Saws, Files, Edge Tools, Elastic Steel Agricultural and Horticultural Tools; Engineers', Smiths', Mining and Quarrying Tools. [Rotunda.] (281)

(See Appendix.)

CAMMELL, CHARLES, & COMPANY, Cyclops Steel and Iron Works, Sheffield.—Rolled Iron and Armour Plates and their fastenings; Steel Tires, Axles, Railway Springs, Rails, Castings, Screw Propellers, &c., and Steel in bars. (797)

BALDWIN, E. P. & W., Wilden Works, near Stourport.—Sheet Iron, Tin Plates, Button Iron, &c. (284)

(See Appendix.)

PERKINS, B., & SON, Bell Court, and 141, Cannon Street, London.—Baths of various kinds; Toilet Furniture; Tin, Iron Plate, and Japanned Wares; Fancy Dish Covers, Tea-Trays, Coal Vases, &c. (285)

FARROW & JACKSON, 18, Great Tower Street and 8, Haymarket, London, and 23, Rue du Pont-Neuf, Paris.—Wine Bins; Machines and Implements for the management of wines; Soda Water Apparatus; Beer Engines and Pumps; Knife Cleaners, and other domestic appliances; Grape-Crushing Machine. (286)

WARD & PAYNE, 114, West Street, Sheffield.—Sheep Shears and Edge Tools. (287)

WILLS, A. W., Park Mills, Nechells, Birmingham.—Edge Tools, Axes, Adzes, Hooks, Hoes, Spades, Shovels, Spuds, and Forks of solid cast-steel. (288)

(See Appendix.)

FEETHAM & COMPANY, 9, Cliford Street, London.—Stoves and Grates for burning coals and wood; Warm Air Ventilating Grates; Fire Dogs, Fenders, and Fire Irons; Fire Guards; Coal Boxes, &c.; Warm Air Fireplace for Exhibitors' Club

Room; Projecting Grate for H.R.H. the Prince of Wales's room; two Camp Cooking Stoves for Workmen's Kitchens. (289)

LICHTSCHEINDE & COMPANY, 10, *Upper Weymouth Street, London*.—Brass and Iron Bedsteads. (185)

(See also Group V.)

CHATWOOD, SAMUEL, *Lancashire Safe and Lock Works, Bolton, and 120, Cannon Street, London*.—Steel and Iron Safes, to resist fire and burglars; Iron Door for bankers' strong-rooms; Iron Deed Chests; Cast Steel Composite Coffers and Safes; Locks: Model of Patent Built-up Wall Safe, &c. (290)

(See Appendix.)

HAYES, CROSSLEY & COMPANY, 153, *Cheapside, London, and Alcester*.—Needles, called "double-pointed," that is, tapering both ways from the middle, in various stages of manufacture. (798)

PASCALL, ATKEY & SON, *Cowes, Isle of Wight*.—Cooking Range for a Yacht; Saloon or Hall Stove. (799)

BLEWS, WILLIAM, & SONS, *New Bartholomew Street, Birmingham, and West Bromwich*.—Chandeliers in metal and glass; Gas, Steam, and Water Fittings; Hydrants; Iron and Brass Tubes and Fittings; Church and other Bells; Weights of various standards; Water Closets and Fittings, &c. (802)

(See also Group XV.)

CLARK & COMPANY, *Rathbone Place, London, and 8, Kärnthnerstrasse, Vienna*.—Patent Self-coiling Shutters in one sheet of Steel; Self-coiling Wood Shutters lined with Steel Bands; Louvre Venetian Shutters. (803)

LANDORE SIEMENS STEEL COMPANY (LIMITED), *Landore, near Swansea*.—Steel Rails, Steel Plates for Tinning; Tinned, stamped and plain rolled; Steel Barrel and Bodies of Martini-Henry Rifle, &c. (804)

MACFARLANE, W., & COMPANY, *Saracen Foundry, Glasgow*.—Cast Iron Ornamental Rain Water Goods, Lamp Posts, &c. (291a)

BRUNNER & COMPANY, *Glasgow*.—Wrought Iron Tubes for Steam, Gas, and Water. (283)

KIRBY, BEARD & COMPANY, 18, *Cannon Street, London*.—Pins, Needles, and Hair Pins. [Rotunda.] (292)

HILL & SMITH, *Brierley Hill Iron Works, Staffordshire*.—Iron Gates, Wire Fencing, &c. (293)

(See also Group XIII.)

FRANCIS, T., & COMPANY, *Liverpool Street, Birmingham*.—Nails and Castings of Malleable Iron. (294)

SMITH & TURNER, 50, *Bartholomew Close, London*.—Ben Turner's Patent Adjustable Regulating Double-Action Door Spring, and Smith's Double-Action Door Spring, Door Centres, &c. (282)

BARNARD, BISHOP & BARNARDS, *Norfolk Iron Works, Norwich*.—Cottage Range, Mangle, Root Grater, Bottle Bin, Poultry Fountain, Carriage Jack, and machine made Staples, Garden Seats and Chairs, Ornamental Wrought-Iron Gates; Palisade in Wrought and Malleable Iron. (295)

(See also Group XIII.)

GILLOTT, JOSEPH, & SONS, *Victoria Works, Birmingham*.—Steel Pens. (296)

(See Appendix.)

RATCLIFF & TYLER, 76, *New John Street, Aston Road, Birmingham*.—Gas Fittings, Gaseliers; General Artistic Metal Work. (297)

(See Appendix.)

BURNEY & COMPANY, *Millwall Docks, London*.—Iron Cisterns and Tanks, painted or galvanised, as made for the Royal British Navy. (299)

(See Appendix.)

PARTRIDGE & COMPANY, *Lombard Street, Birmingham*.—Gas Fittings, Chandeliers or "Gazeliers," and Brackets and Ceiling Roses. (300)

PEARSON, F. G., & COMPANY, *Hope Works, Furnace Hill, Sheffield*.—Adzes, Augers, Axes; Hay, Manure, and Digging Forks; Hatchets; Joiners' and Engineers' Tools, Trowels, and all descriptions of light and heavy Edge Tools. (301)

(See Appendix.)

BEST & LLOYD, *Cambray Works, Handsworth, Birmingham*.—Brass Gas Chandeliers and Gas Fittings. (302)

WATTS, JOHN, & COMPANY (S. Bateson, inventor), *Broad Weir, Bristol*.—Vermin Asphyxiator; Disinfectant, Fumigator, and Vaporiser. (783)

TINPLATE DECORATING COMPANY, *Neath, Wales*.—Decorated Tinplates and Goods made from the same; Tinplates, and Tin Ware. (303)

EVERITT, ALLEN, & SONS, *Birmingham*.—Brass and Copper Tubes, Rolled Sheets, Wire and Nails, Copper Rivets and Washers, and Pierced Brass. (304)

(See Appendix.)

ELMSLIE, E. W., 5, *Great Winchester Street Buildings, Old Broad Street, London*.—Hermetically Closed Tin Cases for Preserved Provisions, which can be opened neatly and readily without a knife. (305)

BROWN, J. B., & COMPANY, 90, *Cannon Street, London*.—Galvanized Wire Netting, Fencing Wire, &c. (306)

(See also Group XIII.)

SMITH, FREDERICK, & COMPANY, *Caledonian Works, Halifax, Yorkshire*.—Iron Wire—For Cotton and Wool Cards, Colliery Ropes, Ships' Rigging, Telegraphs, Fencing; Weavers' Reeds, Ladies' Bonnets, &c., with illustrations of manufacture. (307)

WALKER, CAMPBELL, & COMPANY, 59, *Bridgewater Street, Liverpool*.—Haine's Patent Block-tin and Lead Pipes. (378)

PEYTON & PEYTON, *Bordesley Works, Birmingham*.—Brass and Iron Bedsteads, Cots, Flower Stands; and Spring Mattresses. (308)

HEMMING, S. C., & COMPANY, 25, *Moorgate Street, London*.—Iron Buildings, namely, two Houses for British Workmen, Royal Commission Pavilion, and Offices of

British Commission, with Club Room. Also a Church, Photographic Association House, and Italian Restaurant. (309)

PHILLIP, CHARLES J., 20, *Caroline Street*, and 29, *Mary Street, Birmingham*.—Chandeliers. (93)

SANDERS, H. G., *Little Albany Street, Regent's Park, London*.—Metallic Collapsible Tin Tubes for artists' colours, perfumes, cosmetics, &c. (310)

CROGGON & COMPANY, *Albion Wharf, 10, Upper Thames Street, London*.—Building, constructed of galvanised corrugated iron and wood. (319)

FLETCHER, LOWNDES & COMPANY (per Messrs. Dows, Clark & Company), 13a, *Great George Street, Westminster, London*.—Pavilion, the roof of which is constructed on Howitt's Patent System of Tubular Wrought Iron Ribs. (311)

HOWITT, W., & COMPANY, 13a, *Great George Street, Westminster, London*.—Roof of Dows, Clark & Company's Pavilion, constructed on tubular ribs. (311*)

LANCASTER, A., 27, *South Audley Street, London*.—Sporting Fire Arms, first quality, with latest and best improvements in Guns and Rifles. (312)

HENRY, ALEXANDER, 12, *South St. Andrew Street, Edinburgh*.—Henry's Express Rifles, Single and Double Barrelled, and Double Central-Fire Gun. (313)

(See also Group XVI.)

LEWIS, GEORGE EDWARD, 32 and 33, *Lower Loveday Street, Birmingham*.—Breech-loading Sporting Guns, double barrelled, central fire, &c.; Double Bolt-snap or Self-locking Pin Fire Breech-loaders for sporting, with steel breech-ends to the barrels; Treble Grip-snap Breech-loading Sporting Guns, with self-acting compensation bolt to save wear of breech-ends; Double Barrelled Express Sporting Rifle, with low trajectory, .450 bore; Martini-Henry Sporting Rifle, 15l. 15s. (664)

(See also Group XVI.)

TAYLER, D. F., & COMPANY, *New Hall Works, George Street, Birmingham.*—Solid headed Toilet Pins; Hair Pins; Hooks and Eyes; Pearl Buttons; Thimbles; Iron, Steel, Brass, and Copper Wire. (291)

SCHLETTER & COMPANY, *Birmingham.*—Fire Arms; Tin Plates; Tin and Japanned Ware; Cutlery, Edge Tools, Bells; Gilt Jewellery, Brass-foundry, Needles. (217)

(See also Groups VI. and X.)

DOUGALL, JAMES D., 59, *St. James's Street, London.*—Sporting Guns and Rifles, and new Explosives; Rifles for deer stalking, tiger and elephant shooting, swan and duck, and small game; Sawdust Gunpowder for sporting purposes, &c. (314)

MURCOTT, THEOPHILUS, 68, *Haymarket, London.*—Patent Hammerless Breech-loading Sporting Guns. (320)

(See also Group XVI. and Appendix.)

DOULTON & COMPANY, 28, *High Street, Lambeth, London.*—Plumbago Crucibles and Melting Pots, Muffles; Fire Clay Crucibles, Furnaces, Melting Pots, Evaporating Vessels, Muffles, &c. (315)

(See also Group XVIII.)

HYNAM, JOHN, 7, *Princes Square, Finsbury, London.*—Plumbago Crucibles for Gold, Silver, and Steel Refiners; also for Brass, Copper, Zinc, Antimony, and all other Metal Melters. (319a)

(See Appendix.)

PLANT BROTHERS, 166, *Bromsgrove Street, Birmingham.*—Enamelled Iron Tablets. (374)

PILLISCHER, M., 88, *New Bond Street, London.*—Reading and other Lamps. [Rotunda.] (622)

(See also Group XIV.)

BUSBY, T., 10, *Baron Street, Pentonville, London.*—Bath Valves. (699)

(See also Group XVIII.)

KENT, GEORGE, 199 to 201, *High Holborn, London.*—Rotary Knife Cleaners, Ventilated Refrigerators, Bread Slicing Machines, Egg Beaters, Mixers, Churns,

Potato Mashers, Mincers, Cinder Sifters, Clothes Wringers, Carpet Sweepers, &c. (711)

(See also Group XXI. and Appendix.)

THE WALKER FORGED SCREW AND BOLT COMPANY, *Low Walker, near Newcastle-on-Tyne.*—Patent Forged Screws; Spikes, Fish Bolts, Fang Bolts, and every description of Bolts and Nuts, Chains, Rivets, &c. (677)

(See also Group XVII.)

MURRAY, G. W. *Banff, Scotland.*—Fencing Wire Straining Brackets, for wood and iron posts. (610)

(See also Group XIIIa.)

WATSON, HENRY, *Highbridge Works, Newcastle-on-Tyne.*—Miners' Safety Lamps, used in the Coal Mines near Newcastle-on-Tyne. (486)

(See also Group XIII.)

ELEY BROTHERS, 254, *Gray's Inn Road, London.*—Cartridge Cases for Pin-fire and Central-fire Sporting Guns and Rifles, and for Revolving Pistols, Percussion Caps, Gun Waddings of thick felt, Wire Shot Cartridges for Game at long distances, for Muzzle and Breach Loaders. (657)

(See also Group XVI.)

CORCORAN, BRYAN, WITT & COMPANY, 28, *Market Buildings, Mark Lane, London.*—Wirework for Malt Kiln Floors, containing 6,912 and 9,072 meshes respectively to the square foot; Steel and Iron Round and Square Bar Smut Wire, woven of any size, width, and number of holes; Perforated Plates for Smut Machines; Portland Cement for Malting Floors, Concrete, &c.; Silk used for Dressing Flour; Wirework for Paper Making, Sieves, and other uses; Rice Shelling, Cleaning, and Polishing Stones; Mill Implements and Tools; Pulley Blocks, Hoists, Leather Belting, Grindstones, Haircloth, &c.; Wire of all kinds. (597)

(See also Group XIIIa.)

JEFFREYS, CHARLES, 103, *Hatton Garden, London.*—Outside Reflector Lamps, for lighting shop windows, &c. (753)

(See also Groups VIII. and X.)

THOMAS, RICHARD & Co., *Tin Plate and Iron Works, Lydbrook, near Ross.*—Specimens of Tin Plates. (359)

GROUP VIII.

Wood Industry.

CABINET WORK (Inlaid Floors, Windows, Doors, &c.). JOINERS' WORK. CLEFT WOODWORK (Casks, Shingles, Sieves, &c.). SMALL STAVES AND THEIR PRODUCTS, MATCHES, &c.). VENEERS AND MARQUETRIES. CUT AND TURNED WOOD. CHISEL WORK AND CARVED WORK. CORK MANUFACTURES. BASKET WORK. WOODWORK PAINTED, STAINED AND GILT. PROCESSES AND INVENTIONS USED IN THE PRODUCTION OF THESE MANUFACTURES. STATISTICS OF MANUFACTURE.

FOLEY, ARTHUR, *Fisherton Machine Cabinet Works, Salisbury*.—Boudoir Toilet Table of English yew tree and sycamore wood, and Toilet Table of American birch, inlaid with various woods, and decorated with incised Arabesques and Photographs, printed on the wood. (Designed by H. Dickenson.) (810)

HOLLAND & SONS, 23, *Mount Street, Grosvenor Square, London*.—Furniture. (325)

JACOB, THOMAS, 10, *Vicar's Road, Haverstock Hill, London*.—Table made of Amboyna wood, and inlaid with ivory and coloured woods. (326)

GILLOW & COMPANY, 176, *Oxford Street, London*.—Artistic Furniture—Inlaid Cabinet of Ebony and other woods in the old English style. (327)

JACKSON & GRAHAM, 30 to 38, *Oxford Street, London*.—Decorative Furniture and Carpets. (328)

COOPER & HOLT, 48, 49, and 50, *Bunhill Row, London*.—Mediæval Oak Buffet and Carving Stand to match; Ebony Flower Stand with Decorative Tile Panels; Drawing-room Cabinet of Satinwood, with glass back, inlaid with Ivory, Ebony, and other woods, mounted in Ormolu. In Children's Pavilion: Ash Furniture and General Nursery Fittings. In the Exhibitors' Waiting and Reading Rooms in the Royal British Commission Offices, a Patent Reversible Billiard Table, and other Furniture. Furniture and General Fittings in the English Workmen's Houses. (329)

HEAL & SON, 195 to 198, *Tottenham Court Road, London*.—Bedroom Furniture. (330)

(See also Group II. and Additional Exhibitions.)

WARD, HENRY, 2, *Vere Street, Oxford Street, London*.—Stuffed Birds; Collections of Humming and other Birds, mounted within glass fire screens. (331)

WARD, EDWIN, *Wigmore Street, London*.—Hoofs of a Stag killed at Compiègne, by H.R.H. the Prince of Wales, adapted to a Memorial Inkstand. (340a)

COLLINSON & LOCK, 109, *Fleet Street, London*.—Cabinets in Satinwood, Rosewood, &c.; Fireplace with Decorated Panels; Sideboards and Chairs. (332)

MORANT, BOYD & BLANFORD, 91, *New Bond Street, London*.—Ebonised Sideboard, Neo-Grec style; Walnut-tree Writing-table, style Louis XVI.; Florentine Pedestals, carved in alto-relievo and gilt; Wall and Ceiling Decoration, in ebony and gold, with painted panels in Italian style; Louis XVI. Cheval Screens; and other examples of decorative furniture. (333)

WALKER, W., *Bunhill Row, London*.—Suite of Furniture, consisting of Wardrobe, Toilet Table and Wash-hand Stand, in Satin Wood inlaid with engraved ivory and coloured woods, and sculptured ivory medallions. (334)

(See Appendix.)

CLARK, W., & SONS, 383, *Kennington Road, Lambeth, London*.—Chairs in Oak, Satin Wood, Ebonized Wood, gilt, covered with satin, &c. (785)

DREW, JOHN, 33, *Regent Street, London.*—Show Cases for the Exhibition.

(750)

(See also Group VI.)

SAGE, F., 80 to 84, *Gray's Inn Road, London.*—Show Cases for the Exhibition.

(751)

(See also Group X.)

SOMMERVILLE & SMITH, 34, *Eagle Street, Red Lion Square, London.*—Show Cases for the Exhibition.

(752)

JEFFREYS, CHARLES, 103, *Hatton Garden, London.*—Shop Fittings and Show cases for the Exhibition.

(753)

(See also Groups VII. and X.)

BATTAM, HEYWOOD & HANKS, 54, *Oxford Street*; 1, *Berners Street*; and 17, *Regent Street, London.*—Ebonised and Gilt "Structural" Pavilion, Table, Chairs, and Carpet, designed by Dr. Dresser, F.L.S. [*Rotunda.*]

(94)

CLARKE, J. R., 5, *Liverpool Street, Watworth, London.*—Fancy Inlaid Articles in Wood, known as "Tonbridge Ware;" Mosaic Wood, made from natural British and Foreign woods without any dye or colouring.

(335)

NEVILL, LADY DOROTHY, *Dangstein, Petersfield.*—Workbox.

(336)

MINNS, J., *Thorn Lane, Norwich.* Wood Carvings; Animals, Birds, Foliage, &c.

(337)

BARNARD, B., 107 *St. Paul's Road, Highbury, London.*—Folding Hammock Basinettes and Baskets.

(338)

DUNCAN, J., 6, *George Street, Great Portland Street, London.*—Painted Imitations of Woods and Marbles.

(339)

BETJEMANN, G., & SONS, 36, 38, *Pentonville Road, London.*—Dressing Cases and Bags; Desks, Patent Bookslides, Albums, Envelope Cases; Trinket, Work, and other Boxes, in various woods, Ormolu, &c., decorated with Enamel, Marble, Stones, Mosaics, Wedgwood ware, &c.

(808)

(See also Group VII.)

LE CRAS, J., JUN., *St. Heliers, Jersey.*—Encoignure or Corner Cupboard of Oriental Design.

(725)

JACKSON, T. S., 199, *High Street, Southwark, London.*—Specimens of Stained Woods.

(806)

(See also Group III.)

GROUP IX.

Stone, Earthenware, and Glass Industry.

STONES, NATURAL AND ARTIFICIAL; Slate and Cement Works, Natural and Imitated Stones and Marbles, Paving Stones and Floor Tiles, Ornaments and Decorations, Pipes, Grinding Stones, &c. EARTHENWARE, PIPES, COOKING VESSELS, STOVES, PLASTIC PRODUCTIONS, TERRA COTTAS, &c. GLASS MANUFACTURES: Glass for Household use and Fancy Purposes, Imitation Gems and Pearls, unset, &c. PROCESSES AND MANUFACTURES USED IN THE PRODUCTION OF THE ABOVE ARTICLES. STATISTICS OF PRODUCTION.

DIRECTORS OF CONVICT PRISONS IN ENGLAND.—Mosaic Flooring Constructed of Scraps of Marble, the work of Female Convicts in Woking Prison. (340)

JOHNSON, I. C., & COMPANY, 25, *Great Tower Street, London*.—Cements, Concrete Blocks of Cement, &c.; Testing Machine to show strength of Cement. (345)

MINTON, HOLLINS, & COMPANY, *Patent Tile Works, Stoke-upon-Trent, Staffordshire*; and 50, *Conduit Street, Regent Street, London*.—Tiles—plain, glazed, encaustic, majolica-embossed, printed, enamelled, and painted; Chimney-piece of wood and marble, inlaid with painted tiles; and with Fireplace fitted complete Mosaic Reredos, Mosaic and Encaustic Tilet Pavements; Marble Chimney-piece, with Stove, inlaid with painted earthenware slabs. (346)

WELSH SLATE COMPANY, 19, *Spring Gardens, Charing Cross, London*.—Slates and Slabs from Palmerston Quarry, North Wales, namely, one slab smoothed on both sides, another showing the natural surface of the slate; Roofing Slates of various dimensions, and ridges split twenty to the inch, to show the cleavage of the slate. (347)

(See Appendix.)

GREAVES, J. W., *Port Madoc, North Wales*.—Best Blue Roofing Slates from his Festiniog Quarries, North Wales. (348)

PEN-YR-ORSEDD SLATE QUARRY COMPANY, (W. A. DARBISHIRE, Manager,) *Carnarvon, North Wales*.—Slate for Roofing; Slate Slabs; Slate Ridge for Roofs; Writing Slates, made with Dixon's patent machinery. (349)

LAVERS, A. H., *Nine Elms, London*.—Portland Cements, Roman, Keene's and Parian; Plaster of Paris. (350)

TAYLOR, ROBERT MINTON, *Fenton, near Stoke-upon-Trent, and 206, Great Portland Street, London* (Agents at Vienna, Springer & Sterne).—Encaustic, and Geometrical Tiles, Art and Majolica Tiles and Mosaics. (351)

TURNER, W., *Carnarvon, Wales*.—Welsh Roofing Slates. (352)

SCOTT'S SEWAGE COMPANY, *Ealing, London*.—Ceraent, prepared from sewage deposit; the burnt sewage cements reduced to powder; the same cements set neat. (19)

(See also Group III.)

CWMORTHIN SLATE COMPANY (LIMITED), *Port Madoc, North Wales*.—Roofing Slates. (353)

WOULDHAM CEMENT COMPANY, *Wouldham, Rochester, Kent*.—Portland Cement in various stages of manufacture. (354)

BURGH CASTLE PORTLAND CEMENT COMPANY (LIMITED), *Burgh Castle, Great Yarmouth*.—Portland Cement in its various stages of manufacture, as prepared for stuccoing, for concrete and for hydraulic purposes; Test Blocks of the same which have borne a tensile strain of 1,120 pounds on $1\frac{1}{2}$ square inches, after seven days' immersion in water; White Suffolk facing and moulded Bricks. (355)

WOOD & IVERY, *Albion Brick Works, West Bromwich, Staffordshire*.—Terra-Metallic Coping, Cornices, Mouldings, Plain and Ornamental Bricks, Channels, Garden Edging, Caps, Plinths, Kerbing and Paving Slabs, &c., &c. (356)

HAMMILL, J. B., *Bridgewater*.—Bath Bricks, made from selected sediments of the river Parret, at Bridgewater, for cleaning, brightening, and polishing hardware, brass, and other metal work, knives, &c. (787)

FORD, LEWIS, & COMPANY, *Bristol Road, Gloucester*.—Slate and Marble, Enamelled, Chimney Piece, Table Tops, &c. (788)

WEDGWOOD, JOSIAH, & SONS, *Etruria, Staffordshire*.—Jasper or Wedgwood Ware, white bas-relief on coloured ground, unglazed; "Henri-deux" imitation; Art Pottery Paintings, by M. Lessore; Paintings on Raw Enamel, by M. Beau; Majolica Vases, Dessert, and Fancy Articles; Enamelled, Printed, and Cream-coloured Earthenware; Chemical and Telegraphic Ware; Sanatory and Plumbers' Ware. (796)

DOULTON & WATTS, *Lambeth Potteries, London*.—Stoneware of every description, for chemical manufacturers, dyers, and others. (357)

JONES, G., *Trent Potteries, Stoke-upon-Trent*.—Earthenware and Majolica. (358)

GREEN, JAMES, 35, *Upper Thames Street, London*.—Table Glass, cut and engraved; Glass Lustres and Chandeliers, Vases, Table and other decorative objects. (360)

DANIELL, A. B., & SON, 46, *Wigmore Street, London*.—Glass for Household Use and Ornamental Glass; Pottery and Porcelain, Dinner and Dessert, Breakfast and Tea Services, Toilet Ware, Majolica Vases, and Collection of Ornamental Objects. (361)

COPELAND, W. T., & SONS, 160, *New Bond Street, London; and Stoke-upon-Trent, Staffordshire*.—Glass for Table Use: cut, engraved, plain, and moulded; Porcelain Vases, Dinner, Dessert and Tea Services. Statuettes in Ceramic Statuary. (362)

MOORE, E., & COMPANY, *Tyne Flint Glass Works, South Shields* (Agents for the Continent, SALOMON & JACOBSON, 14, *Deichstrasse, Hamburg*).—Pressed Table Glass, suitable for exportation. (363)

AIRE AND CALDER GLASS BOTTLE COMPANY, *Castleford, Yorkshire*.—Glass Bottles for Aërated Waters, with patent self-acting stoppers; Bottles used for Wine and Spirits, with patent stoppers and packing cases; Bottles used for Medicine, Perfumery, Oils, Preserves, Pickles, Sauces, &c.; Monster Bottles and Carboys. (364)

PELLATT & WOOD, 25, *Baker Street, Portman Square, London*.—Engraved and Cut Glass; Samples of Table Glass, and Services of new forms and designs; Plain Thin Glass; and New Light Cut Glass Designs; China and Earthenware Breakfast, Dinner, and Dessert Services; Paterœ and Vases; Jardinières; Figures in Terra-Cotta, with Persian Blue Glaze, and New Persian Glaze Ware. (365)

(See Appendix.)

PELLATT & COMPANY, *Falcon Glass Works, Blackfriars, London*.—Plain and Cut Crystal Glass; Table Services; Patterns of Glass for Railway and other purposes; Specimens of Lapidary Cutting in imitation of celebrated Diamonds. (366)

(See Appendix.)

BOUCHER, GUY & COMPANY, 128, *Leadenhall Street, London*.—Glass, cut and engraved; China and Earthenware. (367)

(See Appendix.)

CODD, H., (Per Messrs. Dows, Clark, & Co.), *Grove Lane, Camberwell, London*.—Patent Stoppered Bottles for Aërated Waters. (368)

ROYAL PORCELAIN WORKS, *Worcester*.—Porcelain, Ivory Porcelain, Majolica, Enamelled Terra-Cotta; Vitreous Stoneware and Fine Earthenware. (369)

MINTONS, *Stoke-upon-Trent, and 28, Walbrook, London*.—China and Earthenware Dinner, Dessert, Tea, and Toilet Services, China, Majolica, and Parian Vases, Statuettes, and other Ornaments; Enamelled Tiles for walls, grates, hearths, and flower boxes. (370)

MORTLOCK, JOHN, 203, 204, *Oxford Street, London*.—China Breakfast, Dinner, Dessert, and Tea Services, manufactured by Minton; Stone China Dinner Services of Minton, and Wedgwood Ware; Vases, &c., painted by Solon, Mussill, Coleman, and others; Majolica Garden Seats and Vases; Service of Engraved Glass, executed for the Earl of Dufferin, Governor-General of Canada; Glass Bird Cages. (371)

BROWN - WESTHEAD, T. C., MOORE & COMPANY, *Cauldon Place, Hanley, Staffordshire*.—Fine Earthenware and Porcelain, and "Viennese" Earthenware for table use; Majolica, and Jasper Vases, &c.; Specimens of Painting under Glaze. (372)

(See also Group XVIII.)

SIMPSON, W. B., & SONS, 456, *West Strand, London*.—Chimney Piece of Art Tiles and Walnut Wood, with tiled

sides, arranged for open grate. Price 150 guineas; Oriental Shaped Bottles, Vases, and Trinket Box in Majolica. (373)

BARLOW, THOMAS, *Loughton, Staffordshire*.—China. (379)

BENHAM & SONS, 50, 52, & 54, *Wignore Street, London*.—Marble Chimney Pieces. (261)

(See also Group VII.)

SILICATED CARBON FILTER COMPANY, *Church Road, Battersea, London*.—Silicated Carbon Filters in Glass, Terra-Cotta, Marbled China and Earthenware. (Shown in operation at Royal Commission Buildings in the Park.) (708)

(See also Group XXI.)

HAZEON, THOMAS, & COMPANY, *Leadenhall Street, London*.—Hone and other Stones for sharpening Tools, &c. (740*)

(See also Additional Exhibitions and Appendix.)

BURKE & COMPANY, 17, *Newman Street, London*.—Marbles. (740*)

(See also Additional Exhibitions.)

COLTHURST, SYMONS & Co., *Bridgwater*.—Bath Bricks for cleaning, brightening and polishing hardware, brass and other metal work, knives, &c. (256)

DOULTON, H. & COMPANY, 28, *High Street, Lambeth, London*.—Blue Metallic Clay Goods for Pavings, Copings, Ridge Tiles, Channellings and Kerbings; also for use in Buildings where extra strength is required. (315)

GROUP X.

Small Ware and Fancy Goods.

MANUFACTURES OF IVORY, MEERSHAUM, TORTOISE-SHELL, MOTHER-OF-PEARL, WHALEBONE, WAX WARES, JAPANED GOODS, &c. FANCY GOODS, OF LEATHER, BRONZE, &c. UMBRELLAS, PARASOLS, FANS, CANES, WHIPS, &c. COMBS AND BRUSHES. TOYS. PROCESSES AND INVENTIONS USED IN THE PRODUCTION OF MANUFACTURES. STATISTICS OF PRODUCTION.

ATKINSON, J. & E., 24, *Old Bond Street, London*.—Ivory and Tortoise-shell Goods. (47)

(See also Group III.)

COLLINGS & WALLIS, *King Edward's Road, Birmingham*.—Japanned Trays, Waiters, Coal Scuttles, Toilet Ware, Cash Boxes, Candlesticks; Japanned Papier-Mâché Tables, Writing Desks, Trays, Ink-stands, &c.; Japanned Iron and Pearl Vases. (257)

(See also Group VII.)

SCHLETTER & COMPANY, *Birmingham*.—Ivory and Pearl Shell Work; Umbrellas, Combs, &c. (217)

(See also Groups VI. and VII.)

SAGE, F., 80 to 84, *Gray's Inn Road, London*.—Fancy Stands for Jewellery. (751)

(See also Group VIII.)

JEFFREYS, CHARLES, 103, *Hatton Garden, London*.—Velvet Jewellery-Stands, Morocco and Velvet Cases for Jewellery. (753)

(See also Groups VII. and VIII.)

SANGSTER & COMPANY, 140, *Regent Street*; 10, *Royal Exchange*; 94, *Fleet Street*, and 75, *Cheapside, London*.—Umbrellas, Parasols and Sunshades. [*Rotunda*.] (380)

SWAINE & ADENEY, 185, *Piccadilly, London*.—Whips, Riding and Walking Canes and Sticks. (211)

(See also Group VI.)

KENT, G. B., & COMPANY, *Great Marlborough Street, London*.—Brushes for the Toilet, for the Stable, and for Painters' (381)

(See Appendix.)

STEWART, S. R., & COMPANY, *Aberdeen Comb Works, Aberdeen*.—Combs of all kinds in Tortoiseshell, Horn, and Vulcanite; Horn Spoons, Drinking Cups, and Druggists' Scoops; Vulcanite Bracelets, Chains, Ornaments, &c. (382)

(See Appendix.)

LEWIS, E. W., 4, *Sherwood Crescent, Upper Westbourne Park, London*.—Gyroscopes; Aërial, Scientific, Mechanical and other Toys. (383)

BINKO, H. BOCK, 183, *City Road, London*.—Toys. (384)

(See also Group XI.)

CREMER, W. H., 210, *Regent Street, London*.—Toys and Games. (386)

SMITH & WRIGHT, *Birmingham*.—Buttons, Gilt Jewellery, and Dress Ornaments. (387)

JONES & Co., 111, *Jermyn Street, London*.—Fishing Tackle, &c. (316)

PEAGAM, J. J. R., 7, *Queen Street, St. Helier's Jersey*.—Walking Sticks made from the Stalk of the Jersey Cabbage. (318)

GROUP XI.

Paper Industry and Stationery.

PAPER PULP, PAPER, AND PASTEBOARD. COLOURED PAPERS, PAPER HANGINGS, TAPESTRY, PLAYING CARDS, &c. PAPER-MÂCHÉ GOODS, CARD, AND MILLBOARD. ARTICLES FOR WRITING, DRAWING AND PAINTING. BOOKBINDING AND SIMILAR WORK. PROCESSES AND MANUFACTURES USED IN THE PRODUCTION OF THE ABOVE MANUFACTURES. STATISTICS OF PRODUCTION.

SAUNDERS, T. H., *Dartford, Kent*.—Water-marked Hand-made Papers for Bonds, Banknotes, Shares, &c.; Artistic Designs in Watermark; Hand-made Papers for Drawing, Account Books, Correspondence, &c.; Loan and Parchment Paper; Machine-made Papers for Writing and Printing; Safety-coloured Paper for Cheques; Blotting Paper, white and coloured. (391)

McNICOL, J., 97, *Buchanan Street, Glasgow*.—Chemical Wood Pulp, and Paper made from it. (392)

LEE, JAMES ABRAHAM, *Severn Ironworks, Lydney, Gloucestershire*.—Paper made from wood alone, with specimens of the pulp bleached, unbleached, &c. (393)

COWAN, ALEXANDER, & SONS, *Valley Field Mills, Pennicuik, Edinburgh*.—Writing Papers of various qualities; Envelopes made from Cotton and Linen Rags, and Esparto Fibre, gelatine sized; Account Book Papers made from Rags, double sized; Rags, Esparto, Half-stuff, &c., employed in paper-making; Buffalo Skins used in gelatine sizing; Photographs illustrative of the various processes in paper making. (394 and 740*)
(See also *Additional Exhibitions*.)

PORTAL, W. S. & R., *Laverstoke Mills, Micheldever, Hampshire*.—Bank of England Note and other Watermarked Papers. (395)

PATENT WATERPROOF PAPER & CORRUGATED FIBRE COMPANY, *Old Mill, Farnworth, near Widnes,*

Lancashire.—Paper, Paper Tubes, and Cart-ridge Cases, waterproofed. (408)

ENGLISH, JAMES, & COMPANY, 22 & 23, *Budge Row, Cannon Street, London*.—Playing Cards. (396)

WEBSTER, H., *Litchfield Street, Soho, London*.—Inkstands, &c. (397)

LYONS, WILLIAM, *Park Street, Manchester*.—Writing and Copying Inks, black and coloured, and Sealing Wax. (398)

STEPHENS, H. C., 171, *Aldersgate Street, London*.—Inks, Writing Fluids, Copying Inks, Ink Powders, Gum Mucilage, Inkstands, Parallel Rulers, Quills, Pens, Sealing Wax, &c. (399)

(See also *Group III*.)

NEWMAN, JAMES, 24, *Soho Square, London*.—Artists' Water Colours, dry and moist; Oil Colours and Materials for Oil Painting; Brushes, Drawing Paper, &c. (400)

BINKO, H. BOCK, 183, *City Road, London*.—Spectograph or Optical Drawing Apparatus, Apparatus for Drawing Ellipses, Apparatus for Reducing or Enlarging Drawings, Black and Coloured Writing Inks, and Marking Ink. (384)

(See also *Group X*.)

BLACKWOOD, J., & COMPANY, 18, *Bread Street Hill, London*.—Copying and other Writing Inks; Marking Ink called "Jetoline"; Clarified Gums. (402)

HILL, H., & SONS, 38, *Bow Lane*, and 30, *Walling Street*, *London*.—Quills, Quill Pens, Nib Pens, Toothpicks, Sealing Wax, Wafers, Pencils; Quills for Paint Brushes and Fishing Tackle; Stationery Cases, Ivory Paper Knives, Sponge, India-Rubber, and Marble Paper Weights; Feathers for Beds, Shuttlecocks, Fancy Flowers, &c.; Wings of various Birds. (403)

ZAEHNSDORF, JOSEPH, 36, *Catherine Street*, *Strand*, (late 30, *Brydges*

Street), *London*.—Bookbinding, artistic and general. (404)

(See Appendix.)

JONES, OWEN, 9, *Argyll Place*, *London*.—Designs for backs of Playing Cards. (688)

(See also Groups XII. & XVIII.)

McLEAN & HOPE, *Leith*.—Paper Materials. (740*)

(See also Additional Exhibitions.)

GROUP XII.

Graphic Arts and Industrial Drawing.

BOOK PRINTING. XYLOGRAPHY. COPPER-PLATE AND STEEL-PLATE PRINTING. LITHOGRAPHY AND CHROMO-LITHOGRAPHY. PHOTOGRAPHY. ENGRAVING AND GUILLOCHE WORK. PATTERN-DRAWING AND DRAWING FOR DECORATION. TOOLS AND APPARATUS. STATISTICS OF PRODUCTION.

STEPHENSON, BLAKE & COMPANY, *Sheffield & London*.—Printing Types, plain and ornamental; Types for Ribbon and Scroll Designs. (410)

BRITISH & FOREIGN BIBLE SOCIETY, *Queen Victoria Street*, *Blackfriars*, *London*.—Bibles printed in forty-eight languages; the New Testament in eighty-seven languages; portions of the Holy Scriptures in sixty-six languages. (411)

RELIGIOUS TRACT SOCIETY, *Paternoster Row*, *London*.—Religious Books and Tracts, and Illustrated Periodicals for adults and children, in all the European and Indian languages, and in North American Indian, and African languages. (411a)

REED & FOX, 4, *Fann Street*, *Aldersgate Street*, *London*.—Specimen Book of Printing Types. (385)

SUNDAY SCHOOL UNION, 56, *Old Bailey*, *London*.—Printed Books, Sheets, Cards, &c., used in Sunday Schools. (413)

AUGENER, G., & COMPANY, *Beethoven House*, 86, *Newgate Street*, *London*.—Printed Music. (409)

WHITE, JOHN, *King Street*, *Stroud*, *Gloucestershire*.—Printed Ecclesiastical Music. (388)

GRANT & COMPANY, 72 to 78, Turnmill Street, London, and 2, Rue Drouot, Paris.—Letterpress and Lithographic Printing, plain and in colours; Fine Art Printing; Illuminated Cards, Show Boards; Wood Engraving; Enamelled Iron Tablets. (10a)

JOHNSON, J. M., & SONS, 3, Castle Street, Holborn; Steam Printing Works, 56, Hatton Garden, London.—Catalogue of the British Section of the Exhibition; "Crystal," "Chromo-fulgent," Indestructible Iron, and other Show Tablets; Posters, and General Printing in Colours. (433)

(See Appendix.)

BARTHOLOMEW, JOHN, 17, Brown Square, Edinburgh.—Map Engraving and Colour Printing for Atlases, educational and other purposes. (414)

DAY, JOHN B., Savoy Street, Strand, London.—Chromo-Lithographs. (415)

JOHNSTON, W. & A. K., 4, St. Andrew's Square, Edinburgh.—Human Anatomy and Physiology, in two large Sheets; Illustrations of Botany, in four large Sheets. Historical Geography of the Clans of Scotland in one sheet. (416)

LEIGHTON, JOHN, F.S.A., 12, Ormonde Terrace, Regent's Park, London.—Maps of London, Paris, and Vienna, hexagonally indexed in English Miles for the purpose of Municipal Government, Imperial Administration, Cab Fares, &c. (407)

BROWNRIGG, T. M., 32, Lower Leeson Street, Dublin.—Photographs. (417)

GODBOLD, H. J., 8, Grand Parade, Saint Leonards-on-Sea.—Photographs. (418)

HAES, FRANK, 41, St. George's Place, Hyde Park Corner, London.—Photographs of Wild Animals, enlarged by the Autotype Process from small negatives taken in the Zoological Society's Gardens, London. (419)

BEASLEY, F., JUN., 30, Upper Hamilton Terrace, St. John's Wood, London.—Photographs taken by a dry process, showing the number of days between preparation and exposure, and also between exposure and development; Views of English and Irish Scenery, &c. (420)

TWYMAN, C., 36, High Street, Ramsgate.—Photographs. (421)

ROBINSON, H. P., & CHERRILL, N. K., Tunbridge Wells.—Photographs. (422)

FERNELEY, CHARLES A., Scaford Road, Melton Mowbray.—Photograph Lantern Slides—English Scenery. (423)

HARE, GEORGE, 1 Lower Calthorpe Street, London.—Photographic Apparatus, Cameras, Graphoscopes, Stereoscopes, &c. (424)

LONDON STEREOSCOPIC AND PHOTOGRAPHIC COMPANY, 110 and 108, Regent Street, and 54, Cheapside, London.—Photographic Portraits of English Statesmen, Divines, Literary and Scientific men, Dramatic Celebrities; The Disraeli Cabinet, 1868; The Gladstone Cabinet, 1873; Stereographs of Rustic Scenes in England, and two large views of International Exhibition, 1872. (425)

CAMERON, MRS. JULIA M., Freshwater Bay, Isle of Wight.—Photographs, Portraits, and Studies, from Life. (426)

WORTLEY, COLONEL H. STUART, Rosslyn House, Grove End Road, London.—Photographs on Uranium dry plates; Photographs from nature and from life. (427)

CRAWSHAY, ROBERT T., Cyfarthfa, Merthyr Tydvil, Wales.—Photographs. (828)

WANE, MARSHALL, 4, Finch Road, Douglas, Isle of Man.—Photographic Portraits and Composition Groups. (389)

HEATH, VERNON, & COMPANY, 43, Piccadilly, London.—Landscape Autotypes, enlarged from negatives 12 inches by 10. (390)

MCLACHLAN, LACHLAN, 9, *Cross Street, Manchester*.—Photograph representing the Central Executive Cotton Famine Relief Fund Committee, sitting at the Town Hall, Manchester—the portraits taken from the life. (150)

HARMAN, J. S., 87, *New Bond Street, London*.—Photographs. (203)

LEMERE, BEDFORD, 147, *Strand, London*.—Architectural Photographs. Details of Westminster Abbey, and Salisbury, Lincoln, Hereford, and Llandaff Cathedrals, and of Mansions. (204)

LEWIS, ABEL, *Douglas, Isle of Man*.—Photographs of young children. (205)

BEAU, ADOLPHE, *Regent Street, London*.—Photographs. (615a)

WOODBURY PERMANENT PRINTING PROCESS COMPANY, 9a, *Hereford Square, London*.—Photographs in permanent colours (Lent for the use of the Royal Commission for Decoration of the Workmen's Dwellings).

GRAY, B., *London*.—Fire Screen decorated with Photographs. (375)

WYON, J. S. & A. B., 287, *Regent Street, London*.—Engraving and Illumination; Specimens of Engraving, including the Great Seal of England, Great Seal of Canada; Dies for paper, Arms, Monograms, &c., stamped in colours and illuminated; Book Labels, &c.; Reductions in Steel (untouched) from models in relief, or in intaglio; Paintings of Arms and other designs. (430)

BLADES, EAST & BLADES, 11, *Abchurch Lane, London*.—Bank Note Engraving, with microscopic work for prevention of forgery. (431)

DE LEON, M., & COMPANY, 24, *Rathbone Place, London*.—Dies and Stamps; Self-acting and Self-inking Dating, Numbering, Endorsing, and Paging Machines; Stencil Plates, Brass-faced Type, and Marking Ink. (431a)

JONES, OWEN, 9, *Argyll Place, London*.—Designs for Wall Decorations, Furniture, Carpets, Paper Hangings, Silk Hangings and Backs of Playing Cards. (688)

(See also Groups XI. and XVIII.)

GROUP XIII.

General Machinery.

PRIME MOVERS (Steam Generators, Steam-Engines, Water-Wheels, Turbines, Pressure-Engines, Air, Wind, and Electro-Magnetic Engines, Gas Machines). MACHINES FOR TRANSMITTING POWER (Shafts, Wheels, Pulleys, Bands, &c.). MACHINES FOR WORKING SPECIAL KINDS OF MATERIALS (Machines for Mining, Metallurgy, Metal Work, and Wood Work; Machines for Spinning, Weaving, Knitting Sewing, and Embroidering; Machines for Fulling, Cleansing, Shearing, Dyeing; Machines for Bleaching, Leather-Dressing, &c.; Machines for Paper Manufactures and Bookbinding, for Type-Founding, Printing, Lithography, Copper-Plate Printing, Colour Printing, &c.; Machines and Apparatus for Sugar-Making, Oil Manufacture, Breweries, Distilleries, Stearine, Soap, Candles, Starch, Ice-Making, Match-Making, Corn Mills, and Agricultural Machinery and Apparatus). OTHER MACHINERY NOT BELONGING TO THE ABOVE-MENTIONED (Blast Engines, Fire Engines, Pumps, Ventilators, &c.). MATERIALS AND PARTS OF MACHINERY. RAILWAY MACHINERY (Locomotives, Tenders, Railway Velocipedes and parts of them, Railway Carriages and parts composing them, Special Machinery and Apparatus for Railway Workshops and Railway Contrivances; for making and maintaining Railway Plant; Snow Ploughs, &c.). STEAM GAUGES, DYNAMOMETERS, TRADIOMETERS, &c. ALL SORTS OF VEHICLES NOT CONCERNED WITH RAIL. STATISTICS OF PRODUCTION.

PENN, JOHN, & SONS, *Greenwich*.—Model of Pair of Trunk Engines, of 1,350 horse-power, nominal, as fitted to H.M. iron-clad ships, "Minotaur" and "Northumberland." (440)

POWIS, CHARLES, & CO., *Cyclops Works, Millwall Pier, and 60, Gracechurch-street, London*.—Twenty-horse Power Double Cylinder Steam Engine; Steam Crane; Wood-working Machinery. (441)

HOWARD, J. & F., *Bedford*.—Patent Safety Steam Boiler. (442)
(See also Group XIIIa.)

DERHAM, JOHN J., *Blackburn*.—Horizontal High Pressure Expansion Steam Engine of 20-horse power nominal, driving Printing Machinery; Horizontal High-Pressure Patent Expansion Steam Engine of 25-horse power nominal, driving Wood Working Machinery; Patent Atmospheric Hammer. (443)
(See Appendix.)

PATENT GAS COMPANY, 25, *Fenchurch Street, London*.—Apparatus for the Manufacture of Gas, by Eveleigh's Patented Process. (444)

SPICE, R. P., C.E., 21, *Parliament Street, London*.—Working Apparatus for Making Gas for Heating and Illumination. (445)

GALLOWAY, W. J., & SONS, *Knot Mill Iron Works, Manchester*.—Two

"Galloway" Steam Boilers, and Steam Engine. (446)

McNICHOL, JOHN, 97, *Buchanan Street, Glasgow*.—High Pressure Steam Generator. (392)

READING IRON WORKS, (LIMITED), *Reading, Berkshire*.—Fixed Steam Engine, high pressure and condensing, fitted with variable expansion valve; 10-horse power Horizontal Engine; illustrations of new series of Economical Engines, 2 and 4-horse power; Portable Engine with special economical arrangements. (447)
(See also Group XIIIa.)

CLARKSON BROTHERS (per John McNicol), *Glasgow*.—Self-acting Steam Pumping Engines. (392*)

CATER & WALKER, *Grove Steam Boiler Works, Southwark, London*.—Patent Multitubular Steam Boiler, of 50-horse power, with Fittings, at work in British Boiler House, at the Exhibition. (448)

GLOVER, GEORGE, & COMPANY, *Ranelagh Road, Pimlico, London*.—National Standard Gasometers, similar to those supplied to Her Britannic Majesty's Government and to the Government of the Netherlands; Dry Gas Meters; and Gas Apparatus. (449)

ADAMSON, DANIEL, & COMPANY, *Engineering Works, Hyde Junction, near Manchester*.—Steam Boilers—two of

40-horse power each, one with Steel Shell Plates, Solid Welded Flue-rings and Circulating Pipes; Hydraulic Jacks for Lifting Boilers of 10 to 30 tons weight. (450)

NORRIS, S. E., & COMPANY, 56, 57, 58, and 174, *High Street, Shadwell, London*.—Leather Driving Bands for Machinery; Leather Hose for Fire Engines; Buckets; Pump and Hydraulic Leathers; Strap Butts, &c. (451)

HOLGATE, J., & COMPANY, 33, *Great Dover Street, London*.—Leather Machine Bands; Fire Hose, Buckets, &c. (452)

EDWARDS, W. J., 20, *Market Place, Manchester*.—Leather Driving Bands, made from best English leather, and without cross joints. Manufactured by the patentees, Sampson and Company, Stroud, Gloucestershire. (453)

HEAD, WRIGHTSON & COMPANY, *Teesdale Iron Works, Stockton-on-Tees*.—Hoists, Moore & Head's patent; Pulley Blocks, Moore's patent. (454)
(See Appendix.)

PICKERING, JONATHAN, *Stockton-on-Tees*.—Patent Pulley Blocks, Sack Hoists, and Procter's Patent Spring Hammers, for hand and steam power. (606)

HUDSWELL, CLARKE & RODGERS, *Railway Foundry, Leeds*.—Patent Wrought Iron Driving Pulley. (564)

WEBB & SON, *Combs Tannery, Stowmarket*.—Leather Machine Bands, Fire Buckets and Hose. (209)
(See also Group VI.)

POWIS, JAMES, WESTERN & COMPANY, *Victoria Works, Belvedere Road, Lambeth, London*.—Wood Planing, Moulding, Tongueing and Grooving, Tenoning, Mortising, and Boring Machinery; Sawing Machinery of various kinds; Band-saw Machine for Cutting Iron; Stone Moulded and Planed by Machinery; Driving Belts. (455)

PLATT, BROTHERS & COMPANY, (LIMITED), *Hartford Iron Works, Oldham*.—Wool-carding, Preparing, Spinning

and Weaving Machinery; Worsted Gill Boxes and Combing Machines; Cotton Gins. (456)

TANGYE BROTHERS & HOLMAN, 10, *Laurence Pountney Lane, London*.—Steam Engine, 12-horse power, Tangye's patent, horizontal high pressure with variable expansion gear; Steam Pump, direct action, with 14-inch steam or air cylinder, 12-inch water cylinder, and 24-inch stroke; Lifting Jacks, Pulley Block, &c. (457)

BROWN, BAYLEY, & DIXON, *Steel and Iron Works, Sheffield*.—Patent Injector for Locomotive Boilers, &c. (239)

COMBE & BARBOUR, *Falls Foundry, Belfast, Ireland*.—Flax Machinery and Tools; Combe's Patent Hackling Machine, Spreader, Drawing Frame, Roving Frame, Cop Machine, Fluting Machine. Lathe for wood rollers, Patterns, &c. (460)

LIVESEY, HENRY, *Greenbank, Blackburn*.—Machine for winding from pin-cops and coloured Yarns from the Hank, and for unknitting heddles for re-use, with case of sample shuttles, bobbins, pickers, &c.; Drawings of Power Looms. (461)

BROUGHTON COPPER COMPANY, *Manchester*.—Calico Printing Rollers for garments and handkerchiefs, in copper and brass; Copper and brass tubes for steam, gas, water, condensers, &c., seamless and brazed; Copper Singeing Plates for dressing calico; Bolts and Plates for locomotive fire-boxes; Copper and Brass ingots, plates, strips, &c. (462)

NUSSEY & PILLING, *Park Works, Leeds*.—Sewing Machines. (463)

BAINES, W. N., *Lancefield Street, Glasgow*.—Steam Fittings in iron and gun-metal; Valves, Whistles, Water Guages, Gauge Cocks, Grease Cocks, Oil Syphons, &c. (464)

MASSEY, B. & S., *Openshaw Canal Ironworks, Manchester*.—Steam Hammers; 5 cwt. Hammer, double-acting, self-acting, and hand-worked, for the use of engineers, shipbuilders, wagon makers, and others;

1½ cwt. Hammer for machinists, implement makers, and others; ½ cwt. Hammer, can be worked by hand or foot, for file makers, cutlers, bolt makers, and others; 3 cwt. "Special Steam Stamp" for stamping bolts, rivets, studs, shovels, and other articles. (465)

TICKLE, R. P., 3, *Poppin's Court, Fleet Street, London*.—Iron Bed for Mounting Stereotype or other plates for printing. (466)

BACON, G. W., & COMPANY, 127, *Strand, London*.—Beckwith's Portable Sewing Machine. Price 35s. (467)

LAWSON, S., & SONS, *Hope Foundry, Leeds*.—Spinning Machinery for Hemp, Jute, and Flax; Tow Carding Engine, &c. (468)

(See Appendix.)

DE BERGUE, C., & COMPANY, 10, *Strand, London; Strangeways Works, Manchester; and Wauntreoda Works, near Cardiff*.—Boiler and Girder Rivetting Machines; Rivet Making Machines; Punching and Shearing Machines; Patent Permanent Way; Permanent Way Levellers, &c. (470)

(See Appendix.)

GWYNNE, J. & H., *Hammersmith Ironworks, London*.—Centrifugal Irrigation Pump, as used in Austria and Hungary, throwing 1,800 gallons per minute; Centrifugal Irrigation Pump, as used in Egypt and India, capable of lifting 3,000 gallons a minute 30 feet high; other Centrifugal Pumps, throwing from 100 to 3,000 gallons per minute. (471)

BRADFORD, THOMAS, & COMPANY, 63, *Fleet Street, London*.—Washing, Wringing, Drying, Starching, Mangling, and Calendering Machinery. (472)

(See Appendix.)

BATEMAN, DANIEL, & SONS, *Lowmoor, Bradford*.—Improved Angular Wire Cards for Carding Cotton Wool and other Fibrous Substances. (433a)

MATHER & PLATT, *Salford Iron Works, Manchester*.—Twelve Colour Calico Printing Machine, with Double Cylinder Diagonal Engine and Driving Gear. (434)

(See Appendix.)

WORSSAM, SAMUEL, & COMPANY, *Oakley Works, King's Road, Chelsea, London*.—Wood-working Machines for sawing, planing, moulding, mortising, boxing, and tenoning; also Patent Mitreing Machines, Patent General Joiner, new Patent Special Machines for making parquetry flooring; Double Parquetry Edging and Grooving Machine; Parquetry Planing and Surfacing Machine; Hand Mortising Machines, Grinding Apparatus, Saw-sharpening Machine, and various models and specimens of work produced by these machines. (473)

RANSOME, A., & COMPANY, 304, *King's Road, Chelsea, London*.—Wood Working Machines; Vertical Saw Frames, Circular Saw Benches, Band Saw Machines; Planing, Moulding, Shaping, Recessing, Mortising, Tenoning, and Mitreing Machines; General Joiner's Machine; Saw Sharpening Machine; Arrangement for removing instantaneously shavings, dust, and light refuse from machinery. (474)

(See also Group XVIII.)

HUXHAMS & BROWN, *Commercial Road, Exeter*.—Mill to grind Bark for tanyards and leather dressers, by horse or steam power; Machine to roll Leather by steam power; Mill for mixing Mortar or Concrete by hand or by steam; Planing Machine for iron. (213)

(See also Group VI.)

SUMNER, J. M., & COMPANY, 2, *Brazenose Street, Manchester*.—Calico Machine; Pentagraph Engraving Printing Machine for cylinders, copper Printing Rollers, and other articles used by calico printers. (475)

THWAITES & CARBUTT, *Vulcan Ironworks, Bradford, Yorkshire*.—Double-action Steam Tilt Hammer, 7 cwt., with rapid Self-acting Motion. Roots' Patent Rotary Blowing Machine with 15-horse power Vertical Engine combined. (477)

HOMES & HICKTON, *Halesowen, near Birmingham*.—Chains of various kinds; Clip Hooks and Thimbles; Coupling Shackles; Ship Ironwork, Horse Shoe and other Nails. (478)

KERR, PRICE, & COMPANY, *Underwood and Oakshaw Mills, Paisley*.—Spooling Machine, showing the process of winding cotton on the reel; Weild's Self-acting Spooling Machine. (479)
(See also Group V.)

COLLIER, LUKE, *Wellington Works, Rochdale*.—Confectionery and Biscuit-making Machinery for steam and hand power. (480)

CROPPER, H. S., & COMPANY, *Hockley Mill, Nottingham*.—Platen Printing Machine called the "Minerva," with steam engine to drive it. (481)

BROTHERHOOD & HARDING-HAM, 53 and 56, *Compton Street, Goswell Road, London*.—Helical Pump (Boulton and Imray's Patent), with direct acting "Paragon" three Cylinder Engine, shown in operation; "Paragon" Steam Pump in action; 35-horse power "Paragon" Three Cylinder Stationary Engine; Refrigerator for Breweries; Gyroscopic Steam Governor, and Steam Throttle Valve. (482)

WILSON, ALEX., & Co., *Vauxhall Iron Works, Wandsworth Road, London*.—Steam Pumps. (434a)
(See Appendix.)

VICTORY PRINTING & FOLDING MACHINE COMPANY, *Speland Street, Windsor, and 1, North John Street, Liverpool*.—Machine for Printing from paper in the roll or web, and delivering the same printed and folded; Machine for Damping the Paper before being printed; Apparatus for Stereotyping and making the stereotype plates used in the printing. (483)

AVELING & PORTER, *Rochester, Kent, and 72, Cannon Street, London*.—Road Locomotive Crane Engine for lifting hauling, and carrying heavy weights. (484)
(See also Groups XIIIa. and XVIII.)

CLAYTON & SHUTTLEWORTH, *Stamp End Works, Lincoln; and at Vienna, Pesth, Prague, and Lemberg*.—Portable and fixed Steam Engines and Traction Engines. (568)

(See also Group XIIIa.)

WATSON, HENRY, *Highbridge Works, Newcastle-on-Tyne*.—Paper-making Machinery; Revolving Straining Apparatus, with Vat complete. (486)
(See also Group VII.)

NEW, D., & COMPANY, *Moscow Works, Nottingham*.—Lathes for Railway Wheels, Axles, &c.; Radial and other Drilling Machines; Planing, Slotting, and Shaping Machines; Pillar, Standard, and Horizontal Steam Engines, and Brass Steam Fittings. (487)

ROBINSON, T., & SON, *Railway Works, Rochdale*.—Wood-working Machinery, for Sawing, Planing, Moulding, Boring, Mortising, Dovetailing, &c., with Tool-grinding Machines. (489)

WANZER, R. M., & COMPANY, *Hamilton, Canada (represented by Doubleday, Son, & Co., Hamburg)*.—Sewing Machines. (490)
(See Appendix.)

THE WANZER SEWING MACHINE COMPANY (LIMITED), 4, *Great Portland Street, London*.—Sewing Machines. (490a)
(See Appendix.)

CLARK & COMPANY, *Anchor Thread Works, Paisley*.—Self-Acting Spooling Machine for Winding Sewing Thread on Small Bobbins or Spools. (124)
(See also Group V.)

HUGHES & KIMBER, *West Harding Street, Fetter Lane, London*.—Printing Machinery.—Lithographic Cylinder Machine; "Wharfdale" Letter-press Cylinder Machine; "Paragon" Letter-press Machine; Platen Printing Machine; Lithographic Printing Press; Guillotine Paper Cutting Machine; Rolling, Glazing, Perforating, and Paging Machines; Photographic Glazing Machine; Vertical Steam Engine and Boiler. (491)

FLEMING, T., & SON, *West Grove Mills, Halifax*.—Cards for Carding, Flax, Tow, Jute, China Grass, Hemp, Cotton, Wool, Mungo, and all other waste fibres. (492)

BARRACLOUGH, THOS., 10, *St. James's Square, Manchester*.—Spinning Machines for Twines, Cords, Ropes, of Hemp, Flax, Jute, &c.; Hackles; Woollen Rag-tearing Machines; Cotton and Woollen Yarn Printing Machine; Reed-making Machine; Wire Healds for weaving all descriptions of goods; Portable Drilling Machines; Ventilator for Mills; Blower for Furnaces. (493)

APPLEBY BROTHERS, *Emerson Street, Southwark, London*.—Steam Crane to lift 5 tons—travelling, turning, and with variable radius, price 630*l.*; Steam Feed Pump, 12*l.* 10*s.* (495)

BELL, ANDREW, 49, *Blackfriars Street, Manchester*.—Fuel Economiser, for utilising the waste heat from steam boilers. (496)

DUDGEON, A., 22, *Great George Street, Westminster, London*.—Distilling and Rectifying Apparatus (Drawings, Models, &c.). (436)

LOCKETT, LEAKE & COMPANY, *Strangeways Engraving Works, Manchester*.—Double Bar Pentagraph Machine, for engraving cylinders, with recent improvements and additions. (437)

ELLIS, WILLIAM, *Pimlico Wharf, London*.—Lath-rending, Veneer Cutting, and Embossing Machine. (438)

EASTONS & ANDERSON, *Grove, Southwark Street, London*.—Appold's Breaks, of 10 and 20-horse power, for testing the power of steam engines and other prime movers. (234)

MCNAUGHT, JOHN & WILLIAM, *St. George's Foundry, Rochdale*.—Wool-washing and Wool-drying Machines. (439)

DERHAM, T. S., 15, *Blenheim Terrace, Leeds*.—Brickmaking Machine, and Model of Brick-kiln for saving fuel. (498)

DOWS, CLARK & COMPANY, *Bedford Street and Chandos Street, Strand, London*.—Soda Water Machinery and Accessories; Iced Cream Soda Water Apparatus, Gazogenes, Syphons, Filters, &c. (499)

(See also Group XVIII.)

WILSON, J. H., & COMPANY, *Cornhill, Liverpool*.—Locomotive Steam Derrick Crane (2 tons), revolves, travels, and raises and lowers the jib by steam power; Double Cylinder Horizontal Winding Engine, suitable also for pumping and driving machinery. (500)

(See also Group XVII.)

HODGSON, GEORGE, *Bradford, Yorkshire*.—Power Looms—Plain Loom of simplest construction for great speed, for weaving Alpaca, Mohair, Silk and Worsted, in 2 to 6 treads or shafts, or different patterns; Circular Box Loom with six shuttles, and Patent Stop Motion Loom specially adapted for weaving reps; Patent Loom for production of various figured fabrics up to sixteen healds. (502)

DONKIN, B., & COMPANY, *Bermondsey, London*.—Paper Making Machine, Model made to scale of one-eighth, and worked by means of a small turbine. (503)

SHARP, STEWART & COMPANY (LIMITED), *Atlas Works, Manchester*.—Machine Tools; Screwing, Planing, Slotting, Shaping, and Slot-drilling Machines; Lathe for boring tyres, and Drilling Machine for inside of railway wheel tyres; Injectors. (504)

HOLMES & TAYLOR, 12, *Buckingham Street, Strand, London*.—Submarine Grapple and Excavator. Break and Starter for Railway and other Carriages. (505)

BUTT, J. ACTON, *Paragon Works, Ellam Road, Leeds*.—Improved "Paragon" Lithographic Machine for Chromo and

Commercial Lithography and Typography, fitted with self-acting registering apparatus, and adapted for hand and steam power. (405)

MCKEAN & COMPANY, 42, *Borough Road, London*.—Rock Boring Machine or Drill, with Air Compressor, Portable Steam Boiler, and Feed Pump for the same. (506)

HOLMES, J. E., 12, *Buckingham Street, Strand, London*.—Motive Power for driving Sewing Machines and other light Machinery, shown driving a Sewing Machine. (507)

HIND, H., & SON, *Queen's Road, Nottingham*.—Screw-cutting Gap Lathes, Slotting Machine, Shaping Machine, Planing Machine, Wall and Vertical Drilling Machines, Horizontal Boring Machine, Nut-turning Machine, Slotting Machine for Nuts, Parallel and Portable Vices, Chucks, &c. (509)

SCOTT, GEORGE, L., *Crown Ironworks, Heywood Street, West Gorton, Manchester*.—Wheel-moulding Machine and Steam Ventilator for mines. (510)

BAXTER, W. H., *Elm Cottage, Brixton Hill, London*.—Automatic Weighing Machine for Corn and other Granular Substances, and for Liquids. (511)

DUNSTON ENGINE WORKS COMPANY, *Gateshead-on-Tyne*.—Archer's Stone Breaker; Newall's Steam Ore Crusher. (512)

KIRKSTALL FORGE COMPANY, *Leeds*.—Steam Hammers. (280)
(See also Group VII. and Appendix.)

BRADBURY & COMPANY, *Oldham*.—Sewing and Embroidery Machines, adapted for various domestic and manufacturing purposes, such as the making of Hats, Caps, Boots, Millinery, and General Clothing; Appliances and Accessories for the Machines, &c., &c. (514)
(See Appendix.)

LAWRENCE, W., & COMPANY, 14, *St. Mary Axe, London*.—Refrigerators for cooling "Worts," Milk, and for purifying and cooling water; Mashers, Spargers, &c.; Models of Ships' and other Pumps; Model of Wood and Malortie's Patent Fuel Economizing Furnace; Water Boiling, Purifying, and Cooling Apparatus. (515)
(See also Group XVIII. and Appendix.)

DAVIS & PRIMROSE, 68, *Duke Street, Leith*.—Double-acting Steam Hammer for general forging purposes in smiths' shops. (516)

SIBREE, PETER, *Great Driffield, Yorkshire*.—Hydraulic Press for extracting Oils, with Steel Moveable Cylinders, and Double Pumps, Stops, &c. (517)
(See Appendix.)

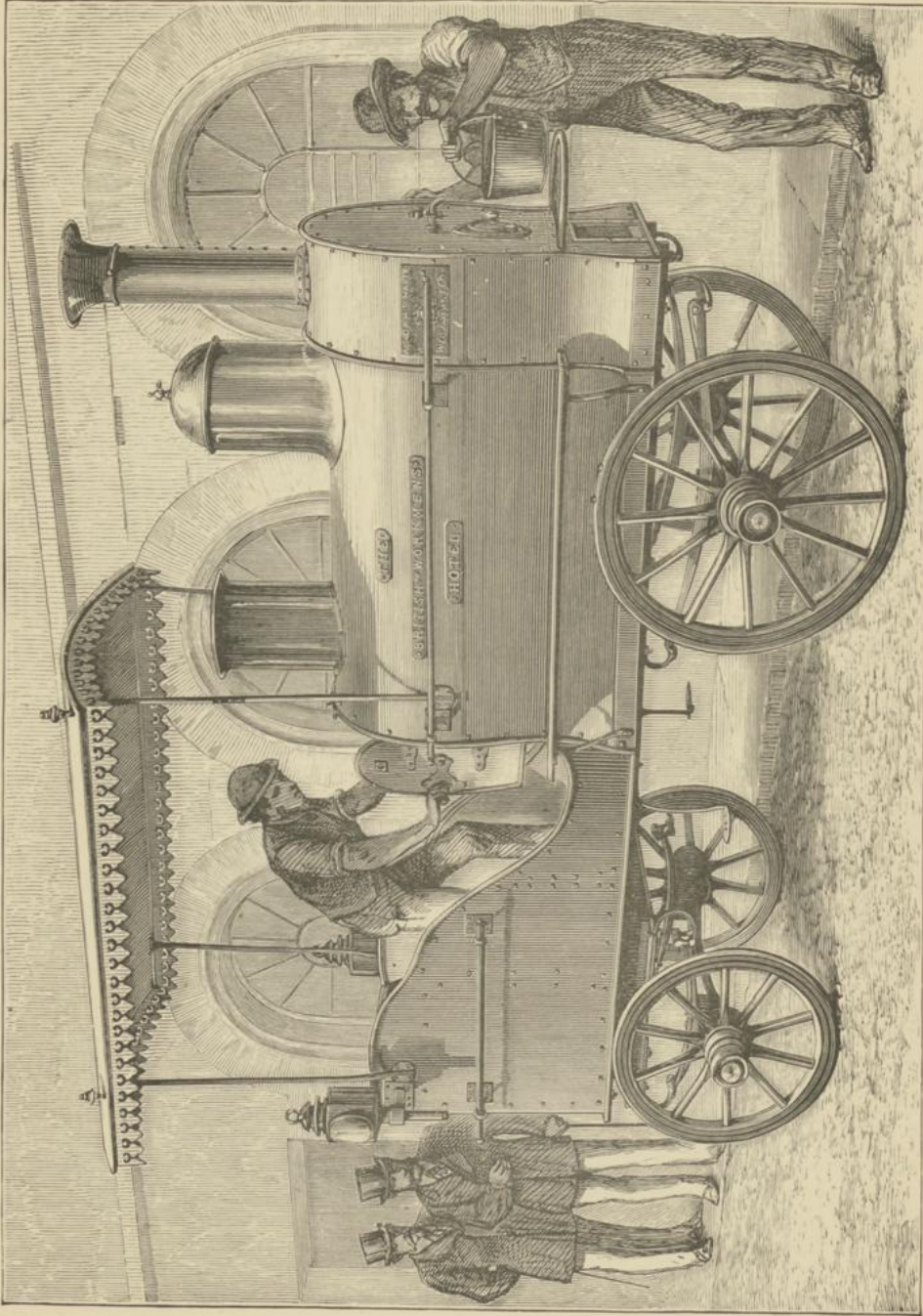
BERTRAM, J., & SON, *Leith Walk Foundry, Edinburgh*.—Patent Apparatus for Straining Pulp for Paper Making. (518)

HOPTON, H., & SON, 67, *George Street, Euston Square, London*.—Bent Carriage Shafts, Wheels, Bent Woodwork, and other Materials of Carriage building. (519)

ADAMS, R., 31, *Strutton Ground, Westminster, London*.—Portable Cooking Apparatus, called the "British Workman's Hotel," for baking and boiling meat, and baking, boiling and steaming vegetables, and for making tea and coffee; on wheels, and drawn by one horse. (522)
(See Illustration.)

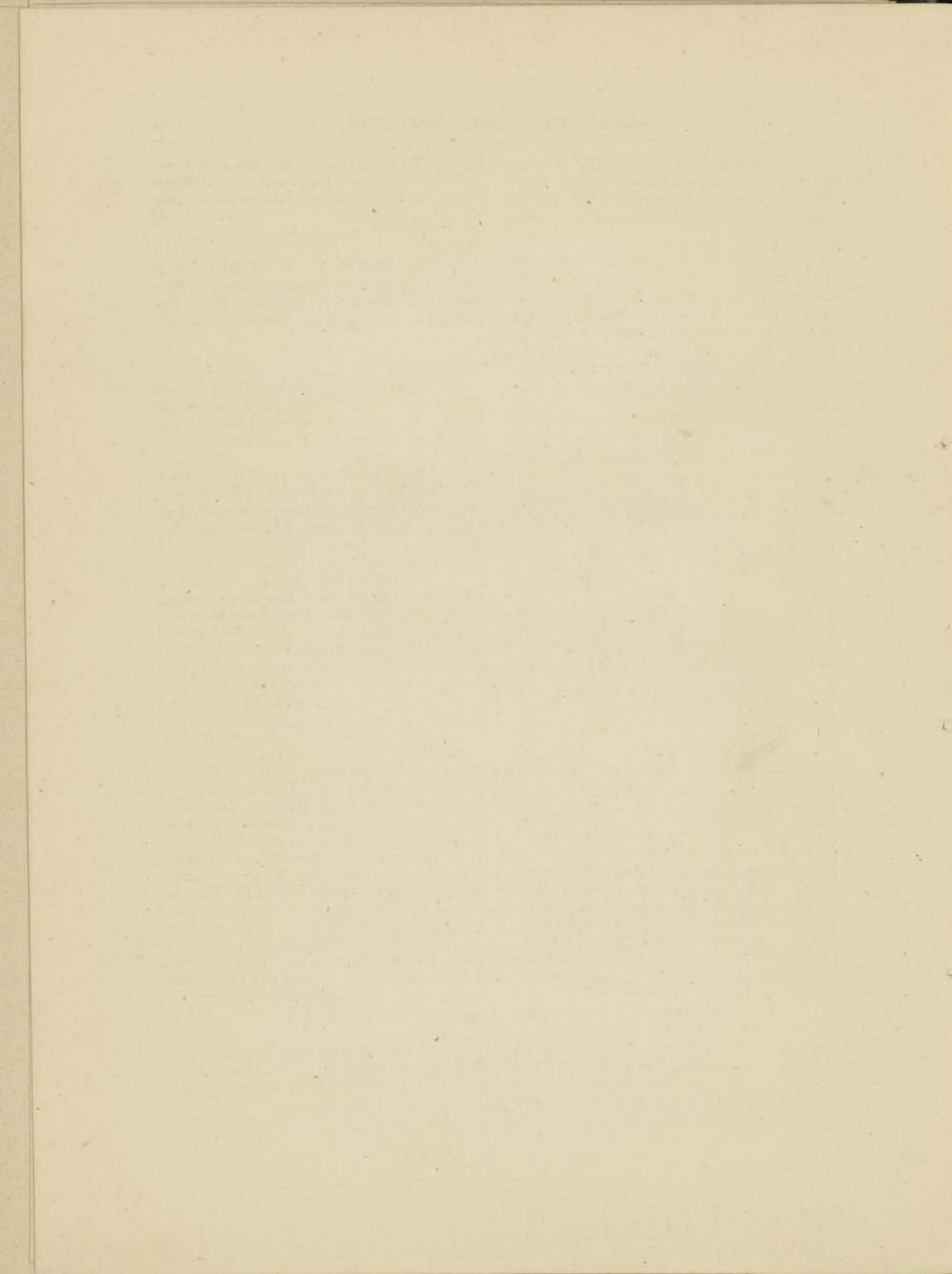
DAVIES, D., *Viaduct Works, Crumlin, Newport, Monmouthshire*.—Patent Self-acting Steam Strikers of three sizes, may be worked also by compressed air or water, to replace ordinary hand strikers and constructed to strike at any angle to the face of the anvil; can be arranged to act upon a circle of four or more anvils or swage blocks. (497)

KAULBACH, E., 39, *Maddox Street, Regent Street, London*.—Model of Improved Steam Engine and Boiler. (406)



“ THE BRITISH WORKMEN'S HOTEL.”

A complete Cooking Apparatus, designed and constructed for Her Majesty's Commissioners, by
RICHARD ADAMS, Strutton Ground, Westminster.



HESLOP & WILSON, *Lombard Street, Newcastle-on-Tyne*.—Portable Steam Mill, for grinding or crushing ore, fettling mortar, clay, chalk, or chemical substances. (236)

ARMSTRONG, SIR W. G., & COMPANY, *Elswick Works, Newcastle-on-Tyne*.—Models of Pumping Engine, Accumulator, Hydraulic Crane, Hydraulic Jack, Hydraulic Capstan and Engine of a Bridge, and of Grain Distributing Machinery. (561)
(See also Groups XVI. and XVII.)

TYLER, HAYWARD, & CO., 84, *Whitecross Street, London*.—Patent Steam Pumps. (521)

GWYNNE & COMPANY, *Essex Street Works, Strand, London*.—Gwynne's Patent Centrifugal Pumping Engine; Gwynne and Beale's Patent Combined Gas Exhauster and Engine; Double-Action Centrifugal Pumps; Hydraulic Rams; Girard's Patent Turbine Water Wheel; Hydraulic Engines. (523)

BROWN BROTHERS & COMPANY, *Rosebank Ironworks, Edinburgh*.—Steam Donkey Pump; Combined Steam and Hydraulic Crane. (524)

HATHORN, DAVIS & CAMPBELL, *Sun Foundry, Leeds*.—Steam Donkey Pump. (412)

MERRYWEATHER & SONS, 63, *Long Acre, London*.—Steam and Hand Fire Engines, including such as are used by the London Fire Brigade. (525)

WARNER, JOHN, & SONS, 8, *Crescent, Cripplegate, London*.—Hydraulic Machinery; Sanitary Apparatus; Hand, Steam, and Horse Power Pumps; Wind Engines; Water Wheels; Fire Engines; Hydraulic Rams; Garden Engines, &c.; Water Barrows; Boring Tools; Water-Closets, Lavatories, Urinals, Baths; Steam Engine Fittings; Bells. (526)
(See Appendix.)

SHAND, MASON & COMPANY, 75, *Upper Ground Street, London*.—Steam and other Fire Engines, as used by the London Fire Brigade, &c. Portable Fire Pumps; Hose, Pipes, Buckets, Helmets, and Implements used by Fire Brigades. (527)

BERNAYS, J., 96, *Newgate Street, London*.—Patent Improved Centrifugal Pump, with effective self lubrication to inner bearings of spindle. (528)

(See Appendix.)

HAYNES, T., & SONS, 227 to 231, *Edgware Road, London*.—Pumps; Fire Engines; Patent Hydronette Fire Extinguisher, Garden Hose Barrow, Hose, &c. (529)

(See Appendix.)

TWIBILL, JOSEPH, *Chester Road, Manchester*.—Fuel Economiser for Steam Boilers, Plans and Drawings of same, Pipes for Steam Boilers, and Pipe Scrapers. (530)

PATENT MACHINE STONE DRESSING COMPANY (W. Payton, Manager), 21, *Great George Street, Westminster*.—Stone Dressing Machine and Apparatus. (531)

GABRIELLI, A., 4, *Westminster Chambers, London, and Bau-Unternehmung der Wasserleitung, Neue Markthalle, Vienna*.—Air Cock and Air Valve, Self-acting, made by Simpson & Co., Pimlico, London; Ball Cocks, equilibrium, made by Lambert & Son, Lambeth, London; Screw and Street Cocks, made by Simpson & Co.; Bib and Stop Screw Down Cocks, and Loose Valve Cocks, made by Guest & Chrimmes, Rotherham, England; Ferrules, Straight and Elbow, and Union Joints, made by Stock, Brothers & Taylor, Birmingham; Hydrants made by Simpson & Co., and Hydrant Indication Plate by John Barnes, Norwich; Hose, Hose-pipe, and Branch and Keys made by Simpson & Co; Meters, Low Pressure, made by W. Parkinson & Co., Cottage Lane, London; Siemen's High Pressure Meter, made by Guest & Chrimmes; Lead Pipes and Pipe Guards; Urinals made by G. Jennings, London; Water-pillar, with High Pressure Meter, &c., made by Guest & Chrimmes; Water Closets complete, made by the City of Norwich Waterworks Co., and Guest & Chrimmes. (533)

GREEN, EDWARD, & SON, 14, *St. Ann's Square, Manchester*.—Fuel Economiser, for using the waste heat of boilers. (534)

(See Appendix.)

MARSDEN, H. R., & COMPANY, *Soho Foundry, Leeds*.—Stone Breaker and Ore Pulverizer, for hand or steam power. (790)

DENNIS & COMPANY, 19, *Holborn, London*.—Steam Sentinel, for the prevention of boiler explosions; Improved Pneumatic Fire Extinguishers. (614)

KENNEDY'S PATENT WATER METER COMPANY (LIMITED), *Kilmarnock*.—Water Meters. (532)

JOHNSON & ELLINGTON, *Chester*.—Hydraulic Warehouse Crane, 25 cwt., with jib; Patent Duplex Whipping Hoist, 6 to 12 cwt., eighty lifts per hour, both worked by accumulators. (459)

(See Appendix.)

PAYTON, WILLIAM, 21, *Great George Street, Westminster*.—Safety and Relief Valves; Apparatus for moving and turning blocks of stone, and other heavy bodies. (559)

INGHAM, J., & SONS, *Thornton, near Bradford*.—Shuttles and Pickers for weaving and belting; Strappings and Springs for machinery. (537)

HOLT, H. P., C.E., *Royal Insurance Buildings, Leeds*.—Patent Combined Elastic Steel Diaphragm, and Relief Frame for equilibrating or balancing ordinary Slide Valves and Expansion Gear, applicable to all old and new Engines. (538)

HILL & SMITH, *Brierley Hill Iron Works, Staffordshire*.—Hammered Iron Engine Forgings, Shafts, Axles, and various kinds of Railway Ironwork. (293)

(See also Group VII.)

IRVIN & SELLERS, *Preston, Lancashire*.—Bobbins, Boxwood Bosses, Pickers, and Shuttles. (540)

SIMON, H., C.E., 7, *St. Peter's Square, Manchester*.—Cramps (Stroudley's patent), to facilitate the replacing of locomotives and carriages that have gone off the rails. (541)

(See also Group II.)

WHITLEY PARTNERS, *Railway Works, Leeds*.—Steam Engine and Boiler Accessories; Allen's Steam Engine Governors and Valves; Peet's Valve Taps for Steam, Water, and Gas Pipes and Mains; Crossley & Hanson's Self-acting Reducing Valves; Berryman's Machines for Heating and Regulating the Feed Water for Boilers; Berryman's Steam Traps; Waters's Feed Water Heaters; Patent "Power Jumpers;" Hanson's Variable Expansion Gear; The "Best" Steam Boilers; Rodgers's Wrought Iron Split Drums; Pitt's Centring and Facing Machines; Walkington's Compound Tool Boxes for Planing Machines; Martin's Anchors; Common's Automatic Apparatus for the prevention of pipes bursting from frost; Cameron's "Special" Steam Pumps; Field's Boiler Tubes; Field & Cotton's "Direct-expansion" Compound Engine; Westray's Portable Drills; Hodgson's Radial Hand Drills; Denison's Suspended Weighing Machines; Dudgeon's Tube Expanders; Gresham's Injectors; Farron's High Pressure Taps; Farron's Pressure Diminishing Valves; Webb's Water Gauges for Steam Boilers; the "Oxygen" Furnace Bar for economizing fuel; Smyth's Self-acting Motor for driving Sewing and other Machines; Haines's Lead-encased Block-tin Piping; The "Vaughan" Self-acting Water Ejectors; Bessemer Emery Wheels; Direct-acting Swivel-arm Engine Indicators; Weston's Ratchet Braces; Taylor's Engine Counters; Taylor's Speedometers; Chandler's Compound-lever Ball Valves; Field's Disc-lip Valves; Whitley's Valve Lubricators; Ripley & Wormald's Tube Wrenches; Allen's Angular-cut Rasps; l'Extincteur; Gun-metal Fittings and Mountings for Locomotive, Marine, Stationary, and Portable Engines and Boilers; Wrought Iron, Brass, and Copper Tubes; Halkyn Mountain Hydraulic Lime, and Pwll Melyn Roman Cement; Lap-Welded Iron Boiler Tubes; Asbestos Steam Packing. (542)

(See Appendix.)

BESSEMER STEEL AND ORD-
NANCE COMPANY (LIMITED), 17, *Grace-
church Street, London*.—Steel Rails, Tyres,
Forgings, &c. (543)

FOX, WALKER & COMPANY,
Atlas Engine Works, Bristol.—Locomotive
Engine, specially designed for Narrow Gauge
Railways, with Adams's radial axle boxes,
and improved central couplings for sharp
curves. (544)

DERING, GEORGE E., *Lockleys,
Welwyn, Hertfordshire*.—Patent Spring Clip,
Rail Joints. (545)

DE LORIERE & COMPANY, 1,
Victoria Street, London.—Double-Purchase
Crane, constructed on a new principle of
prime motion. (546)

THOMSON & COMPANY, *Crown
Iron Works, Glasgow*.—Buffers, Bearing
Springs, and Draw Springs, with Machine
for testing the same. (563)

NORMAN, S. W., 116, *Westminster
Bridge Road, London*.—Model of Tramway
Car, a new method of shunting and of steering
the carriage or engine over curves and
angles. (547)

(See also Group V.)

WELCH, A., 11, *Bank Buildings,
Metropolitan Cattle Market, London*.—Rail-
way Cattle Wagons fitted with appliances
for stalling, feeding, and watering the
animals (models). (548)

HUGHES, H., & COMPANY,
Falcon Works, Loughborough.—Tank Loco-
motive Engine. (549)

HADFIELD, R., *Ecla Foundry,
Attercliffe, Sheffield*.—Double disc Railway
Wheel, in which the Tyre is welded to the
centre. (791)

(See Appendix.)

DEWRANCE, J., & COMPANY,
176, *Great Dover Street, Southwark, London*.
—Steam, Hydraulic, and Vacuum Gauges;

Autographic Pressure Recorders; Injectors;
Engine Counters, Salinometers, Engine
Thermometers, Sand Pumps, Contracting
Pump Bucket, Water Meters, Steam and
Water Fittings; Babbitt's and Dewrance's
Anti-Friction White Metals for lining bear-
ings; Steam Launch Engines and Boilers.
(550)

PETERS, THOMAS, & SONS, 53,
*Park Street, and Upper George Street, Gros-
venor Square, London*.—Five Carriages—
Calèche, or Park Barouche, on eight springs;
Coupé d'Orsay, on eight springs; Coupé,
or Brougham, on elliptical springs; Mail
Coach, with hand brake, luncheon box,
and wine cisterns; Mail Char-à-Bancs, with
hand brake. (551)

WINDOVER, C. S., 32 and 33,
Long Acre, London.—Parisian Phaeton with
removeable seats and head, lunch basket,
&c.; Denmark Phaeton with moveable hind
seat. (552)

SHANKS, F. & R., 70 and 71, *Great
Queen Street, London*.—Four-horse Drag,
to lock shorter than usual; Small Sociable
Landau, and Driving Phaeton with patent
head. (553)

STREETER, EDWIN W., 37, *Con-
duit Street, London*.—Patent Communicator
for Carriages, superseding the Check-string
and Speaking-tube, and affording means of
instant communication with the coachman
without diverting his attention from the
horses. (655)

EVANS, JAMES, 46, *Seel Street,
Liverpool*.—Improved Hansom Cab. (555)

MOY & SHILL, 1, *Clifford's Inn,
London*.—Aërial Machine—Working Model,
exhibiting method of navigating the air by
rotating aëroplanes, without the aid of gas,
The Model is driven by a pair of "Patent
Non-radiating" Steam Engines of 4 indi-
cated horse-power, but weighing only 28 lb.
(556)

THORN, C., *St. Giles's Gate
Norwich*.—Norfolk Shooting and Baggage
Cart, and "Lorne Car" with patent adjust-
ing shafts, &c. (557)

MULLINER, H., *Leamington Spa, Warwickshire*.—Park Phaeton, Sporting Dog Cart Phaeton, and light Dog Cart. (558)

HOLLAND, E., & COMPANY, *Onslow House, Fulham Road, London*.—Trucks, Trolleys, &c. (560)

HUTTON, JOHN, & SONS, *Summer Hill, Dublin*.—Irish Car. (615)

ROBERTS, JOHN, & SONS, *West of England Carriage Works, Bridgewater*.—Whitechapel Dog Cart. (562)

CLARKE, EDWARD, *Patent Crank Works, Lincoln*.—Steam Engine Fittings, Forgings, &c. (376)

BLEZARD, JAMES, & SONS, *Padiham, Lancashire*.—Temples used on Looms for Weaving Cotton, Woollen, Linen, and Silk Goods. (616a)
(See also Group XXVI.)

SIEBE & GORMAN, 5, *Denmark Street, Soho, London*.—Ice-making Machine. (681)
(See also Group XVIII.)

SIEBE & WEST, 17, *Mason Street, Lambeth, London*.—Ice Making Machines. (428)

NEW MILKING MACHINE COMPANY (LIMITED), *Sheffield*.—Milking Machine. (429)

STORER, JOSEPH, *Hammersmith, London*.—Self-acting Table Fountains (shown in Mr. Rimmel's case, Group III.) (50*)

WHITWORTH, SIR JOSEPH, & COMPANY, *Manchester*.—Photographs of Machinery. (501)

SMITH & COVENTRY, *Manchester*.—Photographs of Machinery. (513)

WILLIAMS & COMPANY, (LIMITED), 33, *King William Street, London*.—Lawn Mowers called "Archimedean," adapted for long and wet as well as short and dry grass, for hand and pony use. (588)

BROWN, J. B., & COMPANY, 90, *Cannon Street, London*.—Lawn Mowing Machines. (306)
(See also Group VII.)

FOLLOWS & BATE, *Dutton Street Works, Manchester*.—Lawn Mowing Machines, for hand and horse power. (578)
(See also Group XIIIa.)

BARNARD, BISHOP & BARNARDS, *Norfolk Iron Works, Norwich*.—Patent Lawn Mowers. (295)
(See also Group VII.)

MILBURN, WILLIAM, 7, *Todd Street, Corporation Street, Manchester*.—Lawn Mowing, Rolling and Collecting Machines. (607)

PAGE, E., & COMPANY, *Victoria Iron Works, Bedford*.—Brick and Pipe Making Machines; Peat-Pressing Machines. (609)
(See also Group XIIIa.)

MIDDLEMORE, W., *Holloway Road, Birmingham*.—Machine Belting. (219)
(See also Group VI.)

NEWTON, GOUGH & COMPANY, *Manchester*.—Machine Driving Belts. (215)
(See also Group VI.)

HAZELDINE BROTHERS, 5, *Lant Street, Borough, London*.—Two Parcels Delivery Carts, of different designs, as used by Railway Companies and Carriers in Great Britain. (539)

GROUP XIIIa.

Agricultural Machinery.

BOBY, R., *St. Andrew's Works, Bury-St.-Edmund's*.—Barley Hummeller, Corn Screens, Corn-dressing Machines, Haymaking Machines, Hand Seed Drills, Malt Screens, Cask Bushes. (566)

ROBEY & COMPANY (LIMITED), *Perseverance Iron Works, Lincoln*.—Portable, Vertical, and Horizontal Engines; Thrashing Machines, with iron frames; Straw Elevators (Harvest Stackers); Corn Grinding Mills; Wood Sawing Machinery; Maize Sheller. (567)

(See Appendix.)

CLAYTON & SHUTTLEWORTH, *Stamp End Works, Lincoln; and at Vienna, Pesth, Prague, and Lemberg*.—Portable and Fixed Steam Engines and Traction Engines; Portable Thrashing Machines; Elevators for Straw, Hay, and Sheaf Corn; and other Agricultural Machinery. (568)

(See also Group XIII.)

AVELING & PORTER, *Rochester, Kent, and 72, Cannon Street, London*.—Agricultural Road Locomotive Engine with cylinder surrounded by steam and compensating gear for turning sharp corners, &c. suited for hauling heavy loads or driving fixed machinery; two waggons for use with the locomotive. (484)

(See also Groups XIII. and XVIII.)

HOWARD, J. & F., *Bedford*.—Steam Ploughing and Cultivating Apparatus; Ploughs for all purposes; Grass, Seed, and Drag Harrows; Haymaking Machines; Horse Rake; Mowing and Reaping Machines. (442)

(See also Group XIII.)

SMYTH, J., & SONS, *Peasenhall, Suffolk*.—Corn, Beet and Manure Drills; Broadcast Corn and Seed Sowing Machines; Manure Distributors. (570)

FOWLER, J., & COMPANY 71, *Cornhill, London*.—Steam Ploughing Apparatus complete, and Steam Traction Engines; Clip-drums, &c. (571)

TURNER, E. R. & F., *St. Peter's Ironworks, Ipswich*.—Steam Engines, fixed and portable; Thrashing and Dressing Machine; Corn Grinding, Crushing and Kibbling Mills; Oil Cake Breakers; Maize Shellers, and Kibblers. (572)

HOUGHTON, W., & COMPANY, *Victoria Mills, Great Grimshy*.—Aspirator, Separator, Smutter, combined, for cleaning grain, two sizes. (573)

BAKER, J., *Falcon Works, Wisbeach*.—Corn Dressing and Screening Machines, made by Special Steam Machinery, and suitable for all Countries. (574)

MARSHALL, SONS, & COMPANY (LIMITED), *Gainsborough, Lincolnshire*.—Steam Engines, portable and fixed; Thrashing Machines, Corn Mills, Circular Saw Bench, and Sack-lifting Barrow. (575)

NICHOLSON, W. N., & SON, *Trent Ironworks, Newark*.—Portable Steam Engine, 8-horse power; Vertical Combined Engines and Boilers of 1 to 4-horse power; Haymaking Machines, Self-acting and other Horse-Rakes, Tunnies and Root Cutters, Chaff Cutters, Oilcake Breaking Machine, and Winnowing Machine. (577)

FOLLOWS & BATE, *Dutton Street Works, Manchester*.—Chaff Cutter, Corn Grinding Mills, Meat Choppers and Mincers, Knife Cleaners. (578)

(See also Group XIII.)

RUSTON, PROCTOR & COMPANY, *Sheaf Iron Works, Lincoln*.—Portable, Fixed, and Vertical Steam Engines, with patented improvements; Thrashing Machines, Patent Adjustable Corn Screens, Corn Grinding Machines, Maize Shellers; Wood Sawing Machinery, &c. (579)

(See Appendix.)

RANSOMES, SIMS & HEAD, *Orwell Works, Ipswich*.—Portable Steam Engines for economising Fuel, for Burning Wood and Lignite, and for Straw alone; Steam Thrashing Machines for finishing the Corn for market, for export, also for hot countries, with apparatus for chopping and bruising the straw for fodder; Horse Rakes, and Haymakers; Double and Single Horse and Bullock Ploughs, especially adapted for the large corn districts of the east. (580)

COLEMAN & MORTON, *London Road Ironworks, Chelmsford, Essex*.—Cultivators for light, mixed, and heavy soils; Corn Screen for separating grain; Potato Digging Machine, Manure and Water Carts, Oil Cake Breakers, Hay Elevator, &c. (581)

HUNT & TAWELL, *Atlas Works, Earls Colne, Essex*.—Clover Seed Drawer; Chaff Bruising Mills; Cutters; Root Gardner Turnip Cutters; Horse Gears; Pulpers; and combined Oat and Bean Mill. (582)

LEWIS & COMPANY, *Salopian Ironworks, Shrewsbury*.—Mowing and Reaping Machines, Chaff Cutters, Ploughs, Oil Cake Breaker, Root Pulpers, Turnip Cutters and Slicers. (583)

SAMUELSON & COMPANY, *Britannia Works, Banbury*.—Self-Raking Reaping Machines, and Grass Mowing Machines. (584)

BAMLETT, A. C., *Thirsk, Yorkshire*.—Reaping Machine; Self-Raking Combined Mowing and Reaping Machine; Manual Delivery Reaper. (585)

HORNSBY, R. & SONS, *Spittlegate Iron Works, Grantham*.—Patent Portable Steam Engines; Thrashing, Shaking and Finishing, Dressing Machines; Reaping and Mowing Machines; Corn and Seed

Drills and Manure Distributors; Ploughs; Washing, Wringing, Mangling Machines, &c. (587)

(See Appendix.)

WEETMAN, JOHN, *Vulcan Iron Works, Ipswich*.—Portable Vertical Steam Engine; Thrashing Machine; Horse Rake, with corn and seed distributor, harrow, and weed extirpator; Cultivator, &c. (589)

COULTAS, J., *Spittlegate, Grantham*.—Beetroot Drop Drill, with Artificial Manure Apparatus; Wright's Patent Potato Planter; Royal Corn and Seed Drill; Corn Broadcast Sowing Machine. (590)

PENNEY & COMPANY (LIMITED), *Lincoln*.—Patent Adjustable Rotary Corn-Screens; Seed-dressing Machine; Canadian Cast Steel Forks, Hoes, and Rakes. (591)

WOODS, COCKSEGE & WARNER, *Suffolk Ironworks, Stowmarket*.—Crushing and Grinding Mills for grain, linseed, beans, &c., for steam power, price 18*l.* 18*s.* Ditto for horse or two-man power, 12*l.* 12*s.* Ditto for one man, 9*l.* 4*s.* Linseed and Malt Mill, price 7*l.* 4*s.* "Universal" Mill, worked by a big boy, 6*l.* 15*s.* Portable Combined Steam Engines and Boilers, 95*l.* 10*s.* Corn Mill, with French burr stones, 26*l.* Oilcake Breakers, 3*l.* 10*s.* and 7*l.* Horse Gear 15*l.* 15*s.* Root Pulpers, 3*l.* 12*s.* 6*d.* to 5*l.* Thrashing Machine, for horse-power, 37*l.* (592)

CLARKE & DUNHAM, 48, *Mark Lane, London*.—Grain-Cleaning Machines—Smut Machine, Separator, Sorter, Wirework, Millstone, Millstone Balance, Steel Smelt Wire, and Mill Bills; Needle Lubricators. (593)

GARRETT, R., & SONS, *Leiston Works, Suffolk*.—Portable Steam Engines and Thrashing Machinery; Corn-drills, Horse-hoes, Manure Distributors. (594)

RICHMOND & CHANDLER, *Salford, Manchester*.—Chaff-cutting Machines, Crushing Mills, and Horse Gear. (595)

WALLIS & STEEVENS, *Basingstoke*.—Portable Steam Engine, 8 horse power, with Patent Feed Water Heater,

price 280*l.*; Portable Steam Thrashing and Finishing Machine, price 160*l.*; Horse-power Thrashing Machine, 76*l.* 10*s.*; Model of Patent Folding Elevator. (596).

CORCORAN, BRYAN, WITT & COMPANY, 28, *Market Buildings, Mark Lane, London.*—Corn Grinding Mill, with French Burr Stones, Smutting Machine and Corn Screen, and Wheat Separator; Chondrometer, with English, Austrian, or other scale, for ascertaining the Weight of Corn per bushel, &c.; Hand Drill and Seed Sower. (597)

(See also Group VII.)

WILLSHER, JOHN CHAPLIN, *Brain-tree, and 40, Gracechurch Street, London.*—Steam Engine; 8-horse power Expansion Portable Engine, with Enlarged Firebox; 8-horse power Portable Combined Thrashing and Corn Dressing Machine, to prepare corn for market. (599)

EDWARDS, G. B., *High House, Bredfield, Woodbridge.*—Drills for dropping beetroot seed in tufts or bunches; Drills for dry manure. (600)

CLARK BROTHERS & ODLING *Kirke White Street, Nottingham.*—Beaters for Thrashing Machines; Malleable Iron Castings. (601)

LEWIN, S., *Poole, Dorsetshire.*—Steam Engines, portable, fixed, and marine; Thrashing Machines and Elevators; Waggon Loader, Ploughs, and Circular Saw Bench; Portable Engine, 4-horse power, similar to the above-mentioned, with Thrashing Machine suitable for such engine; Strong and Simple Chaff Cutter. (602)

BARFORD & PERKINS, *Queen Street Iron Works, Peterborough.*—Corn Grinding Mills, Oil Cake Mills, Rollers; Steam Cooking Apparatus; Models of Road-roller, Steam Plough, and Campaign's Anchor for Steam Cultivation. (603)

FOSTER, W., & COMPANY, *Wellington Foundry, Lincoln.*—Eight horse Portable Steam Engine; Portable Thrashing Machine. (604)

REID, B., & COMPANY, *Bon Accord Works, Aberdeen.*—11-row Patent "Disc" Corn and Seed Drill; 10-foot

Patent "Disc" Broadcast Sower, with Axle for transport; Winnower and Corn-dressing Machine; Patent 3-row Combined Beetroot and Manure Drill; Beetroot Raiser; Model of Wire Suspension Bridge, and Straining Pillar for Wire Fences; Models. (605)

READING IRON WORKS (LIMITED), *Reading, Berkshire.*—Fixed Steam Engine of 25-horse power, fitted with Condenser and variable Expansive Valve; fixed Engines of 10, 4, and 2-horse power; Portable Engine with special economic arrangements; Combined Steam Power Thrashing Machine; Horse Power Thrashing Machine for three light horses; Patent Safety Cylindrical Horse Worker; Hand Power Thrashing Machine, &c. (447)

(See also Group XIII.)

DAVEY, PAXMAN & COMPANY, *Standard Ironworks, Colchester.*—Patent Vertical Engine, known as the "Davey-Paxman" Engine, with Boiler, Baffle Plate to regulate draught, and Water Tank Heater; Patent Steam Corn Dryer. (Boiler lent to Royal Commissioners for use.) (608)

PAGE, E., & COMPANY, *Victoria Iron Works, Bedford.*—Ploughs, Harrows, Horse Rakes, Root Pulpers, Oat and Maize Mills, Oil Cake Mill, &c. (609)

(See also Group XIII.)

MURRAY, G. W., *Banff, Scotland.*—Thrashing Machines for horse and hand-power; Endless Chain Pump for lifting thick and other liquids; "Horse Gear" Double-furrow Plough, and combined Plough and Subsoiler, on antifriction wheels; Fencing Wire Straining Brackets for wood and iron posts. (610)

(See also Group VII., and Appendix.)

NALDER & NALDER (LIMITED), *Challow Ironworks, Wantage, Berkshire.*—Combined Steam-power Thrashing and Dressing Machine for preparing grain for market. (611)

BURGESS & KEY, *Holborn Valley Viaduct, London.*—Reaping Machine for two horses, invented by Mr. C. McCormick of the United States of America, and made by exhibitors, delivers the corn, when cut in sheafs, clear of horses' feet; these machines are also adapted for light horses or bullocks. (612)

BAKER, T., *Whitehall Iron Works, Compton, Berks.*—Double Blast Corn Dressing and Winnowing Machine, with six Wire Sieves to suit different descriptions of Corn. (613)

BRIGHAM & COMPANY, *Tweed Implement Works, Berwick-on-Tweed.*—Mowing Machine, the "Star," 17l. 10s.; Reaping Machines; Self-acting "Improved Excelsior," 34l. (237)

GROUP XIV.

Philosophical, Surgical Instruments.

MATHEMATICAL, ASTRONOMICAL, PHYSICAL, AND CHEMICAL INSTRUMENTS (Instruments for Measuring, Weighing, and Dividing, for Optical Purposes and Electric Telegraphy). SURGICAL INSTRUMENTS AND APPARATUS (Artificial Limbs, Teeth, &c.). HOROLOGICAL INSTRUMENTS, CLOCKS, WATCHES, AND THEIR PARTS (Chronoscopes, Chronographs, Electric Clocks). STATISTICS OF PRODUCTION.

COOKE, T., & SONS, *Buckingham Works, York.*—Portable Equatorial Telescopes on Tripod Stands. Theodolite and Engineers' Levels. Large Clocks for use of Royal Commission. (621)

PILLISCHER, M., 88, *New Road Street, London.*—Microscopes and their Appliances; Telescopes; Field and Opera Binocular Glasses; Meteorological Standard Instruments; Aneroid Barometers and Barometrographs; Mathematical, Philosophical, Electrical and Surveying Instruments; Magnetic Compasses; Scales and Rules; Spectacles and Eyeglasses. [Rotunda.] (622)
(See also Group VII.)

SIEMENS BROTHERS, 3, *Great George Street, Westminster.*—Telegraph Apparatus and Materials; Tubular Iron and Wooden Poles with Insulators; Voltmeter, with Pyrometer; Electrical Apparatus for deep sea measurements; Electrical Alarums; Lightning Discharger; Mine and Torpedo Exploding Apparatus; Electrical Batteries; Deep Sea Thermometers; Pneumatic Signal Apparatus; Submarine Cable Specimens; India-rubber and Gutta-percha in stages of manufacture, &c. (623)

HOOPER'S TELEGRAPH WORKS (LIMITED), 31, *Lombard Street, London, Works: West Ham, Mitcham, Surrey, and Millwall Docks, London.*—Submarine Telegraph Cables, and Telegraph Materials and Apparatus; India-rubber Core, for submarine and other lines. (627)

AHRENS, BERNHARD, 24, *Ludgate Hill, London.*—Electro-magnetic Billiard Marker, Scorer, Indicator, and Detector. (628)

RABONE, J., & SON, *Whitmore Street, Hockley, Birmingham.*—Rules in Boxwood, Ivory, Brass, and Steel; Plumb and Spirit Levels; Measuring Tapes; Joiners' Squares, Bevels, Surveyors' Land Chains. (630)

(See Appendix.)

THE INDIA RUBBER, GUTTA PERCHA & TELEGRAPH WORKS, COMPANY (LIMITED), *Silvertown, Essex, and 100, Cannon Street, London.*—India Rubber and Gutta Percha Manufactures; Submarine and Torpedo Telegraph Cable; Insulated Telegraph Wires. (775)

(See also Group VI.)

TELEGRAPH CONSTRUCTION AND MAINTENANCE COMPANY (LIMITED) (per Baron Erlanger), *Rue Tailbout, Paris*.—Telegraph Cables. (616)

ASH, C., & SONS, 7, 8, 9, *Broad Street, Golden Square, London*.—Mineral Teeth, Dental Instruments, Tools, and Appliances. (631)

REIN, C. F., & SON, 108, *Strand, London*.—Acoustic, Surgical and Veterinary Instruments; Respirators; Reservoir Enemas; Eye Fountains and Douches; Syphons and Breast Pumps; Bougies and Catheters; Thethoscopes; Medical Inhalers; Instruments for Deformities; Anatomical Belts, Stockings and Bandages; Trusses, Crutches, Arm Slings, &c. Magneto-Electric Machines for nervous diseases. Elastic Appliances for surgical purposes. Speaking Tubes and Trumpets. [Rotunda.] (632)

REIN, MRS. C. F., 108, *Strand, London*.—Anatomical Belts, Artificial Breasts, Elastic Stockings for varicose veins, &c.; Trusses of all descriptions, Bandages, and other appliances for surgical purposes. [Rotunda.] (633)

GRAY, PHILIP, 7, *Cork Street, Burlington Gardens, London*.—Automatic Articulation applied to the construction of Artificial Limbs; Artificial Limbs suited to various amputations. (634)

(See Appendix.)

WARD, J., *Leicester Square, London*.—Invalid Chairs—locomotive, portable, recumbent, &c.; Children's Perambulators. (636)

PULVERMACHER, ISAAC L., 168, *Regent Street, London*.—Electric Galvano Bands, Chains, Volta-Electric Pocket Batteries; Faradaic Pocket Induction Apparatus. (637)

(See Appendix.)

GABRIEL, MESSRS., 64, *Ludgate Hill*; and 56, *Harley Street, Cavendish Square, London*.—Artificial Teeth and specimens of Mechanical Dentistry. (638)

OCLEE, F. H., 31, *New Bailey Street, Salford*.—Mechanical Self-acting

Bust for showing Artificial Teeth, Specimens of Teeth, &c. (639)

(See Appendix.)

SALT & SON, 21, *Bull Street, Birmingham*.—Trusses; Umbilical Belts for Rupture; Truss Pads made by machinery, without sewing. (640)

KLAFTENBERGER, C. J., 157, *Regent Street, London*.—Marine and Pocket Chronometers, Clocks, and Watches; Watches, for scientific and other purposes—Chronographs, Automaton Seconds, Minute Repeaters, Perpetual Calendar Watches, &c.; Watch Chains and Seals. (641)

KULLBERG, V., 105, *Liverpool Road, London*.—Marine Chronometers with improved balances for extremes of temperature; Keyless Pocket Chronometers, and Lever Watches; Chronograph, Calendar Watch, &c. (643)

WEICHERT, WILLIAM, 119, *Rothsay Terrace, Bute Docks, Cardiff, Wales*.—Marine Chronometers; Chronometer, Barometer and Thermometer combined; Keyless Pocket Chronometers, and Lever Watches. (644)

FRENCH & COMPANY, 9, *Royal Exchange, London*.—Chronometers, Repeating and other Watches, in gold and silver cases. (645)

GREENWOOD, J., & SONS, 6 and 7, *St. John's Square, Clerkenwell, London*.—Clock, going eight days, chiming quarters and music, in Louis XIV. marquetric case. Designed by Maréchal, manufactured by exhibitors. (647)

ADAMS, W. MARSHAM, 3, *Pennistone Street, Shepherd's Bush Green, London*.—Mensurator and Coelometer. (586)

SIVEL & WALTER, 121, *Patrick Street, Cork*.—Marine Chronometer with improved auxiliary compensation balance wheel. (649)

LOZADA, J. R., 105, *Regent Street, London*.—Marine Chronometers, Watches, and Clocks. (655)

LANG, D., & COMPANY, 27, *Houndsditch, London*.—Surgical Instruments. (435)

GROUP XV.

Musical Instruments.

MUSICAL INSTRUMENTS. PARTS OF THEM (Strings, Bows, Moulding Boards, Membranes, Keys, Pipes, &c.). SOUND CARRYING APPARATUS (Speaking Pipes, Signal Whistles, &c.). BELLS, CHIME OF BELLS. STATISTICS OF PRODUCTION.

(Vide Additional Exhibition, No. 3.)

ATKINS, CHARLES, & COMPANY, 1, *Water Lane, Great Tower Street, London*.—Metal Head Side Drums. (650)

IVORY, H, A., & COMPANY, *Wood Green, Tottenham, London*.—Pianofortes. (651)

KIRKMAN, J., & SON, 3, *Soho*

Square, London.—Pianofortes of various descriptions. (652)

BLEWS, WILLIAM, & SONS, *New Bartholomew Street, Birmingham*.—Peal of eight Church Bells arranged for ringing on the English system, weight 55 cwt. Set of Hand Bells for time ringing. (802)

(See also Group VII.)

GROUP XVI.

The Art of War.

ORGANIZATION AND RECRUITING OF ARMIES. EQUIPMENT OF TROOPS, ACCOUTREMENTS, AND ARMOUR. ARTILLERY. MILITARY ENGINEERING. SANITARY CONTRIVANCES. MILITARY EDUCATION, TRAINING, AND INSTRUCTION. CARTOGRAPHY AND HISTORIOGRAPHY.

SHIPLEY, JOHN, 187, *Regent Street, London*.—Horse Equipments, with modern improvements (shown in Major Leveson's Tent). (663*)

ELEY BROTHERS, 254, *Gray's Inn Road, London*.—Cartridge Cases for military rifles, and for revolving pistols; Percussion Caps; Gun Waddings of thick felt. (657)

(See also Group VII.)

GREGORY, JAMES, *Newport Road, Lincoln*.—"Canteen" Cooking Apparatus. (658)

HENRY, ALEXANDER, 12, *South Saint Andrew Street, Edinburgh*.—"Henry's" Self-cocking Military Rifles, with barrel as adopted by Her Britannic Majesty's Government; "Henry's" Military Breech-loading Rifles, with side lock. (313)

(See also Group VII.)

HENRY RIFLED BARREL COMPANY, *Blenheim Works, Eagle Wharf Road, London*.—Steel Barrels for Small Arms and for the Gatling Gun, rifled on the "Henry System," adopted by the British War Department for the Martini-Henry Rifle and the Gatling Gun, shown in various stages of manufacture; Cotton Gunpowder (Imitation)—Punshon's Patent. (660)

SOPER, W., 23, *Friars Street, Reading*.—Breech-loading Rifles, which have been loaded and fired sixty times in one minute. (661)

WEBLEY, P., & SON, 82, 83, and 84, *Weaman Street, Birmingham, and St. James's, London*.—Breech-loading Guns, Rifles, and Revolvers, on various systems and of different qualities. (662)

LEVESON, MAJOR, 22, *King Street, Covent Garden, London*.—Military Tents, Appliances, and Equipments; Sanitary Contrivances. (663)

BROWNING, JOHN, 111, *Minorities, & 63, Strand, London*.—Improved Binocular Field Glasses in Aluminium, Field Telescopes. Exhibited as part of Major Leveson's Collection. (663*)

EDGINGTON, JOHN, & COMPANY, 48, *Long Lane, West Smithfield, London*.—Military Camp Tent, for three men, called the "Old Shekarry Campaigning Tent." Military Hospital Marquee, 40 ft. by 20 ft. (used for the exhibition of Major Leveson's collection). (233)

(See also Group VI.)

GARDNER, JOHN, & SONS, 453 and 454, *West Strand, Charing Cross, London*.—Lamps and Cooking Utensils for Military Service (shown in Major Leveson's Tent). (654)

MURCOTT, THEOPHILUS, 68, *Haymarket, London*.—Military Arms, &c. (678)

(See also Group VII. and Appendix.)

FAGG BROTHERS, 29, *Haymarket, London*.—Boots, Patent, for Cavalry, with spurs, chairs, and straps; Hunting, Riding, Shooting, and Dress Boots. (679a)

LEWIS, GEORGE EDWARD, 32 and 33, *Lower Loveday Street, Birmingham*.—Snider Breechloader, with bolt action, for military purposes; Improved Chassepot Rifle for metallic cartridges, W. Scott's

patent; Cross-bolt Military Rifle, new system—W. Scott, patentee. (664)

(See also Group VII.)

VAVASSEUR, J., & COMPANY, *London Ordnance Works, Bear Lane, Southwark, London*.—Cannon, built-up, cast steel breech and muzzle-loading; Iron Gun Carriages for Naval and Field Service; Projectiles for Breech and Muzzle-Loading Guns; M'Evoy's Torpedoes, Electric Fuzes and Apparatus; Jointers for Electric Cables. (665)

ARMSTRONG, SIR W. G., & COMPANY, *Elswick Works, Newcastle-on-Tyne*.—Breech-loading Rifled Guns, with Carriages, &c.; Muzzle-loading ditto; Gatling Guns with ten barrels; Sixty-four Pounder Palliser Converted Rifled Gun on Carriage; Breech and Muzzle-loading Rifled Guns on Garrison Carriages; Parts of Guns in various stages of manufacture; Series of Electrical Torpedoes, with connections complete; Model of the Moncrieff Gun-carriage for 9-inch Gun; Model of 35-ton Muzzle-loading Rifled Gun; Fuzes, Bursters, &c., for Rifled Guns; Corrugated Zinc Powder Cases for 9 and 10-inch Cartridges. (561)

(See also Groups XIII. and XVII.)

MAYO, C., M.D., *Member of the Royal College of Physicians, London*.—Sling Apparatus, in form of a cart, for transporting severely wounded men; intended chiefly for use between field hospitals and railways, and to reduce the number of men and amount of *matériel* required for field-hospital service. (666)

UNITE, JOHN, 291, *Edgware Road, London*.—Military Bell Tent. (232)

(See also Group VI.)

ATKINS, F. H., & COMPANY, 62, *Fleet Street, London*.—India Filter Carts; Barrack Filters (shown in Major Leveson's Tent). (663*)

ADAMS & COMPANY (LIMITED), 391, *Strand, London*.—Cavalry and Infantry Revolvers (shown in Major Leveson's Tent). (663*)

DAW, G. H., 57, *Threadneedle Street, London*.—Military Cartridges (shown in Major Leveson's Tent). (663*)

MINSHULL & COMPANY, *Tichborne Street, London*.—Military Trunks and Camp Gear (shown in Major Leveson's Tent). (663*)

GROUP XVII.

The Navy.

MATERIALS FOR NAVAL ARCHITECTURE. MODELS AND DRAWINGS OF BOATS AND SHIPS FOR INLAND LAKE AND RIVER NAVIGATION; SEA-GOING SHIPS, COASTING VESSELS, MERCHANT SHIPS, AND SHIPS OF WAR, STORES AND FITTINGS FOR EQUIPMENT, OUTFIT, AND ARMAMENT OF SHIPS. TOOLS AND APPARATUS USED IN SHIPBUILDING. LAND AND WATERWORKS FOR NAVIGATION (Models and Drawings of Docks, Harbours, Sluices, Floating Docks, Floating Batteries, and Coast Defences). CLOTHING, OUTFIT, AND ACCOMMODATIONS FOR CREWS. HYDROGRAPHY, CHARTS, METEOROLOGICAL INSTRUMENTS; EDUCATION OF SEAMEN AND OFFICERS.

DENNY, W., & BROTHERS, *Dumbarton*.—Sectional Model of Spanish Royal Mail Steamship "A. Lopez." [Rotunda.] (670)

MARTIN, CLAUDE, 9, *Great Winchester Street, London*.—Model of Stern of Ironclad Vessel, with Patent Self-canting Anchor and Zig-zag Link Chain Cable. (671)

SMITH, WASTENEYS, 22, *Grey Street, Newcastle-on-Tyne*.—Anchors known as Patent "Stockless;" Model of Ship's Stem fitted with the same, and with Patent Apparatus for working and stowing anchors, and Harford and Co.'s Patent Frictional Brake and Connector Windlass. (672)

WILSON, J. H. & COMPANY, *Cornhill, Liverpool*.—Steam Winch and Hoist. (673)

(See also Group XIII.)

LAIRD, BROTHERS, *Birkenhead Ironworks, Birkenhead*.—Ship Models.—Royal British Navy, H.M.S. "Wyvern," Steam Ram, with tripod masts. Royal Dutch Navy, "Heiligerlee," Turret Monitor, and "De Stier," Steam Ram, for coast defence. Brazilian Navy, "Bahia," Turret Monitor. Pacific Steam Navigation Company's Steamers, "Britannia," of 3,700 tons, 650 horse-power, and "Santa Rosa," of 2,250 tons, 400 horse-power, "Cranborne," of the Indus Steam Flotilla, River Steamer of 100 tons, built of steel, drawing only two feet of water. Steam Launch for carrying Troops and one Gun. "Lancashire Witch," Schooner

Yacht, with Auxiliary Engines. "More Vane," Screw Pleasure Launch. [Rotunda.] (674)

KYNASTON, MRS. C. M., *The Close, Lichfield*.—Boat Lowering Apparatus. (675)

PALMER'S SHIP BUILDING AND IRON COMPANY, *Jarrow-on-the-Tyne*.—Models of Ships; Screw Steamer "Jumna," built for the British Government; Screw Steamer "Montana," built for Messrs. Green and Co., Liverpool; Screw Steamer "Brindisi;" Two Half Models. [Rotunda.] (676)

REED, E. J., C.B., *Earle's Shipbuilding Company, Hull*.—Model of a Broad-side Ironclad Ship, "König Wilhelm." (238)

LUMLEY, HENRY, (CHEVALIER) Associate of the Institute of Naval Architects, 20, *Bury Street, St. James's, and 31, St. James's Street, Piccadilly, London*.—Model of Lumley Rudder for River Steamboats, or Canal Navigation, on Exhibitor's Second System. (679)

WALKER FORGED SCREW & BOLT COMPANY, *Low Walker, near Newcastle-on-Tyne*.—Patent Forged Screws. (677)
(See also Group VII.)

ARMSTRONG, SIR W. G., & COMPANY, *Elswick Works, Newcastle-on-Tyne*.—Model of H.M. Gunboat "Staunch." (561)
(See also Groups XIII. and XVI.)

GROUP XVIII.

Civil Engineering, Public Works, and Architecture.

BUILDING MATERIALS; PROCESSES AND APPARATUS FOR QUARRYING, BRICKMAKING; IRON GIRDER WORK; PREPARATION AND PRESERVATION OF WOOD; ARTIFICIAL STONE, TERRA-COTTA WORK, &c.; MATERIALS AND APPLIANCES FOR FOUNDATIONS (Pile-drivers, Screw-piles, Cofferdams, Caissons, Pneumatic and Diving Apparatus). CONTRIVANCES AND TOOLS FOR EARTH-WORKS (Excavators, Dredging Machines, Apparatus for Raising, Carrying, and Transporting Earth and Materials). MATERIALS AND APPARATUS USED FOR ROADS AND RAILWAYS (Road Rollers; Railway Superstructure, Switches, Crossings, Turn-tables, Traversing-tables, Inclined Planes, Lifts; Pneumatic and other Modes of Propelling; Water Stations and their Apparatus, Railway Station Buildings of all kinds, and Systems of Railway Signals). HYDRAULIC ENGINEERING WORKS, EXCLUDING SEA WORKS (River Works, Canal Works, Dikes, Locks, Dams, &c.). MODELS AND PLANS OF VIADUCTS, BRIDGES, AND AQUEDUCTS, &c. PLANS, MODELS, AND DRAWINGS OF PUBLIC BUILDINGS, DWELLING-HOUSES, BARRACKS, PENITENTIARIES, PRISONS, AND HOSPITALS, SCHOOLS AND THEATRES, LABOURER'S COTTAGES; APPARATUS FOR LIFTING AND MOVING HEAVY WEIGHTS IN BUILDINGS, AS LIFTS, &c.; PLANS AND MODELS OF CHEAP DWELLING-HOUSES; TOOLS AND IMPLEMENTS OF ARTISAN BUILDERS. APPARATUS AND INVENTIONS FOR HEALTH, COMFORT, AND CONVENIENCE IN BUILDINGS (for Lighting, Water Supply, Drainage, Waterclosets, Lightning Conductors, &c.). AGRICULTURAL ENGINEERING; PLANS FOR CULTURE, FENCING, DRAINING; FARM BUILDINGS; BUILDINGS FOR CATTLE BREEDING; STORES, STABLES, MANURE TANKS, &c. INDUSTRIAL BUILDINGS; SPINNING MILLS, WEAVING MILLS, GRINDING MILLS; DISTILLERIES, BREWERIES, SUGAR MANUFACTORIES; WAREHOUSES, SAW-MILLS, AND DOCKS, &c.

BICKFORD, SMITH & COMPANY, *Tuckingmill, Cornwall*.—Patent Safety Fuses for blasting in mines, quarries, &c. (680)

SIEBE & GORMAN, 5, *Denmark Street, Soho, London*.—Diving Apparatus, from which two Divers may work at different depths from the same Air-Pump. Used by the English Admiralty. (681)

(See also *Group XIII*.)

HEINKE & DAVIS, 2, *Brabant Court, Philpot Lane, London*.—Improved Diving Apparatus complete; Electric Lamp for sub-marine uses. (682)

AVELING & PORTER, *Rochester, and 72, Cannon Street, London*.—Steam Road Roller. (484)

(See also *Groups XIII. and XIIIa.*)

SAXBY & FARMER, *Canterbury Road, Kilburn, London*.—Railway Junction Model; Interlocking Railway Points and Signals; Level Crossing Gates; Facing Point Locks; and other railway security apparatus. (683)

BAINES, WILLIAM, *Railway Plant*

Works, Birmingham.—Model of Railway Locking Switches and Signal Apparatus. (700)

BLAKEBOROUGH, JOSEPH, *Brighouse, Yorkshire*.—Waterworks Appliances, Hydrants, Fire-extinguishing Apparatus, Gun Metal Steam Fittings, Cocks, Gauges, Valves, Steam-whistles, &c. (684)

REDMAN, JOHN B., F.R.G.S., Member of the Institution of Civil Engineers, 25, *Great George Street, Westminster*.—Model of Royal Terrace Pier, at Milton-on-Thames, erected by means of Cast-iron Cylinders, 1843-5—the pioneer of this class of marine construction; principal dimensions in feet—length 250, breadth 30; the cast-iron girders are 50 and 51 ft. long, and 3 ft. deep, and weigh 8 tons; cylinder foundation piers 6 ft. in diameter; their average depth below low water mark at Spring tide, 12 ft., rise of tide 20 ft.; height of structure from base of foundations to vane, 80 ft.; the cylinder foundations are all carried through the alluvial sands and gravels down to the solid chalk; the cylinders are filled solidly with brickwork and concrete in cement, the base stones being held down by central wrought iron through bolts. Drawings of Cylinders

applied to a Bridge Pier, and to a Fort on the Goodwin Sands. (685)

TWYMAN, AARON, C.E., 25, *Walbrook, London*.—Plans, Elevations, and Sections of a Dwelling House designed for climates similar to that of Great Britain. (686)

IMPROVED INDUSTRIAL DWELLINGS COMPANY (LIMITED), 34, *Finsbury Circus, London*.—Models, Photographs, and Plans of Improved Dwellings for the Working Classes. (687)

JONES, OWEN, 9, *Argyll Place, London*.—Designs for Wall Decorations, Furniture, Carpets, Paper Hangings, and Silk Hangings. (688)

(See also Groups XI. and XII.)

TALL & COMPANY (LIMITED), 8, *Lawson Street, Great Dover Street, London*.—Concrete Dwelling House. (689)

MOSELEY, ANDREW, F.I.B.A., 6, *Trinity Place, Charing Cross, London*, and FULHAM, D.S., *Associate King's College, London*.—Model of Barrack to house 1,000 men, with drawings of the several floors; an elevation and section to the scale of 10 feet to the inch; detail drawings of parts to a larger scale. (690)

SOCIETY FOR IMPROVING THE CONDITION OF THE LABOURING CLASSES (C. PAYNE, Secretary).—21, *Exeter Hall, Strand, London*.—Drawings of Model Lodging Houses and Renovated Houses for Working People; Plans for Cottages for Agricultural Labourers. (691)

DOULTON, H., & COMPANY, 28, *High Street, Lambeth, London*.—Stoneware, known as "Lambeth Pottery," for sanitary purposes; Drainpipes, Traps, Syphons, Sewage Pipes with sluice valves, Sinks, Closet Basins, Urinals, &c.; Terra-Cotta Flue Linings; Architectural and Horticultural Terra-Cotta; Damp-proof course Air Bricks; Toilet Articles in white ware, &c. (315)

(See also Group VII.)

SKELTON, T. A., 37, *Essex Street, London*.—Catoptric Lamp for Street Lighting. (693)

JENNINGS, G., & COMPANY, *Lambeth, London*.—Sanitary Apparatus. (694)

WRIGHT, SUTCLIFFE & SON, *Halifax, Yorkshire*.—Syphon Traps, to prevent the rising of noxious gases from sewers, without seam and with syphon cleansing plug, strengthening webs and funnel, cast in one piece for fixing in sink; Artesian Sink or Well Pump in cast lead. (695)

BROWN-WESTHEAD, MOORE & COMPANY, *Cauldon Place, Hanley, Staffordshire*.—Sanitary Earthenware for domestic and other purposes, made under the sanction of the London Board of Health. (696)

(See also Group IX.)

ZIMDARS, C. E., 28, *Red Lion Square, London*.—Patent Pneumatic Bell Apparatus, for houses, mines, ships, &c.; Dispatch Tube; Railway Carriage Signals; Alarums. (697)

LAWRENCE, W., & COMPANY, 14, *St. Mary Axe, London*.—Water Boiling, Purifying, and Cooling Apparatus. (515)

(See also Group XIII. and Appendix.)

BUSBY, T., 10, *Baron Street, Pentonville, London*.—Bath Valves. (699)

(See also Group VII.)

BLASHILL, THOMAS, 10, *Old Jewry Chambers, London*.—Design for Extensive Bookseller's Establishment in London. (726)

(See also Group XXV.)

DOWS, CLARK & CO., *Bedford Street and Chandos Street, Strand, London*.—Pavilions suitable for the sale of Summer Drinks in the open air. (499)

(See also Group XIII.)

RANSOME, A., & COMPANY, 304, *King's Road, Chelsea, London*.—Arrangement for Removing instantaneously Shavings, Dust, and Light Refuse from Machinery. (474)

(See also Group XIII.)

CHADWICK, EDWIN C. B., *Park Cottage, Upper Sheen, London*.—Diagram showing New Method of Road Construction and Drainage. Invented by the Exhibitor. (320)

GROUP XXI.

National Domestic Industry.

POTTERY AND PORCELAIN. FABRICS, TAPESTRY, EMBROIDERY, LACE AND OTHER NEEDLEWORK.
METAL ARTICLES AND ORNAMENTS. CARVED WORK AND UTENSILS.

SILICATED CARBON FILTER
COMPANY, *Church Road, Battersea, London.*
—Silicated Carbon Filters in Glass, Terra-
Cotta, Marbled China, and Earthenware.
(Shown in operation at Royal Commission
Buildings in the Park). (708)

(See also Group IX.)

ROWE, MRS., E. R. I, *Union Crescent,
Margate.*—Needle Point Lace, Studies of
Flowers. (709)

BURKE, J. HASWELL, 31, *Wellington
Quay, Dublin.*—Cardboard Mounts for Pho-
tographs, Gold Frames, &c. (710)

KENT, GEORGE, 199 to 201, *High
Holborn, London.*—Rotary Knife Cleaners,
Ventilated Refrigerators, Bread Slicing
Machines, Cinder Sifters, Egg-beaters,
Mixers, Churns, Potato Mashers, Mincers,
Clothes Wringers, Carpet Sweepers, &c. (711)

(See also Group VII. and Appendix.)

GROUP XXII.

Exhibition showing the Organisation and Influence of Museums
of Fine Art as applied to Industry.

THE VARIOUS METHODS AND MEANS BY WHICH THE DIFFERENT MODERN MUSEUMS (viz.: the South
Kensington Museum in London and the similar Museums in Vienna, Berlin, Moscow, &c.) ENDEAVOUR
TO CARRY OUT THE IMPROVEMENT OF THE GENERAL TASTE OF THE PEOPLE AND THE MANNER
IN WHICH THEY PROMOTE THE ART INDUSTRY AND PUBLIC INSTRUCTION OF THEIR COUNTRIES.

SCIENCE AND ART DEPARTMENT OF THE COMMITTEE OF
COUNCIL ON EDUCATION, *South Kensington Museum, London, S.W.* (713)

ELECTROTYPES.

- 1 SHIELD, copper silvered and oxydised and parcel-gilt, "The Outram Shield."—The original, of silver and steel damascened with gold, was presented to the late Sir James Outram, Bart., G.C.B., by friends in the Bombay Presidency. In the centre is a group of equestrian figures in high relief, representing the voluntary cession by Sir J. Outram to General Havelock of the troops destined to relieve Lucknow during the Indian mutiny, around this is a band damascened with gold containing medallion portraits in relief of distinguished Indian officers. A wider external band of groups of figures in low relief represents various events in Sir J. Outram's Indian career. The shield, which is now the property of Sir F. B. Outram, Bart., was manufactured by Messrs. Hunt and Roskell, from the designs of Mr. H. H. Armstead. *English.* 19th century. Diam. 3 feet 3 in. Messrs. Franchi and Son. Price, 55*l.*

- 2 TANKARD and COVER, fictile ivory mounted in metal.—The drum carved in high relief with a bacchanalian group; on the cover a group of a man subduing a centaur. *German (Augsburg)*. Late 17th century. The original, of carved ivory, mounted in silver, parcel-gilt, is in the South Kensington Museum, No. 4,529-'58, and is inscribed "Bernard Strauss Goldsmid fec." H. 19 in., W. 11½ in. by 7¾ in. Messrs. Franchi and Son. Price, fictile ivory with gilt or parcel-gilt mounts, 15*l*.
- 3 VIOLIN, carved with woodland scenes.—The original, in boxwood, belongs to the Earl of Warwick, by whom it has been lent to the South Kensington Museum. *English*. Date about 1330-40, with additions dated 1579. L. 2 ft., W. 7¾ in. Messrs. Franchi and Son. Price, copper bronzed, in imitation of wood, 75*l*.
- 4 SHIELD, with piked centre, of repoussé or beaten work, with subjects from the life of Julius Cæsar a legend in Latin elegiacs round the border. *Italian*. 16th century. The original, of iron, damascened with gold and silver is attributed to Benvenuto Cellini, and is in the Royal Armoury, Windsor Castle. Diam. 22 in. Messrs. Elkington and Co. Price, silvered or oxydised, 3*l*. 15*s*
- 5 VASE and COVER.—Stags among foliage in low relief; on the cover a bird. The original, of silver beaten and chased, is the property of Lord Buckhurst, Knole Park. *Indian*. H. 14 in., diam. 9 in. Messrs. Franchi and Son. Price, silvered, 6*l*.
- 6 VASE and COVER.—Band of masks between fruit and foliage; gadroons at top and bottom; festoons hanging from the cover. The original, of silver beaten and chased, is the property of Lord Buckhurst, Knole Park. 17th century. H. 16 in., W. 10 in. Messrs. Franchi and Son. Price, silvered, 8*l*. 10*s*.
- 7 GOBLET.—The stem carved in high relief with masks, snails, lions, &c. *English*. Hall-mark, 1567. The original, of agate, mounted in silver gilt, is in the South Kensington Museum, No. 38-'67. H. 7¾ in., diam. 3½ in. Messrs. Franchi and Son. Price, gilt, 20*l*.
- 8 PAX.—Of architectural design; in the centre is a group in full relief of the Virgin giving the chasuble to St. Ildefonso. *Spanish (Salamanca?)*. About 1540-50. The original, of silver gilt, is in the South Kensington Museum, No. 314-'64. H. 10½ in., W. 5½ in. Messrs. Franchi and Son. Price, gilt, 25*l*.

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- 9 PAINTING.—On porcelain; two of three rectangular pieces. Copy of "May Day, in the Olden Time," painted by H. S. Marks in 1868. Executed by Miss E. Cambridge, Student of the Porcelain Class, South Kensington. *English*. 1870.

DESIGNS FOR FANS.

- 10 Water colour on silk, grasses, bluebells, and butterflies; sent to competition for fan designs, by Louisa Colfax. *Modern English*.
- 11 Water colour on silk, wreath of convolvulus and blackberries; prize object in competition for fan designs, by Fanny M. Minns. *Modern English*.
- 12 Water colour on silk, passion flowers; sent to competition for fan designs, by A. B. Purkiss. *Modern English*.

- 13 Water colour on paper, conventionalized flowers in purple border, heightened with gold; prize object sent to competition for fan designs, by Maria Truman. *Modern English.*
- 14 Water colour on vellum; mediæval figures representing the Senses: prize object in competition of fan designs, by Ellen Montalba, South Kensington School of Art. *English.* 1869.
- 15 Water colour on vellum; a river with sedgy banks and a kingfisher: prize object in competition of fan designs. By Mrs. A. A. Foster, Lincoln School of Art. *English.* 1870.
- 16 Water-colour on silk; flowers and butterflies on black ground: prize object in competition of fan designs. By Emily R. Stanton, Stroud School of Art. *English* 1870.

STUDENTS' WORKS, &c.

- 17 DRAWINGS AND PAINTINGS, by Students of Schools of Art of the United Kingdom. One descriptive label in frame. (62 frames.)
- 18 MODELS IN PLASTER, by Students of Schools of Art of the United Kingdom. (9 frames.)
- 19 SERIES OF DESIGNS FOR WALL PAPERS, by Students at South Kensington Schools of Art. Manufactured by Messrs. Corbière and Son. (6 frames.)
- 20 PIECE OF SILK, designed by F. A. Slocombe, Art Student, South Kensington. Manufactured by Messrs. Corbière and Son. (1 frame.)
- 21 PHOTOGRAPHS FROM TERRA COTTA PANELS for the Wedgwood Memorial Institute, Burslem. Executed in the Training and Normal School, South Kensington. (8 frames.)
- 22 CHROMO-LITHOGRAPHS of Objects in the South Kensington Museum. (12 frames.)
- 23 TILES (Twelve).—Enamelled Earthenware. Each containing a letter of the alphabet with accompanying figure, designed by the late Godfrey Sykes. *Modern English.* (4 frames.)
- 24 ROSETTE, and portion of border, of enamelled Terra Cotta ceiling, South Kensington Museum. Designed by J. Gamble.
- 25 PAINTING ON ENAMELLED IRON, of a letter of the alphabet. Designed by the late Godfrey Sykes.
- 26 PART OF A SERIES OF DECORATIVE DESIGNS. By E. J. Poynter, A.R.A. For the Grill room, South Kensington Museum. (16 frames.)
- 27 CAST OF PANEL, of North Gate, Sanchi Tope, Bhopal, India. Buddhist Art, 1st Century.

28 PHOTOGRAPH OF THE EASTERN GATEWAY, of the Sanchi Tope, Bhopal, India.

29 TWO FRAMES, from a series, illustrating economic entomology.

30 BOTANICAL SPECIMENS, WITH DIAGRAMS. By Professor Oliver. (70 frames.)

SHEET.	SHEET.	SHEET.
1. Descriptive Label. (Table of Classes.)	25. Cow Parsnip, Hemlock, Wild Chervil, Ivy.	50. Walnut, Sweet Gale.
2. Buttercup, Clematis, Monkshood.	26. Mistletoe, Dogwood.	51. Hazel.
3. Barberry, White Water Lily.	27. Laurustinus, Honeysuckle, Harebell, Guelder Rose.	52. Beech, Oak, Spanish Chestnut, Horn-beam.
4. Fumitory, Poppy.	28. Heath, Vaccinium, Lobelia.	53. Birch, Alder, Poplar, Willow.
5. Wallflower, Shepherd's Purse, Lunaria, Raphanus.	29. Woodruff, Coffee.	54. Yew, Juniper, Scotch Fir, Arbor-vitæ.
6. Mignonette, Rock Rose.	30. Valerian, Field Scabious.	55. Dwarf Fan-palm, Areca baueri.
7. Pansy, Milkwort.	31. Ox-eye Daisy, Bluebottle, Dandelion.	56. Cuckoo-pint, Pondweed, Duckweed.
8. Carnation, Pink, Stitchwort, Sea-heath.	32. Bluebottle, Dandelion, Ox-eye Daisy.	57. Water Plantain, Flowering Rush, Frog-bit.
9. St. John's Wort, Thea Chinensis.	33. Cowslip, Thrift.	58. Tway-blade, Orchis.
10. Mallow, Lime or Linden.	34. Ash, Lilac, Gentian.	59. Crocus, Narcissus, Snowdrop, Yellow Flag.
11. Flax, Wood Sorrel.	35. Periwinkle, Periploca Græca.	60. Blue-bell, Garlic, Butcher's Broom, Asparagus, Tulip.
12. Crane's Bill, Tropæolum.	36. Bindweed, Dodder, Jacob's Ladder.	61. Simlax, Field Rush, Soft Rush.
13. Roe, Zanthoxylum, Orange.	37. Deadly Nightshade, Potato.	62. Sedge, Scirpus Lacustris, Eleocharis palustris.
14. Holly, Spindle Tree.	38. Forget-me-Not, Bignonia, Comfrey.	63. Wheat, Oat.
15. Buckthorne, Grape Vine.	39. Toad-flax, Fox-glove, Germander Speedwell.	64. Table of Genera of Grasses.
16. Sycamore, Horse Chestnut.	40. Bladderwort, Utricularia, Sage, White Dead Nettle.	65. Wheat, Barley, Oat, Rye, Rice, Poa Annua, &c.
17. Laburnum, Pea, Acacia.	41. Garden Verbena, Ribwort.	66. Male Shield-Fern, Polyphy.
18. Sloe, Bramble, Apple.	42. Good King Henry, Orache, Amaranthus.	67. Field Horse Tail, Club Moss, Selaginella.
19. Bramble, Cherry, Meadow Sweet, Lesser Burnet, Dog Rose, Hawthorne.	43. Dock, Daphne Pontica.	68. Hair Moss, Bog Moss, Hypnum Flagellare, Bryum.
20. Meadow Saxifrage, Gooseberry, Red-flowered Currant.	44. Bay Laurel, Camphor Tree.	69. Lichens, Mushroom, Moulds, &c.
21. Stonecrop, Sundew.	45. Birthwort, Eleagnus.	70. Sea-weeds.
22. Purple Loose-strife, Myrtle.	46. Box, Sun Spurge, Mercury.	
23. Willow Herb, Mare's Tail.	47. Plane, Elm.	
24. Bryony, Passion Flower.	48. Nettle, Hemp, Hop.	
	49. Mulberry, India-rubber Fig.	

31 ETCHINGS OF OBJECTS IN THE SOUTH KENSINGTON MUSEUM. By Students of the Etching Class, Central Training Schools. (46 frames.)

SET I.—(ELEVEN IMPERIAL FRAMES.)

No.	No.	No.
35. Box with Cover, boxwood.	32. Plaque, brass.	39. Sun Dial, bronze gilt.
25. Panel, carved oak.	29. Bowl, silver.	15. Cup, nautilus shell.
5. Casket, leather.	33. Inkstand, bronze.	47. Cup, trochus shell.
1. Coffin, walnut wood.	18. Lock, chiselled iron.	38. Cup, cocoa-nut.
12. Casket, ebony.	31. Lamp, bronze.	46. Cup, cocoa-nut.
11. Coffin, steel.	44. Lamp, bronze.	37. Staff, ivory.
20. Key for wheel-lock Rifle, steel.	21. Panel, carved wood.	50. Pax, niello on silver.
28. Snuff Box, steel.	3. Mirror, burnished metal.	4. Pastoral Staff, gilt and enamel.
23. Knocker, wrought iron.	48. Mirror, burnished metal.	16. Pastoral Staff, head of carved ivory.
36. Bell, bronze.	13. Frame, carved oak.	42. Bottle, silver.
24. Knife and Fork, steel.	41. Cross, silver, parcel-gilt.	43. Dagger, steel.
30. Scissors, with sheath, steel.	45. Cross, wood with silver plates.	19. Diptych, gilt bronze.
6. Knife, steel.	20. Plaque, enamel.	27. Knife, steel, engraved.
12. Knife, steel.	17. Triptych, silver-gilt with enamel plaques.	2. Sideboard, carved wood.
8. Vase, crystal.	34. Lamp, bronze.	7. Cup, wood and silver-gilt.
9. Cup and cover, silver-gilt.	40. Vase and Cover, bronze.	
22. Vase and cover, silver-gilt.	10. Knocker, iron.	
49. Watch and Stand crystal and gilt metal.		

SET II.—(TWELVE IMPERIAL FRAMES.)

No.	No.	No.
35. Knocker, bronze.	11. Pedestal, bronze.	13. Dagger, steel.
2. Knocker, bronze.	50. Powder Flask, gilt metal.	15. Tea Caddy, silver.
47. Bracket, bronze.	48. Mount, gilt bronze.	43. Jug, Chinese porcelain.
44. Spout of a Fountain, bronze.	45. Bell, bronze.	3. Pedestal, bronze.
1. Reliquary, gilt, enamel, &c.	30. Powder Flask, boxwood.	41. Casket, bronze-gilt.
12. Cruet, crystal.	28. Knife Case, carved wood.	9. Knocker, bronze.
19. Reliquary, crystal or silver-gilt.	24. Casket, carved wood.	14. Fountain Jet, bronze.
20. Medallion, boxwood, in silver case.	4. Casket, carved bone.	31. Stopper of a Flask, bronze.
8. Snuffers, bronze.	32. Bellows, wood.	49. Dagger, gilt bronze hilt.
36. Snuffers, brass.	16. Bellows, chestnut wood.	34. Dagger, steel.
10. Purse Frame, steel.	39. Tazza, silver parcel gilt.	46. Purse Frame, steel.
40. Fire-irons, with brass handles.	17. Reliquary, gilt copper.	38. Purse Frame, iron.
6. Pastoral Staff, ivory.	7. Goblet, agate, and silver-gilt.	26. Figure, bronze.
25. Diptych, ivory.	5. Cruet, silver parcel gilt.	42. Statuette, bronze.
18. Triptych, ivory.	21. Crucifix, silver-gilt.	27. Salt Cellar, bronze.
22. Knife, steel, with ivory handle.	29. Crucifix, brass.	37. Bracket Branch, bronze.
23. Knife, steel, with ivory handle.	33. Pax, silver-gilt.	

SET III.—(TWELVE IMPERIAL FRAMES.)

No.	No.	No.
34. Statuette, bronze.	4. Nutcrackers, wood.	17. Lock Escutcheon, bronze-gilt.
15. Statuette, bronze.	25. Nutcrackers, boxwood.	45. Group of the Crucifixion, cedar wood.
24. Girardole, iron.	38. Mandoline, beechwood.	43. Cross, cypress wood.
36. Girandole, chiselled iron.	1. Powder Flask, stag's horn.	26. Dagger, steel, brass handle.
50. Mirror Cover, ivory.	18. Scissors, steel.	6. Triptych, boxwood.
47. Mirror Cover, ivory.	2. Knife and Shears, steel.	42. Powder Flask, bronze-gilt.
35. Knife, Fork, and Spoon, ivory handles.	23. Scissors and Bodkin, steel, &c.	11. Cartouche Box, bronze-gilt.
5. Powder Flask, ivory.	49. Shears, chiselled steel.	33. Mortar, bronze.
10. Cylinder, ivory.	28. Cup, silver-gilt.	31. Sugar Nippers, steel.
8. Spoon, silver-gilt.	37. Cup, cow's horn and bronze-gilt.	1. Boss, bronze.
29. Knives, steel.	16. Bowl and Cover, bell metal.	14. Window Grating, iron.
41. Spoons, silver-gilt.	10. Group, copper-gilt.	7. Knocker, tinned iron.
27. Spoons, boxwood.	39. Frame, copper-gilt.	21. Pediment of a Gate, iron.
9. Rapier, steel.	22. Powder Flask, brass-gilt.	20. Knives, steel.
32. Rapier, steel.	30. Key for Wheel-lock Rifle, steel.	46. Knife and Fork, silver handles.
13. Rapier, steel.	12. Keys, steel.	41. Knives, mother-of-pearl handles.
3. Rapier, steel.	40. Knocker, wrought iron.	48. Knife and Fork, silver-gilt handles.

SET IV.—(ELEVEN IMPERIAL FRAMES.)

No.	No.	No.
12. Rapier, steel.	11. Horizontal Clock, ebony and silver.	43. Mirror, burnished metal.
8. Sword, steel.	13. Thurible, copper.	16. Coffin, maple wood.
26. Rapier, steel.	47. Monstrance, silver gilt.	19. Casket, stamped leather.
46. Nutcrackers, steel.	20. Door Handle, bronze.	6. Casket, covered with leather.
46a. Spoon, silver gilt.	3. Lamp, bronze.	14. Box, carved wood.
24. Book.	27. Lamp, bronze.	18. Cupboard, carved oak.
25. Book.	44. Casket, lead.	21. Coffin, carved oak.
40. Mortar, bronze.	7. Candlestick, iron.	4. Knives, steel.
35. Bell, gilt metal.	5. Pounce box, bronze.	1. Knife and Fork, steel.
30. Mortar, bronze.	22. Inkstand, bronze.	10. Knives, steel, with silver handles.
33. Bowl and Cover, bell metal.	2. Hunting Horn, steel.	15. Mounting of a Knife, ivory.
32. Lock and Key, iron.	23. Inkstand, bronze.	36. Knives, steel, mother-of-pearl handles.
28. Door Handle, iron.	49. Box, boxwood.	17. Knife, steel.
37. Lock, iron.	31. Box, carved wood.	9. Ewer, green basalt.
39. Chair, walnut wood.	50. Cross, boxwood, &c.	29. Powder Flask, shell.
42. Chair, carved wood.	34. Panel, wood carving.	
38. Crucifix, copper gilt.	45. Sideboard, carved oak.	

- 32 SKETCH FOR THE DECORATION OF A SMALL DOME ON THE WEST STAIRCASE, SOUTH KENSINGTON MUSEUM. The design has been reproduced in Minton's new permanent process. The subject of the design is Ceres, Vulcan, and Mercury, representing Agriculture, Manufactures, and Commerce.—By F. W. Moody.

FRAMED MATTER—CARTOONS.

- 33 PAINTING.—Oil on canvas, on gold ground; executed in mosaic for the South Kensington Museum. Donatello, Italian sculptor. *Modern English*. By R. Redgrave, R.A. Sight measure, H. 8 ft. 8 in., W. 2 ft. 10½ in. 1707-'69.
- 34 PAINTING.—Oil on canvas, on gold ground; executed in mosaic for the South Kensington Museum. Michael Angelo Buonarroti, Italian painter, sculptor, and architect. *Modern English*. By the late Godfrey Sykes. Sight measure, H. 8 ft. 8 in., W. 2 ft. 10½ in. 1708-'69.
- 35 PAINTING.—Oil on canvas; gold ground; to be executed in mosaic. Nicola Pisano, Italian sculptor. *Modern English*. By F. Leighton, A.R.A. Sight measure, H. 8 ft. 8½ in., W. 2 ft. 10½ in. 1139-'68.
- 36 THREE COPIES OF PORTIONS OF RAPHAEL'S CARTOONS.
- 37 MEASURING MACHINE. Invented by Sir Joseph Whitworth, Bart. Capable of measuring the one-millionth part of an inch.

CLARKE. CASPAR, 16, *Earl's Court Gardens, South Kensington, London*.—Mosaic Picture from the Dome of the Chigi Chapel, Rome, in impressed and coloured paper, by a process indicated by General Scott, C.B. [Executed by the Exhibitor.] (714)

DIRECTORS OF CONVICT PRISONS.—Medallion, in Mosaic, of a Female Head. Executed by the Convicts at the Woking Female Prison. (340)

GROUP XXIII.

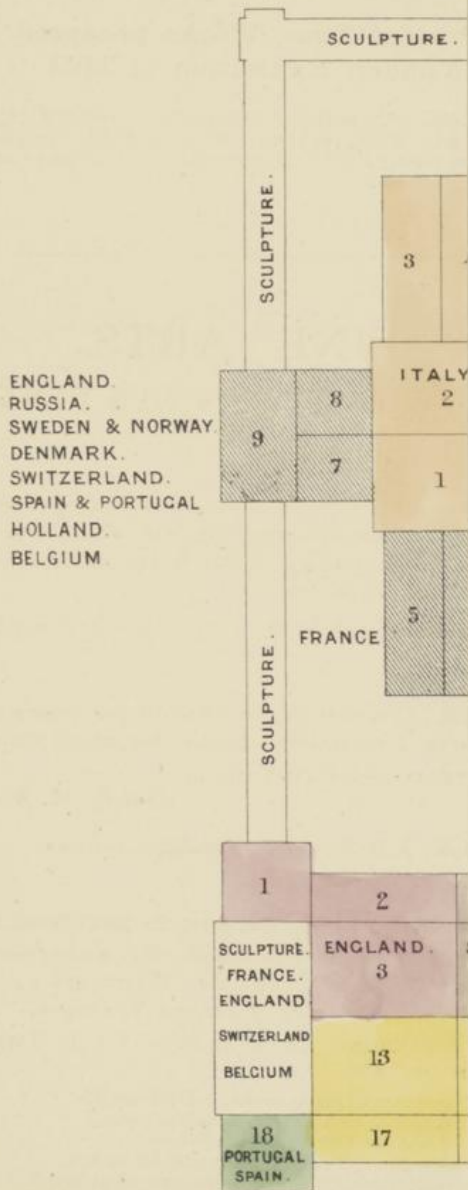
Art applied to Religion.

DECORATION OF CHURCHES (Wall Decoration, Stained Glass, Glass Painting, &c.). CHURCH FURNITURE (Altars, Organs, Pulpits, Pews, Shrines for enclosing Sacred Vessels, &c.). ORNAMENTS FOR ALTARS, PULPITS, CRUCIFIXES, CHALICES, LIBURIUMS, CANDLESTICKS, ALTAR HANGINGS AND CARPETS, PULPIT HANGINGS, &c. OBJECTS USED IN BAPTISM AND FUNERALS, &c.

DE MORINI, CH., 87, *Newman Street, Oxford Street, London.*—Stained Glass Window for a Staircase, Watteau style.
(718)

CONSTABLE, W. H., *Cambridge.*—Stained Glass Window, early English style; subject, "Christ healing all diseases."
(719)

VIENNA UNIVERSAL EXHIBITION, 1876



GROUP XXV.

Fine Arts of the Present Time, Works produced since the Second
London Exhibition of 1862.

PAINTINGS: Including Miniatures and Enamels. SCULPTURE: Including Figures and Groups of small sizes; Engraving, Medals, &c. ARCHITECTURE: Including Models, Designs, Sketches, and Surveys of Architectural Works of the present time. GRAPHIC ARTS: Including Copper and Steel Engravings Etching, Woodcuts, &c.

FINE ARTS.
OIL COLOUR PAINTINGS.

. The Initials which appear after the names of the Artists in the following pages must be read as follows:—P.R.A., President of the Royal Academy of England; R.A., Member, A.R.A., Associate, and A.E., Associate Engraver, of the same Academy; P.R.S.A., President of the Royal Scottish Academy; R.S.A., Member of the Royal Scottish Academy.

When not otherwise stated the Artist is also the Contributor.

ANSELL, R., R.A., Lytham House, St. Alban's Road, Kensington, London.

Elected Associate of the Royal Academy, London, 1861; elected full member, 1870.

1 GOING TO THE WINTERING—DRIVING SHEEP.

Lent by H. A. BRASSEY, ESQ., M.P.

ARCHER, J., R.S.A., 6, Bedford Place, Kensington, London.

2 PORTRAIT OF A LADY IN WHITE.

ARMITAGE, EDWARD, R.A., 3, Hall Road, St. John's Wood, London.

Elected Associate of the Royal Academy, London, 1867; elected full member, 1872.

3 DANIEL POINTING OUT TO KING CYRUS THE FOOTSTEPS OF THE PRIESTS
IN THE TEMPLE OF BEL.—*Story of Bel and the Dragon.*

4 FRENCH PEASANT PLOUGHING UP A BATTLE-FIELD TWENTY YEARS
AFTER THE WAR OF 1870.

“Scilicet et tempus veniet, cum finibus illis
Agricola, incurvo terram molitus aratro,
Exesa inveniet scabrâ rubigine pila:
Aut gravibus rastris galeas pulsabit inanes,
Grandiaque effossis mirabitur ossa sepulchris.”

VIRGIL, *Georgics*, Lib. i., 493-7.

- BOXALL, SIR W., R.A.**, 14, Welbeck Street, London.
Elected Associate of the Royal Academy, London, 1851; elected full member, 1868.
- 5 PORTRAIT OF HON. MRS. RICHARD BOYLE. (*Hors concours.*)
Lent by the HON. and REV. R. C. BOYLE.
- 6 PORTRAIT OF THE LATE MRS. CARDWELL. (*Hors concours.*)
Lent by the RIGHT HON. E. CARDWELL, M.P.
- BRETT, JOHN**, 3, Mansfield Street, London.
- 7 SOUTH BISHOP ROCK—ANTICIPATIONS OF A WILD NIGHT.
CALDERON, PHILIP H., R.A., 9, Marlborough Place, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1864; elected full member, 1867.
- 8 AFTER THE BATTLE *Lent by H. W. F. BOLCKOW, ESQ., M.P.*
- 9 "SIGHING HIS SOUL INTO HIS LADY'S FACE" .. *Lent by G. C. SCHWABE, ESQ.*
- COLE, VICAT, A.R.A.**, 8, Victoria Road, Kensington, London.
Elected Associate of the Royal Academy, London, 1870.
- 10 EVENING *Lent by H. A. BRASSEY, ESQ., M.P.*
"Now fades the glimmering landscape on the sight,
And all the air a solemn stillness holds."
- COOKE, E. W., R.A.**, Glen Andred, Groombridge, Tonbridge Wells.
Elected Associate of the Royal Academy, London, 1851; elected full member, 1863.
- 11 LIGHTSHIP ON THE GOODWINS DURING A GALE
Lent by THOMAS BRASSEY, ESQ., M.P.
- COOPER, T. S., R.A.**, 42, Chepstow Villas, Bayswater, London, and Vernon Holme, Harbledown, Canterbury.
Elected Associate of the Royal Academy, London, 1845; elected full member, 1867.
- 12 A BROOK IN THE MEADOWS *Lent by DAVID JARDINE, ESQ.*
- COPE, C. W., R.A.**, 19, Hyde Park Gate South, Kensington Gore, London.
Elected Associate of the Royal Academy, London, 1843; elected full member, 1848.
Silver Medallist.
- 13 OTHELLO RELATING HIS ADVENTURES TO BRABANTIO—Othello—*Shakespeare.*
Lent by R. P. BARROW, ESQ.
- 14 THE MARRIAGE OF GRISELDA—*Chaucer.* *Lent by G. MOORE, ESQ.*
- DAVIS, H. W. B., A.R.A.**, 10, Cunningham Place, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1873.
- 14a MOONRISE *Lent by W. E. J. ROFFEY, ESQ.*
- DILLON, F.**, 13, Upper Phillimore Gardens, Kensington, London.
- 15 HOUSE OF THE MUFTI SHEIKH EL MAHDI, CAIRO .. *Lent by R. A. COSIER, ESQ.*
- ELMORE, A., R.A.**, 1, St. Alban's Road, Victoria Road, Kensington, London.
Elected Associate of the Royal Academy, London, 1845; elected full member, 1857.
- 16 LEONORA.
- 17 ON THE HOUSETOPS.
FAED, THOMAS, R.A., Sussex Villa, Campden Hill, Kensington London.
Elected Associate of the Royal Academy, London, 1861; elected full member, 1864.
- 18 THE LAST OF THE CLAN. (*Hors concours.*) *Lent by R. SUTTON, ESQ.*
- 19 GOD'S ACRE. (*Hors concours.*) *Lent by GEORGE FOX, ESQ.*

- FILDES, S. L.**, The Studio, King Henry's Road, London.
- 20 "FAIR, QUIET, AND SWEET REST" *Lent by J. LEWIS, ESQ.*
- FRITH, W. P., R.A.**, 7, Pembridge Villas, Bayswater, London.
*Elected Associate of the Royal Academy, London, 1845; elected full member, 1853.
Hon. Member of the Imperial Academy of Fine Arts, Vienna.*
- 21 RAMSGATE SANDS *Lent by HER MAJESTY THE QUEEN.*
LORD FOPPINGTON RELATING HIS ADVENTURES *Lent by H. A. BRASSEY, ESQ., M.P.*
- FROST, W. E., R.A.**, 38, Fitzroy Square, London.
Elected Associate of the Royal Academy, London, 1846; elected full member, 1871.
- 22 UNA AND THE WOOD NYMPHS *Lent by HER MAJESTY THE QUEEN.*
- GRAHAM, P.**, 93, Ladbroke Road, Notting Hill, London.
- 23 A SPATE IN THE HIGHLANDS *Lent by W. CUNLIFFE BROOKS, ESQ., M.P.*
- GRANT, SIR FRANCIS, P.R.A.**, 27, Sussex Place, Regent's Park, London.
*Elected Associate of the Royal Academy, London, 1842; elected full member, 1851;
elected President, 1866.*
- 24 ASCOT MEET *Lent by the COUNTESS OF CHESTERFIELD.*
- 25 PORTRAIT OF MISS GRANT.
- GRAVES, HON. HENRY**, 19, Albert Mansions, Victoria Street, London.
- 25^a PORTRAIT OF MRS. GERRARD LEIGH, OF LUTON HOO.
- 25^b MRS. AMORY (OF KNIGHTHAYES COURT) & CHILD.
- HALSWELLE, KEELEY, A.R.S.A.**, 39½, Old Bond Street, London.
- 26 ROBA DI ROMA *Lent by JAMES GIBSON-CRAIG, ESQ.*
- HARVEY, SIR G., P.R.S.A.**, Edinburgh.
- 27 SCHOOL DISMISSING *Lent by DRYSDALE CARSTAIRS, ESQ.*
- HODGSON, J. E., A.R.A.**, 5, Hill Road, Abbey Road, London.
Elected Associate of the Royal Academy, London, 1873.
- 28 THE SNAKE CHARMER *Lent by G. C. SCHWABE, ESQ.*
- HOLLAND, JAMES, the Late.**
- 29 VENICE *Lent by A. J. LEWIS, ESQ.*
- HOOK, J. C., R.A.**, Silverbeck, Churt, Farnham.
*Elected Associate of the Royal Academy, London, 1850; elected full member, 1860.
Silver and Gold Medallist.*
- 30 THE SHIPBOY'S LETTER *Lent by C. P. MATTHEWS, ESQ.*
- 31 HOISTING SAIL *Lent by C. P. MATTHEWS, ESQ.*
- HORSLEY, J. C., R.A.**, 1, High Row, Kensington, London.
*Elected Associate of the Royal Academy, London, 1855; elected full member, 1864.
Silver Medallist.*
- 32 BANKER'S PRIVATE ROOM—Negotiating a Loan *Lent by G. FOX, ESQ.*
- 33 CHECKMATE NEXT MOVE *Lent by T. JESSOP, ESQ.*
- 33^a "IN WITH YOU, IN WITH YOU" *Lent by J. LEWIS, ESQ.*
- HULME, F. W.**, 8, St. Alban's Road, Kensington, London.
- 34 PONT-Y-PAIR, BETTWS-Y-COED, NORTH WALES.

- KNIGHT, J. P., R.A.**, 20, James Street, Buckingham Palace, London.
Elected Associate of the Royal Academy, London, 1836; elected full member, 1844.
- 35 AN OLD STUDENT *Lent by* EDWARD LANGLEY, ESQ.
- LANDSEER, SIR E., R.A.**, 18, St. John's Wood Road, Regent's Park, London.
Elected Associate of the Royal Academy, London, 1826; elected full member, 1831.
- 36 THE SANCTUARY *Lent by* HER MAJESTY THE QUEEN.
37 THE ARAB TENT *Lent by* H.R.H. THE PRINCE OF WALES, K.G.
38 PORTRAIT OF SIR E. LANDSEER, R.A. *Lent by* H.R.H. THE PRINCE OF WALES, K.G.
- LEHMANN, RUDOLPH, I.**, South Villas, Campden Hill, Kensington, London.
- 40 OUT OF THE WORLD—two Monks making Music
Lent by HENRY SCHLESINGER, ESQ.
- LEIGHTON, F., R.A.**, 2, Holland Park Road, Kensington, London.
Elected Associate of the Royal Academy, London, 1864; elected full member, 1868.
- 41 CLEOBULUS AND CLEOBULE *Lent by* E. L. S. BENZON, ESQ.
42 AFTER VESPERS *Lent by* E. N. BUXTON, ESQ.
- LEWIS, JOHN F., R.A.**, Walton-on-Thames.
Elected Associate of the Royal Academy, London, 1859; elected full member, 1864.
- 43 THE DOUBTFUL COIN *Lent by* C. P. MATTHEWS, ESQ.
44 A STREET IN CAIRO *Lent by* T. BARING, ESQ., M.P.
- LINNELL, J.**, Redhill, Surrey.
- 45 THE WINDMILL *Lent by* J. EDEN, ESQ.
- MARKS, H. S., A.R.A.**, 15, Hamilton Terrace, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1872.
- 46 "THE BEGGARS ARE COMING TO TOWN" *Lent by* OCTAVIUS COOPE, ESQ.
- MILLAIS, J. E., R.A.**, 7, Cromwell Place, South Kensington, London.
Elected Associate of the Royal Academy, London, 1853; elected full member, 1863.
Silver and Gold Medallist.
- 47 PORTRAIT OF MISS NINA LEHMANN *Lent by* F. LEHMANN, ESQ.
48 THE SISTERS *Lent by* C. P. MATTHEWS, ESQ.
- NICOL, ERSKINE, A.R.A.**, 24, Dawson Place, Bayswater, London.
Elected Associate of the Royal Academy, London, 1866.
- 49 A CHINA MERCHANT *Lent by* H. W. F. BOLCKOW, ESQ., M.P.
- OAKES, J. W.**, 34, Addison Road, Kensington, London.
- 50 LINN OF MUICK, NEAR BALLATER, ABERDEENSHIRE.
- O'NEIL, HENRY, A.R.A.**, 7, Victoria Road, London.
Elected Associate of the Royal Academy, London, 1860. Double Silver Medallist.
- 51 EASTWARD HO! *Lent by* A. J. LEWIS, ESQ.

- ORCHARDSON, W. Q., A.R.A., Kinnerton Street, Wilton Place, London.
Elected Associate of the Royal Academy, London, 1868.
- 52 FALSTAFF *Lent by C. MOXON, ESQ.*
- PETTIE, JOHN, A.R.A., St. John's Wood Road, London.
Elected Associate of the Royal Academy, London, 1866.
- 53 TOUCHSTONE AND AUDREY—As you Like it. *Shakespeare* .. *Lent by C. MOXON, ESQ.*
- PHILLIP, JOHN, the Late, R.A.
Elected Associate of the Royal Academy, London, 1857; elected full member, 1859.
- 54 THE DYING CONTRABANDISTA *Lent by HER MAJESTY THE QUEEN.*
- POOLE, P. F., R.A., Green Hill, Hampstead, London.
Elected Associate of the Royal Academy, 1846; elected full member, 1861.
- 55 THE PHANTOM HUNTER.—Decameron *Lent by C. L. COLLARD, ESQ.*
- PRINSEP, VAL. E., Holland Park Road, Kensington, London.
- 56 A BEAUTY AND A BEAST *Lent by SIR C. MILLS, BART., M.P.*
- RAVEN, J. S., 6, Westbourne Park, London.
- 57 THE MATTERHORN *Lent by G. TRIST, ESQ.*
- REDGRAVE, RICHARD, R.A., 18, Hyde Park Gate South, Kensington Gore, London.
Elected Associate of the Royal Academy, London, 1840; elected full member, 1851.
- 58 A WAY THROUGH THE WOODS *Lent by J. KELK, ESQ.*
- 59 THE WOODLAND MIRROR *Lent by THOS. BRASSEY, ESQ., M.P.*
- RICHMOND, W. B., Beavor Lodge, Beavor Lane, Hammersmith, London.
- 60 THE LAMENT OF ARIADNE.
- RIVIERE, B., 16, Addison Road, Kensington, London.
- 61 CHARITY *Lent by COL. LOYD-LINDSAY, V.C., M.P.*
- SANT, JAMES, R.A., 43, Lancaster Gate, London.
Elected Associate of the Royal Academy, London, 1861; elected full member, 1869.
- 62 PORTRAIT OF MASTER JOHN ALFRED WILSON-PATTEN.
Lent by the RT. HON. COL. WILSON-PATTEN, M.P.
- STONE, MARCUS, Langham Chambers, Portland Place, London.
- 63 EDWARD II. AND HIS FAVOURITE, PIERS GAVESTON .. *Lent by GEORGE FOX, ESQ.*
- STOREY, GEORGE A., 58, St. Mary's Terrace, Maida Hill, London.
- 64 THE SHY PUPIL *Lent by JOHN PENDER, ESQ., M.P.*
- TURNER, J. M. W., the Late, R.A.
- 65 WALTON BRIDGES *Lent by H. W. F. BOLCKOW, ESQ., M.P.*
- WALTON, FRANK, Wotton, Surrey.
- 66 GANDER'S POOL—Landscape.

- WARD, E. M., R.A.**, Lansdowne Road, Notting Hill, London.
Elected Associate of the Royal Academy, London, 1846; elected full member, 1855.
- 67 THE LAST SLEEP OF ARGYLL *Lent by A. BROGDEN, ESQ., M.P.*
- WARD, MRS. E. M.**, Lansdowne Road, Notting Hill, London.
- 68 "THE TOWER, AYE, THE TOWER" *Lent by H. WALLIS, ESQ.*
- WATSON, J. D.**, Nailford, Godalming, Surrey.
- 69 THE POISON'D CUP.. .. . *Lent by F. MOWATT, ESQ.*
- WATTS, G. F., R.A.**, Little Holland House, Kensington, London.
Elected Associate of the Royal Academy, London, 1867; elected full member, 1867.
- 70 PORTRAIT OF THE POET BROWNING.
- 71 THE ANGEL OF DEATH.
- YEAMES, WM. F., A.R.A.**, Grove End Road, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1866.
- 72 QUEEN ELIZABETH AND HER COURT RECEIVING THE FRENCH AMBASSADORS
AFTER THE NEWS OF THE MASSACRE OF ST. BARTHOLOMEW HAD
REACHED ENGLAND *Lent by OCTAVIUS COOPE, ESQ.*

WATER-COLOUR PAINTINGS.

- ABSOLON, JOHN**, 106, Palace Gardens Terrace, The Mall, Kensington, London.
Member of the Institute of Painters in Water Colours.
- 73 SIR ROGER DE COVERLEY.
- BARRETT, G., the Late.**
- 74 SOLITUDE *Lent by THOS. BRASSEY, ESQ., M.P.*
- BRIERLY, OSWALD W.**, 38, Amptill Square, Regent's Park, London.
Associate of the Society of Painters in Water Colours.
- 75 HER MAJESTY'S SHIP GALATEA IN SYDNEY HARBOUR
Lent by H.R.H. THE PRINCE OF WALES.
- 76 HER MAJESTY'S SHIP GALATEA AMONGST ICEBERGS OFF CAPE HORN.
Lent by H.R.H. THE PRINCE OF WALES.
- 77 WRECKS OF THE ARMADA ON THE COAST OF IRELAND— *Lent by H. W. BIRCH, ESQ.*
- CALLOW, WILLIAM**, Great Missenden, Buckinghamshire.
Member of the Society of Painters in Water Colours.
- 78 CATHEDRAL OF LIMBURG-ON-THE-LAHN, SUMMER AFTERNOON.

- COOPER, T. S., R.A.**, Vernon Holme, Harbledown, Canterbury.
- 79 AN EVENING DRINK *Lent by H. A. BRASSEY, ESQ., M.P.*
- DEANE, W. W., the Late.**
Associate of the Society of Painters in Water Colours.
- 80 THE BULL-RING AT SEVILLE *Lent by W. EDMUND SIBETH, ESQ.*
- DOBSON, W. C. T., R.A.**, Eldon House, Hampstead, London.
Associate of the Society of Painters in Water Colours.
- 81 THE YOUNG NURSE *Lent by W. S. COOKSON, ESQ.*
- DUNCAN, E.**, 36, Upper Park Road, Hampstead, London.
Member of the Society of Painters in Water Colours.
- 82 LANDING SHEEP ON THE SHORE AT PORT MADOC, NORTH WALES.
- FOSTER, BIRKET**, The Hill, Witley, Surrey.
Member of the Society of Painters in Water Colours.
- 83 ST. MICHAEL'S MOUNT *Lent by EDWARD CROSS, ESQ.*
- 84 LANCASTER *Lent by JOHN H. FOSTER, ESQ.*
- FRIPP, ALFRED**, 1, Belle Vue, Hampstead, London.
- A DORSETSHIRE WOODMAN *Lent by W. EDMUND SIBETH, ESQ.*
- GILBERT, SIR JOHN, A.R.A.**, Vanbrugh Park, Blackheath, London.
President of the Society of Painters in Water Colours.
- 85 THE VIOLIN *Lent by HER MAJESTY THE QUEEN.*
- 86 THE BATTLE OF NASEBY *Lent by THOS. BRASSEY, ESQ., M.P.*
- 87 A TAVERN BRAWL *Lent by E. J. COLEMAN, ESQ.*
- 88 LOUIS XIV. TRANSACTING BUSINESS WITH HIS MINISTERS IN THE APARTMENTS
OF MADAME DE MAINTENON.
- 89 JOAN OF ARC ENTERING ORLEANS *Lent by CHARLES LEAF, ESQ.*
- GOODALL, E. A.**, 6, Wells Street, Oxford Street, London.
Member of the Society of Painters in Water Colours.
- 90 EARLY MORNING, RIVA DI SCHIAVONE, VENICE.. .. . *Lent by C. P. MELLY, ESQ.*
- HAAG, CARL.**, Ida Villa, 7, Lyndhurst Road, Hampstead, London.
Member of the Society of Painters in Water Colours.
- 91 HAPPINESS IN THE DESERT *Lent by W. S. COOKSON, ESQ.*
* * * "thy love-laboured strain,
"Twixt thee and thine a never-failing bond."—*Wordsworth.*
- 92 DANGER IN THE DESERT *Lent by W. S. COOKSON, ESQ.*
"Thrice is he armed that hath his quarrel just."—*Shakespeare.*
- 93 FILIAL LOVE.. .. . *Lent by H. A. HUNT, ESQ., C.B.*
- HALE, WILLIAM MATTHEW**, 35, Wigmore Street, Cavendish Square, London.
Associate of the Society of Painters in Water Colours.
- 94 TWILIGHT AFTER RAIN.
- HARPER, E.**
- 94a } EASTERN SCENES *Lent by SIR RICHARD WALLACE, BART., M.P.*
94b }

HUNT, A. W., Tor Villa, Kensington, London.

Member of the Society of Painters in Water Colours.

- 95 LOCH CORUISHK *Lent by W. S. CAINE, ESQ.*
 96 LLANDECWYN *Lent by W. S. CAINE, ESQ.*

HUNT, W., the Late.

Member of the Society of Painters in Water Colours.

- STILL LIFE—Quinces *Lent by W. EDMUND SIBETH, ESQ.*
 — STILL LIFE—Grapes *Lent by W. EDMUND SIBETH, ESQ.*

MOGFORD, J., 17, Park Road, Haverstock Hill, London, N.W.

Member of the Institute of Painters in Water Colours.

- 97 "DE PERICULO MARIS," Mont St. Michel, Normandy.
Lent by W. EDMUND SIBETH, ESQ.
 98 PARTING RAYS *Lent by W. LEAF, ESQ.*

MOLE, J. H., 7, Guildford Place, Russell Square, London.

Member of the Institute of Painters in Water Colours.

- 99 ON HAMPSTEAD HEATH *Lent by JAMES PATRY, ESQ.*

NEWTON, ALFRED P., 44A, Maddox Street, Regent Street, London, W.

Associate of the Society of Painters in Water Colours.

- 100 SHADES OF EVENING.

PALMER, S., Furze Hill House, Mead Vale, Redhill.

Member of the Society of Painters in Water Colours.

- 101 THE CURFEW *Lent by L. R. VALPY, ESQ.*
 "Oft on a plot of rising ground
 I hear the far-off curlew sound,
 Over some wide-water'd shore
 Swinging slow with sullen roar."—*Il Penseroso, Milton.*
 102 THE TOWER'D CITY *Lent by L. R. VALPY, ESQ.*
 "Such sights as youthful poets dream
 On summer eves, by haunted stream."—*L'Allegro, Milton.*

PINWELL, G. J., 52, Adelaide Road, London.

Member of the Society of Painters in Water Colours.

- 103 AT THE FOOT OF THE QUANTOCKS *Lent by G. E. STREET, ESQ., R.A.,*
Hon. Member of the Imperial
Academy of Fine Arts, Vienna.

POYNTER, E. J., A.R.A., Beamont Lodge, Wood Lane, Shepherd's Bush, London.

- 104 THE WEST WIND *Lent by A. BALDWIN, ESQ.*
 105 PORTRAIT *Lent by G. HOWARD, ESQ.*

READ, S., 55, Argyll Road, Kensington, London.

Associate of the Society of Painters in Water Colours.

- 106 INTERIOR OF THE CHURCH OF ST. LAURENCE, NUREMBERG
Lent by CHARLES LUCAS, ESQ.

ROBERTS, DAVID, the Late, R.A.

- GENERAL VIEW OF KARNAK *Lent by H. BICKNELL, ESQ.*
 — MOSQUE OF SULTAN KAITBEY, CAIRO *Lent by H. BICKNELL, ESQ.*
 — GENERAL VIEW OF CAIRO *Lent by H. BICKNELL, ESQ.*

SHIELDS, FREDERICK J., Ordsall Old Hall, Salford, Manchester.*Associate of the Society of Painters in Water Colours.*

- 107 RAHAB WAITING THE COMING OF JOSHUA *Lent by SIR WALTER JAMES, BART.*
 108 THE NAUTILUS *Lent by RICHARD JOHNSON, ESQ.*

SMITH, COLLINGWOOD (Treasurer of the Water Colour Society); Wyndham Lodge, Brixton Hill, London.*Member of the Society of Painters in Water Colours.*

- 109 THE PASS OF GLENCOE.
 110 THE QUEEN AND ROYAL FAMILY AT THE THANKSGIVING SERVICE,
 HELD IN ST. PAUL'S, ON THE RECOVERY OF H.R.H. THE PRINCE
 OF WALES, 1872.

TAYLER, F., 38, Avenue Road, Regent's Park, London.*Member of the Society of Painters in Water Colours.*

- 111 THE KEEPER'S DAUGHTER *Lent by W. GILBEY, ESQ.*
 112 ON THE PTARMIGAN HILLS *Lent by W. GILBEY, ESQ.*
 113 SHOOTING THE POPINJAY *Lent by H. A. HUNT, ESQ., C.B.*

"The Green Marksman, as if determined to bring the affair to a decision, took his horse from a person who held him, and, having previously looked carefully to his girths and the fitting of his saddle, vaulted on his back, and motioning with his hand for the bystanders to make way, set spurs, passed the place from which he was to fire at a gallop, and as he passed threw up the reins, turned sideways upon his saddle, discharged his carbine, and brought down the Popinjay."—*Old Mortality, Vol. I., Chap. iii.*

TOPHAM, F. W., Warwick House, 86, Adelaide Road, London.*Member of the Society of Painters in Water Colours.*

- 114 THE EVE OF THE FESTA *Lent by H. A. BRASSEY, ESQ., M.P.*
 115 A PASTORAL *Lent by W. S. COOKSON, ESQ.*

WALKER F., A.R.A., 3, St. Petersburg Place, Bayswater, London.*Member of the Society of Painters in Water Colours.*

- 116 AN AMATEUR *Lent by E. L. S. BENZON, ESQ.*
 117 THE FERRY *Lent by F. LEHMANN, ESQ.*

WARD, E. M., R.A., 1, Lansdowne Road, Notting Hill, London.

- 118 LA TOILETTE DES MORTS *Lent by GEORGE FOX, ESQ.*

WARREN, H., 53, Pall Mall, London.*President of the Institute of Painters in Water Colours.*

- 119 THE MAGI ON THEIR JOURNEY *Lent by HER MAJESTY THE QUEEN.*
 120 THE WALK TO EMMAUS *Lent by the REV. W. A. RICHMOND.*

WEIGALL, C., 233, Brompton Road, London.*Member of the Institute of Painters in Water Colours.*

- 121 LE TÊTE-À-TÊTE INTERROMPU.

ENGRAVINGS.

- BARLOW, T. O., A.R.A.**, Auburn Lodge, Victoria Road, Kensington, London.
- 122 HOUSE OF COMMONS IN 1860, after J. Phillip, R.A.
- 123 SISTERS OF MERCY, after Madame Henriette Browne.
- 124 THE DEATH OF CHATTERTON, after H. Wallis.
- BRANDARD, E. P.**, 2, Albion Grove, Barnsbury, London.
- 125 MEN-OF-WAR, PLYMOUTH—Rough Weather.
- COUSINS, S., R.A.**, 24, Camden Square, London.
- 126 BOLTON ABBEY IN THE OLDEN TIMES.
- 127 LOUIS XVI. AND FAMILY, PRISONERS IN THE TEMPLE.
- CRUIKSHANK, G.** 263, Hampstead Road, London.
- 128 FOUR FRONTISPICES TO "FAIRY LIBRARY."—Etchings.
- 129 OPENING OF THE GREAT INTERNATIONAL EXHIBITION IN LONDON, IN 1851. Etching.
- EVANS, E.**, Racquet Court, Fleet Street, London.
- 130 ENGRAVINGS ON WOOD.
- FAED, J.**, 14, Comely Bank, Edinburgh.
- 131 MEZZOTINT ENGRAVING OF HER GRACE THE DUCHESS OF SUTHERLAND.
- 132 THE YOUNG WALTONIAN, Mezzotint and Etching.
- FROMONT, E.**
- | | | |
|---|--|---|
| — | DUTY AND PLEASURE, after C. Green | } <i>Lent by the PROPRIETORS OF "THE GRAPHIC" ILLUSTRATED NEWSPAPER</i> |
| — | TASTING-ORDER AT THE LONDON DOCKS, after W. Small .. | |
- GRAVES, R., the Late, A.E.**, 20, Grove Terrace, Highgate Road, London.
- 133 MRS. GRAHAM, after Gainsborough.
- 134 MRS. LLOYD, after Reynolds.
- 135 DUCHESS OF DEVONSHIRE, after Gainsborough.
- GREATBATCH, W.**, 2, Crescent Place, Mornington Crescent, London.
- 136 DOGS OF MOUNT ST. BERNARD.
- 137 OUR SAVIOUR, after Carlo Dolce.
- HARRALL, H.**, 4, Palsgrave Place, Temple Bar, London.
- 138 ENGRAVING ON WOOD.
- 139 Ditto Ditto.
- 140 Ditto Ditto.
- Ditto Ditto

JEENS, C. H., 67, St. Paul's Road, Camden Square, London.

- 141 PARENTS OF CHRIST SEEKING HIM.
142 THE QUEEN AND PRINCE CONSORT DIVIDING THE POLL-TARFF.

LANE, R. J., the **Late, A.E.**

- 143 PORTRAIT OF H.S.H. PRINCE EDWARD OF SAXE-WEIMAR, C.B.
Lent by MRS. LANE.
143a PORTRAIT OF ALEX. COLVIN, ESQ.

LEIGHTON, JOHN, F.S.A., 12, Ormonde Terrace, Regent's Park, London.

- 144 PROOFS OF WOOD ENGRAVING, after drawings by the Artist.

LEWIS, C. G., 53, Charlotte Street, Portland Place, London.

- 145 FAMILY OF DEER IN THE FOREST OF FONTAINEBLEAU. Proof.
146 HIGHLAND SHEPHERD.
147 HUNTSMAN GOING TO COVER, after Rosa Bonheur.

NICHOLLS, G. P., Aldine Chambers, Paternoster Row, London.

- 148 WOOD ENGRAVING, after a drawing by F. W. Lawson.
149 THREE WOOD ENGRAVINGS; one after W. Leacke, and two after Birket Foster.

RIDGWAY, W., 3, Denmark Villas, Acton, Middlesex.

- 150 THE LIGHT OF THE WORLD, line engraving on copper, after Holman Hunt.
151 THE YOUNG MOTHER, line engraving on copper, after F. R. Pickersgill, R.A.

SADLER, J., 6, Southampton Street, Fitzroy Square, London.

- 152 OBERON AND TITANIA, after a drawing by Sir Noel Paton, R.S.A.
153 GOING TO THE CHRISTENING, after a drawing by A. Bellows.
154 THE DREAM OF EUGENE ARAM, after a drawing by Gustave Doré.
155 LES MISÉRABLES, after a painting by Gustave Dore.

SAUNDERS, A. N., 12, Surrey Terrace, Lewisham High Road, New Cross, London.

- 156 LORD LAWRENCE, engraved in Mezzotint, after J. R. Dicksee.

SAUNDERS, G., 12, Surrey Terrace, Lewisham High Road, New Cross, London.

- 157 CHOOSING THE WEDDING GOWN, after W. Mulready, R.A.
158 BOY WITH SHEEP, after T. Gainsborough, R.A.

SIMMONS, W. H., 247, Hampstead Road, London.

- 159 "THE POOR, THE POOR MAN'S FRIEND," after Thomas Faed, R.A.

SLOCOMBE, C. P., 31, King Henry's Walk, Islington, London.

- 160 AT ST. IVES, CORNWALL.—Pilchard Boats unloading.
161 KENSINGTON GARDENS AFTER RAIN.

- SLOCOMBE, E.**, 31, King Henry's Walk, Islington, London.
- 162 MARIAN—A fireside study.
- 163 FOUR ILLUSTRATIONS OF OVID'S METAMORPHOSES.
- SLOCOMBE, F.**, 31, King Henry's Walk, Islington, London.
- 164 THE RIVER THAMES, FROM THE TOWER OF LONDON.
- 165 MOONLIGHT, ON THE COAST OF WALES.
- STOCKS, LUMB, R.A.**, 9, Richmond Villa, Seven Sisters' Road, Holloway, London.
- 166 CLAUDE DUVAL, after W. P. Frith, R.A.
- 167 "O, NANNIE, WILT THOU GANG WI' ME?" after Thomas Faed, R.A.
- 168 THE GENTLE SHEPHERD, after Sir D. Wilkie, R.A.
- SWAIN, JOSEPH**, 6, Bouverie Street, Whitefriars, London.
- 169 FRAME OF WOOD ENGRAVINGS FOR BOOKS.
- THOMAS, W. L.**
- | | | | | | | | |
|------|--|----|----|----|----|----|--|
| 169a | THE SHEIKH, after Carl Haag | .. | .. | .. | .. | .. | } <i>Lent by the</i>
PROPRIETORS OF
"THE GRAPHIC"
ILLUSTRATED
NEWSPAPER. |
| 169b | HOUSELESS AND HUNGRY, after S. L. Fildes | .. | .. | .. | .. | | |
| 169c | AN ODALISQUE, after Richter | .. | .. | .. | .. | | |
| 169d | THOMAS CARLYLE, after a Photograph | .. | .. | .. | .. | | |
| 169e | EMPEROR NAPOLEON III. AFTER DEATH, from Drawing by
S. L. Fildes | .. | .. | .. | .. | .. | |
- TOMKINS, C. A.**, 8, Dover Terrace, Coldharbour Lane, Camberwell, London.
- 170 THE MAIDEN'S PRAYER, engraved on Steel, from the original picture by Perrault.
- 171 PORTRAIT OF THE RIGHT REV. J. W. COLENZO, D.D., BISHOP OF NATAL, engraved
on steel, from the original picture by S. Sidley.
- 172 JOCHABED.
- VINTER, JOHN ALFRED**, Lithographer in Ordinary to Her Majesty, 29, Monmouth Road
Bayswater, London.
- 173 BALMORAL, 1860, after Sir E. Landseer, R.A.
- WARD, G. R.**, 38, Fitzroy Square, London.
- 174 DWARKANNAUGHT, TAGORE, after Fred. Say.
- 175 PASHA OF EGYPT, after T. Brigstocke.
- 176 EARL OF HAREWOOD AND HOUNDS, after Sir Francis Grant, P.R.A.
- WHISTLER, J. A. M.**, 2, Lindsay Road, Battersea, London.
- 177 SIX ETCHINGS *Lent by* JAMES ANDERSON ROSE, ESQ.
- WILLMORE, A.**, 4, Compton Street, Regent's Square, London.
- 178 THE ASHES OF GERMANICUS, after J. M. W. Turner, R.A.
- 179 THE FOOT BRIDGE, after J. C. Hook, R.A.
- 180 THE SQUALL, after David Cox.
- 181 A CALM, after David Cox.

SCULPTURE.

- ADAMS-ACTON, JOHN**, Marguita House, 103, Marylebone Road, London.
- 182 IL GUIOCATORE DE CASTELLETTO. Price 500 Guineas.
- ADAMS, GEO. G.**, 126, Sloane Street, London.
- 183 BUST OF H.S.H. THE DUKE OF TECK, in plaster.
- 184 MARBLE BUST OF BARONESS BURDETT COUTTS.
- 184^a COLLECTION OF SILVER MEDALS.
- BOEHM, J. E.**, The Avenue, Fulham Road, London.
- 185 EQUESTRIAN STATUETTE IN BRONZE OF H.R.H. THE PRINCE OF WALES,
in the dress of his Regiment, the 10th Hussars.
Lent by H.R.H. THE PRINCE OF WALES.
- 186 SMALL BRONZE BUST OF HER MAJESTY THE QUEEN.
- 187 A SHORTHORN BULL AND ENGLISH PEASANT, Group in bronze.
- 188 A REARING CART STALLION (Cleveland breed) WITH HIS LEADER, in bronze.
- BRUCE-JOY, A.**, 16, Pembroke Gardens, London.
- 188^a MEDALLIONS—THE VISCOUNTESS MONCK.
- 188^b Ditto THE PRINCE HERMANN DE SOLM-BRAUNFELS.
- 188^c Ditto PROFESSOR G. G. STOKES, F.R.S.
- 188^d Ditto PROFESSOR ADAMS, F.R.S.
- 188^e Ditto H.I.M. THE LATE NAPOLEON III.
- DAVIS, EDWARD**, 15, Fitzroy Street, Fitzroy Square, London.
- 189 SIR F. RONALD, F.R.S. (Electrician). Marble Bust.
Lent by SAMUEL CARTER, ESQ.
- DAVIS, H. W. B., A.R.A.**, 10A, Cunningham Place, St. John's Wood Road, London.
- 190 TROTTING BULL, in bronze.
- DURHAM, JOSEPH, A.R.A.**, 21, Devonshire Street, Portland Place, London.
Elected Associate of the Royal Academy, London, 1866.
- 191 A STATUETTE, IN BRONZE, OF HIS ROYAL HIGHNESS THE LATE PRINCE
CONSORT, in the robes of the Grand Master of the Order of the Bath.
- 192 "GO TO SLEEP"—a Marble Group of Child and Dog.
Lent by EDWARD BROOKE, ESQ.
- MARSHALL, W. CALDER, R.A.**, 115, Ebury Street, Eaton Square, London.
Elected Associate of the Royal Academy, 1845; elected full member, 1852.
- 193 UNDINE—Marble Statue.
- 193^a A POMPEIAN GIRL—Marble Bust.
- MORGAN, G.**, 41, Pelham Street, Brompton, London.
- 194 SILVER MEDALS; obverse and reverse; Fowke Memorial.

- STEPHENS, E. B., A.R.A.**, 110, Buckingham Palace Road, London.
Elected Associate of the Royal Academy, London, 1864.
- 195 BLACKBERRY PICKING, THE THORN—Marble.
- 196 EUPHROSYNE AND CUPID—Marble Group.
- WESTMACOTT, JAMES S.**, 14, St. George's Road, London.
- 197 EVE—Marble Statuette.
- 198 ANDROMEDA—Marble Statuette.
- WOOLNER, THOMAS, A.R.A.**, 29, Welbeck Street, Cavendish Square, London.
Elected Associate of the Royal Academy, London, 1869.
- 199 MARBLE BUST OF CHARLES DARWIN *Lent by C. DARWIN, ESQ.*
- WYON, J. S. & A. B.**, 2, Langham Chambers, Portland Place, London.
Double Silver Medallist Royal Academy, London, and decorated with the order of Mejidie of Turkey.
- 200 A COLLECTION OF MEDALS.
- 201 IMPRESSIONS OF THE GREAT SEAL OF ENGLAND.
- 202 IMPRESSIONS OF THE GREAT SEAL OF H.R.H. THE PRINCE OF WALES,
HEREDITARY STEWARD OF SCOTLAND.
- 203 THE GREAT SEAL OF CANADA.

ARCHITECTURE.

- BLASHILL, THOS.**, 10, Old Jewry Chambers, London.
- 203_a NEW WAREHOUSES, LUDGATE HILL, LONDON.
(See also Group XVIII.)
- SEDDON, J. P.**, 12, Park Street, Westminster, London.
- 203_b UNIVERSITY OF WALES, ABERYSTWITTH.
- 203_c DECORATIONS OF CHRIST CHURCH COLLEGE CHURCH, BRECON.
- STREET, GEO. E., R.A.**, 14, Cavendish Square, London.
Elected Associate of the Royal Academy, London, 1866; elected full member, 1872.
Hon. Member of the Imperial Academy of Fine Arts, Vienna.
- 203_d GENERAL VIEW OF THE NEW LAW COURTS, as designed for the Thames Embankment.
- 203_e DESIGN FOR NORTH-EAST ANGLE OF THE NEW COURTS OF JUSTICE, STRAND, LONDON.
- WATERHOUSE, ALFRED**, 20, New Cavendish Street, Portland Place, London.
Hon. Member of the Imperial Academy of Fine Arts, Vienna.
- 203_f PLAN AND ELEVATION OF EATON HALL, CHESHIRE, Seat of the Marquis of Westminster.

GROUP XXVI.

Education, Teaching and Instruction.

EDUCATION: Exhibition of all the Arrangements and Contrivances for the better Nursing, Training and Rearing of Children; their Physical and Mental Development from the first days of their life up to School-time; their Nourishment. Cradles, Nurseries, &c.; Child Gardens (Kinder-Garten), Child Games and Amusements, Child Gymnastics. TEACHING: Exhibition of School Houses and School Apparatus in Models, Drawings, and Examples. Exhibition of Means of Instruction. The Works and Journals of Instruction. Description and Illustrations of Methods of Instruction. History and Statistics of a School, its Organisation and Laws. ELEMENTARY SCHOOLS: This department will include Apparatus for the Instruction of the Blind, Deaf, Dumb, and Idiots. MIDDLE SCHOOLS: Comprehending Gymnasiums, "Realschulen," or Schools wherein exact Science and Modern Languages are taught. PROFESSIONAL AND TECHNICAL COLLEGES. UNIVERSITIES. INSTRUCTION IN THE MORE LIMITED SENSE: Instruction of Adults through Literature, the Public Press, Public Libraries, and Educational Societies, and Associations for Instruction.

HAWES, GEORGE E., *Chapel Field, Norwich*.—Desks and Seats for Schools. (730)

HAVET, ALFRED G., 24, *Charlotte Square, Edinburgh*.—Educational Works, French and German. (731)

DAMON, ROBERT, *Weymouth*.—Types and Genera of recent Mollusca, with Catalogue. (732)

LOTH, PROFESSOR J. T., 27, *Rutland Street, Edinburgh*.—German Educational Works. French for Children, with Key; Tourist's Conversational Guide in English, French, German, and Italian. (733)

BLACKWOOD, WM., & SONS, *Edinburgh*.—Educational Works—Text Books, &c., of Zoology, Geology, Meteorology, Geography, History, Arithmetic, Physics, Agriculture, Navigation, Etymology, Composition, &c. (734)

(See also page 138.)

BOASE, MISS, *Edinburgh*.—Work, entitled "A Century of Banking, from 1764 to 1864, with Memoranda concerning Scotch and English Banking during that period." (735)

GERRARD, EDWARD, 31, *College Place, Camden Town, London*.—Stuffed Specimens and Skeletons of Propithecus Edwardsii, Orang Outang & Chlamydoferus Truncatus; Heads of Moorhwa Vulgaris, Ovis Arias, Caauana Caretta, and Hortulia Sebœ. (736)

RUNDELL, J. B., 34A, *Pembroke Square, Kensington, London*.—Shorthand; a

new system, with adaptations to the English, French, German, and Italian Languages. (401)

CALLAGHAN, WILLIAM, 23A, *New Bond Street, London*.—School Furniture, made on the system of Dr. Liebreich, of St. Thomas's Hospital, London, and adopted by the London School Board. (795)

ARMITAGE, DR., *British and Foreign Blind Association*.—Educational Works for the Blind, consisting of Relief Maps, Writing Frame, Plate for Stereotyping, &c. (737)

SIMMONDS, PETER LUND, 29, *Cheapside, London*.—Collection of 62 Commercial varieties of Cotton. Collection of 51 samples of Laundry Starches, and edible Meals and Starches, scientifically named, comprising the principal varieties of Arrow-roots, Tapiocas, Sagos, Capavas, &c., of commerce. (742)

(See also Additional Exhibitions.)

MOSS, JOHN F., 17, *Old Haymarket, Sheffield*.—Patent School Desk, invented by Exhibitor. (716)

BLEZARD, JAMES, & SONS, *Padiham, Lancashire*.—School Desk, compound fastening. (616)

(See also Group XIII.)

HAMMER, GEORGE M., 108, *St. Martin's Lane, London*.—Specimen of Moss's Patent School Desks, adopted by the London School Board. (646)

WARD, T., *St. John's Schools, New Worthly, Leeds*.—Model School Desks. (485)

ADDITIONAL EXHIBITIONS.

This collection has for its object to illustrate practically, as well as statistically, the nature and extent of the Imports of Raw Material into the Kingdom of Great Britain. As far as practicable, specimens have been procured, which show the general quality of each substance, and the varieties which are originated in different localities; at the same time, the scientific names of the producing animals or plants being generally attached to the articles, will give an interest alike to the man of science and the merchant. The large labels, in addition to a description of the group of substances to which they refer, contain also the statistical information which our Trade-returns show annually, and as these returns are never quite completed until the middle of the year, it has been decided to exhibit the Imports of 1871 instead of 1872, as more accurate information could be obtained of the former than of the latter. The various important firms, without whose help such a collection would have been impossible, have spared neither time nor trouble in aiding the collector, and in many instances these contributions represent considerable money value; and they have helped the more readily, because it has been suggested, that the collection, at the close of the Exhibition, should be left in the Austrian capital, as a contribution to any Polytechnic Institution which may be selected to receive it.

T. C. A.

ROYAL BRITISH COMMISSION OF THE VIENNA UNIVERSAL EXHIBITION OF 1873, 41, *Parliament Street, London*.—Collection of British Imports, collected and arranged by Professor Archer. (740*)

SAMUELSON, E., *Liverpool*.—Tobaccos. (740*)
(See also Group IV.)

SWAN BROTHERS, *Kirkcaldy, N.B.*—Baltic Flax. (740*)
(See also Group II.)

MINIER, NASH, & NASH, *London*.—Flower Roots. (740*)
(See also Group II.)

HAZEON, THOMAS, & COMPANY, *Leadenhall Street, London*.—Hone and other Stones for Sharpening Tools, &c. (740*)
(See also Group IX. and Appendix.)

BOWES, J. L. & BROTHER, *Liverpool*.—Wools. (740*)
(See also Group II.)

MATTHEWS, J., & COMPANY, *Liverpool*.—Oils and Drysalteries. (740*)
(See also Group III.)

BENCKE & SHARMAN, *Liverpool*.—Fibres, various. (740*)
(See also Group II.)

STEAD BROTHERS, *Liverpool*.—Cotton Wool. (740*)
(See also Group II.)

HUBBUCK, J., *Liverpool*.—Samples of Foreign Grain and Breadstuffs imported into Liverpool. (740*)
(See also Group IV.)

BOSTOCK & ABINGTON, 20, *James Street, Liverpool*.—Hops. (740*)
(See also Group IV.)

NEWTON, KEATES, & COMPANY, *Liverpool*.—Metallic Ores. (740*)
(See also Group I.)

BANNER, SAMUEL, *Liverpool*.—Petroleum Spirit and Oils; Rosin, Turpentine, Cotton Seed Oil, and Olive Oil. (740*)
(See also Group III.)

BRANCKER, J. B., *Liverpool*.—Colonial Sugars and Coffees. (740*)
(See also Group IV.)

BARUCHSON, ARNOLD, & COMPANY, *London, Liverpool, and Greenock*.—Beetroot Sugar, imported from France, Belgium, Germany, and Austria. (740*)
(See also Group IV.)

TOBIN, J. A., *Liverpool*.—African Oil Seeds. (740*)
(See also Group III.)

McANDREWS & COMPANY,
Liverpool.—Dried Fruits and Nuts. (740*)
(See also Group IV.)

JOHNSTONE, S. P., *Liverpool*.—
Brazilian Sugar. (740*)
(See also Group IV.)

SINGLEHURST, R., & COM-
PANY, *Liverpool*.—Brazilian Fruits. (740*)
(See also Group IV.)

DARBYSHIRE, McKINNEL &
COMPANY, *Liverpool*.—Series of Animal
Products, imported into Great Britain from
the River Plate, South America. (740*)
(See also Group II.)

NEILSON, H., *Liverpool*.—South
American Cotton. (740*)
(See also Group II.)

HOW & BARCLAY, *Liverpool*.—
Cocoas. (740*)
(See also Group IV.)

EVANS, LESCHER & EVANS,
60, *Bartholomew Close, London*; and EVANS,
SONS & COMPANY, *Liverpool*.—Collec-
tion of the Substances imported into Great
Britain, for Medicinal purposes. (740*)
(See also Group III.)

PIESSE & LUBIN, *London*.—Per-
fumes. (740*)
(See also Group III. and Appendix.)

LEWIS & PEAT, *London*.—Drugs,
Gums, Drysalteries, and Colonial Produce.
(740*)
(See also Groups II. and III.)

MEYERS & DAVIS, 56, *Southwark
Street, London*.—Canes, Sticks, and Rattans
in the rough, for walking and umbrella
sticks, furniture, and fishing-rods. (740*)
(See also Group II. and Appendix.)

ROSE & WILSON, *London*.—Oil
Seeds and Oils. (740*)
(See also Group III.)

PRICE'S PATENT CANDLE
COMPANY, *London*.—Ozokerit. (740*)
(See also Group III.)

MYERS, M., *London*.—Ivory, Tor-
toiseshell, Shells, &c. (740*)
(See also Group II.)

WIGAN & Co., *London*.—Isin-
glass. (740*)
(See also Group II.)

PATRY & PASTEUR, *London*.—
Indigo. (740*)
(See also Group II.)

ANDRADÉ, DE COSTA, & COM-
PANY, 7, *Cripplegate, London*.—Feathers
for Ornament. (740*)
(See also Group V.)

HEAL & SON, *London*.—Bed-
feathers. (740*)
(See also Groups II. and VIII.)

GARDINER, JOSEPH, & COM-
PANY, *London*.—Hard Woods. (740*)
(See also Group II.)

BURKE & COMPANY, *London*.—
Marbles. (740*)
(See also Group IX.)

JOHNSON, MATTHEY & COM-
PANY, *London*.—Metals. (740*)
(See also Groups I., III., and Appendix.)

FORTNUM, MASON & COM-
PANY, 182, *Piccadilly, London*.—Tea,
Coffee, Foreign Pickles, Nuts, Preserved
Fruits and Vegetables, and various foreign
products. (740*)
(See also Group IV.)

EATON, H. W., & SONS, 33,
Old Broad Street, London.—Silk, raw,
thrown, spun, and waste, and cocoons.
(740*)
(See also Groups II. and V.)

GORDON, J., & COMPANY, *Liver-
pool*.—Cotton Wool. (740*)
(See also Group II.)

SMITH, R. M., *Leith*.—Flax, Tow,
and other fibres; Baltic Grain and Pulse.
(740*)
(See also Groups II. and IV.)

BROTCHIE, R., & COMPANY
Leith.—Chicory. (740*)
(See also Group IV.)

COWAN, A., & SONS, *Pennicuick, near Edinburgh*.—Paper Materials. (740*)
(See also Group XI.)

CUNNINGHAM, J. & J., 102, *West Bow, Edinburgh*.—Collection of Oil-Cakes and Manures imported into Great Britain. (740*)
(See also Group II.)

LAWSON SEED & NURSERY COMPANY, *Edinburgh*.—Collection of Agricultural Seeds imported into Great Britain. (740*)
(See also Group II.)

HUME, JOHN, *Edinburgh*.—Bristles. (740*)
(See also Group II.)

MCLEAN & HOPE, *Leith*.—Paper Materials. (740*)
(See also Group XI.)

DUNDEE SEAL & WHALE FISHING COMPANY (DAVID BRUCE, Manager), *Dundee*.—Whalebone, Narwhal Horn, Oils, &c. (740*)
(See also Group II.)

KEILLER & SONS, *Dundee*.—Orange, Lemon and Citron Peel. (740*)
(See also Group IV.)

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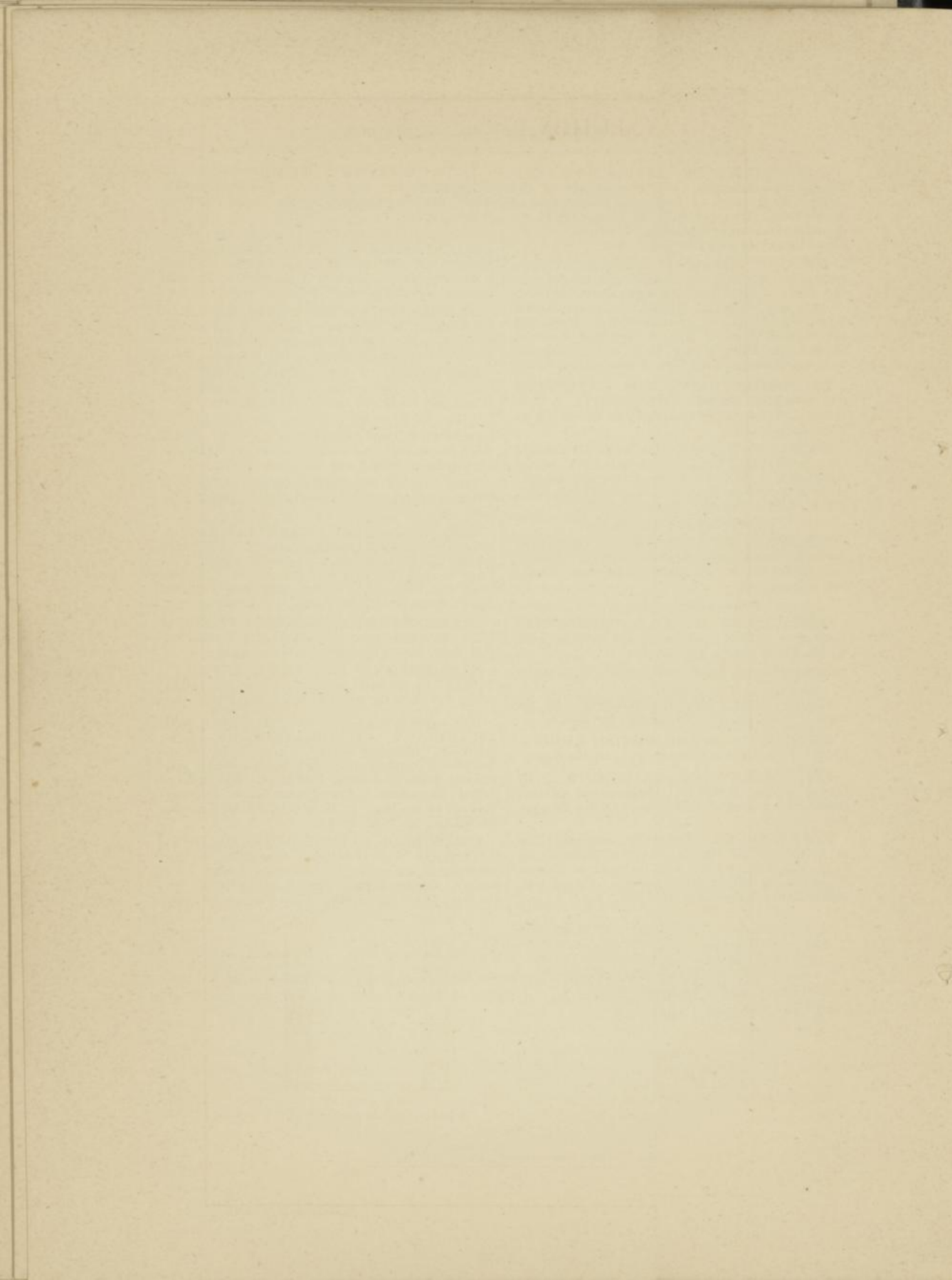
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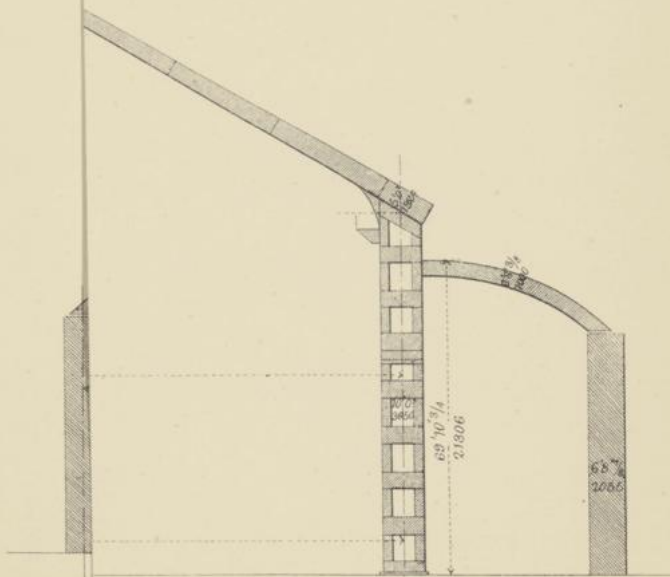
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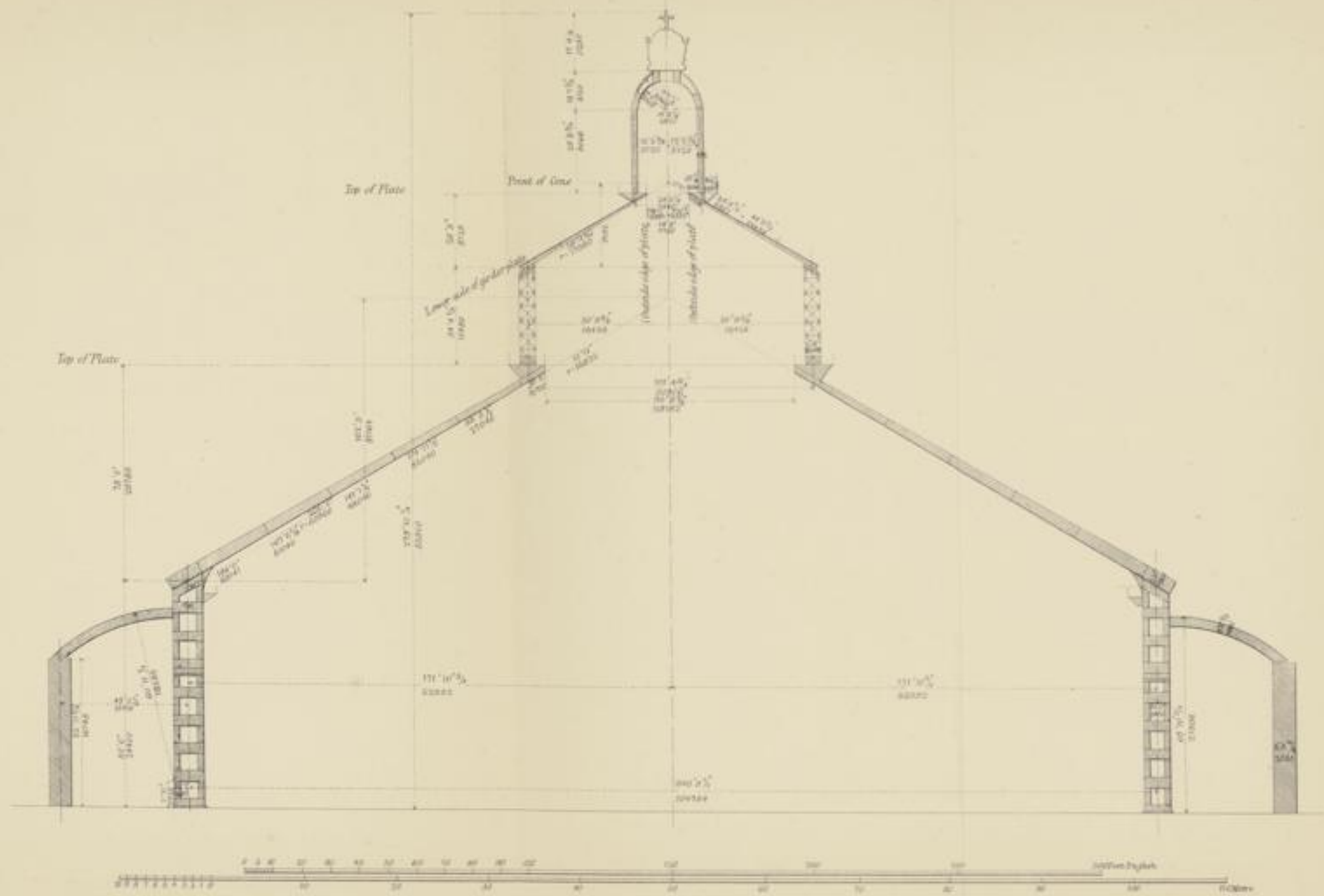


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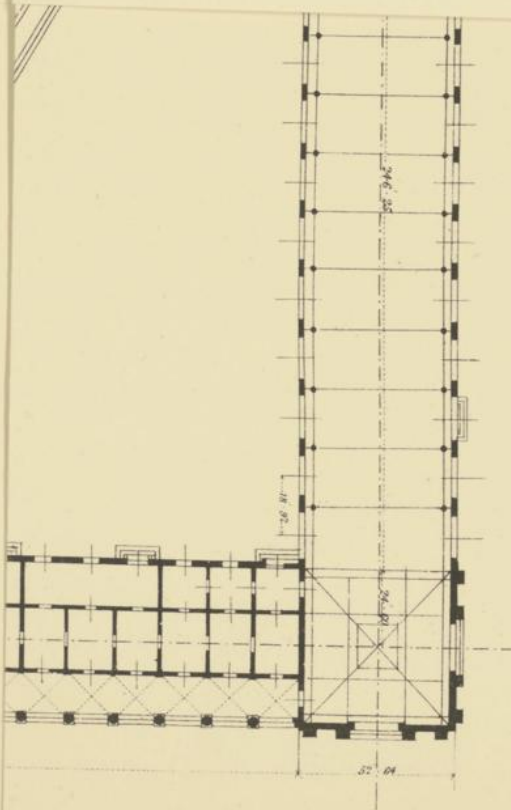


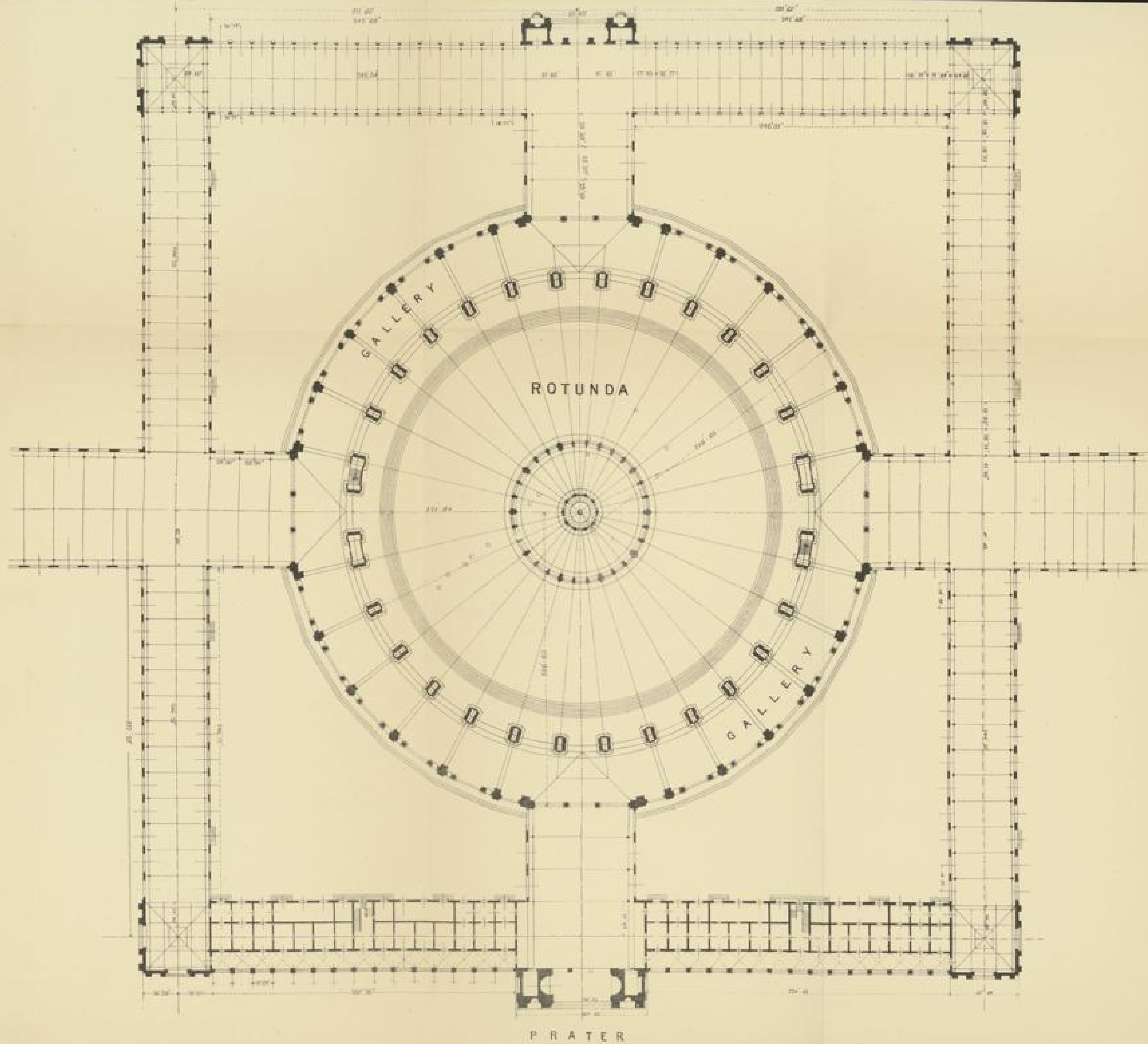
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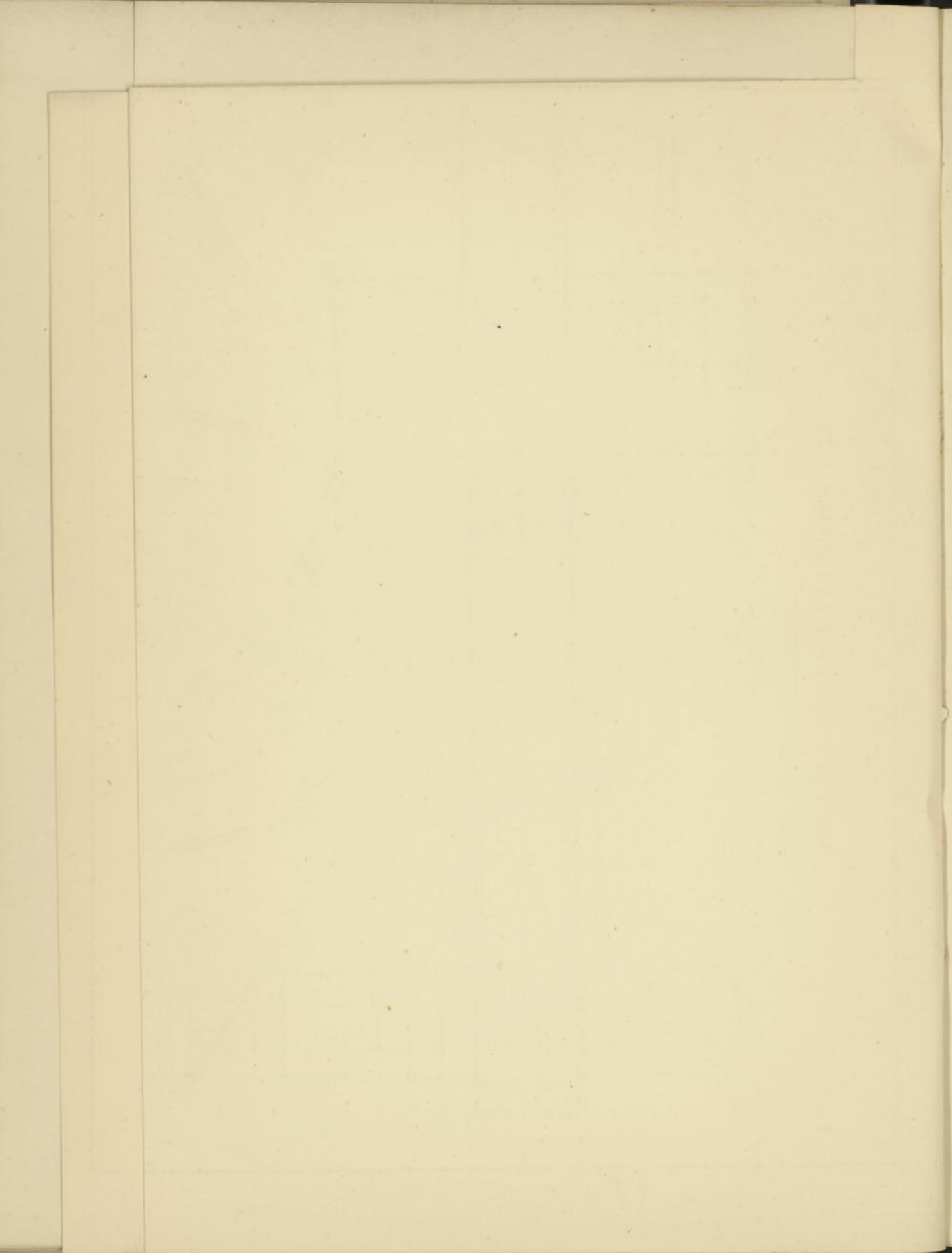
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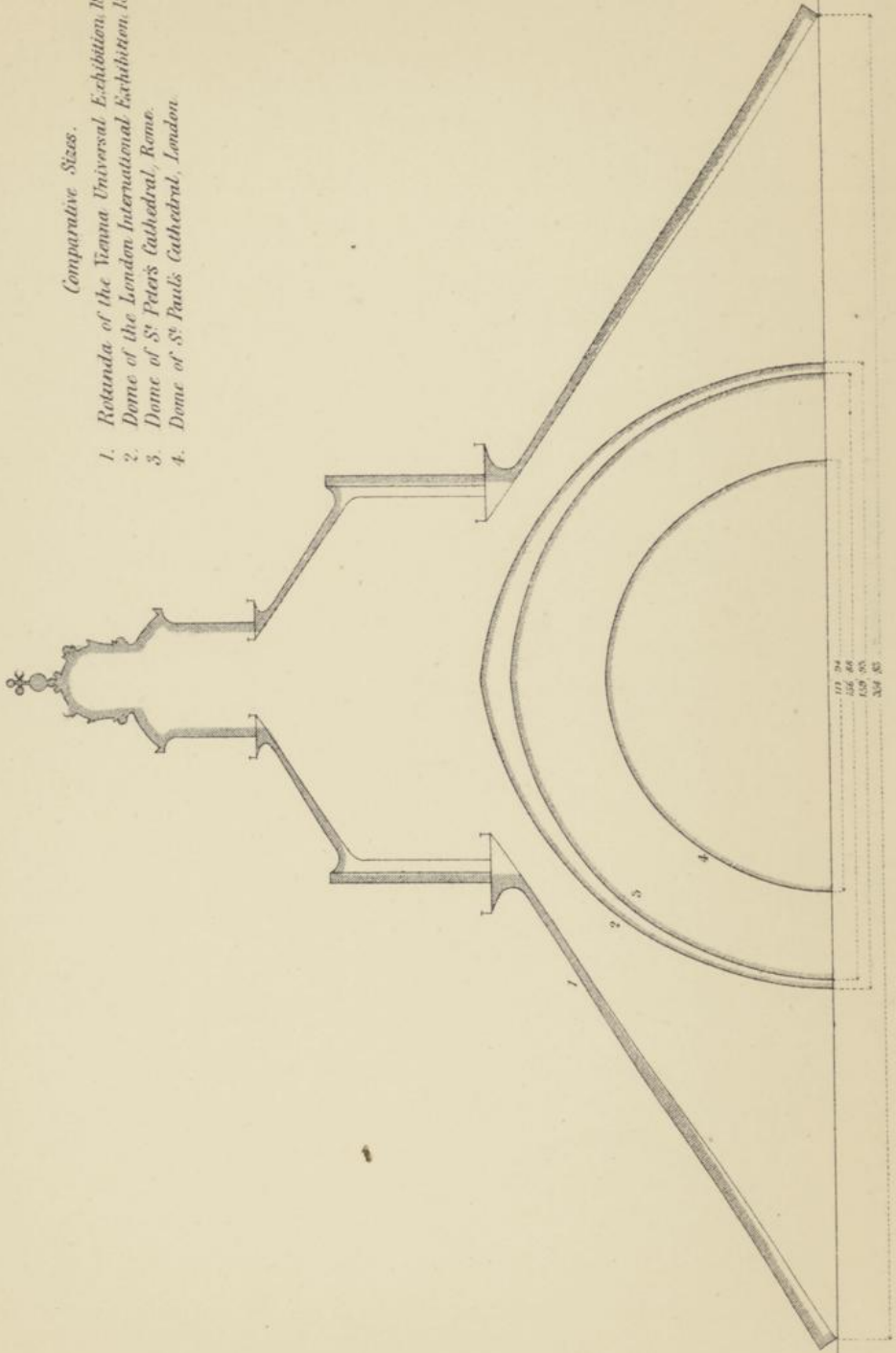




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INDIA

THE HISTORY OF INDIA
FROM THE EARLIEST PERIODS
TO THE PRESENT TIME
BY
JAMES MILL
ESQ.
OF THE BARRISTERS AT LAW
IN THE MIDDLE TEMPLE
LONDON
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SECTION D.—RAW SILK AND SILK COCOONS.

BENGAL COMMITTEE.—The Cocoons, Eggs, Larvæ, &c., of various species of Silk-worms from Assam and other parts of Bengal; specimens of Raw Silk, Silk Thread, and Silk Waste from all parts of Bengal, contributed in part by Messrs. Lall Behari Dutt, Midnapore, Prankissen, Law & Co., and L. Payen & Co., Maldah. (1—29, 1—24, 69—71, 79)

INDIA MUSEUM, *London*.—Raw Silk, Silk-thread, and Silkworm Cocoons from Bengal, Punjab, Assam, Mysore, &c.

F. MOORE, *India Museum, London*.—Collection of the principal Silk-producing Insects of India.

SECTION E.—ANIMAL PRODUCTS IN A RAW STATE.

BOMBAY COMMITTEE.—Hides and Feathers from Kattyawar and Aden. (3—5, 1—8)

BENGAL COMMITTEE.—Samples of Honey, Honey-comb, and Stick Lac from Gowalpara, Bhagulpur, and Sylhet. (461—463, 489)

RAI PRITHEERAM CHOWDRY BAHADUR, ZEMINDAR OF MECKPARA.—Elephant Tusks and Rhinoceros Horns from Gowalpara. (459, 460)

AMRITSAR LOCAL COMMITTEE.—Fourteen Animal Substances used in physic. (135)

LEITNER, DR., *Punjab*.—Specimens of Himalayan Beetles. Collection of 1600 Himalayan Moths and Butterflies. (137)

INDIA MUSEUM, *London*.—Edible Birds Nests from Burmah; Sharks Fins from Bombay; Honey and Beeswax from all parts of India; Marabou Feathers from Calcutta; Isinglass from Bombay, Calcutta, and Burmah; Chank Shells in various stages of preparation and polished Bison Horns.

SECTION F.—WOOL.

INDORE LOCAL COMMITTEE.—Washed and Unwashed Wool. (2, 54)

INDIA MUSEUM, *London*.—Pushm or Shawl-Wool from the Cabul and Cashmere goats; Sheeps-Wool and Lambs-Wool from Guzerat, Rajpootana, Mysore, Kutch and the Punjab; Yak-Wool from Tibet, and Camel-Wool from Sind and Indore.

SECTION G.—PRODUCTS OF FORESTRY.

H.M.'S GUN CARRIAGE FACTORY, *Madras*.—Indian Woods. (174—202)

ELWYN, R. B., *Madras*.—Woods used on Madras Railway. (203—215)

SIMPSON & Co., *Madras*.—Woods used in carriage-building. (216—221)

MADRAS CENTRAL MUSEUM.—Woods from Southern India. (222—251)

MACGREGOR, A.—Teak Saplings, planted between the years 1844 and 1863, showing the rate of growth of this timber—obtained from Malabar. (252—271)

MACGREGOR, A.—Woods from Malabar District. (272—285)

WEDDERBURN, A.—Woods, Gums, and Barks from the Coimbatore District. (286—346, 614—630)

COCKERELL, J. B.—Woods from the Neilgherry Hills. (347—433)

LONGLEY, C. T.—Woods, Gums, Dye-woods, and other Forest Produce from Salem. (434—463, 592—613, 631—643)

MCQUHAE, W.—Woods and Gums from the Madura District. (464—541, 579—591)

SULLIVAN, H. E.—Woods from North Arcot. (542—562)

PLUNKETT, E. C.—Woods from Cuddapah. (563—568)

PUCKLE, G. K.—Woods from the Tinnevely District. (569—578)

WOOLDRIDGE, H.—Woods and Dye-woods from South Arcot. (578¹—578², 644, 645)

BOILEAU, A. C.—Forest Products from Kurnool. (646—646x)

BIDIE, G., *Madras Army*.—Drugs, Seeds, Gums, &c. (647—664)

BENGAL COMMITTEE.—Specimens of various Woods from Gowalpara, and from the Jaunsar Forest on the Himalaya. (467—494)

FOREST DEPARTMENT OF CENTRAL PROVINCES.—Various Woods and Gums.

CENTRAL PROVINCES COMMITTEE.—Samples of Resin and Lac. (85—86)

MYSORE LOCAL COMMITTEE.—Various Woods. (23—88)

PUCKLE, J., *Colonel Mysore*.—Various Woods. (3—22)

DEPUTY-CONSERVATOR OFFORESTS, *Berar*.—Timbers and Gums. (1—21, 1—6)

INDIA MUSEUM, *London*.—Collection of various Woods mounted in fourteen frames.

SECTION I.—MANURES.

H.H. THE FIRST PRINCE OF TRAVANCORE.—Manure. (664a)

SECTION K.—DRAWINGS AND MODELS OF OBJECTS USED IN AGRICULTURE, HORTICULTURE, AND FORESTRY.

MADRAS COMMITTEE.—Model of "Coorg" Cart from Mercara, and of a "Peccotta" from Madras, and an Agricultural Implement from Salem. (686, 688, 689)

MADRAS COMMITTEE.—Publications referring to Forest and Agricultural Produce. (690—693)

MASTERS, H. J., *Bellary*.—Models of Agricultural Implements. (665—673)

MADRAS SCHOOL OF ARTS.—Models of Agricultural Implements. (674—685)

NICHOLAS & CURTHS, *Madras*.—Photograph of Natives working "Peccotta." (687)

BOMBAY COMMITTEE.—Models of Agricultural and other Implements from Bombay, Surat, Ahmedabad, Dharwar, Broach, Kattyawar, Kolapur, Belgaum, Hazaribag, and Poona. (3, 5, 13—18, 22—39, 41—44, 46—52, 54, 56—62, 65)

SUB-COMMITTEE OF BROACH.—Model of "Ghodi," or Stool. (67)

FRETWELL, V., *Khandeish*.—Models of Agricultural and other Implements, and Churka, Spinning-wheel. (1, 2, 4, 6—12, 19—21, 49, 45, 53, 55, 63, 64, 66, 68)

RAMSAY, COL. H., C.B., *Commissioner of Kumaon*.—Models of various Agricultural Implements from Jalmer. (197—207)

PUCKLE, COLONEL, *Mysore*.—Agricultural Implements. (89—92)

BERAR LOCAL COMMITTEE.—Models of Ploughs. (39, 49)

GROUP III.

SECTION A.—CHEMICAL PRODUCTS.

BOMBAY COMMITTEE.—Samples of Soda and Salt. (1, 2)

AMRITSAR LOCAL COMMITTEE.—Various Chemical Preparations. (2, 5, 8, 10, 12, 18, 19, 21, 22, 24, 26, 27)

SECTION B.—RAW SUBSTANCES AND PRODUCTS OF PHARMACY.

AMRITSAR LOCAL COMMITTEE.—150 Specimens of Pharmaceutical Products. (138)

INDORE LOCAL COMMITTEE.—Various Gums and Fixed Oils. (3a, 28—30, 33, 42—48)

INDIA MUSEUM, *London*.—White Sharks Liver Oil from Tellicherry; Leeches from Calcutta, and Vesicatory Insects from Madras and Assam.

C. R. MARKHAM, C. B.—Various Cinchona products from the manufactory at Ootacamund.

SECTION C.—FATS AND THEIR PRODUCTS.

BABOO MODELLIAR, *Madras*.—Soaps and Soap Substitutes. (694—698)

AMRITSAR LOCAL COMMITTEE.—Two Specimens of Fats used in physic. (139)

SECTION E.—ESSENTIAL OILS AND PERFUMERIES.

MIR GOOLAB FUTHOOLAH, *Madras*.—Essential Oils and Perfumes. (699—716)

BABOO MODELLIAR, *Madras*.—Essential Oils and Perfumes. (717—719)

H.H. THE QUICKWAR OF BARODA.—Various Essential Oils. (1—4)

KANNY LOH DEY, DR., *Rai Bahadur*.—Various Attars or Essences collected and classified by Exhibitor. (1—29)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Specimens of Otto de Rose, Rose-Water, and other Perfumes from Ghazee-pore. (215—226)

PUNJAB COMMITTEE.—A Box of Attars or Essences from Delhi. (140)

AMRITSAR LOCAL COMMITTEE.—Eighteen Specimens used in physic. (141)

INDORE LOCAL COMMITTEE.—Otto of Rose from Keora, and Jasmin from Mogra. (3)

INDIA MUSEUM, *London*.—Specimens of Musk.

SECTION G.—DYE-STUFFS, MINERAL AND ORGANIC.

BOMBAY COMMITTEE.—Various Substances used in Dyeing, and Samples of Dyed Materials, from Makbar, Aden, Persia, the Deccan, Guzerath, Madras, Sind, Sholapore, Oomerawatee, Barsee, Rajpore, Zanzibar and China. (1—75)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Four packets of Dyes from Jaloun. (195—195c)

PUNJAB COMMITTEE.—Various Dyes from the Amritsar and Kangra districts. (142—172a)

AMRITSAR LOCAL COMMITTEE.—Sample of Indigo, and a Collection of Dyes used in physic. (30, 173)

BANGALORE CENTRAL JAIL.—Various Dyeing Materials. (93—113)

INDORE LOCAL COMMITTEE.—Specimen of Aul-root. (35)

BERAR LOCAL COMMITTEE.—Specimen of Indigo. (31)

INDIA MUSEUM, *London*.—Lac Dye from Mirzapore, Bengal, Calcutta, &c.; "Puree" or Indian Yellow from Monghyr.

SECTION H.—RESINS.

BIDIE, G., *Madras Army*.—Sample of Sealing-wax. (720)

BOMBAY COMMITTEE.—Resins, and Oleo-resins, from Aden. (1—8)

SCHÖNE, KILBURN & CO., *Calcutta*.—Samples of Shell Lac. (1—3)

WEMYSS, SIR J., BART., *Mirzapore*.—Specimens of Stick-Lac from Mirzapore. (41)

AMRITSAR LOCAL COMMITTEE.—Collection of 31 Resins used in physic. (174, 175)

BANGALORE CENTRAL JAIL.—Lac used in colouring toys. (114)

INDIA MUSEUM, *London*.—Stick-Lac and Shell-Lac from Mirzapore, Bancoorah, Vizagapatam, &c.; Glue from Ahmedabad and Darjeeling.

GROUP IV.

SECTION A.—FLOUR & FARINACEOUS PRODUCTS.

- MADRAS COMMITTEE.—Samples of "Rolong" (used in making bread). (724—726)
- H.H. THE FIRST PRINCE OF TRAVANCORE.—Samples of Flour. (721—723)
- GOVERNMENT BAKERY, MADRAS.—Samples of Flour and Wheat. (727—731)
- BENGAL COMMITTEE.—Samples of Arrowroot, Flour, and Prepared Pulses (as dried and split peas, &c.) from Faridpur, Chittagong, and Rajshahye. (369½—379)
- OUDE LOCAL COMMITTEE.—Cakes made from Moong and Oord Flour. (324—305)
- INDORE LOCAL COMMITTEE.—Wheat-flour and Gram-flour. (38, 38a)
- GOVERNMENT OF BOMBAY.—"Boorato," the pollen of Typha Elephantina, from Lake Munchur, near Boobuc, Sind. (67)

SECTION B.—SUGAR AND ITS PRODUCTS.

- BINNY & Co., Madras.—Samples of Aska Sugar. (740)
- BIDIE, G., Madras Army.—Various kinds of Sugar. (741—745)
- BENGAL COMMITTEE.—Specimens of Cane and Date Sugar, Sugar Candy, and Treacle from Hugli, Chittagong and Faridpur. (380—386)
- CAREW & COMPANY, Rosa Factory, Shahjehanpore.—Samples of Sugar. (42, 43)
- DEPUTY COMMISSIONERS OF JALMER.—Samples of Loaf-Sugar and Sugar-Candy, manufactured in Culpee. (44, 45)
- AMRITSAR LOCAL COMMITTEE.—Collection of Sugar Cane and its Products. (176—189)
- OUDE LOCAL COMMITTEE.—Sugar, Candy, Treacle, &c. (306—309)
- CENTRAL PROVINCES COMMITTEE.—Samples of Sugar Cane and Sugar. (87—92)
- MYSORE LOCAL COMMITTEE.—Sugar Candy. (115)
- INDORE LOCAL COMMITTEE.—Molasses. (49)
- MOOLO WURRIRAM, Tatta, Sind.—Moostee and Goor Sugar. (68, 69)

SECTION C.—SPIRITS AND SPIRITUOUS LIQUORS.

- THE ALBION DISTILLERY, near Calcutta.—Sample of Rum. (1)
- THE KIDDERPORE DISTILLERY.—Sample of Doasta. (2)
- THE SUDDER DISTILLERY, at Bhaugulpore.—Sample of Dobara Liquor. (3)
- NORTH-WEST PROVINCES LOCAL COMMITTEE.—Samples of Country Liquor from Furruckabad and Etawah. (76)
- CAREW & COMPANY, Rosa Factory, Shahjehanpore.—Specimens of Rum. (74)
- INDORE LOCAL COMMITTEE.—Spirit of Mahoon, and Sweet Liquor. (50, 51)
- SETT ATMARAM PRETUMDAS & Co. Sind.—Jagree, Date, and other Spirits. (70—73)

SECTION F.—VINEGARS.

- BENGAL COMMITTEE.—Samples of Cane Juice and Date-Juice Vinegars, and of ordinary Vinegar, from Shahabad and Faridpur. (387—389)

SECTION G.—PRESERVES AND EXTRACTS.

- MADRAS COMMITTEE.—Preserved Fish. (781)
- VENCATACHELLUM, P., Madras.—Pickles, Preserves, Condiments, &c. (746—775)
- BABOO MODELLIAR, Madras.—Preserved Fish-roses. (780)
- BOMBAY COMMITTEE.—Preserved Fruits, Pickles, and Jellies from Nassick, Kutch, and Surat. (18—37, 40, 41)
- FRAMJEE NOWROJEE, Bombay.—Preserved Fruits, Jellies, Pickles, Sauces, and Curry Powder. (1—17, 24, 25)
- BENGAL COMMITTEE.—Pickles, Preserved and Dried Fruits, Preparations of Pulses, &c., from Hugli, Faridpur, Moorshedabad and Bhaugulpur. (390—407, 414—417)
- OUDE LOCAL COMMITTEE.—Various Preserves and Pickles. (319—334)
- SAPOORJEE FRAMJEE WYED, Karachi.—Samples of Chutney, Pickles, Preserves, &c. (74—83)

KHAMOO NEMBHOO, *Hyderabad, Sind.*
—Samples of Chutney, Pickles, Preserves, &c.
(84—101)

DAWUN CHOTEER, *Hyderabad, Sind.*
—Samples of Chutney, Pickles, Preserves, &c.
(102—107)

INDIA MUSEUM, *London.*—Specimens of
“Ghee” from Madras.

SECTION H.—TOBACCO AND SIMILAR MANUFACTURES.

H.H. THE FIRST PRINCE OF TRAVAN-
CORE.—Manilla Tobacco, grown in Travancore,
with Cigars made from the same. (160, 782)

CAMPBELL & Co., *Dindigul.*—Cheroots
and Cigarettes. (783—791)

FORSTER, MAJOR, *Trichinopoly.*—Cheroots.
(792—804)

ROBERTS & Co., *Coconada.*—Cheroots
and Lunka Tobacco. (161, 805—814)

BOMBAY COMMITTEE.—Tobacco from
Broach, Gujerat, Kolapur (Nariad, Soomao, and
Bursad in Surat), Hoogly and Kattyawar, and
Specimen of Gurakoo from Kutch.
(1—3, 6—8, 13—15)

SUB-COMMITTEE OF KUTCH.—Tobacco
from Kutch. (12)

THE CHIEF OF MEERAJ.—Tobacco from
Meeraj. (4)

H.H. THE GUICKWAR OF BARODA.—
Tobacco from Baroda. (5)

SHEPHERD, G.—Tobacco from Amund,
Talooka Kaira, and Kera. (9, 10, 16)

DEPUTY-COLLECTOR OF SHOLA-
POOR.—Tobacco from Sholapoor. (11)

BENGAL COMMITTEE.—Samples of To-
bacco and Ganja in the manufactured and unmanu-
factured states, Opium and other Narcotics, from
Calcutta, Chittagong, Faridpur, &c.
(349—351, 408—411, 605—610)

THE OPIUM AGENT OF BENARES.—
Samples of Opium, Preparations of Opium, Poppy-
Flower Petals, &c., and sets of appurtenances used
in the manufacture and packing of Opium from
Ghazeeepore (169a—174b).

THE COMMISSIONER OF BENARES.
—Prepared Tobacco from Benares and Chunar.
(175—176a)

THEIR HIGHNESSES THE MAHA-
RAJAHS OF VIZIANAGRAM AND OF BEN-
ARES.—Collection of Implements for Smoking.
(254—275)

AMRITSAR LOCAL COMMITTEE.—
Various Narcotics and Stimulants with Drawings.
(190—211)

OUDE LOCAL COMMITTEE.—Samples
of Tobacco, Bhang, &c. (294—299)

CENTRAL PROVINCES COMMITTEE.—
Tobacco, Opium, Ganjah, &c. (69—74)

MYSORE LOCAL COMMITTEE.—To-
bacco and Areca-nut. (116—117)

INDORE LOCAL COMMITTEE.—Tobacco
and Opium. (52—53)

GOVERNMENT OF BOMBAY.—Speci-
mens of Tobacco and Bhang from Sind.
(56—58, 60—66)

BHUGWANDASS MALHI, *Shikarpoor.*—
Tobacco grown from Shiraz Seed. (59)

BERAR LOCAL COMMITTEE.—Samples
of Opium, Tobacco, and Ganjah. (32—34)

SECTION I.—CONFECTIONERY.

H.H. THE GUICKWAR OF BARODA.—
Sesamum and other Confectionery. (1—16)

JAVERILAT VERNASHANKER, *Poona.*
Confectionery Ornaments. (17)

BENGAL COMMITTEE.—Specimens of
Confectionary from Chupra and Burdwan.
(412—413, 611—613)

HERALAL DAS, MONOMOTHO MO-
JUMDAR, GOPAL CHUNDER PAL, HAR-
ISCHUNDRA KHAN, of *Calcutta.*—A Series of
Painted Plaster-Casts, representing (1) the Con-
fections used by different classes of Natives; (2) the
different stages in the preparation of Pan (betel-leaf)
for eating. Moulded and painted by the Exhibitors.

GROUP V.

SECTION A.—WOOLLEN FABRICS.

MADRAS COMMITTEE.—Turban Cloths, Saris, Shawls, and Cholis from Madras, Madura, and Trichinopoly. (815—823*m*)

BOMBAY COMMITTEE.—Kuthee, Blankets, (Dhablees), from Kutch, Surat Jail, and Aden, and Hairstring, from Aden. (1—10)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Blankets, Cloth, Chintz, &c., and specimens of Wool from Mozuffernuggur and Jaloun. (193—194*a*, 148—149*b*)

PUNJAB COMMITTEE.—Dressing Gowns and Rampur Chaddars, from the Peshawar and Ludhyana Districts; Cashmere Shawls, a rare Tablecloth and Samples of Pashm and Woollen Thread, from Kashmere; Cotton and Woollen Cloth from the Ludhyana District, and Woollen Carpets from Multan. (213—220, 224—225, 302—313, 315, 316, 325—333)

AMRITSAR LOCAL COMMITTEE.—Samples of Pashm and Woollen Thread (of Kabul, &c.) (317—324)

DEVISAHAI AND CHAMBA MAL, *Amritsar*.—Rampur Chaddars, Shawls, &c. (226—299)

AHMAD SHAH AND AHSAN SHAH, *Ludhyana*.—Cashmere Shawls. (300, 301)

KADIR BAKSH AND HAMZA, *Sabathu*.—Rampur Chaddars. (221—223)

LAHORE JAIL.—Hearth-rug. (314)

BANGALORE CENTRAL JAIL.—Mysore Wools and Carpets. (121—127)

INDORE LOCAL COMMITTEE.—Blankets and a Carpet. (55—57)

INDIA MUSEUM, *London*.—Woollen Fabrics from Bombay Presidency, Punjab, and North-West Provinces (from the London Exhibition of 1871). Carpets from Bombay, &c. (from London Exhibition of 1872).

VINCENT ROBINSON, & CO., *London*; WATSON, BONTER & CO., *London*; GREGORY & CO., *London*; LAPWORTH BROTHERS, *London*.—Carpets and Rugs from various parts of India.

FARMER & ROGERS, *London*.—Indian Carpets, Rugs, Shawls, Bornouses, &c.

BOMBAY COMMITTEE.—Wrappers, Sarees, Turbans, Belts, Chiddrep, and various other articles of clothing, and materials for making the same, from Aden, Kattyawar, Broach, Surat, Dharwar, and Baroda. (1—67, 80, 119, 126—148)

SURAT SUB-COMMITTEE.—Sarees and other garments, Materials for making the same, Sheets, Towels, &c. (81—118, 120)

H.H. MEER ALI MOORAD KHAN, *Khyrpoor*.—Wrappers ("Khees" and "Soosees") and Materials for making the same. (68—70, 121—125, 149, 151, 152)

H.H. THE RAO OF KUTCH.—Various Cotton Fabrics. (71—79)

SURAT JAIL.—Towels. (150)

BENGAL COMMITTEE.—Various Cotton Garments (Saris, Petticoats, &c.), Articles of Bed-Furniture, &c., &c., from Cachar, the Bardwan District and other parts of Bengal. (1—43)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Saree, Pugree, and Counterpane from Jaloun. (150—152*b*)

PUNJAB COMMITTEE.—Specimens of Cotton Cloth and "Gambriion," from Ludhyana District. (334—342)

RAHIM, *Jalandhar*.—Pieces of Cotton Fabric "Ghati." (343)

OUDE LOCAL COMMITTEE.—Nynsook Chintz, and other fabrics, Counterpane, &c. (145—162)

BANGALORE CENTRAL JAIL.—Saris, Turban-cloths, Tent-cloth. (128—131)

INDORE LOCAL COMMITTEE.—Sarees, Dhotis, Turban, Cotton Fabrics, &c. (60—65)

BHOPAWUR PUL AGENCY.—Various Cotton Cloths, used in native dress. (39—45)

INDIA MUSEUM, *London*.—Chintz, Prayer-Rugs and various Chintzes and Cotton Fabrics; Cotton Goods from the London Exhibition of 1872, as Sarees, Dhotis, Chaddars, Cotton Cloths, Towels, Table Covers, Turbans, &c., from Bengal.

COLLECTOR OF BENARES.—Cotton Manufactures from Benares and Burdwan (from the London Exhibition of 1872).

FARMER & ROGERS, *London*.—Indian Cotton Rugs.

SECTION B.—COTTON FABRICS.

MADRAS COMMITTEE.—Head Cloth, Saris, Dhotis, Packadis, &c., and Arnee Muslin from Coimbatore, Arnee, and Madura. (824—826*g*)

SECTION C.—FLAX, HEMP, JUTE, AND OTHER FABRICS.

MADRAS COMMITTEE.—Kimidy Basket-work from Ganjam. (850—863)

WINTERBOTHAM, H. M.—Palghaut Mats from Palghaut. (827—849)

BOMBAY COMMITTEE.—Mats, Trays, Baskets and Boxes from Aden. (1—18)

H.H. THE QUICKWAR OF BARODA.—Baskets. (19)

BENGAL COMMITTEE.—Palm-Leaf, Straw, Reed, and other Fabrics, as punkahs or fans, mats, baskets, &c., from the Midnapore District, Sylhet, &c. (8—14, 24—26)

DAVID, M., Esq.—Specimen of Serajunge Jute. (459)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Specimens of Jute and Jute Paper, from Jaloun. (196, 196a)

INDORE LOCAL COMMITTEE.—Talputtee, and Paper made from Flax. (69, 70)

INDIA MUSEUM, London.—Collection of Mats.

BOURKE, HON.—Bark Chair Bottoms.

SECTION D.—SILK FABRICS.

MADRAS COMMITTEE.—Gown Pieces and Carpet from Tanjore (obtained by M. R. Ry. A. Streenevasa Row). (864—867)

MADRAS COMMITTEE.—Silk and Silk Thread, Turban-cloths, Saris, Cholis, &c., from Kistna District, Madura and Tanjore. (868—873)

BENGAL COMMITTEE.—Various Silk Fabrics, and Silk Articles of Apparel (as Saris, Kummerbands, &c.) from all parts of Bengal, contributed in part by Shew Golam Shaw, Rai Bahadur; Saroda Persad Guiri, of Musbul, and Iswar Das Kaiburt, of Burdwan District; Bepin Chandra Rakhit and Adet Chandri, of Baghakra, and the Midnapore Jail; a Photograph of a Native Silk Loom from Minapore District. (25—109, 111)

GEOGHEGAN, J., C.S.—Three Copies of a Work by Exhibitor entitled "Account of Silk in India." (110)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Various Silk Fabrics, Silk Articles of Apparel, as Turbans, Pugrees, Goolbaddans, Kummerbands, &c., from Benares, Azingurh; Curtain Cloth and a Rug of Mudar Buds presented by the District Jail of Ghazeeapore. (106, 109—112, 114—116, 120—130e, 132—135)

PUNJAB COMMITTEE.—Silk Fabrics, Raw Silk, and Silk Thread from the Peshawar, Lahore and Multan Districts. (353—358, 371—377)

LEITNER, DR., Lahore.—Silk Fabrics, Handkerchiefs and Scarfs, from Central Asia. (360—370)

CHAMBA MAL, Amritsar.—Piece of Galbadan. (377a)

MYSORE LOCAL COMMITTEE.—Saris, Kammarbands, Kuppasas, &c. (168—207)

SECTION E.—GOLD & SILVER CLOTHS AND EMBROIDERIES.

MADRAS COMMITTEE.—Embroidered Muslin, Velvet, and Net Fabrics from Madras. (874—883)

BOMBAY COMMITTEE.—Fabrics and Articles of Apparel embroidered with gold and silver, as Kinkhabs, Luppas, Kiwarees from Surat and Ahmedabad. Various Silk Articles embroidered with gold and silver, as Sadees, Mushroos, Kemroos, Khuns, Veils, Caps, &c., from Yeola, Surat, Poona, Ahmedabad, Dharwar, Aden, Bombay, Nassick, and Kattyawar. (1—63, 73—89, 92—93)

H.H. THE RAO OF KUTCH.—Embroidered Table-cloths and Cushion-covers. (64—72)

H.H. THE QUICKWAR OF BARODA.—Native Saddles. (90)

H.H. THE THAKOOR OF BHOWNUGUR.—Native Saddles. (91)

BABU SRIDHUR SAI, ZEMINDAR OF MAUJHA, in Sarun.—"Purtalla," gold-worked waist and shoulder-belt combined. (23)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Various Silk and Velvet Fabrics embroidered with Gold such as Kinkhubs, Rugs, Sheets, &c., from Benares and Booludsheehur, &c.; Gold Fringe from Benares. (98—105, 107, 108, 113, 117—119, 131, 136, 137)

BABOO BALGOBUND KHUTTREE, Benares.—Kinkhubs or Gold-embroidered Silk Fabrics made by Ruhman Jolaha, of Benares. (235—239)

BABOO DABEE PERSHAD, Benares.—Various Gold-embroidered Fabrics as Kinkhubs, Rugs, Shawls, Scarves, &c., by Wahid Mian Joleahi, Walli Najar, Golam Kadir, Ameer Khan, and Abdullah. (240—253)

PUNJAB COMMITTEE.—Embroidered Pagris, Caps, Shoes, Scarfs, &c., from the Peshawar, Ludhyana, and Cashmere Districts. Various Shawls, Slippers, Cloaks, Caps, &c., embroidered by Messrs. Pahladdas, Motiram, Serajuddin, Shara-fuddin, and Lala Rormimal, of Delhi; Girdles and Head-dress from Lahore. (395—416, 432—442, 446—458)

LAHORE MUSEUM.—Table-cloth embroidered with silver, gold, and beetles'-wings. (378)

AHMAD SHAH & AHSAN SHAH, Ludhyana.—Rampur Chaddars, &c. (379—394)

DEVISAHAI & CHAMBAMAL, Amritsar.—Rampur Chaddars & Choghas. (417—431)

NANAK CHAND, Delhi.—Embroidered Merino Shawls and Silk Table-cover. (443—445)

OUDE LOCAL COMMITTEE.—Chikan-work, and Embroidered Shoes, Scarfs, Hookah-cloths, &c. (163—188, 190)

BHOPAWUR PUL AGENCY.—Embroidered Table-cover. (53)

GOVERNMENT OF BOMBAY.—Table-cloths, Cushion-covers, Slippers, &c., embroidered in gold and silver; Silk Embroidered Caps, Doyleys, &c., Manufactured by Messrs. Kurrumchund Moorj-mull and Chuttoomull Moorj-mull, Moolchund Mengraj, Moteram Ramchund, and Moolo Singhun, of Haidarabad, Sind. (108—154)

INDIA MUSEUM, *London*.—Velvet Fabrics as Carpets, Saddle-cloths, &c., embroidered with Silk, Gold or Silver; Silk, Satin, Gauze, and Muslin Articles of Apparel variously embroidered or fringed with gold and silk—from all parts of India; "Doo-puttas," embroidered with Gold and Silver (from the London Exhibition of 1872).

BOURKE, HON. R. — Gold-embroidered Dressing-Gowns, Quilts, Horse and Dog-trappings, Scarves, Caps, &c.

FARMER & ROGERS, *London*.—Various embroidered Articles, as Shawls, Cushions, Slippers, Scarves, Caps, &c.

SECTION F.—LACE.

EDIYENGUDI MISSION SCHOOL, *Madras*.—Specimens of Lace. (884—892)

BOMBAY COMMITTEE.—Gold, Silver, and Silk Lace and Cord, from Surat and Aden. (1—27)

SECTION H.—FINISHED OBJECTS OF CLOTHING.

MADRAS COMMITTEE.—Slippers used by Mahomedan Ladies, Madras. (893)

BOMBAY COMMITTEE.—Turbans, Caps, Waistcoats, &c., from Bombay, Kattyawar, Aden, and Poona; Shoes and Sandals of various materials, and variously adorned, from Surat, by Messrs. Ahmed-bean Mahomed, and G. Lalla, Bombay, by Hajiganna & Merjajee, from Kutch, Aden, Kattyawar & Saltara. (1—66, 68—76, 79, 85—125)

H. H. THE GUICKWAR OF BARODA. Shoes variously ornamented; Embroidered Hat, Coat and Trowsers. (67, 77, 80—84, 126—128)

BENGAL COMMITTEE.—Slippers from Cachar. (22)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Various Articles of Apparel as Caps, Turbans, Shoes, &c., and entire Suits of Clothes from Allahabad. (138 to 147*k*)

LEITNER, DR., *Lahore*.—Dresses, Caps, Girdles, Boots, Stockings, &c., from Central Asia. (459—467)

SECTION L.—PROCESSES AND INVENTIONS USED IN THE PRODUCTION OF THESE MANUFACTURES.

MADRAS COMMITTEE.—Silk and Silk Carpet Looms, Tanjore. (894—896)

OUDE LOCAL COMMITTEE.—Wood-cuts for Stamping Cloth. (189)

INDIA MUSEUM, *London*.—Blocks used in Calico-printing from Bombay (from the London Exhibition of 1871).

GROUP VI.

SECTION A.—LEATHER SADDLERY, &c.

MAISTRY H. SHUNKARIAH, *Honsoor*,
Tanned Hides. (897—899)

COMMISSARY OF ORDNANCE, *Cawnpore*.—Raw Materials used in Saddlery, as samples of leather in various stages of manufacture, tanning and currying materials, &c.; Sets of Harness (for cavalry and artillery) &c.

INDORE LOCAL COMMITTEE.—Plain and coloured leather. (71, 72)

BOURKE, HON. R., *London*.—An Afghan Saddle and Stirrups.

SECTION B.—SKINS AND FURS.

INDORE LOCAL COMMITTEE.—Leopard and Buffalo Skins. (73—74)

MICHAEL, COLONEL, *London*.—Tiger-skin, Bear-skin, and Leopard-skin Rugs.

GROUP VII

SECTION A.—GOLD & SILVERSMITHS' WORK & JEWELLERY.

MADRAS COMMITTEE.—Set of Personal Ornaments used by the Khond tribes in Gumsoor, and Chinna Kimidi Maliahs of Ganjam, from Ganjam. (963—978)

MADRAS COMMITTEE.—“Salagram” Necklace obtained through Capt. F. Mackenzie. (901)

MADRAS COMMITTEE.—Various Articles of Silver, as a “Goolab Peish,” Anklets, “Attar Dhan” from Madras, Filagree Ornaments from Cuttack, Hookah, inlaid with silver, from Beeder, and a Gold Chain from Trichinopoly. (912, 914, 900, 902, 955, 961)

ORR & SONS, P., MESSRS. *Madras*.—Bracelet of Jeypore Enamels set in gold. (903)

ALLAN & Co., *Madras*.—Silver Filagree Articles. (904—911, 913)

H.H. THE FIRST PRINCE OF TRAVANCORE.—Various Articles of Jewellery and Plate. (915—932, 956—960)

NATIVE EMPLOYÉ OF MESSRS. ORR & SONS, *Madras*.—Silver Fruit Spoons. (933, 934)

MADRAS SCHOOL OF ART.—Silver Salver. (935)

JEWELLER VITHELINGUM, *Trichinopoly*.—Articles of Jewellery. (936—944)

JEWELLER RUTHANUM, *Trichinopoly*.—Articles of Jewellery. (945—951)

JEWELLER SERVIA, *Madras*.—Articles of Jewellery and Silver-gilt “Sawmy.” (952—954, 962)

BOMBAY COMMITTEE.—Head Ornaments from Dharwar; Silver Tray and other articles from Nassick. (1, 13—17)

BADROODEEN ABDOOLALLY, *Bombay*.—Collection of Sham Jewellery and Silver Armlets, Wristlets, Chains, Anklets, &c. (2—66)

H.H. THE RAO OF KUTCH.—Silver Goblet, Tray, Kettle, &c. (7—11)

H.H. MEER ALI MORAD.—Set of Silver Cup, Saucer, &c., from Kairpoor. (12)

BENGAL COMMITTEE.—A Series of Tinsel imitations of the characteristic personal ornaments worn by the Natives of Bengal. Presented to the Vienna Exhibition by the late Baron Dowleas. (1—6)

BENGAL COMMITTEE.—A collection of imitation personal ornaments, made in the Calcutta Bazaar, and a pair of Silver Kooki Earrings from Cachar. (7—50)

BABU SRIDHUR SAHI, ZEMINDAR OF MAUJHA.—A Gold and Silver Filagree Attardan, from the Sarun district. (76)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Various Articles of Jewellery, as Gold Armlet set with diamonds, Gold Bracelets,

Necklets, Brooches, &c.; Articles of silver, as Scent-Bottles, Cardamom-Box, &c.; Collection of Imitation Jewels, as Necklets, Earrings, Bangles, &c.; Brahminical Beads and Choorees; ten sets of Ornaments worn by the lower class of females. From Benares. (84—90, 90a—90d, 91—97f, 168)

PUNJAB COMMITTEE.—Jewellery and Metal Work from Kangra; Engraved and Jewelled Articles in jade and silver, as Goblets, Rings, &c., from the districts of Karnal, Lahore, Multan, and Cashmere. (577—585, 790—799, 806—814)

AMRITSAR LOCAL COMMITTEE.—Chased Silver Russian Teapot. (814a)

GHULAM AHMAD, Jammu.—Necklace of Diamonds, Rubies, and Pearls, and Crystal Looking Glass, with back composed of jade, gold, and rubies, formerly the property of Runjit-Singh, to whom they were presented by Shuja-ul-Mulk, King of Kabul. (506, 554)

GHULAM AHMAD, Jammu.—Various articles of Jewellery, as Bangles, Forehead, and Nose Ornaments, Rings, Necklaces, &c. (507—553, 555—559)

KISHEN CHAND & BALMAKUND (560—563); **JOWAHIR LAL** (564, 565); **SOHAN LAL & BANKI RAI** (566); **HARAKH CHAND** (567); **CHAMMAM LAL** (568); **PYARE LAL & JANKI DAS** (569—574); **PYARE LAL & MULCHAND** (575, 576).—Various Jewellery, as Brooches, Bracelets, Earrings, &c.; and sets of Jewels, consisting of Bracelets, Necklace, Earrings, and Brooch. From the Punjab.

LEITNER, Dr.—Yarkandi Chop-sticks in silver; Silver Inkstand from Lahore; Hukkas (pipes), and other articles in gold and silver. (800—805a)

KUTBDIN (782, 586—588, 623—633); **MOHAMMAD YAR** (589, 590, 634—638); **IMAMDIN** (591, 592, 639—644, 777—779); **NEAZDIN** (593, 594, 645—648); **ABDUR RAHMAN** (595, 649—651); **GHOLAM MOHIODIN** (596, 652—657, 768—773); **NURDIN** (597, 658—660); **IMAM-BAKSH** (598, 661, 758, 759, 774—776); **BUDAH** (599, 600, 662—666); **KALLU** (601, 667—670); **OMAR BUKHSH** (602, 603, 671—677); **FUZLDIN** (604, 678, 679); **GHULAM HUSSEN** (605, 680—682); **GHULAM JILANI** (606, 607, 683—687); **GHULAM MOHAMMAD** (608, 609, 701—703, 783—786); **HYAT MOHAMMAD** (610—612, 704—710); **KUTBDIN** (2nd), (613, 712—717, 780, 781); **SHARFDIN** (614, 718—722); **OMAR BUKHSH**, (2nd) (615, 723—726); **ATA MOHAMMAD** (616, 727—729); **ISMAIL** (617, 730—735); **MOHAMMAD BUKSH** (618, 736—740); **RAHIM BUKSH** (619, 741—744); **ELAHI BUKSH** (620, 621, 745—750); **KARAMDIN** (622, 751—757); **BADR-DIN** (688—693, 762, 763); **ABDUR RASUL** (694—696); **BUDDAH** (2nd), (697—700); **ALLAH BAKSH** (760, 761); **BUDDAH**, Son of Nur Ahmad (764—766); **BUDDAH**, Son of Nur Mohamar (767); **NYAZ-DIN** (2nd), (787, 788); **DEVI SAHAI & CHAMBA MAL** (789).—Articles of Koftgari (steel, inlaid with gold), such as Card Trays, Jewel Caskets, Paper Knives, En-

velope Cases, Candlesticks, &c.; Weapons of every description; and Armour, as Swords, Daggers, Scimitars, Shields, and Suits of Armour. From the Punjab.

OUDE LOCAL COMMITTEE.—Silver Sovereigns and Goblets, Gold and Silver Jewellery, Diamond Bracelet, &c. (103—142)

MYSORE LOCAL COMMITTEE.—Gold and Silver Ornaments. (208—243)

BHOPAWUR PUL AGENCY.—Collection of Brass, Tin, Copper, Pewter, and Glass Trinkets, worn by natives; a Rose-water Sprinkler. (4—32, 54)

INDIA MUSEUM, London.—Collection of Hindu Ornaments from Madras (from the London Exhibition of 1871); a Set of Ornaments exhibited on lay figure, and various Amulets, Bracelets, and other articles of Jewellery (from the London Exhibition of 1872).

BABOO FAQUIR CHUND, Benares.—Pearl Necklets, Diamond and Pearl "Sathlarha," and Looking-Glass with frame of jade, diamonds and rubies (from the London Exhibition of 1872).

BABOO BUCKTAWAN SINGH, Benares.—"Urupsee" Necklet, 68 pearls (from the London Exhibition of 1872).

RIVETT CARNAC, Mrs.—Collection of Indian Peasant Jewellery (from the London Exhibition of 1872).

FRERE, Lady, London.—Twelve Carbuncles and Silver Pen-Box.

BOURKE, Hon. R., London.—Armour composed of steel inlaid with gold; Silver and Silver-gilt Enamelled Articles, as Cups, Bowls, &c.; Silver Filagree Basket with cover.

ROYLE, J. R., London.—Ostrich Eggs mounted in Silver-gilt; Silver-gilt Filagree Boxes &c.

H.H. THE MAHARAJAH OF JEYPORE.—Jewelled and enamelled "Ankus" (from the London Exhibition of 1871).

SECTION B.—IRON AND STEEL WARES.

MADRAS COMMITTEE.—Bread Knives with Ivory Handles, from Arnachellam Salem. (962a, 962b)

BENGAL COMMITTEE.—Various Iron and Steel Articles, as Knives, Rasors, and other Cutting Implements, Horticultural Implements, &c. from Howrah, Sylhet, Ranaghat, Calcutta, and other parts of Bengal. (48—62, 67a—75)

NUNDON, T. C., Bhowanipore, Calcutta.—Pruning and Cutting Knives. (69, 70)

THOMPSON, T. E. & CO., Calcutta.—Wood-cutting Knives, &c. (71—74)

PUNJAB COMMITTEE.—Articles of Cutlery (Knives and Forks, &c.) from Gujranwalla and Shahpur. (815—822)

SECTION C.—MANUFACTURES FROM ALLOYS AND OTHER METALS.

MADRAS COMMITTEE.—Brass Drinking Vessels, as Goglets, Chemboos, Panchapatras, and Bronze Guindys, from Trichinopoly, Tirupatty, and Calicut. (979—998)

BOMBAY COMMITTEE.—Bedar work as Hookahs, Basins, Cups, &c., from Surat and Bombay; Helmet from Kolapoor; Domestic Utensils of Brass, Copper, Tin, &c., from Nassick and Bombay. (8—16, 18, 1—118)

BENGAL COMMITTEE.—Collection of Cooking and other Domestic Utensils, Drinking Vessels, &c., &c., of brass, copper and other metals, from Hugli, Burdwan, and other parts of Bengal. Kooki Smoking Implements.

(54, 55, 418—433 $\frac{1}{2}$, 453—458, 501—504, 552—570, 575—581, 614—617)

SITARAM RANA, *Chandrakona, Midnapore District*.—Brass Figure of Radhika, consort of Krishna. (57)

NAFAR RAI AND HARADAN GHARNI, *Midnapore District*.—A Thála or large circular brass Tray. (581)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Various Articles illustrative of native metal industry, as Metal Cholees, Spittoons, Boxes, Basin, &c., from Rohilcund; Anklets, from Etawah; Images of Hindoo Gods, Waterpots, and Plates, from Benares. (154—163, 165—167)

H.H. THE MAHARAJAH OF BENARES.—Collection of 36 Native Drinking Vessels. (153)

HYDERABAD LOCAL COMMITTEE.—Various Articles of Beedri Ware, as Boxes, Spittoons, Hookahs, &c., from Beeder, a district in H.H. the Nizam's territory. 1—21

MYSORE LOCAL COMMITTEE.—Coorg Drinking Cup. (244)

INDIA MUSEUM, *London*.—Brass "Chombu" from Madras, and Teapot (from the London Exhibition of 1872).

SECTION D.—WEAPONS OF EVERY DESCRIPTION EXCEPT MILITARY ARMS.

MADRAS COMMITTEE.—Khond Battle-axes from Ganjam; Hunting Knives and Spear Heads from Arnachellam, Salem; Mopla, and Coorg Knives from Mercara; Dagger from Kurnool. (1001—1004, 1005—1010, 1012 & 1016a, 1013—1016)

H.H. FIRST PRINCE OF TRAVANCORE.—Sword and Dagger. (999—1000)

RAMUNY MARAR, *Tahsildar of Ernad, Malabar*.—Mopla Knife from Calicut. (1011)

H.H. THE RAO OF KUTCH.—Sword and other articles. (1—7)

H.H. THE GUICKWAR OF BARODA.—Chain Armour. (17)

BENGAL COMMITTEE.—Various Weapons from Monghyr, Darjeeling, Bancoorah, &c., &c. (1—6, 56, 63—67a, 8—65)

BABU SRIDHUR SAHI, ZEMINDAR OF MAUJHA, *Sirun*.—A Dagger. (7)

NUNDON, T. C., *Bhowanipore, near Calcutta*.—A Battle-axe and other Weapons. (65—68)

PUNJAB COMMITTEE.—Persian and other weapons (Swords, &c.), from Peshawar. (823—833)

MYSORE LOCAL COMMITTEE.—Various Coorg weapons. (245—252)

INDORE LOCAL COMMITTEE.—Bow and Arrows used by Bheels. (75)

BHOPAWUR PUL AGENCY.—Bow and Arrows and Spear-head, combined with Pistol. (1—3, 55)

SECTION E.—PROCESSES AND INVENTIONS USED IN THE PRODUCTION OF THESE MANUFACTURES.

AMRITSAR LOCAL COMMITTEE.—Gold and Silver Crucibles. (834—835)

GROUP VIII.

SECTION A.—CABINET WORK, INLAID FLOORS, &c.

DESCHAMPS, MESSRS., *Madras*.—Inlaid Table-top and Satin-wood Cabinet. (1017—1018)

BUCKLE, Major, R.A., *Madras*.—Elephant-foot Writing Case. (1018a)

SECTION E.—VENEERS AND MARQUETTERIES.

BOMBAY COMMITTEE.—Ivory inlaid articles as Card Trays and Cases, Glove and Money-boxes, &c., by Messrs. Jemsheetjee Shapoorjee, Bowanyshunker Hurryvalubh, Framjee Heerjibhoy, Framjee Heerjee, Rustomjee Merwanjee, Framjee Pestonjee, Cavusjee Munchurjee, Rustomjee Munchurjee, Jemsheetjee Heerjee. (1—33)

JEMSHEETJEE SHAPOORJEE, *Bombay*.—Various Ivory and Sandal-wood inlaid articles as Cabinets, Desks, Card-cases, and Baskets, &c. (34—81)

FRAMJEE PESTONJEE (82—84); FRAMJEE HEERJEE, *Bombay* (85—86); FRAMJEE HEERJEEBHOY (87—105); BOWANY PURSHOTUM (106—107); CAVUSJEE MUNCHURJEE (108—157); RUSTOMJEE CAVUSJEE (158—165); BOWANYSHUNKER HURRYVALUBH (166—190); RUSTOMJEE CAVUSJEE (191—192).—Various Ivory, Sandal-wood, or Ebony inlaid articles, as Desks, Boxes, and Cases of every description, &c., &c. From Bombay.

BENGAL COMMITTEE.—Various Articles ebony, inlaid with ivory, as Cabinets, Desks, Boxes, &c., from Monghyr. (1—9)

MICHAEL, COLONEL, *London*.—Inlaid Ivory and Ebony Stamp Box.

SECTION F.—CUT AND TURNED WOOD.

BHOPAWUR PUL AGENCY.—Teak-wood Household Utensils. (36 and 38)

SECTION G.—CHISEL WORK AND CARVED WORK.

BOMBAY COMMITTEE.—Carved Sandal-wood and Ebony Articles (Boxes, Cases, &c.) by Messrs. Jemsheetjee Shapoorjee, Framjee Pestonjee, Framjee Heerjee, Damodhus Maneck, Bowanyshunker Hurryvalubh, Jemsheetjee Heerjee, Kalidass Nursi, Bowany Purshotum, Cavusjee Munchurjee. (1—64)

JEMSHETJEE SHAPOORJEE (65—123); FRAMJEE PESTONJEE (124—148); FRAMJEE HEERJEEBHOY (149—211); BOWANY PURSHOTUM (212—235); BOWANYSHUNKER HURRYVALUBH (236—279); RUSTOMJEE CAVUSJEE (280—320); CAVUSJEE MUNCHURJEE (321—332).—Carved and inlaid articles in Sandal-wood, Ebony, Tortoiseshell, and Ivory, as Boxes and Cases for various uses, Desks, &c., from Bombay.

BENGAL COMMITTEE.—Carved wood personal ornaments, as Necklaces, Bracelets, &c., and a Set of Crochet and Knitting Needles from Monghyr. (1—7, 13—21)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Chairs and Jewel-Boxes of Barailly workmanship; carved Bread-Plate, Book-Easels, &c., from Saharunpore and Etawah. (77—83)

MYSORE LOCAL COMMITTEE.—Carved Sandal-wood Chowries. (253)

SECTION I.—BASKET WORK.

BENGAL COMMITTEE.—Collection of Mats, Fans, and Baskets from Monghyr. (1—11)

INDORE LOCAL COMMITTEE.—Ornamented Basket, made by Bheels. (74a)

SECTION K.—WOODWORK, PAINTED, STAINED, AND GILT.

LALA HURMAK RAI, *Hushyarpur*.—Boxes and other fancy articles turned in Shisham (*Dalbergia*) wood and lacquered. (837—845)

GOVERNMENT OF BOMBAY.—Various lacquered articles, as Boxes, Trays, Tops, &c., manufactured by Messrs. Mahomed Jaffur Butcha, Kurumchund Moorjmul, of Haidarabad, Sind. (155—181)

BENGAL COMMITTEE.—Lacquered and coloured wood personal Ornaments from Monghyr. (8—12)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Various lacquered Articles from Mineporee and Benares, such as Sandals, Watch-Case, Croquet-Sets, Candlesticks, Toys, &c. (179—185)

FRERE, LADY, *London*.—Lacquered Map-Case.

MICHAEL, COLONEL, *London*.—Lacquered Burmes Box and Kurnool Tray.

GROUP IX.

SECTION A.—STONES, NATURAL AND ARTIFICIAL.

MADRAS COMMITTEE.—Block of Soap-stone from Salem Taluk. (1019)

BOMBAY COMMITTEE.—Coloured Stones from Surat and Kutch, and Polished Stone from Kolapore. (1—9)

BENGAL COMMITTEE.—Carved stone Domestic Utensils from Balasore and Sylhet. (571—574)

AMBLER, *Monghyr*.—Circular Slate Trays. (1—2)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Collection of Stones in the rough and manufactured states from Banda, as an Onyx Necklace, Agate and Jasper Knife-Handles, &c. (48—67b)

PUNJAB COMMITTEE.—Pestle and Mortar, Bracelets and Knife Handles, in stone, from Shahpúr. (849—851)

LEITNER, DR., *Lahore*.—Serpentine Vases and Cups, and Lahore Encaustic Tiles. (846—848)

SECTION B.—EARTHENWARE AND POTTERY.

MADRAS COMMITTEE.—Earthenware Goglet, from Madras. (1503)

MADRAS SCHOOL OF ART.—Terracotta Casts of Hindoo Temple Ornamentation. (1092—1131)

COMPADY OF *Goodiathum Taluk, North Arcot*.—Various Pottery. (1504—1526a)

BOMBAY COMMITTEE.—Pipes from Aden. (1)

TERRY, G. W., *Bombay*.—Plaster Reproductions of Architectural Ornaments. (1—7)

H.H. THE GUICKWAR OF BARODA.—Goblets, Bowls, Cups, Hookas, &c., mounted in or inlaid with silver. (1—46)

BENGAL COMMITTEE.—Collection of Glazed Earthenware and Black Pottery, Cooking Utensils, Drinking Vessels, &c., from the Sarun District, the Sonthal Pergunnahs, Sylhet, Howrah, and Hugli. (444—452, 505—514, 526—553)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Collection of Pottery from Umroha, and Models of Indian Fruits from Furrackabad and Jaloun; Models of Native Artisans, &c., from Jaloun. (1—406, 177, 178)

LEITNER, DR., *Lahore*.—Lassa China Teacup and Basket, Lahore Porcelain, &c. (852—854)

OUDE LOCAL COMMITTEE.—Models of Natives, Houses, Cattle, &c. (191—223)

BHOPAWUR PUL AGENCY.—Hookah, and various Cooking and Drinking Vessels. (37, 46—51)

PEERANO, Son of Joomo, *Kashigur of Tatta, Sind* (182—241, 489—490); CABIL & YARROO, *Halla, Haiderabad* (242—298, 300—352, 375—387); SABOO, *Nussurpore, Sind* (299, 353—374); RUTTO WULLUD MENGHO, *Haidarabad* (388—412); JOOMO, Son of Oosman (Potter), *Karachi* (413—488); Earthenware Cooking Utensils, Tiles, Vases, Jars, Drinking Vessels, Flower-pots, &c.

INDIA MUSEUM, *London*.—Pottery from Berar (from the London Exhibition of 1871).

SECTION D.—PROCESSES AND INVENTIONS USED IN THE PRODUCTION OF EARTHENWARE AND POTTERY.

PEERANO, Son of Joomo, *Tatta, Sind*.—Various materials used in making and glazing Pottery, as clay, colours, moulds, &c. (491—517)

MITCHIE, J., & Co., *Kurrachee, Sind*.—Photographs of Tombs, Potters at Work, &c., and Specimens of the Tools used in the glazing of earthenware. (518—528)

GROUP X.

SECTION A.—MANUFACTURES OF
IVORY, SANDAL-WOOD, ETC.

MADRAS COMMITTEE. — Buffalo-horn, Ivory, and Sandal-wood Articles, as Desks, Paper-knives and Weights, Work-boxes, Glove-boxes and Stretchers, Card-cases, &c., from Vizagapatam, Travancore, Shemoga, Canara; Sandal-wood Necklaces from Madras; Pith Figures and Models from Trichonopoly and Tanjore; Inlaid Rosewood Box from Mysore. (1132—1145, 1147—1156, 1164—1164f)

SEVARAMIAH. — Carved Cocoa-nut, mounted on silver, from Ganjam. (1146)

H.H. THE FIRST PRINCE OF TRAVANCORE. — Carved objects (Paper-knives, Card-cases, &c.). (1157—1163)

BENGAL COMMITTEE. — Collection of Ivory Carvings from Berhampore, and Shell Bracelets, &c., from Sylhet and the Burdwan District. (1—27)

BABU SRIDHUR SAHI, ZEMINDAR OF MAUJHA, *Sarun District*. — A "Chousar" or Dice-board (made of beads), with the 19 pieces used for playing the game of "Pasa." (1)

LEITNER, DR., *Lahore*. — Yarkandi Jade Pipe-stem, and Lamp made of Rock-salt. (855, 856)

INDIA MUSEUM, *London*. — Carved Ivory Figures and Knife Handle; Inlaid Marble Paper Weights (from the London Exhibition of 1872).

MICHAEL, COLONEL. — Sporting Trophies mounted as fancy articles, such as Tiger-skull Inkstand and Letter-box, various Skulls and Horns mounted on shields, Jungle Fowl Hand Screens, Elephant-foot Footstool.

WARD, EDWIN. — Sporting Trophies mounted as fancy articles, Beetle-wing Jewellery, &c.

SECTION B.—FANCY GOODS OF
LEATHER, BRONZE, ETC.

BOMBAY COMMITTEE. — Models of Subjects in Hindoo Mythology, Animals, &c., from Bombay. (1—25)

BOWANY HURRYVALUBH, *Karachi*. — Sets of Wooden "Karandas," Karachi work. (26—31)

BOWANYSHUNKER HURRYVALUBH, *Bombay*. — Sets of Wooden "Karandas," Karachi work. (32, 33)

CAVUSJEE MUNCHURJEE, *Bombay*. — Work-box, Glove-box, Cigar-cases, &c., made from pen-quills. (34—39)

BABOO GOPAL CHUNDER, *Opium Dept., Benares*. — Specimens of Fancy Work by native ladies, as Pen Wipers, &c. Presented by Exhibitor. (227—229)

PUNJAB COMMITTEE. — Fancy Goods in leather and peacock-work; Cheroot Cases and Hookhas from Simla, Sirsa, and Kasur. (857—862)

INDIA MUSEUM, *London*. — Hookah, Opium Pipe and Case (from the London Exhibition of 1872).

SECTION C.—UMBRELLAS, PARASOLS,
FANS, CANES, ETC.

MADRAS COMMITTEE. — Umbrellas, Umbrella-hats and Fans of rushes, palmyra, and other leaves, peacock-feathers, talc, rice, and cuscus-roots, &c., from Madras, Calicut, and Tanjore. (1165—1203)

BOMBAY COMMITTEE. — Fans, Baskets, Boxes, and Mats, variously ornamented. From Sawantwaree. (1—18)

BENGAL COMMITTEE. — An Ivory Fan from Sylhet. (5)

BABU SRIDHUR SAHI, *Sarun District*. — Ivory and Sandal-wood Fans and Fly-flappers. (1—4)

INDIA MUSEUM, *London*. — Palmyra Leaf Shades.

SECTION E.—TOYS.

MADRAS COMMITTEE. — Models of Fruits from Condapilly, Toys from Nakkapilly. (1214—1217)

SESHIA, *the Tahsildar of Nursapore*. — Set of Models of Natives. (1205—1213)

NAWAB OF BANAGANAPILLY. — Native Playing-cards from Kurnool. (1217a—1217d)

BOMBAY COMMITTEE. — Models of Natives at Work, Animals, &c., from Belgaum and Poonah, Playing-cards from Sawantwaree, and Bison-horn Articles from Rutnagheery. (39—81)

SURAT SUB-COMMITTEE. — Figures of various Animals in ivory and wood. (1—38)

H.H. THE QUICKWAR OF BARODA. — Glazed Figures of Animals and various Articles made of horn, from Baroda. (82—116)

MYSORE LOCAL COMMITTEE. — Chennapatna Toys. (254)

GROUP XI.

SECTION A.—PAPER AND PAPER PULP.

INDIA MUSEUM, *London*.—Specimens of Paper Pulp and Paper from North-West Provinces, Punjab, Cashmere, and Oudh (from the London Exhibition of 1872).

SECTION C.—PAPIER MÂCHÉ GOODS.

PUNJAB COMMITTEE.—Papier Mâché Boxes, Trays, Plates, Panels, &c., from Kashmere. (863—871)

GROUP XII.

SECTION C.—COPPER-PLATE AND STEEL PRINTING.

THUILLIER, COL. H. L., C.S.I., *Surveyor-General of India, Calcutta*.—Maps and Charts of India. (1—13)

SECTION D.—LITHOGRAPHY AND CHROMO-LITHOGRAPHY.

ANNIAH RAJ, *Madras*.—Lithographs of Subjects in Hindoo Theology. (1218—1226)

BALDRY, K., *Fort St. George*.—Specimen Plates of various descriptions of Lithography. (1227—1236)

THUILLIER, COL. H. L., C.S.I., *Calcutta*.—Lithographed Maps and Plans of various districts of India. (1—12)

OUDE LOCAL COMMITTEE.—Lithographed Books and Card. (144)

SECTION E.—PHOTOGRAPHY.

NICHOLAS & CURTHS, MESSRS, *Madras*.—Photographs of Foliage of Southern India and Natives. (1237—1253a)

THOMPSON, CAPT. ROSS, R.E., *Madras*.—Photographs of Antiquities and Scenery of India. (1254—1267, 1316—1361)

SCHOOL OF ARTS, *Madras*.—Photographs of Antiquities of Southern India. (1268—1301)

TRAILL, CAPT. R.E., *Madras*.—Photographs of Antiquities. (1302—1315)

SYKES, D. H., *Bombay*.—Photographs of Ambarnath Temple and River Scenery. (18, 19, 22, 41—47)

SHEWSHUNKER NARRAYEN, *Bombay*.—Photographs of Ambarnath Temple and its details, River Scenery, &c. (1—48)

THUILLIER, COL. H. L., C.S.I., *Calcutta*.—Photo-Zincographs, Photo-Collotypes, and Photographs of Topographical Surveys, Scenery, Antiquities, Natives, Fabrics, Jewellery, &c. (1—77)

LEITNER, DR., *Lahore*.—Photographs of Bhuddhist Temple and Lahore College. Photographs of the tribes on the frontier of India, and of his Græco-buddhistic sculpture from Yusufzai and Swat.

INDIA MUSEUM, *London*.—Specimens from a Fac-simile of the Mahabhashya, a celebrated Sanskrit grammatical work, written by Patanjali, in the 2nd century B.C. Photo-lithographed by W. Griggs, India Museum, London.

INDIA MUSEUM, *London*.—Photographs from all parts of India (from the London Exhibition of 1871).

BOMBAY SCHOOL OF ART.—Ten Photographs.

SECTION G.—PATTERN DRAWING & DRAWING FOR DECORATION.

INDIA MUSEUM, *London*.—Designs for Textile Fabrics collected by Dr. Anderson of the Yunan Expedition in Sanda Valley, 1868.

INDIA MUSEUM, *London*.—Sample Books, containing actual specimens of Indian Fabrics in cotton, silk, wool, gold and silver-cloth, &c., constituting portion of new work on the Textile Manufactures of India. Selected and prepared under the direction of Dr. J. Forbes Watson, Reporter on the products of India.

Chromolithographs of Indian Textile Fabrics, prepared under superintendence of Dr. J. Forbes Watson by W. Griggs, India Museum, and forming portion of new work on the Textile Manufactures of India.

GROUP XIII.

SECTION C.—MACHINERY USED IN MANUFACTURES, AGRICULTURE, ETC.

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Apparatus and Machines used in the manufactures of spirits, oil and sugar, &c., from Furruckabad and Benares. (186—192*b*, 208—214.)

SECTION H.—VEHICLES NOT CONNECTED WITH RAIL.

MADRAS COMMITTEE.—Photographs of Conveyances in Southern India; Models of Bullock-carts from Madras and Bellary, and Palanquin from Nursapore. (1379—1383, 1367, 1374)

GRAND ARSENAL, *Madras*.—Models of Dhooly and Muncheel. (1362—1364)

SIMPSON & Co., *Madras*.—Travelling Bullock-coach (model). (1365)

ARSENAL AT BANGALORE.—Bangalore Cart (model). (1366)

GUN CARRIAGE MANUFACTORY, *Madras*.—Models of Palanquin and Hawker's Cart. (1368, 1369)

COOPOOSAWMY & Co., *Madras*.—Models of Tonjon, Palanquins and Bier. (1370—1373)

MADRAS SCHOOL OF ARTS.—Models of various Carts. (1375—1378*b*)

BENGAL COMMITTEE.—Collection of Models of Land-Vehicles and Palanquins from all parts of Bengal. (1—25)

BOMBAY COMMITTEE.—Model of Bullock-cart from Bhownuggur. (1)

BAZONJEE MUNCHERJEE, *Poonah*.—Drawings of Carts of Western India (from the India Museum).

DEPUTY-COLLECTOR OF FURRUCK-ABAD.—Models of Machinery and Apparatus used in native distilleries, agriculture, and in the manufacture of oil, sugar, and opium. (186—192*b*, 209—214)

COMMISSIONER OF BENARES.—Models of Sugar Mill, &c. (208)

GROUP XIV.

SECTION B.—SURGICAL INSTRUMENTS.

H.H. THE FIRST PRINCE OF TRAVANCORE.—Ancient Surgical Instruments. (1384, 1385)

GROUP XV.

SECTION A.—MUSICAL INSTRUMENTS.

M. R. RY. A. STREENEVASA ROW, *Madras*.—Collection of Native Musical Instruments. (1386—1452)

BENGAL COMMITTEE.—Collection of Musical Instruments from the Sonthal Pergunnahs, Chandrakona, Garro Hills and other parts of Bengal. (1—17, 22—29)

SUKLAL & PURUSHOTUM, *Dacca*.—Four Musical Instruments. (18—21)

MAHARANI SURNANAYE; RAJAH JOLINDRO MOHUM TAGORE BAHADUR; BENGAL COMMITTEE; RAJAH CHANDRANATH RAI BAHADUR; H. WOODROW.—Musical Instruments from the Bengal Presidency.

LEITNER, DR., *Lahore*.—Yarkandi Flute, Cashmere Guitar, &c. (875—878)

MYSORE LOCAL COMMITTEE.—“Viné” —Musical Instrument. (255)

INDORE LOCAL COMMITTEE.—Musical Instruments used by Bheels. (76)

BHOPAWUR PUL^l AGENCY.—Native Musical Instruments. (33—35, 52)

SECTION B.—PARTS OF MUSICAL INSTRUMENTS.

MYSORE LOCAL COMMITTEE.—Coils of Steel Wire used in musical instrument manufacture. (256—258)

GROUP XVII.

SECTION B.—MODELS AND DRAWINGS OF BOATS.

MADRAS COMMITTEE.—Models of Boats (Catamaran, &c.) from Madras. (1453—1455)

NICHOLAS & CURTHS, *Madras*.—Photographs of Boats. (1456, 1457)

BENGAL COMMITTEE.—Collection of Models of Native Boats, from Dacca, Chittagong, Bancoorah, and other parts of Bengal. (1—23)

GROUP XVIII.

SECTION A.—BUILDING MATERIALS.

PUBLIC WORKS DEPARTMENT, BENGAL.—Samples of Bricks and "Soorkey," or Brick-Dust, from the Government Brick Factory at Acra. (1—2)

CENTRAL PROVINCES COMMITTEE.—Specimens of various Building Stones and Materials. (1—46)

SECTION E.—HYDRAULIC ENGINEERING.

FOURACRES, C., C.E., *Public Works Department, Bengal*.—Models of Locks, Sluices, Wells, and Well-Excavators. Drawings illustrating the construction and working of Fouracres' Excavators. (1—4, 20—23)

FAULKNER, G. H., C.E., *Public Works Department, Bengal*.—A Series of Drawings of Machinery, &c. connected with the Orissa Irrigation Works. (5—19)

SECTION F.—MODELS AND PLANS OF VIADUCTS, BRIDGES, &c.

GOVERNMENT C. E. COLLEGE, *Madras*.—Models of Native Sluice, Calingula, Dams,

and Model Showing mode of making terraced roofs. (1458, 1462)

NICHOLAS AND CURTHS, *Madras*.—Photographs of Bridges. (1462a—1462c)

THOMPSON, CAPT. ROSS, R.E., *Madras*.—Photographs of Civil Engineering and other subjects. (1462d—1496)

BALDRY, K. S., *Fort St. George*.—Photographs of subjects connected with Public Works Department. (1496a, 1496b)

INDIA MUSEUM.—Photographs of Bridges and Stations on the East Indian Railway.

SECTION G.—PLANS, MODELS, AND DRAWINGS OF PUBLIC & OTHER BUILDINGS.

NICHOLAS AND CURTHS, MESSRS., *Madras*.—Photographs of Buildings, from Madras. (1497—1502)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Photographs of Public Buildings, &c., from Agra. (277—279)

GROUP XIX.

SECTION A.—MODELS AND DRAWINGS OF DWELLING HOUSES.

BENGAL COMMITTEE.—Model of a Pucka Bungalow, with Fittings and Furniture complete. (1)

GROUP XXIII.

SECTION A.—DECORATION OF
CHURCHES.

BENGAL COMMITTEE.—A Series of Paintings on mats representing subjects and scenes in Hindu Mythology; and Collection of Carved Stone Images of Idols from Puri (Jagganath), Orissa. (1—30)

SECTION C.—ORNAMENTS FOR
ALTARS, &c.

BENGAL COMMITTEE.—Utensils and Ornaments used in Hindu religious worship from Howrah. (1—6)

GROUP XXIV.

SECTION B.—OBJETS D'ART.

LEITNER, DR., *Lahore*.—Bronze Image of Buddha, and collection of 1,000 Ancient Hindu and other coins. Græco-buddhistic, Indo-scythic and

ancient Hindu Statues and sculptured Fragments from Yusufzai, frontier of Affghanistan, Swat, &c. (879, 880)

GROUP XXV.

SECTION A.—ARCHITECTURE.

MADRAS COMMITTEE.—Model of Indian Village, done by Natives of Condapilly. (1528)

CHISHOLM, R.F.—Drawing of Madras Railway Station. (1527)

SECTION B.—SCULPTURE.

MADRAS COMMITTEE.—Models of Groups of Natives, done by Natives of Condapilly. (1529—1537)

BENGAL COMMITTEE.—Carved Stone Figures from Sarun. (15, 16)

JADUNATH PAL, RAMCHANDRA PAL, RAMLAL PAL.—A Series of Clay Figures, modelled and painted by the Exhibitors. From Kishnaghur, Nuddea District. (1—14)

INDIA MUSEUM, *London*.—Plaster Casts of Fruits, &c., from Bengal (from the London Exhibition of 1871).

SECTION C.—PAINTINGS, INCLUDING
MINIATURES AND ENAMELS.

MADRAS COMMITTEE.—Paintings on Tale, from Trichinopoly. (1542—1548)

RAMASAWMY NAIDOO OF TRAVANCORE.—Oil Painting and Portrait. (1538, 1539)

HUNTER, DR., *School of Art, Madras*.—Oil Painting. (1540)

SINGAPEROMMAUL RAJ, *Madras*.—Miniatures on Ivory and Water-colour Sketches. (1541, 1549—1553)

BOMBAY COMMITTEE.—Representations of various manufacturing processes, from Kutch. (1—5)

BENGAL COMMITTEE.—Paintings on cloth and on mica from Patna and the Bancoorah District; Illuminated Manuscripts of the Mahabharata. (17—22)

HOSSAIN ALI KHAN, *Delhi and Calcutta*.—A Collection of Paintings on Ivory (by the Exhibitor). (1—12)

BABU SRIDHUR SAHI, ZEMINDAR OF MAUJHA.—Paintings, in tempera, on paper. (13—16)

NORTH - WEST PROVINCES LOCAL COMMITTEE.—Paintings on Talc, illustrative of Native Festivals, Trades, Conveyances, &c., from Benares. (230—234)

LAJA LAM, *Delhi*, (881); ISMAIL KHAN, *Delhi*, (882—887); ZOOLPCAR ALI, *Delhi*, (888); Miniatures on Ivory, *per se*, and mounted on the lids of ebony and sandal-wood boxes.

INDIA MUSEUM, *London*.—Paintings from Jeypore, and Collection of rough Oil Paintings on subjects in Hindu Mythology (from the London Exhibition of 1871).

KIPLING, J. S., *Bombay*.—Series of Sketches of the Craftsmen of North Western India (from the London Exhibition of 1871).

KIPLING, J. S., *Bombay*.—Series of Sketches of Cotton Cultivation in Western India, and of the

leading Members of the Marathe Village System in the Cotton Districts (from the London Exhibition of 1872).

GRIFFITHS, J., *Bombay*.—Collection of Sketches, illustrating the mode of wearing Garments by the inhabitants of the Deccan and Konkan (from the London Exhibition of 1872).

FONCECA, J. J., *Madras*.—Eight Water-colour Sketches (from the London Exhibition of 1872).

SECTION D.—GRAPHIC ARTS.

MADRAS COMMITTEE.—Works written in Telugu characters on Kajan leaves, from Madras. (1554, 1555)

LEITNER, DR., *Lahore*.—Various Persian, Turki, Arabic, Sanscrit and other Manuscripts, including Persian Manuscripts containing the works of ten authors, beautifully illuminated. (889—901)

GROUP XXVI.

SECTION A.—EDUCATION OF CHILDREN AND INFANTS.

BOMBAY COMMITTEE.—Cradle and Children's Toys. (62—68)

BENGAL COMMITTEE.—Various Articles used in a Hindoo nursery, as Bedding, Clothing, Toys, Cooking Utensils, Physic, &c., &c.; Stationery and Reading Books used by the children of Bengal. (1—44)

SECTION B.—TEACHING.

BOMBAY COMMITTEE.—Books and Papers in various languages, Marathi Maps, and a set of fifty-two Vernacular and Anglo-Vernacular Newspapers, published within the Bombay Presidency. Various Articles of Clothing worked and embroidered as specimens of needlework from girls' schools. Photographs of Classes from different schools, and of various Educational and other Institutions. (1—30)

NORTH - WEST PROVINCES LOCAL COMMITTEE.—Specimens of School-work as results of Education, such as Woollen Rugs, Fans, Baskets, Fancy-work, Needlework, &c.; Specimens of plain and ornamental Hand-writing, Paintings on Talc, educational Appliances as Maps, Globes, &c. (281—289, 304—306)

The following Articles from the India Museum belong to the educational collection originally sent to the London Exhibition of 1871.

MADRAS LOCAL COMMITTEE.—Collection of Writing Boards and Writing Materials, Book-rests, &c., used in indigenous vernacular schools (2538—2539, 2587, 2589, 2591—2592); Collection of Tamil Letters, written on Palmyra leaves (2596); Writing by girls of the London Mission Schools, Madras (2420); Specimens of Persian and Hindustani Writing, and Writing-paper, from Madras (2598); Specimens of School-work as examples of results of teaching (2602—2615); Collection of printed Tamil and Telugu Text Books, used in indigenous vernacular schools (2586); Collection of Text Books in Telugu, used in the Christian Vernacular Education Society or other missionary schools, Madras (2578); Collection of Text Books in the Tamil and Telugu languages, illustrating the standard of study in government schools in the Madras Presidency (2571—2572); Collection of Canarese Books of the Educational Department, Madras, used in government schools (2574); Collection of vernacular Text Books, to illustrate the standard of study in government schools for Mohamedans (2575); Collection of English Books used in mission schools, Madras (2576); Collection of Tamil Text Books used in the Christian Vernacular Education Society and other missionary schools (2577); Collection of Malayalam and Canarese Text

Books to illustrate the course of study followed in the German missionary and other schools on the Malabar coast (2579, 2580); Collection of Text Books to illustrate the standard of study for the 1st, 2nd, 3rd, 4th, and 5th classes of a Zillah school, Madras (2566—2570); Collection of Text Books, illustrating the standard required for the first examination in arts, the degree of Bachelor of Arts, B.A., and the matriculation examination respectively of the Madras University. The calendar of the University for 1870-1. (2563, 2582, 2565)

MURDOCH, JOHN, *Madras*.—Catalogue of the Christian Vernacular Literature of India. (2583)

MADRAS SCHOOL OF INDUSTRIAL ART.—Annual Report, Drawing Lessons, and Drawings of Architectural Ornaments. (2422, 2423, 1646, 2418)

EDUCATIONAL DEPARTMENT, *Bombay*.—"Patis," or Writing Boards, Mahomedan Toys, School Exercises, &c. (2326, 2330, 2332, 2350, 2351, 3808)

BOMBAY LOCAL COMMITTEE.—Sanskrit Classics for the use of high schools and colleges; Bombay University Calendar; Sets of Examination Papers from the Bombay University and the Engineering College, Poona; Engineering Drawings. (2346, 2347, 3791, 3800)

TERRY, G. W., *Sir Jamsetjee Jeejeebhoy School of Art, Bombay*.—Series of Architectural Drawings from Ambernath Temple; a series of Decorative Architectural Panels in water colours and oil colours, by pupils of the School of Art. (1940—1955)

BENGAL LOCAL COMMITTEE.—A Collection of Inkstands (earthenware, copper, brass, &c.) from Bengal. (1999, 2001, 2003, 2041)

LONG, REV. J., *Bengal*.—A Cocoa-nut Globe. (2000)

BENGAL LOCAL COMMITTEE.—Specimens of Calligraphy, Translation, Composition, Maps and Drawings by students of the lower vernacular Government schools and of the aided schools in the Dacca district. (3372, 3373, 2034, 2038, 2039)

PUNDIT RAM JASUR OF BENARES.—Sbri Sikhsha, a series of Hindi books for female schools. (3481)

H.H. THE MAHARAJAH OF BHURTPORE.—Map of India, in Hindi-Persian, by Birjullub, student of Bhurtpore College; Oordoo and Hindi Books. (3607, 3608, 3610)

KEMPSON, M., *Director of Public Instruction, North-West Provinces*.—Specimens of Calligraphy and Maps; Collection of Educational Works in English, and Urdu and Hindi-English Vocabularies. (3055, 3550, 3659, 3671)

RAJAH JYE KISHEN DOSS, C.S.I., *Allyghur*.—Specimens of Calligraphy. (3053)

PRINCIPAL OF GOVERNMENT COLLEGE, *Agra*.—Specimens of Calligraphy. (3056)

JOHNSON, REV. J. S., *Shahjehanpore*.—Fifth Annual Report of the Missions Stations of the Methodist Episcopal Church. (3054)

THOMASON CIVIL ENGINEERING COLLEGE, *Roorkee*.—Calendar and Indian Engineering Papers (from the London Exhibition of 1872), by Capt. A. M. Lang, R.E.; Professional Papers on Surveying, published by Lieut. F. Firebrace, R.E., at Seharunpore. (4307—4309)

PUNJAB LOCAL COMMITTEE.—Writing Boards, Reading Desk and Portfolio from the Punjab; Multiplication Tables and Account-book from the Punjab Schools. (722, 723, 725, 744, 750, 764)

GOVERNMENT EDUCATIONAL PRESS, *Lahore*.—Maps and Persian Primer. (717, 743, 752)

PUNJAB LOCAL COMMITTEE.—Specimens of Handwriting from the Punjab Schools; Specimens of Pushtoo (Afghan), Persian, Nagri (Hindi), Gurumkhi and Arabic Calligraphy; Specimens of Writing and Embossing done with the finger nail; Teacher's Book; Scheme of Studies for Zillah Schools, Punjab. (753, 754, 772, 773, 776, 726—738, 740, 741)

NORMAL SCHOOL, *Umritsur*.—Map of the Punjab, by Imam-ud-din. (721)

GOVERNMENT OF OUDH.—Various Educational Appliances (as Writing Implements, Celestial Globe, &c.) from Oudh; Specimens of Handwriting, Composition, Mapping, &c., from Government and indigenous schools of Oudh. (1379—1381, 1402, 1426, 1441, 1550, 1559, 1620, 1683, 1689, 1729, 1760—1769, 1772, 1779)

HEAD-MASTER OF NORMAL SCHOOL, *Lucknow*.—Native Astronomical Instruments from Oudh. (1375—1378)

HEAD-MASTER OF OONAO SCHOOL, *Oudh*.—Native Astronomical and other Instruments. (1377)

MUNSHI NAWUL KISHORE, *Oudh*.—Lithographed Maps; Specimens of Holiday Presents. (1437—1440, 380)

BABU SITAL PERSCHAD GUPT, *School-master, Oudh*.—Models of Water-Wheel, Steam Engine, and Locomotive Engine. Made by the Exhibitor. (1779—1781)

GOVERNMENT OF OUDH.—The Curricula followed in the village schools (primary education), and the vernacular and Anglo-vernacular schools of Oudh. (1433—1435)

MUNSHI NAWUL KISHORE, *Oudh*.—Curriculum of Anglo-vernacular Zillah schools, Oudh. (1436)

EDUCATIONAL DEPARTMENT, *Central Provinces*.—Writing Materials; Educational Books and Appliances. (999, 1006, 1001—1003, 1027, 1028)

MYSORE LOCAL COMMITTEE.—Reports on the High School of Bangalore for 1869, and

on Public Instruction in Mysore for 1869—70; Specimens of Writing in various languages by boys of the High School of Bangalore; Cloth Book used as a slate in the Native Schools of Mysore.

(1960, 1963, 1965)

BURMAH LOCAL COMMITTEE.—Educational Works and Appliances from Burmah.

(2072, 2073, 2074)

SIND LOCAL COMMITTEE.—Educational Works and Appliances from Sind.

(3842, 3885, 3886, 3875—3880)

BERAR LOCAL COMMITTEE.—Specimens of Penmanship, Composition, Mapping, &c., by pupils of various schools in Berar; a Globe made by Wamum Trimbah, Schoolmaster, Akolah, Berar; Marathi Verses in praise of Her Majesty and of the International Exhibition of 1871, by Naro Ragaunath, Schoolmaster, Akolah, Berar.

(913—928)

HYDERABAD LOCAL COMMITTEE.—Specimens of Writing, Exercises, &c., by pupils of schools in Hyderabad and Sukkur; Plans of Buildings, from the Hyderabad Engineering School.

(3900, 3906, 3869, 3870)

PHOTOGRAPHS AND DRAWINGS REFERRING TO THE EDUCATIONAL COLLECTION FROM ALL PARTS OF INDIA, TWENTY FRAMES.—Schools of Art in India (Frames 1—5, 11, 13); School Buildings in India (6—9); Modes of punishment used in native schools in India (10, 18); Burmese Monasteries (12); Native modes of gymnastic exercises (14); Groups of Scholars and Teachers from various parts of India (15, 17); Schools, Buildings, and groups of Scholars from various parts of India (16); Thomason Civil Engineering College Press, Roorkee, North-West Provinces—Lithographs (19, 20).

SECTION C.—LITERATURE, PUBLIC PRESS, ETC.

NORTH-WEST PROVINCES LOCAL COMMITTEE.—Astronomical and other Instruments; the "Bibliotheca Indica" and other Works (290—303); 256 Publications on Education from the North-West Provinces Government Press. (280)

DR. LEITNER, Lahore.—Illuminated Addresses in Urdu, &c.; Specimens of Native Hand-writing and Toe-writing, &c.; Specimens of Printing, &c.; Maps of the Punjab Frontier, Dardistan, Central Asia, &c. A Set of the Exhibitor's Works in various languages, printed in India.

The following Articles from the India Museum belong to the educational collection originally sent to the London Exhibition of 1871.

MADRAS LOCAL COMMITTEE.—Specimens of Types, Letters, Printing, Bookbinding, &c., from all parts of the Madras Presidency (1592 ('72),

2596, 2599); Popular vernacular Reading Books to illustrate the efforts made by the Madras School Book and Vernacular Literature Society to provide instruction and amusing vernacular works for private reading; various other books (2581, 2601); Collection of native Newspapers and Educational Journal to illustrate the progress of native Newspapers in the Madras Presidency. (2597)

ABDUS SARNAT, Madras.—Specimen of Illuminated Persian Calligraphy. (2556)

MURDOCK, JOHN.—Classified Catalogue of Tamil Printed Books. (2584)

GOVERNMENT OF BOMBAY.—Travels in England, by Karsandas Mulji in Guzerathi; A Treatise on Materia Medica, by Náráyon Daji, in Marathi; a Dictionary of Sanscrit Roots in Sanscrit and Marathi, by Vishnu Parashurám Shastri Pandit; an old Zend-Pahlavi Glossary, by Destur Hoshengje Tamaspe, High Priest of the Parsis in Malva, India, edited by Martin Haug, Ph.D. (3800)

EDUCATIONAL DEPARTMENT, Bombay.—Time Tables and a Puranic Map of the World (3792, 3799); Collection of Anglo-vernacular and vernacular Newspapers. (3801)

BENGAL LOCAL COMMITTEE.—Various Manuscripts, Maps, Books, Specimens of Calligraphies &c., from all parts of Bengal (1990, 2029, 2037, 2048, 3371, 3374, 3905 ('72), 3966 ('72), 3969 ('72), 3969 ('72), 4870 ('72), 4883 ('72); a Collection of Newspapers and Books printed in Bengal (3950 ('72); Universal Sun-dial, made by Mangrum, native student and citizen of Patna. (1998)

BABOO ROMANATH TAGORE, Bengal.—Collection of the Alphabets of all the Languages in use in India. (3377)

RAM CHUNDER CHUCKERBUTTY BROS., Calcutta.—Specimens of Lithography. (4887)

NORTH-WEST PROVINCES LOCAL COMMITTEE.—"Pioneer," daily newspaper. (4274, '72)

PRINCIPAL OF ST. JOHN'S COLLEGE, Agra.—Original Composition in Sanscrit and translation from Arabic. (3058)

KEMPSON, M., Director of Public Instruction, North-West Provinces.—A trilingual and other Dictionaries; Copy of "Social Reformer," edited by Ahmad Khan Bahadur. (3472, 3473)

SYAD AHMAD KHAN BAHADUR.—Essays on the life of Mohammed, by Exhibitor. (3485)

H.H. THE MAHARAJAH OF BENARES.—Various Astronomical Instruments. (3548, 3549, 3553—3557, 3559—3561)

H.H. THE MAHARAJAH OF BHURTPORE.—Map of England in Hindi, lithographed at Bhurtpore. (3609)

SHEIK BAICHA.—Urdu Work on Estimating, published at Seharunpore by Exhibitor. (4321 ('72)

MOONSHEE SADHASOOKH LALL.—Urdo and Hindi Newspapers, published monthly by the Exhibitor. (4276—4278 ('72))

WALSH, REV. J.—The "Christian Treasury," monthly magazine in Roman characters, published at Allahabad by Exhibitor. (4282 ('72))

MOONSHEE GUNGA PERSHAD.—Urdo Weekly Periodical and Urdo Civil List, published at Moradabad by Exhibitor. (4317 ('72), 4320 ('72))

MOONSHEE PYARAY LALL.—Monthly Urdo Newspaper, published at Baiswan by Exhibitor. (4322 ('72))

SHIAM SUROOP.—Urdo Periodical, published fortnightly at Bareilly by Exhibitor. (4319 ('72))

PUNJAB LOCAL COMMITTEE.—Three Books, printed at Lahore (769 ('72)); Pamphlet on Lahore Pottery, for the use of Lahore Jail (868); Various Newspapers and Journals, published in the Punjab. (745—748, 4283 ('72))

GOVERNMENT EDUCATIONAL PRESS, Lahore.—Map of the Jhung District. (717)

BABOO NOBIN CHUNDER ROY.—Various Publications, Pamphlets, and Educational Works. (751)

GOVERNMENT OF OUDH.—Specimens of (1) Ornamented Paper on which petitions to princes are written; (2) Manuscript Paper used by the gentry of Lucknow (377 ('72), 379); Alphabet Book said to have been written by the Emperor Shah Jehan, whose seal it bears; The Poems of Hafiz, the mystical poet of Shiraz; Shah Namah (a history of the kings of Persia); Akbar Namah and Ain Akbar

(the history of Akbar and of his Empire); and various other Persian and Urdu books; Translations of various works into Urdo; Scientific Publications; Collection of native Almanacs, &c. (1387, 1390—1393, 1399—1401, 1409, 1415—1424, 1427—1430, 1791, 1792)

MUNSHI NEWUL KISHORE, Lucknow.—Specimen of Dower Deeds used by wealthy Natives; Specimens of Lithography in gold and colours. (373 ('72), 388 ('72))

BANI PERSHAD'S PRESS, Lucknow.—An Almanac. (1432)

GOVERNMENT OF OUDH.—Collection of native Newspapers. (1711—1718 ('72))

EDUCATIONAL DEPARTMENT, Central Provinces.—Palm-Leaf Books written in Tamil and Telugu characters; Native writing materials. (998, 1026, 1029)

MYSORE LOCAL COMMITTEE.—Canarese Dialogues on revenue and judicial matters, police court, public works, agriculture, &c., with a literal interlinear translation; English and Canarese Dictionary by John Garrett; Magazines, &c. (1959, 1964)

INDORE LOCAL COMMITTEE.—"Malwa Akbar," a Newspaper lithographed by the Indore Press. (1756 ('72))

EDUCATIONAL DEPARTMENT, Sind.—"Sind Sudhar," a bi-monthly periodical (the first periodical published in the vernacular of the province), under the direction of the Educational Department, in 1870-71, 600 subscribers; various publications in Arabic, Sindi, Hindi, &c.

BRITISH COLONIES.

VICTORIA.

*List of the Commissioners appointed by the Colonial Government to act in the Colony
in furtherance of the objects of the Exhibition.*

SIR WM. FOSTER STAWELL, Knt., Chief Justice.
SIR REDMOND BARRY, Chairman of Commission.
THE HON. SIR C. GAVAN DUFFY, M.P.
THE HON. W. M. K. VALE, M.P.
THE HON. HOWARD SPENSLEY, M.P.
THE HON. W. H. F. MITCHELL, M.L.C.
THE HON. SIR FRANCIS MURPHY.
THE HON. C. J. JENNER, M.L.C.
THE HON. R. C. HOPE, M.L.C.
THE HON. T. H. FELLOWS, M.P.
THE HON. S. H. BINDON.
THE HON. J. T. SMITH, M.P.
JAMES MACBAIN, ESQ., M.P.
WILLIAM WILLIAMS, ESQ., M.P.
JOSEPH JONES, ESQ., M.P.
THE COUNT DE CASTELNAU.
D. C. MACARTHUR, ESQ.
CHARLES EDWARD BRIGHT, ESQ.

THE REV. J. I. BLEASDALE, D.D.
W. W. WARDELL, ESQ.
SAMUEL RAMSDEN, ESQ.
GEORGE BENCRAFT, ESQ.
PAUL DE CASTELLA, ESQ.
THOMAS LAMBERT, ESQ.
HUGH PARKER, ESQ.
MATTHEW M'CAW, ESQ.
SAMUEL SEXTUS RITCHIE, ESQ.
THE HON. ROBERT RAMSAY, M.P.
JAMES B. PATTERSON, ESQ., M.P.
ORLANDO FENWICK, ESQ.
THE HON. SIR GEO. F. VERDON, K.C.M.G., C.B.
THE HON. J. O'SHANASSY, M.L.C., C.M.G.
T. J. SUMNER, ESQ.
EMIL THONEMAN, ESQ.
THOMAS O'GRADY, ESQ.

G. C. LEVEY, *Secretary.*

Victoria is situated at the south-east of the continent of Australia, and is bounded on the west by the Colony of South Australia. On the north and north-east by the Colony of New South Wales, and on the south and south-east by the Southern Ocean. The area of Victoria is 86,831 square miles, or 55,571,840 acres. The whole continent of Australia is estimated to contain about 3,000,000 of square miles, and Victoria consequently occupies barely a thirty-fourth part of its surface. Great Britain, exclusive of the islands in the British seas, contains 89,644 square miles, and is therefore slightly larger than Victoria. Wheat produced in Victoria, in 1870, was 5,697,056 bushels; horned cattle, 721,096; 76,334,480 lbs. of wool was exported in 1871. From its geographical position, Victoria enjoys a climate far more genial to Europeans than any other colony within the continent of Australia. In regard to heat, the weather is never severely oppressive except during the prevalence of hot northerly winds, and these occur only at intervals during the summer months.

The quantity of gold raised from the date of the first discovery (1851) to 31st Dec., 1871, is estimated at 40,749,848 ozs., which at 4*l.* per oz. gives the value as 162,699,392*l.*

There are 330 miles of railway completed in Victoria, and in full operation.

A large extension of the various lines is now being carried out.

Stage-coaches run to all parts of the Colony, except those for which railway communication is available.

RATES OF LABOUR ON FARMS.—The average rate of wages on farms, which varies considerably in different districts, is, ploughmen, per week, 26*s.*; farm labourers, per week, 17*s.*; married couples, per annum, 57*l.* 10*s.*; females, per week, 10*s.* 8*d.*; mowers per week, 29*s.* 6*d.*, per acre, 6*s.*; reapers, per week, 31*s.*, per acre, 15*s.*; threshers, per bushel, 6*d.*

RATES OF LABOUR ON STATIONS.—The average rate of wages on squatting stations is:—Stockmen, per annum, 45*l.* 6*s.* 6*d.*; shepherds, per annum, 35*l.*; hutkeepers, per annum, 28*l.* 3*s.* 6*d.*; married couples, per annum 51*l.*; females, per annum, 26*l.* 14*s.*; station labourers, per week, 16*s.*; sheepwashers, per week, 18*s.*; shearers, per 100 sheep shorn, 13*s.* 5*d.* This is also subject to variation in different districts.

LIVE STOCK ON FARMS AND STATIONS.—The number of live stock on farms and stations in 1870 was estimated at—horses, 161,830; milch cows, 179,661; cattle, 512,857; sheep, 9,923,663; pigs, 111,464; total, 10,889,475.

EXTENT AND VALUE OF GOLD WORKINGS.—A return made during the year 1869 gave—number of distinct quartz reefs proved to be auriferous, 2,881; extent in square miles of auriferous alluvial and quartz ground worked upon, 905 $\frac{3}{4}$; estimated value of gold mining claims, 8,539,241*l.*

A full and classified catalogue of the contributions from Victoria has been printed by order of the Commissioners for the Colony, and may be obtained at the Exhibition.

NEW ZEALAND.

The Colony of New Zealand consists of three principal islands, called respectively the North, the Middle, and the South (or Stewart's) Island, and several small islets (mostly uninhabited); the chief of which are the Chatham Isles and the Auckland Isles. The three principal islands extend in length 1,100 miles, but their breadth is extremely variable, ranging from 46 miles to 250 miles; the average being about 140 miles.

STATISTICS OF NEW ZEALAND.—The census of 1871 showed that the population of New Zealand (exclusive of the Aborigines), amounted in the February of that year to 256,393; having increased from 99,021 in 1861. The revenue, the trade, and the other elements of material prosperity have increased during the same period in nearly equal proportions. Thus the revenue was in 1861, 691,464*l.*, and in 1871, 1,342,116*l.* The population of the chief towns, (including their suburbs) was in 1871, in round numbers, as follows:—Wellington, (the seat of the General Government), 8,000; Dunedin, 21,000; Auckland, 20,000; Christchurch, 12,000; Nelson, 6,000.

REVENUE, (ORDINARY AND TERRITORIAL).—1860, 464,739*l.*; 1870, 1,384,639*l.*; 1871, 1,342,116*l.* Public Debt of New Zealand in 1872 was, 9,983,341*l.*

IMPORTS AND EXPORTS.—1860, Imports, 1,548,333*l.*; Exports, 588,953*l.* 1870, Imports, 4,639,015*l.*; Exports, 4,822,756*l.* 1871, Imports, 4,078,192*l.*; Exports, 5,282,084*l.*

LAND AND CROPS. (*Land and cultivations of aboriginal natives not included.*)—The extent of holdings in the Colony in February, 1871, was returned as 22,774,498 acres, against 18,762,057 acres in December, 1867, viz.: freehold, 5,637,838 acres, against 5,068,440 acres in 1867, and leasehold, 17,126,660 acres in 1871, (against 13,693,617 acres in 1867. The total number of acres fenced was 6,778,773, against 3,455,588 in 1867. The quantity of land broken up but not under crop, was, in 1871, 116,204 acres, against 94,311 acres in 1867. The total quantity of land under crop, as shown by the Census of 1871, (including sown grasses) was, 1,042,042 acres, against 676,909 acres in 1867. In this total were 77,082 acres of wheat, against 47,786 acres in 1867; 123,135 acres of oats, against 101,563 acres in 1867; 23,071 acres of barley, against 13,136 acres in 1867. 12,901 acres of potatoes, against 14,372 acres in 1867; 776,402 acres of sown grasses, against 472,893 acres in 1867. In other crops there were 29,450 acres, against 27,159 acres in 1867.

ANNUAL PRODUCTION OF BUTTER AND CHEESE.—The annual production of butter in the Colony, according to the Returns of February, 1871, was 5,199,072 lbs., against 3,834,252 lbs., in 1867; and of cheese, 2,547,507 lbs., against 1,300,082 lbs. in 1867.

LIVE STOCK.—The aggregate number of live stock of all kinds (excepting poultry) in 1871, was 10,382,540, against 8,924,520 in 1867. Taking the principal kinds of live stock separately, the numbers were—horses, 81,078 in 1871, against 65,615 in 1867; cattle, 436,592 in 1871, against 312,835 in 1867; sheep, 9,700,629 in 1871, against 8,418,579 in 1867; and pigs, 151,460 in 1871, against 115,104 in 1867.

IMMIGRATION AND EMIGRATION.—The immigration (over seas) to New Zealand in 1870, amounted to 9,124 persons, of whom 6,178 were males, and 2,946 were females. Of the males 5,508 were adults, and 670 children; of the females 2,400 were adults, and 546 children. The following figures show the immigration in 1870, classified according to the countries from which the immigrants arrived:—United Kingdom, 2,266 males, 1,749 females; total, 4,015. Australian Colonies, 3,517 males, 1,126 females; total, 4,643. Other British Ports, 9 males, 1 female; total 10. Foreign States, 386 males, 70 females; total, 456.

TRADE AND INTERCHANGE.—SHIPPING.—The numbers and tonnage of vessels entered inwards and cleared outwards at the several ports of New Zealand during the year 1870 were as follows:—The total inwards was 756 vessels, of 273,151 tonnage. The total outwards was 766 vessels, of 265,407 tonnage. Of the total of 756 vessels inwards, 76, of 56,874 tonnage, arrived from the United Kingdom; 556, of 184,904 tonnage, from the Australian Colonies and other British possessions; and 124, of 31,373 tonnage, from foreign countries (including the southern whale fisheries). Of the total of 766 vessels outwards, 58, of 43,532 tonnage, cleared for the United Kingdom; 548, of 182,876 tonnage, for the Australian Colonies and other British possessions; and 160, of 38,999 tonnage, for foreign countries (including the southern whale fisheries). Of the 756 vessels inwards, 145, of 85,643 tonnage, were British; 553, of 167,869 tonnage, colonial; 45, of 15,301 tonnage, American; 4, of 569 tonnage, German; 3, of 427 tonnage, French; 2, of 1,025 tonnage, Norwegian; 1, of 1,000 tonnage, Russian; 1, of 536 tonnage, Swedish; 1, of 385 tonnage, Hawaiian; and 1, of 336 tonnage, Dutch. Of the 766 vessels outwards, 133, of 78,197 tonnage were British; 574, of 166,812 tonnage, colonial; 44, of 15,115 tonnage, American; 5, of 2,228 tonnage, Norwegian; 3, of 568 tonnage, German; 3, of 427 tonnage, French; 2, of 673 tonnage, Dutch; 1, of 1,000 tonnage, Russian; and 1, of 387 tonnage, Hawaiian.

IMPORTS AND EXPORTS.—The total value of the imports of the colony in 1870 was 4,639,015*l.* against 4,976,126 in 1869, being a decrease of 337,111*l.* or 6.77 per cent. A comparison of the total value of imports in 1869 and 1870, according to the countries whence they were received, gives the following results:—

United Kingdom ..	£ 2,458,579	..	£ 2,685,736	..	increase £ 227,157
British Colonies ..	2,280,135	..	1,759,872	..	decrease 520,263
Foreign States ..	237,412	..	193,407	..	„ 44,005
Totals ..	4,976,126	..	4,639,015	..	decrease 337,111

The total value of the exports from New Zealand in 1870 was 4,822,756*l.*, against 4,224,860*l.* in 1869, being an increase in 1870 of 597,896*l.*, or 14.15 per cent. Excluding the value of imported goods re-exported from the colony, the total value of exports of New Zealand produce and manufactures in 1870 amounted to 4,544,682*l.*, against 4,090,134*l.* in 1869, being an increase of 454,548*l.*, or 11.11 per cent. The two very important exports—gold and wool—demand more particular notice here. The total value of the gold exported from New Zealand in 1870 was 2,157,585*l.*, produced by the several gold-fields to the following amounts, viz., Auckland, 319,146*l.*; Marlborough, 7,408*l.*; Wellington, 120*l.*; Nelson, 591,510*l.*; County of Westland, 578,707*l.*; Otago, including Southland, 660,694*l.* The total value of gold exported in 1869 was 2,362,995*l.*

There appears therefore a net decrease in 1870, amounting to 205,410*l.* The falling off in amount occurred in Auckland, Nelson and Westland, while in Marlborough and Otago there was an increase. The total quantity of gold exported from New Zealand from the 1st April, 1857, to the 31st December, 1870, was 5,542,849 ounces; the total value, 21,565,479*l.* The total quantity of wool exported in 1870 was 37,039,763 lbs., against 27,765,636 lbs. in 1869, being an increase of 9,274,127 lbs. The total value stated for 1870 was 1,703,944*l.*, against 1,371,230*l.* in 1869, showing an increase of 332,714*l.*, or 24.26 per cent.

A special catalogue of the contributions to the Exhibition from New Zealand has been prepared by the Commissioners for the Colony, and may be obtained at the Exhibition.

CEYLON

Is a magnificent Island off the southern extremity of Hindostan, containing about 15,808,000 acres. Part of it was taken possession of by England in 1795-6, but it was not till 1815 that the whole Island came under British Rule. Not a tenth part of the land is as yet cultivated. The population numbers 2,198,884. The revenue for 1871 was £1,121,679; the expenditure, £1,064,184. The value of goods imported in that year was £4,797,952; of exports, £3,634,853. The principal articles of export are Coffee, Cinnamon, Tobacco, Plumbago, Cocoanut Oil, and Fibre. The Pearl Fisheries, which for some years were a source of revenue, have for the present failed. A great deal of jewellery is made in parts of the Island and worn by the natives. Specimens are exhibited.

A brief explanation of the use of the Peasant Jewellery sent to the Vienna Exhibition may be interesting.

JEWELLERY WORN BY MEN.

1. A pair of Earrings, "Kualai," worn by all classes of the Tamils, though not by all individuals; the lobe of both ears are perforated, and the jewel is hung on the hole, so that the ball of the ring is facing. They are worn on all occasions, beginning from the time a young man passes his minority.
2. "Sevappoddu," as above.
3. Three pairs of Earrings, called "Naddokkadukkan." These are worn in the same manner as above by the Tamils, mostly by those of country parts; hence they are called "Naddokkadukkan," which means earrings of the interior.
4. Two pairs of Finger-rings. They are called, "Venmaddum" and "Kootheraykulampu." "Venmaddum" means plain work. "Kootheraykulampu" means horse-hoof. "Venmaddum" is worn in pairs, on the ring-finger, and the other on the little finger of the right hand.
5. Silver Waist-chain worn round the waist, inside the dress, to sustain a piece of cloth to cover the nakedness in bathing, &c.

JEWELLERY WORN BY WOMEN.

1. Ear ornament, "Vaaly." The Tamil women, except the Brahmin class, and people from India and their descendants, wear this on ordinary occasions; the upper parts of the ears are perforated in such a way as to receive the joints of the two pieces of "Vaaly," and keep the ornament in a vertical position.
2. Five pairs of Earrings.—See explanation given for 1 and 3.
3. Ear ornament, "Kathuppu," worn in the ear, in the same hole in which earrings are worn, but this ornament stands over the earrings.
4. Nose ornament, "Mookuttie," in a bore on the left side end of the nose.
5. A Necklace, "Karisamany." Several kinds of necklaces are worn by women, above the collar bone; but this is worn around the upper part of the neck.
6. A Necklace, "Thaddumany," worn below "Karisamany."
8. A Necklace, "Maniaddial," worn as an addition to "Karisamany," and sometimes instead of "Karisamany," but its place is between the "Karisamany" and "Thaddumany."
9. Wedding Necklace "Thaly" and "Charadoo," worn by women from the day of marriage during the life of their husbands. The meaning of the "Thaly" differs in object from that of wedding-ring of other nations; the Tamil women wear it as a sacred mark to distinguish themselves from unmarried women and widows. "Thaly" is the round solid ornament in the middle of the gold string "Charadoo," which is worn in front.
10. Silver Arm-ring, "Kadasam;" bangles worn on the arm near the wrist.
12. "Valayal," worn as above—four on each arm.
13. Finger-rings, worn on the index finger, ring-finger, and little finger of the left hand—from two to four rings on each finger.
14. "Kaal Motheram," or toe-rings, worn one on each of the four toes of both feet, except the big toe.
15. Five-stringed beads, worn round the neck to hang over the breast, the shortest string near about the collar bone.
16. Two-stringed beads "Larye," worn beneath the five strings.
17. Hair-pins.

The colour of these jewels is not the natural colour of gold. The Tamils, being dissatisfied with its natural colour, give it an artificial one. The ingredients and the process employed for fixing the colour are the following:—After the jewel is made and completed it is heated, and then put into a solution of salt. The quantity of water used for the solution is just sufficient to cover the jewel. The gold then turns white, and is cleaned by rubbing it with soft white sand. The jewel is then put into a solution, composed of salt and alum in equal quantities, and in alum and saltpetre twice as much, and is treated till the whole solution is evaporated and slightly heated, when it assumes a yellow colour. It is then dipped in water, and cleaned with soft white sand, and again heated in the last-named solution; cleaned with sand and polished.

This colouring is further carried on as follows:—A solution is made of acid of Gorga fruit or Tamarind, and a very slight quantity of brimstone, and what remains of the last solution, or rather its dregs, after evaporation, and heated. When the solution begins to boil, the jewel is put into it, and moved about until the desired colour is obtained.

The silver jewels also admit of colouring. The process is nearly the same as in the case of the gold, but the use of brimstone is avoided, and they are principally dipped in a solution of lime.

In ancient times there were distinctions as to what jewels certain classes of people should wear, and what classes should not, and also as to town fashion and country fashion; but they are now worn indiscriminately by all classes of the people, and by the people of all districts.

MAURITIUS,

An island in the Indian Ocean, 400 miles east of Madagascar, captured by the British in 1810. The area of the island is 676 miles. The resident population of Mauritius, according to the census taken on the 10th of April, 1871, was composed of 51,771 males of the general population and 48,013 females, and 141,804 males of the Indian population and 74,454 females—total, 316,042. Between the 10th April and 31st December, the excess of births over deaths in the former class amounted to 479 males, and 579 females. In the latter there was an excess of 136 deaths in the males, and an excess of 823 births in the females. The arrivals, however, of Indian immigrants exceeded the departures by 433 males and 364 females, thus raising the total resident population to 318,584 classified as under:—General population, males, 52,250; females, 48,592. Indian population, males, 142,101; females, 75,641. It has been found impossible to follow the movements of the general population, or even of those of free Indian passengers, since the repeal of Ordinance No. 24 of 1850. The total estimated population on the 31st of December, male and female, may be taken as correct; but as the births and deaths of some Creole Indians, number at present uncertain, have been registered as belonging to the general population, the latter is probably a little over-estimated. Revenue (1871), £616,952; expenditure, £600,961. The principal article of produce is Sugar, and the cultivation of the cane is carried on in plantations, which employ 60,000 or 70,000 immigrants, introduced from the Presidencies of India. On the 10th April, 1871, the Indian population on the sugar estates was as follows, according to the census taken on that day:—

	Males.	Females.	Total.
Immigrants—From Calcutta	36,815	12,836	49,651
„ Madras	18,086	9,090	27,176
„ Bombay	5,035	2,143	7,178
Indo-Mauritians	16,192	14,803	31,055
Free Indian Passengers	40	12	52
Total	76,168	38,944	115,112

The value of imports and exports during 1871, deducting specie, has been respectively £1,807,382 and £3,053,054. There is little doubt that the value of exports given by the Blue Book last year was under-estimated. A comparison with those figures, therefore, will not be of much use. The exports in 1871 may, however, be roundly stated as having exceeded those of 1870 in value by £450,000, and this excess is accounted for by the larger quantity of sugar shipped in the former year. The quantities and value of the sugar exported during the last five years are given below:—

	Tons.	Value.	Average price per cwt.
1867	100,000	£2,156,950	18s. 4d.
1868	99,000	2,143,166	21 10
1869	107,000	2,599,815	22 10
1870	102,000	2,549,881	24 11
1871	123,000	2,819,944	22 7

The goods exhibited are as follows:—

GROUP II.

CALDWELL, J., & MRS. DE CHAZAL MOON.—Lithographs of Canes, introduced into Mauritius by Mr. Caldwell, coloured by Mrs. Moon; Report on New Caledonia; Classification of Sugar Canes; Plates of Paintings made in Queensland, New South Wales, and Mauritius; Sugar Canes painted from nature in Queensland, in New South Wales, and Mauritius.

HORNE, J., *Sub-Director, Royal Botanical Gardens*.—Collection of Fibres sent from the Royal Botanical Gardens, Mauritius.

HORNE, J., *Sub-Director, Royal Botanical Gardens*.—63 Sections of Wood, of which 43, from No. 1 to No. 43, are from indigenous trees.

GROUP IV.

WIÉHE, JAMES.—Sugar, 14 Samples.

PITOT HONOURABLE H.—Sugars A B C, crystallised in the Vacuum Pan, different sizes of Crystals, filtered and manufactured without animal charcoal, and purged by turbines. The juice of the sugar-cane has been treated according to Dr. Icery's process. These three boxes, with the one marked F, are white "Vesou" sugars. Sugars D and E have been treated in the same manner as above, with larger Crystals, and have been made from the syrup or refuse from the "Vesou" sugars.

FLORE MAURICIENNE.—24 Bottles Preserved Fruits.

MOIZEAU, H.—Pickles.

STRONG, WIDOW J.—Pickles.

DUMAT, C.—Statistics of Sugar Production; Plan of first-class Sugar Mill.

A full and classified catalogue of the contributions from Mauritius has been printed by order of the Commissioners.

GROUP V.

BOURGUIGNON & COMPANY.—Rope made of Aloe Fibre (*Fourcroya Gigantea*), 6 sizes.

D'UNIENVILLE, —.—Raw Silk.

GROUP XII.

KYSHE, J.—Mauritius Almanack, 1872 and 1873.

MOCO, —.—Photographs; Types of the Chinese, Indian, and Mozambique inhabitants of Mauritius; Views of Landscapes, &c., in Mauritius.

GROUP XVII.

MELDRUM, C., *Government Observatory*.—Meteorological Charts.

JOURDAIN, HONOURABLE H.—Madagascar Products: Silk Lambas, Grass Cloth Nattes, Fine Grass Cloth; Flax, Silk, Fibre, Cord; India Rubber, Cigar Cases; Spoons, Fork, Cups, and Specimen of Crystal.

CAPE OF GOOD HOPE.

The Cape of Good Hope, strictly speaking, is a small promontory near the south-west extremity of the continent of Africa. But the extensive Colony of that name is washed by the Atlantic and the Southern and Indian Oceans on the west and south; it is bounded on the north by the Gariep or Orange River, on the north-east by the territory of the Basutos, on the east by Kaffirland, and including what was formerly the Colony of British Kaffraria. The Cape Colony contains an area of about 188,286 square miles.

The settlers at the Cape are chiefly employed in the production of wool, wine, and in the breeding of horses, cattle, and sheep, and in the growth of wheat, barley, oats, and maize. The wheat of this Colony is not surpassed in quality by any grown elsewhere. No doubt the railroad now completed between Cape Town and Wellington will greatly stimulate all industrial pursuits by affording facilities of transport.

Railway works between Port Elizabeth and Uitenbage are now being carried on, and other lines both in the eastern and western districts have been authorised by Parliament, and will be commenced without delay.

Cape Town is the capital of the Colony and the seat of Government: it is built between Table Bay and Table Mountain, at the foot of the latter: this mountain rises 3,582 feet above the sea. The town is well laid out, and contains numerous public buildings and several good squares.

Diamonds have recently been discovered near the northern boundaries of the Colony.

The population, white and coloured, according to the last returns made in 1865, was as follows:—

	European.	Hottentot.	Kafir.	Other.	Total.
	181,582	81,598	100,536	132,655	496,381
<i>Revenue and Expenditure.</i>					
	£	£			
1868	642,322	668,086		1,956,154	2,215,885
1869	580,025	648,732		1,973,091	2,139,689
1870	668,239	735,695		2,352,043	2,569,499
1871	744,788	764,914		2,585,298	3,531,009
<i>Public Debt, £1,160,607.</i>					
<i>Value of Imports and Exports.</i>					
	£	£			

The Goods exhibited from the Cape are as follows :—

GROUP I.

KING, C. E., & CO., *Dowgate Hall, London.*—Drawing of a Gold Quartz Crushing Machine.

ADLER, N., & CO., Merchants, *Port Elizabeth.*—Gold Ore; Natal Coal; Copper Ore.

MOSENTHAL, JULIUS, Merchant, 53, *Great Tower Street, London.*—Rough Diamonds; Gold.

SWINBURNE, SIR JOHN, *Capheaton, Newcastle-on-Tyne.*—Gold Ore; Ingot of Gold.

OCHS, BROTHERS, Diamond Brokers, *Hatton Garden, London.*—Models of the largest rough Cape Diamonds.

GROUP II.

ADLER, N., & CO., Merchants, *Port Elizabeth.*—Buchu (*Darrosma granulata*); Saffron; Wool. Silk; Cape and Natal Cotton; Cape Woods; Gum; Ostrich Feathers; Goat Skins; Wool Sheep Skins; Sheep Skins; Gnu Skins; Ox Hides; Seal Skins; Ox Horns; Giraffe Bones; Rhinoceros Horns; Ivory; Mother-of-Pearl; Turbo Shells; Aloe; Argal; Vegetable Wax; Bees' Wax; Rock Guano; Bird Island Guano.

MOSENTHAL, JULIUS, Merchant, 53, *Great Tower Street, London.*—Mohair; Goat Skins (bark tanned); Goat Skins (); Sheep Skins (bark tanned); Sheep Skins (glove tanned); Model of an Incubator for hatching ostrich eggs.

POPPE, SCHUNHOFF & GUTTERY, Merchants, *Cape Town.*—Wool.

RUSSELL & CO., Merchants, *Cape Town.*—Guano.

DE PASS, SPENCE & CO., Merchants, *Cape Town.*—Guano.

GROUP IV.

WILEY, J., Miller, *Cape Town.*—Wheat.

CLOETE, D., Agriculturist, *Cape Town.*—Wheat.

MILLS, J., Miller, *Cape Town.*—Flour.

LETTERSTEDT, J., & CO., Millers, *Cape Town.*—Flour.

RUSSELL & CO., Merchants, *Cape Town.*—Wheat; Lentils; Peas; Meal; Beans; Raisins; Dried Fruit; Wines.

COLLISON, SONS, & CO., Wine Merchants, *Cape Town.*—Wines.

VOLSTEEDT, J. P., Confectioner, *Cape Town.*—Preserved Fruit.

JAMESON & CO., Confectioners, *Durban.*—Preserves; Natal Cayenne.

MUNICH, B., Tobacco Merchant, *Cape Town.*—Cigars.

LANDSBERG, OTTO, Snuff Manufacturer, *Cape Town.*—Snuff.

ADLER, N., & CO., Merchants, *Port Elizabeth.*—Coffee; Sugar; Tobacco; Arrowroot.

GROUP V.

MOSENTHAL, JULIUS, Merchant, 53, *Great Tower Street, London.*—Mohair Yarn, and Stuffs made of same.

MOSENTHAL, MRS. JULIUS, *Paris.*—Artificial Fruit, Flowers, and Grain.

GROUP X.

ADLER, N., & CO., Merchants, *Port Elizabeth.*—Two Sticks made of Rhinoceros Horns.

GROUP XIV.

SIEMENS BROTHERS, 3, *Great George Street, Westminster, London.*—A piece of the Submarine Cable to Aden.

GROUP XVII.

UNION STEAM SHIP COMPANY, *Southampton.*—Model of the *Anglian* (s.s.); Model of the *Syria* (s.s.); Photographs.

CURRIE, DONALD, & CO., *Fenchurch Street, London.*—Model of the *Windsor Castle* (s.s.)

GROUP XVIII.

KING, C. E., & CO., *Dowgate Hill, London.*—Drawing of a Gold Quartz Crushing Machine.

BROWN, LATHAM, Secretary to the Cape Railway Company, *London.*—Drawing of Bey River Bridge; Drawing of Wellington Station.

COODE, SIR JOHN, C.E., 2, *Westminster Chambers, Victoria Street, Westminster, London.*—Drawing of the Table Bay Breakwater, Docks, &c.

RICHARDS, W. A. Newspaper Proprietor, 4, *Brown's Buildings, St. Mary Axe, London.*—Drawing of the Mail Coaches to the Diamond Fields.

STANDARD BANK OF BRITISH SOUTH AFRICA, *London.*—Framed List of their Branches.

MOSENTHAL, JULIUS, 53, *Great Tower Street, London.*—Maps and Charts; Books; Constitution of the Cape.

WEST AFRICAN SETTLEMENTS.

SIERRA LEONE, GOLD COAST, GAMBIA, AND LAGOS.

The total population of these settlements, which are held by Great Britain principally with a view of putting an end to the Slave Trade, amounts to 513,370 persons.

The revenue of each separate Settlement from 1866 to 1871 was as follows:—

	1866.	1867.	1868.	1869.	1870.	1871.
	£	£	£	£	£	£
Sierra Leone.. .. .	62,263	64,871	59,272	69,617	67,135	80,486
Gold Coast	11,053	10,839	15,404	24,127	30,851	28,609
Gambia	19,079	22,415	22,088	15,518	18,969	17,490
Lagos	23,823	30,195	33,896	40,622	42,875	45,612
Total revenue of H.M. } West African Settlements }	116,218	128,320	130,660	149,884	159,830	172,197

The expenditure has generally been kept well within the revenue, as may be seen from the following figures:—

EXPENDITURE.

	1866.	1867.	1868.	1869.	1870.	1871.
	£	£	£	£	£	£
Sierra Leone.. .. .	60,532	70,984	55,694	70,465	68,033	76,130
Gold Coast	11,589	10,993	11,651	18,836	35,609	29,094
Gambia	17,681	18,664	17,082	20,236	21,937	16,662
Lagos	23,602	30,195	33,711	39,431	42,379	45,611
Totals	113,411	130,836	118,138	148,968	167,958	167,497

The following Table is a summary of the Trade returns in the four Blue Books for 1871. It shows, at a glance, the value of the commerce of the British Settlements:—

IMPORTS AND EXPORTS.

	Imports.	Exports.	Vessels Entered.	Vessels Cleared.	Tonnage Entered.	Tonnage Cleared.
	£	£				
Sierra Leone.. .. .	305,849	467,755	411	409	110,646	110,919
Gold Coast	250,671	295,207	343	315	131,553	119,494
Gambia	102,064	153,100	229	211	51,853	47,994
Lagos	391,653	589,802	278	275	125,776	125,168
Totals	1,050,237	1,505,864	1,271	1,210	419,828	403,575
Total commercial movement		2,556,101				

Thus, over twelve hundred vessels entered and cleared with cargoes exceeding two millions and a half in value.

These are the actual results of the year 1871. Since then two changes have been made, the effects of which are becoming already manifest, namely, the addition of the Dutch possessions in Guinea to the British Settlements, and the general revision of the tariffs, with a view of encouraging trade and shipping. Owing to these changes, it is probable that the exports from Her Majesty's West African Settlements will exceed

£2,000,000 in 1873, and that the imports will reach £1,500,000, which would give a total commercial movement of £3,500,000; a larger sum than is exhibited by three not unimportant possessions put together, viz., the Federal Colony of the Leeward Islands, Tasmania, and Western Australia.

MANUFACTURES.

In Kambia some attempt is made at manufactures. From the cotton shrub that grows near every house the women pluck the raw material, from which they spin a coarse strong thread, which is woven in a native loom made of hard wood and leather prepared by themselves.

In the verandahs of the native houses the country cloth, from which are made tobies and other articles of wearing apparel, may be seen in process of manufacture, within a few feet of the plant still laden with the opening seeds, from which the material of the thread is plucked whenever it is required.

In the circular gate-houses leading to the courtyards of the better classes the blacksmiths may be seen making hinges, nails, and other common articles from native iron. The same sort of ore that is to be found at Sierra Leone is also to be found in the interior. But though it is neglected on the coast, it is smelted in rude furnaces at Kambia, and is the material from which the blacksmiths make all the iron articles required in that district.

The negroes of the interior may also be seen tanning leather, colouring it with native dyes, and making sandals, shoes, and saddles.

In every village they are busy manufacturing oil for their own consumption and for the European markets. The value of the oil so manufactured and exported last year to Europe exceeded £400,000. This manufacturing industry is altogether carried on by the negroes beyond our settlements.

At Elmina there are a considerable number of natives who have been trained by the Dutch as masons, carpenters, and blacksmiths. The native houses are strongly built of stone. At Cape Coast, eight miles off, the native houses are built of mud, and there is very little attempt at industry to be seen.

The German missionaries at Akropong give technical instruction in their schools. They are zealous, and live in a healthy district, but, as yet, they have made no impression beyond a very limited area.

At Lagos, the liberated Africans, who have emigrated from Brazil, are disposed to be industrious. In this respect they are a great contrast to the liberated Africans of Sierra Leone. They number about 6,000, and are rapidly increasing.

The chief articles of export are Gold Dust, Palm Oil, Cotton, Indigo, Shells, Ground Nuts, &c.

The articles exhibited by Mr. Pope Hennessy, C.M.G., lately Administrator-in-Chief, and Mr. Salmon and others, in behalf of the West African Settlements, are specimens of the Characteristic Trinkets of the Settlements, a Collection of Land Shells, Fancy Groups of Leather, Articles of Food, Specimens of Gold Dust, Monkey Skins, Ropes of Ashantee Make, Pipes and Smoking Reeds, Sandals, Wallets, and Native Manuscripts, Native Looms, &c.

JAMAICA.

Jamaica lies between $17^{\circ} 39'$ and $18^{\circ} 36'$ North latitude, and between $76^{\circ} 3'$ and $78^{\circ} 34'$ West longitude. It is calculated to contain about 6,400 square miles, or 4,080,000 acres. A range of mountains runs from East to West, occasionally rising to a considerable height, especially near the East-end, where the Blue Mountain Peak is found to be about 7,600 feet above the level of the sea. Mr. J. G. Sawkins, F.R.C.S., from observations taken in July, 1861, makes it 7,318 feet. On the North side the land rises into hills, often

of remarkable beauty, and commonly separated from each other by spacious vales and romantic rivulets. On the South side, the face of the country is more irregular and craggy, and several ridges of less elevation are formed, running nearly parallel to the principal one. Extensive plains or savannahs extend from the bottom of the lowest range to the sea. Much of the soil, especially in the higher mountains, is unfit for cultivation, and probably not more than one half of the land which the island contains has yet been granted to individuals.

The principal rock of Jamaica is a white lime-stone of recent formation. Some of an older date (Graywacke, &c.) are to be met with in the mountains, chiefly in the County of Surrey, and in the parish of St. Mary, in Middlesex, as well as a great variety of those rocks (supposed of igneous origin), known to Geologists under the general name of Trap-rocks. The remains of a volcano are distinctly visible in the parish of St. George.

The climate is very salubrious, though occasionally sultry. Being an island, the thermometer is never observed to rise so high as on continents of similar latitude. In the plain of Liguanea, about three miles from Kingston, and 212 feet above the level of the sea, the mercury generally stands, during the warmest weather, at 89° to 90°, and during the cooler at about 85°; it has been occasionally seen as high as 93°, and as low as 63°. The barometer, kept at the same situation, does not fluctuate during the year more than 2-10ths of an inch, say from 29·80, to 30·00, except on some particular occasions.

For several years now Jamaica has been strongly recommended by the Medical faculty of England, the United States, and Germany, as a climate well suited for invalids and others threatened with chest complaints or of delicate constitutions. Many invalids have therefore visited the country, and benefitted by the change; and many remain, preferring the climate to that of their own land. Establishments for the reception of invalids have been opened in the Port Royal and St. Andrew's mountains.

Among the mountains the temperature varies much, according to elevation and exposure. The meridian sun is everywhere felt oppressive by those who have not been long accustomed to its influence.

The island is divided, according to an Act of the Legislature passed 1758, into three counties—namely, Middlesex, Surrey, and Cornwall.

Formerly these were subdivided into twenty-two parishes, but by an Act of the Council passed in 1867 the number was reduced to fourteen, viz.:—In *Middlesex*, St. Catherine, Clarendon, Manchester, St. Mary, and St. Ann; *Surrey*, Kingston, St. Andrew, St. Thomas, and Portland; and *Cornwall*, St. Elizabeth, Westmoreland, Hanover, St. James, and Trelawny.

The Political Constitution, as represented by the Legislative Council and Assembly, was abolished by an Act of the Legislature in 1866, when the Island became a Crown Colony. The constitution at present provides for a Governor, Privy Council, and Legislative Council, the latter consisting of thirteen members, all appointed by the Crown, and of whom six, besides the Governor, are paid officials.

Saint Jago-de-la-Vega, or Spanish Town, used to be the Seat of Government, but it is now transferred to Kingston, which is the principal commercial city. It is here that the commerce of the island is centred, and from its favoured geographical position, as well as from its spacious natural harbour, one of the finest in the world, it offers a convenient port of call to the many lines of steamships now trading in these waters. Fresh Provisions, Vegetables, Water, Coals, and every other necessary for steam or sailing vessels, can be procured readily at very moderate rates. The other principal seaport towns are Port Morant, Morant Bay, Salt River, Milk River, Black River, and Sav-la-Mar on the south coast; and Lucea, Montego Bay, Falmouth, St. Ann's Bay, Port Maria, Annotto Bay, and Port Antonio on the north side.

The principal articles of export are Sugar, Rum, Coffee, Pimento, Ginger, Arrowroot, Logwood, Fustic, Ebony, Brazalitto, Lignum-vitæ, Satin Wood, Bitter Wood, and Cocoa-nuts. Cotton and Indigo were at one time considerable articles of export, but they have long since ceased to be cultivated.

The island abounds with every variety of Tropical Fruits, which are produced in the greatest profusion and without cultivation. Oranges, Bannanas, Pines, &c., find a ready and profitable market in the United States.

The population of the Island, according to the Census, taken 5th June, 1871, was 506,154, as follow:—

	Males.	Females.	Total.
White	6,909	6,192	13,101
Coloured	48,048	52,298	100,346
Black	191,498	201,209	392,707
		Total	506,154

The production of Tobacco in quantity and of a quality suitable for export, is a comparatively new industry in Jamaica. The plantations of Messrs. Soutar & Co., whose cigars are exhibited, are within 15 miles of Kingston, and were established four years ago upon soil similar by analysis, and in a climate corresponding with that of the famed Vuethaboy's district, Havanna. Their seed was also received from, and is of the description grown in the Vuethaboy's. Their manufactory is in Kingston, the capital of the Island, where they give constant employment to about 100 hands in the preparation of the tobacco and manufacture of cigars and cigarettes. The cost of freight from Jamaica to the principal ports in Great Britain is about 3s. per thousand, and to the Continent from 3s. to 3s. 6d.

Cigars exhibited by MESSRS. SOUTAR for submission to jury:—Imperiales, Regalia Britannica, Regalia del Rey, Napolcones Elegantes, Brevas, Londres, Galanes.

BAHAMAS,

A group of twenty inhabited islands, and an immense number of islets and rocks, lying between 21° 42' and 27° 34' North latitude, and 72° 40' and 79° 5' West longitude, which were finally annexed to Great Britain in 1788. The capital of the colony is Nassau, in New Providence. The revenue is about £41,000 a year. The population, 39,162. The annual value of exports is about £150,000 per annum. The principal island, New Providence, was originally settled by the English in 1629, and held till 1641, when it was seized by the Spaniards. It was again colonized by England in 1667, but afterwards fell into the hands of the Spaniards and French. In 1781 the Bahama Islands were surrendered to the Spaniards, but, at the conclusion of the war, they were confirmed to Great Britain by the Peace of Versailles, 1783.

Exhibited.—Ornaments from the Seed of the Mimosa and Sea-side Oat; Shell Work and Fish Scale Ornaments; Back of Hawksbill Turtle and Conch Shells; Fibres of Plantain, Banana, Pineapple, &c., indigenous to the Bahamas; Fans, Rope, &c., made from the Palmetto Leaf; Sponge; Native Woods and Bark; Wings of the Flamingo.

TRINIDAD

Lies to the east of Venezuela. Ceded to Great Britain in 1802. The area of the island is 1,754½ square miles. Revenue about £264,000 a year, and value of exports, in 1871, £1,492,811. The population amounts to 109,638.

The principal articles of export are Sugar, Rum, Molasses, Cacao, Coffee, and Pitch. The number of Sugar Estates is 150, and the number of Coffee and Cacao Estates about 800.

77,452 acres of land are under cultivation. Cotton, Timber of many kinds, and the choicest West Indian Fruits are also produced.

Exhibited.—Collection of Native Woods, Pitch, Asphalte, Fibres, and Cacao. Collected and forwarded on behalf of the Colony by Mr. S. Devenish.

LIST OF SPECIMENS OF TRINIDAD WOODS.

No. of Order.	COMMON NAMES.			SCIENTIFIC NAMES.
	ENGLISH.	FRENCH.	SPANISH.	
1	Acacia.	Acacie.	Aroma.	Acacia Farnesiana.
2	Acoma or mastic.	Acoma.	Acoma.	.....
3	Allspice or pimento.	Bois d'Inde.	Pimientillo.	Pimenta vulgaris.
4	Angelin.	Angelin.	Lombricero.	Andira inermis.
5	Balata or bullet-tree.	Balata.	Purgo.	Achras Balata.
6	Balsam capivi.	Copahu.	Palo de aceite.	Copaifera officinalis.
7	.....	Bois cotelette.	.....	Citharexylon quadrangulare.
8	.....	Bois pois blanc.	C. de Burro.	Swartzia pinnata.
9	.....	Bois gris.	Case.	Licania incana.
10	Bloodwood.	Bois sang.	Lacre.	Vismia Cayennensis.
11	Bread fruit.	Arbre à pain.	Palo de Pano.	Artocarpus incisa.
12	Carapo.	Carapo.	Carapo.	Carapa Guianensis.
13	Calabash.	Calebassier.	Totumo.	Crescentia Cujete.
13a	Wild calabash.	Calebassier sauvage.	Totumo del monte.	Crescentia latifolia.
14	Caracas-tree.	Zaman.	Zaman.	Calliandra Zaman.
15	Cedar.	Cèdre.	Cedro.	Cedrela odorata.
16	Coconut.	Cocotier.	Coco.	Cocos nucifera.
17	Cyp.	Cyp.	Pardillo.	Cordia gerascanthus.
18	Fustic.	Bois d'Orange.	Palo Naranja.	Maclura Xanthoxylon.
19	Galba.	Galba.	Palo Maria.	Calophyllum Calaba.
20	Gasparillo.	Gasparil.	Gasparillo.	Esenbeckia.
21	Genipa.	Genipa.	Caruto.	Genipa.
22	Gommier.	Gommier.	Carano.	Bursera gummifera.
23	Governor's plum.	Prunier-Gouverneur.	.....	Flacourtia Ramontchi.

No. of Order.	COMMON NAMES.			SCIENTIFIC NAMES.
	ENGLISH.	FRENCH.	SPANISH.	
24	.....	Chaconia ou cacao marron.	Guacamaya.	{ Warscewiczia coccinea. Calicophyllum coccinea.
25	Guatcare.	Guatcare.	Guatcaro.	Lecythis idatimon.
26	Guava.	Goyavier.	Guayava.	Psidium pyrifera.
27	Hickory (Trinidad).	Bois pois noir.	Palo de rosa.	Brownea coccinea.
28	Hogplum.	Mombin.	Jovo.	Spondias Mombin.
29	Laurel.	Laurier.	Laurel.	Laurus ?
30	Laurel cyp.	Laurier cyp.	.....	.....
31	{ Letter or leopard } { wood. }	Catia.	Gateado.	Brosimum Guianensis.
32	Lignum vitæ.	Gaïac.	Guayacau.	Guaicum officinale.
33	Lime tree.	Citronnier.	Limon.	Citrus Limomum.
34	Locust.	Courbaril.	Algarrobo.	Hymenea Courbaril.
35	Logwood.	Campêche.	Campêche.	Hematoxylon campechianum.
36	.....	Macata.	Cascabelillo.	Poinsettia pulcherrima.
37	Mammee apple.	Abricotier.	Mamey.	Mammea americana.
38	Manchineel.	Mancenilier.	Manzanillo.	Hippomane mancinella.
39	Mangrove.	Mangle roche.	Mangle botoncillo.	Conocarpus.
40	Monkey Balata.	Balata Macaque.	Purgo macho.	.....
41	Monkey bones.	Os macaque.	.....	.....
42	Mora.	Mora.	Muro.	Mora excelsa.
43	Moussara.	Moussara.	Musara.	Brosimum alicastrum.
44	Murraya.	Murraya.	Citronera.	Murraya exotica.
45	.....	Noyer.	Nogat.	Xanthoxylum.
46	Olivier.	Olivier.	Accitunillo.	Bucida Buceras.
47	.....	.....	Palo de vaca.	Bauhinia grandiflora
48	Poui.	Poui.	Pui.	Tecoma.
49	Purple heart.	Sapater.	Zapatero.	Peltogyne paniculata.
50	Red Mangrove.	Mangle rouge.	Mangle colorado.	Rhizophora Mangle.
51	Red wood.	Bois rouge.	Cabimbo.	Trichilia Moschoxylon.
52	Roble.	Roble.	Roble.	Platymiscium polystachium.
53	Sapodilla.	Sapillier.	Nispero.	Achra Sapota.
54	Savana Yoke.	Yoke savane.	Vopo de savano.	Piptadenia ?
55	Savonette (yellow).	Savonnette jaune.	.....	Lonchocarpus latifolia.
56	Sea side grape.	Raisinier du bord de mer.	Uva del mar.	Coccoloba uvifera.
57	.....	Surette des Grands-Bois.	Cereza del monte.	Byrsonima spicata.
58	Tamarind.	Tamarinier.	Tamarindo.	Tamarindus indica.
59	Tapana.	Tapana.	Tapanare.	Stillaginella.
60	.....	Tendre à caillou.	Charro.	Mimosa lithoxylum.
61	.....	Mahaut de Londres.	.....	Thespesia populnea.
62	Wild tamarind.	Bois mulâtre.	Palo mulato.	Pentaclethra filamentosa.
63	White Mangrove.	Mangle blanc.	Mangle blanco.	Avicennia tomentosa.
64	Yoke.	Yoke.	Yopo.	Acacia.
65	Cashew tree.	Pommier d'acajou.	Merey.	Anacardium occidentale.
66	Yellow Sanders.	L'épineux.	Mapurito o Espina de bobo.	Xanthoxylum clava Herculis.
67	{ Surinam or Cay- } { enne cherry. }	Cerisier de Cayenne.	.....	Eugenia Mitchelli.
68	Mango tree.	Mangotier.	Mango.	Mangifera indica.
69	.....	.....	.....	Jacaranda cerulea.
70	.....	Guatamare.	Guatamare.	Myrospermum frutescens.
71	Guenepe.	Quenepe.	Maco.	Melicocca Bijuga.
72	Avocado pear.	Avocatier.	Aguacate.	Persea gratissima.
73	Wild Angelin.	Angelin des Grands-Bois.	Lombricero del monte.	Diplostropis brachypetala.
74	Scotch friend.	Matapalo.	Matapalo.	Ficus ?
75	Akee.	Riz-de-veau végétal.	.....	Akeesia (Blighia sapida).
76	Sapote.	Sapote.	Mamey colorado.	Lucuma Mammosa.
77	Bitter ash.	Quassia.	.....	Quassia amara.
78	Rough leaf.	Feuille rude.	Chaparro.	Curatella americana.
79	Bloodwood.	Bois sang.	.....	Croton gossypifolium.
80	Sandbox.	Sablier.	Javillo.	Hura crepitans.
81	Contrevent.	Contrevent.	.....	Achras.
82	Frangipani.	Frangipanier.	Aleluya.	Plumeria.

No. of Order	COMMON NAMES.			SCIENTIFIC NAMES.
	ENGLISH.	FRENCH.	SPANISH.	
83	Cassia (long).	Cassier puant.	.....	Cassia brasiliensis.
84	.....	Quashy-Quasha.	.....	Thevetia nerifolia.
85	Malacca apple.	Pommier malaque.	.....	Cerbera Thevetia.
86	Pandanus.	Pandane.	.....	Eugenia Malaccensis.
87	Bermuda cedar.	Cèdre des Bermudes.	.....	Pandanus candelabrum.
88	Fiddle wood.	Bois lézard.	Tortumo Guaray.	Juniperus Bermudiana.
89	Grugru.	Grougrou.	Grugru.	Vitex capitata.
90	Pois doux.	Pois doux.	Guamo.	Acrocomia sclerocarpa.
91	Mabolo.	Mabolo.	Mabolo.	Inga.
92	.....	.....	Pama.	Diospyros mabolo.
93	White wood.	Poirier de la Martinique.	.....	Pisonia.
94	.....	Bois canari.	Cauto.	Tecoma pentaphylla.
95	Royoc.	Royoc.	Royoc.	Hirtella silicea.
96	Beef wood.	Aguatapana.	Aguatapana.	Morinda.
97	Grugru.	Grugru.	.....	Rhopala montana.
98	Incense tree.	Bois d'encens.	Courouca.	Acrocomia sclerocarpa.
99	Star apple.	Caimitier.	Cainito.	Icica heptaphylla.
100	Noyau.	Noyau.	.....	Amyris Trinitensis.
101	Sea side almond.	Amandier du bord de mer.	Almendron de playa.	Chrysophyllum cainito.
102	.....	Poirier.	.....	Prunus occidentalis.
103	Black mangrove.	Mangle noir.	Manglejari.	Terminalia.
104	.....	Pois doux marron.	.....	Id.
105	.....	Icaque des Grands-Bois.	.....	Conocarpus erecta.
106	.....	Bois caraibe.	Cometuro.	.....
107	Stavewood.	Raisnier des Grands-Bois.	Uvero del monte.	Chrysobalanus.
108	Wild nutmeg.	Muscadier sauvage.	.....	Campomanesia aromatica.
109	Garlic pear.	Tocque.	Toco.	Coccoloba latifolia.
110	Cocorita.	Cocorite.	Cocorita.	Rheedia laterifolia.
111	Rose apple.	Pomme rose.	Poma rosa.	Cratæva.
112	.....	Bouis.	.....	Maximiliana insignis.
113	Mountain cabbage.	Palviste.	Chaguaramas.	Jambosa vulgaris.
114	.....	.....	Pata de vaca.	Chrysophyllum glabrum.
115	Savana cyp.	Cyp savana.	Pardillo de Savano.	Oreodoxa regia.
116	.....	Pain d'épices.	.....	Bauhinia variegata.
117	.....	Surette.	.....	Cordia.
118	Clove.	Giroflier.	Clavo de especia.	Cicca disticha.
119	Nutmeg.	Muscadier.	Nuez de Moscada.	Caryophyllus aromaticus.
120	Queen of flowers.	.....	.....	Myristica aromatica.
121	Mahogany.	Acajou.	.....	Lagerstræmia regina.
122	Acacia.	Acacie.	.....	Swietenia Mahogani.
123	Corkwood.	Bois flot.	Tacarigua.	Acacia tortuosa.
124	Elm.	Bois d'orme.	Guazuma.	Ochroma Lagopus.
125	Yellow Mangrove.	Mangle jaune.	Mangle amarillo.	Guazuma ulmifolia.
126	Voavanga.	Varvanguier.	Voa vango.	.....
127	.....	Bois cendre.	Cenizero.	Peridium.
128	.....	.....	.....	Sponia.
129	.....	.....	.....	Phoberos.
130	Mahaut.	Mahaut.	Mahagua.	Heliocarpus americana.
131	Fig tree.	Figuier.	Lechero.	Ficus radula.
132	.....	Cachiman.	Corazon.	Anona reticulata.
133	.....	.....	.....	Rollinia multiflora.
134	.....	.....	.....	Pereskia.
135	Black sage.	Bois nègre.	Cariaquita negra.	Cordia.
136	.....	.....	.....	Stereospermum chelonides.
137	.....	Pied poule.	Cachicamo.	Psychotria.
138	{ Cannon ball or Bombshell tree. }	Arbre à bombes.	.....	Couropita Guianensis.
139	.....	Bâtard bois-canon ou lentille.	Higuereton.	Panax.
140	Fig tree.	Figuier.	Lechero.	Ficus.
141	Almond-tree	Amandier.	Almendron.	Terminalia Catappa.

No. of Order.	COMMON NAMES.			SCIENTIFIC NAMES.
	ENGLISH.	FRENCH.	SPANISH.	
142	.....	Bois charbon.	Rayo d'antigua.	Diospyros sp.
143	.....	Moricyp jaune.	.....	.....
144	.....	Bois rivière.	.....	.....
145	.....	Bois canique.	Naranjillo.	Maba inconstans.
146	Sea side plum.	.....	.....	Ximenia americana.
147	{ Cocoa plum or fat pork.	Icacque.	Icacos.	Chrysobalanus icacos.
148	Sea side Mahaut.	Mahaut du bord de mer.	Mahagua del mar.	Paritium tiliaceum.
149	Orange-tree.	Orangieur.	Naranjo.	Citrus aurantium.
150	.....	Chaparro à feuille lisse.	.....	Bunchosia.
151	Cocoa-tree.	Cacotier.	Palo de cacao.	Theobroma Cacao.
152	Debasse.	Debasse.	.....	Calyptranthes sericca.
153	.....	Bois baguette.	Punteral.	Randia.
154	.....	Bois de morue.	.....	Machierium.
155	Wild cocoa.	Bois cacao.	Uvera del monte.	Coccoloba.
156	.....	.....	Nâure.	Calliandra sp.
157	.....	.....	Almendron del monte.	.....
158	Piroa.	Piroa.	Piroa.	Giulema sp.
159	.....	.....	Palma real, o gagua.	Onocarpus Batawa.
160	Coffee Tree.	Cafier.	Café.	Coffea arabica.
161	.....	.....	Naranjillo.	Swartzia grandiflora.
162	.....	.....	.....	Podocarpus.
163	Wild Chestnut.	Châtaignier.	Castano.	Pachira aquatica.
164	.....	.....	.....	Sacoglottis amazonia.
165	White cedar.	Acajou marron.	Cayuca.	Myristica.
166	.....	Bois baril.	.....	Pisonia sp.
167	Bird Lime Tree.	Bois lait.	Lechero.	Sapium aucuparium.
168	.....	Campèche bord de mer.	.....	Pithecolobium sp.
169	.....	Bois l'étang.	Lagunero.	Pterocarpus Draco.
170	.....	Coco macaque.	.....	?
171	.....	Laurier avocat.	.....	?
172	White Savonette.	Savonnette blanc.	Conure.	Machierium.
173	.....	Bois caco.	{ Cacao del monte.	{ Isertia parviflora.
174	Thorns of l'épineux.	.....	Macho.	Clava Herculis.
175	Gregri.	Gregri.	Espinabobs.	Martinezia caryothefolia.
176	Arnotto.	Roucou.	.....	Bixa orellana.
177	.....	Mahaut chardon.	Anotto.	Apeiba aspera.
178	Yellow sandbox.	Sablier jaune.	Javillo amarillo.	?
179	.....	Mangle chêne.	.....	Avicennia tomentosa.
180	.....	Cacapoule.	.....	Amalpiglia.
181	.....	Cupey.	Cupey.	Clusia rosea.
182	.....	.....	.....	Ilex macoucoua.
183	.....	.....	Mamoncillo.	Casearia.
184	.....	.....	Yema de huevo.	.....
185	Mawbee stick.	Bois costière.	.....	Colubrina reclinata.
186	Sweet sop.	Pomme cannelle.	.....	Anona squamosa.
187	Wild coffee.	Café marron.	Café del monte.	.....
188	.....	.....	.....	Mollinedia.
189	.....	.....	.....	Dracena.
190	.....	.....	Naranjillo (Caroni).	.....
191	.....	.....	Sardino arima.	.....
192	.....	Mabouya.	.....	Capparis cynophallophora.
193	.....	Poui M ^{me} Jean.	.....	Olyganthus condensata.
194	.....	Bois flambeau.	.....	Tecoma Stans.
195	Olive wood.	Bois d'olive.	.....	Capparis jamaicensis.
196	.....	Petit baume.	.....	Croton sp.
197	.....	Bois miel.	.....	.....
198	.....	Noyer (de Chacachacareo Island).	.....	.....
199	.....	.....	Algarrobo (from Chacachareo Island).	.....

No. of Order.	COMMON NAMES.			SCIENTIFIC NAMES.
	ENGLISH.	SPANISH.	FRENCH.	
200	Cactus.	Cactus.	.....	Cactus heptagonus.
201	Dividivi.	Dividivi.	Dividivi.	Cæsalpinia Coriaria.
202	.....	.....	Quiebra hacha.	Copaifera hymenifolia.
203	.....	.....	Jacquinia (Chacachacareo)	.....
204	.....	.....	Inagua.	?
205	.....	.....	Sardino blanco.	Miconia prosina.
206	.....	Bâtard bois l'orme.	.....	Sponia.
207	.....	.....	Maraquive.	?
208	.....	.....	Aquirire.	?
209	.....	.....	.....	Cordia sp. (red flowers).
210	.....	Avocat marron.	.....	Ruprechtia sp.
211	.....	Moricyp rouge.	.....	?
212	Cherry wood (from Chacachareo Island)	Cerisier.	Cerisier.	Pholacilia trifoliata.
213	.....	.....	.....	Aspidosperma.
214	.....	.....	.....	Solanum callicarpifolium.
215	.....	Bois lesserre.	.....	.....
216	.....	.....	Cuchape.	Coccoloba sp.
217	.....	.....	.....	Calliandra sp.
218	Jackwood.	Jacquier.	.....	Artocarpus integrifolia.
219	Chigoewood.	Bois négresse.	Mangle dulce.	Bravaisia floribunda.
220	.....	.....	.....	Tabernæmontana.
221	.....	.....	.....	.....
222	Supple Jack.	Liane persil.	Bejuco mulato.	Seriana sp.

GROUP I.

FINLAYSON, T. A., *Trinidad*. (*London Agents, Messrs. Previté & Greig, 3, Newman's Court, Cornhill.*)—Asphalte épuré and Block of Crude Asphalte, from the Island of Trinidad.

UNIVERSAL EXHIBITION

1873

APPENDIX

DESCRIPTIVE NOTICES

ADVERTISEMENTS

J. H. JOHNSON & CO.

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VIENNA UNIVERSAL EXHIBITION,
1873.

ILLUSTRATED APPENDIX,

CONTAINING

DESCRIPTIVE NOTICES

AND

ADVERTISEMENTS.

J. M. JOHNSON & SONS,
PRINTERS AND PUBLISHERS TO THE BRITISH ROYAL COMMISSION,
3, CASTLE STREET, HOLBORN, AND 56, HATTON GARDEN,
LONDON.

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P 2

UNITED STATES

1776—INTERNATIONAL EXHIBITION—1876



IN
Commemoration
 OF THE
 ONE HUNDREDTH BIRTHDAY
 OF THE NATION.



THE Congress of the United States of America having enacted that an International Exhibition should be held in the City of Philadelphia, in 1876, public attention is now invited to the proposed programme.

This Exhibition is to be international and universal—international, inasmuch as all nations will be invited to participate in it; and universal, because it will include a representation of all natural and artificial products, all arts, industries, and manufactures, and all the varied results of human skill, thought, and imagination.

The outlines of a simple yet comprehensive classification have been adopted. There will be ten departments, each subdivided into ten groups, and these again into classes. The details of this classification are now being elaborated, and will be published in due season, together with such rules and regulations as may be found necessary for the proper conduct and management of the Exhibition.

It is intended that ample space shall be assigned to each state, territory, and foreign country, for a just and proper display of its products. It is believed that not less than fifty square acres of floor space, under roof, will be required for this purpose. A site combining the advantages of a sufficient extent of level ground, with picturesque and cultivated surroundings, easy of access by rail, by water, and by ordinary roads, has been assigned for the buildings in the grounds of Fairmount Park, in the City of Philadelphia.

The Exhibition is to be opened on Wednesday, April 19th, 1876, with appropriate ceremonies, in which the President of the United States, the Members of the Cabinet, Governors of States, Senators, &c., together with Representatives of all Foreign Nations, will participate.

A cordial invitation is extended to every nation of the earth, to contribute illustrations of its arts, industries, progress, and developments.

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L'avantage du Marteau Pilon à Double Action consiste en ce qu'il peut frapper 200 coups par minute, ou 3 ou 4 fois plus vite (si besoin est) que les autres; sa puissance peut être plus que doublée, et le nombre et la force des coups peuvent être changés presque instantanément.

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CONTINENTAL OFFICES:

MESSRS. SCHULTE & SCHEMMANN, HAMBURG.

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Represented in the Exhibition by

A. RACK & CO., HEUGASSE 24, WIEN

Group 1.

No. 3.

WHITWELL, PATENT FIRE-BRICK STOVE

FOR

HEATING AIR FOR BLAST FURNACES,

HEATING AIRS OR GASES,

AND FOR THE

CONDENSATION OF FUMES IN METALLURGICAL OPERATIONS

The reasons why it is exhibited are:—

1st. That it enables the air for Blast Furnaces to be heated by the combustion of the Waste Gases of the Blast Furnace without any purification of such gases being necessary

2nd. That every portion of the apparatus can be cleansed at any time from the outside, without the necessity of cooling down the apparatus, as is now done in all other plant.

3rd. Its superiority to all other forms of heating apparatus, inasmuch as in these stoves the Burning Gases are compelled, between entering and leaving the stove, to traverse the whole surface of the bricks exposed; the Air Blast in its turn also passes over the identical surfaces previously heated by the gas, and absorbs from them the heat required.

4th. Its commercial importance, as, by this method, the greatest intensity of heat in the Hot Blast for Blast Furnaces may be obtained without damage to the heating material. Its construction renders it adaptable to many other purposes where the presence of fumes renders frequent cleansing necessary.

This stove is constructed of Firebrick, and consists of a series of walls enclosed in a wrought-iron casing, and is provided with cleaning doors at the top and bottom. The price varies according to the value of material and the purpose to which the system is applied, so as to insure the greatest possible economy, as follows:—

Purpose of Application.	Tons to be made per Week.	No. of Stoves necessary.	Size.	Dimensions.			Heating Surface per Stove in Sup. Sq. Feet.	Total Cost per Furnace.
				Dia. Ft.	Height. Ft.	Id. Id.		
For Cupolas in the Danks and Bessemer Processes	600	2	A	12 9	21 6		2,270	£562
For Charcoal Furnaces	40	2	B	15 0	20 0		3,205	£750
For Medium Bessemer, Oolitic and Anthracite Furnaces	70 to 100	3	"	15 0	28 6		4,898	£1,500
Full-sized Bessemer, Raw Coal, or Coke	150 to 200	3	C	18 0	28 6		7,212	£2,460
"	250	3	D	22 0	28 6		10,000	£3,150
" Hematite	500	4	"	"	"	"	"	£4,200
" Oolitic	500	4	"	"	"	"	"	£4,200
"	600	5	"	"	"	"	"	£5,250
"	700	6	"	"	"	"	"	£6,300

For further information apply to HERR C. GOECKE, Mulheim a/d Ruhr, Germany; M. MAURICE SAUTTER, Rue Chaussée d'Antin, 50, Paris; M. GUYENET, Ingenieur Civil, 83, Boulevard Magenta, Paris; Mr. W. MOSS BOWRON, F.C.S., 426, Walnut Street, Philadelphia, U. S. A., or to M. PAUL SERVAIS, my Representative, at the Exhibition, Metallurgical Department, Group I., No. 3, daily (Sundays excepted).

THOMAS WHITWELL,

STOCKTON-ON-TEES.

PLATINUM AND PRECIOUS METALS
EXHIBITED BY
JOHNSON, MATTHEY & CO.,
HATTON GARDEN, LONDON,

Smelters and Refiners of Gold, Silver, Platinum, Antimony, Bismuth and Quicksilver, and Manufacturers of Magnesium, Potassium, Sodium, and rare Metallurgical and Chemical Products.

Fondeurs et Affineurs d'Or, Argent, Platine, Antimoine, Bismuth, Argent-vif, et Fabricants de Magnésium, Potassium, Sodium et Produits Métallurgiques et Chimiques.

PLATINUM STILL, value 95,000 frs., to concentrate 200 cwts. (10,000 kilos.) Sulphuric Acid per day. This Still is made of Chemically pure Platinum, and combines the most recent improvements in construction. The tenacity and strength of the metal are of the highest degree attainable by careful workmanship. The joints are autogenously soldered (*i.e.* without Gold Solder), the absolute perfection and superiority of which process have been proved by the results of working, for many years, more than eighty concentrating boilers of capacities varying up to 650 litres, in use in most of the large and well-known manufactories throughout the world.

ALAMBIC de PLATINE, valeur 95,000 frs., pouvant concentrer 10,000 kilos. d'Acide Sulfurique par jour. Cet Alambic est fait de Platine chimiquement pur et combinant les plus nouveaux perfectionnements. La tenacité et la force du métal sont du plus haut degré que puisse atteindre une manipulation habile. Les jointures sont soudées autogènement, c. à d., faites sans l'emploi de l'or, procédé dont la perfection et la supériorité ont été établies par l'expérience de plusieurs années; plus de quatre-vingt chaudières, faites d'après le même procédé, et d'une contenance allant jusqu'à 650 litres, étant employées dans les plus grandes fabriques de tous pays.

COIL SYPHON.—Length of Tube 10,000 millimetres, a great improvement upon the ordinary single or double Tube Syphons of 4,000 to 5,000 millimetres in length. It is more convenient and economical in working, requires less space, is less liable to injury, and cools the Acid to an extent quite unobtainable by the old method. A large number are in successful operation.

SYPHON SERPENTIN.—La Longueur du tube est de 10,000 millimètres, ce qui est beaucoup plus avantageux que les Syphons ordinaires à tubes étroits de 4,000 à 5,000 millimètres. Il est plus commode et plus économique, occupe moins d'espace, et refroidit l'acide à un degré que ne peut atteindre l'ancien procédé. Plusieurs sont actuellement employés et partout avec le plus grand succès.

An arrangement is attached by which the Syphon empties itself if, by accident or carelessness, the boiler is not properly supplied with Acid, thus affording great protection against the most common cause of injury to these valuable articles.

Une disposition spéciale permet le Syphon de se vider de lui-même, quand, par accident ou manque de soins, la chaudière n'est pas suffisamment approvisionnée d'acide. Ce perfectionnement prévient la cause la plus commune des accidents auxquels ces précieux articles sont sujets.

PLATINUM ASSAY APPARATUS, by the use of which Gold Assays can be made with greatly increased accuracy, rapidity, and economy.

APPAREILS en PLATINE, pour les essais d'or, remplaçant les matras avec plus de précision, de rapidité et d'économie.

The especial attention of Mints and Foreign Assay Offices is called to this Apparatus, particulars of which will be forwarded on application.

Ces Appareils, dont on enverra, sur demande, des descriptions détaillées, méritent l'attention de la Monnaie et des Bureaux d'Essais Etrangers.

PLATINUM UTENSILS for Laboratory use. Crucibles, Capsules, Dishes, etc., etc.

INSTRUMENTS de PLATINE pour laboratoires, creusets, capsules &c.

IRIDIO-PLATINUM Gun Vents for heavy Ordnance, and Standard Weights and Measures, as decided upon by the Paris Commission for International use.

IRIDIO-PLATINE.—Lumières pour canons de gros calibre, étalons de poids et mesures, de la forme adoptée par la Commission de Paris pour usage international.

NUGGET OF PURE PLATINUM.—Weight, 4,728 grammes of very perfect form (*only one larger specimen is known to exist*); also Platinum Ore from various localities.

PEPITE de PLATINE PUR, pesant 4,728 grammes, de forme parfaite (*on ne connaît qu'une seule pépîte plus grosse que celle-ci*); Minerais de Platine de différentes localités.

PALLADIUM.—Ingot of pure Palladium, value 48,000 frs., extracted from native Platinum and Gold of the value of 26,000,000 frs.

PALLADIUM.—Lingot de Palladium pur (valeur 48,000 frs.), extrait de Platine et d'or natifs, de 26,000,000 frs. de valeur.

Precious and rare Metals; Chemical and Metallurgical Products.

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In the Paris Exhibition, 1867, JOHNSON, MATTHEY & CO. exhibited Platinum Apparatus, Rare and Precious Metals, and Chemical Preparations of the value of 500,000 frs., and were the only manufacturers of Platinum to whom the highest awards were made in each of the three classes under which they exhibited.

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By Her
Majesty'sRoyal
Letters Patent.Silver Medal
(highest Class),Havre Universal
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Members of the Bath and West of England Society,
and the "Société des Agriculteurs de France."

Offices: 16, MARK LANE, LONDON.

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SOLE MANUFACTURERS OF

GIBBS' PATENT AMMONIA-FIXED GUANO,

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Which has not only all the advantages offered by the best known Raw fertilisers, but also those found in the most highly concentrated Artificial Manures.

BRANDS.

All bags weigh $1\frac{1}{2}$ cwt. each, and are marked on one side, "JAMES GIBBS & COMPANY'S AMMONIA-FIXED GUANO," "PATENT." On the other is placed our registered Trade Mark (the Trefoil) in a garter; and "JAMES GIBBS & COMPY., London." The Leaden Seal bears "Ammonia-fixed Guano" on one side, and "JAMES GIBBS & COMPY., London," on the other.

GIBBS' BONE, BLOOD, AND SPECIAL MANURES,

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OF THE BEST QUALITY AND IN THE HIGHEST CONDITION.

1 Dissolved Bones, "Pure."	8 Blood Manure for Corn.	15 Special Flax Manure.
2 ditto, "Extra quality."	9 Soluble Phosphatic Guano (Ammoniated).	16 ditto Grass ditto.
3 ditto, "Ordinary quality."	10 Special Beetroot Manure.	17 ditto Mangold ditto.
4 Bone Manure for Turnips.	11 ditto Barley ditto.	18 ditto Potato ditto.
5 Superphosphate of Lime, 15 to 18 per cent. P ₂ O ₅ .	12 ditto Bean ditto.	19 ditto *Sugar Cane ditto.
6 Superphosphate of Lime, 10 to 14 per cent. P ₂ O ₅ .	13 ditto Clover ditto.	20 ditto *Tobacco ditto.
7 Blood Manure for Roots.	14 ditto Coffee ditto.	21 ditto Vine ditto.
		22 ditto Wheat ditto.

* Messrs. JAMES GIBBS & COMPY. have given special attention to the production of Manures adapted for the growth of the Sugar Cane and Tobacco Plant.

BRANDS.

On each Bag or Cask is placed our registered Trade Mark (the Trefoil) in a garter, and "JAMES GIBBS & COMPY., LONDON."

SULPHURIC ACID.

[Brimstone and Pyrites].

Sp. G. 1.700, 1.712, and 1.845,

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THE ABOVE AWARDS HAVE BEEN MADE TO MESSRS. SUTTON FOR THE SUPERIOR QUALITY OF THEIR SEEDS.

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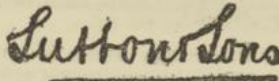
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<p><i>Sutton's Prize Farm Seeds,</i> As see Models of Produce on MESSRS. SUTTON'S Stand in the British Section.</p>	<p><i>Sutton's Choice Vegetable Seeds,</i> As see Models of Produce on MESSRS. SUTTON'S Stand in the British Section.</p>	<p><i>Sutton's Showy Flower Seeds.</i> As Sown round H.R.H. the Prince of Wales's Pavilion at the Vienna Exhibition</p>
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All Packages of Seeds sent out by us bear our REGISTERED TRADE MARK.



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THE LARGEST *bona fide* GROWERS OF SEEDS IN ENGLAND.

SEEDS for the FLOWER GARDEN;
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As Harvested on CARTER & Co.'s Large Seed Farms.
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(Hof-Lieferanten Ihrer Majestät der Königin Victoria, und Seiner Königlichen Hoheit, dem Prinzen von Wales.)

DIE GRÖSSTEN *bona fide* SÄMEREIENBAUER IN GANZ ENGLAND.

SÄMEREIEN für BLUMENGÄRTEN;
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Auf den grossen Sämereien-Baugütern der Herren CARTER & CIE., geerntet.

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Pure Iodine and Bromine—Iodide—Bromide—Carbonate, Bicarbonate, and Chlorate of Potassium—Caustic Soda—and Seaweed Charcoal.

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A Series of Specimens illustrating the application of Carbon to House Refuse and Sewage (Stanford's Patent), are also Exhibited.



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PORTABLE VILLA CONSERVATORY.**

*Constructed upon Improved Wrought Iron
Trussed Girders and with Patent Wood
Sashes, fixed in 6-ft. Bays, no Brick Wall
being required.*



*This Conservatory is prepared ready for
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The above Illustration represents a small Conservatory, suitable for a Villa Residence, and is very economically constructed of a Combination Wood, Iron, Slate, and Glass, being designed especially for Cheapness and Portability.

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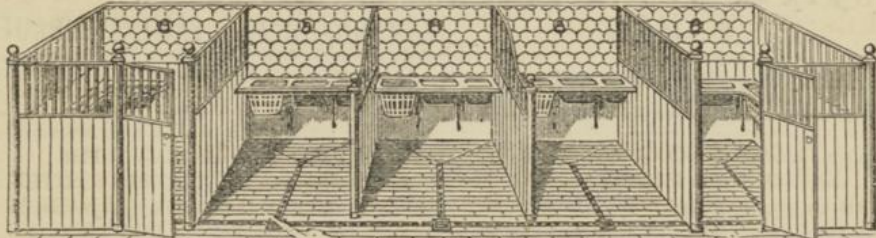
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IRON BRIDGES or Foot Passenger or Carriage Traffic of any dimensions, and to carry any required load.

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Needham's Polishing Paste

For Cleaning Brass, Copper, and Britannia Metal Goods, &c.

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For Sharpening Razors, &c.

Furniture Polish,

For Cleaning French Polish Furniture, &c.

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MANUFACTURED BY

J. PICKERING, POLISH WORKS, SHEFFIELD.

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CERTIFICATE OF MERIT, Signed, ALBERT EDWARD PRINCE OF WALES; PRIZE MEDAL LYONS; and DIPLOMA, DUBLIN.

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THE ONLY GOLD MEDAL MARKING INKS.

With each Bottle is enclosed full Directions in the English, French, German and Spanish Languages.

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CAUTION. EXAMINE YOUR MARKING INK LABELS IN BOTTLES AT 6^p OR 1/2 WITH FAC SIMILE. WHEN ORDERED AND OTHER INK SUBSTITUTED. FULL INFORMATION WILL OBLIGE AND LEGAL PROCEEDINGS WILL BE TAKEN



INVENTOR OF THE PEDESTAL WITH INK. CRYSTAL PALACE PENS AND LINEN.

STRETCHER WITH EACH BOTTLE WILL BE ENCLOSED FULL DIRECTIONS FOR USE IN THE ENGLISH, FRENCH, GERMAN AND SPANISH

For MARKING LINEN, COTTON, &c., with PENS or STENCIL PLATE.

Crystal Palace Marking Ink Pedestal.



Moscow, 1872.



Grand Gold Medal.

J. C. & J. FIELD,

Patent OZOKERIT Candles,

Made in all sizes, very hard, white, and economical, resembling
in appearance the finest Bleached Beeswax.

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PATENTEES AND SOLE MANUFACTURERS OF

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Made in all sizes, all colours, all qualities, fit all sockets, burn to the end, keep always upright, and are *cleanly, economical, and safe.*

WAX BLEACHERS and REFINERS,
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“PRIZE MEDAL PARAFFINE,” SPERMACETI, AND TRANSPARENT WAX
with or without Patent “Self-Fitting Ends,” in all usual sizes.

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and durability of its perfume. Transparent and other Toilet Soaps of all kinds.

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Works: LAMBETH MARSH, LONDON, S.E.

THE EDINBURGH LIQUID BLUE,



TRADE MARK.

MANUFACTURED BY

THOMAS OGILVIE SMITH, EDINBURGH.

REPORT BY DR. STEVENSON MACADAM.

ANALYTICAL LABORATORY,
SURGEONS' HALL,
EDINBURGH, 6th March, 1873.

I have made a careful Chemical Analysis of a sample of the “EDINBURGH LIQUID BLUE,” manufactured by Mr. Thomas Ogilvie Smith, Edinburgh, and find it to be composed of the best materials, to be free from any injurious ingredient, and to be in all respects of the best quality, and superior to any other Liquid or Solid Blue I have examined.

(Signed) STEVENSON MACADAM, Ph.D.,
F.R.S.E., F.C.S.,
Lecturer on Chemistry.

LABORATOIRE ANALYTIQUE,
SURGEONS' HALL,
EDIMBOURG, 6 Mars, 1873.

J'ai analysé avec un très grand soin un échantillon du “BLEU LIQUIDE D'EDIMBOURG,” fabriqué par M. Thomas Ogilvie Smith, d'Edimbourg, ce qui m'a donné lieu de constater qu'il contient les meilleures substances; qu'il est entièrement exempt d'ingrédients délétères et, enfin, qu'il est de première qualité et supérieur à tout autre Bleu Liquide ou Solide soumis à mon examen.

(Signé) STEVENSON MACADAM, Ph.D.
F.R.S.E., F.C.S.,
Professeur de Chimie

EVERYBODY  SHOULD USE

Hemingway's ORIGINAL AND
ONLY GENUINE **New Dry Soap**

Silver Medal,



Lyons Exhibition, 1872.

THE ONLY DRY SOAP

TO WHICH

A PRIZE MEDAL

HAS BEEN AWARDED.

Prize Medal,



London, 1870.

London International Exhibition, 1870, A BRONZE MEDAL; Lyons Universal Exhibition, A SILVER MEDAL, for its superiority over all other Dry Soaps.

SUITABLE FOR ALL DOMESTIC PURPOSES.

Sold Everywhere. BEWARE OF IMITATIONS.

SOLE INVENTORS: S. HEMINGWAY & CO., TRAFALGAR ST., BRADFORD.

PRIZE MEDALS have also been awarded to S. HEMINGWAY & CO. for their celebrated BAKING POWDER and ROYAL WINDSOR STARCH, which cannot be excelled.

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THE OLD SOAP WORKS, RUNCORN,

Manufacturers of superior quality of Soaps (Household and Fancy), Sulphate of Soda, Soda Ash, Soda Crystals, Bleaching Powder, and Refiners of Rosin.

The above Works have now been established over half a century, and during that time they have enjoyed a high reputation for the finish and superiority of the articles manufactured.

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GENERAL COMMISSION MERCHANTS AND MANUFACTURERS' AGENTS,

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FURNITURE POLISH
SHEFFIELD

HOUSEHOLD REQUISITE.

This celebrated Composition for Cleaning and Polishing Furniture has now been in use for upwards of Thirty Years, with continually increasing popularity, and has, with ADAMS' PLATE POWDER, and ADAMS' POLISHING PASTE (for cleaning Brass, Copper, &c.), been awarded Honourable Mention, Paris Exhibition, 1867; and Amsterdam 1869. Vienna Exhibition, Group III., No. 66.

During the Exhibition, apply for further particulars to our representative, Mr. PHILIP W. NICHOLSON, Group XIIIa, No. 577.

MANUFACTORY—
VICTORIA PARK, SHEFFIELD, ENGLAND.



Gold Medal awarded by the National Academy of Agriculture, Manufactures & Commerce Paris.

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WHOLESALE AND EXPORT PLAIN AND FANCY

BISCUIT MANUFACTURERS,

READING, AND ROOD LANE, LONDON.

These Biscuits are made of the finest materials, and from their great variety of Shape and Flavour, acknowledged Superiority of Make, and fine keeping qualities, have obtained a very extensive and increasing sale in England, the Continent, and the various Markets throughout the World.

They are packed in Tins containing 1 lb. and upwards, also in Casks and Boxes, to meet the convenience of the Trade and Shippers.

FABRICANTS DE BISCUITS,

SIMPLES ET DE FANTAISIE, EN GROS ET POUR L'EXPORTATION.

Ces Biscuits sont fabriqués avec les substances les plus recherchées. Leur grande variété de forme et de saveur, leur supériorité reconnue de fabrication, et leurs qualités de durabilité, ont obtenu à ces Biscuits une vente énorme et toujours croissante en Angleterre, sur le continent, et dans toutes les parties du monde, en général.

Ils sont emballés dans des boîtes de fer blanc, contenant 1 livre chacune et au-dessus, dans des Tonnes et de larges Caisses, pour le Commerce et l'Exportation.

FABRIKANTEN VON

EINFACHEN UND PHANTASIE-BISCUITS,

EN GROS UND EXPORTATION.

Diese Biscuits werden von den feinsten Materialien angefertigt und haben durch die Mannigfaltigkeit ihrer Formen, den Wohlgeschmack, die anerkannte Vorzüglichkeit ihrer Zubereitungsweise und die Eigenschaften unverminderter Wohldauer einen sehr ausgedehnten und stets zunehmenden Absatz in England, auf dem Festlande und auf allen Märkten der Welt erlangt.

Sie werden in Blechbüchsen von 1 Pfund und darüber verpackt, dergleichen in Fässern und Kisten in Entsprechung der Wünsche des Handels und der Vershiffer.

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SEMPLICI E DI FANTASIA ALL'INGROSSO E PER L'ESPORTAZIONE.

Questi Biscotti sono fabbricati con le sostanze le più ricercate, loro grandi varietà di forme e di sapore, loro superiorità riconosciute della fabbricazione le loro qualità di durabilità, hanno ottenuto a questi Biscotti una vendita enorme sempre crescendo in Inghilterra, sul continente, ed in tutte le parti del Mondo in generale.

Sono imballati dentro le Casse di stagno contenendo 1 libra ciascuna e più; anche in casse e scatole per il commercio e l'esportazione.



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WHOLESALE AND EXPORT DRUGGISTS, DEALERS IN PATENT
MEDICINES AND DRUGGISTS' AND GROCERS' SUNDRIES.

Manufacturers of the celebrated



Yorkshire CHEAPEST & BEST SAUCE IN THE WORLD
Relish.

6^d. 1/- & 2/- Bottles

SOLD EVERYWHERE !!

BEWARE OF SPURIOUS IMITATIONS.

PROPRIETORS, GOODALL, BACKHOUSE & CO., LEEDS.

Has the largest sale of any Sauce in the world.

GOODALL'S BAKING POWDER.

The largest and best *penny packet* in the trade.

GOODALL'S CHEMICAL CLARIFIER,

For immediately fining and clearing Ales, Lager Beer, &c.

GOODALL'S ANTI-FERMENTATIVE SOLUTION.

This preparation is particularly adapted to all sweet Ales, which generally incline to acetous fermentation; Beer, &c., for export. Full particulars can be had on application.

GOODALL'S BRUNSWICK BLACK,

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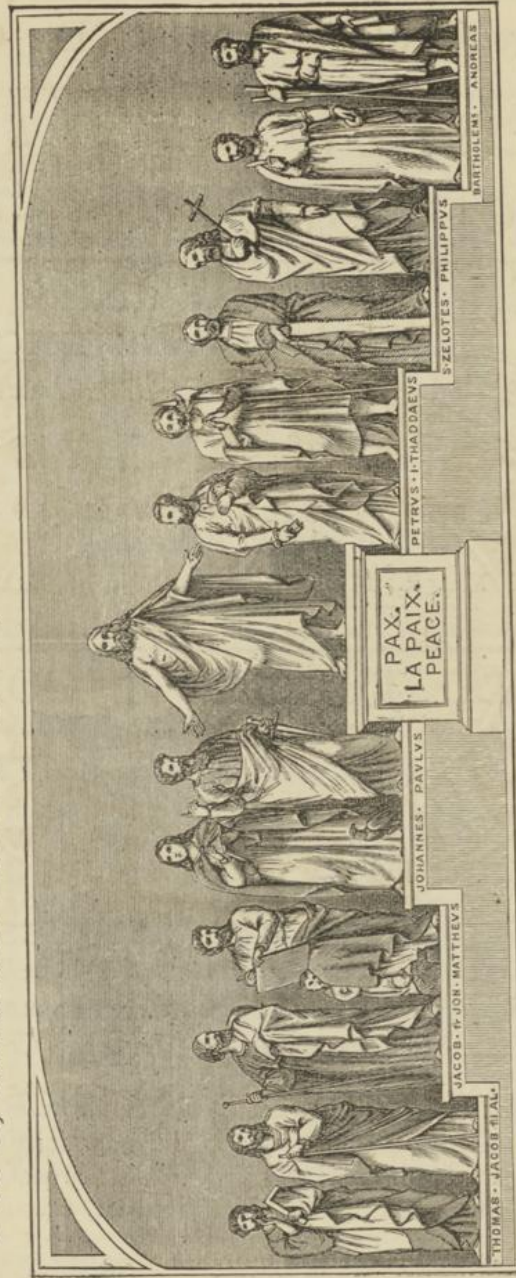
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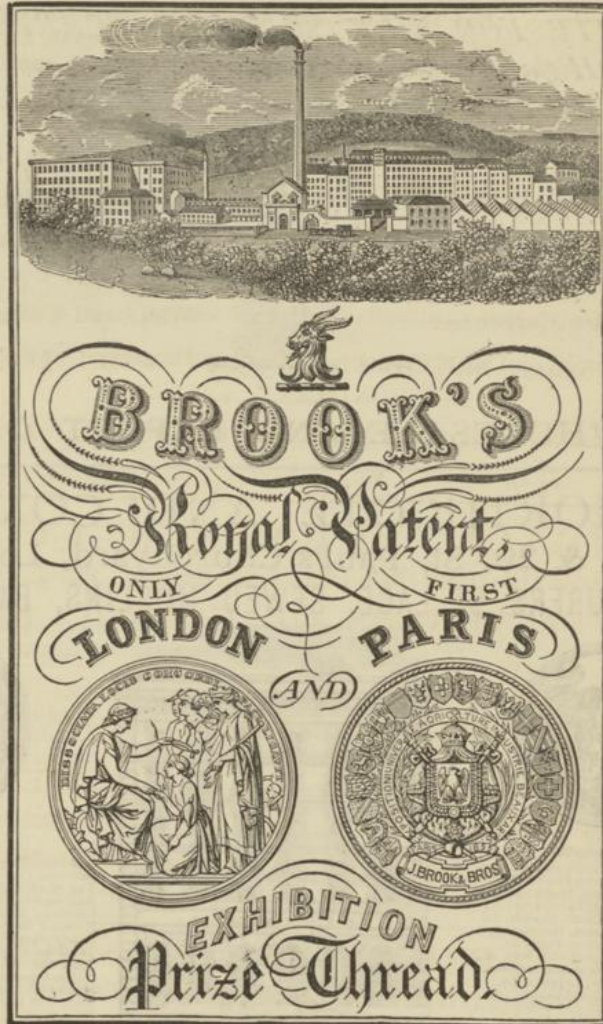
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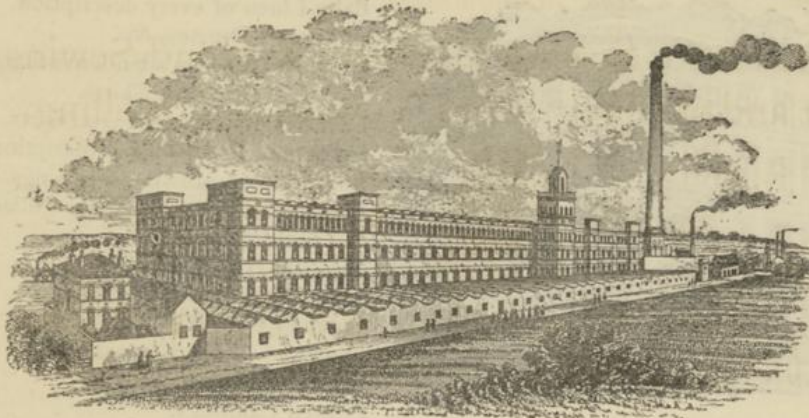
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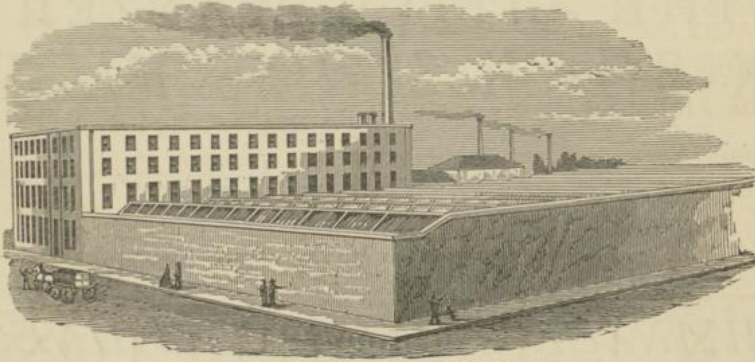
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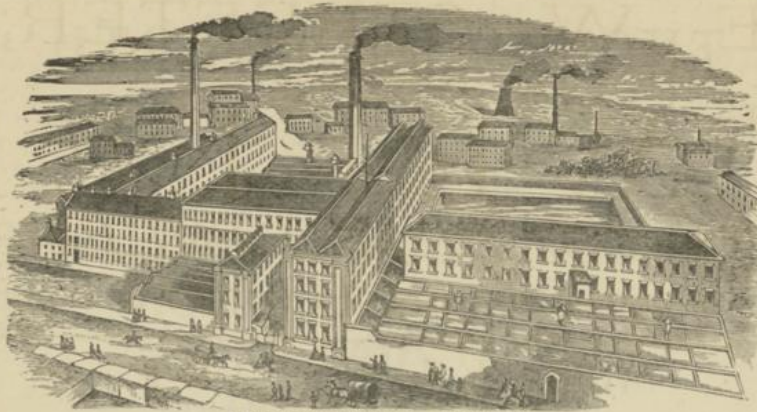
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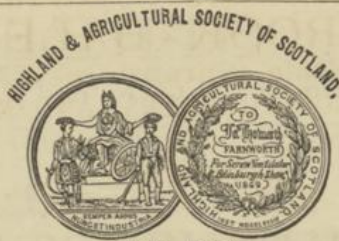
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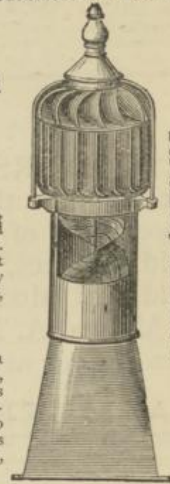
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Coalbrook-Dale, Shropshire, ENGLAND,
IRON-MASTERS, IRON-FOUNDERS, AND METAL-WORKERS.
(*Eisenhütten-Besitzer, Eisengiesser, und Verarbeiter von Metallen, u. s. w.*)

LIST OF MEDALS.
Society of Arts, 1787—The Gold Medal for the Iron Bridge, the first constructed.
Society of Arts, 1849—The Gold Medal for Castings.
Great Exhibition, 1851—The Council Medal, Class XXII.
Paris Exhibition, 1855—Two First and one Second Class Medals.
International, 1862—Bronze Medal, Class XXXI.; ditto, Class X.
Paris Exhibition, 1867—Not Exhibitors.



HAUPTMEDAILLEN:
Der Gesellschaft der schönen Künste, 1787: die Goldene Medaille für die erste bis dahin construirte Eiserne Brücke; derselben Gesellschaft, 1849: die Goldene Medaille für Gussstücke. Der Grossen Weltausstellung, 1851: die Medaille des Ausstellungsraths, Klasse XXII. Der Weltausstellung zu Paris, 1855: zwei Medailen erster und eine zweiter Klasse. Der Internationalen Ausstellung, 1862: Bronzene Medaille, Klasse XXXI. und X. Zu Paris, 1867 nicht vertreten.

SPECIALITÄTEN.

Entrance Gates,
Fencing of all kinds,
Verandahs, Balconies,
Fountains, Vases,
Monumental Erections,
Statues, Garden Chairs and Seats,
Cooking Ranges, Stoves,
Hall Furniture, Tables, &c.,
Colonial Castings, Sugar Pans, Pots, &c.,
Steam Engines, Machinery,
Iron Bridges, Wrought and Cast.

Eingangsthore,
Einzäunungen aller Art.
Verandas,
Balcone, Springbrunnen,
Vasen, Denkmäler, Statuen,
Gartenstühle und Sessel,
Sparherde, Oefen, Möbel für Vorzimmer, Tische u. s. w.
Gussstücke für die Colonien
Zuckersieder, Vierte
Siedepfannen, Töpfe u. s. w.,
Dampfmaschinen,
Maschinerie, Eiserne Brücken, gegossen u. geschmiedet.

Portoni d'entrata, Grate diverse,
Gallerie, Coperte, Balconi,
Fontane, Vasi,
Costruzioni ed erezioni,
Monumentale, Statue,
Sedie da giardino, Grate da cucina,
Graticole da Dispensa e maquazzino,
Supellettili di Sala
e Vestibulo, Tavole, etc.,
Getti Coloniali Pentole da zucchero
e Pentole, varie, etc.,
Varie specie di Macchine a vapore,
Meccanismo ponte di ferro.

Grilles portails,
Palissades de tous genres,
Verandahs et Balcons,
Fontaines, Vases,
Monuments,
Statues, Bancs et chaises de Jardin. Utensiles de cuisine, fours, etc. Meubles de vestibule et anti-chambre. Fonte en fer de tous genres.
Machines à vapeur, etc. Ponte en fer forgé et en fonte.

AGENTS IN VIENNA DURING THE EXHIBITION:

MESSRS. CORBIERE & SONS, Stand 197, British Section.

**JOHNSON & ELLINGTON, ENGINEERS,
CHESTER, ENGLAND.**

SPECIAL MANUFACTURES.

HYDRAULIC CRANES for Warehouses.
HYDRAULIC HOISTS for Hotel Lifts, &c.
HYDRAULIC ENGINES for Various Purposes.

HYDRAULIC MACHINERY for Docks.
HYDRAULIC CAPSTAN ENGINES.
HYDRAULIC PUMPS & ACCUMULATORS.

Hydraulic and Steam Machinery for Warehousing Grain in bulk.

PETROLEUM PLANT OF ALL KINDS.

Lead Pipe Presses and all other Machines connected with Lead manufacture.

STEAM ENGINES of all kinds.

PATENT FUEL & PEAT MACHINERY.

Boilers of all Descriptions.

OMMANNEY & TATHAM,

Engineers, Millwrights, & Brass Founders,

SALFORD MANCHESTER,
MAKERS OF STEAM ENGINES AND BOILERS
OF ALL DESCRIPTIONS.

PUMPING ENGINES for Mines, Water Works, Irrigation, and Feeding Boilers.
HYDRAULIC PACKING PRESSES, for packing Cloth, COTTON, and other Materials.
HYDRAULIC PRESSES, for extracting Oil from Linseed, Cotton Seed, &c.
HYDRAULIC PRESS PUMPS, to work by Hand or Power, of every form.

SCREW PACKING PRESSES.
BRASS AND IRON VALVES AND TAPS.
BRASS AND IRON CALENDER BOWLS AND PUMP BARRELS.
BABBITT'S PATENT ANTI-FRICTION METAL.
COAL-CUTTING MACHINE, Sole Makers of Winstanley & Barker's.
AIR-COMPRESSING ENGINES, Robertson's Patent.



BROWN & COMPANY,

*The Wednesbury Tube Works, Wednesbury, Staffordshire.*Trade **W** Mark.

Manufacturers of Lap-welded Iron Boiler Tubes for Locomotive, Marine, and Stationary Engines, and other purposes; also of Tubes of Howell's Homogeneous Metal—of Steel, Charcoal, and Yorkshire Iron;

Boiler Tube Ferrules, &c.; Wrought Iron Welded Tubes for Gas, Steam, and Hydraulic purposes; Iron, Malleable Cast Iron, and Brass Fittings; and all kinds of Iron Tube in general use.

THE PATENT NUT & BOLT COMPANY, LIMITED.

Head Offices: London Works, near Birmingham, England.

ENGLAND.

LONDON WORKS, BIRMINGHAM.
STOUR VALLEY WORKS, WEST BROMWICH.
MIDLAND WORKS, SOHO, BIRMINGHAM.

SOUTH WALES.

CWM BRAN WORKS, NEAR NEWPORT.
CWM BRAN BLAST FURNACES, NEAR NEWPORT.
CWM BRAN COLLIERIES, NEAR NEWPORT.

Manufacturers of FISH BOLTS, FISH PLATES, SOLE PLATES, SPIKES, FANG BOLTS, and all other kinds of Railway Fastenings; also every description of BOLTS and NUTS, RIVETS, SET SCREWS, COACH SCREWS, WASHERS, TELEGRAPHIC IRONWORK, &c., &c., Hand and Machine made, from Steel, Iron, Copper, Brass, and Yellow Metal, Black, Bright, and Galvanised, as used by Engineers, Railway Companies, Telegraph Constructors, Contractors, Ship Builders, Carriage and Wagon Builders, and others.

EDGE TOOLS.

A. W. WILLS (Late WALTER ALLCOCK),

PARK MILLS, BIRMINGHAM,

Manufacturer of Superior Quality of

HOES, AXES, ADZES, PICKS, SPADES,
SHOVELS, FORKS,

AND GENERAL PLANTATION TOOLS.



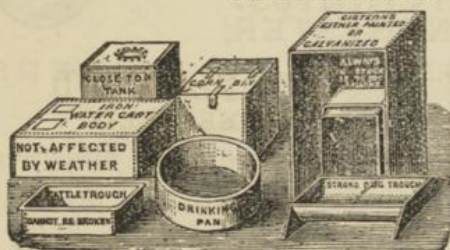
TRADE MARK.

Group 7, No. 288.

BURNEY & CO., MILLWALL DOCKS, LONDON, E.

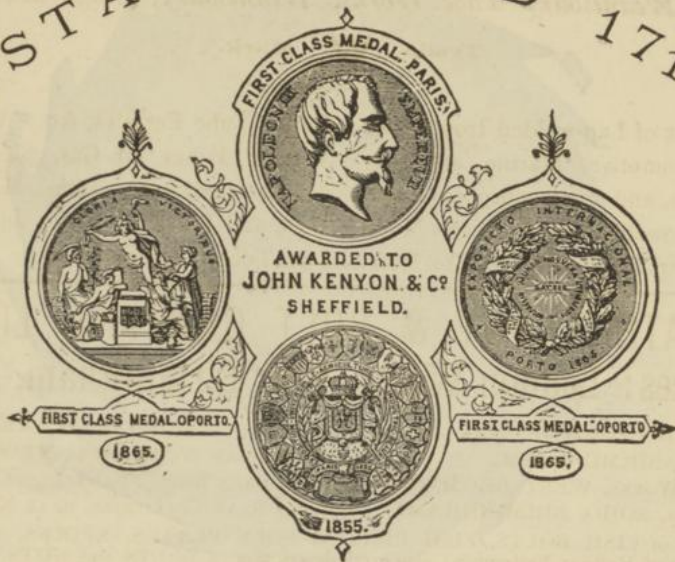
By Admiralty Order, all Royal Navy Tanks are to be made with BURNEY'S PATENT CORNERS.

All Goods at their Works made with the same.



Sole Makers of Tanks to the British Royal Navy, and only holders of Prize Medals for Tanks, &c., the latest being Silver Medal of Royal Agricultural Society, and 1st Class Silver Medal, Naples.

ESTABLISHED 1710.



JOHN KENYON & CO.,
SHEFFIELD,

STEEL CONVERTERS & REFINERS.

MANUFACTURERS OF ALL DESCRIPTIONS OF

Cast, Shear, Bar, Spring, and Sheet Steel,

SAWS, FILES,

EDGE TOOLS, MACHINE KNIVES, &c.

General Merchants.

CORPORATE MARKS,

JK KENYON
SHEFFIELD

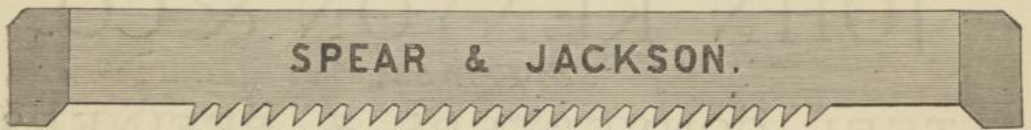
and

YM MIDDLEWOOD
SHEFFIELD.

FOREIGN AGENTS:

CLEMENTZ & CO. ST. PETERSBURG.
F. A. KAEMPFER RIGA.
GEORGE KELLNER & CO. ODESSA.

A. G. REDPATH..... OPORTO.
KREIBIG & FINGER..... LISBON.
A. RACK & CO. VIENNA.



Manufacturers of

STEEL, SAWS, FILES, EDGE TOOLS;
 Tanners', Curriers', Miners', and Engineers' Tools;
 MACHINE KNIVES AND CUTTERS OF ALL KINDS;
 SOLID CAST STEEL SPADES, SHOVELS AND FORKS;
 Forgings and Uses in Mild Crucible Steel for
 Engines and Machines.

Vienna Exhibition, Group VII., No. 281.

AGENT FOR AUSTRIA AND HUNGARY,
 MR. PHILIP W. NICHOLSON, 38, FABRIKGASSE, PEST.

Office during the Exhibition, Group XIIIa. (Agricultural Machinery Department), No. 577.

COCKER BROTHERS,

SUCCESSORS TO

SAM^L COCKER & SON,

(ESTABLISHED 1752.)

SHEFFIELD.

THREE
1ST CLASS PRIZE MEDALS,
CLASSES 1, 21, 22.
Great Exhibition of Industry,
LONDON, 1851.



Seule Maison Honorée de Trois Médailles à l'Exposition Universelle de Londres en 1851.

MEDAL OF HONOUR.
Society of Arts and Industry,
LONDON, 1856.



Médaille d'Honneur de la Société des Arts et Métiers à Londres en 1856.

1ST CLASS
PRIZE MEDAL, CLASS 15,
Universal
Exhibition of Industry,
PARIS, 1855.



Médaille de 1^{re} Classe à l'Exposition Universelle de Paris en 1855.

MANUFACTURERS OF

Cast, Shear, Sheet, and Blister
Steel of every description.

Best Cast Steel Wire, adapted
specially for Mechanical purposes;
also for Ropes, Needles, Fish Hooks,
Pins, Crinoline, &c.

Best Cast Steel Files, Saws, Edge
Tools, Hackles, Gills, Card Clothing,
Card Teeth, Hackle and Gill Pins,
Spindles, Fish Hooks, Needles, &c.

ALSO

GENERAL MERCHANTS.

FABRICANTS

d'Acier Fondu et à l'Eperon, en
Barres, en Tôles et de tous genres.

Fil d'Acier Fondu de 1^{re}
qualité, spécialement préparé pour
travaux mécaniques; ainsi que
pour Cordes, Aiguilles, Hameçons,
Épingles et Crinolines, etc.

Limes faites du meilleur acier
fondu, Scies, Outils de menuisiers,
Cardes, Dents pour Cardes, Éping-
les Hackle et Gill, Hameçons,
Aiguilles, Broches, etc.

ET

NÉGOCIANTS.

LONDON AGENT—F. ORME, Ethelburga House, 70 and 71, Bishopsgate
Street Within.

AGENT FOR GERMANY and NORTH EUROPE—M. SELIG, JUN., 20,
Karlstrasse, Berlin.

AMERICAN AGENT.—J. HATTERSLEY, 33, West Sixth Street, CINCIN-
NATI, OHIO.


E. P. & W. BALDWIN,

Wilden Iron Works, near Stourport.

Makers of CHARCOAL and other BEST Qualities of SHEET IRON; Stamping Sheets; Circular Sheets; Black Plates; BUTTON IRON, 30 to 45 w. g.; Sheet Iron—Pickled, Cold Rolled, and Close Annealed; Canada Plates; Charcoal and Coke TIN and TERNE PLATES; and *Best Charcoal* Tin Plates for Deep Stamping.

All Sheet Iron branded BALDWIN-WILDEN, and marked with distinguishing quality, B, BB, BBB, BChar'l, EBChar'l.

Tin Plates for Deep Stamping, branded "EP x WB" Best Charcoal Tin.
WH

Tin Plates for general working, branded "WILDEN" CHARCOAL, "UNICORN" CHARCOAL TIN, "ARLEY  " TIN.

Coke Tin Plates branded "STOUR" COKE TIN.

Tin Plates specially prepared for Gas Meter purposes.

Our Sheet Iron is not only marked B., BB. &c., but the brand BALDWIN-WILDEN is on the *Bands of each Bundle.*

Agent in Vienna: THEODOR KLEIN, 56, MARIAHILFER HAUPTSTRASSE, where samples may be seen and all information obtained.


Export Agents in London: BROOKER, DORE & Co., 2, Rood Lane, E.C.

Manufacturiers et fondeurs de FER au CHARBON de BOIS, et d'autres espèces de FER en FEUILLES; Estampages de Tôle; Lames et Tôles de Fer ronds et noirs; BOUTON, 30 jusqu'à 45 w. g.; Tôles Dérochées, Laminées et Décrouies; Plaques de Canada; FEUILLES de FER-BLANC au Charbon de Bois et au Coke, et *best charcoal* pour des Estampages.

Chaque espèce de Tôle est marquée BALDWIN-WILDEN, avec la qualité de B, BB, BBB, BChar'l, EBChar'l.

Feuilles de Fer-blanc pour des Estampages sont marquées:

"EP x WB" Best Charcoal Tin.
WH

Pour l'usage en général: "WILDEN" CHARCOAL, "UNICORN" CHARCOAL TIN, "ARLEY  " TIN;

Et au Coke: "STOUR" COKE TIN.

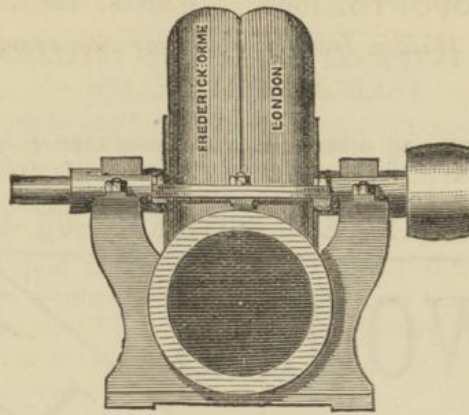
Feuilles de Fer-blanc préparées spécialement pour les besoins des Compteurs au Gaz.

Notre Tôle est marquée non-seulement B., BB., etc., mais même les marques BALDWIN-WILDEN se trouvent sur chaque paquet.

Agent à Vienne: M. THÉODORE KLEIN, MARIAHILFER HAUPTSTRASSE 56, où on peut obtenir des échantillons et d'autres renseignements.

Agents à Londres pour l'étranger: BROOKER, DORE & Cie., 2, Rood Lane, E.C.

FREDERICK ORME.



Improved Patent Noiseless Fans for Blowing, Exhausting, &c.

Hand Ventilating Fans and Fan Forges.

Steam Engines and Fans Combined.

Improved Steam Pumps and Portable Engines.

Bench-Drilling Machines.

Improved Patent Cut-Nail Machines.

Machines for Paris Points,

AND

Improved Screw & Rivet Machines.

Ventilateurs brevetés silencieux, perfectionnés pour souffler, epuiser, etc.

Ventilateurs à main et soufflets de forge.

Machines à vapeur et souffleuses combinées.

Pompes à vapeur perfectionnées et locomobiles.

Machines à percer.

Machine perfectionnée brevetée à couper les clous.

Machines perfectionnées à vis et à rivets.

MANUFACTURER AND GENERAL MERCHANT,
70 & 71, BISHOPSGATE STREET, LONDON.

PRIZE MEDALS.

DUBLIN, 1865. OPORTO, 1865. PARIS, 1867. HAVRE, 1868.

VICTORIOUS IN INTERNATIONAL SAFES CHALLENGE CONTEST,
PARIS EXHIBITION, 1867.

See judgment of the Tribunal of First Instance, "Herring v. Chatwood and Tagnard," given in favour of Chatwood, and condemning Herring in the costs. Also decree of Court of Appeal, pronounced at Paris, December 27, 1872, given in Chatwood's favour, confirming judgment of the Tribunal of First Instance, and condemning Herring in costs.

"BATTLE OF THE SAFES," POST FREE ON APPLICATION.

CHATWOOD'S

OCTUPLE-

PATENT

INTERSECTED-

STEEL

SAFES,

FIRE AND BURGLAR PROOF,

Are specially constructed for the use of Bankers, Jewel Merchants, &c. They are made in various sizes, and with internal fittings to suit the special requirements of Purchasers.

This is the only Safe in the world which is sold subject to 36 hours' test with burglars' appliances before delivery.

SAMUEL CHATWOOD,
BANKERS' SAFE AND LOCK ENGINEER,
LANCASHIRE SAFE & LOCK WORKS, BOLTON;
120, CANNON STREET, LONDON; 13, CROSS STREET, MANCHESTER,
And at Stand No. 290, Industrial Palace, Vienna Exhibition.

ILLUSTRATED PRICE LISTS ON APPLICATION.

S. C. will be happy to advise Bankers on their Security arrangements, without any obligation to adopt his plans.



F. G. PEARSON & CO.,
HOPE WORKS, FURNACE HILL, SHEFFIELD,
 MANUFACTURERS OF
Light and Heavy Edge Tools, Saws, Files, Steel, &c.,
 AND OF THE CELEBRATED
BRIGHT ELASTIC, CAST STEEL, HAY, MANURE, AND DIGGING FORKS.



ALLEN EVERITT & SONS, BIRMINGHAM,
 MANUFACTURERS OF
Brass and Copper Locomotive, Marine, Gas and Steam Tubes,
 SHEET BRASS, BRASS AND COPPER WIRE, &c.,
 WROUGHT COPPER BOAT NAILS, RIVETS, &c.
 Prize Medals, London, 1851; Paris, 1857; Moscow, 1872, for Excellence of Workmanship.

THE BEST ENGLISH-MADE BRUSHES are Manufactured by

G. B. Kent & Co. London.

And Stamped as above.

FACTORY: 11, GREAT MARLBOROUGH STREET, LONDON, W
 G. B. KENT & CO.'S Brushes are celebrated for their durability and strength. *Established 95 Years.*

BOOKBINDING

In the MONASTIC, GROLIER, MAIOLI, and ILLUMINATED STYLES,
In the most superior manner, by English and Foreign Workmen.

JOSEPH ZAEHNSDORF,
 36, CATHERINE STREET (*late Brydges Street*), COVENT GARDEN, LONDON, W.C.

EXHIBITION MEDAL, LONDON, 1862—



S. R. STEWART & Co., Aberdeen,

Aberdeen Comb Works.

The largest Comb Works in the world, employing 900 hands, cutting up weekly 60,000 Horns, besides a large quantity of India Rubber and Tortoise shell, producing Annually Twelve Million Combs.

Medal awarded at London Exhibition, 1862.

AGENTS.

Vienna Julius Victor Meissl.
 Brussels Danz and Ehrhardt.
 Cologne A. Ehrhardt.
 London House, 13, Grocers' Hall Court,
 Poultry, E.C.

See Group X., No. 382.

Fabrique de Peignes d'Aberdeen

La plus grande et meilleure fabrique de peignes du monde. On y emploie 900 ouvriers, consommation chaque semaine 60,000 cornes, outre grandes quantités de caoutchouc et d'écaille; la production annuelle s'élève à douze millions de peignes.

Médaille d'honneur décerné à l'Exposition de Londres en 1862.

AGENTS.

Vienne M. Julius Victor Meissl.
 Bruxelles M. M. Danz et Ehrhardt.
 Cologne M. A. Ehrhardt.
 Maison et Entrepot a Londres, 13, Grocers
 Hall Court, Poultry, E.C.

Voir Groupe X., No. 382.



JOHN HYNAM,
 PLUMBAGO CRUCIBLE MANUFACTURER,
 6, 7, and 8,
 PRINCES SQUARE, WILSON STREET, FINSBURY, LONDON.
 Works:—Tanner's Hill, Deptford, Kent.

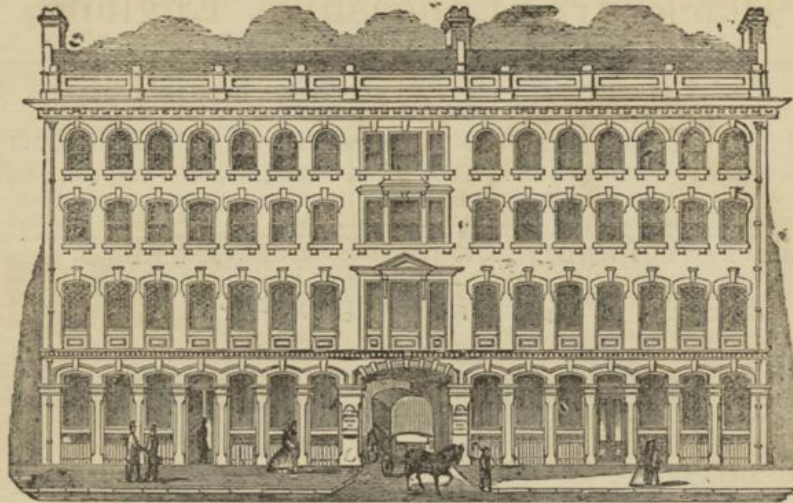
These Plumbago Crucibles are used in the Royal arsenals and Dockyards of Great Britain, and also in those of several Foreign Governments, where they have obtained notability for economy, non-absorption of metal, durability, and freedom from cracking. They are also used extensively by the principal firms of London, Birmingham, and other large towns of England and the Continent. They obtained the First Class Silver Medal (the only one awarded by the Jury), at the Paris Exhibition of 1867, and also a Certificate of Superiority from the Secretary, by whom they were tested, against those of other manufacturers.

W. WALKER,

WHOLESALE AND RETAIL

Cabinet Maker, Upholsterer, & Bedding Manufacturer,

119, Bunhill Row,
LONDON, E.C.



Plans, Estimates, and Designs
Prepared and sent to all parts
of the World.

AN EXTENSIVE ASSORTMENT OF
MEDIÆVAL & GENERAL HOUSEHOLD FURNITURE
ALWAYS IN STOCK.

Furniture made specially to suit all Climates.

WELSH SLATE COMPANY.

PALMERSTON QUARRY.

Dieser wohlbekannte Schieferbruch zu Rhiwbryfdir, in Nord Wales, liefert die besten blauen Dachschiefer und Schieferplatten, welche von dem Verladungshafen der Gesellschaft, Port Madoc, in Nord Wales, nach allen Weltgegenden expedirt werden.

This well-known Quarry at Rhiwbryfdir, North Wales, produces the best Blue Roofing Slates and Slate Slabs, which are sent to all parts of the world, from the Shipping Port of the Company, Port Madoc, North Wales.

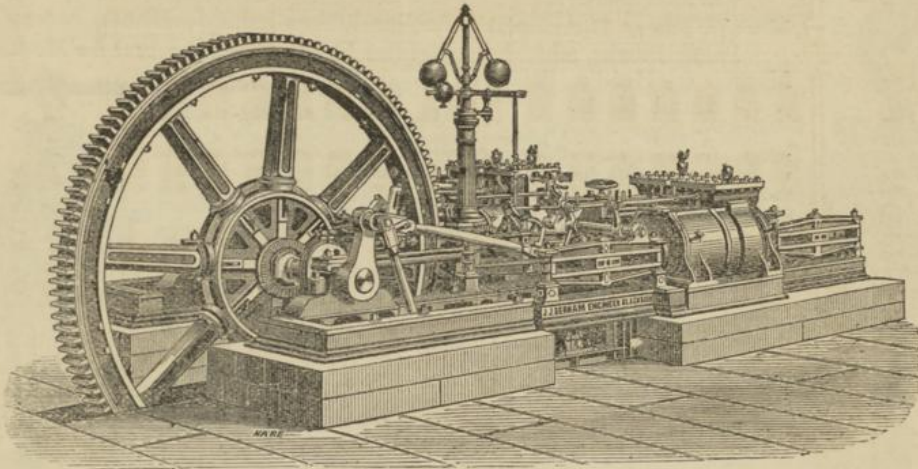
Cette célèbre carrière, située à Rhiwbryfdir, dans le Nord du Pays de Galles, produit les meilleures ardoises pour la toiture et autres usages. Elles sont expédiées de Port Madoc (port de chargement de la Compagnie), Pays de Galles, dans toutes les parties du Monde.

Comptoir in London:
19, Spring Gardens, S.W.,
H. F. PHILLIPS,
Sekretär.

Office in London:
19, Spring Gardens, S.W.,
H. F. PHILLIPS,
Secretary.

Bureau à Londres:
19, Spring Gardens, S.W.,
H. F. PHILLIPS,
Secrétaire.

JOHN J. DERHAM, *Engineer*, Blackburn, Lancashire, England.



Horizontal Engines may be seen working in the Machinery Hall,
British Section.

STEAM ENGINES of all sizes and every description for driving Cotton, Jute, Flax, Woollen, Corn, and other Mills; Compound Beam and Horizontal Expansion Condensing and Non-condensing Engines; Vertical High-pressure Engines for working Mechanics Shop, with double-acting Pumps attached for fire extinguishing; Semi-portable Engines and Boilers, both horizontal and vertical; Pumping and Winding Engines for Mines, Water Works, Distilleries, &c.; Steam Donkey Pumps for feeding Boilers; Steam and Hand-power Crab Winches, Cranes, and Hoisting Machinery. Valves and Fittings of all descriptions, all of the best construction, finish, and workmanship.

CUT-OFF VALVES and Motion applied to Engines for maintaining a uniform speed of Engine under the most extreme variations of load, dispensing with Throttle Valve, and ensuring the full Boiler Pressure of Steam on Piston at the beginning of each stroke.

IMPROVED ELASTIC METALLIC PISTONS AND AIR-PUMP BUCKETS. Cylinders, Air Pumps, and Crank Eyes rebored in their places by practical and experienced workmen.

GEARING OF EVERY DESCRIPTION; Mills completely geared up; Wrought and Cast-Iron Beams, Pillars, Gutters, and Doors for Fire-proof Buildings, &c., &c., &c.

ENGINES COMPOUNDED for economic and steady working, which principle may be advantageously applied to all existing single Cylinder Beam and Horizontal Engines.

STEAM BOILERS; Cornwall, Multitubular and Vertical, of best approved make and construction, Seamless Furnaces, and fitted with Conical Water Tubes, &c.

JOHN J. DERHAM begs to intimate that he has during the last fifteen years supplied Compound Steam Engines, Boilers, and Gearing to many of the large Cotton, Jute, Flax, and other Mills in Austria and other countries. Testimonials and References given upon application.

Sole Manufacturer of SCHOLL'S Patent Atmospheric Power Hammer for Eastern Europe.

Sole Agents for the sale of Agricultural Implement Machinery, as Manufactured by WILLIAM FOSTER & CO., Engineers, Lincoln, for Austria, Bavaria, and Saxony.

AGENT for GREEN'S PATENT FUEL ECONOMISER, for Austria and Poland.

No. 443, Group XIII.

Stand No. 454, Group No. XIII.

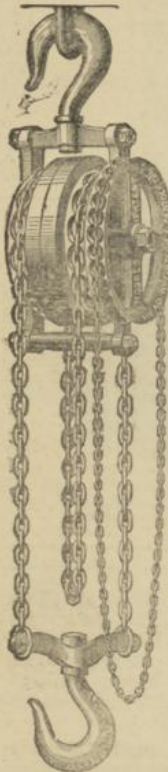
Division No. 454, Groupe No. XIII.

HEAD, WRIGHTSON & CO.,

STOCKTON-ON-TEES, ENGLAND,

Sole Manufacturers of

Moore's Patent Differential
Pulley Blocks, and
Moore & Head's Patent
Hand Hoist.



These PATENT BLOCKS possess many advantages over all others which have been introduced to the public. They will raise the maximum load with a minimum power exerted. They are very simple, and not liable to get out of order. The lifted weight cannot run down of its own accord when suspended. Both chains take an equal share of the load lifted, thus distributing the weight, and causing the Blocks to hang perfectly plumb. The chain is stronger than usual, to prevent any chance of the links stretching.

The PATENT HAND HOIST is specially constructed to enable one man to raise heavy weights with ease and rapidity. It is simple in arrangement, strong in construction, and easy to move about. It can be fixed to any beam or bar, and supplied with chain for any length of lift. It is (when ordered) fitted with an effective brake, by which means the load, when being lowered, is entirely under the control of the man.

Although these Patent Blocks and Hoists have been introduced to the public only a few months, thousands have been sold, and they are now adopted by the largest engineering and other houses in England.

PRICES OF BLOCKS.

PRIX DES POULIES.

Lifting Power. Force élévatoire.	Price of Blocks. Prix.	Price of Chain per foot, including one Hook. Prix de la Chaîne par pied avec un crochet.
	£ s. d.	s. d.
10 cwt. — 10 quint.	1 15 0	1 0
20 " 20 " "	2 10 0	1 6
30 " 30 " "	3 0 0	1 8
40 " 40 " "	3 10 0	1 8
3 TONS — 3 tonnes	5 0 0	2 3
4 " 4 " "	6 5 0	2 3
5 " 5 " "	7 10 0	2 6
7½ " 7½ " "	12 10 0	5 0

The Hand Chain is included in the price of the Block.

La chaîne de manœuvre est comprise dans le prix de la poulie.

THIS FIRM RECEIVED THE SILVER MEDAL AT THE LIVERPOOL AGRICULTURAL SHOW, 1871; AND AT KING'S LYNN, 1872.

NOTE.—Please state Height of Lift in ordering. Delivery at Stockton-on-Tees.

Agent—M. PHILIP W. NICHOLSON, Fabriksgasse 38, Pest.
et pendant l'Exposition, Division No. 577, Groupe XIIIa.

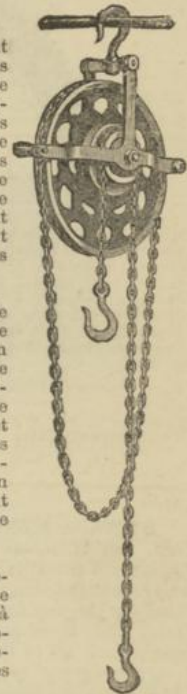
Seuls fabricants des

Poulies différentielles de Moore, brevetées
et des Monte-Charges à bras de Moore
et Head, brevetés.

Ces poulies différentielles offrent des avantages réels sur toutes celles en usage. On lève avec elles le maximum de charge avec le minimum d'effort. La charge, une fois en suspension, ne peut descendre par elle-même. Les deux chaînes portent une partie égale du poids de la charge, ce qui, produisant une distribution régulière du poids, fait que les poulies sont continuellement d'aplomb. Les chaînes sont plus fortes que d'ordinaire.

Le monte-charge est construit de manière à permettre à un seul homme d'élever facilement et rapidement un poids considérable. Le mécanisme est simple, solide et facile à manœuvrer. Il peut être attaché à une poutre ou traverse quelconque et est muni d'une chaîne pour toutes les hauteurs d'élévation. Cet appareil est muni, si on le désire, d'un frein par lequel le fardeau, pendant la descente, est directement sous le contrôle de l'ouvrier.

Quoique ces poulies et monte-charges ne soient mis en vente que depuis peu de mois, il en a été déjà livrés plusieurs milles, et ces appareils sont aujourd'hui généralement adoptés dans les grandes usines de l'Angleterre.



PRICES OF HOISTS.

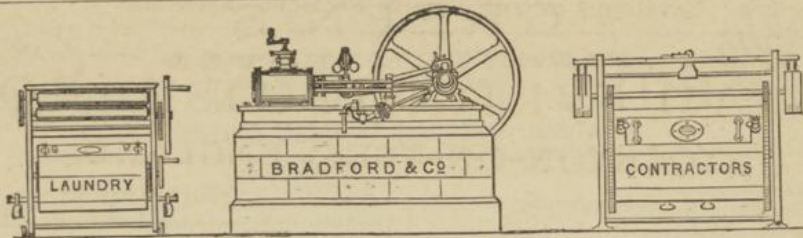
PRIX DES MONTE-CHARGES.

Lifting Power. Force élévatoire.	Price of Hoists. Prix.	Hand Chain. Chaîne de manœuvre.	Lifting Chain. Chaîne pour porter la charge.
	£ s. d.	Per foot. Le pied.	Per foot. Le pied.
No. 1.—To raise 5 cwt. " Pour élever 5 quint. ...	1 15 0	7d.	6s. 7d.
No. 2.—To raise 10 cwt. " Pour élever 10 quint. ...	2 10 0	7d.	1s. 3d.
No. 3.—To raise 15 cwt. " Pour élever 15 quint. ...	3 5 0	11d.	1s. 8d.

If fitted with Brake, EXTRA, No. 1, 15s.; No. 2, 20s.; No. 3, 25s.
Muni d'un frein en plus pour No. 1, 15 sh.; pour No. 2, 20
pour No. 3, 25 sh.

Médaille d'Argent à l'Exposition d'Agriculture, Liverpool, 1871; et à King's Lynn, 1872.

Pour les commandes, on est prié d'indiquer la hauteur et le poids à élever. Les prix sont applicables aux appareils livrés à l'usine.



THOMAS BRADFORD & Co.
Washing Machine Manufacturers and Laundry Engineers,

63, FLEET STREET, } LONDON. Cathedral Steps, MANCHESTER.
142, HIGH HOLBORN, } Windsor Bridge, SALFORD.

Plans and Estimates for Private or Public Laundries, with reference to such in successful operation in all parts of the world, upon application. [No. 472, GROUP XIII.]

MATHER & PLATT,
ENGINEERS, AND MAKERS OF

Every variety of Machinery used in the process of Bleaching, Calico Printing, Dyeing and Finishing, comprising Improved Singe Stove, Patent High Pressure Kiers, Improved Washing Machine, Squeezers, Double-cased Copper-colour Pans, with Gearing to work the Stirrers, Printing Machines, from one to twenty colours, Dye Becks, Starch Mangle, Coloring Machine, Indigo Grinding Mill, Logwood Mill, Madder Mill, with Revolving Pan, Measuring, Lapping, Folding, Doubling, or Rolling Machine, Calender, Drying Machine, with Patent Cylinders in Tinned Iron or Copper, Damping Machine, Belt Stretching Machine, Steam Engines, Horizontal and Vertical, Winding Engines for Colliery purposes, Single and Double Acting Pumps, Force Pumps, Deep Lift Pumps, Patent Coal Cutting Machines and Air Compressors for driving them. Patent Water Meter, Improved Steam, Water, and Gas Valves.

PATENTEES OF

Earth Boring Machine for Artesian Well, Mineral Exploration, &c., Improved Pumps, for pumping out of deep borings, Shearing or Cropping Machine, Clamp Stretching Machine, Gas Apparatus for Heating Calender Bowls, Improved Copper Lined Dye Beck, Warp Sizing Machine or Slasher, with Hot Air Drying Apparatus, Warp Beaming Machine, Piston and Air Pump Bucket, Elastic Metallic Packing, of which upwards of 7,000 are in use, Steam Drying Cylinders.

SALFORD IRON WORKS, MANCHESTER.

Silver Medal,



Paris, 1867.

C. DE BERGUE & CO.,
Engineers and Contractors,
10, STRAND, LONDON,

Silver Medal,



Paris, 1867.

Manufacturers of

Iron Bridges, Girders, Roofing, Punching and Shearing Machines (Horizontal and Vertical), Plate Mill Shears, Girder Rivetting Machines, Rivet Making Machines, Rivet Dressing Machines, Rail Straightening and Punching Machines, Bending, Curving, and Blocking Machines, Cast Iron Patent Permanent Way, Rail Levellers.

STRANGWAYS IRON WORKS, MANCHESTER.

WAUNTREODA WORKS, CARDIFF. TAY BRIDGE WORKS, NEWPORT, DUNDEE.

No. 470, British Section, Machinery Hall, where the principal Machines can be seen in motion, and Illustrated Catalogues obtained.

Ingenieure und Bauunternehmer,
Constructeurs

Eiserner Brücken, Brückenträger, Eiserner Dachstühle, Mechanischer Blechscheer- und Blechlochmaschinen, horizontal und vertical; Blechscheeren für Walzwerke, Nietmaschinen, und Maschinen zur Fabrikation von Nieten und Bearbeitung deren Köpfe; zum Richten und Lochen der Schienen, sowie zum Biegen und Pressen. Patentirte Schienenhebel. Guss-eiserner patentirter Oberbau.

STRANGWAYS IRON WORKS, MANCHESTER.
WAUNTREODA WORKS, CARDIFF.
TAY BRIDGE WORKS, NEWPORT, DUNDEE.

No. 470 der Britischen Abtheilung, in der Maschinen-Halle, woselbst man die hauptsächlichsten Maschinen in Bewegung sehen, und illustrierte Kataloge erhalten kann

Ingénieurs Mécaniciens,
Fabricants de

Ponts en fer, poutres et combles en fer, de machines à poinçonner, de cisailles pour barres et tôles, horizontales et verticales, Cisailles pour laminoir, Machines à river, Machines pour faire des rivets, Machines pour ébarber les têtes des rivets, Machines pour redresser et poinçonner les rails, Machine à cintrer et bloquer; Traverses pour chemins de fer en fonte brevetée, Niveleurs brevetés pour voies ferrées.

STRANGWAYS IRON WORKS, MANCHESTER.
WAUNTREODA WORKS, CARDIFF.
TAY BRIDGE WORKS, NEWPORT, DUNDEE.

No. 470, Section Britannique, Galerie des Machines ou on peut voir fonctionner les principales machines et recevoir des catalogues illustrés.



GREEN'S PATENT IMPROVED FUEL ECONOMISER,



A NATURAL APPENDAGE TO STEAM BOILERS.

Heats the Feed Water with the Residual or Waste Heat from the boilers to a Temperature considerably above boiling.

Saves 20 to 25 per Cent. of the Fuel.

Contributes greatly to the Durability of the Boilers.

Is not liable to get out of Repair.

All Particulars and References may be obtained of the Patentees and Sole Makers.

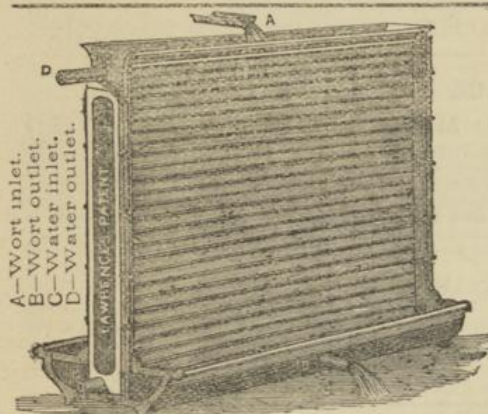
EDWARD GREEN AND SON, 14, ST. ANN'S SQUARE, MANCHESTER;
OFFICES ALSO AT LONDON, GLASGOW, AND DÜSSELDORF.
WORKS, WAKEFIELD.

Has been in Operation to every description of boiler for more than 12 years.

Is now Applied to 65,000 Steam Boilers, representing about 2,500,000 horse-power, in this country and on the continent.

Can be applied without Stoppage to new or old Boilers.

Has become an Indispensable in the manufacturing districts.



Wonderful Discovery for Cooling Worts, for Preserving Milk, Purifying Water, Condensing Steam, &c.

LAWRENCE'S Patent Capillary Refrigerator

Which has obtained numerous Prize Medals, may be seen at the Stand, No. 515, Class XIII. and XVIII., and in use at the British Club at the Exhibition.

This Refrigerator is constructed of corrugated copper. Its wonderful efficiency is due to the capillary action of the corrugated surfaces, over which the hot liquid flows in a thin film, while the cooling water (also in a thin film), passes internally in a diametrically opposite direction.

LAWRENCE & CO.,
Brewers' Engineers, Architects, Contractors, and Manufacturers of every description of Brewery and Distillery Plant.

Head Offices: 14, St. Mary Axe, London, E.C.

ALEXR. WILSON & CO., Engineers,
VAUXHALL IRON WORKS, WANDSWORTH ROAD, LONDON. S.W.,

MANUFACTURERS OF
THE "VAUXHALL DONKEY PUMPS,"
AIR PUMPS FOR PRESSURE & VACUUM,
Valves and Fittings of every Description.
PRIZE MEDALS, HAVRE AND NAPLES MARITIME
EXHIBITIONS.

The special attention of Manufacturers is called to the "VAUXHALL DONKEY PUMPS," which only require to be better known to make them indispensable requisites in all Factories, for Feeding Boilers, as well as pumping Water or other Liquids. They are quite independent of any other mechanism, and are easily fixed.

Over 3000 of these Pumps are now in use on board Yachts and Steamships, in Breweries, Distilleries, Tanneries, Paper Mills, Cotton, Woollen, and other Spinning Mills, Bleach-works, Dye-works, Chemical Works, Saw Mills, Collieries, Iron-works, Mines, and many other places where steam is used.

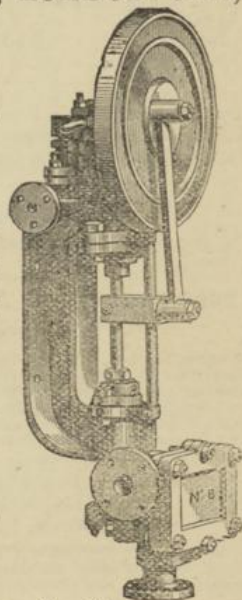
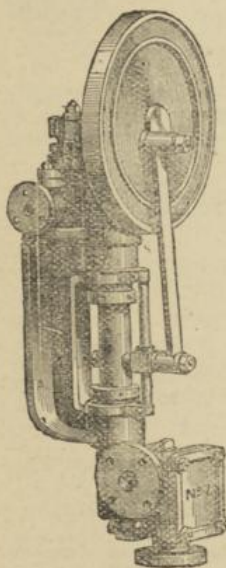
REVISED PRICE LIST.

Size.	Diameter.	Stroke.	Gallons thrown per hour.	Horse-power of boiler supplied.	Price
4	1 1/2	2 1/2	120	8	7 10 0
5	1 3/4	3	200	12	10 0 0
6	2	4	300	20	18 0 0
7	2 1/2	4	450	30	15 0 0
*8	2 3/4	4	700	40	17 10 0
9	3	6	1000	60	20 0 0
*10	3 1/2	6	1500	100	22 10 0
*12	4	6	2000	120	30 0 0

Those marked (*) are double-action.

SOLE AGENT FOR THE AUSTRIAN EMPIRE:

JOSEF OESTERREICHER, Akadamiestrasse No. 3, Vienna.



Established 1844.

WHITLEY PARTNERS, RAILWAY WORKS, LEEDS, ENGLAND, ENGINEERS, FOUNDERS, AND LICENSEES.

MAKERS, BY SPECIAL MACHINERY, OF PATENTED MECHANICAL INVENTIONS.

*Contractors to the European and Colonial Governments and Corporations.***AWARDED**

The First Prize Medal at the Exposition Universelle, Paris, 1867,

"For Improved Construction, Excellence of Material, and Superior Workmanship;"

TWO GRAND GOLD Medals at the Moscow Universal Exhibition, 1872.

Also the First Prize Medals at Leeds and Lyons in 1858, 1868, & 1872.

MERCHANTS AND SHIPPERS OF MACHINERY, METALS, AND HARDWARE.
FOREIGN AND COLONIAL INDENTS AND ORDERS EXECUTED ON COMMISSION.*Illustrated descriptive Price Lists and Estimates free on application.*

Correspondence in English, German, and French.

Samples of Specialties may be inspected at Stand No. 542, Group XIII., in the English Machinery Annexe.
(For list of same, see Catalogue of "British Section," Group XIII.)

SEVEN SILVER MEDALS AWARDED TO HAYNES & SONS, LONDON.

THE NEW PATENT TRIPLE-TUBE HYDRONETTE,

*Unrivalled for Ease of Action, Simplicity, and Force, for Watering Plants in Gardens,
Hothouses, Washing Windows, Extinguishing Fires, &c., &c.***ADVANTAGES.**

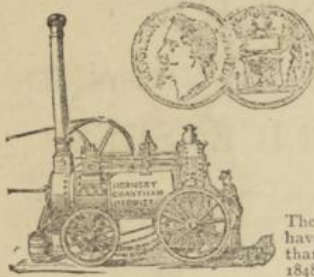
1. No possible leakage, however much the Machine may be used.
2. Simplicity of readjustments, no skill required.
3. Ready access to all parts of the Machine.
4. Freedom from all adhesion, or setting of the plunger in the stuffing box, after disuse.
5. Protection of the working barrel by the outer casing tube

MADE IN FIVE SIZES, FROM 8*h.* 50 TO 20*h.***THE SYREILEON, OR HOSE BARROW,***For Coiling and Uncoiling Long Lengths of Garden Hose.*

IN SIZES TO CARRY FROM 60 FEET TO 200 FEET OF HOSE

May be seen in Action, and Catalogues obtained—Machinery Hall, Stand 529.

R. HORNSBY & SONS.



PRIZE MEDALS

AT THE

LONDON AND PARIS EXHIBITIONS.



The Royal Agricultural Society of England have awarded more First Prizes to these than to any other portable Engines, from 1848 to their withdrawal from competition.



At the last Trials, conducted by the Royal Agricultural Society of England, decisive for five years, against the leading machines in the world,

R. HORNSBY & SONS' MOWERS AND REAPERS

GAINED SEVEN PRIZES AND TWO HIGH COMMENDATIONS, VIZ.:-

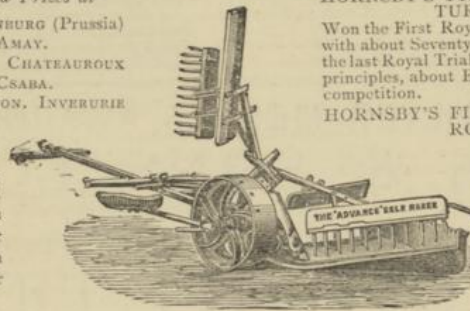
FIRST PRIZE OF £25 TO SELF-RAKER.
Second Prize of £20 to Self-Raker.
High Commendation to Self-Raker.
High Commendation to Self-Raker.
FIRST PRIZE OF £20 TO "PARAGON" MOWER.
HIGHEST AND ONLY PRIZE OF £10 TO "PARAGON"
COMBINED MACHINE, as a Combined Machine
with Manual Delivery.

FIRST PRIZE OF £12 TO "PREMIER" BACK-DELIVERY
REAPER.
Second Prize of £10 to "Premier" Back-Delivery
Reaper.
Prize of £15 to Swathe Delivery Reaper.
HIGH COMMENDATION TO NEW PATENT KNIFE
SHARPENER.

Gold and Silver Medals and Prizes at

SCOLNOK. ERCSINY. QUEDLINBURG (Prussia)
ALTONA. NAMUK. AMAY.
CHAMANT, near Senlis (France). CHATEAUXROUX
SANTIAGO DE CHILL. CSABA.
ALTENBURG. EDINBURGH. BOLTON. INVERURIE

R. H. & SONS have been awarded for Mowers and Reapers by the Royal Agricultural Society of England three times as many First Prizes as any other maker, and nearly as much money in prizes as all other mowing makers together.



HORNSBY'S FIRST ALL ENGLAND PRIZE TURNIP CUTTERS

Won the First Royal Prize at Bury, in competition with about Seventy Machines, and the First Prize at the last Royal Trial at Oxford, beating all the leading principles, about Eighty Machines being entered for competition.

HORNSBY'S FIRST ALL ENGLAND PRIZE ROOT PULPERS

Gained at the Bury Trials of the Royal Agricultural Society of England, the whole of the Prize Money for Hand-power Machines, and the First Prize for the best Power Pulper; also the First Prize for the best Power Pulper, and the First Prize for the best Hand Pulper, at the last Royal Trial at Oxford, after severe tests against all the leading makers.

HORNSBY'S FIRST ALL ENGLAND PRIZE DRILLS

Of every kind, and with all Patent Improvements, have won Thirty-three First Prizes at the Royal Agricultural Society of England at Trials of Makers.

HORNSBY'S FIRST ALL ENGLAND PRIZE DOUBLE FURROW PLOUGHS,

Which gained the Two First Prize Silver Cups, value £10 each at the Great All England Ploughing Contest at Reepham, Sept. 27 & 28, 1871, beating Messrs. Howard, Ransomes, Sims & Head, Fowler, Cooke, Ball, Mel-lard, etc., and proving themselves the strongest, simplest, most efficient, and lightest in draught of any.



HORNSBY'S FIRST ALL ENGLAND PRIZE IRON PLOUGHS.

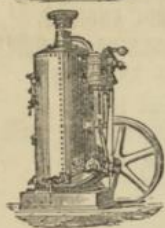
Now known everywhere as the Standard Implement of the day. Gained the First Prize as the best Plough for Light Land, and the First Prize as the best Plough for Heavy Land, at the Great Royal Warwick Trials, and have since maintained their position by gaining Hundreds of Prizes from various Local Societies, including 23 Champion Prizes against Messrs. J & F. Howard, and 15 in succession against Messrs. Ransomes and Sims

HORNSBY'S NEW ROYAL FIRST PRIZE CORN SCREENS.

Which obtained the Prize of £10, being the whole amount offered for Corn Screens, at the last Bury Trials of the Royal Agricultural Society of England, against Roby's, Ransome's, Penny's, Nalder's, and Coleman's principles; and were since Commended by the Royal Judges at the Oxford Meeting, when no Trials of Screens took place.

Illustrated Catalogues gratis and post free on application to
Spittlegate Iron Works, Grantham, England.

ROBEY & COMPANY (LIMITED), LINCOLN, ENGLAND,



AGRICULTURAL AND GENERAL ENGINEERS,

MANUFACTURERS OF

Superior Portable Steam Engines, exceedingly strong and durable, and especially constructed to effect great economy in the consumption of fuel.

Exclusive Manufacturers of Threshing Machines, with Patent Iron Frames, specially designed to withstand the effects of Dry Climates, whereby greater durability, as well as less wear and tear, is secured.

Vertical High Pressure Steam Engines, with Patent "Field" Boiler combined. Unequaled for excellence of workmanship and economy in consumption of fuel. These engines require no masonry foundations.

Superior Horizontal Fixed Steam Engines, erected on Strong Foundation Plates, suitable for Mines, Mills, and Factories.

Improved Fixed and Portable Corn Grinding Mills, admirably adapted for Grinding all kinds of Grain.

Office during Exhibition.—See No. 567, Group XIII., Agricultural Department.

Landwirthschaftliche und Allgemeine Ingenieure,

FABRIKANTEN VON

Vortreflichen, transportablen Dampfmaschinen, ausserordentlich stark und dauerhaft, und hauptsüchlich so construirt dass eine grosse Ersparniss an Brenn-Material erreicht wird.

Ausschliessliche Fabrikanten von Dampf-Dreschmaschinen mit Patentirtem Rahmen aus Winkel-Eisen gemacht, welche überhaupt für heisse Klimaten bestimmt sind, indem eine grössere Festigkeit und Dauerhaftigkeit gesichert wird, was bei den Maschinen aus Holz gebaut nicht der Fall ist.

Aufrechtstehende, Hoch-Druck Dampfmaschinen mit Patent „Field“ Kessel verbunden. Was die Vollkommenheit der Arbeit, sowie die Qualität des Materials und Ersparnisse an Brenn-Stoffen anbelangt, bleiben diese Maschinen noch immer unübertroffen. Sie benöthigen keine Fundamente von Mauerwerk.

Vorzügeliche fest liegende Dampfmaschinen auf starkea Fundament platten montirt, sind für Kohlen-Gruben, Mühlen aller Art, und Fabriken sehr geeignet.

Verbesserte feste und transportable Getreide Mühlen, welche für Körner aller Sorten völlig adaptirt sind.

Comptoir während der Ausstellung wird man in Landwirthschaftlicher Abtheilung No. 567, Gruppe XIII., finden.

Ingenieurs-Constructeurs de Machines Agricoles et autres,

CONSTRUCTEURS DE

Machines à Vapeur Locomobiles, combinant simplicité et solidité, et construites spécialement en vue de réaliser une grande économie de combustible.

Seuls fabricants de Machines à Battre à ossature en fer, brevetées, pour exportation dans les pays chauds et établies dans d'excellentes conditions de Solidité et de Durée.

Machines Verticales demi-fixes, à Haute Pression, avec chaudières système "Field." Ces machines au point de vue du fini de leur construction et de l'économie du combustible sont sans rivales.

Machines à Vapeur horizontales montées sur plaque de fondation en fonte pour Exploitations de Mines, Minoteries, et autres Industries.

Moulins à blé, perfectionnés, fixes et portatifs, s'adaptant à la mouture de toutes sortes de grains.

Office pendant l'Exposition.—Voir No. 567, Groupe XIII., Département de l'Agriculture.

Ingenieros y Fabricantes de Maquinas para Agricultura especialmente los signentos.

Maquinas de Vapor Portátil Perfeccionados. Estas son muy fuertes y duraderos, facilisimas de manejar, de construccion sencilla, y especialmente contruidos para economizar el combustible.

Maquinas de Trillar, con sus cuadros hecho de fierro forjado (en lugar de madera) especialmente buenos para los paises calientes. Estas maquinas son muy fuertes, duran mucha mas tiempo que los de madera y necessitan menos poder para funcionarlos. Los Sres Robey y Cia son los unicos fabricants destes maquinas.

Maquinas de Vapor Verticales Fijas Con Calderas del patente del Sur "Field," son sin igual para la bondad de su construccion y economia de combustible. Estas maquinas no necesitan fundicion de piedra.

Maquinas de Vapor Horizontales Fijas Colocados entiramente sobre una plancha de fondo de fierro colado. Muy apropiado para Minas, Molinas, de Harino, &c.

Molinos de Granos perfeccionados Portátiles y Fijas admirablemente adaptado para moler todes clases de granos.

Oficina durante el tiempo de la Exposicion Numero 567, Grupo XIII., Departamento de la Agricultura.

RUSTON, PROCTOR & CO., LINCOLN,

Maschinen-Fabrikanten

Verfertigen als ihre
Spezialität,

TRANSPORTABLE, HALB-TRANSPORTABLE, FESTSTEHENDE HORIZONTALE UND VERTICALE DAMPFMASCHINEN, DAMPF-DRESCH-MASCHINEN, KUKURUZREBLER, GETREIDE-MÜHLEN, CIRCULAR-SÄGEN UND DAMPF-PUMPEN.

Für

Erprobte Vorzüglichkeit

Wurden ihnen nahezu HUNDERT GOLD u. SILBER MEDAILLEN, nebst Geldpreisen zuerkannt an den verschiedenen Internationalen Ausstellungen, einschliesslich derjenigen von LONDON, PARIS, ST. PETERSBURG, WIEN, RIGA, COLN, BRÜSSEL, HAAG, HAMBURG, LILLE, NEAPEL, LYON, GOTHENBURG, SANTIAGO, CORDOVA, LIMA, MELBOURNE, CZERNOWITZ, CARLSRUHE, u. s. w.

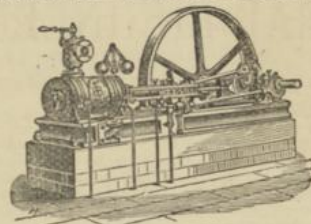
R., P. & Co. haben bis jetzt allein ÜBER DREI TAUSEND LOCOMOBILEN geliefert, von denen alle den SPEZIELLEN BEDÜRFNISSEN der verschiedenen Länder angepasst wurden und nun in ALLEN WELTGEGENDEN zur vollständigen Zufriedenheit ihrer Besitzer arbeiten.

Kaufliebhaber werden darauf aufmerksam gemacht, dass obige Locomobilen UNERREICHT DASTEHEN in Bezug auf grosse Kessel- und Cylinder-Dimensionen, STÄRKE der arbeitenden Theile, EINFACHHEIT der Construction, QUALITÄT von Material und Arbeit, sowie ELEGANTE AUSSTATTUNG und LEISTUNGSFÄHIGKEIT.

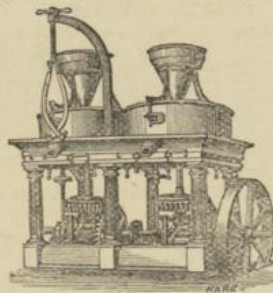
Kataloge und jede wünschbare Auskunft stehen auf Verlangen zu Diensten.



PORTABLE AND SEMI-PORTABLE STEAM ENGINES.



VERTICAL FIXED STEAM ENGINES.



FLOUR MILLS.



THRASHING MACHINES & MAIZE SHELLERS.

Engineers,
Manufacture as their
Speciality,

PORTABLE & SEMI-PORTABLE STEAM ENGINES, FIXED HORIZONTAL AND VERTICAL ENGINES, STEAM THRASHING MACHINES, MAIZE SHELLERS, FLOUR MILLS, SAWING MACHINERY AND STEAM PUMPS.

For

Superior Excellence

They have had awarded, nearly ONE HUNDRED GOLD & SILVER MEDALS, besides Money Prizes, at the various International Exhibitions, including those of LONDON, PARIS, ST. PETERSBURG, VIENNA, RIGA, COLOGNE, BRUSSELS, THE HAGUE, HAMBURG, LILLE, NAPLES, LYONS, GOTHENBURG, SANTIAGO, CORDOVA, LIMA, MELBOURNE, CZERNOWITZ, CARLSRUHE, &c.

R., P. & Co. have already delivered of their renowned Portable Engines UPWARDS OF "THREE THOUSAND," all of which, having been SPECIALLY ADAPTED to suit the requirements of the several Countries, are now working in ALL PARTS OF THE WORLD with satisfaction.

Buyers are invited to notice that for LARGE ALLOWANCE of POWER, STRENGTH of wearing parts, SIMPLICITY of construction, FIRST QUALITY of material and workmanship, HIGH FINISH and EFFICIENCY in actual working, the above Engines are UNRIVALLED.

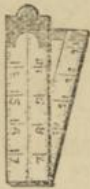
Catalogues and fullest information on application.

SAWING MACHINERY, STEAM PUMPS, &c., &c.

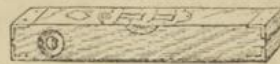
GRAND SILVER MEDAL, MOSCOW, 1872.

JOHN RABONE & SON,
MAKERS OF

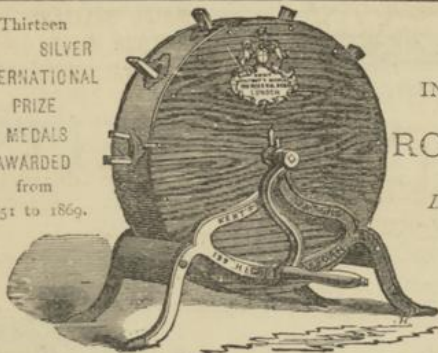
BOXWOOD, IVORY, BRASS, & STEEL RULES;
MEASURING TAPES,
WITH STEEL, METALLIC WIRE, AND LINEN TAPES;
SPIRIT LEVELS, ETC.



WHITMORE STREET, HOCKLEY, BIRMINGHAM.



Thirteen
SILVER
INTERNATIONAL
PRIZE
MEDALS
AWARDED
from
1851 to 1869.



G. KENT,

INVENTOR, PATENTEE & MANUFACTURER

OF THE

ROTARY KNIFE CLEANER,

AND VARIOUS OTHER

DOMESTIC LABOUR-SAVING INVENTIONS,

All promoting Economy, Cleanliness, Comfort, and the
better performance of Household Work.

199, 200, 201, HIGH HOLBORN, |
LONDON.

GRAY'S "ANGLESEY" ARTIFICIAL LEGS,

Recommended above all others by the most eminent Members of the Medical Faculty.

These Legs were worn by the late Field Marshal the MARQUIS OF ANGLESEY, K.G., who lost his leg at the Battle of Waterloo, and whose walking and riding excited, equally, the astonishment and admiration of all beholders.

Mr. PHILIP GRAY,

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SUCCESSOR to his Brothers, WILLIAM GRAY (deceased), and FREDERICK GRAY (retired), whose high reputation, as inventors and makers of Artificial Limbs, is too well known and appreciated to require comment.

Mr. P. GRAY has been or upwards of twenty years a Pupil and Partner with his Brother, FREDERICK GRAY, and for the last ten years principal working Partner in the late Firm of F. & P. GRAY, at the above address; he was constructor to the late Colonel Sir THOMAS ST. VINCENT TROUBRIDGE, BART., K.C.B., who lost both legs at the Battle of Inkermann, and yet was enabled, by means of these Artificial Limbs, to ride and walk with ease and facility.

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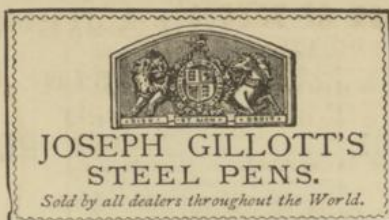
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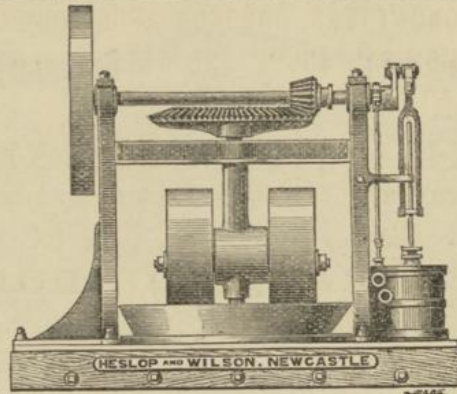
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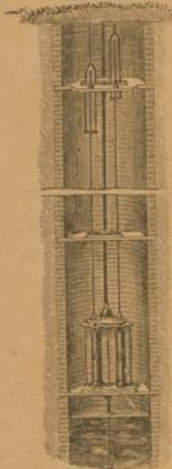
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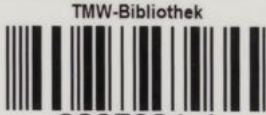
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