

VIENNA UNIVERSAL EXHIBITION,
1873.

ILLUSTRATED APPENDIX,

CONTAINING

DESCRIPTIVE NOTICES

AND

ADVERTISEMENTS.

J. M. JOHNSON & SONS,
PRINTERS AND PUBLISHERS TO THE BRITISH ROYAL COMMISSIONERS,
3, CASTLE STREET, HOLBORN, AND 56, HATTON GARDEN,
LONDON.

THE HISTORY OF
THE BRITISH EMPIRE
IN ILLUSTRATED VOLUMES
WITH A HISTORY OF
THE UNITED STATES
AS AN APPENDIX
BY
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NEW YORK HERALD,
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LITERARY EDITOR OF THE
NEW YORK DAILY HERALD,

Alphabetical Index to Descriptive Notices, &c.

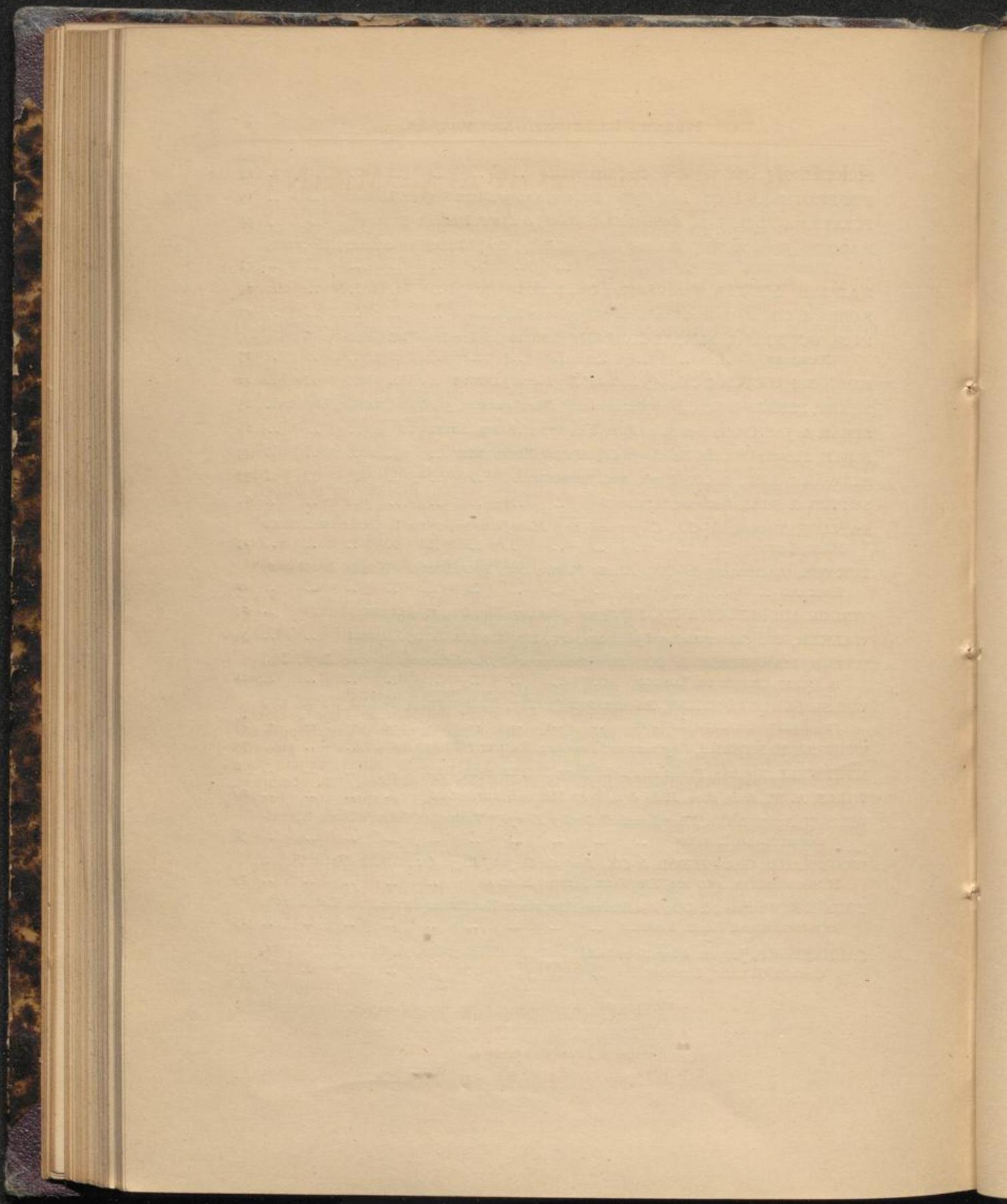
	PAGE
ADAMS, J., <i>Furniture Polish</i> , VICTORIA PARK, SHEFFIELD	15
BALDWIN, E. P. & W., <i>Charcoal Sheet Iron, &c.</i> , WILDEN IRON WORKS, NEAR STOURPORT	30
BARTLETT, W., & SONS, <i>Needle and Fish Hook Manufacturers</i> , ABBEY NEEDLE MILLS, REDDITCH	25
BARTON, JAMES, <i>Patent Stable Fittings</i> , 370, OXFORD STREET, LONDON	12
BERGUE, C. DE, & CO., <i>Engineers and Contractors</i> , 10, STRAND, LONDON	37
BOND, M. A., (now Hickisson), <i>Marking Inks, &c.</i> , 75, SOUTHGATE ROAD, LONDON	13
BORWICK, G., & SONS, <i>Baking Powder</i> , CHISWELL STREET, LONDON	18
BRADBURY & CO., <i>Sewing Machine Makers</i> , OLDHAM, NEAR MANCHESTER. (Inside Front Cover.)	11
BRADFORD, T., & CO., <i>Washing Machinists and Laundry Engineers</i> , 63, FLEET STREET, LONDON	37
BRINSMEAD, JOHN, & SONS, <i>Pianos</i> , 18, WIGMORE STREET, LONDON	46
BRITISH SEAWEED COMPANY, LIMITED (THE), <i>Pure Chemicals</i> , 154, WEST REGENT STREET, GLASGOW	11
BROOK, JONAS, & BROTHERS, <i>Sewing, Crochet, and Embroidery Cottons</i> , MELTHAM MILLS, NEAR HUDDERSFIELD	21
BROWN & CO., <i>Iron Boiler Tubes, &c.</i> , THE WEDNESBURY TUBE WORKS, WEDNESBURY, STAFFORDSHIRE	26
BURNLEY & CO., <i>Tanks, &c.</i> , MILLWALL DOCKS, LONDON	26
CARTER, JAMES, & CO., <i>Seedsmen</i> , 237 AND 238, HIGH HOLBORN, LONDON	11
COATS, J. & P., <i>Sewing, Tatting, and Crochet Cottons</i> , FERGUSLIE WORKS, PAISLEY	20
CHATWOOD, S., <i>Invincible Safes</i> , LANCASHIRE SAFE AND LOCK WORKS, BOLTON	32
COCKER BROTHERS, <i>Steel, Steel Wire, &c.</i> , SHEFFIELD	29
DAVIES, M. H., <i>Iron Roofs, Workshops, &c.</i> , GRANGE ROAD, BERMONDSEY	12
DAVIS, J. C., "Excelsior" <i>Knife Cleaner</i> , 69, LEADENHALL STREET, LONDON	45
DERHAM, JOHN J., <i>Steam Engines, &c.</i> , BLACKBURN, LANCASHIRE	35
EDWARDS & TODD, <i>Magic Tincture</i> , 16, ROBERTSON STREET, HASTINGS	44
ENGERT & ROLFE, <i>Felt for Roofing</i> , POPLAR NEW TOWN, LONDON	19
ESTEY & CO., <i>Cottage Organs</i> , BRATTLEBORO', VERMONT, U.S.A.	46
EVERITT ALLEN & SONS, <i>Brass Tubes, Wire, &c.</i> , BIRMINGHAM	33
FIELD, J. C. & J., <i>Patent Ozokerit Candles, &c.</i> , LAMBETH MARSH, LONDON	14
FRODSHAM, C., & CO., <i>Watches, Chronometers, &c.</i> , 84, STRAND, LONDON	46
GIBBS, JAMES, & COMPY., <i>Manures, &c.</i> , 16, MARK LANE, LONDON	10
GILLOTT, JOSEPH, <i>Steel Pens</i> , BIRMINGHAM	45

	PAGE
GLEN-COVE COMPANY, <i>Maisena, Starch, &c.</i> , NEW YORK, U.S.A., AND 33, EASTCHEAP, LONDON	48
GRAY, PHILIP, "Anglesey" Artificial Legs, 7, CORK STREET, BURLINGTON GARDENS, LONDON	43
GRIESSELEICH, H., & CO., General Commission Merchants, 59, BASINGHALL STREET, LONDON	15
GOODALL, BACKHOUSE & CO., Yorkshire Relish, &c., BOAR LANE, LEEDS	17
GREEN, E., & SON, Patent Fuel Economiser, 14, ST. ANN'S SQUARE, MANCHESTER	38
HAYNES & SONS, "Hydronette," 227, EDGWARE ROAD, LONDON	39
HEAD, WRIGHTSON & CO., Pulleys, Blocks, Hoists, &c., STOCKTON-ON-Tees	36
HEMINGWAY, S., & CO., New Dry Soap, TRAFALGAR STREET, BRADFORD, YORKSHIRE ..	15
HORNSBY, R., & SONS, Mowers, Reapers, &c., SPITTLEGATE IRON WORKS, GRANTHAM ..	40
HOWE SEWING MACHINE COMPANY, THE, 150, CHEAPSIDE. (Outside Back Cover).	
HUNTLEY & PALMERS, Biscuit Works, READING..	16
HYNAM, JOHN, Plumbago Crucibles, TANNER'S HILL, DEPTFORD, KENT	33
INTERNATIONAL EXHIBITION, PHILADELPHIA, U.S.A., 1876	47
JACOBY, M., & CO., Valenciennes, Curtains, &c., STONEY STREET, AND BROADWAY, NOT- TINGHAM	22
JOHNSON & ELLINGTON, Hydraulic Cranes, &c., CHESTER	43
JOHNSON, J. M., & SONS, Chromo Printers and Show Tablet Manufacturers, 56, HATTON GARDEN, LONDON. (Inside Back Cover.)	
JOHNSON, MATTHEY & CO., Platinum Apparatus, HATTON GARDEN, LONDON	9
JONES, T. & J. H., EVANS & CO., Flannels, Tweeds, &c., NEWTOWN, NORTH WALES ..	19
KENT, G. B., & CO., Brushes, &c., 11, GREAT MARLBOROUGH STREET, LONDON ..	33
KENT, GEORGE, Rotary Knife Cleaner, 199 TO 201, HIGH HOLBORN, LONDON ..	44
KENYON, JOHN, & CO., Steel Converters and Refiners, SHEFFIELD.. . . .	27
KIRKSTALL FORGE COMPANY, LEEDS, YORKSHIRE	7
LAWRENCE, W., & CO., Patent Capillary Refrigerator, 14, ST. MARY AXE, LONDON ..	38
LLOYD, EDWIN, Portable and Villa Conservatories, HORTICULTURAL WORKS, GRANTHAM, LINCOLNSHIRE	12
MAIN, A. & J., & CO., Iron Bridges, &c., SCOTT STREET, PORT DUNDAS, GLASGOW.. . .	12
MATHER & PLATT, Bleaching, Printing, and Dyeing Machinery, &c., Salford Iron Works, MANCHESTER	37
MURRAY, G. W., Threshing Machines, &c., BANFF FOUNDRY, SCOTLAND	44
MYERS, A., & SON, Works of Art, &c., 171, NEW BOND STREET, LONDON	25
NORTHCOTE, S., & CO., Laces, Muslins, &c., 28 AND 29, ST. PAUL'S CHURCHYARD, LONDON	24
OCLEE, F. H., Surgeon Dentist, 31, NEW BAILEY STREET, Salford, MANCHESTER ..	45
ORME, FREDERICK, Noiseless Fans, &c., 70 AND 71, BISHOPSGATE STREET, LONDON ..	31
PATENT NUT AND BOLT COMPANY (LIMITED), Bolts, Nuts, &c., LONDON WORKS, NEAR BIRMINGHAM	26
PEARSON, J. G., & CO., Edge Tools, Saws, &c., HOPE WORKS, FURNACE HILL, SHEFFIELD	33
PELLATT & WOOD, Glass and China, 25, BAKER STREET, PORTMAN SQUARE, LONDON	46

INDEX TO ILLUSTRATED APPENDIX, &c.

v

	PAGE
PICKERING, J., <i>Polishing Paste, &c.</i> , SHEFFIELD	13
PIM BROTHERS & CO., <i>Irish Poplins</i> , DUBLIN, AND 30, MILK STREET, LONDON .. .	19
PULVERMACHER, J. L., <i>Galvanic Chain Bands, &c.</i> , 168, REGENT STREET .. .	44
RABONE, JOHN, & SON, <i>Boxwood and Steel Rules, &c.</i> , WHITMORE STREET, HOCKLEY, BIRMINGHAM	43
RATCLIFF & TYLER, <i>Brass Founders, &c.</i> , BIRMINGHAM	25
ROBEY & CO., <i>Agricultural and General Engineers</i> , LINCOLN	41
RUNCORN SOAP & ALKALI COMPANY (LIMITED), <i>Sodas, &c.</i> , THE OLD SOAP WORKS, RUNCORN	15
RUSTON, PROCTOR & CO., <i>Agricultural Engineers</i> , LINCOLN	42
SHARP, PERRIN & CO., <i>Manufacturers and Warehousemen</i> , 31, OLD CHANGE, LONDON..	25
SPEAR & JACKSON, <i>Steel Saws, Files, &c.</i> , ETNA WORKS, SHEFFIELD	28
SMITH, THOMAS OGILVIE, <i>Edinburgh Liquid Blue</i> , EDINBURGH	14
STEWART, S. R., & CO., <i>Combs, &c.</i> , ABERDEEN	33
SUTTON & SONS, <i>Seedsmen</i> , READING	11
TAPLING, THOMAS, & CO., <i>Carpet and Rug Manufacturers</i> , 1 TO 8, GRESHAM STREET WEST, LONDON	23
TURNER, ARCHIBALD, & CO., <i>Elastic Fabrics, &c.</i> , BOW BRIDGE WORKS, LEICESTER, ENGLAND	22
VIRGOE, MIDDLETON & CO., <i>Silk Squares, Scarves, Ties, &c.</i> , 17, ALDERMANBURY ..	24
WALKER, W., <i>Cabinet Maker, Upholsterer, &c.</i> , 119, BUNHILL ROW, LONDON ..	34
WELCH, MARGETSON & CO., <i>Manufacturers and Warehousemen</i> , <i>Scarves, Rugs, &c.</i> , 16 AND 17, CHEAPSIDE, LONDON	22
WELSH SLATE COMPANY, PALMERSTON QUARRY, RHIWBRYFDIR, NORTH WALES, AND 19, SPRING GARDENS, LONDON	34
WHITLEY PARTNERS, <i>Engineers and Founders</i> , RAILWAY WORKS, LEEDS	39
WHITWELL, THOMAS, <i>Patent Fire Brick Stove</i> , STOCKTON-ON-TEES	8
WILLS, A. W., <i>Hoes, Axes, Picks, &c.</i> , PARK MILLS, BIRMINGHAM	26
WILSON, ALEX., & CO., <i>The "Vauxhall Donkey Pumps," Vauxhall Iron Works</i> , WANDS- WORTH ROAD, LONDON	38
WOODWARD, GROSVENOR & CO., <i>Brussels Carpets, Rugs, &c.</i> , STOUR VALE MILLS, KIDDERMINSTER, AND 102, NEWGATE STREET, LONDON	19
YOUNGER, WILLIAM, & CO., <i>Ale Brewers</i> , ABBEY AND HOLYROOD BREWERIES, EDINBURGH, AND BELVEDERE ROAD, LONDON	19
ZAEHNSDORF, JOSEPH, <i>Monastic and Illuminated Bookbinding, &c.</i> , 36, CATHERINE STREET, COVENT GARDEN, LONDON	33



THE KIRKSTALL FORGE COMPANY,

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Iron Manufacturers, Engineers, Iron and Brass Founders.

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Also AXLES for ROAD CARRIAGES and WAGGONS.

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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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Group I.

No. 3.

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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.

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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.	In. In.	Ft.	In.	
For Cupolas in the Danks and Bessemer Processes	600	2	A	12	9	21	6	2,270
For Charcoal Furnaces	40	2	R	15	0	20	0	3,205
"	70 to 100	3	"	15	0	28	6	4,698
For Medium Bessemer, Oolitic and Anthracite Furnaces	150 to 200	3	C	18	0	28	6	7,212
Full-sized Bessemer, Raw Coal, or Coke	250	3	D	22	0	28	6	10,000
Full-sized Bessemer, Raw Coal, or Coke	400	4	"	"	"	"	"	£3,150
Hematite	400	4	"	"	"	"	"	£4,200
Oolitic	500	4	"	"	"	"	"	£4,200
"	600	5	"	"	"	"	"	£5,250
"	700	6	"	"	"	"	"	£6,300

For further information apply to HERR C. GOEDECKE, 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.**

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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.

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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.

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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 autogénement, 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-vingts 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.

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APPAREILS en PLATINE, pour les essais d'or, remplaçant les matras avec plus de précision, de rapidité et d'économie.

Ces Appareils, dont on enverra, sur demande, des descriptions détaillées, méritent l'attention de la Monnaie et des Bureaux d'Essais Etrangers.

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PEPISTE de PLATINE PUR, pesant 4,728 grammes, de forme parfaite (*on ne connaît qu'une seule pépite plus grosse que celle ci*); Minéraux de Platine de différentes localités.

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Métaux rares et précieux; Produits Chimiques et Métallurgiques.

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By Her
Majesty's



Royal
Letters Patent.

*Silver Medal
(highest Class),*



Havre Universal
Exhibition, 1868.

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and the "Société des Agriculteurs de France."

Offices: 16, MARK LANE, LONDON.

Works: LONDON, PLYMOUTH, NEWPORT, BRISTOL.

SOLE MANUFACTURERS OF

*Silver Medal
(highest Class),*



Havre Universal
Exhibition, 1868

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(Group II., Section i., Agricultural Hall.)

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.

B R A N D S .

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,

(Group II., Section i., Agricultural Hall.)

O F T H E B E S T Q U A L I T Y A N D I N T H E H I G H E S T C O N D I T I O N .

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.

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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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Export Agents:

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SUTTON'S HOME GROWN SEEDS.



THE ABOVE AWARDS HAVE BEEN MADE TO MESSRS. SUTTON FOR THE
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SUTTON'S GRASS SEEDS FOR ALL SOILS.

SUTTON & SONS are the only English Seedsmen appointed to supply Grass Seeds to the Imperial Austrian Commission, and the Grounds of the Vienna Exhibition have been sown with Seeds specially prepared by them for the purpose. MESSRS. SUTTON have also had the honour of supplying Her Majesty the Queen of England, and most of the Crowned Heads of Europe.

<i>Sutton's Prize Farm Seeds,</i> As see Models of Produce on MESSRS. SUTTON'S Stand in the British Section.	<i>Sutton's Choice Vegetable Seeds,</i> As see Models of Produce on MESSRS. SUTTON'S Stand in the British Section.	<i>Sutton's Showy Flower Seeds.</i> As Sown round H.R.H. the Prince of Wales's Pavilion at the Vienna Exhibition Prices and full Particulars Gratis and Post Free on application.
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TRADE MARK.

We wish it to be distinctly understood that,
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SPECIAL NOTICE.

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ROYAL BERKS SEED ESTABLISHMENT, READING, near LONDON, ENGLAND.

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JAMES CARTER & CO.,

SEEDSMEN

TO THE

Queen and the Prince of Wales.

THE LARGEST *bona fide* GROWERS OF SEEDS IN ENGLAND.

SEEDS for the FLOWER GARDEN;
SEEDS for the FARM;

SEEDS for the KITCHEN GARDEN;

As Harvested on CARTER & Co.'s Large Seed Farms.

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SAMEREIEN für BLUMENGARTEN;

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Auf den grossen Samereien-Baugutern der Herren

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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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PORTABLE VILLA CONSERVATORY.**

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Sashes, fixed in 6-ft. Bays, no Brick Wall
being required.*



*This Conservatory is prepared ready for
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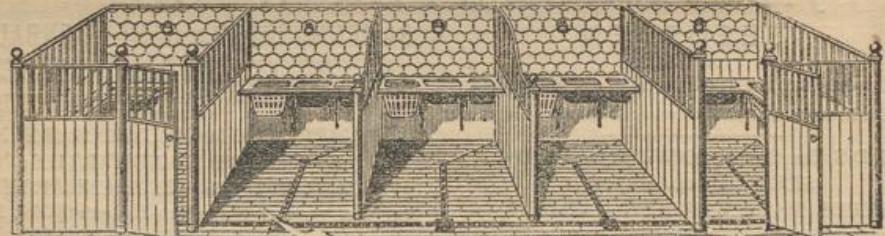
The above Illustration represents a small Conservatory, suitable for a Villa Residence, and is very economically constructed of a Combination Wood, Iron, Slate, and Glass, being designed especially for Cheapness and Portability.

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Special Plans prepared and forwarded, on receiving full particulars with Rough Sketch and dimensions.

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Iron Bridges, Telegraph Posts, Tanks, &c.
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**Needham's Polishing Paste**For Cleaning Brass,
Copper, and Britannia Metal Goods, &c.**Pickering's Razor Paste,**
For Sharpening Razors, &c.**Furniture Polish,**
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Plate Powder,

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Waterproof Harness Blacking.

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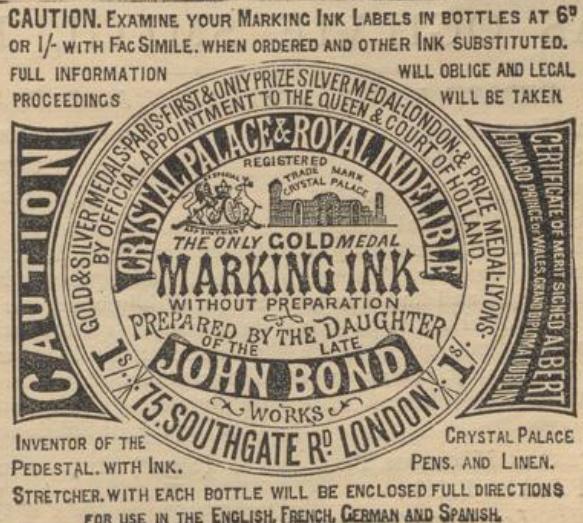
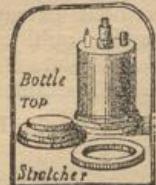
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MARK YOUR LINEN WITH

THE ONLY GOLD MEDAL MARKING INKS.

With each
Bottle is en-
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Directions in
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Crystal Palace
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COTTON, &c.,
with
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STENCIL
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Moscow, 1872.



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Patent OZOKERIT Candles,

Made in all sizes, very hard, white, and economical, resembling
in appearance the finest Bleached Beeswax.

Grand Gold Medal.

Moscow, 1872.



Grand Gold Medal.

PATENTEES AND SOLE MANUFACTURERS OF
“SELF - FITTING” and “WEDGE” CANDLES,
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.

sole Proprietors of the “UNITED SERVICE SOAP,” noted for the beauty
and durability of its perfume. Transparent and other Toilet Soaps of all kinds.

Full detailed Price Lists on application.

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THE EDINBURGH LIQUID BLUE,



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'EDIM-
BOURG,” 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
New Dry Soap**

Silver Medal,



Lyons Exhibition, 1872.

THE ONLY DRY SOAP

TO WHICH
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HAS BEEN AWARDED.

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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.

**RUNCORN SOAP AND ALKALI COMPANY, Limited,
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.

H. GRIESSELICH & CO.,

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Receive and Execute European and Colonial Orders for every description of British and Continental Goods, direct from the various factories of their Principals, from entire new stock, and at lowest market rates.

Terms:—London Credit, or Remittances. Correspondence—English, German, French. A general Price List on application.

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.

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**ADAMS'S
FURNITURE POLISH
SHEFFIELD**



Gold Medal awarded by the National Academy of Agriculture, Manufactures & Commerce Paris.

HUNTLEY & PALMERS, 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.

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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, dessgleichen in Fässern und Kisten in Entsprechung der Wünsche des Handels und der Verschiffer.

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Questi Biscotti sono fabbricati con le sostanze le più ricerchiati, loro grandi varietà di forme e di sapore, loro superiorità riconosciuta della fabbricazione le loro qualità di durabilità, hanno ottenuto a questi Biscotti una vendita enorma sempre crescerdo in Inghilterra, sul continente, ed in tutte le parti del Mondo in generale.

Sono imballati dentro le Casse di stagni contenendo 1 libra ciascuna e più; anche in casse è 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

Yorkshire6^d. 1/- & 2/- Bottles

CHEAPEST & BEST SAUCE IN THE WORLD

Relish.

SOLD EVERYWHERE !!

BEWARE OF SPURIOUS IMITATIONS.

PROPRIETORS, GOODALL, BACKHOUSE & CO., LEEDS.

Has the largest sale of any Sauce in the world.

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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.

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For painting Stove Grates, Chimney Corners, Bath Stoves, Iron, Tin, &c. In 6d. and 1s. bottles.

Goodall's Quinine Wine.Prepared with HOWARD'S QUININE. Acknowledged and highly recommended by many eminent physicians to be the *best and cheapest tonic yet introduced to the public.* In large bottles, 1s. and 2s. each.Extract from the *Food Journal*.—"An honest and useful preparation, containing a proper proportion of Quinine."From the *Anti-Adulteration Review*.—"A valuable tonic, and has become popular from its intrinsic goodness."

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Wentworth Lascelles Scott, Esq., F.C.S., F.A.S.L., F.R.S.S.A., &c.—"A pure, wholesome, appetising tonic, of agreeable flavour and reliable composition."

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G. B. & Co.'s Monthly Price Current of Drugs, Chemicals, Druggists' and Grocers' Sundries, free per post on application.

GOLD MEDAL,

HAVRE, 1868.

GOLD MEDAL,

PARIS SOCIETY OF ARTS.

BORWICK'S**BAKING POWDER,**

AWARDED

THREE MEDALS

For its superiority over all other Baking Powders, in raising light
and digestive

BREAD without YEAST

and rendering

FLOUR PUDDINGS and PASTRY**LIGHT, DELICIOUS AND WHOLESOME.**

This well-known Baking Powder is sold largely in most parts of the world, as well as in the United Kingdom, and the Proprietors have testimonials from the Queen's Private Baker, the Army and Navy, and Medical Men and Chemists of the highest standing.

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INDIA PALE AND STRONG ALE BREWERS,
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Asphalted Felt for Roofing, and for
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Sheathing Felts for putting under Metal,
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Irish Poplins and Silk Furniture, Brocatelles and Terrys.

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LONDON	1851.	LONDON	1862.	PARIS	1867.
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MANUFACTURERS OF

WHITE AND COLOURED REAL WELSH FLANNELS.

THE SNOWDON WHITTLE, AND KIMRIC TWEEDS.

Extracts from the Official Report on the London International Exhibition, 1871.

DIVISION II., PART VII.

Welsh Flannels, Page 26, "Messrs. T. & J. H. Jones & Co. Exhibit some real Welsh Flannels, which are of first-rate make, and fully sustain the well-deserved reputation of Welsh Flannels."

Woollen Shawls, Page 37, "Two very beautiful specimens of Shawls, one being white wool, the other the same material dyed scarlet, are exhibited by Messrs. T. & J. H. Jones & Co. No two specimens in the Exhibition show so perfectly the extreme purity which is obtainable in this material."

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BRUSSELS, WILTON, AND TOURNAY VELVET CARPETS AND RUGS
OF VARIOUS QUALITIES.

Works and Address—STOUR VALE MILLS, KIDDERMINSTER.

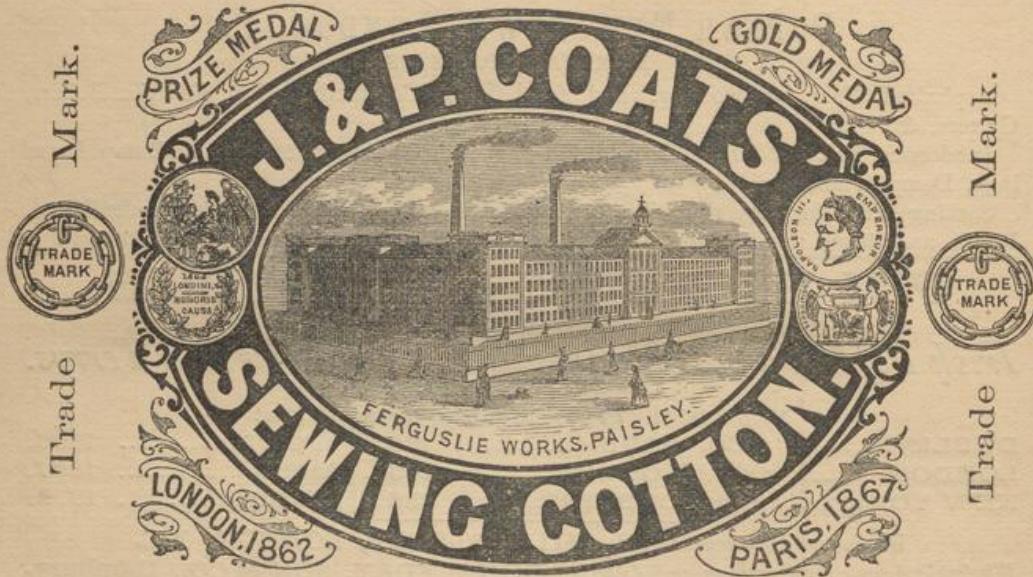
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J. & P. COATS,
SEWING, TATTING, AND CROCHET
Cotton Manufacturers,
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BEST SOFT SIX CORD COTTON,
Unsurpassed for either Machine or Hand Sewing.

EXTRA MACHINE GLACE COTTON.



CROCHET OR TATTING COTTON
OF THE FINEST QUALITY, in SKEINS or on REELS.
TO BE HAD OF ALL WHOLESALE AND RETAIL DRAPERS.

WHOLESALE AGENTS.

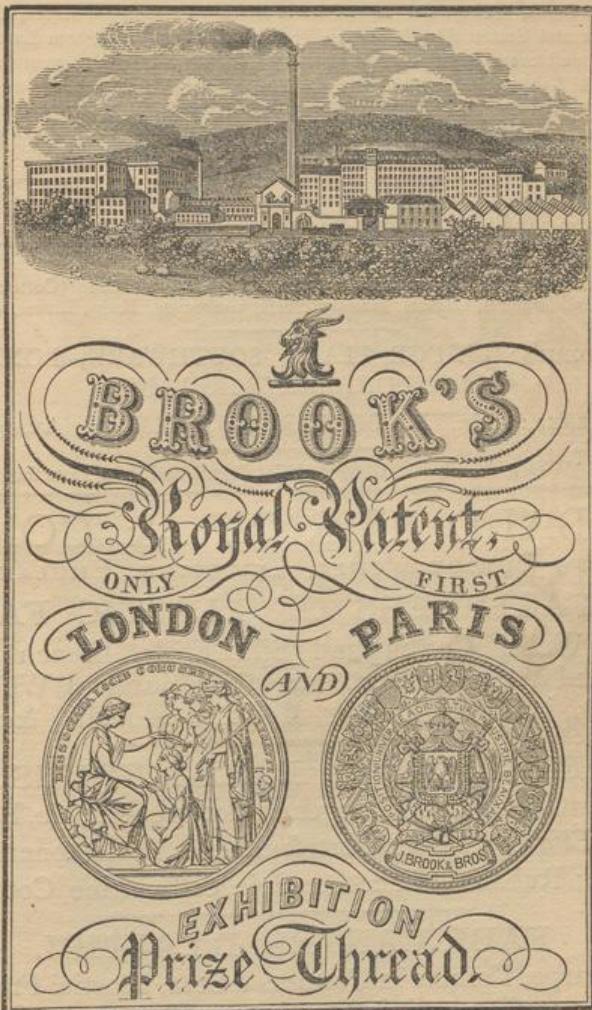
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BROOK'S PATENT GLACE THREAD,

For Hand and Machine Work.



BROOK'S SUPERIOR SIX - CORD,

For Hand and Machine Work.

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The Only First-class Medal	PARIS, 1855.
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Gold Medal	PARIS, 1867.

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STONEY STREET, AND BROADWAY, NOTTINGHAM,
Manufacturers, Merchants, and Shippers.

The Exhibitors manufacture a large variety of patent Valenciennes, and call particular attention to their new imitation real Valenciennes, with patent twisted purls, also to their new patent embossed imitation of hand-made Swiss Curtains. In effect and strength these Curtains are superior to any machine-made Curtains hitherto produced. They also manufacture Black Silk Guipure Laces, Cotton Maltese Laces, Cambrian Laces, Silk and Cotton Shawls and Veils; Lace Tunics, Nottingham Lace Curtains and Vitrage Nets, Antimacassars, and every description of Plain and Fancy Nets; and manufacture and supply all kinds of machine-made Laces, suitable for Home, Continental, and Transatlantic consumption.

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MANUFACTURERS AND WAREHOUSEMEN.
 16 & 17, CHEAPSIDE, LONDON.

Specialities in Gentlemen's Scarfs, Ties, Mufflers, Collars, Shirts, Shirtings (Cotton, Woollen, and Silk), Silk Handkerchiefs, Cambric Handkerchiefs, Umbrellas, Rugs, Braces, &c., &c.

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 LONDONDERRY, IRELAND.

AGENT IN VIENNA: MR. R. POHORSCHELEK, 3, AKADEMIE STRASSE.

Established 1826. Wholesale only. Illustrated Catalogues and Price Lists forwarded on application.

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MANUFACTURERS OF ELASTIC FABRICS.

Boot Gusset Webs, Cotton and Silk Frills, French Webs, Pocket Book Webs, and Webs for Portemonnaies; Surgical Webs; Cords and Braids, in Silks, Lustres, Cottons, Mohairs, &c., &c.

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Elastiques pour Chaussures, Franges en Coton et en Soie, Élastiques Français, Cordons Élastiques pour Portefeuilles et Portemonnaies; Élastiques pour Chirurgie; Rubans et Lacets en Soie, en Lustre, Coton, Mohair, etc.

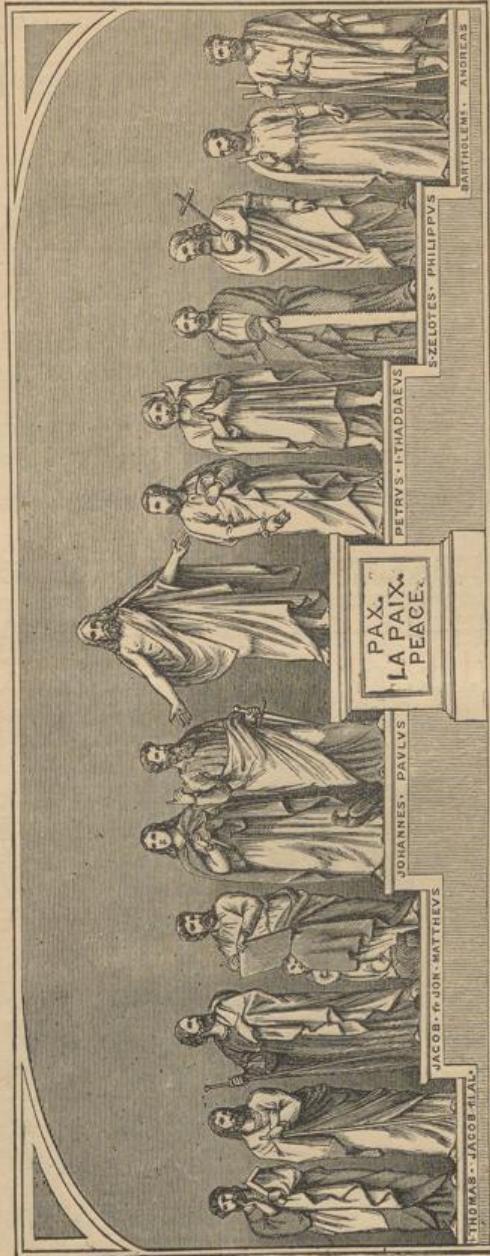
FABRICANTES D'LASICI.

Elastici per Scarpe, Francie in Cottone, e Seta, Elastici Francesi, Cordoni Elastici per Portfogli, e Valigi; Elastici per Chierurgia, Orlatura in Seta, Lustrata, Cottone, Mohairs, ez., ez.

MR. ARCHIBALD TURNER, the head of this firm, was the first to introduce Vulcanized India Rubber Thread into woven and braided fabrics. This invention was introduced to the public in the year 1847, and for many years he and the firm (of which he still continues the head) had the whole control of this production, during which time they introduced the well-known elastic fabrics, consisting of cords, braids, loom webs, garter webs, belt webs, brace webs, stay webs, frills, webs for surgical purposes, and gusset webs for boots and shoes.

CATALOGUE OF THE BRITISH SECTION.—APPENDIX.

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CARPET AND RUG MANUFACTURERS,
Also Manufacturers of TAPESTRIES for CHURCH DECORATION,
AND OTHER ECCLESIASTICAL PURPOSES.
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THOMAS TAPLING ET CIE.,
FABRICANTS DE TAPIS ET COUVERTES,
Et Fabricants de TAPISSERIES pour DÉCORATION D'ÉGLISES,
ET À L'USAGE DES ECCLÉSIASTIQUES.
DE 1 A 8, GRESHAM STREET WEST, LONDON, E.C., ET GLASGOW.

VIRGOE, MIDDLETON & CO.,
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 MANUFACTURERS.

*SPECIALITÉ FOR SILK SQUARES, SCARFS, AND TIES,
 of the Highest Class and Finest Description, in every variety of
 Shape, Make, and Style.*

Cambric Handkerchiefs.

White and Printed Bandannas.

Surats and Brocades.

Twills, Plain and Printed.

Silk and Woollen Cachenez.

Collars, Wristbands, and Shirt Fronts.



Braces, Garters, &c.

Flannels and Flannel Shirts.

Oxford, Sea Island, Twill, and Egyptian Gauze Cotton Shirtings.

White and Coloured Shirts.

Dressing Gowns, &c.

WHOLESALE AND EXPORT ONLY.

S. NORTHCOTE AND COMPANY,
 28 & 29, St. Paul's Churchyard, London,
 MANUFACTURERS OF LACE, SEWED MUSLINS, BABY LINEN, &c.



Departments.

Real Valenciennes and Pillow-made Laces.
 Bruxelles, Flanders, Laces, Shawls, Halks, &c.
 Honiton Floucings, Laces, Insertions, &c.
 Shawls, Bridal Veils, Sets, Falls, &c.
 Real Black Floucings, Laces, Shawls, &c.
 Real Maltese Laces, Insertions, &c.
 Shawls, Half-Silk, Printed, &c.
 Cluny Edgings, Laces, Insertions, &c.
 De Laine Laces, Even, Black and Colours.
 French Blondes, Collars, Lapsets, &c.
 Irish Crochet Collars, Parasol Covers, &c.
 French Imitation Blondes and Black Laces.
 Nottingham Edgings and Laces, &c.
 Pusher Laces, Floucings, Tunics, &c.
 Patent Black Maltese Laces, Insertions, &c.
 Novelty Laces in Silk and Cotton.
 Imitation Valenciennes, Insertions, all makes.
 Imitation Lisie, Brussels, and Maltese Laces.
 Pusher and Spanish Shawls, Rotondes, &c.
 Novelties in Lace Mantles, Jackets, and Falls.
 Sprigged Nets, Black, White, and Fancy.



Departments.

Ladies' Underclothing, Morning Wrappers, &c.
 Corsets, Crinolines, and Costumes.
 Baby Linen, and Children's Dresses
 Hoods, Hats, Bonnets, Cloaks, Pelisses, &c.
 Berceauettes and Baskets—Cash's and other
 Patent Frillings.

Departments.

Hortense Net, Black, White, and Magpie.
 Brussels, Cambric, Muslin, Net, &c.
 Yak Shawls, Rotondes, JACKETS, &c.
 lace and Imitation made-up Lace Sets, &c.
 Lace and Muslin JACKETS, Fichus, Aprons, &c.
 Evening Dresses, Tulle and Tarlatane.
 Fancy Open Cloaks, Hoods, Capes, &c.
 Tambour Lace Dresses, Tunics, Shawls, &c.
 Tuile Bridal Veils, Plain and Embroidered.
 Antimacassars, Lace and Muslin Curtains.
 Shetland Goods, Hair Nets, Cap Fronto, &c.
 Flannel and Panel Crinoline Sets, Falls, &c.
 French Embroidered Crimp Trimmings, &c.
 Rolled Crapes, Erophane, Gossamer, &c.
 Fancy Dress Trimmings, Gimpa, Frillings, &c.
 Goffered Muslin, Net, Erophane, Frillings, &c.
 Sewed Muslin and Linen Sets, Habit Shirts, &c.
 French Lawns & Irish Cambric Handkerchiefs.
 Hem-stitched and Bordered Handkerchiefs.
 Linens, Lawns, and Union Linings.
 Tarlatanes, Swiss Books, and French Organdies.

WHOLESALE AND EXPORT ONLY.
 PRICE LISTS TO BE HAD ON APPLICATION.

SHARP, PERRIN & CO.,
 Manufacturers and Warehousemen,
 31, OLD CHANGE, LONDON.

SPECIALITIES.



Baby Linen of every description.
 Children's Dresses, &c.
 Ladies' & Children's Underclothing.
 Stays and Crinoline Skirts.
 Ladies' Costumes and Overskirts.
 Laces and Nets of every description.
 Embroidered Muslin Trimmings.
 Linen and Embroidered Collars
 and Cuffs.
 Cambric Handkerchiefs.
 Scotch and Manchester Muslins.
 Longcloth and Calicoes.
 Plain and Fancy Flannel.
 Plain and Fancy Hosiery.
 Printed Cambrics.

WHOLESALE ONLY.

WILLIAM BARTLEET & SONS,
 NEEDLE & FISH HOOK MANUFACTURERS,
 ABBEY NEEDLE MILLS, REDDITCH.

RATCLIFF & TYLER, BIRMINGHAM,

Makers of Gaseliers, Branches, Standards, &c.

Brass Founders, and Art Metal Workers, &c.

WORKS OF ART.

A. MYERS & SON beg to invite an inspection from visitors to London of their select collection of WORKS OF ART. It includes specimens of Old Porcelain and Fayence of every manufacture, Fine Old Bronzes, Ivories, Terra Cottas, Furniture, &c. Pictures by the Old and Modern Masters of the highest class.

Messrs. A. Myers & Son will also purchase WORKS OF ART of every description at their highest values.

Address, Post Paid,

A. MYERS & SON, 171, NEW BOND STREET, LONDON, W.

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



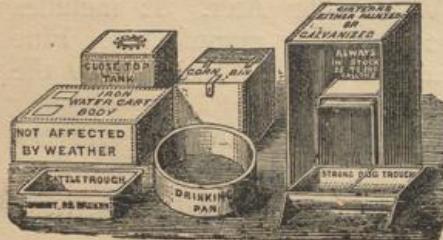
HOES, AXES, ADZES, PICKS, SPADES,
SHOVELS, FORKS,
AND GENERAL PLANTATION TOOLS.

Group 7, No. 288.

BURNEY & CO., MILLWALL DOCKS, LONDON, E.

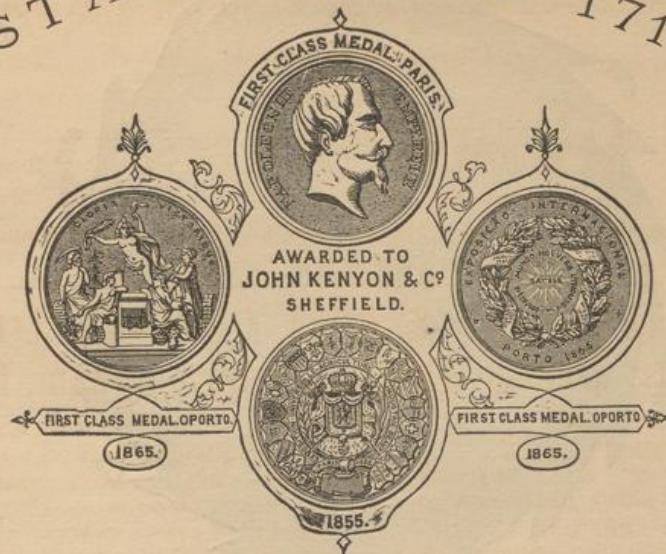
By Admiralty Order, all Royal Navy Tanks are to be made with BURNEY'S PATENT CORNERS.

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,



KENYON and
SHEFFIELD

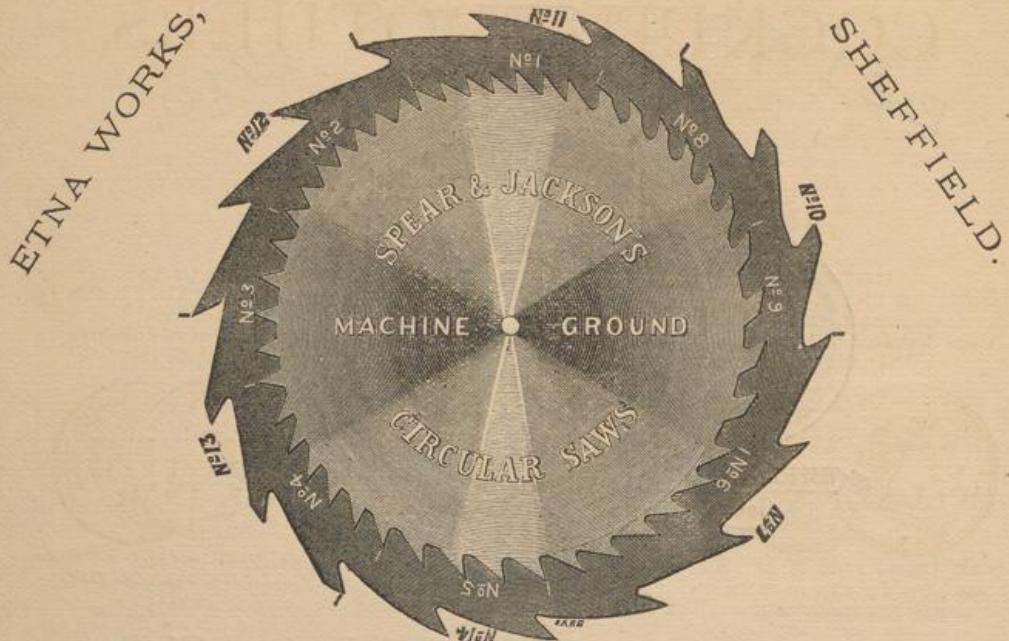


MIDDLEWOOD
SHEFFIELD.

FOREIGN AGENTS:

CLEMENTZ & CO. ST. PETERSBURG.
F. A. KAEMPFFFE RIGA.
GEORGE KELLNER & CO. ODESSA.

A. G. REDPATH.....	OPORTO.
KREIBIG & FINGER	LISBON.
A. RACK & CO.	VIENNA.



SPEAR & JACKSON.

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.

CATALOGUE OF THE BRITISH SECTION.—APPENDIX.

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.

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, CINCINNATI, OHIO.

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, Epingle et Crinolines, etc.

Limes faites du meilleur acier fondu, Scies, Outils de menuisiers, Cardes, Dents pour Cardes, Epingle Hackle et Gill, Hameçons, Aiguilles, Broches, etc.

ET
NÉGOCIANTS.

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.

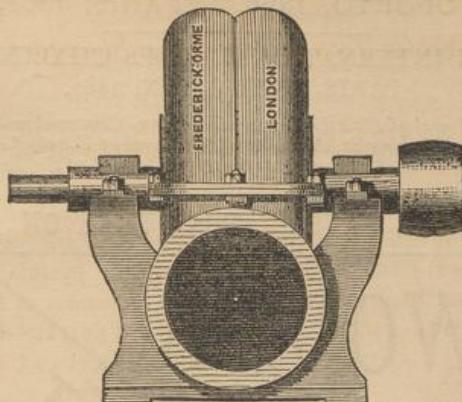
Feuilles de Fer-blanc préparées spécialement pour les besoins des Compteurs au Gaz.

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, aspirants et foulants.

Ventilateurs à main et soufflets de forge.

Machines à vapeur et ventilateurs combinés.

Pompes à vapeur perfectionnées et locomobiles.

Machines à percer.

Machine perfectionnée brevetée à couper les clous.

Machines pour pointes de Paris, et Machines perfectionnées pour écrous et 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
—
“INVINCIBLE”
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.

CATALOGUE OF THE BRITISH SECTION.—APPENDIX.



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 **C**opper **L**ocomotive, **M**arine, **G**as and **S**tream **T**ubes,
SHEET BRASS, BRASS AND COPPER WIRE, &c.,
WROUGHT COPPER BOAT NAILS, RIVETS, &c.
Prize Medals, London, 1851; Paris, 1867; 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, 18, Grocers' Hall Court,
Poultry, E.C.

See Group X., No. 382.

Fabrique de Peignes d'Aberdeen

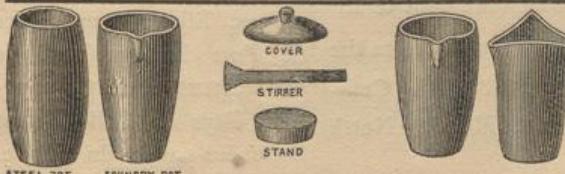
La plus grande et meilleure fabrique de peignes du monde. On y emploie 900 ouvriers, consommation chaque semaine 60,000 cornes, outre grandes quantités de caoutchouc et d'écailler; la production annuelle s'élève à douze millions de peignes.

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 à Londres, 18, 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.

AN EXTENSIVE ASSORTMENT OF
MEDIÆVAL & GENERAL HOUSEHOLD FURNITURE
ALWAYS IN STOCK.
Furniture made specially to suit all Climates.

Plans, Estimates, and Designs
Prepared and sent to all parts
of the World.

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.

Comptoir in London :
19, Spring Gardens, S.W.,
H. F. PHILLIPS,
Sekretair.

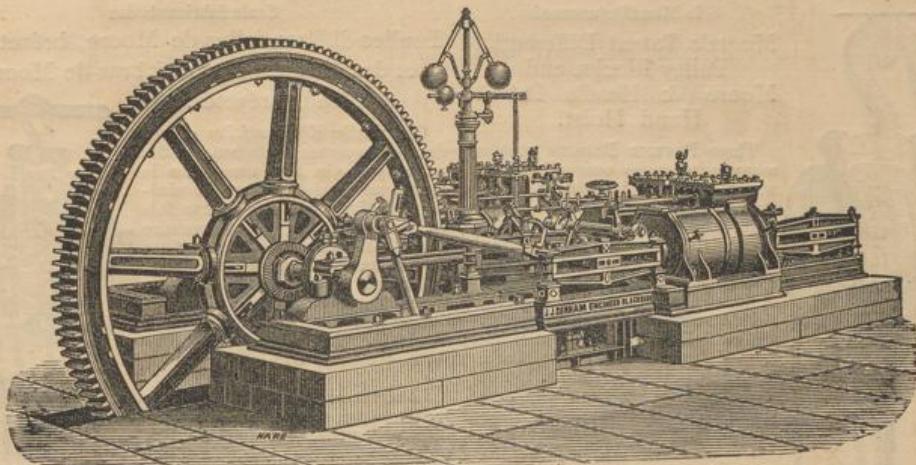
This well-known Quarry at Rhiwbryfdir, North Wales, produces the best Blue Roofing Slates and Slate Slabs, which are sent to all parts of the world, from the Shipping Port of the Company, Port Madoc, North Wales.

Office in London :
19, Spring Gardens, S.W.,
H. F. PHILLIPS,
Secretary.

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.

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 Agent 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.

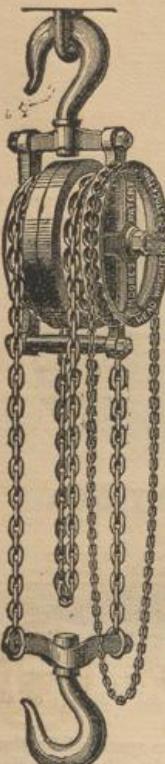
Division No. 454, Groupe No. XIII.

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. Priz de la Chaîne par pied avec un crochet.
10 cwt. — 10 quint.	£ 8. d.	s. d.
20 " " 20 "	1 15 0	1 0
30 " " 30 "	2 10 0	1 6
40 " " 40 "	3 0 0	1 8
3 tons.— 3 tonnes	3 10 0	1 8
4 " " 4 "	5 0 0	2 3
5 " " 5 "	6 5 0	2 3
7½ " " 7½ "	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.

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 quelleconque 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 milliers, et ces appareils sont aujourd'hui généralement adoptés dans les grandes usines de l'Angleterre.

PRICES OF HOISTS.

PRIX DES MONTE-CHARGES.

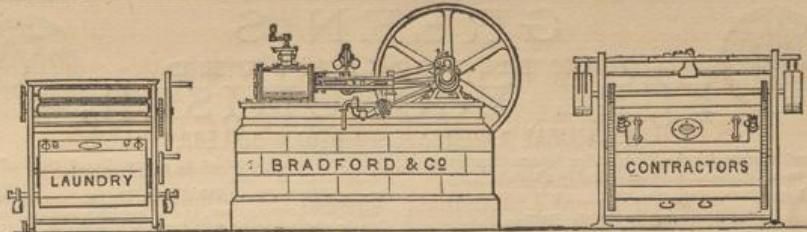
Lifting Power, Force élévatoire.	Price of Hoists, Prix.	Hand Chain, Chaîne de manœuvre.	Lifting Chain, Chaîne pour porter la charge.
No. 1.—To raise 5 cwt.	£ 1 15 0	Per foot. Le pied.	Per foot. Le pied.
" " Pour éléver 5 quint.	7d.	0s. 7d.	0s. 7d.
No. 2.—To raise 10 cwt.	2 10 0	7d.	1s. 3d.
" " Pour éléver 10 quint.			
No. 3.—To raise 15 cwt.	3 5 0	11d.	1s. 8d.
" " Pour éléver 15 quint.			

If fitted with Brake, EXTRA, No. 1, 15s.; No. 2, 20s.; No. 3, 25s.
Muni d'un frein on paye en plus pour No. 1, 15 sh.; pour No. 2, 20 sh.; 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 éléver. Les prix sont applicables aux
appareils livrés à l'usine.





THOMAS BRADFORD & Co..
Washing Machinists and Laundry Engineers,
63, FLEET STREET, } LONDON.
142, HIGH HOLBORN, }
Cathedral Steps, MANCHESTER.
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, Chloring 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.

Silver Medal,



Paris, 1867.

C. DE BERGUE & CO.,
Engineers and Contractors,
10, STRAND, LONDON,

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 hauptsächlichen 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 cintre 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.



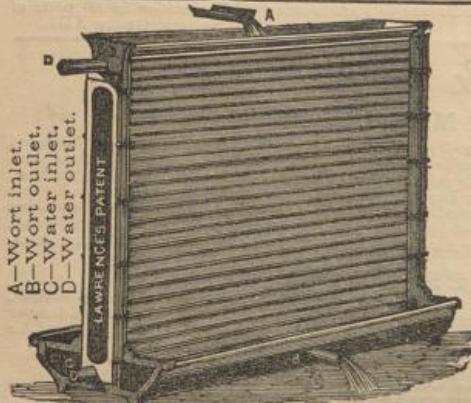
Heats the Feed Water with the Residual or Waste Heat from the boilers to a Temperature considerably above boiling. Saves 20 to 25 per Cent. of the Fuel.

Contributes greatly to the Durability of the Boilers.
Is not liable to get out of Repair.

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.

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.



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 their 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.

ALEX.R. 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.

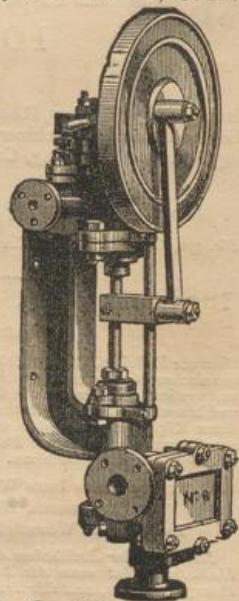
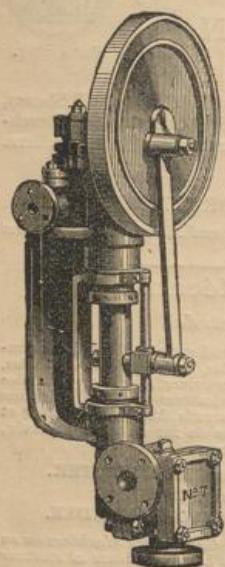
Over 3000 of these Pumps are now in use on board Yachts and Steamships, in Breweries, Distilleries, Tanneries, Paper Mills, Cotton, Woollen, and other Spinning Mills, Bleach-works, Dye-works, Chemical Works, Saw Mills, Collieries, Iron-works, Mines, and many other places where steam is used.

REVISED PRICE LIST.

Size.	Diameter.	Stroke.	Gallons thrown per hour.	Horse-power of boiler supplied.	Price £ s. d.
4	1½	2½	120	8	10 0 0
5	1½	3	200	12	10 0 0
6	1½	4	300	20	13 0 0
7	2	4	450	30	15 0 0
8	2	4	700	40	17 10 0
9	2	6	1000	60	20 0 0
10	2	6	1500	100	22 10 0
12	2	6	2000	120	30 0 0

Those marked (*) are double-action.

SOLE AGENT FOR THE AUSTRIAN EMPIRE:
JOSEF OESTERREICHER, Akademiestrasse 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 ft. 50 to 20 ft.

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.

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.

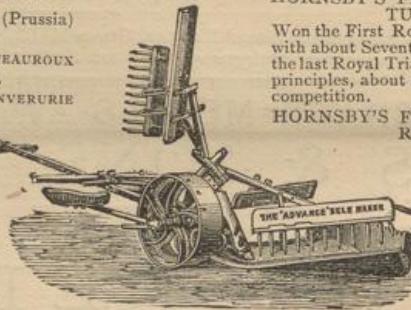
Second Prize of £10 to "Premier" Back-Delivery Reaper.

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. NAMUR. AMAY.
CHAMANT, near Senlis (France). CHATEAUROUX
 SANTIAGO DE CHILI. 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 leading 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.

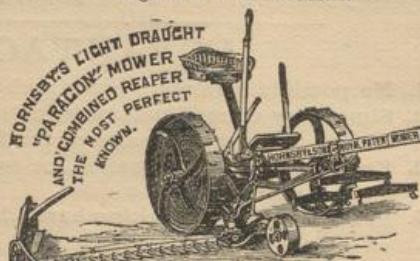
HORNSBY'S FIRST ALL ENGLAND PRIZE ROOT PULPERS

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, Mellard, etc., and proving themselves the strongest, simplest, most efficient, and lightest in draught of any.



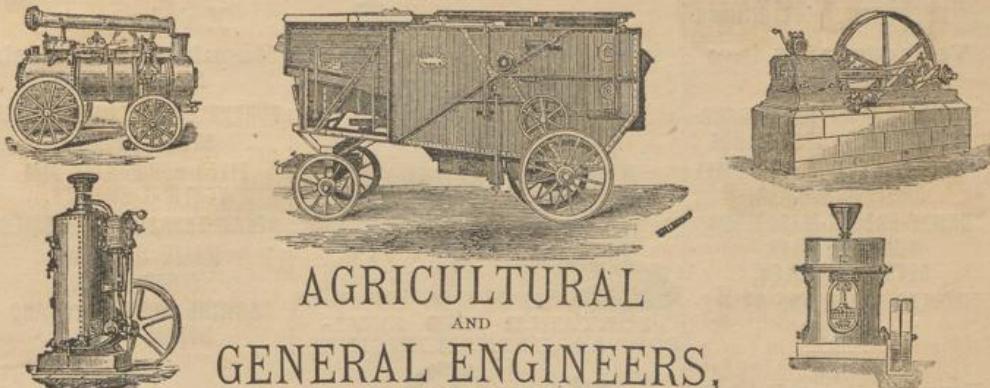
HORNSBY'S FIRST ALL ENGLAND PRIZE IRON PLOUGHS.

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 Thrashing 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. Unequalled 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 XIIIa., Agricultural Department.

Landwirthschaftliche und Allgemeine Ingenieurs,
FABRIKANTEN VON

Vortrefflichen, transportablen Dampfmaschinen, ausserordentlich stark und dauerhaft, und hauptsächlich so construit dass eine grosse Ersparniss am 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.

Aufrechte stehende, Hoch-Druck Dampfmaschinen mit Patent "Field" Kessel verbunden. Was die Vollkommenheit der Arbeit, sowie die Qualität des Materials und Ersparnis an Brenn-Stoffen anbelangt, bleiben diese Maschinen noch immer unübertroffen. Sie benötigen keine Fundamente von Mauerwerk.

Vorzügliche fest liegende Dampfmaschinen auf starken Fundament platten montirt, sind für Kohlen-Gruben, Mühlen aller Art, und Fabriken sehr geeignet.

Vorbesserte feste und transportable Getreide Mühlen, welche für Körner aller Sorten völlig adaptirt sind.

Comptoir während der Ausstellung wird man in Landwirtschaftlicher Abtheilung No. 567, Gruppe XIIIa., 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 systeme "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 XIIIa., Département de l'Agriculture.

Ingenieros y Fabricantes de Maquinas para Agricultura especialmento los signentos.

Maquinas de Vapor Portátil Perfeccionados. Estas son muy fuertes y duraderos, facilisimas de manejar, de construcion seucilla, y especialmente construidos para economizar il combustible.

Maquinas de Trillar, con sus cuadros hecho de fierro forjado (en lugar de madera) especialments buenos para los paises calientes. Estas maquinas son muy fuertas, duran mucha mas tiempo que los de madera y necessitan menos poder para funcionarlos. Los Sres Robey y Cia son los unicos fabricantes destos 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 aproposito para Minas, Molinas, de Harino, &c.

Molinos de Granos perfeccionados Portatiles y Fijas admirablemente adaptado para moler todes clases de granos.

Oficina durante el tiempo de la Exposición Numero 567, Grupo XIIIa., Departamento de la Agricultura.

RUSTON, PROCTOR & CO., LINCOLN,

Maschinen Fabrikanten

Verfertigen als ihre Spezialität,

TRANSPORTABLE, HALB-TRANSPORTABLE, FESTSTEHENDE HORIZONTAL AND VERTICAL DAMPFMASCHINEN,
DAMPF-DRECH-MASCHINEN,
KUKURUZREBLER,
GETREIDE-MÜHLEN,
CIRCULAR-SÄGEN UND DAMPF-PUMPEN.

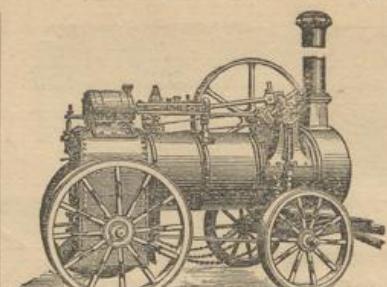
Für
Erprobte Vorzuglichkeit

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, GOHENBURG, SANTIAGO, CORDOVA, LIMA, MELBOURNE, CZERNOWITZ, CARLSRUHE, u. s. w.

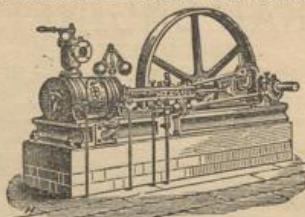
R., P. & Cie. haben bis jetzt allein ÜBER DREI TAUSEND LOCOMOBILEN geliefert, von denen alle den SPEZIELLEN BEDÜRFNISSEN der verschiedenen Länder angepasst wurden und nun in ALLEN WELTGEgenden zur vollständigen Zufriedenheit ihrer Besitzer arbeiten.

Kaufleibhaber werden darauf aufmerksam gemacht, dass obige Locomobile 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.



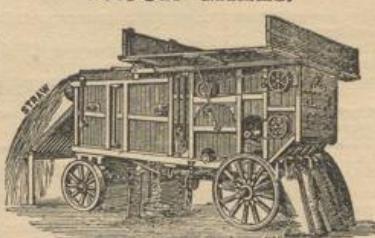
PORTABLE AND SEMI-PORTABLE STEAM ENGINES.



VERTICAL FIXED STEAM ENGINES.



FLOUR MILLS.



THRASHING MACHINES &
MAIZE SHELLERS.

SAWING MACHINERY, STEAM PUMPS, &c., &c.

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, GOHENBURG, 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.

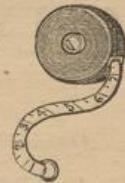
Buyers are invited to notice that for LARGE ALLOWANCE of POWER, STRENGTH of wearing parts, SIMPLICITY of construction, FIRST QUALITY of material and workmanship, HIGH FINISH and EFFICIENCY in actual working, the above Engines are UNRIVALLED.

Catalogues and fullest information on application.

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.

JOHNSON & ELLINGTON, ENGINEERS,
CHESTER, ENGLAND.

SPECIAL MANUFACTURES.

HYDRAULIC CRANES for Warehouses.

HYDRAULIC MACHINERY for Docks.

HYDRAULIC HOISTS for Hotel Lifts, &c.

HYDRAULIC CAPSTAN ENGINES.

HYDRAULIC ENGINES for Various Purposes.

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.

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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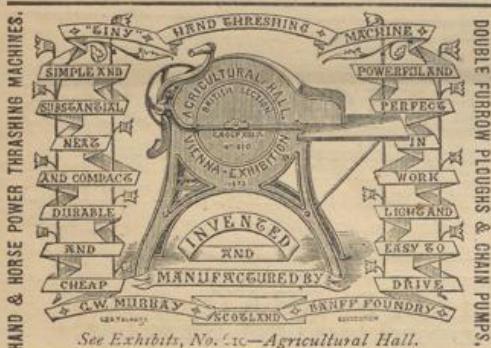
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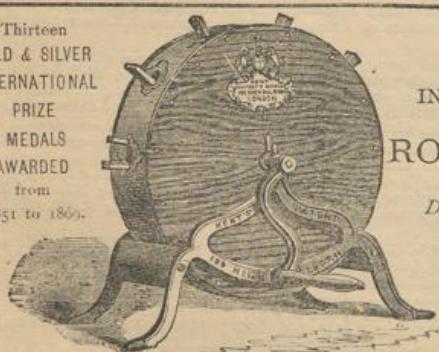
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