AMERICAN NOTES (From our own Correspondent.)

NEW YORK, June 18th.

The President of the United States has just approved the Act authorising the construction of a bridge across the Staten Island Sound, a few miles below New York City, known as the Arthur Kill. This practically secures the Baltimore and Ohio Railroad Company terminal facilities in this city. Commercial circles are interested in this new railway enterprise, which will certainly afford increased opportunities for more intimate commercial relations between this city and the South hy rail. The broad gauge in the South has been changed to standard, and already there is an evident increase of traffic between Southern States and the Northern. A large volume of idle capital is finding numerous invitations to engage in Southern industrial, commercial, and railway enterprises, and the establishment of terminal facilities by this wealthy corporation will go far to encourage investments which have been hanging back for the past year or two. A large amount of capital will be invested in cotton m'lls, in mining properties, and in blast furnaces and mills in Georgia and Alabama. Agents representing syndicates will shortly go South for the purpose of making more careful investigations into the desirability of contemplated investments. The volume of business in commercial circles is increasing very slowly. Confidence exists everywhere that the summer and autumn trade will be very heavy in iron, because of the large amount of railway building to be pushed through. The NEW YORK, June 18th.
THE President of the United States has just where that the summer and autumn trade will be very heavy in iron, because of the large amount of railway building to be pushed through. The railmaking capacity is 125,000 tons per month, and all mills are crowded with orders, some of them having taken orders for as late as December delivery. Prices range from 34 dols. 50c. to 35 dols, in large lots. There is also an increasing demand for foreign material, such as unwrought steel, Bessemer pig, and for bridge building material and rails, although the opportunities for placing rails in this market are very light, excepting at points far removed from mills. An improving demand for coastwise tonnage has been developed within a week or ten days. The Delaware river shippyards have contracts on hand for several very fine yachts, for passenger steamers ware river shipyards have contracts on hand for several very fine yachts, for passenger steamers for rivers, for schooners for coastwise service, while the locomotive builders have within two or three weeks received a good many orders for locomotive engines for delivery late this season. Prices of all kinds of material continue very low. Several car-builders in New York and Pennsylvania have contracts that will run them ninety lays. Nails have declined in price to 14ct 80. sylvania have contracts that will run them ninety days. Nails have declined in price to 1 dol. 802. per keg. Merchant bar is selling at 1½c. to 2c. per lb. The supply of merchant steel by the new processes is steadily increasing. The sheet and plate mills are slack of orders just at present. The structural ironmaking capacity is being increased, and several inquiries for large lots have just been received, which will probably keep most of the bridge mills busy, running full time.

NEW COMPANIES.

THE following companies have just been regis

Adam Eyton, Limited.

This is the conver ion to a company of the business of Adam Eyton and Son, of the Lead Smelting Works, at Llanerchymor, near Holywell, and of Chester Wharf, Liverpool. It was registered on the 19th ult. with a capital of £75,000, in £10 shares, with the following as first subscribers:—

Thomas Ford, 52, Coleman street, auctioneer
F. Parrett, Chestnut road, Tuttenham, stationer
W. B. Caulfield, 73, Ferndale-road, Clapham,
shipping surveyor
H. Cruse, 12, Little Queen-street, S.W., parliamentary agent
G. W. Ruifle, 131, Blackfrians-road, engraver
C. E. Pinkerton, Richmond, law student
H. V. Cruse, 12, Little Queen-street, S.W.
The number of directors is not to be less than

The number of directors is not to be less than three nor more than seven; the subscribers are to appoint the first and act ad interim; qualification for subsequent directors, 50 shares; remuneration, one-sixth of the annual divisible profits.

Abundantia Paint Works, Limited.

This company was registered on the 19th ult. with a capita ochre and other substances), and to same marks able. The subscribers are

man

A. Mendell sonn, 17, Silk-street, tine art publisher
J. Biron, 71, Queen's-road, Brownswood Park,
fine art publisher
C. W. Foskett, 91, Fore street, manufacturer
C. Frohlich, 26, Manchester-avenue, E.C., merchant

F. Russer, 115, Lorg.lane, E.C., agent ...

The number of directors is not to be less than three nor more than seven; the subscribers are to appoint the first and act ad interim; the company in general meeting will determine remuneration.

Beeston West-end Mills Company, Limited. This company proposes to erect buildings at Beeston, Nottingham, suitable for carrying on business as lace manufacturers. It was registered on the 23rd ult. with a capital of £10,000, in £5 shares, with the following as first subscribers:—

J. Smith, Beeston, lace manufacturer
C. Jackson, Beeston, lace manufacturer
W. Jackson, Beeston, lace manufacturer
J. F. Doar, Beeston, grocer
W. Thornhill, Beeston, tailor, &c.
C. Stroud, Beeston, solicitor
S. Kirkby, Beeston, elek

Registered without special articles.

Flectro-Metal Extracting, Refining, and Plating Company, Limited.

This company was registered on the 22nd ult. with a capital of £50,000, in £1 shares, to extract and refine metals by the electro process, and for galvanising and plating iron and other metal

goods and articles by electrolysis or otherwise. The subscribers are:—

*Thomas F. Veasey, 76, Finsbury-pavement, mechanical engineer
J. J. Done, 10, Finsbury-square, land agent
A. Odelle, 13, Kempsford-road, Kennington, clerk clerk
B. Wyand, Edgware, clerk
A. W. Pym, 43, Ashurton-grove, Holloway, clerk
*T. Fenwick, 172, Fleet-street, works manager
J. Marsh, 4, Wellclose-square, mechanical
draughtsman

The number of directors is not to be less than three nor more than seven; qualification, 50 shares; the first are Messrs. F. B. Welch, C. S. Brand, Henry Aislewood, Thomas Veasey, and T. Fenwick; remuneration, £50 per annum, with an additional £50 per annum for the chairman, and one-tenth of all surplus profits remaining after 15 per cent. dividend. 15 per cent. dividend.

Gardner Gun and Ammunition Company,

This company proposes to carry on, as successors This company proposes to carry on, as successors to the Gardner Gun Company, the business of manufacturer and dealer in machine and other guns. It was registered on the 22nd ult. with a capital of £250,000, in £5 shares. Two agreements of 18th ult, the first between P. G. Whatnough and Percy F. Marks, and the second between Wm. Gardner and Percy F. Marks, are adopted. These documents, although declared to be binding upon the company, are not registered, nor do the articles of association afford any information as to the terms made with the vendors information as to the terms made with the vendo and promoters in respect of the purchase. subscribers are:-

W. C. Elborough, South Norwood
A. L. Elborough, Bedford Park, Croydou
T. H. Norte, 5, Leadenhall-street, advertising contract r
G. Born, Dyke-road Brighton
C. G. R. Eames, 16, Peak-hill, Sydenham
A. C. Dockerill, 83, Winston-road, Newington-green E. Moreton, 25, St. Margaret's-ro d, Brockley

The number of directors is not to be less than three nor more than eleven; the first are appointed by the subscribers; qualification, 40 shares; re-muneration, £200 per annum each, and expenses.

Glendon Iron Company, Limited.

This is the conversion to a company of the business of ironmasters, smelters, and mineowners, carried on by Edward Kuapp Fisher and Edward Fisher, at Glendon, Finedon, and elseward Fisher, at Glendon, under the style of the Glendon Iron Company. It was registered on the 23rd ult. with a capital of £60,000, in £10 shares. The subscribers are:—

E. R. Fisher, Market Harborough ironmaster ... E. Fisher, Market Harborough, ironmaster ... H. S. Gee, Knighton, near Leicester, manufacturer.
H. Davids, Banbury land agent
W. Wartnerby, Market Harborough, solicitor
C B Fisher, Market Harborough, land agent
J. J. Mumford, Market Harborough

The number of directors is not to be less than three nor more than seven; qualification, fifty shares; the company in general meeting will determine remuneration.

Imperial Ottoman Ice Company, Limited.

This company was registered on the 21st ult. with a capital of £100,000, in £5 shares, to establish a Société Anonyme in the Ottoman Empire for acquiring the rights and privileges granted by the Sultan's firman to Salem Agha, for the working of a consequent for the working of a consequent for the sultan's strengths. for the working of a concession for the manufacture of ice within the limits prescribed by such firman. The subscribers are:—

E. Turner, 41, Grosvenor-road, barrister E. B. Robertson, Shooter's hill, physician and Surgeon
Major-General O. Wilkinson, 40, St. George's road, S.W.

road. S.W.
R. Stripp, 24, Tarbert-road, East Dulwich-grove
F. E. Lewis, 4, The Sanctuary, S.W., merchant
J. McClear, 2, Victoria-mansions, Westminster,
chemical expert.
T. Dermer, 2, Victoria-mansions. Westminster,
managing director of the Public Works and
Contract Company

The number of directors is not to be less than three nor more than twelve; qualification, fifty hares, the subscribers are to appoint the first.
The renumeration of the mard is to be at the rate
of £200 per annum for each director, and 10 per
all not profits after yment of 10 per
each dividend.

This company was registered on the 17th ult. with a capital of £30,000, in £20 shares, to carry on colliery operations in Glamorganshire or elsewhere. The subscribers are:—

*E. Franklin Thomas, 125, Bute-street, Cardiff, steamship owner
Jackson Powley, 125, Bute-street, Cardiff, colliery
proprietor

proprietor

J. Lusty, Cardiff Docks, colliery proprietor

V. Thomas, Aberdare, mining engineer

T. Cory, Sketty, Aberdare, colliery proprietor

G. Griffiths, Park House, Cardiff, colliery pro-

prietor R. F. Akers, 125, Bute-street, Cardiff, accountant The number of directors is not to be less than three nor more than five; the first are the sub-scribers denoted by an asterisk, and Mr. T. Crawshay, of Bonvilstone, near Cardiff; remuneration, £200 per annum to the chairman, and £100 per annum to each of the directors.

Morris Hart and Co., Limited.

This company proposes to acquire the patent and other rights granted to Messrs. E. E. Colley, W. W. Colley, and Morris Hart, for apparatus for winding, unwinding, and cutting paper for printing and other purposes, for cutting and reeling paper for telegraphic and toilet purposes, for printing, numbering, and perforating tickets, and for printing consecutive numbers; and to take over the business carried on by the vendors at 4. Coleman-street-buildings, and 40 and 41. at 4, Coleman-street-buildings, and 40 and 41, Kirby-street, Hatton-garden, trading as the Patent Cutting and Reeling Company, and the Patent

C. F. Ince, 1, Church-court, Old Jewry, printer and stationer

*E. G. Johnson, 41, City-road, manufacturer

*R. J. Baelz, 14, St. Mary-axe, merchant

C. Howard, 212, South Lambeth-road, solicitor

J. Seward, 39, Trinity-buildings, Borough, printer J. P. Nurse, 17, St. George's-avenue, Tufnell Park,

The number of directors is not to be less than The number of directors is not to be less than three nor more than seven; qualification, 250 shares; the first are Sir William Henry White, C.B., Arthur Grey, H. O. White, E. G. Johnson, and Robert Baelz, and after completion of purchase, Morris Hart and W. W. Colley. The ordinary directors will be entitled to remuneration at the rate of £50 per annum each, and a further sum of £50 each for every $2\frac{1}{2}$ per cent. dividend over 5 per cent., but no fees are payable until $7\frac{1}{2}$ per cent. dividend is declared.

Jones's Annealed Concrete Company, Limited.

This is the conversion to a company of the business of cement and paving flag manufacturer, carried on by Mr. John Alcock Jones at Middlesbrough. It was registered on the 22nd ult. with a capital of £5000, in £5 shares. The subscribers

J. Gilchrist, Middlesbrough, chartered accountant J. A. Jones, Middlesbrough, concrete manufacturer
C. J. Dobbs, Middlesbrough, engineer
E. A. Jones, Middlesbrough, iron manufacturer
J. Newhouse, Middlesbrough, draper
C. Moses, North Ormesby, urchitect
W. M. Hopkins, Stockton on Tees, accountant

Most of the articles of Table A apply. The number of directors is not to be less than three nor more than seven.

Muspratt Brothers and Huntley, Limited.

This company proposes to take over the chemical manufacturing business of the abovenamed firm, carried on at the Metal Extraction Works, Flint. It was registered on the 22nd ult. with a capital of £200,000, in £10 shares. The

A. Dyson, 42, Church-street, Flint, manufacturing chemist

chemist.
E. Dyson, 42. Church-street, Flint, manufacturing chemist
I. C. Banister, Blundellsands, Liverpool, manager H

The number of directors is not to be less than three nor more than seven; qualification, five ordinary shares; the first are the subscribers denoted by an asterisk. Mr. J. K. Huntley is appointed managing director at a salary of £1200 per annum. The remuneration of the ordinary directors will be determined by the company in general meeting.

Pure Rain water Company, Limited.

This company proposes to acquire the British and other patent rights of Henry Curzon relating to improvements in the method of filtering rainwater in its flow from roofs to tanks, and also for improvements in the method of collecting rainwater for storage, and to manufacture "Curzon's Patent High-pressure Rain-water Pipe Percolator." It was registered on the 23rd ult, with a capital of £20,000, in £1 shares. The subscribers are:—

neer
B. A. Hales, Romford, Essex
B. Spurling, 32, Collins-street, Melbourne
J. Cooper, 75, Somerleyton-road, Brixton, accountant

Silo Supply Company, Limited.

This company was registered on the 22nd ult. with a capital of £30,000, in £1 shares, to manufacture and deal in silos or apparatus for the manufacture and production of silage, and for such purposes to acquire the letters patent No. 4925, dated 15th March, 1884, granted Mr. John Moss Fletcher. The subscribers are:—

Percy Leith, 8, Dorset-square Percy Letth, 8, Dorser-square
L. Tompkins, 3, Upper Gloucester-place
T. Beazley, 2, Barnes Villas, Lonsdale-road,
Barnes, clerk
Edmonds, Bowes Park, N., patent agent
Keating, 24, Coleman-street, secretary to a company
W. Pannell, 47, Lansdowne-road, Queen's-road,
S.E., accountant
T. Sheldrake, Levisham, Yorkshire, engineer Registered without special articles.

St. John's Gate (Clerkenwell) Company, Limited This company proposes to acquire the ancient building known as the St. John's-gate, situate in the parishes of St. John and St. James, Clerken-

well, and also to purchase the advowson or right of presentation to the benefice of St. John. It was registered on the 23rd ult. with a capital of was registered on the 25rd and with a 2-14,000, in £10 shares. The subscribers are:—Shares. Sir E. H. Lechmere, Bart., M.P. Hanley Castle,

Worcester
J. R. Dawes Freshfield, 5, Bank-buildings, soli-General J. St. George, K.C.B., 22, Cornwallgardens ... Major-General Whitworth Porter, 28, Cheniston-Major-General Whitworth Porter, 28, Chemstongardens.

J. Furley, J.P., Ashford, Kent.
Edwin Freshfield 5, Bank-buildings, solicitor
Robert Vigers, 4, Frederick's-place, Old Jewry,
land surveyor

Registered without special articles.

Tidenham Waterworks Company, Limited. On the 18th ult. this company was registered with a capital of £2000, in £5 shares, to erect

Toilet Requisite Company. It was registered on works for supplying water to the parish of Tidenthe 19th ult. with a capital of £50,000, in £5 ham and other places in the counties of Gloucester shares. The subscribers are: and Monmouth. The subscribers are:-*E. W. Whalley, Chepstow, contractor ...

*F. Morgan, Chepstow

*H. Clay, J. P., Chepstow

G. C. Francis, Chepstow, solicitor

H. Lewis, Chepstow, draper

G. Leys, J. P., Chepstow

A. Miller, Ohepstow

The first directors are Messrs. Henry Clay, H. F. Morgan, and Louis Gueret.

Universal Box Company, Limited.

Upon terms of an agreement of the 11th ult. this company proposes to purchase and work the Letters Patent No. 4686, dated 2nd October, 1883, granted to William Phillips Thompson for in granted to William Philips Thompson for in-provements in apparatus for use in making wooden boxes, purchased by Henry Campbell, of 11, Queen Victoria-street. It was registered on the 18th ult. with a capital of £4000, divided into 2000 A and 2000 B shares of £1 each. The B shares are allotted as fully-paid to the vendor in considera-tion of the purchase. The subscribers are:—

*J. S. Burroughes, 19, Soho-square, billiard table manufacturer *W. Buttery, 5, Pembert negardens, Holloway, manufacturers manager.

C.B. Ledbetter, 141, Hungerford-road, Camdenroad, accountant
R. Plumbe, 13, Fitzroy-square, architect
W. J. Noad, 9, Fenchureh-avenue, insurance J. Noad, 9, Fenchurch average manager
Shubrook, 9, Gracechurch street, chartered accountant 10 W. J. Crump, 10, Philpot-lane, solicitor.

The number of directors is not to be less than two nor more than three; qualification, 100 shares; the company in general meeting will determine remuneration. The first two subscribers are ap pointed directors.

West Coast Timber Company, Limited.

This company was registered on the 18th ult. with a capital of £25, 00, in £10 shares, to acquire the Sampson-road Sawmills, Sampson-road North, Birmingham. The subscribers are:-

J. M. Woodward, Redditch, artist

The subscribers denoted by an asterisk are the first directors; qualification, 25 shares; the company in general meeting will determine remunera-

Western Traction Engine Company, Limited.

This company was registered on the 17th ult. with a capital of £1000, in £10 shares, to carry on business as carriers and traction engine proprietors. The subscribers are:

Registered without special articles.

THE PATENT JOURNAL.

Condensed from the Journal of the Commissioners of Patents. Applications for Letters Patent.

*** When patents have been "communicated" the name and address of the communicating party are

printed in italics. 22nd June, 1886.

FIELD OF OPERA GLASSES, A. W. Drayson,

Southsea.
8210. Petroleum Engine, J. Roots, London.
8211. Curs of Files, W. Machel and J. B. Tompkin,
Sheffield. Snemeid. 8212. Soles of Boots and Shoes, W. Brierley.—(0.

Lindner, Germany.)
8213. ARTIFICIAL GRINDSTONES, &C., T. Plesner, Man-

chester.

8214. Preparation, &c., of Paper, W. Brierley.—(F. Leidl, Germany)

8215. Electro-Plate Preserver, W. E. Bragg and W. T. Jones, Birmingham.

8216. Applying the Elastic Force of Vapour as a Motive Power, &c., J. Murrie, Glasgow.

8217. Sulphilde of Zinc, J. H. Dennis and N. Glendinning, Liverpool.

8218. Storage of Grain and Cereals, W. G. Herbert, Liverpool.

Liverpool.
8219. Movable Neck Collar Studs, &c., J. Appleby,

8219. MOVABLE NECK COLLAR STUDS, &c., J. Appleby, Birmingham.
8220. Bottles and Stoppers, J. Brown, Dewsbury.
8221. Driving or Gearing Chains, R. Green, Birmingham.
8222. Wood-Turning, &c., Machines, J. W. Dulston, Rochdale.
8223. Steam Engines, J. Tennent, Grangemouth.
8224. Supports for Drawing Boards, T. and J. V. Harger, Skipton-in-Craven.
8225. Adjustable Beach Stops, T. and J. V. Harger, Skipton-in-Craven.
8226. Secondary Batteries, A. M. Clark.—(A. E. Peyrusson, France)
8227. Securing Buttons to Fabrics, F. A. Smith, jun., Paris.

S228. BUTTON FASTENERS, G. W. Prentice, Paris. 8229. LAMPS, R. A. Bradshaw and J. Rutherford, London

London.

30. Finding the Variations of the Compass, R. E. Harriss, London.

31. Locking of Securing Screw Nuts, G. G. Potter,

London. 8232. BALANCED WHEEL for SEWING, &c., MACHINES, J. A. Footlit, London. 8233. Food for Horses, &c., F. I. FitzGerald.—(R. M. Boyd, Australia.) 8234. Finishing Horse-nail Plates, J. A. Huggett,

Eastbourne. 235. Cooking by means of a Gridinon, T. James,

Bristol. 236. Wirework, J. Y. Johnson.—(A. Belpéche,

8286. Wirrwork, J. Y. Johnson.—(A. Belpéche, France.)
8237. Type-writers, C. Spiro, London.
8238. Gas Lamps, H. G. O'Neill and the Platinum Light Company, London.
8239. Preparing Fibrous Substances for Spinning, W. Clissold, London.
8240. Drying Grain, J. Powers, London.
8241. Weight Registering Machines, W. E. Richardson, London.

son, London. 8242. Butter-Printing Presses, W. E. Richardson,

Tongue and NECK YOKE ATTACHMENT, R. T. Cook,

\$224. DETACHING RUNAWAY HORSES from VEHICLES,

4. DETACHING RUNAWAY HORSES from VEHICLES,
C. Hiersemann, London.
5. MECHANICAL MUSICAL INSTRUMENTS, L. Augustin,
London.
6. WINDMILLS, H. Knölke, London.
7. COMBINED PENHOLDER and SPRING BALANCE, I.
Creenbury, Glasgow.
8. INSULATORS for SUPPORTING ELECTRICAL CONULCTORS, A. R. Bennett, Glasgow.
9. APPARATUS for WASHING, &c., WOOL, &c., T.
Hauschel, Glasgow.
10. BUTTON HOOK, &c., F. Weintraud, jun., London.

250. BUTTON HOOK, &c., F. Weintraud, jun., London.
1. Ol. Stoves, H. Fricker.—(R. M. Wanzer,

Canada.)

\$22. Self-Levelling Berths, A. J. Boult.—(The Palace Marine Berth Company, United States.)

\$23. METALLIC PACKINGS for STUFFING-BOXES, J. B. Deeds, London.

\$234. LAMP BURNERS, A. M. Craig and C. P. Hobart, London.

\$255. WASHING BOTTLES, A. J. Boult.—(G. P. Goulding, Inited States.)

H. H. Lake.—(H. Cole, H. Allen, and S. Allen, United

States.)

\$257. Photographic Cameras, N. Conti, London.

\$258. Ploughing and Pulverising the Soil, R. Woodcock, London.

\$259. Night-lights, H. G. Walker, London.

\$250. Artificial Hand, G. Clasen, London.

\$251. Mining Machines, S. B. Stine and J. V. Smith, London.

23rd June, 1886.

23rd June, 1886.

22. Travelling Band for Machines for Coating Photographic Plates, A. Cowan, London.

23. Diamond Tube and Pipe Cutter, W. Hewitt and T. Dineen, Leeds.

24. Scutching Flax, W. Henderson, Benton.

25. Bolts for Locks, F. Dews, Wolverhampton.

26. Pernying Machines, H. P. Trueman and J. G. New, Birmingham.

27. Gulles, J. Parker and T. Brook, Sheffield.

28. Pickers used in Looms, J. Dawson and H. Armistead, Halifax, "9. Mechanical Tool Holders, I. A. Best and H. Best, Birmingham.

20. Self-acting Mules, J. Macqueen, Manchester.

21. Stocking and Socks, T. Moreley, sen., and T. Moreley, jun., Leicester.

22. Driving Spindles of Spinning Machinery, H. Stephenson, J. Webb, and S. Hallam, Manchester.

23. Rotary Engine, R. Whitchead, Heeley.

24. Unpresimable Illuminated Signs, &c., G. Francis, Halifax.

25. Driving the Tubes in Spinning Frames, &c., J. H. Craven and J. Crabtree, Bradford.

26. Preventing Issue of Smoke from Furnaces, W. Briggs, Bradford.

27. Warp Beams for Weaving, T. Burns and F. T. Schmidt, Bradford.

28. Hydraulic Rivetting Machines, H. Berry,

Schmidt, Bradford.

8. Hydraulic Rivetting Machines, H. Berry,

Barnett, India.)

7. Machine for Labelling Tins, M. B. Chambers, London.

London.

See S. Kettle Boiler, R. T. Elmunds and W. H. Edmunds, London.

99. AFFIXING STANDARD BOARDS in TRAVELLING BAGS, P. C. Wilkins, London.

890. Ber-Hives, J. Dixon, Great Ayton.

8291. Tools for Beading, &c., E. Preston, Birmingham.

8292. Tea-tasting Pots, J. A. Game and M. Aflalo, London.

893. Metal Screws. H. D. Cunningham, London.

94. Application of Hot Air, H. D. Cunningham, London.

London.
S206. PROTECTING BLACK LEAD, &C., PENGLIS, T. H.
Taylor, Manchester.
S207. WINDOW SASHES, R. Adams, London.
S208. VENTILATING TUNNELS, &C., C. H. Davies,

99. SOLITAIRES, &c., J. E. Buchan, London.
100. TIRES of PERAMBULATORS, &c., O. S. Perkins, London.
101. Guides for Chains and Ropes, G. A. Kroll, London.

ndon. ILLUMINATING LAMPS, E. J. Clayton, London. ELECTRIC CABLES, S. F. Shelbourne, New York,

U.S. 8394. BATTING GLOVES, H. Richardson, London. 8805. FURNACES for the MANUFACTURE of WATER GAS. R. Henderson and S. Levy.—(G. H. Kohn, United

K. Henderson and S. Levy.—(G. H. Kohn, United States.)

8306. Machine Guns, J. Formby, London.

8307. Indicating Apparatus for Looms, W. P. Thompson.—(Desiré Chipart, Jils, France)

808. Obtaining Chlorine, L. Mond, Liverpool.

809. Opera, &c., Glasses, A. M. A. Fournet, London.

810. Ventilators, J. Tanks, London.

811. Fire-Irons, A. M. A. Fournet, London.

812. Manufacture of Carbonic Acid, P. Farinaux, London.

London. TENNIS RACQUETS, J. F. Gilmore, London. 113. TENNIS RACQUETS, J. F. 114. GUTTERS, S. Watson, London. 115. Machines for Combing Flax, &c., G. Stelling,

16. Expansible Vessel for Rallway Brake, A. C. Boothby and C. R. Watson, London.

17. DYRING WOOL, W. F. Geuge. — (J. Bertrand.)

Cowl, S. Wallis and T. Wiseman, Lundon. Deracmanta care Labels for Flower Pors, G.

odon.
ALLOY, J. Webster, Loudon.
ALLOY, J. Webster, Loudon.
PRINTER BOILER FRED PUMP, O. Lilienthal

BASHAIL LONDON.

28. COLL STRAM GENERATORS, O. Lilienthal and W. Bashall, London.

29. APPLYING ELECTROITY to DRILLING, R. Richards, H. R. Landon, and W. T. W. Thackeray, London.

224. CLEANING the SURFACE of IRON, A. Gutensohn and J. M. James, London.

24th June, 1886.

8325. SLEEPERS and CHAIRS for RAILWAYS, A. Butchart, Great Burdon.
826. Hydrostatic Aspirator, T. Caink, Malvern

26. HYDROSTATIO ASSISTANCE LINK.
27. HEELS of BOOTS and SHOES, &c., A. W. Wilson and B. Silver, Leicester.
28. REQUILITING the PRESSURE of Gas, J. Stewart,

Edinburgh. CHANGING-BOXES for PHOTOGRAPHIC CAMERAS, A.

S. Newman, London.

S. Newman, London.

8330. Hammerless Drop-down Guns, J. and S. Whitehouse, Birmingham.

831. Feeding Fuel to Fire-places and Furnaces, H. Hart, Glasgow.

832. Clock-winding, &c., Mechanism, A. C. Henderson.—(L. Lefèvre and H. Pallut, France.)

838. Llustrating Sewing Stitches, C. M. Hull, Sheffield.

834. Supporting Ships' Compasses, &c., G. C. Lilley, London.

835. Bedsteads, C. W. Cole, London.

836. Elastic Pneumatic Heel for Boots and Shoes, A. H. Valda, London.

336. ELASTIC PNEUMATIC HEEL for BOOTS 2nd SHOES, A. H. Valda, London. 337. SEATS, J. Scheiber and K. E. Klein, London. 338. INDUCTION APPARATUS, L. Gutmann, London. 339. FACING BRICKS, R. Steinau, London. 3340. HARROWS, W. T. Procter, London.

8341. PRINTING MACHINES, F. Feldmann, London. 8342. TURNING OVER, &c., the LEAVES of MUSIC, H.

Currie, London. 8843. Cards for Playing Games, T. Crane, London. 8844. FURNACES and FURNACE BARS, J. Naysmith,

Glasgow. 8345. Lathe, T. Millett, London. 8346. Dynamo-electric Machines, A. B. Blackburn,

8346. Dynamo-electric Machines, A. B. Blackburn, London.
8347. Wheels, G. H. Rayner, London.
8348. Porffying Coal Gas, J. Hammond, London.
8349. Consuming Smoke, &c., in Fornaces and Fireplaces, A. M. Clarke.—(G. E. Weyy, France.)
8350. Slide Valves for Steam Engines, W. P. Thompson.—(A. Macmillan, Japan.)
8361. Ready-reckoners, &c., T. M. Reid, Liverpool.
8362. Pasteboard Boxes, B. Rückert, Liverpool.
8363. Relief Pattern India-rubber Plates, A. J.
Boult.—(L. Kayser, France.)
8354. Velocipedes, W. Smith and G. Hicking, London.
8365. Armature for Dynamo-electric Machines, C.
E. L. Brown, London.
8366. Air Valves, A. J. Boult.—(L. Kayser, France.)
8367. Manufacture of Compressed Fuel, S. Butler,
London.

ndon. Refractory Linings for Furnaces, T. Twynam,

REFRACTORY LININGS for FURNACES, T. Twynam, London.

8360. CHURNS, E. H. Toulmin, London. 8361. STEAM ENGINES, H. H. Lake.—(A. F. Devereux, United States.)
362. Toilet Ewers, Messrs. Oetzmann and Co., London

25th June, 1886.

CROCODILE LEATHER FLOOR COVERING, J. Hurry,

London. 64. Wool Washing Machines, E. and A. Peltzer,

London.

S364. Wool Washing Machines, E. and Manchester.

S365. Regulating the Speed of Motive-power Engines, W. M. Rye and J. Dearden, Manchester.

S366. Plug Cocks, S. W. Smith, Coventry.

S367. Machinery for Crushing Minerals, T. Nicholson, Pensarn, and A. J. Harrison, Sheffield.

S363. Detonators, &c., T. Johnston and G. Smith, Classow.

Glasgow.
8369. PROPELLERS, J. Hutton, Glasgow.
8370. MANUFACTURE of TRINITY WOOL YARN, &c., E. Wilkins, Yorkshire.
8371. PREVENTING the CONSTANT FRICTION of the RUDDER HEAD of SHIPS, W. Hewitt and T. Dincen, Loads.

LAYING NON-SLIPPERY ASPHALTE ROADS, H. H.

Whitaker, London. 273. FIRE-PROOF CONSTRUCTION, H. H. Whitaker,

BS74. SAFETY LAMPS, J. Laidler, Durham. 8375. FILTERING FUNNELS, W. C. Nickels, London. 8376. ELECTRO-MOTIVE FORCE CELLS, &C., A. Muirhead,

376. ELECTRO-MOTIVE FORCE CELLS, &C., A. Muirhead, London.
377. Safes for Preserving Food, W. K. Birkinshaw, Sheffield.
378. Tooth Brushes, F. L. Lawrence, London.
379. Secondary Batteries, A. Reckanzaun, London.
380. Hoistine Engines, J. Rothwell, London.
381. Eeg Boilers, J. Griffin, London.
382. Venetian Blinds, L. F. Balck, London.
383. Safery Saddle for Horse Riding, J. C. King.
Ukbridge.

Uxbridge. 384. Wells of Tea-Kettles, G. Clark, London,

8385. SOLDERING, A. J. Boult.—(J. F. Ross, Canada.) 8386. Cases for Storing Bottles, &c., F. Myers Liverpool. Liverpool.
387. Tamping Blast Holes in Mines, G. Francis,

Liverpool.
388. POLE BINNACLE LAMP, W. S. Wallace, Wolver AUTOMATIC DAMPERS for FIRE STOVES, H. S. T.

Biscoe, London. 8390. Coating Sheet Iron with Zinc, R. Heathfield, London. SUPPORT for PLANTS, C. Groombridge and J. P.

8391. Support for Plants, C. Groombridge and J. P. Rickman, London.
8392. Steps, J. Stayner, London.
8393. Uncorking Bottles, R. G. Barnes, London.
8394. Ventilation of Waterproof Garments, J. Neville, Enfield.
8395. Electrical Apparatus for Taking Marine Soundings, O. E. Woodhouse, F. L. Rawson, and C. S. Snell, London.
8396. Cleats for Securing Strings, W. Heatley, London.
8397. Coating Sheet Iron, W., J., and W. H. Baker,

COATING SHEET IRON, W., J., and W. H. Baker,

S397. COATING GHEAT.
London.
S398. WASHING BOTTLES, H. W. Hennes, London.
S399. LAMP STOVES FOR HEATING PURPOSES, E. A. and
J. D. Rippingille, London.
S400. SEWING MACHINES, N. Browne.—(E. Frankenberg, 8401. RETAINING WALLS OF RESERVOIRS, &c., T. Fraser,

usgow.

Fastenings for Stays, F. R. Baker, London.

Delivery of a given Quantity of Liquid in Change for an Equivalent in Coin, P. Everitt,

8404. Indicating the Force of a Blow, P. Everitt,

London.

8405. Drying Apparatus, E. Robinson, London.

8406. Elastic Tires, C. C. Cotton, London.

8407. Fire Grates, &c., for Steam Boilers, A. Tolhurst, C. A. Glabrook, and A. Philbey, London.

8408. Aluminium Chioride, Gustavus, Baron de Overbeck.—(Hector de Grousilliers, Germany.)

8409. Lining of Textile Fabrics for Thickening, the Same, H. H. Lake.—(T. tamb and J. D. Morley, United States.)

8410. Grading Knivas of Moving &c., Machines, H. H. Lake.—(C. Bules, Direct States.)

8411. Theatment of Refuse Liquids of Casworks, &c., C. Coord, London.

8412. Taxasterining Cash from one Part of Short of Ancartic Company, Pried States.)

8413. Israhirasteria Laguage I. C. Lamps J. G. Laguage, Salls, Israhirasteria Laguage, J. C. Laguage, Salls, Israhirasteria Laguage, J. C. Laguage, Salls, Israhirasteria Laguage, J. C. Lamps J. G. Laguage, Salls, Israhirasteria Laguage, J. C. Laguage, J. C. Laguage, Salls, J. C. Laguage, J. C. Laguage, Salls, J. C. Laguage, J.

INCANDESCENT ELECTRIC LAMPS, J. G. Lorrain,

26th June, 1886. 8414. MAKING CLOCKS run without ATTENDANCE, &c.

E. Shanley, Bootle.
15. Cord Contrivance by which Passengers can
Communicate with the Company's Servants, G. W.

COMMUNICATE WITH THE COMPART'S BERTAINS, STATEMENT POPE, Diss.

S416. WOOL COMBING MACHINES, T. Speight, Bradford.

8417. SILK WALL DECORATION, L. DONDY, Liverpool.

8418. MAKING BRICKS, &C., W. G. Wodson and R. Skeoch, London.

8419. MAKING SPEAKING INSTRUMENTS SEMI-ACOUSTIC, E. DUNN, Stafford.

8420. ANTISEPTIC SALP in BREWING, A. Boake and F. G. A. Roberts, Stratford.

8421. Enabling Shunters to Couple, &c., J. Jempson,

8421. ENABLING SHUNTERS to GOODLIN,
Manchester,
\$422. Gas Compressors, J. Lyle, Glasgow.
8423. Lubricators, R. Hutchison, Glasgow.
8424: Testing Miners' Safety Lamps, A. R. Ormiston
and J. Ormiston, Glasgow.
8425. Sizing Loose Coloured Wall Paper, &c., J. T.
Sawney and C. E. Quick, Hull.
8426. Coal-savers for Stove-Grates, T. Redmayne,
Sheffield.

emeid. STOVE, T. W. Roberts, Bramley. EYES FOR ROPES, D. Müller and E. Kamin,

8428. Eyes for Ropes, D. Müller and E. Kamin, Berlin. 8429. Braking and Starting Gear for Vehicles, W. Thompson, Gløsgow. 8430. Twin Water Directors, J. Cockburn, Edin-PORTABLE PHOTOGRAPHIC LAMP, J. M. Copeland,

DRYING and HEATING STOVE, T. Cudlipp,

BINDER for Papers, E. L. Shipman and J. D. G. pman, London. Ship

8434. Springs for Carriages, J. Mitchell and W. Cod-

ington, Sheffield. 435. Saving of Life from Fire, W. Fitzsimons, MOTIVE-POWER ENGINES, G. W. Weatherhogg,

8436. MOTIVE-POWER ENGINES, G. W. Weatherhogg, Swinderby,
8437. PAD for RENOVATING HATS, W. G. Speck and F. Longland, London.
8438. FOLDING BOXES, N. B. Chadwick, Middlesex.
8439. FASTENBER to FOLDING BOXES, N. B. Chadwick, Middlesex.
8440. APPARATUS for COMMUNICATION BETWEEN STATIONS and SIGNAL BOXES, W. Rice and W. Sykes, London.
8441. PRODUCING HEAT by GAS, J. Dredge, London.
8442. SUBSTITUTES for INDIA RUBBER, &c., F. Greening, London.

London. 8443. Composition for Treating Leather, T. N. Ash-

5445. Composition for treating leather, T. N. Ashman, London.
8444. Ships, F. G. Mareglia, London.
8445. Stopping, &c., Cylinder Letter-press Printing Machines, C. T. Watson and B. Thompson, London.

Education Rope with Paint, &c., T. U. Oliver, West Bromwich. 8447. TREATMENT of RHEA or CHINA GRASS, W. Heilgers.—(J. E. D. Wise, India.)

28th June, 1886.

8448. STONE BREAKING, &c., MACHINES, C. Mason and A. Hill, Leicester.
8449. WINDING-UP APPARATUS for LACE, &c., MACHINES, R. Mansfield and A. Goddard, Nottingham.
8450. TILITING BARRELS, &c., W. Greenwood, Bristol.
8451. HYDRAULIC MOTORS OF WATER ENGINES, H. Hale, LOUTH

AUTOMATIC WINDOW SASH FASTENER, R. W. Thompson, Newcastle-on-Tyne,
8453. Securing the Handles of Table Cutlery, W.
B. Hatfield and C. Wingfield, Sheffield.
8454. Casters, G. Moore and A. L. Stamps, Birming-

8454. Casters, G. Moore and A. L. Stamps, Birmingham.
8455. Let-off Motion for Looms used in Weaving, J. Longton, Lancashire.
8456. Casement Fasteners, &c., E. V. Bailey and C. Mackey, Bloxwich.
8457. Look Nut, G. H. Wills, London.
8458. Steam, Air, Gas, and Water Pistons, R. Robinson, Gateshead.
8459. Port Light for Ships, J. Milne, Sen., Bristol.
8460. Press for Framing, &c., Hats, J. Bevan, Manchester.

8461. STEAM ENGINE INDICATORS, E. Morton, Man-

chester. 8462. Cultivating, &c., High Lands, J. N. Stovin, Lincoln. 8463. Latches, W. H. Horn, London. 8464. Reservoir, &c., Gauges, G. F. Deacon, Liver-

pool. 8465. Pickers of Looms for Weaving, C. Vickers, Leeds.

Leeds.
8466. Hats, J. H. Neave, Liverpool.
8467. Opener for Bottles, W. G. Walker (for and on behalf of the Aire and Calder Glass Bottle Works), London.
8468. Producing Peptone from Nucleo-proteines, W. Merck, London.
8469. Making Charcoal from Sludge, F. H. Danchell, London.

ndon. Cycles, G. Butler, London. Electric Lamps, H. W. Rhoads, Halifax. Water Tap Valves, J. Kelly, London. Working Gas, &c., Stop Cocks, L. Lenaerts,

8474. Apparatus for Burning Gas Tar, J. Heydon, 8475. ELECTRIC ALARUMS, M. A. and H. A. Israel,

Mansfield,

8475. Electric Alarums, M. A. and H. A. Israel,
London.

8476. Twist Lace Fabrics, A. and F. H. Lees,
London.

8477. Mixing Plastic Materials, W. Kent and C.
Cope, London.

8478. Horseshoes, J. P. Bryce, London.

8478. Horseshoes, J. P. Bryce, London.

8480. Medicine Case, J. J. Stephens, London.

8480. Medicine Case, J. J. Stephens, London.

8481. Retort Covers, H. H. Salomons, London.

8482. Pump, H. Field, London.

8483. Fire-bars, &c., H. Ough, London.

8484. Purifying Gas, G. Symes, London.

8485. Hinges, R. F. Brittain, London.

8486. Vat, H. J. Haddan.—(W. Werr, Sweden.)

8487. Bufferrs, I. A. Timmis, London.

8488. Apparatus for Administering Medicine, A.
Jacobelli, London.

8489. Washing Machines, R. C. Annand, London.

8490. Boxes, C. A. Maynard, London.

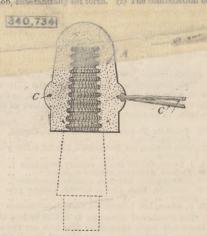
8491. Treating Alumnous Minerals, G. Baron de
Overbeck.—(H. de Grousilliers, Germany.)

8492. Axle, W. W. Horn.— (R. McLaughlin, Canada.)

8493. Paper Pulp, A. Wilkinson, London.

SELECTED AMERICAN PATENTS. (From the United States' Patent Office official Gazette.)

840,734. ELECTRIC WIRE INSULATOR, Bert Seaboldt, Salt Lake City, Utah.—Filed January 27th, 1886. Claim.—(1) The combination of an insulating knob, a tie wire encircling the same, and having its ends adapted to support a line wire, and a covering for the tie wire, consisting of a plastic insulating and an according to the tie wire and a covering for the tie wire, consisting of a plastic insulating the constant of the constant o



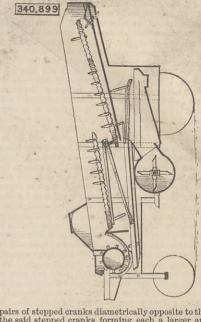
an insulating knob and a tie wire, the knob being formed of a plastic insulating material and inclosing the wire, substantially as set forth. (3) The combination of the knob A, the wire C, encircling the same and and the line wire supported by the wire C substantially as set forth.

340,899. THRASHING AND SEPARATING MACHINE Frederick Strobel, Marion, Ohio.—Filed December

Frederick Strobel, Marion, Ohio.—Filed December 10th, 1885.

Claim.—(1) In a thrashing machine, the combination, with the thrashing cylinder and concave, of a rearwardly and upwardly curved grate extending from the rear edge of the concave to a point above the horizontal plane of the axis of the cylinder, and a substantially vertical deflector secured to the upper edge of the grate and facing the cylinder discharge, as and for the purpose shown and set forth. (2) In a thrashing machine, the combination of a casing having a bulge in its top to the rear of the cylinder, the cylinder and concave, a grate curved rearward and upward from the rear edge of the concave to a point above the hori-

zontal plane of the axis of the cylinder, a substantially vertical deflector suspended from the upper edge of the grate and facing the cylinder discharge, and a shaker to the rear of the grate, as and for the purpose shown and set forth. (3) In a thrashing machine and separator, the combination, with a crank shaft having two double cranks at the ends and formed with two



pairs of stepped cranks diametrically opposite to them, the said stepped cranks forming each a larger and a shorter crank, of a forward rack, pitmen pivotally connecting it with the larger of the stepped cranks, a rear rack, pitmen or arms pivotally connecting it with the outer cranks, and a grain pan having arms pivoted to the smaller cranks, as and for the purpose shown and set forth.

340,550. METHOD OF ORNAMENTING GLASS AND OTHER SURFACES, Edwin L. Brown, Chicago, Ill.—Filed September 28th, 1885.

SURFACES, Eastern L. Brown, Cricago, 112.—The September 28th, 1885.

Claim.—(1) The process of ornamenting the surfaces of glass, stone, metal, or other equivalent material by first delineating the design or picture thereon by means of a jet or spray of sensitised gelatine or equivalent resistant substance or material, and, secondly, submitting the surface so prepared to the action of a sand blast or other known abrading or etching process,

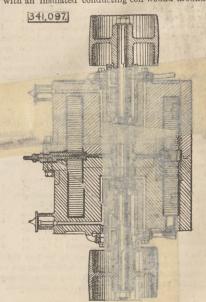


substantially as specified. (2) Glass, stone, metal, or other equivalent material, the surface or surfaces of which are ornamented by drawing the design or picture thereon by means of a jet or spray of sensitised gelatine or equivalent resistant substance or material, and afterward subjected to the action of a sand blast or other known abrading or etching process, substantially as shown and described.

341,097. Unipolar Dynamo Electric Machine, Sebastian Ziani de Ferranti, West Kensington, County of Middlesex, England.—Filed October 6th, 1884.

County of Muddlesex, England.—Fittle October Con., 1884.

Claim.—(1) In the construction of dynamo-electric machines, the combination of a, two cylindrical magnet pole-pieces set face to face and with an insulated conducting coil wound around the circumference of each pole piece, so that one shall be north, the other south, when an electric current is passed through the coils; b, a disc of copper or other such-like good conducting and non-magnetic met-il mounted upon an axis concentric with the pole-pieces, so that it may be revolved between them, and c means for leading off the radial current set up in the disc from its axis and its circumference. (2) In the construction of dynamo-electric machines, the combination of a, two cylindrical magnet pole-pieces set face to face and with an insulated conducting coil wound around the



circumference of each polnorth the other south vipassed through the coils, of the two cylindrical pot to the other, so as to fe magnet; b, a disc of cope conducting or other nor upon an axis concentric vit may be revolved between the coils of the radial curits axis and its circumfution of dynamo-electrica, two cylindrical mand wound with an inadisc of copper or other suc non-magnetic metal mounth the pole pieces, so between them, c means current set up in the disc cumference and for conthrough the coil of the macombination of the reveircular metallic trough or containing mercury or other of the coil of the macombination of the reveircular metallic trough or containing mercury or other of the property of the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercury or other such as the coil of the macombination of the reveircular metallic trough or containing mercur that one shall be current is most ends most ends
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