Yates, John Smale, and Josiah Smale; John Smale shall be chairman of directors. The first managing directors shall be William Matthews, Joseph Yates, and W. Yates. Qualification, 50 shares. Remuneration, £25 each per annum.

ELECTROLYTIC CAUSTIC SODA AND CHLORINE TRUST, LIMITED.

Registered by Walter Webb and Co., 23, Queen Victoria-street, E.C., with a capital of £10,000 in £10 shares. Object, to carry into effect an agreement expressed to be made between James Charles Richardson of the first part, Trevenen James Holland of the second part, and the company of the third part, for the acquisition of certain patents relating to improvements in the electrolytic production of caustic soda, caustic potash, and other products from their salts, and for improvements in apparatus to be used for electrolytic purposes, and to develop, improve, and bring into public use the said inventions. The first directors are G. R. Tyler, C. E. Green, R. C. Baxter, R. Vogan, Colonel T. J. Holland, C.B., and J. C. Richardson. Qualification, £500. Remuneration to be determined in general meeting.

BRINTON'S, LIMITED.

Capital, £150,000 in £10 shares. Object, to acquire the undertaking of John Brinton, Limited, in accordance with an agreement made between John Brinton, William Henderson, H. G. Henderson, J. H. Pearse, S. J. C. Brinton, A. J. Day, and G. N. Preen of the one part, and H. W. Gethin, on behalf of the company, of the other part, and to carry on business as manufacturers of, and dealers in, carpets, rugs, worsted yarns, and fibrous substances of all kinds. First subscribers :—

	Shares
J. Brinton, Moir Hall, Stourport	1
J. H. Pearse, Kidderminster	1
H. G. Henderson, Kidderminster	1
G. N. Preen, Kidderminster	1
H. J. Chaytor, M.A., Kidderminster	1
S. J. C Brinton, Utrecht Mansions, West Kensington	1
H. F. Pearse, Franche, Kidderminster	1

The first seven directors are J. Brinton (chairman), J. H. Pearse, H. G. Henderson, G. N Preen, and R. Schlensz-Müilheimer. Qualification, £1,000. Remuneration, £500 per annum, divisible.

Gazette News.

ADJUDICATION.

Peter Maclaren and William J. Patterson, High-street, Manchester, warehousemen.

PARTNERSHIPS DISSOLVED.

Myers and Hill, Welford-road, Leicester, hosiery manufacturers.

Lawton and Warhurst, High-street, Manchester, general warehousemen.

A. Hayward, St. Mary's Gate, Manchester, yarn agent.

Horsfall and Hamer, Halifax, millwrights.

Robert Crabtree and Co, Burnley, cotton manufacturers.

Woods, Ord, Clarke, and Co., Leicester, hosiery manufacturers.

WINDING-UP NOTICES.

John Brinton and Co., Limited, Kidderminster. (For reconstruction.)

The Clitheroe Salford Bridge Mill Co., Limited, Clitheroe.

Patents.

SPECIFICATIONS PUBLISHED.

1890.

8,669. WEISS. Embroidery machines. 11d.
9,848. WATTS. Knitting machines. 1s 7d.
11,700. WARRINGTON. Looms. 8d.
11,716. HODGSON AND TETLEY. Jacquards, etc. 8d.
11,802. SCHOLVIEN AND RIEDEL. Phenyldimethylpyrazolone. 6d.
11,901. DOBSON AND BROMILEY. Carding engines. 11d.
12,224. LAKE (*Boynton*). Spinning machines. 8d.
12,576. SUTCLIFFE AND GREENWOOD. Treating yarn for weaving. 6d.
13,666. HAGUE. Knitting, etc., machines. 8d.
13,696. SOUTHWELL AND HEAD. Moquette carpets, etc. 8d.

1891.

1,480. THOMPSON (*Branson*). Circular knitting machines. 8d.
3,012. BOOTH. Ornamenting, etc., bands of muslin. 6d.
5,126. WINFIELD. Twist lace machines. 6d.
6,189. ZWERINTZEFF. Jacquard power-loom. 11d.
7,239. KRAFFT, A. AND C. F. Cutting, etc., bands for looms, etc. 6d.
7,330. SHELY, J. D. AND J. H. Breaking and cleaning hemp, etc. 8d.

SECOND EDITION.

1888.

18,425. PITT (*L. Cassella and Co.*) Colouring matters. 6d.

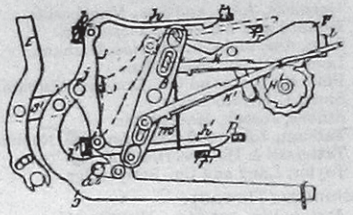
ABSTRACTS OF SPECIFICATIONS.

677. January 14, 1890. **Spinning.** T. RAWSTHORNE, 13, Victoria Parade, Ashton, Preston.

Carding engines.—The doffer is cleaned by means of one or more card covered rollers placed above it and rotated either in the same direction as, or slowly in the opposite direction to the doffer. 6½d. *Drawings.*

697. January 14, 1890. **Looms.** H. H. LAKE, Southampton-buildings, Middlesex.—(*G. W. Stafford, Providence, Rhode Island, U.S.A.*)

Dobby.—The shaft of the pattern cylinder carries two ratchet wheels H1 turned by pawls K, K1 on the rocking lever B. The setting levers are in pairs *l*, *l1*, and are formed with projections below acted on by the pattern on the pins, those of the levers *l1* being in advance of the others. Each pattern lag carries a double row of pins. The levers *l* act on upper drawhooks *h*, and



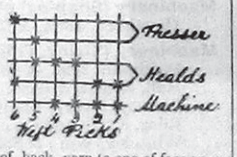
the levers *l1* (through wire stirrups *m*) on lower hooks *h1*, the two series of hooks being acted on alternately. The hooks are operated by lifters or knives *r*, *r1*, and by depressers (not shewn) receiving motion by links from the lever B. The levers J are connected to levers D, mounted on the shaft *a2*, and operating the healds from below, these levers being adjustably linked at *s1* to levers E operating the healds from above. Diagonal check bars *p p1*, with concave sides lock the hooks *h* when they are against the diagonal stop bars *t*, and are raised clear of the knives. The back ends of the lifters are moved further than the front to give the required difference of lift to the healds. To shorten the movement of the lifters, in some cases, the levers J may be shortened, the pins *j* being to one side to prevent upward movement of the ends of the levers in contact with the bar *t1*. 8½d.

725. January 15, 1890. **Fibrous materials.** G. BROADBRIDGE, 4, Rumford-place, Liverpool.—[*Partly communicated by M. J. D. Sant Anna, Lagos.*]

An improved fibrous material for use in making brushes, baskets, ropes, etc., also as a substitute for piassava, is obtained from the leaves of various palm trees, some of which are species of raphia. The leaves are steeped in water until the softer parts are partially decayed, and then the skeleton of the leaf is stripped by hand and dried. The material may be dyed if desired. 4½d.

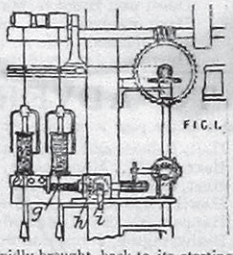
741. January 15, 1890. **Figured cloth.** G. MORT, Rose Bank, Patricroft, near Manchester.

Mitcheline cloth with a plain ground and fine raised figure is woven, with one shuttle, as indicated in the drawing. The face yarn for the raised portion works on two healds; the back yarn for the ground and the outline of the figure is drawn from a separate beam and is worked by a jacquard machine and pressers. Two or four ends of back yarn to one of face yarn may be employed. Modifications with eight and ten picks to the round are described. 6½d. (*Patent opposed. Applicant desires not to proceed.*)



822. January 16, 1890. **Spinning, etc.** H. TETLOW, "Miles Platting Reed, Heald and Wire Works," Varley-street, Miles Platting, Manchester.

Flyer frames.—The drag bar *e* is connected by screw, etc., gearing with the roller shaft, etc., so that it is moved automatically as the bobbins are filled with yarn. The drawing shews a suitable arrangement of gearing, the bevel wheel *h* forming a nut for the screw *g*, and gearing also with a bevel wheel provided with a handle *i* by which the drag bar may be rapidly brought back to its starting position at the commencement of each set. 8½d.

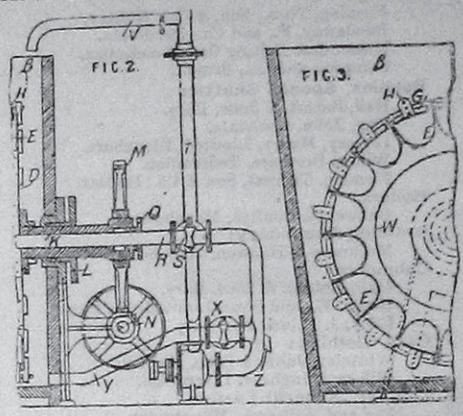


823. January 16, 1890. **Spinning.** H. B. BARLOW, 17, St. Ann's-square, Manchester.—(*J. G. Scott, 40, Forbes-street, Bombay.*)

Doffing.—The cops as they are doffed are placed into doffing boxes, mounted on rollers in a balanced trough which may be raised or lowered as desired. On tilting the trough the boxes may be removed and their contents discharged into a suitable receptacle. The boxes may be dispensed with and the cops removed from the trough by means of a travelling band, or the bottom of the trough may be made in hinged sections to facilitate the removal of the cops. The invention is applicable to mules, ring frames, etc. 8½d. *Drawings.*

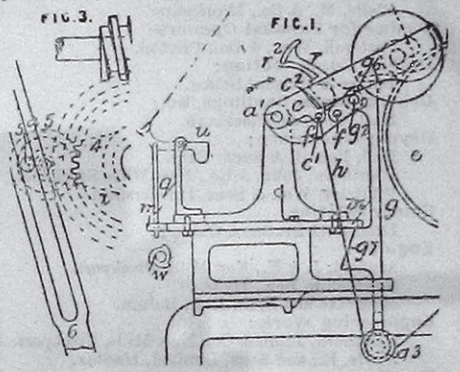
703. January 14, 1890. **Dyeing, etc.** R. HADDAN, 18, Buckingham-street, Strand, Middlesex.—(*J. Bertrand-Leplat, Tourcoing, France.*)

Relates to apparatus for subjecting to dyeing processes, and processes preliminary thereto, more or less manufactured textile materials, such as cotton slivers, rovings, cops, or bobbins. Consists in a drum formed of two discs D, D supporting a periphery composed of a number of parallel perforated troughs E, to receive the materials, provided with perforated covers G, fixed by plugs passed through holes in lugs H at the ends thereof. To economise dye liquor, the drum is partly filled by a water-tight cylinder W, and the vat may have blocks of wood or fillers surrounding the drum. The drum is mounted in a vat B on trunnions, one of which, K, is hollow, passing through a stuffing-box L, and carrying a worm-wheel M driven by a worm N on the main shaft. The trunnion itself contains a stuffing-box Q, through which



passes the pipe R leading to the pump S. The latter communicates with the vat by the pipes T, V, any Y, and with the reservoir of the dye or other liquor by a pipe Z. In a modified form, troughs E are in the form of rows of circular receptacles for wound fibre, such as cops and bobbins. By adjusting the valves S and X, the liquid can be circulated through the materials in either direction. 8½d.

922. January 18, 1890. **Spinning.** G. H. HOLDEN and J. ASHWORTH, Manchester.



Winding machines.—Mounted upon the same axle *a1* (Fig. 1) as the bobbin cradle *c* is a lever *f*, to which is pivoted the upper end of a vertically sliding brake lever *g*, normally held in its lowest position by a sliding spring rod *m* through an aperture in which pass the detector wires *q*. The bobbins are normally pressed against the drum *e* by a weighted cord *h*, which is attached to the bobbin cradle at *c1*, passes beneath a pulley *g3* on the brake lever *g* and over a pulley on the frame. When a thread breaks the wiper *w* engages with the fallen detector wire and the catch bar *m* is slid horizontally, releasing the rod *g*, which is then forced upwards by the weighted cord *h*, causing the brake block *g6* to take against the bobbin and raise the same from the driving drum, the bar *m* being at the same time moved further to the left by means of an incline *g7*, thereby moving the fallen detector wire out of engagement with the wiper *w*. The parts may be brought back to their original position by means of a handle *r*, which is pivoted on the lever *f* and provided with a fork for engaging with the pivot pin *g2*. It is also provided with a catch *r2* for engaging with the part *c2* of the bobbin cradle, for holding the latter in the raised position when it is required to find a broken end, etc. In order that the detector wires *q* may be made stronger than usual, they are suspended from balanced levers *u*. Two arrangements are described by which the traverse rail may be operated. In that shewn in Fig. 3, the traverse rail is connected, either directly or through an oscillating lever 6, with a crank pin 52 on the face of a spur wheel 5, carried by an arm 4 mounted on a shaft rotated by worm gearing, the spur wheel 5 gearing also with a fixed spur wheel 2. In the other arrangement, a lever, corresponding to 6, is oscillated by means of a heart-shaped cam, its motion being modified by reason of its being mounted on an eccentric, which is rotated by suitable gearing from the cam shaft. 8½d.