PARTNERSHIPS DISSOLVED.

Blackburn, Attenborough, and Sons, Nottingham, machinists; as regards Edward Attenborough.

Berris and Robertshaw, Huddersfield and Bradford, yarn agents and merchants.

Hy. E. Schunck and John E. Schunck, trading as Edward Schunck, Wicken Hall Works, near Rochdale, bleachers.

J. Riley and Son, Bedworth, Warwick, ribbon, tape, and smallware manufacturers.

WINDING-UP NOTICE.

The Cotton Waste Dealers Association, Limited, Manchester.

Patents.

SPECIFICATIONS PUBLISHED.

1890.

7,062. WILD. Friction clutches. 6d.
7,135. THOMSON AND HAIGH. Flat carding engines. 11d.
8,053. BOOTH. Sectional warping machines. 8d.
8,066. SUMNER. Preparing spinning, etc., machinery. 8d.
8,725. WILLCOX (*Farbenfabriken vorm. F. Bayer and Co.*) Derivatives of alizarine, etc. 6d.
8,799. NORTH. Black dyeing piece goods. 4d.
8,802. MOSELEY. Fishing stockings, etc. 4d.
9,028. BROOKS (*Clarte*). Stopping preparing and spinning machines. 8d.
9,323. SIBLEY. Circular knitting machinery. 1s. 1d.
9,557. WARBURTON AND STUTTARD. Presser flyers. 6d.
10,195. ABEL (*Sachsische Webstuhl Fabrik*). Figured weaving in looms. 11d.
15,841. BYWATER AND BEANLAND. Balling twine, etc. 6d.
7,621. HEYS (*Sourmais*). Cutting float threads in fabrics. 8d.
9,071. WINTER. Yarn sizing, etc, machines. 8d.
9,258. IMRAY (*Koch*). Colouring matters. 8d.
9,530. IMRAY (*Farbwerke vormals Meister Lucius, and Brüning*). Colouring matters. 6d.
9,537. JOHNSON (*Badische Anilin & Soda Fabrik*). Substantive dye-stuffs. 6d.
10,108. TAYLOR. Reels of cotton, etc. 6d.

1891.

479. GESSNER. Guiding fabrics in finishing, etc., machines. 1s. 1d.
489. SALWEY. Treating smoke of factory, etc., chimneys. 8d.
2,993. SEITZ AND WEISE. Printing and shaping textile materials. 4d.
4,262. BRADLEY. Knitting machines. 6d.
4,405. BOULT (*Bergmann*). Untwisting waste rope, twine, etc. 8d.
2,410. WYMAN. Looms. 2s 2d.
3,263. DURAND & ors. Colouring matters. 4d.
4,488. GESSNER. Carding engines. 8d.

REPRINT (with alterations).

1889.

16,729. STELL. Doubling and twisting wool, etc. 8d.

ABSTRACTS OF SPECIFICATIONS.

17,882. November 9th, 1889. **Spinning.** S. PEGLER, Middlegate, Birstall, Yorkshire.

The fibres are drawn and burrs and thistles are removed therefrom by passing through a series of rollers provided with longitudinal blades, each pair of rollers rotating quicker than the pair immediately preceding it. 6½d. *Drawings.*

18,497. November 19, 1889. **Carding engines.** C. A. MASON, 4, River Avenue, Nashua, New Hampshire, U.S.A.

Flats.—The strippings from the revolving flats are wound upon a roller H, which is carried loosely on the arms *f*, and is driven by a roller G, itself driven through ratchet gearing from the vibrating arm of the stripping comb, the ratchet being held, during the backward movement of the driving pawl, by the friction of a spiral spring let into a recess around the axle. 6½d. *Drawings.*

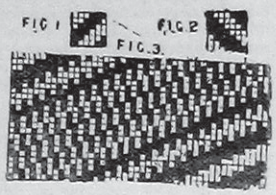
18,517. November 19, 1889. **Dyes.** B. WILLCOX, 47, Lincoln's Inn Fields, Middlesex.—(*Farbenfabriken vormals Friedrich Bayer and Co., Elberfeld, Germany.*)

Azo dyes.—Consists in combining the azo compounds of amines or their sulpho or carboxy acids with the dihydroxy-naphthalene-monosulpho acid S described in Specification No. 13,665, A.D. 1889. The amines employed are aniline and its homologues and the sulpho acids thereof, anisidine, cresidine, *m*- and *p*- nitraniline, nitrotoluidine, nitroxylidine, *a*- and *beta*-naphthylamine, and their mono- and disulpho acids. Molecular proportions of the reacting substances are employed, and the combination is preferably effected in an acetic acid solution; alkaline solutions yielding less bright colours. 4½d.

18,519. November 17, 1889. **Dyes.** B. WILLCOX, 47, Lincoln's Inn Fields, Middlesex.—(*Farbenfabriken vormals Friedrich Bayer and Co., Elberfeld, Germany.*)

Azo dyes.—Consists in preparing mixed azo colouring matters by combining the intermediate compounds obtained from equal molecular proportions of tetrazo-diphenyl or *o*-tetrazo-ditolyl salts, and *o*- or *m*-cresol carboxy acid, with the following phenols, amines, or their sulpho or carboxy acids, viz.:—*a*- or *beta*-naphthylamine or their sulpho acids, phenol, resorcinol, orcinol, resorcylic acid, *a*- or *beta*-naphthol mono- or disulpho acids, *a*- or *beta*-naphthol carboxy acids, dihydroxy-naphthalene or its mono- or disulpho acids. The intermediate products are formed by mixing the substances in an acetic acid solution, and then making the mixture slightly alkaline. The amines are combined in acetic acid solution, and the phenols in an alkaline solution, the mixture being allowed to stand 12 hours and then heated to 80° C. 6½d.

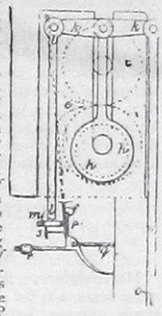
18,617. November 21, 1889. **Woven fabrics.** N. REISER, Aachen Germany.



For weaving tissues with large diagonal patterns with a small number of healds the warp threads are divided alternately into two or more sets, the drawing-in and treading for each set being such as would alone produce a small diagonal pattern of similar inclination, but each set requiring a different number of shafts for its production. In Fig. 3 is represented a portion of the pattern produced, by combining the patterns shewn in Figs. 1 and 2, for which six and seven healds would respectively be required. Thirteen healds are therefore required to produce the combined pattern, the width of which would be equal to double the least common multiple of the number of shafts, *i.e.*, eighty-four threads, and the length to the least common multiple of the lengths of the separate patterns, *i.e.*, forty-two threads. The invention may be modified. 8½d.

18,624. November 21, 1889. **Spinning.** J. BOON, 25, Jessel-street, Mill Hill, Blackburn, Lancashire.

Stop-motion for carding-engines.—The trumpet guide *e* is mounted in a swinging plate *f*, which is normally maintained by the tension of the sliver in a slightly inclined position as shewn. A balanced lever *k* carries hanging rods *n*, *l*, one (*n*) of which is normally held by a lever *o* connected with the ordinary stop lever, while the other takes into an aperture in the bracket *m* as the fulcrum of the lever *k* is raised and lowered by an eccentric *h* on the axle of the lower calendar roller, or on the front shaft. When the sliver breaks, the plate *f* assumes a more perpendicular position than that shewn, the rod *l* is made to pass through the aperture in the plate *m*, and the lever *o* is moved, stopping the machine. Normally the frame *f* rests lightly against an arm P of a three-armed lever, one arm of which carries an adjustable weight *r*. When the sliver passing is too thick, the lever P turns on its pivot at the end of the rod *q*, the end of the rod *l* strikes the plate *m* and the machine is stopped as before. *s* is a small weight for adjusting the balance of the plate *f*. 8½d.



18,630. November 21, 1889. **Looms.** J. JUCKER, 60, Peter-street, Manchester.

Picking spindle mounting.—The outer end of the picking spindle is held in the square formed by the crossing of the horizontal and vertical slots, in slide pieces, which are adjustable by screws on the cap fitting on to the end of the lay. The slide with the horizontal slot and the spring are fixed in position by a screw, and the other slide is fixed by a lock screw, or the parts may be secured by means of suitable serrations. 6½d.

18,733. November 22, 1889. **Looms.** L. H. MARSDEN, Spring Bank, Droylsden, and J. H. FROST, 1, Victoria Crescent, Eccles, both in Lancashire.

In looms for weaving leno or net-work the doup threads are slackened at the required times by the descent of a rod in slotted brackets, such rod being hung from a lever on a shaft which is operated by connections with a tappet, dobby, or jacquard. The lever may be adjustable in length. 6½d.

18,734. November 22, 1889. **Bands or straps.** L. H. MARSDEN, Spring Bank, Droylsden, and J. H. FROST, 1, Victoria Crescent, Eccles, both in Lancashire.

Bands or straps for braces, garters, waistbelts, and the like, are woven with open spaces or holes at intervals for the purpose of ventilation. Such bands or straps are made of double cloth with india-rubber introduced into the filling for elasticity if required. The bands or straps may be woven in a loom with doups and standards as in leno weaving, and a slackening motion, certain dents of the reed being left empty as required. 6½d.

18,749. November 22, 1889. **Linoleum.** D. N. MELVIN, Linoleumville, New York, U.S.A.

Constructing mosaic linoleum, etc., by cutting out tesserae from unoxydised linoleum composition, and securing these on to a backing of canvas, and finishing by rolling and pressing. The tesserae are placed on pattern blocks having short holding pins or edges, and are pressed on to the canvas by means of a hydrostatic or other press capable of travelling across the fabric and pressing upon any portion. After the tesserae have been placed on the canvas, the linoleum is again pressed. 8½d.

18,772. November 23, 1889. **Pressing fabrics.** G. DOUGLAS, Bowling Dye Works, Bowling, near Bradford, Yorkshire.

Two endless cloths travel face to face around a large cylinder and suitable guide rollers. Heating cylinders are likewise provided to heat the face of each cloth. The fabric to be pressed, either rigged or singe-width, is fed between the cloths as they pass between the rollers. The pressure is regulated by the tension of the cloths, or rollers may be employed to press the cloths directly against the cylinder. The cloths are driven by the nip-rollers, which may be of equal size, and geared together. 8½d. *Drawings.*

18,790. November 23, 1889. **Pressing and finishing fabrics.** J. MILLER, 14, Cunliffe Villas, Manningham, Bradford, Yorkshire.

The fabric is brushed upon the face and back, and passed between corrugated breadthening rollers, and over expanders to a heated cylinder and trough press. It is then passed over a steamer provided with a guard, and to a second press. Afterwards, it is passed over a refrigerating cylinder, against which it is held by an endless hand, and, finally, it is withdrawn by a drawing roller, and beamed or folded in the ordinary manner. Pressure is applied to the pressing cylinder by spiral springs, having screw adjustment, and the troughs are adjusted in position by suitable screws and hand-wheels. The parts are driven by worm gearing, and the speed is varied by means of conical driving drums. 1s.

18,867. November 25th, 1889. **Driving Belts.** J. TAYLOR, Whitewell Bottom Mill, Newchurch, Lancashire.

Woven.—A fourfold fabric is woven with the top and bottom folds wider than the centre. In the grooves thus formed an *edging* of buffalo hide, leather, etc., is secured. The order of weaving is as follows:—The top shed is opened at the first pick, the second at the second pick, the third at the third pick, and the fourth at the fourth pick. Then the fourth shed is opened in reverse at the fifth pick, the third in reverse at the sixth pick, etc. The whole is bound together by binder warps. 6½d. *Drawings.*

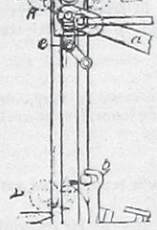
18,878. November 25th, 1889. **Warping yarns.** G. CARR, Westgate, Barnsley.

In order to facilitate the transit of prepared warp to the loom, and the placing of it on the warp beam, such warp is prepared or wound upon a flanged shell or drum A. The latter is held during this operation upon a dummy warp beam between adjustable flanges thereon, a recess *a*3, corresponding to a similar recess in the dummy beam, receiving a rod or wedge to prevent slipping. The drum A is removed from the beam, and within it is placed an axle, upon each end of which are carried a large and a small wooden disc, the large discs protecting the edges of the warp, whilst the small ones fit in and strengthen the drum. The warp is then wrapped in paper, etc., and the whole is ready for transit. When at the weaver's it is unpacked, and the drum is fitted on to the warp beam, which is recessed to suit the form of the drum at *a*3. The drum is secured on the warp beam in the same way as on the dummy beam. 8½d.

18,901. November 25th, 1889. **Dyes.** C. DREYFUS, Clayton, near Manchester.

Azo dyes.—Relates to primuline combinations. Consists, firstly, in diazotising dehydrothio-para toluidine sulphonic acid by means of sodium nitrite and hydrochloric acid, and pouring the diazo compound into a solution of beta-naphthol in caustic soda with agitation. When the soda salt of the colouring matter is required, the product of the above process is pressed and dried. For preparing the ammonia salt, which is preferred on account of its greater solubility, the above product is treated with hydrochloric acid to precipitate the free sulpho acid, and this, after washing and pressing, is dissolved in liquid ammonia. Or the lime salt may be formed and converted into the ammonia salt by double decomposition with carbonate of ammonia. The colouring matter may be used for dyeing mordanted or unmordanted wool, and for printing on cotton. 4½d.

18,910. November 25th, 1889. **Looms.** T. and A. C. H. SALLANDROUZE, and B. L. C. S. and L. P. S. LE MOULLEC, all of 23, Boulevard de Strasbourg, Paris.



Pile, forming.—Relates to the loom described in Specification No. 3,175, A.D. 1888, for the manufacture of pile carpets in imitation of Oriental carpets. For cutting the pile threads two blades with cutting teeth are employed, the upper blade reciprocating on the lower fixed blade. The whole device is moved downwards into cutting position by suitable carrying arms. For determining the distance which the tubes carrying the pile material pass through the warp, a number of rows of reels R carrying the pile threads passing through tubes T are held by spring catches in a raised position, and are detached and brought down by nippers on cam-worked arms *a*, a stop *b* causing the axle *e* of the nippers to turn partially, and to bring the tubes into a horizontal position. The stop *b* being then removed by a cam, the tubes T turn by gravity into a vertical position and project between the warp threads. In due time the reels and tubes are carried up again to their spring catches. 1s

18,915. November 25th, 1889. **Fabrics coated.** F. E. WARBURG, 5, Dowgate Hill, London.—(*C. van Nueffel, Berchem, Antwerp, Belgium.*)

Machinery for continuously coating and drying floor oil-cloth, American cloth, table covers, etc., constructed with shearing rollers, pumicing rollers, and spreading roller, after which the fabric is led to a drying chamber, along which it travels supported on laths. The two ends of the fabric are connected so as to allow of several coats being applied without removal from the machine. An apparatus is described for taking up the fabric when it is required to coat on the reverse side. 8½d. *Drawings.*