

**SHEEP SKINS.**—The supply has been only moderate, with a large proportion of prime sorts, which brought out a full competition, with slightly better rates.

**FLAX AND JUTE.**

**DUNDEE TRADE REPORT.**

WEDNESDAY, 30TH APRIL, 1890.

The advices both from Calcutta and New York, indicate a better market for jute and jute goods. Today therefore, all makers are firm, and while it is not possible to quote a rise in values, still the turn of the market is in every case in favour of the sellers.

In all positions jute is firm, and say half-a-crown dearer on the week.

Jute yarns are not to be had under 1s. 5d. for 8lbs. cop; and heavies are largely done at 1½d. a rise of the ¼ per pound.

Jute goods are firmer. Even common hessians are wanted, and buyers find that they must in every case pay the full list price.

Flax remains inactive at from £17 to £18 for Riga K, according to Shipper, other sorts in proportion. Flax yarn and especially tows are very quiet indeed.

The foreign yarns prevent any rise, and bleachers are offering yarns at rates which leave a very small margin for bleaching.

Linens are in fair demand; the makers of heavy goods especially are busy.

Arbroath is engaged, and prices, while not higher, are firm. Brechin and Forfar are fairly employed, and Fifeshire, in all departments, continues to do an excellent trade.

Dundee fancy goods are quiet, this not being the season, but twines, cords, and ropes, are all in active demand.

**MANCHESTER.**

D'oyleys, toilet covers, and other articles of a similar character, have been in better request of late, as the fine weather seems to have imparted a much more cheerful feeling all round. Heavier makes are also in moderate demand amongst wholesale distributors, but manufacturers have not yet commenced to feel the benefit of this activity on the part of their customers. Blinds have sold well, and fancy makes of these goods, if the designs are suitable, can be generally disposed of at this season. If those engaged in the linen trade displayed as much energy in this matter as do cotton manufacturers, the consumption of their productions would probably be found to increase largely.

**SILK.**

**LONDON.**

**MONDAY.**—London Produce Clearing House quotations of best 4½ Tsaltee: May 12s. 11d., June 13s., July 13s. 1d., August 13s. 3d., September 13s. 3d., October 13s. 4d., November 13s. 5d. per lb.

**TUESDAY.**—Quotations of best 4½ Tsaltee: May 12s. 11d., June 13s., July 13s. 1d., August 13s. 2d., September 13s. 3d., October 13s. 4d., November 13s. 5d. per lb.

**WEDNESDAY.**—Quotations of best 4½ Tsaltee: May 12s. 11d., June 13s., July 13s. 1d., August 13s. 2d., September 13s. 3d., October 13s. 4d., November 13s. 5d. per lb.

**THURSDAY.**—Quotations of best 4½ Tsaltee: May 12s. 11d., June 13s., July 13s. 1d., August 13s. 2d., September 13s. 3d., October 13s. 4d., November 13s. 5d. per lb.

**DRY GOODS.**

**MANCHESTER.**

The glorious weather of the last few days has caused quite a rush in the fancy trade of the city, and the packing rooms have been engaged to their utmost capacity. It has, in fact, frequently happened that even after working until eleven at night, the whole of the day's orders have not been despatched, large quantities being left over until the next morning. This shows clearly how busy the houses have been. The change is a welcome one, as the period from now to Whitsuntide is generally looked forward to as a time for making up any deficiencies in the trade of the previous portion of the year. While fancy goods have been in such brisk demand there has also been a great deal of buying in the heavy departments, and, judging from appearances, next week will also witness an extensive turnover. Fancy muslins are moving off freely, and manufacturers are fully employed. The prices paid by the distributing houses are not, however, considered satisfactory by producers, and there is much grumbling on this point. In quarters where the American trade in fancy white goods is extensive, there is a gloomy feeling

on account of the McKinley Bill proposals. One representative concern here is already taxed to the extent of forty per cent. on its shipments to the States, and further legislation on the other side is regarded as so near an approach to prohibition, that even in this city the recent talk of a European Customs Retaliatory League being formed against the States is discussed with approval in many quarters.

**NOTTINGHAM.**

The tone generally in the lace trade is not so cheerful as should be the case at such a season as the present, which ought to bring with it a brisk demand for many classes of goods produced in this district. With the exception of curtains and costume nets, however, the output on no class of goods can be looked upon as extensive, and there are many machines idle. For millinery lace the inquiry is brisker, Valenciennes being chiefly in demand. The popularity of artificial flowers is said to be on the wane. Should this surmise prove correct, a more active inquiry for lace may be looked forward to. Silk chantillies are moving freely. Cotton and plain nets are slow, but in embroidery bobbin nets there is more doing. There is a fair inquiry for cashmere and merino hose, but cotton varieties are quiet.

**THE KIDDERMINSTER CARPET TRADE.**

There is no falling off in the amount of business moving in the trade. On all hands are signs and evidences of activity, and manufacturers of Brussels throughout the district have as much, and in several instances more, than they can well do to keep up with the demand for their goods. When the advance price lists were issued, about a month ago, it was expected that buying operations would be checked somewhat, but such has not been the case, and during the last two or three weeks the new business which has come to hand has been considerably in excess of the average for the time of year, and for the next month or two at least manufacturers are likely to have plenty to do. So far, then, as employment for machinery is concerned, business generally is flourishing, but there is still a certain amount of dissatisfaction amongst the manufacturers themselves with the prices even now obtainable, and it would not be at all surprising were efforts made towards a further advance in rates, as worsted yarns are still very high in price, and other yarns which enter largely into the manufacture of carpets have gone up rapidly lately.

In addition to the rumours mentioned last week, there are rumours also current regarding small syndicates or combinations, but to those rumours it is felt that very little importance must be attached. The wool market continues firm in tone, but there is an absence of speculation and only a small amount of business doing locally, as spinners are pretty well covered with stock. Worsted yarns are in great request and spinners both here and away are much pressed for deliveries. Manufacturers have still a number of contracts to work off their books, and there is consequently not much new business falling; during the last week or two transactions have been more numerous, however, and there seems a greater disposition to cover for the remainder of the season. Prices of spun yarns remain firm and spinners being busy even fractional concessions are refused.

Cotton yarns are again advancing and spinners seem to think that prices must go still higher yet.

Jute yarns are moving upwards again, but this market is always in a fluctuating condition, and next week prices may be reported as having given way.

**Joint Stock and Financial News.**

**COTTON COMPANIES' REPORTS.**

**WINDSOR (Oldham).**—The profit is £725, and a dividend of 10 per cent. will be paid. The share capital is £15,242, and loan £15,882. The fixed stock is valued at £32,799, and there are 14,712 twist, and 22,956 weft spindles.

**PARK AND SANDY LANE (Royton).**—The profit is £870, and a dividend of 10 per cent. will be paid. The share capital is £27,976, and loan £12,992. The fixed stock is valued at £31,553, and there are 12,546 twist and 22,698 weft spindles.

**GREENACRES (Oldham).**—The profit is £2,188, and a dividend of 10 per cent. will be paid. The share capital is £56,003, and loan £76,301. The fixed stock is valued at £98,258, and there are 65,172 twist and 43,218 weft spindles.

**NEW COMPANIES.**

**IMPERIAL OILCLOTH COMPANY LIMITED.**

Registered by Bullock, Bourne, and Thompson, 10, Throgmorton-avenue, E.C., with a capital of £60,000 in £5 shares. Object, to acquire the business of H. Morris and Co. and that of the Imperial Oilcloth Company of Manchester, oilcloth manufacturers, etc. The first subscribers are:—

- |  |   |
|--|---|
| S. Moritz, 26, King-street, Manchester   | 1 |
| G. Moritz, Paget-street, Manchester  | 1 |
| A. Moritz, Regent-street, Manchester   | 1 |
| Mrs. Moritz, 155, York-street, Manchester  | 1 |
| R. Moritz, 107, Bury New-road, Manchester  | 1 |
| L. Goldspink, 1, Thornhill-square, N.  | 1 |
| W. H. Newnham, 10, Throgmorton-avenue  | 1 |
| G. and A. Moritz are appointed managing directors, with a remuneration of £300 each. |   |

**THE SEVERN TWEED COMPANY, LIMITED.**

Registered by Paine, Son, and Pollock, 14, St. Helens-place, E.C., with a capital of £150,000 in £5 shares. Object, to acquire the Cambrian Mills, Newtown, Montgomeryshire, and all property whatsoever belonging to the Severn Tweed Company, Limited, now in liquidation. The first subscribers are:—

- |  |   |
|--|---|
| J. T. Woolright, Arundel Mills, Stroud                 | 1 |
| J. Fraser, 2, Tokenhouse Buildings, E.C.               | 1 |
| W. M. Waterlow, 29, Stonley-gardens, Bel-seize-gardens | 1 |
| G. H. Boyce, 65, Warrington-crescent, W.               | 1 |
| F. W. Aste, Rosslea, Norwood                           | 1 |
| C. Ince, 102, Alexandra-road, N.W.                     | 1 |
| G. E. Holman, 37, Ivanhoe-road, Denmark-hill           | 1 |

There shall not be less than three nor more than six directors. The first are Clement Ritchie, J. T. Woolright, H. Anstruther, M.P., W. Scott Owen, and the Hon. Hubert Hanbury Tracy. Qualification, £200; remuneration, £1,000, divisible.

**Gazette News.**

**ADJUDICATIONS.**

Henry Yewdall, Henrietta-street, Covent Garden, Middlesex; also of Manningham-lane and Market-street, Bradford, dyer and finisher.

Joseph Brierley, High Pavement, Nottingham, lace manufacturer.

William Thornley, Perry's factory, Radford Boulevard, Nottingham, lace manufacturer.

**RECEIVING ORDERS.**

Joseph Brierley, High Pavement, Nottingham, lace manufacturer; Nottingham.

J. Parker, George-street, Liverpool, cotton broker; Liverpool.

Benjamin Simpson, Corporation-road, Nottingham, lace manufacturer; Nottingham.

**NOTICES OF DIVIDENDS.**

William Child, Manchester, and Joseph Binning, Calcutta, India (trading as Child, Binning, and Co., 63, Major-street, Manchester, and as J. Binning and Co., Calcutta, India), merchants and commission agents; 2s. 3rd.

**PARTNERSHIPS DISSOLVED.**

William Wightwick and Co., or the National Linen Company, New Broad-street, Middlesex, linen and silk merchants.

**Patents.**

**APPLICATIONS FOR PATENTS.**

The names in italics within parentheses are those of Communicators of Inventions.

Where Complete Specification accompanies Application an asterisk is suffixed.

**22ND APRIL.**

6,057. J. J. STORY, 45, Southampton Buildings, London. Cutting and perforating textile fabrics, etc.

- 6,067. W. H. KERSHAW, 3, Commercial-street, Halifax. Snarling motion of self-acting mules.
- 6,110. E. DE PASS, 78, Fleet-street, London. Drawing and combing fibrous materials. (*J. Imbs, France*)\*
- 6,127. A. H. NORMAN, 4, South-st., Finsbury, London. Treatment of ramie.

23RD APRIL.

- 6,142. J. WALKER and G. LOWE, 4, St. Ann's Square, Manchester. Letting-off motion of looms for weaving terry and similar looped fabrics.
- 6,146. A. S. CROSSLEY and C. HOLDEN, 17, St. Ann's Square, Manchester. Jacquard machines.
- 6,149. J. K. TULLIS, 154, St. Vincent-st., Glasgow. Belting.
- 6,154. G. H. CROKER, 15, Water-street, Liverpool. Machinery for cleaning cotton seed, etc.
- 6,155. G. H. CROKER, 15, Water-street, Liverpool. Process for the removal of fibre or lint from and cleaning cotton seed, and means or apparatus employed therein.
- 6,169. J. BLACKWOOD, 87, St. Vincent-street, Glasgow. Belting.
- 6,170. A. J. BOULT, 323, High Holborn, Middlesex. Machines for re-blocking cloth. (*H. Hutchinson and S. J. Moore, Canada*)\*
- 6,195. S. S. BROMHEAD, 97, Newgate-street, London. A blue colouring matter for cotton. (*Die Chemische Fabric Grunau, Landshoff and Meyer, Germany*.)
- 6,202. S. STEFANOW, 24, Southampton Buildings, London. Electrolytic process for the preparation of a liquid for bleaching fabrics, etc.

24TH APRIL.

- 6,226. I. WALSH, Beech Cottage, Gorton-lane, Manchester. Spindle bolsters for ring frames.
- 6,229. I. N. AINSWORTH, 8, Quality Court, London. Loom pickers.
- 6,230. R. HARLING, J. HARLING, and F. HEDDEN, 8, Quality Court, London. Winding machines.
- 6,250. W. T. GLOVER and W. E. S. GARDE, Bridgewater-street Iron Works, Salford. Machinery for making warps.
- 6,258. J. KIRK and B. LEE, 46, Lincoln's Inn Fields, London. Finishing worsted, woollen, and other woven fabrics.
- 6,274. O. IMRAY, 23, Southampton Buildings, London. Production of blue-grey colouring matters from indolines soluble in alcohol, resulting from the action of hydrochlorate of amido-azobenzol upon an aqueous solution of hydrochlorate of aniline or orthotolidine. (*The Farberwerke vormals Meister, Lucius, and Bruning, Germany*.)
- 6,281. H. REDGATE, 23, Southampton Buildings, Middlesex. Twist lace machines.

25TH APRIL.

- 6,289. J. GREGSON, Vulcan Iron Works, Preston. Loose reed looms.
- 6,338. J. BENTLEY, Sunbridge Chambers, Bradford. Temple mountings for weaving.
- 6,304. J. BENTLEY, Sunbridge Chambers, Bradford. Operating shuttle drop boxes.
- 6,315. R. HARRISON, 761, Middleton-road, Chaderton, near Oldham. Washing, scouring, and bleaching cotton, linen, wool, or other fibrous materials.
- 6,340. W. J. TAAFFE, 5, Market-street, Manchester. Machinery for the manufacture of felt hats having reference to "planking" or felting the body of the hat.
- 6,346. THE BRITISH ALIZARINE COMPANY, Ltd., and D. C. BENDIX, 23, Southampton Buildings, London. Soluble alizarine compound for dyeing and printing.
- 6,351. H. SLOAN, 20, High Holborn, London. Giving motion to the hackles of hackling machines.
- 6,353. S. H. COLE, W. S. DOBSON, and D. DE MOUZILLY, 20, High Holborn, London. Knitting machines, partly applicable to looms and other machines used for manufacturing fabrics.

26TH APRIL.

- 6,368. G. H. CROKER, 15, Water-street, Liverpool. Machinery for cleaning cotton seed, etc.

SPECIFICATIONS PUBLISHED.

1889.

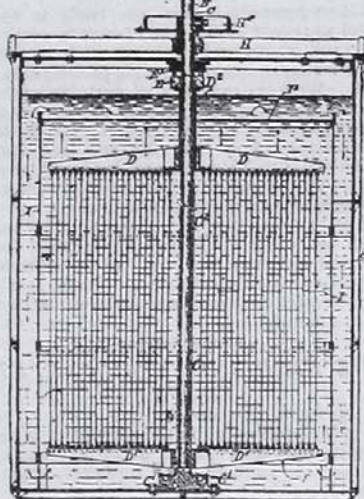
- 7,090. DREYFUS and ROBINSON. India-rubber, etc., fibres and fabrics. 61.
  - 7,480. FUHRMANN and TRENCKMANN. Glove, etc. fastenings. 8d.
  - 8,650. HARGREAVES and GILLOW. Ring spinning and doubling frames. 8d.
  - 9,186. BOULT (*Streubel*). Spinning machines. 8d.
  - 11,000. LAKE (*Oehler*). Colouring matters. 6d.
  - 17,622. BETTNEY. Knitting machines. 11d.
- 1890.
- 3,407. LANE Artists' painting fabric. 6d.
  - 3,465. JUSTICE (*Willcomb Knitting Machine Co.*) Stocking. 8d.

AMENDED SPECIFICATIONS.  
SECOND EDITIONS.

- 4,387.\* LAKE (*Wirth and Co.*) Colouring matters. 6d. 1889.
- 2,988. ASHWORTH. Carding engine flats. 8d. 1889.

ABSTRACTS OF SPECIFICATIONS.

15,103. October 30, 1888. Dyeing and Drying. F. MOORE, Trowbridge, Wiltshire.



Relates to the dyeing and drying of cloth, yarn, and other materials. In a vessel A, heated externally by suitable means, is mounted an inner vessel I, open beneath and partially closed above by a perforated cover L. Upon a central shaft B is mounted a hollow spindle C, the lower flanged end of which runs on ball-bearings, the upper passing through a guide-bar H, and carrying a driving pulley H'. Upon the hollow spindle are two frames D, D' carrying rings or spirals with hooks which hold the cloth or hanks under treatment. The upper frame D is adjustable, for stretching the material, by a nut E, which is fixed to the supporting sleeve D<sub>2</sub> and can be turned against a locknut E<sub>1</sub>, prevented from turning by a feather engaging a slot in the spindle C. On rotation of the spindle currents are caused by centrifugal action in the directions indicated by the arrows. For drying the material hot air is supplied to a similar vessel into which the frame C, D, D', and its contents are lowered. The Provisional Specification describes also an apparatus comprising an inner perforated vessel and a fan for circulating the liquid; and the invention is therein stated to be applicable to the treatment of wool and to washing. [84d.]

15,121. Oct. 30, 1888. DYES. J. Y. JOHNSON, 47, Lincoln's Inn Fields, London.—*Badische Anilin and Soda Fabrik, Ludwigshafen-on-the-Rhine.*  
Relates to the production of derivatives of alizarine green, a substance prepared from alizarine-blue as described in specification No. 14,258, A.D. 1884.

*Alizarine green sulpho acid.*—Alizarine green is gradually added to 30 times its weight of fuming sulphuric acid containing 8-10 per cent of free anhydride, and the mixture is heated to 130-135 deg. C. until practically soluble in water. The mixture is then poured into water, filtered, and the sulpho-acid precipitated by common salt. It is soluble in water and produces on wool treated with a chrome mordant green shades similar to those of alizarine green itself.

*Alizarine indigo blue.*—Alizarine green is dissolved in about 20 times its weight of concentrated sulphuric acid of about 1.84 sp. gravity, and the mixture is heated to 200-210 deg. C. until it assumes a pure indigo blue colour. It is then poured into water, whereby the new product is precipitated. Instead of starting with an alizarine green the process for the preparation of this body from alizarine blue as described in the above-mentioned Specification, may be continued directly by raising the temperature gradually to 200-210 deg. C., and maintaining it at this point, until the colour changes from purple to bright indigo-blue. The product is then separated as before. Alizarine indigo blue is also obtained by treating alizarine green sulpho acid with concentrated sulphuric acid. It is insoluble in water, as are also its alkaline salts. Upon chrome-mordanted wool its dye shades similar to those produced by indigo blue. Both alizarine-green sulpho acid and alizarine-indigo-blue form with alkaline bisulphites compounds which are soluble in water and suitable for dyeing and printing. [84d. No drawings.]

15,145. Oct. 23, 1888. Looms. J. WHITAKER, Ingrow Wire Mill, near Kelghey.  
The picking stick is formed with an inclined bearing surface for the strap, the latter being kept in position by a strip of metal, etc. [84d. Drawings.]

15,157. Oct. 23, 1888. Advertising. W. FLOWERS, 5, Ham Frith Road, Essex, and H. ELDRIDGE, 83, Dresden Road, Hornsey Rise.  
The advertisements are put on the borders of serviettes, towels, and table-cloths, either directly by printing or weaving, or indirectly through attached strips of linen. [84d. No drawings.]

15,214. Oct. 23, 1888. Ring Spinning and Doubling Frames. G. BALFE, Coronation House, Reddish, Lancashire.  
In order to straighten the fibre before it is wound on the spindle and also to prevent ballooning from taking place, one or more bands or strips of cloth are arranged between the thread guides and the points of the spindles. The strip may be suspended by hooks from the board above; it is secured at the ends by cords. When the machine is stopped the band will hang vertically. [84d. Drawings.]

15,258. Oct. 23, 1888. DYES. J. Y. JOHNSON, 47, Lincoln's Inn Fields, London.—*Badische Anilin and Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany.*  
*Azo Dyes.*—Relates to the preparation of diazo colouring matters which may be regarded as azo derivatives of symmetrical diphenyl-ureas or diphenyl-thioureas. Consists in reacting with one molecule of phosgene or of thiophosgene, or of carbon bisulphide upon two molecules of para-amido-

benzol-azo-salicylic acid, or of para-amido-benzol-azo-cresotinic acid. The amido-azo compounds may be obtained by reduction of the corresponding para-nitro-diazo-benzol combinations, or by combining Greiss's amidodiazobenzol with salicylic or cresotinic acid; but preferably Nieszki's diazo acetanilides are employed. For example, acetyl-p-phenylene diamine is diazotised in hydrochloric acid solution by means of sodium nitrite, and the solution is run into a soda solution of salicylic acid. The acetyl azo compound precipitated is deprived of its acetyl group by heating with sulphuric acid in a water bath and the azo compound is precipitated by pouring into water. It is then converted into its sodium salt by caustic soda, and phosgene gas is passed into the cold solution until it becomes acid. The brown slimy product is filtered and converted into its sodium salt. The colouring matter thus produced is easily soluble in water, and in an alkaline dye-bath produces a yellow colour on un-mordanted cotton. Liquid phosgene may also be used. Thiophosgene carefully agitated with the amido-azo compounds produces dyes of similar properties. When carbon bisulphide is used the mixture is heated in a still with a reflux condenser, [64d.]

15,259. Oct. 23, 1888. DYES. J. Y. JOHNSON, 47, Lincoln's Inn Fields, London.—*Badische Anilin and Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany.*

*Indulines.*—Relates to the production of sulpho acids of the red basic naphthalene dye-stuff called Rosinduline obtained by heating amido naphtho-quinone-oxil (naphthoquinone diamide), or substances which yield this body, with aniline hydrochloride and aniline. The basic colouring matter for this purpose is preferably prepared by heating together benzol-azo-alpha-naphthylamine hydrochloride aniline hydrochloride, and aniline, and the crude product may be purified by dilute hydrochloric acid, and then further purified and converted into its salts. From these products three sulpho-derivatives are prepared:—(1) Monosulpho acid. The partially purified product, or the isolated base, or a salt thereof, is heated with sulphuric acid of 95-96 per cent. H<sub>2</sub>SO<sub>4</sub> at 100 deg. C. until soluble in cold dilute caustic alkali, and the sulpho acid thus produced is then precipitated by addition of water, in which it is insoluble. If desired, it may be purified by conversion into its crystalline alkaline salts. (2) Disulpho acid. The red basic dye-stuff, or preferably its mono-sulpho acid, is heated with fuming sulphuric acid containing 23 per cent. free anhydride at about 49 deg. C. until soluble in boiling water, and the disulpho acid is then precipitated by ice-cold water and purified by conversion into its crystalline alkaline salts. (3) A third and probably higher sulpho acid, which is easily soluble in cold water, is obtained by heating the basic colouring matter or its disulpho or mono-sulpho acid, but preferably the latter, with fuming sulphuric acid at 100 deg. C. until soluble in cold water, and the sulpho-acid produced is then converted into its sodium salts. [84d.]

15,260. Oct. 23, 1888. DYES. B. WILCOX, 47, Lincoln's Inn Fields, London.—*Farben-fabriken vormals, F. Bayer and Co., Elberfeld, Germany.*

*Alizarine-blue-mono-sulpho acids.*—Relates to the preparation of mononitro and monomido-alizarine mono-sulpho acids and of alizarine-blue-mono-sulpho acids therefrom. The nitro compounds are prepared by treating alizarine-alpha-beta-mono-sulpho acids obtained in the preparation of flavo- and anthra-purpurine in sulphuric acid solution, with the theoretical quantity of nitric acid, or of a nitrate, or in acetic acid solution with nitrous acid or a nitrite. The amido compounds are obtained by reduction of the mono-nitro compounds by ordinary means, for example, by fuming hydrochloric acid and crystallised tin salt. Alizarine blue mono-sulpho acids are prepared from these products by Skraup's reaction. For example, a mixture of amido-sulpho acid and nitro-sulpho acid is heated with glycerine and sulphuric acid to 120-140 deg. C., until a sample dissolves in a ka<sup>1</sup> with a pure green colour, and the alizarine-blue sulpho acid thus produced is precipitated by pouring the melt into water, and is purified by conversion into its sodium salt. The new product can be employed for printing cotton without the employment of bisulphite, and yields with chromium mordants shades of a greener tinge than those obtained with alizarine blue. Readily soluble bisulphite compounds which are easily decomposable by mineral acids are obtained by heating alizarine-blue-mono-sulpho acid paste with sodium bisulphite at about 50 deg. C., diluting with water and precipitating with common salt. [84d.]

15,342. Oct. 25, 1888. Carding Engines. A. HALEY, York Villa, Frome, Somersetshire.

*Hand (cleaning) cards.*—The card clothing is stretched over a curved iron plate, riveted or otherwise secured to a wooden frame. [64d. Drawings.]

15,357. Oct. 25, 1888. Punching Jacquard Cards. A. R. SADLER, Duke Street, J. R. BEARD, St. George's Street Mills, and J. GODWIN, Athey Street Mills, all in Macclesfield.

Arrangements are described for operating piano machines by power. The machine may be arranged to be operated by the usual treadles when required. [84d. Drawings.]

15,402. Oct. 26, 1888. Spinning Mules. T. GURST, T. BUCKERS, Poland Street, Manchester, and J. COCKEN, 93, Leo Street, Oldham.

*Winding-on.*—The chain for regulating the amount by which the screw of the quadrant nut is operated at each run-in during the formation of the cop-bottom is taken up by means of a cam and slotted-lever arrangement, the cam being operated through worm-gearing, and the chain being adjustably attached to a slotted lever and passing over pulleys on the winding faller and catch. The catch is thus raised slightly at each run-in until, when the cop-bottom is completed, it is entirely disengaged from the ratchet. A nosing arrangement is described in the Provisional Specification. [64d. Drawings.]

15,449. Oct. 27, 1888. Padding Quilts, Cushions, etc. S. LEBMAN, Little Lever Street, Manchester.

Imitation down quilts, skirts, or other coverings or garments, cushions, pillows, bolsters, and other articles of upholstery are padded as follows:—An inner layer of loose short staple cotton waste fibre, prepared by being cleaned and passed through a willow or opening machine, is interposed between layers of longer stapled cotton fibre or wadding, and the whole is covered with suitable fabric and quilted. The short stapled fibre may be used alone when in a strong cover, or with only one layer of long staple fibre or wadding "backing." [84d.]

PATENTS.

W. P. THOMPSON & CO.

Agents for procuring Patents and Registering Trade Marks and Designs.

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