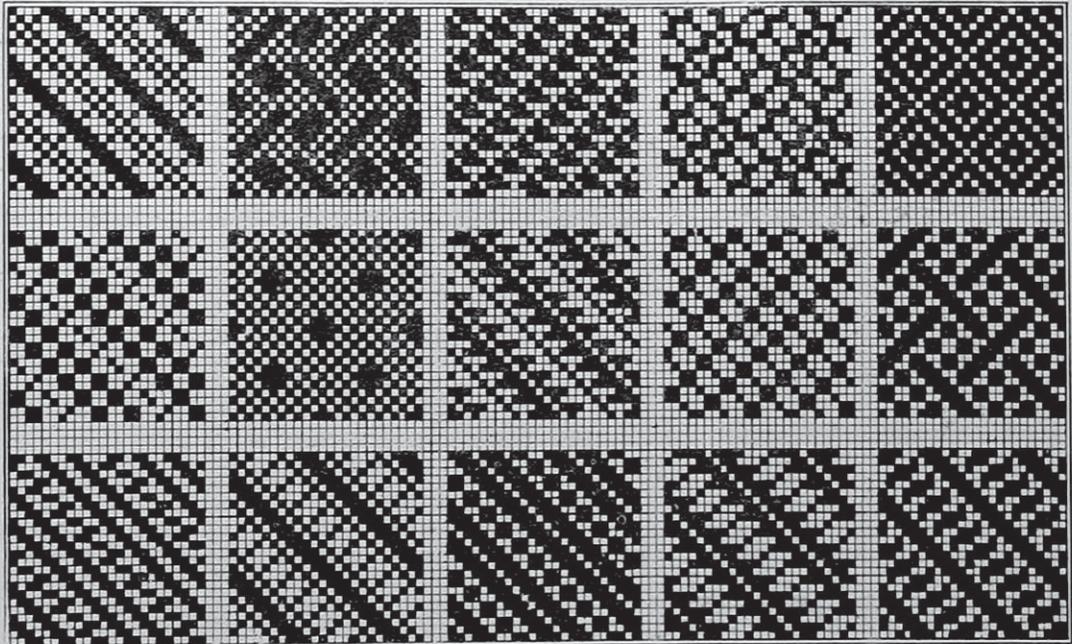


- FRILL**:—An ornamental band of fabric, gathered in folds or tufts on one edge.
- FRINGE**:—Ornamental trimmings of pendant cords, loose threads, or tassels.
- FRISE**:—A pile fabric, woven so that the pile is in loops and stands out from the face of the cloth, the loops not being cut. Differs from plush and velvet in this respect. The loop effect is produced by using two warps, the threads of one being stretched with greater tension than the other, using the tight warp for building up the body of the fabric and the loose warp for forming the face. The loops are formed by the loose warp, which comes from a separate warp beam, operated with a positive let-off, in order to feed this warp freely, the filling taking the greater lengths and thus forming the characteristic loops.
- FROG**:—A spindle-shaped button or toggle and a corresponding loop, each surrounded with ornamental braiding, used to fasten a cloak or coat, by passing the toggle through the loop.
- FUCHSINE OR MAGENTA**:—It was discovered in 1859, being one of the first artificial dyes made. One method of preparing it is by oxidizing a mixture of aniline and toluidine, which can be made from compounds found in coal tar. The crude product is dissolved in hot water and allowed to cool, when the dye crystallizes out and is separated. The solution, or "mother liquor," as it is called, which contains some of the dye mixed with other substances, is evaporated and less pure grades of fuchsine are obtained, which are sold under various names, such as cerise, grenadine, amaranth, etc. Fuchsine appears as a powder, or as crystalline masses, with a brilliant green metallic lustre. It is soluble in 250 parts water, much more readily in alcohol. It dissolves in concentrated sulphuric acid with a brownish yellow color; the solution becomes nearly colorless on dilution with water.
- FULL DRESS**:—A style of dress which etiquette or fashion requires to be worn at certain social functions.
- FULLER'S EARTH**:—A term originally applied to a lime or argillaceous earth occurring in association with chalk and oölite.
- FULL-FASHIONED**:—A term applied to underwear that has been finished with flat seams, selvage edged, throughout. Also used for hosiery. Full-fashioned goods are knit flat, in separate sections, and are made to conform to the desired shape by the machines automatically dropping stitches to narrow them at certain parts. The final shape is given by stretching them on suitable boards and drying them before removal.
- FULLING OR MILLING**:—The process of shrinking woolen fabrics by means of moisture, and heat produced by friction and pressure; which shrinks, thickens, and makes the goods more compact.
- FULLING-MILLS**:—Machines for fulling, milling or felting cloth. There are two types, viz.: the rotary and the kicker mill. The first is the one in most general use.
- FULL REGULAR**:—(or looped). A term applied to hosiery or underwear that has the seams fastened together by hand knitting instead of by machine looping.
- FUR**:—The short, fine, soft coat or pelage of certain animals, distinguished from the hair, which is longer and coarser, and more or less of which is generally present with it.
- FURNITURE PLUSH**:—A plush made of mohair or mohair and cotton, used for covering household furniture, etc., also called *Utrecht Velvet*.
- FUSTET**:—Young fustic, Zante-fustic. Wood of a European tree, obtained its prefix *young* on account of the smallness of its branches compared with that of the yellow wood, distinguished as *old fustic*. Its colors are more fugitive. Fustet is very little used in cotton-dyeing, not at all in calico-printing, but is used by some wool-dyers to give a more fiery tint to their scarlets.
- FUSTIAN**:—A stout, twilled cotton fabric, especially that which has a short nap, variously called corduroy, beaver-teen, velveteen, etc., according to its finish.
- FUSTIC**:—Old fustic, yellow wood. The wood of a *morus tinctora*, a tree growing in the West Indies, and which yields a yellow dye; formerly known as *Dyer's Mulberry*. The colors it gives are not very staple. It comes into sale in four stages; namely, as chips, powder, aqueous extract, and as a paste or lake. In the two former stages it is generally laid up for several weeks before coming into use, being frequently turned over and sprinkled with water. This process softens the woody fibre, and enables the color to be more easily extracted.
- FUTURES**:—A term used in the cotton market to designate cotton sales for future deliveries, dealing in many instances with forthcoming crops, which at the time they are bought and sold are only in the embryonic stages of growth, a condition of dealing into which much careful consideration and no small degree of speculation may enter, and which seems to owe its origin in some measure to the prolonged harvesting of the fibre; vice versa *spots*.
(*To be continued.*)
-
- Sulphur Black on Jute**.—Sulphur blacks are at present used extensively in jute dyeing. The fibre absorbs them readily, and the baths are much better exhausted than in the case of either linen or cotton. The raw jute simply requires boiling in water as a preliminary process, the dyeing process being the same as for cotton. Sulphur blacks should be used which require the least quantity of sodium sulphide for solution, which is liable to tender this fibre.
-
- Deepening Sulphur Black**.—It is said that a deeper and more lustrous black is obtained on goods dyed with a sulphur black if the goods after dyeing and rinsing are worked first at 105° F. in a 20% bath of pyroligneate of iron, and then, also at 105° F., in a bath containing wheat starch, tallow, and logwood extract, equal quantities of the first two and half the weight of either in the extract. The method has the further advantage of weighting the material.
-
- The interim financial statement of the Calico Printers' Association of England, covering the six months to December 31, 1908, makes certainly a bad showing. In the corresponding half of 1905 there was a net profit (after paying debenture interest) of £171,818; in the corresponding half of 1906 the profit was £181,757; in 1907, after an exceptionally bad half year, there was a net profit earned of £61,907; but the result of the past half year's working is a net loss of £67,293, or in other words, the association has not only earned nothing toward a dividend on its preference shares, but it has failed to earn anything with which to pay the current interest on its debentures, and the gross profit shown, falls short of even the very moderate (and slightly reduced) sum set aside for "depreciation, maintenance, upkeep and repairs."
- No doubt the conditions of trade have been peculiarly bad, but such a complete debacle in the affairs of a great industrial company is most unusual and disquieting.

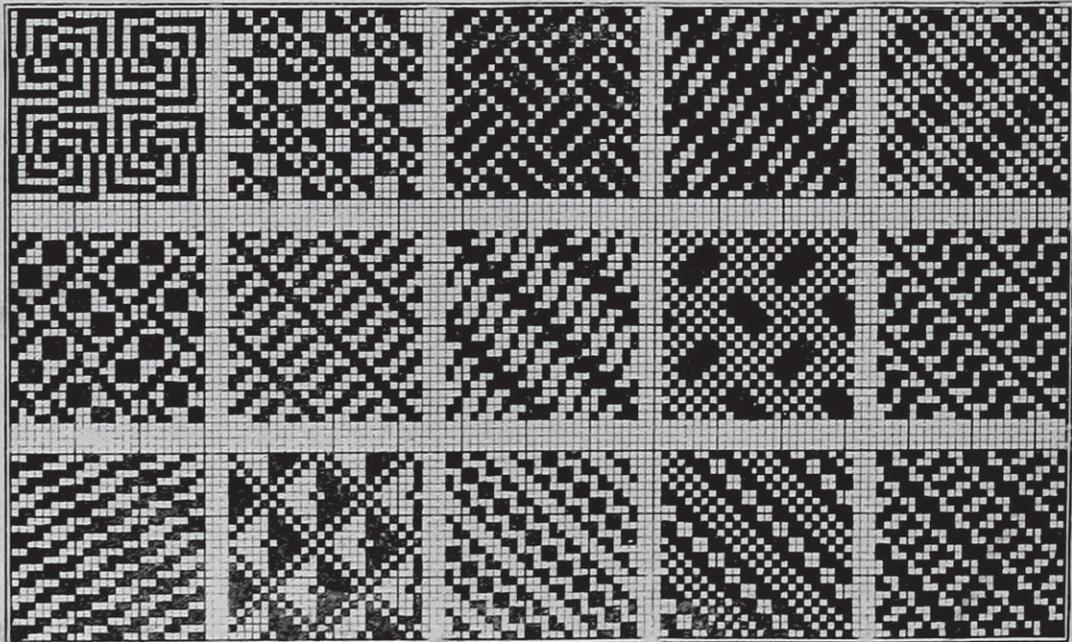
DICTIONARY OF WEAVES.*

TWELVE HARNES



12 X 12

TWELVE HARNES



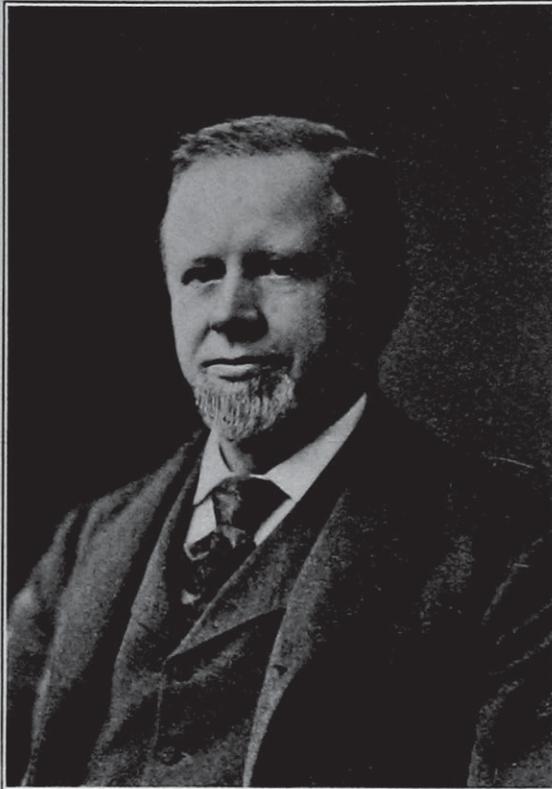
12 X 12

* Over One Thousand Weaves have thus far appeared in this Dictionary.

Philadelphia—The Textile City.

The Jacquard Machine.

Philadelphia is not only the largest and most important textile manufacturing city of the world, but at the same time produces the more intricate (fancy) constructed fabrics met with in the market.



THOMAS HALTON, SR.

As will be readily understood, manufacturing more particularly these complicated fabric structures in consequence made Philadelphia the home of figured weaving, *i. e.*, the Home of the Building of Jacquard Machines in this country.

The Jacquard machine itself is the invention of Joseph Marie Jacquard, born in Lyons, France, in 1752; his parents being silk weavers. Jacquard's invention in itself was based upon the older inventions in the line of weaving machinery, by Buchon, Falcon and Vancanson.

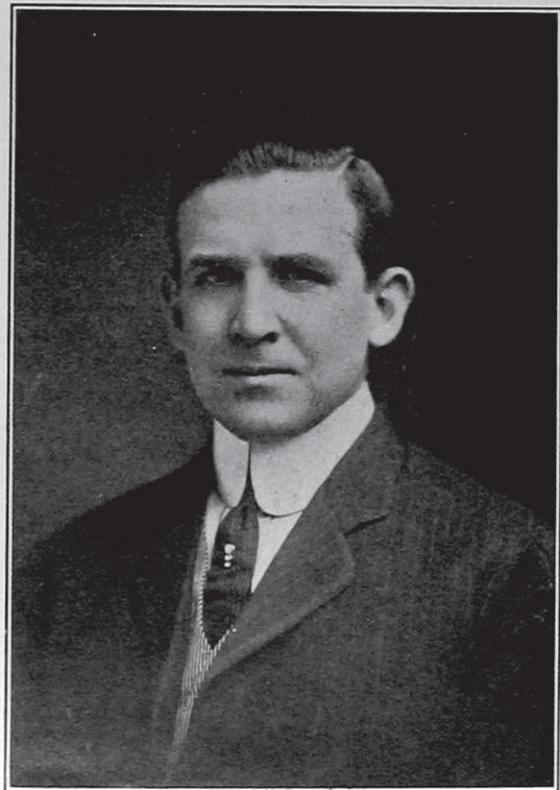
Bouchon, in 1725, employed a band of pierced paper, pressed by a hand-bar against a row of horizontal wires, so as to push forward those which happened to lie opposite the blank spaces, and thus bring loops at the lower extremity of vertical wires in connection with a comb-like rack below. Falcon submitted in 1728 a chain of cards, and a square prism, known as the cylinder, in lieu of the band of paper of Bouchon. In 1745, Vancanson suppressed altogether the cumbrous tail-cards of the draw-loom, and made the loom completely self-acting by placing the pierced paper or card upon the surface of a large pierced cylinder, which traveled backwards and forwards at each stroke, and revolved through a small angle by

ratchet work. He also invented the rising and falling griffe, and thus made a machine very nearly resembling the actual Jacquard.

Jacquard was an experienced weaver besides an inventive mechanic, and in combining the best parts of the machines of his predecessors, succeeded in 1804, as the first person, in obtaining an arrangement sufficiently practical to be generally employed, *i. e.*, the first Jacquard machine had then been constructed by him. Until 1810 Jacquard had great troubles, as his machine was not understood by the weavers. So violent was the opposition made to its introduction that he was compelled to leave Lyons in order to save his life. The Conseil des Prudhommes broke up his machines in the public places, and Jacquard was delivered over to universal ignominy. But after some years had passed, the machine proved to be of the greatest value, and on the spot where the model was destroyed a statue to Jacquard now stands.

Jacquard died in 1834, at which time over 30,000 Jacquard machines were then in use in his native city, Lyons.

With reference to Philadelphia more particularly, the History, Progress and Success of the Jacquard machine is most closely connected with the name *Halton*; Mr. Thomas Halton, as far back as 1876 building these machines then at Delaware avenue, near Schackamaxon street in the same house in which he then



THOMAS H. HALTON

lived. The superior construction of this Halton Jacquard machine soon made a name for it all over the country, compelling in turn Mr. Halton, in order to

be able to supply the continually growing demand for his machines, to establish a larger machine shop at Waterloo street below York, and after a few years

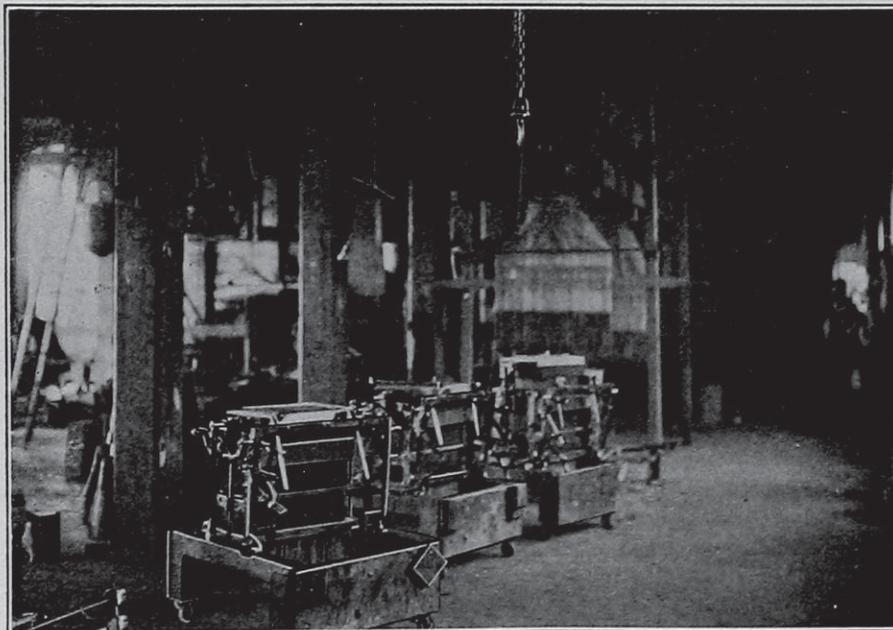
In 1899, in order to be able to supply the ever increasing demand for their Jacquard machines, they then erected the large plant at Allegheny avenue and



THE THOMAS HALTON'S SON'S PLANT

at Huntington street, below Kensington avenue, and finally at Mutter street below Lehigh avenue; in every instance securing a larger plant so as to be able

“C” street, and where they are now located, with facilities to handle any order for Jacquard machines, no matter how large, at the shortest possible notice. The



VIEW OF A PORTION OF ONE OF THE ERECTING ROOMS SHOWING HALTON JACQUARDS AND HARNESS BUILDING

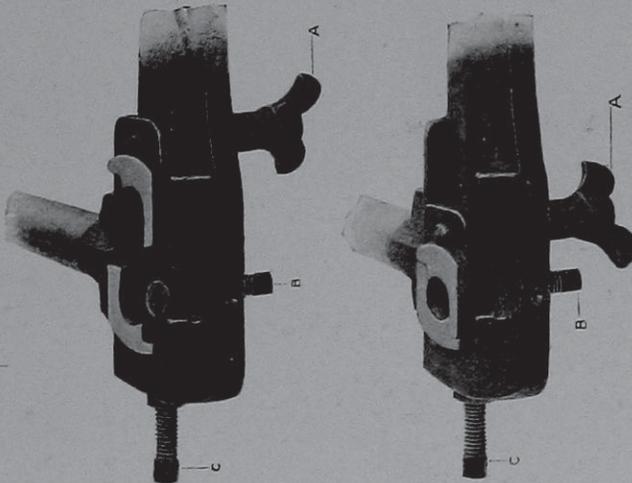
to fill the always growing demands for Halton Jacquards.

Mr. Halton died in 1898, his sons Thomas H. and James D. and who for years were closely connected with their father in the business, continuing the latter under the name of Thomas Halton's Sons.

plant is under the personal supervision of Mr. Thomas H. Halton, who sees to it that most careful attention is given to every point in the construction of every machine built in the plant, from the selection of the proper materials to the final trials and tests that each machine is subjected to before shipment. Every ma-

chine is fitted with its own levers and tested as thoroughly as possible before it is shipped, thus insuring proper fit and smooth working.

Among the various kinds of Jacquard machines built by the Messrs. Thomas Halton's Sons, we find: The Single Lift Machine, with plain *Baton* Cylinder Motion or plain *Spindle* Cylinder Motion; the Independent (*Spindle*) Cylinder Motion or the Independ-



CYLINDER BEARINGS AND ADJUSTMENT

dent (*Baton*) Cylinder Motion; The Rise and Fall Machine; The Compensating Shed Machine (Rise and Fall); The Double Lift Single Cylinder Machine; The Double Lift Double Cylinder Machine; The Fine Index Double Lift Single Cylinder Machine; The Cross Border Single Lift Machine; The Cross Border Double Lift Machine; The Double Cylinder Rise and Fall Machine with Stationary Knives; 3, 4 and 5 Frame Brussels Machines; 3 yard Wilton Rug Machines, etc.

As will be readily understood, Improvements in the construction of the Halton Jacquard have been and are continually made, and when calling attention to the most important ones, will prove of the greatest of interest to those engaged in the manufacture of figured work.

All the Halton Machines are fitted with PATENT CYLINDER BEARINGS AND ADJUSTING DEVICES, permitting the taking out of the cylinder in an instant by simply giving one-half a turn to the thumb screw (see letter of reference *A* in the accompanying illustration) and raising the upper bearing out of the way (see left hand diagram) where it can be clamped by the thumb screw until it is again required in its normal position. Perfect adjustment, both laterally and vertically, is secured by the set screws *B* and *C*, at the side and bottom of the cylinder spindle; the cylinder being set to a nicety with this adjustment.

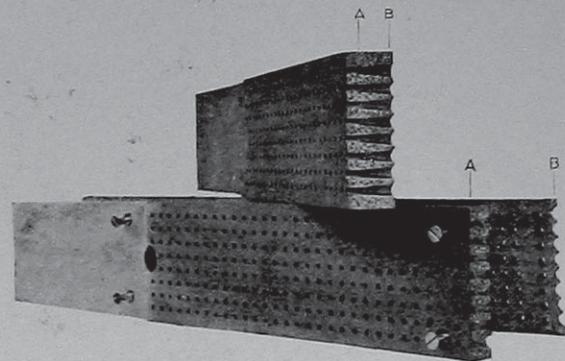
THE HALF-EYE TYPE OF A NEEDLE is used in all Halton machines, said eye making work easier for the loom fixer, since when for one reason or the other a needle has to be taken out of the machine it is not necessary for him to remove the hook.

CYLINDERS AND NEEDLE BOARDS of the Halton machines are made from selected, well seasoned ma-

hogany. The cylinders are built up in sections and are partially hollow, thus obtaining a minimum of weight and possibility of shrinkage or warping. The shafts of the cylinders are short in length, driven in each end, and then turned up true. If one end then becomes worn, either through lack of lubrication or otherwise, it is then only necessary to withdraw the short shaft, drive in another, and turn it up to the proper size.

The Halton machines are also provided with a PATENT DOUBLE NEEDLE BOARD. Every fixer knows what trouble and annoyance he is put to when it is necessary to take off an ordinary needle board for cleaning purposes. With the Halton patented double needle board this trouble and annoyance is obviated. As the name indicates, the needle board is in two parts, viz.: the front part (see latter of reference *A* in the accompanying illustration) and in which the needles fit comparatively snug and where the dirt accumulates; and the back part *B*, and in which the holes are of larger diameter, so that the dirt does not accumulate. When it then becomes necessary to clean the board, the front section only is removed and the back section allowed to remain to support the needles, which without support would drop from their proper position.

THE HALTON INDEPENDENT CYLINDER MOTION is another patented improvement of theirs. As is known to users of Single Lift Jacquards, the motion of the cylinder is usually governed by the lift. If the esses, cams and other cylinder motions are made to suit a high lift, they cannot be used for a small lift. If on the other hand, the mechanism is designed to suit a small lift, and a large lift is at any time re-



DOUBLE NEEDLE BOARD (PATENTED)

quired, the cylinder is thrown before the knives complete the lift, causing a quick, jerky motion, hard on the cards and the machine. Again the hooks have to be knocked off the knives before they are down, which is at once severe on the hooks and cards.

The Halton Independent Cylinder Motion, as is shown in perspective view in the accompanying illustration, obviates these defects, by using a patented mechanism similar to a double crank in appearance, except that the outside or *Cylinder* crank is movable on its axis to any degree, without disturbing its position of the main or lifting crank. This cylinder crank

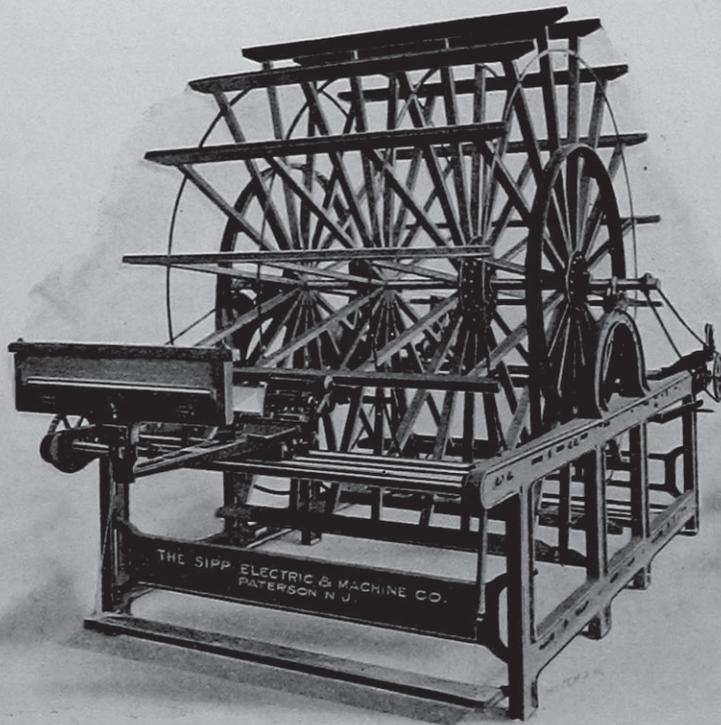
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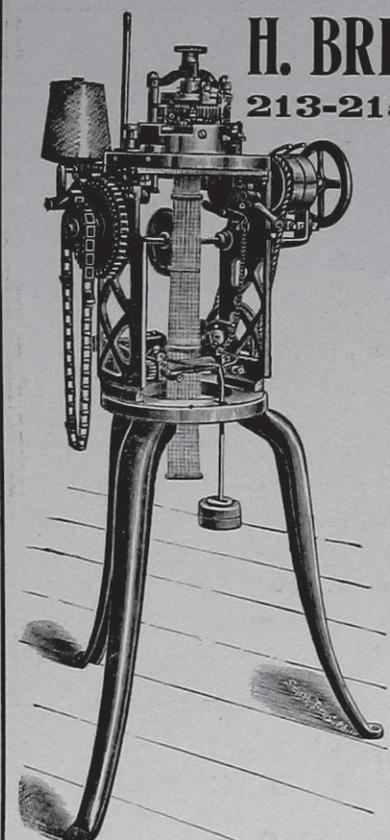
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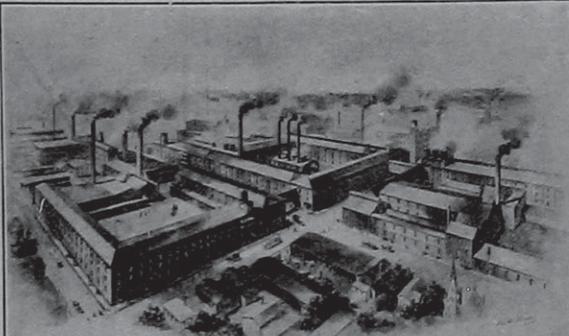
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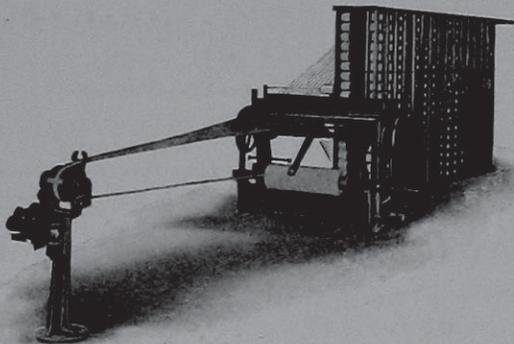
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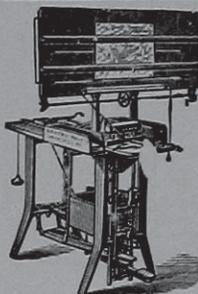
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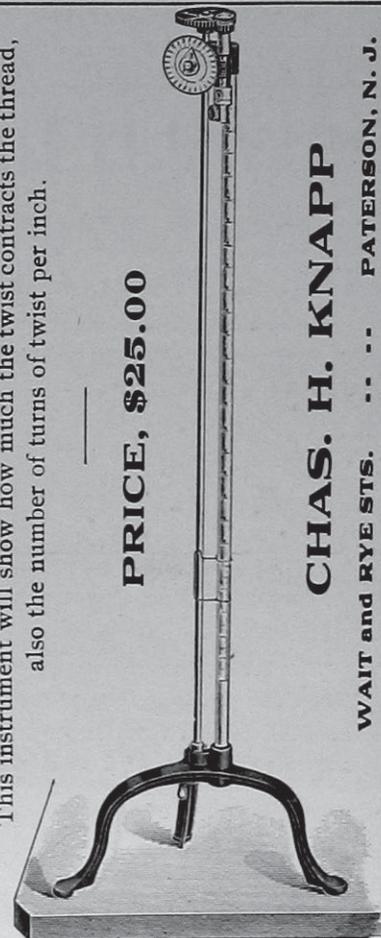
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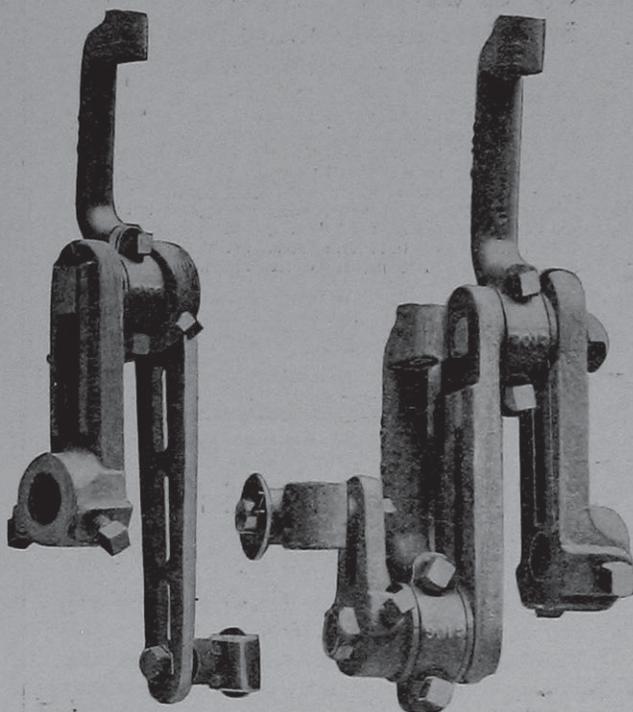
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is connected by a rod to a rocker lever which connects to the cylinder spindles or baton, by means of arms. With this mechanism, the cylinder can be set at any



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CRANK FOR RISE AND FALL MACHINE (PATENTED)

time sooner or later, to suit whatever lift is being used, and the hooks need not be pushed back until the knives have deposited them on the bottom plates, thus relieving the wire work and cards of unnecessary wear. Both cranks are slotted and any required sweep can be obtained on either.

In connection with their Rise and Fall machine, they use two plunger spindles on each side instead of one; the knives being lifted by one and the hook grate dropped by the other, an arrangement which prevents any friction, binding or excessive wear—as in the case where only one spindle is used. The spindles are operated by a double crank (shown in its perspective in the accompanying illustration) and two levers, thus making the rise and fall distinctly independent of each other, and at the same time giving a balanced motion

to the machine, instead of the jar more or less met with when using only one lever. The crank being adjustable, the rise can be increased or decreased without altering the drop or vice versa. The cylinder is operated by their Independent Cylinder Motion in conjunction with the double crank previously explained and illustrated.

As will be readily understood, besides the few improved-patented-devices thus referred to, the Messrs. Thomas Halton's Sons have others and which they apply either to all their machines or to such as designed for special fabrics, *i. e.*, as the case may require.

Another important branch of the Messrs. Thomas Halton's Sons Plant is their JACQUARD HARNESS BUILDING DEPARTMENT. They do harness building of every description, furnish harness all complete, tied to the machine in their erecting rooms, ready to be put on the loom, or they will send their men to tie up the harness in the loom, at your mill. They also furnish comberboards of every description, either in one piece, or in sections to facilitate changes in texture without having to re-tie the harness. *Coupled and Uncoupled Linges and Mails*, both articles in all sizes are always kept in stock. *Racks* for holding the sets of cards on the looms, and *Adjusting Brackets* for regulating the height of machine in the loom, are also supplied, if so ordered.

Mr. H. A. Forbes of Paterson, N. J., is their representative for that city and vicinity; the South being in the hands of Mr. O. H. Robbins of Charlotte, N. C.

DECATING OR DECATIZING. Lately several inquiries came to this office as to which is the correct word for this modern process of woolen and worsted finishing; to which we state that Decatizing is the correct word. We are upheld in this assertion by Messrs. Schuchardt and Schutte, 90 West Street, New York, the sole manufacturers of this machine in this country, as well as the Farbenfabriken of Elberfeld Co. (vormals Friedr. Bayer Co.) Elberfeld, Germany and New York City, who as far back as March 1906 use Decatizing as the word to use in place of the German Dekatiren or the French Decatir (See page 269, Harras-Technologisches Lexikon der Textile Industrie); decating being no word of the English language.

BOOKS ON TEXTILE SUBJECTS.

Wool Dyeing (Part 1), by W. M. Gardner. Price \$2.00.

TABLE OF CONTENTS: Fibre, Scouring, Bleaching, Water, Mordants, Assistants and other Chemicals.

Wool Dyeing (Part 2), by Gardner and Knaggs. \$3.00.

TABLE OF CONTENTS: Classification of Coloring Matters; Natural Dyestuffs: Logwood, Redwoods, Madder, Cochineal, Kermes and Lac-dye, Orchil; Cudbear and Allied Coloring Matters, Yellow-Dyes, Indigo; Artificial Dyestuffs: Classification of Coal-tar Dyes, Artificial Mordant Dyes, Acid Mordant Dyes, Acid Dyes, Direct Cotton Dyes Suitable for Wool, Basic Dyes, Dyes Applied by Oxidation, Reduction and other Special Processes, Metallic Dyes, Methods of Dyeing Wool in Various Forms, Suitability of Dyes for Different Classes of Work, The Theory of Wool Dyeing.

The Dyeing of Cotton Fabrics, by F. Beech. Price \$3.00.

TABLE OF CONTENTS: Fibre; Action of Alkalies, Acids and Oxidising Agents; Bleaching; Dyeing Machinery and Manipulations; Principles and Practice of Cotton Dyeing; Dyeing Unions, Cotton-Wool, Cotton-Silk; Washing, Soaping, Drying; Testing Color; Experimental Dyeing and Comparative Dye Testing.

Silk Dyeing Printing and Finishing, by G. H. Hurst. Price \$2.00.

TABLE OF CONTENTS: Fibres; Boiling Off; Bleaching; Dyeing Blacks and Fancy Colors; Weighting; Dyeing Mixed Fabrics; Printing; Dyeing and Finishing Machinery and Processes.

Dyeing of Textile Fabrics, by Hummel and Hasluck. Price \$2.00.

Three Volumes Bound in One.

Vol. 1: Textile Fabrics and Their Preparation for Dyeing. Vol. 2: Coloring Matters for Dyeing Textile Fabrics. Vol. 3: Mordants, Methods and Machines used in Dyeing.

Wool, Cotton, Silk; Fibre to Finished Fabric, by Posselt. Price \$3.50.

TABLE OF CONTENTS: Raw Materials; Preparatory Processes; Carding, Drawing, Spinning and Twisting; Winding, Warping; Weaving Machinery and Supplies; Knitting, Processes and Machinery; Dyeing, Bleaching, Mercerizing, Processes and Machinery; Finishing, Processes and Machinery; Heat, Power and Transmission.

Color in Woven Design, by R. Beaumont. Price \$7.50.

This work contains on 32 plates 126 colored illustrations of Diagrams Illustrating the Mixing of Colors; Fancy Yarns, Fancy Cassimeres, Worsteds, Trouserings, Coatings, Suitings, Ladies Dress Goods, Cloakings, Fancy Cotton and Silk Fabrics. Besides said 126 colored illustrations, the work contains 203 illustrations, in black and white, of Weaves and Color-Effects in Fabrics, etc., accompanied by 440 pages of reading matter.

Chemistry of Dye-Stuffs, by G. von Georgievics. Price \$4.50.

A textbook presenting to the student in as condensed a form as possible the extremely wide domain of the modern chemistry of dye-stuffs; bringing into prominence all the relations known to subsist between the various dyes and groups of dyes, as well as the connection between color and constitution, since the proper appreciation of these relations forms the main object of color chemistry.

The Jacquard Machine, by E. A. Posselt. Price \$3.00.

TABLE OF CONTENTS: Different parts of the Jacquard Machine and its Method of Operation; The Jacquard Harness; The Comberboard; Tying up of Jacquard Harnesses for all kinds of Fabrics, Modifications of the Single Lift Machine; Stamping, Lacing and Repeating of Jacquard Cards; Practical Hints on Jacquard Designing.

Testing of Yarns and Textile Fabrics, by J. Herzfeld. Price \$3.50.

A Guide for the Manufacturer and Large Purchaser, who observe definite specifications to insure standard material and workmanship; also giving a collection of tests, both of physical and of chemical nature.

Woolen Spinning, by C. Vickerman. Price \$1.75.

TABLE OF CONTENTS: Fibre, Supply, Sorting, Scouring and Drying, Bleaching and Extracting, Dyeing, Burring, Mixing and Oiling, Carding, Spinning, The Mule, Miscellaneous.

Wool Combing, by H. Priestman. Price \$1.50.

TABLE OF CONTENTS: Fibre, Washing, Water, Carding, Preparing, Intermediate Processes, Combing, Finishing, Tops and Top Testing.

Silk Throwing and Waste Silk Spinning, by H. Rayner. Price \$2.50.

A Treatise on the Principles of Silk Throwing and Waste Silk Spinning, with Illustrations and Descriptions of the Machinery used.

Textile Calculations, by E. A. Posselt. Price \$2.00.

A Complete Guide to Calculations Relating to the Construction of All Kinds of Yarns, Fabrics, and the Analysis of Cloth.

Cotton Spinning, by T. Thornley. 3 Volumes. Price \$6.50.

A Complete Self-Instructor (with Questions and Answers) on this subject, treating machinery and processes as used abroad.

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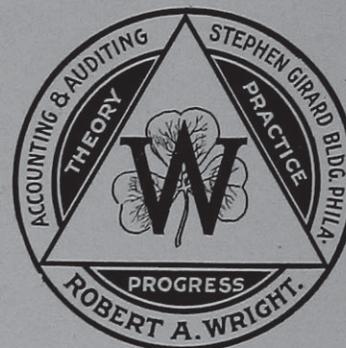
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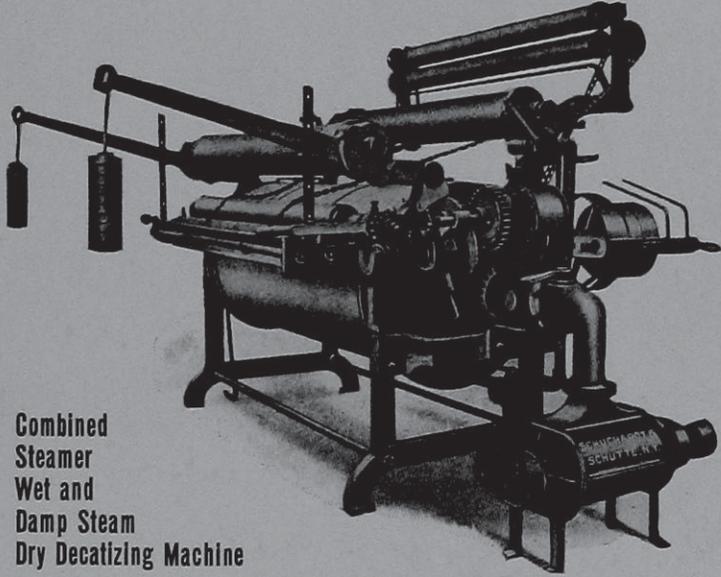
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MILL NEWS

Philadelphia. The Huddersfield Worsted Company has been started by George, John and William Camp, William McMurtie, Fred Shaw and Tom Dyson; the capital stock being placed at \$25,000. The new concern is engaged in the manufacture of all kinds of textile fabrics. Operations, it is stated, will soon be commenced. They have bought the plant of the Lehigh Worsted Company, on Kensington avenue.

Bowmanstown, Pa. Plans for the newly organized Bowman Silk Company's mill are finished and the contract for its erection awarded. The mill will be 50x100 feet, one story high, with a basement room underneath and a boiler and engine house attached.

Bridgeport, Pa. The Northern Trust Company will sell the Kaufman Knitting Mills, equipped with 310 machines and in full operation. Dyeing and finishing are included.

Catasauqua, Pa. James E. Missimer has started a hosiery mill at Second and Arch streets, North Catasauqua.

Chester, Pa. The T. I. Birkin Company's lace mill, at Second and Flower streets, has been sold to the Chester Lace Mills Company, which has been incorporated with a capitalization of \$400,000. J. W. Smith, who was manager of the Birkin plant, is president of the new concern.

The Chester Worsted Co., of which Mr. Jno. W. Turner is Sec. and Supt., will build an addition, 180 x 100 feet, to their present plant at Green and McIlvaine streets. The building will be used for a wool sorting department and warehouse for the concern.

Clifton Heights, Pa. It is reported that the Thomas Kent Manufacturing Company is about to build another large textile mill.

Reading, Pa. It is rumored that the plant of the Reading Hosiery Company, has changed hands, the consideration being \$25,000.

Rockdale, Pa. Operation on the erection of the addition to the Yorkshire Worsted Mills has been started. The new building will be 142 feet long, 51 feet wide and 32 feet high. A very desirable attribute will be its abundance of light. Additional broad looms will be installed.

Slatington, Pa. W. H. Whitehead has effected the organization of a concern to operate a silk mill. The building has been secured, and from 50 to 60 hands will be employed.

Walnutport, Pa. A new silk weaving mill has been started in the Bowman Building, about 30 yards west of the Central Railroad depot.

Paterson, N. J. Frank & Dugan have increased the wages of their warpers and winders, so that now nearly all their employees are receiving better wages.

The W. H. Ashley Silk Mills Company of Hackettstown contemplate the erection of a branch plant in Paterson.

Two knit goods concerns have been incorporated. One is the Up-To-Date Knit Goods Company of Newark, with a capital stock of \$25,000, and the other, the firm of William F. Taubel of Riverside, which will make hosiery and merchandise. The capital stock of the latter is \$1,200,000.

It is reported that a new brick mill is to be erected by the Barbour Flax Spinning Company. They now have an equipment of 22,000 spindles and employ 1,500 operatives.

Prescott and Waywell, a local silk winding and warping firm, are completing the work on their new two-story mill, which is expected to be in running order by May.

Garfield, N. J. The Robertsford Worsted Mills are to be rebuilt and enlarged.

Woodbine, N. J. The Coast Knitting Company has been incorporated with a capital stock of \$25,000.

Buffalo, N. Y. The Gifford Manufacturing Company has filed a certificate of incorporation. It will be a yarn mill.

Jamestown, N. Y. The Ashworth & Odell Worsted Company has secured a site 600 by 300 feet where a larger mill will be built this spring.

Fulton, N. Y. Ground has been broken for a new six-story mill on the west side by the American Woolen Company; the same to cost about \$1,500,000. It will be a yarn mill, the product of which will be used in all of the various mills of the company.

Phoenix Mills, N. Y. The Utica Knitting Mills Company has taken possession of the Fenimore Knitting Mills, and will operate the plant to its fullest capacity.

Sauquoit, N. Y. F. L. Port, the superintendent at the Lewis Knitting Mill for the past year, has accepted a position as superintendent in Philadelphia.

Sidney, N. Y. It is reported that the silk mill which has stood idle for the past few months, is to commence business again. The mill building is a finely constructed one and of sufficient capacity to hold a large number of looms. It was built about three years ago and did a successful business for many months. The product of the mill is silk dress goods, both plain and fancy.

Andover, Mass. The Marland Mills will start work on full time to-day. One-half of the mill has been closed for over a year.

Blackinton, Mass. The Blackinton Mfg. Co. have sold their mills. It is announced that \$100,000 will be expended by the buyers on improvements.

Cherry Valley, Mass. The George W. Olney Woolen Co., employing about ninety hands, will go on a working schedule of fifty hours a week.

East Boston, Mass. Within the next one or two weeks, work will be started here on the erection of the new Reciprocity Cotton Mill.

Fall River, Mass. The Pocasset Manufacturing Company has declared and paid a regular quarterly dividend of $1\frac{1}{2}$ per cent, March 3.

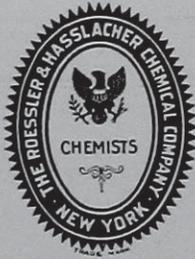
At the annual meeting of the Cotton

(Continued on page xvi)

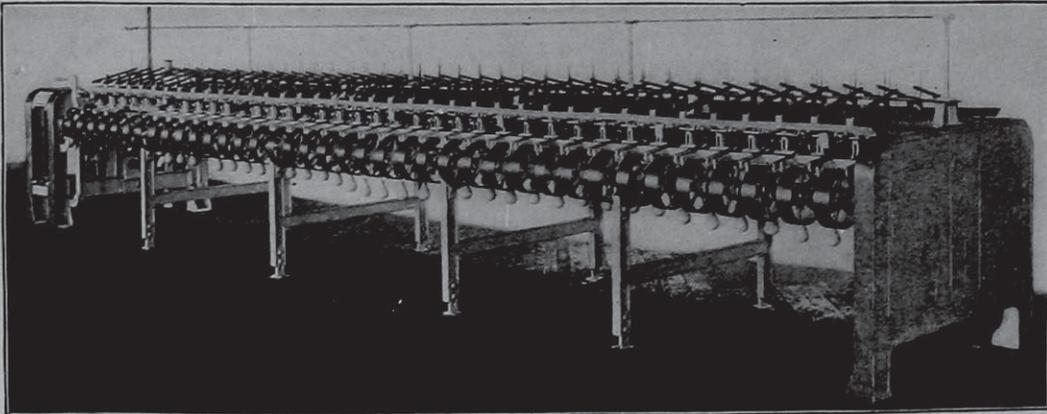
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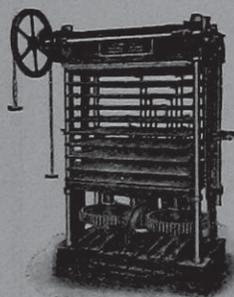


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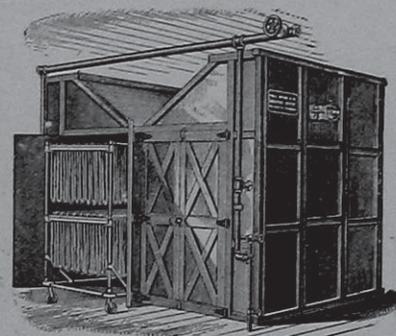
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Manufacturers' Association the officers who were re-elected are as follows: President, George H. Hills; vice president, W. Frank Shove; secretary and treasurer, Clarence M. Hathaway; members of the executive committee for three years, Charles H. Shove, associate members of executive committee for one year, Edward L. Anthony, and Edward Barker. The president and vice-president are ex-officio members of the committee. The other members who hold over are James E. Osborn and William N. McLane.

Fitchburg, Mass. J. D. Armitage, the new agent of the re-opened Cambridge mill of the American Woolen Company, is superintending the work of removal from storage there, the looms discarded by the Beoli mill when the looms of the Cambridge were carried to West Fitchburg. These looms are being shipped to the Assabet mill at Maynard. The empty mill will be renovated and put in the best condition possible for the new machinery for the making of women's dress goods, a line new to Fitchburg.

Greylock, Mass. The Greylock Mills will soon begin construction on a large addition to their present mill; the addition will practically double the present capacity of the plant, which has been working full and overtime all through the business depression. When the additions are finished, the mill will have 1,200 looms and 60,000 spindles. In order to accommodate the new operatives between 40 and 50 tenement houses will be erected by the Company.

Lawrence, Mass. The American Woolen Company has decided to at once begin work on another enormous mill in this city. Although no definite location has been made for the proposed (Ayer) Mill, tentative plans for the

plant have been prepared, which call for a building 621 by 125 feet, and six stories high, with a dye house 375x100 feet, and also a large power house.

The \$2,500,000 issued for the erection of this mill were taken at a figure that will make the money cost about 5½ per cent. Provided the mill will cost more than that, the company plans to pay the excess from its current earnings. Since the Wood Worsted Mills, erected a few years ago, have been a profitable investment, it is expected that the new mill will show equal profits.

The Brightwood Manufacturing Company of North Andover have had plans and specifications prepared for a new mill, 250 by 80 feet, two stories high, to be erected on the Lawrence side of the Shawshin River, just over the boundary line.

The Pacific Mills have acquired a large tract of land on Merrimack street, east of the Wood Worsted Mills, and on which that corporation will erect big print works.

Work has been begun on the Everett Mills for the construction of a gigantic mill 826 by 100 feet for a distance of 463 feet, the remaining 363 feet being 75 feet wide. The new mill, an imposing structure five stories high, will employ about 3000 operatives.

Lowell, Mass. The Beaver Brook Mill in Collinsville and of which Mr. O. L. Suenderhauf is the Agent, is unusually active in the weaving department, and the work planned for this mill will soon place it in the front rank of active mills.

The Musketquid Worsted Mills, of which E. J. Hylan is agent, has awarded contracts for the erection of a five-story brick addition, 60 by 70 feet, to the present plant, and an additional story 60 by 60 feet will also be put on the old mill.

The additions as contemplated will add 30,000 square feet.

Milbury, Mass. New Northrop looms have been installed by the Cordis Mills to replace the 212 common looms formerly used. The equipment is now 204 looms, which are operated by 13 weavers, whereas the old looms required 52 operatives.

Pittsfield, Mass. The Taconic Mill, of which Mr. R. A. Semple is Supt., has received a large order for resist dye worsteds that will be sufficient to keep the mill going with a full force of hands until next summer. It is probable that a portion of the plant will be run night and day.

Central Falls, R. I. A new weaving plant, which will give employment to 125 hands, is now in course of construction and was started on Mill street, by the Leader Weaving Company.

Pawtucket, R. I. The Glen Cairn Manufacturing Company has purchased for \$10,000 the plant of the New England Thread Company. The building is now being overhauled and new machinery will be installed for the manufacture of silk and mercerized shoe laces. It is expected to be ready about May 1.

Shannock, R. I. Forty looms are being installed in the new weave shed of the Columbia Narrow Fabric Company.

Tarkiln, R. I. Press of orders at the Oak Valley Worsted Company mills, of which Ernest A. Mowry, is superintendent, has forced the management to run the plant five nights a week, all night.

Valley Falls, R. I. The Penikees Mills Company has purchased the plant of the Zephyr Textile Company, on East avenue, Pawtucket, and will use it as an annex to its own plant.

Woonsocket, R. I. The Jules Desurmont Worsted Co. has been incorporated with a capital stock of \$500,000, for the purpose of manufacturing yarns and fabrics.

The Scotia Worsted Mills, Wm. Naismith Agt., and James Munro Designer, are running day and night.

The mills of the Rhode Island Dyeing & Finishing Company will be remodeled or a new building constructed.

Waterbury, Conn. The American Mills Company, manufacturers of suspender webbing will erect a two-story brick factory 64 by 191 feet and a one-story structure 30 by 54 feet in order to increase its facilities.

Unionville, Conn. Charles W. House & Sons, manufacturers of felt, whose plant was burned Feb. 21, involving a loss of approximately \$75,000 have decided to rebuild.

Dover, N. H. Control of the Cocheco Manufacturing Company of this city has passed to the Pacific Mills of Lawrence, Mass.

Meredith, N. H. The mill of the Atlas Linen Company has been purchased by the Meredith Linen Company. Linen crash and towels are produced.

Bennington, Vt. About sixty new looms will be added to the equipment of the mill here by Holden, Leonard & Co. The weaving will be done in the proposed addition and a new 125 horsepower boiler has been installed.

Lewiston, Me. At a meeting of the stockholders of the Hill Manufacturing Co., it was voted to build a new mill with a capacity of 23,000 spindles, which will make the entire capacity of the plant 80,000 spindles.

Elkton, Md. Daniel L. Baldwin President of the Elk Mills Co. purchased the weave mills of J. W. Barber and Co., which will give employment to sixty operatives.

Lonaconing, Md. The Klots Throwing Company has ordered additional machinery for its mill, and is now operating 4,000 spindles on silk throwing.

Norfolk, Va. The W. H. Ashley Silk Co. of Hackettstown, N. J., has leased the large manufacturing building at Ninth and C streets. The machinery is now installed and the mill will be ready for business by April.

Winchester, Va. C. A. Williams & Bros., owners of the Winchester Woolen Mills, have announced that they will double the capacity of the plant. For months the mills have been working overtime to catch up with increasing orders.

Charlotte, N. C. The Cotton Fibre Company has been incorporated with a capital stock of \$125,000, for the purpose of manufacturing cotton waste.

Colonel Leroy Springs, president of the Eureka & Springstein Cotton Mills, has announced that the present equipment of about 500 looms of the Springstein mill will be transferred to the Eureka and a new equipment of looms for weaving a finer product will be installed in the Springstein.

The Dakotah Cotton Mills of Lexington have awarded the contract for the

erection of their mills, comprising a main structure, 300 by 100 feet, with a boiler house and a dye house. 8,200 spindles and 250 looms will form the equipment.

Asheboro, N. C. The Acme Hosiery Mills have completed all arrangements for its new plant, and will install 100 knitting machines.

Bessemer City, N. C. The Slater Manufacturing Company, incorporated with a capital stock of \$300,000, is the reorganization of the Southern Cotton Mills.

Chapel Hill, N. C. The Alberta Cotton Mills, and the Blanche Hosiery Mills, both of this place, have been purchased by Julian S. Carr of Durham. Improvements to both mills will be made.

Duke, N. C. The Erwin Cotton Mills Company has chosen "Duke" as the place for its \$1,000,000 gray goods mill.

Kings Mountain, N. C. It is rumored that the Cora Cotton Mills will add 10,000 spindles, *i. e.*, double its plant.

Laurinburg, N. C. The first meeting of the stockholders of the Waverly was held. The mill will be located just beyond the Scotland Mill and will have 20,000 spindles, spinning hosiery yarns.

McAdenville, N. C. The McAden Mills will install 3000 new spindles in mill No. 3 at a cost of \$60,000.

Monroe, N. C. The Icemorlee Cotton Mills Company, will build another mill; double its present capital stock and erect a 5000-spindle plant for manufacturing fine yarns, in addition to the 5000 spindles on hosiery yarn they now operate.

Salisbury, N. C. Work has been begun on the \$100,000 addition to the Kesler Cotton Mills, which will be 80 by 120 feet, two stories high.

Selma, N. C. The Ethel Cotton Mill has begun the construction of a building which will be equipped with 5,280 spindles and accompanying machinery for the production of cotton yarns, part of it to be used in their present knitting department and the balance sold.

Wadesboro, N. C. The Wadesboro Cotton Mills Co., has awarded a contract for 1000 spindles and 100 looms, the plant now operating 7700 spindles.

Hawkinsville, Ga. 5000 spindles, it is reported are to be added by the Southern Cotton Mills.

Griffin, Ga. It is reported that the Spalding Cotton Mills will about double the present equipment of 11,000 spindles and 375 looms, manufacturing fancy weaves.

Manchester, Ga. The Manchester Cotton Mills have awarded contract for the erection of the mill buildings, which are to be equipped with 20,000 spindles and 500 looms for manufacturing cloth. The company is capitalized at \$500,000.

Baton Rouge, La. The Board of Trade is reported to have completed arrangements for the establishment of a knitting mill.

Meridian, Miss. The Alden Knitting Mills, of New Orleans, will establish a branch of their concern in this city.

Milwaukee, Wis. The Columbia Knitting & Manufacturing Company, it is reported, has decided to quadruple its present capital stock of \$25,000.

Fayetteville, Tenn. The capacity of the Elk Cotton Mills, which is now 6,000 spindles, is to be increased to 10,000 spindles.

Trenton, Tenn. Additional equipment is to be installed by the Trenton Cotton Mills, which will mean an outlay of \$15,000.

Austin, Tex. There is to be a cotton manufacturing plant established at Marble Falls in connection with the Granite Manufacturing Company's water power developments. The building is on hand, and it will be equipped with spindles and looms when the electricity is ready for connection. The power plant is to be 10,000 horsepower and will cost about \$250,000.

Grand Rapids, Mich. The Clarke Knitting Company, which was organized in December, has completed the installation of its machinery and motors, and begun operations. Its equipment includes 20 of the latest improved knitting machines, driven by individual motors. The sewing machines and other equipment are also of the latest type. The company's product are combination suits and two-piece underwear.

The Star Knitting Company is increasing its equipment by the installation of new machinery.

Piqua, Ohio. The Atlas Underwear Company have let a contract for an addition to their plant 300 by 65 feet. They employ at present 350 people and expect to increase the number to 600.

Poteau, Okla. Organization of the Poteau Cotton Mills has been completed with W. A. Campbell as president.

TEXTILE WORKERS' BUREAU

Wanted. To make connections with some good Worsted Yarn Mill, or Commission House, to sell Production in New England. Either commission or salary. Would also take on cotton account if desired.

Have had a large experience in these lines and am thoroughly acquainted with the New England trade. Address: W. H. (208) Posselt's Textile Journal.

Overseer of Weaving. Situation wanted as overseer of weaving on fine woolen or worsteds. Experienced. A 1 references. Can come at once. Address G. R. (210) Posselt's Textile Journal.

Assistant to Carder. Wants position as Second-hand in Woolen card room. Steady worker and strictly temperate. Will go anywhere. F. H. G. (212) Posselt's Textile Journal.

Foreman. In silk mill, 21 years experience in silk mill, 6 years as foreman in winding, quilling, warping, twisting, managing of stock throughout, and the inspection of cloth. Total abstainer, and can give best of references as to character and ability. Address, Foreman (209) Posselt's Textile Journal.

Boss Weaver or Designer. Now with a New England Mill; has had three years' practical experience. Will go anywhere. C. E. (204) Posselt's Textile Journal.

"Textile Designing Simplified."

The object of this chart is to show how easy weaves for all classes of Textile Fabrics can be constructed; it will be a search light in the misty matters in the field of designing Textile Fabrics. Keep this chart of weaves for reference. Millions of new weaves can be obtained by it.

All weaves for Textile Fabrics have their foundation in Plain Twills and Satins.

PLAIN.—This weave and its sub-divisions are explained on the chart in the top row by 16 weaves, the sub-divisions covering common, fancy and figured Rib and Basket weaves.

TWILLS.—The foundation of constructing regular (45°) twills is shown by rows 2 and 3 with twenty six weaves, covering twill weaves all the way from 3 harness up to 13 harness. The sub-divisions of twills are quoted next on the chart, being Broken twills, Skip twills, Corkscrews, Double twills, Drafting twills, Curved twills, Combination twills warp drafting, Combination twills filling drafting, 63° twills, 70° twills, Wide wale twills, Entwining twills, Checker-board twills, Pointed twills, Fancy twills, thus covering every sub-division of twill weaves possible to be made.

SATINS are next shown, giving also their sub-divisions, viz: Double satins and Granites. **HOW TO PUT A BACK FILLING ON SINGLE CLOTH** is shown below the satins by two examples, and at its right hand is quoted the principle of **HOW TO PUT A BACK WARP ON SINGLE CLOTH.**

On the bottom line are given the four steps for:—

THE CONSTRUCTION OF DOUBLE CLOTH, 2 @ 1; and above the same one example, with the arrangement 1 @ 1.

THREE PLY CLOTH is shown by one example.

HOW TO BACK SINGLE CLOTH WITH ITS OWN WARP is shown by two examples.

WEAVES FOR SPECIAL FABRICS are quoted: Tricots (warp, filling and Jersey effects), Rib fabrics, Honeycombs, Imitation Gauze, Velveteen, Corduroy, Chinchillas Quills Plush, Double-plush, Tapestry, Grape, Terry, Worsted coating stitching, Hucks, and Bedford cords

HOW TO WORK THIS CHART OF WEAVES.

CAPITAL LETTERS of references refer to the plain weave and its sub-divisions.

SMALL LETTERS of references refer to twills and their sub-divisions.

NUMERALS of references refer to satins and their sub-divisions.

Example.—How to ascertain the construction of the weave at the right hand top corner of the chart; being the figured rib weave marked C C? These two letters of reference mean that said figured rib weave is nothing else but the combination of the 2-harness 6 picks common rib weave warp effect C, and the 6 harness 2 picks common rib weave filling effect C'

Example.—The letter of reference c, underneath the first broken twill indicates that the same is obtained from the 1₂ 4 harness twill c, (third weave on the second row); in other words, letter of references below each weave of any of the various sub-divisions refer always to the corresponding foundation weave.

Example.—Twills q, and o, are the foundation for the eight combination twills filling drafting, said common twills are drafted 1 @ 1, the different designs being obtained by means of different starting.

Example.—The wide wale twill w' w', has for its foundation the 63° twills, marked also respectively v' and w', the latter two weaves have again for their foundation respectively the common twills marked l and w.

Example.—Granites marked 8 have for their foundation the 8-leaf satin, such as marked 12 the 12-leaf satin.

Example.—Backed by filling e 8, means the common 2₂ 4-harness twill e, (fifth weave on second row) and the 8-leaf satin is used in the construction of this weave.

Example.—The complete design of double cloth, marked e 8 A, means that the common 2₂ 4-harness twill (e), the common plain (A) and the 8 leaf satin (8) are used in the construction.

Example.—Rib fabric A, indicates that the plain weave forms the foundation. It will be easy to substitute different foundations in constructing weaves for heavy weights. In reference to single cloth weaves we only want to indicate that by following rules shown in the chart, millions of new weaves can be made up from it.

Keep this chart on hand for reference. Only 144 weaves are given, yet they will guide you to make millions of new weaves.

