sign. This would be cut as follows:—Taking the extent of the pattern in width, which is 24 stitches,

Card 1 Solid at 1—2 Cut at 3—24 Color: White Card 2 " 3—24 " 1—2 " Black Card 3 " 4—23 " 1—3 and 24 " Red Card 4 Same as Card 1 " White Card 5 Solid at 3—24 Cut at 1, 2 and 4—24 " Black Card 6 Same as Card 3 " Red

By reading the diagram carefully, the cut of the remaining cards will readily be ascertained, while the order of the carrier threads is constant throughout the making of the jacquard design although the border is set out somewhat different for the laying of the threads, the order being Black, Red, Red, Black, White, White, and starting with White on the jacquard design. A similar horizontal stripe border is made at the end of the fancy color design.—"Hosicry Trade Journal."

CHRONOLOGICAL TEXTILE EVENTS.

(Continued from page 77.)

The importations of foreign woolen and cot-1815. ton goods, which immediately followed the peace, for the fiscal year next ensuing, amounted to over \$70,000,000. It was supposed to be an object worth large sacrifices on the part of English manufacturers to break down the formidable rivalship of growing industry in America, by means of heavy consignments of goods, to be disposed of at auction and upon the most liberal credits to the mer-That this policy had the approval of eminent British statesmen, was inferred from the remarkable language of Mr. Brougham in Parliament (soon after the peace) when he declared in reference to the losses sustained by English manufacturers in these transactions, that "it was even worth while to incur a loss upon the first exportations, in order by the glut to stifle in the cradle these rising manufactures in the United States, which the war had forced into existence."

The power loom invented in the previous year by F. C. Lowell and P. J. Jackson, was patented by them Feb. 23, this year. Its cost was about \$300, and was in operation at Waltham since 1814. The Boston Manufacturing Co. in the following year, stated to Congress, that by the aid of this loom in their Waltham factory they were making a profit of 25%, and stood in no need of further protection.

The Scotch loom, of which patterns were brought from Glasgow to this country during the last year by William Gilmour, was constructed by David Wilkinson at Pawtucket, R. I., who added some improvements of his own, and commenced making them for sale at \$70 a loom. It was put in the Lyman Factory at North Providence. Its comparative cheapness enabled the small as well as large manufacturers to dispense with hand looms, with a consequent increase of the cotton business.

Edward Howard, an Englishman, with Samuel Slater, started a small woolen mill at East Village (Webster, Mass.) in 1815, for the manufacture of

broadcloths and other similar woolens, which continued until the building was destroyed by fire in 1820, when a privilege at the South Village was purchased. Mills were erected and the business was carried on, increasing from 3 to 5 sets of cards, under the firm name of Slater & Howard, until the close of 1829, when Mr. Slater acquired his partner's interest, and associated with himself his three



WOOLEN MILL AT WEBSTER, MASS., 1815.

sons, George B., John and Horatio Nelson Slater, under the firm of Samuel Slater & Sons.

The manufacture of Ingrain carpets (Kidderminster carpets) established in America by Isaac Macaulay in the old Hamilton Mansion, at Bush Hill, Philadelphia.

Coach laces manufactured in Newark, N. J. The factory employed 20 hands. The supply of silk was obtained from Connecticut, and was found to be both in strength and lustre equal to imported silk. This silk, raised in Connecticut, had been previously made chiefly into sewing silk, whereas the raw silk used for coach lace, tassels, and fringe, was principally imported at an average cost of \$6 per pound, which was increased by the war to \$30 per pound.

A large woolen manufactory, owned by the Cincinnati Manufacturing Company, and calculated to make 60 yards of broadcloth daily, went into operation in the winter of this year.

S. Blydenburgh and Hez. Healy, of Worcester, Mass., patented (Feb. 20) a loom to go by water, steam, etc.

The cotton manufacture of the United States employed this year a capital of \$40,000,000; males employed from the age of 17 and upwards, 10,000; women and female children, 66,000; boys under 17 years of age, 24,000; wages of 100,000 persons, averaging \$150 each, \$15,000,000; cotton used, 90,000 bales or 27,000,000 lbs.; yards of cotton goods of various kinds manufactured, 81,000,000; valued at an average of 30 cents per yard, \$24,-300,000.

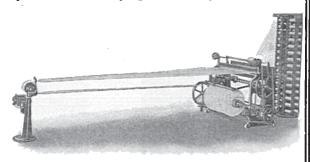
The woolen manufacture was supposed to have invested in buildings, machinery, etc., \$12,000,000;

(Continued on page x)

GLOBE MACHINE & FOUNDRY CO.

FRANKFORD, PHILADELPHIA, PA

Builders of the Denn Warping Machinery. Specialists in Warping Machinery since 1872.



SPINDLE DRIVEN BALL WARPER.

PATENTED DEC. 7th, 1909

We guarantee our spindle driven ball warper to pull any number of ends that it is possible to arrange in two creels, (about 1000), without chafing the yarn or squeezing out the ends of the ball.

It builds a straight ball with an even tension throughout.

Send for descriptive circulars.

Chronological Textile Events—(Continued).

value of raw material consumed, \$7,000,000, increase of value of the latter by manufacturing \$12,000,000, making the value of woolen goods manufactured annually, \$19,000,000; number of persons employed constantly, 50,000; occasionally, another 50,000; total 100,000.

A meeting of stockholders and representatives of cotton manufactories was held in Providence, November 6th, and a committee was appointed to assess the several factories one cent on each spindle, "for the payment of the expenses of an agent to proceed to Washington, to enforce the memorial or petition of the cotton manufacturers." The Hon. James Burrill was employed as the agent; and John Waterman, in collecting the assessment and statistics, found the number of cotton mills, in and near Providence, to be as follows: In Rhode Island, 99 mills, with 75,678 spindles; in Massachusetts, 57 mills, 45,650 spindles; in Connecticut, 14 mills, 12,886 spindles; total: 170 cotton mills, and 134,214 spindles.

This memorial to Congress represented the cotton manufacture within thirty miles of Providence, employing 140 manufactories, containing in actual operation 130,000 spindles; bales of cotton used annually, 29,000; yards of cotton goods of the kinds usually made, 27,840,000; the weaving of which, at 8 cents per yard, amounted to \$2,227,200; total value of cloth, \$6,000,000; persons steadily employed, 26,000. The petition asked for a prohibition of importing coarse cotton fabrics, especially

HENRY TROEMNER

MANUFACTURER OF

SCALES AND WEIGHTS

For the Chemist and Dyer
The Analysis of Yarns and Fabrics

911 Arch Street - PHILADELPHIA



F. G. LENTZ & CO. Designers, Card Stampers and Harness Builders

FOR ALL TEXTILE FABRICS

Mascher, Waterloo and York Sts.
Both Phones PHILADELPHIA, PA.

those from beyond the Cape of Good Hope, and increased duties on others, representing the trade as particularly embarrassed by the quantities of low priced India cottons, made of inferior stock, and badly manufactured, introduced by the revival of the carrying trade, and by the further abstraction of specie, already at a premium of 15%. It was stated that a single ship, the Princess Charlotte, arrived at New York on June 15th from Calcutta, with nearly 600 tons of piece goods, selected for the American market. This quantity, at the large allowance of 4 oz. to the yard, and the average price of 25 cents a yard, would make about 5,000,-000 yards, worth about \$1,200,000, brought by a single foreign ship. The duty being ad valorem, yielded little revenue on the coarser fabrics in the largest quantities. The Massachusetts memorial, presented December 13, contained the first suggestion of a minimum duty on cotton, which was granted during the session.

The Assembly of New Jersey was about the first legislative body which came to the relief of American manufacturers at this time. On October 15th, acting upon the report of Mr. Dayton, from the committee to which was referred the petition of Charles Kinsey and other cotton and woolen manufacturers, it resolved to abolish the tax upon spindles employed in the cotton manufactories.

In Philadelphia and vicinity there were employed at this time 2,325 persons in the cotton branch and 1,226 persons in woolen industry.

A method of imparting to a loom two beats of the batten with only one revolution of the cranks, patented in England by P. and J. Taylor.

The Electricity Department of the Bradford (England) Corporation have fitted up a specimen shade-matching chamber, which has been visited by dyers and others recently. Daylight is altogether excluded, and the illumination comes from a line of two-inch vacuum glass tubes fitted at the borders of the ceiling, and fed with current of high voltage. A soft, even illumination is obtained. Orders for the apparatus have been received from important dyers in that district