

Textile World Journal

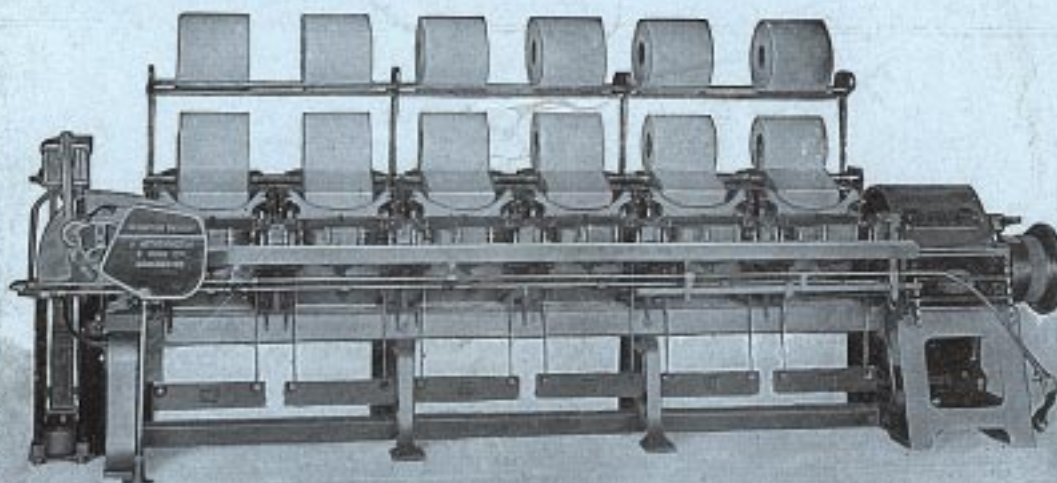
Textile World Record - Textile Manufacturers Journal

VOL. LI.

NEW YORK, OCTOBER 14, 1916

NO. 46

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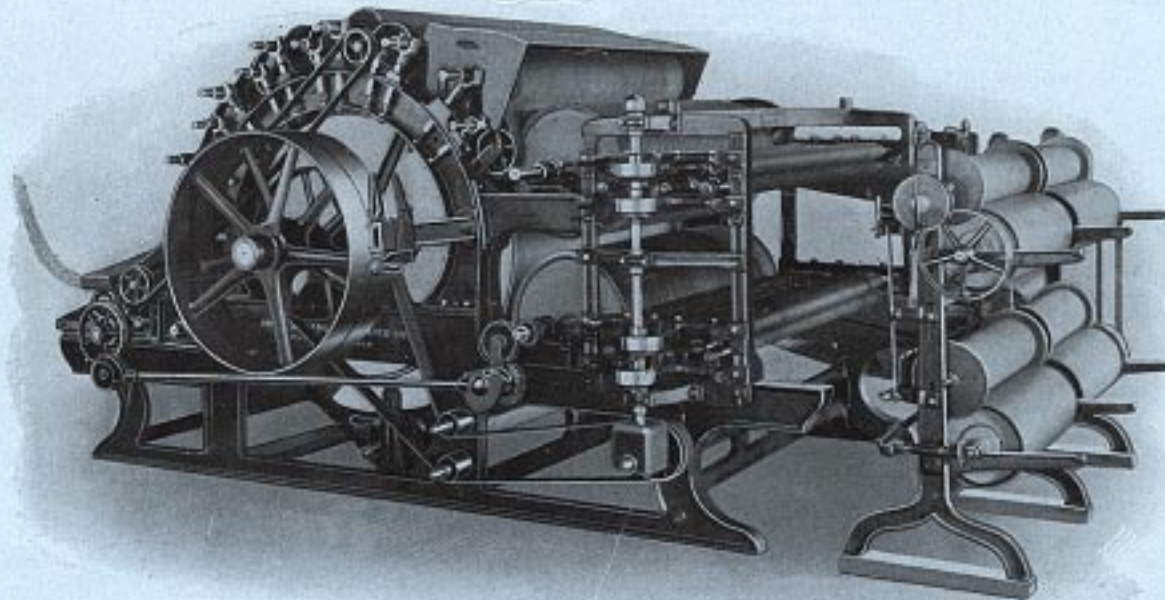
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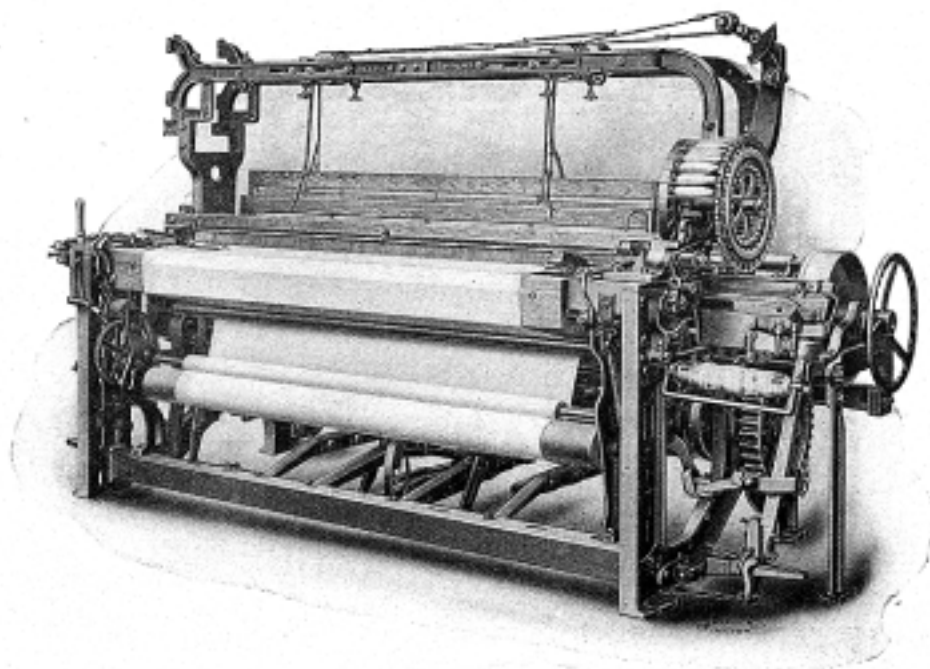
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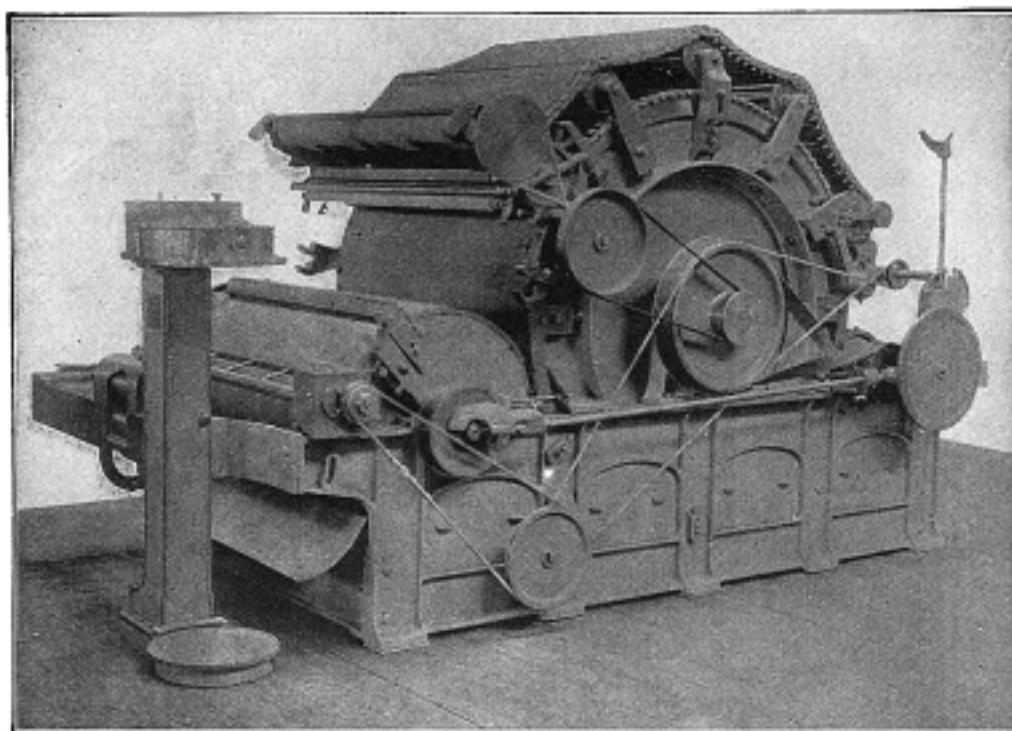
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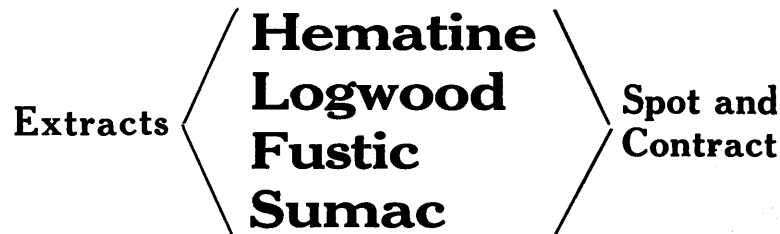
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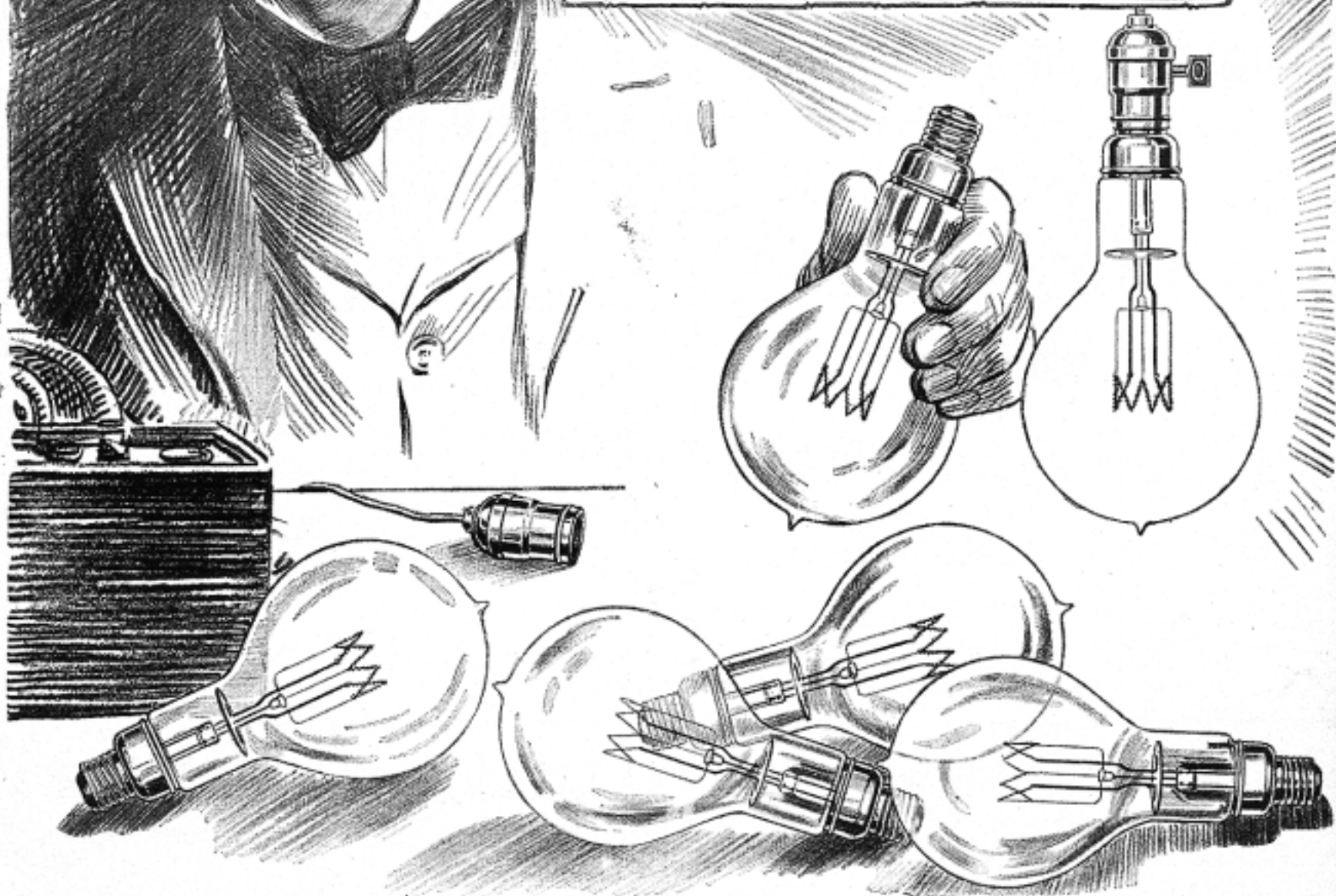
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Textile World Journal

Textile World Record - Textile Manufacturers Journal

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Vest Pocket Editions of the Directory are published in three sections viz.: the New England States and Canada; Middle States; Southern and Western States. The price of these is \$1.00 per section.

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Published annually in a handy size for the pocket, \$1.50

It contains full reports of every knitting mill in the United States and Canada, giving capitalization, names of the officers, including superintendent and buyer; kind of goods made; number of knitting machines, whether latch or spring needle; number of sewing machines; whether the mill dyes or bleaches or finishes; kind of power; number employed; selling agent; kind of yarn bought; lists of the jobbers, manufacturers' selling agents, commission merchants, department stores and large retailers handling knit goods and the name of the person in charge of the knit goods department.

Book Department

We carry in stock for sale all up-to-date textile books published in the English language and will send catalog free upon request.

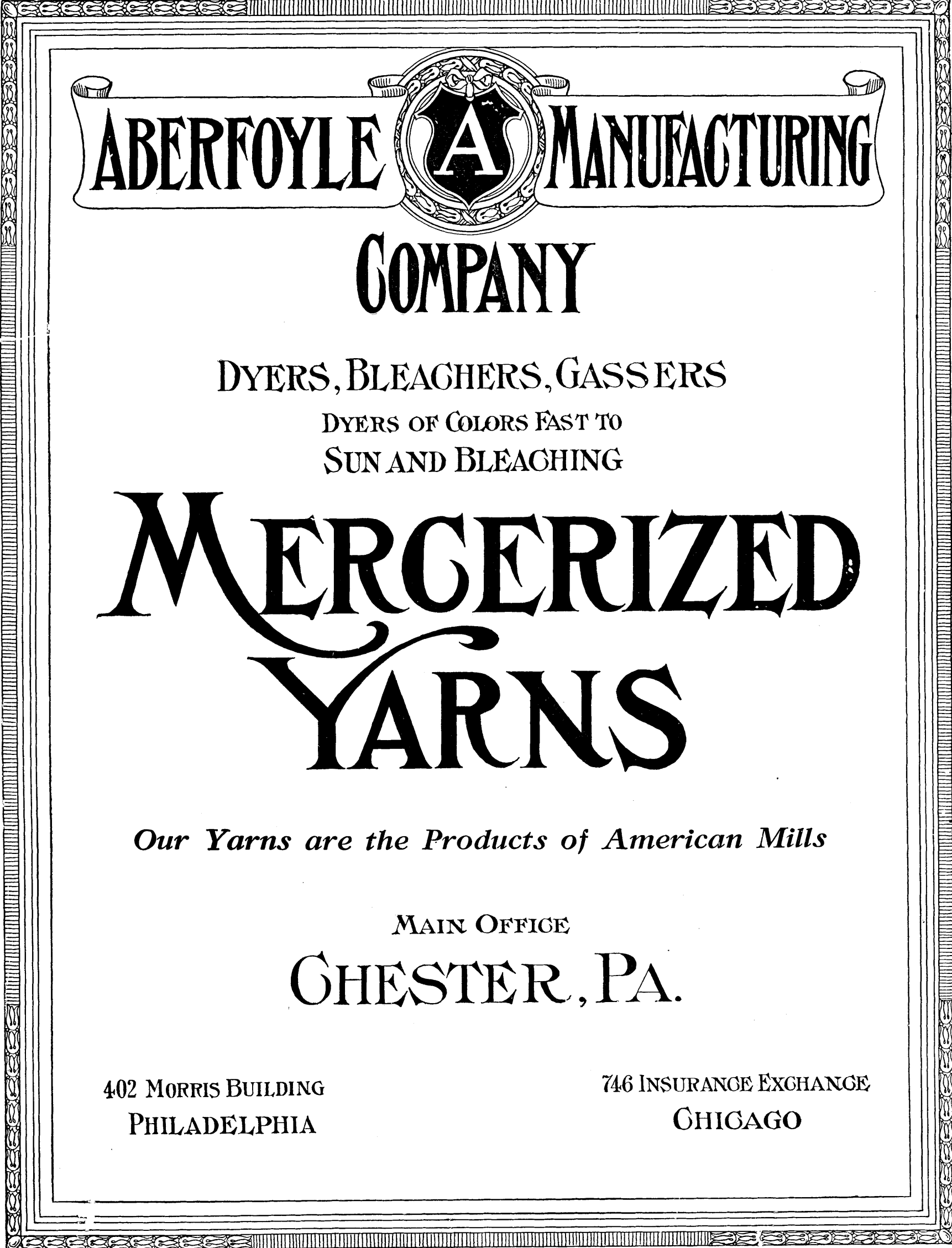
THE PURCHASING UNIT


IF one were to analyze the subscription list of TEXTILE WORLD JOURNAL from the buying unit standpoint, he would find that practically every large purchaser of textile mill supplies in this country is represented. In fact we have made such an analysis and, surprising though it may seem, the Journal reaches through paid subscriptions of purchasing agents, superintendents, managers and active mill officials between 85 and 90 per cent. of the textile industry's purchasing power.

Setting aside all possible interest in the reading pages as a motive for subscribing, let us look at it from the purchasing standpoint. The reason for such a large representation among the industry's buying units is that modern buying and selling methods include trade paper advertising as one of the most important channels of communication. Sellers depend upon it for carrying the story of their products to the trade. Buyers depend upon it for ideas, reference purposes and oftentimes the actual placing of orders. Industrial buying and selling has become such an involved process that trade paper advertising was destined from the first to prove itself one of the biggest factors in reducing it to a simple, efficient basis. So much so that no buyer or seller of textile mill supplies, equipment, etc., can conduct his work efficiently without intelligent use of TEXTILE WORLD JOURNAL, which is through merit the industry's leading medium for buying and selling.

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Textile World Journal

A Weekly Journal of News, Market Reports and Technical Information

461 Eighth Ave., at 34th St.

NEW YORK, OCTOBER 14, 1916

VOL. LI. No. 46

COTTON IN EXPLOSIVES

Striking Increase for First Half of 1916 Over Total for 1915

WASHINGTON, Oct. 10.—A preliminary statement of the quantity of cotton fiber consumed in the manufacture of guncotton and of explosives of all kinds has been issued by Director Sam. L. Rogers, of the Bureau of the Census, Department of Commerce. It consists of a summary of the quantities of cotton fiber reported by manufacturers of explosives consumed during the calendar year 1915, and the first two quarters of 1916.

These statistics have been collected in compliance with the requirements of the Act of Congress approved August 7, 1916, which directs that the Census Bureau "Collect and publish statistics of raw and prepared cotton and linters, cotton waste, and hull fiber consumed in the manufacture of guncotton and explosives of all kinds, and of absorbent and medicated cotton."

The Bureau listed all manufacturers of guncotton and other explosives in the United States, including the Army and Navy plants, and furnished them with the necessary blanks for reporting the quantity of cotton fiber consumed. Returns were received from 178 establishments. Of these 153 reported that they did not consume cotton fiber of any character. There were 25 concerns which reported the consumption of bleached or treated cotton fiber. This number included several engaged in the manufacture of fireworks and using only very small quantities of cotton.

While a few of the manufacturers of explosives bleach all or a part of the cotton fiber used by them, it appears to be the general practice to purchase the fiber already prepared. The statistics are accordingly given on this basis. The fiber used consisted principally of linters, although small quantities of hull fiber, waste, and low grade cotton were also used. A number of establishments were unable to segregate the kind of cotton fiber consumed, hence all bleached fiber used for this purpose is given in one total.

The total quantity of bleached cotton fiber consumed in the United States during the calendar year 1915 in the manufacture of explosives was 121,331,385 pounds, equivalent to 244,003 bales of 500 pounds each net weight. During the three months ending March 31, 1916, there were consumed in this industry, 144,988 bales, and during the three months ending June 30, 1916, 142,725 bales. The increased use of cotton fiber in this industry is striking, the quantity consumed during the first half of 1916 being considerably in excess of the total for 1915. The quantity of prepared cotton held on June 30, 1916, by the manufacturers of explosives was 11,447,422 pounds, equivalent to 22,895 bales of 500 pounds each. This quantity compares with 28,933 bales on March 31, 1916, and 30,483 bales on December 31, 1915. The bureau will now collect quarterly statistics of this character, and the reports will be issued as soon as possible after the termination of each quarter.

The loss in bleaching cotton for ni-
(Continued on page 16)

WOOL INDUSTRY CENSUS

Figures Giving Comparisons Between 1909 and 1914

The Bureau of the Census has issued a preliminary statement on the manufacture of woolen and worsted goods, giving comparisons between the industry in 1909 and 1914. Figures follow:

Wool Manufactures	Census Figures Giving Comparisons Between 1909 and 1914.		1909.	1914.	Per cent of increase (1) 1909-1914.
	1909.	1914.			
Number of establishments.	501	298	799	911	-12.3
Persons engaged in manuf-actures	51,631	113,059	164,690	169,193	-2.7
Proprietors and firm members	316	141	457	677	-32.5
Salaried employees	2,150	3,391	5,541	5,324	4.1
Wage earners (average number)	49,165	109,527	158,692	163,192	-5.8
Primary horsepower	134,597	246,623	381,220	348,283	9.5
Capital	\$107,871,742	\$281,780,836	\$389,652,578	\$415,377,993	-6.2
Services	27,726,892	58,772,968	86,499,860	79,084,271	9.4
Salaries	3,522,413	7,024,003	10,546,416	9,357,225	12.7
Wages	24,204,479	51,748,965	75,953,444	69,727,046	8.9
Materials	63,696,042	132,800,624	246,496,666	273,438,670	-9.9
Value of products	103,815,905	275,668,474	379,484,379	419,743,521	-9.6
Value added by manuf-acture (value of prod-ucts less cost of materials)	40,119,863	92,867,850	132,987,713	146,304,951	-9.1

A minus sign (—) denotes a decrease.

JOBBER'S WINTER MEETING

Association Convenes in New York on January 15, 16, 17 and 18

The following dates for the regular winter meeting of the National Wholesale Dry Goods Association and its subsidiaries have been announced through the office of the Secretary-Treasurer in Philadelphia: Jobbers Association of Knit Goods Buyers, Monday, January 15 at 10 a.m.; Jobbers Association of Dress Fabric Buyers, Tuesday, January 16 at 9.30 a.m.; Jobbers Association of Notion Buyers, Wednesday, January 17 at 2 p.m.; banquet of the National Wholesale Dry Goods Association, including all auxiliaries and associate members, Wednesday, January 17 at 7 p.m.; meeting of National Association, Thursday, January 18 at 10 a.m. All meetings and the banquet will be held as usual at the Waldorf-Astoria.

The entertainment features will not be held separately as in former years, but the National Association and its auxiliaries will come together for a banquet at which it is expected that the total attendance will exceed 1,000. The Grand Ball Room of the Waldorf has been reserved for this occasion, and tables will be arranged seating eight persons each. Speakers of national prominence will address the banquet and the meetings of the association and its auxiliaries. Detailed programs of each meeting will be published when available.

Fall River Wage Request

FALL RIVER, MASS., Oct. 12.—Fall River weavers want another advance of at least 10 per cent. in wages. At their meeting the past week, they directed their delegates to the Textile Council to report at the meeting to be held on Wednesday night next, the wish of the organization. The fact that when

the increase was made four months ago the employers protested against precipitate action so quickly after an improvement by which stockholders profited a little after a long period of intermittent activity in the cloth market was seemingly forgotten. The vote of instruction was accompanied with a recommendation that the council be informed that the weavers are opposed to the policy of delay in dealing with the question. Sec. James Whitehead made this comment about the action: "Market conditions warrant an increase in wages such as our association wants. There is no question in my mind about the ability of the manufacturers to comply with our request without doing harm to their stockholders. They are making lots of money and declaring large dividends. The operatives are asking only what they are entitled to."

For Cartridge Cloth

WASHINGTON, Oct. 7.—The Bureau of Supplies and Accounts, Navy Department, is inviting proposals to be opened on October 24 for furnishing 200,000 square yards silk cartridge bag cloth, heavy, to be delivered f. o. b. cars or on wharf at or near works within 14 months after date of contract; also on the same date for 50,000 square yards light silk cartridge bag cloth, to be delivered as above, and for 2,500,000 yards braided and spun silk cartridge bag lacing cord, also to be delivered within 14 months after the date of the contract.

KNIT GOODS EMBARGO

Includes Underwear and Hosiery—Data of English Imports from U. S.

WASHINGTON, Oct. 12.—The British embargo on cotton knit goods including hosiery, as announced in the TEXTILE WORLD JOURNAL for last week, also applies to underwear and to knit goods containing forty-five per cent. cotton, according to officials of the State Department.

Previous to this embargo, issued on Oct. 3, imports of wool had been prohibited by Great Britain. This late embargo prohibits the importation of cotton; therefore, woolen goods, cotton goods, and any percentage mixture of the two are prohibited, according to the view taken by State Department officials here.

There has been considerable question also as regards mixtures of cotton and silk, and the following advice has been received by the officials from the British authorities:

"No decision has as yet been reached in the case of goods of mixed cotton and silk, and samples should be submitted to enable the attorneys to determine whether such goods may be considered silk."

This is the latest information that has been received relative to silk or wood fibre goods or combinations thereof.

While the State Department has not yet taken the matter up as to whether or not special permits to import hosiery and other knit goods into Great Britain will be issued, it is assumed by the officials that these permits will be granted in special cases as heretofore on other embargoed goods.

There has been a great increase in the export of knit goods wearing apparel from this country into the United Kingdom, according to figures compiled by the Department of Commerce. Taking England, Scotland and Ireland as the United Kingdom under the heading of "knit goods wearing apparel," which includes mostly underwear and hosiery, the department's figures show that for the fiscal year 1911 the exports from this country to the United Kingdom were \$683,842. In 1912 the figures advanced to \$745,777; further advancing in 1913 to \$1,041,498 they fell, however, in 1914 to \$931,094, and then increasing again in 1915 to \$9,139,357, the largest import of that commodity which Great Britain has ever made from the United States.

The Department is at the present time completing its figures for the fiscal year 1916, which show that the imports have again advanced and are \$11,921,045.

Figures have just reached the State Department from English sources showing the imports from the United States and other countries on cotton stockings and socks. According to those figures, in 1913, England imported from this country \$31,440 worth, advancing in 1914 to \$200,355 and again in 1915 to \$1,110,410. During the same time the total imports from all other countries were in 1913 \$2,100, in 1914 \$4,015, and in 1915 \$33,495.

The same statistics show that cotton goods imported, other than hosiery,
(Continued on page 16)

Latest Cable News

Manchester, Eng., Oct. 13 (Special cable to the Journal).—Healthy market, but high prices rather checking business. Small cloth turnover for India. Home trade and several minor outlets give encouraging support. Prices strongly held. Yarns very stiff. Spinners selling at healthy margin of profit.

Bradford, Eng., Oct. 12 (Special cable to the Journal).—Merinos steadily hardening. Spot 64s tops 55d. Topmakers asking February delivery. Crossbreds generally firm. Next series London sales gives an estimate of 70,000 bales of crossbreds available, mostly slipes. Steady prices expected. Season for crutchings in New Zealand over. Bradford spinners bought speculatively all stocks of Turkey mohair. America buying freely of wool and mohair in South Africa.

Textile World Journal

Textile World Record - Textile Manufacturers Journal

EDITORS

C. H. CLARK
V. E. CARROLL
CLARENCE HUTTON

For Publishers' Announcement See Page 11

Entered in the New York, N. Y. Post Office as
Second Class Matter

A TENET OF OUR CREED: WE BELIEVE IN THE CONSERVATION OF AND PROTECTION TO DOMESTIC INDUSTRIES.

Vol. LI October 14, 1916 No. 46

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, etc., required by the Act of Congress of August 24, 1912, of TEXTILE WORLD JOURNAL, published weekly at New York, N. Y., for October 1, 1916.

State of New York, } ss.:
County of New York, }
Before me, a Registered Notary Public in and for the State and County aforesaid, personally appeared V. E. Carroll, who, having been duly sworn according to law, deposes and says that he is the Editor of the TEXTILE WORLD JOURNAL, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, to wit:

1.—That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, Bragdon, Lord & Nagle Co., Inc., 461 Eighth Avenue, New York City; Editors, C. H. Clark, V. E. Carroll, C. Hutton, 461 Eighth Avenue, New York City; Managing Editor, V. E. Carroll, 461 Eighth Avenue, New York City; Business Manager, H. G. Lord, President, 144 Congress Street, Boston, Mass.

2.—That the owners are: Bragdon, Lord & Nagle Co., Inc., 461 Eighth Avenue, New York City; M. M. Bragdon, 461 Eighth Avenue, New York City; V. E. Carroll, 461 Eighth Avenue, New York City; C. H. Clark, 144 Congress Street, Boston, Mass.; A. F. Lord, 144 Congress Street, Boston, Mass.; S. H. Steele, Drexel Building, Philadelphia, Pa.; H. O. Barnes, 461 Eighth Avenue, New York City; H. G. Lord, 144 Congress Street, Boston, Mass.; F. L. Nagle, 144 Congress Street, Boston, Mass.

3.—That the known bondholders, mortgages, and other security holders owning or holding 1 per cent. or more of total amount of bonds, mortgages, or other securities are: None.

4.—That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest, direct or indirect, in the said stock, bonds, or other securities than as so stated by him.

V. E. CARROLL,
Editor.

Sworn to and subscribed before me this 3rd day of October, 1916.

FENIMORE C. GOODE,
Notary Public.

(Seal)
Notary Public, New York City, New York County, No. 130. New York Register No. 8011. My commission expires March 30, 1918.

COTTON GOODS CONDITIONS AND EXPORT TRADE

Unprecedented is a word which but imperfectly describes the situation in the cotton goods market. There seems to be no limit to the advances which are being made and which are forecast. Print cloths have not quite touched the level reached in 1907, but sheetings, drills and staple goods generally have overtopped the highest figures of that period of inflation. The most significant feature of the present situation is that buyers who refused to operate when merchandise was considerably cheaper are now willing to place orders at the highest prices which have been named, the only restriction upon much larger

contracts being inability to secure deliveries. Whether the attitude of buyers is speculative and unreasonable it is difficult to determine, but it must be admitted that the present price situation is the result of unusual absorption of mills' products and an absence of stock at first hands. Reports from the retail trade indicate that an active business is in progress, though whether this situation may be changed, with its influence upon all divisions of the market when the jobber raises his prices to a basis of the figures he has paid, remains also to be determined.

Of course, it is thinkable that conditions may arise which would alter the situation materially. International complications of such a character as to retard if not to interrupt entirely business in the cotton goods market may occur. And yet such contingencies are likely to be only temporary in character, and will not probably change the complexion of the market for any prolonged period. An illustration is to be found in the effect of submarine activity along the Atlantic coast this week. While causing a sudden dip in raw material prices, and consequent conservatism on the part of buyers, the equilibrium was soon restored, and no effect upon prices was noted. As a matter of fact, it would seem as though it would take a revolutionary occurrence to cause any weakening of present values. As long as manufacturers refuse to accept contracts for as late deliveries as buyers are willing to consider, on account of the unusual forward sale of their product, it is not logical to expect that first hands can be any more amenable to buyers' requests for more favorable quotations than they have been for the last several months.

In cotton goods more than in any other division of the textile industry is the influence of an increasing export demand beginning to be appreciated. Indeed, it is the belief of careful market judges that sales for export, more than any other influence, have contributed to the present status. While there are those who are pessimistically inclined regarding the future, feeling that the development of this trade has not been conducted along lines which guarantee permanency, yet by far a greater number believe that a very substantial proportion of the business from foreign sources will be continued after the war.

It is not to be denied that a good many discouragements arise from time to time in the path of those who are conscientiously endeavoring to cater to export buyers' demands. The attitude of altogether too many manufacturers toward export trade is that the buyer must be forced to purchase the goods, which are being generally made, rather than that any alterations in their production should be made by the manufacturer to suit the buyers' requirements.

There is no doubt that the textile industry has much to learn in connection with export trade and that it also has a long road to travel before this branch can be regarded as anything more than a side issue. To proceed on the theory that it can be treated as such, and that it can be relegated to the background when domestic markets are active, to be taken up as a stop gap in times of emer-

gency, is simply to lose sight of an opportunity which present conditions are presenting to a class of merchants who are keenly alive to possibilities in other directions, and who should feel the responsibility of building up a reputation as international factors in the world's trade.

THE KNIT GOODS EMBARGO

The embargo on cotton knit goods to England, reports of which have been announced in these columns, has been confirmed by official authorities. Inasmuch as a similar prohibition was formerly applied to wool knit goods, it is now evident that all classes of hosiery and underwear come under the ban. It is not fully determined whether silk and artificial silk hosiery may be made an exception, but it is probable that this will depend in large measure upon the amount of cotton used therein.

Various reasons are given for the establishment of the embargo. One is that it is due to protectionist propaganda which is being developed in Great Britain to a very considerable degree. In this connection also it is stated that the product not only of American knitting mills but also that of Japan has had preference over English goods to the great discomfiture of native manufacturers. The result has been, according to these reports, that operatives have been discharged and mills have closed down because of this foreign competition. If these reports are true it is not surprising that the embargo is established.

As to the effect on the domestic industry, much more serious results would ensue if American manufacturers were pushing for business. As it is, their mills are unusually well occupied and it is a question whether very many are taking the matter seriously on this account. At the same time, if, as it appears, the embargo applies to orders taken and not shipped more or less complication may result, although there are those who contend that it will be possible to sell any such goods on hand to the domestic trade at higher prices than those for which they were contracted by foreign buyers.

While the results of this action on the part of the British Government may not be of serious import to the domestic industry at the moment, yet looking into the future the development of an export trade with England may be seriously hampered. Our Washington correspondent in another column gives the amount of knit goods exports sent to England during the last two fiscal years. While these figures comprehend all wearing apparel, it is indicated that the majority of shipments are of hosiery and underwear. To cut off a business amounting to approximately twelve million dollars may mean a very serious setback to American knit goods manufacture under normal conditions.

WAGE EARNERS AND THE TARIFF

If the census figures for the years 1914 and 1909 could be interpreted literally they would indicate that wool manufacturing in this country had been a declining industry during that period. Preliminary figures for the census of 1914 show a decline in the number of wool manufacturing establishments of

12.3 per cent, of 5.8 per cent in the number of wage earners, of 6.2 per cent in capital invested, of 9.9 per cent in materials used and of 9.6 per cent in value of product. While the greater part of the year 1914 was one of unusual depression in the wool manufacturing industry, due to the paralyzing influence of the inadequate Underwood tariff, it will probably be found that a considerable proportion of the apparent shrinkage in the industry, as indicated by the 1914 census, may have been due to altered methods of compilation. Nevertheless, it is a fact that the year 1914 in this industry marked the combination of the adverse effect of tariff agitation and tariff revision, which had restricted the growth of the industry seriously.

Assuming that certain of the figures for the two census years allow fair comparisons, nothing of greater interest is to be deduced than the radical increase in per capita earnings of operatives and in the percentage of wages to total value of products. During this five-year period there was an increase in the average earnings per capita of 12 per cent, the average of 1914 being \$480. In 1914 wages were 20 per cent of the total value of products, while in 1909 they were only 16 per cent. Despite this large increase in wages there has been since 1914 a very much more marked advance, and it is probably safe to assume that wages in the woolen industry are to-day 25 per cent to 30 per cent higher than in 1909. Every advance in wages has met with proportionately smaller return upon the capital invested. Therefore, operatives in this industry have every incentive to exert themselves in maintaining the present wage status. They, rather than manufacturers, should be most concerned about the enactment of an adequate protective tariff, and about the conservation of domestic interests to meet the commercial invasion of this country by foreign manufacturers after the war.

Thanks to the Allies, submarine warfare that may be waged by the Germans along the coast of this country is of more vital importance to the textile industry than it could have been under conditions existent prior to the present war. The insistence of Great Britain upon placing wool and cotton upon the contraband list had elements of greater future danger for that country than any other, but should the work of German undersea boats along this coast prove permanently effective this country could not fail to suffer almost as much as Great Britain, in so far as its textile import and export trade are concerned. Our need for wool is to-day almost as great as that of Great Britain, owing to the fact that the British embargo has reduced our foreign sources of supply to such wools as can be obtained in South Africa and South America. The great bulk of this wool must be imported in British bottoms, or in foreign ships that would be considered by the Germans as their prey. The unexpected has come to the rescue of the wool market so many times since the war started that it need surprise no one if the menace of the German submarines should prove sufficient to force a further radical advance in wool values.

OBITUARY

Eugene Clinton Clark

Eugene C. Clark, president of the Alexander Smith & Sons Carpet Co., Yonkers, N. Y., died suddenly last Friday in his automobile. He was returning with his wife, daughter and nurse to his home in Yonkers when taken ill and expired before he could reach his home. Mr. Clark was 54 years old and had been connected with the Smith company for forty years. He began as bobbin boy and rose to the position of president, which position he had occupied for six years.

J. H. Tobey

J. H. Tobey, Chicago manager and a director of J. H. Lane & Co., commission merchants, died in Chicago on Oct. 3, after having been ill for some time. Mr. Tobey was about 44 years of age, and had been connected with J. H. Lane & Co. for the last 23 years. He was held in high esteem by his business associates and by all with whom he came in contact.

George Acheson

George Acheson died at his home in Valley Falls, R. I., September 26. Mr. Acheson was born in Pawtucket, R. I. His family later moved to Smithfield, where he attended the public schools, and later entered the employ of the Lonsdale Co., where he worked his way up to foreman of the dyeing department. He later accepted a position as overseer of dyeing at Lewiston, Me., in one of the large mills. He was a veteran of the Civil War, and a member of the Ballou Post G. A. R. of Central Falls.

Charles E. Wilson

Charles E. Wilson, for many years overseer of spinning in the Riverside Mills, American Woolen Co., Providence, R. I., but later with the Jamestown Worsted Co., died at his home in Jamestown, New York. He was well known among the overseers in the vicinity of Providence.

John E. Brown

John E. Brown, senior partner for the John E. Brown Manufacturing Co., Holyoke, Mass., died at his home in that city September 28. He retired from active business several years ago. He leaves four sons and one daughter.

James Lamb

James Lamb, overseer of finishing for the Farr Alpaca Co., Holyoke, Mass., died at his home in that city after a short illness.

Wool Manufacturers' Dinner

The American Association of Woolen and Worsted Manufacturers is busily engaged through committees in preparation for its annual meeting and banquet, which will take place December 6 at the Waldorf-Astoria. This dinner for the last several years has been a most prominent milestone in the activities of the organization, and it is expected the program this year will be of a character to attract a large number.

New Spring Color Card

The Textile Color Card Association of the United States has brought out its 1917 spring season color card this week. It contains fewer samples than in former seasons and new tones of gray, tan and citron are prominent. This association was formed during the early days of the war when it became evident that American textile interests would be obliged to control their own color situation.

Chemical Import Statistics Revision**Need of Greater Information for Development of Domestic Industry**

AN address by Dr. Bernhard C. Hesse, well-known consulting chemist, was made last evening before a joint meeting of the New York sections of the American Chemical Society, American Electrochemical Society and the Society of Chemical Industry on the necessity of rearranging Government statistics on the imports of chemicals and dyestuffs. He advocated through cooperation the listing of the names of those materials that in normal times come from abroad and are used or can be made by a branch of the chemical industry. He declared that quantities, prices and locus of consumption are irrelevant and immaterial, and that it was merely a qualitative list which it should be the endeavor of the combined organizations to secure.

With such data Dr. Hesse plans that the Central Committee of the Chemical Industry, of which he is chairman, shall compile all of the submitted material into a composite list and then ask the Government to give the quantities and values imported monthly, quarterly or annually, as may appear best suited to the needs of the industry.

Speaking of the possibility of establishing a self-contained industry in this country, Dr. Hesse said:

For upwards of thirty years the attitude of the country as expressed in three Republican and two Democratic tariffs and one Democratic partial tariff-revision, has been that our chemical industry in general and coal-tar dyes in particular, shall not be protected and that any tariff laid on chemicals and dyes shall be non-protective and for revenue-yielding purposes only. The tariff efforts at protection were and are directed toward other industries.

Immediately upon the outbreak of the present war our press and the public severely scolded us chemists for not making coal-tar dyes; dyes seemed to be the limit of their information as to what chemists do. Many other and more important things which were in the same condition as dyes were overlooked, deliberately or otherwise, in this tirade and this fusillade of criticism. The reason was and is clear. The raw cotton market had been shot to pieces and fabricated cottons then on the market were made from high-priced cotton and buyers demanded sales at the then prevailing very low raw cotton prices; thereupon the manufacturers set up the dyestuff bogey to bolster up their demands for higher prices for fabricated cottons. Going behind the scenes, it is clear that this demand for dyestuff independence is, far more likely than not, artificial, and in the light of the experience of thirty years past, insincere and thoroughly non-dependable. Economic beliefs of the two political parties and the business policies of the nation more than thirty years old cannot be expected to be overturned so suddenly and such sudden alleged change cannot be sincere or lasting, panic-time conversions and statements to the contrary notwithstanding. The chemists of the country will simply be living in a fool's paradise if they bank on it that the above view of our industry by the public has undergone or will soon undergo any lasting change.

In his speech of acceptance on September 2, 1916, President Wilson said: "We have driven the tariff lobby from cover and obliged it to substitute solid argument for private influence." While this may be true as a general statement it does not at all apply to the inside history of the making of the dyestuff section of the Kitchin General Revenue bill. Leader Kitchin himself says that it was a compromise between the Hill bill rates or no added rates at all. The Kitchin rates are and were dictated solely by private influences privately exercised and rest upon no "solid argument" nor public proceedings whatever; they are merely the result of "take what the dye-users offer you or you get nothing at all." A few only of the dye-users forced this situation; let no one be deceived, the big influences in the dye and chemical using field are not behind this movement at all. When the right time comes, and signs to that effect are already evident, those influences will have any rates above the Underwood tariff taken off, and taken off quickly at that, for they probably will not be permitted to raise the duties on their own finished products; then our domestic dye and chemical makers will be as badly off as ever, and our chemical industry instead of having been helped forward will have been given a "black eye" by the very politicians who professed to be its friends. The underlying reason for this on-the-surface solicitude for the welfare of our domestic chemical industry by both political parties is votes and is not dictated by any primary or real desire for a do-

mestic chemical industry; our politicians are not yet educated up to that point. It has been variously estimated that 400,000 or 800,000 votes are to be found among the operatives of the dye-using industries; by some political legerdemain both political parties hope to convert this alleged dyestuff solicitude into a solicitude for the welfare of those voters. The chemists of the country are worth hardly 10,000 votes to the politicians.

Further, it must be remembered that among domestic dye and chemical users the feeling is growing:—"Well, we were more scared than hurt; we 'got by' this time; it's a long time to the next war; we should worry! Let others take care of themselves; we want cheap dyestuffs and cheap chemicals and we do not care who makes them; dyes and chemicals are our raw materials and raw materials must be free."

On the theory of the "greatest immediate good to the greatest number," and this is perhaps for the present and the immediate future properly expressed by the number of influenceable or affected votes, it is reasonably certain that our country will not lastingly reverse itself in its fiscal and economic policy of the past generation. Products of chemical industry are not themselves and as such very largely sold to the "ultimate consumer," that is, the voter. They are largely used in making things that are made by and do reach the voters and to those who make these things that thus reach the voter the products of chemical industry are raw materials, and the country long has been and still is fairly well united on the proposition that "raw materials must be free," and particularly where the making of those so-called "raw materials" in this country will not directly affect many—particularly voters.

Contrary to all the expectations raised by the recent discussions of the press, the country seems to have set adrift its newborn desire to insure to those industries that it has a domestic supply of such of their raw materials as are in reality highly manufactured products of other industries and has definitely decided to continue in this respect to be dependent upon foreign nations.

A dollar invested in our chemical industries is not so productive as in our industries as a whole; it spends less for wages, salaries and materials and produces less product-value and less enhancement-value.

Relatively, our chemical establishments are 0.79 per cent. of all our industrial establishments and the number of persons employed is 1.15 per cent. of all persons employed in manufacture.

So that while an average chemical plant, as such, is of greater importance to the community than the average industrial plant, yet the capital so invested is not so productive as in the average industries. It is possible that sooner or later the American public will decide that our national well-being requires greater development along chemical lines since chemical products are raw materials for so many domestic industries, and will be prepared to take what steps may be necessary to accomplish that result, but until that time arrives we chemists must be prepared to make our own way and on our own merits and independently of any economic help from politicians, for we must remember that whatever one set of politicians may give us another set of politicians can take away; such artificial help may merely be producing more of those undesirable ventures known as "War Babies."

Obviously, therefore, we chemists cannot stop to quarrel with the facts, but we must simply make friends with the situation as it is. These are simply "the rules of the game." The country does not want to help us broadly, as is for the sixth time and conclusively proved by the happenings of the past two years, and yet the country, in a half-hearted way, wants and really should have a chemical industry—complete to be sure—but it will have to be content with what it can get in that direction. It is our duty to give the country the utmost that we can give it. We have done the best possible under the conditions of the past and present. In order to help our country more we must know with considerable particularity what our country buys from abroad. If our country wants us to help more than we have heretofore the country must tell us more than it has in the past. Chemists are not mind-readers nor clairvoyants. When the country says:—"We import \$800,000 worth a year of fifty different chemicals," what good does that do it or do us? Could anything be more tantalizing to chemists? Why not tell us what those fifty things are and how much of each and at what price it reaches this country? Then we might be able to do something additional. Why should we be called upon to guess what these fifty items are and what their respective values and poundages are? The country has that information and why hide it?

If the chemists of the country were fully informed as to the values and amounts of imports into this country of products of and for chemical industry, we could then more intelligently and more surely work toward the self-containedness of the nation, and more completely utilize to the utmost all opportunities around us; if then, added economic help in certain directions were clearly needed, and if by then President Wilson's above statement has actually been realized with respect to our products and the country really wants our industry, it seems only reasonable to expect that

such added help would then be forthcoming, promptly, permanently, willingly and intelligently.

Our first duty, then, is to tell the country how we suggest to have this added information imparted; then, if the country does really give us that, it will be our second duty to take hold of the opportunities thus disclosed and make them give up all they can be made to give up; we can then cross the next bridge when we come to it. In the meantime we have our hands full trying to get this request for more information into presentable and convincing form.

In making up this list of import items we must bear in mind that it should contain everything that a well rounded-out and self-contained chemical industry needs either in materials or apparatus or makes in the way of products, finished or intermediate, for its own use or for use in other and wholly non-related industries, and this is much more varied than any available list of such products; this is our real task—to make the list complete in every respect.

The function of such a complete list is three-fold:—Firstly, it will inform government officials and the public of; and will visualize to both, the variegated and ramified activities and interests of chemical industry; secondly, by its illustrative character it will enable our government officials to "spot" a relevant newcomer in our field much more readily than otherwise; thirdly, it will tell us chemists ourselves a great deal more about our own business, our own opportunities and our obligations to other industries than any collection of text or handbooks ever could. It is rather a "tall order," but if we will not make up such a list why should we expect others to do our work for us? And who else should do it? It is our job and no one's else.

When considering the taking up of making things in this country that are up to then largely or wholly imported from abroad, we must bear in mind that, in general, increased domestic consumption follows domestic manufacture so that an imported item of \$100,000 per year may in a few years of domestic manufacture reach a consumption of three or four times that figure.

Finally, it must not be lost sight of that when we ask for greater subdivision of the items of imports in our commerce and similar reports we are not at all asking for a revision of the general classification. These reports can convey the same financial and other information as to the sources and amounts of revenue as heretofore; we do not ask to have this function of those reports curtailed or hampered in the least; all we ask is that they be made to contain and to give more detailed information as to our items of purchases of products of and for the chemical industry from abroad.

Navy Canvas Awards

WASHINGTON, Oct. 10. — Parker, Wilder & Co., of New York, have been awarded the contract by the Bureau of Supplies & Accounts, Navy Department, bids for which were opened on Oct. 3, at \$102,253.70 for furnishing the Portsmouth, N. H. Navy Yard with 9,000 yards of 8, 10, and 12 ounce white cotton canvas ravens: The Boston Yard with 167,000 yards of the same; the Brooklyn Yard with 141,000 yards of the same; the Philadelphia Yard with 25,000 yards of the same; the Washington, D. C. Yard with 2,000 yards of the same; the Norfolk, Virginia Yard with 85,000 yards of the same; the Charleston, S. C., with 26,000 yards and the New Orleans Naval Station with 6,000 yards.

Wellington, Sears & Co., of Boston, have been awarded the contract at \$8,354.50 for furnishing 24,500 yards of white cotton cot canvas for the Portsmouth, N. H., Boston, Brooklyn, Norfolk, and Charleston, S. C., Yards. The same firm was also awarded the contract at \$449.80 for furnishing 1,400 yards of 30-inch white cotton cot canvas for the Mare Island Yard.

William H. Evans has been awarded the contract at \$470 for furnishing 1,000 yards 8-ounce and 1,000 yards 12-ounce 28½-inch black cotton canvas ravens for the Norfolk Yard.

Mr. Evans' firm has also been awarded the contract at \$5,187 for furnishing the Mare Island Yard with 50,000 yards of 22-inch medium white cotton canvas and the Puget Sound Yard with 31,000 yards of the same.

Curran & Barry have been awarded the contract at \$31,870.95 for furnishing a part of canvas in class 143.

200,000 yards of shrunk blue denim will be furnished to the Charleston, S. C., Yard by the Lane Cotton Mills Co., of New Orleans, at \$41,600.

PROTEST KNIT EMBARGO

Formulate Resolution of Protest to State Department

A conference of Philadelphia Hosiery Manufacturers was held at the Manufacturers' Club Thursday evening, Oct. 12, to consider the effect of the recent embargo established by Great Britain against imports of cotton knit goods. The manufacturers present at the meeting expressed themselves in the strongest possible terms against the arbitrary unfairness of the embargo, *per se*, which coming without notice and being of a retroactive character, has involved manufacturers in serious losses where they have been led to cover this foreign business with orders for special yarns, etc. It was felt that a spirit of fairness should have given the trade at least 30 or 60 days' notice, so that manufacturers would have an opportunity to clear up their merchandise with the least possible loss. Furthermore, the embargo should be so modified as not to affect those goods on order and as yet undelivered.

A strong feeling of resentment at the arbitrary action of the English government marked the meeting, and it was the consensus of opinion that the State Department should take steps whereby this situation might be relieved.

It was finally decided to adopt the following resolution to be sent to the State Department at Washington: Resolved that it is the sense of the meeting that a protest should be entered against the embargo on knit goods, and that the State Department should be urged to demand that the embargo should either be lifted or so modified as not to affect merchandise sold prior to the establishment of the embargo and remaining undelivered.

Knit Goods Embargo

(Continued from page 13)

were as follows: From the United States, in 1913, \$1,139,685 and for the same period from Japan, \$134,680. For 1914 the figures advanced for the importations from the United States to \$2,489,295 and from Japan they fell off to \$118,595. For 1915, the latest figures quoted, the imports increased from the United States to \$8,165,800, and from Japan they also showed an increase to \$1,051,495.

Word has reached the State Department, from unofficial British sources saying that the American and Japanese hosiery and underwear manufacturers are practically monopolizing the British market. Mill hands have been laid off and in many cases it is understood when a British manufacturer has actually secured an order it has been countermanded in favor of American and Japanese mills. It seems fair to assume, if these reports be true, that considerable pressure has been brought to bear on the British Government by English manufacturers.

Inquiries are being received here by officials of the Department of Commerce relative to this new knit goods embargo, showing the great interest that is being taken in this matter by American manufacturers.

Textile Club at Boston

The Textile Club, whose membership is made up of agents and superintendents of cotton mills in Northern New England, and which holds its meetings during the winter at Young's Hotel, Boston, the first Saturday of every month, met at the latter hostelry last Saturday, and, despite the counter attraction of the world series baseball game, had an attendance of over 25. Vice-President Dexter presided.

FOREIGN TRADE DIFFICULTY

South American House Contracts Arbitrarily Canceled

There are numerous reports received in the trade that the glowing prospects of export business with South American firms are not quite so promising as they were, and that experiences of firms doing business with certain concerns in that part of the world, are anything but gratifying. There is one concern in Buenos Ayres, with which many leading hosiery mills have been having serious difficulty of late. This includes not only cancellations of orders booked, but also the collection of amounts due. In several instances the credit established at banks in New York has been withdrawn, and all efforts on the part of both manufacturers, as well as the agent placing the business to secure their money, have been unavailing. In this one case the business amounts to about \$500,000 worth of hosiery, which was distributed among many well known manufacturers in this country. Although the goods in a number of instances had not been delivered at Buenos Ayres, orders were cancelled, because of alleged unsatisfactory merchandise; in one case, the foreign representative stated he had seen goods in South America, and that the black was entirely unsatisfactory, whereas the manufacturer in question had never shipped a case of hosiery out of the country. Orders have been cancelled while goods were in transit, and credit cancelled so that it was impossible for the manufacturer to secure payment. Many mills which have received these cancellations without any apparent just reason have gone to quite a little expense in preparing special packing with labels printed in Spanish, and they consequently have been forced to bear quite a loss.

Just what is the reason for these cancellations, those involved in these unsatisfactory transactions are at a loss to understand. It is believed these foreign firms have over-bought on certain lines and are endeavoring to relieve themselves of these contracts. They are also refusing to pay the commissions of the agents who placed the business. The peculiar part about the transaction is that most of these purchases were made at prices from 25 to 50c. below present prices. For example a ladies' mercerized hose was purchased at \$1.75, which is now held at \$2.25; and a ladies' artificial silk hose at \$2.15, which is now bringing \$2.50 and \$2.75.

One manufacturer has placed his case in the hands of an attorney having legal connections in Buenos Ayres in an effort to secure legal redress, and interesting developments are anticipated by the trade.

There are many who hint at the possibility of trade interference from foreigners, who may be making extraordinary efforts to secure the business in South America, and attempting to forestall any chance of American manufacturers establishing trade connections in this trade field. In any event those who have suffered, advise those manufacturers who are contemplating doing business with South America to exercise the greatest possible caution, in securing a fixed credit which cannot be withdrawn arbitrarily, and to make every effort to see that all details are absolutely determined with no possible loophole for evasion. Many of these concerns in South America are able to show the best possible credit, and it is recommended that the personal credentials and standing of their representative should be closely scrutinized by exporters.

DYE TARIFF INSTRUCTIONS

Duty as Per New Law on Withdrawals Since Passage of Bill

WASHINGTON, D. C., Oct. 9.—Assistant Secretary of the Treasury Andrew J. Peters has just communicated with the Collector of Customs at New York relative to the duty on dyestuffs as provided for by the last session of Congress, of special interest to the textile trade. The Collector has been requested to "assess duty on merchandise of the character in question (dyestuffs) withdrawn from a public or private bonded warehouse for consumption on and after Sept. 9, 1916, at the rates provided in the provisions in question of the Act of Sept. 8, 1916, even though imported and entered in such warehouse prior to Sept. 9, 1916." The letter in full is as follows:

"The question has been presented to the department whether dyestuffs imported and entered for warehouse under the tariff act of Oct. 3, 1913, but not withdrawn from warehouse until after the taking effect of the Revenue Act of Sept. 8, 1916, are dutiable under Title V of the later act, when like dyestuffs are covered by the provisions of the later act. The enacting clause of the provisions in question of the later act provides:

"That on and after the day following the passage of this act, except as otherwise specially provided for in this Title, there shall be levied, collected, and paid upon the articles named in this section when imported from any foreign country into the United States . . . the rates of duty which are prescribed in this Title. . . ."

"It is contended that it was the intention of Congress to make the provisions of this Title applicable only to importations arriving after the taking effect of the new act.

"Sec. 20 of the Customs Administrative Act of June 10, 1890, was, in part, as follows:

"Any merchandise deposited in any public or private bonded-warehouse may be withdrawn for consumption within three years from the date of original importation, on payment of the duties and charges to which it may be subject by law at the time of such withdrawal. . . ."

"As amended by the Act of Oct. 1, 1890, the language is as follows:

"That any merchandise deposited in bond in any public or private bonded-warehouse may be withdrawn for consumption within three years from the date of original importation on pay-

Period.	Consumed.	On hand at end of period.
Calendar year 1915.....	244,093	30,482
Quarter ending March 31, 1916.....	144,938	19,933
Quarter ending June 30, 1916.....	142,725	22,895

ment of the duties and charges to which it may be subject by law at the time of such withdrawal. . . ."

"The quoted portion of the original section is the same as in Par. S, Sec. III, of the tariff act of Oct. 3, 1913.

"By the Act of Dec. 15, 1902, Sec. 20 of the Act of June 10, 1890, as amended to read substantially as first quoted above, but with the following proviso:

"Provided, That the same rate of duty shall be collected thereon as may be imposed by law upon like articles of merchandise imported at the time of withdrawal, although this proviso is now omitted from the tariff act of 1913, as it was omitted from the tariff act of 1909.

"In T. D. 25,276 the Circuit Court of Appeals held that the amendment of Dec. 15, 1902, was declaratory of the meaning of the earlier act, it appearing that the amending act was enacted by

Congress in consequence of the apprehended results of a decision from which an appeal had been taken.

"The omission from the corresponding paragraph now is probably because the proviso is not necessary in view of T. D. 25,276.

"Although the enacting clause of the dyestuff provision of the Act of Sept. 8, 1916, mention only 'articles named in this section when imported from any foreign country,' Paragraph S would appear to apply, in view of the above decision and make the products withdrawn from warehouse, after the Act became effective, dutiable 'at the same rate of duty . . . as may be imposed by law upon like articles of merchandise imported at the time of withdrawal.' Note also T. D. 27,412.

"You will, therefore, assess duty on merchandise of the character in question withdrawn from a public or private bonded warehouse for consumption on and after Sept. 9, 1916, at the rates provided in the provisions in question of the Act of Sept. 8, 1916, T. D. 36,667, even though imported and entered in such warehouse prior to Sept. 9, 1916."

Cotton in Explosives

(Continued from page 13)

trating purposes varies considerably depending on the condition of the raw fiber, some stock being quite clean and some very trashy. From the information at hand it would appear that the loss in preparing linters from the wrapped and iron bound bales to the purified fiber as used in nitration is from 30 to 40 per cent. Based on an average loss of 35 per cent. the gross weight of cotton fiber used in the manufacture of explosives was 375,000 equivalent 500 pound bales in 1915, 223,000 bales for the first and 220,000 for the second quarter of 1916.

In addition to the prepared cotton consumed in the United States in the manufacture of guncotton and other explosives, considerable quantities are exported for use in foreign countries. Exports of bleached linters are not reported separately, but are included with the exports of linters, and no information is available as to the quantity sent abroad. The total exports of linters for 1915 amounted to 236,574 bales, for the first quarter of 1916 to 58,403 bales, and for the second quarter to 123,461 bales. No statistics have been collected by the bureau in regard to the quantity of cotton, linters, hull fiber, and waste consumed in the manufacture of explosives in foreign countries.

—Equivalent 500-pounds (net weight)—

Period.	Consumed.	On hand at end of period.
Calendar year 1915.....	244,093	30,482
Quarter ending March 31, 1916.....	144,938	19,933
Quarter ending June 30, 1916.....	142,725	22,895

Wool Goods for Navy

Bids will be opened Oct. 31 at the Bureau of Supplies and Accounts, Washington, for supplying the Brooklyn Navy Yard with 25,000 yards dark blue 18-ounce cloth, 400 yards, 16-ounce, 54-inch, light blue cloth; 35,000 yards, overcoat cloth; 300 yards, 16-ounce, 54-inch, scarlet cloth; 50,000 yards cotton sail duck; 60,000 yards heavy blue flannel; 35,000 yards, 36-inch, blue lining flannel; 10,000 yards, 54-inch, navy blue worsted serge.

Men's Wear Trade Note

It is announced that after Jan. 1 J. B. Kirkaldy, selling agent of the United States Worsted Co., will act in a similar capacity for the Scotia Worsted Mills, Woonsocket, R. I. The latter company will continue, however, to have a separate selling organization and office.

JAPAN'S COTTON MILLS

Decrease in Number, But Increase in Spindleage and Efficiency

WASHINGTON, Oct. 9.—The cotton mill industry of Japan is one of the most important of that busy, tight little island country. There are at the present time 36 spinning mills in the country with a total capitalization of about \$43,000,000. The number of spindles at work, according to an investigation made in the middle of June was 2,763,000. The working people employed included 23,590 males and 99,760 females, or a total of 123,330 persons. The output of cotton yarns is said to amount to an average of 160,000 bales per month.

A comparison with conditions as they existed for the first six months shows some peculiar features. For instance, the number of spinning mills has been reduced from 48 to the 36 above noted. The paid up capital has been increased from \$25,466,119 to \$43,006,883; the number of spindles has jumped from 1,482,497 to 2,763,000, or almost double. The number of workmen has also increased from 79,881 to 123,350, and the output has increased from 85,000 to 160,000 bales per month. That the increase in the number of persons employed has not kept pace with the increase in the output, is taken to mean that there has been an increase of the efficiency of the workers, and the reduction of the number of mills, shows that there is in Japan, as in the United States, a movement toward the pooling of interests in order to get the best results with a minimum of expense and loss of energy.

One thing to which attention is specially called is the tendency to increase the number of spindles, and the amount of capital involved, and it is expected that the end of the present year will see a much greater increase in this respect.

Of course, taken in comparison with the world's aggregate of 138,917,969 spindles at work last year, Japan's share is very small, only a little over 2 per cent., and only about 5 per cent. when compared with England's 57,000,000 spindles; but there is every reason to believe that it is the intention of the Japanese to overcome that disadvantage just as fast as possible, and as fast as she can find markets in which to dispose satisfactorily of this rapidly increasing production, for which purpose she expects to further exploit the markets of China and the Southern Pacific. Already the sale of cotton yarns to China has increased from a value of \$1,258,500 in 1906 to \$3,461,500 in 1916, the figures being for the first six months of each year.

The Textile Reconstruction of France*

Conditions in the Department Du Nord Before the War

By ALFRED RENOARD

AT the present moment three-fourths of the Department Du Nord, France, are in the hands of the Germans. Industrial life has not only disappeared from the whole region, but a large number of industrial establishments, the working-stock they had, the raw materials they contained, the whole supply of manufactured goods are entirely gone; either because they have been ruined through the continuous bombardments, or because the raw materials and goods have been requisitioned against valueless receipts, or the working-stock has been carried away to Germany; or finally, because the machinery stripped of its copper parts by the enemy is nothing but a heap of iron, or a useless molten mass. Whatever the cause made be, all this no longer exists and will surely have to be replaced after the war.

An industrial district, like Le Nord, that stands at the top of the textile industry in France, and which, therefore, can be considered one of the most important textile centers of the world, does not give up its predominance easily and will want to resume the high position which it held before the war. One must reckon with the possibility that there will be some failures, but they will be few and will only be temporary. The textile industry belongs to the life of the inhabitants and will remain in it, and could not be exterminated.

Under these conditions it seems to us that there will be a great opportunity for the United States in the replacing of machines in the establishments that have been stripped of their equipment: Preparatory machines for cotton and wool, spinning and twining machines for the two industries, power looms, knitting machines, apparatus for dyeing, bleaching and finishing, etc. As soon as the war is ended, the manufacturers of these districts will need not only such equipment, but also parts for the quick

** This is the first of a series of articles by Alfred Renouard, a French textile authority, writing exclusively for TEXTILE WORLD JOURNAL. After describing the importance of the north of France as a textile center prior to the war, the author will describe the damaged condition of the mills in that territory at present, and will demonstrate the business possibility that will be presented to American manufacturers of textile machinery and mill supplies after the war when the reconstruction and re-equipment of these plants are started.*

restoration of damaged machinery, for the supply of which America will have a good chance. To be sure, the construction engineers of England, France and Switzerland, will not fail to place themselves in line, but in the first two countries a large number of textile machine shops have most of their men occupied with the manufacture of war munitions, and after the war will be so overrun with orders as to be unable to fill them promptly; and will be obliged to delay their deliveries indefinitely. Besides one must take it for granted that, for a certain number of years at least, German engineers will be systematically barred from French business. Many of these concerns will surely install themselves in Switzerland, and put on a Swiss label; several have already taken such steps. But they will intentionally lose precious time in making an installation, and this will not help to secure a new clientage for them. Moreover, the French mill owners are warned, and associations have already been formed to meet this eventuality and to unmask such rascals. On the other hand, the United States engineers are perfectly prepared to place themselves in the foremost ranks with a large number of machines, and will then have (we repeat it) an important place as suppliers of the French clientage that knows how to value a good and reasonably priced construction, the quick delivery of the machinery ordered, and, last but not least, has retained a deep sympathy for the American people.

CONDITIONS BEFORE THE WAR

The textile industry is beyond dispute the most important of all those of the district of the North. It embraces, in fact, the manufacture of all common fibers: Wool, cotton, flax, hemp, jute, and even silk, since one establishment of great importance in Roubaix has specialized in the spinning of schappe, or silk waste. The district of the North may be divided into two large divisions, which are quite distinct: that of the flax industry and that of the woolen industry, while the cotton industry is spread over both regions, though more concentrated in some places than in others.

LILLE THE LINEN CENTER

First rank in the flax industry is held by Lille, the capital of the province. It possessed before the war three-fourths of the 500,000 spindles and more than one-third of the 22,000 power looms and the 22,000 hand-looms that were in all

France. The city itself had 108 textile mills of different kinds, the smaller places around Lille all together about 100. One of the specialties of Lille is the manufacture of linen sewing thread, the manufacturers of which have formed a syndicate for the purpose of guarding the interests of this special industry. Lille is also the seat of the very ancient association, "Comité Linier de France," whose purpose it is to watch over the interests of the industry which it represents and to improve the cultivation and manufacture of flax.

Another important center is Armentieres with 64 different flax mills; Dunkirk, the seat of the jute and canvas manufacture, with 12 mills. Chambrey and vicinity with 53 mills, and Valenciennes with 16 mills represent principally the manufacture of batistes, lawn, and handkerchiefs. Tulle and laces are manufactured in Cadry with 216 mills and Inchy with 85 mills. We will also mention that the textile industries have a number of technical institutions of a high order: Societe Industrielle, the Industrial Institute in Lille, and the Professional School at Armentieres.

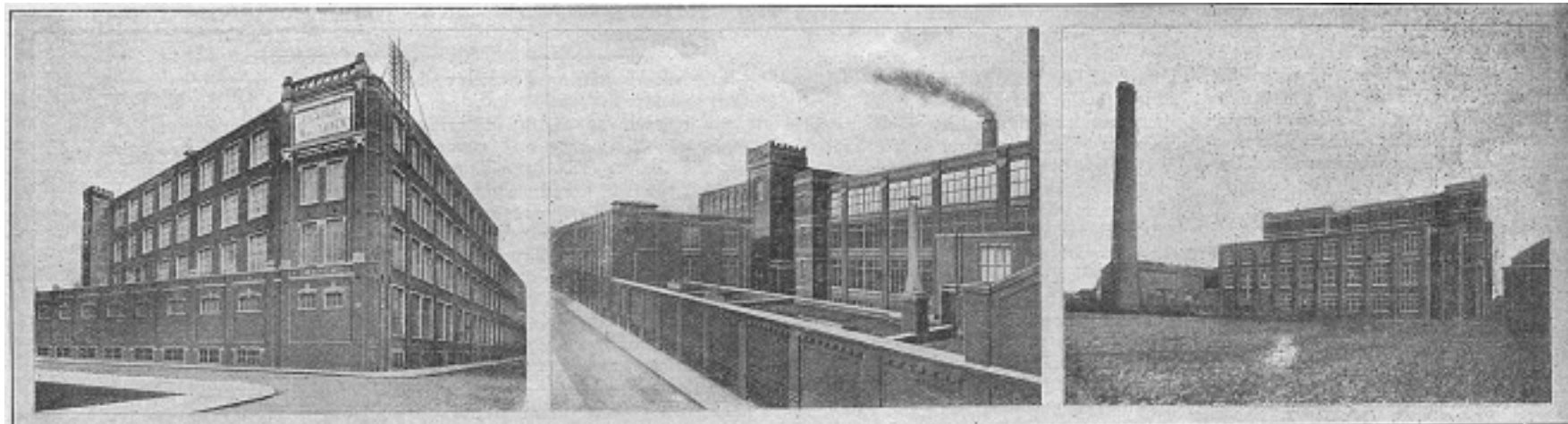
WOOL INDUSTRY IN ROUBAIX-TOURCOING

The center of the woolen industry is Roubaix, where just before the war about 40,000,000 pieces of textile fabrics with a value of about 350,000,000 francs were produced, and the total amount of business transacted was not below one billion francs. Of hardly less importance is its close neighbor, Tourcoing, with over 100 different mills, to which must be added a very large number of smaller mills nearby. Tourcoing is also the seat of the industrial and commercial society for the protection of the interests of the district and of a professional school; in Roubaix are three industrial schools. Also Fourmies with its adjacent villages is worth mentioning as an important center of the woolen industry. It need scarcely be said that there is hardly a single textile fabric that is not manufactured in this great industrial district.

(To be continued)

Assistant Inspector Wanted

WASHINGTON, Oct. 11.—In addition to the examination to be held on Nov. 7 for a warehouse investigator, the Civil Service Commission is announcing its intention of holding an examination on Nov. 14 for an assistant warehouse inspector familiar with cotton and wool; the applicant must have had at least three years' responsible experience in the management of a warehouse handling the above mentioned products, but he need not of necessity be a college graduate. Applicants must be within the ages of 21 and 40 years. The salary will range from \$1,800 to \$2,400.



1. COTTON SPINNING MILL OF HENRI LOYER AT LILLE

2. COTTON SPINNING MILL OF WALLAERT BROS. AT LILLE

3. COTTON SPINNING MILL OF F. DELASALLE AT NARAIS DE LOMME

PROTEST INSURANCE

Hosiery Men Declare Rates Exorbitant and Classifications Antiquated

An important conference was held on Tuesday, Oct. 10, in Philadelphia, when several prominent hosiery manufacturers appeared before the Classification Committee of the Pennsylvania Compensation Rating and Inspection Bureau in support of a petition for a lower rate of insurance for hosiery manufacturers in Pennsylvania on workmen's compensation insurance. The group of manufacturers included W. Park Moore, vice-president of the Hancock Knitting Mills; Edward Powell, treasurer of the Powell Knitting Co.; H. M. Gwyn, president of the Oneida Knitting Co., Inc., all of Philadelphia, and Jos. S. Rambo, president, and W. W. Finn, superintendent, of Rambo & Regar, Inc., Norristown, Pa.

The manufacturers presented a very strong case in favor of a reduction in the present rates which they declared are excessive. As evidence of this point, they submitted reports from 119 hosiery manufacturers showing a payroll approximating \$8,000,000, which revealed 49 plants, or 41 per cent., which had 174 accidents of various kinds, while 70 plants out of the 119 had no accidents whatever to report. Of these 49 accident cases, the reports showed only 28 required any medical attendance, while 21 only required both medical attendance and compensation. For the first six months of this year, 1916, the payments for both compensation and medical attendance amounted to \$1,259.17, or a basis of 9 per cent. of the premium. Inasmuch as the present rate charged hosiery mills is 36 per cent., the arguments that the rates are excessive were rather weighty and it is expected the rate will be lowered materially. The statement was also made before the committee that certain of the classifications were antiquated, and it was urged that revision be made.

This movement for the relief of hosiery manufacturers was initiated by the National Association of Hosiery and Underwear Manufacturers, which by a general canvass in the State succeeded in securing the needed information to present its case. A similar effort is being made to secure data from underwear mills in the State, and the success anticipated in behalf of the hosiery mills it is hoped will inspire complete returns from the underwear trade, so as to accomplish the same result.

Southern Mills Fair

A fair is announced for to-day for the benefit of the Wiscassett and Eford Mills of the Cannon Mills. Prizes are to be awarded for the highest proficiency in flower and vegetable cultivation, preserving, cooking, fancy work, care of live stock, etc. In connection with the fair there will be held a health exhibit and baby show with prizes for the best babies. These two plants are located at Albermarle, N. C. and are an integral part of the Cannon Manufacturing Co. with headquarters at Kanapolis, N. C.

Steamship to South America

The first steamer of the Philadelphia-South American Line is scheduled to sail from Philadelphia, about October 15 for Rio Janeiro. This will establish direct water communication between Philadelphia and South America. The lower port charges and operating expenses at Philadelphia enable shippers to obtain advantageous shipping rates, and the success of the undertaking is predicted in its effort to give American manufacturers American ships.

YARN PRODUCT ENLARGED

A Going Concern in Clinton, Mass., Increases Capacity

The Burton Company, a comparatively new concern, manufacturing carpet yarns in the plant formerly occupied by the Victor Worsted Manufacturing Co., Clinton, Mass., is adding several more new sets of cards, and corresponding other machinery to take care of an increasing volume of business.

This mill started with two sets of cards, but very soon after increased to six sets, and the orders for its products have increased to such an extent that it has been found necessary materially to increase producing capacity. Accordingly orders have been placed for several more sets of cards for quick delivery. Some of these have already arrived and are being set up, and more are on the way. It is the company's intention to operate from fifteen to eighteen sets and thereby triple present production. The cards will be set up, and started set by set as they arrive. The yarn product will be unchanged.

Several large orders from carpet manufacturers were recently rejected, because of limited capacity. The company employs at the present time about eighty hands, and when the new machinery is in full operation, the force will be more than doubled.

This mill is equipped with electric motors in every department, though it still has its own steam and electric generating plant which can be quickly put in operation whenever it is considered economical to do so. Power at present is supplied by the Clinton Gas and Electric Company.

Edward Elsner of Boston, and Richard W. Marsden of Clinton, are agent and superintendent respectively. Gerald McCaulay is secretary and paymaster. The staff of overseers are Frank Peck, carder; Edward Fish, spinner, spooler and twister; Martin McNamara, picking and carbonizing; Edward Floyd, master mechanic; Amos Peary, electrician.

MACHINERY PRICES FIXED

Present and Prospective Prices of Raw Materials Control

Joseph R. Leeson, president of the Universal Winding Co., Boston, is strongly of the opinion that prospective purchasers of machinery have nothing to gain by deferring purchases that may be needed during the coming year. He was queried upon this question by one of the metal trade papers, and his reply was as follows:

"Readers of metal trade journals are aware of the fact that all leading manufacturers of steel in the United States have the entire production of their plants sold for many months in advance, that the pressure for steel in conjunction with munition production not only continues, but steadily increases. In addition to this the demand for all kinds of metals for industrial use is constantly gaining. The ship yards of the United States are oversold, railroad equipment is gaining in volume, and industrial plants are being added to and new establishments started daily. Present indications are that prices of all kinds of metals will continue to increase, so that so far as can be at present forecasted the only change in regard to cost now in sight is increase of cost and consequently in selling prices. It is clear that present and prospective purchasers of all kinds of machinery will gain nothing by deferred purchases, and that the judicious course now is to purchase all machines for which any use is likely to be made during the coming year."

FOR WAREHOUSING EXPERT

Civil Service Examination to Secure Competent Investigator

WASHINGTON, Oct. 10.—Pursuant to the enactment of the new Warehousing Law, the Civil Service Commission has announced that it will hold an open competitive examination for the position of investigator of warehouses. As the result of that examination it is expected that four appointments will be made at salaries ranging from \$2,500 to \$3,000. And, as a further result of this examination, four registers will be appointed, one to have had experience in connection with grain, one in tobacco, one in cotton and one in wool.

In the examination a weight of 30 will be given to education, 40 to practical experience, and 30 to a thesis or discussion. One of the prerequisites for the applicants will be graduation from a college or university of recognized standing, and at least four years' practical experience in the management of a warehouse. Credit will also be given for experience in warehouse management, insurance, and accounting, and for general experience which would enable the applicant to grade any of the four products named above; additional credit will also be allowed to applicants who may have a knowledge in warehouse construction, inspection, planning, etc.; and in connection with the thesis attention will be paid specially to the handwriting, and the subject chosen should deal with the management, economic importance of storage, legislation needed for the proper development of the storage industry, and the importance of storing in connection with warehousing and financing agricultural products. Applicants must be between the ages of 25 and 45.

Dye Census Being Printed

WASHINGTON, Oct. 12. Work is being rushed by the Government Printing Office on Dr. Thomas H. Norton's dye-stuff report. It is expected that it will take at least two weeks to print this much discussed census. Although a number of those interested, both for and against the publication of this manuscript, asked for hearings on the matter, Secretary Redfield did not think it was necessary.

Tilton Mills Incorporate

The Tilton (N. H.) Mills, as announced in these columns, have been incorporated under Massachusetts laws with a capital of \$315,000. A. S. Brown will continue as president; J. Murray Walker, of Boston, has been elected treasurer, and J. L. Eadie, agent. Mr. Eadie has for a number of years been general manager of the Pontoosuc Woolen Manufacturing Co., Pittsfield, Mass. No change will be made in product or selling agent.

Sale of Merrimac Foundry

The sale of the real estate, building and equipment of the Merrimac Foundry & Machine Co., Lawrence, Mass., is announced for Thursday, Oct. 26, upon the premises, under the supervision of J. E. Conant & Co., the Lowell, Mass., auctioneers. The real estate is divided into thirteen lots of various frontages and areas. There is also included a standard steel and glass building 100 by 200 feet (to be sold to be removed), and some 264 lots of machinery and mechanical equipment.

Cotton Goods Trade Note

The Amoskeag Manufacturing Co., Jarvis & Prankard, selling agents, has placed staple gingham at value, to cost not over 8½c., without notice.

AUSTRALIANS TO VISIT HERE

To Discover New Methods of Manufacture and Management of Labor

WASHINGTON, Oct. 11.—A commission is soon to visit the United States from Australia, to look into the textile and other industries, including methods of manufacture and conditions of employment, according to word recently received here.

The Commission will be composed of six manufacturers and six representatives of labor organizations, as well as a secretary and a journalist, who will send back to Australia daily reports of the progress that is being made.

The exact date that the commission will set sail for this country has not been determined. It is understood that the commission will be absent from Australia for about six months which probably means that their visit in the United States will probably last four months. All the expenses of the commission are to be defrayed by the Australian Government.

The purpose of the commission's trip to the United States is to discover new ways of manufacture, and the management of labor which may be of assistance in increasing the production of Australian industries following the war. It is especially pointed out that the commission has not been appointed for the purpose of creating friendly feeling with the United States, or for increasing trade between the two countries, although it is hoped that this may be one of the results of the trip.

Naval Supply Awards

WASHINGTON, Oct. 9.—The J. Spencer Turner Co., has been awarded the contract by the Bureau of Supplies & Accounts, Navy Department, for furnishing 100,000 yards of 6-oz. 28½-inch slate, or cotton canvas ravens at \$14.125, bids for which were opened Oct. 3. The Guerin Spinning Co., of Woonsocket, R. I., has been awarded the contract at \$962 for furnishing the Fort Mifflin, Pa., Naval Magazine with 1,300 square yards of heavy silk cloth for cartridge bags.

Wm. Anderson Textile Mfg. Co.

The cotton goods partnership of William Anderson & Co., distributors of Anderson zephyrs in this country and Canada, has been succeeded by a corporation under the name of the William Anderson Textile Manufacturing Co. The corporation will retain the sole selling agency of Anderson zephyrs in this country and Canada, and will continue the domestic gingham and converting business of the partnership. Officers of the corporation are: William M. Macfarlane, president; William Anderson, vice-president; W. J. MacLaughlin, secretary and treasurer; J. O. P. Humphreys, assistant secretary and treasurer.

Meeting of S. N. E. T. Club

The sixty-third monthly meeting of the Southern New England Textile Club will be held at the Hotel Narragansett, Providence, R. I., on Saturday, Oct. 21, at 2 o'clock in the afternoon. Hon. Wade H. Ellis of Ohio will be the principal speaker, and will take the tariff as his subject. The Governor of Rhode Island, the two State senators, and other prominent men have been invited to be guests of the club.

Everett Extra

The Everett Mills, Lawrence, Mass., has declared an extra dividend of 1 per cent., and a regular semi-annual dividend of 3 per cent., both payable Nov. 1 to stock of record Oct. 14.

THE PERSONAL PAGE

Henry C. Dexter, former president of the Southern New England Textile Club and prominent in textile circles in Rhode Island, has been nominated as Republican candidate for mayor of Central Falls, his home city. The present incumbent of the office is a Democrat and Mr. Dexter's nomination was the result of the search of the Republican organization for the strongest candidate who could be found.

Stephen T. Whittier, assistant general manager of the Hamilton Manufacturing Co., cotton goods, Lowell, Mass., is enjoying a short vacation at his camp, at Rangeley Lakes, Maine.

George H. Emmott, treasurer of the Rathbun Knitting Company, Woonsocket, R. I., has been nominated as Republican candidate for mayor of that city; during the past year Mr. Emmott was president of the city's Board of Aldermen. His mayoralty nomination was seconded by L. W. Ballou, agent of the Guerin Spinning Co.

Robert J. Edwards has been elected president of the Bates Manufacturing Co., cotton goods, Lewiston, Maine, succeeding Charles H. Fiske, who has resigned both as president and director of the corporation. Charles H. Fiske, Jr., will succeed his father as director, and President Edwards is also a member of the latter board.

Thomas H. McKay, of the McKenzie-McKay Co., bleachers, dyers and mercerizers, Pawtucket, R. I., has accepted a responsible position with the Sharp Manufacturing Co., cotton yarns, New Bedford, Mass. Mr. McKay retains his interest in the Pawtucket company, but active management of the latter's plant is in charge of A. A. Moffitt, formerly with the Greene & Daniels Co., of that city. George McKenzie, of the firm, who has been in poor health for a long period, is now improving, and hopes to resume his business activities in the near future.

Henry Pope, president of the Paramount Knitting Co., Chicago, Ill., and also president of the Paramount Hosiery Form Drying Co., also of Chicago, was a visitor in Philadelphia during the past week. Of late Mr. Pope has been devoting a considerable portion of his time to the interests of the latter company which has developed an increasing business.

C. H. Vanderbeck, of the Philadelphia office of Percy A. Legge, worsted yarns, has just returned from week or ten days at Hot Springs, Va., where he has been staying accompanied by Mrs. Vanderbeck.

E. C. Barnhardt, vice-president of the Gibson Manufacturing Co., Concord, N. C., spent several days in Philadelphia and New York this week at the offices of the Cannon Mills.

R. N. Kimball, vice-president and general manager of the Chicago-Kenosha Hosiery Co., Kenosha, Wis., was noted among the prominent visitors in Philadelphia recently looking over the situation there.

G. W. Turnipseed, superintendent of the Anniston Manufacturing Co., Anniston, Ala., has returned to his duties at the mill, having recently undergone an operation for appendicitis. His many friends are glad to hear of his recovery.

T. B. Terrell, secretary and treasurer of the Locke Cotton Mills, Concord, N. C., was seriously injured last Sunday evening when his car skidded while motoring between Coolemeec and Concord, and overturned. Mr. Terrell had three ribs fractured with one lung punctured. His numerous friends are hoping for favorable news of an early recovery.

Superintendent W. M. Sherard, who only recently took charge of the Henrietta Cotton Mills, at Henrietta, Rutherford County, N. C., is actively assisting in the educational boom that struck that mill settlement last fall, and is being continued with vigor this fall. The revival of the "moonlight schools" is one of the main features. At these schools many adults of mature age, who were denied opportunities to attend public schools in their early days, are now addressing themselves to the belated task of regaining an education.

Supt. H. C. Greenlaw announces the engagement of George E. Pierce, of Fairhaven, Mass., as master mechanic at the Royal Mill in Riverside, R. I., in succession to John Bellamy, who has resigned.

S. A. Scott has accepted a position as night superintendent of the Adelaide Mills, Anniston, Ala. He was formerly superintendent of the Acworth (Ga.) Mills.

J. M. Williams has been appointed superintendent of the Winnsboro (S. C.) Mills. He comes from the Dilling Mill, Kings Mountain.

M. E. Riley has been promoted to superintendent of the Acworth (Ga.) Mills, where he was formerly employed as carder and spinner.

Charles E. Hartley, night superintendent for the Standard Spinning Co., Oswego, N. Y., has severed his connection with the company.

John T. Melbourne, for the past 46 years a resident of Stafford Springs, Conn., employed by the Fabyan Woolen Co., has taken a position as manager of the Fabyan Woolen Mills, Medway, Mass.

W. S. Trickett has been appointed superintendent of the Morris & Co., Inc., Groveville (N. J.) Mills. He comes from the Pembroke Mills, Suncook, N. H. On leaving the Suncook Mill, he was presented by the overseers with a handsome traveling bag.

J. M. Hewitt, formerly superintendent of the Stevens Woolen Mill, South Bend, Ind., has accepted a position as superintendent of the South Bend (Ind.) Woolen Co.

J. M. Masson, superintendent of the South Bend Woolen Mills, has resigned his position with the company.

James L. Eadie, general manager of the Pontoosuc Woolen Mfg. Co., Pittsfield, Mass., has resigned his position with the company. He has been appointed manager of the Tilton (N. H.) Manufacturing Co., a new company recently incorporated, taking over the Tilton Mills.

J. R. Puckett, formerly night superintendent of the Wilson Cotton Mills, Wilson, N. C., has been appointed superintendent of the Necronsett Mills, Cumberland, N. C.

Winthrop B. Nye has been appointed agent of the Putnam Manufacturing Co., Putnam, Conn., succeeding George A. Vaughn.

Winfield Beasley has been appointed superintendent of the Garner Print Works & Bleachery at Wappingers Falls, N. Y. He is the son of Frank R. Beasley of Woonsocket, R. I. Mr. Beasley has been in the employ of the bleachery at Wappingers Falls for a number of years.

Pardon B. Sanford has resigned his position as superintendent of the Utica Steam & Mohawk Valley Cotton Mills. He is succeeded by Edward Smith. Mr. Smith was formerly superintendent of the Utica Fine Yarn Corp., Utica, N. Y.

Samuel Taylor has been appointed superintendent of the Hochelaga Cotton Mills, of the Dominion Textile Co., Montreal, Canada.

F. D. Williams of Sylacauga, Ala., has accepted a position as overseer of carding and spinning for the Great Falls Co., Rockingham, N. C.

H. G. Forsyth has accepted a position as overseer of weaving for the Aiken Manufacturing Co., Bath, S. C. He was formerly with the Seminole Manufacturing Co., Clearwater, S. C.

Henry Guyton, formerly overseer of spinning at the Little River Mills, Rougemont, N. C., has accepted a similar position with the Erwin Mill No. 4, West Durham, N. C.

Edward Hanson, formerly overseer of the cloth room for the Merrimack Manufacturing Co., Lowell, Mass., but more recently overseer of the duck finishing department for the Boott Mills, Lowell, Mass., has taken a position as overseer of the finishing department for the Williamsville Manufacturing Co., Killingly, Conn.

Peter Oliver, formerly overseer of the duck and bag weaving department for the Boott Mills, Lowell, Mass., but more recently with the Tremont & Suffolk Mills of Lowell, Mass., as second hand in the weaving department, has taken a position as night overseer of weaving for the Jencks Manufacturing Co., Pawtucket, R. I.

Thomas E. Foley has accepted a position as overseer of spinning for the Berkshire Woolen Co., Pittsfield, Mass.

Frank Hanky, overseer of weaving for the Lawrence-Webster Co., Malone, N. Y., has resigned his position with that company to accept a similar one with the Malone Woolen Mills, J. O. Ballard Co., Malone, N. Y.

Martin F. Harding has resigned his position as overseer of carding for the John Roberts Woolen Mill, Claremont, N. H.

Daniel Simkins has accepted a position as second hand of ring spinning at the Chester (Pa.) Spinning Co. He comes from Millville, N. J.

Alexander Tainsh, Jr., second hand in the dyehouse of the Manton Mills, American Woolen Co., has resigned his position with that company to accept a position as overseer of dyeing at the Brodsky Thread Mills, Fall River, Mass. He is succeeded at the Manton Mills by Earl S. Parker.

Charles Taylor, overseer of weaving at the Butler Mills, New Bedford, Mass., has severed his connection with the company.

John Bellamy, for the past three years master mechanic for the Royal Mills, B. B. & R. Knight Co., Riverpoint, R. I., has resigned his position with the company. He was presented

with a traveling bag and meerscham pipe by the help in the mill.

John Riley has accepted a position as overseer of mule spinning for the Delta Spinning Mills, Frankford, Philadelphia, Pa. He comes from North Adams, Mass., and formerly held this position.

Frank Morris has been appointed overseer of weaving for the Saxton's River (Vt.) Woolen Co. He was formerly employed at the Wakefield (R. I.) Mills Co., as loom fixer.

Frank Casey, formerly superintendent of the Wakefield (R. I.) Mills Co., has taken a position as designer for the American Textile Co., Sweetwater, Tenn.

Edward Adams, formerly overseer of carding for the Wakefield (R. I.) Mills Co., has taken a position as overseer of carding for the J. Roberts Mills, at Claremont, N. H.

George E. Pierce has been appointed master mechanic for the Royal and Valley Queen Mills, Riverpoint, R. I., succeeding John Ballamy.

William Carrigan, overseer of carding for the Ludlow (Mass.) Manufacturing Associates, has resigned his position on account of ill health.

William Green, assistant foreman in the drawing department for the George Gilbert Manufacturing Co., Gilbertville, Mass., has resigned to accept a position as overseer of drawing with the Bradford Worsted Spinning Co., Louisville, Ky.

John Jeffers, overseer of carding for the past 28 years for the E. E. Hilliard Co., Buckland, Conn., has severed his connection with that company.

John T. MacNaught, overseer of dyeing for the Madison Woolen Mill, Madison, Me., has resigned his position with that company. He is succeeded by Benjamin Washburn, who comes from the Holden Woolen Co., Bennington, Vt.

Thomas Smith, has been appointed superintendent of the Wottoquottoc Spinning Co., Hudson, Mass. He comes from Centerdale, R. I.

Owen J. Mullaney has taken a position as assistant dyer and finisher for the New Bedford Textile School. He was employed at the Glenyon Dye Works, Saylesville, R. I., for a number of years.

F. D. Williams has resigned his position as assistant superintendent for the Central Mill, Sylacauga, Ala., and it is reported that he has taken the position as overseer of carding in one of the mills in Rockingham, N. C.

Charles F. Goldthwaite, chemist for the Slater Mills, Webster, Mass., has resigned his position with that company to accept a responsible position as chemist with the Western Rug Co., Duluth, Minn.

Wm. H. Ridgway, head of the firm of Craig Ridgway & Sons, Inc., the well-known manufacturers of elevators, of Coatesville, Pa., recently addressed a large meeting of prominent men of Philadelphia, organized for the purpose of furthering the cause of religion. In the course of his remarks, Mr. Ridgway pointed out the fact really "big business" men were giving up drinking because they found it did not pay, and that recently at the Union League in Philadelphia he had noted that not one of 200 business men had liquor served.

FINANCIAL MARKETS

STOCKS CLOSELY HELD

Most Stockholders Anticipate Still Higher Share Values

Boston, Oct. 11.—The comparatively small offerings of textile shares may be due to the fact that most stockholders are confident that the next annual statements of most mills will show such an improvement in their financial condition as to warrant still higher share values, and large numbers of them will pay extras, either in the shape of stock or cash disbursements. Even if the outlook were not quite so promising as it now appears to be, it is doubtful if there would be any marked increase in realizing sales at current prices. The majority of textile stockholders purchased their shares on an investment basis and are well satisfied that there are few other industrial securities to be had that combine in a more marked degree safety of investment as well as certainty of substantial dividends. Several of the Fall River mills have already paid extras, and now one of the most conservatively managed mills in northern New England declares a dividend of one per cent. extra in addition to its annual regular of 6 per cent. This is the Everett Mills of Lawrence, Mass. Although this company has made no change in its dividend rate for many years, it always has the reputation of earning its dividend, even under the discouraging conditions that obtained during the Lawrence strike; while the 4 per cent. to be paid Nov. 1 takes the shape of a regular 3 per cent. semi-annual dividend and an extra of one per cent., it is generally regarded as equivalent to the placing of this stock on a regular 8 per cent. annual rate.

There seems to be no doubt but that the best showings among textile mills for the year will be made by some of the yarn plants. Their adjustment to an advance price basis came easier than that of most of the cloth mills, and they also worked out of their low-priced contracts earlier than did the cloth mills. The margin of profit that they are now making bears no logical relation to the cost of production, and is based solely on the law of supply and demand, as it affects their product. There used to be a time when a spinner who could regularly show a net of \$3 a spindle was envied by his competitors, but to-day he must make nearer \$10 or \$12 a spindle to become a member of the envied class. There are many mills that are doing as well as this, but of this number there are many who have the losses of several years to recoup, and who will use their extra earnings to reduce their indebtedness and to re-equip or to extend their plants instead of materially increasing their dividends. Among southern cotton mills there are a large number in the latter class, and it is quite certain that discriminating purchases of southern textile shares at the present time would prove an attractive investment. One of the southern mills that has just given a demonstration of its financial strength is the Bibb Manufacturing Co., Columbus, Ga.; this company has just increased its capital from \$1,500,000 to \$2,500,000, thus capitalizing a large portion of its accumulated surplus. The Bibb has installed a large amount of new machinery during the

last two years and additional expansion is now in progress.

BOSTON STOCK AUCTIONS

The sales of textile shares at the Boston auctions on Wednesday were as follows:

Shrs.	Mill.	Par.	Sales.	Chge.
9	Border City	100	117	+2
1	Pepperell	100	185	+2
10	Butler com.	100	95½	+½
2	Algonquin	100	200¼	-¾
19	Bates	100	275	..
19	Lawrence	100	110½	+2¼
5	Massachusetts	100	123	-2½
5	Pacific	100	160	-¾
4	Pacific	100	159¾-7%	-¾
10	Mass. in Ga.	100	99	+¼
5	Merrimack (com.)	100	53¾	+¾
1/3	Brookside	100	50	..
15	Arlington	100	105¾-10%	-¾
25	Granite	100	102½	..

129½ Total.

Fall River Mill Stocks

FALL RIVER, MASS., Oct. 12.—Trading in the local market for securities is quiet. It is not because of a lack of opportunity to sell, but on account of the absence of disposition on the part of holders of certificates. There is a strong temptation to meet the inquiry, but the hope of a further advance is so pervasive that those who will respond when the right chance offers say that it has not yet developed. In that supposition they find plenty of support.

HOPING FOR FURTHER ADVANCES

It is hard to come upon anyone who keeps tabs on the situation, who will admit that the limit of the rising tendency is within the field of observation. The pushing of prices awaits only the sign that the public is prepared to weigh manufacturing conditions and conditions throughout the country, and to invest in anticipation of large returns, or substantial appreciation with a view to taking profit when the increment is considered desirable. To listen to the most optimistic, their range of vision extends well into next year as the determining point at which they will consider offers for the shares they are disposed to surrender at a price. The foundation for their superstructure of hope is the well-known fact that many looms are tied down by contracts to be completed towards the close of winter. The prophets of manufacturing profits insist that prosperity is going to exist in 1917 just as it prevails this year. One experiences the utmost difficulty, therefore, in effecting purchases of mill stocks unless the person is prepared to subordinate his willingness to buy to the seller's insistence on the maximum.

HIGH PRICES FOR CLOTH

A most potent argument in support of the contention of those who urge that price levels of to-day are entirely disproportionate to values, both immediate and prospective is contained in the last week's report of business in the cloth market. It strengthened them and weakened those who were in a mood to persist in haggling in the hope of wringing concessions. The argument lay in the fact that many of the prices at which goods have been sold recently for delivery well into the future exceeded those of the boom period in 1907-1908-1909. Quotations on shares reached the highest in local history. It is argued that there is no reason why there should not be a repetition of the incident.

In order that the record in soaring might be duplicated, American Linen will have to go to 118, from 85; Ark-

wright from 78 to 112; Barnard from 58 to 113; Border City from 118½ to 150; Chace from 114 to 145; Conanicut from 87½ to 100; Cornell from 155 to 202; Davis from 122 to 125; Davol from 103 to 105; Granite from 105 to 150; Hargraves from 72½ to 130; King Philip from 142½ to 178; Laurel Lake from 96 to 190; Luther from 145 to 175; Mechanics from 97 to 105; Narragansett from 102 to 142; Osborn from 104½ to 105; Parker from 72½ to 120; Pocasset from 100 to 150; Richard Borden from 170 to 180; Seaconnet from 58 to 95; Shove from 95 to 108; Stafford from 85 to 112; Union from 195 to 240; Wampanoag from 80 to 110; Weetamoe from 97½ to 100. Some stocks are even higher than they were at the time in question. Stevens did not get beyond 110; at present owners of shares are refusing 177. Of course, the fact that a stock dividend is to be declared this month at the annual meeting accounts partly for the abnormal rise, but back in April of this year a sale was effected at 158½, when it was only felt, not known, that something of importance was in contemplation this year or next. Flint did not equal this year's level by nearly 20 points. Tecumseh stands better by five points, the maximum before 1916 being 135. Although Tecumseh is paying a higher dividend this quarter than last, the quotation is two points under the asking figure announced in August. Its boom price was 135. Merchants is better now at 113½ than it was when the market was in a state of fever, and everyone was pushing in order to take advantage of the big earnings. One of the increases affected by a change in dividend percentage is the Bourne. Where before it paid only 4½, its rate is 6. The difference in quotation is as 107½ is to 112. The annual meeting of stockholders is to take place next week. Twelve months ago there was an indebtedness of less than \$30,000; this represented a reduction of \$43,000. Not only will the sum disappear, but a substantial reserve will appear in the report of Treasurer George Delano. Among the probabilities, in the judgment of some stockholders, is an increased rate. About the only basis for the belief is the action of other corporations and the earnings of the past year. Some persons affect to anticipate a fillip to the stock market through the favorable showings of the various corporations. The fiscal year is ending. That it will prove to have been highly lucrative is not doubted. More interest is centered on the reports of the corporations which have been payers of small dividends or passers than in reading the size of the earnings of the leaders in the cotton industry.

Textile Share Quotations

	Par.	Sales.	
		Latest.	Prev.
Am. Woolen pf.	\$100	97½	97¾
Amoskeag	100	73	73
Amoskeag pf.	100	98	98½
Androscoggin	100	200	219
Appleton	100	196	200
Arlington	100	105¾	106
Bates	100	275	275
Bigelow-Hartford pf.	100	107½	110
Chicopee	100	100	70¾
Continental	100	70	75¼
Dwight	500	1120	1120
Edwards	100	99	98¾
Esmond pf.	100	100	100
Everett	100	133	120
Franklin	100	201½	200
Great Falls	100	200	199
Hamilton Woolen	100	90	83
Hamilton Cotton	100	82¼	82¼
Hill	100	80¾	83

Lancaster	100	86	85
Lawrence	100	110½	108½
Lockwood	100	100	100
Ludlow Associates	100	131½	130
Lyman	100	125	124
Massachusetts	100	123	125
Mass. Mills in Ga.	100	99	98½
Merrimack pf.	100	85½	85
Merrimack com.	100	53¾	52½
Middlesex	100	87	86
Nashua	500	780	790
Naumkeag	100	192	193
N. E. Cot. Yn. com.	100	25	26
N. E. Cot. Yn. pf.	100	53	52½
Newmarket	100	161¼	158¾
Pacific	100	159¾	160¾
Pepperell	100	345	345
Pepperell (new)	100	185	183
Plymouth Cordage	100	180	191
Salmon Falls M. Co.	100	60	60
Tremont and Suffolk	100	128½	127
Waltham B. & D.	100	118	120
York Mfg. Co.	100	110	110

† Ex-dividend.

Fall River Quotations

(By G. M. Haffards & Co., Fall River, Mass.)

	Par.	Bid.	Ask.	Sale.
Cotton stock				
American Linen Co.	\$100	..	85	..
Ancona Co. pf.	100	..	..	..
Ancona Co. com.	100	..	..	..
Arkwright Mills	100	..	..	..
Barnard Mfg. Co.	100	56	..	..
Bourne Mills	100	112	..	..
Border Cy. Mfg. Co.	100	115	118½	..
Chace Mills	100	116	..	118
Charlton Mills	100	116	118	..
Conanicut Mills	100	..	87½	..
Corr Mfg. Co. (Taunton)	100	..	..	..
Davol Mills	100	101	..	..
Flint Mills	100	..	125	..
Granite Mills	100	101	105	..
Hargraves Mills	100	..	72¼	..
King Philip Mills	100	140	..	..
Laurel Lake Mills	100	..	96	..
Lincoln Mfg. Co.	100	101	..	..
Luther Mfg. Co.	100	140	..	..
Merchants Mfg. Co.	100	..	..	..
Mechanics Mills	100	..	97½	..
Narragansett Mills	100	..	102	102
Osborn Mills	100	..	106	105
Parker Mills	100	..	72¼	72¼
Pocasset Mfg. Co.	100	..	100	..
Rich. Borden Mfg. Co.	100	160	170	..
Sagamore Mfg. Co.	100	250	..	..
Seaconnet Mills	100	..	58	58
Shove Mills	100	93¾	96	95
Stafford Mills	100	83	..	..
Stevens Mfg. Co.	100	..	140	..
Tecumseh Mills	100	..	140	..
Troy C. & W. Manfy	500	..	..	..
Union Ctn. Mfg. Co.	100	190	195	..
Wampanoag Mills	100	78	80	80
Weetamoe Mills	100	95	97½	97¼

* Ex-dividend.

New Bedford Quotations

(By Sanford & Kelley, New Bedford, Mass.)

	Bid.	Asked.
Acushnet Mills	..	172½
Beacon Mfg. Co.	102	..
Beacon Mfg. Co. pf.	113	115
Booth Mfg. Co. com.	40	..
Booth Mfg. Co. pf.	..	106
Bristol Mfg. Co.	..	88
Butler Mfg. Co. com.	..	100
Butler Mfg. Co. pf.	..	107
City Mfg. Co.	120	..
Dartmouth Mfg. Co. com.	195	200
Dartmouth Mfg. Co. pf.	95	..
Gosnold Mills pf.	96	..
Grinnell Mfg. Co.	130	..
Hathaway Mfg. Co.	200	..
Holmes Mfg. Co. com.	220	..
Holmes Mfg. Co. pf.	120	..
Kilburn Mills	160	..
Manomet Mills	116	..
Nashawena Mills	100¼	102
Neild Mfg. Co.	172¼	..
N. B. Cotton Mills Corp.	100	..
N. B. Cotton Mills Corp. pf.	90	95
Nonquitt Spinning Co.	105	..
Page Mfg. Co.	92¼	97½
Pierce Mfg. Co.	..	415
Pierce Bros., Ltd.	100	..
Potomska Mills	135	..
Quissett Mills com.	167¼	..
Quissett Mills pf.	..	115
Sharp Mfg. Co. com.	105	110
Sharp Mfg. Co. pf.	102	..
Soule Mills	97	100
Taber Mills	124	..
Wamsutta Mills	110	..
Whitman Mills	165	175

Inactive Textile Stocks

(Quoted by Phillip M. Tucker, Boston, Mass.)

	Bid.	Asked.
American Mfg. Co. com.	162	160
American Mfg. Co. pf.	98½	100
Bay State Cotton 1st pf.	98	100
Boott Mills	90	..
Boston Duck	1250	..
Boston Mfg. Co.	70	..
*Brookside Mills	147¼	..
Cabot	122	..
*Columbus	97½	102½

(Continued on page 62)

TECHNICAL SECTION

In October, this section features Cotton Manufactures and Power and Engineering, October 7; Wool Manufactures, October 14; Knit Goods, October 21; Dyeing, Bleaching and Finishing, October 28



Woven in America

World conditions have brought into renewed prominence the very important position held by fabrics of American make. In reliability, in variety of selection, in correctness of style,— American Woolen Company's fabrics stand unrivalled. They are produced by an organization numbering more than forty mills equipped with the most modern facilities and giving employment to thousands of skilled employees.

American Woolen Company

Wm. M. Wood, President.

Selling Agency

American Woolen Company of New York
18th to 19th Street, on Fourth Avenue
New York City



This Might Solve Your Problem

AN ADVERTISEMENT BY CHARLES E. CARPENTER

In moulding VIM Leather for certain products it is necessary to soak the leather in liquid wax.

Experience shows that 250° Fahr. is the proper temperature at which to keep the wax, but we had constant difficulty in keeping anything near a uniform temperature.

Either the temperature fell and then the wax was not hot enough to penetrate the pores of the leather, causing the leather to break in moulding, or else the wax became too hot and burnt the leather.

We had thermometers and folks to watch them, but once or twice every week the temperature would get away from us.

Houghton American System of Heat Control

(PATENTED)

It so happened that we purchased the American Regulator Co. of Pittsburgh and in March, 1916, we moved their plant to Philadelphia and located it in one of our own buildings, as a part of our Heating and Engineering Department.

It also came to pass that we happened to mention our wax troubles to Mr. C. E. Bonnet, Manager of our Heating and Engineering Department. We were surprised when he assured us that he could attach automatic heat control to our wax tanks and hold the temperature between 249 and 251°.

What is more, he did it. For months our troubles have been over and we have already saved many times the cost. It is a dependable apparatus that has thus far not required the slightest attention or repairs.

There are places around every mill where it is desirable to automatically control the temperature in a similar manner and where a large saving and improvement in quality of production could be effected.

If you have such a place, send us particulars.

Of course you know it is a paying investment to have the temperature of your work rooms and offices automatically controlled.

You also know that the control of humidity in your work rooms is just as essential, and our Heating and Engineering Department has a Hygrostat which will do this automatically. Perhaps it can be attached to the humidifying apparatus you already have installed. Write the Heating and Engineering Department and ask them.

Since 1865

E. F. HOUGHTON & CO.

Publishers of The HOUGHTON LINE

Third and Somerset Sts., Philadelphia

OFFICES IN PRINCIPAL CITIES

LOOMS

Every practical overseer,
loom fixer and weaver
knows that the

Crompton & Knowles Fancy Worsted Loom

is the best loom on the
market, combining ease
of operation with maxi-
mum production.

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Bolivia Cloth: Analysis of Weave and Finish

AMONG several special fabrics, which are at the present time attracting attention, "Bolivia" cloth is a leader. Some idea of the construction and manufacture of this cloth is given in the following analysis of a fabric retailing at \$5.50 to \$7 per yard, 6/4 width. In appearance, the fabric resembles chinchilla, but whereas the latter is a woolen cloth with soft, rich, if somewhat dull finish, Bolivia is a worsted fabric, with a lively handle and bright lustrous finish. The curl on the Bolivia will last much longer. The sample before us weighs 15½ ounces per yard, on a basis of 57 to 58 inches width.

WARP PARTICULARS

The warp contains 47 to 48 ends to the inch in the finished cloth, which gives a total of 2,772 ends in the full warp. The count of the yarn is 2/60s, and in our judgment was made on the Bradford system. It seems superfluous to advise the use of a first-class warp yarn, but having in memory an instance within our own knowledge where a mill was using 2/60s from three different yarn spinners, where of the three yarns, one was of outstanding excellence with correspondingly good results in weaving, we would advise that quality be considered first and price second, for in the case mentioned the highest priced yarn was by far the cheapest in the finished cloth. Better dressing and weaving, greater production, much less burling and sewing; all these advantages by far overcome the difference in the cost of the yarn per pound. This applies to all yarns, but particularly so to yarns of such high counts as 2/60s.

A warp made of 2/60s can be run without sizing, if it is a well spun yarn, but better results can be obtained by sizing. Mere weight and stiffness in sizing do not necessarily mean better weaving, in fact, they very frequently result in poorer weaving. The best results are obtained by a light size, which just lays the fiber, and renders it more compact, thus reducing friction, without impairing the yarn's natural elasticity.

In a mill of considerable size, and spinning its own yarn, the warp for Bolivia cloth would probably be prepared by the cotton slasher system, where the yarn is put on section beams, and a large number of cuts run on to loom beams without change. Under this system, full broad warps are run in succession through the slasher, sized, dried and beamed in one operation.

The average mill on worsted work buys the yarn required from a spinner and in all probability such yarns would be delivered on dresser spools with any numbers of ends on the spool according to the wants and convenience of the weaver. In this instance, 36 ends per spool seems a convenient number. The warp of 2,772

ends would be run in 7 sections of 396 ends each, taking 11 spools to a section.

The average mill, if it sizes warps at all, uses a sizing dresser, and this number of ends to a section (396) would permit of a fair rate of speed in dressing, and at the same time allow the yarn to be well dried before it leaves the drying chamber, and is run on to the reel. In some mills the warps are

Possibilities in Fancy Effects—Difficult to Imitate in Cheaper Fabrics

By RETLAW

dressed and beamed dry and then run through a sizing slasher on to another beam, which method permits of a larger production. In our opinion, however, a warp yarn suitable for this Bolivia fabric can be obtained, which may be used without sizing.

The warp should be put on the beam about 78 inches wide. In beaming, particular care should be exercised against

warp ends. It is held by only a few threads at intervals, and around these few ends the pile filling is curled. The warp chain is of compound construction, consisting of a basic or foundation weave with warp and filling, and also a pile filling weave, which is to be cut and so treated in the finishing as to form the small curl on the face of the cloth.

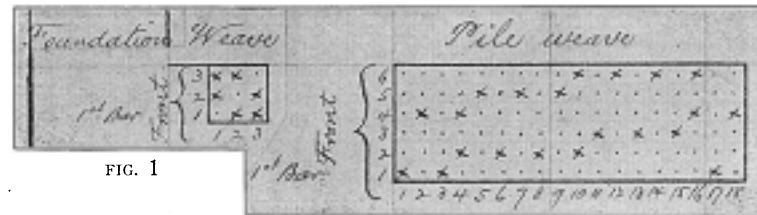


FIG. 1



FIG. 2

undue tension, which might result in the yarn on the beam being too hard. The warp should be beamed firm, but not hard. A hard beamed warp will weave poorly, particularly so in the case of fine yarns. A set of good straight heddles of fine light wire should be used. Old worn heddles are responsible for much loss of production in weaving, and for a great deal of expensive sewing.

DRAWING-IN

The draft is straight over on 18 harnesses, which calls for 154 heddles on each harness. A reed with 12½ dents to the inch is called for, with three threads in each dent. This will give a width in the reed of practically 74 inches, and care should be taken to see that the warp occupies the center of the reed.

In setting in the loom, see that harnesses are level and hung evenly at both ends. The jacks should be set so that the lower shed at its maximum of separation rests lightly on the race plate. See that the beam spindles rest in well oiled bearings; that the friction bands are well covered with cloth, and that in no place has the cloth been worn through, permitting the contact of the metal of the band with the metal of the beam friction head. Ordinarily, little or no attention is paid to the spindle bearings of the whiproll. These should be well oiled, so that the whip-

The foundation weave is the ordinary 3 harness twill, with the twill running to the right as shown in Fig. 1. The pile weave is of a specially constructed float arrangement, covering 18 harnesses, as shown in Fig. 2. The compound weave is shown complete in Fig. 3, and this is also the harness

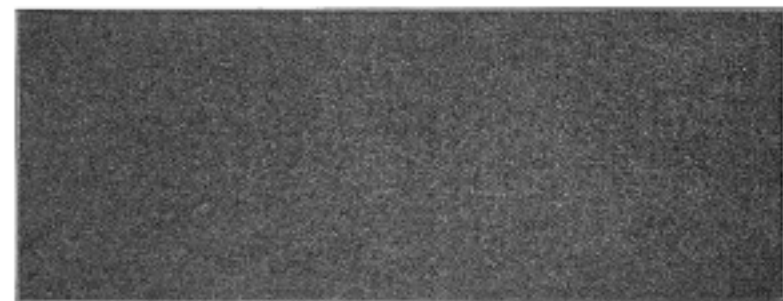


FIG. 4. SAMPLE OF BOLIVIA CLOTH

chain. It cannot be reduced to less harnesses by crossing drafting. For practical purposes it should be built 24 bars long, as a chain of 12 bars and 18 harnesses by have a tendency to catch and cause serious breakage.

The diagonal lines on bars 1, 3, 5, 7, 9 and 11 indicate the floats which are to be cut to provide material to form the curl. The spaces enclosed by heavy lines on bars 1, 3, 5, 7, 9 and 11 indicate the places where the warp threads hold and bind the floated pile filling into the foundation fabric, and it is around these threads that the cut filling, under the finishing processes, forms the small curls characteristic of the Bolivia fabric. The marks, V, at the top of Fig. 3, indicate the points at which the indentations appear, which form the longitudinal rib effect in the fabric; but these do not appear on the cloth as it comes from the loom. They also are developed in the final finishing processes.

FILLING PARTICULARS

There are two fillings in Bolivia cloth. A filling for the foundation fabric to give strength, and a filling for the formation of the pile. Both are French spun worsted yarns. The basic yarn which is woven on bars 2, 4, 6, 8, 10 and 12 is a 1/24s, ⅜ blood, of ordinary standard twist. The pile filling, which is woven in on bars 1, 3, 5, 7, 9 and 11, is a 2/24s, high ⅜ quality, of good lustrous stock. The yarns forming the pile are first spun as single 24s, and then two threads twisted together in the reverse direction to the single twist,

making a 2-ply slack twist, putting in on the reverse twist just enough turns to form a soft thread, not more than 3 or 4 turns per inch, thus producing a soft bulky yarn, readily susceptible to the process of cutting by giggering, which forms an important part of finishing.

Particular care should be given to the adjustment of the filling stop motion, for the filling of the foundation weave cannot be seen by the weaver. It goes on the back of the cloth. Misspicks and broken picks cannot be detected, except by the stop motion. While as a rule, imperfections on the back of a cloth are not considered as very detrimental in ordinary fabrics, in the case of such a high priced fabric as Bolivia, perfection is desirable both on face and back.

Few mills care to take up the manufacture of such a fabric as this, because of the very high number of picks per inch for which it calls, viz., 130. A production of 10 to 12 yards per day would be considered good. The estimated cost of this fabric is \$2.38, and the mill may get a profit of 50c. per yard; a profit of \$6 per loom per day. Contrast this with another special novelty, of which the writer has knowledge, start costing around \$2.25 at the mill, and on which a profit of 30c. per yard is obtained. The second fabric calls for only 24 picks per inch, and comes from the loom at the rate of 40 to 50 yards per day, a profit

of \$12 per loom per day. However, it is a question of proportion, the mill should ask and we believe may obtain, a higher profit per yard for specially high pick fabrics.

FINISHING PROCESSES

The cloth should come from the loom weighing 20 ounces, according to calculations, but may vary between 19 and 20 ounces per yard. After being perched, measured and weighed, it enters upon the finishing processes. The first of these are burling and sewing. There should be very little of either on such a fabric. The pieces should be cleared of ends and prominent knots on the face, burlled on the back, the knots drawn up and cut off, leaving ends sufficiently long to make up for the stretch effected in subsequent handling.

This Bolivia cloth is not fulled or milled. Only a good scouring with a good soap is required, and care should be observed, that the water is not warmer than can be comfortably borne on the hands. Too heavy a soap, and water too warm, will cause felting to an objectionable degree. Before scouring, the pieces should be tacked selvage to selvage with the floated face inside. Extra care should be taken to get rid of every trace of grease, though on such yarns there will be naturally very little oil to remove. Rinse off all traces of soap, then send to the dyehouse, where the goods should again be examined. In dyeing the pieces should again be tacked at the selvages, with filling face inside.

After dyeing, the pieces should be

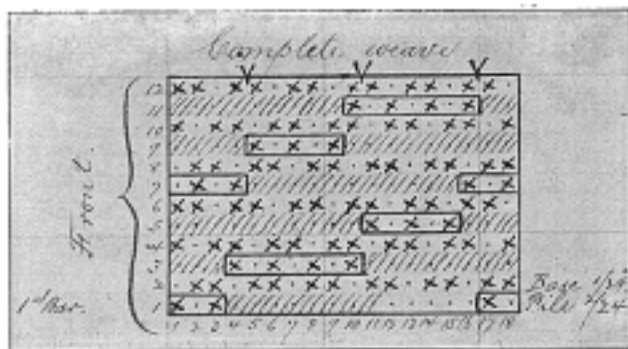


FIG. 3

roll can effectively play the part for which it is intended, viz., easing the warp at the beating-in of the pick, and the strain of the changing of the shed.

WEAVE

It is a most difficult matter to ascertain the interlacings of this weave, as in the finishing process the pile filling has been so thoroughly cut that it is free from the greater number of the

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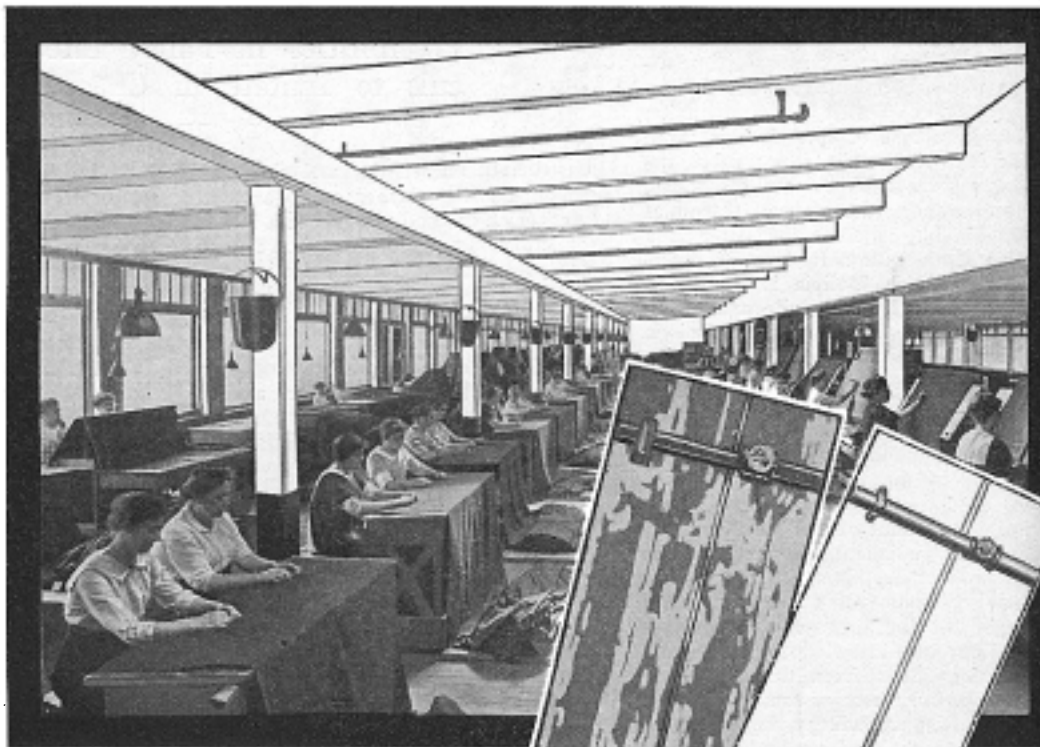


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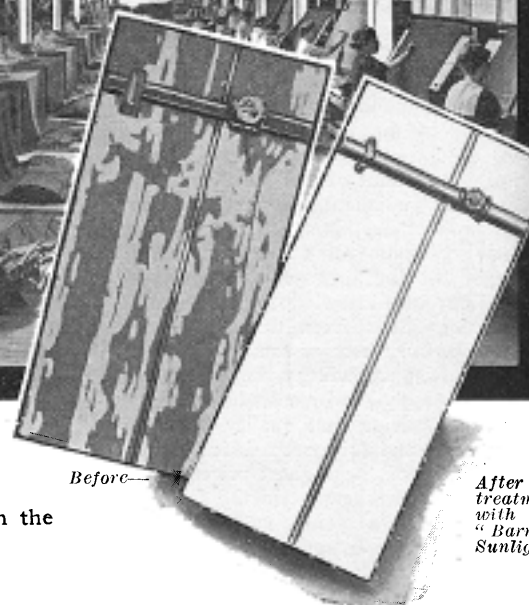
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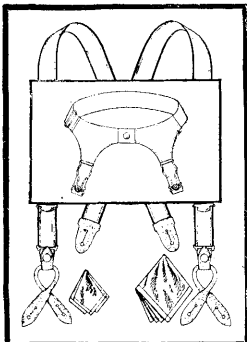
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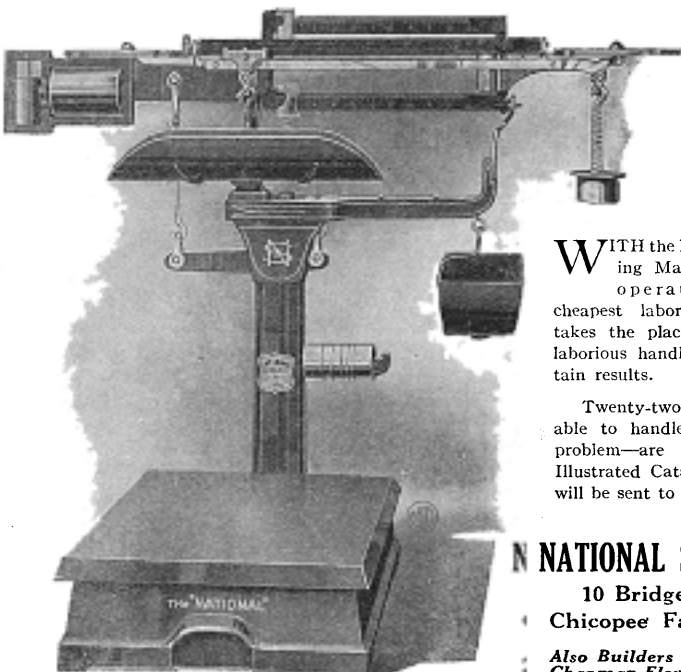


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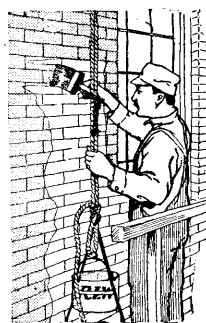
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After dyeing, the pieces should be dried and again inspected, then taken to the gig, where the pile filling must be cut open, to form the material for the small curls. This gigging should be carefully done. No attempt should be made to break records of production at this point. Violent work, with speed in view, would utterly ruin the face of the cloth, and all depends on the good judgment of the man in charge. The gigging should be continued until the floated filling is cut clean through to the foundation weave.

The pieces should then be placed on a whipping machine, such as is used for high grade chinchillas, and beaten on the back to straighten up the cut pile. The next step is to top off with the shear, but this is not absolutely necessary.

The piece should then be put through a regular chinchilla machine to curl up the pile. A fine, close plush should be used to cover the upper rub motion, while a good corduroy may be used for the bed plate of the machine. Once through the machine ought to be sufficient, as the chinchilla nub is not wanted in this case. The process is required only to give a curled direction or tendency to the pile.

The piece is then taken to the shear, and the nub effect shorn off gradually until only the small curl effect remains; and at the same time the longitudinal indentation should appear, forming the rib effect. The appearance of this indentation should guide the man at the shear as to the extent to which the shearing process should be carried. Again this last shearing ought to be a careful, gradual process. The piece can now be inspected, rolled, weighed and shipped.

This fabric will lose considerable weight in the finishing processes, for in addition to the usual loss, the napping and shearing will remove an unusual amount of fiber. The piece ought to weigh 20 ounces per yard from the loom. The pile fillings will lose a large percentage of fiber, and the total loss may be placed at 18 per cent., which reduces the weight per yard to 16 4/10 ounces. In addition to this, there must be taken into account the fact that the fabric gains in length in finishing, at least 5 per cent, possibly 7 per cent., which will still further reduce the weight per yard and make it 15 1/2 ounces finished.

LAYOUT AND COST

The layout and cost are as follows:
 2772 ends warp, 2/60s white worsted, Bradford system.
 12 1/2 x 3 reed = 73.9 inches wide over all.
 130 picks filling { 1/24s white French spun.
 woven 1 and 1 of { 2/24s white French spun
 slack twist.

2,904 ozs. 2/60s @ \$1.72 1/2 per lb.....	.3131
6,006 ozs. 1/24s @ \$1.25 per lb.....	.4692
12,012 ozs. 2/24s @ \$1.27 1/2 per lb.....	.9572
Cost of material.....	\$1.7395
Per yard dressing and drawing-in.....	.0050
Per yard weaving.....	.2600
Per yard finishing.....	.0500
Per pound soap, scouring only.....	.0150
Per pound dyeing.....	.1200
Per yard fixed charges.....	.3080

Cost of manufacturing..... .7580
 Allow for gain in length of 5 per cent. 105..... \$2.4975

Cost per yard..... \$2.378
 Some manufacturers contend that a gain in length should not be taken into consideration in calculating cost, but the same men would never dream of omitting to take into account any shrinkage, so we hold that so long as the gain is regular an allowance in calculating cost should be made.

POSSIBILITIES OF DEVELOPMENT

Bolivia fabric should lend itself very readily to fine fancy effects. For example, a black warp with a black base filling for bars 2, 4, 6, 8, 10, 12; a dark blue 2/24s pile yarn on bars 1, 3, 7, 9;

and a dark wine or green 2/24s pile yarn on bars 5 and 11, would give an effective color stripe effect.

With black warp and black filling for foundation weave, and making changes only in the pile filling yarns, a large variety of beautiful colorings and styles could be developed.

There is little chance of any duplication in a cheaper fabric, although the construction lends itself to, in fact in-

Details of Manufacture of Spun Silk Yarns*

Preparation of Yarns for Weaving and Knitting Mills—Conditioning

By J. W. HOLLAS

SILK loses about 1 1/2 per cent. from the spreading to the roving. The lap is taken from the relapping machine, previously described, and put up at the feeder of the gill sett frame. The tail end of the lap is put up first, for if this is not done the silk will be drawn twice the same way. In order to get an even sliver the silk should be drawn

vites, manipulation. A cotton warp would scarcely be noticed, but the difference in the total cost would be so small, that this reduction is not worth consideration. The only manipulation which would pay would be a 2/40s black cotton warp; a 1/16s black cotton filling, and a pile filling of 3 1/2 run bright luster wool. This fabric would figure out around \$1.55 at the mill, reeding 13 1/2 x 3, reducing width to 68.4 inches.

side tight, the other side slack, causing a lot of snarls and variations in the weight of the sliver at the finishing head.

It is also highly essential that the machine be not overloaded. The writer prefers to run on the light side. With the double thread screws and patent disc cams that are made in the United



DRAWING SILK PREPARATORY TO SPINNING

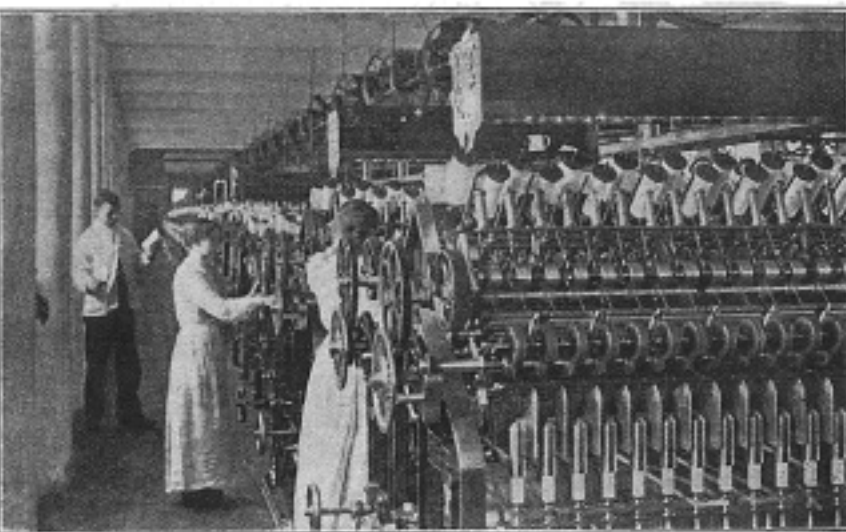
States, and the machines properly set, they can be run at high speed, allowing a lighter sliver in the machine, also getting more weight through than with the single screw. Roving tubes or bobbins should be enameled so that the oil will not soak through, for if a single roving is run on a plain bobbin the silk will draw the oil out of the wood,

one way on one machine, and the other way on the next machine. If the silk is drafted the same way on two successive machines it is likely to be thick or thin, with too much draft. In joining one lap to another, care should be taken that the ends be kept straight so that all the material will go smoothly into the pins with none of the fiber riding on the pin tops as this tends to make nibs and loose short silk, which is difficult to get out. The lap fed into the sett frame is commonly given a draft of 12, and the material is delivered in the form of sliver.

DRAWING FRAMES

The slivers, which have been run into round sliver cans, are taken from the sett frames and 12 ends are put up at the back of the drawing head, where a 12 1/2 draft may be given. It is advisable to give four drawing operations and then reduce the number of ends at the finishing head to get the proper weight of sliver for the roving frame.

The finishing head is usually a porcupine drawing head and may have four or eight deliveries according to the weight of sliver required for roving frames. The porcupine drawing head manipulates a large quantity of material, and the small draft roller will run well at 600 r.p.m. All the pins and surfaces the silk comes in contact with, should be polished and smooth so as to prevent the fiber from catching on rough places. If the silk has not had all the grease taken out during the early operations trouble will be caused during this process. The slivers, which should be straight, will come out raggy, one



SPINNING ON CAP SPINNING FRAMES

causing stained yarn. The oil is generally on one side of the roving, and when the roving is spun into singles, then woven into a piece, it has a dark speckled appearance, full of brown dots.

Particular attention should be paid to have the top press rollers smooth and true, for if they contain hollow places the roving will be poor, or if there is a

flat place on them there will be a lump on the roving every time the flat place in the roller comes on to the draft roller. If the roving is made too hard twist there will be a lot of bad rollers in the spinning. A large diameter bottom draft roller in the spinning will need more twist in the roving. A small diameter draft roller, about 1 or 1 1/4 inches, will need a very soft twist roving.

PARTICULARS OF SPINNING FRAME

A spinning frame with a small bottom draft roller will make a more evenly spun yarn than a frame with a large diameter draft roller. Yarn spun on a small diameter draft roller with a suitable draft will have a better feel and be more like a mule spun yarn, and when woven into a piece will make a fuller cloth. The most suitable drafts for spinning silk are from 10 to 15; if the draft exceeds 15 the yarn deteriorates in quality. By putting a finer hank roving in the spinning frame and running with a suitable draft, much more satisfactory results will be obtained.

Taken all round, a spinning frame with the spindles driven by tapes and with tension pulleys, is the more suitable equipment, preventing slack twist. The writer has found it better to increase the speed of the main shaft or motor than to run the main shaft at low speed and have large diameter cylinders, besides saving power. The thread guides should be directly over the top of the spindle, so that the thread will fly evenly, before lapping on the bobbin.

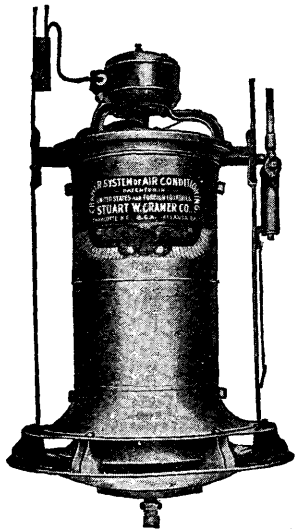
If the yarn is to be singles, it is wound on cops ready for the loom. If for two or three-ply yarn the spinning bobbins are taken to the winding frame where the ends are doubled. The thread from 8 to 12 spinning bobbins can be wound on one winding bobbin, and it will be found that this process saves a lot of waste, and more spindles can be kept running on the twisting frame than if twisting direct from the spinning bobbin. Care should be taken in tying the ends, using a weaver's knot with no long ends hanging which must be trimmed off when sorting. The twisting frame spindles run in the opposite direction to the spinning spindles, so if spinning to the left, the two-ply is twisted to the right.

GASSING OR CLEARING

The yarn is taken from the twisting frame to the gassing or clearing frame. As stated previously, silk that is not clean enough for a single yarn can be made into a two-ply yarn so any nibs or ooze in the thread will be taken off in the gassing. The package is put in the gassing frame creel, then

*Continued from issue of Sept. 2.

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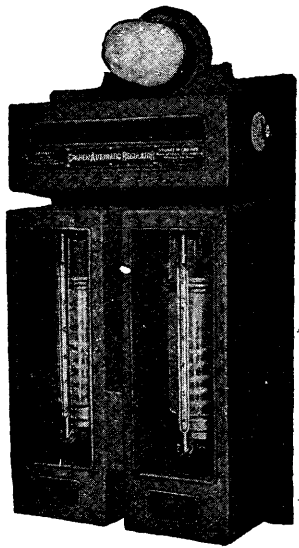


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the thread lapped around the runners on the bar. The writer has had better success with porcelain runners, as steel runners get too dry and cause ends to break. The thread is then passed through the gas flame, which burns off the nibs. The friction caused by the thread running around the runners loosens the nibs and noils, and the gas flame burns all these loose particles from the yarn. After the yarn has been passed through the flame it is given a few more turns around the runners to polish it, and then wound on a bobbin. Usually a two-ply yarn requires about four passes on the gassing frame, but lower qualities require more.

A heavy count of yarn will stand more runners or friction than a fine count. The operator must be impressed with the importance of giving all the ends the same number of laps around the runners, otherwise the work will look nibby and dirty in some places, while in other places it will look clean.

It is a good plan to have the gassing bobbins painted different colors on the ends to determine the number of the pass or operation: for example, first pass, plain bobbins; second pass, blue ends; third pass, red ends; fourth pass, white ends. If any bobbin goes astray the color of the bobbin end determines which pass or lot it belongs to.

Yarn will lose from 4 to 8 per cent., in gassing, according to quality, so that a thicker count must be spun to allow for loss. Take a 2-60s composed of two ends of 120s twisted together. This yarn would be spun to 114s. Twisting two ends would give $114 \div 2 = 2-57s$ counts. This when gassed and washed would be about 2-60s. When gassing, the thread is stretched very tight, and when wrapping to take the size of yarn from a gassing bobbin, allow 5 per cent. for the stretch, for when the yarn is washed and conditioned again it will shrink 5 per cent.

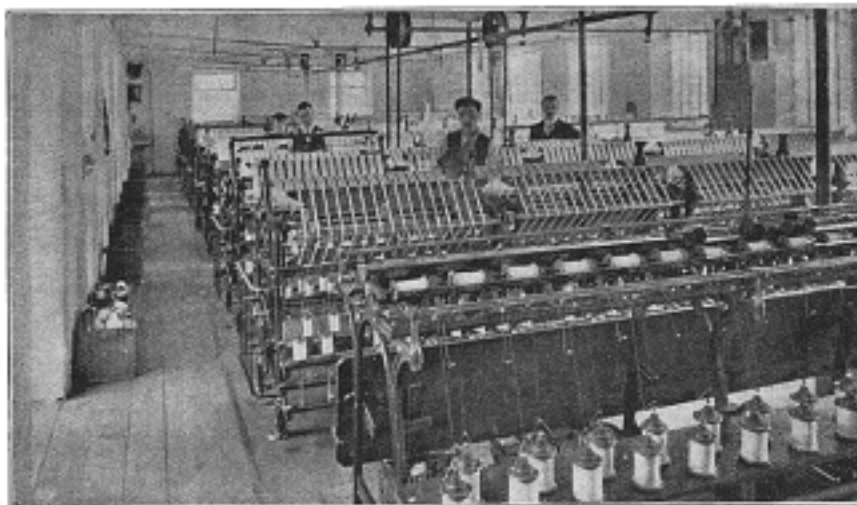
REELING THE YARN

The gassing bobbins are taken to the reel, which winds the thread into skeins or hanks. The reel has a catch arrangement, and when 840 yards have been wound it stops, so that in each skein

skeins are tied together to form a knot and ten of these knots weigh one pound. One hundred knots weigh ten pounds, making a bundle of yarn. In reeling 42s counts there would be 42 skeins of 840 yards to one pound. Three skeins would be tied together to make one knot, and 14 knots would equal one

deep, with ends made high enough to hold a square roller, and a notch at the top of the ends high enough so that when the yarn is put on the roller the silk just clears the water.

When the roller is full of yarn, lift it into a notch about 6 inches lower. This will let the silk hang in the water. Now



DOUBLING, TWISTING AND REELING SPUN SILK

pound; or 140 knots would make a bundle. If ten-pound bundles are arranged in this way for different counts, the counts can easily be determined by counting the knots in the bundle, and as a ticket is sometimes lost this is very useful.

The yarn from the reel is examined or sorted by operators, and all bad ends, irregular twist, corkscrew yarn, etc., picked out. If a mill has reliable and experienced help, there will be very little irregular yarn or bad ends, and if the drafts and other matters have received proper attention there will be little trouble. After sorting the yarn is ready for washing or dyeing.

WASHING YARN

When washing yarn the most common method is to fill a tank with water, adding soap, heating the water and then putting the yarn on wooden poles, working it back and forth, then taking

turn the handle forward a few times, and then backward a few times until the yarn has had a good wetting. Then lift the square roller into the top notch again, take the yarn off, place in a hydro-extractor, run a few minutes, then place in yarn drying machine or hang up in dry house. The yarn is then

taken to the shaking out pole. This is a pole with stout wooden arms extending and made very smooth. The yarn is placed on these arms, then one knot at a time is taken and shaken out by taking another short, round piece of roller about 14 inches long, putting it through the yarn and giving a few pulls and shakes. It is surprising the amount of dust this will shake out of the yarn, and this also serves to open up the twist leaving it nice and soft, ready for the conditioning room. Yarn shaken out, as described above, saves a lot of dust from accumulating in the equipment used in weaving and knitting.

CONDITIONING YARN

After the yarn is thoroughly dry it is put in the conditioning room and allowed to take up about 11 per cent. of moisture. Anything above 11 per cent. is excess moisture. If silk is allowed to take up natural moisture the appearance of the yarn is improved, giving a better lustre than if damped down.

If the yarn is to be sold in the hank or skein it is made into ten-pound bundles, as described above. The hanks are placed in a bundling press, then pressed very tightly, tied up with twine and made into neat bundles for shipment. If the yarn is to be used for warping it is taken to the hank winding machine and rewound on to warping bobbins. These bobbins are then placed in a creel, and the yarn run on a warping frame to make the necessary number of ends and length for the loom.

Wool Combing and Variation in Pin Setting*

Particulars of Circles—Open Space—Shapes of Pins—Re-Pinning—Tension in Combing

BY TEXUS

COMBS are primarily fiber sorters, compelling long fibers to go in one direction, and short fibers in another; and secondarily they are combers or separators of individual fibers. In placing the functions of these machines in this order, regard is paid to the difficulty which the wool comb inventors had in solving the removal of the short fibers. In fact, so far as real combing between fibers is concerned, the gill-box is ideal in its method. Those who have studied how the wool slivers are pierced and combed through by the fallers, while the back rollers hold the material, and the pulling of the wool through the pins at the front roll-

fiber removal, and the elimination of vegetable matter and neps.

It is interesting to notice that the invention of the gill box was contemporary with the invention of the four principal combs for wool. Also that in all the specifications and references to wool combs in their early development there is no mention of either carding machines or gill boxes, as though the combing machine was fashioned and intended to deal with wool as it left the wash-bowl, without any preparation. Whatever was done 70 years ago in wool combing, it can be said that as far as present combing machines are concerned, carding and gilling, though sub-

DETAILS OF NOBLE COMB CIRCLES FOR 64S BOTANY.

No. of row.	pins. per inch.	B.W.G.	LARGE CIRCLE.		Total space per inch.	Space between pins. in.	Approx. No. of fibers allowed for 1 diam. at base of pins.
			of wire. in.	by pins. per inch.			
1.....	42	17 x 27	.016	.672	.328	.0078	1500
2.....	40	19 x 27	.016	.640	.360	.0090	"
3.....	38	19 x 27	.016	.608	.392	.0100	"
4.....	36	20 x 26	.018	.648	.352	.0097	"
5.....	30	23	.025	.750	.250	.0083	"
6.....	28	23	.025	.700	.300	.0107	"
7.....	24	22	.028	.672	.328	.0136	"
8.....	22	21	.032	.704	.296	.0134	"
9.....	20	20	.035	.700	.300	.0150	"
10.....	17	19	.042	.714	.286	.0168	"
11.....	14	18	.049	.686	.314	.0223	"
SMALL CIRCLES.							
1.....	46	18 x 28	.014	.644	.356	.0077	1500
2.....	45	19 x 28	.014	.630	.370	.0082	"
3.....	40	20 x 27	.016	.640	.360	.0090	"
4.....	36	21 x 26	.018	.648	.352	.0097	"
5.....	28	23	.025	.700	.300	.0107	"
6.....	27	23	.025	.675	.325	.0120	"
7.....	23	22	.028	.644	.356	.0155	"
8.....	20	21	.032	.640	.360	.0180	"



GASSING AND CLEARING SPUN SILK YARN

there are 840 yards. Whatever counts are being-reeled there will be that number of skeins, each of 840 yards to the pound. For example, if 2-50s is being reeled, there will be 50 skeins of 840 yards each to one pound.

The operator, after 840 yards of 2-50s has been wound and the reel has knocked off, ties the ends so that they can easily be found again and then threads tie yarn through two other places in the skein. This keeps the thread in the skein straight, and it is easy to find the center of the skein. When the tie yarn has been put in five

off and putting in a hydro-extractor, and from there putting into a drying machine. This method often causes a lot of tangled yarn, which is hard to re-wind on bobbins. The writer has found the following method to give the best results: Have an iron tub in which to prepare the liquor, fill this tub nearly full of water, add one pound of good quality soap, also two pounds of good olive oil soap, as this is good for the silk at this stage. Boil the water by blowing steam into it, until all the soap is dissolved. Then run the water into a V-shaped trough, about 14 inches

ers, the latter traveling many times quicker than the fallers, will have concluded that though simple in construction, there is no machine so effective in combing wool. It would have been possible to continue and finish the combing of wool in similar machines of finer parts, but for the necessity of short

secondary to combing, are indispensable operations.

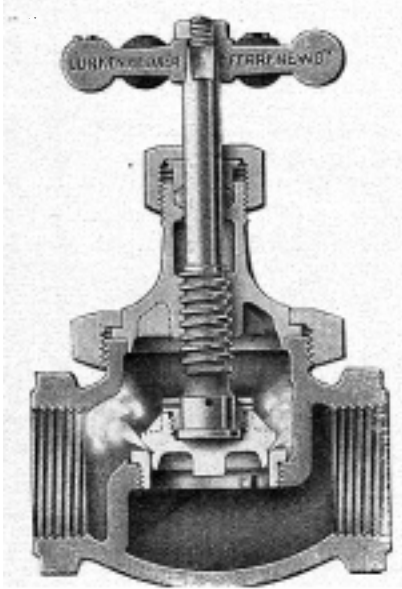
FINE MODERN PINNING

Pins are common to all wool combs. In the days of the old hand-comb the pins were 12 inches long, fairly thick and strong, and few in number. To obtain any degree of perfection in his work, the hand-comber had to make many lashings and combings on the

* From the Wool Record.

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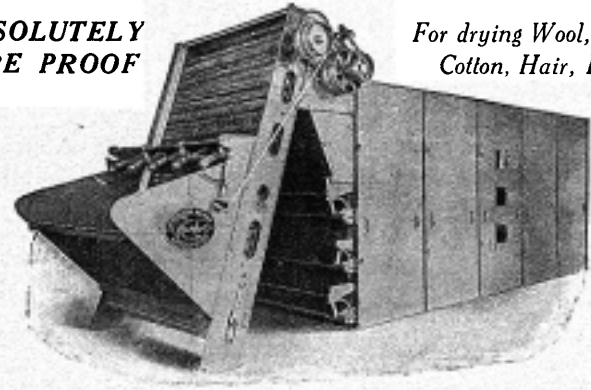
46-108



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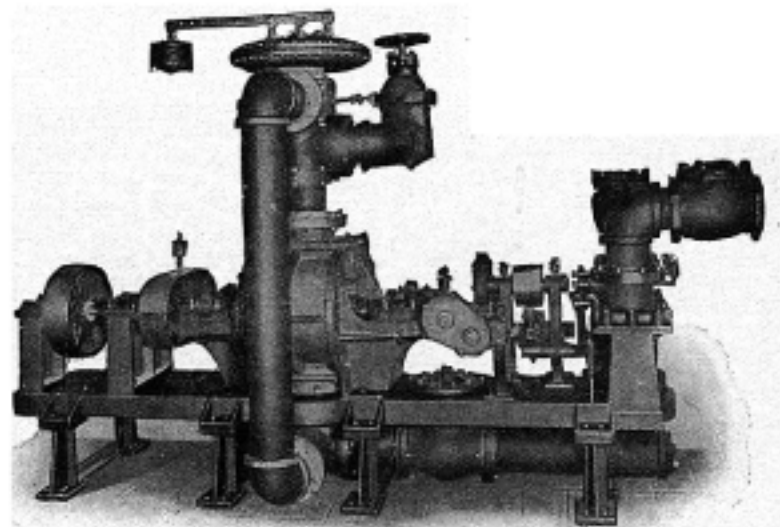
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(Write for Bulletin M 82)

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same batch of fibers, which was inevitable considering the scarcity of pins and the wide spaces between them. Present day combs have so many pins per inch, and so many rows of pins, that one passage of the wool through them is considered sufficient for all purposes. This bears testimony to the fineness and closeness of modern pinning, which can, at one operation, effectually comb the fibers so that two fibers do not lie together, unseparated. Fiber separation is imperative if fiber distribution is to be successful in the drawing and spinning. The more effectually this is done, the greater the possibility of spinning fine and level yarn.

WOOL COMB DETAILS

Wool combers are often too willing to allow the wool comb makers to supply them with combs, the details of which have been determined by the

comb maker himself. These may be suitable or not, but are always built with due regard to the particular work of the wool comb, who should know what is required to give him the best results. It is not suggested that wool comb makers do not meet trade requirements, but it is obvious that their willingness to serve the combers deprives the latter of much useful thought, so much, in fact, that very few combers know the contents of their comb circles beyond the number of the rows of pins and the number of pins per inch of the finer rows. These latter particulars the comb maker supplies, and they form the standard of pinning.

For instance, wool comb makers supply four types of comb circles for Noble combs, recommended respectively for English long wool, low crossbred, fine crossbred, and botany wools. These

have been proved to be suitable for clearing the wool, and consistent with this, allowing for the maximum production. The density and size of pins used are those which were in vogue a generation ago, and it is supposed that much time, thought and skill were requisitioned before satisfactory circles were produced. It is interesting to examine the pinning of Noble comb circles for combing botany wool, and by questioning one's self reason whether we have the best possible arrangement for fiber separation and productivity. The difference between the pinning of the two circles calls for attention.

LARGE AND SMALL CIRCLES

In the principle of combing as adapted here, the set over in each circle need not be similar. But there is also a variation in the pinning of these

(Continued on page 45)

Textile Patents

WEFTLESS fabrics, Method and apparatus for the continuous production of, 1,195,554. Eugene Bourdin, Lyon, France.

TEXTILE materials, Treating. 1,197,396. Raymond B. Price, Mishawaka, Ind.

WOOL, hirsute and other animal fibers, as well as fabrics or textiles and the products, Treating. 1,197,495. Herbert P. Jefferson, Boston, Mass.

Spinning Worsted Around a Cotton Thread

An auxiliary yarn guide for use on frames making yarn by passing a worsted

(Continued on page 41)

QUESTIONS AND ANSWERS DEPARTMENT

Combing Fine and Coarse Wools

Technical Editor:

1. Are there any set rules for the combing of both fine and coarse wools for worsted weaving yarn? For example, the end comes from the card in ball form.

2. Should this ball be put into the creel or run the end from the center of ball to backwasher?

3. Which is correct and will it make a difference in the percentage of noils?

4. Should there be two preparing gill boxes after the backwasher gill box, before the comb, or is one enough for both fine and coarse wool?

5. How many dabs should a dabbing brush make per minute to be up to the right speed?

6. How many revolutions should the circle or creel make per minute for low $\frac{1}{4}$ blood; high $\frac{1}{4}$ blood; $\frac{3}{8}$ blood; $\frac{1}{2}$ blood; and fine?

7. Does it depend altogether on the condition of the stock from the card?

8. Should a comb take out or make a good clean sliver with the first combing, when stock from the card is in fair condition?

9. Is it necessary to double comb almost every lot of $\frac{3}{8}$ blood and fine to get a good clean sliver, or does this depend on the setting of the card?

10. What are the right number of pins per inch for the circles for combing various classes of wool?

Comber (2754).

1. Yes. For this reason, the number of processes through which the stock passes must always be so arranged that the heel of sliver always goes on to the comb first; i. e., in the opposite direction from which it leaves the card. On breaking a sliver as it leaves the card, it will be seen that there is a difference in the two ends. The end which comes from the card first is pointed, and appears to be of a finer quality than the heel end, which not only seems more even in length, but also has a larger percentage of knots than the point end.

2. The sliver should be taken from the outside of the ball; never in any process take the end from the center, as it puts twist into the sliver. This tends to break fibers when passing through the backwasher gill. In order to make slivers less liable to break when passing through the backwasher, it is a good plan to run the slivers from three or more cards into one.

3 and 4. By taking from outside of ball at every process, it works out as follows: Heel end leads in backwasher; point end in first; preparing gill box; heel end second preparing box; point end in punch box, and heel end in Noble comb. Thus the dirtiest end of sliver goes on the comb first, and is put in the small circle, which is always pinned finer than the large circle. For nip and square-motion combs one preparing box is sufficient. If the stock is fed to the comb in the other direction—i. e., point

Under this head we undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to the TEXTILE WORLD JOURNAL. Questions should be stated as briefly and concisely as possible. Inquiries pertaining to textile processes, machinery, improvements, methods of management, the markets, etc., are especially invited, as well as any legitimate discussion on the views expressed. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as an evidence of good faith.

If the question is not of general interest to textile readers and involves expensive investigation, a charge covering the cost may be made, of which the inquirer will be advised before any expense is incurred.—EDITOR.

end first, it not only means a larger percentage of noil, but the work does not come off as clear.

5. The number of dabs per minute is governed by the speed of the circle, and the quality of the stock. For the finer classes of wool the circle should only travel about $\frac{1}{2}$ inch for every dab. Thus the number of dabs varies from 400 to 600 per minute.

6. The number of revolutions per minute of circles varies according to the quality of stock. Very low stock may be run up to $5\frac{1}{2}$; medium, $4\frac{1}{2}$, and fine, 3 to 4 revolutions per minute. In the low qualities the travel of the circle is from $\frac{3}{4}$ to nearly 1 inch per dab. Of course, the less the travel in proportion to the number of dabs, the less wear and tear there is on the brush. Too great speed tends to the stock being dragged instead of drawn, and what is gained in output easily is lost in tear.

7. Yes. Badly carded stock is more difficult to comb, and gives poor results.

8. Yes. Especially with counts up to 56s, say $\frac{1}{2}$ blood.

9. Not always. Good, fine, free stock, well carded, except for the finest dress goods, should do with one combing, although double combed wool, not only makes a better spin, being freer from short fibers, but also the second combing puts a bloom and finish on the top which cannot be attained by passing once through the comb. This is one of the points where the square-motion comb has the advantage over other combs for fine wools, as the square-motion fallers, which are really combs with 10 or more rows of fine pins, pass through every staple 11 times, and thus not only clear, but give a gloss to the stock equal, if not superior to, double combed on the Noble comb.

BRADMORE.

[An article beginning on page 27 of this issue considers the pinning of circles.—EDITOR.]

Making Steamer Rugs

Technical Editor:

I am enclosing a sample clipped from a steamer or travelling rug (shown at Fig. 1), with fringe attached. We would like to know how this fringe is twisted and finished. We would also like to know how this fabric is woven. Please give a draft showing how it is constructed.

Mapleton (2743).

The draft for this cloth is shown at

Fig. 2. As the draft shows, the warp is dressed as follows:

1 face warp, 1 back warp, 1 face warp, 1 back warp, 1 cotton stitcher.

The draft repeats on 20 harnesses. It is woven, 1 back filling, 1 face filling and should be started as the chain is marked.

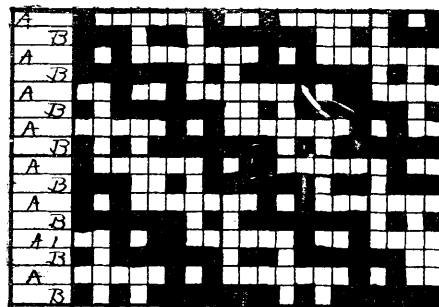
This is a double cloth composed of two 2 up and 2 down fabrics, twilled to the left, tied together with an extra cotton warp. This extra cotton warp is stitched to the face fabric once in every eight picks of the face yarn, and to the back fabric once in every eight picks of the face yarn, as shown on the chain draft.

The fringe is made by pulling the warp yarn through the reed (5 inches for a 4-inch finished fringe) after the rug is woven.

After pulling through the reed the amount required for the desired finished fringe, weave five or six picks and pull through the reed the same length of warp as before. This is to make the



FIG. 1



Face Threads = 1, 3, 6, 8, 11, 13, 16, 18.
Back " = 2, 4, 7, 9, 12, 14, 17, 19
Cotton warp Stitchers = 5, 10, 15, 20

FACE PICKS = A.
BACK PICKS = B.

FIG. 2

fringe on the first end of the next rug. As soon as these rugs are woven they are put on a fringe twisting machine, which is adjustable for different sizes of fringe, and then sent to the finishing room to be finished. HANCOCK.

Books on Dyeing

Technical Editor:

Please send me your catalogue of books relating to dyeing. Have you any books treating on dyeing in the laboratory and giving monographs on dyes and dyeing?

Chemist (2749).

Practically all the best books on dyeing are listed in our catalogue of textile books, a copy of which has been sent to "Chemist." A new book has recently been published, entitled "The British Coal-Tar Industry," edited by Walter M. Gardner.—[EDITOR.]

Consumption of Grease and Oil

Technical Editor:

Can you give me any figures as to the consumption of grease and oil in cotton yarn mills?

Power (2745).

In spinning mills the average consumption of grease is about 3 per cent. of the consumption of oil. In carding rooms the proportion of grease to oil is about 4 per cent., while in spinning rooms where machine and spindle oils are used the grease consumption is from $1\frac{1}{2}$ to 2 per cent. of the oil consumption.

RADIAL.

Terms in the Carpet Industry

Technical Editor:

We are in receipt of several samples of Brussels carpet purchased under specifications requiring 256 cords, 3 threads, 8 2-3 wires. Can you advise us as to the customary significance of this nomenclature in the carpet industry?

(2744).

Brussels carpet fabric of standard grade or pitch, as it is technically described, contains 256 loops on 27 inches, or $\frac{3}{4}$ yard. Each of these worsted warp loops is controlled by a separate harness "cord." The loop warp is generally 3 ply, owing to the fact that three ends cover better than 2 ply or single yarn containing the same number of yards to the pound; 256 also denotes the number of loops that the designer has at his disposal for pattern purposes, but he is not obliged to use all.

For example, by using 128 loops he obtains a pattern repeat that is $13\frac{1}{2}$ inches wide, but this must be repeated twice in order to complete the full 27 inches for which the jacquard machine and harness cords provide. If a still smaller pattern repeat, the design may be limited to 64, 32 or 16 cords, or any other number into which 256 may be divided.

On the other hand, by using what is called the "drop repeat," style of pattern, designs requiring two 27 inches wide pieces of carpet, equal to 512 cords and 54 inches, may be produced.

In addition to Brussels carpets of the standard 256 pitch, grades, known to the trade as "stouts," containing 216 cords

(Continued on page 55)

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WOOL MANUFACTURES

MACKINAW HOLD WELL IN MEN'S WEAR MARKET

Good Trade in This Line Taken as Fore-shadowing Excellent Business Generally

Mackinaws are again the most prominent feature of the men's wear market this week, although, of course, the advent of so many holidays in the week has tended to slow up trade. Columbus Day and a Jewish holiday which came in during the week left an extremely short time for business. Mackinaws, though, have been going as well as can be expected, and it seems probable that before the season is out they will be unusually scarce. Those who have hit the market right in regard to style and price, and there are few who have not got good lines of mackinaws, are finding that the goods are going almost as fast as they are shelved. On the whole, if mackinaws may be taken as any criterion, and they usually do forecast the general condition of the coming heavy-weight season, it seems that business in heavy-weights should be unusually good.

PRICES AGAIN DISCUSSED

It seems to be the opinion of many prominent men connected with the trade that prices for next season will be ridiculously high in the opinion of the buyer. So far, there does not seem any relief in sight or any chance of prices being lower. Everything connected with the woolen and worsted business has gone up in price, and although a short time ago it was rumored that the dye situation was becoming easier, it seems now that this statement was entirely without foundation. It seems that in all probability there will be, as there was to some extent last season, an effort on the part of certain buyers to force the market down by a failure to buy. Those who are in position to know, however, say that goods are really being sold at a reasonable figure, and that it is virtually impossible for mills to do any better in regard to prices.

SPINNERS' STRIKE

As was the case last week, it is hard to obtain at present any definite or authoritative reports on the termination of the spinners' strike. From the information that could be obtained, it was learned that the men had gone back to work in nearly all, if not all, of the mills. The two contentions on which the strike was based were a \$15 per week minimum wage and the recognition of the union. The only real stumbling block was the "recognition of the union" clause, for few of the men were making less than \$15 a week at the time of the walk-out. No recognition of the union was granted by the mills, and the men are evidently at work again.

OVERCOATS NOT IN DEMAND YET

On account of the unseasonably warm weather at the close of last week and the first part of this, there was little demand for overcoatings, but now that cold weather has come, it seems likely that spot overcoatings will be in demand. A prominent designer of coats, in speaking in a general way of overcoatings recently, said that the big seller for next year would be a narrow, pinch-backcoat with a convertible collar. This will tend to cut down the yardage required for a coat, and should make them cheaper to some extent.

COTTON WILL BE USED MORE

The sentiment is growing stronger every day, that next season will see a

remarkable sale for cotton worsteds and manipulated goods of all kinds. The high prices of wool and worsted fabrics will make cotton goods a necessity, although it is not expected that they will be comparatively as cheap as they were this year. Cotton has advanced to an alarming degree, but nevertheless does not at all approach the price of wool and worsted.

Men's Wear Trade Notes

Mackinaws are receiving a large amount of attention on the men's wear market, and from all reports they are selling extremely well.

It is thought that next season's prices will be extraordinarily high; in fact, they will be almost be out of the reach of the buyer. If anybody has found a remedy for this state of affairs so far he is keeping quiet about it, and the whole market is perturbed.

The spinners' strike, which was hindering the production of a great many mills in New England, is evidently over; although little definite information can be obtained, it seems that the mills have won.

Plan "More Sheep" Meeting

The Philadelphia Wool and Textile Association is arranging for a conference to be held in Philadelphia in the early part of November for the purpose of developing still further the general activities of its campaign for increasing the flocks of sheep along the eastern seaboard. Invitations have been extended the various textile manufacturers associations, leading manufacturers of wool goods, agricultural boards in various States as well as the chambers of commerce in different localities, and even the railroads. The Baltimore and Ohio and the New York Central railroads have expressed great interest in the project, and are planning to co-operate with the association in its efforts. The New York Central Railroad Agricultural Agent recently held a conference with President A. C. Bigelow of the association and indicated a determination to further the work in their territory. He was anxious for suggestions in order that they may conduct a campaign of education among the farmers along their lines. The three important factors, he stated, are the elimination of the dog evil, the securing of necessary sheep for stocking the farms, and the outlet for the wools. On this latter point the Philadelphia Wool and Textile Association is working in an effort to provide a satisfactory outlet for the wools to be grown in these eastern sections. A large attendance at this conference next month is assured.

Allentown Textile Class Opens

The Allentown Extension Class of the Pennsylvania State College, which is devoted to instruction in the science of textiles among employes in the mills in that section, was started last week. The class which meets once a week, is under the direction of Stewart McConaghy, formerly connected with the staff of the Philadelphia Textile School.

New Zealand Exports Allowed

The Textile Alliance, Inc., is in receipt of advices from its New Zealand correspondent that crutchings are permitted to be exported, but that the expense of those exports is uncertain.

DRY GOODS REPUBLICANS

Hughes and Fairbanks Association in Active Operation

The Hughes and Fairbanks Uptown Dry Goods Association is taking an active interest in the coming presidential election. Throughout the trade Hughes buttons have been distributed and it has been found that it is pretty hard to talk business with anybody without eventually coming back to election possibilities.

On September 29 a circular letter was sent out to every prominent mill man and to every textile center in the United States. In this letter the necessity of a Republican administration is emphasized and subscriptions are asked for the furtherance of the cause.

The officers of the Hughes and Fairbanks Uptown Dry Goods Association are: President, William Schramm of Schefer, Schramm & Vogel; treasurer, William Skinner of William Skinner & Sons; chairman, Richard A. Strong of Strong, Hewat & Co., and vice-chairman, Benedict Erstein of L. Erstein & Bro. Other officials are:

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DRESS GOODS SLOWER

BUT ALREADY WELL SOLD

Coatings, Staples, and Semi-Staples, Still in Fair Demand—Gabardines and Poplins Lead

There is little change in the condition of the women's wear market since last week's report, although it may be said that the market has slowed up to some extent. Buyers seem to have finished their purchases for the season and many mills are almost sold up. Dealers have expressed themselves as extremely well satisfied with the way in which goods were sold so far this year, and the holders of suitings seem to be the only ones who have suffered in any degree. Skirtings and coatings have gone well and for those kinds of fabrics which hit the fancy of the buyer there is a greater demand than supply.

KNITTED COATINGS SELLING

Lately there has been a lull in the knitted suiting market, but knitted coatings are going extremely well. Knit goods seem daily to be attaining greater popularity. Many prominent makers of women's wear and dress goods are installing knitting departments in their mills in anticipation of the rush which all feel sure will come. The fact that all kinds of suitings have not been extremely popular this year has caused many handlers of knit goods to concentrate their attention on coatings, and a great many novelty knit coatings are on the market. Next season seems in prospect as though it might be entirely a knit goods season. This class of goods combines great warmth with lightness of weight, and this fact alone should make it popular.

STAPLES SELLING STILL BETTER

As was stated last week, staples and semi-staples are more in demand and seem to be infringing on the popularity of fancies. Fancies after a poor start have had a good season, but now staple goods seem to have the call. Fine twill gabardines and poplins are the most popular just at present, but many dealers think that a general rush on staples is just around the corner. Staple coatings are selling well and the difficulty is to find a mill that is not almost sold up.

REPUBLICAN VICTORY EXPECTED

All through the women's wear market there is a growing feeling of confidence that the next administration will be Republican. It may seem that the woolen or worsted business is a poor place to draw an opinion from, but one man who comes in touch with nearly every business in the country says that the only thing he finds even in New York State is the Republican sentiment. It is here that the fiercest battle will be fought, but many say that Maine is such a good indication of the way that the wind is blowing that they need no other proof.

ADVANCE IN PRICE QUESTION

There has been a complaint made lately by manufacturers that they receive a great many protests from buyers when they have to advance the price of their merchandise. One dealer said that he did not understand why it was not clear to buyers that an advance in price is often necessary. A mill running a popular fabric in six or seven different shades cannot at the first of the season tell which of those shades is to be popular, and consequently they do not lay in a particu-



Fence That Gives Satisfaction In Every Particular

is the only kind to place around your factory buildings. To insure protection from prowlers, from storm and from fire, surround your property with

EXCELSIOR
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Chain Link Fence

This fence not only gives complete protection but lets in all the daylight and enhances the appearance of the premises. This fence is built to stand erect for years, made of strong steel posts set in cement, strong steel wires heavily galvanized to prevent rust.

Ask your hardware dealer about Excelsior Rust Proof Flower Bed Guards, Trellis Arches and similar attractive garden goods. Write us direct for attractive catalog M, upon fencing for all purposes.

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The selection of hides, tanning, dressing, Duxbaking, cementing and finishing is done by men who are experts in their lines and whose value to us is weighed by the thoroughness of their work.

Try one of these non-stretch belts and you'll find it costs far less in the end than ordinary kinds.

*Duxbak won the highest award at the San Francisco Exposition—
A Gold Medal of Honor.*



Chas. A. Schieren Company
ESTABLISHED 1868

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Belt Manufacturers

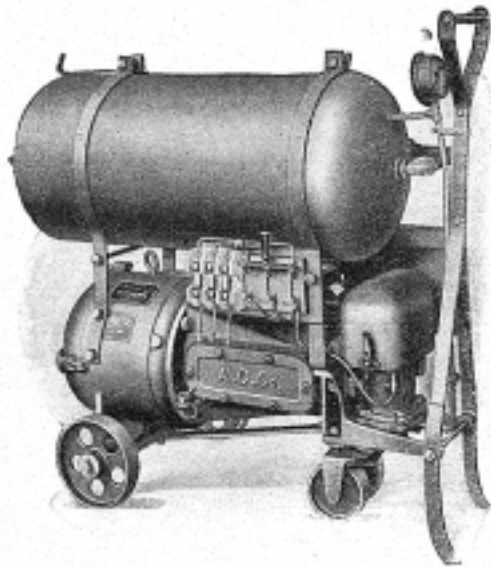
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A Necessity for Cleaning Electrical Machinery in the Power House, Factory or Mill.

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Our first idea is to make CLEVELAND WORSTEDS reliable. There are many artistic looking articles that cannot stand the wear and test of time. The designs of CLEVELAND WORSTEDS always look good, because they are woven into a reliable background.

LOOK AT THE CLOTH!

Cleveland Worsted Mills Company
Spinners, Weavers, Dyers
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(Vice-President and Gen'l Manager)
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GOT THE BEST
Rotary Cloth Press
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Patent Presser Beds.
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larly large stock of the kind of substitute that goes into any one color. When as the season advances, it is found that one shade is outstripping another, it is necessary to buy such stock as will make up into that shade and it is usually the case that an advance over the original price has to be paid. This is only one of many arguments that the dealers advance to refute the charge that they are raising prices unjustly.

Dress Goods Trade Notes

Staples and semi-staples are increasing in popularity daily with fine twill gabardines and poplins predominating. It is reported that all makes of staple coatings are selling well, but that they are scarce and hard to be found.

Knitted suitings have not been selling well lately, but knitted coatings, of which there are a great many varieties on the market, are going fast. Nearly every women's wear maker is said to be putting in a knitting department as quickly as possible.

Now that the dress goods market is not so busy as it was, there is great discussion of the coming campaign, and all are looking forward confidently to a Republican victory.

SILK RATES PROTESTED

Present Schedule Based on Value, According to Carriers

WASHINGTON, Oct. 9.—The question of the correct classification of artificial or natural silk, raw, thrown or spun, and of silk waste including pierced cocoons, noils, frisons and shoddy are all involved in the "Silk Association of America vs. the Pennsylvania Railroad Company, et al." now pending before the Interstate Commerce Commission in Docket No. 8617.

Prior to June 2, 1915, by items 19-24 of Official Classification No. 42, silk, raw, thrown or spun, whether or not on wooden spools, bobbins or warp beams, was rated at first class, less than carload, when the valuation did not exceed \$1 per pound, and when it was not expressed, or if expressed was valued at more than \$1 per pound, it took three times first class; silk waste was rated at first class, regardless of value.

The effect of the passage of the Cummins amendment, which became effective June 2, 1915, was the enactment of the following ratings: "silk, raw, thrown or spun, whether or not on wooden spools, bobbins or warp beams, less than carload, when the value did not exceed \$1 per pound, first class; when the value thereof exceeded \$1 per pound a rating of 1½ times first class is given."

The Silk Association attacked this latter rating on the following grounds: That raw, thrown or spun silk should be carried at first class rates, regardless of value. That raw, thrown or spun silk on wooden spools, bobbins or warped beams should be carried at second class, regardless of value; and That silk waste noils, shoddy, etc., should be carried at the second class.

The carriers protest against the ratings asked for by the association. They call attention to the fact that it always has been, and is now the practice of the carriers through their tariffs to refuse to accept articles of extraordinary value, which are not adapted to transportation by freight. The reason that they give for classifying silks as they do is summed up in the one word "value," that, they contend, is the predominating characteristic of raw silk upon which the justification of the present rating rests.

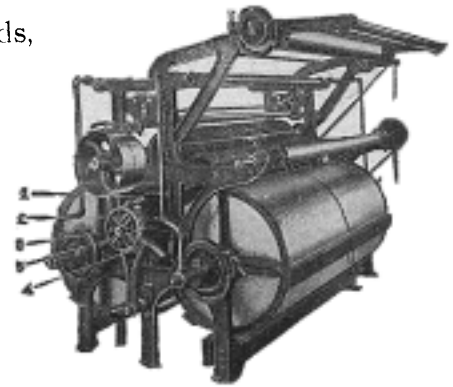
**STEAM LUSTERING
FACE FINISH GOODS**

Kerseys, Beavers, Billiards,
Plushés and some use
it for worsteds

We have more of
these machines in use
than double all other
makes combined

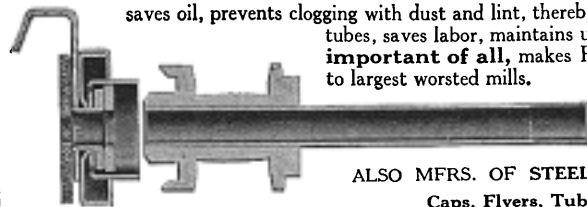
FIFTEEN IN ONE MILL

Parks & Woolson Machine Co
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**Important Improvement in Worsted Spinning
The Bamford DUST PROOF and SELF-LUBRICATING Spindle Tube**

saves oil, prevents clogging with dust and lint, thereby insuring longer life to the tubes, saves labor, maintains uniform speed, and most important of all, makes PERFECT YARN. Refer to largest worsted mills.



Bamford & Smith
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ALSO MFRS. OF STEEL CAPS AND SPINDLES
Caps, Flyers, Tubes, etc., Repaired

**WE MAKE JUST ONE THING
MILL CRAYONS**

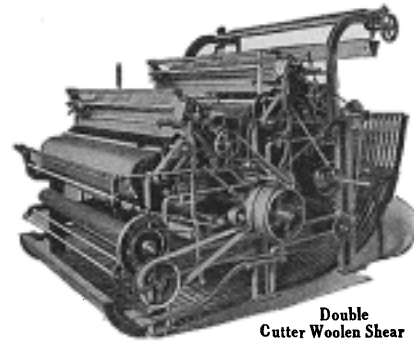
We are the ORIGINAL manufacturers of Mill Crayons. Nearly half a century ago we started manufacturing crayons for textile mills and we have been at it ever since.

The "LOWELL," the acknowledged leader of mill crayons, is made by experienced mill men—men who know the needs of textile mills. For all uses in COTTON, WOOLEN and WORSTED mills the "LOWELL" Crayon is unequalled.

They are just soft enough to mark the finest materials without injury and yet hard enough to wear well. 15 colors and white. Contain no oil or grease. LEAVE NO STAINS AFTER BLEACHING.

Write for color card and prices.

LOWELL CRAYON CO., Lowell, Mass.



Double
Cutter Woolen Shear

**Wool Burring
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Picking Machinery
CLOTH FINISHING
MACHINERY**

Curtis & Marble Machine Co.
WORCESTER, MASS.



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Trade Mark, Reg. U. S. Pat. Off.

**A MOST EFFECTIVE
MOTH EXTERMINATOR**

FULL PARTICULARS FROM

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I. FOULDS & SON, Inc.
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Textile Leather Manufacturers

Comb & Gill Box Aprons Picker Leather Roller Covers Chrome Waterproof Belting
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**Do Not
Contract
For Your
TEXTILE
SODA
For 1917
Until
You Get
Prices On
Blue Label
Prosperity
Soda**

"IT'S LOCKED IN"



This successful blending of live ammonia and refined soda is the greatest cleansing agent the textile trade has known.

PROMPT DELIVERIES

Stocks carried in over 100 Warehouses.

**Isaac Winkler
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Murphy Automatic Furnace

MURPHY IRON WORKS
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IN THIS DAY of rising production costs and keen sales competition haphazard methods cannot endure. Just as the development of the cash register has brought certainty and economy to the retail business where before there was chaos—so has the Murphy Automatic Furnace reduced to a science the handling of fuel. If you think of fuel consumption in terms of Dollars and Cents—if you are interested in more steam for less coal write for complete details and efficiency data at once. Address—without obligation—

Let us outline a plan to fit conditions in your plant. Ask for Catalog "I"

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Are Power Savers

Chapman Ball Bearings almost entirely eliminate shaft friction—that is why they are power savers. Manufacturers who have equipped their hangers with them notice big differences in their present power bills as compared with the bills previous to the installation of Chapman Ball Bearings.

During the past 14 years that we have been designing and manufacturing ball bearings, we have acquired much valuable experience. To those who want to cut down power costs we are ready to give assistance. Write us today—better do it now.

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WOOL OIL
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¶ We are prepared to fill promptly all orders for K. D. Oil and will be pleased to ship a trial lot for testing and comparison with the oil you are now using.

¶ K. D. Oil scours easier, carries stock better and is especially desirable where old stock containing much dirt and grease is used.

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That you recognize this is proved by the methods you adopt to prevent oil stains. But why not strike at the root of the trouble and eliminate them?

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It is a remarkably adhesive lubricant. It sticks to the part it is lubricating—does not thin out and fly over floors, walls, etc. IT DOES NOT CAUSE OIL STAINS.

Non-Fluid Oil is more economical than fluid oils and more efficient than greases. It is a friction-killing, money-saving lubricant.

A grade for every purpose
Write for samples
New York & New Jersey Lubricant Co.
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MILL NEWS

Cotton

***KILLINGLY, CONN.** Further development in the plans of the Killingly Manufacturing Co. was made known recently, when W. I. Bullard, assistant treasurer of the company, announced that the option which the company held on the Barnaby Mills, Fall River, has been allowed to expire. This is said to be practically an assurance that the concern will build its own yarn mill, probably undertaking the work during the spring of 1917. Reports regarding the contemplated enlarging of the company's facilities have been in circulation for some time, but the company has been undecided as to whether to build its own mill, enlarge present plant or lease new buildings. A mill capable of producing 80,000 pounds of yarn per week will be required.

***PUTNAM, CONN.** The State Trade Shop, which is operated in connection with the State Textile School, is to manufacture plain and fancy cloths from 10s to 80s yarns with an equipment of 216 ring spindles and 4 looms. A dyehouse is to be added in the near future, the product to be sold direct.

***ALBANY, GA.** Flint River Cotton Mills have signed all contracts for their recently announced additional mill. About \$140,000 will be the cost of the new machinery, and \$26,000 will be the cost of the building. The latter will be 130 x 106 feet, of brick construction. It will be equipped with 11,000 spindles, 260 looms, rope power drive, etc., for manufacturing cotton cloth.

***ATHENS, GA.** The Princeton Manufacturing Co. denies report recently published regarding the purchase of 1,600 spindles, and states that the report may have arisen from the fact that a humidifier system is being installed.

***MACON, GA.** Bibb Manufacturing Co. will increase capitalization from \$1,500,000 to \$2,500,000. It is understood that this additional investment will provide for additional mills and improvements heretofore announced, together with some future betterments that will be given consideration.

DALLAS, TEX. Dallas Cotton Linter Co. has been organized to establish mill for manufacturing cotton felt, cotton linters, etc. It will invest \$20,000 for the equipment of machinery to include cards, pickers, electric power drive, etc. Tom B. Burnett is president.

ROSWELL, GA. The Roswell Manufacturing Co., manufacturer of sheetings, shirtings and yarns, has installed electric power in its plant, according to report.

LAWRENCE, MASS. The Arlington Mills have purchased two plots of land on Stafford street from George A. H. Coupe of Methuen, according to a record filed at the registry of deeds. The lots are 96 x 53 and 96 x 73 feet.

***LOWELL, MASS.** J. C. Wadleigh, agent of the Merrimack Manufacturing Co., plain and fancy cotton, bleached, printed and finished corduroys, advises that the 131 x 41 foot building which was recently reported as being erected by the company is being built in the yard for temporary purposes only, and that he cannot at this writing state how much new machinery will be installed.

NEW BEDFORD, MASS. The Nashawena Mills are reported be planning the erection of an addition to their plant, which will be two stories high, 100 x 200 feet. The silk machinery will be moved into

this addition to make room for new spinning and preparatory cotton equipment in the main mill. The spindleage of the mills has been increased from 126,000 to 145,000 during the past year, and it is stated that before next Spring it will total 160,000. The total number of looms to be operated by next Spring is said to be 3,800, and new cards, combers, winders and quillers have also been ordered.

***NEW BEDFORD, MASS.** The Passaic Cotton Mills advise that the report which was published last week regarding the erection of a new mill for the company is entirely correct. They add that they do not at the present time care to give out details regarding new machinery to be installed.

***NEWBURYPORT, MASS.** The Bay State Cotton Corporation advises that reports circulated recently to the effect that this company was to lease a portion of the N. D. Dodge Shoe Co.'s building, and install machinery for manufacturing cotton, is entirely without foundation.

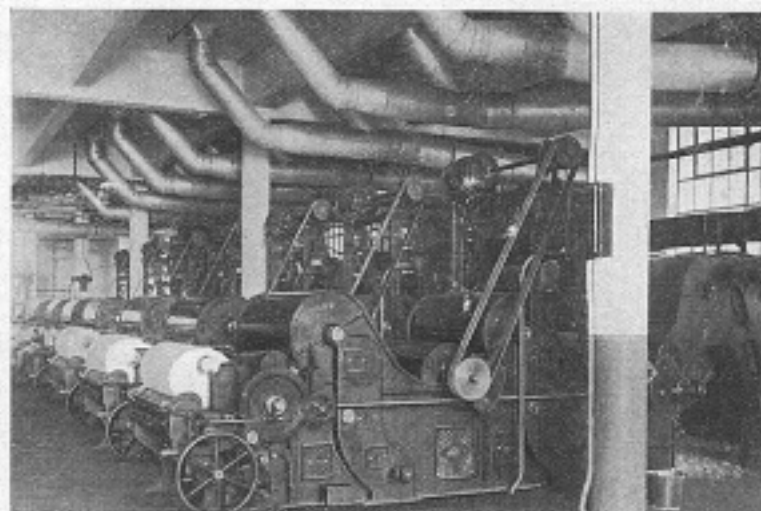
***MARION, N. C.** Clinchfield Manufacturing Co. has signed all contracts for its big additional mill, announced some weeks ago. It will invest more than \$600,000 for this new plant, J. E. Sirrine of Greenville, S. C., being the architect-engineer in charge. About \$160,000 will be the cost of the building, a three and one-half-story, 398 x 132 foot, slow burning standard mill construction plant for which the Gallivan Building Co. of Greenville, S. C., has the contract. About \$450,000 will be the cost of the machinery, which will include 40,000 spindles and 1,000 looms with electric power drive.

ROUEMONT, N. C. Little River Manufacturing Co. will increase capital stock from \$60,000 to \$100,000. Presumably this is for an enlargement of manufacturing facilities, but no definite statement has been made. Cotton rope and yarns are the product of the Little River mill.

ST. PAULS, N. C. The St. Pauls Cotton Mills are installing a complete equipment of G. M. Parks Co.'s Turbo humidifiers.

PAWTUCKET, R. I. Local report states that the old building on the premises of the Dexter Yarn Co., which has been used as a storehouse for cotton, is being torn down to prepare for the erection of an addition to the plant. The Dexter Yarn Co. manufactures 5s to 40s combed and carded cotton yarns, cops, cones, skeins, tubes, warps, single and twisted cable and hawser cords and mercerized yarns, 16,000 spinning spindles and 6,200 twister spindles being the equipment at last report.

***BELTON, TEX.** As reported several weeks ago in these columns, the Belton Cotton Mills, which have been idle for a number of years, are soon to begin operations again. The old company has been reorganized as the Belton Yarn Mills, and experienced cotton mill men from Charlotte, N. C., will be in active charge of the plant. C. W. Johnson of Charlotte is president of the reorganized company, and W. W. James of Belton is secretary and treasurer. P. M. Keller of Charlotte, N. C., will be general manager of the plant. The old buildings will be remodeled, new machinery will be installed, and the mills brought up to date. A force of 100 skilled operatives will be employed at first, and this force will be increased as additional machinery is installed.



Part of Naumkeag Steam Cotton Company's Picker Room, showing 7½ horsepower Westinghouse Type CS Picker Motors and Starters, with overload and low voltage release. A frame drive on two beater picker.

Westinghouse Steel Type Impregnated Picker Motors

Westinghouse Electric & Mfg. Co.
East Pittsburgh, Pa.

Atlanta, Ga.
Boston, Mass.
Charlotte, N. C.



New York, N. Y.
Philadelphia, Pa.
Syracuse, N. Y.

* Indicates previous mention of project.

SOFT WATER

REFINITE is changing ideas regarding the employment of soft water for all textile processing. Whereas mills were formerly content to get along with water that was nearly soft or at the best put in apparatus that would partially soften water, they are now installing systems that will reduce water to *absolute* softness.

The mechanical advantages of such water for textile processing are obvious. The chief reason for the change in ideas at this time has been the introduction of REFINITE.

This natural mineral has reduced the cost of absolutely soft water to within reach of every mill. More than this, the REFINITE process is so simple and powerful that new efficiency standards have been set in the softening of water.

Learn about REFINITE today. A postal will bring complete information.

Des Moines Refining Co.

109-111 East Walnut Street

Des Moines, Iowa

A. W. Buhlmann, Eastern Representative
200 Fifth Avenue, New York

REFINITE

MILL NEWS—Continued

Knit

*HICKORY, N. C. The Ranford Knitting Mills, recently noted as having incorporated with a capital stock of \$100,000 (\$15,000 paid in), is just starting up machinery on the manufacture of ladies' 176 needle and children's ribbed wool hosiery in the grey. The officers of the company are G. E. Ranson, Weldon, N. C., president; E. L. Shuford, Hickory, N. C., treasurer, and C. N. Groves is the superintendent. The machinery will be operated by steam power, and there is to be a dyehouse, although this has not as yet been completed. The product will be sold direct.

*CONWAY, S. C. Charles R. Scarborough, who was mentioned recently as interested in plans for establishing a mill, will probably soon complete arrangements for organizing a company to manufacture knit goods.

GUELPH, ONT., CANADA. J. A. Paul, Wyndham street, has opened up the Guelph Hosiery Co. on men's worsted hosiery.

ST. CATHERINES, QUE., CANADA. Johnson & Shardlow, Lennoxville, have opened up a hosiery department at their local branch with L. L. Moore, formerly with the Holeproof Hosiery Co., London, Ont., in charge. Considerable equipment is being added to the main plant to take care of the heavy orders that have been booked.

*HARRISBURG, PA. R. W. Moorehead, treasurer of the Moorehead Knitting Co., advises that a 50 x 200 foot warehouse is standing on the property which was recently purchased by the company, and that no change or addition will be made in the present building, which is now utilized by the company.

*TOWER CITY, PA. The increase in capital stock from \$50,000 to \$75,000 made last week by the Bestok Underwear Co., Inc., is to provide for an addition to the company's plant and equipment. When the addition, which is now being built, is completed there will be a total floor space of 20,000 square feet in the plant. Ten additional knitting machines will be installed, bringing the total up to 30 latch needle machines.

*MENTOR, O. The Mentor Knitting Mills, which have been closed for several months following the death of the manager, J. B. Henrion, have been sold to a syndicate of local capitalists, according to report. It is stated that plans are under way to open the plant within a short time, but whether it will continue to be operated as a knitting mill is not known at this writing. The Mentor Knitting Mills manufactured men's, women's and children's ribbed underwear and union suits, cotton, worsted, silk and merino.

NEW HAVEN, CONN. The Winona Mills Hosiery Corp. has been incorporated for \$200,000, divided into 2,000 shares par value, \$100, all common stock. The company will begin business on \$154,400, and the incorporators are: Jefferson A. Simonds and Mabel S. Bartlett of New Haven, and Andrew Douglas Sackeld of New York. This is believed to be the re-incorporation of the Winona Underwear Co., which has operated a mill at 30 Wallace street for a number of years, the capital stock being \$100,000.

GOSSVILLE, N. H. Fire completely destroyed the plant of the Barmer Narrow Fabric Co., causing damage estimated at \$100,000. The company operated 30 looms on the manufacture of scalloped edgings for underwear and dresses.

*Indicates previous mention of project.

Silk

PATERSON, N. J. Buyer Bros. & Stein have started a 16 loom broad silk plant in Champin Bros.' new mill, 191 S. First street, Lakeview, and hope later to increase their plant to 40 or 50 looms.

PATERSON, N. J. A. Millstein has recently placed 20 broad silk looms in the Albion Mill, Madison street, and is running under his own name. There is still space in the mill for the installation of 20 additional looms.

PATERSON, N. J. A new broad silk concern just started in the Bell Mill with 10 looms is known as the Quality Silk Co. The owners names could not be obtained at this writing. It is said that the company expects to increase the plant about May 1, 1917.

PATERSON, N. J. The Ward Silk Co. is the name of a new firm lately started in the Bell Mill, Fifth avenue, with 20 broad silk looms. George Abrash is the proprietor.

MOUNT MORRIS, N. Y. Local men are said to be strongly endeavoring to secure the location of a silk mill in Mount Morris. F. J. Mann is named as one of those chiefly interested in the project, and it is stated that he has been negotiating with local capital to take stock in a new company, which will employ from 500 to 1,000 hands, the mill to be established within the next few months.

*NEW BEDFORD, MASS. The Oneko Mill, which was recently purchased by the Klots Throwing Co., is being thoroughly renovated and newly equipped with silk throwing machinery, and will probably be in operation about December 1. A small portion of the equipment is already on the premises, it is stated, but difficulty in securing prompt deliveries has held up work at the plant.

PATERSON, N. J. The Japan Silk Co., which was incorporated several months ago with a capital stock of \$25,000, is operating 18 looms on the second floor of the Albion Mill, Madison street, and it is reported that this number of looms will be increased to 40 within the near future.

PATERSON, N. J. Wagman & Hayman, Inc., who have recently started in the Bell Mill with 16 broad silk looms, are looking for floor space, and expect to add 20 looms to their present equipment, it is reported.

*JOHNSTOWN, PA. The Buser Silk Co., Inc., advises that contrary to report circulated recently, no addition is contemplated for the present.

*HAZELTON, PA. Reports which have been current for several months regarding an addition to the plant of the Hazelton Silk Mill, operated by Louis Roessel Co., have culminated in the report that the Hogg Construction Co., of Philadelphia, has been given contract for the construction of a four-story, 60 x 200 foot building to be erected on McKinley street. This building, it is stated, is to be of fireproof construction, and will contain all modern improvements, such as lockers, lunch rooms, retiring rooms for employes, etc. The capacity of the mill when completed will be about 500 looms. Specifications state that building is to be ready for occupancy about March 1, 1917. The Hazelton Silk Mill manufactures broad dress silks with an equipment of 92 wide and 10 narrow looms. It was reported in these columns last May, that the Washington, N. J., branch of the Louis Roessel Co. was to be moved to Hazelton and incorporated into the new building, but this was merely a local rumor and has not yet been confirmed by the company.

MILL NEWS—Continued

Wool

LAUREL GLEN, CONN. A company to be known as the Laurel Glen Worsted Co. is to be organized by Charles P. Eccelstone, Ralph M. Briggs and John S. Burdick, according to local report. It is stated that the company has taken over the property of the old "Solomon Barber" mill, and has already commenced construction work on a cement penstock to carry the water supply. Work on the erection of a new mill building is soon to be undertaken, it is stated.

PHILADELPHIA, PA. Orb & Williams have started up the Wootex Manufacturing Co. with 18 looms, which they are operating on commission weaving of men's wear cotton and worsteds. The plant is located in the Lomax Mills, Jasper and Orleans streets.

***CLINTON, MASS.** The Burton Co., advises that the capacity of the plant is to be tripled as soon as machinery can be procured and set up. Several sets of cards have already been installed, and when all the new machinery now on order has been set up the force of operatives will be increased to approximately 160 hands.

CONCORD JUNCTION, MASS. The Strathmore Worsted Mills have leased a building off Commonwealth avenue, and after making necessary repairs will utilize it as part of the Strathmore plant.

***PATERSON, N. J.** No new machinery is to be added to the Peerless Plush Manufacturing Co.'s plant, although the company advises that the details which were published last week regarding the erection of a new dyehouse and warehouse are correct.

WILTON, ME. The Wilton Woolen Co. is building an elevator in the center of its upper mill.

WINCHESTER, VA. The Virginia Woolen Co. is building an addition which will double the capacity of the present plant. The new building will provide space for 120 looms and it is expected that approximately 200 operatives will be added to the present force. The company will install 50 new looms and 8 sets of woolen cards, which, with the present equipment of 72 looms and 8 sets of cards, will be operated on flannels, cassimeres, velours and chevots.

***NEWTON, ALA.** The Killebrew Manufacturing Co., which was noted last week as having incorporated, is the successor to the Killebrew Woolen Mill Co., manufacturer of cotton and woolen jeans and pants. The old company was incorporated for \$40,000, while the new concern has a capital stock of only \$30,000. No other changes have been made.

Miscellaneous

***NORTH BROOKFIELD, MASS.** The Phoenix Linen Co. advises that the addition of machinery recently reported consists of 2,816 cotton ring spindles, which have been purchased from the Atlas Yarn Co., the Southbridge, Mass., concern which recently closed its mill and offered its equipment for sale. These machines will be used to spin warps for use in the manufacture of towels and crash.

SPRINGFIELD, MASS. Plans are said to have been drawn for the mill to be erected on Plainfield street for the Bozart Rug Co., 376 Birnie avenue. Specifications call for a fireproof structure, 60 x 300 feet, two stories and basement, of brick and steel construction, with concrete floors and fireproof roof, etc. It is stated that a power plant will

also be erected. Newton C. Bond Co. is the architect.

***PATERSON, N. J.** The Victory Silk Dyeing & Finishing Co. announces that the new mill which is being erected at 40-58 Bleecker street, will be one story high, of brick construction throughout, and will consist of a dyehouse, executive offices and finishing department. This mill will cost \$42,800, and it is stated that new machinery will be installed in every department.

***PHILADELPHIA, PA.** The addition to the plant of L. B. Luithlen Co. is to be used for storage and drying purposes, and no new machinery is to be added to the present equipment. As previously noted this addition will consist of two stories and basement.

READING, PA. The Reading Dyeing Co. is said to have erected an addition to its plant which cost approximately \$10,000. The new building is two stories high, 40 x 118 feet.

SAYLESVILLE, R. I. An addition is to be built to the plant of the Sayles' Bleacheries, according to report. This addition will be of brick construction, 79 x 70 feet, and will be used for finishing cloth.

PHILADELPHIA, PA. The Philadelphia Dyeing & Finishing Co. is equipping the one and two story buildings formerly occupied by Sykes & Geiger, Frankford and Van Dyke streets, Frankford, with machinery for the dyeing and finishing of cotton fabrics. The concern has been incorporated with a capital of \$100,000. The officers are Wm. J. Gibbons, Jr., formerly connected with the Summerdale Dyeing, Printing & Finishing Works, Inc., president and superintendent; Franz Merz, vice-president, and A. W. Hardwick, secretary and treasurer, acting as buyer. The capacity of the plant will be 40,000 yards per day, and the company will engage in the dyeing and finishing of drills, ducks, sheetings, jeans, etc., in heavy cotton piece goods.


***PATERSON, N. J.** Plans for the new factory building of the Paterson Industrial Development Co., were given out last Monday by the Chamber of Commerce, and bids for contracting may be submitted up to November 15. This plant is to represent an investment of approximately \$250,000, it is understood, and when completed space will be leased to small concerns desiring to locate in Paterson.

PHOENIX, N. Y. The plant of the Duffy Silk Co., which was destroyed by fire on Sept. 23, will be rebuilt immediately, the intention being to erect a large modern mill. The fire was a disastrous one, destroying practically all of the business section of Phoenix and the loss sustained by the Duffy Silk Co. alone is estimated at \$150,000.

***SAYVILLE, N. Y.** Last June it was reported in these columns that a Paterson silk concern, the name of which could not be ascertained, was to build a new mill in Sayville. Recent report states that a new silk concern is to be located here, and that building has been leased and new machinery installed.

PHILADELPHIA, PA. Application for a charter of incorporation for the Cheltenham Towel Mills, Mascher and York streets, will be made by Patrick McPeak, Mary C. McPeak and Edward P. McPeak. This plant has been in operation at the above address for some time.

WILLIMANTIC, CONN. The Rossie Velvet Co., with main plant at Mystic, is said to be rapidly outgrowing its present quarters in the Willimantic Industrial Co.'s mill on South Park street, and it is expected that a large addition to the building will soon be necessary.



No. 5 of a series of portraits of users of S. K. F. Ball Bearings

Stephen C. Lowe
PRESIDENT AND GENERAL MANAGER
S. C. LOWE SUPPLY CO.
New Bedford, Mass.

**BUILDERS OF
AMERICAN TEXTILE MILL MACHINERY**

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Yours very truly,
STEPHEN C. LOWE.



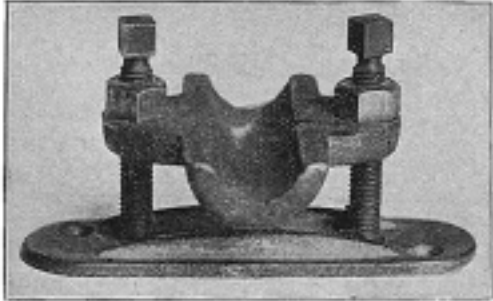
SKF BALL BEARING CO.
Hartford, Conn.



* Indicates previous mention of project.

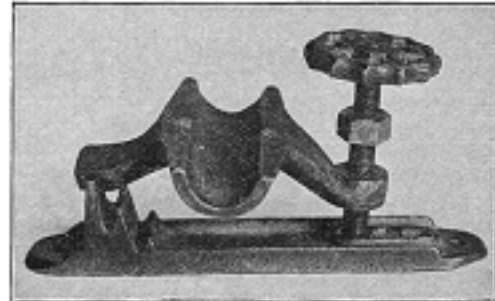
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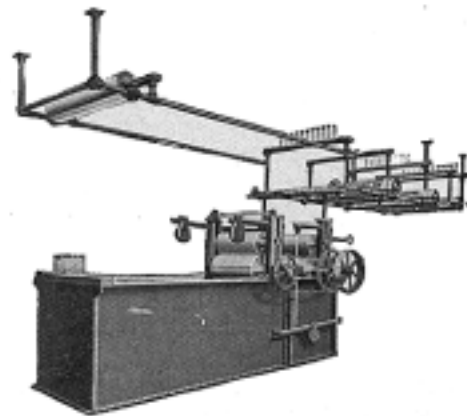
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COTTON MANUFACTURES

SUBMARINE ACTIVITIES AFFECT SHIPPING RATES

Sharp Advances Recorded, While Cotton Goods Exporters Await Further and More Definite Developments

Activity of German submarines off the Rhode Island coast early in the week, when a number of ships of the allied and neutral nations were sent to the bottom, played havoc with marine insurance rates. An advance in insurance which was not definitely determined upon early in the week adds another disturbing element to the situation confronting exporters of American cotton goods. In conservative quarters, it was stated, that a rate of 6 per cent. was quoted generally for Northern European ports, with Mediterranean rates fully as high. For vessels and cargoes bound for the Far East via the Suez Canal rates quoted were about 8 to 10 per cent., and for South America and the West Indies, the rate was approximately 3 to 5 per cent. Opinions of prominent factors on the market as to the effects of this new development on cotton goods exports had not reached a maturity sufficient to allow free discussion of them, and the general attitude of the trade seemed to be one of waiting developments. This attitude was also prevalent in shipping circles and sailings of a number of boats for European ports were postponed. Pending further indication of the extent to which shipping is to be affected by the new menace off the Atlantic Coast, trading is reported as somewhat restricted in merchandise for export, sellers holding up transactions until the

possibilities of the future become more apparent. Prices on domestic goods showed no declines, but business was lighter, and the general policy of buyers more cautious.

CONDITIONS GENERALLY UNCHANGED

While merchants report a continuance of the large and steady business with South America and the miscellaneous markets, the large outlets for American goods remain out of the market so far as purchasing is concerned. India, China and the Red Sea show no signs of life, and each advance in price makes it more improbable that activity may be expected from them in the near future. Exporters state that it is absolutely impossible to interest buyers at current quotations, even when they point out the likelihood of continued appreciation on all lines of goods. Maintenance of good business with the Philippines is reported by sellers active in this market. A hint of possible improvement in the China situation, which market is regarded as lost to this country until the

(Continued on page 56)

Comparative Quotations		
Spot cotton.	Oct. 11.	Last Year.
Middling uplands, N.Y.	17.55c.	12.50c.
Print cloths:		
27-in., 64x60, 7.60 yd.	4 3/4c.	3 3/4c.
Gray goods:		
38 1/2-in., 64x60, 5.35 yd.	7 1/2-7 3/4c.	4 11/16-4 3/4c.
39-in., 68x72, 4.75 yd.	8 3/4c.	5 3/4c.
39-in., 72x76, 4.25 yd.	9c.	6c.
39-in., 80x80, 4 yd.	9 1/2c.	6 1/2-6 3/4c.
Brown sheetings:		
36-in., 56x60, 4 yd.	8-8 1/4c.	6c.
36-in., 48x48, 3 yd.	10c.	7c.
36-in., 48x48, 4 yd.	7 3/4-7 7/8c.	5 1/4c.
Denims, 9-oz.	At value.	Nominal.
Denims, 2-20s (Indigo)	19c.	12 1/2c.
Ticking, 8-oz.	17 1/2c.	11 1/2c.
Standard prints	7 1/4c.	5 1/4c.
Stand. staple ginghams	8c.	6 1/4c.
Drills, 37-in., 3 yd.	10 1/4-10 1/2c.	7 1/4c.

DEMAND-SUPPLY RATIO RULES ENGLISH COTTONS

Trade Is Bullish on Future Without Considering Raw Cotton—Production Limited and Decreasing

By FREDERICK W. TATTERSALL

MANCHESTER, ENG., Sept. 28.—Apart from the amount of business passing or change in raw material rates, there has been a tendency toward a stronger tone in the market this week. The situation is abnormal, and it is not possible to gauge the outlook in the same way as in the past. It is stated that the military authorities are determined to take still more men from spinning mills and weaving sheds and consequently the decrease in production must continue. This factor is playing an important part in the local industry. It is scarcely possible to record a large business, but demand is steady and persistent and sufficient orders have been booked to maintain the position of producers. A remarkable development in connection with Egyptian cotton prices has caused much comment and it is fortunate that spinners in Bolton and district are in a strong enough position to put up their quotations and refuse to sell except at top rates.

MANUFACTURERS MORE INDEPENDENT

A distinctly more independent attitude is now being presented to buyers by manufacturers of cloth than at any period since the beginning of the war. Engagements of course, are irregular, but certain styles of goods are sold well into next year at profitable rates.

(Continued on page 62)

COTTON GOODS QUIET, BUT PRICES ARE FIRM

Submarine Scare Affects Business in Gray Goods Temporarily—General Strength Undiminished

Uncertainty created by German submarine activity off the Atlantic Coast, followed by a drop in raw cotton on Monday, caused a distinct falling off in gray goods business on the cotton goods market. Buyers were out of the market almost entirely on Monday, but an improved tone was displayed on Tuesday, and gradually increased conservative operations were the rule later in the week. The price strength of all lines of merchandise was fully demonstrated by this temporary unsettling element, all quotations being firmly held, although easing in asking prices on certain gray goods was reported. Cotton fulfilled the expectations of practically all well-informed merchants by promptly regaining almost all its lost ground on Tuesday, the opening of futures being approximately on a par with the closing on Friday of last week. All market factors unite in the belief that the unprecedentedly strong position of all lines of merchandise cannot be disturbed by incidents similar to the sinking of six ships, aside from a mere temporary sentimental effect. Fundamental conditions are so sound that nothing but the most startling unexpected developments will alter the situation for six months or more, it is felt. Higher prices for raw cotton and piece goods are almost accepted as a matter of course.

GRAY GOODS FIRM

Heavy business in gray goods was

Table of Exports of Cotton Manufactures from Port of New York for Week Ending October 10, 1916*

Compiled by TEXTILE WORLD JOURNAL.

Destination.	Unbleached.		Bleached.		Printed.		Colored—Piece Dyed.		All other.		Duck.		Knit Goods.	Yarn.
	Value.	Yards.	Value.	Yards.	Value.	Yards.	Value.	Yards.	Value.	Yards.	Value.	Yards.		
Argentina	\$8,820	106,593	\$17,093	175,139	\$11,748	140,107	\$10,109	93,150	\$101,936	925,964	\$6,971	18,466	\$32,535	\$55,476
Australia	23,490	233,540	3,037	25,413			3,137	28,270	102,765	771,312	8,267	22,584	80,121	4,170
Barbadoes	1,559	15,881	310	2,723					2,256	31,042			857	
Bermuda	41	294							320	3,000			2,591	
Bolivia	271	9,000	5,706	98,400	789	15,338	159	1,204	770	7,194			1,049	
Brazil			743	3,640	1,825	14,929	466	5,600			1,219	2,573	6,747	1,075
British Guiana					124	2,301					670	1,561	130	
British India													40	
British South Africa					146	2,520							487	
British West Africa									164	1,150			273	
British West Indies											539	1,932	264	
British West Indies (other)	728	15,150	1,919	19,382	684	8,216	306	2,654	2,915	33,946	95	555	541	
Canada									222	1,663				
China														
Chile			926	7,263										
Colombia	6,438	124,697	3,993	41,083	23,131	370,163			3,685	23,080	32,323	28,261	5,842	
Costa Rica	4,128	81,760	1,776	27,867	745	9,833			30,634	274,076	1,220	1,943	7,662	5,183
Cuba	11,991	109,853	38,280	336,627	3,998	45,196	13,419	114,755	49,099	496,841	9,316	31,993	35,124	2,155
Danish West Indies	358	5,521	384	7,950	178	2,859			248	2,446	28	108	317	
Denmark					506	5,457			1,279	17,240			26,764	
Dutch East Indies	98	1,200	3,356	39,097										
Dutch West Indies	520	7,586	897	14,256	696	14,710	68	1,050	1,412	11,833	45	272	282	23
Ecuador	1,798	28,910	2,567	33,493	9,125	121,197	46	600	16,666	170,725			3,718	
England									2,413	16,938	52,045	144,410	88,031	
Finland													19,652	
France			54,056	539,797					546	3,121	570	4,461	9,154	
French Guiana											287	796	134	
French West Indies			190	2,529							2,250	10,936	11	
Greece									1,200	21,000				
Guatemala									330	1,752				
Haiti									1,370	10,009			495	
Honduras	11,068	210,000	3,093	60,504									1,434	
Italy					2,389	44,218			7,334	76,209	472	1,487	1,050	
Jamaica	1,548	28,100	231	2,315							581	858		
Japan					106	2,384			1,017	12,970	33	50	1,163	
Mexico	11,025	175,583	15,881	220,979	2,199	26,980	1,555	8,755	12,243	119,549	3,010	7,169	11,775	15
Netherlands											10,752	25,593	30,881	3,616
Newfoundland	451	5,849	388	6,030	395	2,883			381	3,436			769	2,732
New Zealand					956	6,000			3,880	24,798			10,631	
Nicaragua	453	8,000	5,970	99,099	1,566	17,663			1,455	16,349			448	
Norway													459	
Panama	698	11,010	1,272	12,949	201	3,745			5,780	72,711	77	104	6,911	
Paraguay									2,199	30,377				
Peru	2,465	32,700	7,181	83,070	11,405	37,202	3,318	46,009			1,327	6,989	7,221	
Philippine Islands	600	12,000	37,573	312,899	14,717	252,991			12,980	104,434	1,078	5,040	7,977	
Portugal											1,260	4,148		
Russia in Europe											82,318	225,730	27,047	
Salvador	7,364	165,400	138	2,773					3,829	34,131	32	86	1,216	
San Domingo	1,685	31,572	1,867	25,193			1,189	12,035	4,449	54,902	132	1,400	1,577	
Scotland											12,976	23,384		
Sweden			3,296	28,142	420	4,371			4,956	62,968	3,842	4,356	15,205	
Trinidad									36	250	5,394	12,832	78	
Uruguay	907	12,389	1,561	20,493	778	4,237			6,699	60,154	1,395	4,986	11,304	
Venezuela	23,957	243,370	8,528	112,787	11,035	176,336	11,983	125,965	28,466	295,146	5,502	17,762	4,607	
Totals	\$121,709	1,675,667	\$222,422	2,362,919	\$99,889	1,433,951	\$47,424	458,769	\$489,852	4,480,239	\$248,141	622,806	\$467,355	\$75,092

* These figures are a compilation of the daily reports issued by the Bureau of Statistics, Custom House, New York. Apparent discrepancies may be accounted for by delay in receiving declarations of shipments until after sailing of ships. Such discrepancies, if any, are equalized the following week.

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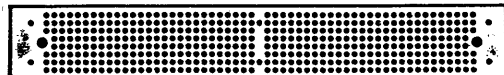
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WOOD TANKS FOR ALL PURPOSES

done during the latter part of last week, and advances of $\frac{1}{4}$ c. were general. Buyers withheld from the print cloth market on Monday, but resumed cautious operations the following day at asked prices. One seller this week stated that despite the heavy business of the recent past, he believed much buying was yet to be done. On $38\frac{1}{2}$ -inch, 64 x 60s, 5.35 yard goods, $7\frac{1}{4}$ to $7\frac{3}{8}$ c. is quoted; 39-inch, 68 x 72s, 4.75 yard, are at $8\frac{1}{4}$ c., and the top of last week's market, 9 and $9\frac{1}{2}$ c., respectively, is now being obtained for 72 x 76s, 4.25 yard goods and four yard 80 squares. Brown sheetings quickly rallied from the Monday inactivity, although buyers showed a disposition to await more settled conditions before operating freely. A figure of $7\frac{3}{4}$ c. for four yard 48 squares is accepted on contract for goods to be delivered during January, February and March, and $7\frac{7}{8}$ c. is obtained for spot and nearby delivery.

NO CHANGE IN FINISHED GOODS

Finished goods generally were almost entirely unaffected by the submarine scare, and the market remains altogether in the hands of sellers. Prices are stationary in most instances, and there is a steady demand for goods of all character. The bleached goods situation is unrelieved, with agents sold so far ahead that it is difficult, and impossible in instances, to obtain deliveries this side of January. An actual scarcity exists in this class of merchandise on the primary market according to certain merchants, although there continues the anomalous situation of jobbers selling below agents' prices. Well-known lines of branded goods selling below the market will work up gradually, it is believed. All colored goods are exceedingly firm, and the price trend is constantly higher. Eight-ounce tickings were advanced a full cent late last week, and are now priced at $17\frac{1}{2}$ c. Denims, gingham, chevots, plaids, etc., are firmly held. Retail demand for cotton goods of all descriptions is unexpectedly heavy, and gives every indication of continuing so. The strongly sold-up condition of napped goods is causing agents to give little consideration to the opening of outtings usually made early in the year.

Cotton Goods Trade Notes

A meeting to consider the new duck list now being prepared was held Tuesday morning, but several more joint discussions will probably be necessary before final decision is reached. It is expected that the new list will be made public next week.

Catlin & Co. have advanced Swiss and fluff flannel, darks, $\frac{1}{2}$ c. per yard for spot and nearby delivery.

The Amoskeag Manufacturing Co., Jarvis & Prankard, selling agents, has placed bleached madras at value.

Turner, Halsey & Co. have advanced Mount Vernon-Woodberry wide duck to 10 off the list, army duck to the full list and sail duck to 5 off the list.

B. B. & R. Knight, William E. Wall, selling agent, have priced 4-4 Fruit of the Loom at $10\frac{1}{2}$ c. and Fruit of the Loom bleached muslins at 10c., net 60 days.

The T. Holt Haywood Dept. of Fred'k Victor & Achelis has named a price of 8c. for dark Trossach staple gingham and $7\frac{3}{4}$ c. for a certain percentage of the lighter colors.

The Amoskeag Manufacturing Co., Jarvis & Prankard, selling agents, has withdrawn 19,000 range chambray and has advanced all tickings 1c. a pound.

Fred'k Victor & Achelis, T. Holt Haywood Dept., have been appointed sole selling agents for the Arista Mills Co., and the Southside Mills, both of Winston-Salem, N. C.

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