

action of those here who are putting into practice the economic doctrine which has obtained in France, in Germany, and elsewhere? And with England posing as "the solitary citadel of Free Trade" (Mr. Gladstone's apt simile seems likely, by the way, to become famous) the problem becomes more complex still.

An article in the *Sheffield Telegraph* has attracted a good deal of attention on this side of the Atlantic. With that vigour which characterises the leading utterances of Sir W. C. Leng's organ, the *Telegraph*, referring to the new tariff, says:

No blockade established by an open enemy could be so perfect as the fiscal blockade threatened in the new bill. Ordinary blockades—as enforced by armed ships—may, under cover of fog, snow-storm, or abnormal darkness, be broken through, but the meshes of the fiscal blockade are too fine to be eluded. The fighting ships by which an ordinary blockade bars entrance against blockade runners may be dispersed by storms and driven seawards through stress of weather, but the new tariff is intended to act like one unbreakable torpedo netting to stop all access against the goods of nations which are no enemies but friends, and no useless friends either, but the best patrons and the best customers of that greatest of all American interests—the interest which is dependent—absolutely dependent, upon the markets of the Old World for its prosperity. Now this word "dependent" may not be the most acceptable of words to our cousins on the other side of the Atlantic, but it is none the less true. We can do without their corn and beaves, but can they do without our market? We can survive their putting of stiff duties upon our manufactured produce, but could their grain growers so readily surmount the imposition by us of discriminating duties—duties, say, of 10 per cent. *ad valorem*—on their grain, their beef, pork, bacon, lard, and their canned goods? India, Canada, Australia, New Zealand are rich in food stuffs, which they are both willing and anxious to exchange for our goods. They are not churlish. Glad are they to buy of such as buy of them. And they are as able as they are willing to supply our market, taking always our merchandise in return. If then our American cousins have set their hearts upon a war tariff, why not meet their declaration of war manfully? If they are in the mood to play the curmudgeon and the charl, why hesitate to shew them how excellently well we English can get along without them?

It is language such as this which will bring the American people to their senses, and action in accordance with the language would have more effect than anything else in the world.

THE MARKETS.

After the rush of recent auction sales a lull has set in, many of the buyers having returned home. Nevertheless for the time of the year there is a good demand. Prices of cotton goods are firm, and commission houses are sold out of many widths, and do not care to look far ahead. Wheelwright, Eldredge, and Co. have made the following advanced prices: Brown cottons—Clifton CCC 4-4 sheetings advanced 1/2c, do. S drills advanced 1/2c, and do. K drills advanced 1/2c. Bleached cottons—Farwell 4-4 bleached sheetings advanced 1/2c, and do. half-bleached 4-4 advanced 1/2c. Calicoes in fancies are dull and featureless. The Lodi sheetings, which were advanced 1/2c. by Denny, Poor, and Co., are sold without guarantee or protection. The Gloucester Manufacturing Company will also hereafter sell all their calicoes without stock protection and guarantee. The tone of the wool market is also firm, and stocks in Philadelphia are low. The flannel sales brought some buyers to town, but transactions have not been numerous. Worsteds suitings, and cotton warp and union cassimeres have moved off freely. Stocks of many popular makes are in a satisfactory condition; and, as the mills are approaching the end of existing contracts, it is probable some of them will close for alterations and repairs until the demand for spring goods sets in. The Satinet Manufacturers' Association has decided to shut down for thirty or sixty days during the summer. Stocks are bought abnormally high, but the step has been rendered necessary owing to the keen competition of low grade cassimeres, and the consequent reduction in profits. The satinet mills are generally small concerns, widely scattered, and many of them old and at work under disadvantageous conditions. There are said to be 60 factories in New England, with 186 sets of machinery, 35 of the mills

and 136 sets of machinery being located in Massachusetts.

FOREIGN DRY GOODS.

Imports into the port of New York for the week ending May 22nd, 1890, and since January 1st for the last three years were as follows:—

	1883	1889	1890
	Dols.	Dols.	Dols.
Entered at port	2,222,052	1,927,686	2,431,000
Thrown upon market ..	2,025,687	1,497,736	2,082,215
Entered for consumption	1,730,961	1,102,553	1,817,129

IMPORTS OF DRY GOODS SINCE JANUARY 1ST.

	1888	1889	1890
	Dols.	Dols.	Dols.
Entered at port	56,145,057	59,547,000	63,314,328
Thrown on market	46,971,982	60,323,837	63,042,968

From the above it will be seen that the imports of foreign dry goods at this port for the week amount to 2,431,000 dols., shewing an increase of 38,220 dols. as compared with last week, and an increase of 1,103,314 dols. as compared with the corresponding week last year. The total of goods marketed for the week has been 2,082,215 dols., or 348,785 dols. less than the imports. The total imports since January 1st, 1890, have been 61,314,328 dols., against 59,547,000 dols. for the same time in 1889, or an increase of 1,767,328 dols.

European velvets have been purchased in this market in very large quantities of late, and the prospects for manufacturers would be brighter were it not for the tariff proposals. Plain velvets are well spoken of, but there is not so much doing in plain plushes. Velvet brocades for autumn promise well. Amongst ribbons, the only descriptions for which there is anything approaching an active demand are velvets. Creams, and dark grounds in Millhouse Challies are good lines to carry. Black velveteens are in fair request.

Francis B. Knowles, president of the Knowles Loom Works, Worcester, Mass., died at Washington, D.C., on the 17th, of heart failure. He was in that city with his wife, having stopped on his way home from Florida, where for the past few years he has spent the winter.

Mr. Knowles was born at Hardwick in 1823. At 17 he had acquired an education sufficient to enable him to take charge of a district school. He left Hardwick before he was of age, and after working as a subordinate in several manufacturing businesses, he first appeared at the head of an establishment in 1845 at Gloversville, N.Y., where he manufactured buckskin gloves. He also established in that town a large clothing house, one of the first of its kind in that neighbourhood, and the largest. During the winter of 1861-62 he was in Washington, and made contracts to furnish the army with his gloves. In March, 1862, Mr. Knowles moved to Warren, and, in partnership with his brother, the late Mr. L. J. Knowles, began the manufacture of looms. The first looms made were for hoopskirt tapes with woven pockets for the wires. The loom was patented in 1863, and this branch of the business continued till the fall of 1866, when the company removed to Worcester, occupying Dr. Joseph Sargent's buildings in Allen-court. In 1879 the business had grown to such proportions that it was necessary to have more room, and the concern moved to the Junction shop, where the manufacture of looms has since been continued. Preparations are now in progress for moving into the new building, just finished.

From 1866 till February, 1884, the date of L. J. Knowles' death, Mr. Knowles was in partnership with his brother, and January 1, 1885, the Knowles Loom Works were incorporated, F. B. Knowles being elected president. The factory at this time employed about 400 hands. At the present time the pay roll shews a force of 800.

A *Times* telegram from Philadelphia dated June 4th, says:—

The Senate Finance Committee to-day heard a large deputation of New York merchants and importers who protest against the passage of the Tariff Bill. All the members of the committee, with one exception, attended the meeting. Senator Sherman presided. Mr. James M. Constable, of the firm of Arnold, Constable and Co., spoke for the deputation, presenting a protest against the Bill. He said that the deputation represented, besides New York importers of Chicago, Philadelphia, and Cincinnati, that they believed the Bill legislated for

one class, favouring manufacturers against importers, and that if the Bill became law many importers must retire from business. Other addresses were made by merchants representing various trades, all opposing the Bill. Mr. Henry Curtis spoke on behalf of silk and velvet importers, Mr. Isidore Strauss for pottery and glassware, Mr. Louis Windmuller and Mr. Ernest Werner for wool and woollen goods, and Mr. James Thorpe for upholstery importers. The committee gave close attention to the speeches.

The general argument of the speakers was that the duties in the Bill were actually prohibitory, and would therefore stifle the import trade.

Large meetings of opponents of the Tariff Bill were held here yesterday afternoon and evening, and were addressed by several Democratic members of Congress from Washington. The Senate Finance Committee continues slowly examining the details of the Bill.

The Senate Finance Committee devoted the whole of the day to hearing the speeches of New York importers against the Tariff Bill. This afternoon, importers of coat linings, plush cloths, cotton velvets, hosiery, linens, and other goods, opposed the tariff.

Designing.

NEW DESIGNS.

SATEENS AND THEIR DERIVATIVES.

The use of sateens in one form or another being very prevalent in all branches of the textile trades, a brief description of the methods of construction and utilisation of these makes may prove acceptable.

The sateen weave probably owes its origin to the silk trade, the satins, with which all are familiar, being constructed on the sateen principle. It seems doubtful what reasons led to the use of this make. The saving of expensive material might be one, the production of the maximum amount of lustre might be another; but whichever it was, the principles involved must have been understood in a greater or less degree from the earliest times.

The whole idea of a typical sateen is to produce a smooth even surface, no indentations being observable where the threads pass to the back and the weft comes to the surface. In order to effect this, it is necessary to have a great number of threads per inch, with comparatively few picks per inch. The reason for this will be apparent on consulting *Figure A*, which is re-

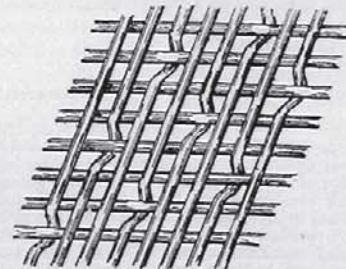


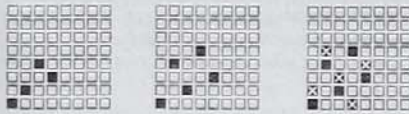
FIGURE A.

produced from the "Manufacturers' Review and Industrial Record." Since each thread retires once in every eight picks, it is necessary that the threads on either side should close up and cover this intersection, which would otherwise prove a defect, and it is very evident, therefore, that a great number of threads per inch are desirable. Then again, observe the fundamental principle of construction, which is this:—All the weft picks lie quite straight in the cloth, while the warp threads bend round them where necessary. Thus the weft picks must always be distant from each other the diameter of the warp threads, but the warp threads may lie as close to one another as their diameters will allow. It thus appears that since the pattern depends entirely on the warp, a large number of threads per inch are desirable, or practically no pattern will appear. Having briefly explained the principle on which these cloths are constructed, the use to which the various types are put may now be commented on.

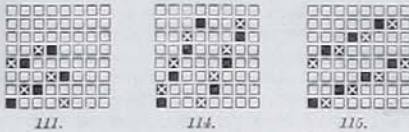
Design 108 is what is known as the crow twill or 4-end sateen. It is not such a perfect sateen as those produced on 5, 7, 8, etc., ends

but, nevertheless, it is a very useful make. In woollen cloths it is often used both alone and in weave combinations. As a make to employ for producing hair-line stripes for coatings, trousseings, dress fabrics, etc., it is also very useful.

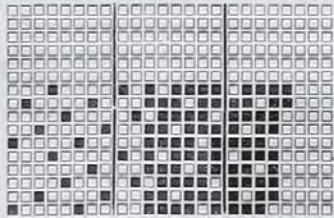
Design 109 is the 5-end sateen constructed upon a base of 2. This is the make employed for the fine, lustrous doeskins, so prevalent a few years since, but now almost defunct. This weave was undoubtedly used because of its lustre-giving properties, and also on the score of economy. An interesting feature about this and the succeeding makes is the direction the twill takes. Since the idea in making a sateen is to distribute the intersections of warp and weft as evenly over a given surface as possible, at first it appears as though there



DESIGN 108. 109. 110.



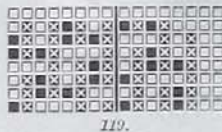
111. 114. 115.



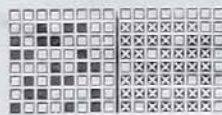
113.



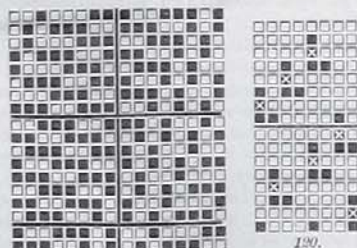
116. 117. 118.



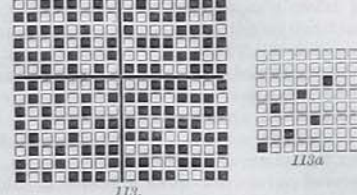
119.



Face. Back. 119.



120.



113.

113a

could be no twill, but such is not the case, as will be seen on reference to Designs 110 and 111 where extra dots have been put in to shew that either a warp or weft twill may be produced. Thus if the warp largely predominate in the number of ends per inch a warp twill will be formed going to the left in an upright direction, while if weft predominate a horizontal weft twill will be formed going to the right. The 5-end sateen and its derivatives are excellent makes for use in either the coating or dress trades. A stripe formed as shewn in Design 112 produces an excellent stripe, while the two Designs 110 and 111 may be combined in twill form as shewn in Design 113, in which case also it is either suitable for dress goods or coatings, according to the weight and style of the cloth. The 5-end sateen is also often used for the ground of floral designs of medium and heavy work, but for the finer materials, such as silks, etc., the 8-end sateen is preferable. Design 110 is the plan employed for the Venetian, a fine warp twill cloth.

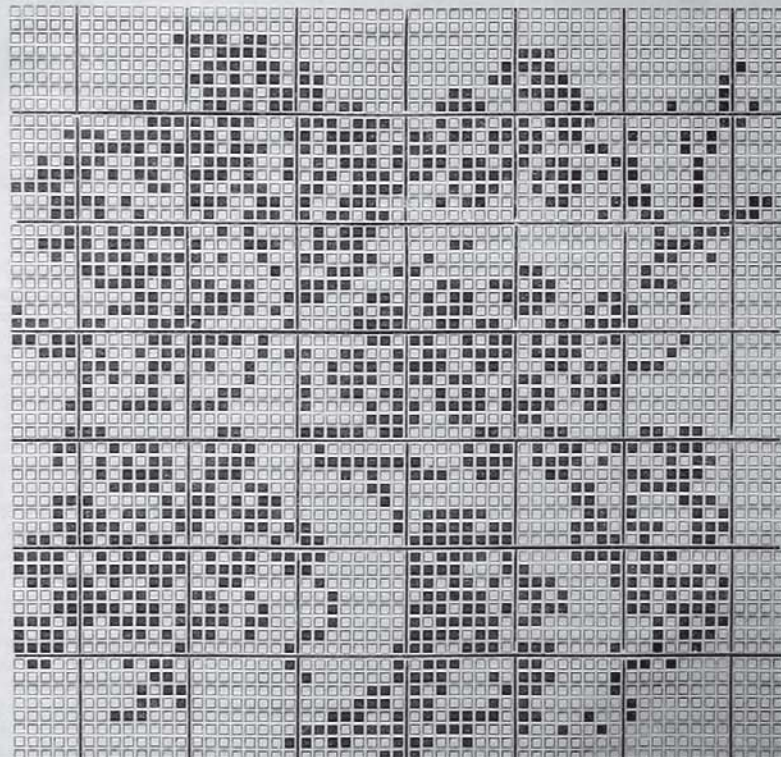
Proceeding to 6 ends, the 6-end sateen may be produced as shewn in Design 113, but since it is more or less imperfect, however arranged, it is only used on rare occasions.

The 6-end sateen is shewn in various forms in Designs 113a to 118. The direction of the twill may be readily ascertained as before by adding another dot to the pure sateen make. Thus in Design 114 the best effect would be obtained by setting the warp close and putting in comparatively few picks, while in Design 115 an open sett should be adopted and a large number of picks, thus producing a good twill in a horizontal direction. From the examples furnished it will be noticed that whereas the 5-end sateen when once put down will make either a warp or a weft twill as required, the 7-end sateen shewing a more decided twill, must be put down one way for a warp twill, and the other way for a weft twill, as indicated in Designs 114 and 115. Of course several useful weaves can be constructed on this basis; in fact, this make in one form or another is fairly often made, but as a rule designers prefer to deal with the 8-end sateen. The question often arises—What is the best system of tying a back to a weave? If a sateen weave, undoubtedly the first system to try is tying on a sateen basis. As an example of this, Design 119 is furnished.

The face is a weave derived from the 7-end sateen, and the most convenient method of tying is, of course, on the 7-end sateen basis, for the right position of the tie once found, the same relative position can be maintained throughout by employing exactly the same sateen. In some irregularly-constructed sateen weaves this method will not yield perfect results, as will be shewn later. In order to demonstrate the method of tying fully, both warp and weft backs have been applied. In the first case, the backing thread is brought over the weft with the face threads on either side, which thus covers it, and in the second case the backing weft is brought over the warp with the picks on either side, which thus hide it. When there are two face threads to one backing rather more difficulty is experienced in effecting a perfect tie in every case. This will be treated in a future number.

LINEN DRESS DESIGN.

Natural figures, on a small scale, of fruit and foliage for morning dresses, in light materials, are likely to be in vogue during the summer and autumn. A considerable quantity of cloth of this make is annually exported to the West Indian Islands. We give a suggestive design which can easily be enlarged if deemed necessary; space will not permit us to give the repeat, which must be made diagonally, bringing the leaf at the top of the left hand corner in the design to the bottom right hand corner in an inverted order, as may be seen by turning the design round until the large leaf is found in position at the bottom on the right hand. A repeat may be made as the design stands. The warp, two fold, 80's cotton in a 60 reed, or 60 ends per inch, shot with 56's linen weft, 56 picks per inch; or the weft may be 20's two fold spun silk or mohair. The greatest amount of sheen is required from the weft, as the warp is simply used to make plain cloth, which is shewn by the light type in the design. The details given of reed and counts may be varied, but in any case the weft must be the main factor, as it forms the figures; the warp may be any dark shade from black through all the blues, browns, etc.; weft always showing bright tints in all the fashionable colours. We expect to give in our next issue a few examples in all-over patterns and stripes, suitable for the export trade.



LINEN DRESS DESIGN.