generally than was ever before the case since the organisation was founded in 1867.

FACTORY LEGISLATION.

New Jersey manufacturers are waiting with much interest to see whether or not the new Factory Act, reducing the hours of labour to 55 per week, and practically interdicting all overtime, is to be rigidly enforced, as its operation would place them at a very serious disadvantage in competing with other States, wherein the laws permit much longer hours—all the way from 60 per week to whatever the millowner and his hands may agree upon between themselves. This new law is supposed to be operative now.

The adoption of a 58 hours-a-week time-schedule for the Commonwealth of Massachusetts is virtually an accomplished fact, and it is predicted that a further reduction in the hours of labour will follow within the next year or two. Manufacturers are greatly stirred up over the matter, and with good cause, as the enforcement of the measure will handicap them seriously in competing with other States, and most especially (in case of the cotton industry) with the South, of which they are beginning to get rather apprehensive—and not without cause.

COTTON ITEMS.

Imports of Egyptian cotton for nine months of the current fiscal year have exceeded by nearly 50 per cent. the imports of that commodity for the same time last year. This cotton all goes to the New England mills, and the movement indicates that there is an increasing tendency to improve the quality of the goods manufactured in that section. Finer yarns are being spun each year, and a better quality of goods placed on the market.

According to consular advices, the popularity of American prints in the South American markets is increasing under the stimulus of the recently established policy of reciprocity. During the past year the exports of prints and other cotton fabrics of American manufacture to the southern countries have been larger than ever before, and a steady enlargement of American trade in this direction is confidently to be expected.

THE IMPORTATION OF DRESS GOODS.

Protectionists are grieved and enraged to find that the sale of foreign dress goods is almost as large as ever, notwithstanding the high tariff of 1890. The April returns shew that the value of the imports of women's dress goods for that month was $727,125 against $510,704 in 1891. Under the heading of "cloths," there is also an increase, the figures being $588,000 and $519,000 respectively. The increases in the figures for ten months preceding April are very marked, and if the April returns are kept up during May and June, the imports during the twelve months will be larger than has been known for some years, with the exception of 1890, when the totals were swollen from exceptional causes. In the case of dress goods, should the importations continue to the end of the fiscal year the same as for the month of April, which averaged less than for the previous ten months, they will nearly equal the average value of those for the years 1884 to 1891, notwithstanding present values are on a lower basis. That such things should be is a source of much annoyance to McKinleyites, who thought that Bradford and other European centres would be entirely crushed by the latest tariff.

JAPANESE *v.* ITALIAN SILK.—An American merchant at Yokohama, who has recently made a tour in the silk manufacturing districts of Europe and the United States, has put on record for the benefit of Japanese silk producers his impressions as to the relative qualities of Italian and Japanese silk. At present the latter is marred by defects. The first defect is that of variations of colour. A bale of Italian will run off at one unvaried tint throughout, because the cocoons are carefully assorted before reeling, while in Japan there is no such system of rigid selection. Again, there is a similar want of uniformity in the sizes, or "counts"—to use the term current in the cotton trade—of Japanese silks. In Italy silk of, say, 13-15 deniers will not be found to vary beyond the indicated limits, and the average will be very nearly 14 deniers. A similar description of Japanese often contains all sizes from 10 to 18 deniers, and manufacturers cannot possibly make an even cloth from such material. With respect to cleanness of thread, too, there is a wide difference between the two growths. In 100 skeins of Italian there will hardly be found a single "nib," whilst many would be discovered in a single skein of Japanese. These various defects can all be removed by greater care in winding, and the writer intends to publish in Japan the results of his investigations. He warns the Japanese that Chinese silk growers may begin to give attention to the reforms he suggests, and if they should do so Japan will have a more formidable competitor to deal with than Italy is now.

Designing.

NEW DESIGNS.

TWEEDS.

These goods are now made in such a variety of ways, with such a variety in yarns, make, and finish, that although good patterns are more easily produced than heretofore, novelties are few, and only the result of mature thought and calculation—excepting, of course, the few effects produced by accident. To some it may appear that the production of excellent patterns is at all times rather haphazard, depending largely upon circumstances outside the control of the designer. In other words, they would say—let a man put together a large number of pattern ranges and he is certain to produce some effects of the kind required. This may be true in some degree, but only those who have practically studied pattern production realize how, without judgment, sound commonsense, feeling for good colour-combination, and systematic work, the designer has an insurmountable barrier between him and the coveted success: he cannot *with any degree of certainty* design effective pattern ranges. Now a great deal of the success in putting pattern ranges together depends upon the mental vision with which the designer can foresee the result of the proposed combinations, and this foresight can only be obtained from the organization of previous research. How important then is the thorough organization of all research work, how much time may be saved by such organization, and what a field for future enterprise it opens to him who will bear in mind the above facts and order his work systematically!

An example of the method of procedure in conducting a research into the colour and weave effects produced by the three-and-three twill may here prove useful. As a rule it will always be found advisable to arrange colourings in numbers, the same multiple of the weave to be employed, thus: for the two-and-two twill, one and one, four and four, etc; for the three-and-three twill, three and three; six-and-six, nine and three, etc. Since in compound schemes of colouring, warp and weft of necessity cross in a variety of ways, producing other effects than those arranged for, in the following list more colourings are given than may be deemed necessary. Still we would recommend a complete list at least being drawn up for each weave, even if every scheme be not worked out.

THREE-AND-THREE TWILL COLOUR AND WEAVE EFFECTS IN TWO COLOURS.

Warps.	*Wefts.*			
(1)	1	2	3	4
1 black	1 black	2 black	3 black	All black
1 white	1 white	2 white	3 white	or white
(2)				
2 black	2 black	1 black	3 black	All black
2 white	2 white	1 white	3 white	or white
(3)				
3 black	3 black	1 black	2 black	All black
3 white	3 white	1 white	2 white	or white
(4)				
6 black	6 black	1 black	2 black	3 black
6 white	6 white	1 white	2 white	3 white
(5)				
6 black	6 black	2 black	3 black	6 black
3 white	3 white	2 white	3 white	6 white
(6)				
9 black	9 black	3 black	6 black	6 black
3 white	3 white	3 white	3 white	6 white

This exhaustive list may seem rather too extensive for completely working out, and there is really no need to do so, as it will be found that many schemes are repeated twice. For example, every one-and-one effect of any value will be found under *Warp* 1, therefore all others may be crossed off; similarly every effect of any value in two-and-two warping will be found in the second warp. By this means it will be possible to practically complete the working-out of the list with very little trouble.

With three colours more thought in the selection of crossings, etc., is needed, but the following list gives the prominent schemes:

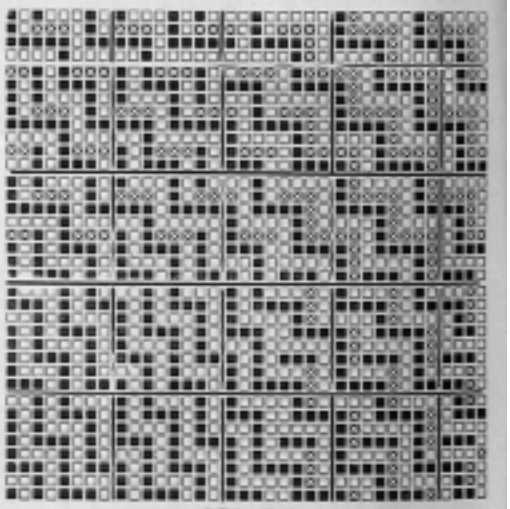
THREE-AND-THREE TWILL COLOUR AND WEAVE EFFECTS IN THREE COLOURS.

Warps.	*Wefts.*			
(1)	1	2	3	4
1 black	1 black	2 black	3 black	4 black
1 grey	1 grey	2 grey	3 grey	4 grey
1 white	1 white	2 white	3 white	4 white
(2)				
2 black	2 black	1 black	3 black	4 black
2 grey	2 grey	1 grey	3 grey	4 grey
2 white	2 white	1 white	3 white	4 white
(3)				
3 black	3 black	4 black	6 black	All black
3 grey	3 grey	4 grey	6 grey	or dark
3 white	3 white	4 white	6 white	colour
(4)				
9 black	9 black	3 black	9 white	All black
6 grey	6 grey	3 grey	6 grey	or dark
3 white	3 white	3 white	3 black	colour

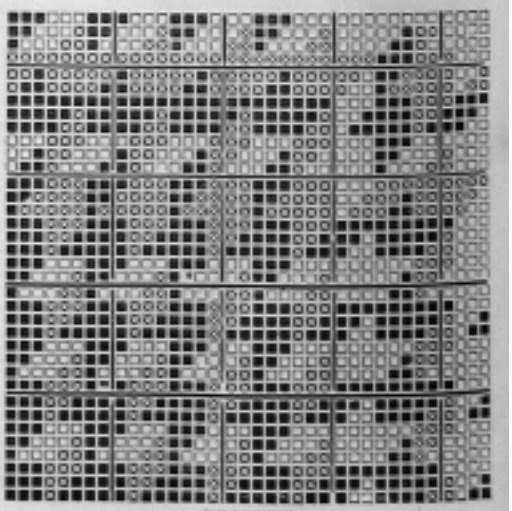
This list is not quite so systematic as the previous one: still it will be found to contain most of the best colour and weave effects; should any designer, however, wish to draw up the lists more completely, the system for doing so is here fully indicated.

A few ideas may now be given of applying some of the above effects to tweed colourings.

In the two-colour effects we find a one-and-one effect in black and white, and in the three-colour effects we also have a similar effect. These, combined, give us a check as shewn in *Design A*, the particulars being as follows:—



DESIGN A.



DESIGN B.

Warp.

1 thread black, 1 ,, white } for 18 threads.

1 thread black, 1 ,, grey, 1 ,, white } for 18 threads.

Weft.

1 pick black, 1 ,, white } for 18 picks.

1 pick black, 1 ,, grey, 1 ,, white } for 18 picks

Any dark, medium, or light colours may be used for the black, grey, and white respectively.

Another effective pattern is as follows:

Warp.

3 threads dark brown, 3 ,, black } for 18 threads.

3 threads black, 3 ,, medium olive, 3 ,, medium brown } for 18 threads.

Weft.

Same as warp

Of course the size of the pattern may be altered at will. This effect is indicated in *Design B*.

A principle of even greater worth is to replace some of the threads in the foregoing with threads of a distinctive colour, as indicated in the following:—

Warp.

1 thread grey and white twist, 1 ,, fawn and white twist } for 12 threads

1 thread lemon and white twist, 1 ,, fawn and white twist } for 4 threads.

1 thread grey and white twist, 1 ,, fawn and white twist } for 12 threads.

4 threads grey mixture, 4 ,, fawn mixture } for 24 threads.

Weft.

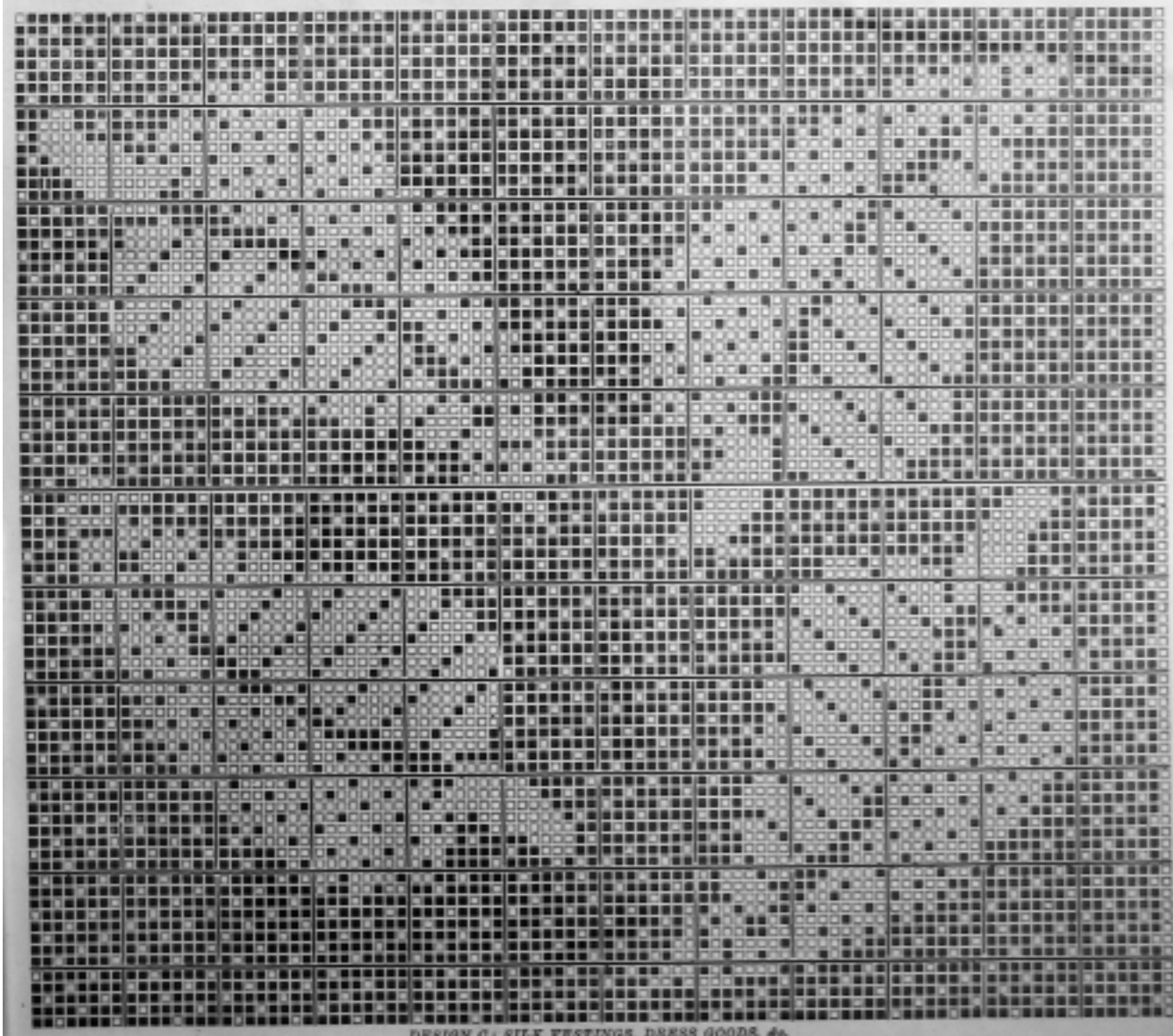
To be the same as warp.

This scheme, properly carried out, will give a most pleasing result, and its value as suggestive of others is great. It should, however, be noted that in all the foregoing some little experiment may be useful to ascertain the best "footing," *i.e.*, relationship between weave and colouring.

SILK VESTINGS, ETC.

Limited space has prevented us from developing the full motive of *Design C*. Sufficient however is shewn to convey some idea of its nature and utility. The warp ground is a 5-shaft satin, although any other satin twill might be as effective. The leaves are formed by the weft picks, or the ground may be a sateen, and the figure a warp face. For dress-goods a spun silk warp, all white or cream, 44 double threads, that is 88 single ones, two in a mail, four in a dent, then a band of 5-shaft satin 88 single threads, two in a mail, 72 single ends, two in a mail. As will be seen from the design, one figured stripe has the leaf inverted cross-ways, and in the third stripe the leaf is inverted lengthways, giving a variety by being irregular. The silk tram weft on the warp ground to match the band dividing the two figured stripes. A pattern as follows would be found suitable:—The two figured stripes, dark emerald green, brown, blue, cardinal, puce, or tan; the dividing band all white or cream; the weft all white or cream. This is merely an indication of what may form patterns for stripe goods.

For vestings, a great quantity of warp threads would be required, say 25 dents per inch, 5 in a dent, all single in the mail, with 60's two-fold China silk. The leaves in their four positions to form an all-over pattern, based on a satin arrangement, so that the leaves would be equally distributed over the surface of the fabric. The warp and weft to be of different or opposing colours. Any arrangement may be used if suited to the size of the leaf, and the space it occupies in the repeat. The design is simply suggestive, and to obtain pleasing effects will very much depend upon the treatment adopted. Fancy vestings are very popular, and likely to continue so for a time. Novelty and good colourings in these fabrics command a ready sale, particularly in simple floral patterns.



DESIGN C: SILK VESTINGS, DRESS GOODS, &c.