

We see from these figures that the Amalgamated Association of Operative Cotton Spinners of Lancashire and adjoining Counties has thus a total strength of 32,657 members. It is not our purpose to inquire on the present occasion how far they have succeeded or how far they have fallen short of enrolling every operative, whose occupation as spinner, minder, or piecer, renders him eligible for admission. That may form the subject of another inquiry. It is more our purpose to point out that whatever may be said regarding it, one thing must be admitted, namely, that the efforts made have resulted in a grand success in two of the most important phases of such a movement—the numbers enrolled and the amount of money contributed by the individual members. The total income from contributions during the past year has been £46,145 4s. 3d., which with various items from miscellaneous sources makes the total income of the year £47,293 10s. 10d. This is a magnificent sum, and shews how "many a mickle makes a muckle." Roughly speaking the personal contribution of each member may be put down at 1s. per week. Now these 32,657 people have combined and contribute their money for certain purposes, namely, the protection and advancement of their common interest. May we not here ask how many master spinners and manufacturers have or do spend £2 12s. per annum on behalf of their common good, the good of the trade? We venture to say that the number who could respond in the affirmative would be very small indeed. Is this a healthy condition of things? Can they rationally expect to make their influence felt in such a manner as their interests really demand? We do not wish it to be assumed that we are advocating a more perfect organisation of capitalists in order that their forces may be arrayed against those of their workpeople. Such is not the case. That is only one side of the matter; there are many occasions in which we expect they would be arrayed together on one side, working for their common interest to the benefit of both. The points in which their interest are one are far more numerous than those in which they are antagonistic, and this truth will, we expect, make its way home to the consciousness of increasing numbers of both sides every day in the future, leading to a diminution of conflict and an increase of co-operative effort to advance their common good.

#### CHEMICAL PATENTS.

The May number of the Manchester Chamber of Commerce *Monthly Record*, issued on Tuesday, contains a report on the English law of patents, drawn up by a committee of the Chemical and Allied Trades Section, which offers proposals for a further amendment of the already much-amended Patent Act of 1883. These proposals are drawn up to meet the exigencies of the chemical industries of this country.

The present law on the subject of the amendment of patents has been almost entirely built up on legal experience gained in dealing with patents for mechanical inventions, where the nature and scope of the invention is, as a rule, fairly well ascertained.

The report of the above-named committee very properly points out that chemical patents are frequently of a very different kind, and the strict application of legal principles derived from dealing with mechanical inventions has been, and can still be, productive of a great amount of injustice and actual obstruction of the path of chemical progress, and that, there-

fore, a more explicit statement of the scope of the inventions should be required in specifications of chemical patents. The proposals made by the committee are as follow:—

1.—To add to part II., section 5, sub-section 4, of the Act of 1883, the following provisions, which shall be known as sub-section 4b:—"When generic terms are used in chemical patents, the patentee shall specify by name or otherwise each substance or compound which he intends to include within such term or terms, and he shall only be entitled to claim as his invention those substances or compounds which have been so specified by him."

2.—Sub-section 4c:—"There shall be deposited at the Patent Office, along with the complete specification of chemical patents, duplicate samples, sufficient for analysis or examination of the result or results claimed, and of all raw and intermediate products used in obtaining such result or results, unless such raw or intermediate products shall be ordinary articles of commerce easily obtainable in this country."

3.—Sub-section 4d:—"The complete specifications of all patents relating to coal-tar colours, in addition to the samples of the colouring matters themselves, and the intermediate substances used in obtaining them, shall be accompanied by dyed specimens of cotton-wool or silk, shewing the results obtained with one per cent. and two per cent. respectively of the dyes claimed. A complete statement of the method employed in dyeing in each case shall also be given."

The Committee are further of opinion that the words in clause 1, section 18, "from time to time," shall be altered, in the case of chemical patents, into "two years from date of application."

The three numbered paragraphs of the above proposals are excellent, and would materially contribute to the removal of the present abuses, but we regret we cannot express our approval of the subsequent somewhat ambiguous paragraph, which appears to have been interpolated in the report as an afterthought, and which would practically do away with the undoubtedly great advantages which section 18 confers.

For example, if an inventor claims three elements of an invention, say A B C, and it turns out that C is not novel, the patent for A B and C is invalid unless the patentee subsequently disclaims the C part of his invention. Section 18 allows him to do this at any time, and thus retain his right to A and B (supposing, of course, that these are actually his own invention). In the meantime there is nothing to prevent anyone using the old element C, but the law very properly says that it is not right to take advantage of an inadvertence on the part of the inventor to steal from him his undisputed elements A and B. To limit the time for disclaiming to "two years from date of application" would in many cases be an act of far greater injustice than the evils the proposal is intended to remedy. From the point of view of a chemical manufacturer, who would like to make use of an inventor's labours without paying for them, the total abrogation of this section, or even of the Patent Law altogether, might be desirable; but from the inventor's point of view, the matter presents itself in a somewhat different light. It is somewhat remarkable that the Committee have in their report given no reason whatever for the "further" opinion respecting the restriction of the time for amendments.

The firm of Leonhardt, Woelker, and Girbard are enlarging their factory at Dombrowa, near Lodz, by the erection of a combed-yarn-spinning establishment, which will accommodate 600 spindles. Stiller and Bilschowski of Lodz are also adding a combed-yarn-spinning factory to their works.

DURING THE WEEK ending the 5th May some 1,350 bales of silk, weighing 98,796 kilogrammes, were conditioned at the Lyons conditioning house. Evidently the French manufacturers find plenty of work for the conditioners to do, and it would be a good thing if English silk manufacturers followed the example of their French competitors.

MANUFACTURING IN NATAL.—The Government of Natal has issued the rules and regulations for the law to make provision for encouraging by rewards colonial manufacturing industries. Its two most prominent features are the appointment of a Commissioner of Industries, and the offer of rewards varying in amount from £100 to £5,000 for the establishment of new industries, of which twenty are specified. The amount of rewards extends from one-eighth to two-fifths of the value of the output. The amount of the capital to be invested ranges from £500 to £25,000. The aggregate amount of rewards offered is £25,000. The principal industries which the Government wishes to build up are leather, woollen, and iron. The fourth class of industries mentioned in the schedule embraces woollen manufactures, blankets, and rugs from colonial wool. The value of the product to be produced in one year and a half is about £8,000, on which a reward or bonus of £3,000 will be paid, while the amount of capital invested in plant must be £15,000. Class 5 embraces woollen cloths—tweeds, serges, and flannels from colonial wool. The amount of capital to be invested is £7,500, and the value of the output for one year and a half must equal £5,000, on which a bonus of £1,500 will be paid by the Government. Class 6 embraces yarns and hosiery from colonial wool. The amount of capital to be invested must equal £1,500, and on the output of a value of £1,000 per annum the Government will pay a bonus of £300. Natal is determined if she can to build up home manufactures.

## Letters from Readers.

The Editor does not necessarily endorse the opinions of his correspondents.

#### ANSWERS TO CORRESPONDENTS.

T. S. V. (Thomaston, Maine, U.S.)—Your inquiry has been passed on to Messrs. Geo. Thomas and Co., Deansgate, Manchester, who have a speciality in connection with the subject of your inquiry.

## Designing.

#### NEW DESIGNS.

#### WORSTED COATINGS AND TROUSERINGS.

A great improvement has been noticeable of late in the application of both weave and colour to worsteds. The novelties of construction (*i.e.*, weaves) which have come into use comparatively recently have been made the most use of, and though the best of these probably owe their origin to the French journal *Les Tissus*, still English manufacturers and designers are not behind their neighbours in the efficient utilisation of such effects. We have previously, in the pages of this journal, made use of some of these effects in combination with other makes, and we now present another series which, though original, probably owe some of their component parts to the journal mentioned.

*Design 100* is a weave combination which should claim our best attention. It consists primarily of two effects, *viz.*, a warp twill and a weft twill. These are, of course, varied, and the order in which they are varied will well repay due consideration. First of all comes a broad warp twill effect A, leading up to a weft rib effect B, on the other side of which is the sateen or buckskin twill C, after which comes one of the main features of the design, *viz.*, the weft twill D. This consists of a broad rib in twill form, and three small ribs designed to shew to the best effect the broad one. Succeeding this is another section of the buckskin make, followed by a weft rib to balance the other one previously described. This is followed by the broad warp twill effect, and then the buckskin follows, to be repeated according to the width of stripe required. The following sett will be found suitable:—

Warp.	Wtft.
All 2/50's worsted.	All 25's worsted.
14's reed 6's.	80 picks per inch.

It will be noticed that the weft rib portions have been introduced with the idea of supplying colour in the weft, and that by wefting one and one, sections B B will vary considerably from section D. The following colouring will prove effective:—

**Warp.**  
 2 threads dark olive,  
 2 " olive worsted and red silk twist, or  
 olive worsted and dark brown silk,  
 black,  
 4 " olive worsted and red silk twist,  
 dark olive,  
 14 " black,  
 16 " dark olive,  
 14 " olive worsted and red silk twist,  
 black,  
 2 " olive worsted and red silk twist.  
 Dark olive threads as required.

**Weft.**  
 1 pick black worsted and white silk twist,  
 1 pick black worsted.

Or as follows :

**Warp.**  
 2 threads dark olive (neutral),  
 2 " olive worsted and blue green silk twist,  
 4 " olive dark,  
 2 " dark brown (neutral) and blue green silk  
 twist,  
 44 " dark brown (neutral),  
 2 " dark brown (neutral) and blue green silk  
 twist,  
 4 " dark olive,  
 2 " dark olive (neutral) and blue green silk  
 twist,  
 Dark olive threads as required.

**Weft.**  
 1 pick black worsted and blue silk twist,  
 1 pick black worsted.

White, green, and red silk twists will also prove effective.

*Design 101* is composed of two nine-end makes. The first make, developed in solid type, is really a warp rib twill of a corkscrew character, from which two twills of entirely different colour can be obtained by warping one and one. The weave, with which it is combined, is a nine end twill which, if too open as here given, may be rendered faster by single dots as shewn. The following is a suitable sett :—

**Warp.** All 2/50's worsted. 16's reed 6's.  
**Weft.** All 25's worsted. 90 picks per inch.

Colour may also be applied with advantage here.

*Design 102* is a suggestion for producing a novel effect by means other than those in everyday use. In dress fabrics, warp rib stripes, generally crammed, are very common, and it seems to us that this principle of producing a bold, effective stripe may be successfully carried out for worsteds. The sett supplied for *Design 101* or the following should give an effective pattern :—

**Warp.** All 2/60's worsted. 25's reed 4's.  
**Weft.** All 30's worsted. 90-100 picks per inch.

The twill effect may be extended as far as requisite, and coloured silk or worsted twist introduced in this twill section. The threads going to the back in the large rib effect should be tied to ensure a firm cloth being produced.

**WOOLLEN SUITING.**

*Design 103* is for this class of goods. The production of spots in one form or another

calls for attention from all woollen manufacturers. Of course the introduction of extra yarns is often resorted to for such effects, but the method indicated in this design is quite as effective and sometimes much more appropriate. If the following system of warping, etc., be adopted, an effective stripe will be produced :—

**Warp.** 16 ths. black or dark brown.  
**Weft.** All black or dark brown.  
 16 ths. medium light drab.

Since marks here mean warp, the spots which are distributed on the basis of the 4-end sateen will be developed in the light drab. Colours may, of course, be introduced, but since the spotting should be the characteristic feature of this design care must be taken to avoid too strong contrasts, or any other effects that will render the spots unimportant.

**INDIAN CARPET.**

This week we give an Indian carpet design from Cashmere. It is five yards square, made of spun silk; all the ground (light type) of side, cross borders, and centre, is a peculiar green white approaching to peacock green, tinged very much with white; all the dark type is a brilliant crimson. As will be seen it is an all-over pattern on a purely geometrical basis, giving the proper form for a floor decoration. Some of these carpets or rugs are made of fine goats' wool, and sell at prices almost incredible. They possess extreme softness with durability. The colours preserve their purity; they are always glowing, radiant, and bright. It is a matter for regret that home manufacturers do not improve their designs, by introducing something of the spirit and appropriateness of Eastern patterns into their productions.

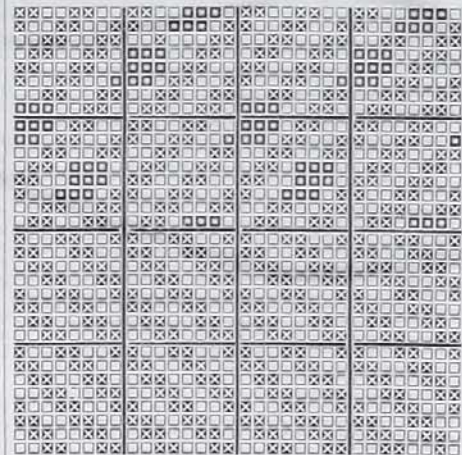
**NEW GALATEA STRIPES.**

*No. 1.*—Fast colours; 60 reed, 3 in a dent, or 90 ends per inch, of 20's twist, 24's weft, 56 picks per inch; one shuttle dark blue; four shafts, three for twill and one for spot; three to round. Warping and draft: 36 dark blue on shafts 1, 2, 3; 3 of white; 3 in a heald, on the fourth shaft; 18 of dark blue on 1, 2, 3, and 3 of orange; three in a dent on 4th shaft; total ends in pattern, 60.

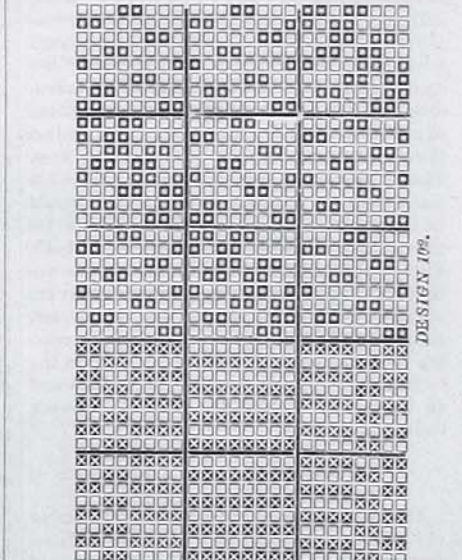
*No. 2.*—The same reed and counts as *No. 1*. Three shafts for twill and two for spot; 9 to the round. Warping and draft: 48 dark blue, 2 of white, 4 dark blue; all on shafts marked 1, 2, 3; 3 of pink, 3 in a heald on 4th shaft, 3 of light green, 3 in a heald on 5th shaft, 4 dark blue, 2 of white, 3 dark blue, 2 of white, 4 dark blue on shafts 1, 2, 3; then 3 of white, 3 in a heald on the 4th, and 3 of white on the 5th shaft; 4 dark blue, 2 white, 3 dark blue, 2 of white, 4 dark blue on 1, 2, 3, shafts, 3 light green, 3 in a heald on 5th shaft, 3 of pink, 3 in a heald on 4th shaft, 4 dark blue 2 of white on shafts 1, 2, 3; complete pattern. Total number of ends, 108 and repeat.

**ZEPHYR COTTON TARTAN WITH SILK STRIPE.**

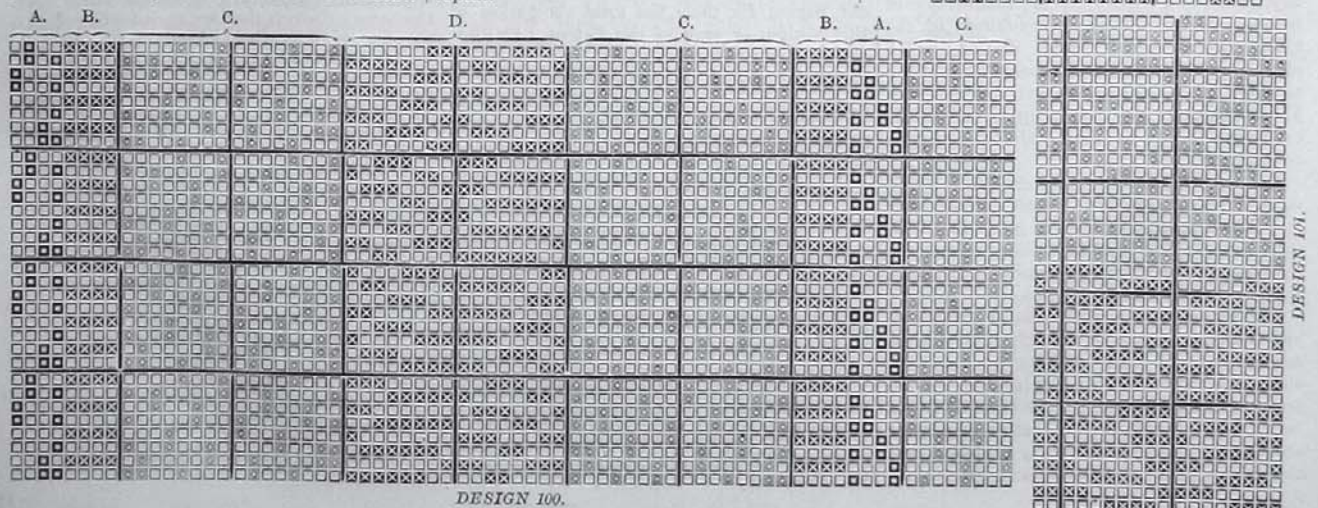
60 reed, one in a dent, or 30 ends per inch of 24's twist, 24's weft, 30 picks per inch, silk stripe, 24's two-fold spun silk, bright colours. Warping and draft: 4 buff, 4 white, 12 times over on shafts 1, 2, 3, 4; 12 green drab, 2 brown, 2 blue, 2 brown, 2 blue, 2 brown, 2 blue, 2 brown, 13 blue, all on 1, 2, 3, 4; 24 crimson or scarlet silk on 5, 6, 7, 8 shafts; 12 blue, 2 brown, 2 blue, 2 brown, 2 blue, 2 brown, 2 blue, 2 brown, 12 green drab; total ends in complete pattern, 196. The silk to be 4 ends in a dent, 8 shafts, 4 to round.



DESIGN 100.



DESIGN 101.



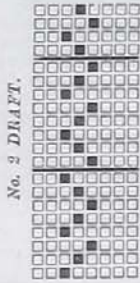
DESIGN 102.

DESIGN 100.

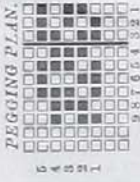
INDIAN CARPET,



TARTAN PEGGING PLAN.



No. 2 DRAFT.



PEGGING PLAN.

No. 2 GALATEA.



PEGGING PLAN.

No. 1 GALATEA.

