

promotion of their comfort that an all-wise Creator first created these beasts of the field."

"Insane legislation, which protects the natural productions of beasts" is charming. But what have the wool growers, who depend for their livelihood upon the sale of the "natural productions of beasts," to say to this? It seems to be carefully overlooked by this ingenious correspondent, that it is not the beasts, but the owners of the beasts, that protection is intended to benefit. *Wade's* says in connection with this matter that the secretary of the navy has suggested that we have a new coat-of-arms, in keeping with improved methods of warfare. If the secretary is ready for designs, it adds, we would suggest a Billy-goat *en rampant* on a New England granite-boulder, surrounded by wrecked carpet-loom.

Work has been commenced on the buildings which are being erected by the company formed to take over Dunlap's patent for printing tapestries. The new works are situated at Stanwick, N. J., and the structures now in progress consist of a weaving and printing shed 106 by 192 feet. Other buildings will be pushed forward as rapidly as possible. Thirty looms are ready, and 130 more are included in the contract. Certain grades of printed upholstery goods are included in the lines to which the company (which has a full paid-up capital of £40,000) will give attention. It is stated that the H. B. Clafin Co. has made a formal offer to take the entire production up to 2,000,000 yards.

An Englishman (Mr. R. G. Hood, of Philadelphia), referring to recent statements as to the high cost of living in this country, and the exaggerated statements made concerning the remuneration of labour, endeavours to shew that the position of a working man here is much better than that of his brother in England. Mr. Hood is a thoughtful man, judging from the character of his remarks. He says that after arriving in the States he found that his annual savings amounted to as much as the total wages he would earn in England. As to the statements made concerning the high cost of living here, he states that the dearest thing he found was labour. Every dear article he found was, he says, only dear in proportion to the amount of labour involved in its production. "We can only compete with Europe," he adds, "when we are prepared to work for their (*sic*) wages, and live according to their customs and habits, as they can work just as hard and skilfully as we can, notwithstanding all the boasts to the contrary that American workmen can do twice as much as English. I should like to see the American mechanic who is so skilled in the use of tools, and so full of energy and endurance, as to beat the English mechanic five minutes a day, to say nothing of five hours."

The main buildings of the Geneva Worsted Mill, owned and operated by the Geneva Worsted Co., Maurice Uhlman, manager, have been burned down. The village of Geneva is about three miles from the centre of the city, and the mill property is situated largely in the town of North Providence. The fire was confined to the mill in which it originated, the office, with its contents, the weave room, machinery and stock, No. 2 mill and the boiler and engine room being saved from damage. The loss is estimated at £20,000.

Cotton damask and towels are being made more extensively than ever, the advance on linens giving the trade an unlooked-for stimulus. Several manufacturers are engaged on these, and sold several months ahead. They are nothing like linens, but are a very good substitute, being cheap, and suitable for many purposes. Bath towelling and hucks are very fair imitations, and command considerable sales.

The favourite lace of Russian ladies is made in ecru, mixed with such varied colours as bright red, blue, yellow, and pink. It has recently been introduced in Paris as a decoration for dresses and the bordering of table and house linens.

It is reported from the Dardanelles that the production of cotton in that region during 1890 was on a reduced scale. The amount is estimated at 200,000 kilos, inclusive of the cotton of the village of Maidos. Current prices: 6 piastres 30/40 per oque. The goods are despatched to Salonica, the Danube, and to Greece.

THREE heavy failures in the silk trade are reported from Mayence, Luigi Franzi, Alessandro Balli, and Guglielmo Possenti, with liabilities of 800,000 lire (£32,000). Further failures are feared.

THE New York correspondent of the *Daily Chronicle* telegraphs:—Messrs. Ashworth Brothers, of Manchester, have secured a tract of land from the Globe Yarn Mills at Fall River, Massachusetts, upon which they will erect large machine shops for the manufacture of carding and general machinery.

A READING tailor announces that he has made arrangements to meet special and urgent cases, which will enable him to make a suit of clothes in 210 minutes. This makes a capital advertisement, and may continue to do so if no opposition tradesman offers to do the same half-an-hour quicker. But even then the feat would be a very safe "record," as races are reckoned. Some eighty years ago a Newbury manufacturer won a wager of 1,000 guineas by producing at a quarter-past six in the evening a complete damson-coloured coat, of which the wool had been on the backs of two sheep at five o'clock the same morning. We have seen several copies of a print representing a commemorative festival held at a village at West Underwood, North Bucks, about the close of the last century, to celebrate the coming of age of one of the Throgmorton family, in which are shewn the shearing of the sheep, carding and spinning the wool, the weaving of the cloth, the tailor at work, and the fitting on of the finished garment—all done between sunrise and sunset. This feat might even astonish the enterprising Reading tailor. Some cotton was once made up in cloth at Preston within six hours of its being taken out of the bale, and in the evening of the day on which it was delivered at the factory the weaver was wearing a dress made from it. So, too, particular credit was taken by the dress-makers of Marie Roze when they once provided her with three costumes at a day's notice, as she was unexpectedly called upon to play *Marguerite*. There would surely be more difficulty in making three dresses in a day than one suit of clothes in three-and-a-half hours, but still no time would have to be lost in either case.—*Warehouseman*.

THE SCISEOPHONE.—An instrument for detecting flaws in metal castings and forgings, which is called the sciseophone, has been invented by Captain de Place, of Paris. The apparatus consists of a small pneumatic tapper worked by the hand, and with which the piece of steel or iron to be tested is tapped all over. Connected with the tapper is a telephone with a microphone interposed in the circuit. Two operators are required, one to apply the tapper and the other to listen through the telephone to the sounds produced. These operators are in separate apartments, so that the direct sounds of the taps may not disturb the listener, whose province it is to detect flaws. The two, however, are in electrical communication, so that the instant the listener hears a false sound he can signal to his colleague to mark the metal at the point of the last tap. In practice the listener sits with the telephone to his ear, and so long as the taps are normal he does nothing. Directly a false sound—which is very distinct from the normal sound—is heard, he at once signals for the spot to be marked. By this means he is able not only to detect a flaw, but to localise it. Under the auspices of the South-Eastern Railway Company, a demonstration of the sciseophone was given last week, by Captain de Place, at the Charing-cross Hotel, London, in the presence of several members of the Ordnance Committee and other Government officials. Mr. Stirling, the company's locomotive superintendent, had previously had several samples of steel, wrought iron, and cast iron prepared with hidden flaws known only to

himself. The first sample tested by Captain de Place he pronounced to be bad metal throughout, which Mr. Stirling stated he knew it to be. Other samples were tested, and the flaws localised by means of the apparatus. On breaking some of the bars of wrought and cast iron, the internal flaws—the localities of which were known to Mr. Stirling by his private mark—were found to have been correctly localised by Captain de Place. On the other hand, it has to be stated that some bars were broken at points where the apparatus indicated a flaw, but where the metal proved to be perfectly sound. Making every allowance for the experiment being conducted with occasional interruptions from the visitors, it shews that, however ingenious the invention, it can hardly yet be called a practical success. Having, however, accomplished so much, there is every reason to suppose Captain de Place will succeed in rendering the apparatus perfectly reliable.

Designing.

NEW DESIGNS.

INDIAN DHOOTY.

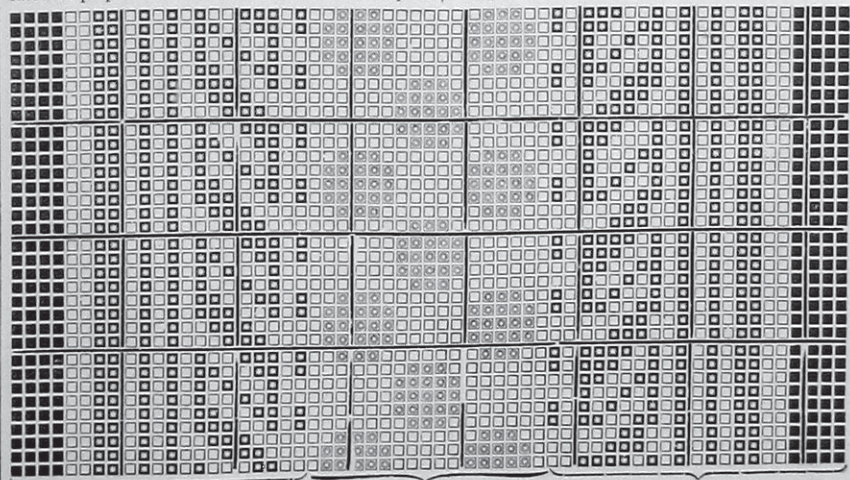
This design is a silk bordered dhooty, made in Loodianah. It is 3 yards, 22 inches; width, 1 yard, 4 inches; weight, 10½ ounces. In the band *a* all the light type is a plain ground of green, the dark type or stars white; the band *b* all the blank spaces a plain ground of dark blue, nearly black, the dotted balls or circles a dark though clear yellow, almost approaching orange; the *c* band is a counterpart of *a*; the whole of the black portions of the border are silk, the ground and centre of the dhooty bleached cotton; the welt all bleached cotton. Many varieties of Loongee, Dhooties, and other makes of Hindoo cloths will be found in the pages of this journal since March of last year, forming a very interesting study for the makers of this class of fabrics in Lancashire and elsewhere. The patterns and type of colouring, which is fully described, are the most popular throughout the Indian Empire, and meet a ready sale in all bazaars.

GAUZE OR LENO FABRICS.

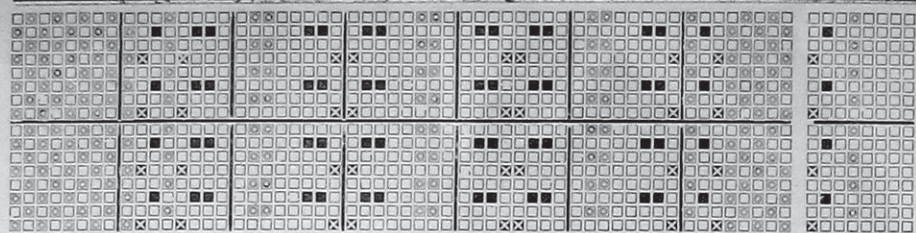
Though considerable time has elapsed since we last gave our readers examples of this type of work, we trust that interest in this subject has by no means diminished, and that the three examples the construction of which we propose to demonstrate in this issue will prove of sufficient interest to warrant their thorough study and comprehension.

In *Sketch A* is shewn a useful combination of gauze and plain, in appearance varying in some degree from the general run of such combination, owing to the reasons which we fully demonstrated in our last article on this subject, viz., the number of picks in each crossing of the doup thread.

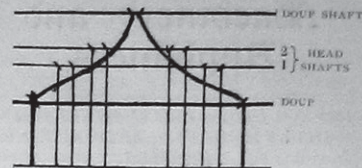
It will be well to note in the first place that the gauze effect consists of a thick thread crossing four thin threads; then attention should be directed to the matter mentioned above, viz., that the thick thread is only up for one pick on one side of the four stationary



INDIAN DHOOTY.



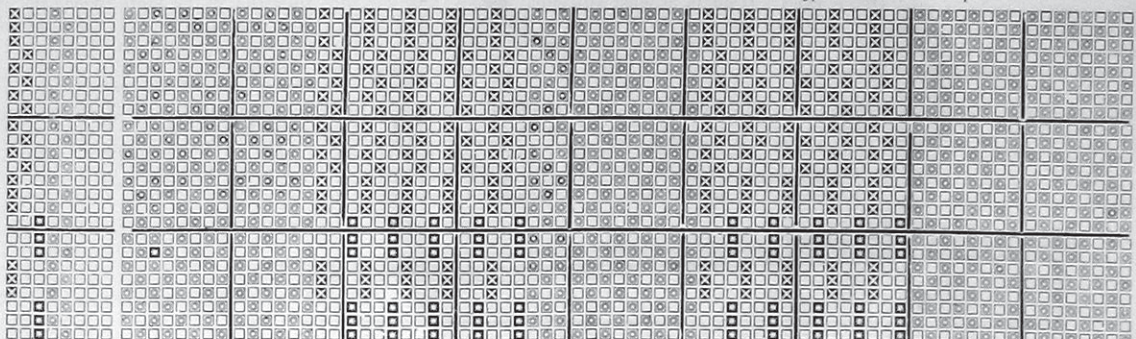
DESIGN 8.



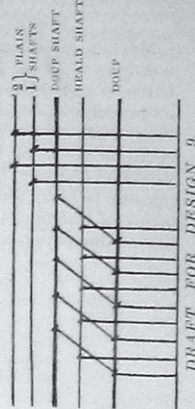
DRAFT FOR DESIGN 8.

PEGGING PLAN FOR DESIGN 8.

Cross type indicates the doup.

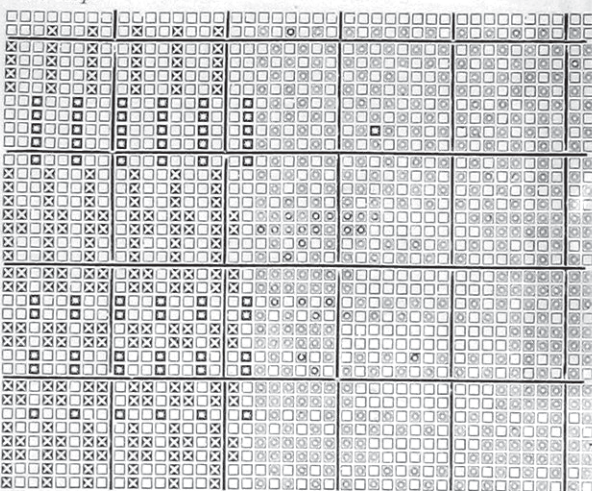


DESIGN 9.

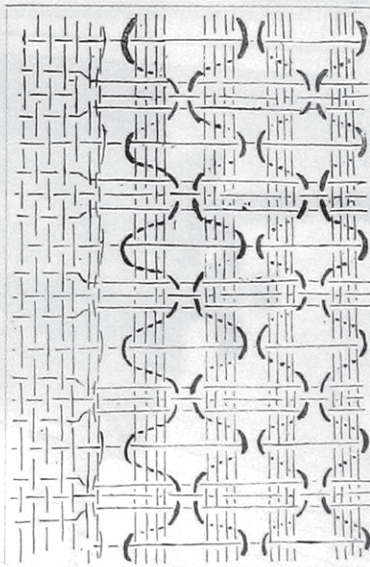


DRAFT FOR DESIGN 9.

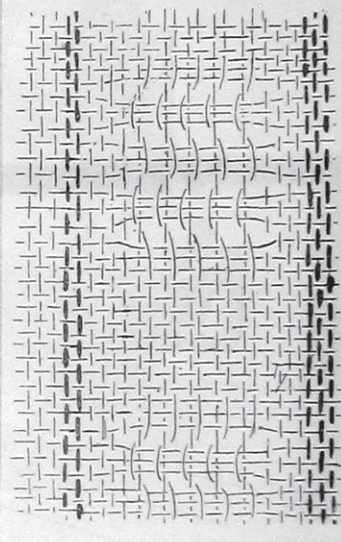
PEGGING PLAN FOR DESIGN 9.
Cross type indicates the doup.



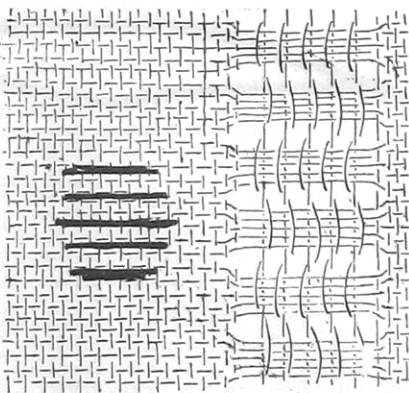
DESIGN 10.



SKETCH A.



SKETCH B.



SKETCH C.

The draft and pegging plan considered together will be found to give *Design 8* as here developed. Note should be made of the fact that marks here indicate warp up, and also that the arrows indicate the way in which the pegging plan acts on the heads.

Of course, stripes of any width, either in gauze or plain, may be combined as required, but in order to ensure a straight, firm, plain edge the two outside threads should work gauze as here indicated.

Sketch B is a slightly different type of make, thick threads in this case being introduced in the plain portion as indicated at *A* (*Design 9*). Another innovation, it will be observed, is that the gauze threads do not work gauze throughout, but that after crossing the stationary threads for a certain number of times they form plain cloth in conjunction with the stationary threads, thus giving a check appearance. The design in this case also should be compared with the sketch, and the draft and pegging plan with the design, when little difficulty should be experienced in realising the construction.

Sketch C is again of a different type, and in some respects is a more intricate example, but careful analysis will disclose simplicity throughout. The gauze effect, it should first be observed, consists of stationary and crossing threads, the latter changing position every five

picks. To fully comprehend this pattern, the extra weft, which is the difficulty, should be completely ignored, the gauze and plain only being taken into account; then between every two picks space should be left for two more, which are to produce the spot on the plain ground; now mark up everything but those threads which are to be down for the spot: this means mark up doup, stationary thread and plain threads not forming the figure. The shaft working in connection with the doup must be down if the doup is up.

If these conditions be put down on point paper as indicated, an effect similar to *Design 10* will be produced, the pegging plan and draft for which is also given.²³

Respecting the application of these three patterns we need say little. For cotton goods they are very useful and effective, being produced with comparatively little trouble; for silk they would also prove very effective or for silk and worsted in unison; also for cotton and mohair; in these two latter cases there is in our opinion ample room for the production of some novel and striking effects on the principles here laid down.

²³Our remarks respecting the position of the doup shaft and the method in vogue of weaving these cloths wrong way up should be called to mind when studying the effects.

threads, but for three picks on the opposite side, these conditions necessitating the production of a very light wefted pattern, which varies considerably in appearance from patterns of a heavier construction, which favour the production of a more perfect plain cloth.

Design 8 is the full point-paper plan for this pattern, which those to whom this subject is rather novel should first completely master, comparing minutely with *Sketch A*.