



The above shows a trousering of very pretty design. The cross-stitch stripe could be well employed for more fancy goods, such as dress fabrics, but by means of subdued coloring is not out of place in the present instance. The design is given in the lower figure, the light threads being shown by dots, the dotted portion to the right of the design being that which gives the cross-stitch effect. The weft is single-fold black woolen, whilst the warp is two-fold worsted throughout, warped as follows:

1	1	end navy.
Times	1	" black.
1	1	" lavender.
Twice	1	" black.
1	1	" navy.
1	1	" lavender.
1	1	" navy.
Twice	1	" black.
1	1	" lavender.

1	1	end black.
Times	1	" navy.
1	1	" black.
Twice	1	" twist.
1	1	" lavender.
Twice	1	" twist.
1	1	" black.

—Textile Manufacturer, Manchester.

DYE-HOUSE DISEASES.

Dr. Schuler, factory inspector in Switzerland, describes in his last annual report certain appearances of illness in dye-works, and his remarks will necessarily interest foreign readers. He begins with chrome mordants, and reports on a factory where some of the dyers who used them suffered from eczema and fissuring of the skin of the hands and arms. This was first taken for the itch, but when its true cause was ascertained, those found to be subject were put to different work. Two deaths have been caused in Zurich by mineral acids. The mixture of all three used by silk dyers is specially dangerous, for if it should be spilt it gives off suffocating nitrous fumes.

Throwing down water, a thing often done in such cases by thoughtless or ignorant persons, only makes matters worse. Attempt to make unbreakable flasks for the acids, or to protect ordinary flasks in some way have not succeeded. The only thing to be done is to use stronger and smaller ones, and to impress upon the men the necessity for more care. Even in chemical works, where processes are carried out almost in the open air, precautions have to be taken to prevent acid vapors from reaching the lungs of the workmen, and the fumes of sulphurous acid supply a very powerful argument in favor of replacing it as a bleaching agent by peroxide of hydrogen and water glass.

Certain finishing processes often cause a spray of hydrochloric acid, which in the best constructed apparatus is drawn away by a fan. In dyeing with aniline black the vapors of kinone are very apt to cause severe inflammation of the eyes, and a special case is mentioned in Dr. Schuler's report. A man who had long been employed in dyeing aniline black in a badly ventilated place developed yellowish white tumors in the eye, between which mucus and tears collected. The cornea was badly affected, and the lens was darkened with minute

particles of dye, which had penetrated the softened epithelium, and it was found on enquiring that numerous other aniline black dyers suffered in a similar way, although in this particular case the symptoms were specially severe.—Textile World

DYEING OF UNIONS WITH DIAMINE DYESTUFFS.

For drabs, fawns, etc., Diamine Catechu B is an ideal dye-stuff being fast to light, stoving and hot pressing; in conjunction with Diamine Fast Yellow B and Diaminogene B, varied shades are obtained, which are level and fast to light.

In the dyeing of light shades it is important to keep on the light side of the pattern, since, if the shade be too dark, it is very difficult to strip the wool, which indeed can only be done effectively by means of potassium permanganate and sodium bisulphite.

Again, in dyeing shoddy unions which have been stripped with potassium bichromate and sulphuric acid, it is best to neutralize the goods thoroughly with alkali previous to dyeing, otherwise uneven results will be obtained.

Dress goods and crepons containing mercerized cotton are dyed with less sodium sulphate than usual, the material being entered into the dyebath at or near the boil, and the boiling continued during the whole of the dyeing process in order to cover the wool. (The ordinary process consists in dyeing for a considerable time below the boil.) In this connection, avoid dyestuffs which have a greater affinity for cotton than wool.

In the case of dark shades, the mercerized cotton has a tendency to dry up bronzy, but this appearance can be removed by running the goods for fifteen minutes in a fresh hot bath containing sodium sulphate. In all cases, the addition of a small amount of acetic acid in washing is recommended.

Two-colored ("shot") effects upon crepons are obtained by dyeing the wool with acid dyestuffs, washing and dyeing the cotton in a cold concentrated bath containing sulphate and carbonate and substantive dyestuffs: Diamine Black RMW, Diamine Black BH, Diamine Sky Blue, Diamine Fast Yellow A, and Diamine Orange D, are largely used in this connection. However, where the cotton is to be dyed black, the following process is employed:

Dye the cotton with Diamine Black BH at 100° F. (if higher temperature the wool will be stained), diazotize and develop with Phenylene Diamine, and finally dye the wool in acid bath. Quite recently a new method of dyeing, by a combination of the dyeing and milling process, has been adopted, chiefly for the production of black. A full black is obtained by adding 1 to 1½ per cent. of Milling Black B to the soap solution and milling for at least sixty minutes; the wool, which is only slightly but uniformly tinted, is dyed in acid bath with 2 to 5 per cent. sulphuric acid, and the boiling is reduced to a minimum in order to diminish the bleeding effect of the cotton.

The addition of sodium sulphate in the milling yields a more intense black, but this advantage is more than counter-balanced by the increased scouring which is necessary to remove the soap in the presence of a salt, and which consequently diminishes the intensity of the black. In all cases, scouring must not be done at a temperature above hand warmth, nor for too long a time.

Generally, most substantive dyestuffs can be applied in the manner described, only they are not fast enough to acids to withstand cross-dyeing. However, for mixtures in which the wool has been dyed either in the loose state or as yarn, the cotton is advantageously stained or even dyed to shade by adding the dyestuff to the soap solution in the milling process; moreover, this procedure is more economical than the older process of dyeing the cotton cold in the washing machine.—Textile Colorist.