

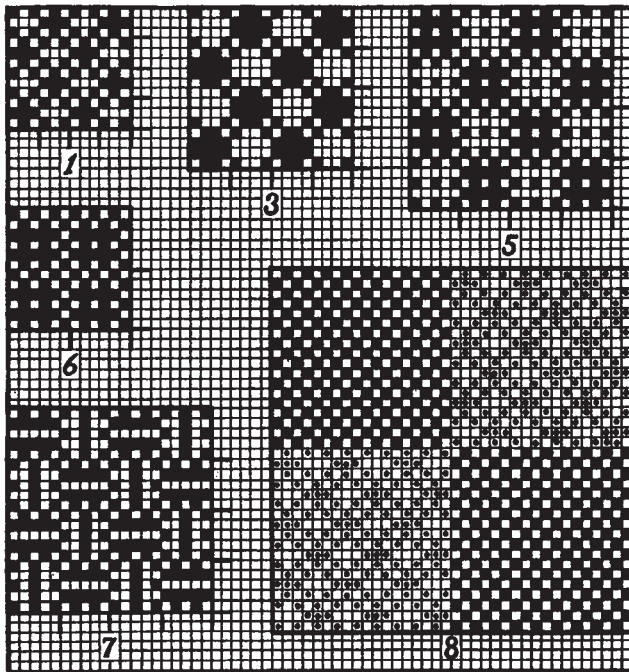
A STUDY IN WEAVE FORMATION

IMITATION GAUZE WEAVES.

Fabrics produced with these weaves besides being known by that name are also called Mock-Lenos, Open-Work Effects, or Canvas Cloths, the weaves producing in the fabric structures perforations somewhat similar to those of real gauze. The perforations are in this instance produced by unequal distribution of warp and filling threads throughout the fabric, *i. e.*, warp and filling threads are made to run together in groups in place of being distributed evenly all over the width of the fabric.

The open effects previously referred to are produced in the loom by the characteristics of the weave used, assisted by placing those threads which have to run together in one dent, leaving one, two or more dents empty between each group of warp-threads thus threaded into one dent. In the same way, in connection with the filling the open-work effect will be made more pronounced when beating up closely the picks which, by the characteristics of the weave used, run together, and taking the fell of the fabric out of the way of the beat-up of the reed by means of the take-up of the loom, previous to starting a new unit of picks.

These open-work effects thus produced are however not made to last, they being made only for a temporary effect and will be destroyed in washing or wear of the fabric. To preserve this open-work effect as long as possible, the fabrics are as a rule heavily sized in order to keep the units of groups of threads together.



From 3 to 7 threads, according to the weave used, may be made to form a group; the most often used arrangement is 3 or 4 threads.

Each weave is constructed by reversing a small unit of an effect in all four directions, thus providing a tendency for the outer threads of these units which oppose each other in their method of interlacing, to be forced apart, whereas in each unit effect itself the method of interlacing of the various threads is such

that they will readily approach each other and for a fact try to exchange positions with each other. The warp-threads thus run in groups with a space between, are crossed by the picks grouped in a similar manner.

The simplest imitation gauze weave is shown in Fig. 1, the same repeating on 6 warp-threads and 6 picks, with 3 threads and 3 picks to the unit of a group, as indicated by means of heavy lines on the

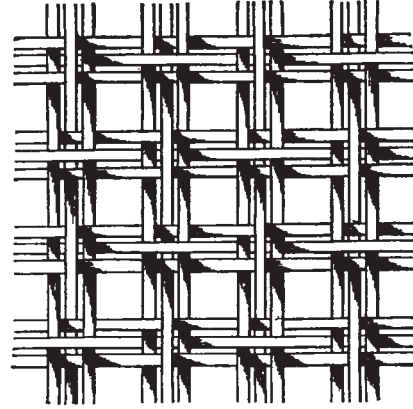


Fig. 2

bottom of the weave with reference to the warp-threads, and on the right hand side of the weave with reference to the picks.

Examining weave Fig. 1 more in detail with reference to interlacing of the warp-threads, it will show us that the first and third thread work alike, warp-thread 2 interlacing floating 3 *up* 3 *down*, not hindering warp-threads 1 and 3 from working towards each other, a feature readily explained when we consider that 2 warp-threads, interlacing side by side alike will have a tendency to twist with each other, except they are separated by means of a dent. This is the reason why such warp-threads, in regular weaving, provided they refer to different colored threads, must be separated by a dent wire of the reed. The same feature is duplicated with the second unit of warp-threads in the repeat of the weave, *i. e.*, warp-threads 4 and 6 interlace the same, and thus will try and unite towards each other, warp-thread 5, on account of the floating effect, not preventing this tendency.

What holds good for the warp also holds good for the filling, for which reason picks 1 and 3 interlacing the same, will go easy in the cloth, pick 2 on account of its loose floating effect not hindering the grouping of picks 1 and 3. The same is the case with the next unit of picks (4; 5 and 6) in the repeat of the weave.

Fig. 2 is a sketch of a fabric interlaced with imitation gauze weave given in Fig. 1, and will readily illustrate the formation of these fabrics.

Fig. 3 shows us the 8-harness imitation gauze weave, with 4 threads and 4 picks to the unit of a group, as shown by dashes on the bottom and the right hand side of the weave. This weave is an enlargement of weave Fig. 1, *i. e.*, using two threads in warp and filling for the floating, in place of the one used in connection with weave Fig. 1.

Fig. 4 is the fabric sketch for weave Fig. 3, and will readily explain the latter.

Fig. 5 shows us a 10-harness imitation gauze weave, using 5 ends and 5 picks for each unit of a group of threads, as shown by means of dashes on bottom and the right hand side of the weave. Examining this weave, we find that from each group, the first,

third and fifth warp-thread and pick interlaces alike and naturally will have a tendency to run together, the second and fourth warp-thread and pick of each group

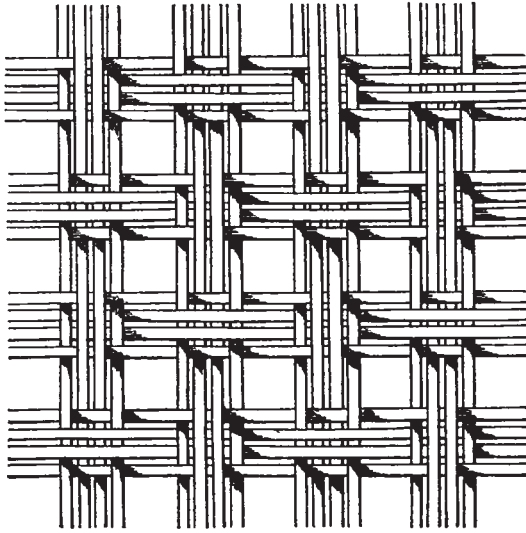


Fig. 4

not interfering with it, *i. e.*, either floating on top or bottom of the group.

Fig. 6 shows us a 6-harness imitation gauze weave, reeded 6 ends in a dent, leaving one or two dents empty between each group of threads, the weave repeating on 6 warp-threads and 6 picks.

Fig. 7 shows us an imitation gauze weave repeating on 10 warp-threads and 10 picks, with 5 threads

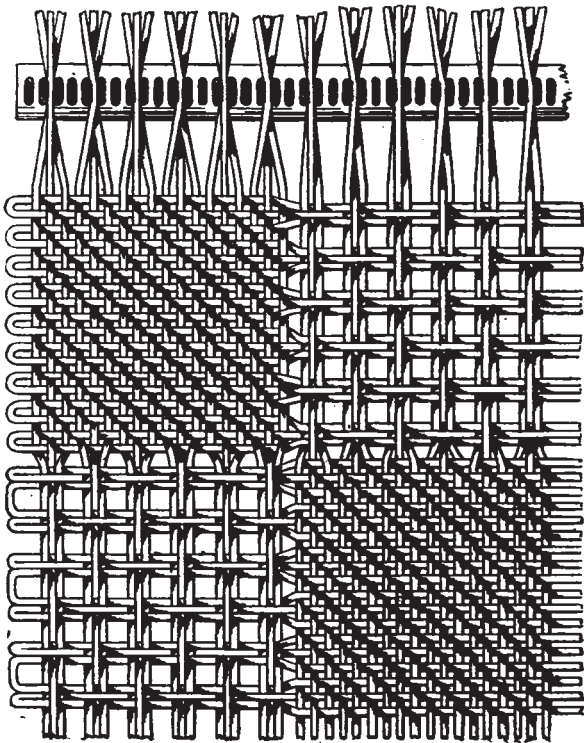


Fig. 9

of each system to a group, as indicated by means of dashes on bottom and the right hand side of the weave.

Figured Effects.

Besides these plain imitation gauze weaves, in many instances we find combined with it regular weaving,

the combination of both, imitation gauze effect and regular weaving, being arranged either in the shape of stripes or checks. The first will be readily understood, since in this instance after arranging a certain number of warp-threads to produce imitation gauze effect, a certain number of warp-threads are then arranged to do regular weaving. For the latter we may use the same yarn; again we may use a different yarn than we used for the imitation gauze weave; again we may use color combinations, *i. e.*, colored stripes. The most often used weave for the regular woven portion of the stripe is the plain weave, although warp effect twills for 3 or 4 harnesses or the 5 leaf satin, may find use to produce special effects. The construction of such fabrics will explain themselves, since it is nothing more than the combination of two different fabric structures.

Fig. 8 explains the combination of imitation gauze weaving in connection with plain weaving, to form checks.

Fig. 9 is the fabric structure with reference to weave Fig. 8, and will readily explain the latter, clearly showing the change of imitation gauze weaving to regular weaving wherever the weave changes. On the bottom of fabric sketch Fig. 9 a section of the reed is shown: the 3 threads of a group are placed in one dent, leaving 2 dents empty between each group. The motive for changing regular weaving to gauze weaving is *plain setting*, with 18 warp-threads and 18 picks to each effect, resulting in a complete combination weave repeating on 36 warp-threads and 36 picks. In place of the plain setting others may be used: again instead of using only 18 threads for either effect, any number of threads may be used, as long as the number used is a multiple of 3.

South Africa's Demand for Silk Ribbons.

Johannesburg department stores claim that there is a large demand for silk ribbons, and that one or two firms in the Transvaal order sufficiently large quantities to make this market an important one for a firm endeavoring to extend its trade relations and build up an export business.

Silks are imported into South Africa from the following countries, given in the order of their importance: Japan, India, China, France, Switzerland, and the United Kingdom. Competition among manufacturers of ribbons is very keen, and while sales depend largely upon the quality and design of the silk, prices play no less a part in determining individual sales.

Retail prices on silk ribbons imported from Great Britain seem to be somewhat lower than those coming from the United States. Samples of varying degrees of fineness were contrasted with certain American samples, and although the goods were not exactly the same, the prices of practically the same grades were somewhat lower for the British goods.

Importations of American goods into the Johannesburg district are made through Cape Town, Port Elizabeth, East London, Durban, and Lourenço Marques.

The customs tariff for the Union of South Africa provides an ad valorem duty of 20 per cent upon silk and manufactures of silk, with a rebate of 3 per cent upon goods manufactured in the United Kingdom or reciprocating British colonies.