

A STUDY IN PLAIN AND FANCY SELVAGES.

(Continued from October issue.)

An Independent Selvage.

The same is characterized by forming an independent structure from that of the fabric, both with

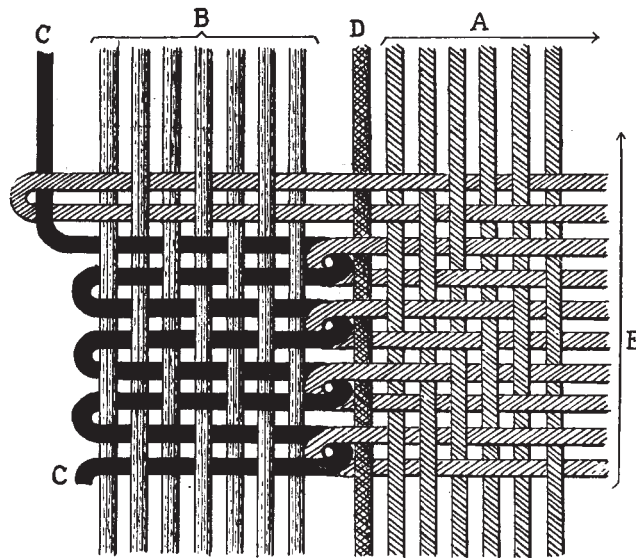


Fig. 3

reference to warp as well as filling. Consequently we can give to this selvage in warp as well as in the filling, a different color compared to that of the fabric; again, we may use a totally different material for said selvage compared to that of the fabric in this manner producing a special effect, not possible to be obtained with a common selvage.

This selvage may be arranged in any width required, either as a plain or fancy selvage and can be attached to any weave as used for interlacing the fabric itself. With fabrics requiring a face finish, the advantages of such a selvage are increased strength and durability; again this selvage can be made in a lighter texture compared to that of the fabric itself, a feature which in connection with certain fabrics may be of advantage.

The mounting of the loom for the use of such a selvage is very simple and will explain itself from reference to diagram Fig. 3 and weaves Figs. 4 and 5.

Fig. 3 is a plan showing the interlacing of fabric and selvage and their connecting, according to weave Fig. 4.

A are the warp-threads for the fabric (see full type in weave Fig. 4).

B are the regular selvage warp-threads (see cross type in weave Fig. 4), the same interlacing with the

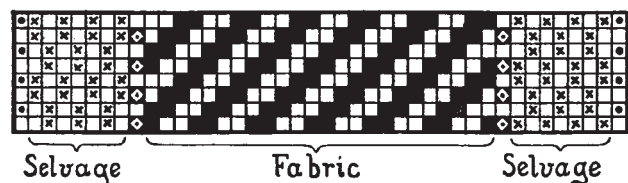


Fig. 4

common 2 by 4 warp rib weave, *i. e.*, the plain weave, with two picks in a shed.

C is the extra warp-thread (see dot type in weave Fig. 4) which forms the filling for the selvage.

D is a special binder warp-thread (see diamond

type in weave Fig. 4) placed there to catch the regular filling E and prevent the latter from pulling into the warp-threads of the fabric structure proper; the filling E in the meantime having united itself with, *i. e.*, being caught by the warp-filling end C, pulls the latter along with it towards the binder thread D. This procedure is in turn duplicated on the other side of the fabric with a corresponding number of selvage warp-threads, a special warp-filling end, and a duplicate binder selvage thread. As will be readily understood, this peculiar interlacing of the selvage is repeated alternately on the left hand side, and then on the right hand side of the fabric.

The warp-filling end C is wound on a small bobbin, provided with just sufficient friction to permit the unwinding of the thread as is required during weaving, but not to let the thread unwind more than is taken up at a time during weaving. Said bobbin is placed on a spindle, secured conveniently to the rear arch of the loom frame, in order that the thread will unwind easily from it during weaving. Enter this thread without a heavy tension, parallel and close to the regular selvage warp-threads B, through the harness and reed. In the harness the thread C is passed through the eye of a heddle in the usual manner.

For the interlacing of the selvage, the regular filling E does not tie at its outside end, as in a common selvage, but it ties against this rule, *i. e.*, it ties at the most inside situated selvage thread D, so that

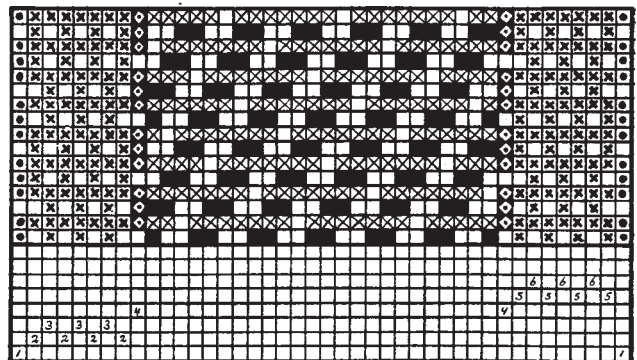


Fig. 5

- Fabric Face weave.
- ⊗ " Back weave.
- ⊠ Selvage threads.
- ⊡ Binder warp thread to connect selvage and fabric.
- ⊞ Harness for carrying selvage warp-filling.

the filling E is always pulled out of the selvage, *i. e.*, from between the threads B. In this manner the selvage would remain without filling or interlacing, if not by means of the raising or lowering of the warp-filling C an entwining of the latter with the regular filling E would have been accomplished; by means of it at the return travel of the shuttle the selvage filling C is compelled to draw off from its bobbin and follow the regular filling E between the regular selvage threads B to the place where warp-thread D stops further pulling off. The result is the formation of a special, solid woven selvage which at the same time is solidly connected to the fabric.

Fig. 5 shows the weave required, if adding a similar independent selvage to a heavy-weight struc-

ture, *i. e.*, one system warp and two systems of filling (the same face weave is shown as in the previously given example—the 4-harness even sided twill, arranged 1 pick face to alternate with 1 pick back). Since character of type used in this weave corresponds to those used in connection with the previously explained weave, no further explanation with reference to the formation of the selvage during weaving is required, any more than that the backing does not interlace with the warp-filling, and neither with the edge of the fabric, *i. e.*, binder end *D* is *up* on every back pick, but always pulls out of the latter.

"Silk" a Necessity in War.

The American Silk Industry.*

September, 1918.

As the silk trade passes into the fall buying season, indications of the entire industry being placed on a strictly war basis are increasingly in evidence.

The fact that female help is so largely employed in the silk industry will probably result in less diversion of labor than in those industries dependent or largely dependent upon male operatives. In spite of this fact, the labor problem as it presents itself to the silk manufacturers is of the utmost seriousness. Munition factories by offering extraordinary wages have taken many female operators from the looms and spindles of the silk factories, which has resulted in greatly curtailing the production of silk fabrics.

It is estimated that sixty-five to seventy per cent of the producing capacity of the looms and spindles throughout the silk producing centers of the country is at present employed. This in itself means considerable curtailment, and it is to be observed that it has been brought about by economic conditions, rather than by Government order.

Undoubtedly, the most important action of the Government in its contact with the silk industry was the determination to organize a Silk Section of the War Industries Board, and on August 8 the appointment of William Skinner, as Chief of that section.

... As the war progresses from month to month, and as the entire country is more and more organized on a war basis, the policies of the Government in respect to industry will be gradually disclosed. It is very clear that the salient feature of these policies will be the concentration of the entire manufacturing power of the country to the end of winning the war, and winning it as soon as possible.

That part of the silk industry which is exclusively engaged in the production of munitions of war will undoubtedly be increased and extended to the very limit of production. Even now, the entire spun silk branch of the business has been practically turned over to the Government for the production of silk noil cloth to be used for war munition fabrics.

The diversified uses to which silk is put in warfare are of more than usual interest. Its chief use is probably in the manufacture of spun silk cartridge bag cloth. Artillery experts claim that when big guns are fired, it is necessary that the explosives be placed in bags made of material that will burn without leaving practically any "afterglow." Silk is the only fabric available in sufficient quantities that would meet these

requirements, so that *silk is necessary in one of the chief operations of war, namely, the firing of artillery.* It is equally important that the lacings for tying the cartridge bags should be of silk as well as the bags themselves.

Another important employment of silk in warfare is for parachute flares with star shells attached, often of 100,000 candle power. These devices have played an important part in the present war, as all who have followed events know. The parachutes are about sixteen feet in diameter, and are composed of light weight habutai silk. They are dropped from aeroplanes, and when the flares are lighted, *the entire battlefield is illuminated for several minutes at a time.*

Silk tubular powder bags, or ballistite rings, as they are also known, are *used in controlling the direction of projectiles.*

Other uses are in small bags for *carrying explosives* in trench warfare, and silk for fuse discs. It is quite likely that silk will come to be used to a greater extent in *aeroplanes, balloons and parachutes.*

Sewing silks are extensively used and it is to be especially noted that all uniforms in the Navy are sewed with silk. Silk neckerchiefs, silk braids, banner silks, and silk hatbands are, of course, required extensively, both in the Army and in the Navy.

That part of the industry engaged in the production of fabrics for women's wear will doubtless be maintained on a basis commensurate with what the Government believes is necessary for clothing purposes.

The shortage of cotton and wool

and the great increase in the price of fabrics made of these fibres has already acted to the advantage of the silk manufacturer whose goods are less in demand for war purposes, and thus they are offered to women, who might ordinarily buy cotton and woollen fabrics, at prices more nearly level with other suitable fabrics than ever before in the history of merchandising. In fact, it may be said that the silk industry is in a position to perform a most important service to the country in offering to women at reasonable prices, an attractive clothing material, at a time when the Government is making tremendous demands for all materials made of cotton and wool.

As regards war-time fashions,

it is indeed remarkable to note the beautiful collections that have come from Paris, which must necessarily be the center of war activities, and from ateliers within sound of the enemy's cannon. In spite of all this martial atmosphere, one notes what seems like an amazing absence of anything that pertains to the military. As has happened before in war-times, more notably in the period of Napoleon's First Empire, and in the Directoire period, fashions tend to extremes and extravagancies. Nearly all the new models show the silhouette figure outline, longer, narrower skirts, scant draperies and high waistlines.

Fabrics are largely of sheer materials such as *Georgette crepe, crepe de Chine, crepe metéore*, and the various *satins effects*, including *charmeuse and messaline*.

Taffetas and *foulards* are generally regarded as fabrics which will be largely in demand for next spring's buying season. *Satin météores* and *crepes* which will be worn this fall, are shown in dark street shades, such as seal, brown, taupe, mole, navy and black. Plaids and fancies of all kinds appear to be rapidly taken by buyers.

*Abstract from the "Semi-Annual Report of The Silk Association of America, 1918."