

BROCHÉ
or
BROCADE

a study by



KLARA CHEREPOV
HANDWEAVING STUDIO

**UPPER KING STREET
GREENWICH, CONN.**

JEFFERSON 1-6376

BROCHÉ or BROCADE

What type of fabric is Broché or Brocade?

First of all it should be understood as a fabric completely loom-controlled without any pick-up work. It is a fabric in which threads are brought to the face in spots without being continuously interwoven as in Summer and Winter, overshot or other patterns where warp or weft is emphasized. The purpose of the broché weave is purely a decorative one to introduce in spots a design, color and/or texture which would otherwise be hidden below the surface.

For which type of fabric is broché most suitable? As mentioned before, its foremost purpose is a decorative one. Broché is used most often for upholstery fabric and pillows because colors and motifs can be introduced without worrying about long floats in the back. Broché also finds great application in drapery fabric, but here floats longer than one inch should be cut off after washing. If broché is used in fabric for wearing apparel, then it can be used to bring to the surface an occasional colored or textured thread. When the float becomes too long, the broché thread is tied with the ground fabric on a common riser. The handweaver must bear in mind that this procedure will necessitate additional treadles.

The broché weave is divided into two different parts:

1. The background weave in warp and weft.
2. The broché weave in warp or weft or a combination of warp and weft.

For the background fabric a close weave must be chosen. It can be tabby, but a regular four harness broken or straight twill can also be used. Inasmuch as the handweaver is always limited by the number of harnesses available, tabby is the best choice because only two harnesses are needed which allows for design possibilities even with the four harness loom.

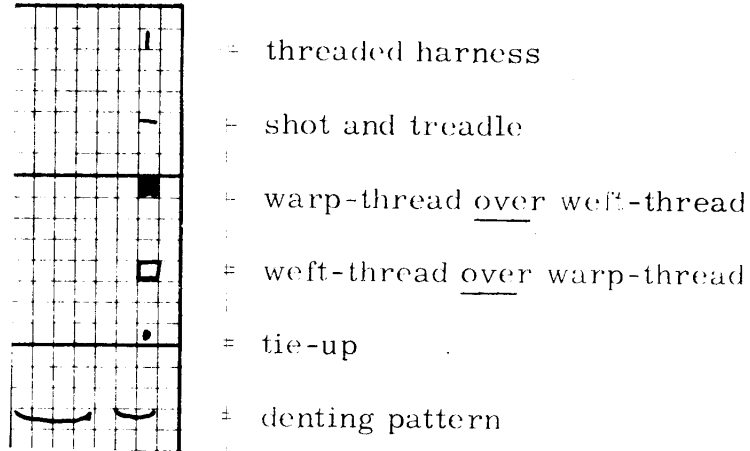
How to plan a broché fabric with warp effect.

Plan a fabric for the ground weave 32" wide and 14 threads per inch. The broché design calls for eight bands 1-1/2" wide distributed over the fabric. If the ground warp has 14 threads per inch, the broché warp must have the same setting of 14 per inch. It is best to use two different warp beams: one for the background weave with the full width of the fabric and the other for the broché warp. Here a sectional beam can be very helpful, since the broché warp often occurs only in bands. If no second beam is available and the broché effect is in narrow stripes, the threads can simply be tied to the background warp as close to the warp beam as possible and then untied and tied back again as the warp progresses.

As a rule the two warps are made separately. If on the other hand only one warp beam is available and the warp is longer than three yards, both warps must be planned as one and the distribution in the raddle must be even. In the weaving however a tension problem will soon develop since the background warp (tabby or twill) has a much greater take-up than the broche warp which is only occasionally brought to the surface and the rest of the time is floating underneath. To overcome this tension problem, a rod can be used to weight down the broché warp and the tension which is required can be achieved by adding additional weight to it. It is best to weight it down in the center and on each end.

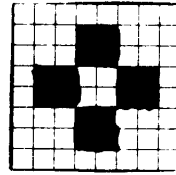
In planning a broché weave, the exact location of the warp broché stripe and the choice of motif to be woven must be clearly defined. The width of the individual design must be determined in the beginning whereas the length of the design and the frequency of the repetition are controlled by the treading. As mentioned before, the four harness loom allows for a two-block design possibility. Two harnesses are taken up with the background weave which in this case must be tabby, and the other two are for the broché warp.

The symbols used in the drafting diagrams are as follows:



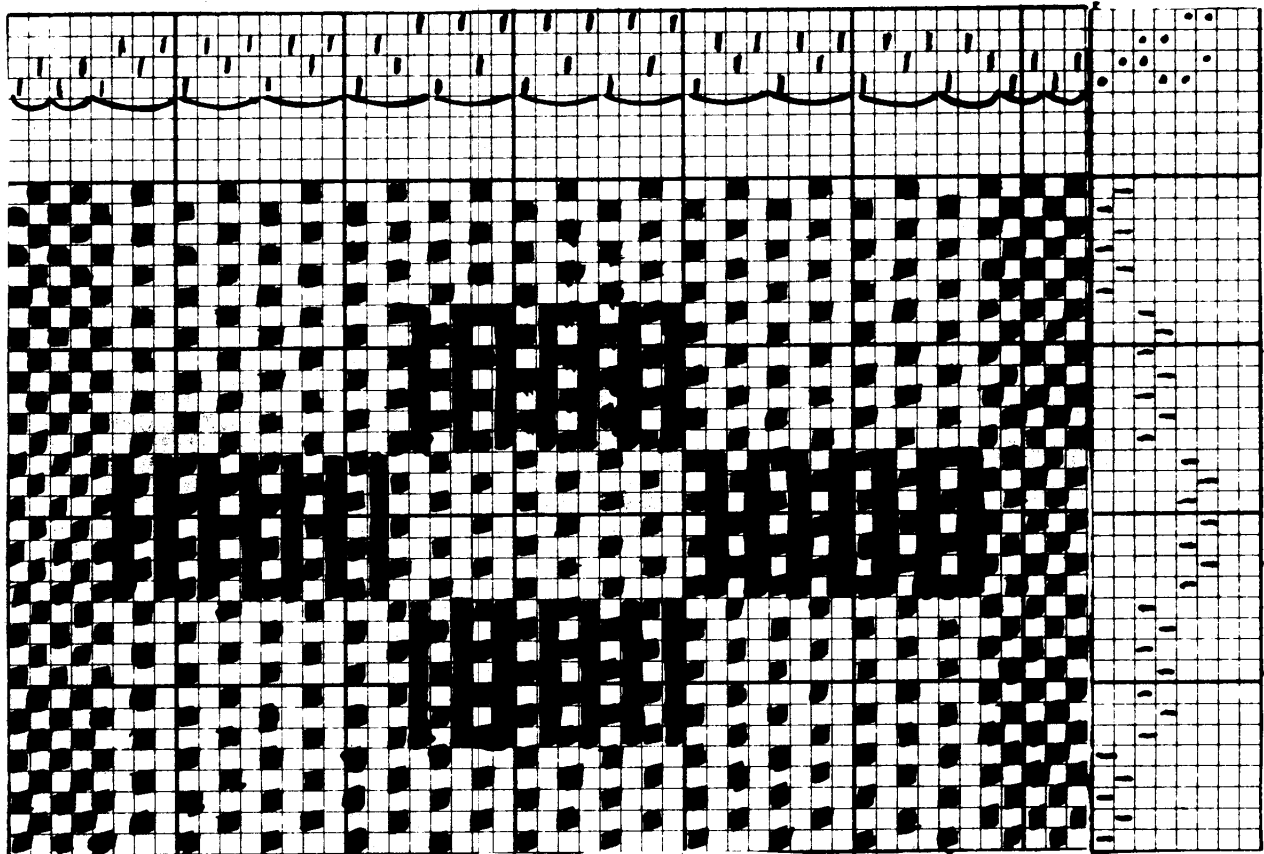
The background warp in the sample has 14 threads per inch in a 32" width so that a total of 448 warp-threads are required. The broché warp also has 14 threads per inch but consists of only eight bands 1-1/2" wide each making a total of 168 threads.

This simple motif is used:



Motif 1

The threading is as follows:

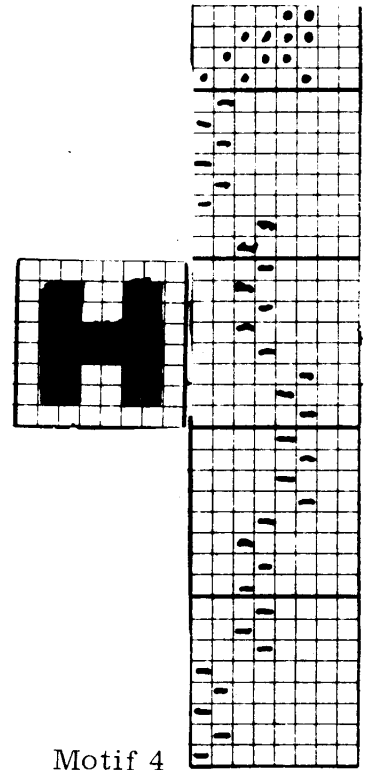
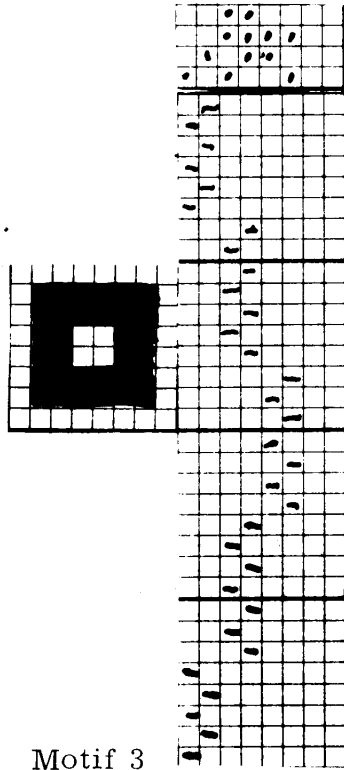
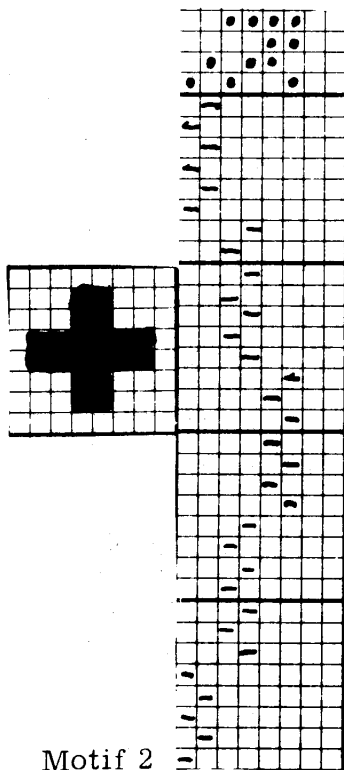


Motif 1

Harnesses one and two are the ground warp; three and four are the broche warp. 28 threads are on harnesses 1 and 2. The broché form #1 is threaded on harness 3; form #2 is on harness 4.

The tabby is carried through uninterrupted. The denting pattern is determined by the denting of the ground weave. If two threads are sleyed in each dent for the ground weave, this procedure must be followed throughout the whole width of the ground warp regardless of where the broché threads occur because the ground fabric must be of an even structure. As a general rule where the broché is introduced, the broché warp has the same number of threads as the ground warp. In this specific case, it is 14 threads per inch. These broché threads are sleyed in the same dents in addition to the ground warp. If there are 14 threads per inch in the ground weave, there are 28 threads per inch where the broché stripe occurs. There is a great advantage in using a wider dent because when the ground weave is sleyed 2 per dent and the broché stripe 4 per dent, the weaving will proceed more easily. To achieve a better effect with the broché weave, use a heavier yarn than the ground yarn such as a soft wool, a boucle or an effect yarn.

What are the possibilities with this simple 4 harness threading? Motifs #1 to 7 and many more can be woven. The threading stays the same. The changes are made in the tie-up and in the arrangement of treading.





Musical notation for Motif 5. It consists of a vertical staff on the right with a grid background, showing a sequence of notes. To its left is a horizontal staff with three rectangular blacked-out sections, indicating obscured or missing information.

Motif 5

Musical notation for Motif 6. It consists of a vertical staff on the right with a grid background, showing a sequence of notes. To its left is a horizontal staff with several rectangular blacked-out sections, indicating obscured or missing information.

Motif 6

Musical notation for Motif 7. It consists of a vertical staff on the right with a grid background, showing a sequence of notes. To its left is a horizontal staff with several rectangular blacked-out sections, indicating obscured or missing information.

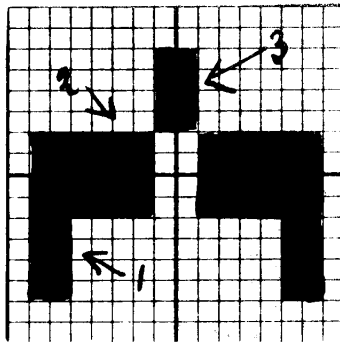
Motif 7

Six harness warp broché.

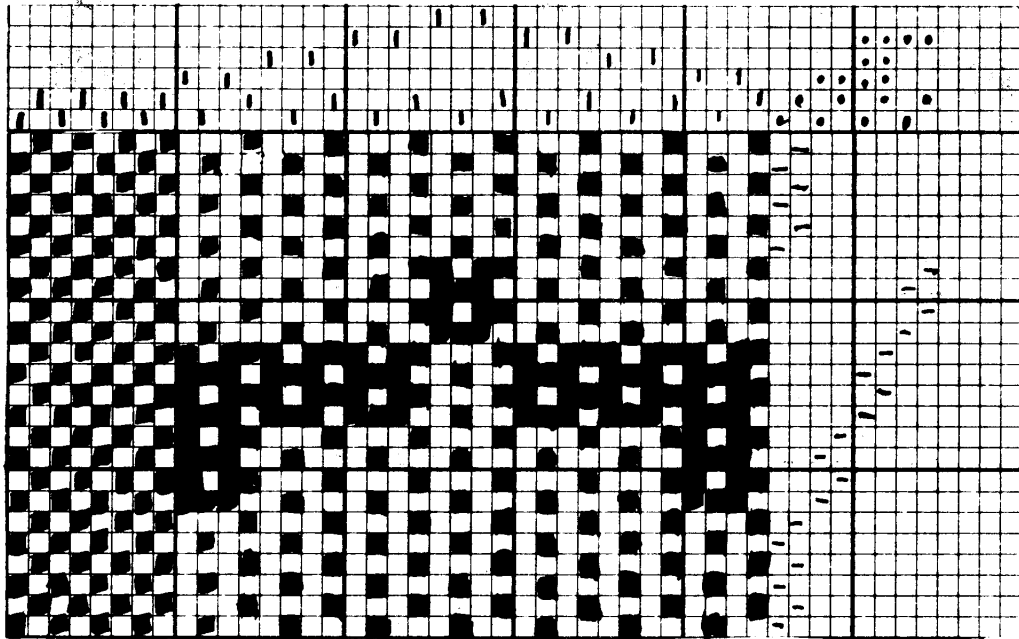
Again only two harnesses are needed for the tabby and four harnesses are available for the broché design, which increases the design possibilities considerably.

The threading of the following samples of the broché warp is done on a pointed threading base: 3, 3, 4, 4, 5, 5, 6, 6, 5, 5, 4, 4, 3, 3. Some of the motifs require only five harnesses, but when the possibility of four harnesses for the broché warp is available, they may as well be used and the changes in the treading are greater.

Motif #8 for instance requires only five harnesses since the broché motif has only three forms, but it is woven on the same threading with just a change in the tie-up.

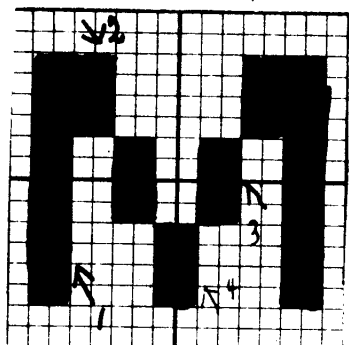


Motif 8

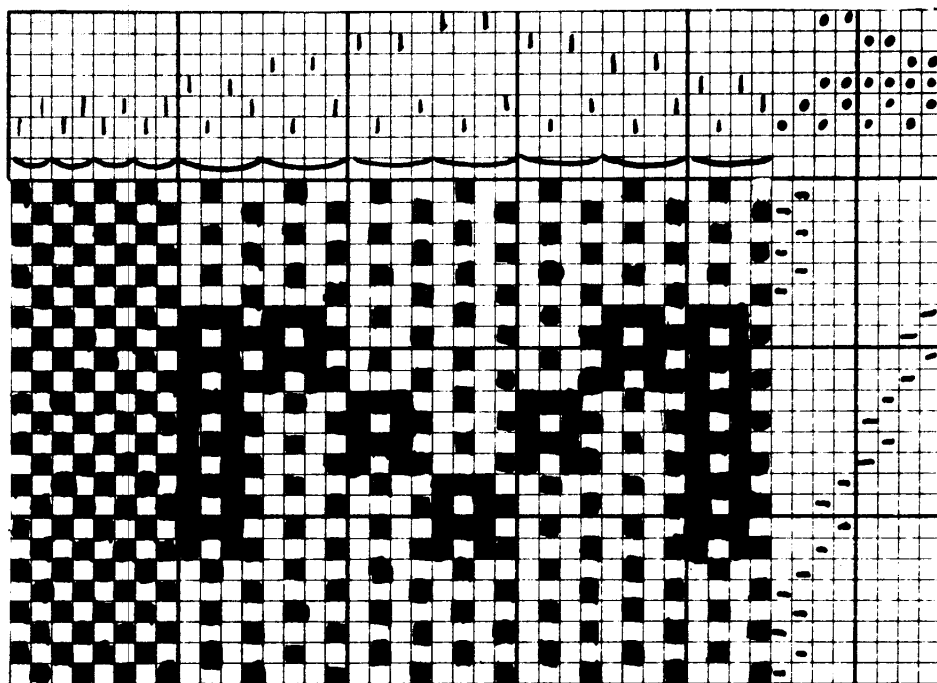


Motif 8

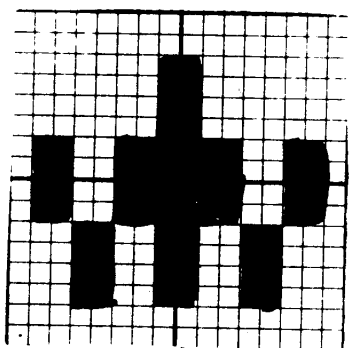
Motif #9 requires all four harnesses of the broché warp, since each of the four forms is woven with another combination. Form 1 and Form 4 are raised together as are Forms 1 and 3 and Forms 1 and 2.



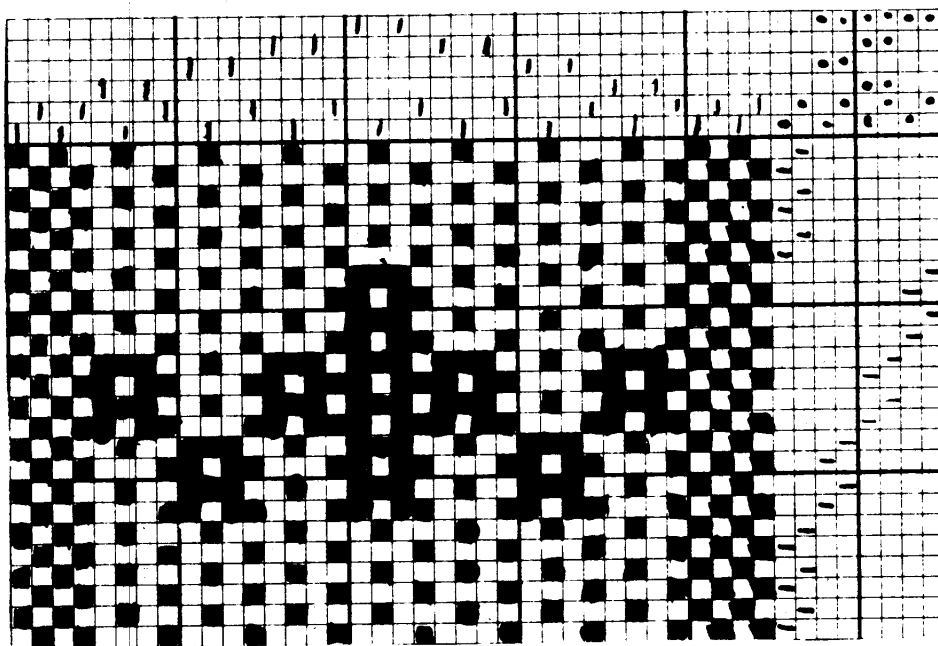
Motif 9



Motif #10 shows another different arrangement of forms on the same threading.



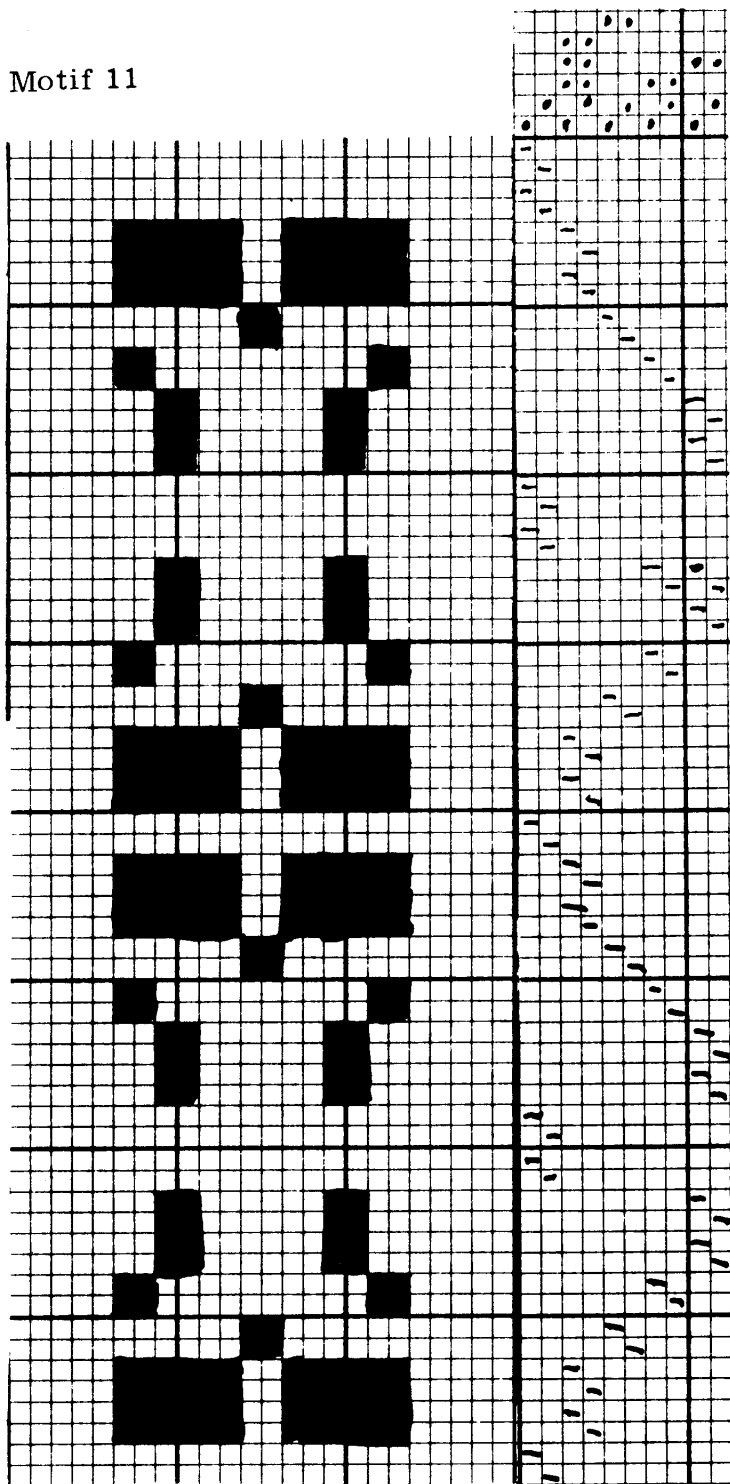
Motif 10



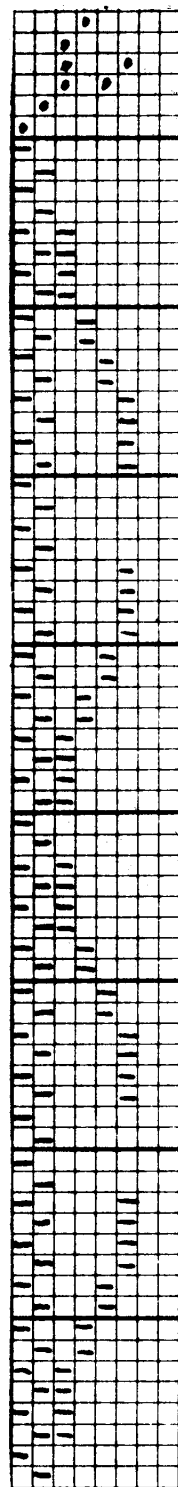
Motifs 8, 9, and 10 need six harnesses and eight treadles. Since most of the six harness looms are equipped with eight treadles, the direct tie-up can be used and the given treadlings can be transferred to the most convenient way for each individual weaver.

Motifs #11 and #12 present a different problem. The threading remains the same as for Motifs #8 through 10 (i. e. a six-harness threading). In the weaving however, ten or even twelve treadles are needed to weave these motifs because each uses the basic four forms plus a variety of combinations resulting from using two, three or even all four forms together. Only one harness is necessary to make one form but two treadles are needed for each form because of the tabby ground weave.

Motif 11

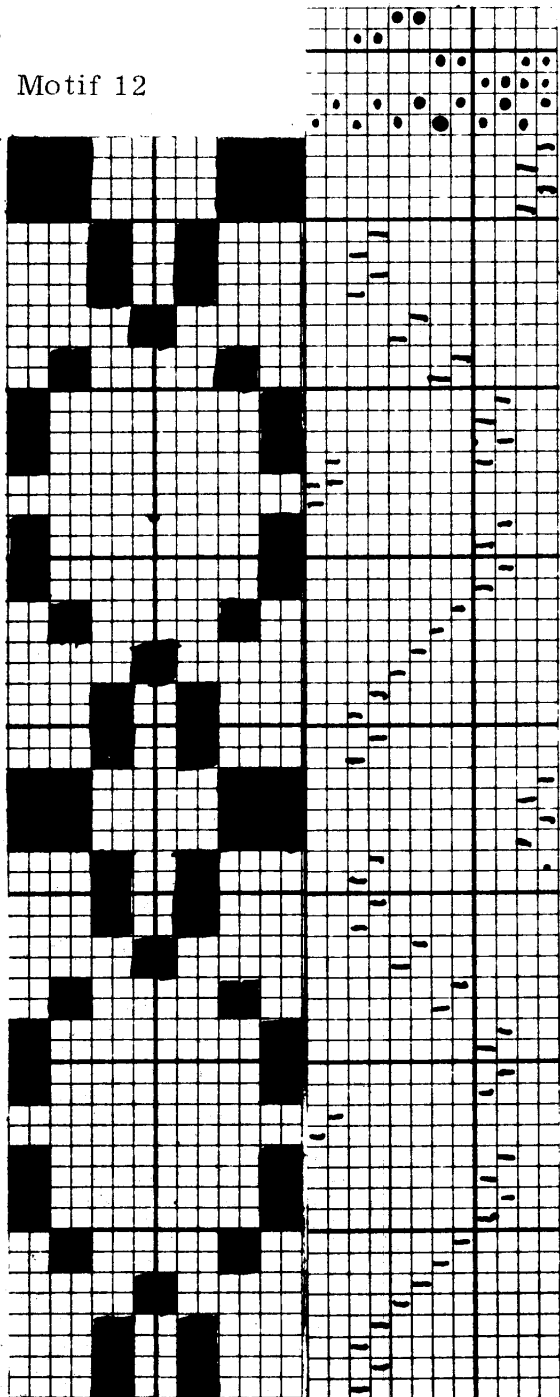


11a

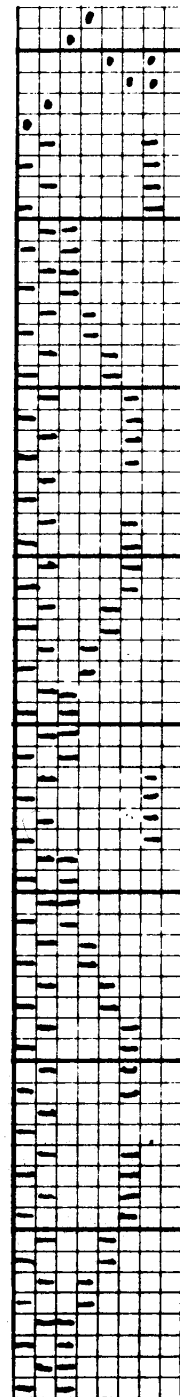


By separating completely the ground weave and the broché weave in the tie-up, only half the number of treadles are required for the broché stripe plus the additional two treadles for the tabby ground weave. By stepping on treadle one which raises one harness of the ground weave and with the other foot stepping on whatever treadle the form is tied to, the first shot is woven. For the second shot, the broché harness stays raised simply by leaving the foot on that treadle and only the background changes to treadle two which is the other tabby shot. This changes the treadling pattern as shown in draft 11a and 12a. This separation of ground and broché weaves in the tie-up becomes increasingly important as the complexity of the pattern develops.

Motif 12



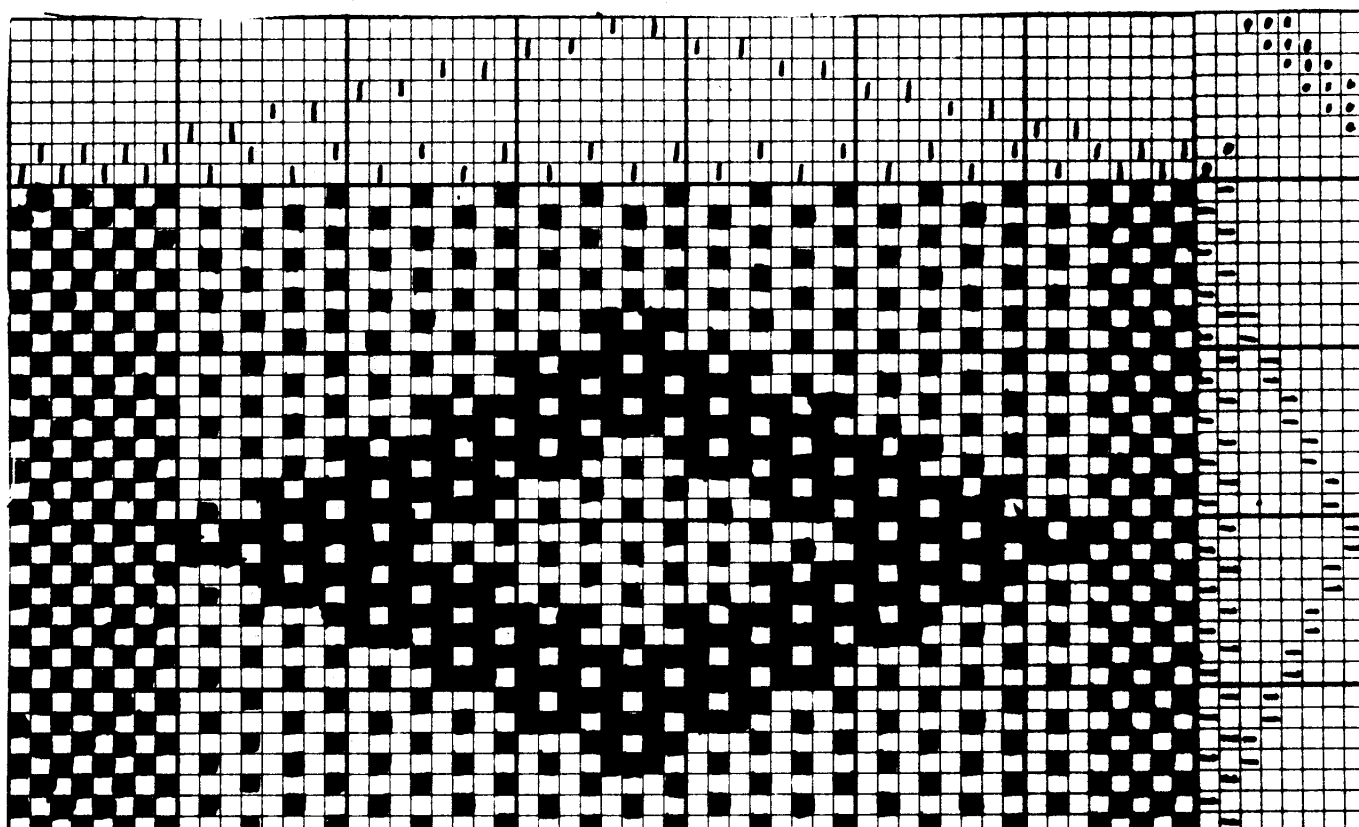
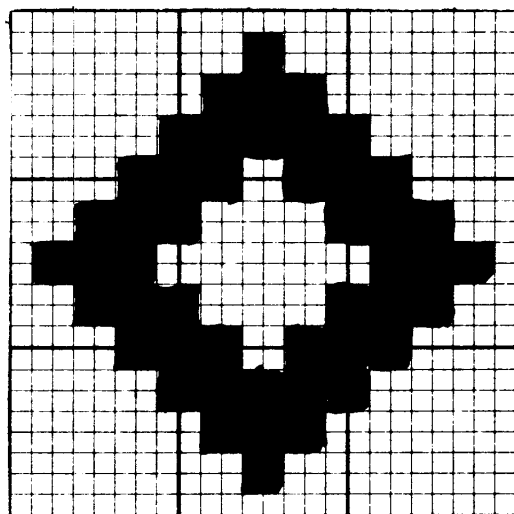
12 a

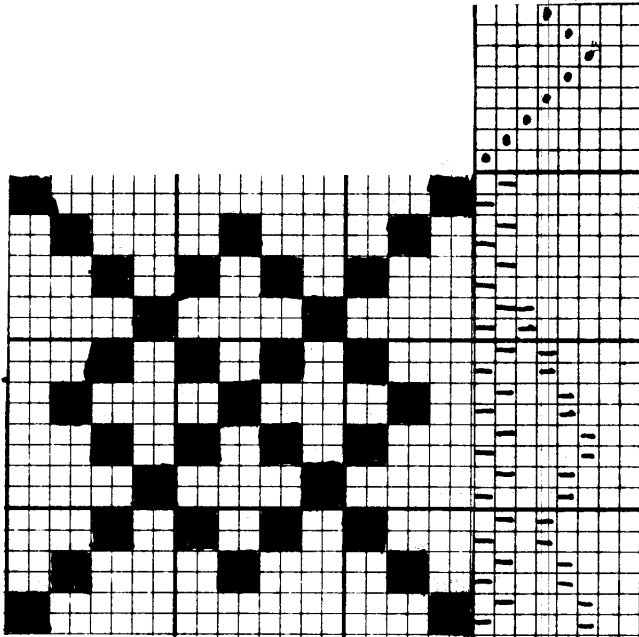
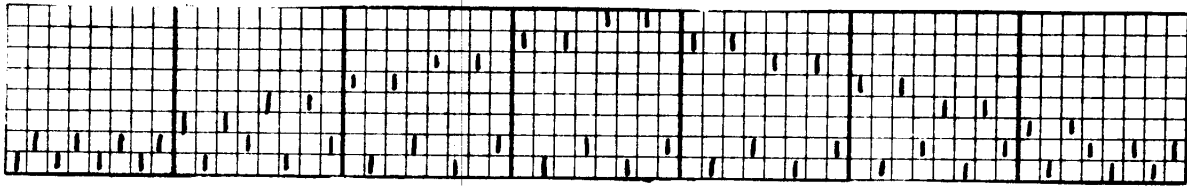


Eight harness warp broché.

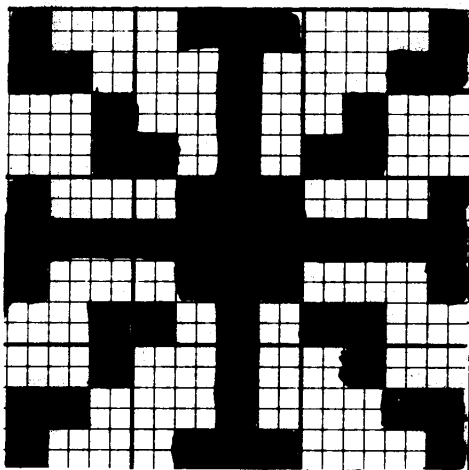
The step from a six harness to an eight or more harness warp broché is not a great one in its working process. The basic principle stays the same, only the design possibilities multiply. The following draft shows again a threading based on the pointed threading method, but this time over 6 harnesses plus the 2 additional harnesses for the ground weave. By treading the separate weaves simultaneously, the combinations of the different forms continuously create new designs. The following designs, #13 through 16, illustrate a few of the possibilities. It is for the individual weaver to explore and experiment with new forms and combinations as well as with color and texture. It can be a balanced design in the threading, but the choice of treading different combinations is wide open to the weaver's imagination.

Motif 13

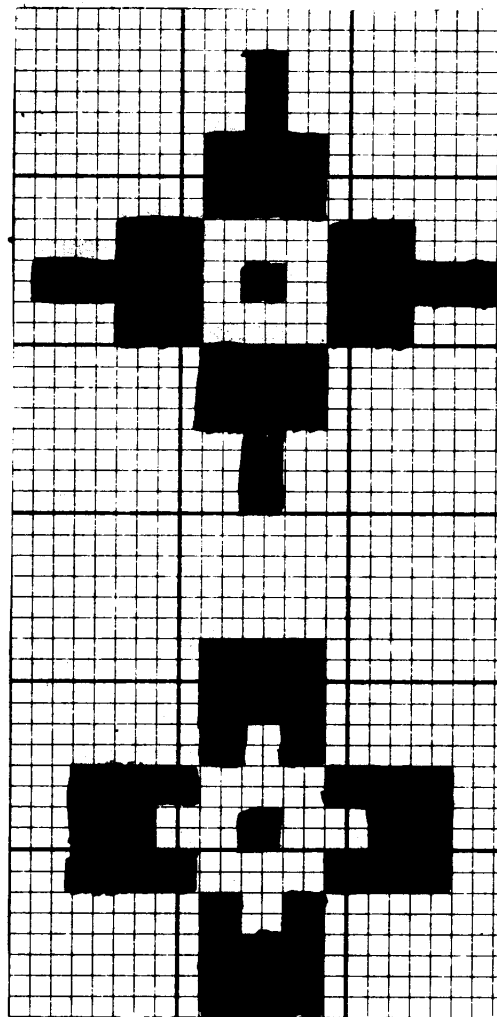




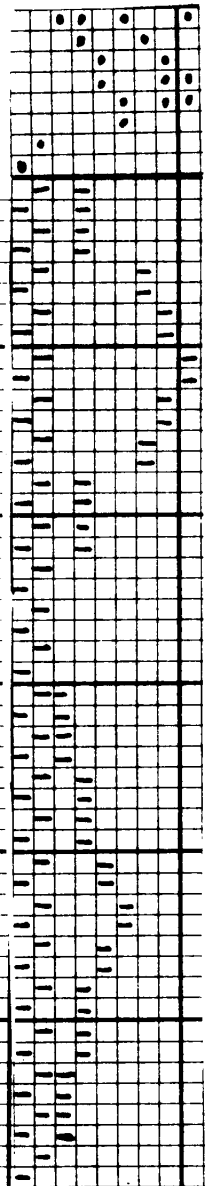
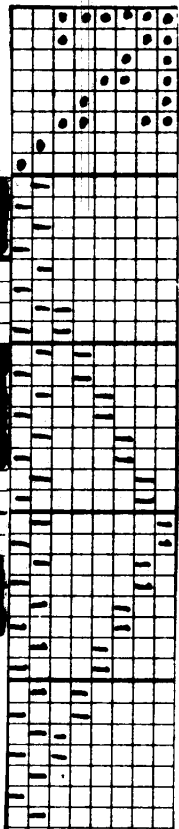
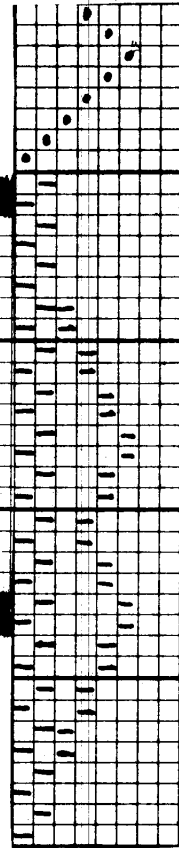
Motif 14



Motif 15



Motif 16



Weft broché or brocade.

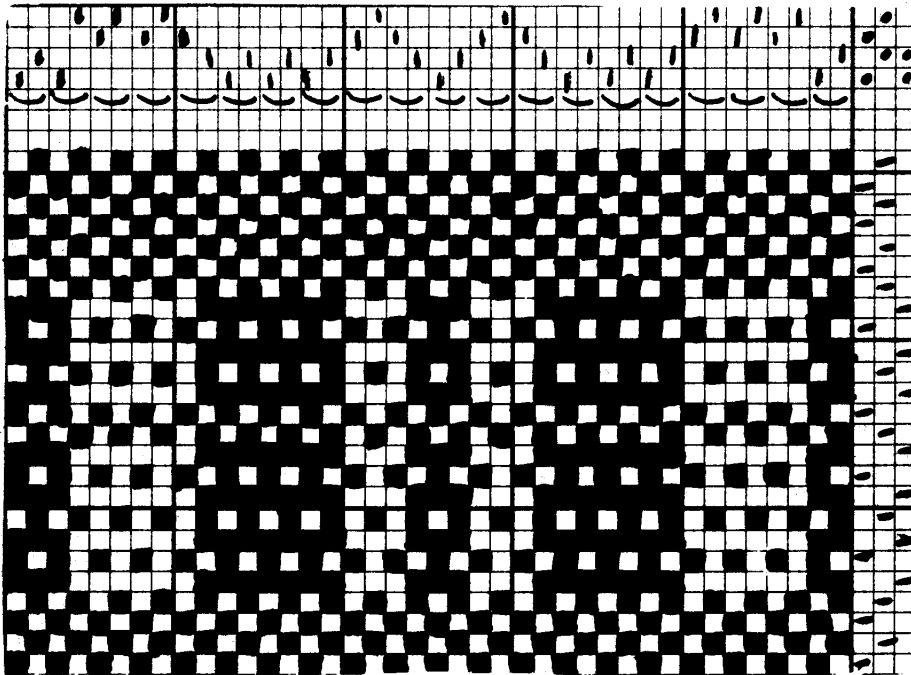
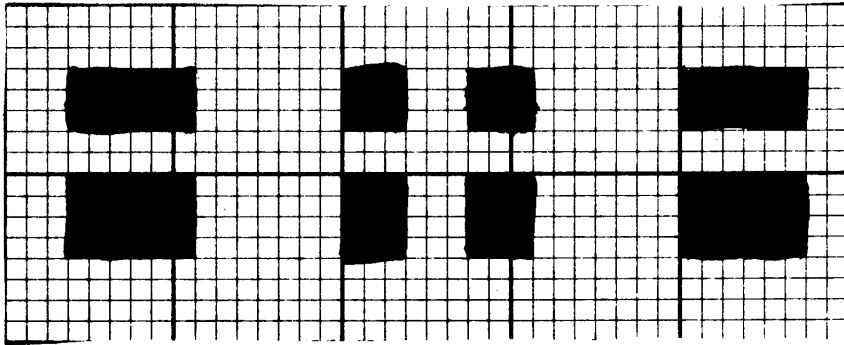
In weft broché, the broché effect is created with the weft which allows for unlimited change of color and texture. In this respect it differs considerably from warp broché which as a rule is woven with one shuttle. The preparation of the weft broché is simpler than that of the warp broché. Only one warp - the ground warp - is needed, but again the design with the different forms must be planned before the threading. The weft broché is created by the manner of threading the ground warp on the harnesses available. One must always keep in mind that, as in the warp broché, the ground weave must be uniform throughout.

Four harness weft broché.

The four harness loom limits the design possibility in weft broché to only one form. This form can vary in width and distribution over the fabric and its repetition can be controlled in the treading.

Motif and draft #17 illustrate four harness weft broché. The ground weave is tabby on harnesses one and two. Where the broché effect appears, the ground must be carried on as tabby on harnesses three and four for as long as the weft float is desired. It can be an even or uneven number of threads as long as the weaver bears in mind that the ground fabric must be tabby. In this threading the tabby is 1 + 3 and 2 + 4. The first three threads are ground and the third thread is back on harness one. In order to form the proper tabby throughout, the broché effect cannot be started on harness three but must begin on harness four. In weaving the broché shot, the whole ground warp is raised (in this case, harnesses 1 + 2) and harnesses 3 + 4 stay down in order to show the weft broché.

Motif 17



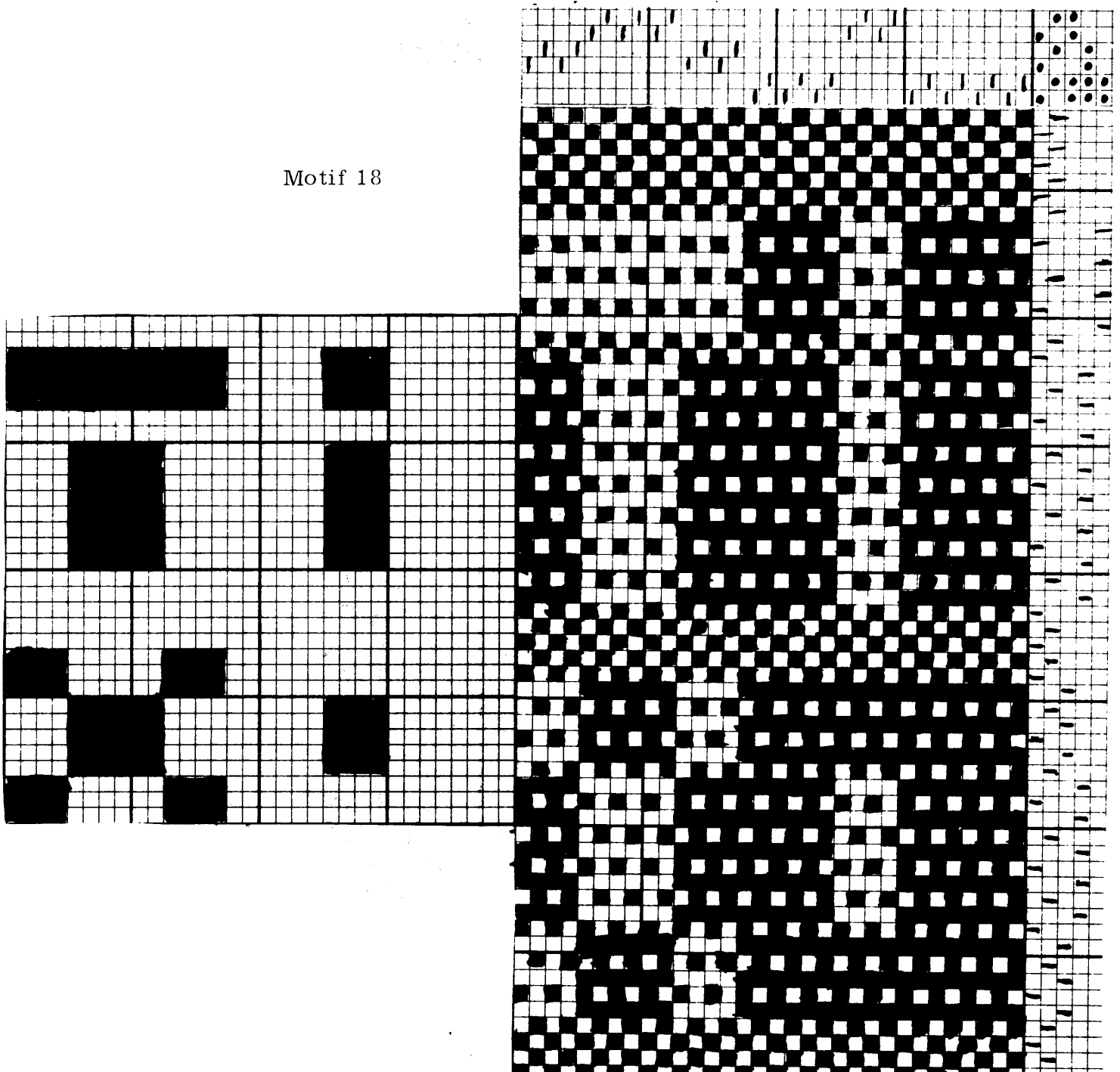
Six harness weft broche.

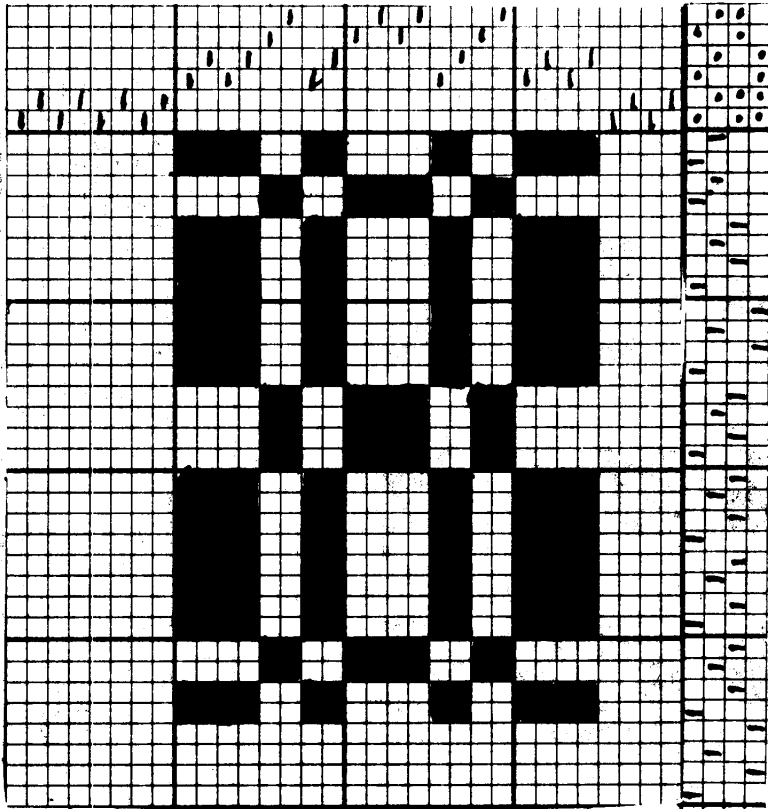
Six harnesses provide for two basic forms plus their combinations.

Motif and draft #18 demonstrate.

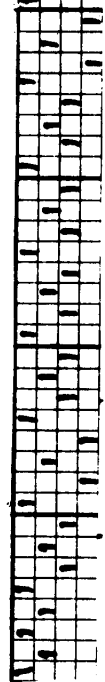
Treadles 1 and 2 control the ground weave, woven with yarn similar in weight to balance the tabby. Treadles 3, 4, and 5 are used for the broche effect, which can be multicolored and multi-textured. Motifs #19 to #21 give more designs for weft broche plus threading and treadling. Motif #22 demonstrates how opposite weft broche stripes can be achieved with the same number of harnesses simply by reversing the threading.

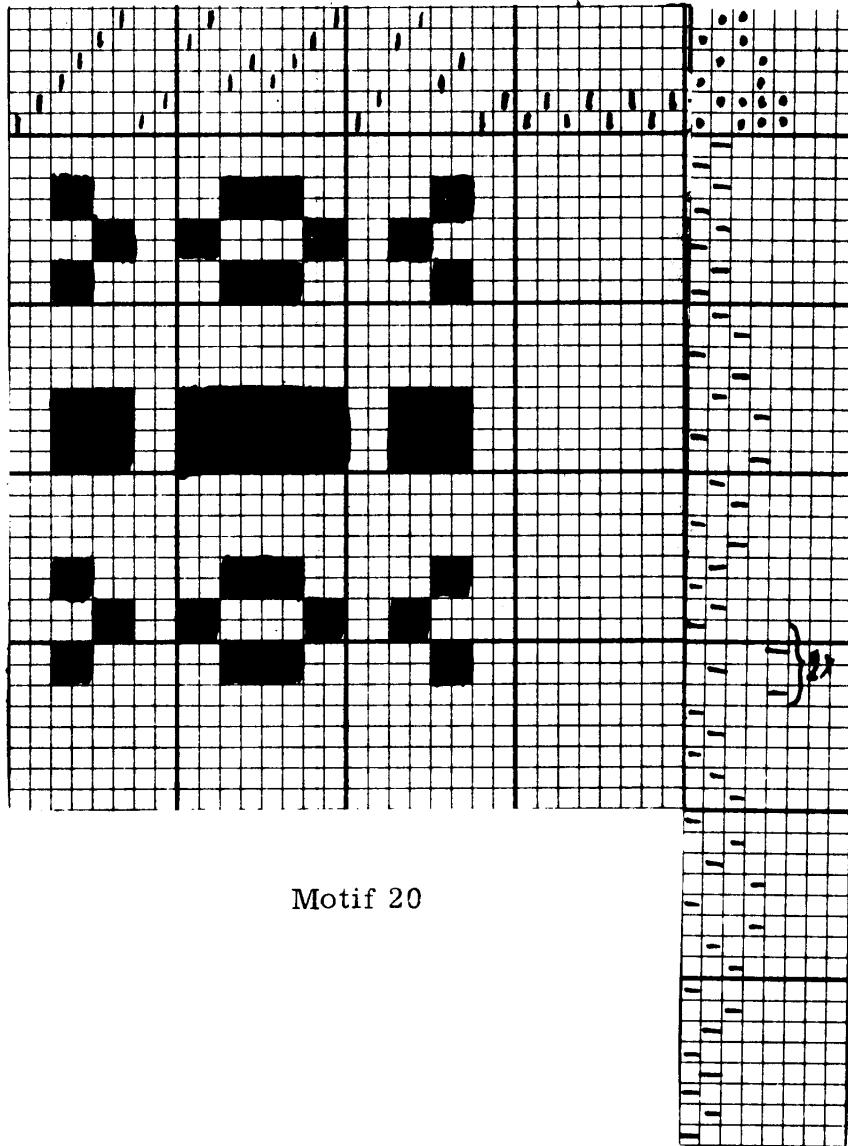
Motif 18



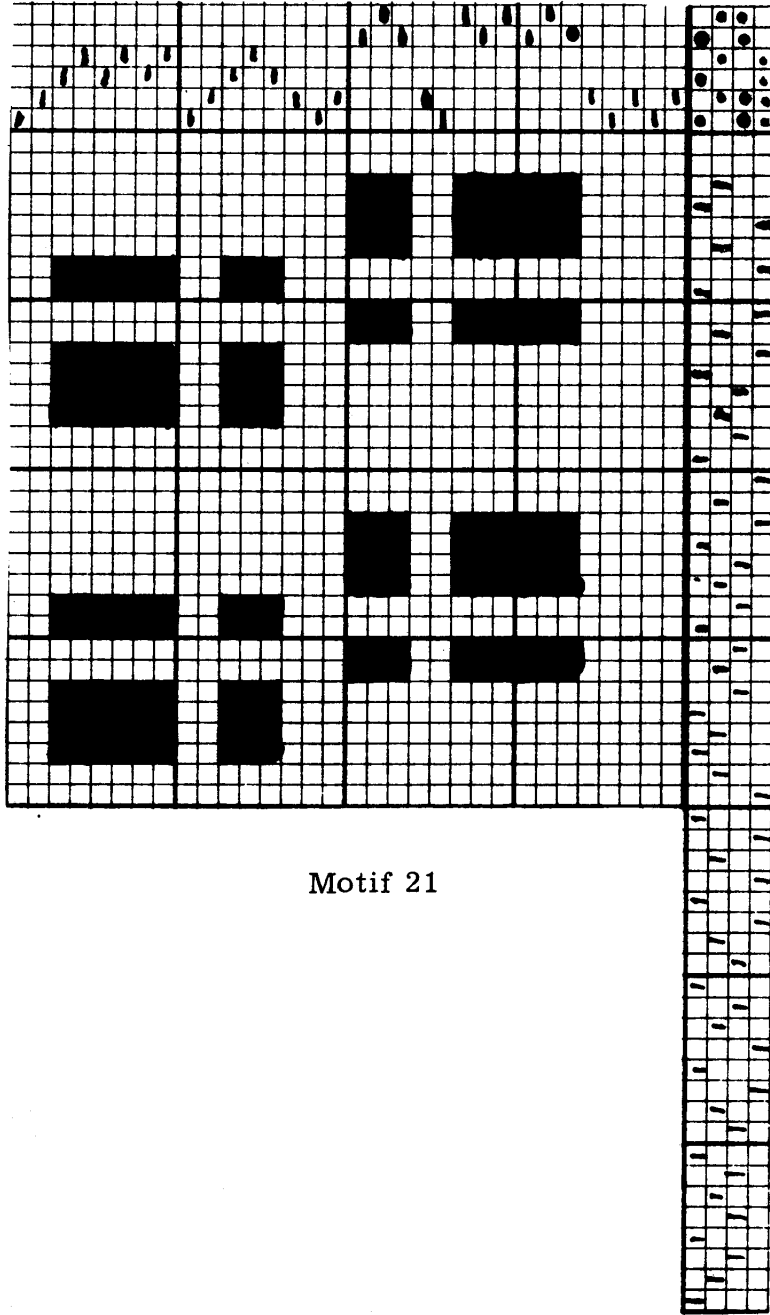


Motif 19

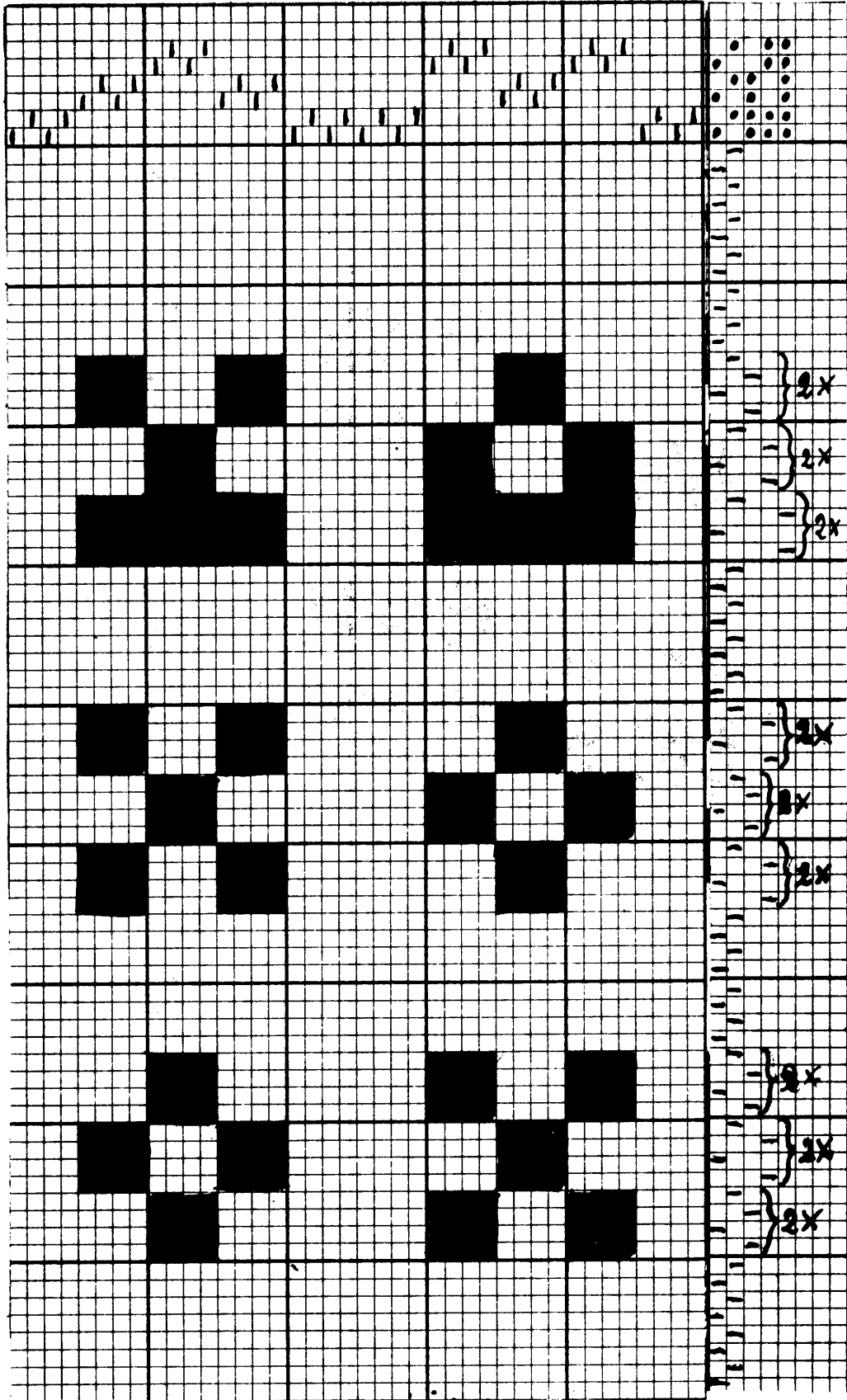




Motif 20



Motif 21



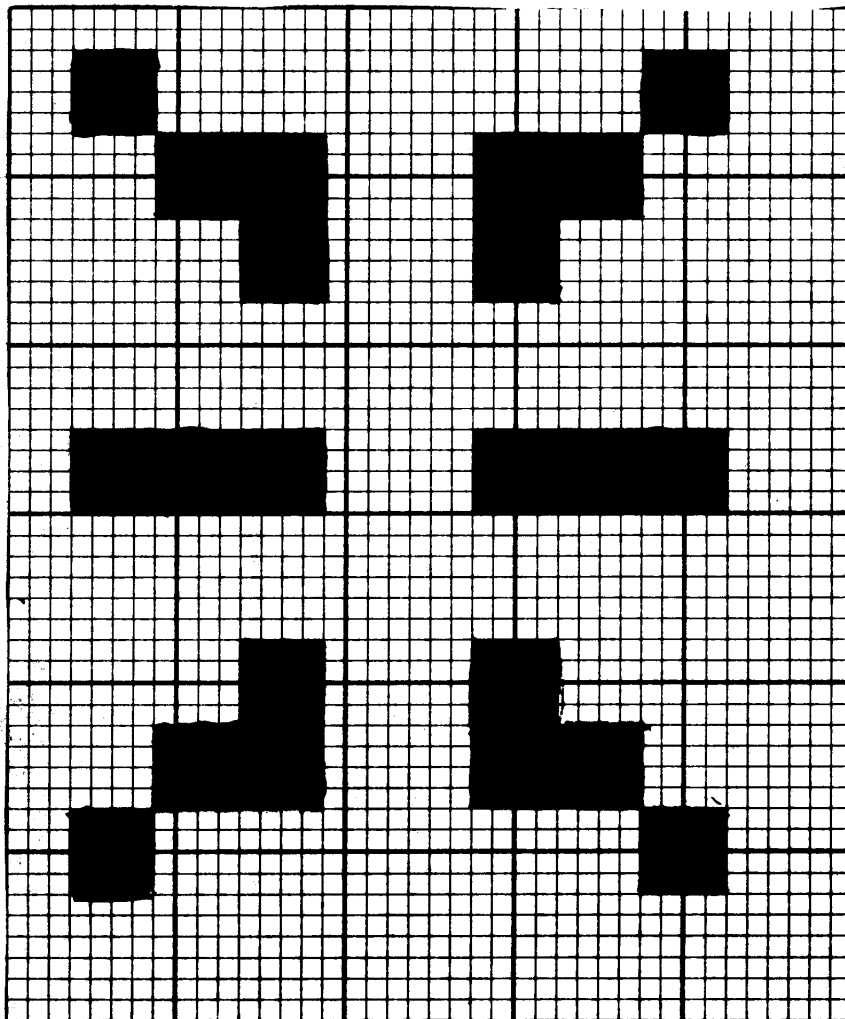
Motif 22

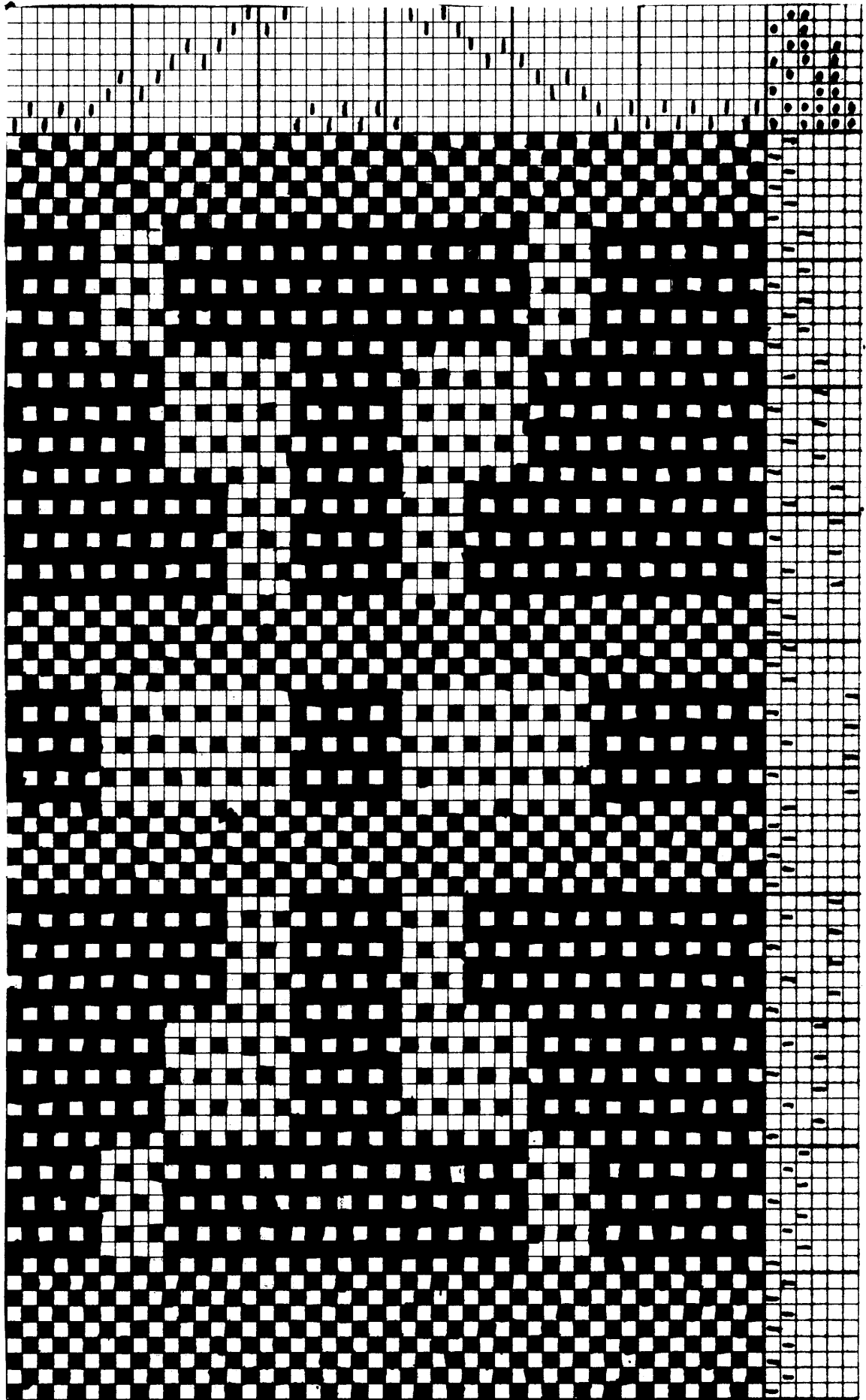
Eight harness weft broche.

It becomes clear from the preceding drafts that in the weft broché pattern each additional basic form needs two more harnesses. With the increase in the number of basic forms however, their combinations with each other also offer more design possibilities. Motifs #23, 24, 25, 26, 27 have the same threading but changes are made in the treadling. There is no need to make the full draft for each design because the tie-up and the treadling can be made from the motif. If the weaver keeps in mind on which harnesses the different forms are threaded, a wonderful opportunity is given to improvise on the loom with color, texture and form.

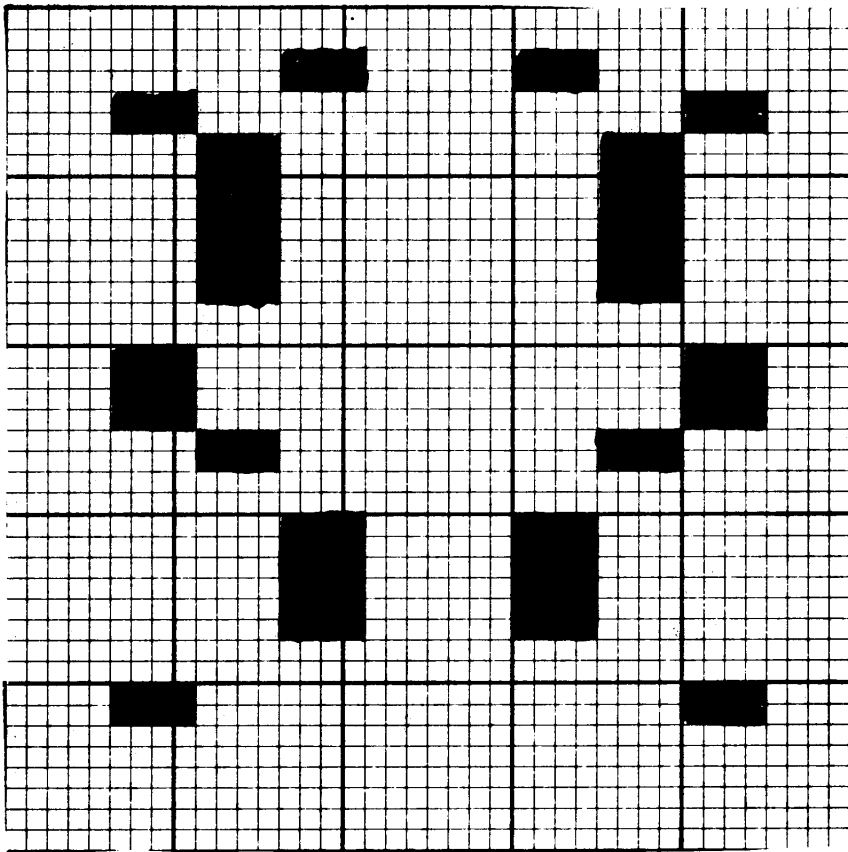
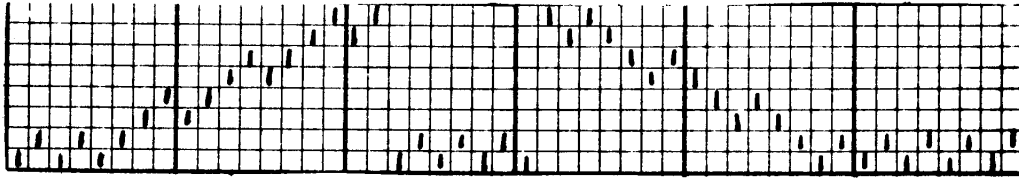
A very basic difference between weft and warp broché is that when the weft broché shot is woven, the whole background weave must be raised whereas in warp broché, alternating halves of the background are raised continuously with each shot. When weaving a weft broché fabric with a definite motif, there is a great advantage in weaving the fabric face down because then only a few harnesses must be raised for each broché shot.

Motif 23

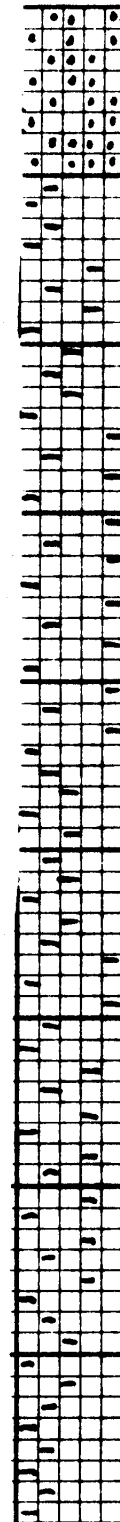


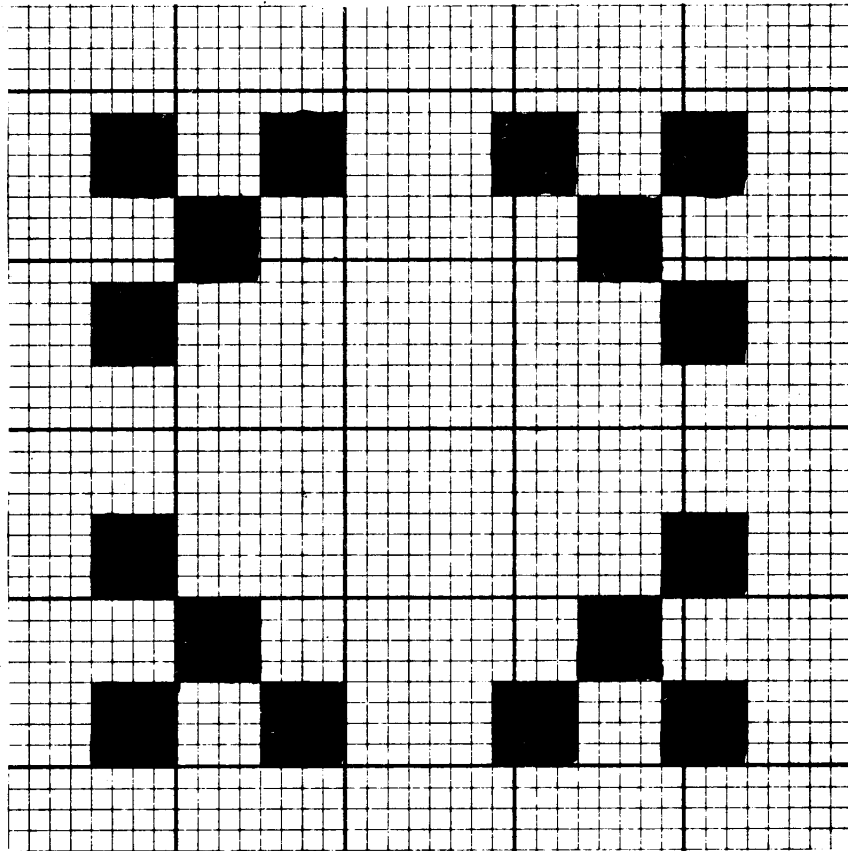


Motif 23

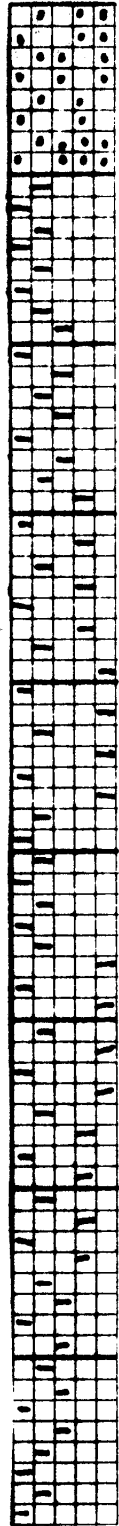


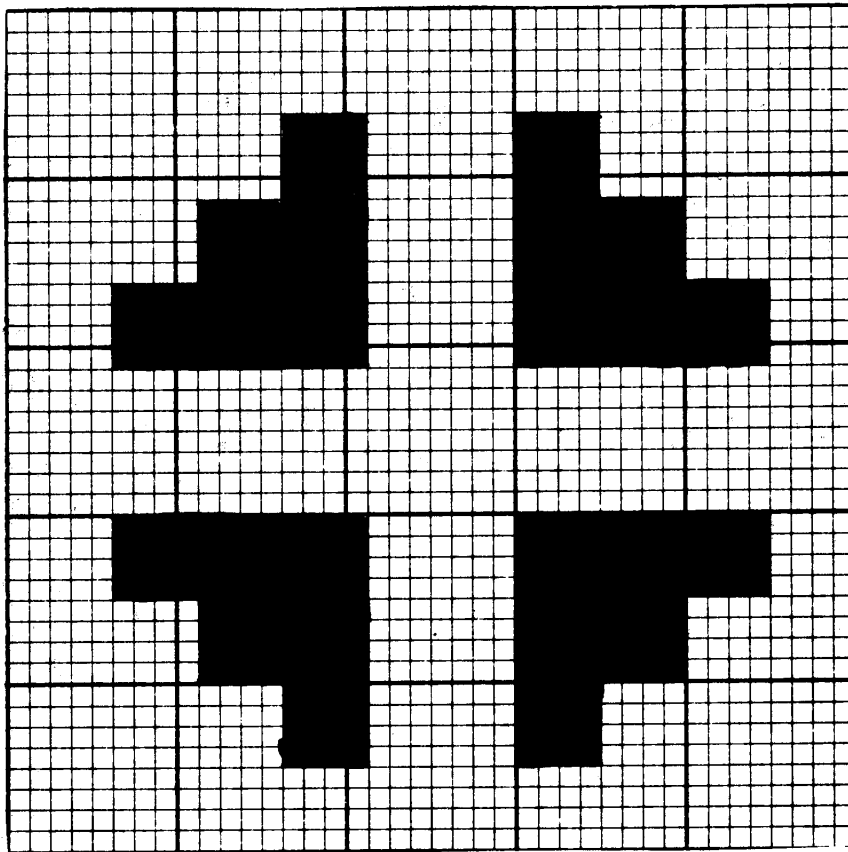
Motif 24



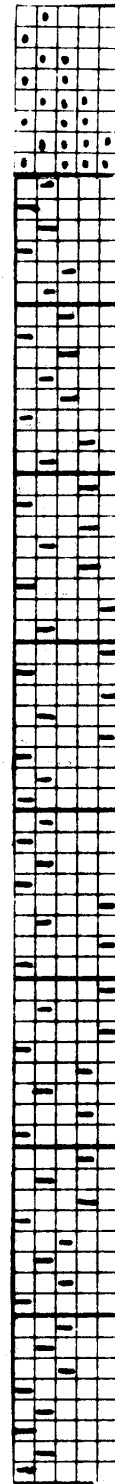


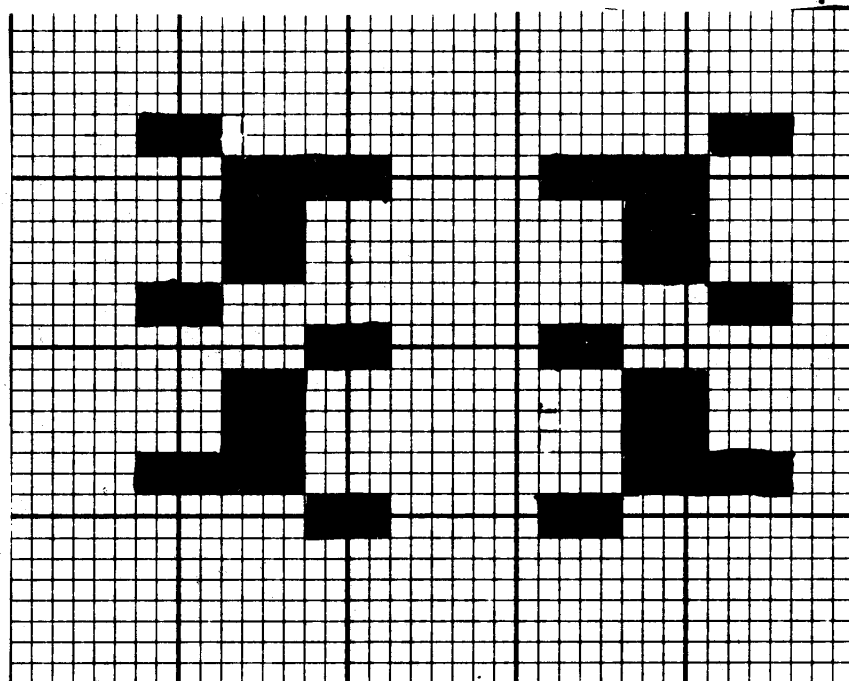
Motif 25



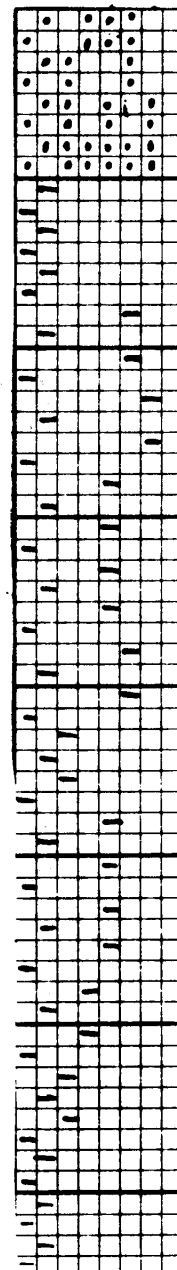


Motif 26





Motif 27



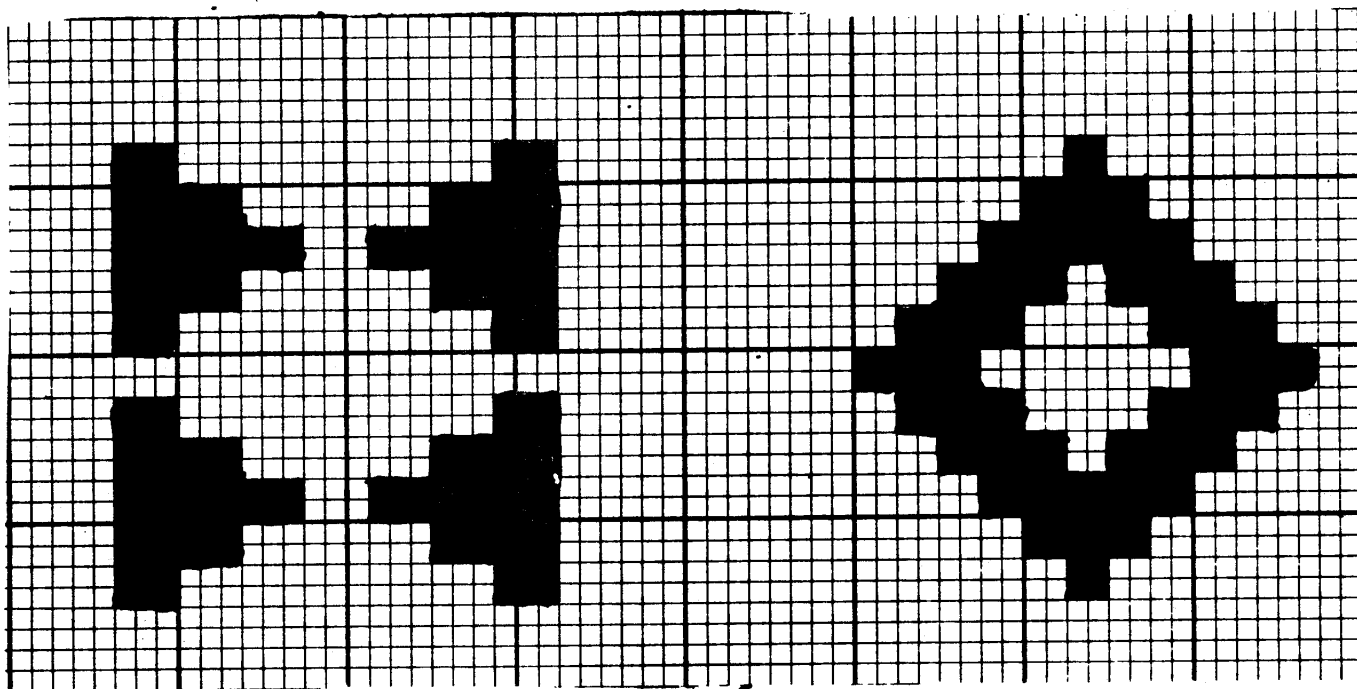
The combination of warp and weft broché.

Very interesting results can be achieved by combining warp and weft broché. The same principle of a background weave of an even structure must be maintained in the combination of the two brochés. In the warp broché the ground weave is threaded on harnesses 1 and 2. In the weft broché the ground weave is distributed over the harnesses available for the weft effect, but both must be threaded to form a tabby background across the whole width of the fabric.

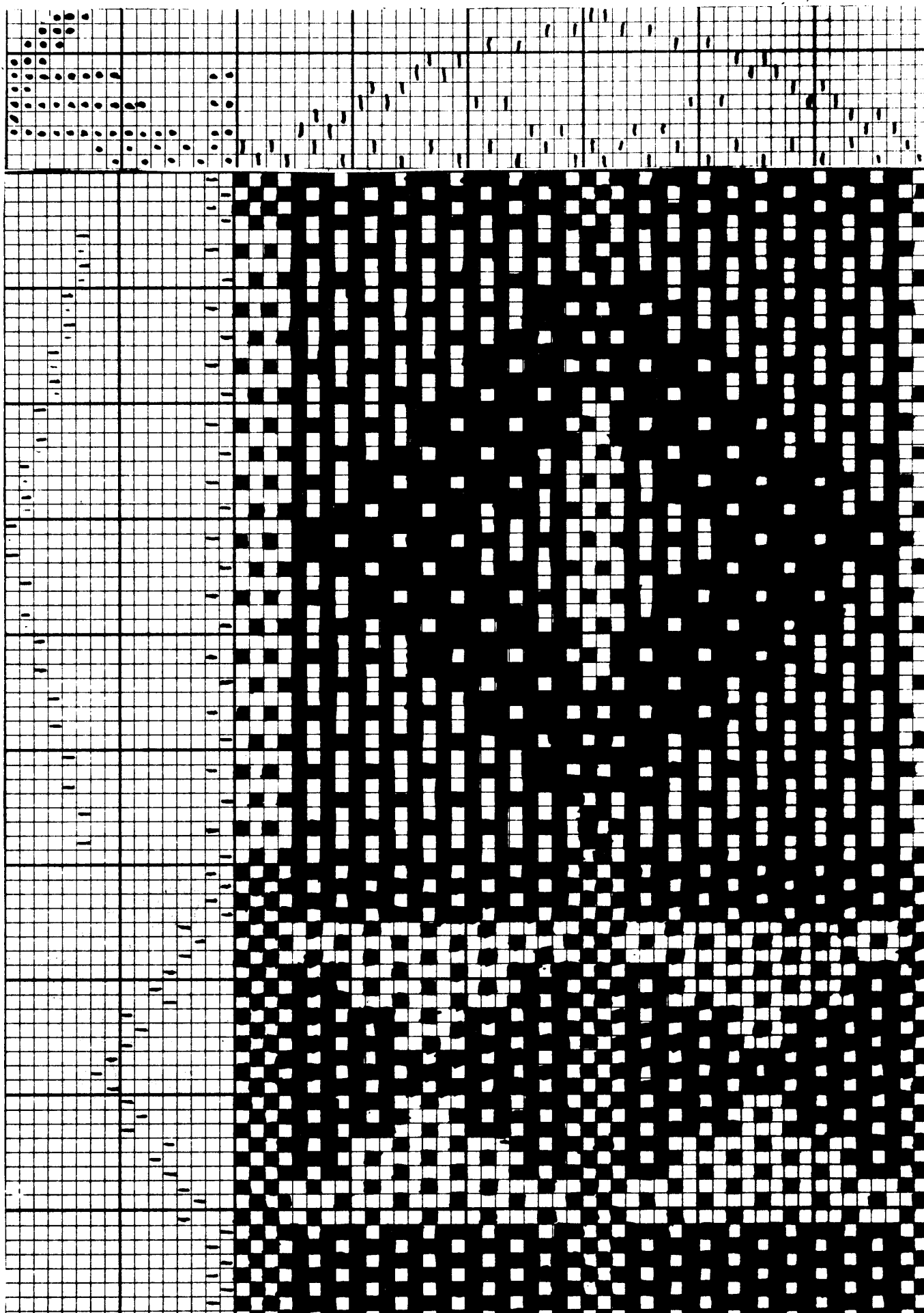
The following motif #28 is done with 16 harnesses.

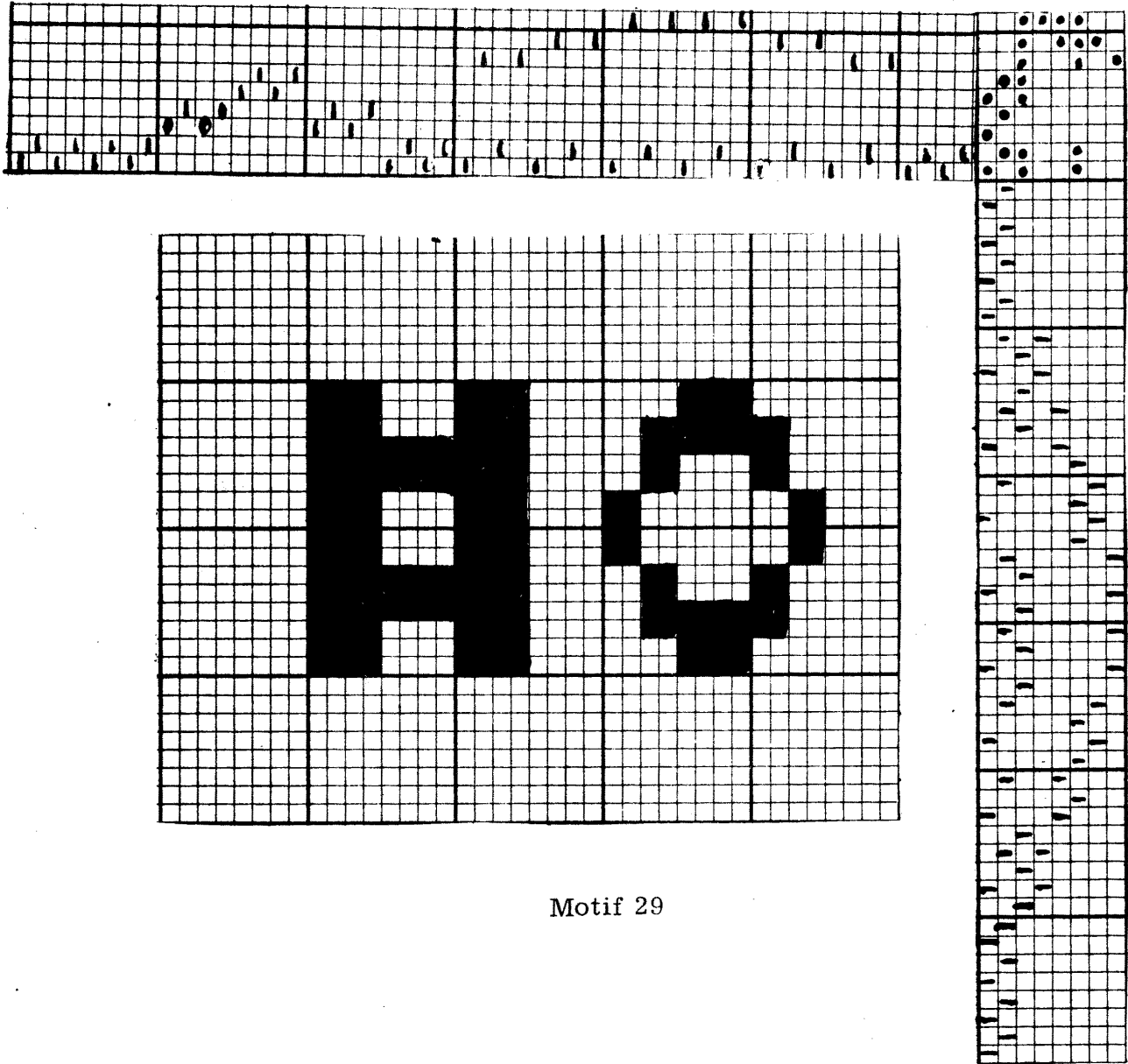
Limiting the number of forms in the motifs, especially in the weft broché, will save harnesses. Changing color and/or texture in any given form can be an alternative for additional forms in the weft effect.

The treading is as follows: The warp broché is with the separate tie-up method as explained in the six-harness warp broché. One shot for the warp broché (the ground weave) is thrown followed by the different thread for the weft broché effect. Motifs #29 and #30 give threading and treading for other combinations of warp and weft broché.

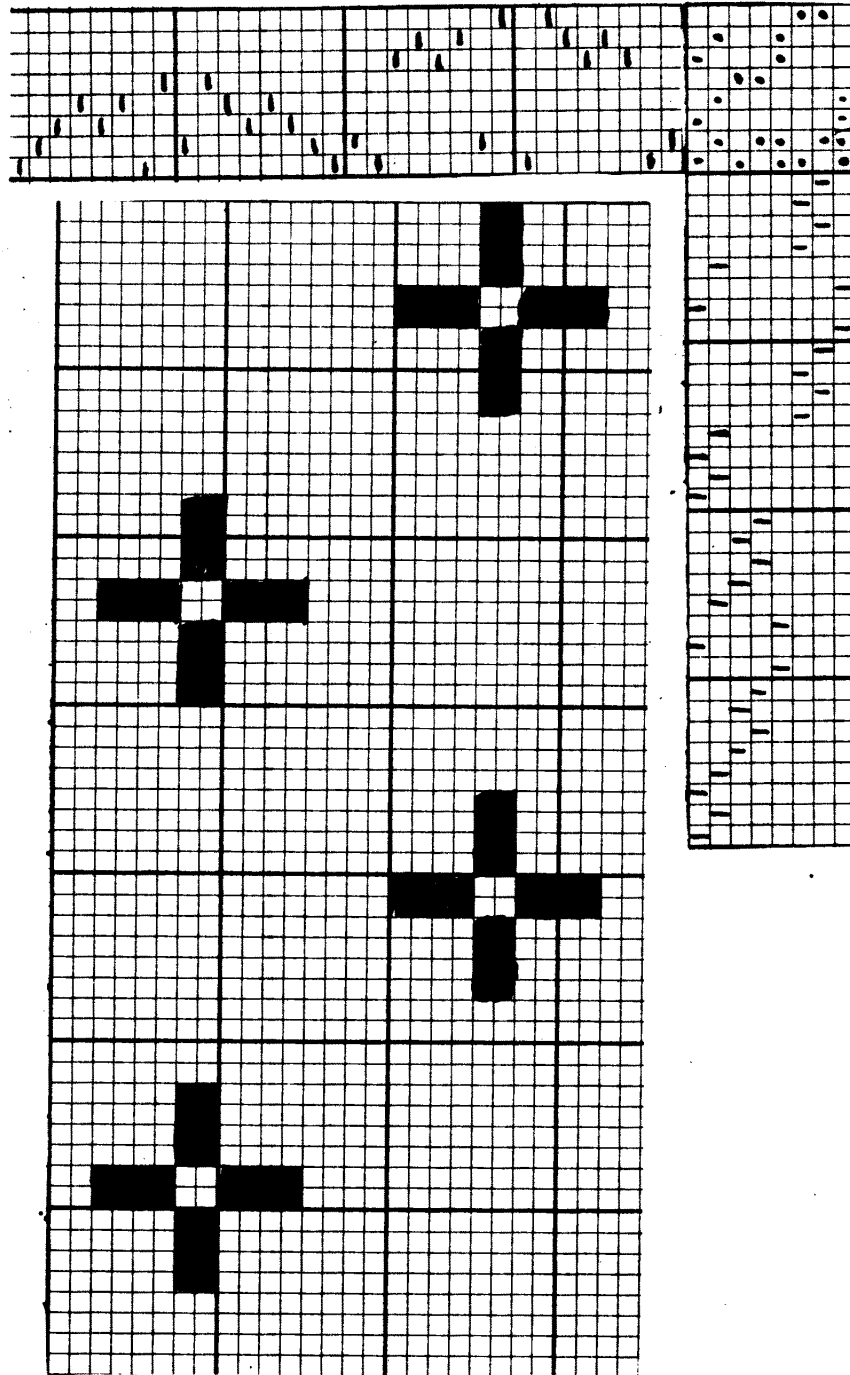


Motif 28





Motif 29



Motif 30

