

The Hand Weaver's Guild
of Connecticut

DIVERSIFIED PLAIN WEAVE

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DIVERSIFIED PLAIN WEAVE

Given in memory of Mrs. Koehler

The Hand Weaver's Guild
of Connecticut

DIVERSIFIED PLAIN WEAVE

The basis of this weave is plain weave or tabby. The design is created by the combination of textures of the fine and heavy threads. The fine threads form the ground weave and the heavy ones form the design.

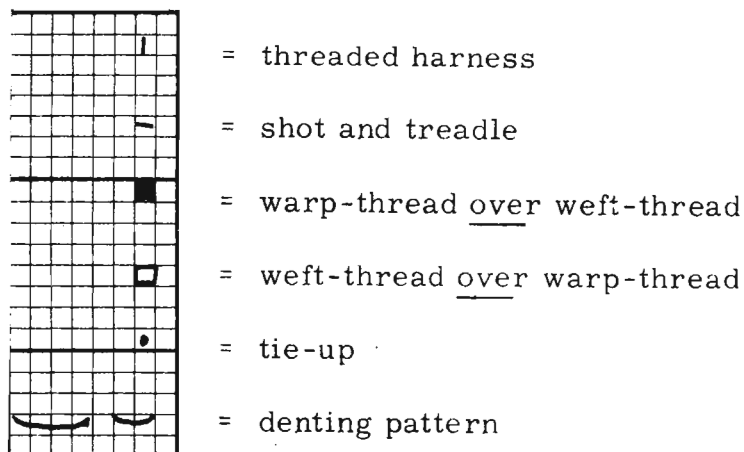
Regardless of the number of harnesses one is using, the first two are reserved for the plain weave. By increasing the number of harnesses, the design possibilities multiply. For example, with a four harness loom, the ground weave would be on harnesses 1 and 2, which would leave harnesses 3 and 4 to be used for the design. With a six harness loom, the ground weave would still be on harnesses 1 and 2 which would leave harnesses 3, 4, 5, and 6 free to be used for the design, thus allowing for a more complex design.

The basic rule for this weave is the same for warp and for weft: 2 fine threads and one heavy thread, with one fine thread on either side of the heavy thread. The setting of the warp is determined by the thickness of the heavy yarn. One heavy thread goes in each dent with a fine thread on either side of it in that same dent, thus placing 3 threads in each dent.

An even smooth yarn will show the design better but it is not mandatory. One must however keep in mind when choosing the yarn that the difference in the size is a very important factor in the design and effect of the weave.

An additional plus for this weave is its absolute reversibility. The design which appears on one side of the fabric as a weft effect will at the same time show as a warp effect on the reverse side. It thus has both a positive and a negative effect, affording the weaver a choice of which side she wants to use.

The symbols used in the drafts are as follows:



What are the treadling possibilities for the tie-up of a 4 harness loom with 6 treadles?

For the diversified plain weave instead of walking the loom in treadling, it is better to number the treadles one to six starting from left to right. The draft of the treadles shows the difference between "walking the loom" and treadling from left to right.

a. Walking the loom



1 3 5 6 4 2

b. From left to right



1 2 3 4 5 6

First of all the tabby as the basic weave or ground weave is on treadles 1 and 2. Harnesses 1 and 3 are raised by treadle 1, and harnesses 2 and 4 are raised by treadle 2. These two treadles are operated with the left foot, the other four treadles by the right foot.

The next pair of treadles (3 and 4) give the weft effect. By raising

only harness 1 on treadle 3, all the heavy threads (on harnesses 3 and 4) and one-half of the fine threads (on harness 2) are down, which results in the absolute weft effect -- the horizontal line. The same weft effect is achieved by raising only harness 2 on treadle 4.

Treadles 5 and 6 weave the warp effect. Both harnesses 3 and 4 (all the heavy threads) are raised with one of the harnesses of the fine threads thus creating a vertical effect.

Swatch #1 illustrates only the tabby. As mentioned before, the sequence of threads is the same in warp and weft -- 1 fine, 1 heavy, and 1 fine. This three thread change results in alternating the heavy thread once on treadle 1 and the next time on treadle 2 which gives the dotted effect.

Swatch #2 is a combination of all three possibilities.

Fig. 1 Tabby, weft face, warp face.

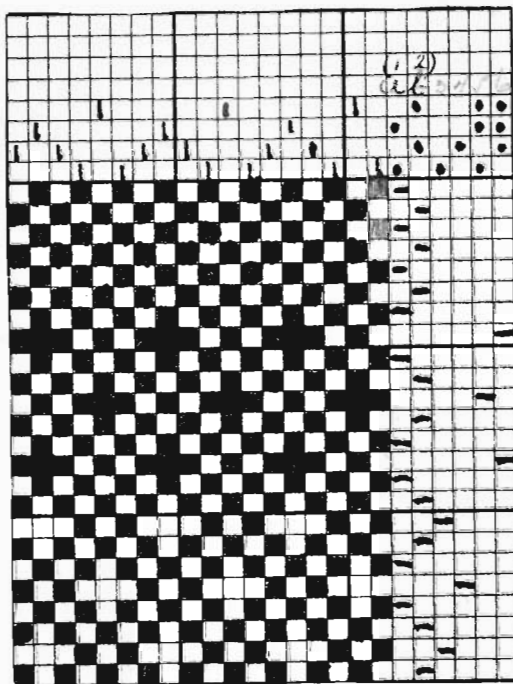


Fig. 1

6 Harness Diversified Plain Weave

With each additional harness the design possibilities increase. The four harness weave is limited to either a vertical or horizontal line or to a salt and pepper effect. The additional 2 harnesses (harnesses 5 and 6) which are used only for the enlargement of the design immediately allow for limited figuration. The threading is developed in the same manner as previously explained:

2-3-2-1-4-1-2-5-2-1-6-1

The basic rule stays the same no matter how many harnesses are involved. Again harnesses 1 and 2 are reserved for the ground weave - the fine threads. Harnesses 3 to 6 are available for the design - the heavy threads. As an additional design factor, we have with the multiple harness design, the threading and the treadling pattern.

Fig. 2. A four harness crepe weave is used as a basic design on a straight threading and straight treadling. Fig. 2.

Fig. 3. The same pattern, a crepe weave, is used on a pointed threading and pointed treadling. In Fig. 2 one pattern repeat goes over 4 threads. The pointed threading for 4 harnesses goes over 6 threads. The reverse of the threading on harnesses 3 - 2 gives the reverse of the pattern. The treadling pattern gives the same result and, as with the twill pointed threading and pointed treadling, results in a perfect diamond design. Fig. 3.

Fig. 4 demonstrates still another enlargement of the same design.

The Rosepath threading which includes 8 threads is used and the threading pattern is used also as a treadling pattern. Fig. 4.

There is no need however, for the design to be based on a specific weave. One can start out with a design which fits in the limitation of the number of harnesses available. The design harnesses - the heavy threads - can be raised as the form calls for them: All together, none at all, singly, in groups of 2 or 3 and so on.

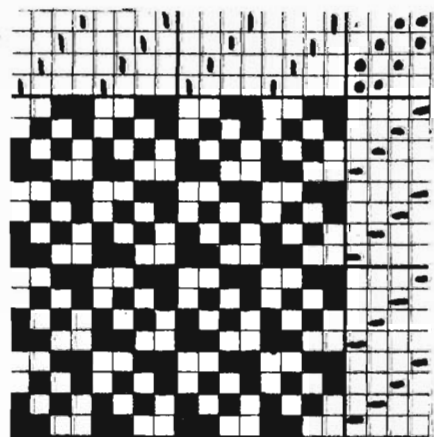


Fig. 2

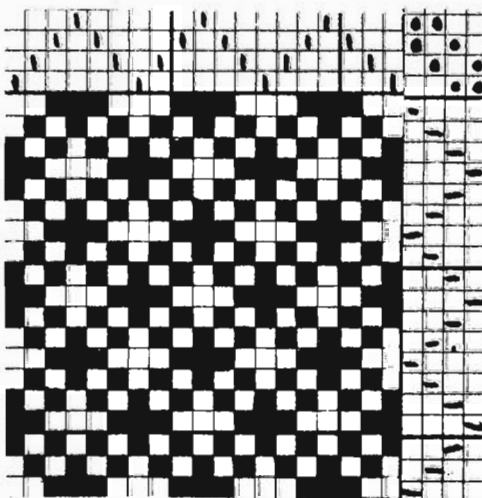


Fig. 3

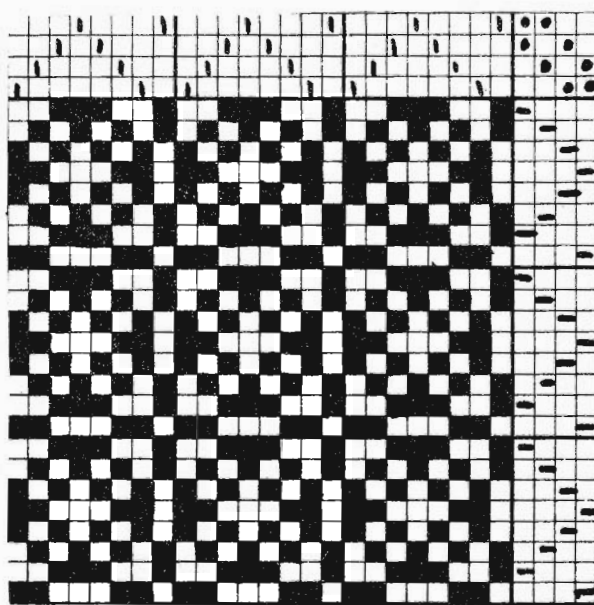


Fig. 4

Fig. 5., Fig. 6., Fig. 7., Fig. 8. Designs on a straight threading.

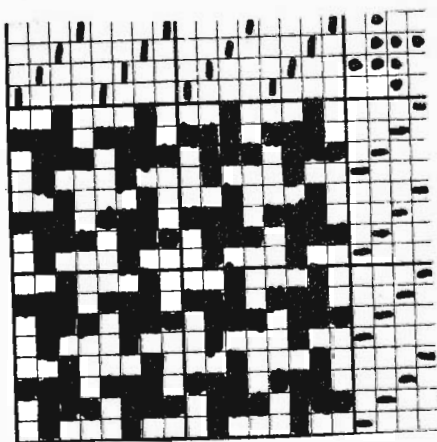


Fig. 5

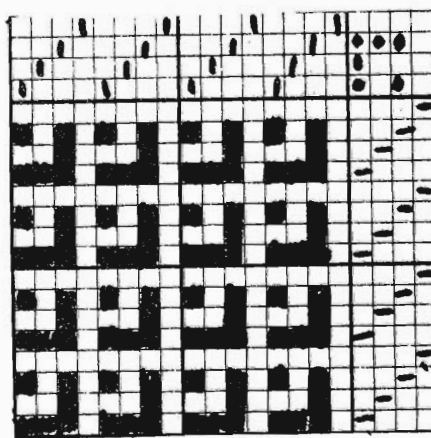


Fig. 6

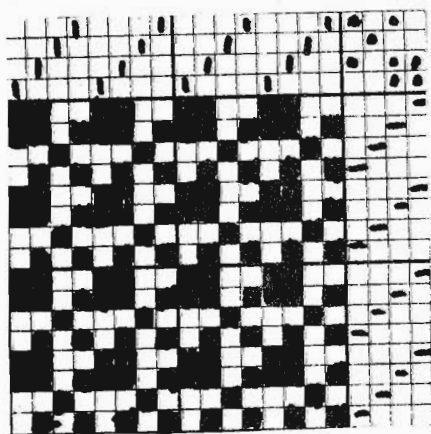


Fig. 7

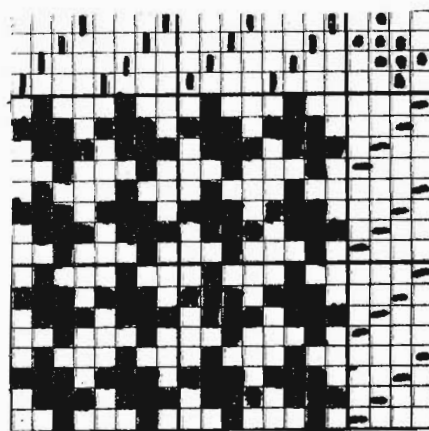


Fig. 8

The pointed threading gives more possibilities than the straight threading especially when the number of harnesses is limited. The following designs demonstrate some possibilities.

Figures 9 through 12. Designs for a pointed threading.

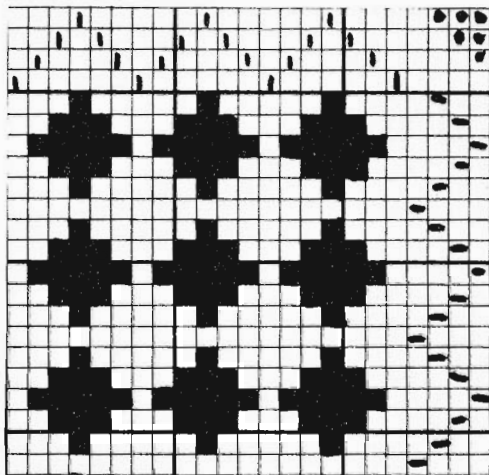


Fig. 9

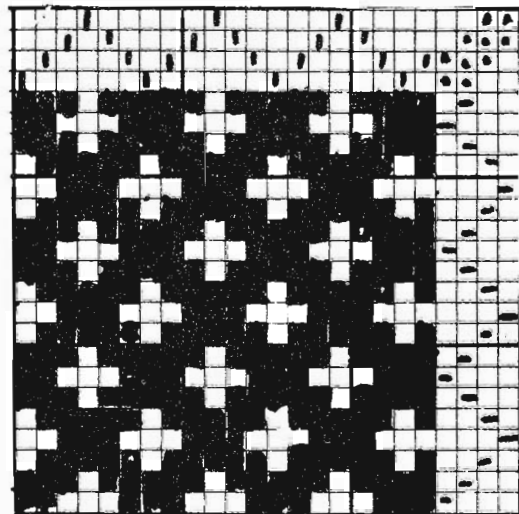


Fig. 10

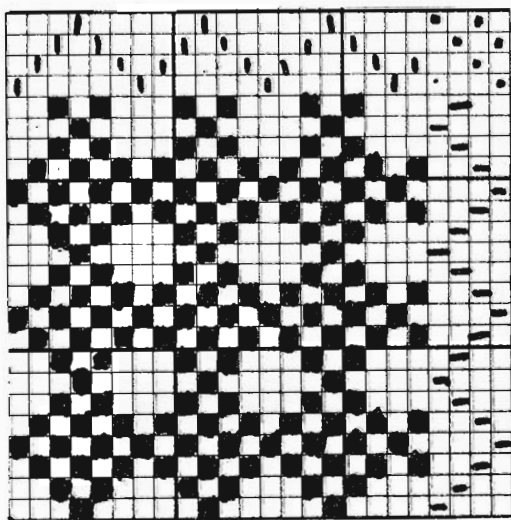


Fig. 11

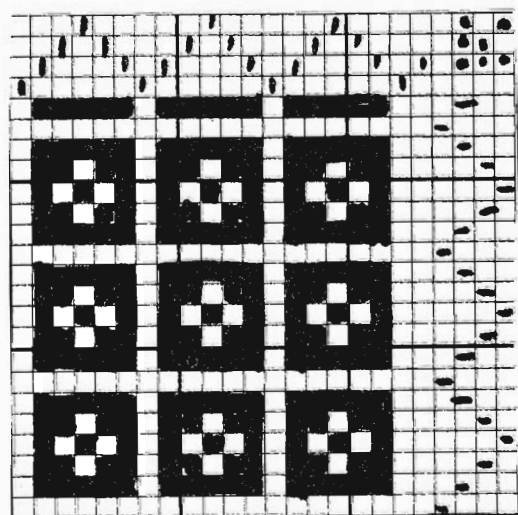


Fig. 12

Figures 13 through 16. Designs for Rosepath threading.

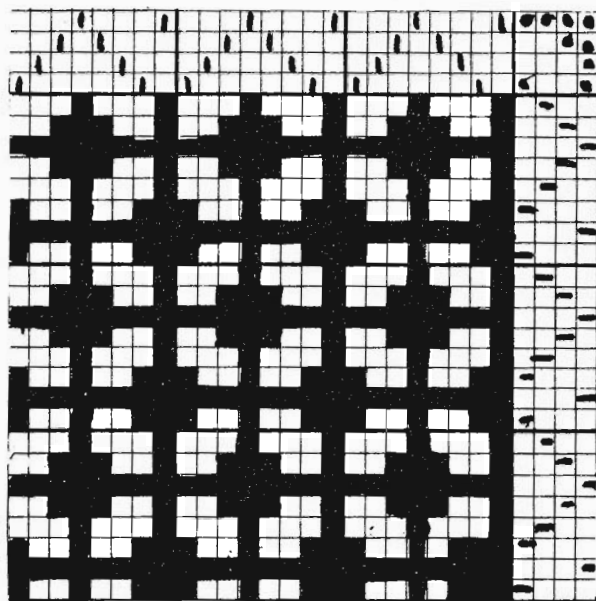


Fig. 13

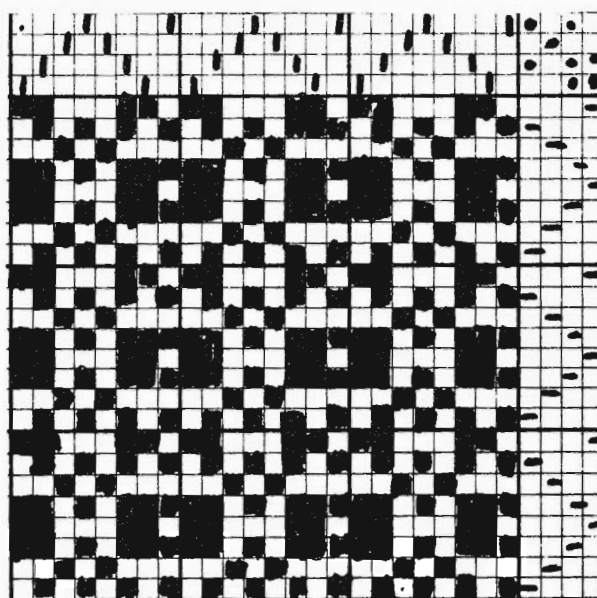


Fig. 14

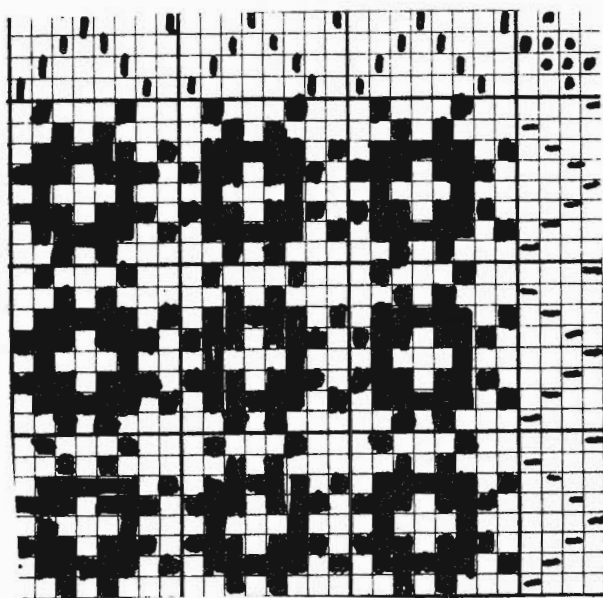


Fig. 15

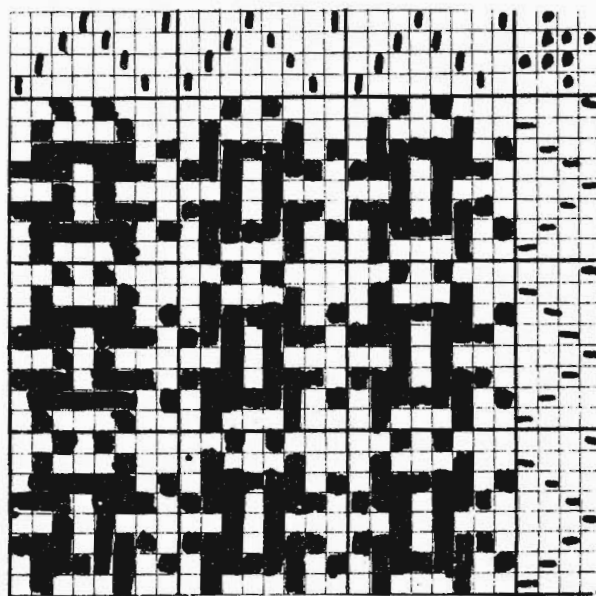


Fig. 16

8 Harness Diversified Plain Weave

If the six harness weave is clearly understood, the step to the 8 harness weave is a very easy one. Naturally the more harnesses, the more interesting the weave can be. With the straight threading the design encompasses 6 threads (Fig. 17 through 20); with a pointed threading it can go over 10 or 12 (Fig. 21 through 26).

One point must be clearly understood about the threading. The pattern (heavy) threads cannot follow each other on the same harness. For example: one cannot thread 2-3-2-1-3-1-2-3-2-1-3-1. It will not create the alternating tabby effect in the weave of the heavy yarn. In order to create the tabby look of the heavy thread, two separate harnesses are needed just as in a regular tabby. If a repetition of the same harness is desired, it must be threaded as follows: 2-3-2-1-4-1-2-3-2-1-4-1-2-3-2-1-4-1 and so on.

If one has difficulty in designing, it is worthwhile to try out different threadings and treadlings, keeping the above rule for threading in mind. The following designs are based on pattern and free design. (Fig. 27 through 32). Pointed threading enlarged.

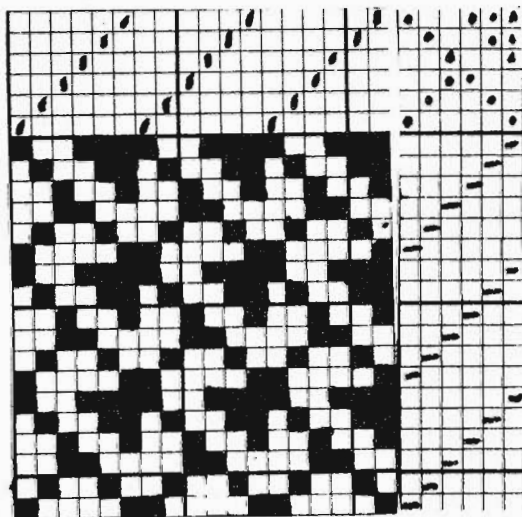


Fig. 17

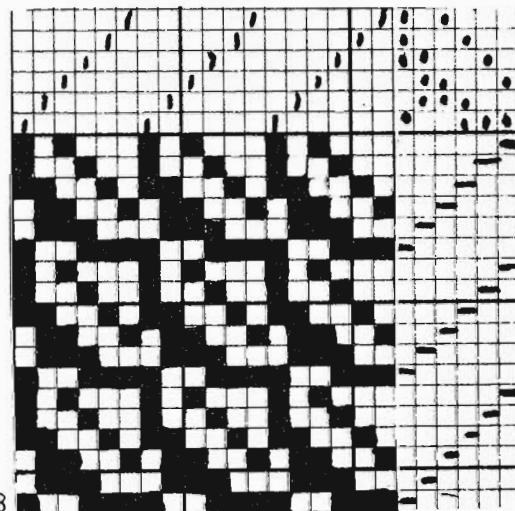


Fig. 18

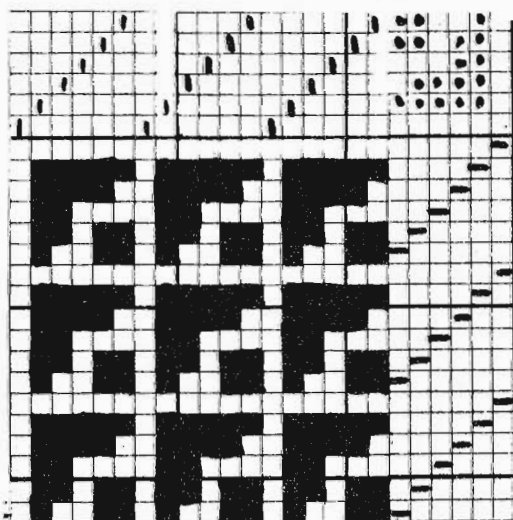


Fig. 19

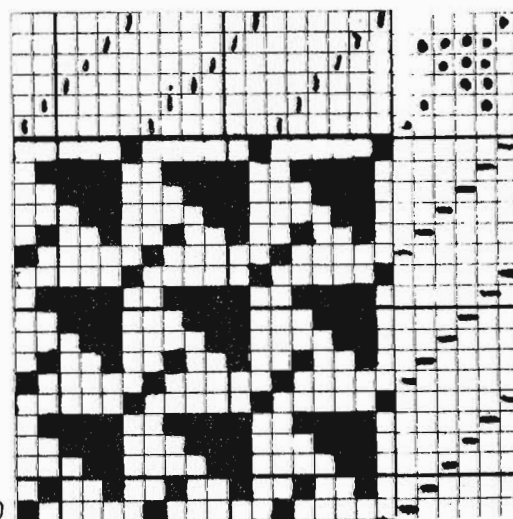


Fig. 20

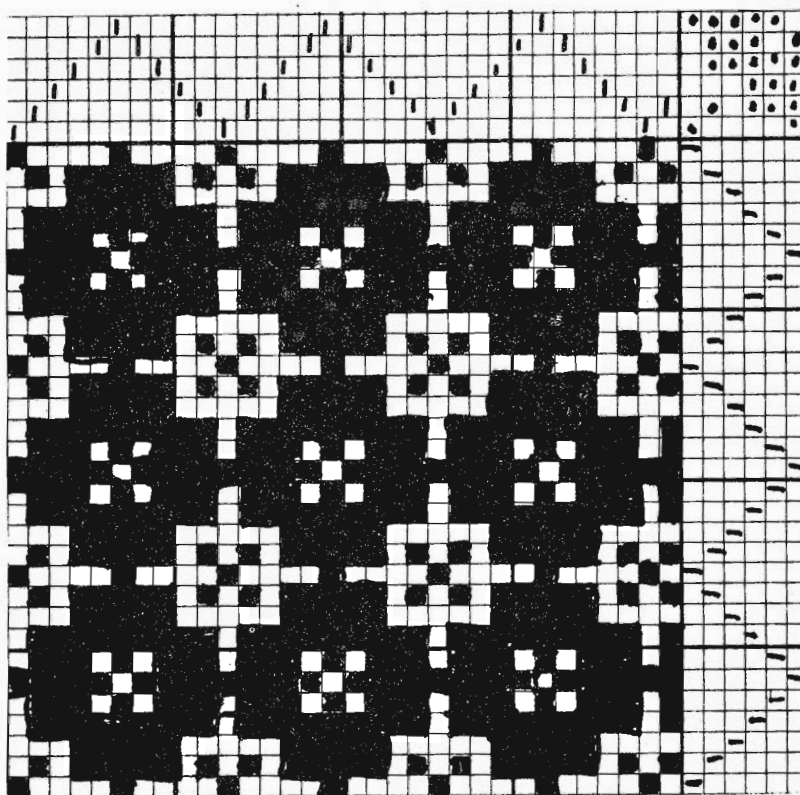


Fig. 21

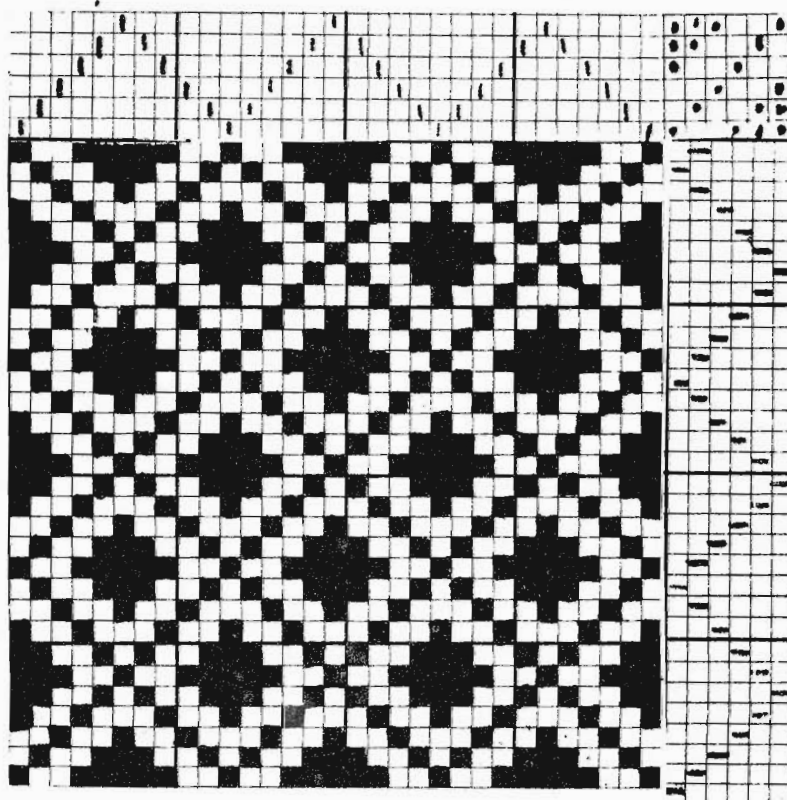


Fig. 22

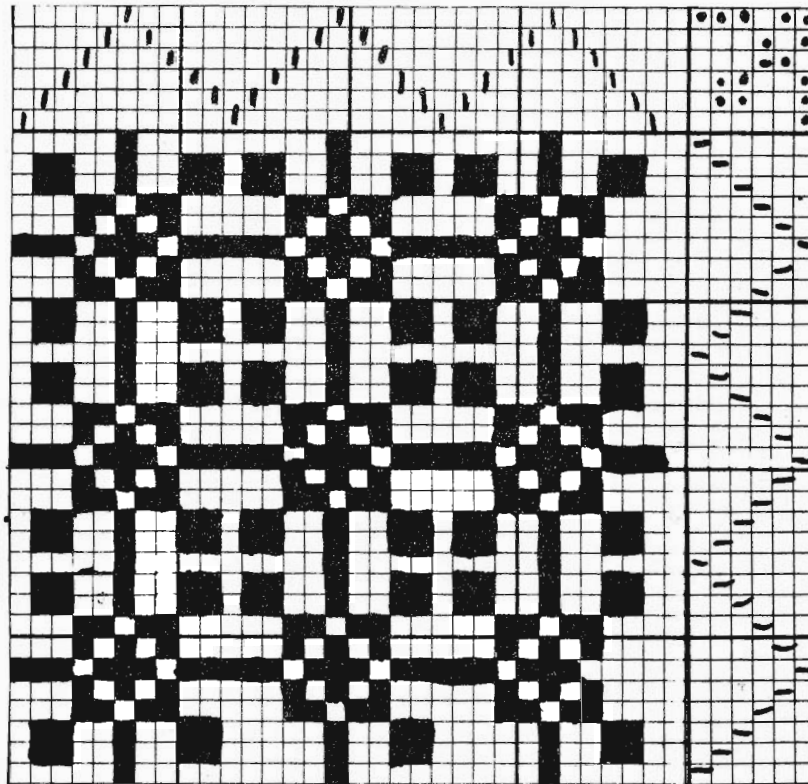


Fig. 23

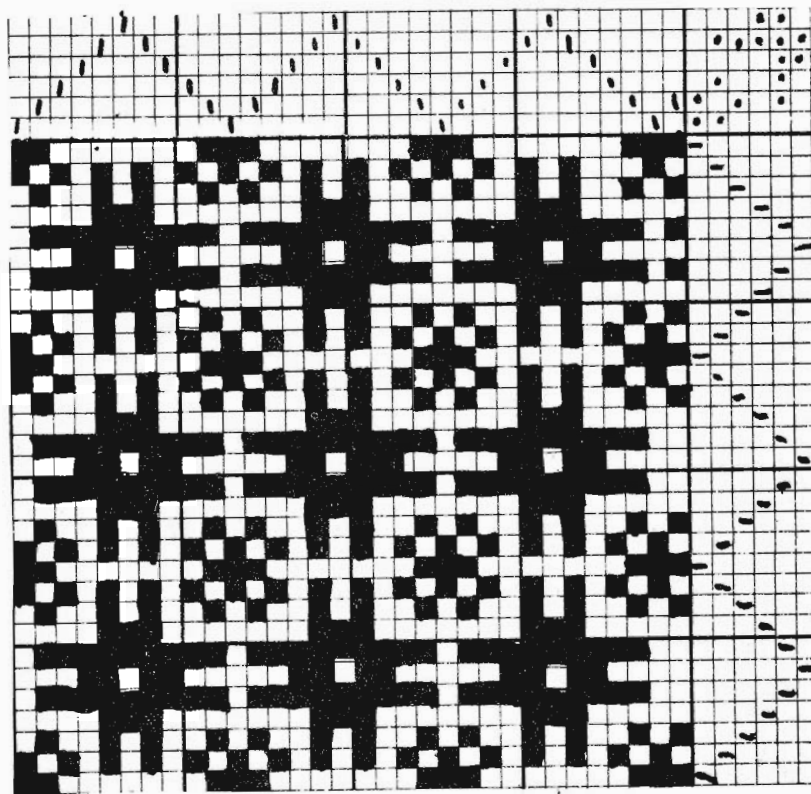


Fig. 24

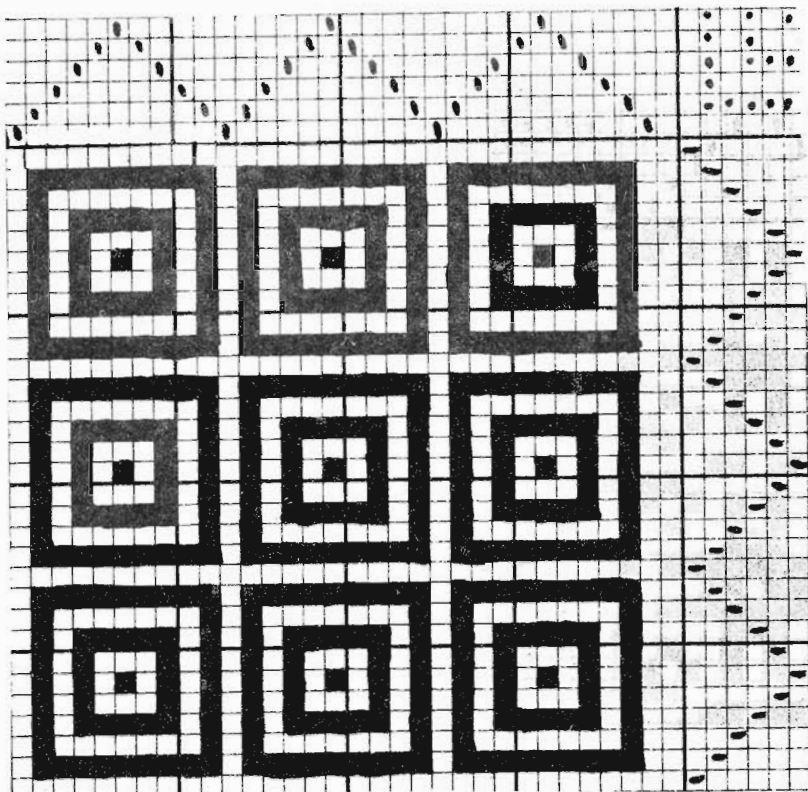


Fig. 25

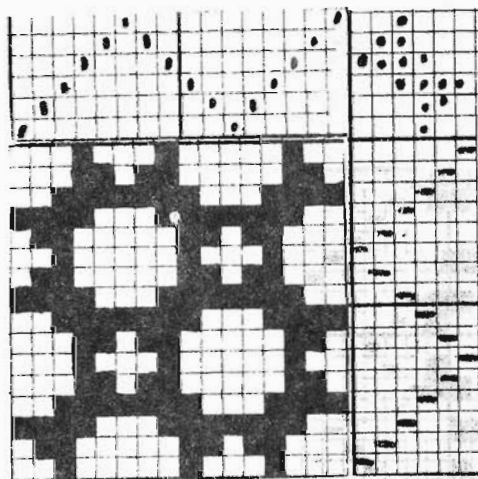


Fig. 26b

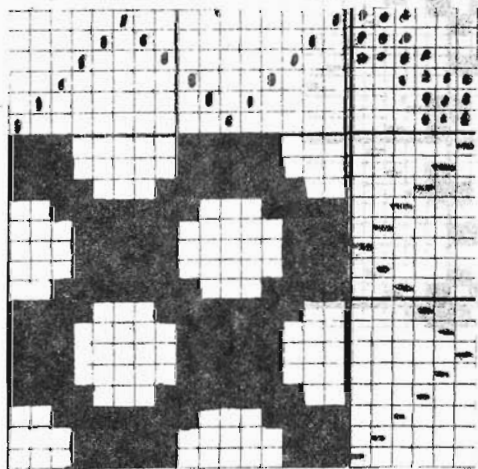


Fig. 26c

Minor changes in the tie-up for Figure 26a make the designs for Figures 26b and 26c.

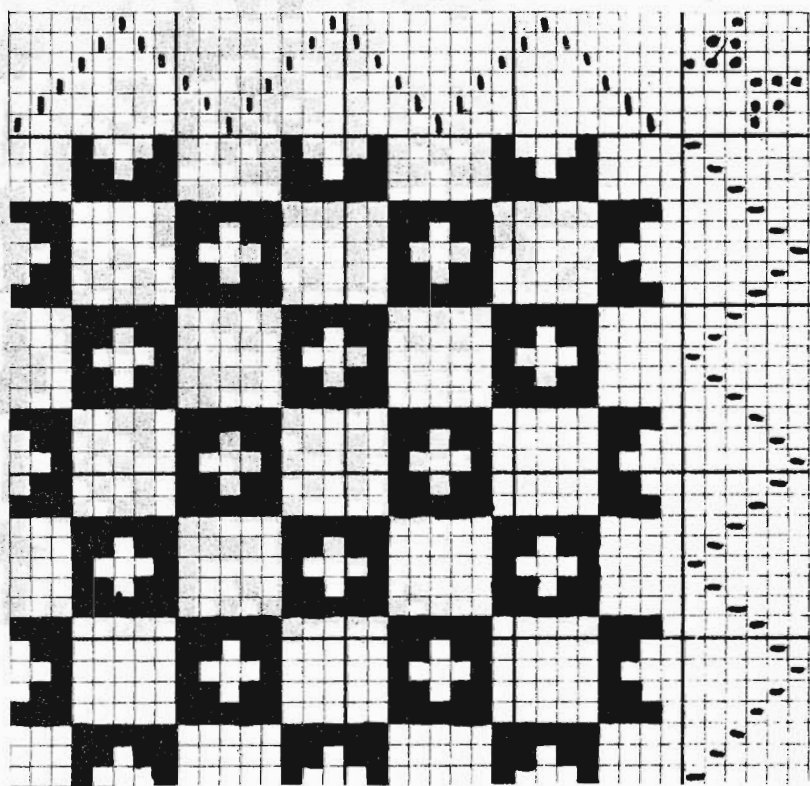


Fig. 26a

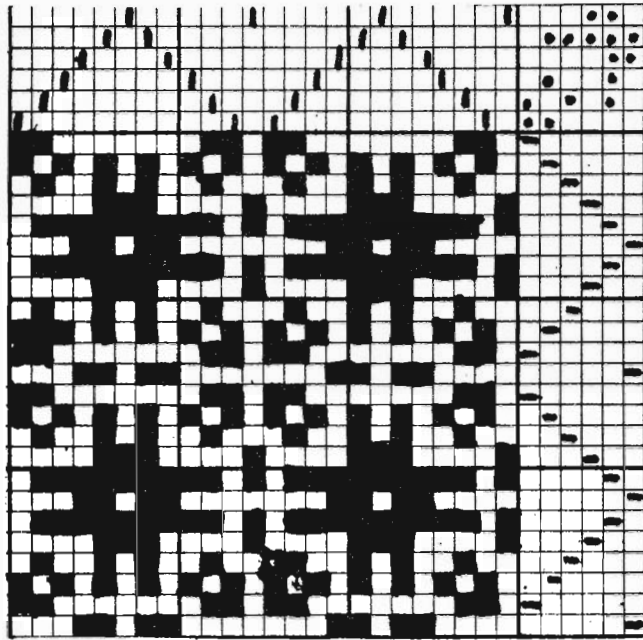


Fig. 27

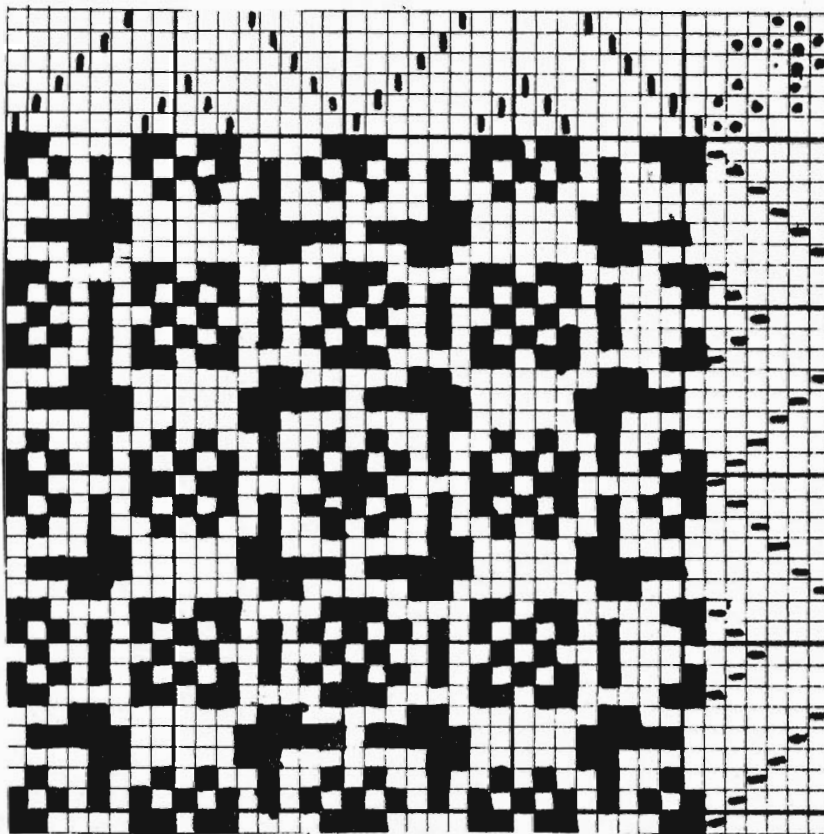
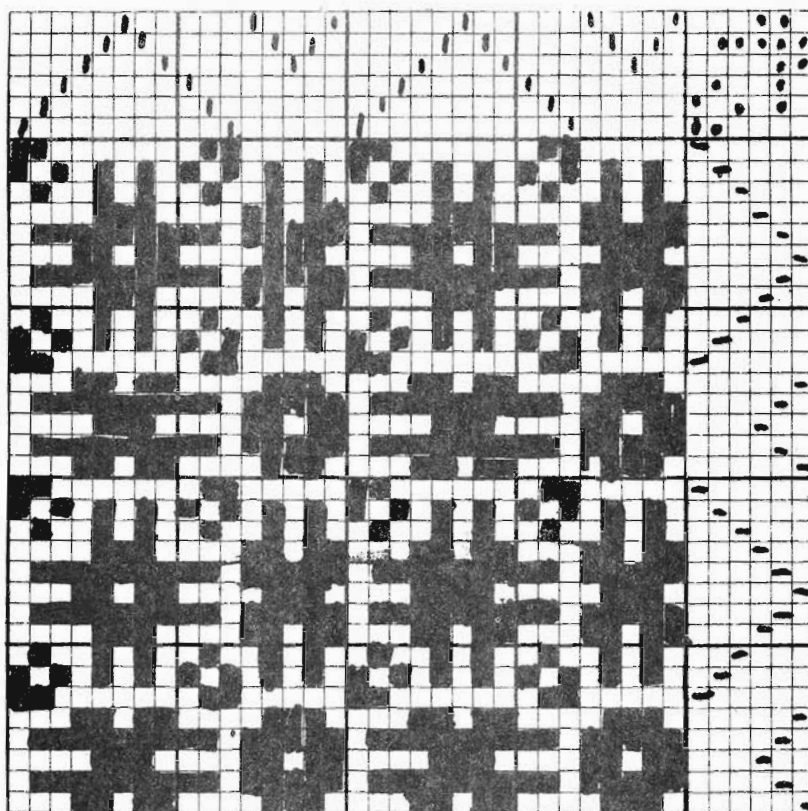


Fig. 28

Figures 27, 28, and 29 are designs made with enlarged pointed threadings of the tie-up for Figure 23.



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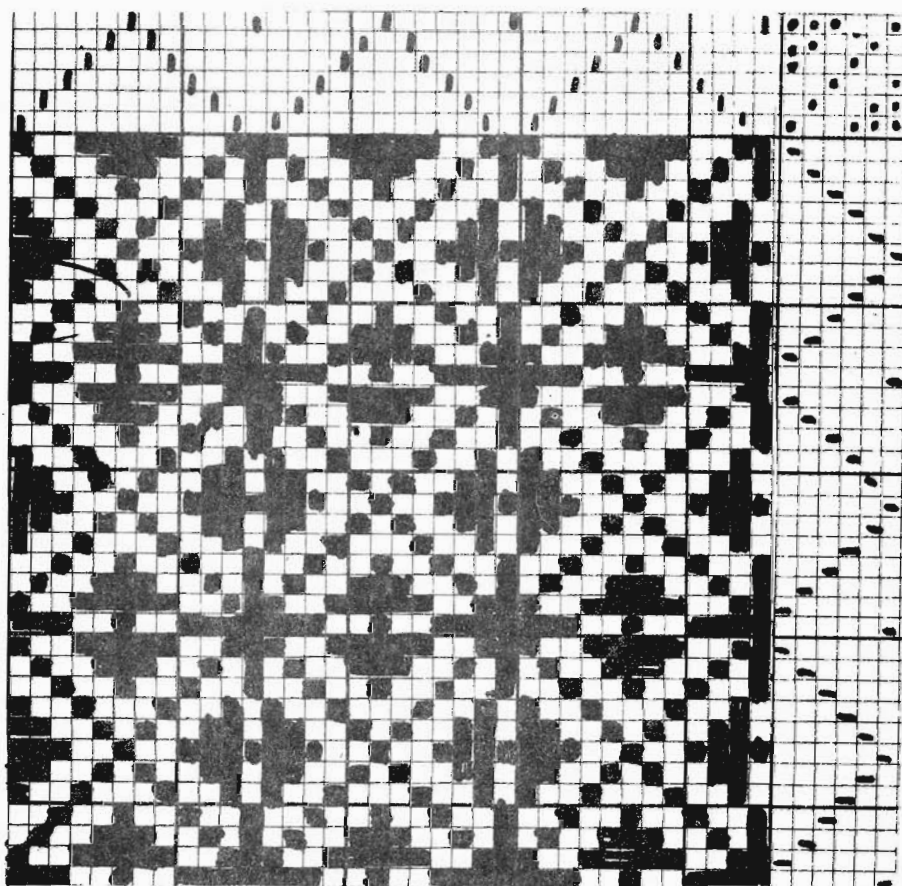


Fig. 30

Figures 30 and 31 are designs made with enlarged pointed threadings of the tie-up for Figure 22.

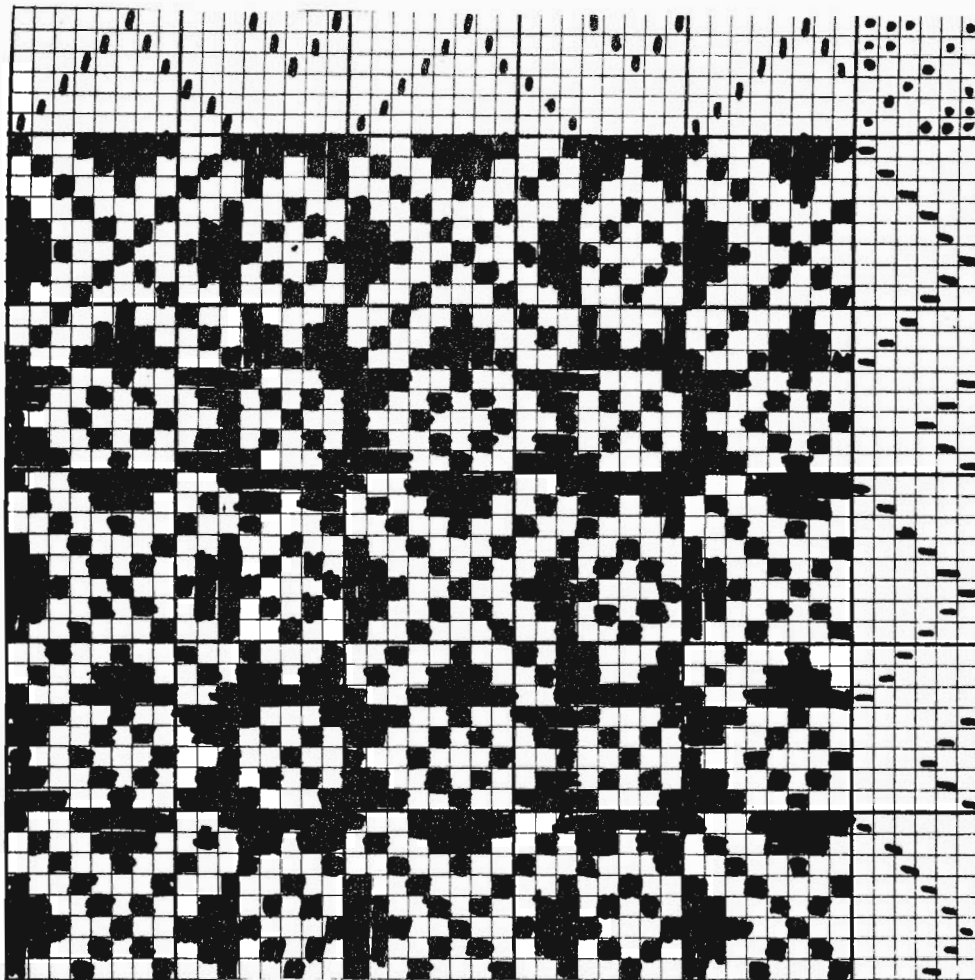


Fig. 31

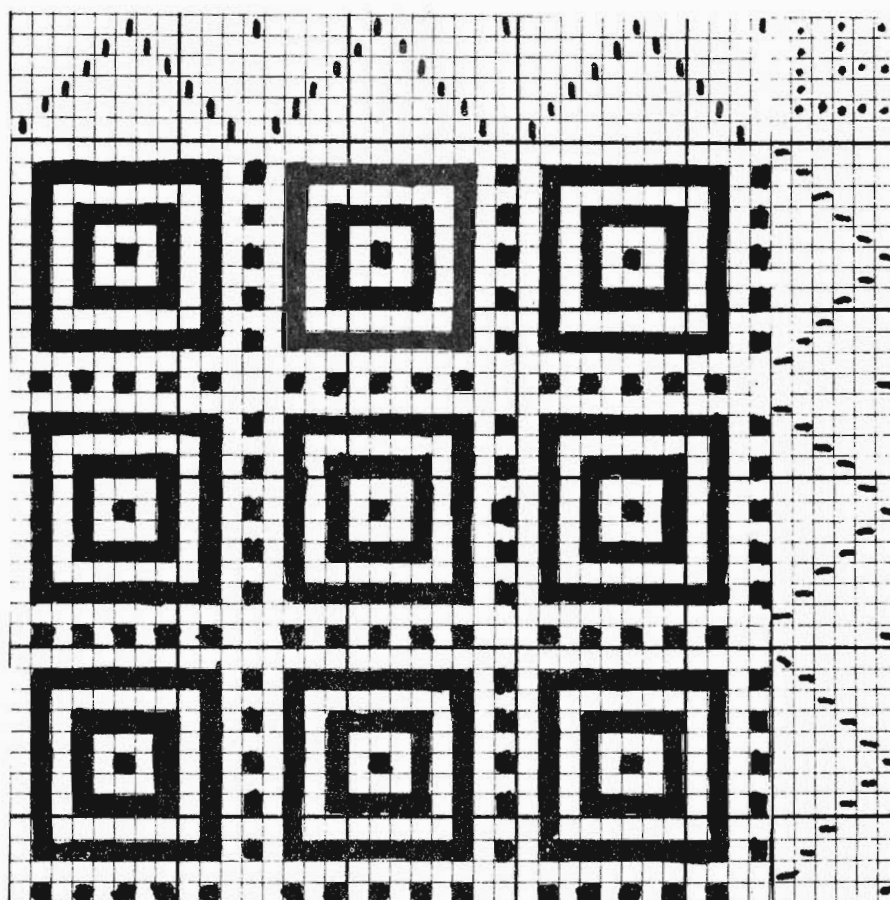


Fig. 32

10 and 12 Harness Diversified Plain Weave.

The designs can become more intriguing as the number of harnesses climbs. Circle effects can be created by again applying the pointed threading. On the other hand, the straight threading allows for many more designs as well as allowing for greater freedom in developing those designs. Fig. 33 through 38. Straight threading.

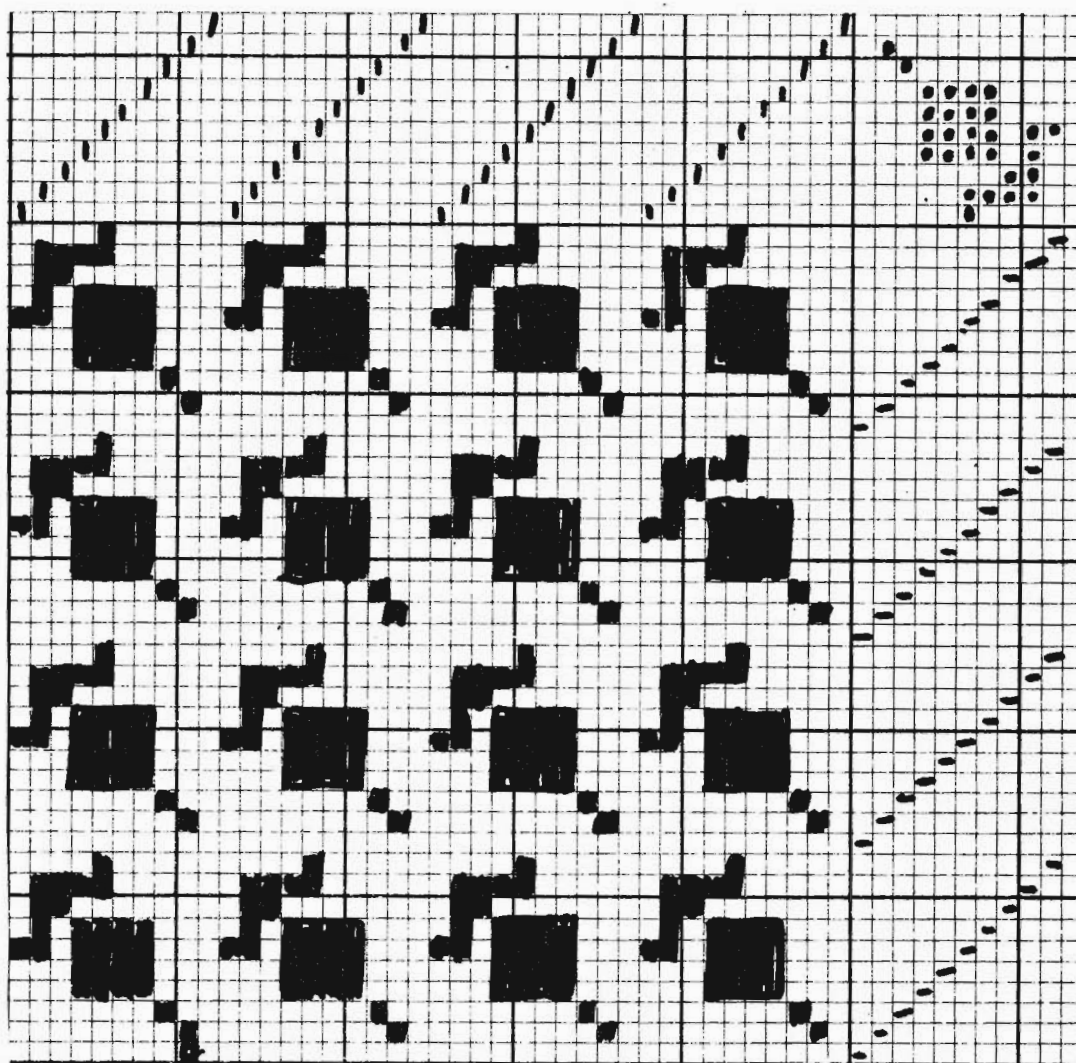


Fig. 33

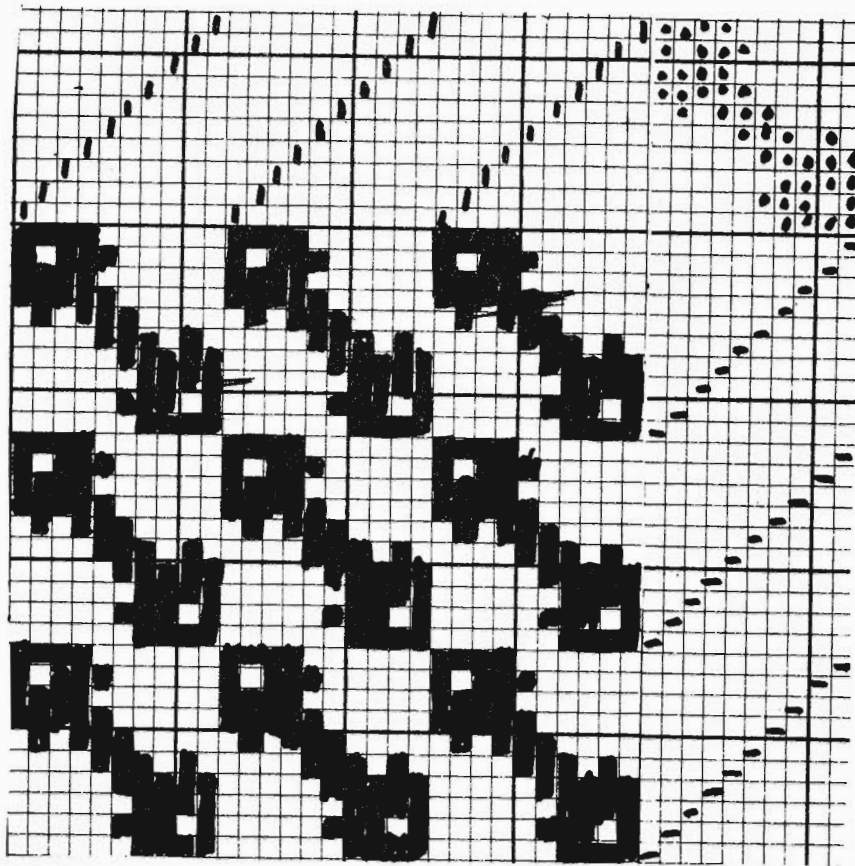


Fig. 34

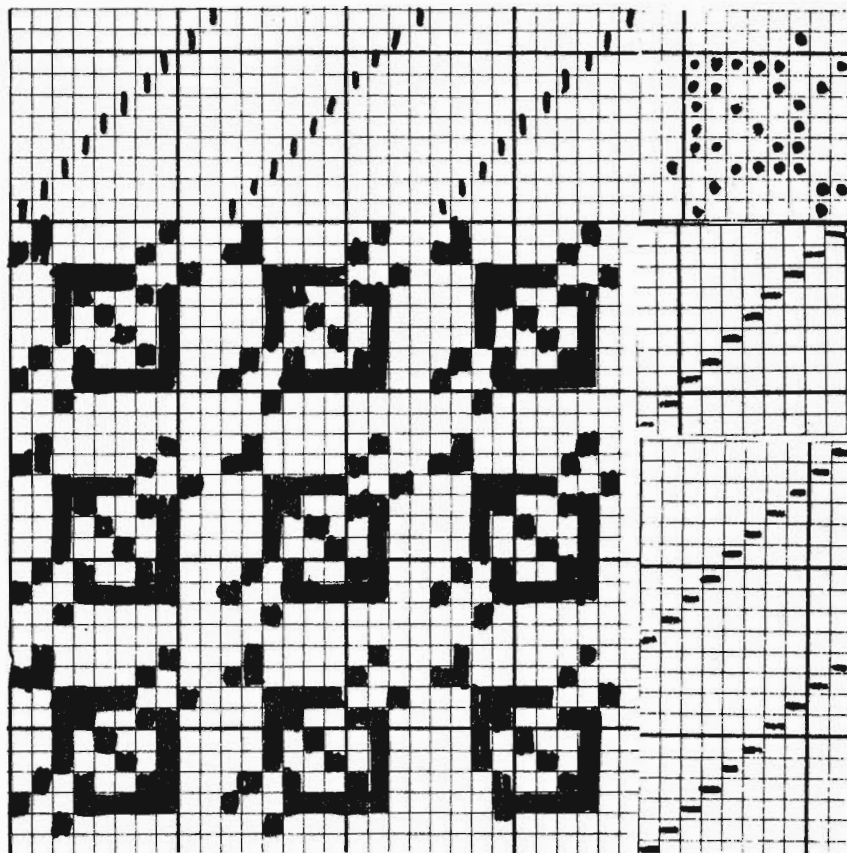


Fig. 35

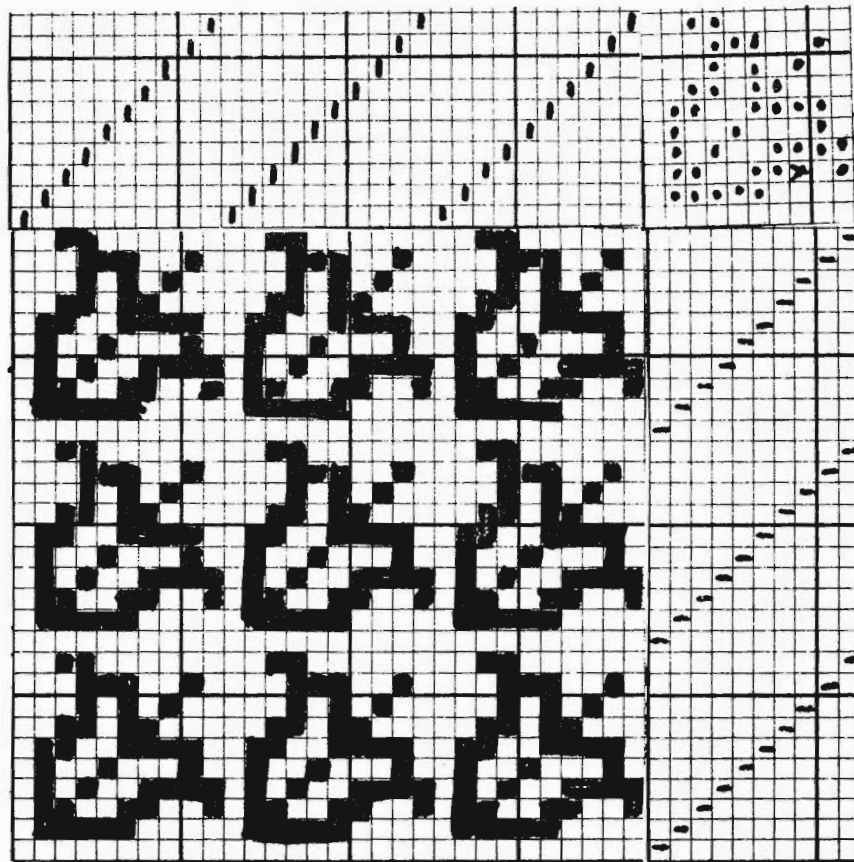


Fig. 36

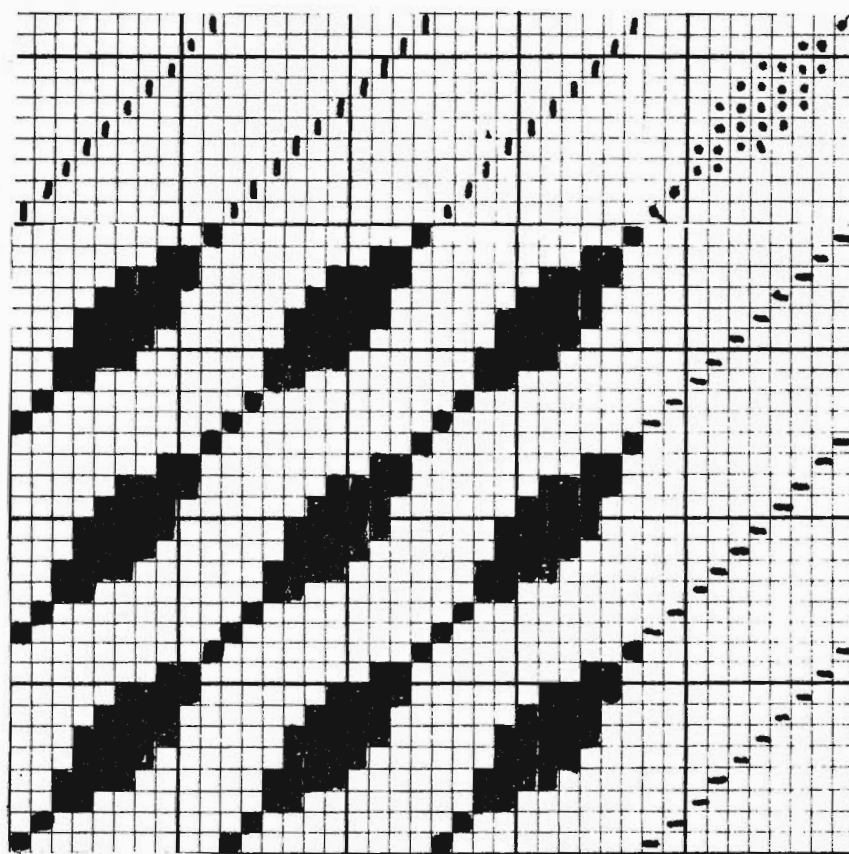


Fig. 37

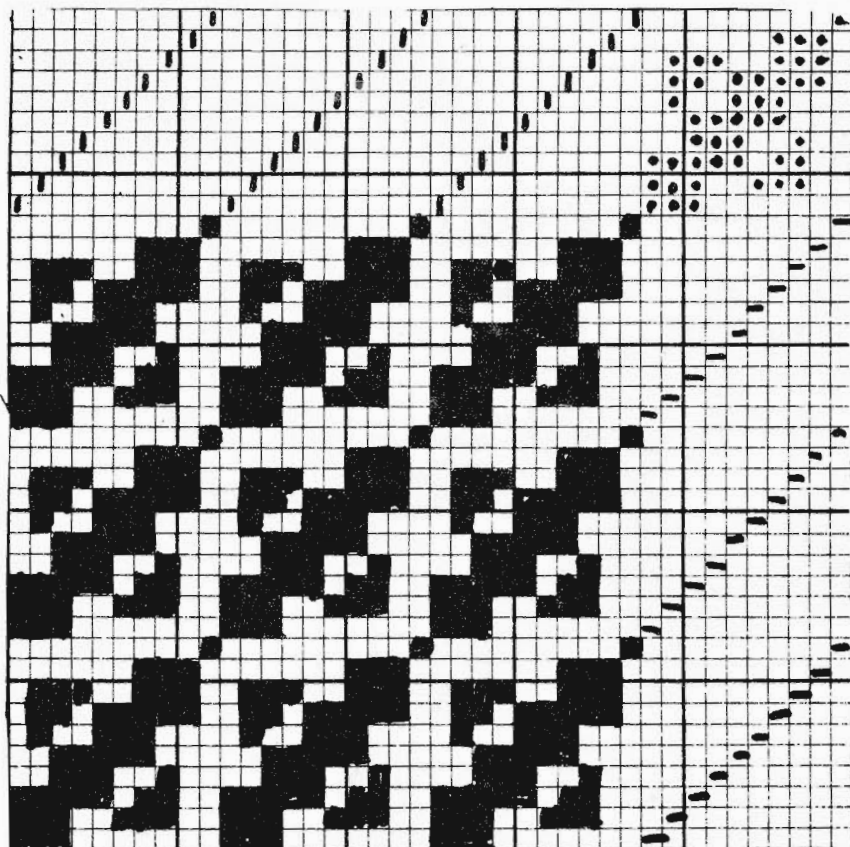


Fig. 38

Fig. 39 through 44. Pointed threading.

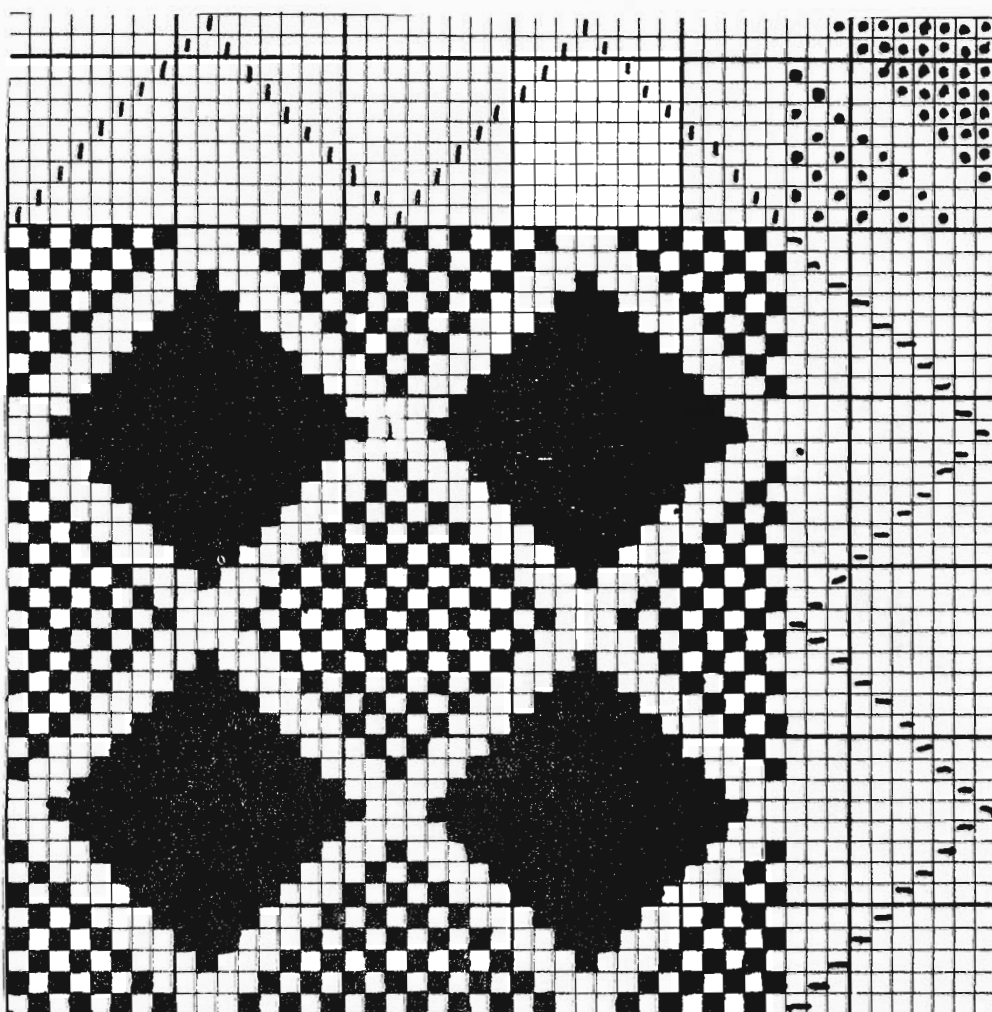


Fig. 39

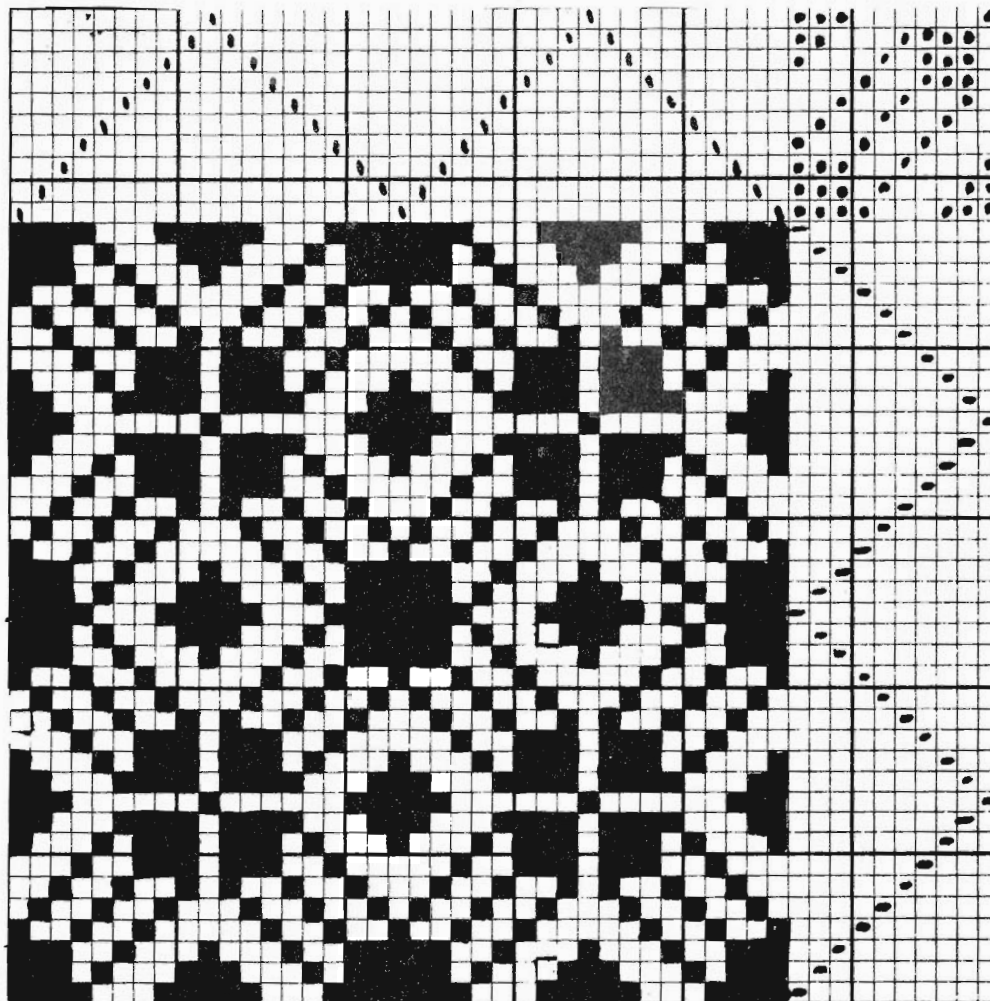


Fig. 40

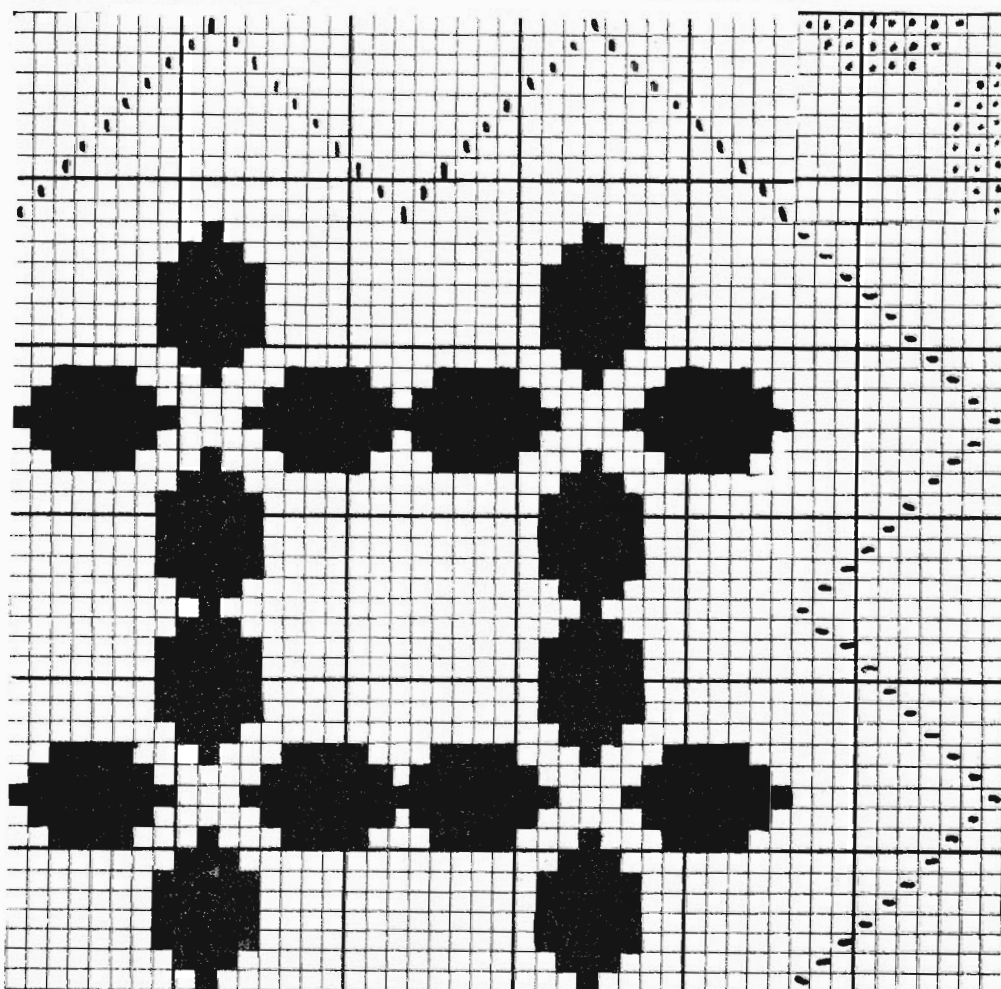


Fig. 41

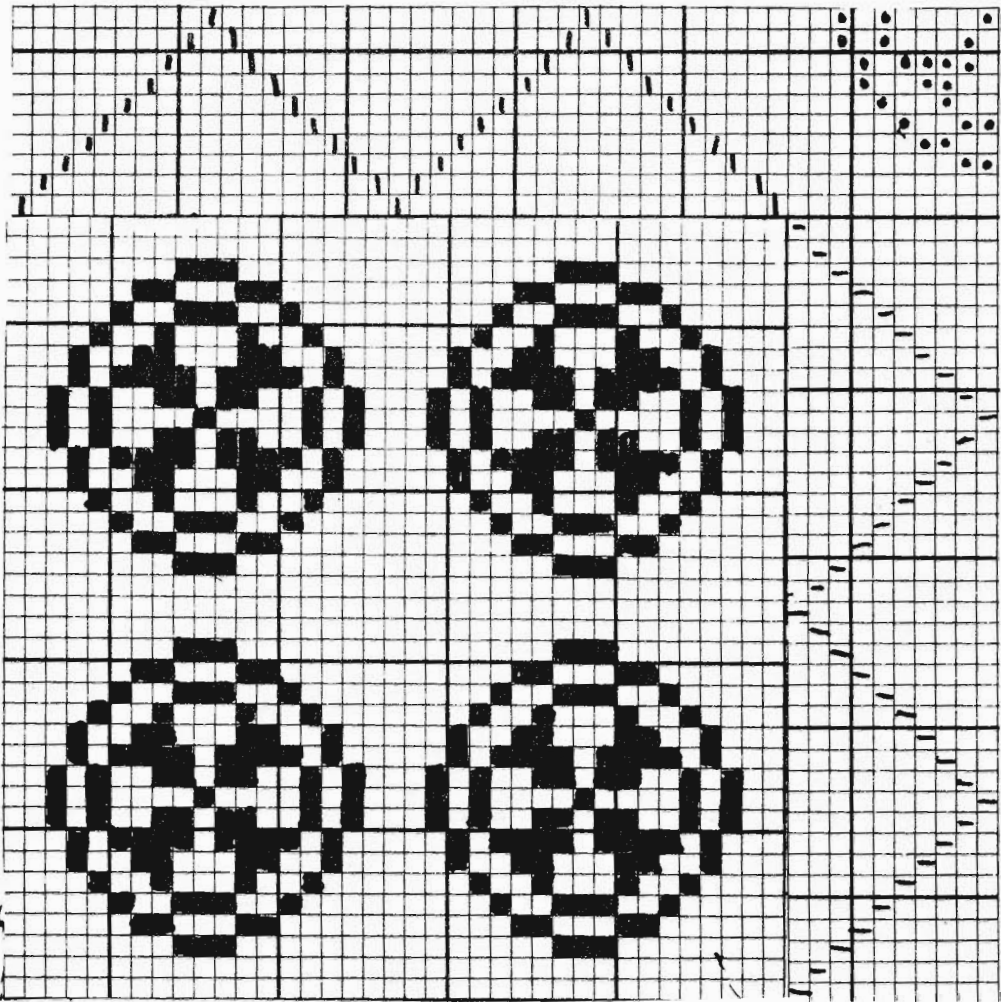


Fig. 43

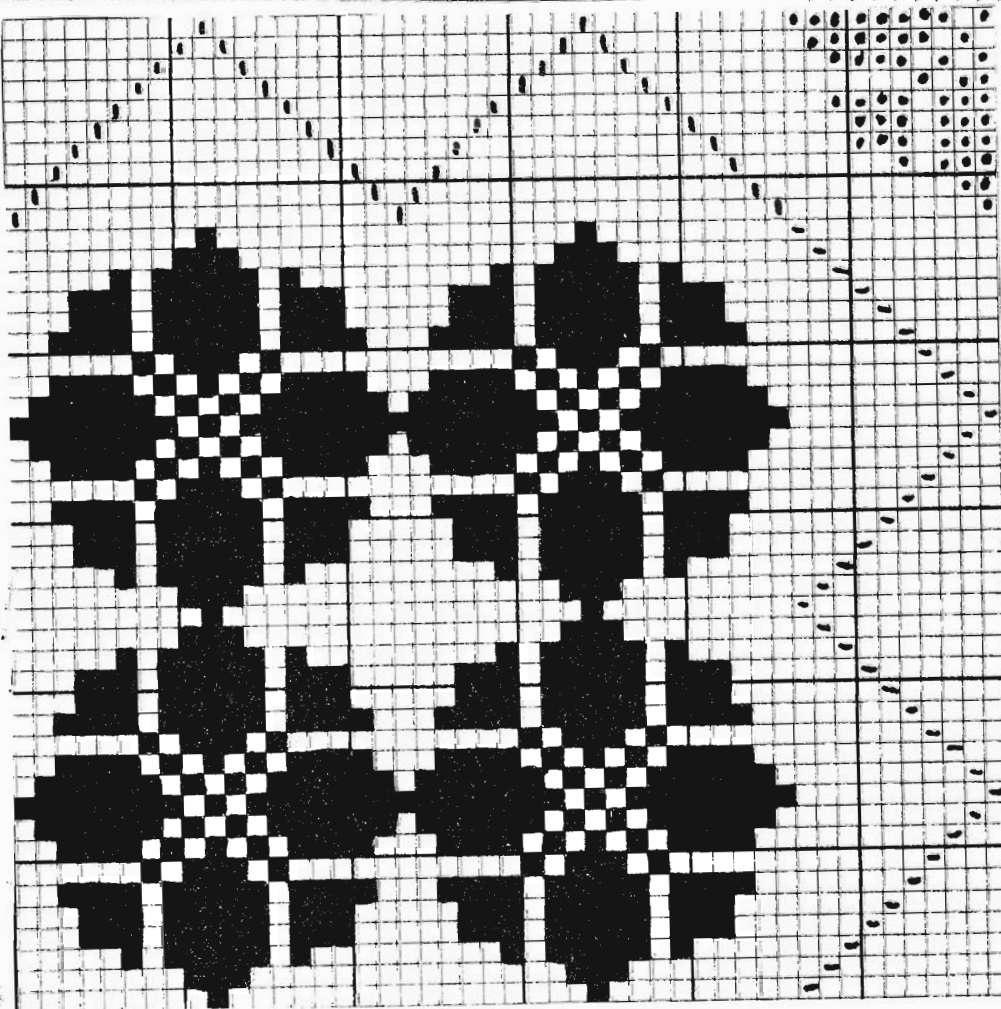
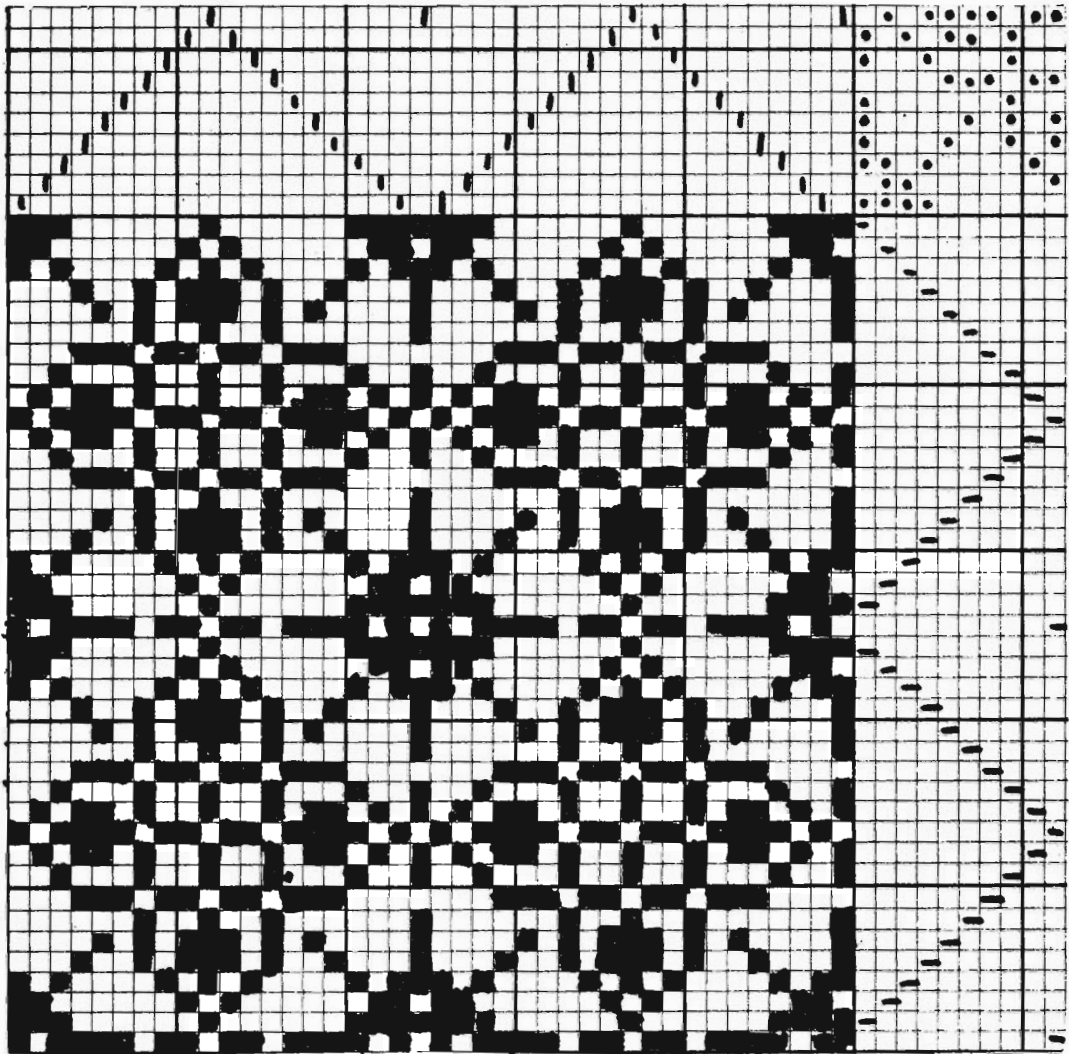


Fig. 44

Fig. 45
Pointed
threading
enlarged.



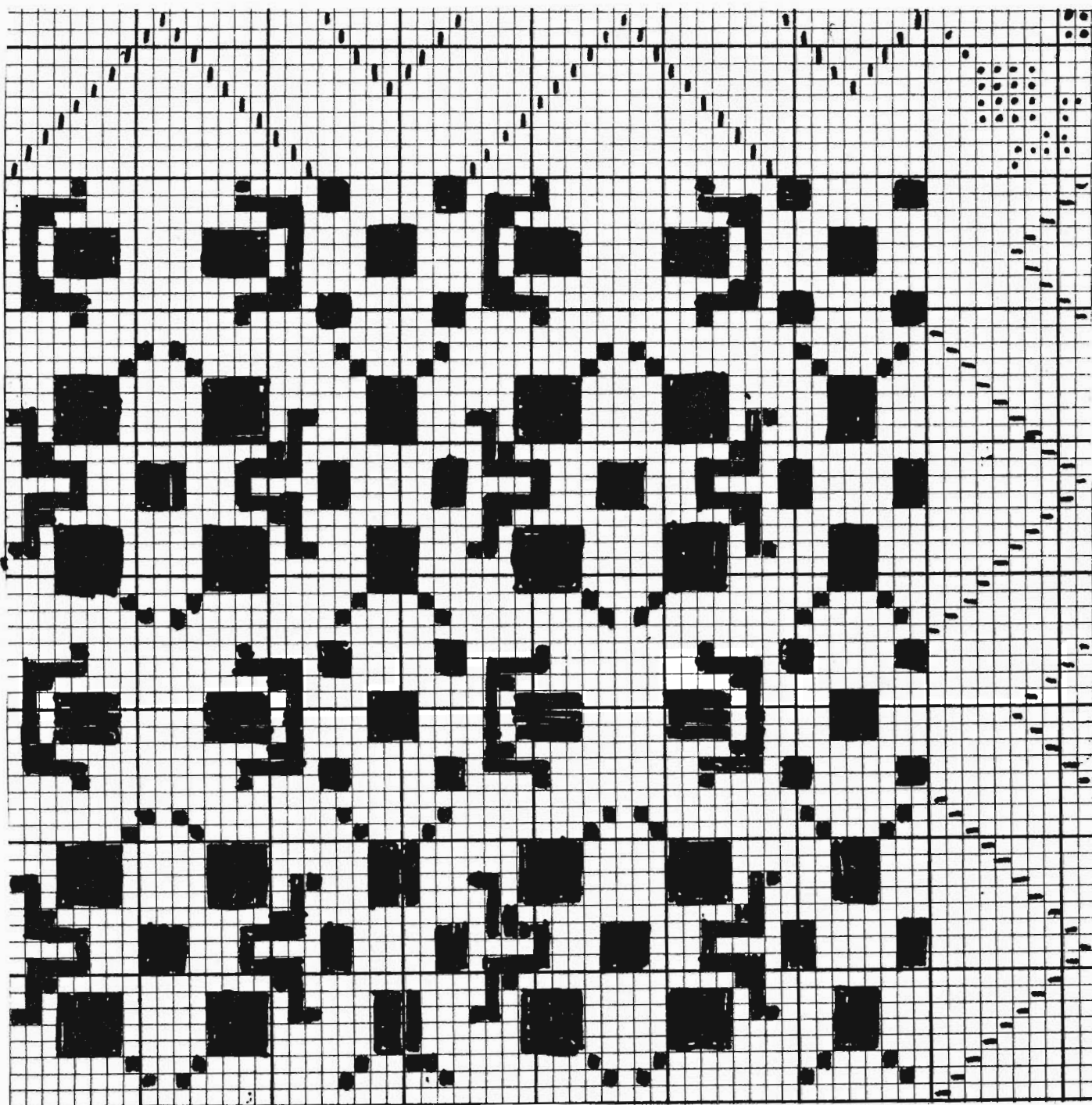


Fig. 46

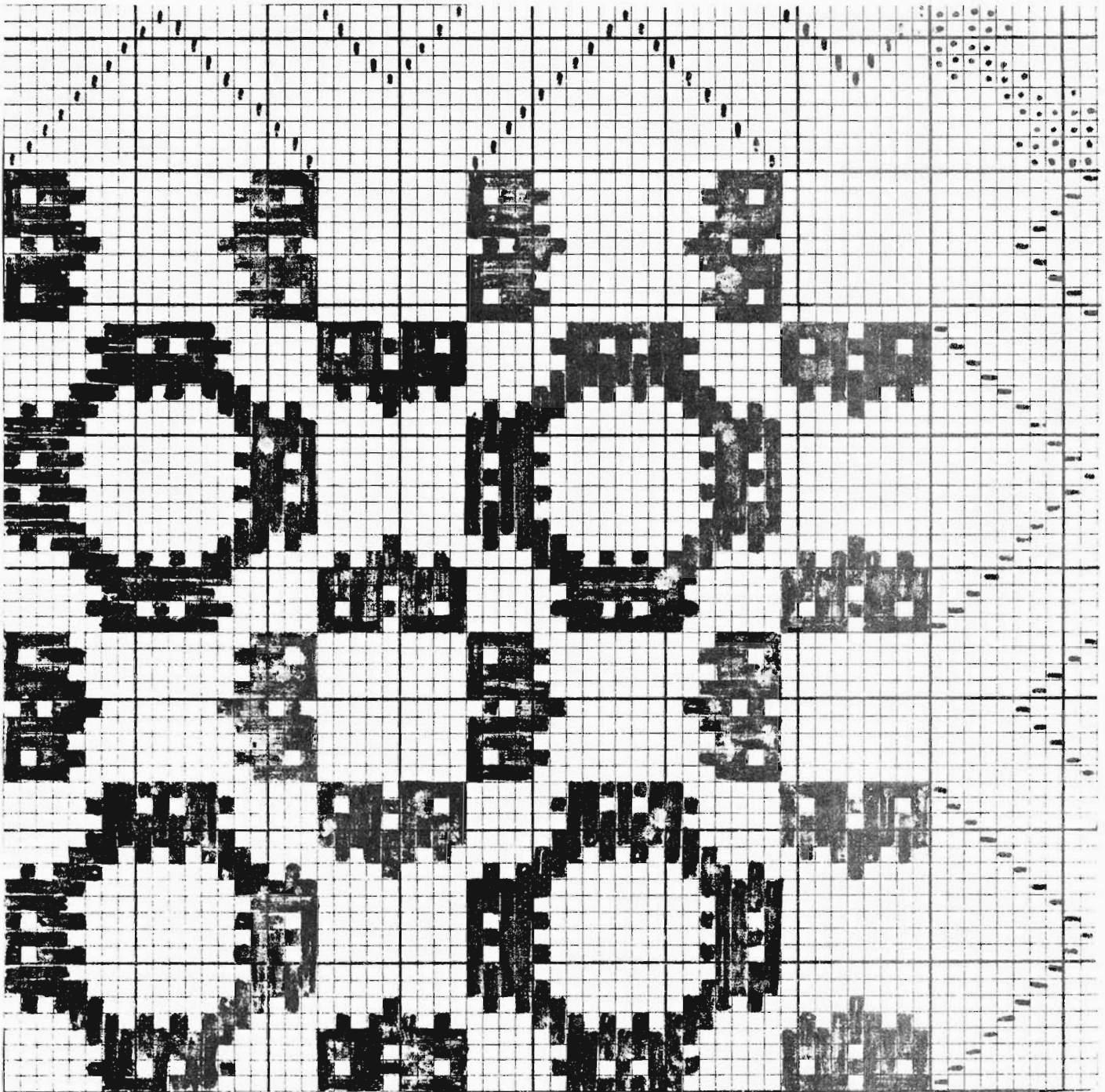


Fig. 47

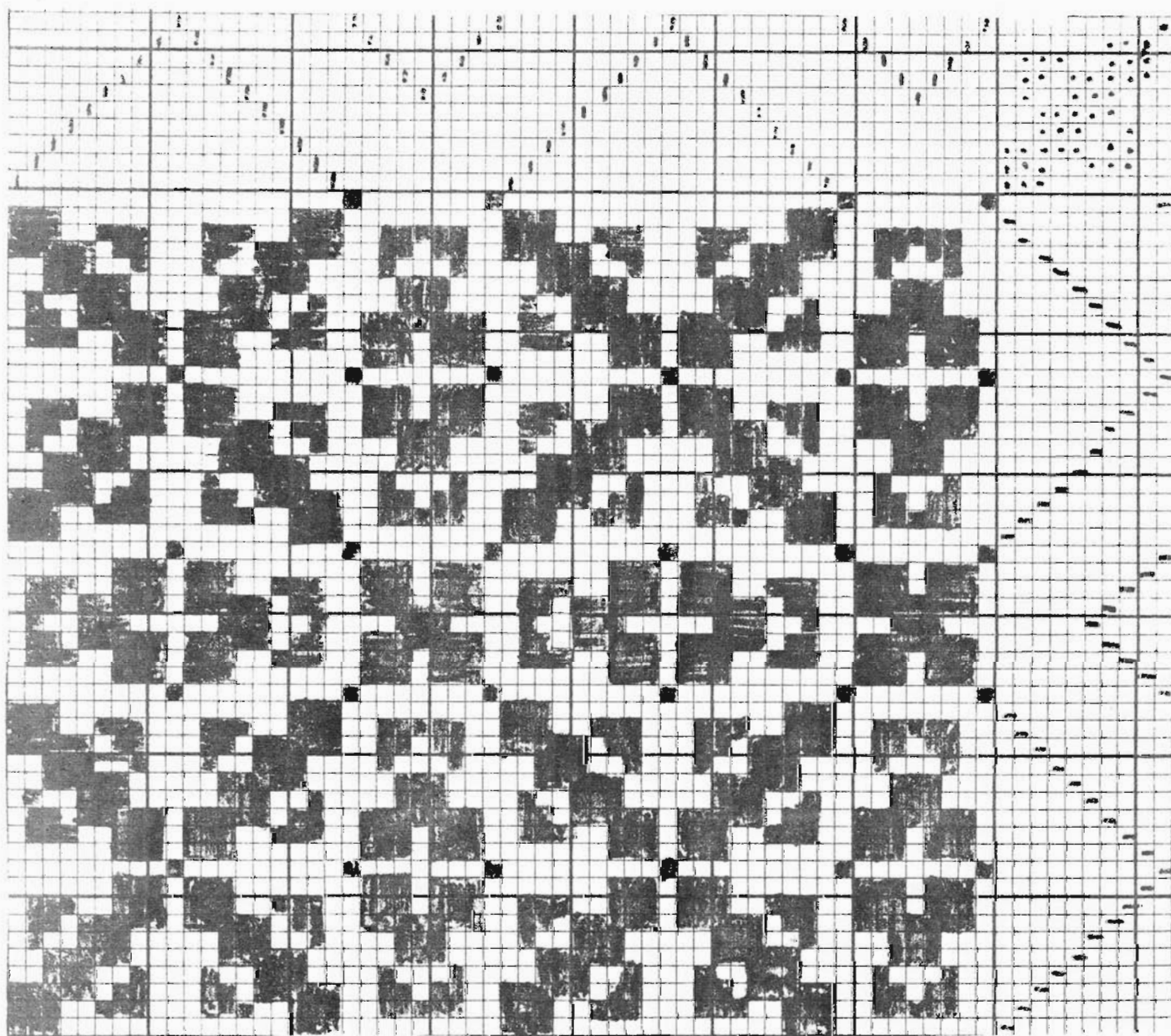


Fig. 48

In Figures 2 through 48, it must be clearly understood that all the tie-ups, the threading, and the treadling patterns as presented are only for the design which is accomplished by the heavy threads. These tie-ups and patterns must now be combined with the ground weave which is the fine yarn. As mentioned in the beginning, the two tabby harnesses remain the same throughout all these designs.

For example with a 4 harness pattern design as in Fig. 2, the heavy threads for the pattern would be on harnesses 3 to 6 on a 6 harness loom. The tabby threads would be on harnesses 1 and 2. The complete draft representing the tabby and the pattern threads, the tie-up and the treadling is shown in Fig. 2a

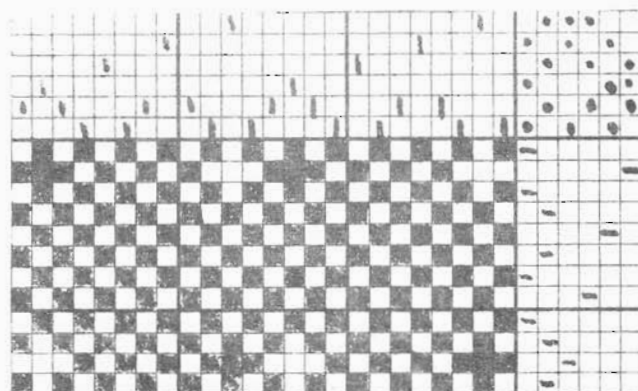


Fig. 2a

With a 6 harness pattern design as in Fig. 32 on an 8 harness loom, the pattern (heavy) threads would be on harnesses 3 - 8, while the tabby threads (fine threads) would again be on harnesses 1 and 2. This complete draft is shown below in Fig. 32a.

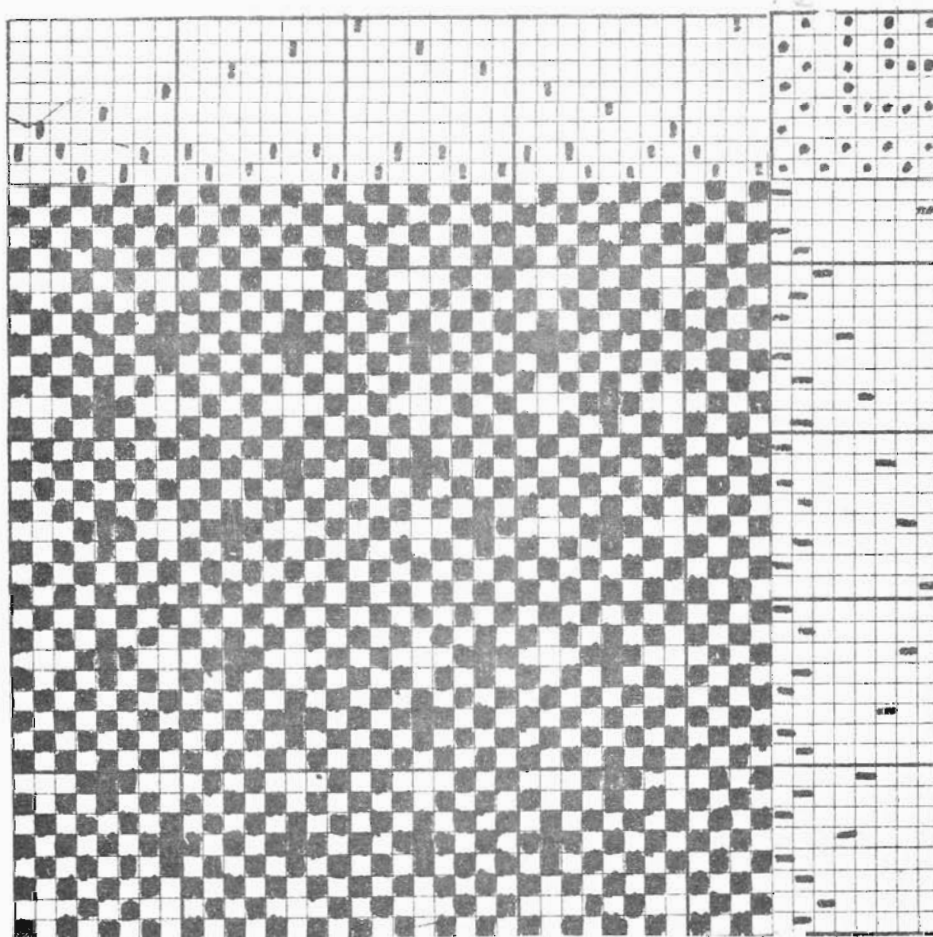


Fig. 32a

A 10 harness pattern as in Fig. 40 on a 12 harness loom, the pattern threads would be on harnesses 3 to 12 with the tabby threads on harnesses 1 and 2. This complete draft is below in Fig. 40a.

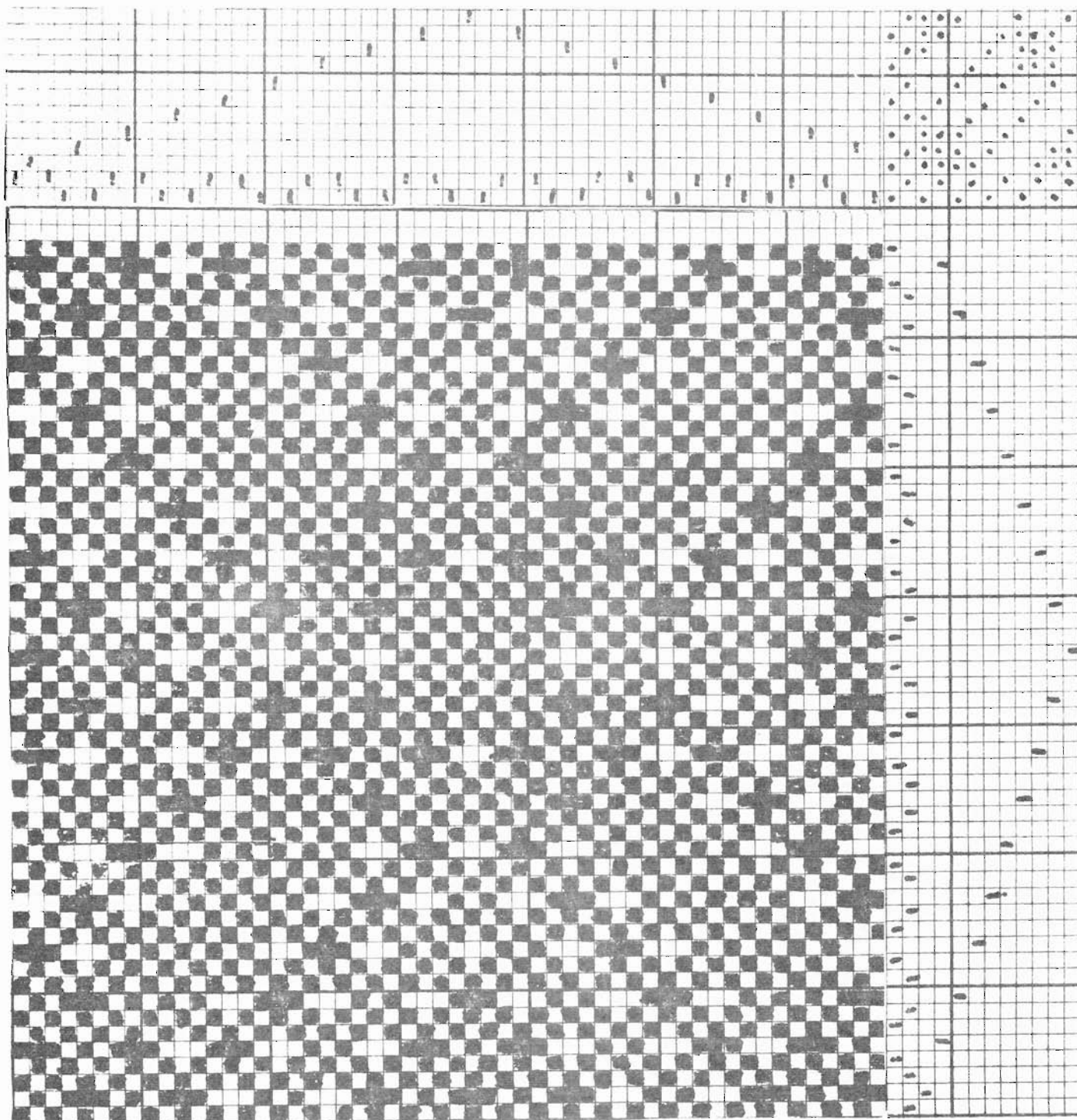


Fig. 40a

It is possible to expand in a lengthwise direction any given portion of a design by a modification of the tie-up for the pattern tabby threads. The tabby shots (the fine threads) that are woven in between the pattern shots (the heavy threads) are still controlled by treadles 1 and 2. All the pattern shots are woven with 2 feet, the left one for the proper tabby treadle (the fine threads) and the right one for the proper pattern treadle (the heavy threads).

On a 8 harness loom with 10 treadles, the procedure would be as follows. The fine threads are on harnesses 1 and 2. The pattern threads are on harnesses 3 to 8. Treadles 1 and 2 are solely for the ground weave with treadle 1 tied to harnesses 1-3-5-7 and treadle 2 tied to harnesses 2-4-6-8. Treadle 3 is tied only to harness 1 and treadle 4 only to harness 2, but since they are used for the pattern tabby, they must be used in conjunction with a pattern treadle. Treadles 5 to 10 are tied to the harnesses 3 to 8 (the heavy threads) in the manner prescribed by the design draft.

If the weaver wants to repeat the portion of the design which is tied to treadle 5, she would use treadle 5 together with either treadle 3 or 4 for the first shot. Then she would use treadle 5 together with the alternating pattern tabby on either treadle 3 or 4 for the second shot. This portion of the pattern could be repeated as often as required provided that the weaver alternates treadles 3 and 4 with each successive pattern shot. Bear in mind that the pattern tabby treadles must always alternate throughout the weaving of the pattern shot whether or not one is repeating an identical pattern treadle. Fig. 49, 50, 51, 52 designs

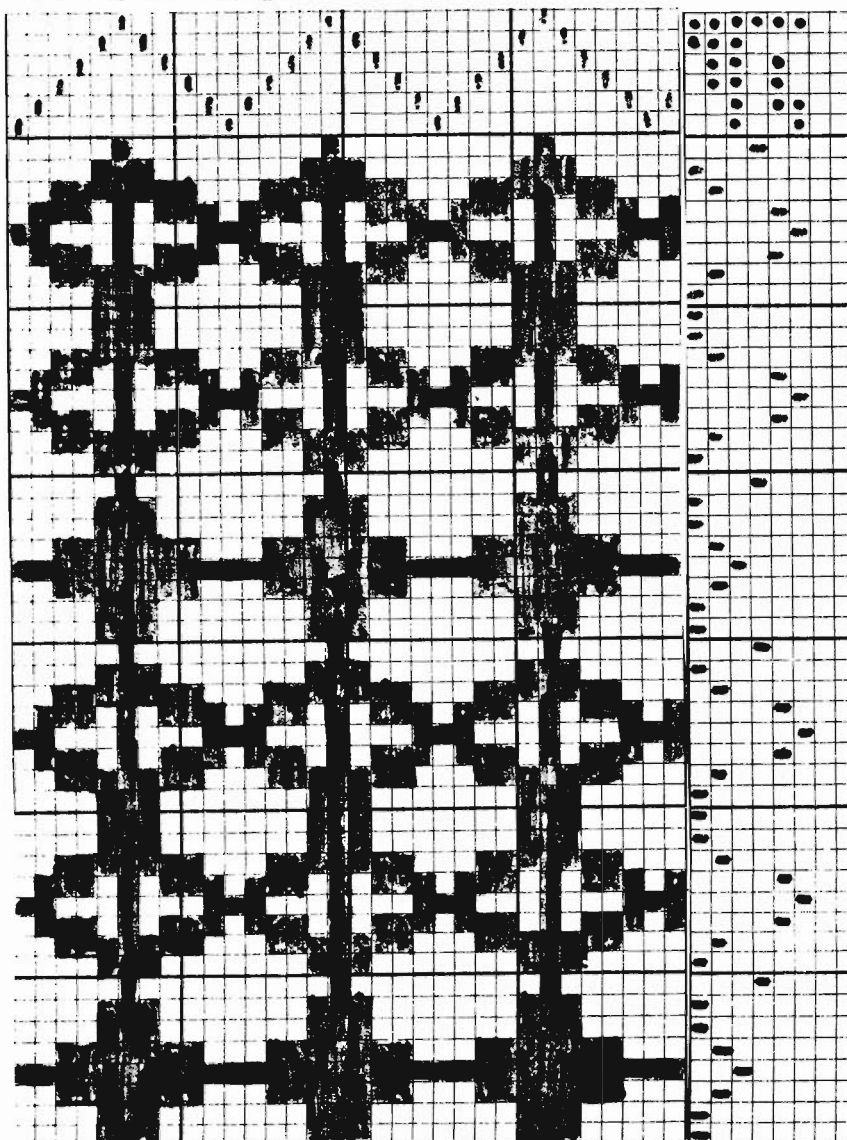


Fig. 49

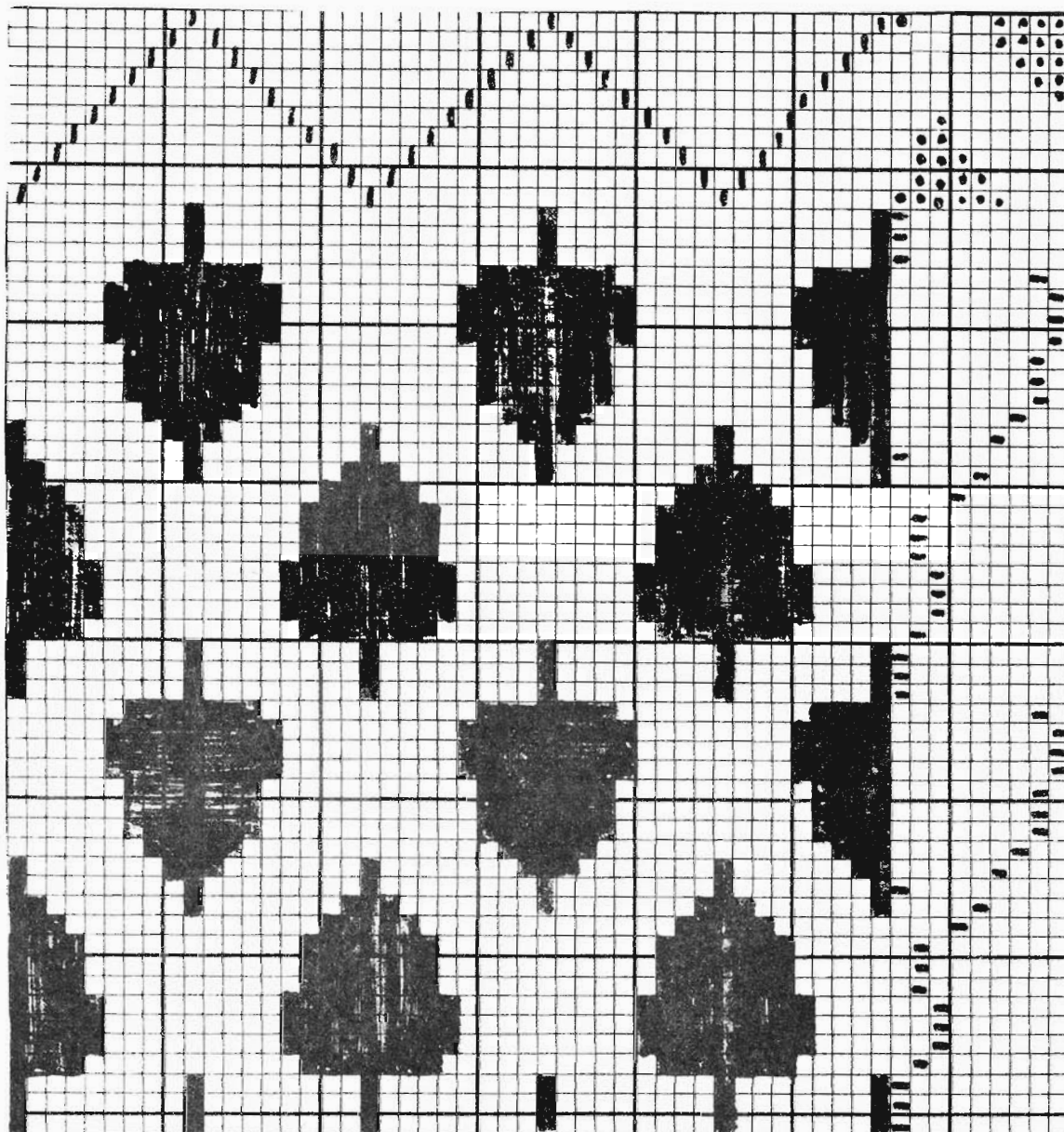


Fig. 50

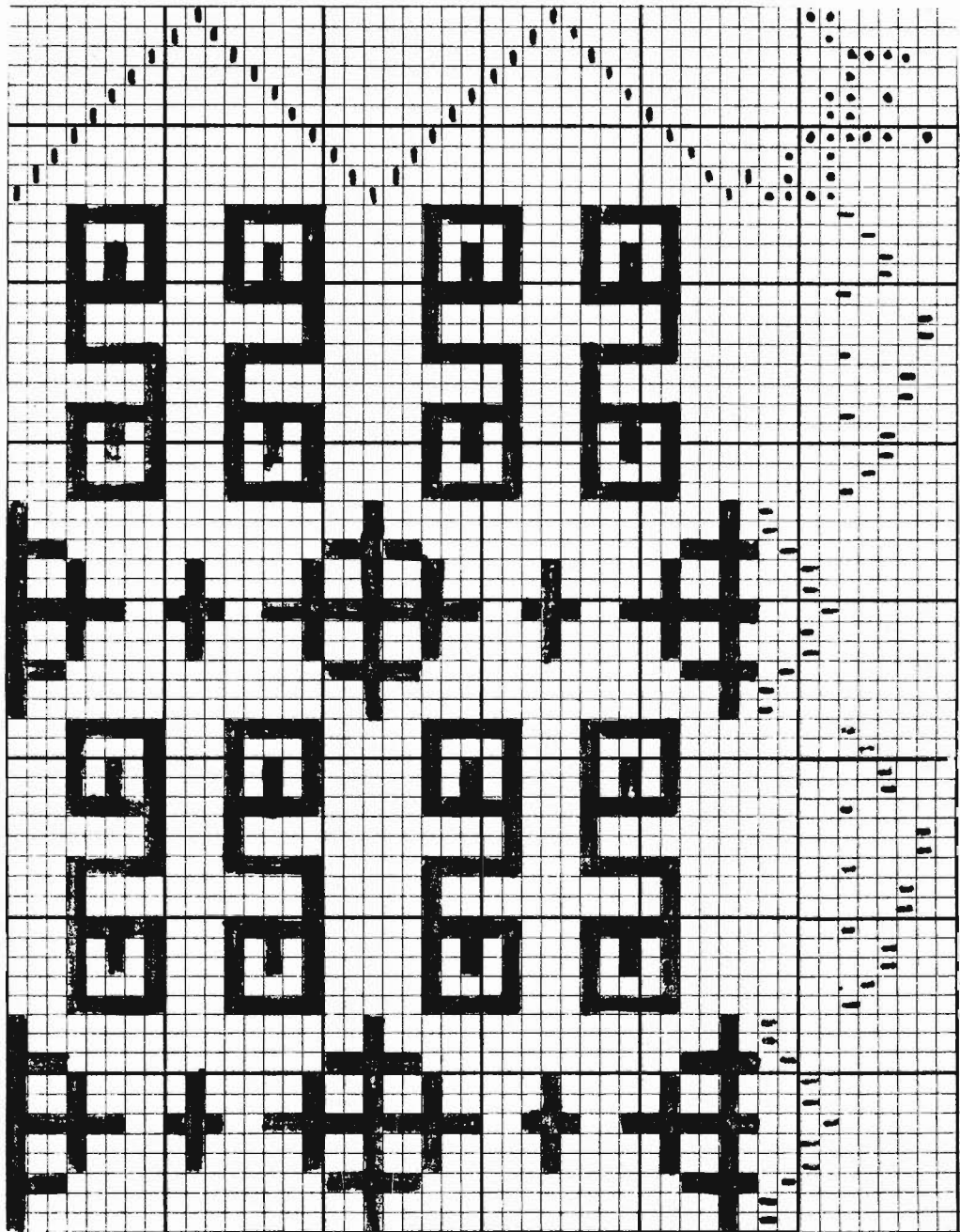


Fig. 51

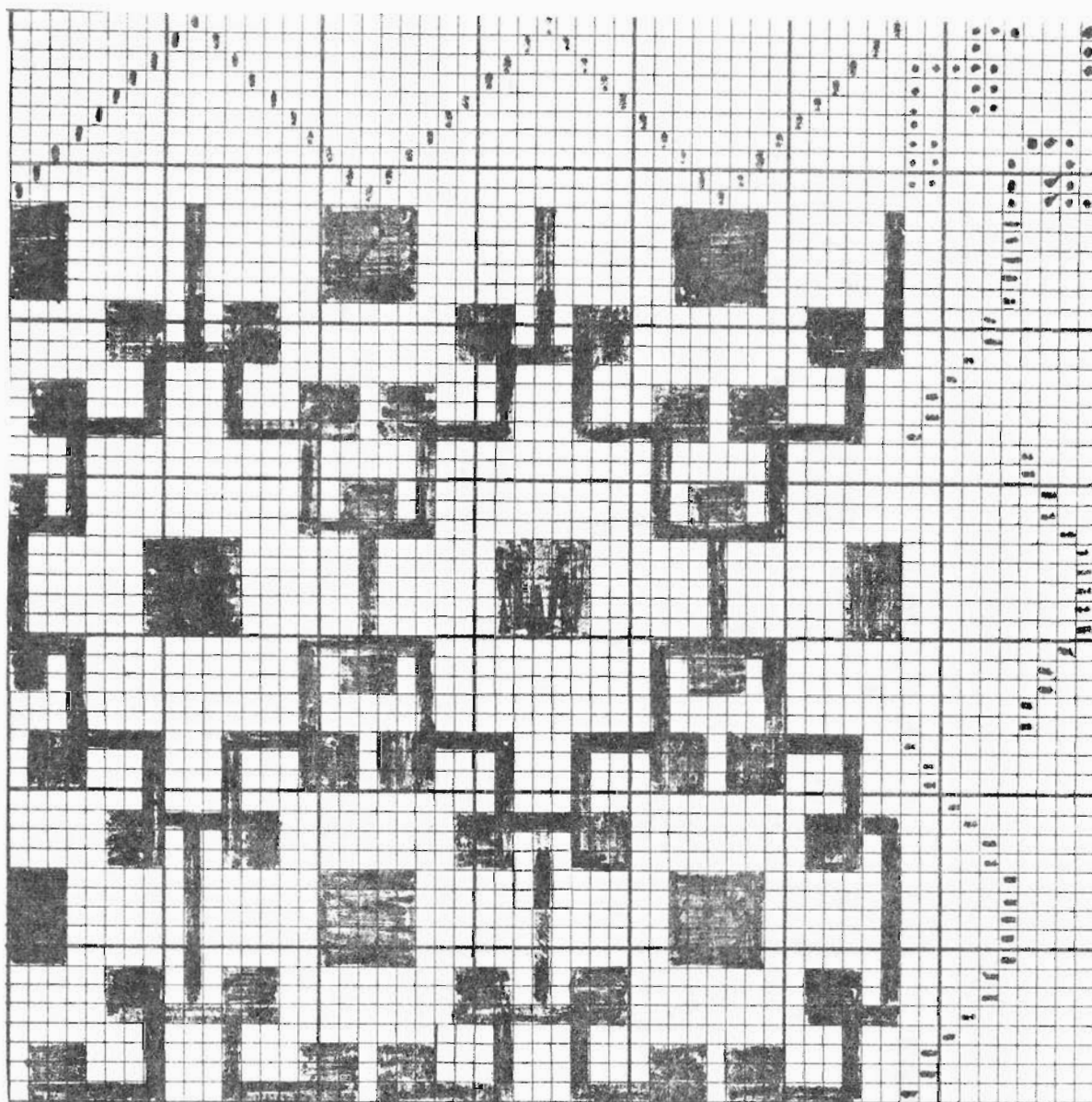


Fig. 52

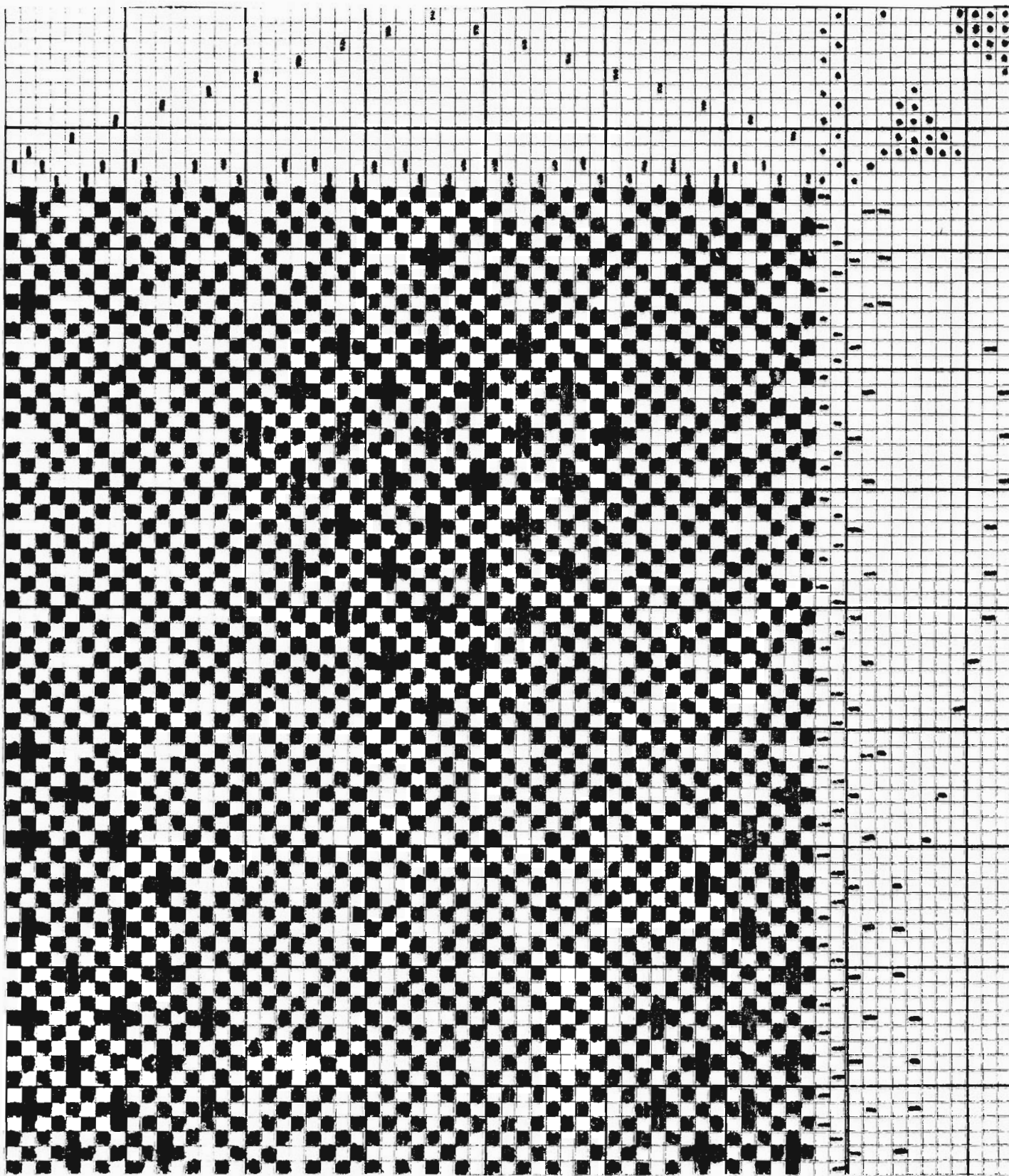


Fig. 50a a complete draft.

Diversified plain weave can be used to produce coordinated fabrics for very interesting effects in clothing and in home decorating. A two piece ensemble could be woven using the weft effect for one part and the warp effect of the same design for the other part -- or a coat in the warp effect with the handbag and hat showing the weft effect. Why not a completely reversible poncho or skirt?

In home decorating the possibilities seem limited only by the weaver's imagination. One warp could be used to make several pillows for the living room or the family room showing the tabby, the warp-faced and the weft-faced effect. A pleasing combination could be worked out in upholstery and pillows with the upholstery in the more subdued pattern and the pillows in the bolder effect.

Once the structure of the diversified plain weave is understood and some of its possibilities are explored, the weaver can use color and texture to great advantage in loom controlled design weaving.