W. L. BARRON.

INTERCHANGEABLE NEEDLE GUIDE.

APPLICATION FILED SEPT. 25, 1918.

1,387,094. Patented Aug. 9, 1921.

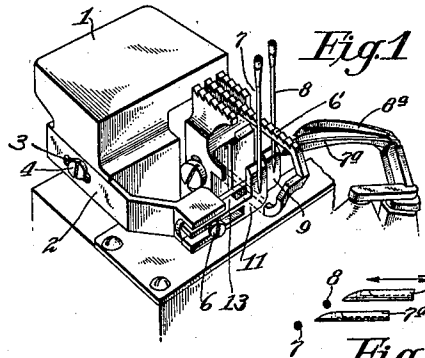


Fig. 1

Fig. 1a

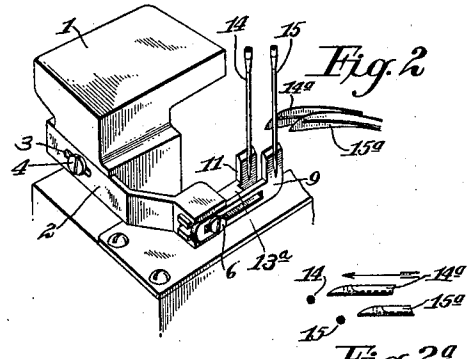


Fig. 2

Fig. 2a

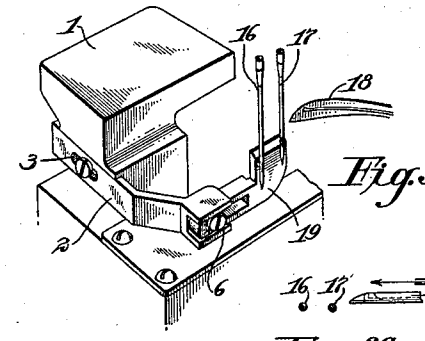


Fig. 3

Fig. 3a

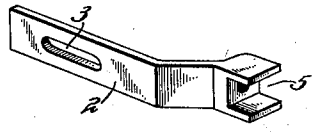


Fig. 4

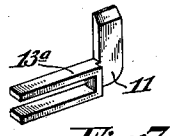


Fig. 7

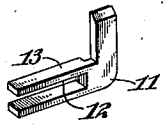


Fig. 6

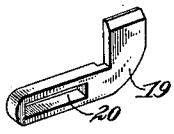


Fig. 8

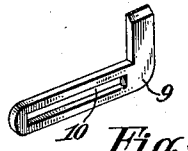


Fig. 5

WITNESS

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INTERCHANGEABLE NEEDLE-GUIDE.

1,387,094. Specification of Letters Patent. **Patented Aug. 9, 1921.**

Application filed September 25, 1918. Serial No. 255,692.

To all whom it may concern:

Be it known that I, WILLIAM L. BARRON, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Interchangeable Needle-Guides, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to needle-guides, and more particularly to guides for use in chain stitch machines to prevent the needles from being deflected into the path of the loopers.

The objects of the invention are to provide means whereby the guides may be interchanged, their relative order varied, their position changed transversely or longitudinally relatively to the seam line, or their position changed relatively to each other, according to the requirements of varying needle positions.

The present embodiment comprises a needle-guide support adjustably mounted on the machine frame, and a plurality of needle-guides interchangeably and adjustably mounted on said support, the guides being adjustable in a direction at an angle to the direction in which the support is adjusted, and also adjustable relatively to each other. The invention is equally applicable to a single or plural needle machine.

In the accompanying drawings, Figure 1 is a perspective view showing my adjustable guides in connection with needles having a staggered or diagonal arrangement. Fig. 1ª is a section through the needles showing their arrangement and that of the loopers. Fig. 2 is a view similar to Fig. 1 showing the needles as staggered in a direction opposite to that in Fig. 1. Fig. 2ª is a section through the needles in Fig. 2, showing their arrangement and that of the loopers. Fig. 3 is a view similar to Fig. 1 showing an adjustable guide applied to needles arranged abreast. Fig. 3ª is a section through the needles and above the looper in Fig. 3. Fig. 4 is a perspective view of the needle-guide support. Fig. 5 is a perspective view of one of the needle-guides. Figs. 6 and 7 are perspective views of guides coöperating with that shown in Fig. 5. Fig. 8 is a perspective view of the guide represented in Fig. 3.

Referring to the drawings, 1 indicates a lug on the machine frame. A needle-guide support 2 is adjustably mounted on the lug by means of a slot 3 in the support and a screw 4 passing through the slot and engaging the lug 1. At the forward offset end of the support 2 a groove 5 is formed in which the various needle-guides are adjustably and interchangeably secured by means of the screw 6. A feed-dog 6′, having the usual feed and lift movements, extends parallel to the line of seam-formation.

In Fig. 1 the needles 7 and 8 are shown as staggered, as are their corresponding loopers 7ª and 8ª, the left hand needle 7 being in front. An angled needle-guide 9 has a vertical guide portion disposed adjacent the needle 8, and a horizontal portion arranged in the groove 5 of the support 2. A closed slot 10 is formed in the horizontal portion of the guide 9. A second angled needle-guide 11 has a vertical guide portion adjacent the needle 7, and a horizontal portion arranged in the groove 5 and in front of the guide 9, an open slot 12 being formed in said horizontal portion. The guides are spaced apart longitudinally of the seam line by a small projection or spacer 13 which in the present instance and preferably is formed integral with the guide 11. The guides are secured in the groove 5 by the screw 6 which passes through the slots 10 and 12.

In Fig. 2 the needles 14 and 15 are also arranged in staggered relation, but the right-hand needle 15 is in front. In this case the right-hand needle guide 9 is also arranged in front and the left-hand guide 11 in the rear, the spacing projection 13ª being then arranged on the opposite side of guide 11, as shown in Figs. 2 and 7.

In Fig. 3 the needles 16 and 17 are shown as arranged abreast, with a single coöperating looper 18. A single angled needle-guide 19 may then be used, its enlarged vertical portion being disposed adjacent the needles, and its horizontal portion fitting in the slot 5 of the support. The closed slot 20 allows the guide to be adjustably secured by means of the screw 6.

By applicant's construction a few parts suffice for a large number of different needle positions, and obviate the necessity in prior

art constructions of providing a very large number of needle guides for the same purpose.

Having thus set forth the nature of the invention, what I claim herein is—

1. In a sewing machine, a reciprocating needle, and a guide therefor adjustable in a single movement transversely of both the needle-path and the line of seam-formation.

2. In a sewing machine, a reciprocating needle, and a needle-guide having an adjustment longitudinally of the line of seam-formation and having a second adjustment transversely of both the needle-path and the line of seam-formation.

3. In a sewing machine, reciprocating needles, an adjustable support, and needle-guide means carried by said support and adjustable horizontally of said support and transversely of the seam line.

4. In a sewing machine, reciprocating needles, and needle-guides therefor adjustable transversely relatively to the seam line and also adjustable relatively to each other.

5. In a sewing machine, an adjustable needle-guide support, and means for interchangeably and adjustably securing a plurality of needle-guides thereto.

6. In a sewing machine, a plurality of needles in staggered relation, needle-guides therefor, and means whereby said guides may be adjusted laterally of the seam line.

7. In a sewing machine, a plurality of needles in staggered relation, needle-guides therefor, means whereby said guides may be adjusted relatively to said needles and also to each other, and means for adjusting said guides longitudinally of the seam line.

8. In a sewing machine, a plurality of needles in staggered relation, a needle-guide support adjustable longitudinally of the seam line, and needle-guides disposed transversely of the seam line and individually and simultaneously adjustable with respect to said support.

9. In a sewing machine, a plurality of reciprocating needles, an adjustable needle-guide support, a plurality of needle-guides, and means for securing said guides in said support in varying relation to each other and to said support, whereby the guides may be properly located for different needle positions.

10. In a sewing machine, a plurality of reciprocating needles, a plurality of needle-guides therefor, means for adjusting said guides in one direction relatively to the needles while maintaining them in fixed relation to each other, and means for adjusting them in another direction relatively to the needles and also to each other.

11. In a sewing machine, a plurality of reciprocating needles in staggered relation, a plurality of needle guides, means carried by one of said guides for spacing them longitudinally of the seam line, and means whereby said guides may be adjusted transversely of the seam line and needle-paths.

12. In a sewing machine, a needle, a looper, and a guide for the needle adjustable substantially longitudinally of the looper path.

13. In a sewing machine, a plurality of needles, guides therefor and means whereby said guides may be adjusted relatively to the needles and to each other.

14. In a sewing machine, a plurality of needles, guides therefor, and means for interchangeably mounting said guides.

15. In a sewing machine, an adjustable needle-guide support, a plurality of needle-guides, and means for mounting the guides on the support so that they may be adjusted relatively to each other.

In testimony whereof, I have signed my name to this specification.

WILLIAM L. BARRON.