This invention relates to devices for edge stitching of two pieces of fabric together in such manner that the cross over loops between the straight parts of the necessary stitching are all on the same side of the finished work and the straight parts of the stitches, that is to say the tension members that actually hold the cloth parts together, are buried within the fabric and cannot be seen from either side of the finished work, which may be done either by hand or on a conventional sewing machine.

The objects of the invention are to produce an edge joiner of two separate pieces of fabric in such manner that the junction will be substantially invisible from the “right” side of the cloth or normal face, and the loops or cross-overs of the joining, only will be visible from the “wrong” side or normal back of the fabric.

Another object of the invention is to produce a stitched seam that is favorably comparable with a lap seam in strength.

A further object of the invention is a device of the character described in the foregoing paragraphs which additionally possesses the virtue of utilizing the normal “draw” of stitching to hold two edges of fabric in stitched edge joiner so closely that the nap of the cloth completely hides the junction of the pieces without any wrinkling effect.

A still further object of the invention is provision for far greater accuracy of matching cloth patterns than has been possible hitherto.

The invention consists, broadly, in a method for joining two pieces of fabric together in edge juxtaposition by stitching, in such manner that the cross-over loops between the stitches shall be on the same side of the fabric and the parts of the stitches which hold the fabric parts together by tension are within the body of the fabric itself, and also in means for performing the indicated function by mechanical structures.

The invention also consists in certain new and original features of construction and combination of parts, hereinafter set forth and claimed.

Although the novel features which are believed to be characteristic of this invention will be particularly pointed out in the claims appended hereto, the invention itself, as to its objects and advantages, the mode of its operation and the manner of its organization may be better understood by the following description, taken in connection with the following drawing forming a part thereof, in which—

Fig. I is a plan view of the clamp member in its simplest form;

Fig. II is a diagrammatic representation of an ordinary sewing machine with the clamp in place and holding two pieces of fabric in edge to edge relationship for sewing together by use of the mechanical invention;

Fig. III is a vertical section on the line III—III, Fig. II;

Fig. IV is a fragment of one (either) portion of the body of the clamp member shown in Figs. I, II and III; and

Fig. V is a diagrammatic view of the edge stitched “seam” of the fabric after being processed according to my new invention.

In the drawing I represents one clamp member and 2 represents the other or cooperating member, the faces 4 of which are preferably identical. These faces consist of spaced holes or needle ways, one-half of which is formed in each clamp face, so spaced that a land, or clamping surface remains between each hole when the two clamp faces are brought into cooperative relationship.

3 diagrammatically represents means for holding the two parts of the clamp together with the holes and lands in proper registry. Obviously, this holding means may be varied widely according to choice of known means.

In Fig. II, 20 represents the head portion of a conventional sewing machine, such as commonly used by tailors or that used by housewives. 21 is the needle bar arranged to reciprocate in the well known manner. 22 is a common straight sewing machine needle held in the needle bar in the way devised by the maker of the machine and 23 is a conventional presser foot.

8 is the thread as it is supplied by the sewing machine to form the stitching; 8a represents that part of the thread, after stitching, which is formed into cross-over loops in the stitching, top and bottom members of which may be of the same thread as in chain stitching sewing machines or a separate thread as furnished from a bobbin type machine which interlocks with the thread from the head portion.

The height H (Fig. IV) will be according to the total width of the “seam” indicated by HS (Fig. V), which of course is limited by the stroke of the needle 22.

The presser foot 23 will ride on top of the fabric as shown in Fig. II and the fabric itself will be edge joined into a U-shaped joint as shown in Figs. II, III and V; hence the needle penetrates the fabric on one side of one piece and emerges on the same side of the other piece.
of fabric which is to be joined to it and the finished stitching is after the manner shown in Fig. V in which the dotted line 18 represents the two edges of the cloth in juxtaposition and which are preferably first basted together as indicated by the diagonal lines marked "Basting".

e represents the reverse or "wrong" side of one piece of cloth and e' represents the "right" side or face of the cloth of the same piece. The letters f and f' represent corresponding surfaces on the piece which is to be joined to it.

A feed device will be presumed to be present on the table of the sewing machine represented by the numeral 25 and hidden from sight underneath the work. Such feed devices are always adjustable to make long or short stitches and before using my clamp will be so adjusted that the feed, which works against the surface f, is the same as the spacing of the holes or needle ways in the clamp portion of the member. Since each time the needle passes through one of the holes and returns, it tends to compensate any small inequality of feeding, no difficulty is experienced in using this clamp in the manner indicated if the feed is set with reasonable accuracy to conform to the spaced holes or needleways.

If desired, the holes may be reamed out or funneled a trifle on that side of the clamp where the needle enters.

G represents a guide member adjustably attached to the sewing machine table 25.

The use of the device is thought to be clearly illustrated in the drawing. Edges intended to be joined are preferably first basted by hand after the known manner and then sewed after the manner shown in Fig. V which makes an exceedingly strong stitch favorably comparable to the strength of a lap seam singly sewed, and the mechanical manner of inserting the stitches is shown in Fig. III.

Obviously the clamps or other means indicated by the numeral 3 may be arranged so that it is not necessary that the clamp be wider than the two pieces of cloth to be joined as would be the case with the simplified arrangement shown in Fig. I. However, this is not part of my present invention.

Having fully disclosed my invention and the manner of its application and use, what I claim as new and desire to secure by Letters Patent, is:

1. A sewing machine attachment for edge sewing two pieces of fabric together with all visible parts of the stitching on the same side of the finished work, defined in part as a pair of faced cooperative clamp members, the cooperative faces of which are formed to present alternating needle ways and lands when the clamps are in cooperative relationship.

2. A clamp for holding two pieces of fabric in juxtaposition for edge sewing a seam on a common sewing machine defined in part as a pair of clamping members for holding the two pieces in a U-shaped loop, alternating needle holes and clamp lands formed in part on both clamping members and means for aligning the clamp with a sewing device, whereby the cross-over parts of stitches are on the same side of the sewn seam and the straight parts are within the body of the fabric.

3. In a device for edge joining two pieces of fabric, a clamp adapted to rigidly hold the two pieces in U-shaped loop formation with the edges together in the middle of the U, the said clamp being provided with alternating needle passage ways and clamping surfaces in spaced relationship.

4. A fabric holding clamp for a sewing machine defined in part as a matching pair of clamp members, cooperating faces formed on said clamp members, said faces being characterized by a series of spaced needle grooves transversely of said faces.

5. A fabric holding clamp of the character described in part as a plurality of cooperating clamp members, holding faces on said members arranged for matching relationship, said faces being characterized by spaced matching face portions transversely of said holding faces.

6. A device arranged for use with a sewing machine for edge stitching two fabrics together with a straight needle, comprising clamping means for presenting the center part of a U-shaped loop of fabric to the sewing device, spaced needleways transversely of the clamp and clamping surfaces spaced between the needleways.

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