Oct. 17, 1939. A. H. DE VOE 2,176,836

SEAM FOR SEWED ARTICLES

Original Filed March 18, 1938

Fig. 3.

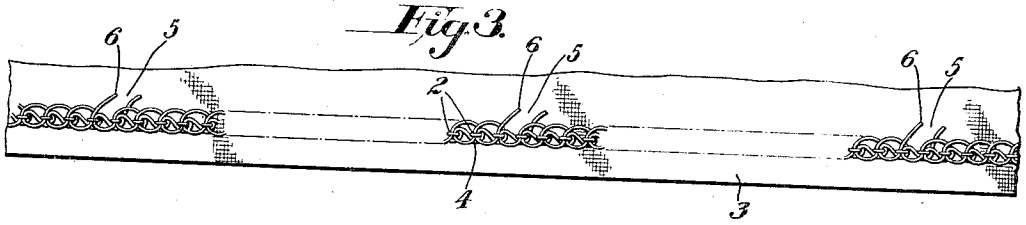


Fig. 1.

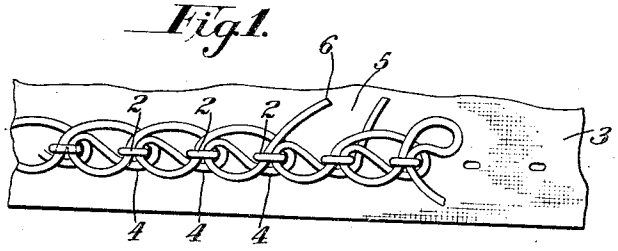


Fig. 4.

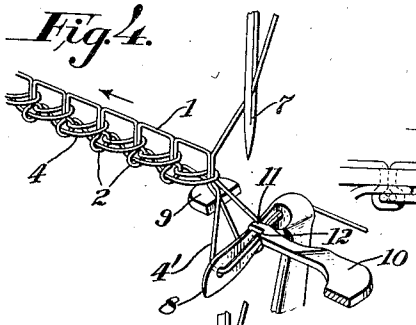


Fig. 2.

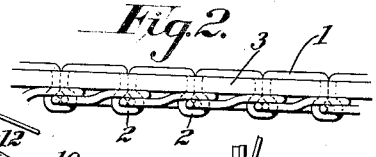


Fig. 5.

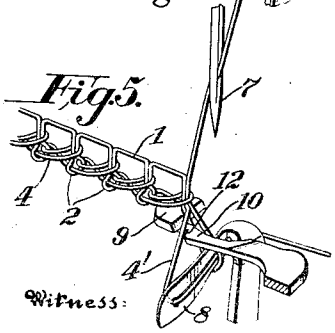


Fig. 6.

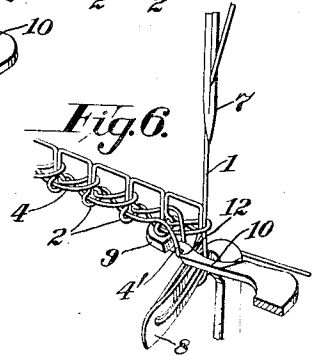
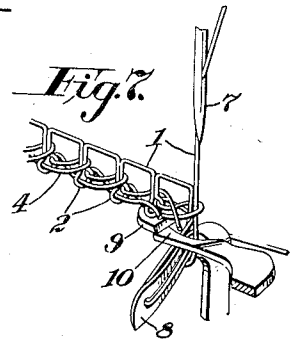


Fig. 7.



Witness:

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SEAM FOR SEWED ARTICLES

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Original application March 18, 1938, Serial No. 196,641. Divided and this application July 9, 1938, Serial No. 218,289

6 Claims. (Cl. 112—262)

This invention relates to seams for sewed articles and, more particularly, to seams involving sewing threads of a ravelling nature such, for example, as are found in the well known two-thread chain-stitch seams, wherein a needle-thread is formed into a series of needle-thread loops which penetrate the material or "between substance" and are keyed by loops of a looper-thread, each of which looper-thread loops enters a needle-thread loop and is, in turn, entered by the next succeeding needle-thread loop.

An object of the invention is to provide a seam involving ravelable sewing threads in which provision is made for minimizing or restricting the ravelling tendency. Another object of the invention is to provide a machine-made ravelable seam in which there is provision for safeguarding the entire seam against being readily ravelled.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations and arrangements of parts hereinafter set forth and illustrated in the accompanying drawing of a preferred embodiment of the invention, from which the several features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

This application is a division of my copending application, Serial No. 196,641, filed March 18, 1938.

In the accompanying drawing Fig. 1 is a bottom plan view of a portion of my improved seam. Fig. 2 is a longitudinal section of the seam. Fig. 3 is a bottom plan view of a larger portion of the seam on a smaller scale than that shown in Fig. 1, and Figs. 4, 5, 6 and 7 are perspective views of the needle, looper and thread-cutter implements of a sewing machine for automatically making my improved seam; the parts being shown in their cooperative relationships during a thread-cutting operation.

The seam illustrated for the purposes of the present disclosure comprises a continuous upper or needle-thread 1 formed as usual into a series of loops 2 which penetrate the material or "between substance" 3 and are keyed by the under or looper-thread loops 4 each of which is entered by the next subsequent needle-thread loop 2.

The points 5 of periodical interruption of the looper-thread are so contrived that the last needle-thread loop 2 and looper-thread loop 4, prior to each of the points 5 of thread interruption, are keyed against ready ravelling by the finishing end 6 of the interrupted looper-thread. Should ravelling of the looper-thread occur for any cause, it may continue only back to a point of interruption of the looper-thread and thus the entire seam is safeguarded against being readily ravelled out.

The improved seam shown may be produced automatically by a sewing machine having the usual reciprocatory eye-pointed needle 7, and complementary thread-carrying looper 8, by providing the machine with a ledger-blade 9 disposed closely adjacent the sewing machine throat-plate in rear of the needle-hole and by providing a horizontally movable cutter-blade 10 below the throat-plate to cooperate with such ledger-blade. The movable cutter-blade 10 is preferably formed with a pilot nose 11, Fig. 4, and with a shear-cutting edge 12 at one side of said nose.

Suitable mechanism may be readily provided to project the cutter-blade 10 across the looper 8 in the direction of seam-formation, Figs. 4 and 5, at the proper time in a stitch-forming cycle to cause the pilot nose 11 to enter and detain the looper-thread loop 4' without cutting the looper-thread. The pilot nose 11 detains the loop 4' of looper-thread, as shown in Fig. 6 until the needle and looper, in the continuance of their stitch-forming functions, sew another stitch, after which the cutter-blade 10 may be further moved to the position shown in Fig. 7 to cut the looper-thread against the ledger-blade 9 and then retracted to initial position Fig. 4. This operation may be repeatedly performed periodically, as desired, by providing the machine with a slow running cam for actuating the thread-cutter once for any given number of stitches.

The invention is not to be understood as limited to a two-thread chain-stitch seam except insofar as the prior art and appended claims may require.

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

1. In a seam for sewed articles, the combination with the usual between-substance and a needle-thread formed into a series of evenly spaced loops penetrating the between-substance, of a series of severed under thread lengths each keying a plurality of consecutive needle-thread loops of said first mentioned series.

2. In a seam for sewed articles, the combination with the usual between-substance and a needle-thread formed into a series of loops penetrating the between-substance, of a looper-thread formed into loops each of which enters a needle-thread loop and is, in turn, entered by a succeeding

needle-thread loop, said looper-thread only being periodically interrupted.

3. In a seam for sewed article, the combination with the usual between-substance and a needle-thread formed into a series of loops penetrating the between-substance, of a looper-thread formed into loops each of which enters a needle-thread loop and is, in turn, entered by a succeeding needle-thread loop, said looper-thread only being periodically interrupted at points such that the last needle-thread loop and embracing looper-thread loop prior to a point of interruption of the looper-thread are keyed by the finishing end of the looper-thread at such point of looper-thread interruption.

4. In a seam for sewed articles, the combination with the usual between-substance and a needle-thread formed into a series of loops penetrating the between-substance, of a looper-thread formed into loops each of which enters a needle-thread loop and is, in turn, entered by a succeeding needle-thread loop, said looper-thread only being periodically interrupted at regular intervals.

5. A straightaway seam for sewed articles, comprising the usual between-substance, an upper thread formed into linear end-to-end series of loops entering the between-substance, and a plurality of disconnected under-thread lengths successively keying successive series of needle-thread loops.

6. A straightaway seam for sewed articles, comprising the usual between-substance, a continuous upper thread formed into a continuous line of loops entering the between-substance, and a plurality of disconnected under-thread lengths successively keying successive series of needle-thread loops.

ALBERT H. DE VOE.