

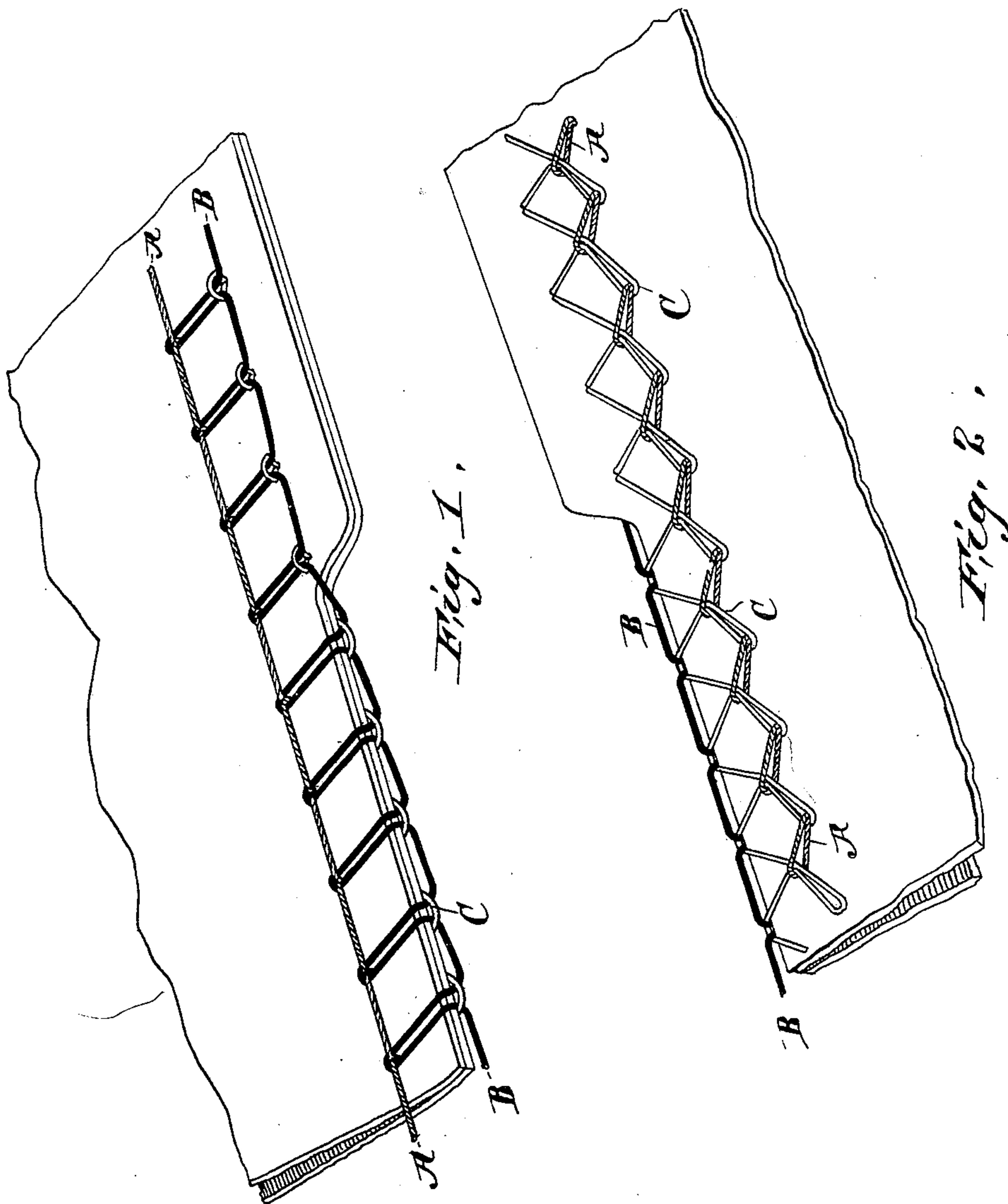
(No Model.)

2 Sheets—Sheet 1.

H. H. FEFEL.  
SEAM FOR UNDERWEAR, &c.

No. 547,003.

Patented Oct. 1, 1895.



WITNESSES:

*Benjamin  
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INVENTOR

*Henry H. Fefel*

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his ATTORNEY

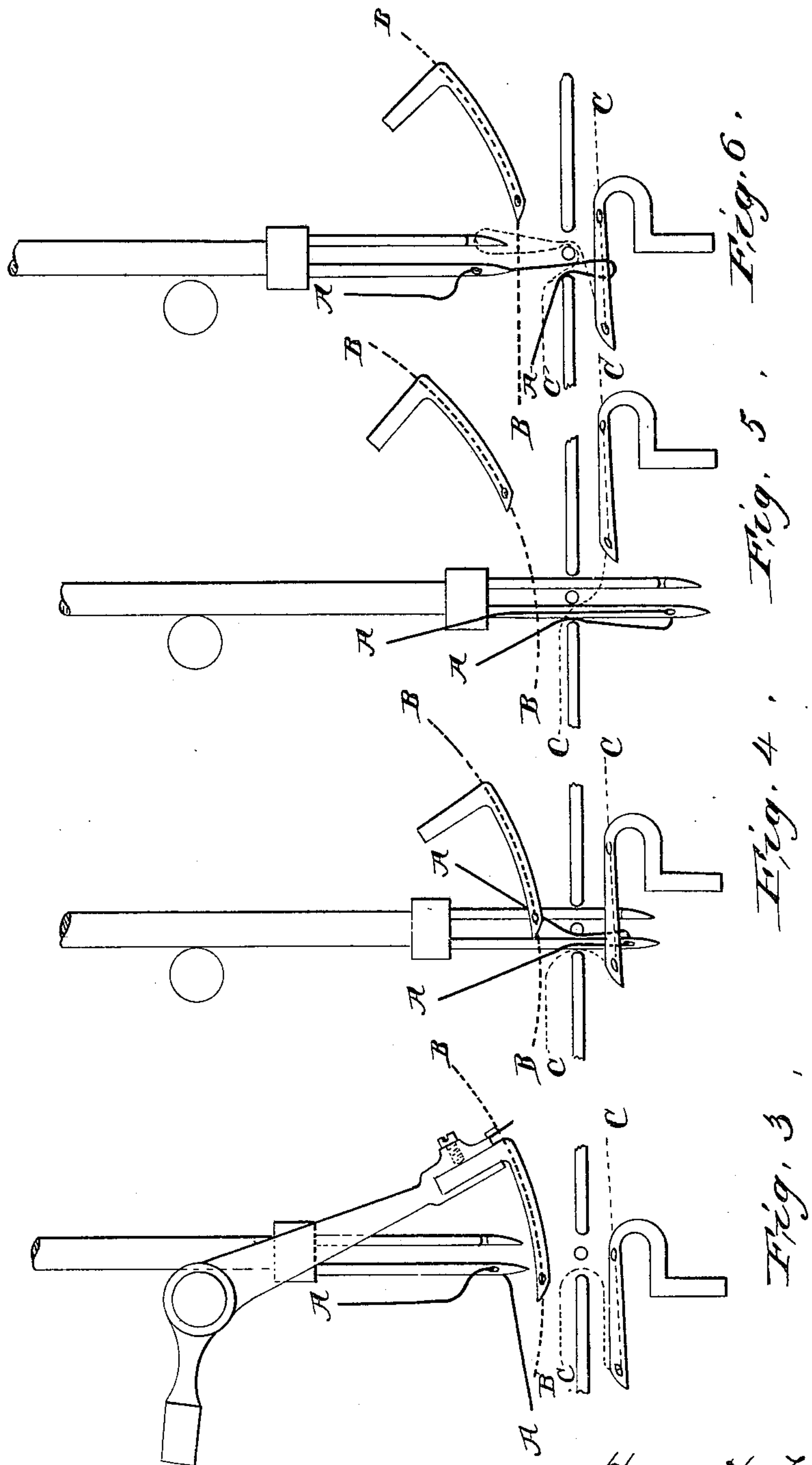
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ATTEST

C. W. Benjamin  
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his ATTORNEY



# UNITED STATES PATENT OFFICE.

HENRY H. FEFEL, OF NEW YORK, N. Y.

## SEAM FOR UNDERWEAR, &c.

SPECIFICATION forming part of Letters Patent No. 547,003, dated October 1, 1895.

Application filed September 14, 1894. Serial No. 522,990. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY H. FEFEL, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Seams for Underwear and other Articles, of which the following is a specification.

The object of my invention is to provide a new seam or arrangement of threads joining the edges of two pieces of cloth or other suitable fabric, and is more particularly intended for use in underwear and hosiery, although it is applicable to other purposes.

My improved seam employs three threads, one of which does not at any time pass through the fabric, but lies in a succession of loops on the top of the fabric and interlocked with the other threads. A second thread is carried across the under side of the fabric in a succession of loops, which interlock on the under side with the third thread and which also pass up through the fabric, where they interlock with the first thread. The third thread is made to form a loop, which passes down through the loop of the first thread and through the fabric to the under side, where it passes through the loop of the second thread and is held while the second thread passes through its loop.

My improved seam can be used either for overseam work or as a seam for joining two pieces of fabric, which are then spread out into a flat seam, as in the case of underwear.

The association of threads to form my improved seam is shown in the accompanying drawings, in which—

Figure 1 is a perspective of the upper side of the seam applied as an overseam-stitch in one portion and as a seam joining two pieces of fabric before trimming in the other portion. Fig. 2 is a similar perspective of the under side. Fig. 3 shows the three threads and the devices for holding the same before any junction of the threads begin. Fig. 4 shows the needle-thread descending through the loops of the other threads. Fig. 5 shows the position of threads when the needle-thread is in its lowest position. Fig. 6 shows the lower thread after the same has been carried through the loop of the needle-thread on the under side of the fabric and also up through the fabric to interlock the upper thread.

Same letters indicate similar parts in the different figures.

A is the needle-thread, shown in heavy black lines for the sake of clearness in Figs. 3 to 6.

B is the upper thread, which never passes through the fabric, but is carried back and forth across the path of the needle by a swinging looper, as shown in Figs. 3 to 6. For the sake of clearness, in Figs. 3 to 6 the thread B is shown in heavy dotted lines. For the same reason the lower thread C is shown in faint dotted lines in Figs. 3 to 6, and is carried backward, forward, and sidewise by the usual looper on the under side of the table and is lifted up through the fabric by a crochet-hook, as shown in Fig. 6. Other devices for bringing about the proper motions of these three threads to bring them into the desired relationship may be used, if desired, instead of those shown in the drawings, or the work may be done by hand. These motions may be briefly described as follows, beginning the description after several stitches have been formed: The needle-thread is passed downward through the fabric in form of a loop, and also through the loop of the under thread. It is held on the under side of the cloth until the next loop of the under thread passes through it. The under thread is then lifted up through the fabric in the form of a loop, which is pierced by the loop of the upper thread. The next loop of the needle-thread then descends through the loop of the upper thread, through the fabric, and through the loop of the under thread, when it is again held until the next loop of the under thread passes through it, and this process keeps up indefinitely.

When this improved seam is to be used for underwear or other purposes requiring the sewing together of two pieces of fabric which are afterward to be spread out flat, the stitching may be done either before or after trimming the edge, as shown in Figs. 1 and 2. When the seam is to be used in overseam work, the edges of the fabric are, of course, properly prepared before sewing.

In overseam work or in stitching over a trimmed edge for other purposes, the loop of the under thread is not, strictly speaking, brought up through the fabric, but is brought

up over the edge thereof to the same position for being interlooped with the upper thread as if it came up through the fabric sewed before trimming the edges.

5 I claim—

The above described seam for underwear and other articles, which consists of two pieces of fabric united by a series of stitches comprising three threads, one of which lies  
10 along the face of the fabric at some distance from the edge thereof, and forms a series of loops, which project through the fabric to the other face thereof; a second thread, which is  
15 passes through the fabric in a direction op-

posite to the loops of the first thread, and the loops of the other series of which each pass through one loop of the first thread, and are in turn each threaded by the next succeeding loop of said first thread; and a third thread, which 20 is thrown across the face of the fabric in a series of loops, which pass through the projecting loop of the second thread and around the descending loop of the first thread, substantially as described.

HENRY H. FEFEL.

Witnesses:

W. P. PREBLE, Jr.,

J. KENNEDY.