

W. ARBETTER.
SEAM FOR SEWED ARTICLES.
APPLICATION FILED FEB. 1, 1908.

1,009,273.

Patented Nov. 21, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

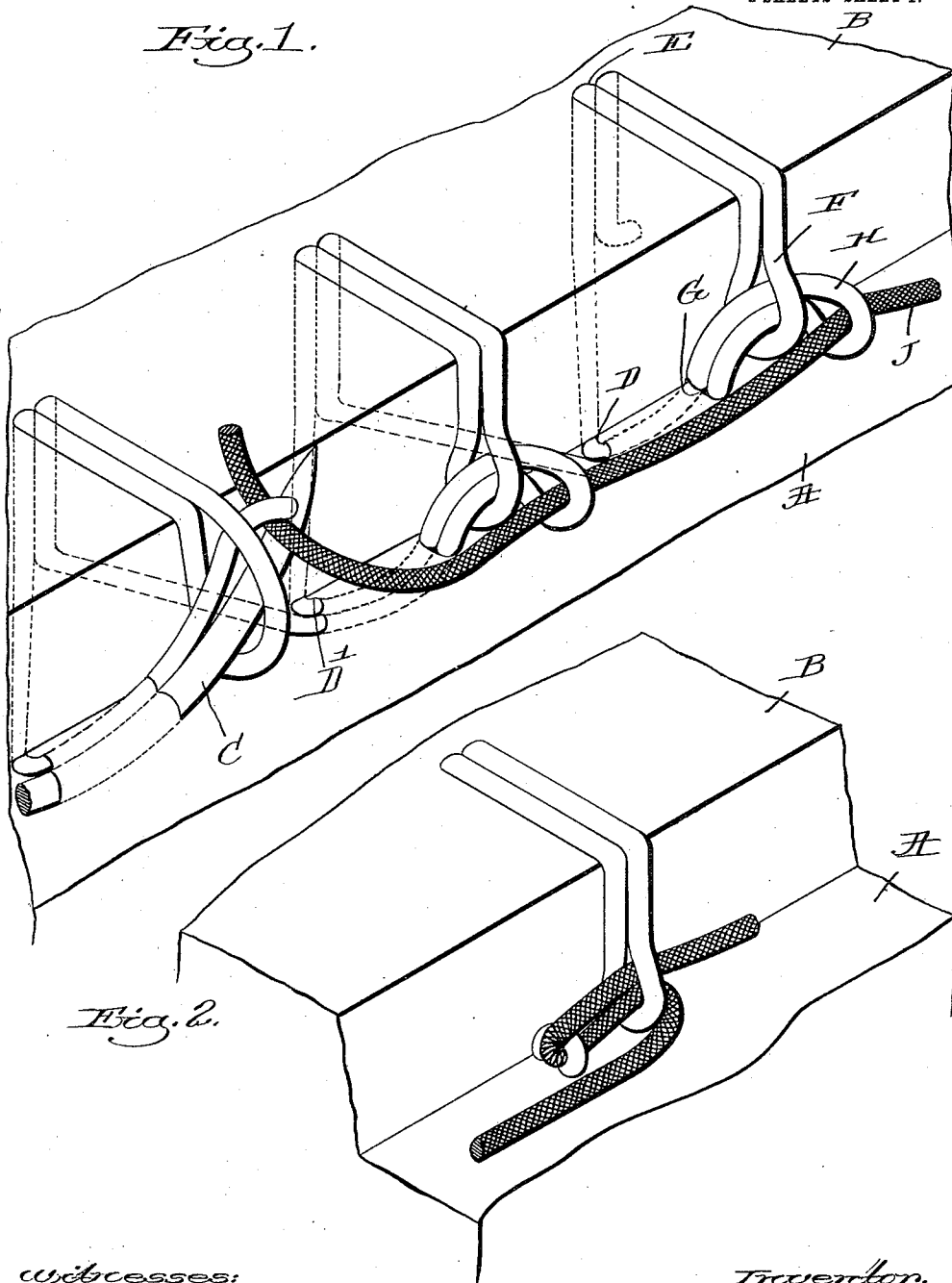


Fig. 2.

Witnesses:
Fred S. Grumbaf.
Joseph M. Ward.

Inventor.
Wm. Arbetter,
By Bradley & Gregory,
attys.

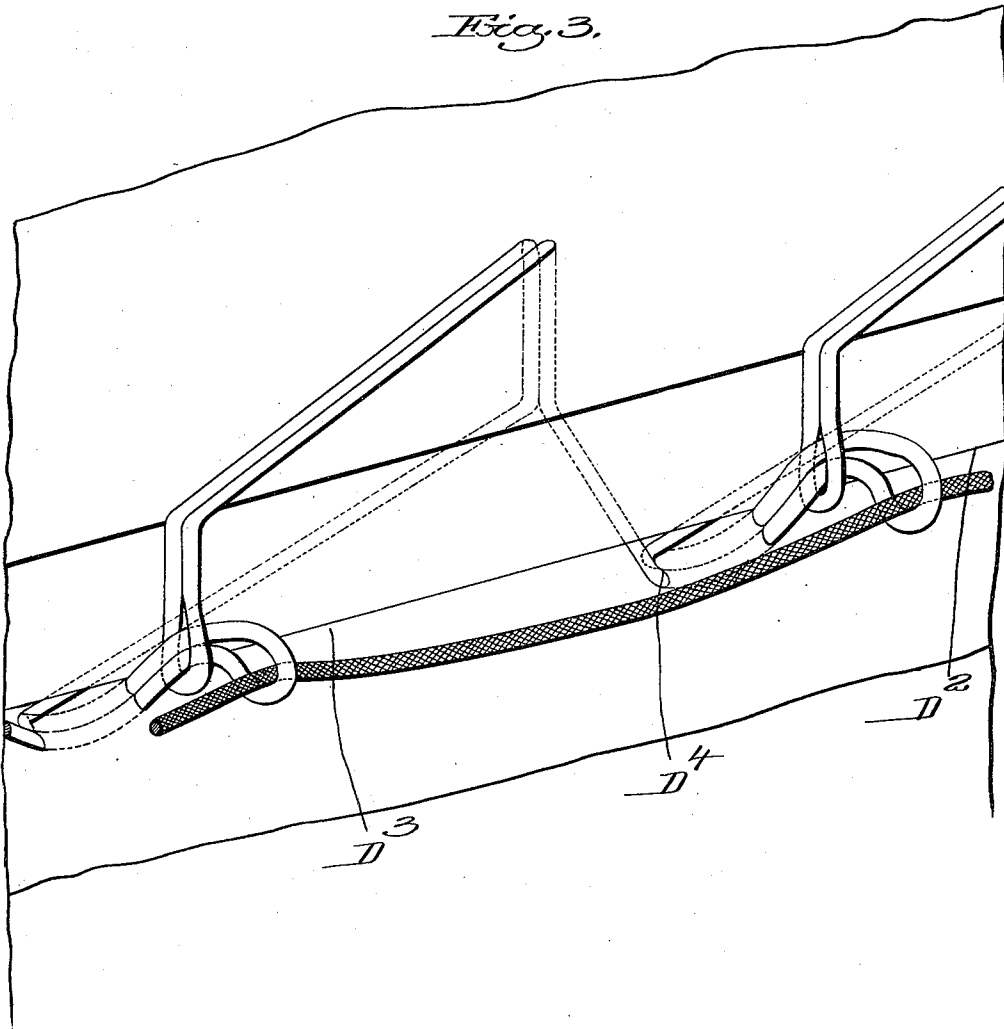
W. ARBETTER.
SEAM FOR SEWED ARTICLES.
APPLICATION FILED FEB. 1, 1908.

1,009,273.

Patented Nov. 21, 1911.

2 SHEETS—SHEET 2.

Fig. 3.



witnesses:

Fried. S. Grunkef.
Joseph M. Ward.

Inventor:
Wolfgang Arbetter,
by Henry Hugon.

UNITED STATES PATENT OFFICE.

WOLF ARBETTER, OF CHELSEA, MASSACHUSETTS, ASSIGNOR TO ARBETTER FELLING MACHINE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

SEAM FOR SEWED ARTICLES.

1,009,273.

Specification of Letters Patent.

Patented Nov. 21, 1911.

Application filed February 1, 1908. Serial No. 413,742.

To all whom it may concern:

Be it known that I, WOLF ARBETTER, a citizen of the United States, residing at Chelsea, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Seams for Sewed Articles, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention relates to a seam for sewed articles designed to be made by a sewing machine, and particularly adapted for use in what is known as "felling" work where the edge, either raw or folded, of a superimposed layer or layers of fabric is attached to a base layer by blind stitches, or stitches entering and emerging from the same face of the fabric.

It is the object of the present invention to provide such a seam which can be readily made by machine, and which will simulate so far as possible the appearance of a felling seam produced by hand, and which at the same time will be strong and durable.

The nature of the seam will appear more fully from the accompanying description and drawings and will be more particularly pointed out in the claims.

The drawings illustrate preferred forms of the seam as applied to felling work.

Figure 1 is a view in perspective of that form of the seam wherein the feed takes place after each two thrusts of the needle. Fig. 2 is a view similar to Fig. 1 showing but one portion of the seam wherein the tension has been so applied as to produce a slightly different effect. Fig. 3 is a view similar to Fig. 1 of that form of the seam wherein the feed takes place after each thrust of the needle.

The seam herein illustrated is designed to be made by a machine of the general type shown in the patent to Arbetter No. 830,699, granted September 11, 1906. An additional stitch-forming instrumentality is added in the way of a looper whose operation is to seize the loop of needle thread on the diagonal stitch and carry it over into the path of the needle on the straight stitch, so that the loop formed on the straight stitch will pass through the loop formed on the diagonal stitch. The revolving hook and mechanism is also so modified as to pass

the second or bobbin thread only through the loops of needle thread formed in making the straight stitches. The tension devices are suitably modified, and the feed is arranged to operate only after each diagonal stitch to make the form of stitch shown in Fig. 1 of the present invention, or to operate after each diagonal and each straight stitch to make the form of seam shown in Fig. 3 of the present invention.

As the seam of this invention is an article of manufacture the machine by which it is produced need not be further described in detail.

In the drawings, A represents the base layer of material, such for example as the fabric of a coat or dress, and B represents the superimposed layer or layers, which may be considered as presenting either a raw or a folded edge, as in the case of a lining.

In making the seam two threads are employed, a needle and a looper thread. In the drawings the needle thread is illustrated as being inserted by means of a curved, eye-pointed needle, but any suitable instrumentality may be used to insert the loops of needle thread. The looper thread may be inserted by means of the familiar type of rotary hook and inclosed bobbin and bobbin case, but any suitable instrumentality may be used for manipulating this thread.

Referring to the construction shown in Fig. 1 of the drawings, the curved needle C enters beneath the upper surface of the superimposed layer B and preferably under the edge thereof at D, and passes up through the superimposed layer in a diagonal direction, emerging from the upper surface at E, and throwing out a loop F, which is then seized by a looper and carried over the edge of the superimposed layer; the needle is then retracted and turned into a position parallel to the edge of the superimposed layer B, and operated to enter the upper surface of the base layer A at about the point D and emerge therefrom at the point G, making a stitch parallel and close to the edge of the layer B; the needle upon emerging at G carries its loop H through the loop F, which is held open by the looper for that purpose, and into the path of the looper or rotary hook which then passes the thread J therethrough; the needle is then retracted,

coming out at the point D, and the feed takes place until the point D' is presented to the needle, when the operations already described are repeated. There is thus formed the structure shown in Fig. 1, wherein the needle thread is formed into two rows of loops, the loops of one of these rows lying parallel and close to the edge of the superimposed layer and entering and emerging from the upper surface of the base layer, while the loops of the other of said rows enter the superimposed layer beneath its upper surface and extend from the point of emergence over the edge of the superimposed layer. The loops thus extending over the edge of the superimposed layer are locked in position by the concatenation of the loops in the first row, and the second thread. The particular form of this concatenation will depend, obviously, upon the tension. With the loops H left loose, as in Fig. 1, the loops H will pass through the loops F and be held by the thread J. With the loops H drawn down into the fabric, as in Fig. 2, the thread J will pass first through the loops F and then through the loops H, thus securing the locking of the seam.

In the preferred form of the seam the loops F enter under the edge of the superimposed layer but do not catch into or penetrate the base layer.

The seam shown in Fig. 3 is made in precisely the same way except that the feed takes place after each straight and after each diagonal stitch. The needle in making the diagonal stitches will enter at the points D², D³, and in making the straight stitches at the point D⁴, the feed thus taking place from D² to D⁴, and then from D⁴ to D³, and so on. In the drawings it has been necessary to exaggerate the loops and their positions in the fabric, but the essential characteristics of the seam are thereby made clear.

It will be noticed that each loop F of the needle thread extending from the point of emergence E over the edge, has its strands lying in single, straight, parallel lines on the upper surface of the superimposed layer so that the loops are parallel to each other and spaced. In this respect they present a close simulation of hand work. When the threads are drawn up properly in the interlocking loops and thread J lying along the base fabric close to the edge of the superimposed layer, are practically concealed beneath the superimposed layer, so that the seam still more resembles the hand felling seam.

It is preferable to have the loops F extend at right-angles or nearly so to the edge of the superimposed layer, but the exact angle at which they will come will depend upon the relation of feed or distance between the stitches and the length of the stitches.

Having described my invention, what I

claim as new and desire to secure by Letters Patent, is:

1. A seam for sewed articles comprising a base layer of fabric, a superimposed layer presenting an edge thereon, a thread formed into two rows of loops, the loops of one of said rows lying parallel and close to said edge and entering and emerging from the upper surface of said base layer, the loops of the other of said rows entering the superimposed layer beneath the upper surface and emerging from its upper surface and extending from the point of emergence over the edge of said layer, a second thread locking the loops of the said two rows together.

2. A seam for sewed articles comprising a base layer of fabric, a superimposed layer presenting an edge thereon, a thread formed into two rows of loops, the loops of one of said rows lying parallel and close to said edge and entering and emerging from the upper surface of said base layer, the loops of the other of said rows entering the superimposed layer beneath the upper surface and emerging from its upper surface and extending from the point of emergence over the edge of said layer, a second thread extending through the loops of the first row and forming therewith a lock for the loops of the second row.

3. A seam for sewed articles comprising a base layer of fabric, a superimposed layer presenting an edge thereon, a thread formed into two rows of loops, the loops of one of said rows lying parallel and close to said edge and entering and emerging from the upper surface of said base layer, the loops of the other of said rows entering the superimposed layer beneath the upper surface and emerging from its upper surface and extending from the point of emergence over the edge of said layer, the loops of said first row extending respectively through the loops of the second row, a second or locking thread passing through the loops of the first row.

4. A seam for sewed articles comprising a base layer of fabric, a superimposed layer presenting an edge thereon, the said layers being fastened together by thread presenting two rows of loops, each loop of one row lying parallel and close to said edge and entering and emerging from the upper surface of the base layer, each loop of the other of said rows lying in the superimposed layer diagonally to the edge thereof and emerging from the upper surface thereon and extending from the point of emergence over the edge of the superimposed layer with its strands in single straight parallel lines and means for concatenating said loops.

5. A seam for sewed articles comprising a base layer of fabric, a superimposed layer presenting an edge thereon, and secured to said base layer by two connected rows of

locked loops, each loop of one row lying in the base layer and entering and emerging from the upper surface thereof, each loop of the other row passing through the superimposed layer, emerging from the upper surface thereof, and extending from the points of emergence over the edge of the superimposed layer with its strands in straight, parallel lines, whereby the appearance of a single row of short parallel stitches

in the superimposed layer at the edge, as in hand felling, is produced.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WOLF ARBETTER.

Witnesses:

MABEL PARTELOW,
THOMAS J. DRUMMOND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
