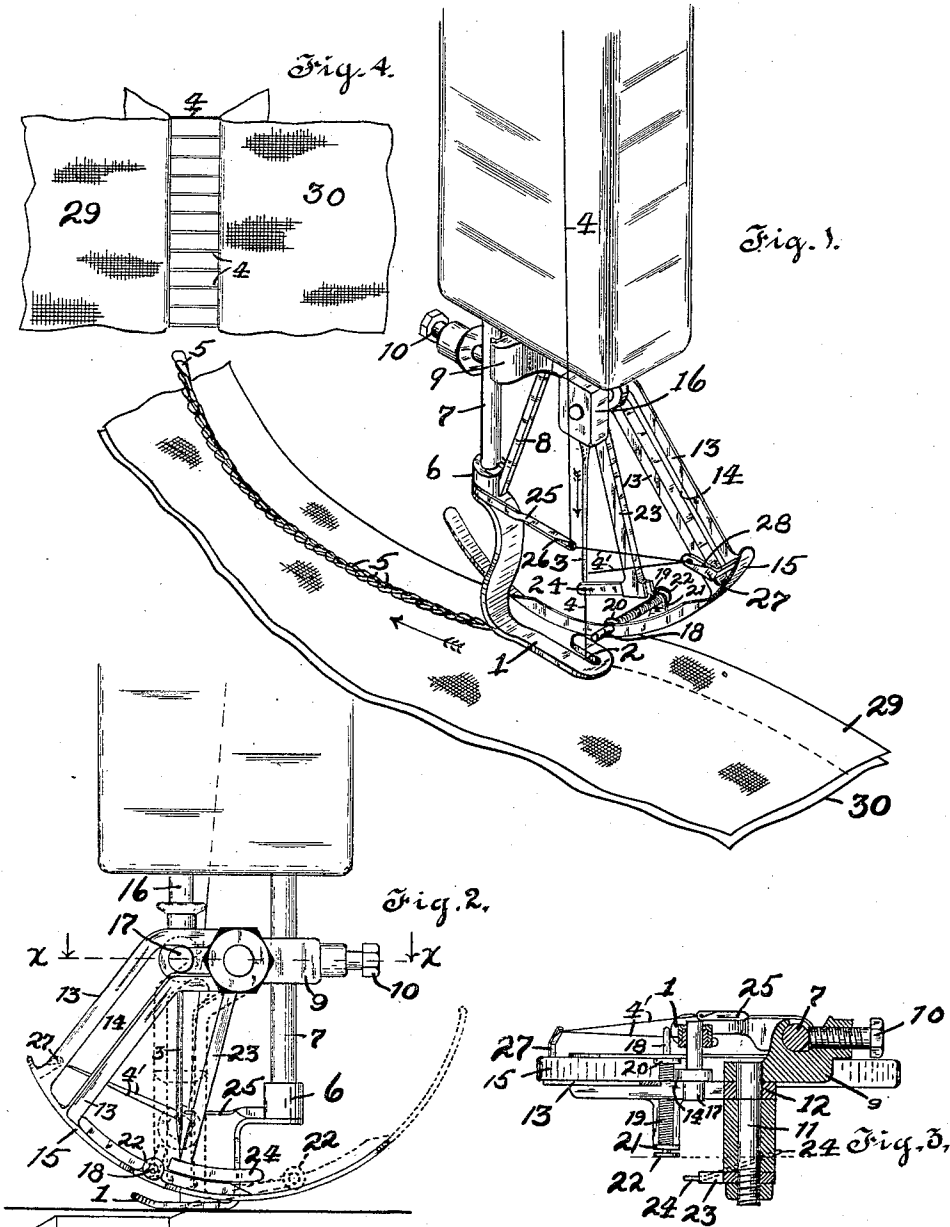


W. A. DALEY.
 SEWING MACHINE ATTACHMENT.
 APPLICATION FILED AUG. 30, 1909.

1,069,235.

Patented Aug. 5, 1913.



Witnesses:

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UNITED STATES PATENT OFFICE.

WALTER A. DALEY, OF CHICAGO, ILLINOIS.

SEWING-MACHINE ATTACHMENT.

1,069,235.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER A. DALEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Sewing-Machine Attachments, of which the following is a specification.

My invention relates to improvements in sewing machines and has for its object to provide means for producing mechanically what is known as the tailor basting stitch, or for sewing two pieces of material together by loose thread lengths or loops.

It is illustrated in the accompanying drawing, wherein—

Figure 1 is a perspective view, Fig. 2, a side elevation, Fig. 3, a section along the line $x-x$ of Fig. 2, and Fig. 4, a perspective view of two sections of a garment basted together and separated for cutting.

Like parts are indicated by the same numerals in all the figures.

The presser foot 1 is provided with the rearwardly opening slot 2 through which passes the needle 3 carrying the thread 4 to form the stitches 5. The presser foot 1 is attached by means of the collar 6 to the presser bar 7. The bracket 9 is attached to the presser bar by means of the strut 8 and the set screw 10. The bracket 9 carries the stud 11 upon which is rotatably mounted the quadrant 12 composed of the outwardly and downwardly extending arms 13 forming between them the slot 14 and supporting at their lower extremities the curved guard and guide 15. The needle bar 16 carries the roller 17 adapted to travel in the slot 14. The guard 15 supports in the bearings 20 and 21 the finger 18 which is surrounded by the spring 19 and which carries the collar 22 adapted to engage the fixed cam leaf 24 which in turn is supported by the arm 23 which is rigidly attached to the bracket 9. The thread 4 on its way from the spool to the needle passes through the slotted eye 26 in the end of the bar 25 and the slotted eye 28 in the thread puller lug 27, thence to the eye of the needle. The cloth to be sewn is shown at 29 and 30. 31 in Fig. 2 shows a diagrammatic view of the shuttle which coacts with the needle to form the stitches.

The cam surface 24 is shown in Fig. 3 at an angle so that when the collar 22 has passed into the position indicated in dotted lines in Fig. 2, it will be engaged by the cam

surface 24, thus pulling out the pin 18 against the spring. At the end of the excursion the part 22 has reached the position shown in full lines. The collar 22 will have slipped off of the cam surface 24 and owing to the tension of the spring will have resumed its previous position which it maintains until after the forward stroke places it again in contact with the cam surface 24.

The parts can be greatly altered in form and shape, size and proportion without departing from the spirit of my invention. I have shown what is in fact an operative structure but I wish my drawing to be taken as diagrammatic in the sense that it illustrates broadly my invention, the essential features of which are set out in the claims.

As illustrated in my drawing, the use and operation of my invention are as follows: The two pieces of cloth to be sewed together are fed into the machine in the usual manner. The slot 14 is of such shape that as the needle bar commences the downward stroke the quadrant is forced back into the position shown in the dotted lines in Fig. 2, carrying the finger 18. During this motion the finger 18 engages the thread and draws it out into a loop 5 which passes out backwardly through the slot 2. During the return stroke of the needle bar the quadrant returns to its original position, the cam 24 meanwhile having engaged the collar 22 and thrown the finger back into the guard against the spring 19. By this means the finger is withdrawn from the path of the thread until after the quadrant has returned to its original position and is ready for the following forward stroke, immediately before which the cam releases the finger and it is allowed to fly back into its operating position. During this motion also the thread has been drawn out between the eye 26 and the eye in the needle 3 by the eye 28 as shown at 4' Fig. 1, thus giving the needle sufficient slack for the succeeding downward stroke. This prevents any deflection of the needle during the forward movement owing to tension in the thread. If there were no slack in the thread during the downward stroke the tension would exert a bending force on the needle and cause it to miss the opening provided for it in the surface plate. In this manner the cloth is sewed together having between each stitch a long open loop or length of thread as shown in the drawing.

The pieces may afterward be pulled apart as shown in Fig. 4. The lengths of thread may then be cut intermediate the two pieces of cloth to leave two rows of thread one on each of the separated pieces for any desired purpose as for example to mark the place of an intended seam.

The stitch forming apparatus usually comprises two portions. These sometimes take the shape of a needle and a shuttle and the place at which my device must in part operate is some point which is between the two stitch-making devices or at least that it is so located that its effective action takes place between the two stitch-forming devices or between the needle and shuttle. The particular form in which I have shown this device is that of a finger which travels back and forth between the needle and shuttle, reciprocating along its own axis to move out of the path of the thread at the desired moment. It coöperates with several other devices such as the guard and other portions of the thread pulling devices here especially adapted to draw or pull the thread through the needle at the bottom when the needle is on its reverse stroke, leaving it for the finger to draw out and form the loop when the needle is on its descending or working stroke, so as to obviate the danger of the needle being pulled on one side.

I claim:

1. In a sewing machine the combination of two coöperating stitch forming devices with a loop forming device containing a finger reciprocatingly movable across the

path of the thread, and a fixed cam engaged by the finger to impart such reciprocating movement.

2. In a sewing machine the combination of two coöperating stitch forming devices with a loop forming device containing a finger laterally movable across the path of the thread, and a fixed cam leaf and a collar on the finger engaged by the cam leaf to impart reciprocating longitudinal motion to the finger in response to its lateral movement.

3. In a sewing machine the combination of two coöperating stitch forming devices with a loop forming device containing a movable finger and an arc-shaped pivotally mounted swinging guard for the same, said finger adapted to successively protrude from and recede into said guard.

4. In a sewing machine the combination with two stitch forming devices of a thread puller and a looping finger, and a pivotally mounted reciprocating support for said thread puller and looping finger.

5. In a sewing machine the combination with two coöperating stitch forming devices of a thread puller and a looping finger, and means for reciprocating said puller and said finger in a plane parallel with the path of the thread, and means for simultaneously reciprocating said finger in a direction perpendicular to said plane.

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Witnesses:

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