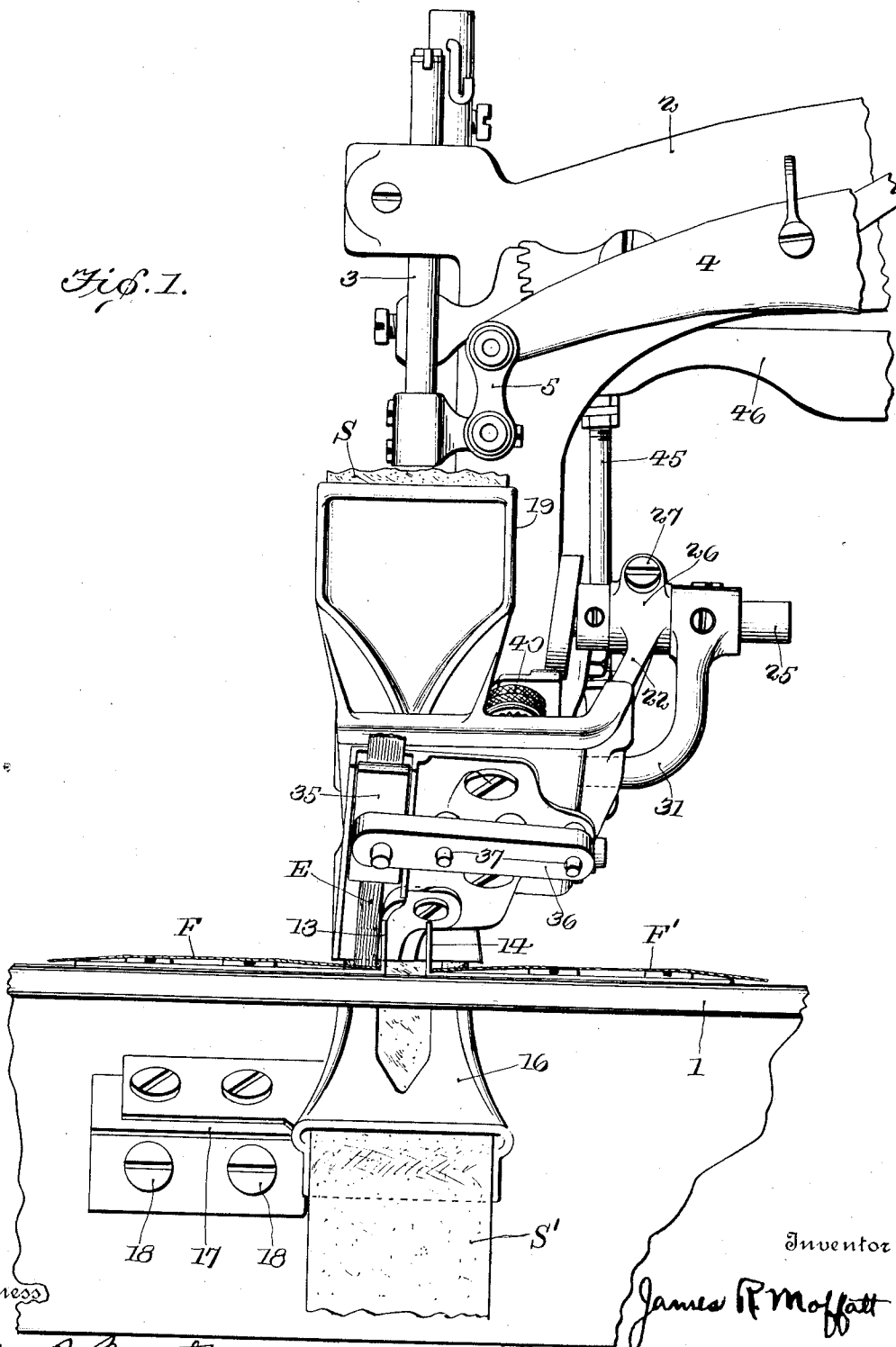


1,352,675.

Patented Sept. 14, 1920.
7 SHEETS—SHEET 1.

Fig. 1.



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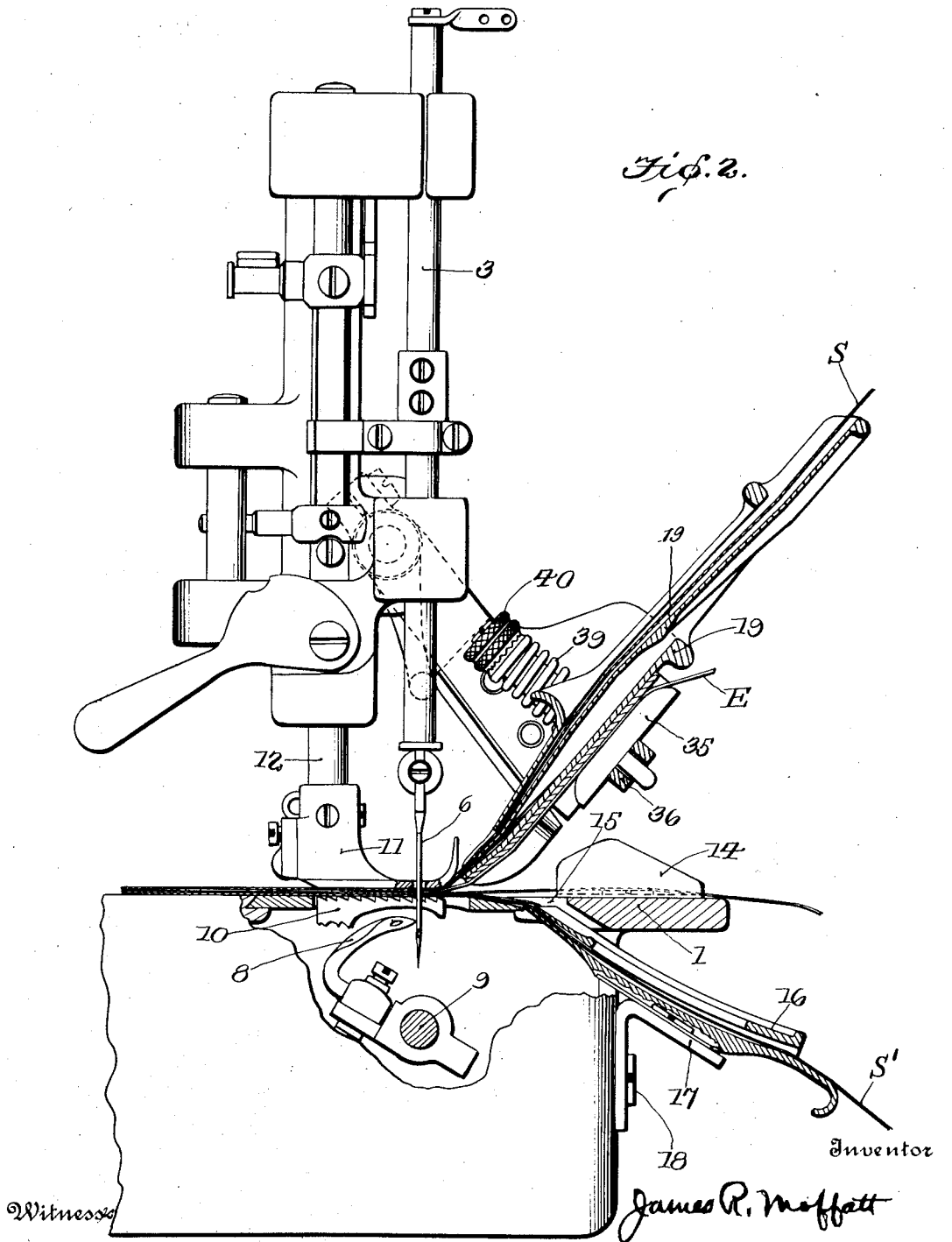
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SEWING MACHINE.
APPLICATION FILED JULY 13, 1917.

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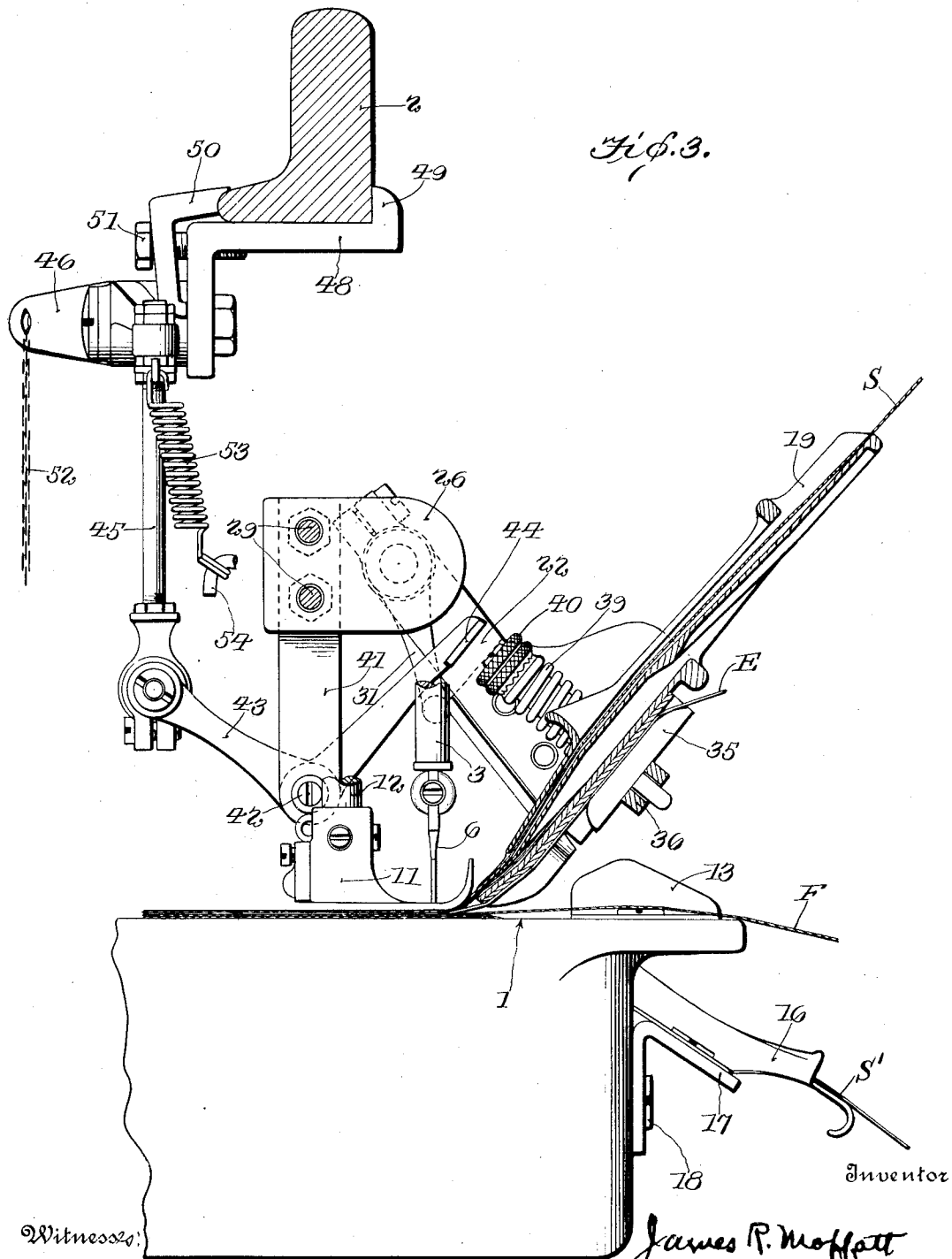
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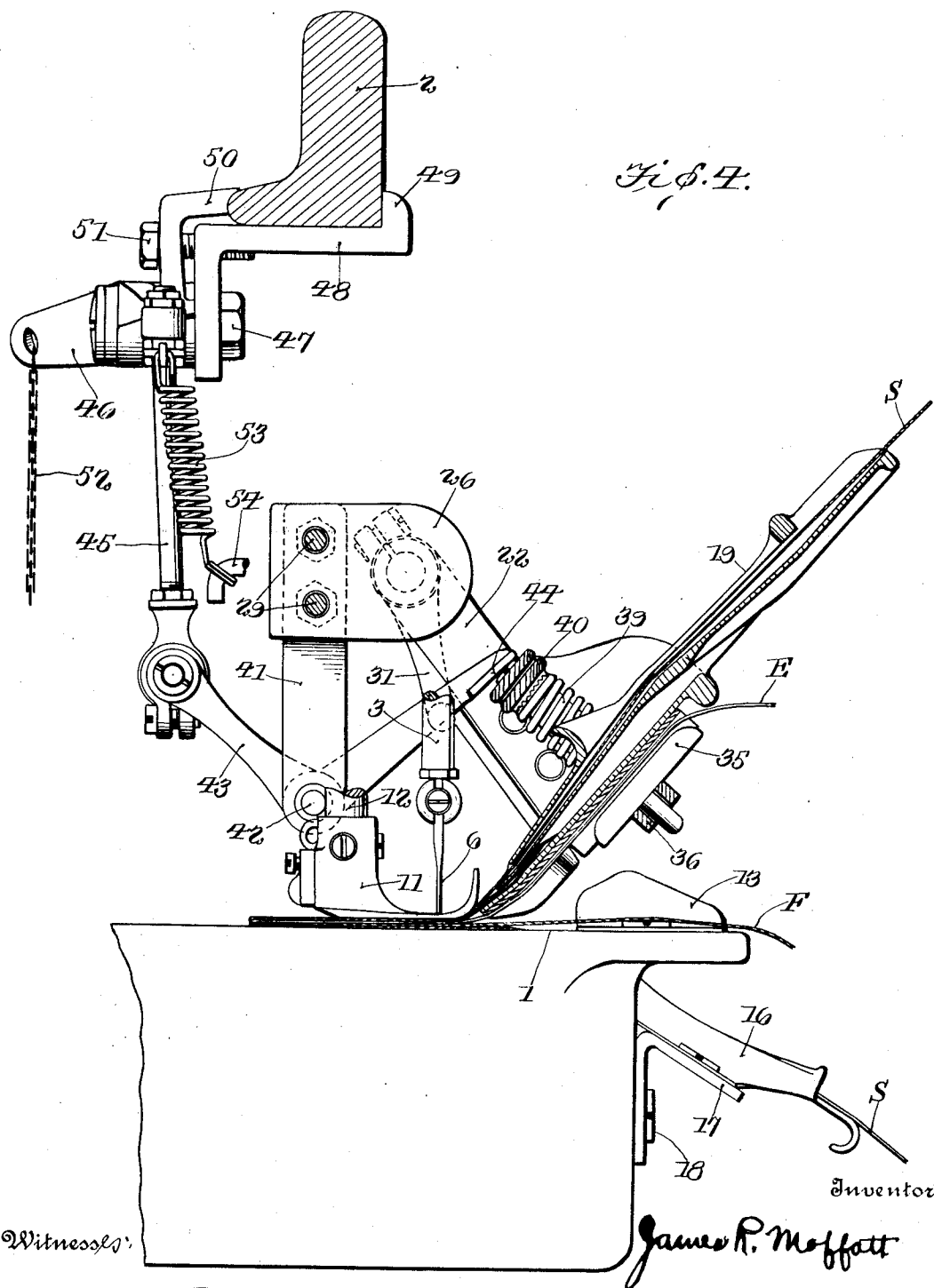
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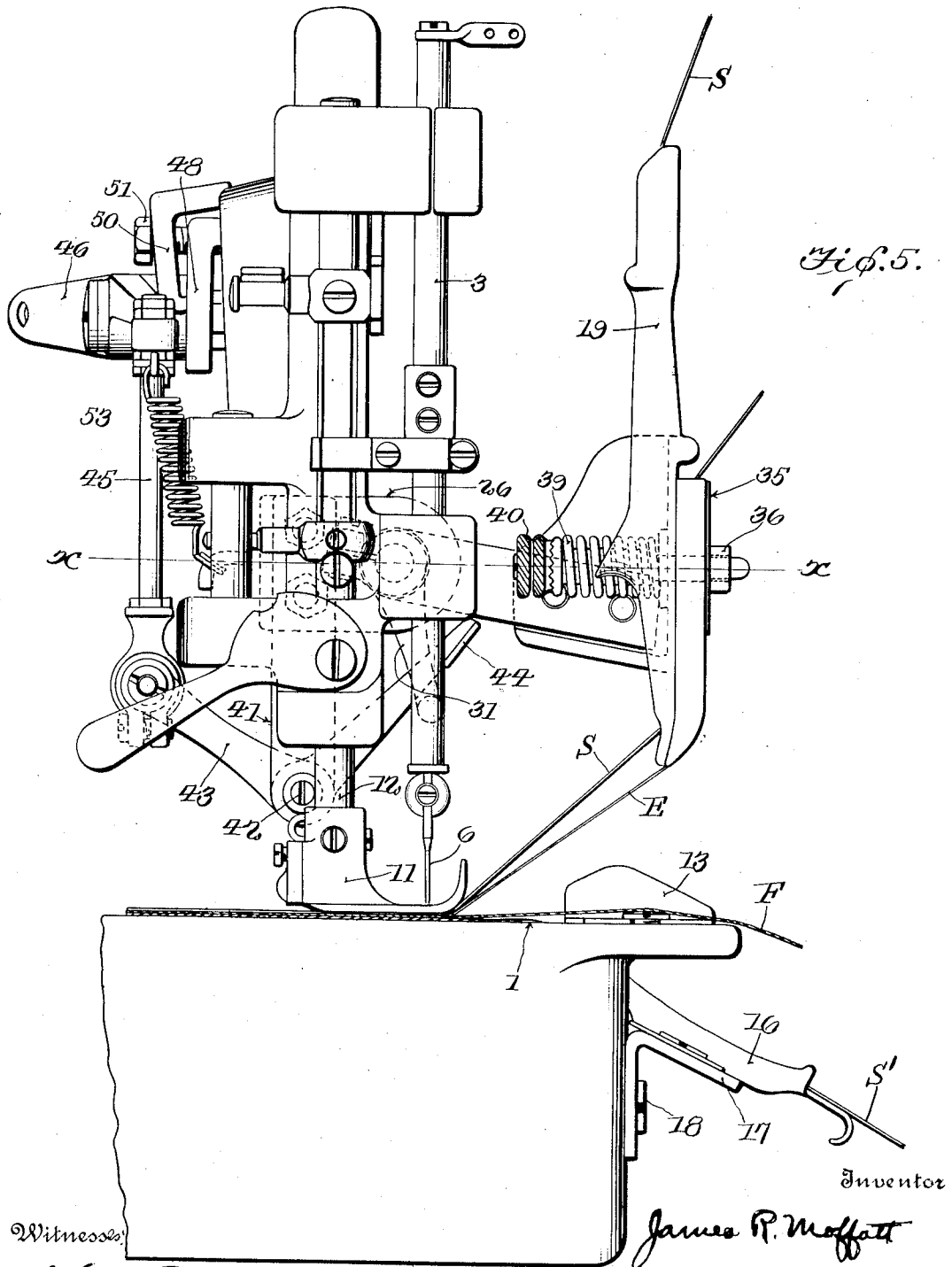
Patented Sept. 14, 1920.
7 SHEETS—SHEET 4.



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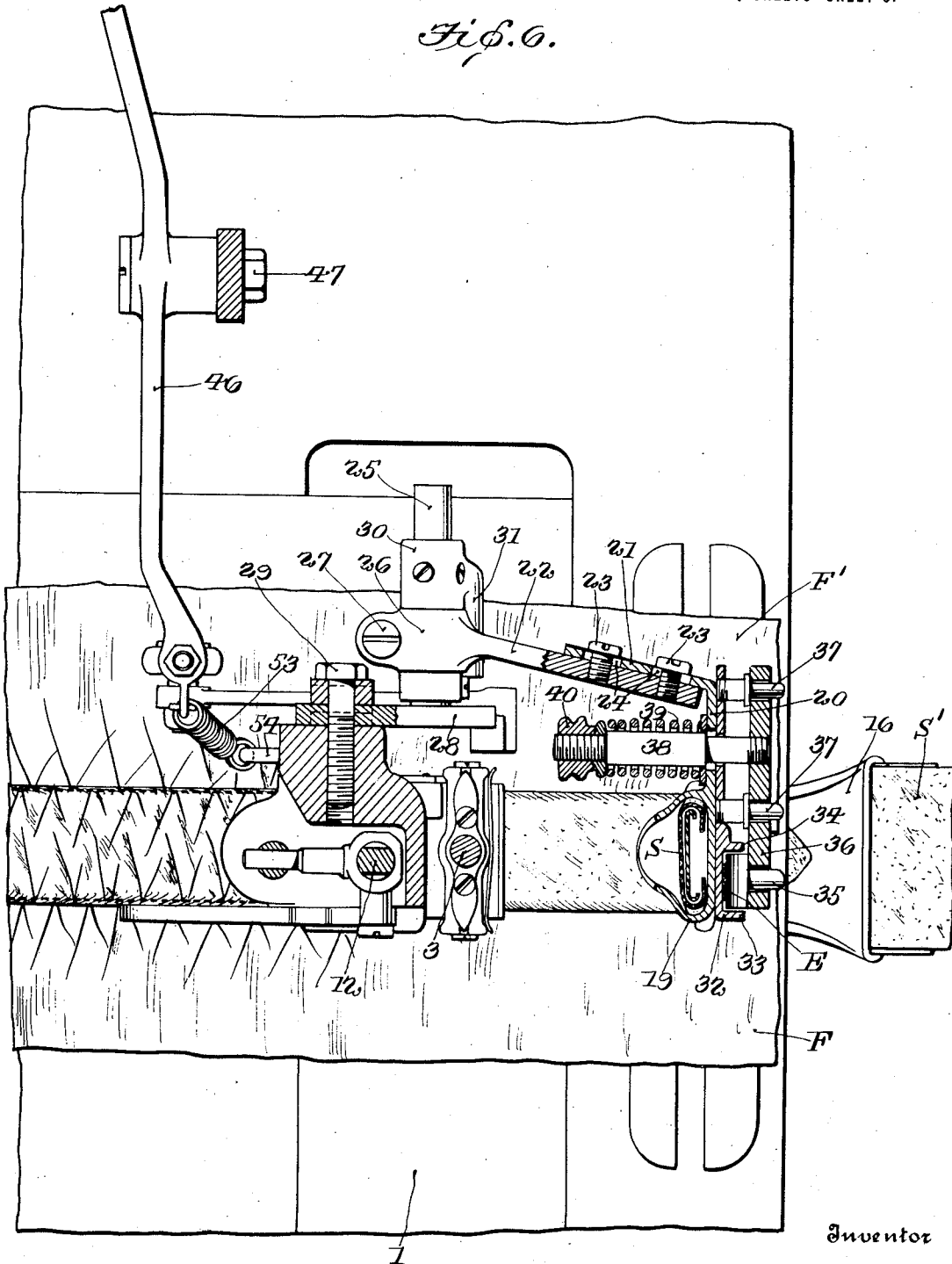
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Fig. 6.



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7 SHEETS—SHEET 7.

Fig. 7.

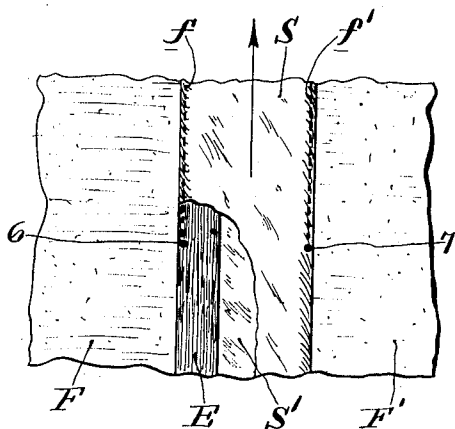


Fig. 8.

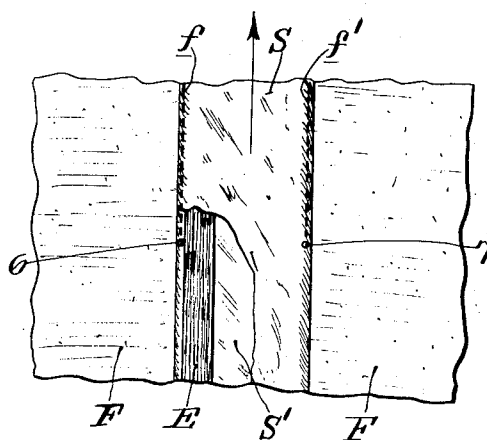


Fig. 9.

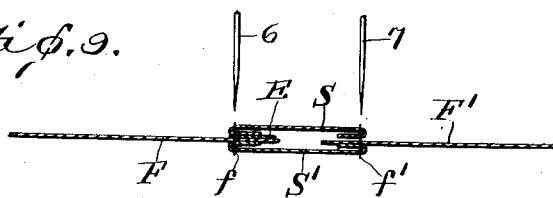
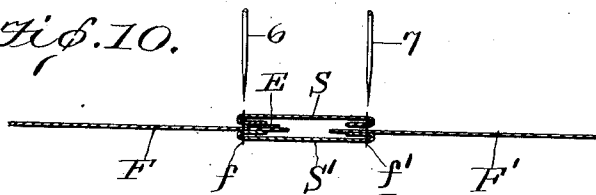


Fig. 10.



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UNITED STATES PATENT OFFICE.

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SEWING-MACHINE.

1,352,675.

Specification of Letters Patent. Patented Sept. 14, 1920.

Application filed July 13, 1917. Serial No. 180,371.

To all whom it may concern:

Be it known that I, JAMES R. MOFFATT, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a description, reference being had to the accompanying drawing, and to the figures of reference marked thereon.

The invention relates to new and useful improvements in sewing machines and more particularly to a sewing machine adapted to stitch an elastic tape in a fabric pocket wherein the elastic tape may be stretched and tacked at certain points so that when released it will serve to gather the fabric sections.

An object of the invention is to provide a machine of the above character wherein the elastic tape guiding means and the means for causing the tape to be stretched are carried by the overhanging arm of the machine.

A further object of the invention is to provide an elastic tape stretching means of the above character with means whereby the same may be controlled at the will of the operator and without stopping the stitching mechanism.

A still further object of the invention is to provide means for guiding a facing strip above the elastic tape and also a facing strip below the elastic tape for forming from the facing strips and the fabric sections, a pocket for the elastic tape.

A still further object of the invention is to provide guiding devices for spacing the fabric sections which are joined on the facing strips.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings, which show by way of illustration, one embodiment of the invention:—

Figure 1 is a front view of the front end of a sewing machine having my improvements applied thereto;

Fig. 2 is a view partly in end elevation and partly in vertical section, showing my improvements;

Fig. 3 is a view partly in end elevation and partly in vertical section, the section being taken through the overhanging arm and sectionally through the guiding device for the elastic tape;

Fig. 4 is a view similar to Fig. 3, but showing the elastic tape released from tension;

Fig. 5 is an end view of a machine having my improvements applied thereto, certain of the parts being omitted for the sake of clearness and the guide for the elastic strip being turned to inoperative position;

Fig. 6 is a sectional view on the line $x-x$ of Fig. 5, with the guide for the elastic tape in the position shown in Fig. 5;

Fig. 7 is a plan view showing two fabric sections joined by facing strips forming the pocket for the elastic tape, the elastic tape being free from tension so that the stitches penetrate the same;

Fig. 8 is a similar view but showing the tape stretched so that the stitches do not penetrate the same;

Fig. 9 is a transverse sectional view through the parts, as arranged in Fig. 7; and

Fig. 10 is a transverse sectional view through the parts, as arranged in Fig. 8.

The invention consists broadly in a sewing machine having suitable stitching mechanism for forming a plurality of rows of independent lines of stitching. Means is provided for guiding two fabric sections to the stitching mechanism with their edges spaced. Means is also provided for guiding a strip beneath the fabric sections and another strip above the fabric sections, the strips being joined together and to the fabric sections respectively by lines of stitching. The upper strip guiding device is carried by the overhanging arm. An elastic tape guiding means is also carried by the overhanging arm and this elastic tape guiding means is provided with a tension shoe which is yieldingly held against the tape so as to put a drag on the tape and stretch the same. The tape guiding means is so disposed relative to one of the needles that when the tape is free from tension, the expanding of the tape will carry the same into the path of said needle.

While on the other hand, when the tape is under tension and stretched, it will be reduced in width so as to escape the needle and be free from the lines of stitching 5 formed by the needle. This enables the tape to be tacked at certain points and stretched between these points so that when released it will gather the fabric sections. The means for placing the tape under tension is under 10 control of the operator and the tension may be released at will without stopping the stitching mechanism.

Referring more in detail to the drawings, I have shown in Figs. 7 to 10, inclusive, two 15 fabric sections, indicated at F and F'. These fabric sections are joined by two strips, one of which is indicated at S and the other at S'. The two strips are secured to the fabric sections F by a line of stitching f, while the two strips are secured to 20 the fabric sections F' by a line of stitching f'. The elastic tape is indicated at E. In Figs. 7 and 9 of the drawings it is shown as free from tension and the full width and 25 positioned so that the lines of stitching F are being placed through the same.

In Figs. 8 and 10 of the drawings, the tape is shown as stretched and of much 30 lesser width so that the needle forming the line of stitching f escapes the tape.

The above is one use of my improved machine, and I have referred to the same to aid in the description of the invention.

The sewing machine for carrying out the 35 invention consists of the work support 1, an overhanging arm 2, in which a needle bar 3 reciprocates. The needle bar 3 is reciprocated by a needle lever 4 which is connected to the needle bar by a link 5. The needle 40 bar is provided with two needles 6 and 7. Cooperating with each needle below the work support is a looper 8 which is carried by the looper shaft 9. These loopers move in a direction parallel with the line of feed 45 and form with the needles two thread lock chain stitches. The lines of stitching are entirely independent of each other. The material is fed across the work support by a feed dog 10 and the material is held on 50 the work support by a presser foot 11 carried by a presser bar 12.

The two fabric sections F and F' are guided to the needle by two edge guides 13 and 14 which direct the respective fabric 55 sections F and F'. These edge guides are so positioned that the edges of the fabric sections are spaced and the edges are directed so that they pass between the needles and one fabric section is entered by one needle while the other fabric section is entered 60 by the other needle. The work support 1 is provided with an opening 15 up through which the fabric strip S' is led. The guide 16 receives this strip S' and folds in the 65 edges thereof and directs the same under-

neath the fabric sections F and F'. The guide 16 is of the usual character and is mounted on a bracket 17 secured by screws 18 to the depending apron of the work support. The upper strip S is guided under 70 the presser foot 11 by a fabric guide 19. This fabric guide 19 has a laterally extending section 20 and a shank 21. This shank 21 is secured to an arm 22 by screws 23—23. The screws 23—23 pass through elongated 75 slots 24 and are threaded into said arm 22. The strip guide 19 is constructed so as to fold the edges of the strip. The arm 22 is freely mounted on a rod 25. Said arm is attached to a split collar 26 which surrounds 80 the rod and a screw 27 may cause the collar to grip the rod 25 so that the arm 22 may be swung about the rod 25 and supported in various positions. The rod 25 is mounted in a bracket 28 which is attached to the over- 85 hanging arm of the machine by bolts 29. Secured to the rod 25 is a fixed collar 30 which has a depending arm 31 lying in the path of movement of the arm 22. This arm 31 serves as a stop against which the arm 90 22 rests, when the guide 19 is in normal position for directing the strip underneath the presser foot.

On the under face of the guide 19 is a second guide 32 for the elastic tape E. Said 95 guide has downwardly extending lips 33 and 34 between which the strip is guided. A tension shoe 35 is carried by a plate 36. This plate 36 is freely mounted on spaced pins 37—37 which are attached to the extension 100 20 of the guide 19. A post 38 is threaded into this plate 36. A spring 39 surrounds the post 38 and bears at one end against the extension 20 while the other end bears against a nut 40 on the outer end of the 105 post 38. This spring normally presses the plate 36 toward the guide 32 and tends to hold the shoe 35 pressed against the elastic tape E.

Secured to the overhanging arm by the 110 bolts 29 is a bracket 41. Pivoted at 42 on the bracket is a lever 43. The free end of this lever, indicated at 44, is directly above the post 38 when the guide 19 is in normal position for feeding the strip and the elastic 115 tape underneath the presser foot. A link 45 is pivotally secured to the other end of the lever 43 and this link 45 is in turn connected to the second lever 46 pivoted at 47 to a bracket 48, clamped to the overhanging 120 arm. Said bracket 48 is formed with an upturned lip 49 adapted to engage the side face of the overhanging arm 2, (see Fig. 4). A cooperating clamp plate 50 engages the other side of the overhanging arm 2 and a 125 clamping bolt 51 pressing the clamping plate against the overhanging arm clamps the bracket to the overhanging arm. The lever 46 is connected at its outer end to a chain or other suitable flexible device 52 which in 130

turn is connected to the knee shift or foot treadle so that the lever 46 may be depressed at its outer end without stopping the stitching mechanism. A spring 53 is secured to the end of the lever 46 and to a lug 54 on the front end of the overhanging arm. This spring serves to hold the front end of the arm depressed which raises the free end 44 of the lever 43 and holds the same out of contact with the posts 38 or in the position shown in Figs. 3 and 5.

When the knee shift is operated or the lever 46 depressed, then the lever 43 is swung about its pivot 42 and the free end of this lever engages the post forcing the same downwardly, compressing the spring 39 and moving the tension shoe 35 away from the elastic tape, as clearly shown in Fig. 4 of the drawings. When in this position the elastic tape is free from tension and will at once resume its normal position of extreme width and the guide is so positioned that at this time the needle will penetrate the tape.

As soon as the operator releases the knee shift the spring 53 will withdraw the lever 43 from contact with the post and the spring 39 will force the tension shoe again into contact with the tape. This will put a drag on the tape and hold the same so that the feed of the sewing machine as it feeds the tape and the fabric sections to which it is joined will cause the tape to be stretched.

From the above it will be apparent that I join the two fabric sections by facing strips thus forming a pocket for the elastic tape and at the same time securing the tape in the pocket, tacking the tape where the lines of stitching form the pocket at desired intervals and stretching the tape between these intervals so that when the tape is released the fabric sections will be gathered through the action of the tape returning to its normal condition. By mounting the guide for the strip forming the upper portion of the pocket and also for the elastic tape on the overhanging arm, I have free space underneath the same for guiding the fabric sections and for manipulating the same.

It is obvious that minor changes in the details of construction may be made without departing from the spirit of the invention as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A sewing machine including in combination, a work support, an overhanging arm, stitch forming mechanism, means for guiding fabric sections for forming a fabric pocket, means carried by the overhanging arm for guiding an elastic tape into said fabric pocket as it is being formed, a shoe for engaging the tape for placing the same under tension, a plate supporting said shoe, a post mounted on the plate, a spring sur-

rounding the post and normally forcing the shoe against the tape, a lever carried by the overhanging arm and normally out of engagement with said post and means for moving the lever to cause the same to engage the post and move the plate to release the tape from the tension of the shoe.

2. The combination with a work support, a presser foot, an overhanging arm and stitch forming mechanism, a strip guide, an arm carried by the overhanging arm and supporting said strip guide, said arm being freely supported whereby the strip guide may be moved away from the presser foot, a stop for supporting the strip guide with its delivery end adjacent the presser foot, an elastic tape guide carried by the strip guide and means for placing the elastic tape under tension at the will of the operator, said means being so constructed as to permit the strip guide and tape guide to be moved away from the presser foot.

3. The combination with a work support, a presser foot, an overhanging arm, stitch forming mechanism including two needles, fabric guides for guiding fabric sections with their edges spaced from the respective needles, a strip guide for guiding a strip of fabric underneath the presser foot for joining the upper faces of said fabric sections, a second strip guide for guiding a strip of fabric for joining the lower faces of said fabric sections and means for guiding a piece of elastic tape between the fabric sections.

4. The combination with a work support, a presser foot, an overhanging arm, stitch forming mechanism including two needles, fabric guides for guiding fabric sections with their edges spaced from the respective needles, a strip guide for guiding a strip of fabric underneath the presser foot for joining the upper faces of said fabric sections, a second strip guide for guiding a strip of fabric for joining the lower faces of said fabric sections and means for guiding a piece of elastic tape between the fabric sections, said elastic tape guide being disposed so that when the tape is free from tension it will be entered by one of the needles and when said tape is stretched it will pass between the needles.

5. The combination with a work support, a presser foot, an overhanging arm, stitch forming mechanism including two needles, fabric guides for guiding fabric sections with their edges spaced from the respective needles, a strip guide for guiding a strip of fabric underneath the presser foot for joining the upper faces of said fabric sections, a second strip guide for guiding a strip of fabric for joining the lower faces of said fabric sections and means for guiding a piece of elastic tape between the fabric sections, said elastic tape guide being disposed so that

when the tape is free from tension it will be entered by one of the needles and when said tape is stretched it will pass between the needles and means under control of the operator for placing the elastic tape under tension at will.

6. The combination of a work support, a presser foot, an overhanging arm, stitch forming mechanism including two needles, means for guiding two fabric sections to the needles with their edges spaced, means for guiding and turning in the edges on a strip so as to connect the lower faces of the fabric sections, means carried by the overhanging arm for guiding and turning in the edges of a strip so as to connect the upper faces of the fabric sections, an elastic tape guide carried by said last named strip guide, said elastic tape guide being so disposed as to direct the elastic tape into the path of one of the

needles when it is free from tension and so as to direct said tape between the needles when it is under tension and stretched, a tension shoe for engaging the elastic tape, a post for moving the tension shoe away from the tape, a spring surrounding the post and normally holding the shoe in engagement with the tape, a lever carried by the overhanging arm independently of the strip guide and adapted to engage the post for moving the shoe away from the elastic tape and means whereby said lever may be operated at will.

In testimony whereof, I affix my signature in the presence of two witnesses.

JAMES R. MOFFATT.

Witnesses:

J. H. MASLAND,
STEDMAN THOMAS.