

No. 719,584.

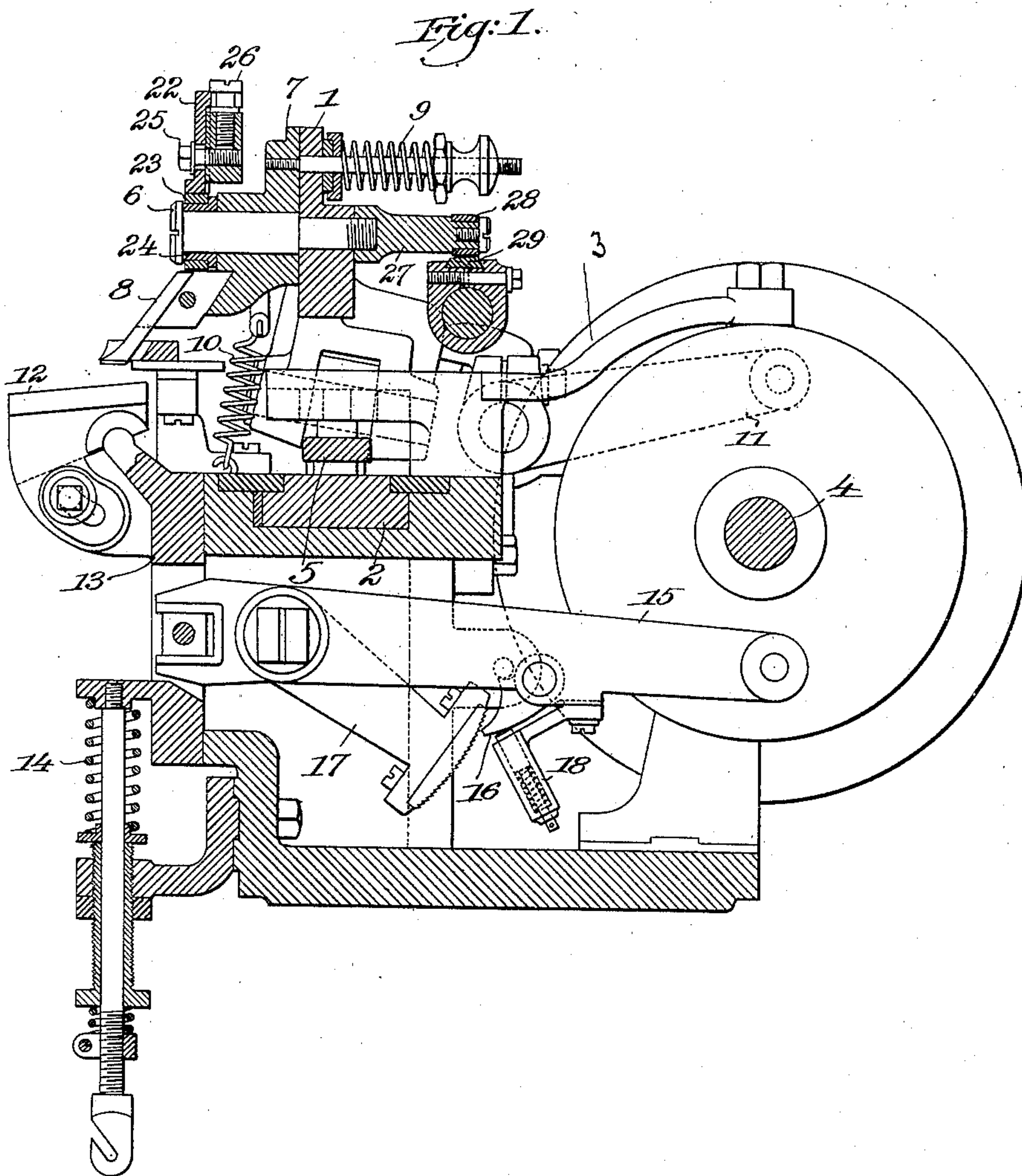
PATENTED FEB. 3, 1903.

J. B. HADAWAY.  
STITCH SEPARATING MACHINE.

APPLICATION FILED MAR. 13, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses:  
John F. C. Preinkert  
Fred O. Fish

Inventor:  
John B. Hadaway  
by his attorney  
Benjamin Phillips

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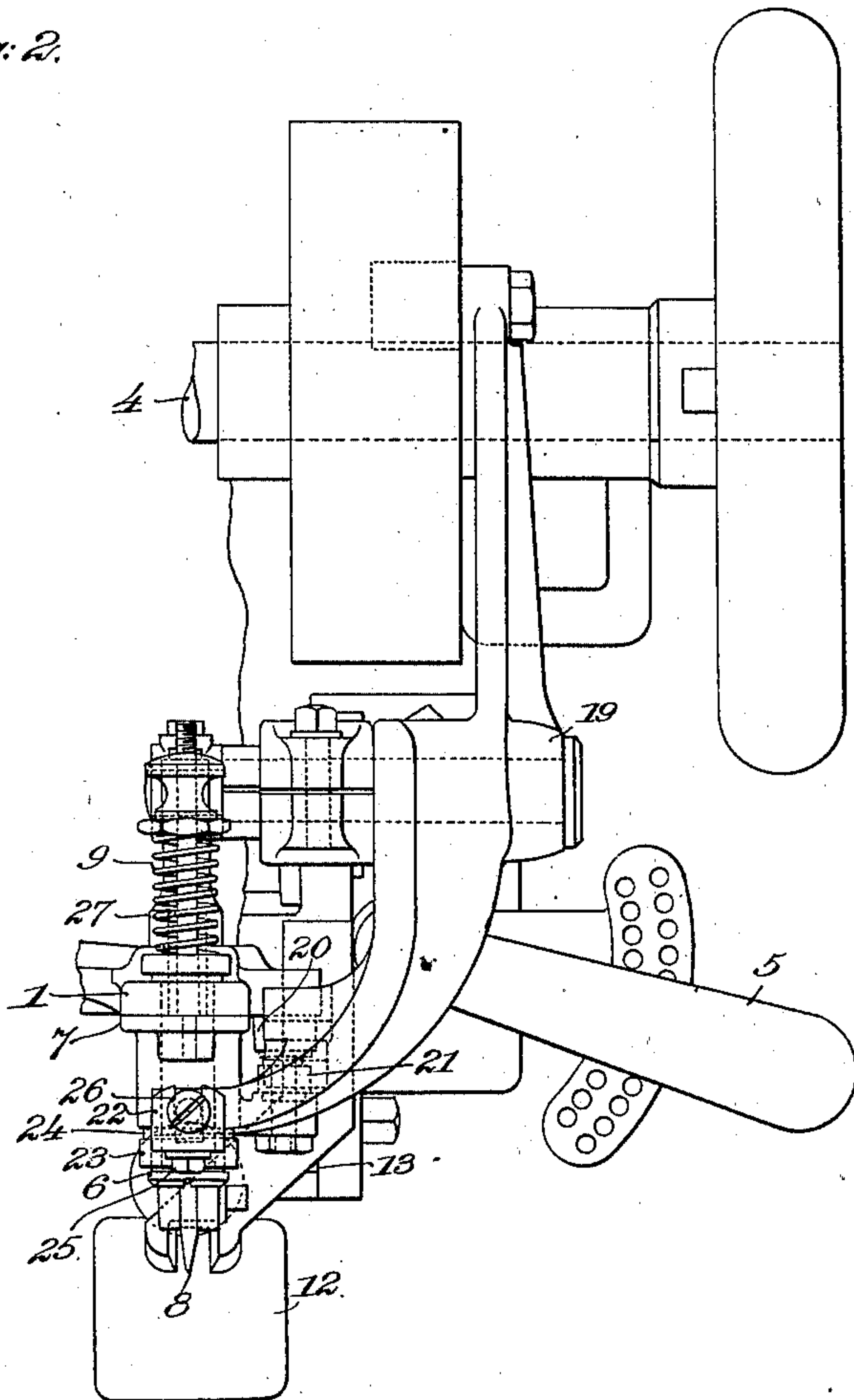
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3 SHEETS—SHEET 2.

*Fig. 2.*



*Witnesses:*  
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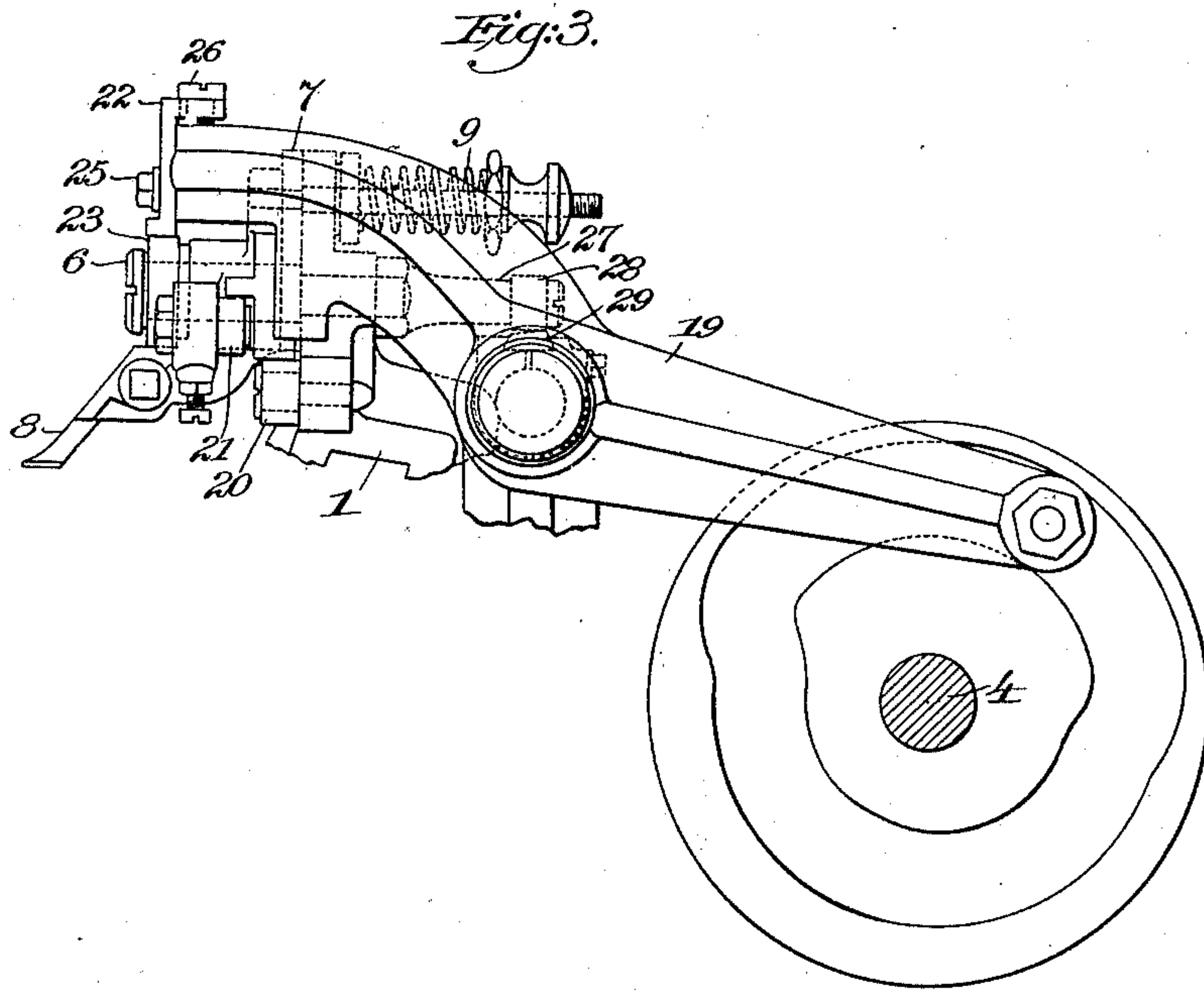
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3 SHEETS—SHEET 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN B. HADAWAY, OF BROCKTON, MASSACHUSETTS.

## STITCH-SEPARATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 719,584, dated February 3, 1903.

Application filed March 13, 1902. Serial No. 97,983. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN B. HADAWAY, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Stitch-Separating Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to stitch-separating machines, which are now commonly used in the manufacture of boots and shoes to indent the intervals between the stitches appearing upon the upper surface of the projecting edge of the sole or to shape the crowns of the stitches.

The object of the invention is to produce a strong and rigid machine of the type referred to by which the stitch intervals can be indented to any desired depth or the crowns of the stitches properly shaped regardless of the hardness of the stock being operated upon and the resistance offered to the tool by the stock and regardless of the particular shape of the indenting or shaping tool.

More particularly, my invention has for its object to improve the construction of stitch-separating or stitch-finishing machines of the type disclosed in various patents heretofore granted to me in which the stitch indenting or finishing tool is mounted upon a tool-stock pivotally supported upon a stud projecting from one side of the tool-supporting lever, and thereby render this type of machine capable of operating satisfactorily upon all qualities of stock and of producing indentations of any desired depth or shape or of imparting any desired shape to the crowns of the stitches without increasing the size or weight of the various parts of the machine, so as to detract from its delicacy or rapidity of operation.

With this object in view my invention consists in the devices and combinations of devices hereinafter described and claimed.

My invention is embodied in its preferred form in the construction illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of a stitch-separating machine embodying the same. Fig. 2 is a plan view of so much of the

machine illustrated in Fig. 1 as is necessary to show the connection of my invention therewith, and Fig. 3 is a view in end elevation of a portion of the machine illustrated in Figs. 1 and 2.

The stitch-separating machine illustrated in the drawings, with the exception of the improvements which constitute my present invention and with the exception of certain details to be hereinafter referred to, is the same in all essential particulars as the machine illustrated in my prior patent, No. 543,012, dated July 23, 1895.

Referring to the drawings, 1 indicates the tool-supporting lever, which is pivotally mounted upon the feed-slide 2.

3 indicates the lever by means of which the slide 2 is actuated to cause the indenting or finishing tool to be located in proper position with relation to the stitches of the seam and to feed the work, said lever being provided at its rear end with a roll or stud engaging a groove in a cam secured to the driving-shaft 4 and at its forward end being provided with a slot, in which is received a rectangular block pivotally mounted upon a stud projecting upwardly from the lever 5, which is pivotally mounted upon the feed-slide.

Projecting laterally from the tool-supporting lever 1 is a stud 6, upon which the tool-stock 7 is pivotally mounted. The indenting or finishing tool 8 is secured in clamping-jaws in the tool-stock 7 and is shown in the drawings as an indenting-tool which is adapted to be located in and indent the intervals between the stitches. The tool-stock is mounted to turn loosely upon the stud 6 and is held in position by means of the friction device, (indicated at 9.)

10 indicates the spring by means of which the indenting-tool is yieldingly held in contact with the work during the movements which are imparted to the slide 2 in order to locate the tool in the stitch intervals, and 11 indicates the lever by means of which the tool-supporting lever 1 is actuated to raise the tool from the work.

The work is supported beneath the indenting-tool by the work-support 12, which is pivotally and adjustably mounted upon the upper end of the work-supporting slide 13, this work-support being substantially the same



as that disclosed in my prior patent, No. 690,422, dated January 7, 1902. The work-support 12 and slide 13 are pressed upwardly by means of a coiled spring 14, and the work-  
 5 support and slide are locked in position during the indenting movement of the tool by means of a locking-lever 15, provided with one or more pawls 16, which are pressed against the ratchet-teeth of the lever 17, con-  
 10 nected to the slide 13 by means of spring-pressed plungers 18.

The tool-supporting lever 1 is actuated to cause the indenting-tool to indent the work by means of a pressure-lever 19, the rear end  
 15 of which is provided with a roll or stud engaging a cam-groove in a cam secured to the driving-shaft 4 and the forward end of which is provided with a surface arranged in position to engage a roll 20, mounted upon the  
 20 free end of the tool-supporting lever. The forward end of the lever 19 is also provided with a surface arranged to engage a roll 21, mounted upon an arm projecting laterally from the tool-stock 7.

25 The construction illustrated in the drawings and so far described, with the exception of the work-support 12, which is disclosed in my prior patent, No. 690,422, dated January 7, 1902, and the spring-pressed plungers 18  
 30 for pressing the pawls 16 into engagement with the ratchet-teeth of lever 17, is the same in construction, organization, and mode of operation as that disclosed in my prior patent, No. 543,012, dated July 23, 1895, hereinbefore  
 35 referred to. In the operation of the machine disclosed in said patent it has been found that when the stock being operated upon is dry and hard the indenting-tool is not always forced into the work the desired distance, the  
 40 resistance offered to the tool by the work being sometimes sufficient to spring the lever 1 or bend the stud 6 slightly. It has also been found that when a blunt-pointed tool is used in order to make a wide indentation or when  
 45 a tool is used which engages and shapes the crowns of the stitches or a portion thereof the resistance offered to the tool by the work is so great that the desired results are not always produced.

50 In order to prevent the tool-separating lever from being sprung and the stud 6 from being bent by the backward thrust of the tool due to the resistance of the work and to cause the tool to be forced into the work the de-  
 55 sired distance regardless of its particular shape or of the resistance offered to the tool by the work, my present invention contemplates providing an abutment on the pressure-lever 19 for supporting the stud against  
 60 the backward thrust of the tool. In the machine illustrated in the drawings I have formed this abutment by extending the for-

ward end of the lever 19 over the stud 6 and have mounted upon the end of the lever a plate 22, the lower edge of which during the  
 65 indenting and feeding movements of the tool is in contact with or in close proximity to a friction-roller 23, mounted upon a sleeve 24 upon the stud 6 outside of the hub of the tool-  
 70 stock 7. The plate 22 is secured to the lever 19 by means of a screw 25, which passes through a slot in the plate, such construction allowing the plate to be adjusted vertically  
 75 by means of an adjusting-screw 26, as is clearly shown in Fig. 1.

In addition to the abutment on the lever 19 for supporting the stud 6 against the back-  
 ward thrust of the tool the machine shown in the drawings is also provided with the means  
 80 disclosed in my prior patent, No. 690,422, dated January 7, 1902, for preventing the tool-supporting lever 1 from being sprung by a resistance offered to the tool, such means consisting of a nut 27, which is extended  
 85 rearwardly and provided with a friction-roller 28, which when the tool-supporting lever 1 is in its lowermost position contacts with or is in close proximity to a cam-plate 29, clamped in a split sleeve secured to the stud upon  
 90 which the pressure-lever 19 is mounted.

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

1. A stitch-separating machine, having, in combination, a tool-supporting lever, a stud  
 95 projecting from one side of the lever, a tool-stock pivotally mounted thereon, an indenting-tool on the tool-stock and a pressure-lever for actuating the tool-supporting lever provided with an abutment arranged to sup-  
 100 port the stud against the backward thrust of the tool, substantially as described.

2. A stitch-separating machine, having, in combination, a feed-slide, a tool-supporting lever mounted thereon, a stud projecting from  
 105 one side of the lever, a tool-stock pivotally mounted thereon, an indenting-tool mounted on the tool-stock, means for holding the tool yieldingly in contact with the work, means for actuating the slide to cause the tool to be  
 110 located in proper position with relation to the stitches in the work and to feed the work, and a pressure-lever for actuating the tool-supporting lever to cause the tool to indent the work provided with abutments arranged  
 115 respectively to engage the tool-stock and to support the stud against the backward thrust of the tool, substantially as described.

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

JOHN B. HADAWAY.

Witnesses:

BENJAMIN PHILLIPS,  
 FRED O. FISH.