No. 745,917. PATENTED DEC. 1, 1903.

W. SHAFER.

FEED DEVICE FOR WIRE STITCHING MACHINES.

APPLICATION FILED APR. 7, 1903.

NO MODEL.

fig. 1.

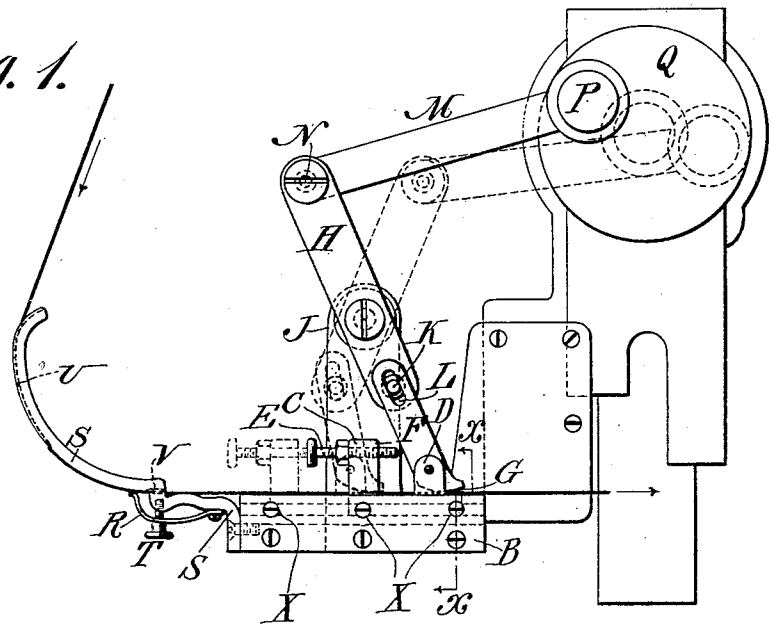


fig. 2.

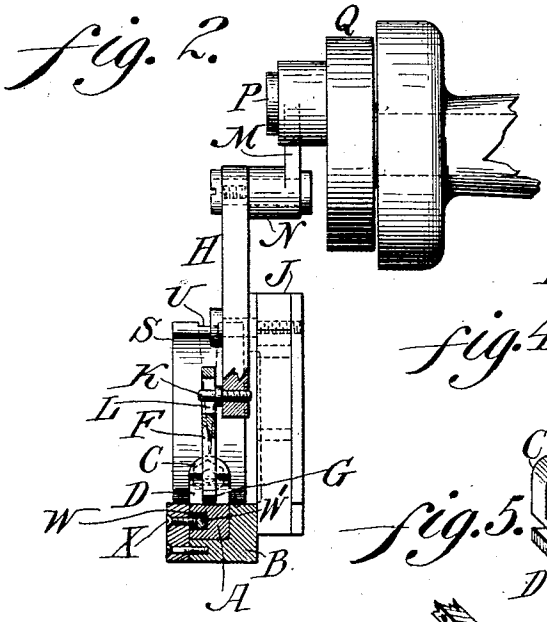


fig. 3.

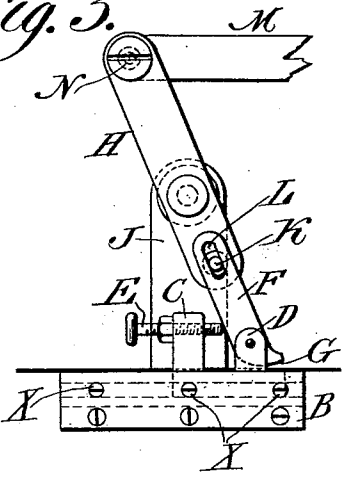


fig. 4.

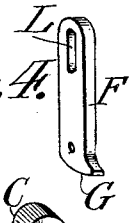


fig. 5.

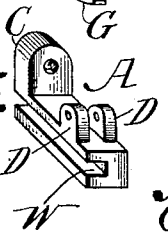


fig. 6.



Witnesses

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No. 745,917. Patented December 1, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM SHAFER, OF CAMDEN, NEW JERSEY, ASSIGNOR TO THE NEW JERSEY WIRE STITCHING MACHINE COMPANY, A CORPORATION OF NEW JERSEY.

FEED DEVICE FOR WIRE-STITCHING MACHINES.

SPECIFICATION forming part of Letters Patent No. 745,917, dated December 1, 1903.

Application filed April 7, 1903. Serial No. 151,500. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SHAFER, a citizen of the United States, residing in the city and county of Camden, State of New Jersey, have invented new and useful Improvements in Feed Devices for Wire-Stitching Machines, of which the following is a specification.

My invention consists of a feed device for wire-stitching machines embodying a foot and connections whereby the sole of said foot is raised clear of the wire or stitching material in one motion of the foot and engages the same in the other direction, so that said material is positively and uniformly fed at intervals.

It also consists of means for adjusting the extent of the feed and of other details of construction, as will be hereinafter set forth.

Figure 1 represents a front elevation of a feed device for wire-stitching machines embodying my invention. Fig. 2 represents a partial vertical section through the line *x x* and partial side elevation at a right angle to Fig. 1. Fig. 3 represents a front elevation of the device, showing the foot thereof in a different position from that in Fig. 1. Figs. 4 and 5 represent perspective views of detached portions.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a traveler or carriage which is mounted on the bed or support B. Rising from said carriage are the ears C and D, the ear C having fitted to it the horizontally-extending screw E, and the ear D having pivotally connected with it the foot F, whose under side has a cam face or sole G, which is adjacent to the upper side of the carriage A, so as to engage with the strip of stitching material which is guided by said carriage and rested thereon. It will be noticed that the point of the screw E is located back of the foot F and is adapted to form an abutment for said foot, as will be hereinafter more fully referred to.

H designates a lever which is pivotally mounted on the post or standard J, the latter rising from the support B or other suitable portion of the frame of the machine. The lower end of said lever H is connected with the foot F by the pin or stud K, which is screwed or otherwise secured to said lever and enters the slot L in the upper end of said foot.

M designates a link which is pivotally connected at one end, as at N, with the lever H and mounted at the other end on the wrist-pin P of the disk Q, to which latter rotary motion is imparted in any suitable manner.

The operation is as follows: As the disk rotates, swinging or vibratory motion is transmitted to the lever H. As the lower end of the latter moves, say, in the direction to the left, it carries with it the upper end of the foot F, so as the latter turns on its pivot its under side or sole is raised clear of the wire or wire-stitching material. Then the back of the foot contacts with the screw E, and thus limits the pivotal motion of the foot to the left, while at the same time the foot continues its sliding motion to the left. It will now be seen that the carriage A is actuated by said foot and follows the same. The sole of the latter continues to ride freely over the stitching material. When the lever returns, it thrusts forward the upper end of the foot and causes its sole to lower and wedge against the stitching material and bite the same, so that said material is advanced with the carriage and so fed to the place of service. When the lever moves in the opposite directions, the sole of the foot is again raised clear of the stitching material and said foot engages with the screw E and the carriage is run back, as before, after which the other operations stated are repeated. As the foot has a slotted connection with the lever H and so may move freely on the stud K, while it describes its circular or vibratory motions on the carriage as the latter slides in opposite directions, the screw E may be moved so as to increase or decrease the throw of said foot so as to adjust the sole of the latter to the thickness of the stitching material or the pressure it is desired to exert on said material.

In order to impart pressure to the stitching material and smooth out the same before reaching the carriage A, I employ the resili-

ent or spring finger R, which is connected at one end with the bracket S, screwed to a portion of the frame or the support B, and has its other end bearing against said material as the latter is moved on said bracket, the pressure of said finger being adjusted by the screw T, which is passed through said finger and engaged with said bracket, it being noticed that said bracket is of curved form and has a channel U therein for guiding the stitching material true to the portion of the bracket adjacent to the finger R and an opening V, through which said material is directed to the carriage.

In order to steady the carriage on the bed or support B and guide the same true in its motions, the side of said carriage is formed with the horizontally-extending groove W, into which freely project the points of the screws X, which are fitted in said support. (See Figs. 2 and 5.) Within the groove W is the detachable bar W′, which receives the screws X, said detachable bar being stationary as the carriage reciprocates, so that said carriage is nicely held in place and guided true in its motions.

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

1. In a feed device for a wire-stitching machine, a carriage, a foot pivotally attached thereto, means connected to said foot for reciprocating said foot and said carriage, and means on said carriage and engaging with said foot for regulating the travel of said carriage in its rearward or non-engaging direction.

2. In a feed device for a wire-stitching machine, a carriage, a foot pivotally attached thereto, slotted connection between said foot and a reciprocating device whereby said foot and said carriage are reciprocable, and means on said carriage and engaging with said foot for regulating the travel of said carriage.

3. In a feed device for a wire-stitching machine, a carriage, a foot pivotally attached thereto, slotted connection between said foot and a reciprocating device whereby said foot and said carriage are reciprocable, and an adjusting-screw on said carriage and engaging with said foot above its pivot whereby the travel of said carriage in a rearward or non-engaging direction may be regulated.

4. In a feed device for a wire-stitching machine, a reciprocating carriage formed with a longitudinal groove, and a removable stationary bar in said groove.

WILLIAM SHAFER.

Witnesses:
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