

J. ROWE.  
Sewing Machine.

No. 27,260.

Patented Feb. 21, 1860.

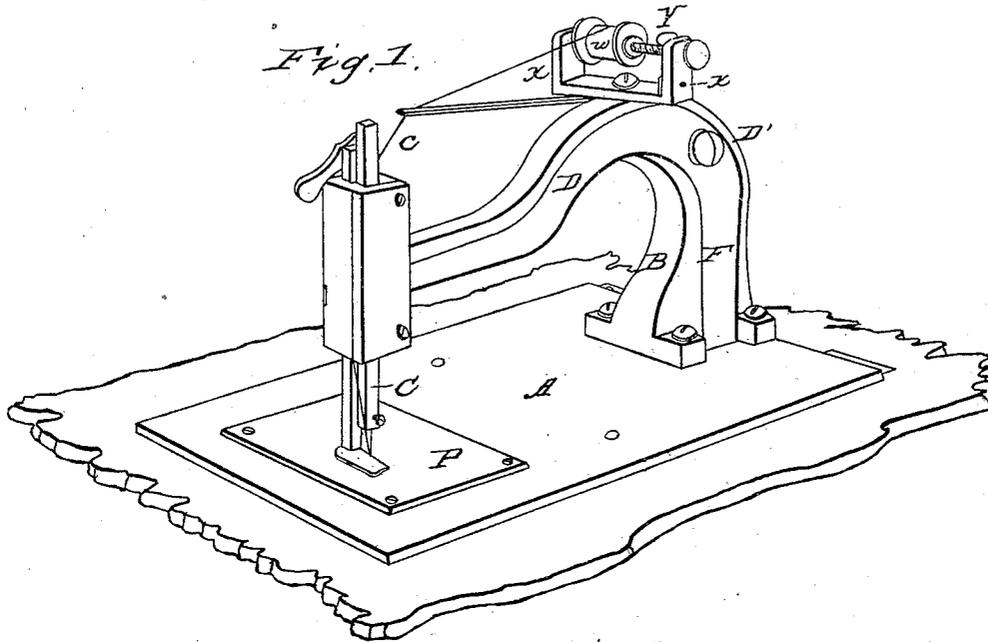
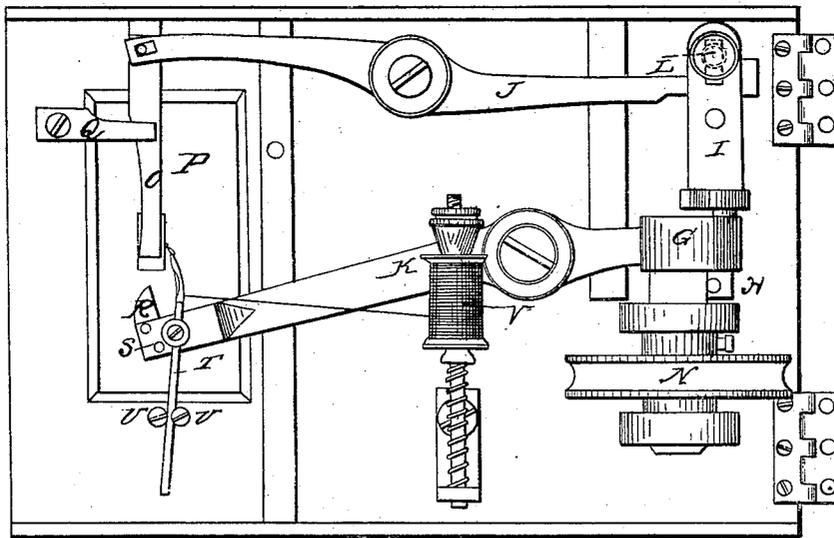


Fig. 1.



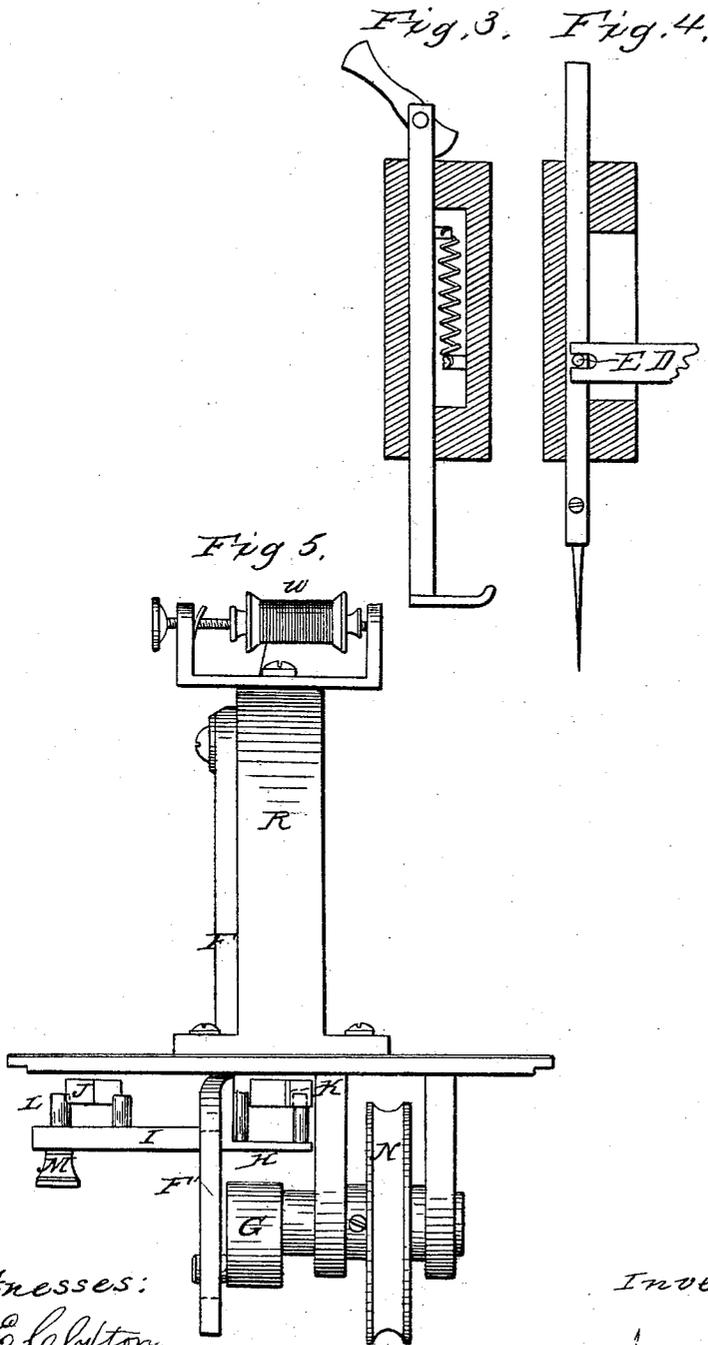
Witnesses:  
H. C. Clifton  
D. A. Coffin Jr.

Inventor:  
James Rowe.

J. ROWE.  
Sewing Machine.

No. 27,260.

Patented Feb. 21, 1860.



Witnesses:  
H. C. Clayton  
D. B. Coffin Jr.

Inventor:  
James Rowe.

# UNITED STATES PATENT OFFICE.

JAMES ROWE, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND MARTIN B. EWING.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 27,260, dated February 21, 1860.

*To all whom it may concern:*

Be it known that I, JAMES ROWE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Sewing-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

The nature of my invention relates to the employment of a looper constructed and arranged to operate substantially as hereinafter represented and described.

With reference to the accompanying drawings, Figure 1 is a perspective view of the machine. Fig. 2 is a view of the under portion of the machine from beneath. Figs. 3 and 4 are detail views. Fig. 5 is a rear elevation.

A is the table, and B is a stand secured firmly to it, and in the front end of which is arranged to slide up and down freely the needle-bar.

C is the needle-bar, which receives its motion by means of arm D, the end of which is notched to receive the pin E in the needle-bar C. The arm D is pivoted at D' to the stand B, and with arm F forms a bent lever, the lower end of which extends down through the table and is furnished with the slot F', in which plays the wrist-pin of crank G, from which its movement is derived.

To the arm F, below the table, are fixed the bars H I. Upon the under side of the table are pivoted the feed-lever J and the looper-lever K. The rear ends of these levers are furnished with the inclined surface seen in Figs. 2 and 5, which surfaces are acted upon by stud-pins arranged in the bars H I to give the levers their proper vibrating movement. The stud-pin L is arranged in a slot in the bar I, to which it is fitted with a square tension, so as to prevent its turning, yet so as to be moved easily in said slot for adjustment. To the square tenon is fitted the set-screw M, so that by means of this screw the stud L can be set in different positions in the slot, whereby any required variation in the feed may be obtained.

On the same shaft with crank G is arranged the pulley N, to which power is applied by means of a belt to drive the machine.

Connected to the forward end of lever J, by means of a pin and slot, is the elastic feed-slide O, fitted to slide in a groove upon the under side of the table. This feed-slide is bent so that its middle rests upon the under side of the sewing-plate P, where it is confined by the finger Q, and its end opposite the lever J is made elastic, to serve as a spring, and is slightly bent downward, by which means the rough or toothed upper surface thereof, formed to protrude through the sewing-plate, is kept below said plate's upper surface until forced up by the shoe R, which is fixed upon lever K for that purpose.

In the forward end of the lever K is fitted the stud S, to form a swivel-carrier for the looper T, the back end of which plays through the guide U, and this guide may be made adjustable by being arranged on a small slotted plate, to be secured to the under side of the table by screws. The looper T is in its construction similar to a needle furnished with two eyes near its point and a little removed from each other, the looper being curved a little between the two eyes, so that the curve back of the eye nearest the point shall furnish an opening for the needle in its downward passage between the looper and its thread, through which to carry its own loop. The screw shown in stud S is for the purpose of holding the looper when properly adjusted in said stud.

The under thread is supplied from the spool V, and its suitable tension adjusted by means of the spring-cone and cone-nut shown upon the spindle which carries the spool. The spool W supplies the upper thread, and is carried, and the tension of its thread produced, in a similar manner. The spindle on which it is carried is, however, made conveniently removable, for the purpose of replacing the exhausted spools with full ones by means of the spring-step and set-screw shown, in connection with stand X, in which spool W is mounted.

Y is a slack spring for the upper thread, and is furnished with an eye in its end to receive the thread.

Z is a pressure-guard, furnished with a suitable foot to hold down the work over the rough or toothed surface of feed-slide O, which protrudes through the sewing-plate. This pressure-guard is pressed down by the spring seen in Fig. 3, and is raised from the work by

means of the cam at its upper end, (to be seen in the same figure.)

The described mode of operating the looper produces a movement adapted to its curved point, already described.

The operation is substantially as follows: The spools are first arranged as shown, and the proper tension given them, as described, to be transmitted to the thread in the sewing operation. The upper thread is passed first through the eye in the slack spring Y, thence through the eye in the top of needle-bar C, thence through the needle's eye, as shown. The under thread from spool V is first passed through the rear eye in the looper T from the side toward the needle or the concave side of the curve, thence through the eye nearest the point. The pressure-bar is now lifted and the work placed under it, when it is let down again, and the work being guided with one hand, the machine is set in motion and comes to the position shown in the drawings, where the needle has passed down through the work and begins its upward movement, the looper being just ready to move forward and take the loop brought down through the work by the needle, and which is now opening by the upward movement of the needle, which, with the forward movement of the looper, is being produced by the forward throw of the crank G, driving forward the arm F, and with it the bar H, its inner stud acting upon the incline on the end of lever K to produce the said movement of the looper. Meanwhile the needle nears the upper end of its stroke, and the fixed stud in bar I strikes the incline on feed-lever J, operating thereby the feed-slide O, so as to move the work forward one stitch, the shoe R having

first moved upon with the movement of lever K and raised up the feeding end of said slide O into contact with the work. The needle-bar C and its needle is now brought down by the backward throw of the crank, by its moving backward the arm F, and by the like movements the other stud in bar H strikes its incline, operating lever K so as to move back the looper, the needle having first passed through between it and its thread, causing it thereby to form a loop around the needle and its loop, the neck of which, grasped by the loop previously formed on the looper and now slipped off, is drawn upward to the work. Meanwhile the feed-slide O is drawn back by the adjustable stud-pin L, which strikes its incline on lever J, and the looper moves forward, as before, and passes through the needle's loop, as before, below that formed around the needle and its loop, and drawn up, as described.

The several parts of the improved machine may be made of any suitable materials usually employed for similar purposes.

Having described the construction and operation of my improvement, what I claim therein as new, and desire to secure by Letters Patent, is as follows:

In combination with a needle of a sewing-machine, the double-eyed curved looper T as constructed, the same being made to operate in the manner substantially as set forth, for the purpose described.

In testimony of which invention I have hereunto set my hand.

JAMES ROWE.

In presence of—

H. E. CLIFTON,  
D. N. B. COFFIN, Jr.