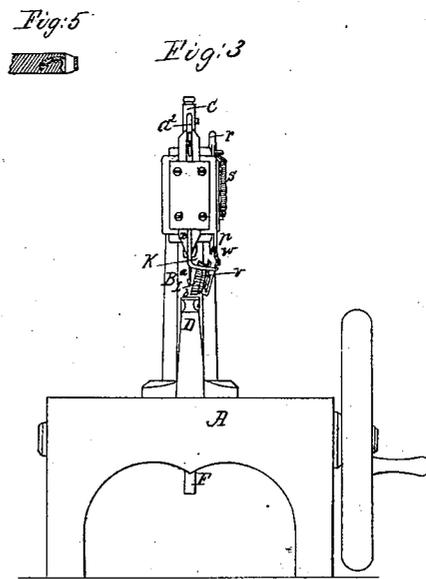
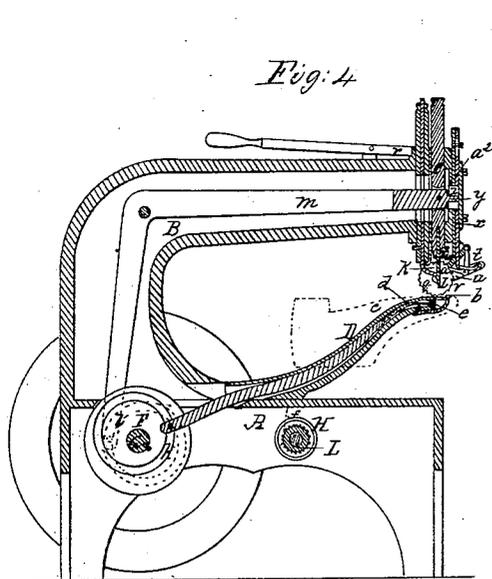
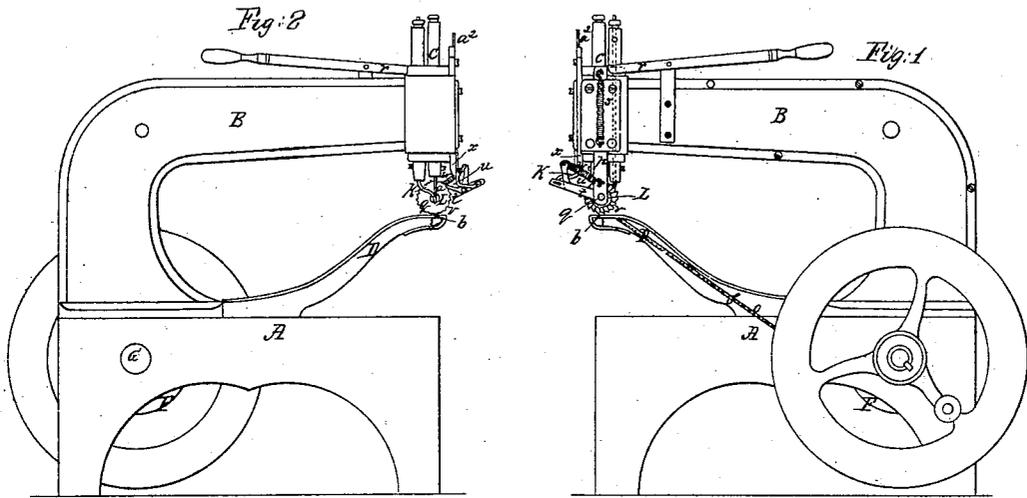


*L. R. Blake,  
Sewing Machine.*

*No 20,775.*

*Patented July 6, 1858.*



# UNITED STATES PATENT OFFICE.

L. R. BLAKE, OF SOUTH ABINGTON, MASSACHUSETTS.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 20,775, dated July 6, 1858.

*To all whom it may concern:*

Be it known that I, LYMAN R. BLAKE, of South Abington, in the county of Plymouth and State of Massachusetts, have invented an Improved Machine for Sewing a Sole on a Boot or Shoe; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figures 1 and 2 are side elevations, and Fig. 3 a front end elevation, of it. Fig. 4 is a vertical and longitudinal section of it. Fig. 5 is a horizontal section of the upper part of the horn-rest, which supports a shoe while the latter is being sewed.

The nature of my invention consists in arranging the shoe-rest on the end of an arm or projection to extend from the table or supporting-frame of the machine and enter the shoe; also, in arranging the looper as well as a thread-passage within such horn, or applying the same to operate in connection with the arm in a manner as hereinafter described.

In the drawings, A denotes the table or stand of a chain-stitch sewing-machine, while B is the goose-neck or main arm for supporting the needle-carrier C and the operating-lever *m*, and other working parts to be hereinafter described.

*a* is the hooked or barbed needle, which extends down and from its carrier C, and works through a rest, *b*, fixed to the end of a long curved auxiliary arm, D, projecting upward from the bed or table A, and having such a form as to be capable of entering a shoe, so as to carry the rest *b* into the toe part (as well as any other part of the interior) thereof, as shown in Fig. 4, in which the shoe is shown at *c* in dotted lines. The arm D is made hollow, so as to receive the looper *d*, which consists of a slider carrying an eye, *e*, through which the thread *f* passes. The looper should have such a movement as will cause the thread to be laid across the needle and just above its barb immediately before the needle commences its ascent, the same being in order to enable the barb or hook of the needle to seize the thread and draw it upward through the sole of the shoe. For this purpose the looper slides forward and backward in a path or groove which is placed at an acute angle to the vertical plane passing through the middle of

the machine. It is moved longitudinally by means of a rod, *i*, which is actuated by a cam or eccentric groove, *k*, formed in one side of a disk or wheel, F, fixed on the driving-shaft G. Another eccentric or cam groove, *l*, made on the opposite side of the wheel F, serves to operate the bent lever *m* in the usual manner.

H is the bobbin or spool from which the thread is taken. It is placed on and so as to slide freely to and fro and revolve on an arbor, I, arranged underneath the table A, as shown in the drawings. From the spool H the thread *f* is led up through the table and in a groove or thread-passage, *o*, made in the auxiliary arm and leading to the looper. From this passage the thread passes through the eye of the looper.

K is a rest cast-off, which operates with the needle, as described in No. 11,240 of United States Patents.

L is a conical feed-wheel, which is arranged over the rest *b* and supported by an arbor or journal, *g*, projecting from a slider, *p*, jointed to a lever, *r*, and drawn downward by a spring, *s*, the whole being arranged as shown in Figs. 1 and 3. A lever, *t*, turns on the wheel-arbor as a fulcrum, and carries an impelling-pawl, *u*, which works in a ratchet, *v*, formed on the feed-wheel, a spring, *w*, serving to retract the lever after it has been moved downward by a slide, *x*, operated by a stud, *y*, from the needle-carrier. The stud extends into a slot, *z*, formed through the slider *x*, such slot being furnished with an adjustable slide, *a'*, by which the movement of the lever *t* may be regulated, the slider having reciprocating vertical motions imparted to it.

In the operation of this machine the shoe to which a sole is to be sewed is to be placed on the auxiliary arm D, and with the sole upward, the feed-wheel being made to rest on the sole. On the mechanism being put in action, the shoe will be fed or moved along on the rest *b*, and the sewing of the sole to the upper and insole will be performed by the needle and the looper, or the same and the rest-cast-off.

What I claim is—

1. The arrangement of the rest *b* of a sewing mechanism, or combining it with an auxiliary arm, D, of such form as to be capable of entering a shoe and introducing the rest *b*

into the toe, as well as other parts of the interior of the shoe, in order that an outer sole may be stitched or sewed upon the inner sole and upper of a shoe.

2. Arranging either the thread-passage or the looper, or both, within or so as to operate with the auxiliary arm, substantially as described.

In testimony whereof I have hereunto set my signature.

LYMAN R. BLAKE.

Witnesses:

JOHN B. HOLLIS,  
SPENCER VINING.