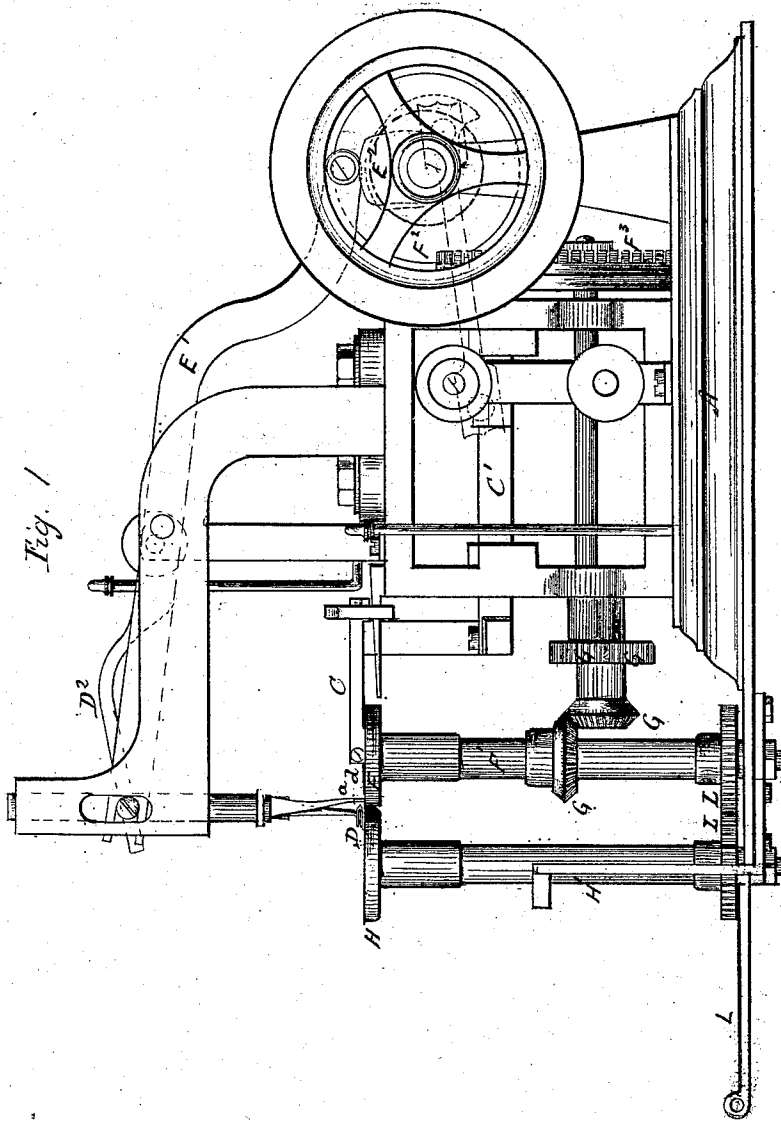


B. RUDOLPH.

Sewing Machine for Making Gloves.

No. 99,481.

Patented Feb. 1, 1870.



Witnesses  
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2 Sheets—Sheet 2.

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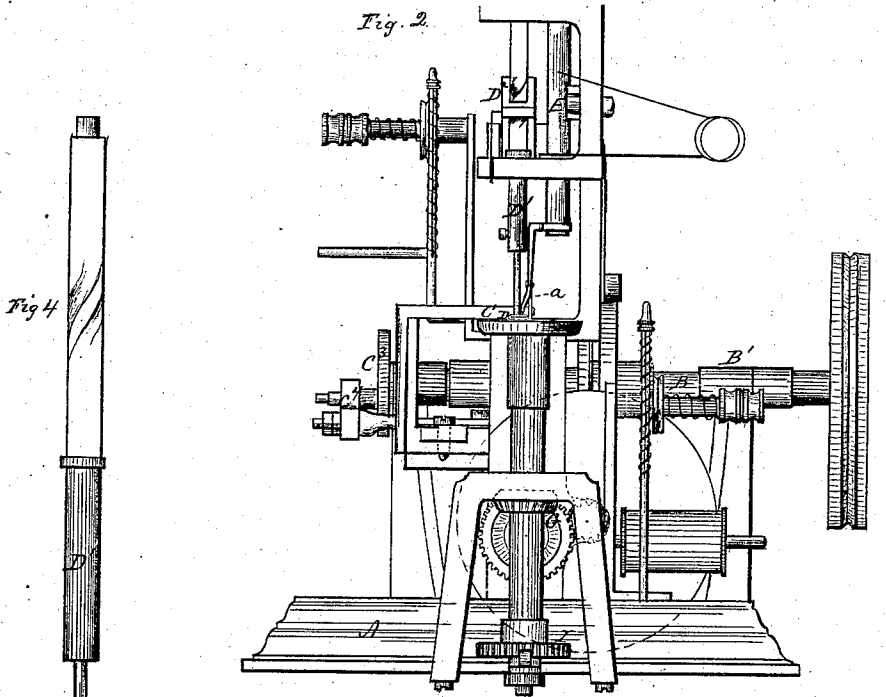


Fig. 3.

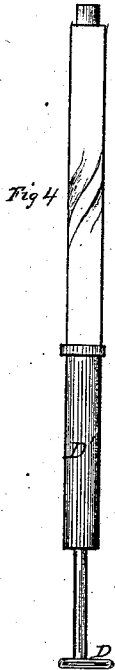


Fig. 4.

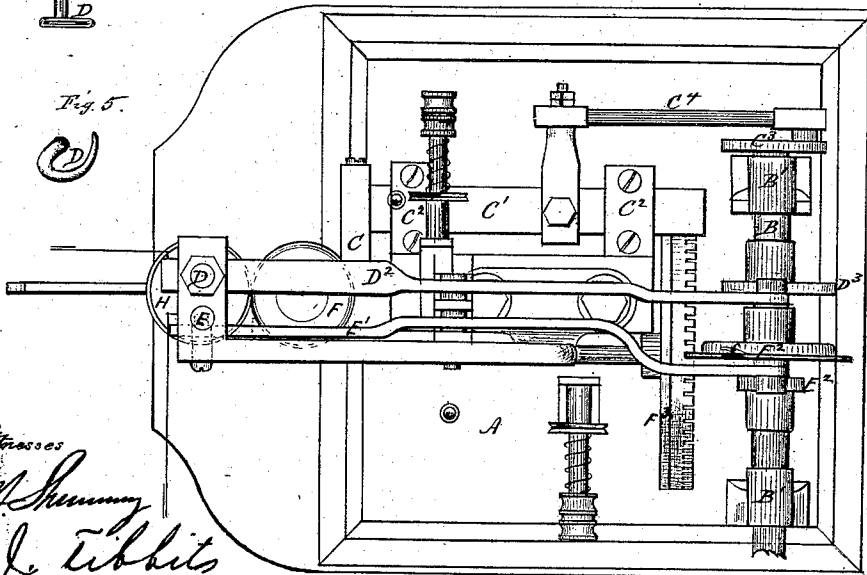


Fig. 5.

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# UNITED STATES PATENT OFFICE.

BRUNO RUDOLPH, OF BERLIN, PRUSSIA.

## IMPROVEMENT IN SEWING-MACHINE FOR MAKING GLOVES.

Specification forming part of Letters Patent No. 99,481, dated February 1, 1870.

### *To all whom it may concern:*

Be it known that I, BRUNO RUDOLPH, of Berlin, in the Kingdom of Prussia, have invented a new Improvement in Sewing-Machines; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a front view; Fig. 3, a top view; Fig. 4, the looper-spindle detached and enlarged; and in Fig. 5, the looper detached.

This invention relates to an improvement in sewing-machines, the special object of which is the sewing of gloves; and the invention consists in a sewing mechanism combined with a pair of rollers, serving a double purpose of guiding and feeding the work.

A is the bed of the machine, upon which the operative mechanism is arranged. B is the driving-shaft supported and so as to revolve freely in bearings B', and caused to revolve in the usual manner of common sewing-machines. C is the needle carrier, arranged so as to move horizontally, and attached to a sliding bar, C', moving in suitable guides C<sup>2</sup>, and to which a reciprocating movement is imparted by an eccentric or crank wheel, C<sup>3</sup>, on the driving-shaft through a connecting-rod, C<sup>4</sup>. D, the looper, is arranged in a vertical spindle, D<sup>1</sup>, to which a reciprocating rotary movement is imparted by a lever, D<sup>2</sup>, from the cam D<sup>3</sup> on the driving-shaft, the end of the said lever being forked or slotted, so as to inclose the spindle D<sup>1</sup>, the upper part of which has a spiral groove formed thereon, as seen in Figs. 2 and 4, and so that the movement of the lever D<sup>2</sup> up and down on the spiral portion of the spindle D<sup>1</sup> imparts to the looper the necessary rotary movement to catch the loop of the needle-thread, the said looper D lying in the usual relative position to the needle, and carrying a second thread, which interlaces with the needle-thread, forming what is commonly known as the "Grover & Baker stitch."

*a* is a finger attached to a spindle, E, to which a vertical movement is imparted from the lever E<sup>1</sup> from a cam, E<sup>2</sup>. The said finger is arranged so as to descend when the looper has passed around and taken the needle-thread, the said finger entering into the looper

between the looper and its thread, to hold the said looper-thread and form a loop through which the needle in its next movement will pass, and when the needle has taken the loop, then the finger rises to return again for the second loop.

F is a disk arranged upon a vertical shaft, F<sup>1</sup>, and so as to revolve freely; and to the said shaft an intermittent movement is given from a disk, F<sup>2</sup>, on the shaft, on which a spiral tongue, *f*, is arranged, so as to work in the teeth of a wheel, F<sup>3</sup>, so that one revolution of the disk F<sup>2</sup> moves the wheel F<sup>3</sup> one tooth, and this motion is communicated to the vertical shaft F<sup>1</sup> through gears G G.

H is a disk corresponding to the disk F, and arranged relatively thereto, so that the work will pass between the two at right angles to the needle, and so that the needle will pass through the work at the meeting-points of the two disks.

A movement is imparted to the disk H, corresponding to the movement of the disk F, by gears I, as seen in Fig. 1. Suitable thread-guides and tensions are arranged for the two threads.

L is a lever fixed upon the shaft H' of the disk H, so that by pressing down upon the said lever L the disk H may be forced from the disk F for the introduction of the work. The disk H is drawn back, and the work inserted between the two disks, then the disk H freed to compress the work, and the machine started. The stitching is performed in the usual manner, the work being fed along and firmly held by the two disks F and H.

I am aware that it is not new to move or feed the material being sewed between the peripheries of two wheels, with the needle arranged to work at right angles to the same. I therefore do not broadly claim the same.

I claim as my invention—

In combination with the looper D, arranged upon the vertical spindle D<sup>1</sup>, and constructed so as to receive a reciprocating rotary movement, as described, the needle *d* and finger *a*, the two disks *f* and *h* operating to hold and feed the work, substantially in the manner set forth.

Done at Berlin, Prussia, this 24th day of June, 1869.

BRUNO RUDOLPH.

Witnesses:

H. BREISMANN,  
JOHANN ADAM HABERKORN.