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LOOPER MECHANISM FOR SEWING MACHINES.

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931,352.

Patented Aug. 17, 1909.

Fig. 1

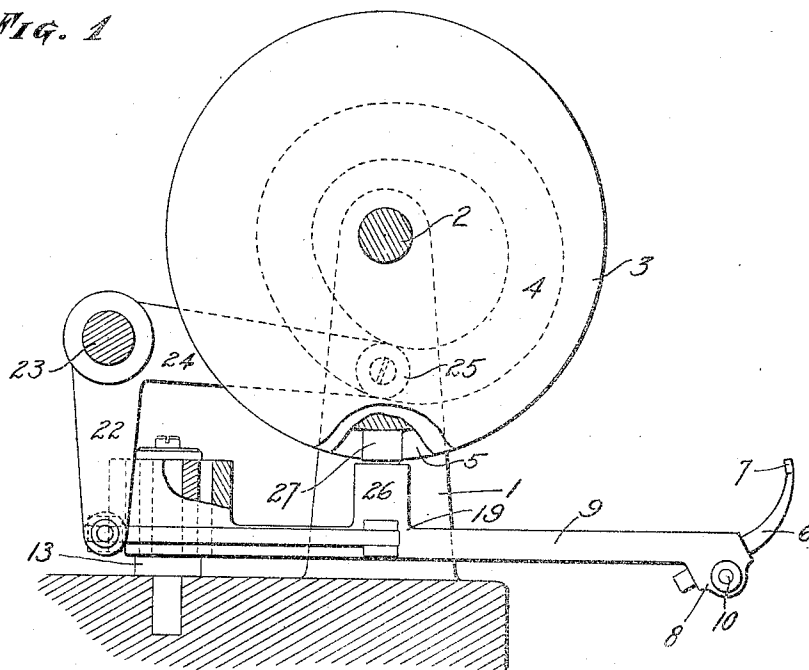
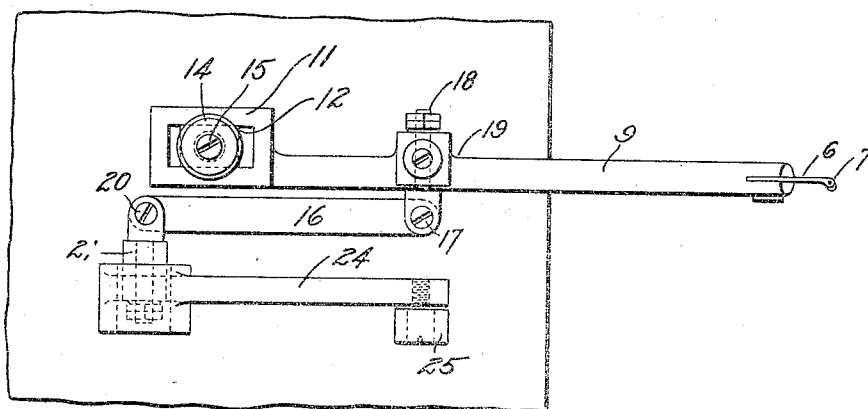


Fig. 2



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LOOPER MECHANISM FOR SEWING-MACHINES.

No. 931,352.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed October 28, 1907, Serial No. 399,538. Renewed September 2, 1908. Serial No. 451,355.

To all whom it may concern:

Be it known that I, FELIX EMILE VALOIS, a citizen of the United States, residing at Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Looper Mechanism for Sewing-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 sewing machines and more particularly to machines used in sewing together the uppers and soles of boots and shoes.

The object of the present invention is to produce a new and improved looper mechanism for shoe sewing machines.

To the above ends the present invention consists of the improved looper mechanism for sewing machines which will now be described and claimed.

The present invention is illustrated in the accompanying drawings, in which:—

Figure 1 shows in side elevation and partial section my improved looper mechanism. Fig. 2 shows a top plan view.

Similar reference characters will be used throughout the specification and drawings to designate corresponding parts.

In the drawing 1 represents a standard extending upwardly from the base of the head of the machine, in which is mounted a shaft 2, carrying a cam 3, the cam having a cam-path 4 and a peripheral cam-path 5. The looper 6 may be of the usual form having the usual thread eye 7. This looper is adjustably and detachably mounted in the split end, 8, of a rocking and sliding lever 9, it being held therein by means of a set screw 10. The lever 9 at its rear end is provided with a slotted head 11 mounted to slide upon a block 12 pivotally supported upon a stud 13 mounted upon the head of the machine, it being held on the stud 13 by means of a cap 14 and a screw 15. The lever 9 has imparted to it a to-and-fro reciprocating motion by means of a link 16 pivoted at 17 to a stud 18 swiveled in a bearing 19 carried by said lever. The rear end of the link 16 is pivotally connected at 20 to a swiveled stud 21 which is mounted in the lower end of one arm 22 of a bell crank lever fulcrumed at 23 to the frame of the machine, the other arm 24 of the bell crank lever

carrying a cam roll 25 engaging the cam-path 4.

From the foregoing it will be observed that the rotation of the cam 3 will by means of the cam roll 25 impart a rocking motion to the bell crank lever 24 and 22 which will, by means of the link 16 and the swiveled connections, impart a sliding movement to the looper lever 9, this movement being permitted by the slotted head 11 sliding along the pivoted block 12.

It is well known to those skilled in this art that the looper must have in addition to the longitudinal reciprocations, lateral reciprocations, and for this purpose the lever 9 has an upwardly extending boss 26 carrying a cam roll 27, which engages the peripheral cam groove 5 which, as the cam 3 revolves, will impart a rocking motion to the looper lever 9, this being secured by the rocking of the block 12 on the spindle or stud 13, and the combined movements imparted to the looper lever 9 by the cam grooves 4 and 5 result in imparting to the looper the substantially circular movement necessary to throw the thread leading from the looper about the shank of the needle, all in a manner well known to those skilled in this art.

It is thought that the operation of my invention will be sufficiently understood from the foregoing description of its construction.

In conclusion I desire to say that in the drawing I have not sought to show any of the parts of the shoe sewing machine with the exception of my improved looper and the cam for operating it, and that in so far as said drawing discloses the supports for the moving parts, such supports are intended to be merely diagrammatic and not to accurately show any part of the head of the sewing machine, it being understood that the head of the sewing machine is or may be of any of the usual and well known types.

Having described my invention I claim as new and desire to protect by Letters Patent of the United States:—

1. A looper mechanism for shoe sewing machines comprising the looper lever carrying at its outer end a looper, said lever slotted at its rear end and mounted upon a pivoted block, a cam engaging the looper lever in advance of its pivotal point to impart thereto lateral movements, a lever operated by said cam for imparting to the looper longitudinal movements and a link

swiveled to said looper lever and the operating lever, substantially as described.

2. A looper mechanism for shoe sewing machines comprising the looper lever carrying at its outer end a looper and mounted
5 by a pivotal sliding connection at its rear end, a cam engaging the looper lever in advance of the pivotal sliding connection to impart thereto lateral movements, a lever
10 operated by said cam for imparting to the

looper longitudinal movements, and a link swiveled to said looper lever and the operating lever, substantially as described.

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

FELIX EMILE VALOIS.

Witnesses:

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