

W. CAREY.
SHOE SEWING MACHINE.

Patented May 5, 1896.



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UNITED STATES PATENT OFFICE.

WILLIAM CAREY, OF MONTREAL, CANADA, ASSIGNOR TO THE CAREY WIRE SEWING MACHINE COMPANY, LIMITED, OF SAME PLACE.

SHOE-SEWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 559,771, dated May 5, 1896.

Application filed September 13, 1895. Serial No. 562,464. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CAREY, a citizen of the Dominion of Canada, residing at the city and district of Montreal, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Machines for Uniting Soles and Uppers of Boots or Shoes; 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.

My invention refers to an improvement in the needle-bar and the mechanism that transmits a reciprocating motion to it in my machine already patented in the United States under No. 536,183 on March 26, 1895.

This invention consists in the novel construction and combination of the parts hereinafter fully described and claimed.

Referring to the drawings, similar letters refer to similar parts throughout the several views.

Figure 1 is a vertical section through the horn, showing the inside mechanism. Fig. 2 is a plan view showing the method of attaching my driving-lever to the screw that imparts it motion, and Fig. 3 is a horizontal section on line X X of Fig. 1.

A is my ordinary horn, turning at *a*, while B is my ordinary screw, that rises and falls, as fully explained in my patent above referred to, my improvement consisting in the needle-bar C, which is a solid bar having a deep groove in its back to let my ordinary pinion-shaft F pass, as shown on Fig. 1 at *f*, and the ordinary needle D is inserted in the usual manner in the head C'. Where the head is formed, two shoulders C⁴ are made, which serve to guide the needle-bar in its reciprocating motion, for as it ascends the shoulders C⁴ slide along the shoulders *a'*, cast solid with the horn A, which, with the block *a*³, keep it in such a position that the needle practically travels vertically up and down, the block *a*² being provided with a projection *a*³, (shown

in dotted lines in Fig. 1,) that projects into the groove in the back of the needle-bar C and thus prevents any lateral motion.

To transmit the up-and-down or reciprocating motion of the screw B to the needle-bar C, I use the lever of the first order, E, which is fulcrumed at *e* to the horn A and secured at its extremity *e'* to the head of the screw B, as shown in Fig. 2, and has its other extremity, *e*², secured to the bottom portion of my needle-bar C, so that when the screw B rises or falls the needle-bar C is made to fall or rise, thus transmitting to it its reciprocating motion.

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

1. In a sewing-machine for shoes, the combination, with a needle-bar provided with two shoulders at the front part of its upper end, and a groove in its rear part; of a horn provided with guides for the said shoulders to bear against and a projection engaging with the said groove and preventing lateral motion; and driving mechanism operating to reciprocate the said needle-bar in a vertical direction, substantially as set forth.

2. In a machine for uniting soles and uppers of boots and shoes, the combination of a solid needle-bar having a deep groove in its back and two guide-shoulders formed at its upper extremity where the head to carry the needle is made, a mechanism for transmitting a reciprocating motion to the above needle-bar consisting in a lever of the first order joined at one end to the needle-bar and at the other to a screw that rises and falls, with a screw B, horn A having the guide-shoulders *a'* and guide-block *a*² substantially as described and for the purposes set forth.

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

WILLIAM CAREY.

Witnesses:

JAMES LAURIN,
H. DURIES.