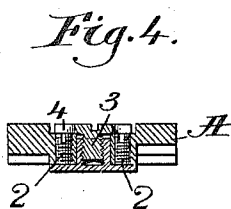
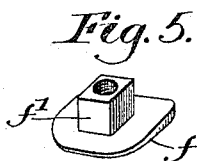
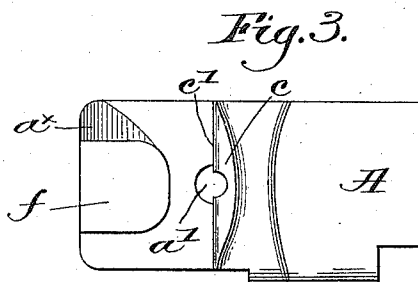
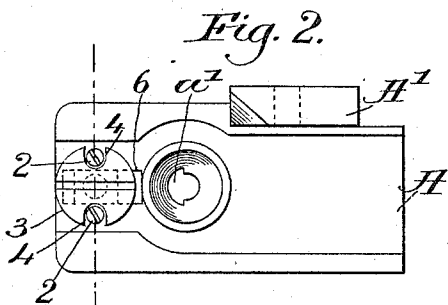
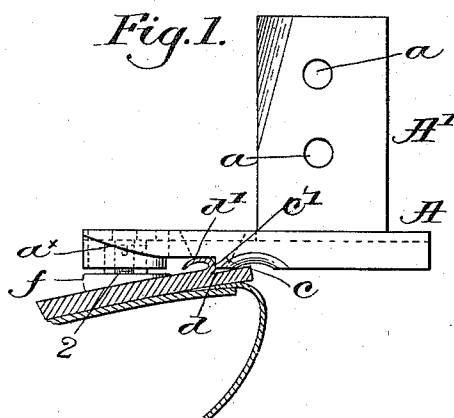


(No Model.)

G. N. GORDON.
FOOT FOR NAILING MACHINES.

No. 579,390.

Patented Mar. 23, 1897.



Witnesses:
A. C. Harmon.
Thomas J. Drummond

Inventor
George N. Gordon.
by Crosby Gregory, atty.

UNITED STATES PATENT OFFICE.

GEORGE N. GORDON, OF MALDEN, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE WIRE GRIP FASTENING COMPANY OF MAINE, OF BOSTON, MASSACHUSETTS.

FOOT FOR NAILING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 579,390, dated March 23, 1897.

Application filed October 7, 1896. Serial No. 608,074. (No model.)

To all whom it may concern:

Be it known that I, GEORGE N. GORDON, of Malden, county of Middlesex, State of Massachusetts, have invented an Improvement in Foot for Nailing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters and numerals on the drawings representing like parts.

In the manufacture of boots and shoes wherein the fastenings are inserted in a channel in the sole the channel-flap has to be turned back to fully expose the channel for the reception of the fastenings. This work is commonly done by a tool in the hands of the operator; but a machine has been made having a rotary wheel to enter the channel and turn back the flap, and in sewing-machines a channel-opener has run in the channel to somewhat lift the flap, so that the channel may be entered by the needle.

In this invention I have provided a foot for use in machines for inserting fastenings into boot and shoe soles, the sole being borne against said foot during the operation of uniting the soles and upper. This foot is provided with a lip to enter the channel and at a short distance therefrom with a projecting bearing to act on the surface of the sole near the flap of the channel, said bearing occupying a lower position than said lip with relation to a horizontal line to thus effect an angular or inclined position for the bottom of the sole and insure the driving of the fastenings therein in a diagonal direction. The space beneath the lower end of the projecting bearing and the lip receives the channel-flap and protects the same. The acting edge of the lip to enter the channel is located substantially in the line of the diameter of the opening in the foot, through which opening the usual nose for guiding the wire rests or plays. To provide for varying angles of inclination for the sole, I have made the bearing adjustable.

Figure 1, in elevation, represents my improved foot, with a shoe shown in cross-section, in place. Fig. 2 is a top or plan view of the foot. Fig. 3 is an under-side view of

the foot. Fig. 4 is a section in the line *x*, Fig. 2; and Figs. 5 and 6 are details to be referred to.

My improved foot is composed, as shown, of a plate A, having an upright shank A', provided with holes *a* for the reception of bolts by which to secure it to a rigid part of the machine. This foot has in it the usual hole or opening *a'* for the reception of the usual nose, from which the wire, nail, or other fastening is automatically inserted into the sole.

The under side of the foot is provided with a lip *c* to enter the channel *d* in the sole, said lip presenting its acting edge *c'* across substantially the diametrical center of the opening *a'*, so that the said lip may enter said channel and act against and to retain the flap *d'* turned back and over beneath the adjacent part of the foot, the under side of the foot cooperating with said lip *c* in holding the said flap away from and keeping the channel uncovered, so that the fastening, of whatever form, may enter the channel without fear of penetrating any part of the flap.

It is a great desideratum to insert the fastenings used to unite the sole and upper in a direction more or less inclined with relation to the face of the sole to thus prevent the fastenings from being driven too near the edge of or off from the inner sole, and to effect this I have combined with the said foot, in addition to said lip, a bearing *f*, it terminating in a plane below that in which the bottom of the lip stands, said bearing acting on the face of the outer sole between the line of channels or at or near its median line and positioning or fixing the angle of inclination of the sole from a horizontal plane, the longer or the deeper the said bearing the greater the inclination of the face of the sole from a true horizontal position.

Inasmuch as some soles are to be tipped more than others I have made the bearing *f* adjustable vertically, I using, as herein shown, for such purpose two stop-screws 2 2 and an adjusting-screw 3.

The foot A is slotted at 6, its front end to receive the square hub *f'* of the bearing, said hub having a screw-threaded hole which is

entered by the threaded part of the screw 3, the head of the screw having at its edge two notches 4 4.

The foot at opposite sides of the slot 6 is provided with screw-threaded holes in which are entered the screws 2. The screws 2 may be turned down into the foot to act as stops and keep the bearing more or less below the bottom of the foot, the screw 3 keeping the bearing against the said stop-screws. By notching the head of the screw 3, as at 4, the screws 2 may be readily reached by a screw-driver without removing the screw 3.

It will be understood that the channel-flaps are turned over back onto the sole before the boot or shoe is presented to the nailing-machine, but it sometimes happens that the flap is imperfectly turned over, and to prevent the lip *c* from running on such imperfectly-turned-over portion, and thereby causing the fastenings to be driven through the flap, I have upwardly and outwardly beveled the under side of the foot at a^x on that side of the downhold toward which the shoe is fed, so that when an imperfectly-turned portion of the flap approaches the lip there shall be presented a space into which the lip acting on the flap may push the flap, so that it will not get into position to at all cover the channel or get under the lip.

The bearing is so shaped as to present at the under side of the foot a rounded edge or guide-wall, so that the sole may be turned and yet enable the guide-lip to remain in the channel during the process of driving the fastenings. The under side of the bearing is inclined to thus rest squarely on the sole.

The slot 6 is long enough to permit the adjustment longitudinally of the shank f' of the bearing, so that said bearing may be adjusted toward or from the lip *c*.

I claim—

1. A foot for use in a machine for inserting fastenings into soles, it presenting at its under side a lip to enter a channel in the sole and at a short distance therefrom, a bearing extended downwardly for a distance below the bottom of the said lip, said bearing acting to keep the sole in an inclined position

to insure the insertion of fastenings therein at an incline to the sole, substantially as described.

2. A foot for use in a machine for inserting fastenings into soles, it presenting at its under side a lip to enter a channel in the sole and at a short distance therefrom, a bearing extended downwardly for a distance below the bottom of the said lip, said bearing acting to keep the sole in an inclined position to insure the insertion of fastenings therein at an incline to the sole, and means to adjust the position of said bearing vertically, substantially as described.

3. The foot provided with a hole through which a fastening may be driven, and the bearing extended from its under side downwardly beyond the outer edge of said hole, combined with means to adjust the bearing vertically, substantially as described.

4. The foot, its lip *c*, and the bearing extended from its under side downwardly, combined with means to adjust said bearing longitudinally, substantially as described.

5. The foot, and its lip, combined with an adjustable downwardly - extended bearing having an inclined bottom, substantially as described.

6. The foot, and its lip, combined with a bearing, two stop-screws, and a screw 3 having a notched head and engaging said bearing, substantially as described.

7. The foot, and its lip, combined with a downwardly-projected bearing presenting a rounded edge toward the said lip, substantially as described.

8. A foot having a lip to enter a channel, and a downwardly-extended bearing to effect the tipping of the sole, the under side of said foot being beveled as at a^x at one side of said bearing, to operate, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE N. GORDON.

Witnesses:

GEO. W. GREGORY,
FREDERICK L. EMERY.