

(No Model.)

G. H. GIFFORD.
SHOE TURNING MACHINE.

No. 578,231.

Patented Mar. 2, 1897.

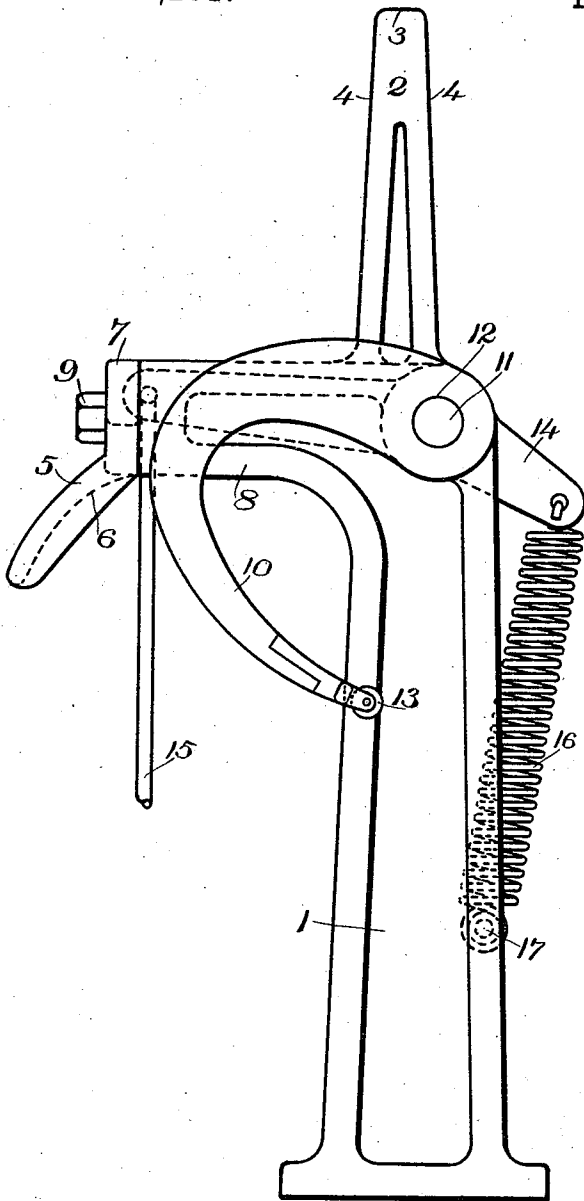


FIG. 1.

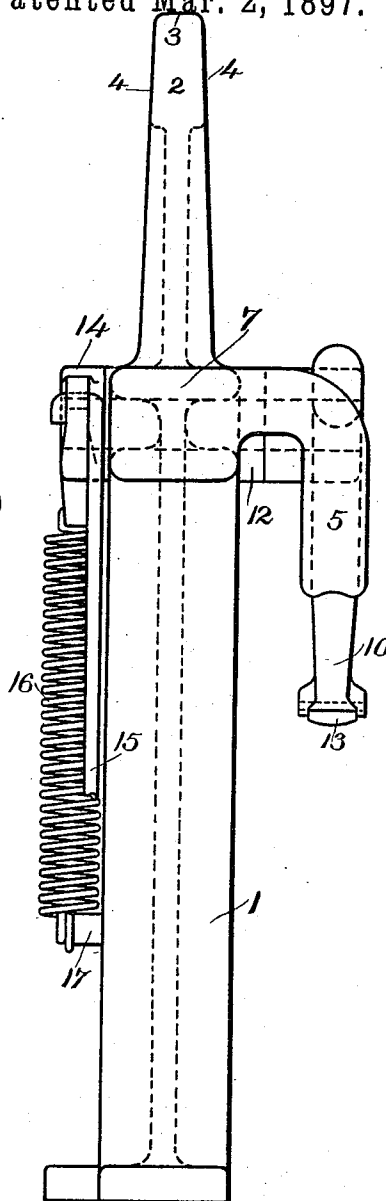


FIG. 2.

WITNESSES.

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INVENTOR_

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UNITED STATES PATENT OFFICE.

GEORGE H. GIFFORD, OF BROCKTON, MASSACHUSETTS.

SHOE-TURNING MACHINE.

SPECIFICATION forming part of Letters Patent No. 578,231, dated March 2, 1897.

Application filed October 2, 1896. Serial No. 607,704. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. GIFFORD, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Shoe-Turning 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.

As is well known, there are certain shoes known as "turns" or "turned shoes," wherein the uppers and soles are secured together while reversed or "wrong side out," and afterward in the finishing of such shoes it becomes necessary to turn them and bring the uppers and soles "right side out," after which the heels are attached and the shoe in other respects completed and finished. The turning of such shoes is quite a difficult operation, and heretofore it has been almost entirely performed by hand, which is a slow and tedious proceeding. Prior to my invention it has also been proposed to employ certain hand-tools and devices and pointed posts to assist the operator in turning such shoes, but such devices are slow in operation and demand a good deal of hand-labor in their manipulation, which renders their use objectionable.

It is the object of this invention to produce a machine for turning shoes which shall be capable of performing its functions in an expeditious and accurate manner, and which will necessitate a minimum amount of hand manipulation of the shoe while performing the turning operation.

To this end my invention consists of the devices and combination of devices which will be hereinafter described, and pointed out in the claims.

My invention is illustrated in the accompanying drawings, in which similar reference-numerals designate similar parts, and in which—

Figure 1 represents the machine in front elevation with the turning-iron depressed; and Fig. 2 an end view thereof, looking toward the right, Fig. 1.

The machine of the drawings comprises a

suitable standard 1, which supports the operative parts of the machine. Projecting upwardly from the upper end of standard 1 is a post 2, which is preferably formed as shown, with the blunt end 3 and the tapering sides 4, and being of any suitable shape in cross-section, and which is employed in turning the counter of the shoe, as will be hereinafter described. After the counter of the shoe has been turned it is placed or suspended upon a retaining iron or support in such position that an oscillating turning-iron may enter the interior of said shoe and force out and turn the toe or forward portion of the same.

The retaining-iron 5 is preferably of the construction shown, it being slightly curved downwardly and outwardly, and has a convex retaining-surface 6, which acts to guide the turning-irons while entering a shoe suspended upon said retaining-iron.

The retaining-iron 5 is projected from a base-plate 7, which is secured to an arm or projection 8 of the standard 1 by a stud or bolt 9.

Arranged to oscillate in the same vertical plane as the retaining-iron 5 is a turning-iron 10, which is preferably curved or yoke shaped, as shown, and which is fixed to the end of a shaft 11, which is free to oscillate in a bearing 12 in the standard 1. The turning-iron 10 is gradually tapered or reduced toward its free end in order that it may readily enter the shoe upon the retaining-iron 5 and force out the forward or toe portion thereof, and in the machine of the drawings the free end of the turning-iron 10 has a roll 13, which acts upon the inner surface of and turns the forward portion of the shoe. The shaft 11 has upon the end opposite the turning-iron 10 a two-armed lever 14, which is fixed thereto, and one end of which is connected by a rod 15 to a foot-treadle (not shown) by which said shaft and turning-iron are oscillated in a direction to force the end of the turning-iron into the shoe and force out and turn the forward or toe portion thereof. A spring 16, connected to the other end of lever 14 and to a stud 17 on the standard 1, operates to oscillate said shaft and turning-iron in the opposite direction, thus causing said iron to

assume its normal position when the treadle is released.

It is obvious that the end of the turning-iron 10 will be suitably shaped for the shoes upon which it operates. Thus when operating upon shoes having comparatively broad toes it will be formed with a correspondingly broad end or provided with the roller, as shown; but in operating upon pointed or narrow-toed shoes the end of the iron will be more or less pointed.

In the operation of the machine the operator first places the back of the counter of the turning-post 2 and by a quick downward thrust draws the shoe down over said post, thus turning the counter portion of the shoe. The shoe is now placed upon the retaining-iron 5, the inside of the counter portion resting upon the upper surface of said iron and the inturned forward or toe portion thereof curled up along the under concave surface 6 of said iron. The treadle is now depressed, which causes the turning-iron 10 to move downwardly and the end thereof to enter the shoe upon the retaining-iron 5 and push out the forward or toe portion, thus completing the turning operation. Upon releasing the treadle the turning-iron is caused by the spring 16 to assume its normal position.

Having fully described my invention and its mode of operation, I claim as new and de-

sire to protect by Letters Patent of the United States—

1. In a shoe-turning machine, the combination with a retaining-iron engaging the counter of the shoe, of a movable turning-iron arranged to enter the foot-opening of the shoe while held on the retaining-iron and to move forward toward the toe of the shoe, and mechanism for actuating the turning-iron, substantially as described.

2. In a shoe-turning machine, the combination with a retaining-iron engaging the counter portion of a shoe, of a yoke shape pivoted turning-iron arranged to enter the foot-opening of a shoe while held by the retaining-iron and to advance toward the toe, and mechanism for actuating said iron, substantially as described.

3. In a shoe-turning machine, the combination with a retaining-iron engaging the counter of a shoe, of a turning-iron movable from the foot-opening toward the toe portion of the shoe, a lever for moving it in one direction and a spring for moving it in the other direction, substantially as described.

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

GEORGE H. GIFFORD.

Witnesses:

T. HART ANDERSON,
WILLIAM A. SARGENT.