To all whom it may concern:

Be it known that I, WILLIAM T. SHEILL, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Shoe-Turning Machines; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to shoe-turning machines, and has for its object an improved device intended and adapted to be used to aid in turning right side out a shoe that has been sewed wrong side out.

Turned shoes have been made for many years, and at the present time they are coming extensively into use, and manufacturers are learning that not only can they turn shoes of fine leather, but that they can to advantage make a turned shoe of coarser leather. The serious difficulty that has been heretofore encountered in the manufacture of turned shoes is that when a shoe which has been sewed wrong side out is turned some part of the upper is stretched out of shape. Generally the part which is most distorted or stretched is the facing-strip along the lacing edges of the shoe; and the reason or one of the reasons why this part of the shoe is distorted is that the appliance which has been used for turning such shoes is one that compels the workman to grasp and pull the shoe in a way to place undue strain on this facing-strip. With the appliance which embodies this invention the workman does not pull on the lacing-strip in any extent, but seizes the heel end of the sole, which has been purposely left detached for that purpose, and pulls the sole over a wheel-terminated arm and gently draws and works the leather of the upper to enable the sole to be drawn through the upper until the sole is straightened out to its normal flat condition. This accomplishes the turning of the shoe without putting any distorting strain on the leather of the upper.

In the drawings, Figure 1 is a side elevation of the turning-arm of the machine and shows the relative location of the turning-arm and the gripper in the action of the machine. Fig. 2 is a reduced view of the machine, showing the treadle connection with the gripping-cord. Fig. 3 is a front elevation of the upper end of the turning-arm. Fig. 4 is a side elevation of the pliers.

A indicates a bench or table-top on which is mounted a braced standard B. The standard is bent twice, once at a and once at b, and the standard terminates with a bearing in which there is a corrugated wheel c. From the bend b to the wheel c the distance is somewhat less than the length of an ordinary shoe, and from the curve b to the curve c the distance is sufficient to enable the arm to rest on the inside of a shoe, with that part of it between b and a lying nearly parallel with the leg of the shoe, while the part between b and the wheel lies substantially parallel with the sole—that is, the part between b and the wheel and the part between b and a are substantially at right angles, although the curve between the two parts is gradual. The part between b and the wheel is arranged at about forty-five degrees to the standard B. In the table is a shift-wheel k, over which runs a cord h h', the lower end of which is connected to a head g, that engages through rings f and f', and these in turn engage with the lever-handles e and e' of a pair of holding-pliers D, provided with gripping-jaws d and d'. In using this device the shoe is sewed wrong side out and a small part at the rear of the sole is left unsewed. When the shoe is in this condition, the workman takes it and by hand turns the leg part of it and the counter, which may be easily turned, leaving the toe part of the sole and most of the vamp still unturned. He then places the shoe in the partly-turned condition over the end of the appliance and brings the pliers into engagement with the free part of the sole. The further action of the pliers in drawing the shoe downward is actuated entirely by the foot of the workman, leaving his hands free to gently manipulate the leather of the shoe as it is...
gradually turned, holding the shoe in place on the arm and working it out easily and gradually and without strain at any part.

I am aware that appliances consisting of arms terminated by wheels have been used and that a turning-arm in which the heel part of the shoe is held by an arm inserted in the cavity in front of the counter and the toe part is turned by a finger that is pushed in against it on the inside; but neither of these enables the workman to draw the shoe by giving the entire draft thereon straight along the sole, and neither of these ways leaves the hand of the workman free for the necessary manipulation of the leather as the shoe is turned.

What I claim is—

1. In an appliance for turning shoes, the combination of a bent arm adapted to be inserted in the shoe, an appliance adapted to grip the sole and means independent of the hand of the operator for drawing said gripping appliance in line with that part of the turning-arm which lies parallel to the sole of the shoe, substantially as described.

2. In a turning appliance for shoes, the combination of an arm provided with a double-curved part adapted to be inserted in the shoe, and foot-actuated drawing-pliers, substantially as described.

3. In a turning appliance for shoes, in combination with a standard provided with a curved part adapted at its terminal to lie in parallelism with the sole of a shoe, and curved to extend in parallelism with the leg of the shoe, a pair of pulling-pliers, and a connected draft appliance, and means tending to draw the jaws of the pliers together, substantially as described.

4. In a turning appliance for shoes, an arm provided with a terminal adapted to bear against the sole of the shoe, an upright standard part, and an intermediate part adapted to rest in the leg of a shoe, a draft appliance arranged to grasp the sole of a shoe, and to draw the same in a line substantially in the axis of that part of the arm which lies against the sole of the shoe, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

WILLIAM T. SHEILL.

Witnesses:
C. F. BURTON,
NETTIE V. BELLES.