

E. I. LA CHAPELLE.
 MECHANISM FOR TURNING WHAT IS KNOWN AS TURN SHOES.
 APPLICATION FILED FEB. 4, 1910.

1,011,067.

Patented Dec. 5, 1911.

3 SHEETS-SHEET 1.

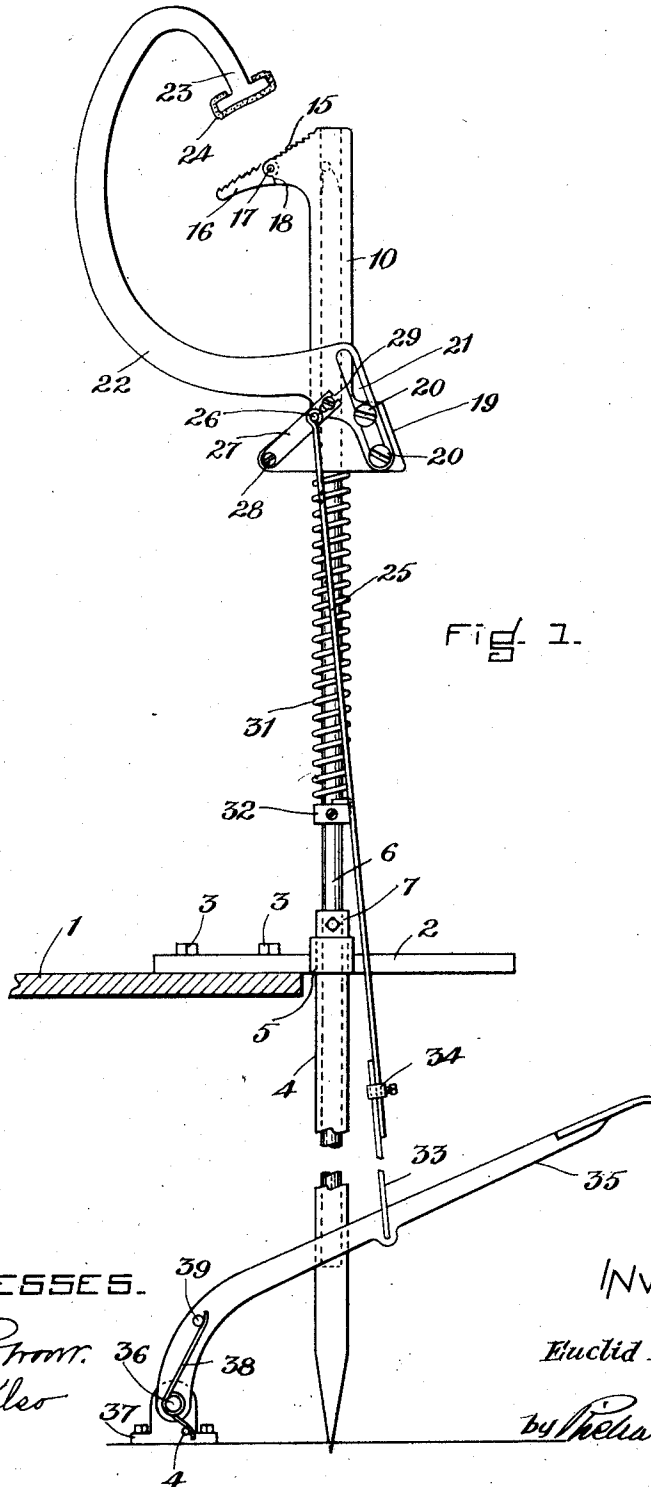


Fig. 1.

WITNESSES.

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1,011,067.

3 SHEETS—SHEET 2.



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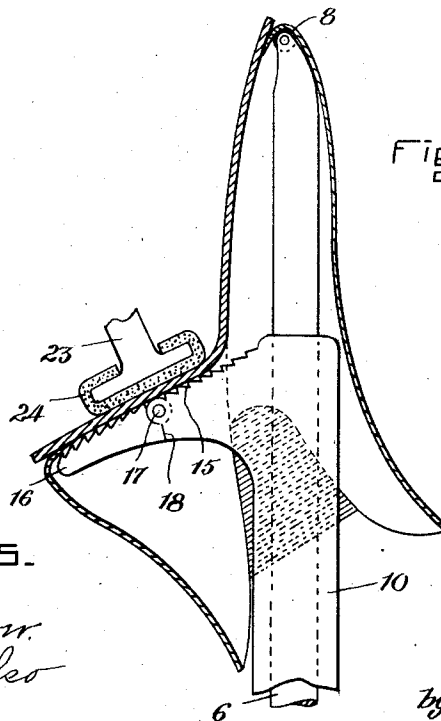
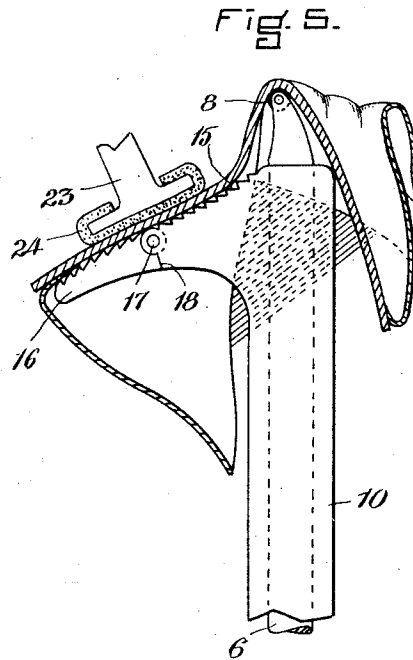
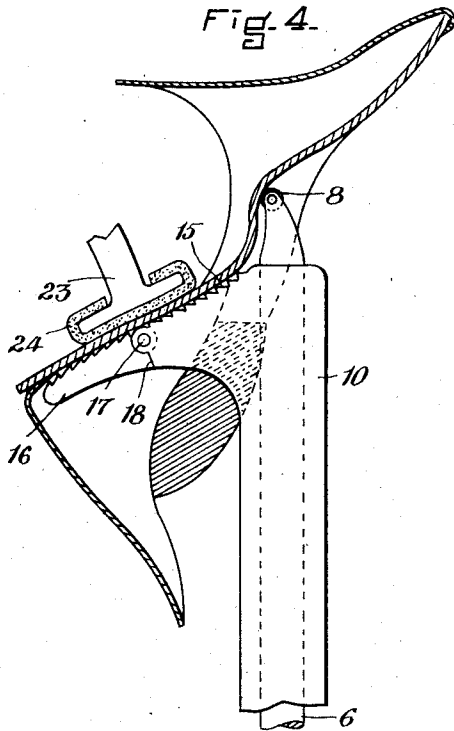
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by Richard P. Elliott,
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WITNESSES.

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UNITED STATES PATENT OFFICE.

EUCLID I. LA CHAPELLE, OF BEVERLY, MASSACHUSETTS.

MECHANISM FOR TURNING WHAT IS KNOWN AS TURN-SHOES.

1,011,067.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed February 4, 1910. Serial No. 542,070.

To all whom it may concern:

Be it known that I, EUCLID I. LA CHAP-
ELLE, a citizen of the United States, residing
in Beverly, county of Essex, Commonwealth
of Massachusetts, have invented certain new
and useful Improvements in Mechanism for
Turning What is Known as Turn-Shoes, of
which the following is a specification, ref-
erence being had to the drawings accom-
panying the same and forming a part
thereof.

My invention relates to an invention or
improvement in a device for turning shoes
of the type in which the parts of the shoe
are secured together and to the sole while
the shoe is wrong side out.

The object of my invention is to provide
a mechanism that will enable the operator
to perform the most laborious part of the
operation of turning a shoe through devices
which enable him to use his weight exerted
through a foot lever, the foot lever operat-
ing through the mechanism to bend the sole
in such shape as to enable the operator to
readily turn the fore-part of the upper of
the shoe with the hands.

Heretofore, operations through mecha-
nism have consisted in turning the fore-
part and the heel-part of a shoe separately,
but in most cases shoes are turned by hand
over the end of a stick. In turning shoes
by hand, it requires great exertion on the
part of the operator to bend the sole to en-
able him to turn the heel and fore-part of a
shoe right side out.

In the drawings which accompany this
specification—Figure 1 represents a side ele-
vation of the complete machine; Fig. 2 is a
partial sectional elevation of the clamping
device and the pusher rod for bending the
sole of the shoe in the operation of turn-
ing it; Fig. 3 is a front elevation of the
clamping device; Fig. 4 represents a shoe
clamped in position on the turning device.
with the heel-part of the upper turned, and
the pusher just beginning to bend the sole
preparatory to turning the fore-part; Fig.
5 is a partial view of the clamping device
of the mechanism, and the pushing or bend-
ing device showing the fore-part partially
turned; and Fig. 6 shows the clamping de-
vice of my mechanism, with the clamping
device pulled down to its extreme movement

and the pusher rod in the toe of the shoe,
and shows both the heel and the fore-part
turned, preparatory to removing it from
the turning mechanism.

My invention is designed to be secured,
by means of the plate 2, to a bench or table.
A portion of the bench is represented by the
numeral 1; the plate 2 may be bolted to the
bench or table by bolts 3, 3; 4 represents a
socket which is held in a boss 5 of the plate
2; 6 represents the lower end of the pusher
rod, which is supported and inclosed in the
socket 4 and adjusted to a proper height by
means of the set collar 7, which is provided
with a set screw in the usual manner. The
upper end of the rod 6 is preferably pro-
vided with a roll 8 journaled in its end. It
has a groove 9 in one side which serves as
a ball-race for the balls 11, 11, and to pre-
vent the vertically moving clamping casting
10 from revolving upon it through contact
of the balls 11, 11, etc., with the groove 9
of the rod 6, and the groove 12 formed in
the clamping casting 10. A lining 13, of
wood or other frictionless fiber, is inserted
in the casting 10 and held therein against
movement by pins 14, 14, the bushing 13
being a running fit upon the clamping rod
6 so that the casting 10 will move up and
down freely.

The clamping casting 10 is provided with
the serrated face 15 which has the portion
16 pivoted to it by the pivot 17 in such
manner that said portion 16 is free to move
upwardly, but prevented from moving down-
wardly by contact of the shoulders 18. The
lower part of the casting 10 is provided
with the portion 19 which has shoulder
screws 20, 20, threaded into the casting,
which shoulder screws are adapted to slide
freely in the slots 21 of the clamping arm
22, the clamping arm 22 being provided with
a clamping portion 23, preferably covered
with a soft material 24, and placed at such
an angle that the face of the clamping foot
23 will press the sole of a shoe firmly down
upon the serrated clamping face 15 and hold
it firmly thereon.

The casting 10 is pulled downwardly upon
the upper end of the pusher rod 6 by means
of a rod 25 which is pivoted by the pivot
26 to the lever 27. The lever 27 is in turn
pivoted to the portion 19 of the casting 10

by the pivot 28, so that the lever 27 will oscillate upon said pivot 28 when the rod 25 is pulled downward. The outer end of the lever 27 is provided with a slot 29 which slides freely upon a screw 30 threaded into the presser arm 22.

The spring 31 is provided for holding the casting 10 normally in an upward position, the upper end of the spring 31 bearing against the under side of the portion 19 of the casting 10, while the lower end of the spring bears upon an adjustable set collar 32 which may be adjustably secured upon the pusher-rod 6 by means of the usual set screw. The lever 25 is in two parts, the lower part 33 being secured to the upper part 25 by an adjustable set collar 34 which is provided with a set screw. The lower end of the rod 33 is pivoted to a foot lever 35, which foot lever is in turn pivoted by the pivot 36 to the plate 37, which may be attached to the floor. A counter-balancing spring 38 is provided for counter-balancing the weight of the treadle or foot lever 35, and for lifting the clamping-lever 22 to raise the portion 23 from the portion 15. This spring 38 is a coil-spring with the ends projecting, one end hooking under the pin 39 near the lever, and the other end under the pin 40 in the floor-plate 37.

The operation of turning a shoe upon my improved turning device is as follows:—A shoe that is inside out is placed upon the clamping member 15, with the heel-part and fore-part of the upper projecting upwardly; then by pressing down upon the foot lever 35, the lever 27 is pulled downward and pulls the clamping arm 22 downward upon the screws 20, 20, until the foot part 23 of the clamping lever 22 contacts with the sole of the shoe, and firmly clamps it between said face 23 and the clamping surface 15. Then, the heel-part may be easily turned by hand to assume the position shown in Fig. 4. Further downward movement of the foot lever 35 pulls the casting 10 downwardly, allowing the roll 8 of the pusher rod 6 to project upwardly beyond it, and to bend the sole as shown in Fig. 4. When the sole is bent sufficiently, as illustrated in Fig. 5, the operator commences to turn the fore-part with his hands, when further downward movement of the foot lever 35 pulls the casting 10 still further downward, and finally down so far that the pushing-rod 6 projects upwardly as shown in Fig. 6, and the turning of the fore-part of the shoe is completed, the hands of the operator cooperating with the mechanism to complete the operation of turning the fore-part. The set screw 41 limits the upward movement of the casting 10 on the pusher-rod 6.

The form and location of the parts with reference to each other may be varied without departing from the spirit of my inven-

tion, as my invention consists of means for clamping the shoe to hold it firmly, and for bending the sole in the peculiar manner illustrated, to enable the operator to easily turn the heel-part and fore-part of the shoe without exerting any great amount of strength.

Having described my invention, what I claim is—

1. In a device for turning shoes, means for clamping the sole of the shoe at the shank portion to permit the turning of the heel part of the upper; and a pusher rod for bending the sole near the middle to permit the fore-part of the upper to be easily turned.

2. In a device for turning shoes, means for clamping the sole of a shoe, comprising a clamping member; a hinged portion to said clamping member, adapted to swing upwardly; a stop to prevent said hinge portion from swinging downwardly; a second clamping member co-acting with said first clamping member to clamp the sole of a shoe at a desired point, and arranged so that the heel part may be easily turned while the sole of the shoe is clamped; and a pusher rod for bending the sole of a shoe to permit the easy turning of the fore-part of the shoe upon the sole.

3. In a shoe turning device, cooperating clamping members to clamp the sole of a shoe near the shank; a treadle for operating said clamping members by the foot; means connecting the clamping members with the treadle; a pusher rod for bending the sole of a shoe and means whereby the operation of said treadle will cause movement of the clamping members with relation to the pusher rod to bend the sole of a shoe to permit the fore-part of the shoe to be easily turned.

4. In a shoe turning device, a pusher rod; clamping means mounted upon said pusher rod and movable axially thereon; means for causing the clamping members to co-act to clamp the sole of a shoe; and spring operated means for separating said clamping members to permit the removal of the shoe from the turning device.

5. A turning device having a stationary member and an axially moving clamping member movable on said stationary member, and so arranged with relation thereto that axial movement of the clamping member will cause the bending of the sole of a shoe upon said stationary member; and spring operated means to return the clamping members to their normal open positions.

6. A turning device having a stationary member and an axially moving clamping member movable on said stationary member, and so arranged with relation thereto that axial movement of the clamping member will cause the bending of the sole of a shoe

upon said stationary member; spring-operated means to return the clamping members to their normal open positions; and means to prevent the rotation of the clamping members upon the stationary member.

In testimony whereof, I have hereunto set my hand, in the presence of two sub-

scribing witnesses, this the 14th day of January, A. D. 1910.

EUCLID I. LA CHAPELLE.

Witnesses:

R. P. ELLIOTT,

CLARENCE P. WESTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."