

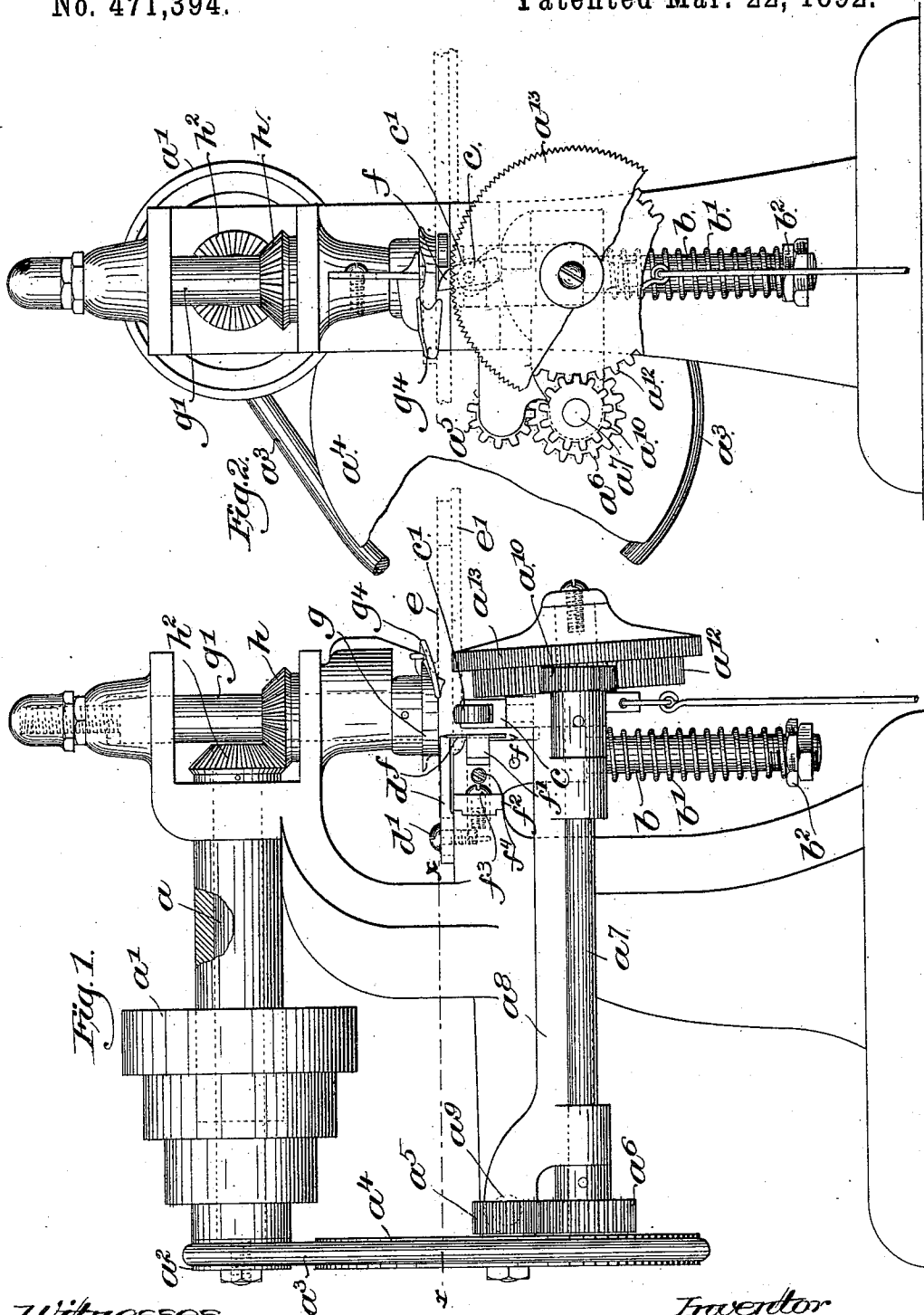
(No Model.)

2 Sheets—Sheet 1.

E. C. MOODY.
SOLE TRIMMING MACHINE.

No. 471,394.

Patented Mar. 22, 1892.



Witnesses.
Edward F. Allen
Emma J. Bennett

Inventor
Timothy C. Moody
by Lemby & Gregory attys.

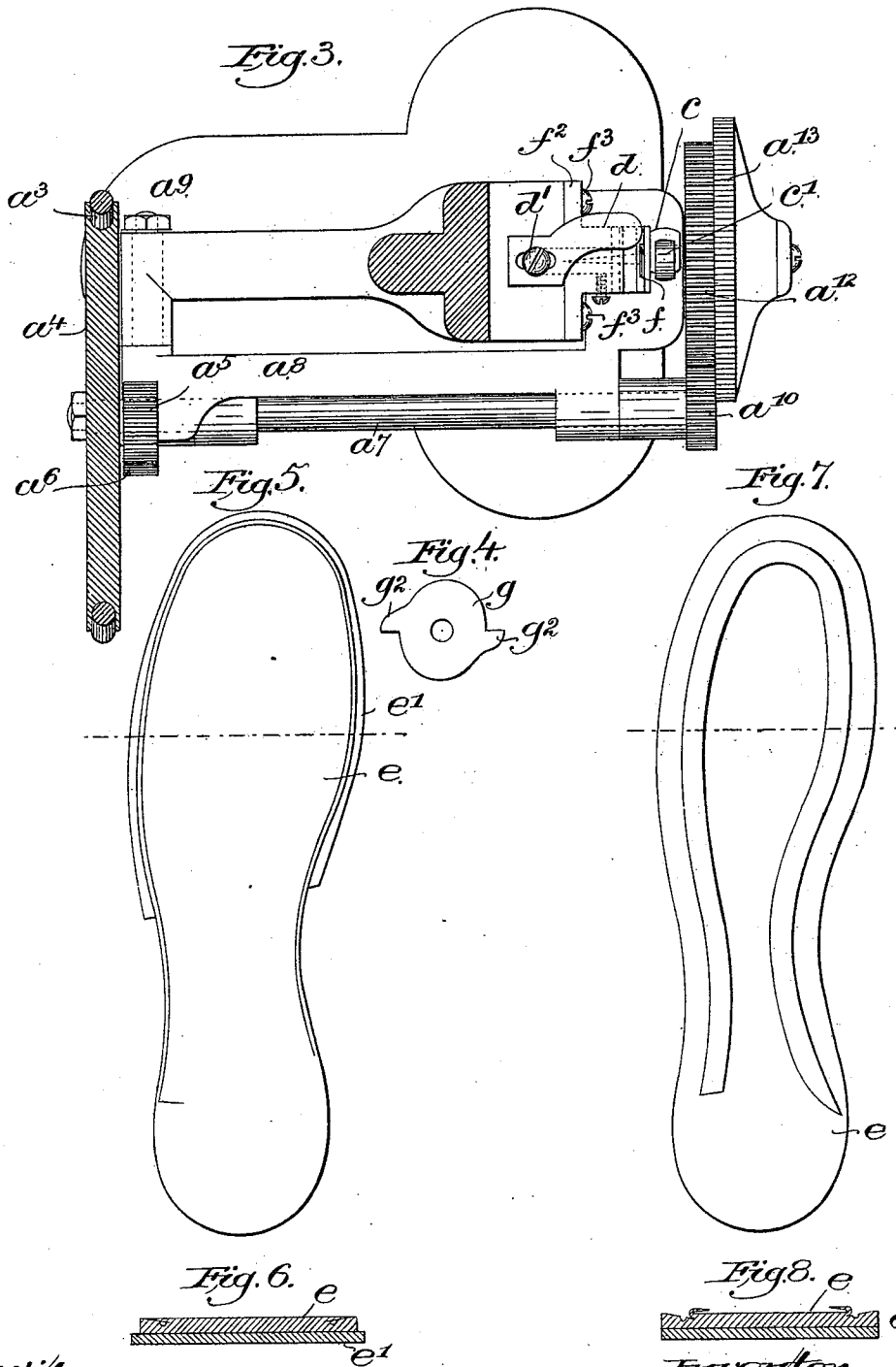
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by Henry Gregory attys.

UNITED STATES PATENT OFFICE.

EMERY C. MOODY, OF AVON, MASSACHUSETTS.

SOLE-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 471,394, dated March 22, 1892.

Application filed July 1, 1891. Serial No. 398,112. (No model.)

To all whom it may concern:

Be it known that I, EMERY C. MOODY, of Avon, county of Norfolk, State of Massachusetts, have invented an Improvement in Machines for Trimming Soles and for Laying Down a Channel-Flap on the Sole to which the Slip-Sole is Attached, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In the manufacture of boots and shoes employing an inner sole, outer sole, and an interposed slip-sole it is customary to attach the slip-sole to the inner surface of the outer sole, trim it off by hand to correspond to the shape of the outer sole, and then apply the attached outer and slip sole to the lasted upper. The outer sole, to which the slip is applied, is or may be channeled.

In practice trimming the slip-sole by hand is a very tedious and unsatisfactory operation.

This invention has for its object to construct a machine for trimming the slip-sole to correspond to the contour of the outer sole to which it is attached, and the machine is further designed to turn over and lay down the channel-flap.

My invention consists, first, in a machine for trimming slip-soles when attached to an outer sole, of a gage against which the outer sole bears, combined with a trimming-knife and feeding mechanism; secondly, in a machine for trimming slip-soles when attached to an outer sole, of a gage against which the outer sole bears, combined with a trimming-knife and feeding mechanism comprising two yielding feed-rolls and means for positively driving one of them; thirdly, in a machine for trimming slip-soles when attached to an outer sole and for turning over and laying down the channel-flap, of a gage against which the outer sole bears, a trimming-knife and feeding mechanism, a rotatable tool for turning over the channel-flap, and a tool for laying down said channel-flap.

Figure 1 shows in side elevation a machine for trimming slip-soles and laying down the channel-flap on the sole to which the slip-sole is attached. Fig. 2 is a left-hand end view of the machine shown in Fig. 1; Fig. 3, a hori-

zontal section of the machine shown in Fig. 1, taken on the dotted line xx ; Fig. 4, a detail of the tool for turning over the channel-flap; Fig. 5, a plan view of a sole having a slip-sole attached to it; Fig. 6, a cross-section of the soles shown in Fig. 5; Fig. 7, a plan view of the soles shown in Fig. 5, the slip-sole being trimmed; and Fig. 8, a cross-section of the soles shown in Fig. 7.

The main frame-work of the machine is of any suitable construction to support the operating parts. The main shaft a has secured to it the belt-pulleys a' , connected to any suitable counter-shaft, and also a belt-pulley a^2 , over which a belt a^3 passes, which in turn passes over a belt-pulley a^4 , secured to a short shaft having fixed to it a toothed gear a^5 , which meshes with a toothed gear a^6 , secured to a shaft a^7 , having its bearings in a suitable frame a^8 , pivoted to the main frame-work at a^9 , said shaft a^7 having at its opposite end a toothed gear a^{10} , which engages a toothed gear a^{12} , mounted loosely on a stud projecting from the pivoted frame a^8 , a milled-edge feed-wheel a^{13} being secured to or formed integral with the toothed wheel a^{12} . A post b depends from the frame-work, which supports a spring b' , one end of which bears against the under side of the pivoted frame a^8 and the other end against adjusting-nuts b^2 , said spring serving as a cushion for the pivoted frame. A yoke c is also mounted on the pivoted frame a^8 , the arms of which afford suitable bearings for a roller c' , the periphery of which lies substantially in the same plane with the periphery of the serrated feed-roller a^{16} . A gage d is adjustably secured to the main frame by a set-screw d' , said gage being herein represented as a curved plate having its edge properly shaped to permit the outer sole, to which the slip-sole is attached, to bear firmly against it.

The main frame beneath the outer edge of the gage d is cut away to provide sufficient space for the entrance of the projecting slip-sole and for clearance.

Referring to Fig. 1, e (see dotted lines) represents the outer sole, and e' the slip-sole attached to it. A trimming-blade f is formed integral with or attached to a suitable block f' , which is adjustably secured to a block f^2 by a set-screw f^3 , said block f^2 being secured

to the main frame by screws f^4 f^4 or otherwise. A wheel g is secured to the shaft g' , which wheel has projecting wings or fins g^2 upon opposite sides of it, which are adapted to engage and turn over the channel-flap, and to the frame-work a stationary curved plate g^4 is secured, which is adapted to bear upon and lay down the said channel-flap after it has been turned over by the wheel g . A bevel-gear h is secured to the shaft g' , which is engaged by a toothed gear h^2 , secured to the shaft a . The outer sole, bearing against the gage d , is fed forward by the feed-wheels c' a^{13} , down upon which they are held by the rotating wheel g , and the trimming-knife f being located in line with the contacting edge of the gage the slip-sole will be trimmed off to correspond with the shape of the outer sole.

It is obvious that the devices herein shown for turning over and laying down the channel-flap may be omitted and the trimming devices alone employed.

By adjusting the trimming-knife the slip-sole may be trimmed to correspond with the shape of the outer sole, but slightly larger to project beyond the edge thereof an equal distance all around.

I claim—

1. In a machine for trimming slip-soles attached to outer soles, a gage against which the edge of the outer sole bears, and a support for said gage cut away underneath its edge to receive the projecting edge of the slip-sole, combined with a trimming-knife for the slip-sole in line with the contacting edge of said gage, and feeding mechanism, substantially as described.

2. In a machine for trimming slip-soles attached to outer soles, an adjustable gage against which the edge of the outer sole bears,

and a support for said gage cut away underneath its edge to receive the projecting edge of the slip-sole, combined with a trimming-knife for the slip-sole in line with the contacting edge of said gage, and feeding mechanism, substantially as described.

3. In a machine for trimming slip-soles attached to outer soles, a gage against which the edge of the outer sole bears, and a support for said gage cut away underneath its edge to receive the projecting edge of the slip-sole, combined with an adjustable trimming-knife for the slip-sole in line with the contacting edge of said gage, and feeding mechanism, substantially as described.

4. In a machine for trimming slip-soles attached to outer soles, a gage against which the edge of the outer sole bears, combined with a trimming-knife for the slip-sole, and feeding mechanism consisting of two yielding rollers, one of which is connected to a power-driven shaft and positively rotated thereby, substantially as described.

5. In a machine for trimming slip-soles attached to outer soles, a gage against which the edge of the outer sole bears, combined with a trimming-knife for the slip-sole, feeding mechanism, a turning wheel having projecting wings thereon, said wheel holding the sole upon the feeding mechanism, and a laying-down tool for the channel-flap, consisting of a stationary curved plate g^4 , substantially as described.

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

EMERY C. MOODY.

Witnesses:

GEORGE PACKARD,
CLARENCE L. SARGENT.