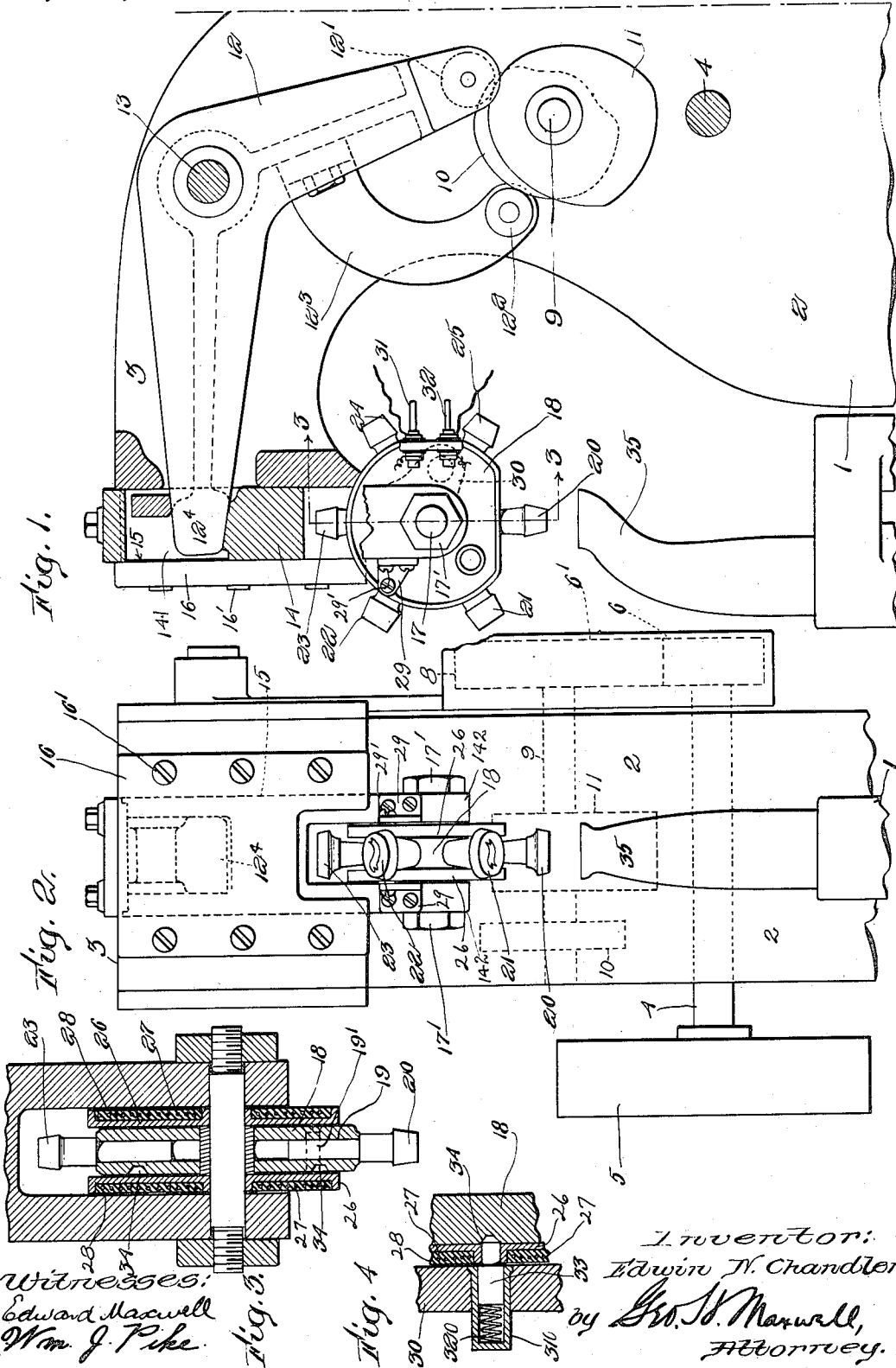


E. N. CHANDLER.
SHOE BRANDING MACHINE.
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1,042,319.

Patented Oct. 22, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

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ELECTRIC HEATING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION
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SHOE-BRANDING MACHINE.

1,042,319.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed March 16, 1910. Serial No. 549,812.

To all whom it may concern:

Be it known that I, EDWIN N. CHANDLER, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Shoe-Branding Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to branding machines and particularly to a machine for electric branding of such articles as shoes.

In branding trade marks, trade names or similar symbols, marks or devices, it is frequently desirable that a plurality of marks be easily presentable for use. It is, further, necessary that such marks, emblems or devices be easily and rapidly changeable and that they be operatable under necessary conditions of temperature, pressure and at a speed and adjustment consistent with the rapid commercial production of such commodities.

In my present invention I contemplate such a step as the branding of shoe soles with a suitable marking, as for instance the branding of a trade mark or trade name. In running shoe orders through a shoe factory it is not only necessary to mark shoes with the different sizes but also frequently to imprint thereon, according to each order the various trade marks, trade names or other nomenclature of the trade, and to this end I have devised a machine capable of electrically branding any one of a plurality of marks, rapidly and under conditions of facile change and easy and cheap operation.

The construction and operation of my device will be more fully described in the specification which follows and in the drawings which form a part thereof, wherein I have shown a preferred embodiment of my device in an electric machine especially adapted to work on shoe soles or the shanks thereof.

Throughout the specification and drawings like reference numerals are employed to indicate corresponding parts and in the drawings Figure 1 is a side view of an electric branding machine embodying my invention, Fig. 2 is a front view thereof, Fig. 3 is a central sectional view of the branding head, and Fig. 4 is a detail of the head stop.

1 is a base from which rises an upright 2 with an overhang 3. In the upright 2 is a power shaft 4 driven by a pulley 5.

6 is a pulley on the shaft 4 belted at 6' to a pulley 8 on the shaft 9. The shaft 9 carries a pair of operating cams 10 and 11.

12 is a three-arm lever pivoted at 13 in the upright 2 and having at the lower end of one arm a roller 12' for contact with the depression cam 11 and a roller 12² in the lower end of the uplift arm 12³ for contact with the other cam 10. At its opposite end 12⁴ the lever 12 engages a slide 14 through a suitable opening 14¹ therein which slide works in a slide way 15 in which it is held by plates 16 fastened by screws 16'. The slide 14 is extended at its lower end in a pair of bearings 142 between which is supported the shaft 17 held in place by nuts 17'. On the shaft 17 is rotatably mounted a die head comprising a relatively thin hub or head 18 radially drilled to form a plurality of sockets 19 in which a plurality of branding dies or irons 20 to 25, inclusive, are removably held by key screws 19' set off center to said sockets 19 to lock said dies in place.

Between the bearings 142 and the faces of the head 18 are a pair of flanged disks 26 each disk having a recess on one side and being set with the smooth side against the head and with the recess toward the bearing 142. Within these recesses of the disks 26 are placed resistance wires 27 which constitute the heaters of the device. These coils are embedded in vitreous enamel 28 which constitutes an insulating body for them, and are of equal thickness to the flanges on the disks 26 so as to completely fill the recesses between the flanges and to be flush therewith. On the bearings 142 are screwed brackets 29 through which screws 29' pass to hold the disks 26 against rotation. The screws 29' are arranged to pass through the enamel insulation 28 without contact with the heating wires 27 and to engage the disks 26.

31 and 32 are two pairs of binding posts on the two disks 26 for connection with the two poles of a suitable source of current for the heating coils 27.

30 is a bracket on one of the bearings 142 and in it is set a closed sleeve 310 containing a coiled backing spring 320 which forces out a plunger 33 having its outer end reduced in

size and arranged to pass freely through a hole in the adjacent disk 26 so as to register with a recess 34 in the side of the hub 18. A plurality of such recesses 34 are provided in the hub 18, viz. one for each of the sockets 19, the engagement of the plunger 33 with a recess 34 acting to hold the hub in proper position for one of the tools 20 to 25 to operate upon a shoe. The end of the plunger 33 is rounded and engages the recesses 34 on the adjacent face of the hub 18. These parts constitute a stop or locking device whereby the rotary head may be checked with the brand desired presented to the work. The engagement of the rounded end of the plunger 33 may be overcome, however, and the head rotated further by simply applying more pressure in a rotary direction.

A work support which is formed as a horn 35 is provided on which the shoe is put.

The branding head 18 is, as has been explained, comparatively thin so as to be heated and maintained hot by contact with or by radiation from the plates 26 within which the resistance coils 27 are embedded.

In use my machine operates as follows: Suppose that current is supplied to the binding posts 31 and 32 of the two coils 27 and a shoe is positioned on the horn 35. The head 18 is now rotated until the proper branding iron, as for instance 20, is brought vertically over the shoe. The machine is then started and as the shaft 9 rotates the lever 12 is rocked by the cam 11 to depress its outer end and force down the slide 14 to bring the selected branding iron 20 against the shoe.

The cams will be properly timed to enable a suitable branding impression to be made in the leather and the arm 12^a is then moved by its cam to lift the upper end of the lever 12 to raise the slide and clear the brand from the work.

On account of the construction of the head it may be maintained hot even though making rapid impressions and the brands may be readily and rapidly selected and rendered operative, each one being hot and ready for instant use.

It will be readily noted that the construction herein shown permits the head carrying

the brands to be independently rotated, while the electrical heating devices are maintained in their relatively rigid position, although partially supported by the axle 17.

As has been suggested, my machine may be used to brand any sort of marks or variety of marks and the branding may be done at any part of the article desired, as for instance the sole of a shoe might be branded instead of the shank, as has been supposed in the example employed in this specification and different marks may be successively and quickly branded on the same shoe.

What I, therefore, claim and desire to secure by Letters Patent is:—

1. A shoe branding machine, comprising a head in the form of a relatively thin block with parallel sides mounted for rotatable adjustment, a plurality of radial branding tools carried thereby in sockets extending close to the parallel sides of said block and adapted to be selectively brought into operative position, electric resistance heating means in the form of plates mounted to lie against the flat sides of said head to heat the same and also the tools carried in the sockets thereof, said plates being supported on the axle of the rotatable head, and means to prevent rotation of said plates with the head.

2. A shoe branding machine, comprising a carrier, a head in the form of a relatively thin block with flat parallel sides mounted for rotatable adjustment thereon, said head having a series of radial sockets carrying branding tools, and electric resistance means in the form of a plate with a resistance element embedded in insulation therein, arranged to lie against a side of said block, adjacent the socket of a tool in operative position on said head to transmit heat to said tool in operation and means to prevent relative movement of said electric resistance while permitting rotary adjustment of the head.

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

EDWIN N. CHANDLER.

Witnesses:

EDWARD MAXWELL,

M. J. SPALDING.