H. D. FERGUSON.

VULCANIZER FOR BOOTS AND SHOES.

APPLICATION FILED JULY 6, 1920.

1,358,068.

Patented Nov. 9, 1920.

2 SHEETS—SHEET 1.

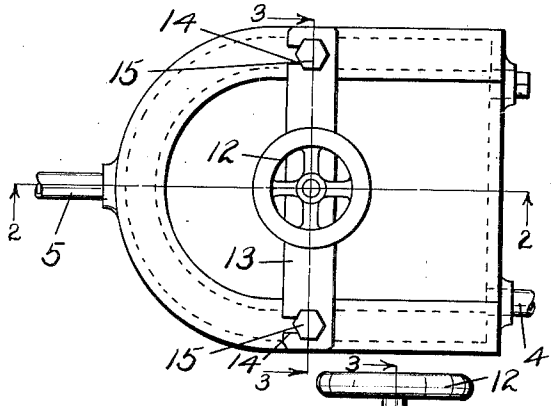

FIG. I.

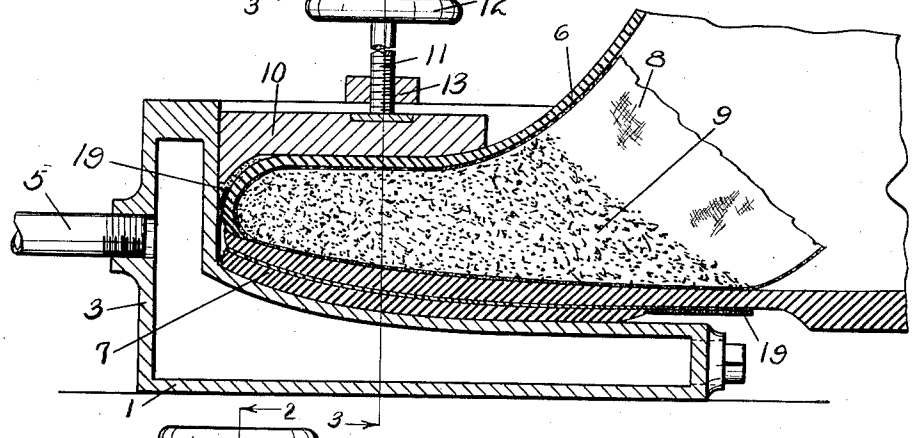

FIG. II.

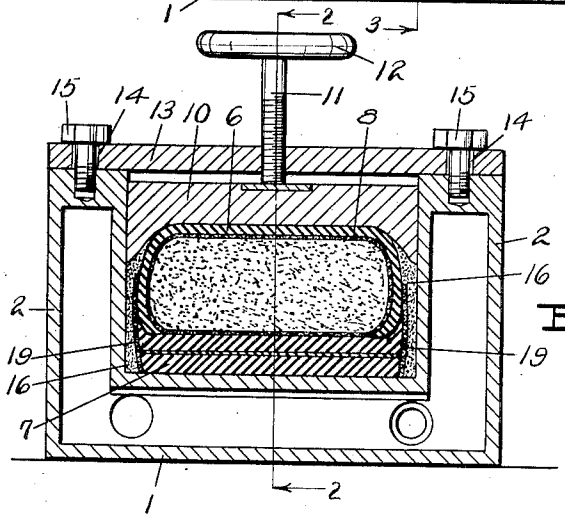

FIG. III.

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Witness

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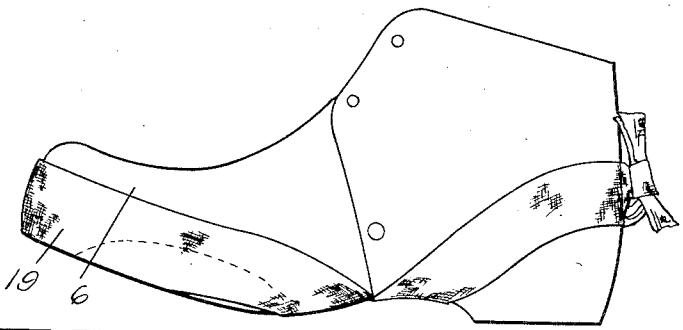

FIG. IV.

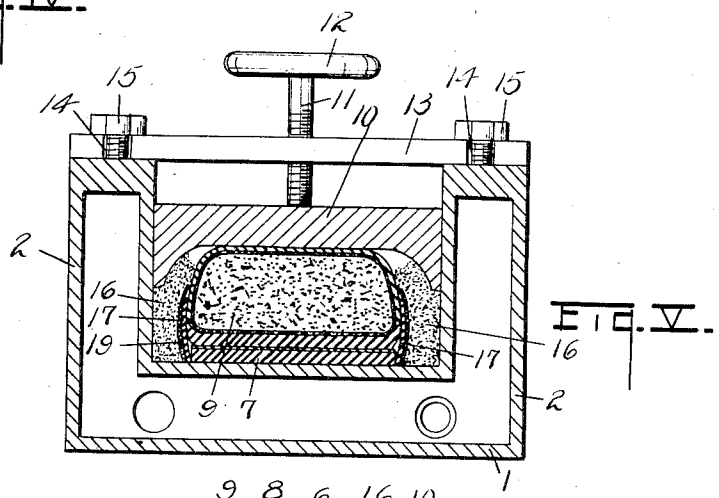

FIG. V.

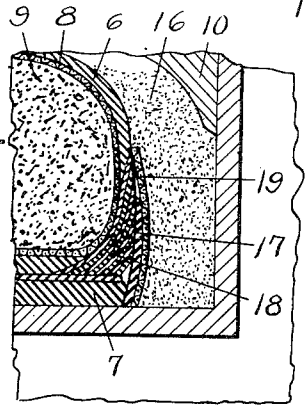

FIG. VI.

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UNITED STATES PATENT OFFICE.

HARRY D. FERGUSON, OF DOWAGIAC, MICHIGAN.

VULCANIZER FOR BOOTS AND SHOES.

1,358,068. Specification of Letters Patent. Patented Nov. 9, 1920.

Application filed July 6, 1920. Serial No. 394,221.

To all whom it may concern:

Be it known that I, HARRY D. FERGUSON, a citizen of the United States, residing at Dowagiac, county of Cass, State of Michigan, have invented certain new and useful Improvements in Vulcanizers for Boots and Shoes, of which the following is a specification.

This invention relates to improvements in vulcanizers for boots and shoes.

The main objects of this invention are to provide an improved vulcanizer which is particularly well adapted for repairing boots and shoes, and which is adapted to a large range in the matter of size and enables practical work by one not especially trained or skilled.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing forming a part of this specification, in which:

Figure I is a plan view of my improved vulcanizing mold, the steam pipe connections being broken away.

Fig. II is a detail view mainly in central longitudinal section on a line corresponding to line 2—2 of Figs. I and III, a shoe being shown in position thereon.

Fig. III is a transverse section on a line corresponding to line 3—3 of Figs. I and II, parts being shown in full lines for convenience in illustration.

Fig. IV is a side elevation of a shoe such as is shown in the mold as prepared for vulcanizing.

Fig. V is a transverse section corresponding to that of Fig. III showing a shoe of different size and the means for accommodating it.

Fig. VI is a detail section similar to that of Figs. III and V, further illustrating the adaptability of the vulcanizer to different work.

In the drawing, similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, I provide a mold having the hollow bottom 1, the hollow side walls 2 and the hollow front wall 3. These hollow walls provide a continuous steam chamber, pipes 4 and 5 being connected to the chamber for the inlet and discharge of the steam. 6 represents a rubber overshoe to be repaired. As shown in Figs. II and III, the mold is adapted for applying a sole 7 to the shoe.

To properly support the shoe, I provide an internal or lasting support consisting of a casing 8 of flexible material and a filling 9 of granular material, preferably sand, the casing being of such size that it may be arranged within the shoe and the sand or granular material packed therein to properly support the shoe. The top clamp 10 is provided with a clamping screw 11 having a hand piece 12, the screw being arranged through the clamping bar 13 slotted at 14 to engage the retaining screws 15.

To adapt the mold to various sizes and shapes of boots and shoes, I provide a filler 16 between the shoe and such parts of the mold walls as are spaced from the shoe. This filler may be powdered soap-stone or the like.

In Fig. V, I show my improved mold adapted to a shoe of smaller size than that shown in Fig. II, and also arranged to apply the side patches 17.

In Fig. VI, I show the mold as adapted to repair a side opening in the shoe, a built-up patch 18 being provided. To support the sole and the patches when preparing for the insertion of the mold, I provide the binding tape 19 which is arranged over the patches and engages the edges of the sole to support the same as illustrated in Figs. II, III, IV, V and VI.

With the arrangement of parts illustrated and described I am enabled to repair boots and shoes of different sizes, and make repairs to the sole and uprights as desired. The device is very economical to produce, convenient to use, and may be satisfactorily used by one not especially skilled for the work.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a vulcanizer for boots and shoes, the combination of a mold including a hollow bottom, side and front end walls providing a single steam chamber, a top clamp, an internal lasting support consisting of a cas-

ing of flexible material and a filling therefor of granular material such as sand, and a filling of heat conducting material between the walls of the mold and the parts to be vulcanized which are spaced therefrom.

2. In a vulcanizer for boots and shoes, the combination of a mold including a hollow bottom, side and front end walls providing a single steam chamber, a top clamp, and a filling of heat conducting material between the walls of the mold and the parts to be vulcanized which are spaced therefrom.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

HARRY D. FERGUSON. [L. S.]

Witnesses:
MARGARET L. GLASGOW,
EUGENIE W. LENT.