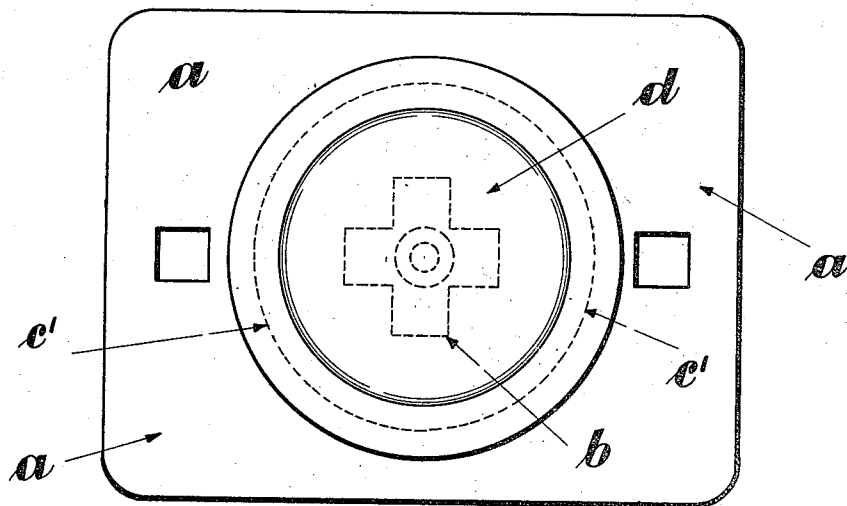
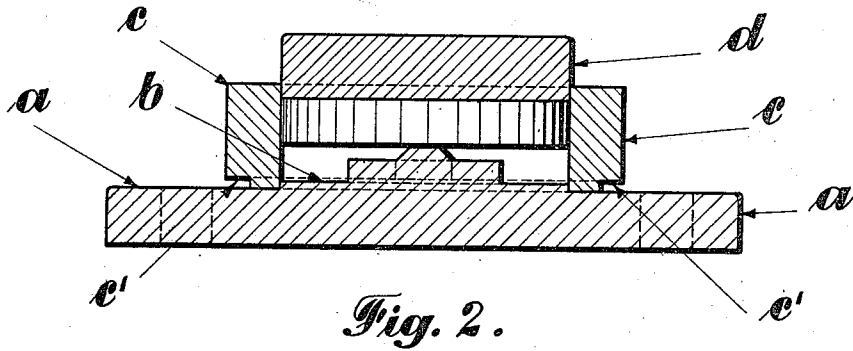
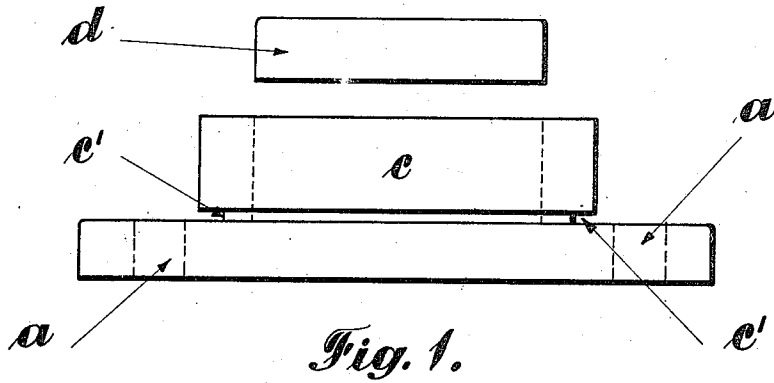


S. COOKE & W. C. DAVIS.
HEEL PAD MOLD.
APPLICATION FILED MAR. 24, 1911.

1,140,577.

Patented May 25, 1915.
4 SHEETS—SHEET 1.



Witnesses:-

John C. Sanders.

John A. Leitch.

Inventors:-

Samuel Cooke
William Charles Davis

By their Attorney:- *Wm. Waller Mudd*

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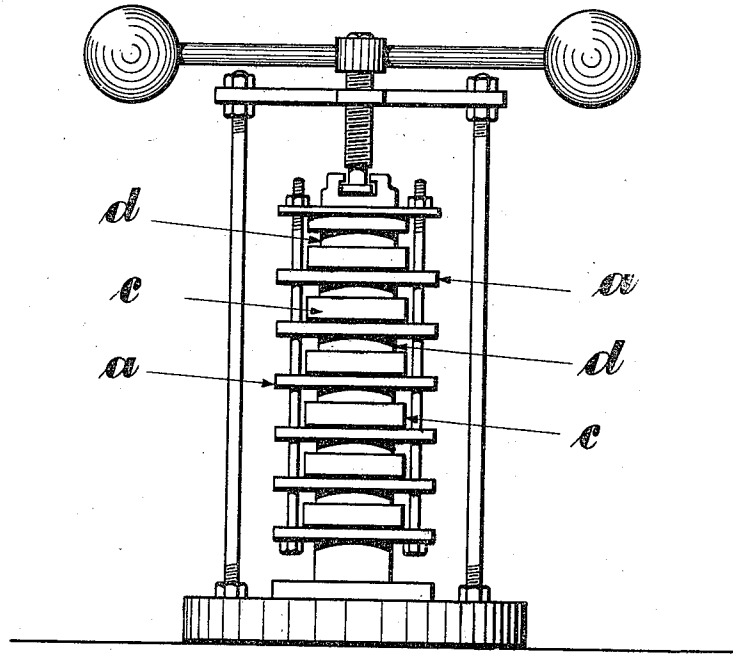


Fig. 4.

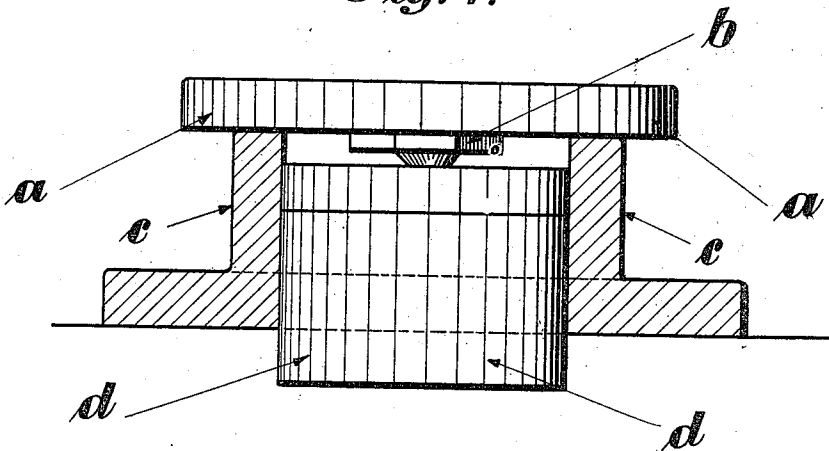


Fig. 12.

Witnesses:-

John C. Sanders

John A. Pacival

Inventors:

Samuel Cooke
William Charles Davis

By their Attorney:- McMillan, Abbott

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4 SHEETS—SHEET 3.

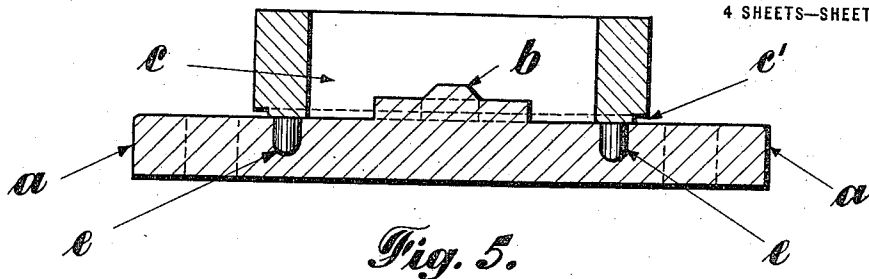


Fig. 5.

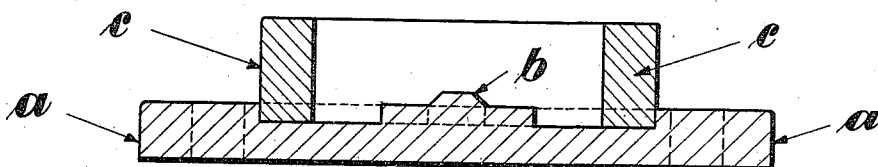


Fig. 6.

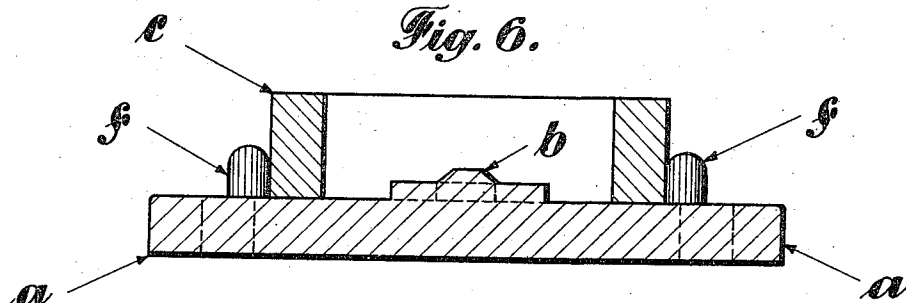


Fig. 7.

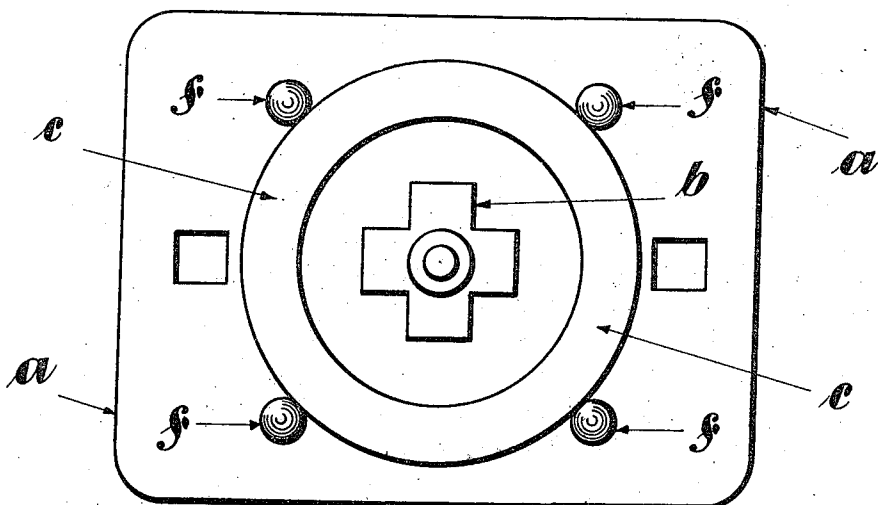


Fig. 8.

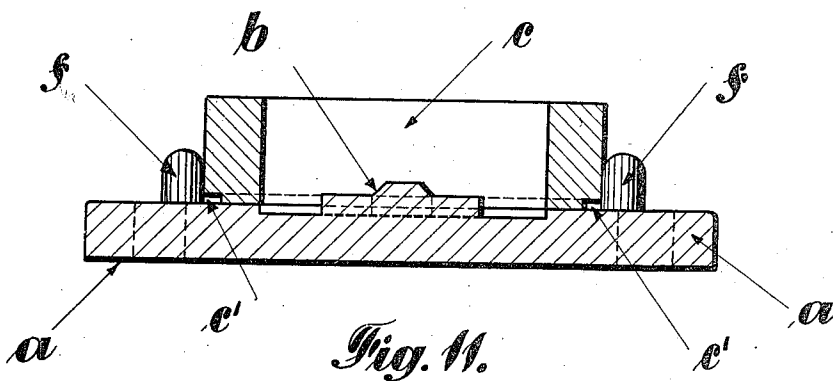
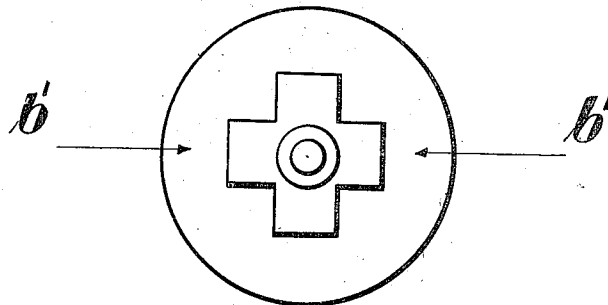
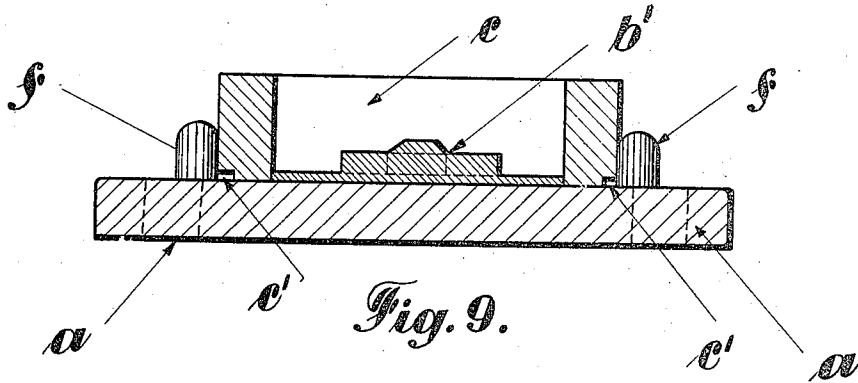
Witnesses:-
John C. Sanders
John A. Leicival.

Inventors:-
Samuel Cooke
William Charles Davis
By their Attorney:-
Am. Mfg. Co.

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Patented May 25, 1915.
4 SHEETS—SHEET 4.



Witnesses:-

John C. Sanders

John A. Lercival.

By their Attorney:-

Inventors

Samuel Cooke

William Charles Davis

(M. M. M. M.)

UNITED STATES PATENT OFFICE.

SAMUEL COOKE AND WILLIAM CHARLES DAVIS, OF GORTON, MANCHESTER, ENGLAND.

HEEL-PAD MOLD.

1,140,577.

Specification of Letters Patent.

Patented May 25, 1915.

Application filed March 24, 1911. Serial No. 616,721.

To all whom it may concern:

Be it known that we, SAMUEL COOKE and WILLIAM CHARLES DAVIS, both subjects of the King of Great Britain and Ireland, and residents of Gorton, Manchester, England, have invented a certain new and Improved Heel-Pad Mold, of which the following is a specification.

At present white metal molds made in one piece and produced by casting are used in the molding of india-rubber heel pads, and with such construction of molds vulcanized india-rubber of good quality, such as is obtained from dis-used cab or bus tires, cannot, owing to the high pressure required, be used in the making of the pads without the risk of the mold bursting.

A further object is that there is always a "spew" or raw edge around the pad when molded, this being owing to the imperfect manner in which the top of the mold is closed in.

This invention has for its object to provide a mold, and to effect the molding operation, whereby a pad can be molded from vulcanized india-rubber of good quality without risk of the mold bursting, and whereby the pad shall be molded without any "spew" on the edges, which will thus do away with the labor heretofore involved in trimming up the pads by hand.

Upon the accompanying drawings Figure 1 illustrates an exterior elevation of a mold made according to this invention and showing the ram or plunger about to enter the mold. Fig. 2 illustrates a sectional elevation of the mold, and with the ram or plunger lowered therein. Fig. 3 illustrates a plan of the mold. Fig. 4 illustrates a press wherein a series of molds are clamped together. Figs. 5, 6 and 7 illustrate sectional elevations of modified forms of molds. Fig. 8 illustrates a plan of Fig. 7. Fig. 9 is a similar view to Figs. 5, 6 or 7 and illustrates a further modification. Fig. 10 is a plan of a detail shown in Fig. 9, while Figs. 11 and 12 illustrate still further modified forms or arrangements of mold.

Referring now to Figs. 1 to 4, the mold which is made of steel comprises three parts, *a*, the base part, which is in the form of a plate, *b*, the central part, which is raised and forms the bottom face of the mold, and *c*, a ring which forms the vertical wall of the mold.

The ring *c* at its base fits concentrically around the part *b* and is designed to receive a ram or plunger *d* which has a neat piston-like fit and designed to slide within the ring *c*.

The central raised part *b* of the plate *a* is suitably engraved or formed with any desired pattern, decoration, brand or name with which the finished pad may require to be made.

In making pads with a mold constructed as described the piece of india-rubber, which has previously been cut to the approximate size and shape, is, with the ram or plunger *d* removed, inserted in the ring *c*. The ram or plunger *d* is then placed in position on the india-rubber in the ring *c*, the top surface of the rubber lying just below the top of the ring, and the mold thus charged, with the ram in position projecting above the ring, placed under a screw or other form of press for giving the necessary pressure to force down the ram or plunger and press the india-rubber within the mold into the required shape. After this operation the mold is then subjected to heat and further pressure in the usual way, and the pad is caused to soften and become permanently molded to the requisite shape and design. When the molding has been effected the ram *d* is removed from the ring *c* and this latter removed from the plate *a*, notches, projections or, preferably, an annular recess *c'* in the ring permitting of a suitable tool being inserted for this purpose.

Usually the pad will be removed from the plate *a* with the ring *c*, but, when taken out of the ring, the pad will be without "spew" or raw edge, which is common with the ordinary and present style of molding, and further possesses a solid and regular formation.

It is necessary that the parts of the mold be made to accurately fit each other, that is to say, the ram or plunger *d* is made to neatly fit the ring *c* and be capable of freely sliding therein under pressure, while the bottom of the ring *c* is made to closely fit around the part *b* of the plate *a*.

In molding a number of pads simultaneously, the molds are usually placed one upon another when in the press, and held by clamping plates; see Fig. 4, the plate *a* of one mold resting or pressing on the ram *d* of another mold, and the rams *d* being of

sufficient length to allow of the desired movement under the action of the press.

Referring to Fig. 5, the plate *a* may, instead of having a raised central part, have the pattern, name or other matter formed in the face, and the ring *c* held to the plate *a* by pegs or dowels *e*. The plate *a* may also be recessed or sunk, and permit of the ring *c* fitting within such recess, see Fig. 6.

In the modification shown in Figs. 7 and 8 the plate *a* may be provided with a series of pegs or projections *f* preferably four, and the raised portion of the plate may be omitted.

Fig. 9 shows a still further modification wherein a loose part or plate *b'* may be used, Fig. 10 showing a plan of said plate detached.

In Fig. 11 the plate *a* is shown recessed instead of having a raised or loose part, and the ring is held in position by pegs or projections *f* in similar manner to Figs. 7 and 8.

Obviously, it will be understood that the arrangement and fitting of the plate *a* and ring *c* to each other may be modified in various ways, while further, it will be understood, that the ram or plunger may be arranged below, instead of above the mold, see Fig. 12.

The improved mold may be used in the making of heel pads and the like from other than vulcanized rubber.

What we claim is:—

A mold for use in molding heel pads and the like from waste vulcanized india-rubber comprising, in combination, a steel base part having holes for rods to pass through whereby a series of molds may be held one above another, a straight, parallel-sided cylinder resting on said base part and having an annular recess in its periphery at its lower edge, a circular boss integral with the base part projecting into and closely fitting the lower end of the said cylinder, a further boss integral with and central to the said circular boss and having a raised central conical part, a solid steel piston in the said cylinder of uniform diameter, against the top of which the base part of the mold above may bear when a series of molds are placed one above another and which stands above the cylinder when the mold is in use, and is of a length which allows of a full pressing operation to be performed before the base part of the mold above can touch the top of the cylinder, substantially as herein set forth.

In witness whereof we have hereunto set our hands in the presence of two witnesses.

SAMUEL COOKE.

WILLIAM CHARLES DAVIS.

Witnesses:

I. D. BAILEY,

F. C. PENNINGTON.

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