

T. J. MAYALL.
Vulcanizing Rubber Belting, &c.

No. 140,519.

Patented July 1, 1873.

Fig. 1

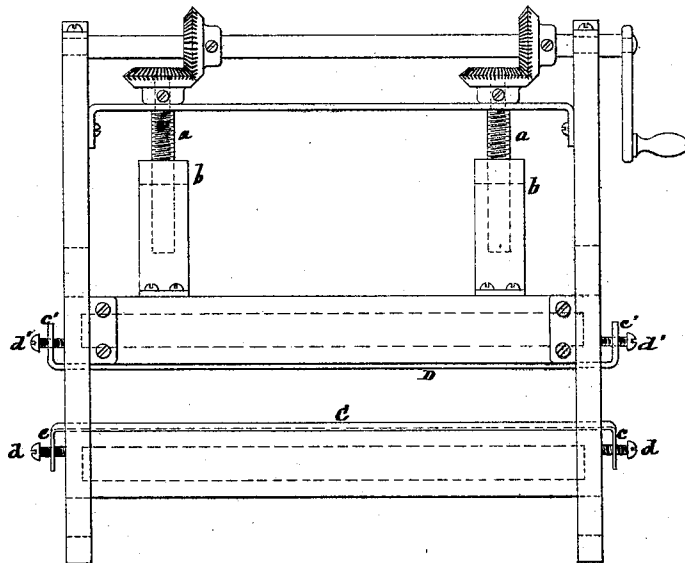
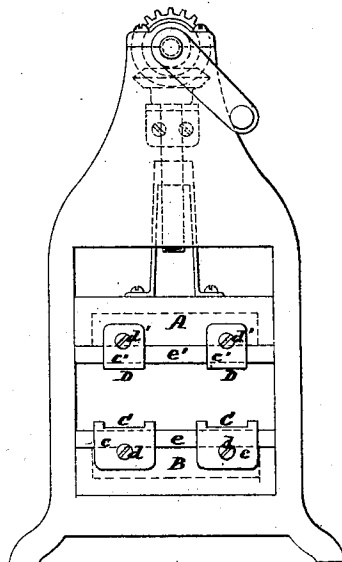


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

THOMAS J. MAYALL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN VULCANIZING RUBBER BELTING, &c.

Specification forming part of Letters Patent No. **140,519**, dated July 1, 1873; application filed June 21, 1873.

To all whom it may concern:

Be it known that I, THOMAS J. MAYALL, of Boston, Suffolk county, Massachusetts, have invented certain new and useful Improvements in Presses for Vulcanizing India-Rubber Belting, Hose, Packing, and other articles, of which the following is a specification:

This invention consists in combining with the steam "plates" or "jackets" of a vulcanizing or curing press removable molds so constructed as to be readily attached to and detached from the said plates or jackets. The top portions or followers of the molds are attached to the vertically-movable top plate of the press, and the bottom portions of the molds or molds proper are attached to the under stationary plate of the press. The two portions of each mold will be brought together or separated, according as the top plate is moved down or up, and they can be accurately adjusted so that the one will fit on or into the other.

It has been usual heretofore to employ molds which were separate from the press or its plates or jackets; but in this case the molds have been laid loosely on the bed or lower plate of the press, and the followers have been laid loosely on top of the material in the molds. The top plate of the press when lowered would press down the followers on or into the molds, this pressure with accompanying heat being continued until vulcanization of the articles in the molds. In order to get at the goods in the molds after vulcanization, it has been necessary to first raise the top plate of the press, and then remove the followers by hand, which consumes much time and involves considerable trouble and labor.

My invention obviates all these difficulties and objections. The followers are lifted by the top plate, and when once adjusted to their molds require no further looking after. At the same time, as both molds and followers are readily detached, they can be removed and replaced by larger or smaller molds and followers.

The manner in which my invention is or may be carried into effect is represented in the accompanying drawing, in which—

Figure 1 is a side elevation of so much of a vulcanizing-press as is needed to illustrate my

invention. Fig. 2 is an end elevation of the same.

The press is of any ordinary or suitable construction. Inasmuch as its construction is well known to rubber-manufacturers, I have not deemed it necessary to give more than a general representation of the press in the drawing, dispensing with the steam-heating connections and other accessories which do not concern my invention.

The hollow steam-heated plates or jackets are shown at A B, the upper one, A, arranged to move vertically up and down, being actuated by suitable gearing, which revolves screw-spindles *a* having their bearing in the frame of the press, and engaging internally-screw-threaded sockets *b* on the upper plate. The lower plate or bed B is stationary. The molds represented in the drawings in illustration of my invention are for curing belting. They are shown at C, and rest on the lower plates B, to which they are secured in any suitable manner, and by suitable means which will permit them to be removed when desired. The means shown in the drawing consist of vertical ears *c* extending beyond and down along the plate B at each end thereof, through which pass set or binding screws *d*, catching under a ledge or flange, *e*, or its equivalent, formed on or attached to each end of plate B. The molds can thus be firmly held in position. They can be easily adjusted in different positions on the bed, as their screws when loosened will, when the molds are moved on the bed, slide along under the flange *e*. They can also be readily removed by withdrawing the screws from engagement with the flanges *e*. The mold-followers are shown at D, and are attached to the upper plate A in precisely the same manner as that in which the molds are attached to the lower plate, *c'* being the ears of the followers, *d'* their binding-screws, and *e'* the ledges or flanges on the upper plate.

The remarks above made as to the attachment of the molds to their plate and the mode of manipulating them apply with equal force to the attachment and manipulation of the follower.

It will be understood that the shapes of the molds will vary according to the kind of article to be vulcanized, whether belting, hose,

packing, rubber strips for billiard-cushions, &c. The mode of applying the two parts of the molding apparatus will, however, be essentially the same in all cases.

Having now described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. In a vulcanizing-press, the combination, with the top and bottom heating jackets or plates, of removable and adjustable top and bottom mold-plates, or molds proper, and followers, attached, respectively, to the said top and bottom jackets, substantially as and for the purposes described.

2. The combination, with the steam-jackets or plates provided at their ends with horizontal ledges or flanges, as described, of mold-plates, or molds proper, and followers, provided at their ends with ears holding set or binding screws, which catch under said ledges or flanges, as and for the purposes shown and set forth.

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

THOS. J. MAYALL.

Witnesses:

JOHN BULKLEY,
EDM. F. BROWN.