

A. M. SCHEURLE & J. M. STINE.
 VULCANIZING MOLD FOR RUBBER TIRES.
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997,212.

Patented July 4, 1911.

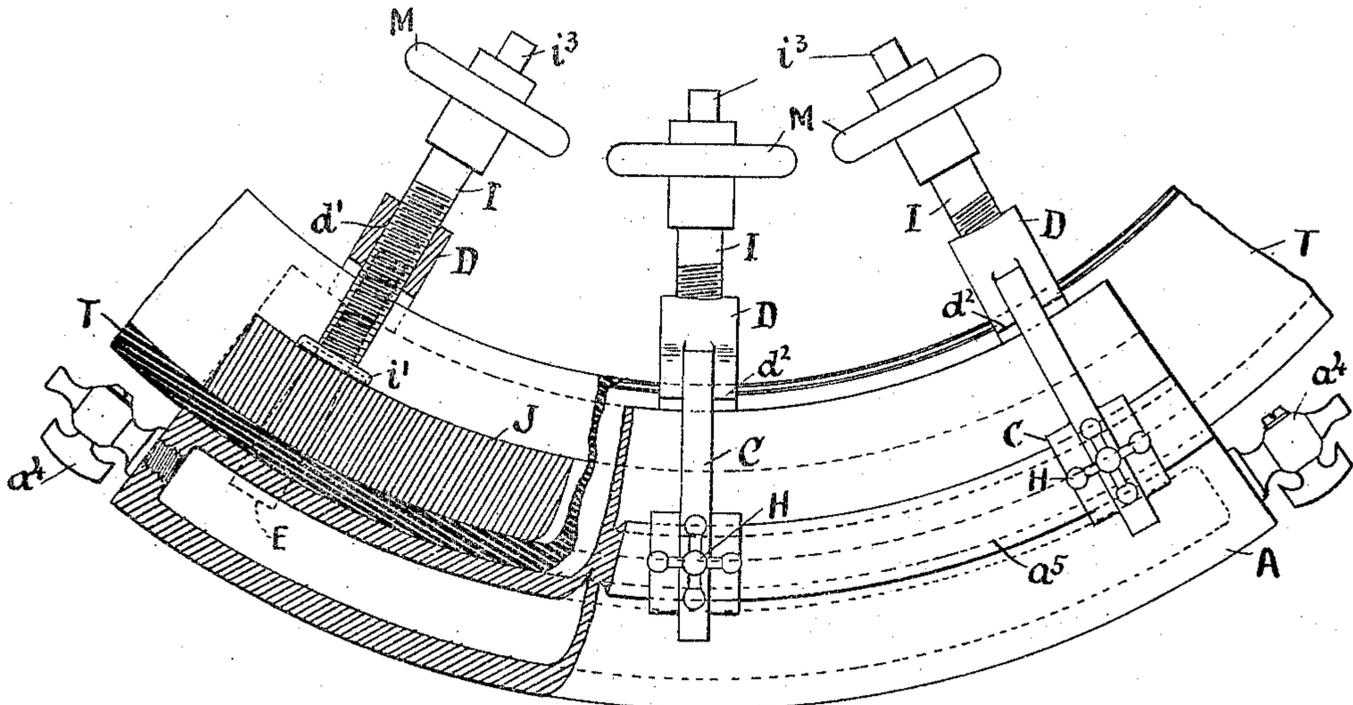


Fig. 1

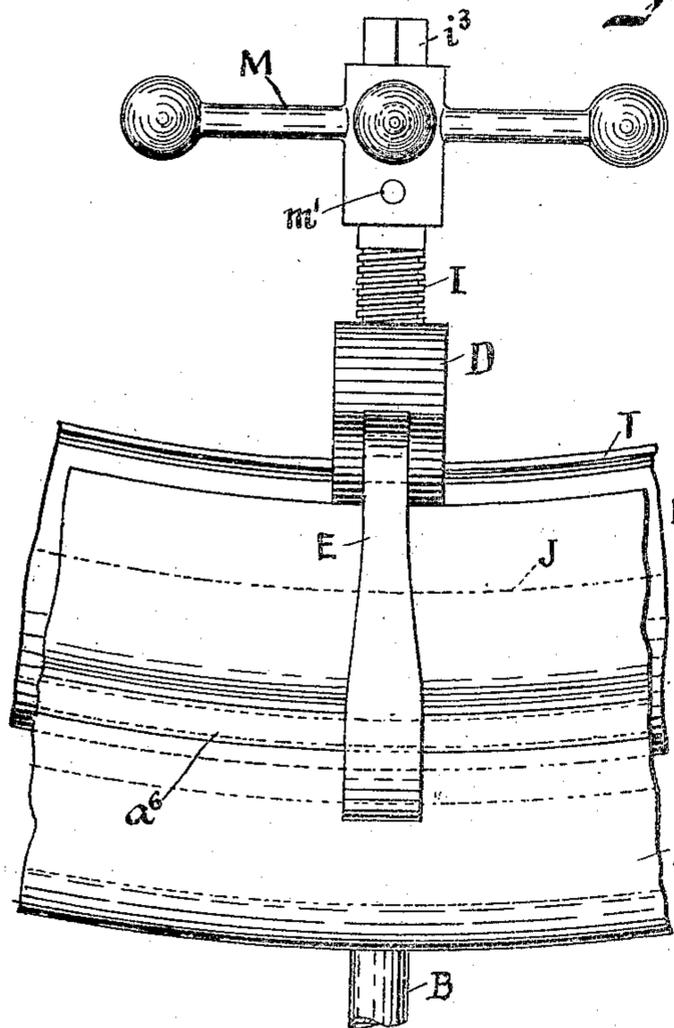


Fig. 2

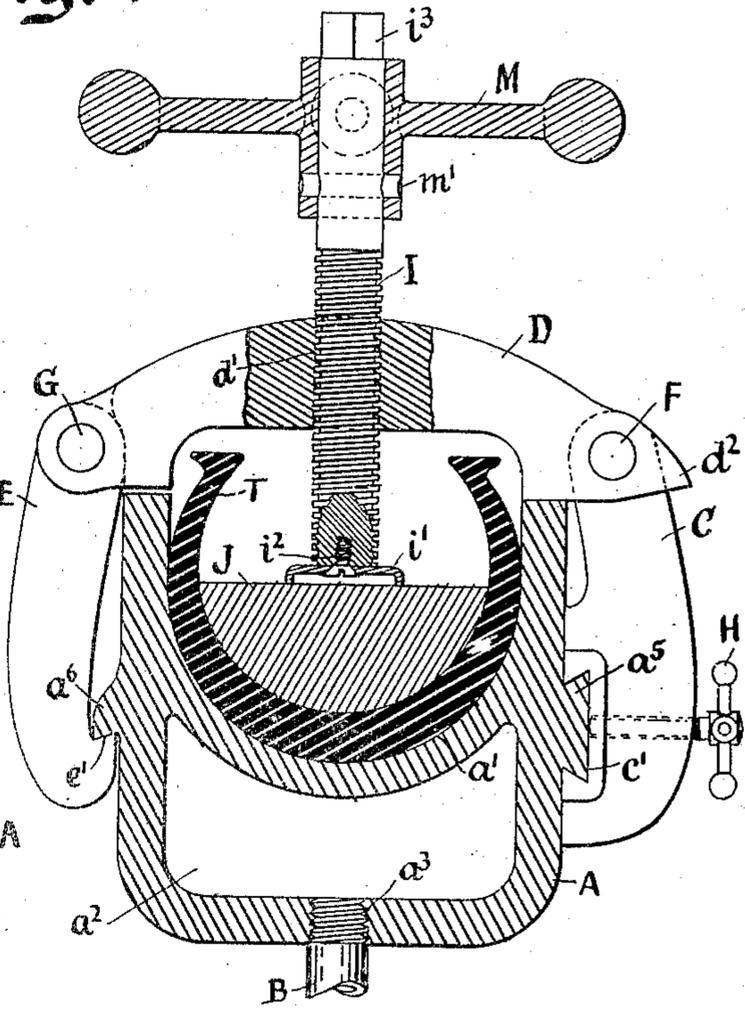


Fig. 3

Witnesses

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VULCANIZING-MOLD FOR RUBBER TIRES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, ANTON M. SCHEURLE and JOSEPH M. STINE, of Kiel and Milwaukee, Wisconsin, respectively, have invented a Vulcanizing-Mold for Rubber Tires, of which the following is a specification.

This invention relates to devices for repairing rubber-tires by the vulcanizing process, and more particularly to that type of devices which comprises a mold-box having a chamber or recess to receive the tire or a portion thereof and a separate and adjacent chamber for steam or other fluid for heating the box to the requisite temperature required for vulcanizing. Such vulcanizing-molds ordinarily are provided with clamps for holding the tire which is being vulcanized in contact with the recess provided for it and pressing it against the walls thereof. Such clamps as at present constructed are separate from the box so that when the tire is being removed they fall away from the box, and moreover they so embrace the box as to interfere with the steam-pipe supplying the same in certain positions.

The object of our invention is to improve this type of apparatus by providing a simple portable form of mold-box with a readily attachable and detachable clamp which can be placed at any point of the box desired and can be quickly adjusted in position and raised while it remains attached to the box in the proper position; and to provide a connection whereby any number of said clamps may be attached to the box in the desired positions.

According to our invention we provide on one side of the box a longitudinal dovetailed rib, and we provide each clamp with a base-member having a dovetailed recess adapted to engage with and slide upon said rib whereby it is prevented from becoming detached unless it is slid off the end of said rib, and on the other side of the box we provide a longitudinal lug which is adapted to be engaged at any point by a hooked catch-piece forming another member of said clamp.

The nature of our invention will best be

understood by a consideration of the following detailed description, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of a complete apparatus, the left-hand end being shown in longitudinal section; Fig. 2 is a fragmentary side-view of the central-portion and one clamp, from the opposite side from Fig. 1; and Fig. 3 is a longitudinal central-section through the mold-box showing a clamp in operative position thereon, partly in section and partly in elevation.

The reference letters refer each to the same part in each figure of the drawings.

The mold-box A is of arcuate shape conforming in radius of curvature as nearly as possible to the size of the tires for which it is to be used; said box has in its upper side a recess a' conforming in cross-section to that of the tires, and immediately below the same, a closed chamber a^2 for steam or other heating fluid, which is admitted thereto by means of a pipe B screwed into an aperture a^3 . Pet-cocks a^4 may be provided at the ends to let out cold air in order to heat said chamber quicker. On one side of said mold-box is formed a dovetail-shaped longitudinal rib or lug a^5 , and on the opposite side a second longitudinal rib or lug a^6 , whose lower face is slightly undercut or recessed as shown.

Each joint-clamp comprises three principal members, to wit:—a base-member C, a yoke D and a hooked catch-piece E, said members being pivoted together by pins F and G. The base-member C has an undercut recess c' which is of the same shape as the lug a^5 and is adapted to slide over the latter as shown; whereby the clamp may be placed in any position along the length of the mold-box and when so placed will remain there without falling away from the box. To prevent longitudinal displacement, a set-screw H, threaded into the member C and pressing against the lug a^5 , may be used, though this is not necessary. The member D is adapted to span the upper open side of the mold-box and has a screw-threaded recess d' in which works a screw-stem I, and said screw-stem has mounted in

a swiveled manner upon its lower end a circular flanged disk or other like pressure-piece i' , which is adapted to press upon the pressure-pad J, which fits inside the tire, and the office of which is to press the latter against the lower surface of the recess a' . The swivel-plate i' may be held in place by a screw i^2 . On the upper end of the stem I is located means for rotating the same; said means comprising as shown the squared end i^3 for a wrench, and below the same, a hand-wheel M secured on the stem by a dowel m' or otherwise. On the member D is formed a lug d^2 to support it when raised and prevent it from falling over. The catch-piece E is provided with a hooked engaging-surface e' which is arranged to engage the lower undercut surface of the lug a^0 , as shown in the drawings, whereby said yoke is held in its transverse position when the screw-stem I is rotated to press the tire T into its recess as above described.

It will be seen that any number of clamps may be used side by side, or at as frequent intervals along the tire as may be found desirable without interfering with each other; and may be set or removed with a minimum of effort and manipulation.

We wish it understood that our invention is not limited to the use of all the above described features and constructions, for some may be omitted and others may be varied or modified in various ways, as will readily occur to those skilled in the art.

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

1. In combination, a vulcanizing mold-box and a clamp therefor, said mold-box having a recess in one side adapted to receive a tire, and said clamp comprising three elements pivoted together, to wit:—a base-member at one end, a yoke-member in the middle and a catch-member at the other end, and means on said yoke-member for pressing the tire into said recess; said box being provided on each side with a longitudinally extending engaging-surface, said base-member having a coacting face adapted to engage in a longitudinally slidable manner with one of said engaging surfaces, and said catch-member being provided with a coacting-surface adapted to engage with said engaging-surface on the other side of said box.

2. In combination, a vulcanizing mold-box for tires having a longitudinal recess in its upper side adapted to receive a tire and having on each side thereof longitudinally running engaging-surfaces, and a yoke-shaped clamp adapted to bridge across said recess and having on its opposite ends surfaces adapted to engage in a longitudinally slidable manner with said engaging-

surfaces of the box, whereby said clamp can be moved to any position longitudinally of said box and can be removed therefrom only by sliding it off the end thereof.

3. In combination, a vulcanizing mold-box having in its upper face a longitudinal recess adapted to receive a tire and a yoke-shaped clamp adapted to bridge said recess; said mold-box having on each side a longitudinally running undercut surface and said clamp having on each end an undercut surface adapted to engage in a slidable manner with the respective undercut surface of said box; whereby said clamp remains attached to said box unless slid endwise off the end thereof.

4. In combination, a vulcanizing mold-box having in its upper face a longitudinal recess adapted to receive a tire and a yoke-shaped clamp adapted to bridge said recess; said box having on each side a longitudinally running lug having an undercut surface and said clamp having on each end a member with a hooked-surface adapted to engage in a slidable manner with the under surface of said lug; whereby said clamp remains attached to said box except as it may be slid endwise off the end thereof.

5. In combination, a vulcanizing mold-box having in its upper face a longitudinal recess adapted to receive a tire and a yoke-shaped clamp adapted to bridge said recess; said box having on one side a dovetailed lug and said clamp having on one end a dovetailed recess conforming to the cross-section of said lug whereby it may be engaged therewith only by sliding it over the end thereof and may be moved to any position along the length of said box.

6. In combination, a vulcanizing mold-box having in its upper face a longitudinal recess adapted to receive a tire and a yoke-shaped clamp adapted to bridge said recess; said box having on one side a dovetailed lug and said clamp having on one end a dovetailed recess conforming to the cross-section of said lug whereby it may be engaged therewith only by sliding it over the end thereof and may be moved to any position along the length of said box; said box having on the opposite side a lug having an undercut lower surface and said clamp having a member with an undercut surface adapted to engage with the undercut surface of said last-named lug.

7. In combination, a vulcanizing-box having a longitudinal recess adapted to receive a tire, and on one side thereof a longitudinal dovetailed lug, a clamp comprising a base-member having a recess adapted to engage in a slidable manner with said lug, a yoke pivotally connected to said base-member, and means for securing the free end of said yoke to the other side of said box.

8. In combination, a vulcanizing-box having a longitudinal recess adapted to receive a tire, and on one side thereof a longitudinal dovetailed lug, a clamp comprising a base-member having a recess adapted to engage in a slidable manner with said lug, a yoke pivotally connected to said base member, said box having on its other side a longitudinally running lug, and a member depending from said yoke and adapted to engage under said last-named lug.

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

ANTON M. SCHEURLE.
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Witnesses as to Anton M. Scheurle:

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