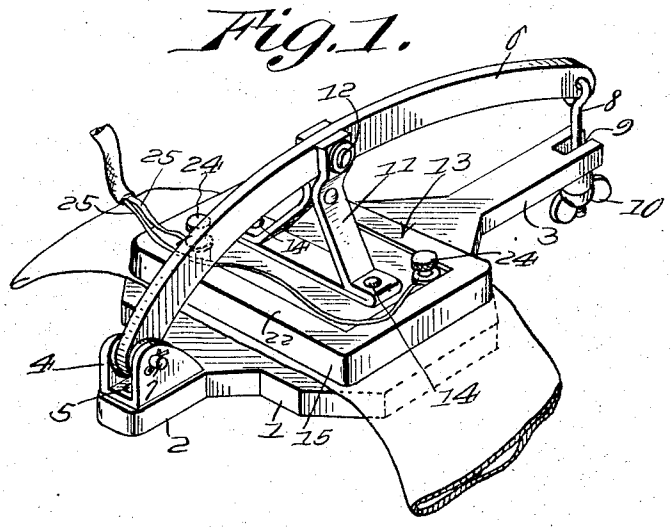
Oct. 30, 1923. 1,472,185

E. A. MOLLENHAUER

VULCANIZING APPARATUS

Filed Oct. 20, 1921

Fig. 1.



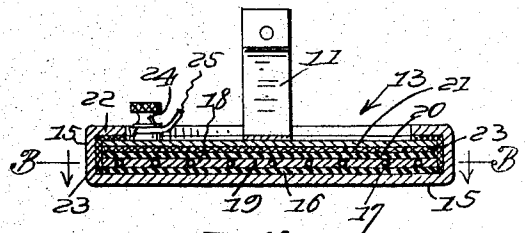


Fig. 2.

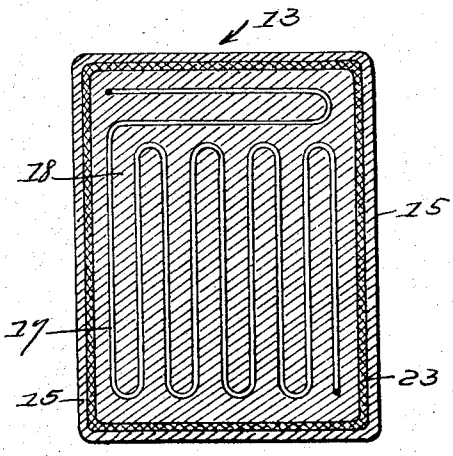


Fig. 3.

Inventor

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Patented Oct. 30, 1923. 1,472,185

UNITED STATES PATENT OFFICE.

ELMER A. MOLLENHAUER, OF SPOKANE, WASHINGTON.

VULCANIZING APPARATUS.

Application filed October 20, 1921. Serial No. 508,960.

To all whom it may concern:

Be it known that I, ELMER A. MOLLENHAUER, citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Vulcanizing Apparatus, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in vulcanizing apparatus.

The primary object of the invention is to furnish a vulcanizing apparatus of simple and inexpensive construction which may utilize electric current for heating, and in which the electric current imparts its heat directly.

With the foregoing object outlined and with other objects in view which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

Referring to the drawing:

Figure 1 is a perspective view of the improved apparatus showing an inner tube held by the same.

Fig. 2 is a sectional view of the movable clamping jaw of the device.

Fig. 3 is a horizontal sectional view of the same taken on line 3—3 of Fig. 2.

In the drawing, 1 designates a stationary jaw or base which is preferably formed of stamped sheet metal such as aluminum and is provided with oppositely extending arms 2 and 3. A channel shaped member 4 is secured to the arm 2 by means of a rivet 5, and a lever 6 has one of its ends connected to the channel shaped member 4 by means of a pivot pin 7. The opposite end of the lever 6 is provided with a pivoted link 8 adapted to engage a slot 9 in the arm 3, and provided with a wing-nut 10 adapted to draw one end of the lever 6 toward the stationary jaw 1.

A bracket 11 is connected to the lever 6 by means of a pivot pin 12 and a heating movable jaw 13 is secured to the said bracket by suitable fastening means such as rivets 14.

The movable heating jaw as best shown in Figures 2 and 3, is formed of a cup 15 of suitable sheet metal such as aluminum and arranged on the inner side of the bottom of this cup is a sheet of suitable electric current insulating material 16 such as mica. This sheet does not prevent the passage of heat. Arranged on the sheet 16 within the cup 15, is a coiled resistance wire 17 which rests directly on the sheet so that the heat from the wire is directly imparted to the bottom of the cup 15. The spaces between the coils of the resistance are preferably filled with plaster Paris 18 and another sheet of mica 19 rests on this plaster Paris. A sheet preferably of asbestos 20 is superposed on the sheet 19 and a cover plate 21 is superposed on the asbestos sheet 20 and is held in place by turning over the edges of the cup as shown in 22. A ring 23 of some suitable heat insulating material such as asbestos is arranged between the members 16, 18, 19, 20 and 21, and the inner surface of the wall of the cup, and the ring 23 and sheet 20 function to prevent the heat from being dissipated upwardly or outwardly. The plate 21 is provided with suitable terminal posts 24 which are connected to the wire 17 and to the wires 25 which conduct the current to the heating plate.

In use, the article to be vulcanized is placed on the jaw 1 and then the jaw 13 is secured in position by the nut 10. Then the current is turned on and the bottom of the cup 15 is rapidly heated. Owing to the wire being arranged substantially in direct contact with the bottom of the cup 15, the device will heat up more rapidly than devices requiring the heating of intermediate substances, and consequently less current will be used with the present apparatus than with the devices now in use.

From the foregoing I believe that the construction, operation and advantages of the invention will be understood by those skilled in the art and I am aware that various changes may be made in the construction illustrated without departing from the spirit of the invention as expressed in the following claims.

What I claim and desire to secure by Letters-Patent is:

1. In a tire vulcanizing apparatus, a heating plate including a cup having a metallic bottom, a sheet of electric insulating and heat conducting material arranged within said cup and contacting with said bottom, an electric resistance coil arranged within the cup in direct contact with said sheet, solid filling material in which the coils of said resistance are imbedded, and a second

sheet of material similar to the first sheet resting on said filling material.

2. A tire vulcanizing apparatus including a heating plate comprising a metallic cup, a sheet of mica covering the entire inner surface of the bottom of said cup, an electric resistance having wire coils resting on said sheet and in direct engagement with the sheet, solid filling material arranged between the coils of said resistance and permanently holding the coils in spaced relation, a second sheet of mica resting on said filling material, a sheet of asbestos superposed on the second sheet of mica for preventing radiation of the heat upwardly, an asbestos ring surrounding the edges of said sheets for preventing radiation of the heat outwardly, a metallic plate resting on said asbestos sheet, terminal poles passing through the last mentioned plate and engaging said resistance, and an inwardly extending flange integral with the upper edge of said cup engaging said metallic plate and holding said sheets, coil, filling material, ring and the metallic plate in snug relation within the cup.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ELMER A. MOLLENHAUER.

Witnesses:

JOE YOUNG,

AUG. MOLLENHAUER.