(No Model.)

W. B. MANN.

VULCANIZING APPARATUS.

No. 365,083. Patented June 21, 1887.

Fig. 1.

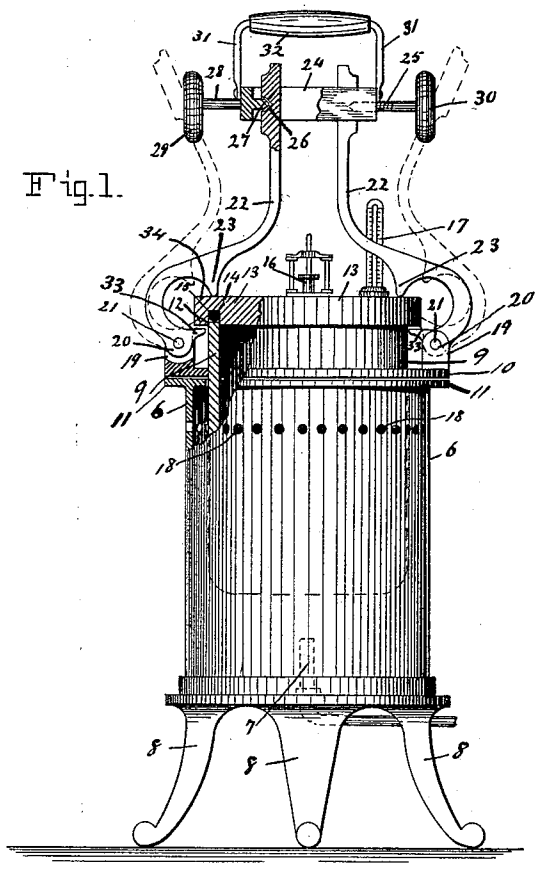


Fig. 3.

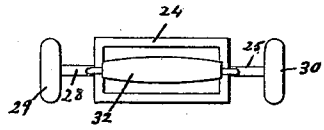


Fig. 4.

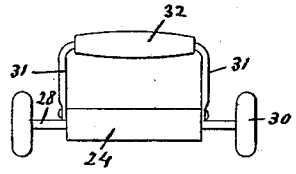


Fig. 2.

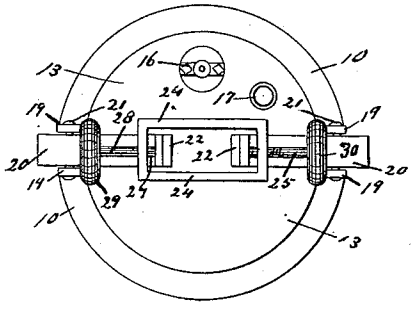
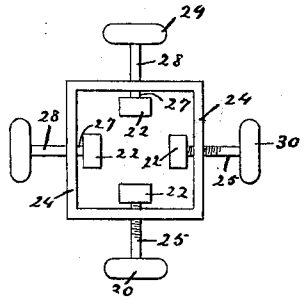


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM B. MANN, OF BALTIMORE, MARYLAND.

VULCANIZING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 365,083, dated June 21, 1887.

Application filed March 29, 1887. Serial No. 232,911. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. MANN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Dental Vulcanizers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in dental vulcanizers wherein the movable top or bonnet thereof is held in position and made steam-tight by specially-constructed clamping arms or levers, by which the said bonnet may be quickly removed and replaced, the said clamping-levers exerting a uniform and equally-distributed pressure upon the bonnet, whereby the packing in the joint will be made steam-tight. Each clamping-lever is further provided with an additional arm, whereby, when the clamping-levers are thrown out to relieve the pressure upon the bonnet, this additional arm is brought in contact with the under side of the flange of the said bonnet, and the joint will be broken and the bonnet raised, thus in the one movement of the clamping-levers relieving the pressure on the bonnet and at the same time breaking the joint and avoiding the troublesome delays which have heretofore been experienced in breaking this joint. The clamping-arms are secured by a specially-designed locking-link, whereby any pressure may be put upon the bonnet by means of the clamping-levers and held thereat, the said locking-link being provided with a handle, by which the vulcanizer may be conveniently and safely carried.

In the further description of my invention reference is had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of the device complete. Fig. 2 is a plan of the device. Fig. 3 is a detailed plan of the locking-link. Fig. 4 is a side elevation of the locking-link. Fig. 5 is a modification of the locking-link when four levers are used.

The same figures refer to the same or similar parts throughout the several views.

The figure 6 denotes the stove, which is constructed in the usual form, with the burner 7 therein, the entire structure being supported by the legs 8. An opening in the top of the stove 6 permits the pot 9 to be placed therein, the said pot 9 being provided with the flange 10, secured thereto, with which it is supported by the corresponding flange, 11, at the top of the stove 6, in such position that the heat from the burner 7 will impinge on the bottom of the pot and produce the necessary evaporation therein, the bottom of the pot 9 being closed, as represented by the dotted lines in Fig. 1, and the holes 18 in the casing of the stove 6 being provided for proper ventilation of the heating device.

The open end 12 of the pot 9 extends some distance outside of the stove 6 and is covered by the top or bonnet 13, which is provided with the annular packing-space 14, wherein fits the end of the pot 9, the said packing-space 14 containing the packing 15, whereby, when a pressure is put upon the bonnet 13, this joint will be made steam-tight. Attached to this bonnet 13, and communicating with the interior of the vulcanizer, is the safety-valve 16, which will relieve any excess of pressure which may be in the vulcanizer, the thermometer 17 being in like manner attached to the bonnet 13 for indicating the temperature and pressure.

Securely attached to the pot 9, or it may form a part thereof, is the flange 10, which, in addition to supporting the vulcanizer in position in the stove, is provided with the lugs 19, integral therewith, whereby a fulcrum is formed for the levers 20, the bolts 21 serving to pivot the levers 20 to the lugs 19. The levers 20 consist of the long arms 22, whereon are the projections 23, which, when the long arms 22 are drawn inward, bear upon opposite sides of the bonnet 13 with sufficient pressure to make steam-tight the joint formed by the pot and the bonnet and the packing therebetween.

In order to draw together the long arms 22 with a greater pressure and to hold them thereat, the locking-link 24 is provided, the said link 24 being passed over the ends of the arms 22 after they are drawn inward, and additional pressure exerted in this direction by the screw 25, which works in the link.

At the ends of the arms 22 are the countersinks 26, in which, on one arm, fits the tapered

point of the screw 25, and on the other arm fits the center 27, which is integral with the link 24, this side of the link having the spindle 28, integral therewith, which is provided with the insulated wheel or handle 29, that is of like material and size of the wheel or handle 30 on the screw 25, whereby steady and uniform pressure may be applied to the arms 22 by the link. Fixed rigidly to the link 24 is the bail 31, with the insulated handle 32, by which the vulcanizer may be safely carried, this operation being made safe by the screw 25 and the fixed center 27, holding securely in the countersink 26 of the levers. The levers 20 are further provided with the short arms 33, which are so located and of such form that when the long arms 22 are thrown outward, as represented by the dotted arms in Fig. 1, they will come in contact with the projecting edge 34 of the bonnet 13, and cause the said bonnet 13 to be raised and its joint with the pot broken, when the bonnet may be easily removed.

In Fig. 5 (a modification) is shown how the locking-link 24 may be employed when four levers are used for clamping the pot 9 and the bonnet 13, the link 24 inclosing the four arms and being provided with two screws 25 and two fixed centers 27, as represented.

The manner of operating is as follows: The arms 22 being out, as represented by the dotted lines in Fig. 1, and the pot open, it is charged with water and the necessary material, when the bonnet 13 is placed thereon with the end 12 of the pot in position in the packing-space 14. The arms 22 are now drawn inward sufficiently close together to place around them the locking-link 24, when the screw 25 is set up, whereby the projection 23 on the arm 22 will be made to press with sufficient force upon the bonnet 13 to securely clamp together the pot 9 and the bonnet 13, and the packed joint therebetween made steam-tight, the bail 31 and handle 32 being provided for conveniently carrying the vulcanizer when it is hot. When it is desired to remove the bonnet 13, the screw 25 is slackened, when the locking-link 24 may be removed. The long arms 22 are thrown outward, whereby the short arms 33 will be brought in contact with the projecting edge of the bonnet 13, as shown by dotted lines, the bonnet raised, and the joint broken, when the said bonnet may be easily removed by hand.

Having described my invention and the manner of operating, what I claim, and desire to secure by United States Letters Patent, is—

1. In a dental vulcanizer, the combination of the pot 9, the bonnet 13, and two or more clamping-levers, 20, so placed that the pressure upon the bonnet 13 will be equally distributed, for the purpose set forth.

2. In a dental vulcanizer, the combination of the pot 9, the bonnet 13, two or more levers, 20, and the locking-link 24, provided with the clamping-screw 25, for the purpose set forth.

3. In a dental vulcanizer, the combination of the pot 9, the bonnet 13, two or more levers, 20, and a locking-link, 24, provided with the bail 31, for the purpose set forth.

4. In a dental vulcanizer, the combination of the pot 9, the bonnet 13, and a clamping lever or levers, 20, provided with the short arm 33, for breaking the joint, as herein described, for the purpose set forth.

5. In a dental vulcanizer, the combination of the pot 9, the bonnet 13, and two or more clamping-levers, 20, the locking-link 24, provided with the bail 31, and the screw 25 and center 27, to hold in the countersinks 26, for the purpose set forth.

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

WILLIAM B. MANN.

Witnesses:
J. H. PETZE,
JNO. T. MADDOX.