

(No Model.)

T. J. CARRICK.
DENTAL VULCANIZER.

No. 464,922.

Patented Dec. 8, 1891.

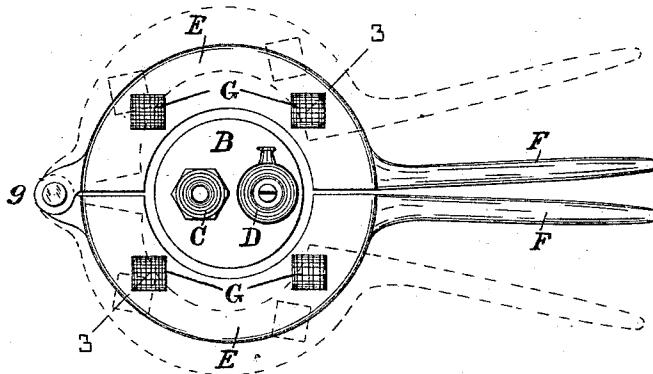


Fig. 1.

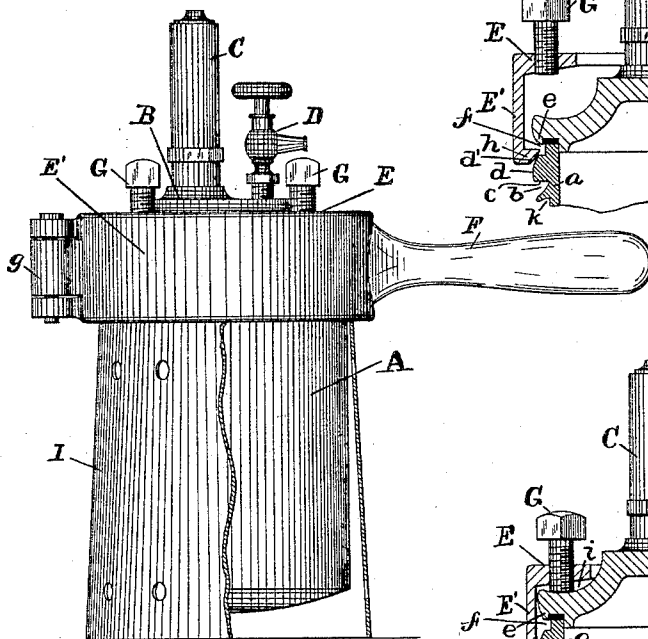


Fig. 2.

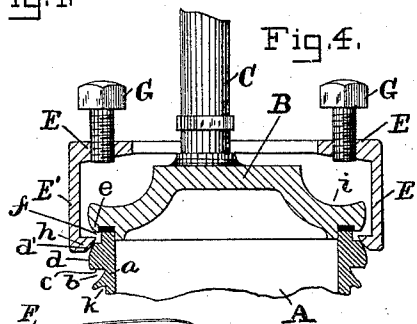


Fig. 4.

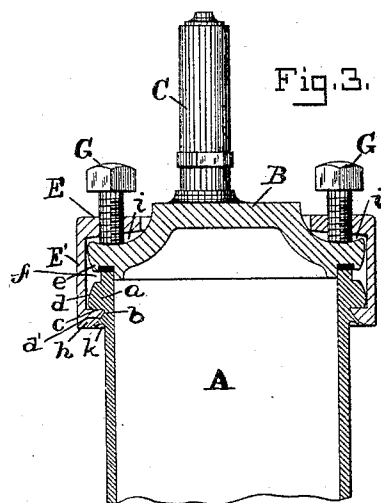


Fig. 3.

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DENTAL VULCANIZER.

SPECIFICATION forming part of Letters Patent No. 464,922, dated December 8, 1891.

Application filed July 11, 1891. Serial No. 399,152. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. CARRICK, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Dental Vulcanizers, of which the following is a specification.

This invention relates to an improvement in vulcanizing-vessels for dentists' use; and the principal objects in view are to provide means for more securely holding on the lid of the vessel during the process of vulcanization and for facilitating the removal of the lid when the process is complete.

With these ends in view the invention consists in the novel features of construction and combinations of parts which will be described hereinafter, and pointed out in the claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a top view of the vessel; Fig. 2, a side elevation showing the stand which supports the vessel over the heater; Fig. 3, a cross-section on line 3 3 of Fig. 1, and Fig. 4 a similar cross-section showing the manner of lifting the lid by the use of the clamp.

The reference-letter A designates the vessel in which the steam is generated during the process of vulcanization; B, the lid or cover of the vessel, which is made to fit steam-tight by means of the usual packing-ring, or otherwise; C, a case inclosing a thermometer and D a blow-off cock, both of which rise from the lid B. The vessel A has at its upper end an outside collar or ring *a*, having an encircling groove *b*, wedge-shaped in cross-section, as seen in Fig. 3, its upper side being straight and constituting a shoulder *c*, while its lower side is slanting or curved, giving the groove its flared or wedge-shaped appearance. Above the said groove the surface of the ring *a* is inclined or curved, as at *d*, for a purpose hereinafter explained. When the lid B is in place, its rim *e* projects over the edge of the vessel A and has position over the ring *a*, a space *f* being between the rim of the lid and the said ring.

The annular clamp for holding on the lid comprises a pair of semicircular sections E, connected by a hinge *g* at one side and each provided at the opposite side with a handle

F. These sections are adapted to shut together around the lid, and each has a downward-extending rim *E'*, the two together forming a continuous band to surround the lid and ring *a*. Each downward-extending rim *E'* has at its lower edge an inward flange *h*, having a curved or inclined lower side *d'*. When the hinged parts of the clamp are shut together, the two flanges *h* form a continuous annular flange.

In securing the lid on the vessel A the clamp is first opened by spreading apart the handles F, and then fitted over the lid with the part E resting on the same. When the clamp is thus placed, the inward flanges *h* are at the encircling groove *b* on the ring, and upon closing together the handles F these flanges will take into the said groove and engage the same all the way around. The lid may now be forced down and made to fit steam-tight by means of set-screws G in the clamp, which when turned bear on top of the lid. In the present instance these screws are four in number, and they bear in a depression *i* in the upper side of the lid and thereby prevent the handles from spreading and the clamp-sections from opening.

It will be observed that in bringing the two parts of the clamp together around the vessel the flanges *h* are caused to take up against the shoulder *c* by their inclined lower sides engaging the curved or slanting lower side of the groove in the ring, and the set-screws hold the lid securely down and prevent the spreading apart of the sections of the clamp.

The hinged clamp and its handles are further utilized in removing the lid B as follows: The clamp is opened and the inclined lower sides of its flanges *d'* placed on the inclined upper surface *d* of the ring *a*, as represented in Fig. 4. Now upon partly closing together the two parts of the clamp it will be observed that these flanges will ride up over the inclined surface *d* of the ring into the space *f* and take up under the projecting rim *e* of the lid. Farther closing together of the clamp parts causes the flanges *h* to exert a lifting pressure on the said lid-rim and pry the lid off, as will be apparent. The clamp may in this manner be utilized as a very effective means for removing the lid when the latter has be-

come stuck tight. The clamp-handles are also employed as a convenient means for handling the vessel when hot.

The letter I designates a circular jacket or stand in which the vulcanizer is set, and which constitutes a support for the same while heat is applied to the vessel A. The under side of the ring *a* has an annular depression *k*, in which the upper edge of the stand I engages.

10 I claim—

1. A vulcanizing-vessel having a shoulder at its upper part, a lid, and an annular clamp for retaining the lid, composed of two sections hinged together and provided with a flange 15 to engage the said shoulder.

2. A vulcanizing-vessel having an encircling groove on its exterior with an upper side constituting a shoulder and an inclined lower side, a lid, and an annular clamp for retaining the lid, composed of two sections hinged 20 together and provided with a flange to engage the said groove, said flange having an inclined lower side.

3. A vulcanizing-vessel having an encircling ring on its exterior provided with a 25 curved or inclined upper surface, a lid having a rim to project over the sides of the vessel, and an annular clamp for retaining the

lid, composed of two sections hinged together and provided with a flange to engage the said ring, said flange having an inclined lower side adapted to engage the inclined upper surface of the ring, in the manner and for the purpose described.

4. A vulcanizing-vessel having a shoulder at its upper part, a lid, an annular clamp for retaining the lid, composed of two sections hinged together and provided with a flange to engage the said shoulder, and set-screws in the clamp to press against the lid. 30

5. A vulcanizing-vessel having a shoulder on its exterior, a lid, two semicircular clamps connected at one side by a hinge and comprising an upper portion which takes over the lid, a rim to surround the joint between the lid and vessel and provided with an inward flange which engages the said exterior shoulder, and means attached to the said upper portion of the semicircular clamps to force down the lid. 40 45 50

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

THOMAS J. CARRICK.

Witnesses:

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