No. 896,989. PATENTED AUG. 25, 1908.

J. F. HARDY.

VULCANIZER.

APPLICATION FILED MAY 14, 1907.

Fig. 1.

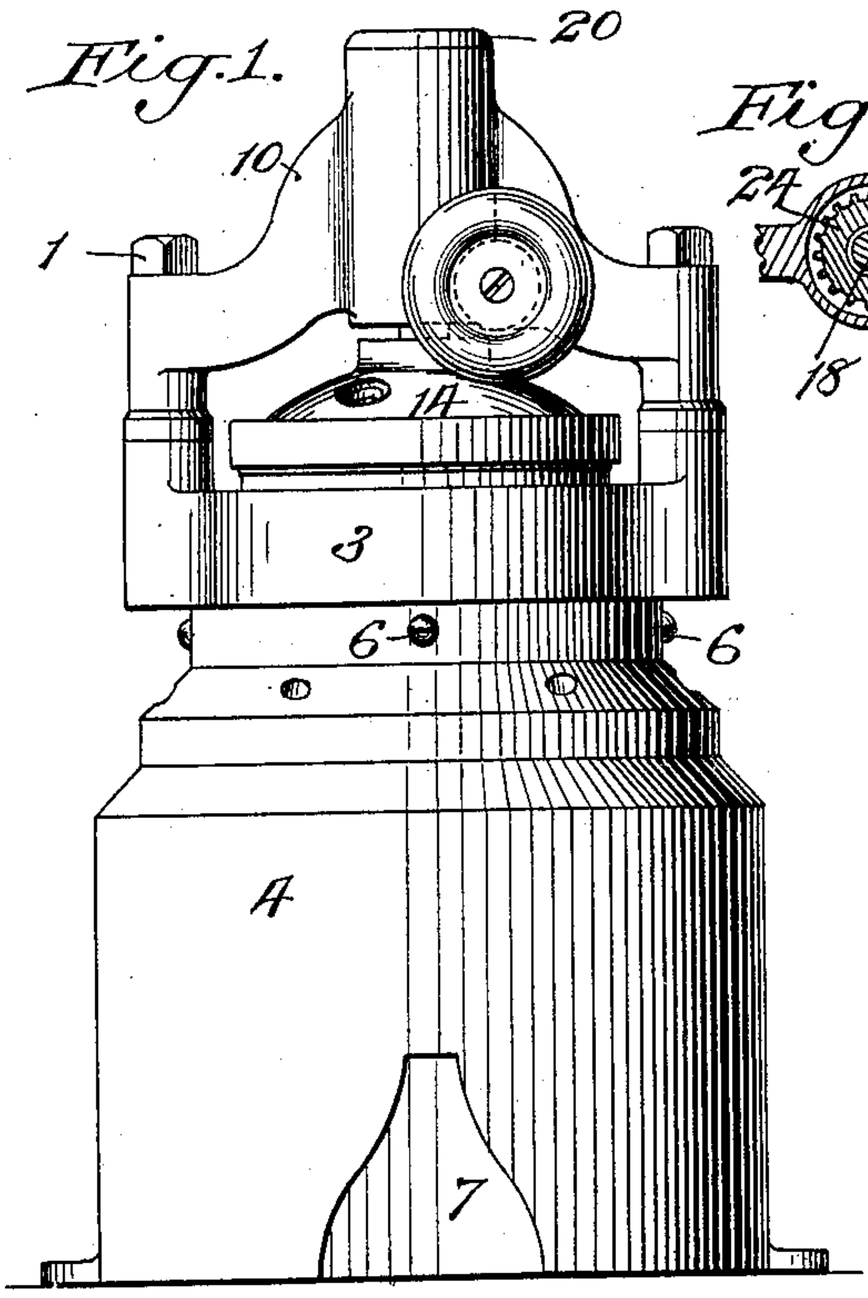



Fig. 5.

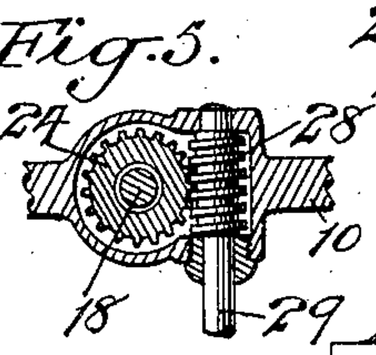



Fig. 2.

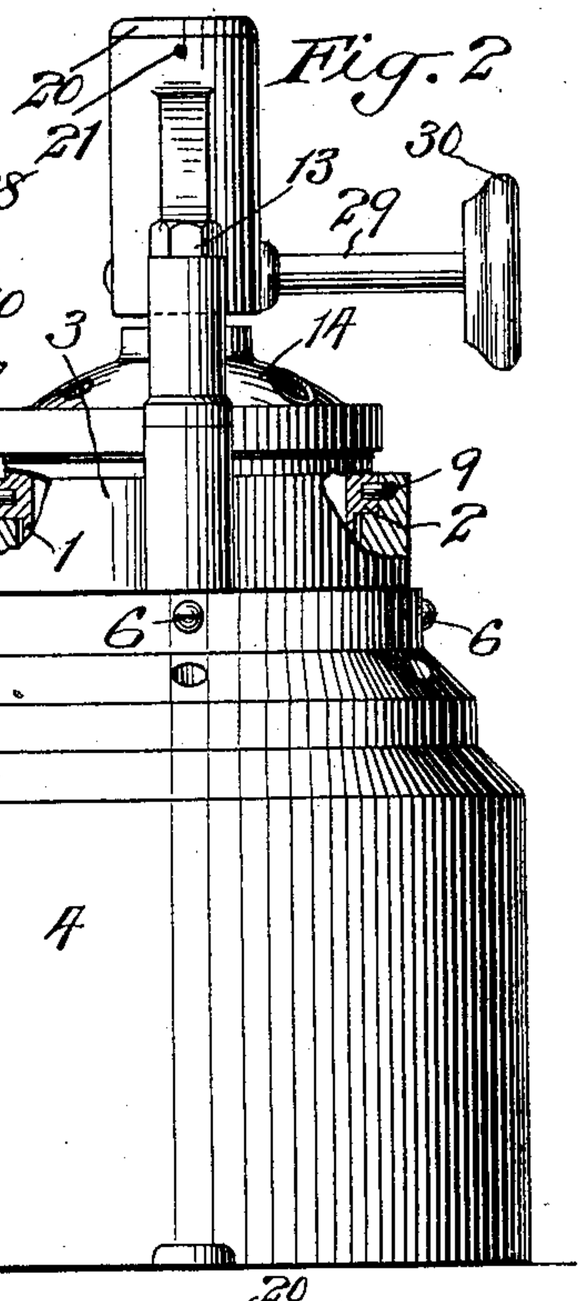



Fig. 3.

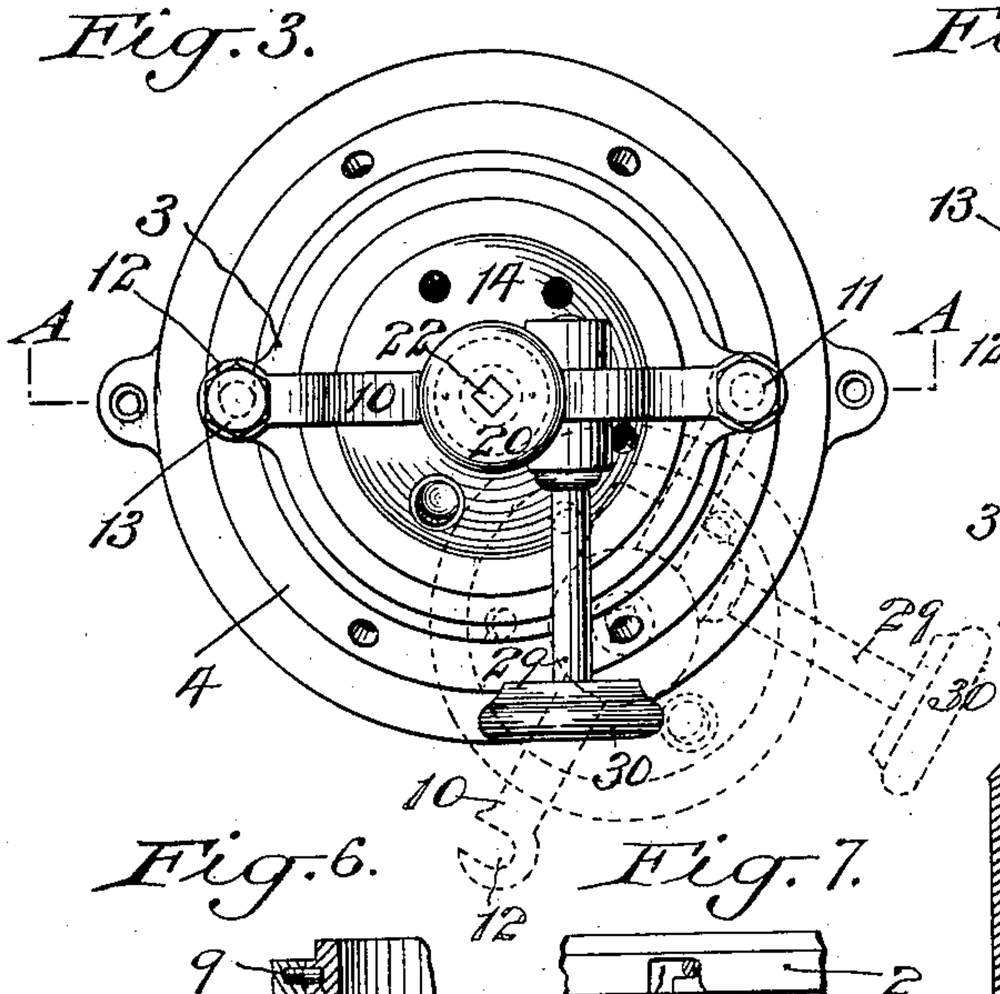



Fig. 4.

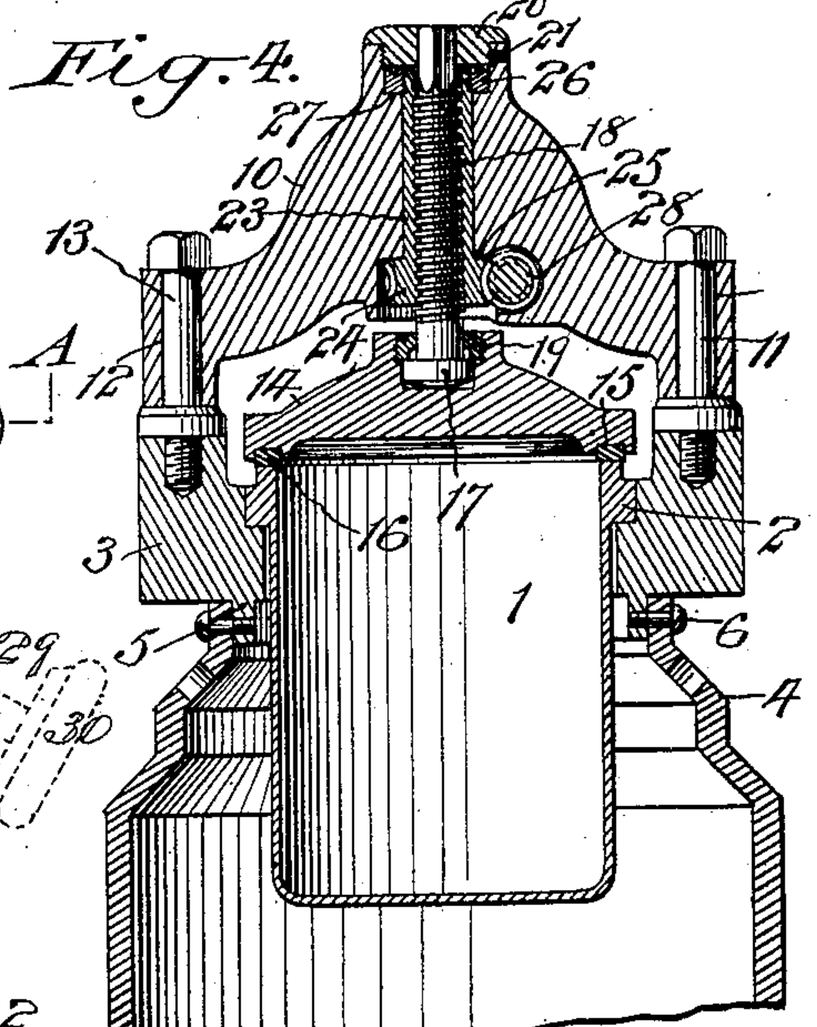



Fig. 6.

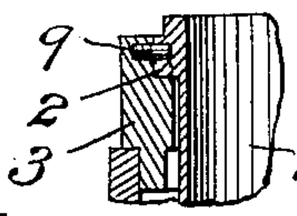
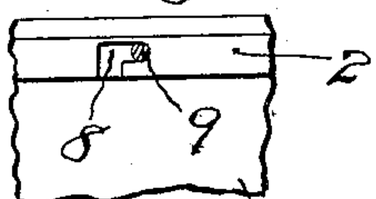



Fig. 7.




Witnesses:-
F. George Barry,
Henry Thieme.

Inventor:
James F. Hardy
by attorneys
Brown & Seward

# UNITED STATES PATENT OFFICE.

JAMES F. HARDY, OF NEW YORK, N. Y., ASSIGNOR TO CONSOLIDATED DENTAL MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## VULCANIZER.

No. 896,989. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed May 14, 1907. Serial No. 373,638.

*To all whom it may concern:*

Be it known that I, JAMES F. HARDY, a citizen of the United States, and resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Improvement in Vulcanizers, of which the following is a specification.

My invention relates to a vulcanizer with the object in view of providing efficient and convenient means for seating the cover of the pot on the pot without any tendency to rotate the cover on its seat during its adjustment and removal.

A practical embodiment of my invention is represented in the accompanying drawings, in which

Figure 1 is a view of the vulcanizer in side elevation, Fig. 2 is a similar view showing the vulcanizer turned at an angle of 90° to the position shown in Fig. 1, Fig. 3 is a top plan view, Fig. 4 is a vertical section in the plane of the line A—A of Fig. 3, Fig. 5 is a partial transverse section through the worm and worm wheel, Fig. 6 is a partial vertical section showing the manner of engaging the pot with its support, and Fig. 7 is a partial view of the exterior of the pot at the point where it connects with its support, one of the locking pins being shown in section.

The pot is denoted by 1. It is supported by means of an annular rib 2 in the top 3, the top 3 being entirely supported by a casing 4 which is made fast to a depending flange 5 on the top 3 by means of screws 6. The casing 4 is provided with an opening 7 for inserting the burner.

The pot 1 is interlocked with the top 3 by means of one or more bayonet joints, in the present instance two represented by the angle slot 8 formed in the rim or rib and the pin 9 set in the inner wall of the top 3, as clearly shown in Figs. 2, 6, 7. The top 3 supports a yoke 10 which is hinged to swing horizontally into and out of position over the pot 1 by a bolt 11 extending through one end of the yoke into the top 3, the opposite end of the yoke being provided with an open side socket 12 for partially embracing a bolt 13 located preferably diametrically opposite the bolt 11 and set in the top 3.

The pot cover is denoted by 14 and it is intended to fit accurately over the top of the pot and to receive in a shallow groove 15 formed in its under face a gasket 16 for making a tight joint. The cover is attached to the head 17 of a screw 18 by means of a plug 19 which embraces the shank of a screw 18 in proximity to the underside of its head 17 and screws into the top of the cover 14. The lower end of the head 17 is made convex so that the cover 14 may rock slightly on the head to find its seat on the top of the pot.

The screw 18 extends upwardly through the center yoke 10 and is held against a rotary movement by means of a cap 20 screwed into the top of the yoke and locked against rotary displacement by means of a set screw 21. The screw 18 has the upper end of its stem squared as at 22 to fit with a sliding fit the hole in the cap 20.

On the screw 18 within the yoke 10 there is placed a sleeve nut 23, the lower end of which carries or has formed integral therewith a worm wheel 24, the upper face of which seats against a shoulder 25 on the yoke, the top of the sleeve nut being provided with a collar 26 screwed thereon and seating on its end side against a shoulder 27 formed in the yoke. Thus the wheel 24 and the collar 26 serve to lock the sleeve nut 23 in position in the yoke against displacement in a longitudinal direction, the collar 26 serving to take up any lost motion. It is intended that the joint between the sleeve nut and the wall of the bore through the yoke shall be as close as is practicable to permit the nut to rotate within the yoke. The nut 23 is operated by means of a worm 28 on a worm shaft 29 extending horizontally into the yoke and provided with a hand wheel 30 for turning the worm.

In operation, the pot having been placed in position within the top 3, the yoke with the cover 14 supported on the head of the screw 18 may be swung into position as shown in full lines Figs. 1, 2, 3 and 4, and the hand wheel 30 may then be turned to operate the sleeve nut 23 in a direction to force the screw 18 downwardly and hence press the cover 14 onto its seat on top of the pot. The connection between the worm and worm wheel is such that the cover will be locked without any other fastening means until such time as it is required to remove it when the hand wheel 30 may be moved in the opposite direction thereby lifting the screw and hence the cover 14 from its seat, permitting it to be swung off to one side for the convenient removal of the pot. The structure is such that the screw 18 moves together with

the cover 14 directly toward and away from the top of the pot without any tendency to rotate the cover on its seat and the purchase may be applied in a convenient and effective manner through the worm and sleeve nut.

What I claim is:—

1. In a vulcanizer provided with a yoke, a nut swiveled in the yoke, a screw for operating the cover of the vulcanizer and engaged with the nut and means for operating the nut.

2. A vulcanizer comprising a pot, means for supporting it, a cover for the pot, a screw forming a support for the cover, a nut forming a support for the screw, a yoke forming a support for the nut and a worm mounted in the yoke for operating the nut and hence the screw for adjusting the cover toward and away from its seat.

3. A vulcanizer comprising a pot, means for supporting it, a cover for the pot, a screw forming a support for the cover, a nut forming a support for the screw, a yoke forming a support for the nut, a worm for operating the nut and means for preventing the rotation of the screw during the operation of the nut.

4. A vulcanizer comprising a pot, means for supporting it, a cover for the pot, a screw engaged with the cover, a nut engaged with the screw, a yoke provided with a seat for receiving the nut in rotary adjustment therein, a worm seated in the yoke and engaged with the nut and means for preventing the rotation of the screw during the operation of the nut.

5. A vulcanizer comprising a pot support, a pot connected with the support by a slip joint, a cover for the pot, a screw forming a support for the cover for lifting the cover directly away from and adjusting it toward the top of the pot, a nut in which the screw is mounted, a swinging yoke forming a support for the nut, a cap on the yoke for holding the screw against rotary movement and a worm mounted in the yoke in engagement with the nut for operating it and hence moving the screw.

6. A vulcanizer comprising a pot support, a pot connected with its support by a bayonet joint, a collar for the pot and means for adjusting the cover and removing it from the pot.

7. A vulcanizer comprising a pot, means for supporting it, a pot cover movable toward and away from the pot, a worm gear for operating the cover and a yoke forming a support for the worm gear.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 11th day of May, 1907.

JAMES F. HARDY.

Witnesses:

H. D. BULTMAN,

JAMES MURRAY.