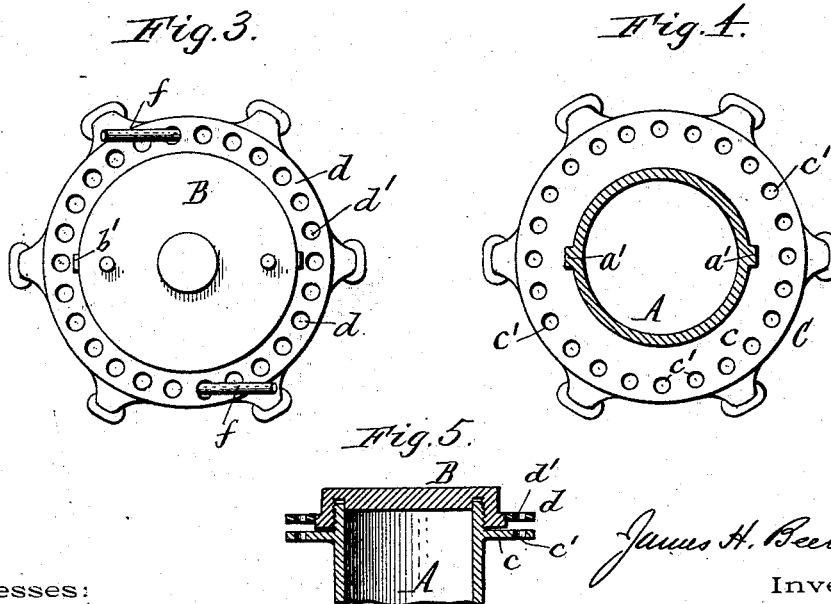
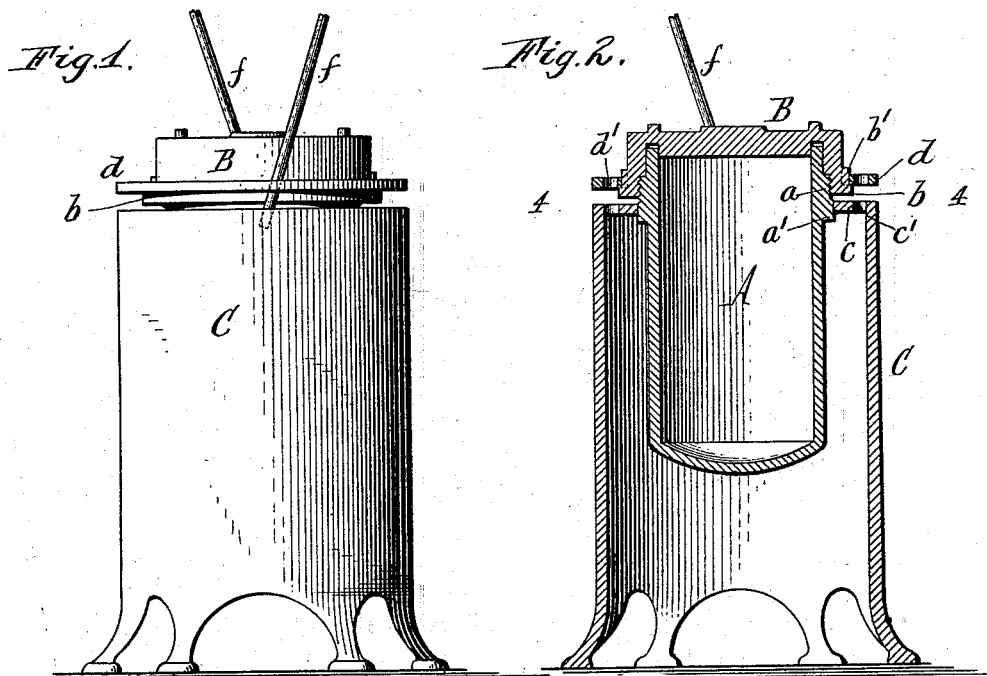


(No Model.)

J. H. BEEBEE.  
DENTAL VULCANIZER.

No. 524,798.

Patented Aug. 21, 1894.



Witnesses:

Emil Neuhart.  
Chas. F. Burkhardt.

Inventor.

By Wilhelm Bornes.

Attorneys,

# UNITED STATES PATENT OFFICE.

JAMES H. BEEBEE, OF ROCHESTER, ASSIGNOR TO THE BUFFALO DENTAL MANUFACTURING COMPANY, OF BUFFALO, NEW YORK.

## DENTAL VULCANIZER.

SPECIFICATION forming part of Letters Patent No. 524,798, dated August 21, 1894.

Application filed May 4, 1894. Serial No. 510,023. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. BEEBEE, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Dental Vulcanizers, of which the following is a specification.

This invention relates to that class of dental vulcanizers in which the cover of the vulcanizing pot is constructed in the form of a screw cap which engages with a screw thread at the top of the pot. The removal of the cap after the completion of the vulcanizing process has hitherto been attended with some difficulty, as considerable power is sometimes required to loosen the cap by means of the ordinary vulcanizer wrench which has usually been employed for this purpose. Moreover, when the packing was new and the vulcanizer leaked owing to the insufficient closure of the cap, it was difficult, if not impossible with the aid of the ordinary wrench to further close the cap, without first cooling the vulcanizer, owing to the steam pressure against the cap, which greatly increases the frictional resistance of the screw connection.

The object of my invention is to provide the vulcanizer with simple means whereby the screw cap can be sufficiently tightened, as well as released, without difficulty.

In the accompanying drawings:—Figure 1 is a side elevation of a dental vulcanizer containing my improvement. Fig. 2 is a vertical section of the same. Fig. 3 is a top plan view thereof. Fig. 4 is a horizontal section in line 4—4, Fig. 2. Fig. 5 is a vertical section of a vulcanizing pot and cap, showing a modification of my improvement.

Like letters of reference refer to like parts in the several figures.

A represents the vulcanizing pot and B its screw cap or cover.

C is the jacket or casing surrounding the vulcanizing pot and having at its upper end an inwardly projecting annular flange or ring *c* upon which the pot is supported by means of its externally screw threaded rim *a*. The vulcanizing pot is held from turning in the jacket by lugs *a'* formed on the pot and interlocking with notches formed in the flange of the jacket, as shown in Figs. 2 and 4. The

screw cap is provided with a ring or flange *d* which surrounds the same and is arranged directly above the flange of the jacket. This ring is preferably detachable from the cap and is loosely supported upon an annular rim or shoulder *b* formed at the lower end of the screw cap, and the same is prevented from turning on the cap by lugs *b'* arranged on the latter and engaging in notches formed in the ring, as shown in Fig. 3. The upper or cap-ring *d* is provided with an annular row of equidistant openings *d'*, and the lower or jacket ring *c* is provided with a similar row of openings *c'*, arranged in substantially the same vertical plane with the openings of the upper ring, but differing in number from those of the upper ring, so that the greater portion of the openings of opposing sets are off-set or break coincidence vertically, similar to vernier graduations.

I have obtained satisfactory results by providing one of the rings with twenty-four openings and the other with twenty-six openings.

After screwing the cap upon the vulcanizing pot, the same is tightened by passing two rods or levers *f* through two pairs of offset openings of the rings, the levers being placed on diametrically opposite sides of the cap and inserted in the opposing openings in such a way that they incline toward the direction in which the cap is to be turned, as shown in Figs. 1 and 3. The openings of the lower ring with which the levers engage, are thus in advance of the corresponding openings of the upper ring, and upon swinging the levers toward a perpendicular position, the upper ring and the cap are turned forward, the edges of the lower openings serving as stops or fulcrums for the levers during this action. If the cap is not sufficiently tightened by a single application of the levers, the latter are inserted in another set of offset openings and operated in the manner above described, this operation being repeated until the cap is properly tightened.

The cap is loosened by inserting the levers in the offset openings so as to incline in the opposite direction, whereby the cap is turned backward and released upon moving the levers toward a perpendicular position.

By my improved means, a powerful lever-

age is obtained which enables the screw cap to be tightened, as well as loosened under considerable steam pressure with comparatively little effort and without the use of the cumbersome wrenches heretofore employed.

The openings of the two rings are made large enough to permit the requisite rocking movement of the levers.

Instead of arranging the lower ring on the jacket of the vulcanizer, it may be formed on or secured to the upper portion of the vulcanizing pot, as shown in Fig. 5, by which construction the same result will be attained.

I claim as my invention—

1. The combination with the vulcanizing pot, of a screw cap having a perforated flange for turning it, and a stationary ring or flange arranged adjacent to the perforated flange of the screw cap and having a series of stops forming lever fulcrums; substantially as set forth.

2. The combination with the vulcanizing pot and its screw cap having a perforated ring for turning it, of a jacket surrounding the pot and provided below the cap-ring with a perforated ring having its openings arranged to break coincidence with the openings of the cap ring, substantially as set forth.

3. The combination with the vulcanizing pot and its screw cap, of a perforated ring detachably secured to the cap, and a jacket surrounding the vulcanizing pot and provided directly below the cap-ring with a perforated ring having its openings offset with reference to the openings of the cap-ring, substantially as set forth.

Witness my hand this 27th day of April, 1894.

JAMES H. BEEBEE.

Witnesses:

CHARLES M. WILLIAMS,  
GEO. E. HARMON.