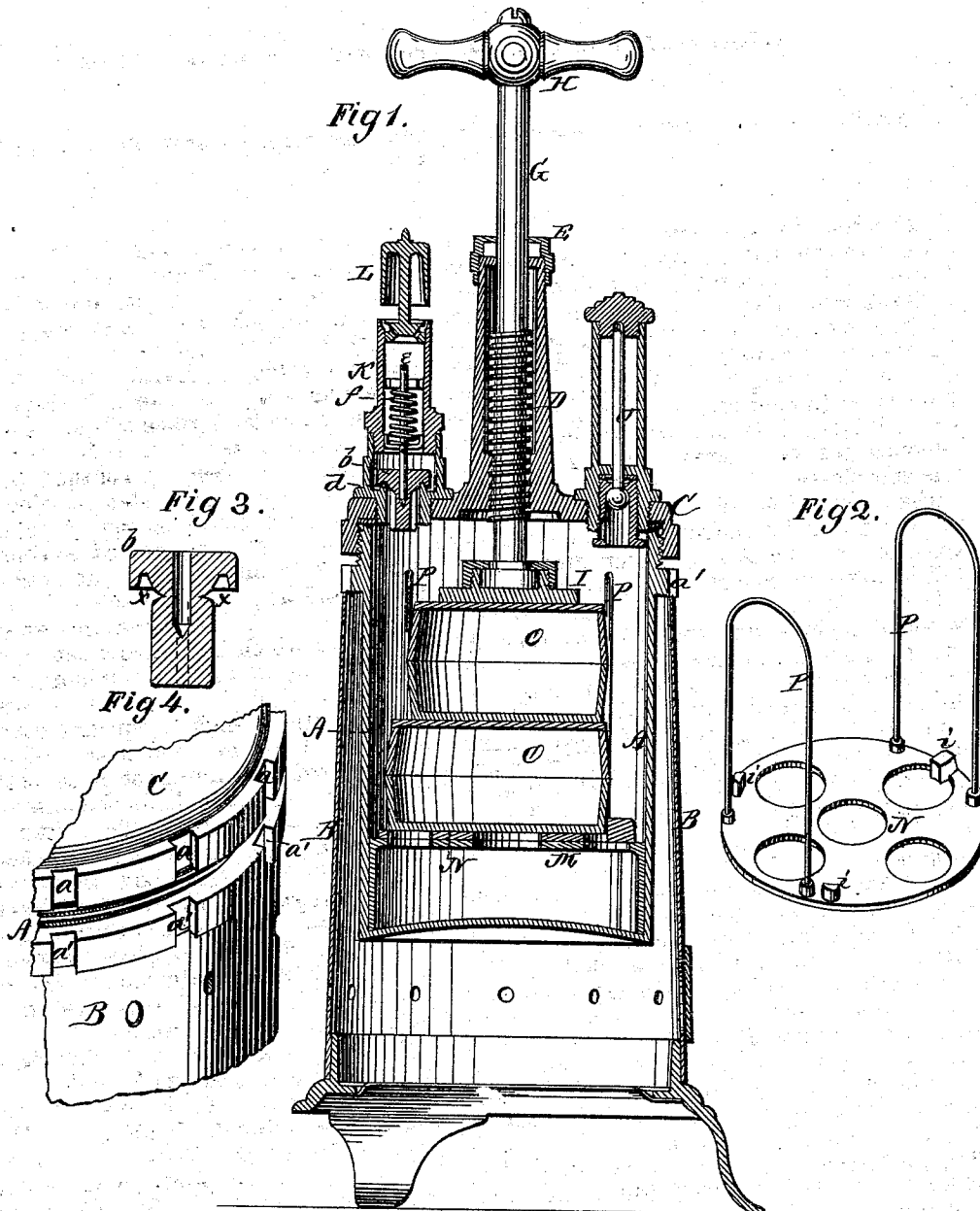


J. R. B. RANSOM.

Vulcanizing Apparatus for Dental Purposes.

No. 154,082.

Patented Aug. 11, 1874.



WITNESSES.

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JOHN R. B. RANSOM, OF TOLEDO, OHIO.

IMPROVEMENT IN VULCANIZING APPARATUS FOR DENTAL PURPOSES.

Specification forming part of Letters Patent No. **154,082**, dated August 11, 1874; application filed June 25, 1874.

To all whom it may concern:

Be it known that I, JOHN R. B. RANSOM, of Toledo, in the county of Lucas and in the State of Ohio, have invented certain new and useful Improvements in Vulcanizing Apparatus for Dental Purposes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a vulcanizing apparatus for dental and other purposes, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my vulcanizing apparatus. Fig. 2 is a perspective view of a loose perforated bottom or diaphragm used in the vulcanizer. Figs. 3 and 4 are detached views of certain parts thereof.

A represents the vulcanizer or boiler, constructed of ordinary form and size, and of any suitable material. This vulcanizer is placed within a stove or furnace, B, as shown. C is the lid of the vulcanizer, which lid is provided with a downward-projecting circumferential rim, and is screwed on the vulcanizer, as shown, so as to form a steam-tight joint. In the rim of the lid C are made a number of notches, *a a*, for the insertion of a key or wrench to turn the lid, and in a rim around the upper end of the vulcanizer are similar notches *a' a'*, for the attachment or insertion of another key or wrench to hold the boiler while the lid is being screwed on. By these means a perfectly steam-tight joint may be obtained. The lid C is, in the center, provided with a vertical packing-tube, D, in the lower end of which is formed a female screw for the passage of the screw G. Surrounding this screw, and on the upper end of the packing-tube, is screwed a cap or stuffing-box, E, as shown in Fig. 1. The upper end of the screw G is provided with a handle, H, and the lower end is provided with a swiveled

disk, I, as shown in Fig. 1. On one side of the packing-tube D in the lid C is arranged a thermometer, J, in any suitable manner. On the opposite side is a whistle-tube, K, with whistle L. In the lower end of the tube K is placed a valve, *b*, provided with downward-projecting wings, as shown in Figs. 1 and 3, and in the under surface of the valve is a circular groove or recess, *x*, to fit over the seat *d*, formed in the lower end of the tube. From the valve *b* projects a stem, *e*, which is surrounded by a spiral spring, *f*, to hold the valve down. The wing-valve *b*, as constructed, presents a broad surface to the action of the steam, and hence is not liable to be stopped; but as soon as the pressure exceeds the amount at which the valve is set it will open and give the alarm by sounding the whistle.

The vulcanizer or boiler A is formed, as shown, with a slightly upward-curved bottom, and above the same in the vulcanizer is a perforated diaphragm or false bottom, M. This diaphragm may be in the form of an inverted cup and placed on the bottom of the vulcanizer, or be permanently attached thereto at a suitable height above the bottom. On the diaphragm M is placed a perforated plate, N, provided on its upper surface with lugs *i i*, to hold the flask O in place thereon. P P are bails or handles attached to the plate N, by which said plate is easily inserted in the boiler or taken out therefrom.

Water is to be put in the boiler or vulcanizer below the diaphragm M, and one or more flasks, O, placed on the plate N, and the whole deposited on the diaphragm. The boiler being placed in the stove or furnace B and the lid C screwed down tight, as steam is generated it passes up through the perforations in the diaphragm and plate, and completely envelops the flasks. At the proper time in the process of vulcanizing, the flask or flasks are closed tightly by means of the screw G.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The perforated plate N, provided with lugs *i i* and bails or handles P P, substantially as and for the purposes herein set forth.

2. The combination of the boiler A, lid C,

perforated diaphragm M, perforated plate N, with handles P P, and the screw G, with swiveled disk I, all substantially as and for the purposes herein set forth.

3. The combination of the boiler or vulcanizer A, lid C, whistle-tube K, with whistle L, the wing-valve b, with circular groove x, and seat d, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 25th day of May, 1874.

JOHN R. B. RANSOM.

Witnesses:

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