(No Model.)

J. JOHNSON.

DENTAL VULCANIZER.

No. 478,871. Patented July 12, 1892.

FIG. 1

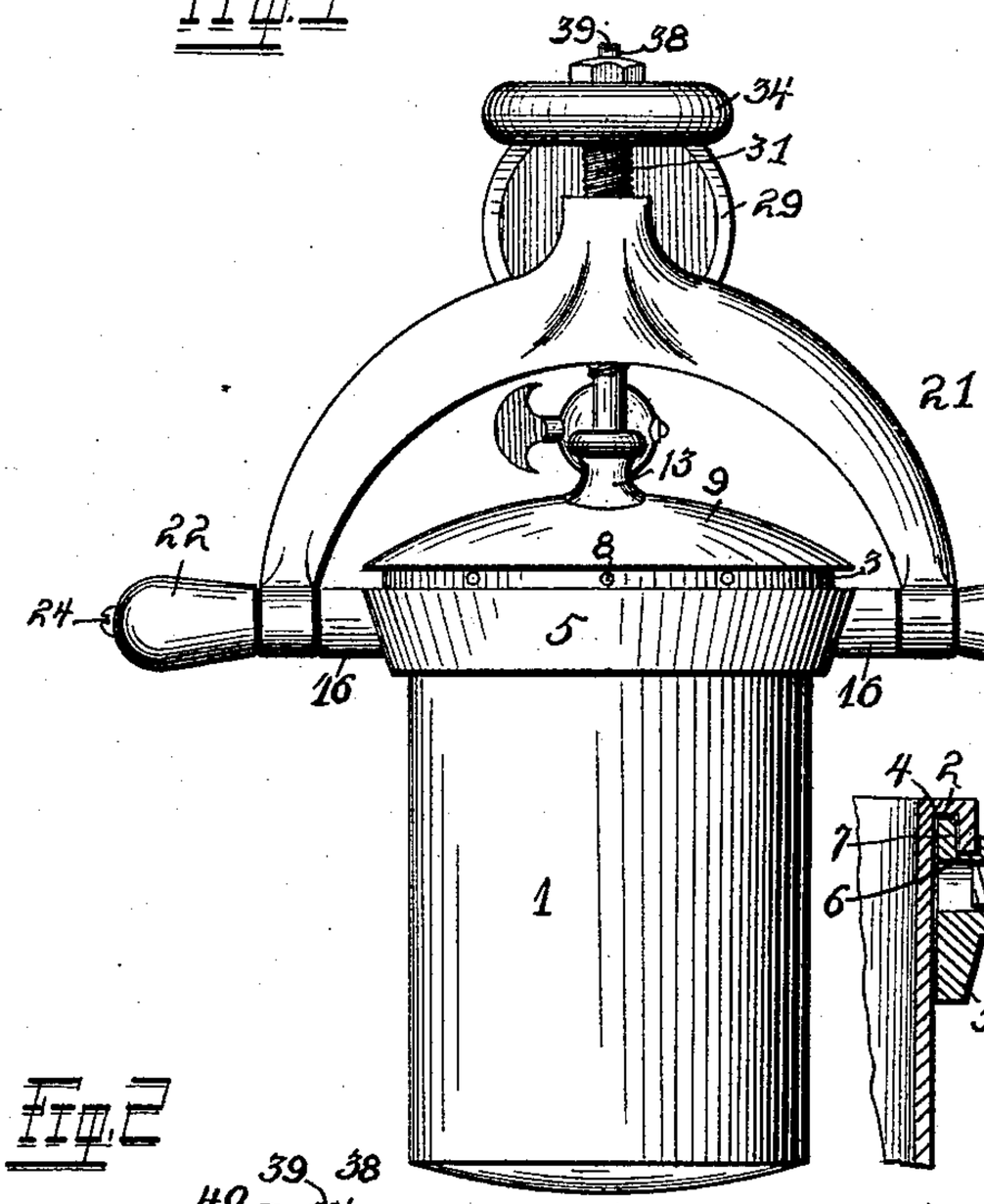


FIG. 3

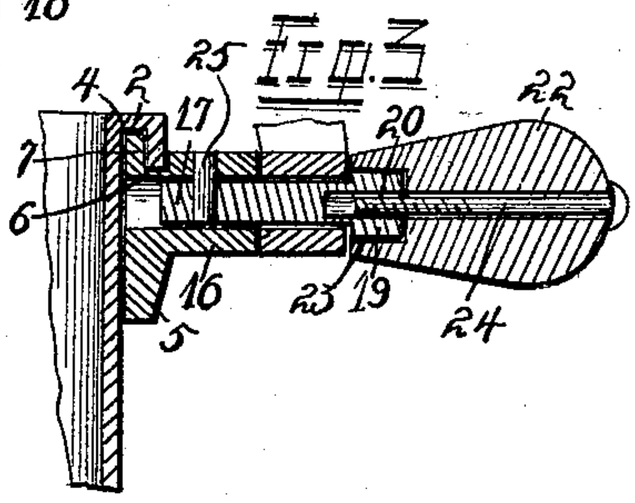
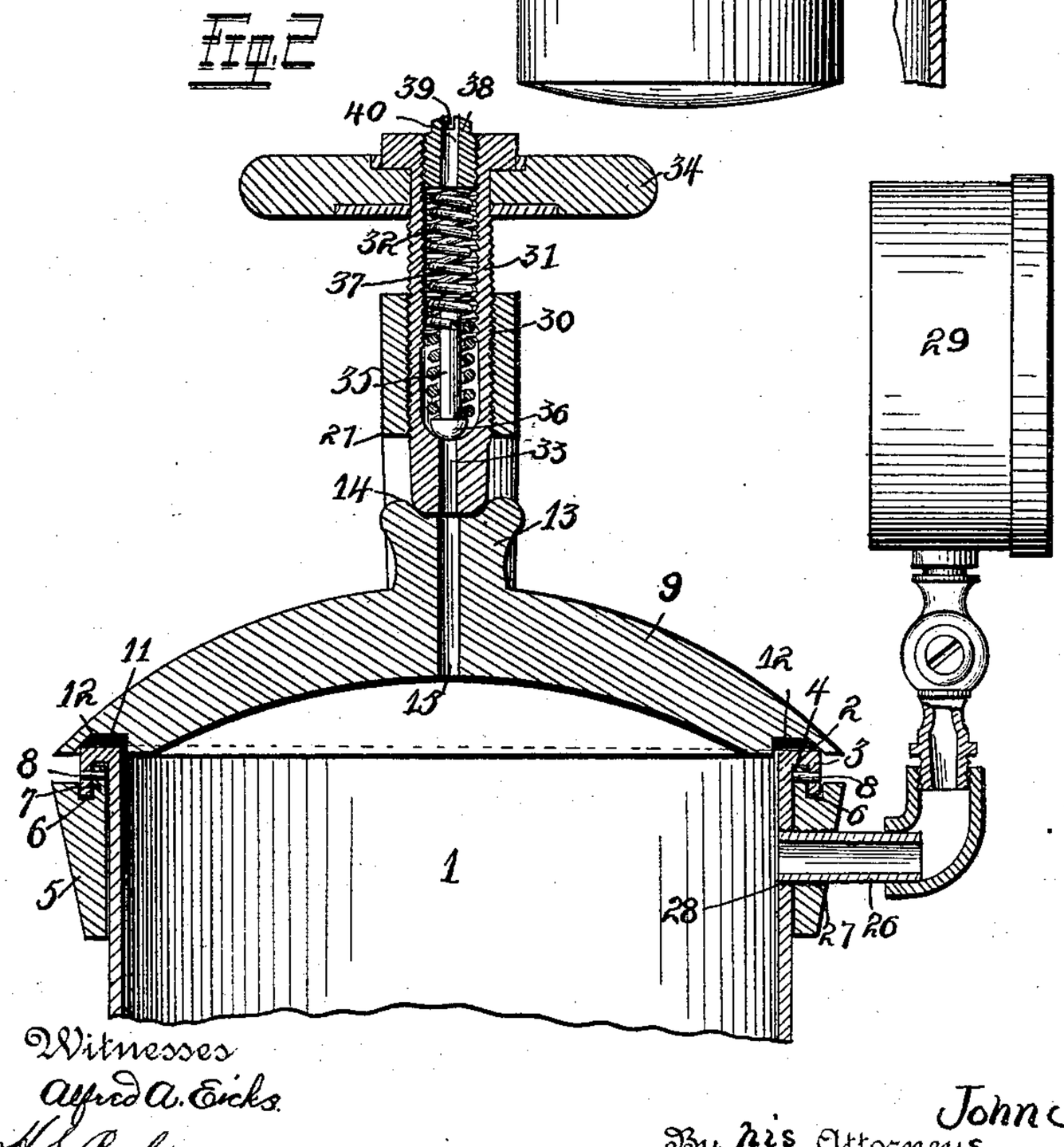


FIG. 2



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN JOHNSON, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF FIVE-SIXTHS TO ALBERT BAREIS, ALPHINIE MARTINI, AND ANNA MARTINI, OF SAME PLACE.

DENTAL VULCANIZER.

SPECIFICATION forming part of Letters Patent No. 478,871, dated July 12, 1892.

Application filed April 27, 1892. Serial No. 430,856. (No model.)

To all whom it may concern:

Be it known that I, JOHN JOHNSON, of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Dental Vulcanizers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in dental vulcanizers; and it consists in the novel arrangement and combination of parts as will be more fully hereinafter described, and designated in the claims.

Referring to the drawings, Figure 1 is a side elevation of my complete device. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a detailed sectional view showing the method of securing the yoke and handle to the collar of the retort.

Referring to the drawings, 1 indicates a flask or retort, which is provided on its upper edge with a peripheral rim 2, and formed on said rim 2 is a depending peripheral flange 3, thus forming between said flange 3 and the exterior surface of said flask or retort an annular recess 4 for the purpose more fully hereinafter described.

5 indicates a band or collar, which is substantially V-shaped in cross-section, as illustrated in Fig. 2. Said collar 5 is provided with an annular depression 6, formed in its upper face and in which the flange 3 is adapted to snugly fit, and said collar 5 is also provided with a peripheral flange 7, which is adapted to snugly fit in the recess 4. Said flange 7 is firmly and rigidly secured in the recess 4 by means of a series of pins 8, which pass through the flanges 3 and 7, as illustrated in Fig. 2.

9 indicates a removable lid, the same being provided on its lower edge with a peripheral and annular recess 11, which is lined throughout with a coating of rubber 12 or any other suitable packing substance.

13 indicates a projection which is formed on said lid, said projection being provided with a hollowed-out portion 14. (See Fig. 2 for illustration.)

15 indicates a passage which passes through the lid 9 and the projection 13 for the purposes more fully hereinafter described.

Secured to or cast integrally with the collar 5 are lugs or projections 16, the same being provided with screw-threaded bores, and mounted in said projection 16 are externally-screw-threaded bolts 17, the same being provided with heads 19, and formed in said heads 19 are screw-threaded bores 20.

21 indicates a yoke, which is secured to the projection 16 by means of the screw-threaded bolts 17. (See Figs. 1 and 3 for illustration.)

22 indicates handles, which are provided with a depression 23, in which the heads 19 of the screw-threaded bolts 17 are adapted to fit. Said handles 22 are secured to the screw-threaded bolts 17 by means of screws 24, which are adapted to be screwed into the screw-threaded bores 20, formed in the heads 19 of bolts 17. Said screw-threaded bolts 17 are prevented from being loosened or accidentally unscrewed by means of pins 25, which pass through the shell of the projections 16 and into the screw-threaded bolts 17. (See Fig. 3 for illustration.)

26 indicates a tube, which is screwed through a suitable screw-threaded perforation 27, formed in the collar 5 and also into a similar perforation 28, formed in the retort 1. (See Fig. 2 for illustration.) Said tube 26 affords communication between the interior space of said retort and the actuating mechanism of an ordinary steam-gage 29. (See Fig. 2 for illustration.)

I will now proceed to describe the method of securing the lid 9 to the retort, referring to Figs. 1 and 2 for illustration. The yoke 21 is provided with a screw-threaded hole 30, in which is mounted an adjustable and externally-screw-threaded pin 31. Said pin 31 is provided with an internally-screw-threaded bore 32 and also with a passage 33, coinciding with the passage 15, formed in the lid 9. (See Fig. 2 for illustration.) It can be readily perceived by referring to Fig. 2 that the passage 33 is of less diameter than the bore 32. Mounted on the externally-screw-threaded pin 31 is a hand-piece 34, designed for the purpose of manipulating the same. Located in the bore

32 is a stem 35, on the lower end of which is formed a valve 36, which normally rests over the passage 33. Said valve 36 is designed for a safety-valve to regulate the pressure of the steam generated in the vulcanizing process within the retort. 37 indicates a spiral spring, which is located in the internally-screw-threaded bore 32 and mounted on the valve-stem 35, one end of which rests upon the upper face of the valve 36 and the other end against an adjustable externally-screw-threaded plug 38, which is adapted to be screwed into the internally-screw-threaded bore 32. Said plug 38 is provided with a recess 39, in which the edge of a screw-driver may be inserted for adjusting the same, and also with a bore 40 for permitting the egress of steam from the retort 1. It may be stated in this connection that the lower end of the adjustable externally-screw-threaded pin 31 is so formed as to snugly fit in the hollowed-out portion 14 of the projection 13 of the lid 9. It can be readily perceived from this construction that by means of the adjustable pin 31 the lid 9 may be firmly clamped on the retort 1, and also by the proper and sufficient elevation of the pin 31 said lid may be released from said retort, the operation of which comes within the purview of ordinary judgment. It can be readily perceived, also, that the safety-valve and its coacting mechanism is thoroughly and securely incased and protected. By the constructions hereinbefore set forth it is utterly impossible to have any explosions incident to vulcanizing.

Having fully described my invention, what I claim is—

1. A vulcanizer comprising a retort, a rim 2, formed integrally with the same, a flange 3, depending therefrom, a recess 4, formed between said retort and depending flange, a collar 5, approximately V-shaped in cross-section and provided with a flange 7, adapted to fit in recess 4, and with an annular depression 6, in which the depending flange 3 is adapted to fit, internally-screw-threaded projections 16, formed on said collar, screw-threaded bolts mounted in said projections, a yoke mounted on said screw-threaded bolts, an adjustable internally-bored and screw-threaded pin 31, mounted in said yoke, a safety-valve located in said pin, coinciding passages formed in said pin and the lid, a spring mounted on said valve, and means for adjusting the tension of said spring, substantially as set forth.

2. A vulcanizer having a retort, a recess and flange formed on the top of the same, a collar provided with a flange and recess, interlocked in said flange and recess of the retort, a detachable lid provided with a hollowed-out projection on its top face and having a passage formed therein, an annular recess formed in said lid lined throughout with rubber, a yoke mounted on said collar, adjustable clamping mechanism carried by said yoke for securing and releasing said lid, a safety-valve mounted in said mechanism, a passage formed in said mechanism coinciding with the passage formed in said lid, and means for holding said valve over said passage, substantially as set forth.

3. A vulcanizer comprising a retort, a steam-gage in communication with the same, a collar secured to said retort, a yoke secured to said collar, a detachable lid, a projection formed on the same, a passage formed in said lid, an adjustable externally-screw-threaded pin provided with an internally-screw-threaded bore mounted in said yoke, a passage formed in said pin coinciding with the passage formed in said lid, a stem 35, provided with a valve 36, located in said internally-screw-threaded bore, a spiral spring mounted on said stem, and an externally-screw-threaded plug provided with a passage mounted in said pin for regulating the tension of said spring, substantially as set forth.

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

JOHN JOHNSON.

Witnesses:

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