

No. 695,715.

Patented Mar. 18, 1902.

C. P. FRITZ.

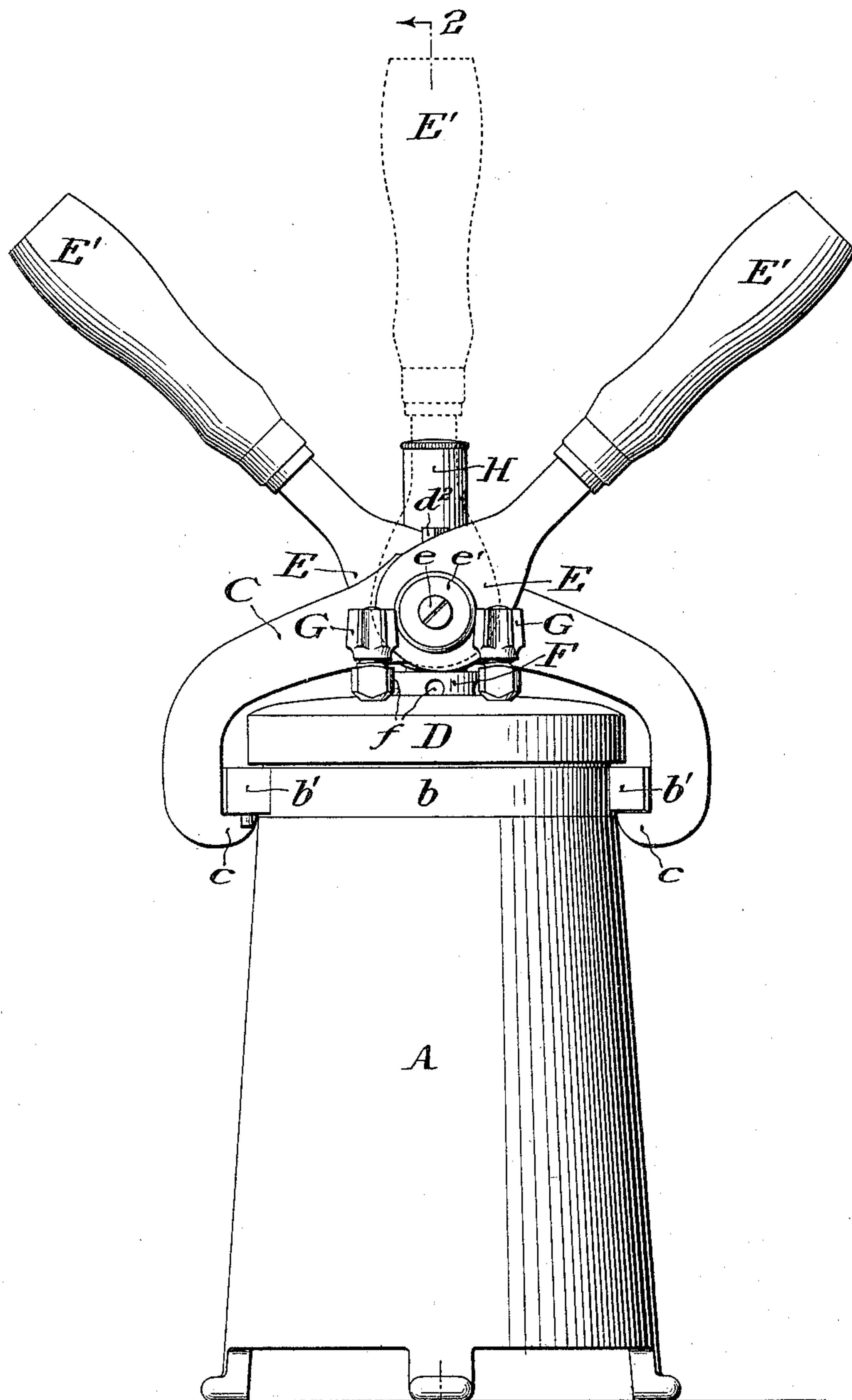
VULCANIZER.

(Application filed July 22, 1901.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.



WITNESSES:

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INVENTOR:

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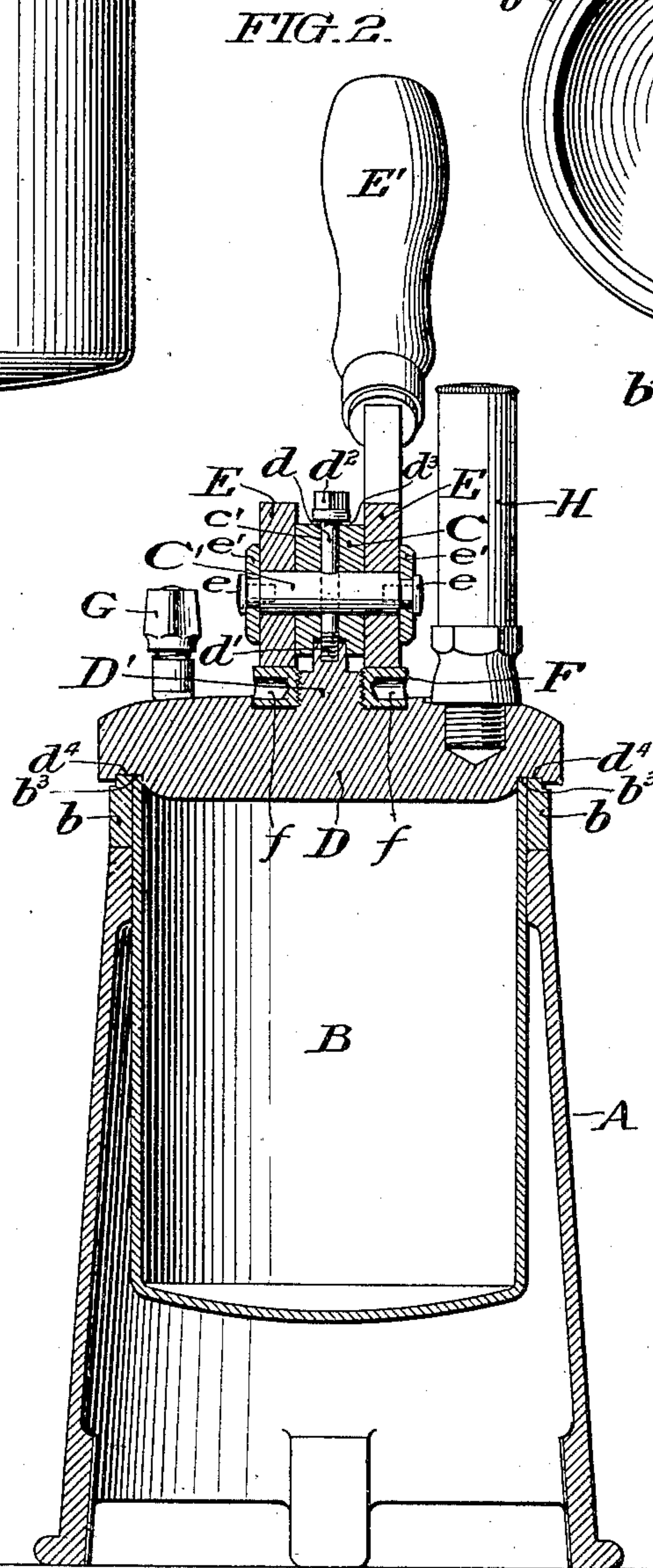
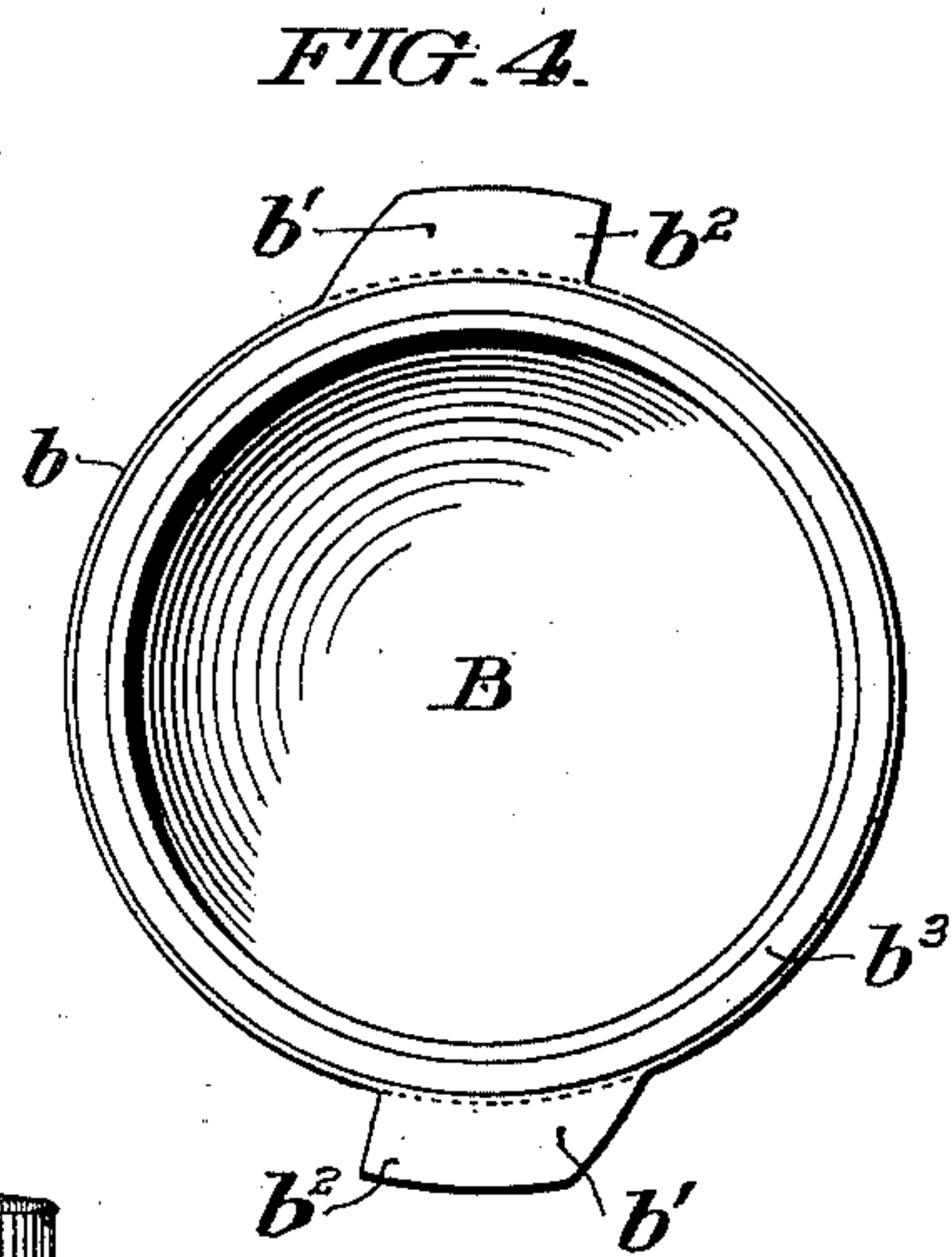
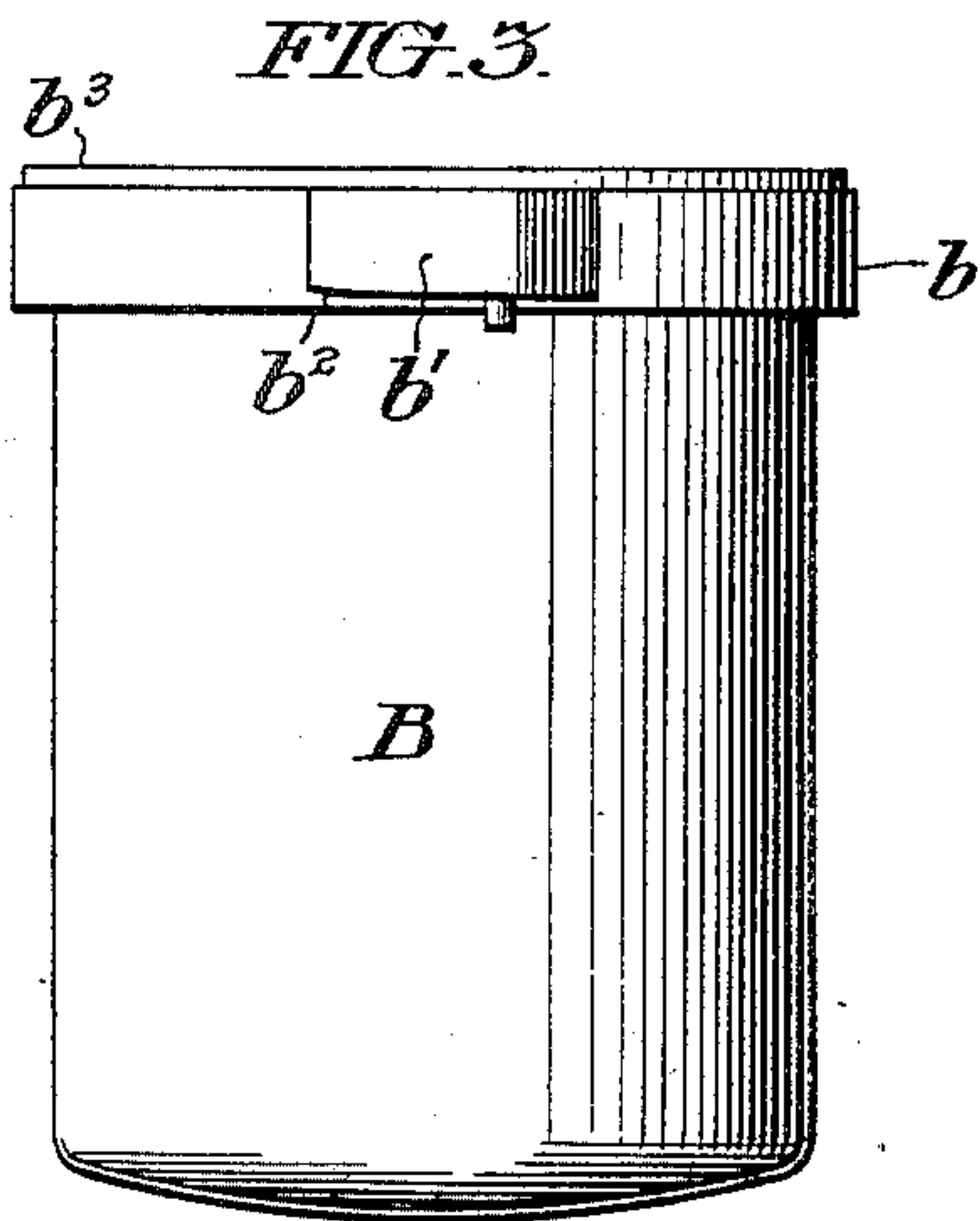
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WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES P. FRITZ, OF PHILADELPHIA, PENNSYLVANIA.

VULCANIZER.

SPECIFICATION forming part of Letters Patent No. 695,715, dated March 18, 1902.

Application filed July 22, 1901. Serial No. 69,179. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. FRITZ, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Vulcanizers, whereof the following is a specification, reference being had to the accompanying drawings.

My present invention is especially applicable to dental vulcanizers of the class comprising a retort with a removable lid; and my improvements relate particularly to the means whereby the lid of such a vulcanizer may be manipulated and secured.

My invention comprehends the novel features of construction and arrangement hereinafter more definitely specified and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a vulcanizer conveniently embodying my invention. Fig. 2 is a vertical sectional view taken on the line 2 2 in Fig. 1. Fig. 3 is a side elevation of the retort shown in section in Fig. 2. Fig. 4 is a plan view of the retort shown in Figs. 2 and 3.

In said figures, A is the outer casing or jacket, which supports the retort B, the latter being provided with an annular flange *b* at its top, which overhangs the edge of said casing A. Said flange *b* comprises laterally-projecting lugs *b'*, which are inclined at their ends *b²*, as indicated in Fig. 3, so as to conveniently engage the hooked extremities *c* of the yoke C. Said yoke supports the retort-lid D by means of the stud *d*, which is fixed concentrically in the lid at *d'* and extends through the bearing *c'* in the yoke. The head *d²* of said stud serves to prevent the removal of the lid from the yoke; but, as shown in Fig. 2, there is a space *d³* between said head *d²* and the top of the yoke C, so that the yoke and lid are capable of relative adjustment longitudinally with respect to the stud, as herein-after described. Said yoke C comprises a stud-shaft C', which projects at each side thereof, as shown in Fig. 2, and supports the rotary eccentrics E, which are counterpart and retained upon the opposite sides of the yoke by means of the screws *e* and washers *e'*. Upon the top of said lid D, surrounding the stud *d*, is a screw-threaded boss D', upon which is fitted the screw-collar F, which serves as an abutment for the eccentrics E. Said collar F is provided with peripheral wrench-sockets

f, and being adjustable in alinement with the stud *d* forms, in effect, an extension of the lid D, which may be shifted at the will of the operator, so as to adjust the relation between the eccentrics E on the yoke C and said lid D.

The operation of my device is as follows, the least radius of the eccentrics E being diametrically opposite to the handle-levers E', by which they are manipulated: When said levers are upturned to the position indicated in dotted lines in Fig. 1, the yoke C is lowered upon the stud *d* a sufficient distance to loosen the hooks *c* from the lugs *b'* and the yoke being rotated upon the stud *d* until it is clear of said lugs. The yoke C, together with the lid D, may be uplifted by the levers E' and entirely removed from the retort B, thus giving convenient access to the interior of the latter. It being desired to replace the lid of the retort, the levers E' are again upturned to the position shown in dotted lines in Fig. 1 and the yoke and lid placed upon the retort with the hooks *c* of the yoke C out of alinement with the lugs *b'* and adjoining the ends *b²* of the latter, the lid being thus seated with its recess *d⁴* in engagement with the top edge *b³* of the retort B, as shown in Fig. 2. The yoke C may be rotated upon the stud *d* independently of the lid until the hooked extremities *c* of the yoke are engaged beneath the lugs *b'*. Thereupon the levers E' being drawn down, as indicated in full lines in Fig. 1, thereby the yoke C is uplifted until the lid D is compressed upon the retort B sufficiently to seal the latter, the eccentrics E of course abutting against the collar F and effecting the relative movement of the yoke and lid in the direction of the length of the stud *d*.

Of course as the parts above described wear with continued use the levers E' will necessarily be shifted to a lower position than that indicated in full lines in Fig. 1 in order to effect the proper compression of the lid D. However, such wear of the parts may be compensated, as above described, by vertical adjustment of the collar F.

I have illustrated the lid D as provided with safety-valves G and a thermometer H, as it is usual to provide vulcanizers of this class with such devices. However, such devices form no part of my present improve-

ments. Moreover, it is to be understood that I do not desire to limit myself to the precise details of construction herein set forth, as it is obvious that various modifications may be made therein without departing from the essential features of my invention.

I claim—

1. In a vulcanizer, the combination with a retort; of a lid fitted thereto; a stud fixed concentrically in said lid; a yoke mounted to rotate and to slide longitudinally upon said stud; a head upon said stud arranged to prevent the removal of said yoke from said lid; laterally-extending lugs upon said retort; hooked extremities on said yoke arranged to engage beneath the lugs on said retort; an eccentric mounted upon said yoke; and means arranged upon said yoke to rotate said eccentric and thereby effect the relative movement of said lid and yoke, in the direction of the length of said stud, substantially as set forth.

2. In a vulcanizer, the combination with a retort; of a lid fitted to said retort; a stud fixed in said lid; a yoke mounted to rotate and to slide longitudinally upon said stud; means upon said yoke arranged to engage said retort; and an eccentric mounted to rotate upon said yoke independently of said retort, and arranged to effect the relative movement of said lid and said yoke, in the direction of the length of said stud, substantially as set forth.

3. In a vulcanizer, the combination with a retort; of laterally-extending lugs upon said retort; a lid fitted to said retort; a stud fixed in said lid; a yoke mounted to rotate and to slide longitudinally upon said stud; hooked extremities on said yoke arranged to engage the lugs on said retort; a stud-shaft fixed in said yoke; an eccentric journaled upon said shaft; and an adjustable abutment upon said lid opposed to said eccentric, substantially as set forth.

4. In a vulcanizer, the combination with a retort; of a lid fitted to said retort; a stud fixed in the top of said lid, in concentric relation therewith; a yoke mounted to rotate and to slide longitudinally upon said stud; a head upon said stud, arranged to prevent the removal of said yoke; an adjustable abutment upon said lid; an eccentric journaled upon said yoke in opposition to said abutment; and a handle-lever upon said eccentric, arranged to effect rotation of the latter and the relative movement of the lid and yoke, in the direction of the length of said stud, substantially as set forth.

5. In a vulcanizer, the combination with a retort; of a lid fitted to said retort; a stud fixed in the top of said lid, in concentric relation therewith; a yoke mounted to rotate

and to slide longitudinally upon said stud, means upon said stud, arranged to prevent the removal of said yoke; a stud-shaft fixed in said yoke; two eccentrics respectively journaled upon the opposite extremities of said shaft; means to retain said eccentrics upon said shaft; an abutment upon said lid, opposed to said eccentrics; and means to adjust said abutment toward and away from said eccentrics, substantially as set forth.

6. In a vulcanizer, the combination with a retort; of a lid fitted to said retort; diametrically opposite lugs projecting laterally from said retort; a stud fixed concentrically in said lid; a yoke mounted to rotate upon said stud; hooked extremities on said yoke arranged to engage the lugs on said retort; a stud-shaft fixed in said yoke; two counterpart eccentrics respectively journaled upon the opposite extremities of said shaft; handles upon the respective levers arranged to effect rotation thereof; an abutment upon said lid opposed to both of said eccentrics; and means to adjust said abutment, substantially as set forth.

7. In a vulcanizer, the combination with a casing; of a retort fitted to said casing; an annular flange at the top of said retort overhanging said casing; diametrically opposite lugs projecting laterally from said flange; a lid fitted to said retort; a stud fixed concentrically in said lid; a yoke mounted to rotate upon said stud, independently of said casing; a head upon said stud arranged to limit the movement of said yoke longitudinally with respect to said stud; hooked extremities upon said yoke, arranged to engage the lugs on said retort; counterpart eccentrics journaled upon said yoke and arranged to effect the relative movement of said lid and yoke in the direction of the length of said stud, substantially as set forth.

8. In a vulcanizer, the combination with a retort; of a lid fitted to said retort; a yoke mounted to rotate upon said lid; means to prevent the removal of said yoke from said lid; lugs upon said retort, projecting laterally beneath said lid; hooked extremities upon said yoke, overhanging the periphery of said lid and engaged beneath said lugs; an eccentric mounted to rotate upon said yoke, independently of said retort; and means to rotate said eccentric, arranged to relatively shift said yoke and said lid, and compress the latter upon said retort, substantially as set forth.

In testimony whereof I have hereunto signed my name, at Philadelphia, Pennsylvania, this 11th day of May, 1901.

CHARLES P. FRITZ.

Witnesses:

ARTHUR E. PAIGE,
E. L. FULLERTON.