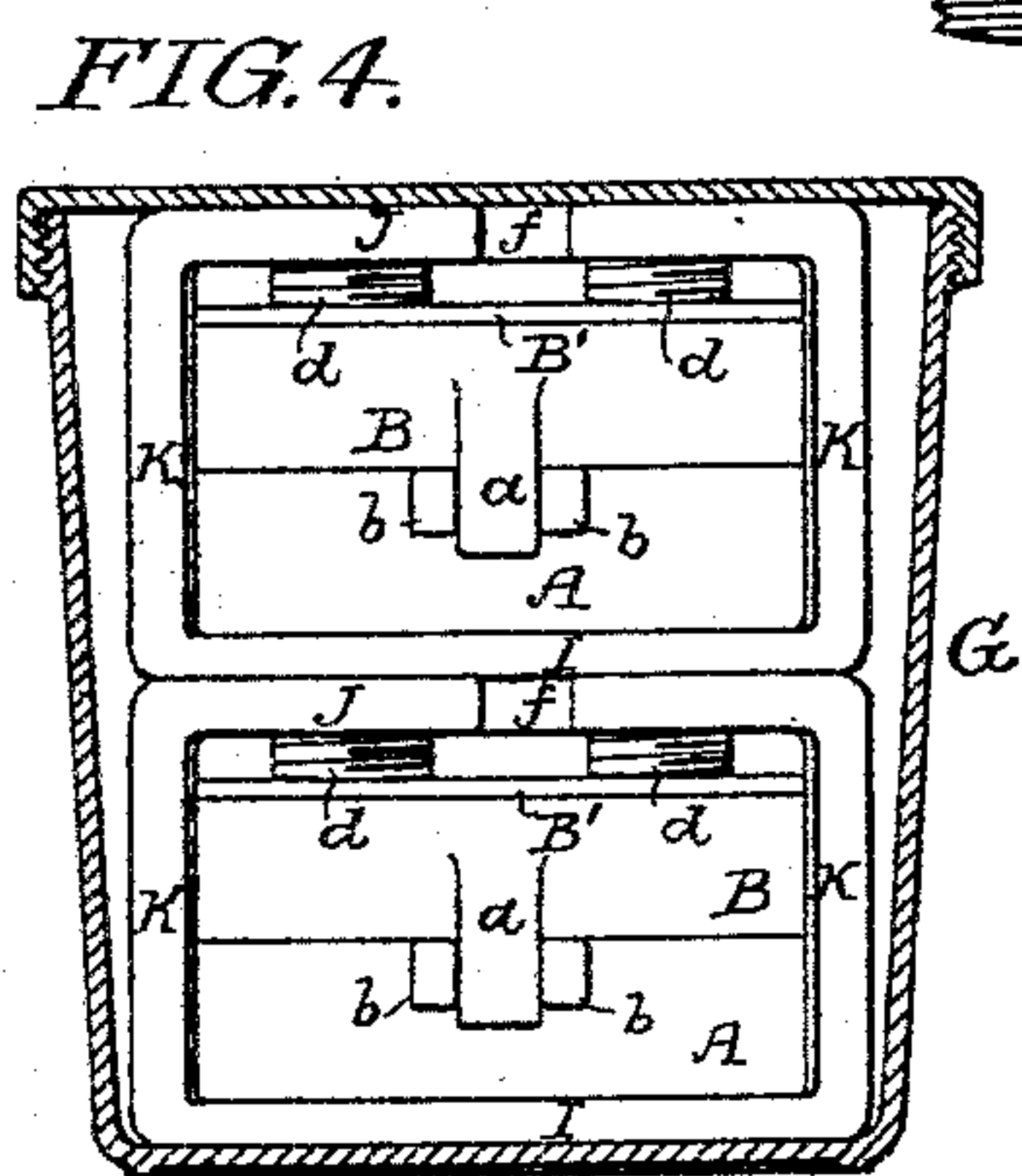
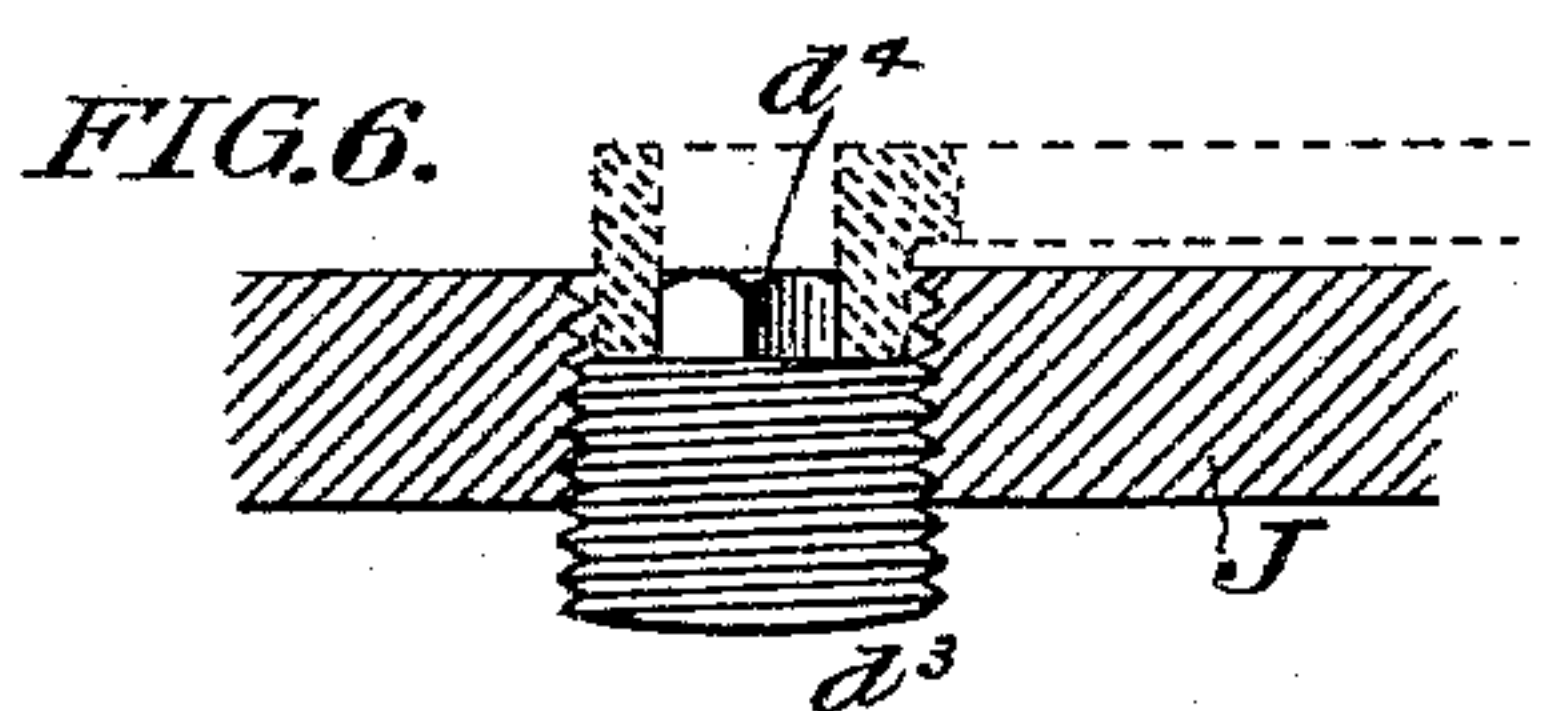
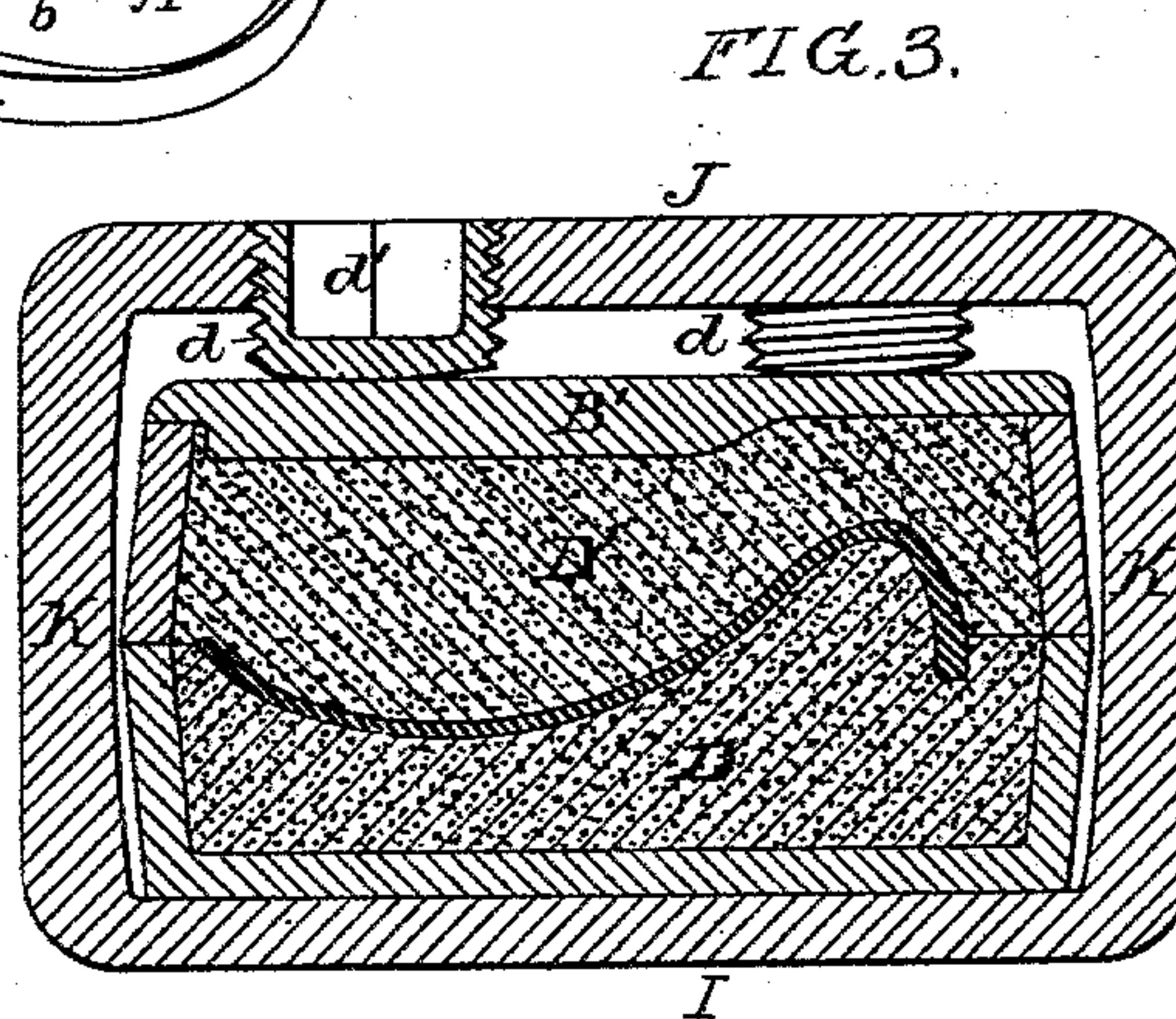
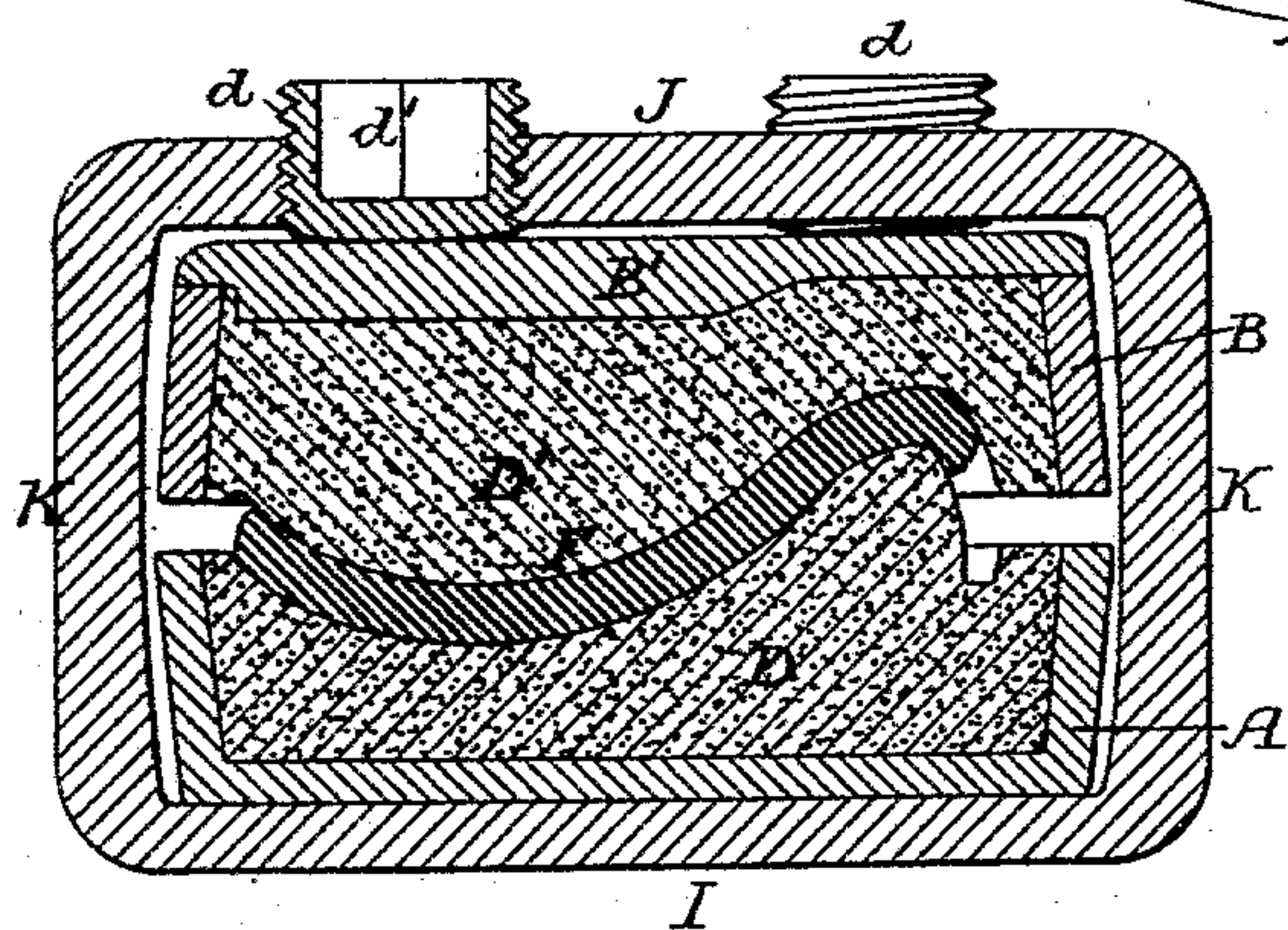
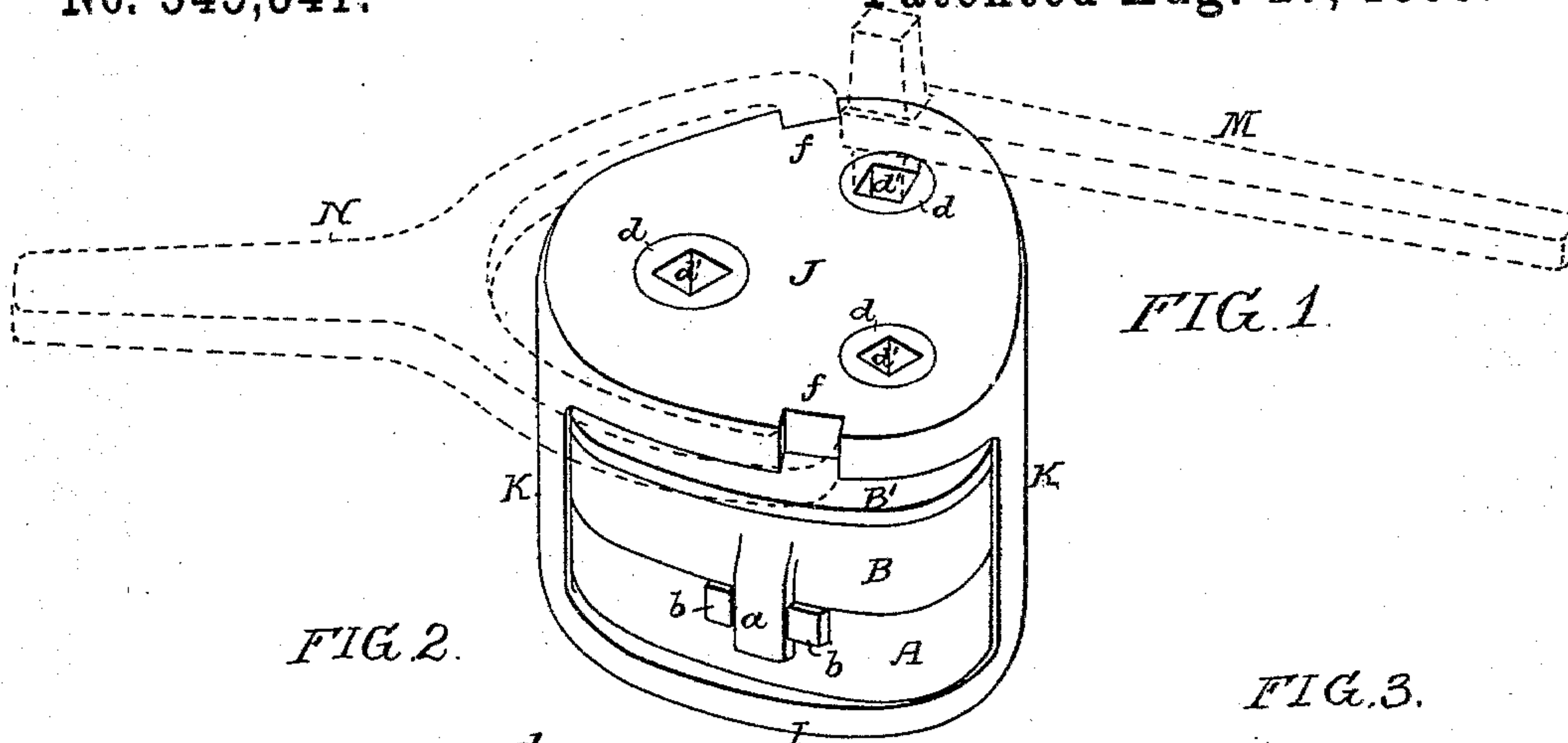


(No Model.)

W. P. BROWN.
VULCANIZING FLASK.

No. 545,341.

Patented Aug. 27, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

WISTAR P. BROWN, OF PHILADELPHIA, PENNSYLVANIA.

VULCANIZING-FLASK.

SPECIFICATION forming part of Letters Patent No. 545,341, dated August 27, 1895.

Application filed February 2, 1895. Serial No. 537,149. (No model.)

To all whom it may concern:

Be it known that I, WISTAR P. BROWN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Vulcanizing-Flasks, of which the following is a specification.

The object of my invention is to provide for the use of dentists a vulcanizing-flask combined with more convenient and effective means than those usually employed for compressing the flask; and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a dentist's vulcanizing-flask provided with a compressor constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same on a larger scale and showing the parts of the flask as they appear before compression. Fig. 3 is a view similar to Fig. 2, but showing the flask fully compressed. Fig. 4 is a sectional view of a vulcanizer with a pair of flasks contained therein. Fig. 5 is a perspective view illustrating a modified form of compressor for the flask, and Fig. 6 is a sectional view illustrating a modification of one of the details of the compressor.

The flask is composed, as usual, of the lower cup-shaped part A and an upper part B with detachable cap-plate B', the proper adjustment of the parts A and B in respect to each other being effected by the engagement of one or more lugs *a* on the part B with projections *b* on the part A of the flask. The part A of the flask contains a plaster cast D, and the upper part of the flask contains a cast D', the teeth being embedded in one of these casts, and the dental plate is formed by compressing between these two casts and around the bases of the teeth a sheet of soft rubber F, which is then vulcanized by inclosing the flask in the vessel G, Fig. 4, and subjecting it to heat for a certain period, after which the flask is removed and permitted to cool prior to the separation of the sections of the flask and the removal of the plate with its teeth therefrom.

In order to provide for the compression of the flask, I use a frame comprising a base plate I, a top plate J, and connecting end bars K, the space between the top and bottom bars of the frame being sufficient to per-

mit of the introduction of the flask when the sections of the same are separated, as shown in Fig. 2, but the top plate of the frame being provided with a series of screw-plugs *d*, having sockets *d'*, for the reception of a suitable wrench, such as shown by dotted lines at M in Fig. 1, whereby said screw-plugs may be turned so as to press upon the top plate B' of the flask, and thus cause the upper section B of the same to be forced down toward the bottom section A, the excess of rubber F being forced to escape between the upper and lower sections of the flask until the latter are finally forced together, as shown in Fig. 3.

It is frequently necessary to subject the flask to heat after a partial compression, so as to soften the rubber and permit of a further compression, such heating being generally effected by placing the flask in boiling water. As this necessitates the heating of the compressor as well as the flask, I provide for the proper holding of the said compressor while the wrench M is being used by forming in the top plate J opposite notches or recesses *f* for the reception of the hooked end of a forked wrench N, such as shown by dotted lines in Fig. 1, this wrench being held in one hand while the wrench M is manipulated by the other hand, so that a powerful leverage can be exerted in order to effect the screwing up of the plugs *d*, and the heated compressor is not touched by the hands of the operator, a spring clip or lifter, such as shown by dotted lines at P in Fig. 5, being used for engaging with the notched top plate J, in order to deposit the same in or remove it from the boiling water used for heating the flask.

When the sections of the flask have been completely compressed, as shown in Fig. 3, the tops of the screw-plugs *d* are flush with the upper face of the top plate J of the compressor, so that two flasks with their clamps can be conveniently introduced into the usual vulcanizer G, which is employed for subjecting the contents of the flask to the heat necessary for effecting vulcanization.

In Fig. 5 I have shown a compressor differing slightly in form from that illustrated in Fig. 1 and having but a single central screw-plug *d*² for compressing the flask; but I prefer the construction shown in Fig. 1, as pressure can be more effectively exerted through

the medium of a series of screw-plugs distributed throughout the area of the top plate of the compressor than by a single screw-plug. The use of a series of screw-plugs also permits the compression of one part of the flask independently of another, as is frequently required in certain classes of work. It will be evident that the compressor which I employ is capable of exerting much more powerful pressure upon the flask than can be exerted by screw bolts and nuts engaging with lugs formed upon the sections of the flask, as sometimes employed, and the screw-plugs are more convenient to manipulate than such bolts and nuts and are less liable to be lost or mislaid. In fact, the screw-plugs d need never be removed from the top plate of the compressor. By thickening the top plate J the formation of sockets in the screw-plugs can be dispensed with and a plug d^3 , having a polygonal projection d^4 , can be used, as shown in Fig. 6, for instance, the wrench entering the opening in the top plate in screwing up the plug so that the portion of the latter which engages the wrench can pass below the upper face of the plate.

Having thus described my invention, I claim and desire to secure by Letters Patent—

30 1. The combination of the sectional vulcanizing flask, with a compressor comprising a top plate, a bottom plate, and connecting end

bars, said top plate being provided with one or more screw plugs for bearing upon the top plate of the flask, each of said screw plugs having a portion adapted for receiving a wrench, and capable of being screwed down below the upper face of the top plate of the compressor, substantially as specified. 35

2. The combination of the sectional vulcanizing flask, with a compressor comprising a top plate, a bottom plate, and connecting end bars, said top plate being provided with a series of screw plugs distributed throughout the area of the plate and adapted to bear upon the top plate of the flask and press said flask downward upon the bottom plate, substantially as specified. 40 45

3. The combination of a sectional vulcanizing flask, with a compressor, comprising a top plate, a bottom plate and connecting end bars, said top plate having notches for the reception of the jaws of a retaining wrench, and being provided with one or more screw plugs for bearing upon the top plate of the flask, substantially as specified. 50 55

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WISTAR P. BROWN.

Witnesses:

FRANK E. BECHTOLD,
JOSEPH H. KLEIN.