

(No Model.)

J. R. HOUSEL.
DENTIST'S FLASK.

No. 283,487.

Patented Aug. 21, 1883.

Fig. 1.

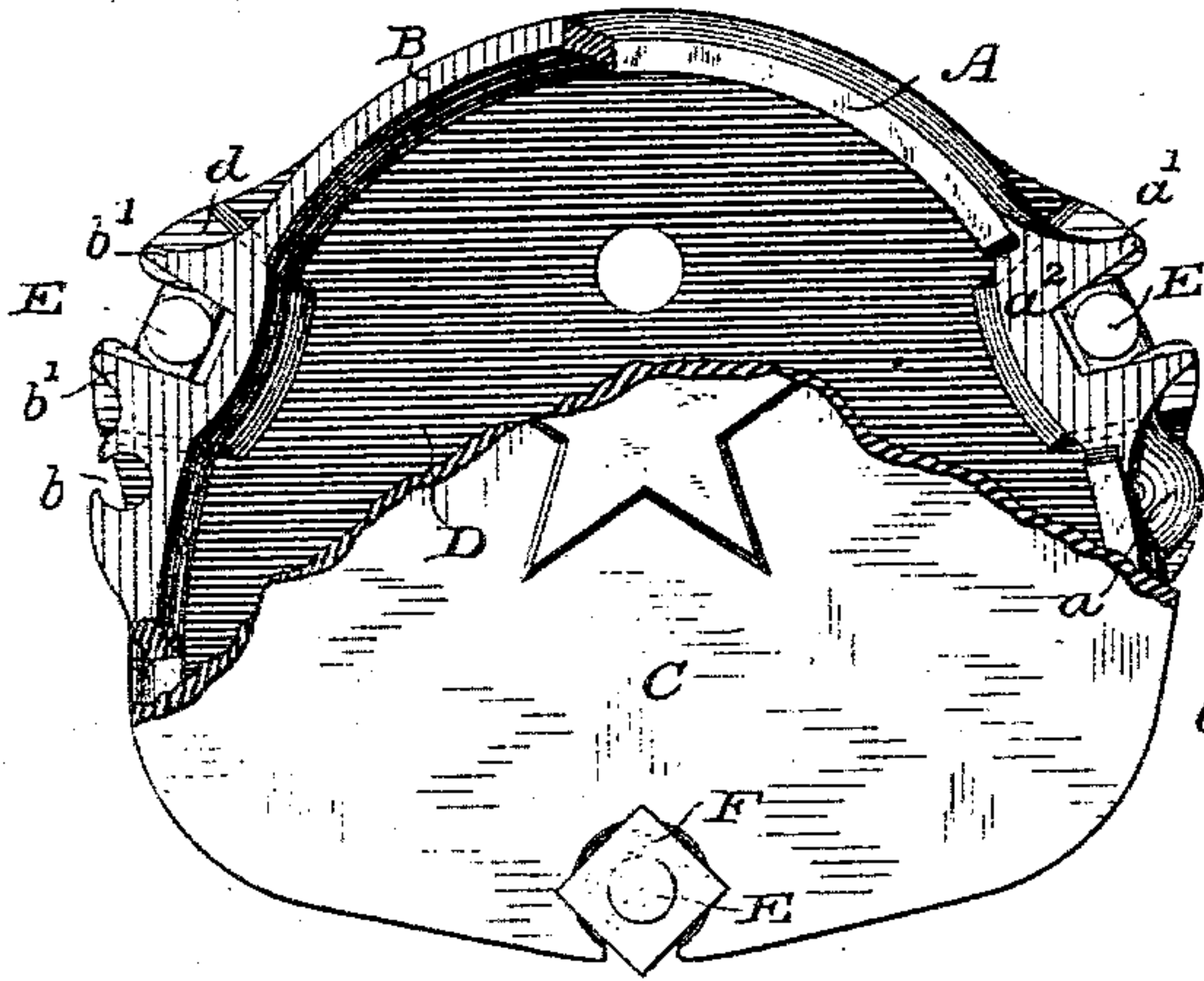


Fig. 2.

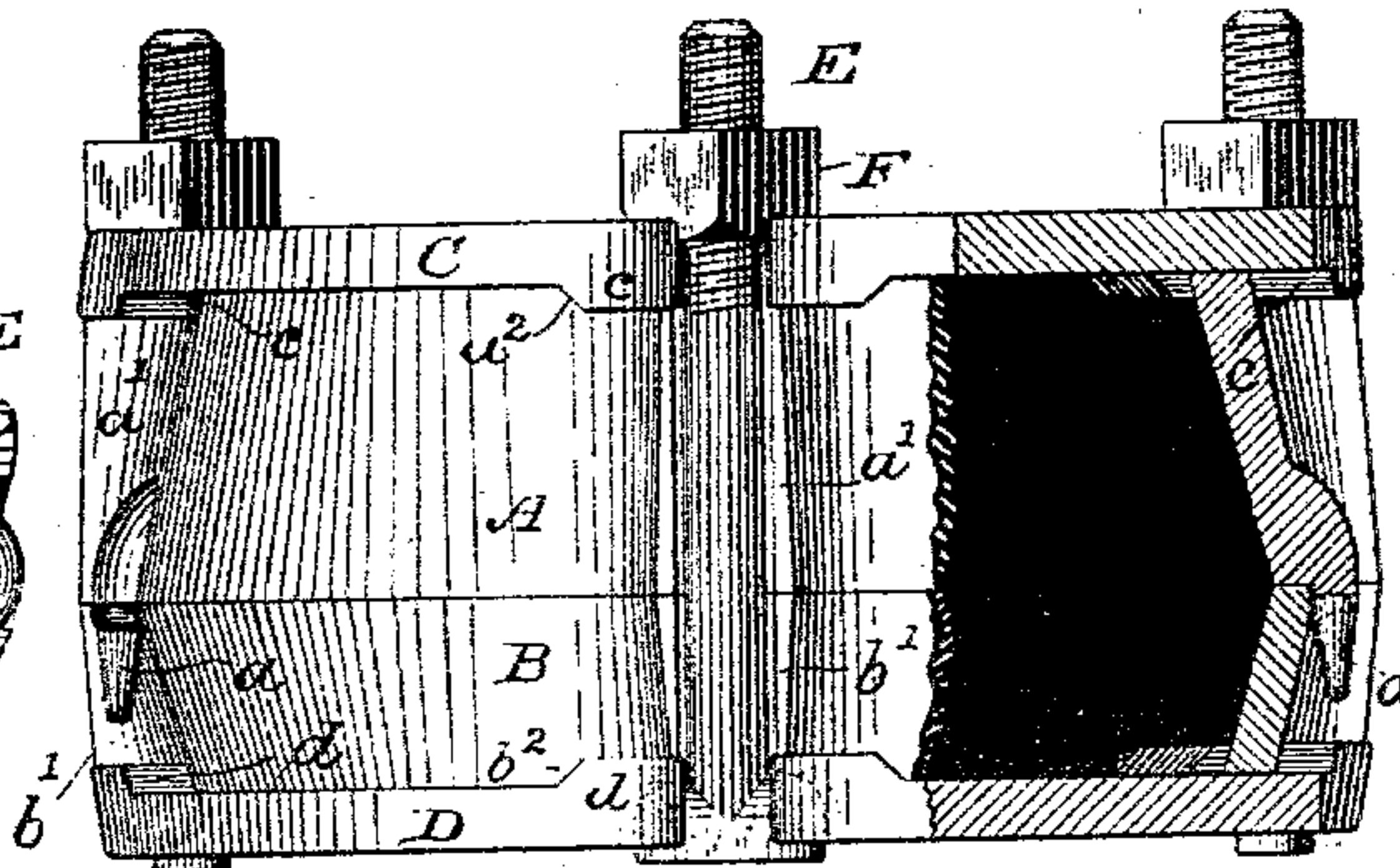


Fig. 3.

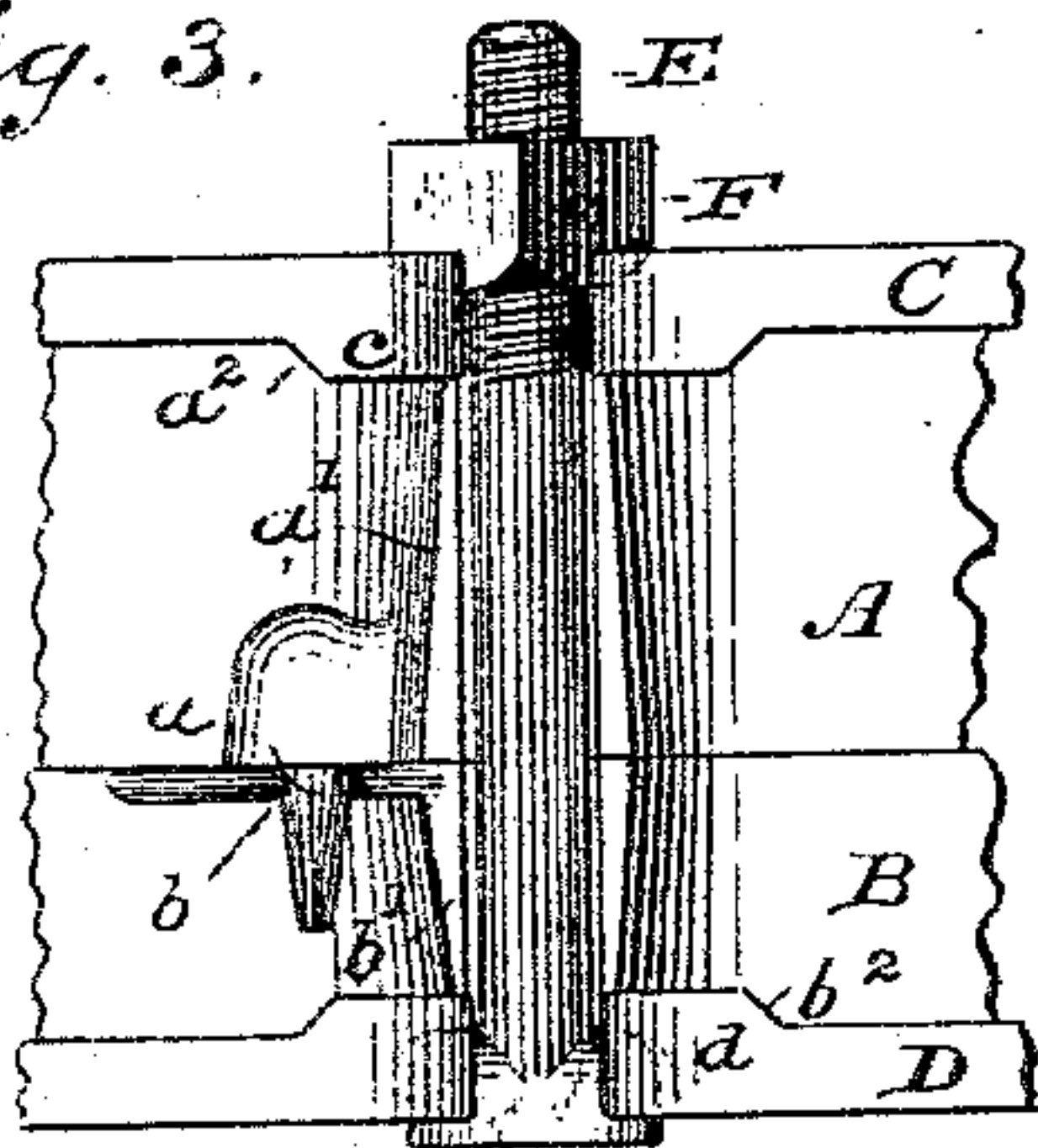


Fig. 4.

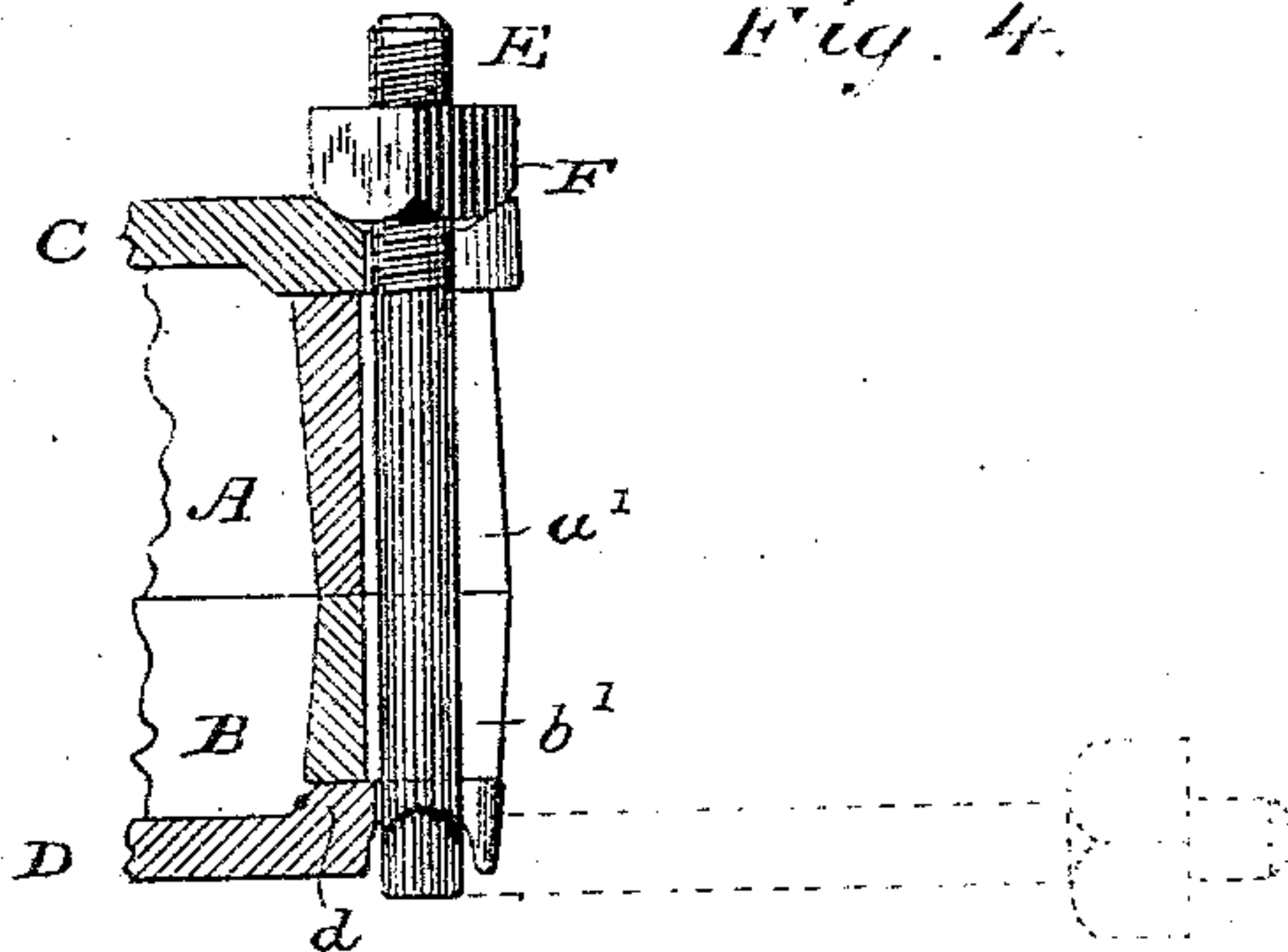


Fig. 5.

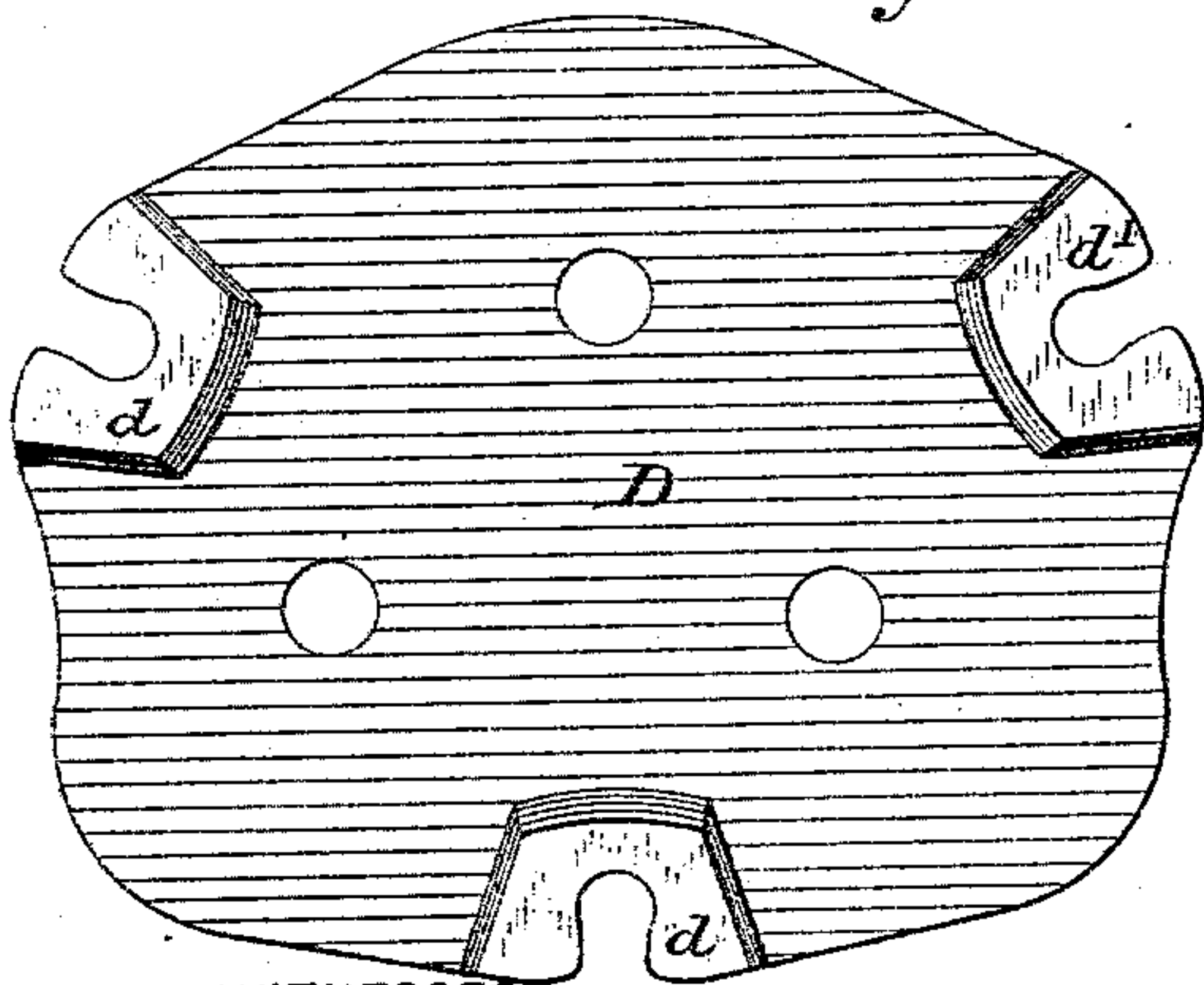
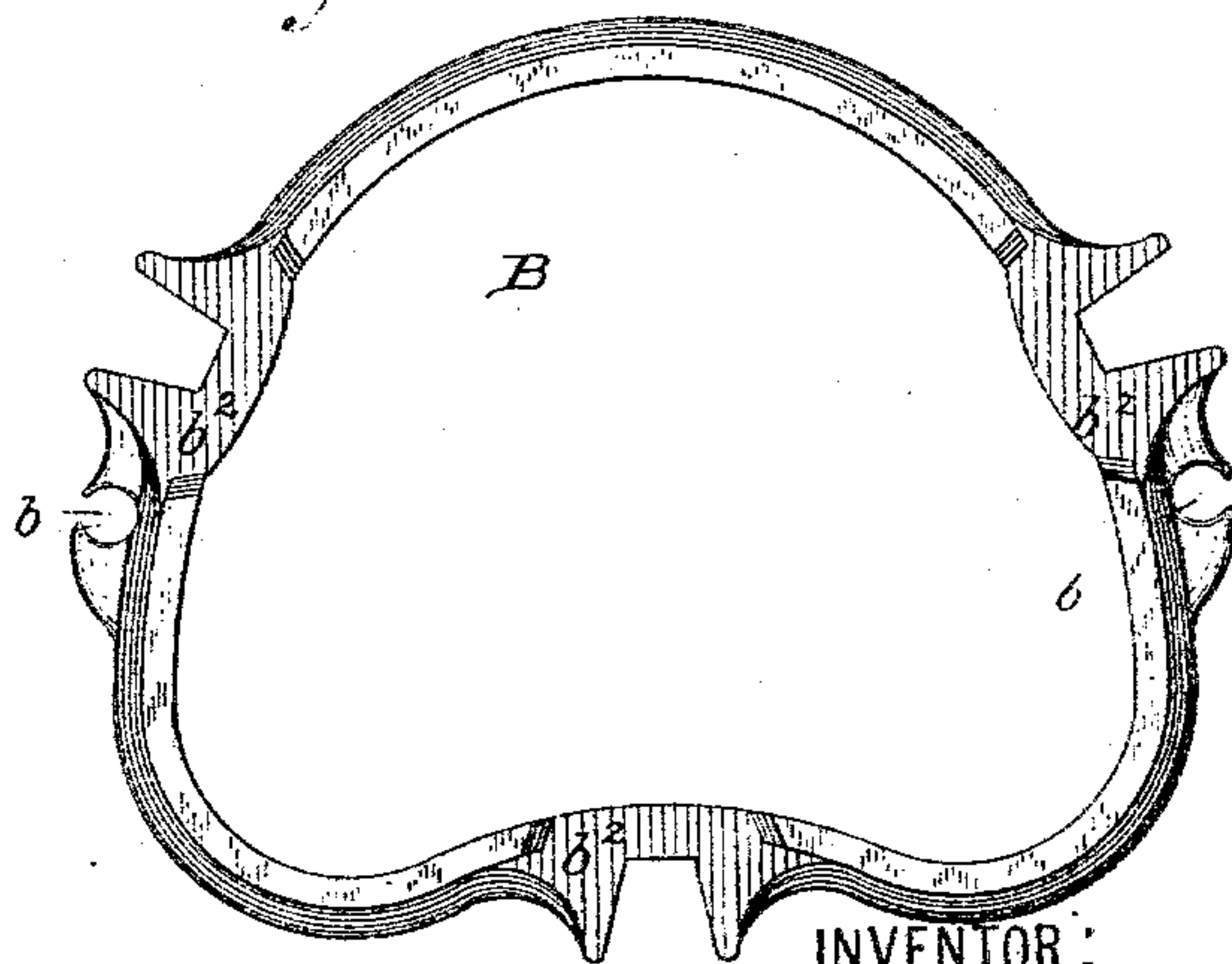


Fig. 6.



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DENTIST'S FLASK.

SPECIFICATION forming part of Letters Patent No. 283,487, dated August 21, 1883.

Application filed June 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH R. HOUSEL, of Watsonstown, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Dentists' Flasks, of which the following is a specification.

My invention relates to flasks more especially designed for the use of dentists, and for use with celluloid, of which artificial dentures are to be made. Celluloid is a well-known material for such dentures. In manufacturing artificial dentures from celluloid, a blank of celluloid having the general form of the plate or denture to be made, is placed between plaster molds in a flask, which have the desired impression. The flask is then placed in a small stove called a "heater," and pressure is applied to force the mold together on the blank, which, being softened or rendered plastic by the heat, will take the form of the impression. If the heat is not high enough to make the celluloid very plastic, a greater amount of pressure is required, and this comes upon the bolts generally employed, which pass through the top and bottom plates of the rings or sections of the flask, which top and bottom plates overlap said rings. When a heavy strain is brought upon the plates, they frequently give way, as the edges of the plates through which the bolts pass are unsupported, by breaking when made of cast-iron, or by bending when made of malleable iron or brass. One effect of the heat upon the celluloid is to cause it to swell and become spongy in cooling if not restrained by the mold.

The object of my invention is to provide a flask which will permit any desired amount of pressure to be brought upon the bolts and top and bottom plates in manufacturing dentures without liability of said plates giving way by bending or breaking.

The subject-matter claimed is particularly pointed out at the close of the specification.

In the accompanying drawings, which show my improvements as embodied in the best way now known to me, Figure 1 is a plan view, the top plate or cover being partially broken away, showing the upper edge of the top flask

section or ring at the right side of the figure, said section being broken away near the middle of the flask to show the top edge of the lower flask section or ring at the left side of the figure. Fig. 2 is a front view of the flask, partly in section, showing the manner of fitting the parts of the flask together, and showing also the strengthening ribs or projections, between which the tightening or clamp bolts lie. Fig. 3 is a detached view of the end of the flask, showing the manner of fitting the sections together with a guide pin or dowel of the upper ring of the flask entering an opening in a lug on the upper edge of the lower section or ring thereof, and showing, further, the strengthening ribs or projections between which the tightening-bolts lie. Fig. 4 is a section through the end of the flask, showing the tightening-bolt in position to clamp the flask parts together, the dotted line showing the bolt as loose and swung down to permit the sections of the flask to be separated. Fig. 5 is a plan or top view of the lower or bottom plate of the flask, showing the thickened or raised portions thereon; and Fig. 6 is a view of the lower flask ring or section inverted, showing the recesses or seats which receive the raised or thickened portions on the upper surface of the bottom plate.

The flask in this example is composed of a top ring or section, A, a lower ring or section, B, having lugs *b*, with holes to receive the usual guide pins or dowels, *a*, projecting from the lower edge of the upper ring or section, A, a top plate, C, and a bottom plate, D. The top and bottom plates, C D, overlap or extend beyond the flask-sections A B to receive the tightening or clamp bolts E, of which there are three in this example, as usual. The heads *e* of the bolts E in this example are loosely fitted in recesses in the projecting edge of the bottom plate, so as to be readily swung down to permit of the opening and closing of the flask, as usual. When in their clamping position, as shown in Figs. 1, 2, 3, and 4, the upper ends of the bolts lie in recesses or between ears on the projecting edge of the top plate, and their threaded ends receive clamp or screw nuts F, which, when tightened up, obviously

clamp the top and bottom plates tightly upon the upper and lower edges of the flask rings or sections A and B. As heretofore stated, were no provision made against such result, on tightening the bolts so as to exert considerable pressure on the flask-sections, the top and bottom plates are liable to give way, bend, or break at their edges. To provide against this I provide the flask-sections A B at their sides with vertical projections, ribs, or flanges $a' b'$ coincident or in line with each other, fitted to receive the tightening or clamp bolt between them. These ribs or projections $a' b'$ extend or project outward from the sides of the flask-sections, not only to encompass the bolts, but also to afford extended seats, upon which the top and bottom plates rest at the points where the bolts pass between them. Obviously, therefore, the portions of the top and bottom plates which receive said bolts are rigidly supported, and when pressure is applied by screwing up the clamp-nuts, there is no danger of breaking or bending said plates. To still further strengthen the top and bottom plates, C D, at the points where the bolts pass through and act upon them, said plates are thickened up at said points by raised portions $c d$; and these raised or thickened portions are seated in corresponding depressions or recesses, $a^2 b^2$, formed, respectively, in the top and bottom edges of the flask-sections A B. The edges of the flask-sections A B which fit together are true or smooth to permit a close joint, while, by reason of the recesses or depressions $a^2 b^2$, which re-

ceive the thickened or raised portions $c d$ of the top and bottom plates, a close joint is also permitted between the flask-sections and the top and bottom plates.

I have described my improvements as applicable to the manufacture of artificial dentures of celluloid. It will be understood, of course, that they are equally applicable for use in the manufacture of such dentures from other materials—rubber, for instance—where a great amount of pressure is required to close the flask in the process of packing.

I claim as my invention—

1. The combination of the flask-body, composed of rings having external strengthening ribs or projections, the separable top and bottom plates, and the clamp-bolts, substantially as described.

2. The combination of the two flask-rings having external strengthening-ribs, the separable top and bottom plates having raised or thickened portions fitting corresponding seats in said flask-rings, and clamp-bolts lying between said strengthening-ribs, and passing through said thickened portions of the top and bottom plates, substantially as described.

In testimony whereof I have hereunto subscribed my name this 5th day of June, A. D. 1883.

JOSEPH R. HOUSEL.

Witnesses:

W. W. FISHER,
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