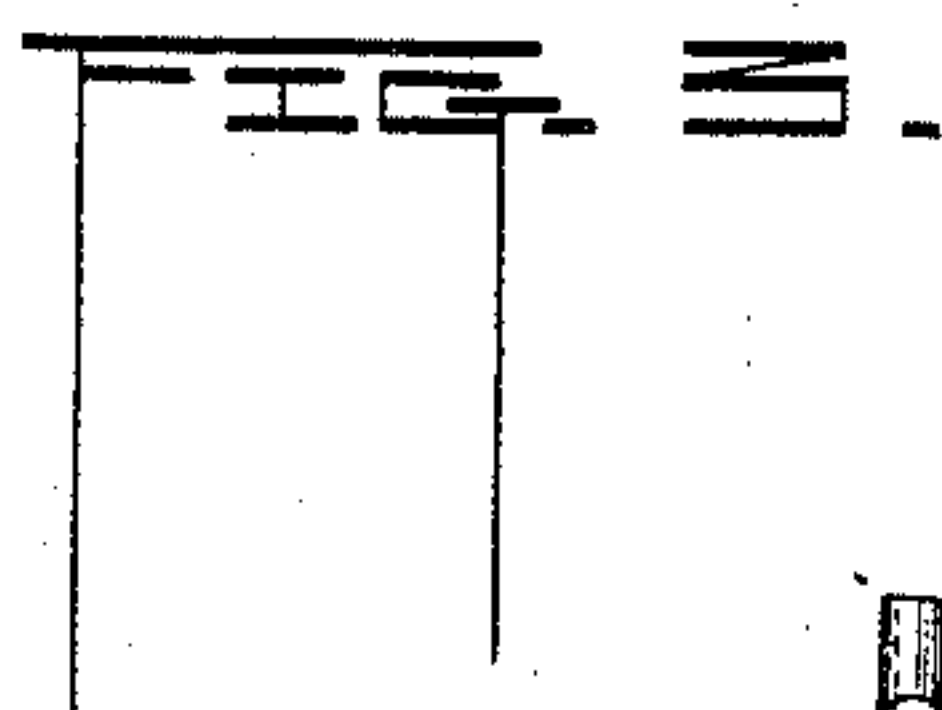
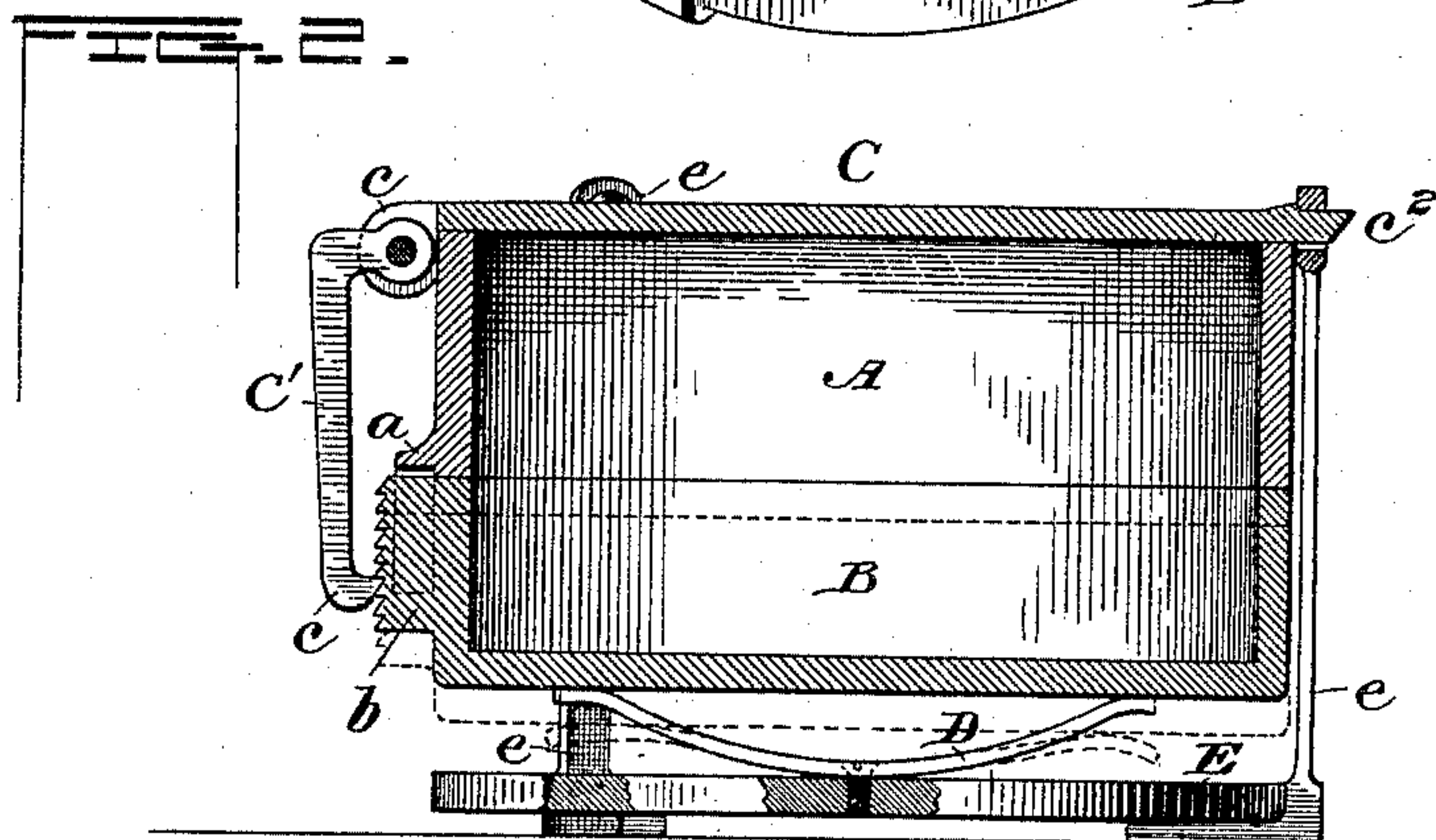
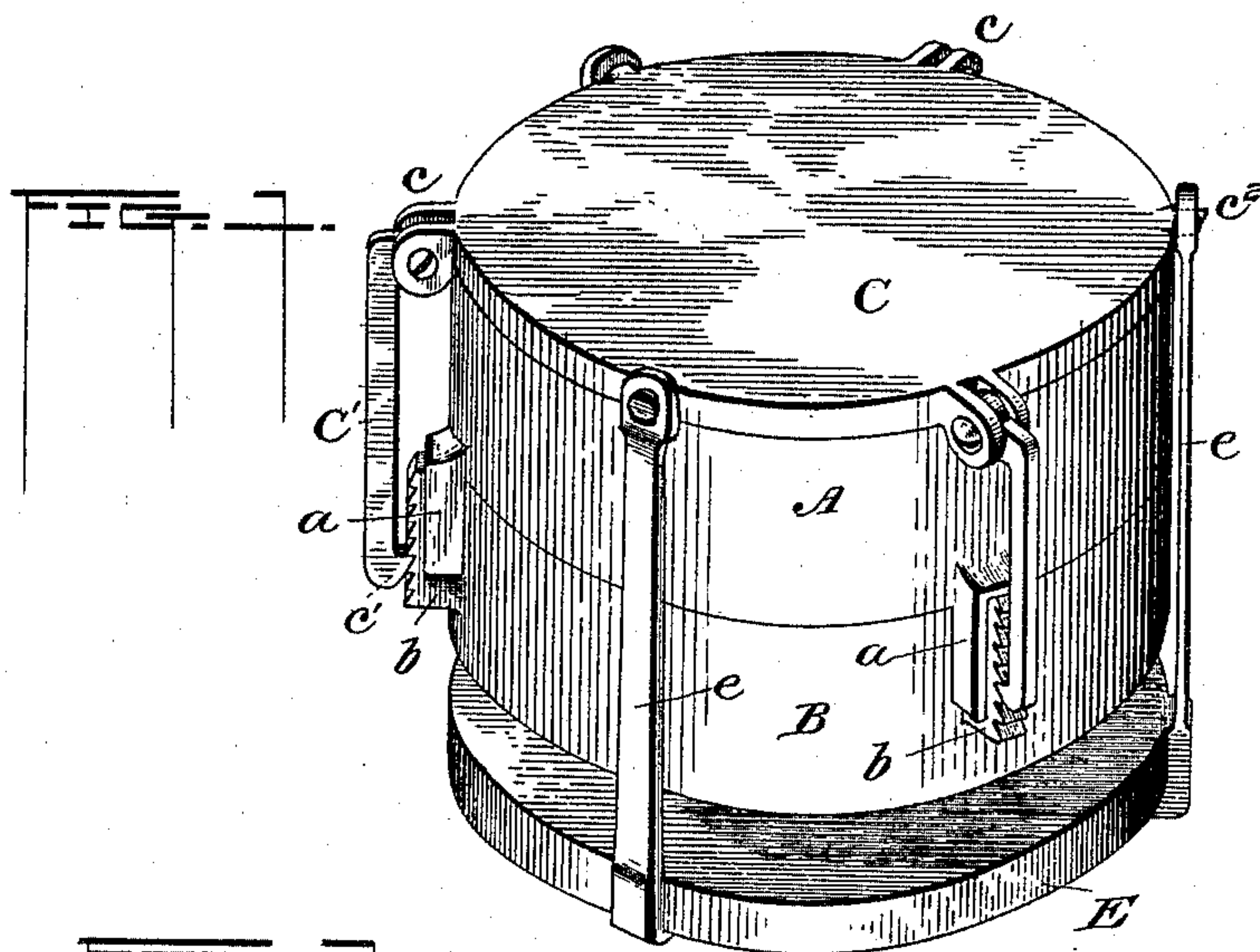


(No Model.)

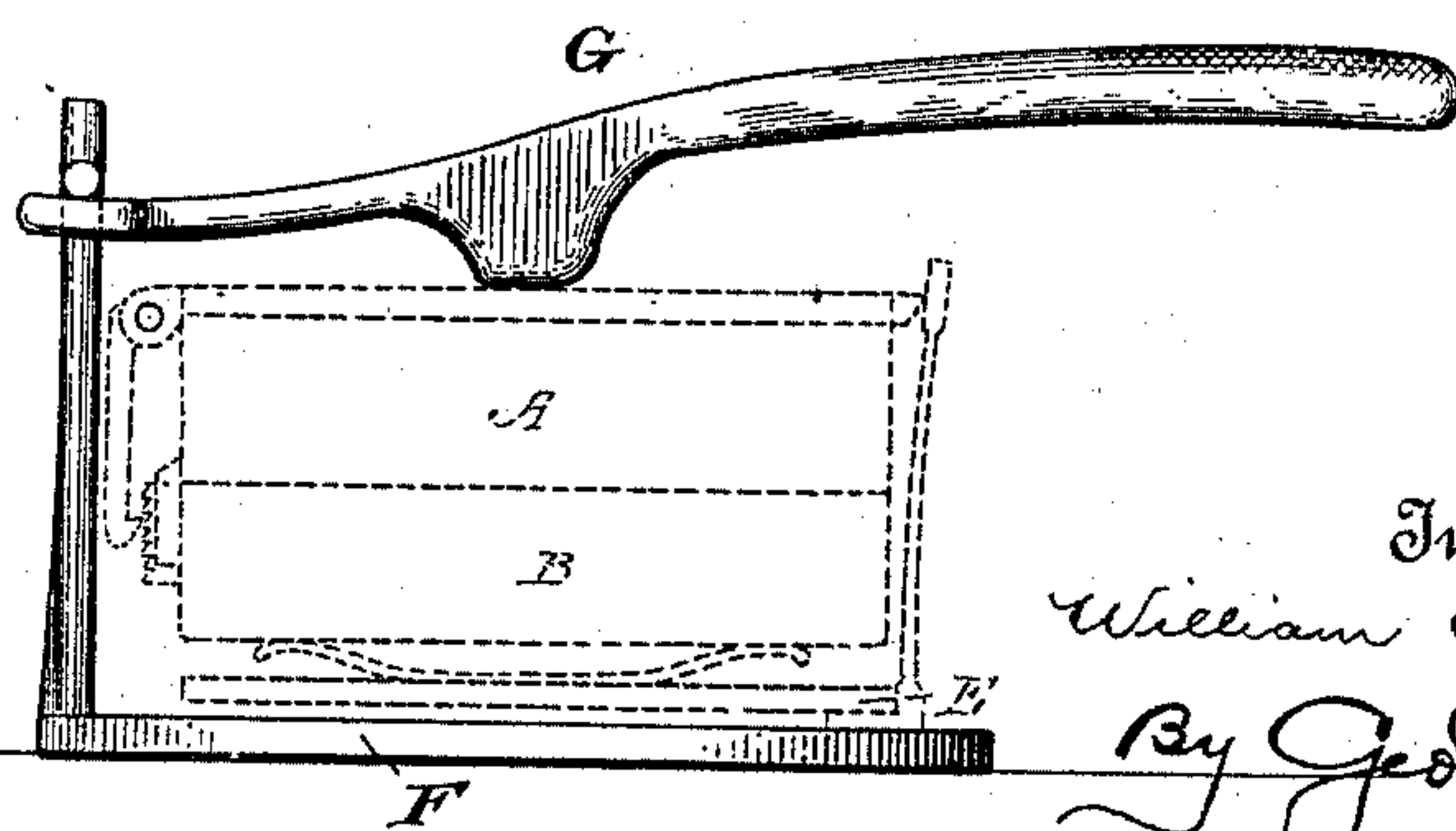
W. E. STILES.  
DENTAL FLASK.

No. 476,088.

Patented May 31, 1892.



Witnesses  
L. A. Comer Jr.  
Gale P. Moore.



Inventor  
William E. Stiles  
By Geo. F. Chubb  
Attorney



# UNITED STATES PATENT OFFICE.

WILLIAM EDMOND STILES, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR  
OF ONE-HALF TO MAHLON MOYER, OF SAME PLACE.

## DENTAL FLASK.

SPECIFICATION forming part of Letters Patent No. 476,088, dated May 31, 1892.

Application filed November 18, 1891. Serial No. 412,286. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM EDMOND STILES, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Dental Flasks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to flasks for vulcanizing dental plates.

Its object is to subject the plate to a steady pressure while being vulcanized and to secure the advantages due to simplicity, durability, and ease of handling. I provide the upper part or cope of the flask with a cover supplied with depending hooks or pawls, which engage with racks on the lower part or drag. The parts are also held together by a yielding fastening device adapted to impart to the drag a constant upward pressure.

In the drawings, Figure 1 is a perspective view of the flask. Fig. 2 is a vertical central section, and Fig. 3 shows the press for closing the flask.

The cope A consists of a short annulus, as shown, having at intervals around its lower edge the bifurcated downwardly-extending lugs *a*. The drag B is a shallow vessel of the same cross-sectional shape and size as the cope, so that the two will register accurately when put together. At intervals around the upper portion of the drag are formed the vertical ribs *b*, the outer edges of which are serrated to serve as racks. The bifurcated lugs *a* correspond with the ribs *b* and fit over them when the cope is placed upon the drag, thereby acting like steady-pins to retain the two parts of the flask in proper relative position. The cope is provided with a loose flat cover C, which has ears *c* projecting from its edge to support the hinged dogs or pawls C'. The pawls are so arranged as to coincide with the ribs *b* on the drag when the cover is placed upon the cope, so that the hooked ends *c'* of

the pawls will engage with the teeth of the ribs. The lower face of each tooth is horizontal, so that the hook when engaged therewith resists any upward strain, but will readily slide down the inclined top of the next lower tooth when the cope and the drag are brought closer together. The parts are also held together by a spring D, attached to a base-plate E, and upon which the drag rests. Upright spring-arms *e* rise from the base-plate to the level of the top of the cover, each arm having at its upper end an eye, which slips over a stud *c'*, projecting from the edge of the cover.

The operation of my invention is as follows: When a plate is to be made, the lower part of the mold is placed in the drag. Then a mass of rubber is placed upon it. Then the cope containing the upper mold is put on and the cover is laid on the cope. The pawls drop down over the racks and fasten the parts together, with a considerable space left between the cope and drag, the molds and materials being more than sufficient to fill them. The base-plate is then set upon the platform F of the press (shown in Fig. 3) and the assembled cope, drag, and cover are placed upon the spring D. The lever G is then brought down upon the cover C, compressing the spring until the arms *e* can engage with the studs *c'*. The apparatus is now transferred to the vulcanizer, and as the rubber softens and fills the molds the spring D forces the drag upward toward the cope, thus keeping a steady pressure on the rubber. As the parts approach, the pawls drop down into the lower teeth and prevent any accidental separation. The pawls and racks may be dispensed with; but I prefer to use them.

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

1. A dental flask consisting of a cope, a drag provided with racks, a cover for the cope, and pawls hinged to the cover and arranged to engage with the racks, substantially as described.

2. The combination, with the cope having depending bifurcated lugs, of the drag having serrated ribs coinciding with said lugs, and a cover carrying hinged pawls arranged

to engage with said serrated ribs, substantially as described.

3. The combination, with a cope and a drag, of a cover provided with studs, a base carrying arms engaging with said studs, and a spring attached to said base-plate and pressing against the bottom of the cope, substantially as described.

4. The combination, with the cope A, having the bifurcated lugs *a*, of the drag B, having the vertical serrated ribs *b*, the cover C,

carrying the hinged pawls C' and having the studs *c*<sup>2</sup>, the base-plate E, provided with the spring-arms *e*, and the spring D, attached to said base-plate, substantially as described.

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

WILLIAM EDMOND STILES.

Witnesses:

HARRY C. REAGAN, Jr.,

I. L. WISE.