W. C. TRACY.

Dental-Flask.

No. 163,615. Patented May 25, 1875.

Fig 2.

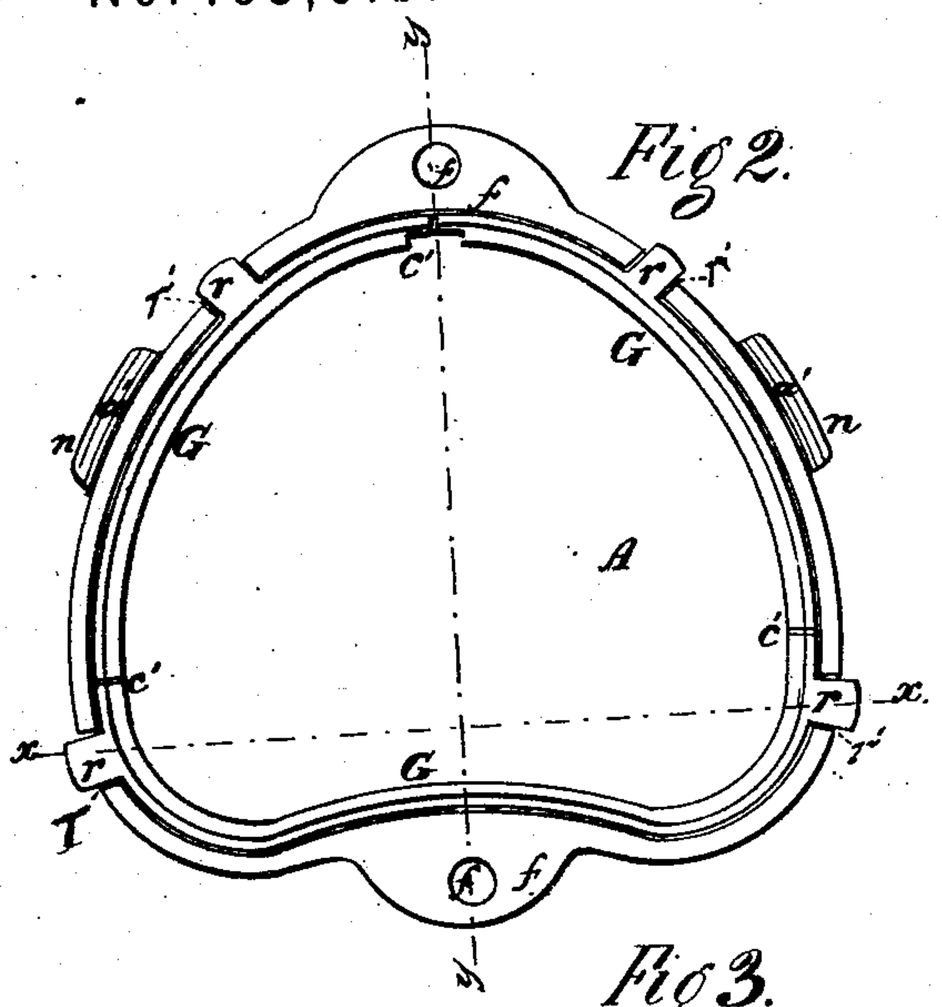


Fig 1.

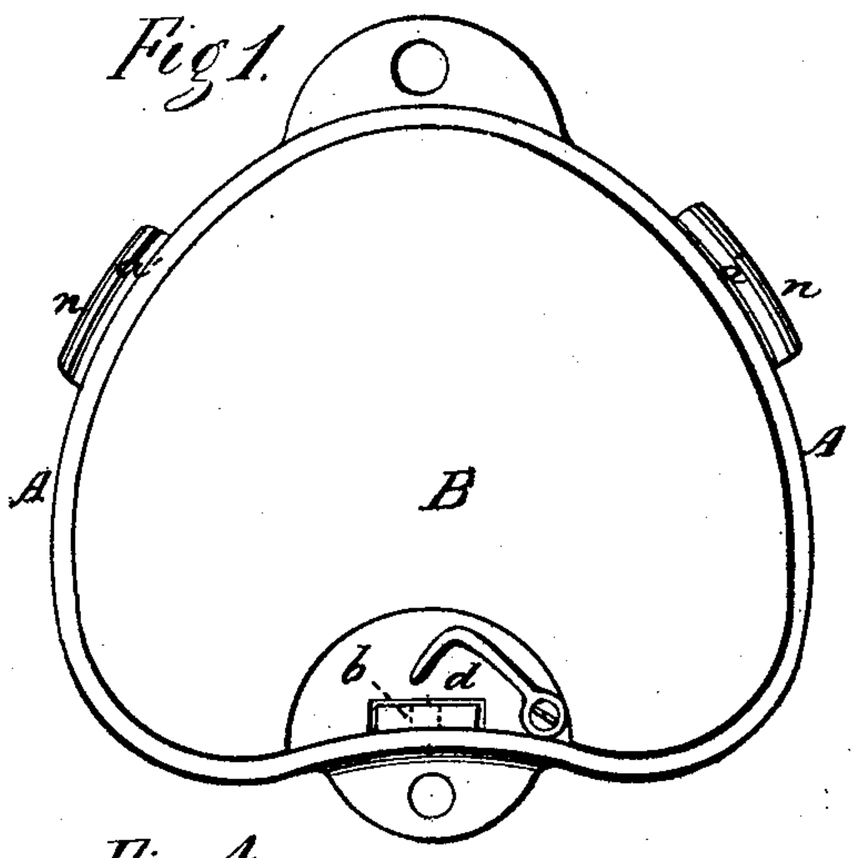


Fig 3.

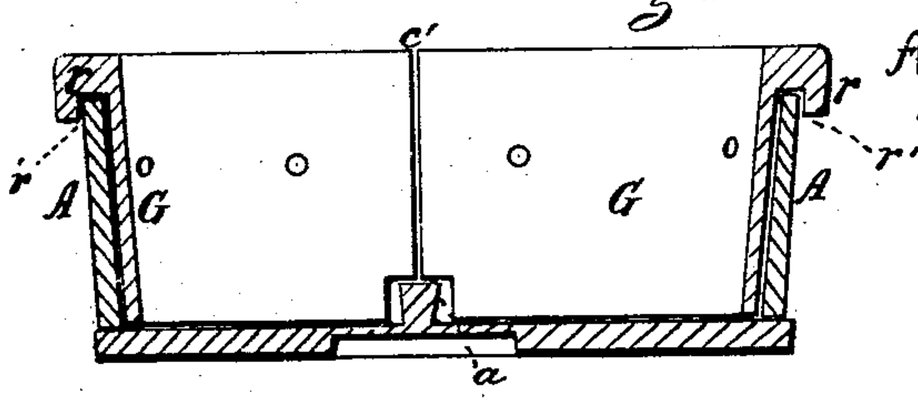


Fig 4.

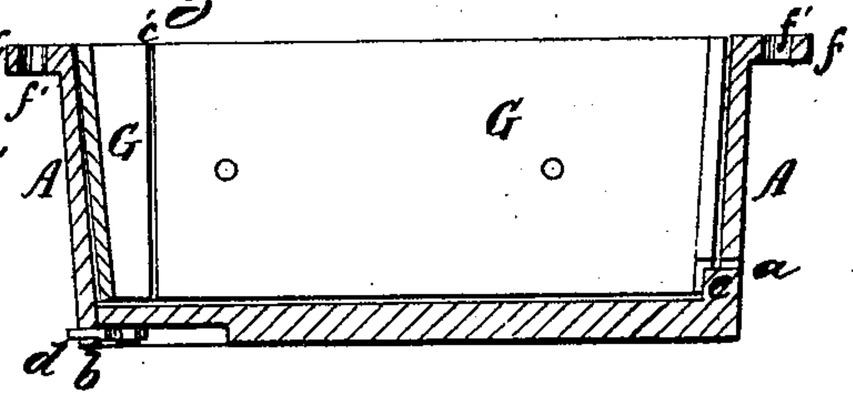
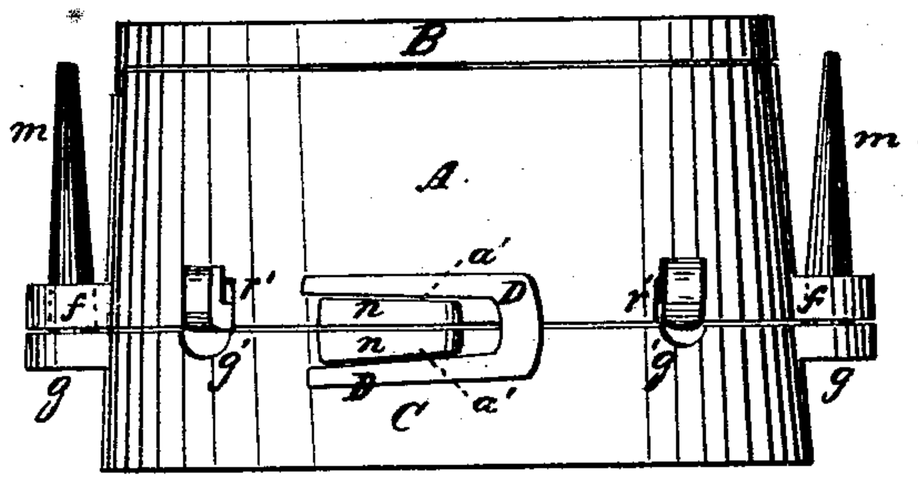


Fig 5.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM C. TRACY, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN DENTAL FLASKS.

Specification forming part of Letters Patent No. **163,615**, dated May 25, 1875; application filed March 19, 1875.

To all whom it may concern:

Be it known that I, WILLIAM C. TRACY, of Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Dentists' Flasks, of which the following is a specification:

This improvement is intended for molding and shaping dental plates made of either rubber or celluloid, whereas in the present practice of the dental profession flasks of different construction are used for the two varieties of work. My invention, however, may be in part applied to flasks used exclusively for one or the other of the said varieties.

My invention comprises the combination, with a flask, of internal sectional sliding bushing-plates, which, being interposed between the plaster-mold (formed in the flask in the use of the same) and the sides of the flask, slide out with the mold when the latter is detached from the flask, and, after having thus facilitated the removal of the molds, are readily taken off from the latter. By this means the rapping of the flask to jar the mold therefrom, and the injury frequently caused by the said rapping both to the mold and to its contained dental plate, are effectually avoided.

The invention further comprises a novel combination of parts, whereby provision is made for the more secure retention in place of the internal bushing-plates, and for their convenient starting in the removal of the mold; also, a novel means of attaching and detaching the cap of the flask as occasion may require; also, a novel combination of parts, whereby the two main parts or sections of the flask are accurately and conveniently guided to and retained in their required relation to each other; also, in a novel combination of parts, whereby the flask, as a whole, is rendered capable of use for either rubber or celluloid work, as may be desired.

Figure 1 is a plan or top view of a flask made according to my invention. Fig. 2 is an inverted plan view of the same with the base or lower section removed. Fig. 3 is a vertical section taken in the line *y y* of Fig. 2, and Fig. 4 is a similar section taken in the line *x x* of Fig. 2. Fig. 5 is a side view of the flask complete.

A is the body forming one of the main sections of the flask. It is of somewhat tapering or flaring form, as indicated in Figs. 3, 4, and 5. In the outer edge of this section A is a dovetail notch, *a*, and opposite this notch is an outwardly-projecting staple, *b*, this staple being formed in one piece with the aforesaid section. B is the cap, provided at one edge with a dovetail-stud, *c*, which may be thrust into the notch *a*, while a hook, *d*, is made to catch into the staple *b*. The cap is thus firmly attached to the section A, and at the same time time is capable of easy removal. By turning the hook out from the staple the adjacent edge of the cap may be brought slightly outward, and the cap itself drawn laterally until the stud is brought from the notch, and the cap is thus detached. By making the stud somewhat smaller than the notch the stud may be made to act as a pivot upon which the cap may be turned outward to any required degree. Upon that edge of the section A opposite that at which the cap is fixed, and at points nearly or quite equidistant, are radially-projecting lugs *f*, having holes or sockets provided in them, as shown at *f'*. C is the base, or second main section of the flask. This base is hollowed or concaved internally, and is formed with radial lugs *g*, coincident in position with the lugs *f* of the section A, but provided with stems *m*, which pass into and through the sockets *f'* of the lugs *f* when the two sections A C are placed together, the stems *m* and socketed lugs *f* acting in unison to guide the two sections into a proper position with reference to each other, and to prevent their lateral displacement. Upon the inner edges of the sections A C are ears *n*, so arranged that when the sections are brought together, as just explained, the ears of the one will be brought coincident with those of the other, as shown in Fig. 5. The outer surface *a'* of each of these ears is made inclined, so that a forked key, D, being forced upon each pair of adjacent ears, keys or locks them firmly together, thereby locking together the two sections of the flask. At *g* are openings formed in the sides of the flask at the junction of the two sections thereof, in order to permit the escape of surplus material in the use of the flask, as hereinafter explained. G are bushing-plates, made of metal, and provided

within the section A, forming a sectional lining, the joints c' between these plates being from top to bottom of the section A, and the plates themselves conforming to its flaring contour. Formed on the outermost edge of each plate G is a hook-shaped lug, r, which projects radially through a notch, r', in the adjacent edge of the section A, and catches over the edge provided by the said notch in such manner as to hold the plate in position without interfering with the requisite locking together of the two sections, as hereinbefore explained.

In the use of the flask the section C is filled with plaster-of-paris in a manner that will be readily understood by dentists, and upon this is placed the usual wax pattern representing the artificial denture to be made. This done, the section A is placed upon the section C, but with its cap B removed, and without any rigid fastening to the two sections together by means of the keys D. Plaster is then poured in through the open top of the section A until the latter is filled, whereupon the cap B is brought to its place and fastened, as hereinbefore explained, any surplus plaster being forced out through the openings g. When the plaster in A has hardened the mold is complete, and the two sections being separated the wax form or pattern is removed. The celluloid, in the form and condition in which it is ordinarily sold to dentists, is then placed between the two sections, and the latter are then placed in the usual steam bath and press, and when the celluloid has been duly softened the two sections are brought together by means of the press until the soft mass is pressed into the mold provided in the plaster by the wax pattern, as hereinbefore indicated. When the two sections have been brought in contact the molding of the celluloid is complete, the surplus of the latter having made its escape through suitable channels previously radially provided in the plaster, and it is only necessary to remove the flask from the bath and press and allow it to cool to normal temperature to insure the return of the molded celluloid to a hard and firm condition. When the denture is to be of vulcanized rubber the mold provided within the flask, as hereinbefore explained, is filled with rubber in the usual manner, and the two sections of the flask being brought together by pressure, as by means of a suitable press, which done the keys D are applied to lock the two sections together, as required, during the subsequent vulcanization of the rubber.

When the denture, either of celluloid or vulcanized rubber, is completed within the flask, the separation of the two sections will detach the denture from that portion of the mold contained in the section C. In order to secure its detachment from the other portion of the mold, it is necessary that the plaster shall be detached from within the section A. This is accomplished by simply turning the said section with the open side downward, whereupon the bushing-plates G slide out from the section A and carry the plaster with them. In case the bushing-plates should not slant freely by their own weight and that of the plaster within, their movement may be induced by a few light taps upon the outwardly-projecting hook-studs. The plaster being thus detached from the section A of the flask, the denture may be readily detached from the plaster in any usual or appropriate way.

What I claim as my invention is—

1. The combination, with a dental flask, of the sectional detachable bushing-plates G, arranged to slide outward in the removal of the plaster from the flask, substantially as and for the purpose set forth.

2. The combination of the outwardly-projecting hook-lugs r, provided upon the bushing-plates G, with the notches r', formed in the edge of the section A and the section C of the flask, substantially as and for the purpose set forth.

3. The cap B, constructed with the dovetail-stud c and hook d, in combination with the dovetail-notch a and staple b of the section A, substantially as and for the purpose set forth.

WM. C. TRACY.

Witnesses:
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