

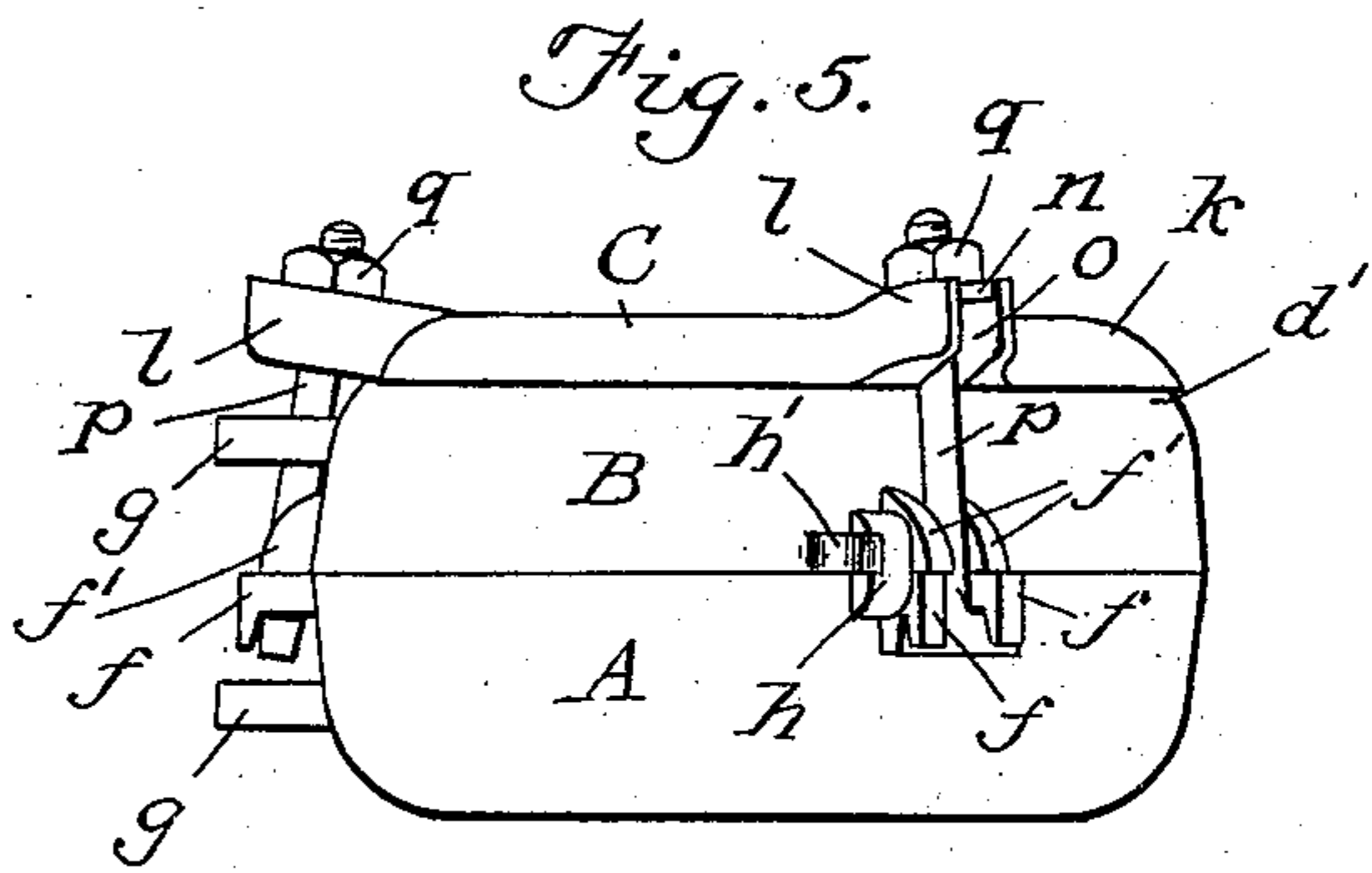
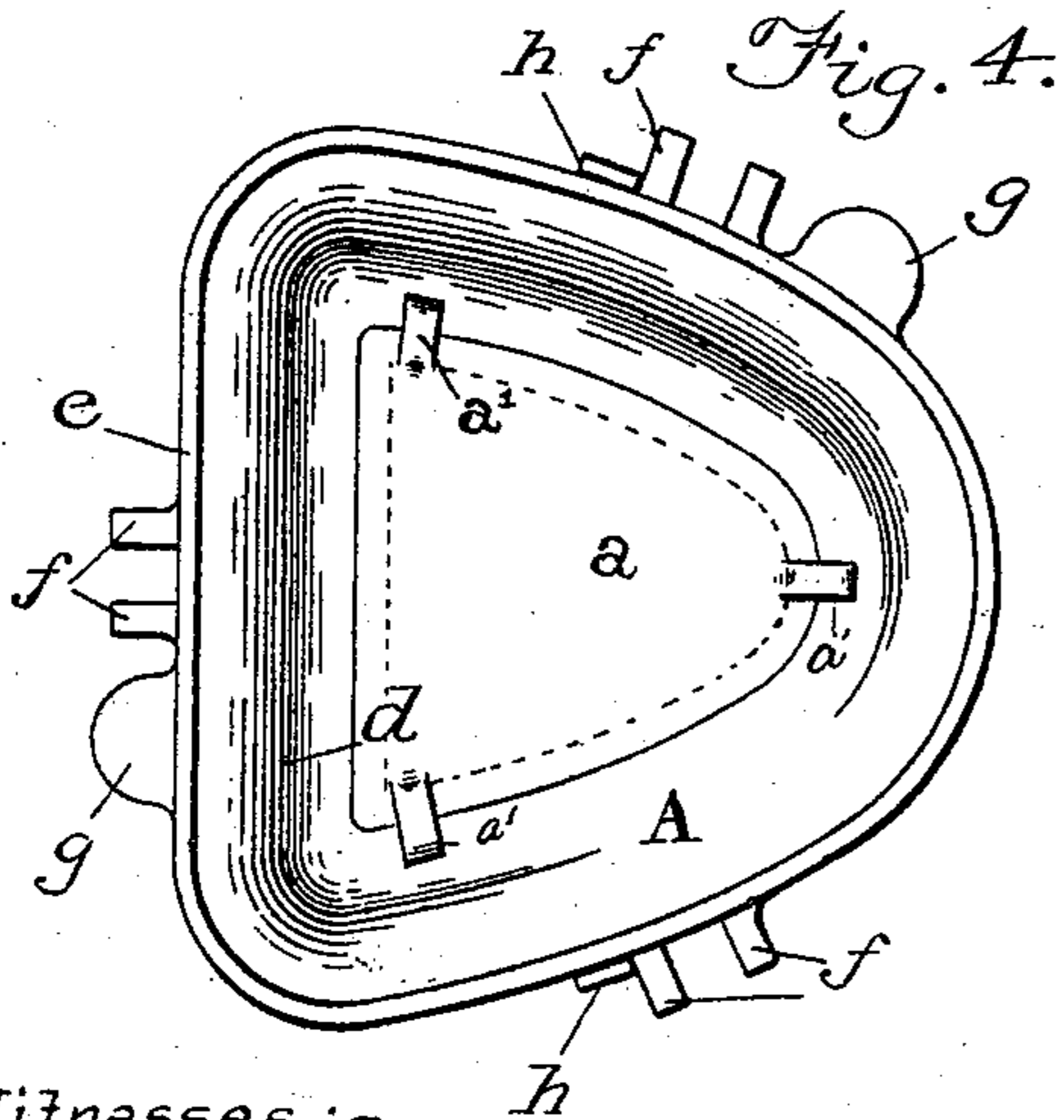
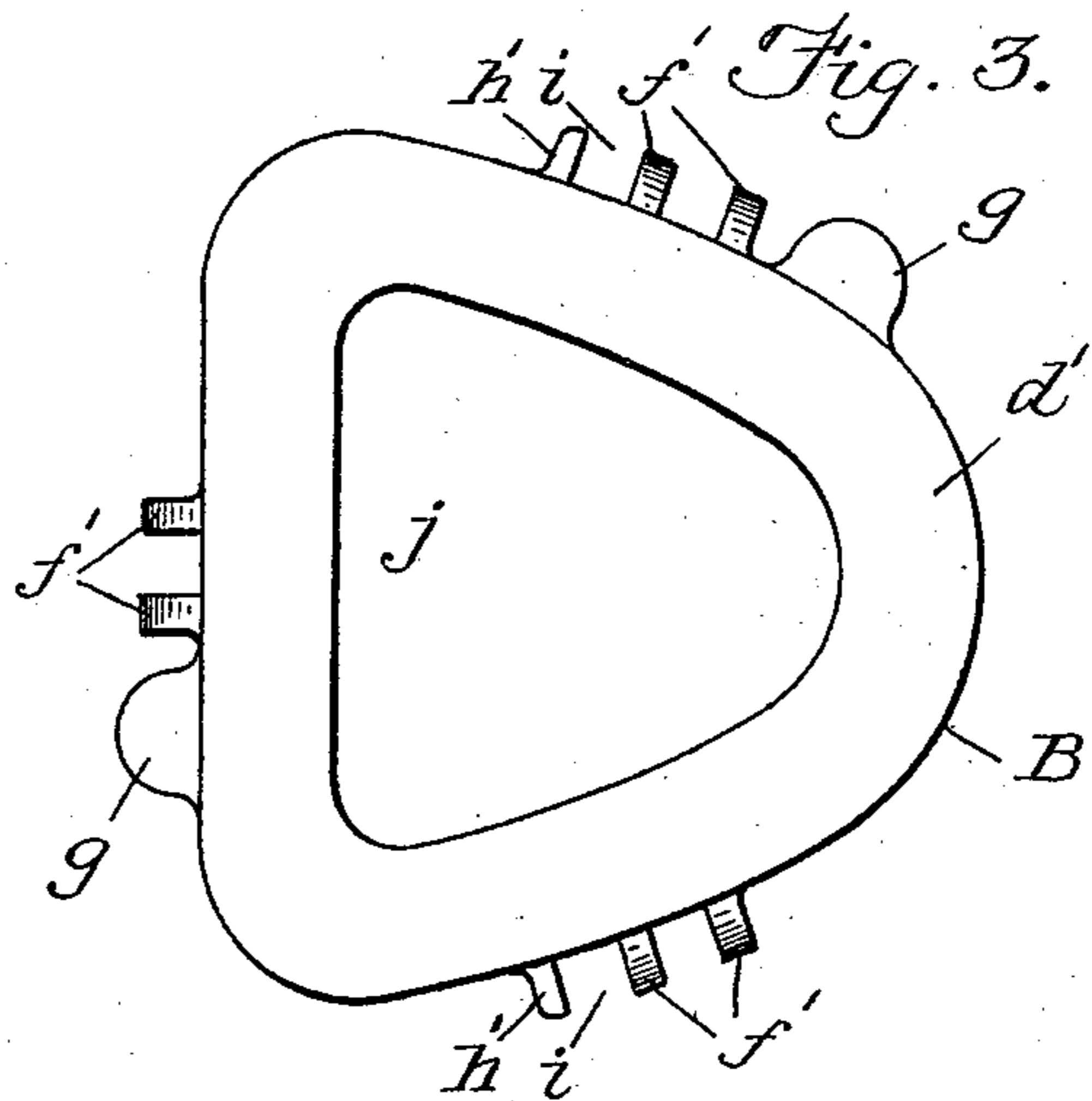
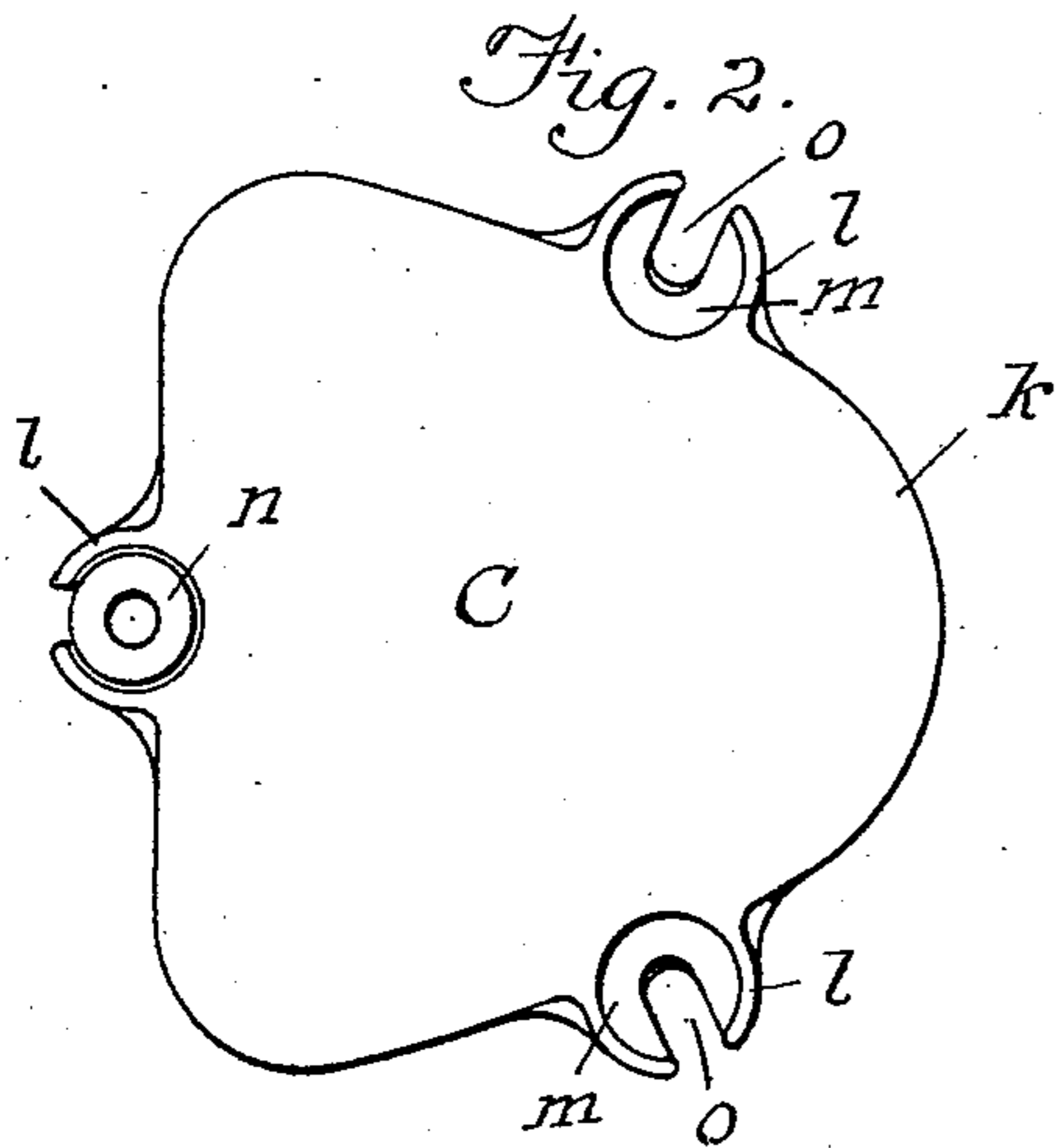
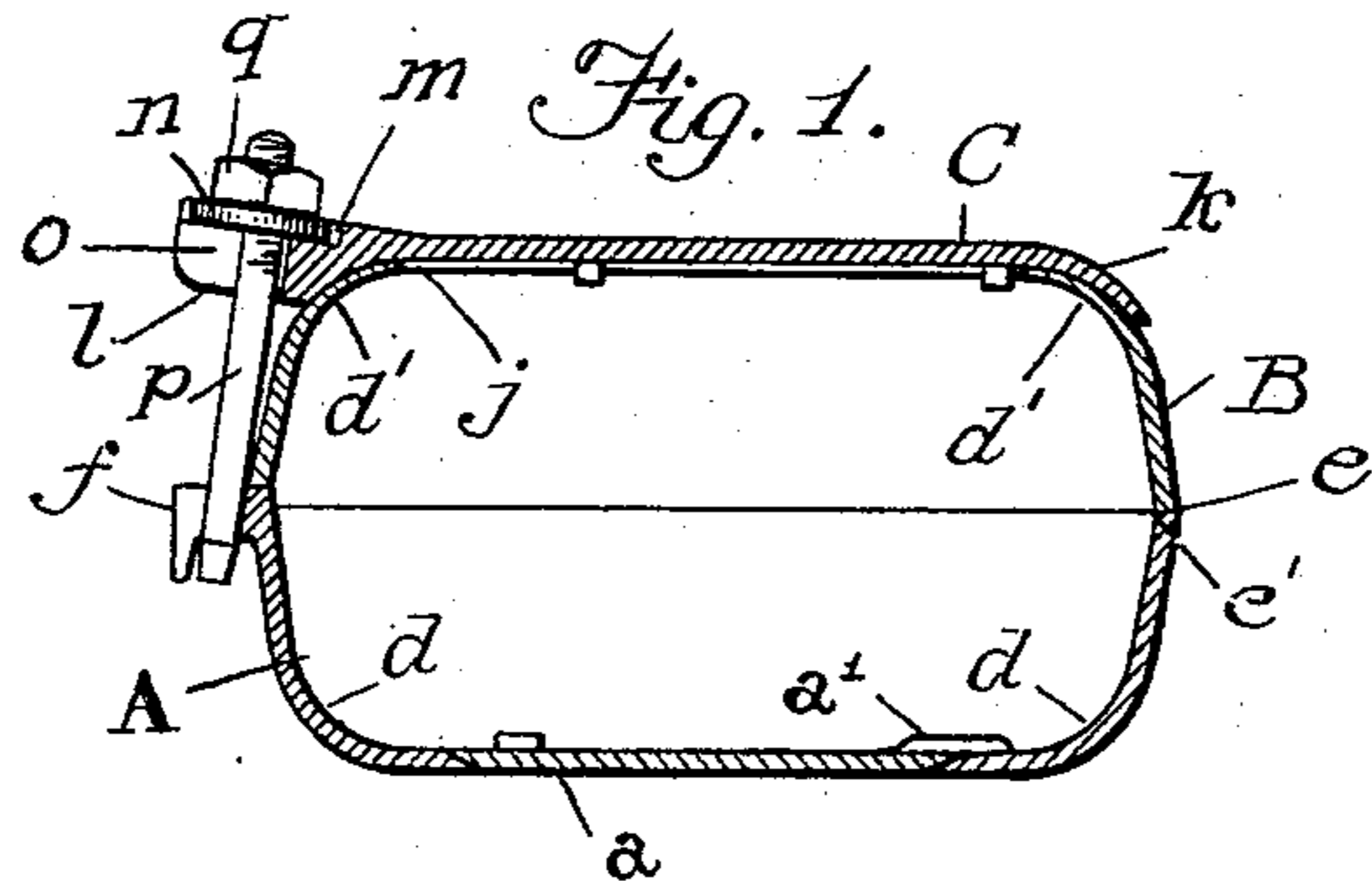
No. 620,303.

Patented Feb. 28, 1899.

F. GROSHANS:  
DENTAL FLASK.

(Application filed Dec. 10, 1898.)

(No Model.)



Witnesses :-

Lee J. Van Horn,  
Charles B. Mann Jr.

Inventor :-

Ferdinand Groshans  
By  
Chas B. Mann  
Attorney.

# UNITED STATES PATENT OFFICE.

FERDINAND GROSHANS, OF BALTIMORE, MARYLAND.

## DENTAL FLASK.

SPECIFICATION forming part of Letters Patent No. 620,303, dated February 28, 1899.

Application filed December 10, 1898. Serial No. 698,803. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND GROSHANS, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Dental Flasks, of which the following is a specification.

My invention relates to improvements in vulcanizing-flasks such as are used in mechanical dentistry; and the invention consists of an improved construction of the parts whereby certain advantages, which will be pointed out, are derived.

The invention is illustrated in the accompanying drawings.

Figure 1 is a cross-section view of the flask with the parts bolted together. Fig. 2 is a top plan view of the cover of the flask and shows the projecting recessed flanges which receive the bolts and washers, one washer only being in position. Fig. 3 is a top plan view of the upper half of the flask with the cover removed and shows the reduced opening in the top. Fig. 4 is an inside plan view of the lower half of the flask, and Fig. 5 illustrates a side view of the flask and shows the parts all locked together by the bolts.

Referring now by letters to the drawings, A designates the lower half of the flask, B the upper half, and C the cover. The lower half A of the flask has inside sloping walls, which are rounded at *d*, where the side wall merges into the bottom of the flask, the object of this shape being to aid in the withdrawal of the plaster cast. This half of the flask at its top rim edge *e* is provided with downwardly-projecting hook-shaped lugs *f*, two of which are located together to form a pair on each side of the flask. The head of a bolt, hereinafter described, engages with each pair of these lugs. The lower half A has in its bottom an opening and a removable plate *a* of shape corresponding with the opening within said lower half and closing the opening, said removable plate being provided with retaining-lugs *a'*, which lap over onto the bottom. When the plaster cast is to be removed from the lower half A, a hammer may be tapped onto the lower side of said plate *a*.

Heretofore in removing the plaster cast from flasks considerable trouble has been ex-

perienced in freeing the plaster cast from the flask, and it has been commonly necessary to strike with a hammer on the edges of the flask in order to loosen the plaster cast. Such hammering is injurious to the flask and batters the edges to the extent that a tight joint with the other half of the flask cannot be made when the two halves are locked together. In order to overcome this objection, each half of the flask is provided with one or more projecting knocker-lugs *g*, located on the sides, and it has been found that the plaster cast can be easily removed by hammering on these lugs, thereby avoiding injury to the flask.

An upward-projecting lug *h* is on opposite sides of the lower half of the flask and immediately adjoins one pair of lugs *f*, the purpose of which will be hereinafter set forth.

The upper half B of the flask conforms in shape to the lower half and fits snugly thereon, making a practically tight joint. This half is provided on its bottom edge *e'* with pairs of projecting lugs *f'*. These lugs *f'* are so located that when the two flask parts are placed together the pairs of lugs *f* on the lower half will register with the pair of lugs *f'* on the upper half and the bolt has position in both pairs of lugs.

The upper half of the flask is provided with guide-lugs *h'*, separated from the pairs of lugs *f'* by a space *i*, into which the lug *h* on the lower flask part takes when the two halves are secured together. It will be seen that the upward-projecting lug *h* on the part A and the guide-lugs *h'* on the part B will serve to so lock the two parts as to prevent them from having lateral play.

The upper half of the flask is rounded and curved inward at *d'* and forms a partial top with an opening *j*, through which the plaster-of-paris in a semiliquid or plastic state is poured into the flask. This rounded and inward-curved portion *d'* or the inner side of the flask has the same function as the rounded portion *d* on the lower half—to wit, enables the plaster cast to be more readily freed from the flask; but the partial top thus formed serves to confine and stay the teeth-mold in position when inserting the flask with plaster.

The cover C is formed with a concavo-convex rim edge *k*, which laps and fits snugly over the inward-curved partial top of the up-

per half. The cover is also provided at each side with projecting recessed flanges *l*, which are slightly upwardly inclined. These flanges are provided on top with a circular recessed or sunken face *m*, which forms a seat for a round washer *n*, and each of said flanges has a slot or cut-away portion *o* for the bolt to enter sidewise.

A bolt *p*, having at one end a T-head and at the other end a nut *q* and the washer *n*, secures the two flask parts and cover together. The T-head of the bolt *p* is first placed under the hook-lugs *f* on the lower half of the flask, the bolt carrying the washer *n* and nut is then swung into the slot or cut-away portion *o* of the projecting flanges *l*, and the washer is permitted to seat into the circular recess *m*.

As the flanges *l* are upwardly inclined and are provided with the recessed face, it will be seen that the bolts will not accidentally fall out before the nuts *q* have been tightened on them. Another advantage of the upwardly-inclined flanges *l* is that straight bolts may be used to secure the parts together, whereas in many dental flasks the bolts have to be bent to fit the outside curvature of the flask.

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

1. In a dental flask the combination of a three-part flask—the lower part, A, at the juncture of the inside wall and bottom provided with a rounded portion, *d*; the upper part, B, having its side wall at the top rounded and curved inward and forming a partial top having an opening, *j*; a cover, C, having a concave bottom face, which laps over the said inward-curved partial top, and means to clamp the three flask parts together, substantially as described.

2. In a dental flask the combination of a three-part flask—the lower part, A, at the juncture of the inside and bottom walls provided with a rounded portion, *d*; the upper part, B, having its side wall at the top rounded and curved inward and provided with a top opening; knocker-lugs on the sides of the said upper and lower parts; a cover which takes over the top of the inward-curved side walls, and means on the cover and the lower part, A, to clamp the three parts together.

3. In a dental flask the combination of a three-part flask—the lower part, A, provided with downward-projecting hook-lugs, *f*, in pairs; the upper part, B, having its side walls at the top rounded and curved inward and forming a partial top with an opening, *j*; a cover, C, provided with upwardly-inclined projecting flanges having on top a circular recess, *m*, and a side slot, *o*; a bolt one end of which takes under the hook-lugs on the lower part of the flask and the other end occupies the slot in said flanges and has a washer which fits in the said recess on the flanges and a nut on the bolt, substantially as described.

4. In a dental flask the combination of a lower part, A, provided at the juncture of the inside and bottom walls with a rounded portion, *d*; a removable plate, *a*, fitting in an opening in the bottom of said lower part; an upper part, B; and means to clamp the lower and the upper parts together.

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

FERDINAND GROSHANS.

Witnesses:

CHARLES B. MANN, Jr.,  
GEO. KOETHER.