

(No Model.)

F. P. MORHOUS.

BOTTLE STOPPER.

No. 378,800.

Patented Feb. 28, 1888.

Fig. 1.

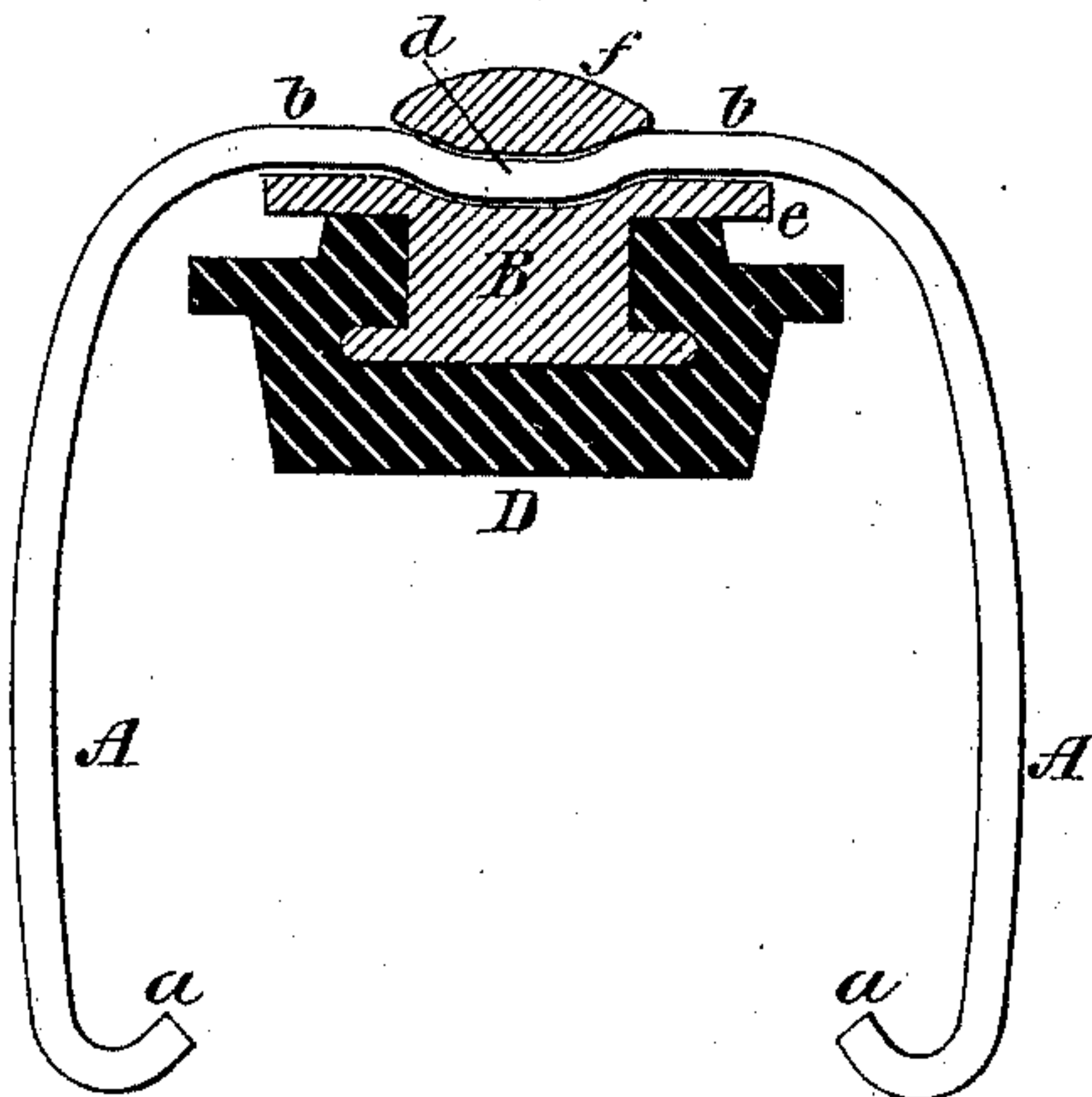


Fig. 2.

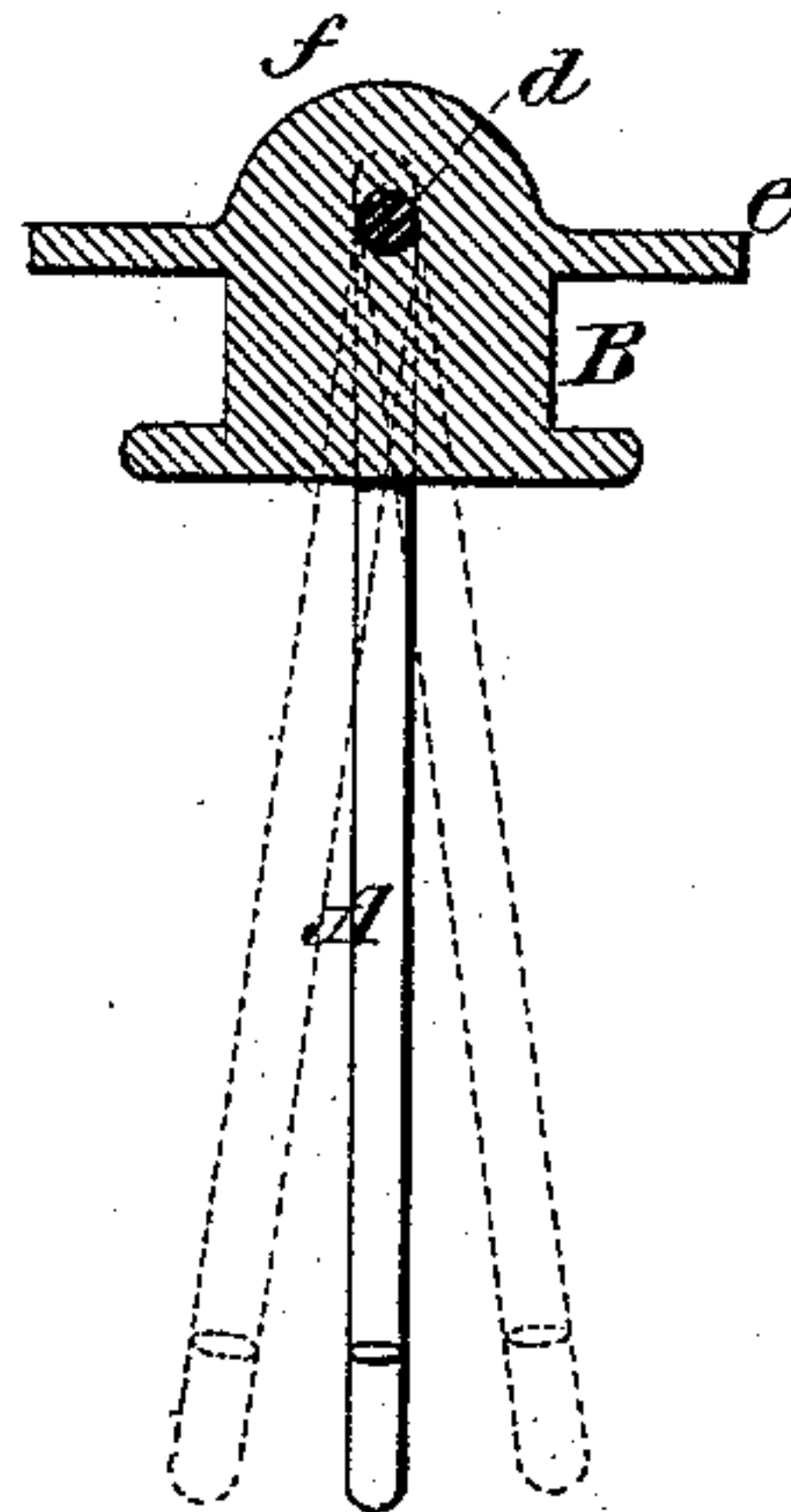


Fig. 5.

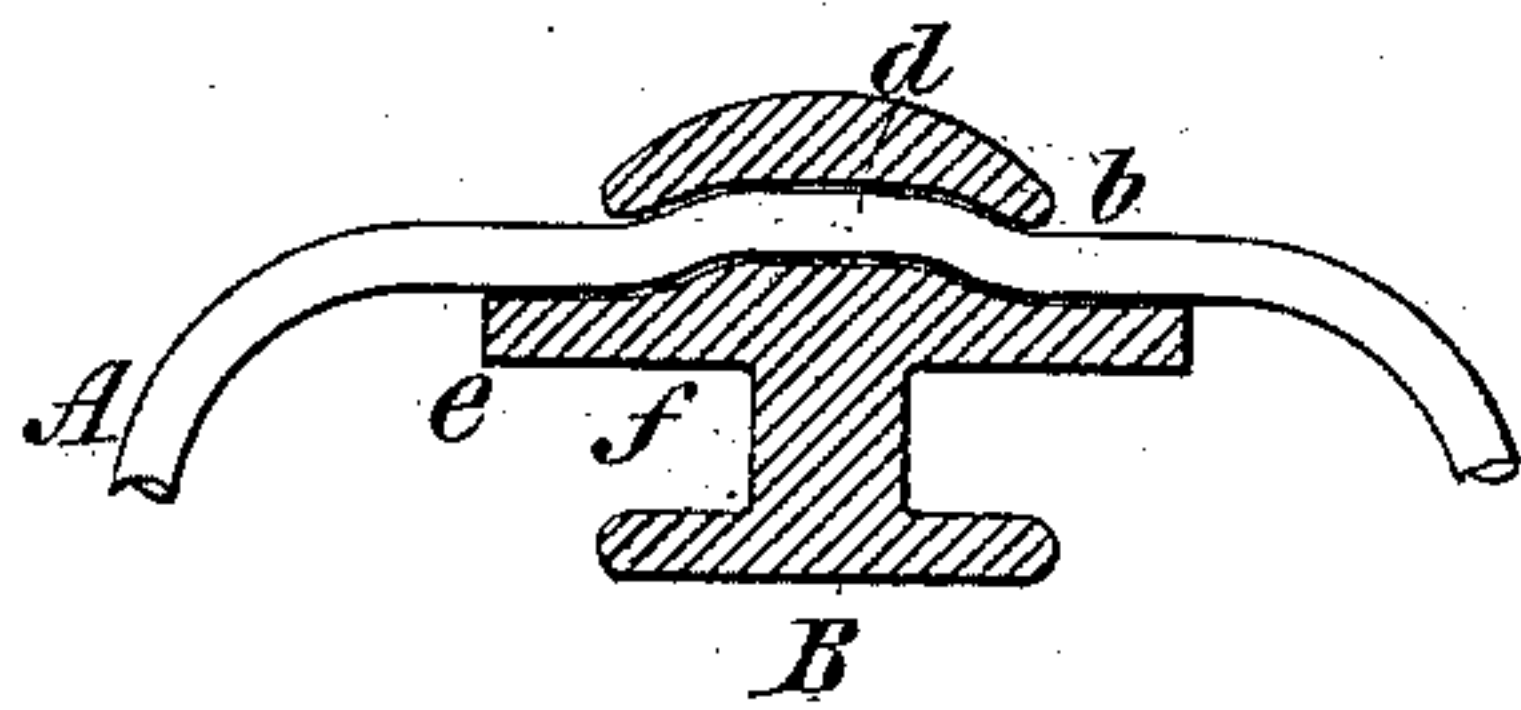


Fig. 3.

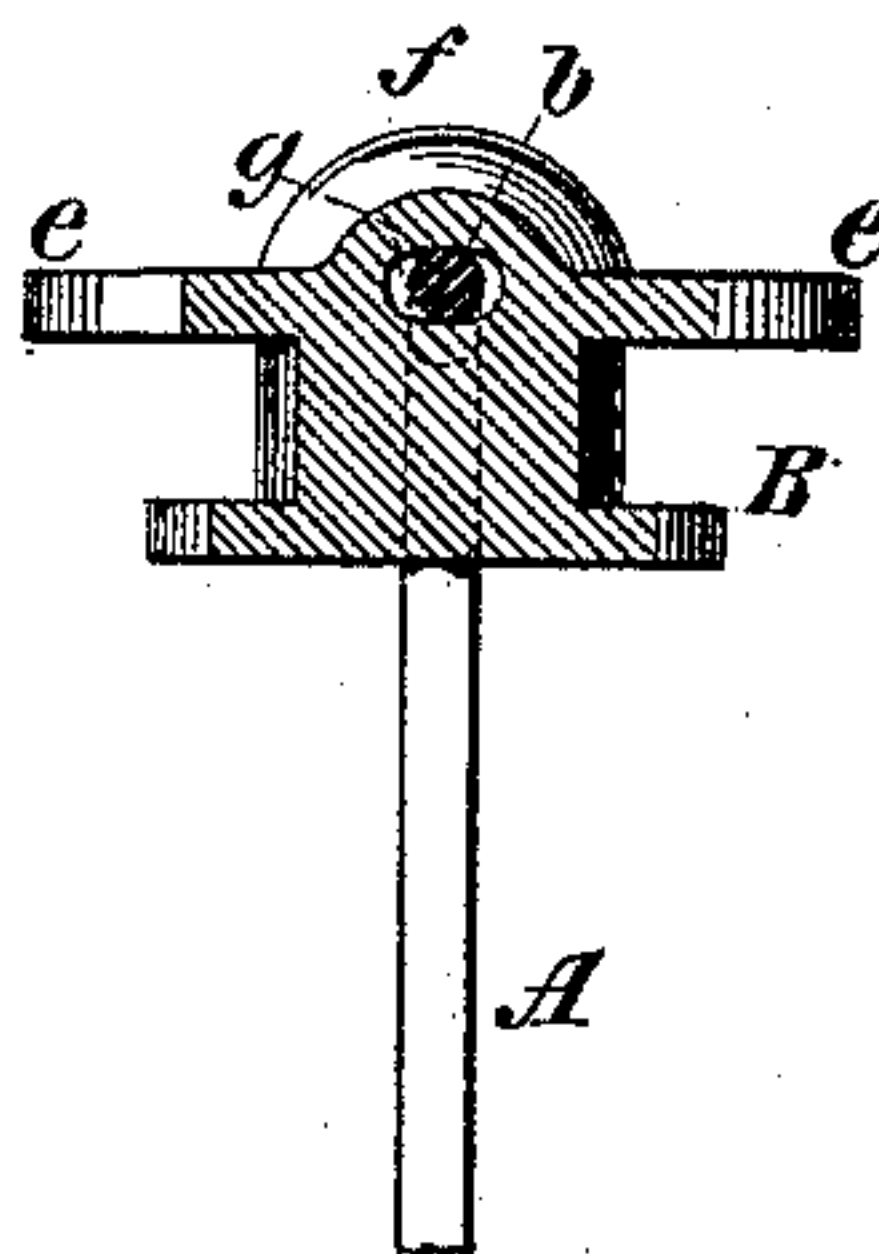


Fig. 4.

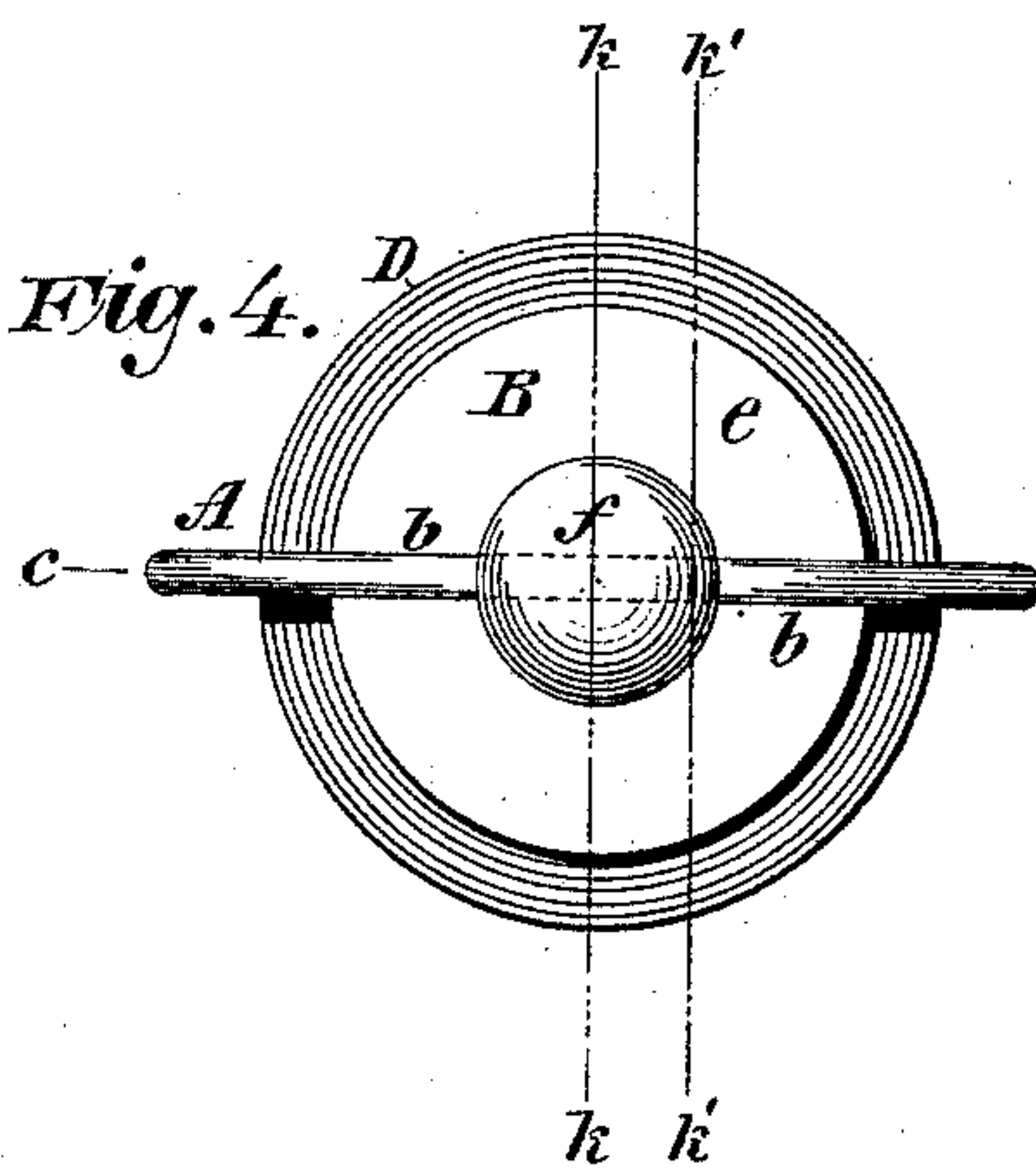
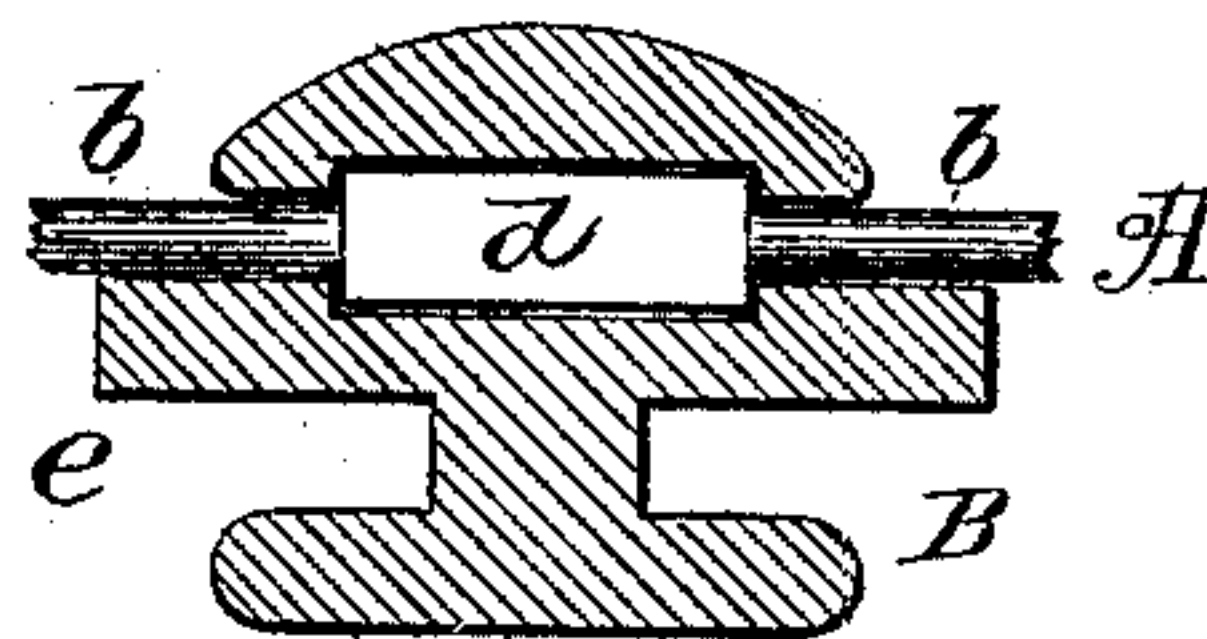


Fig. 6.



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UNITED STATES PATENT OFFICE.

FREDERICK P. MORHOUS, OF BENNINGTON, VERMONT, ASSIGNOR TO HENRY W. PUTNAM, OF SAME PLACE.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 378,800, dated February 28, 1888.

Application filed December 7, 1887. Serial No. 257,219. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK P. MORHOUS, of Bennington, in the county of Bennington, Vermont, have invented a certain new and useful Process of Constructing Bottle-Stoppers, of which the following is a specification.

This invention relates more particularly to that class of bottle-stoppers in which the stopper proper is carried by a bail which is pivoted at its ends to a lever supported by the bottle-neck.

The object of this invention is to permit a stopper which is cast directly upon a bail to have a slight oscillatory motion on the bail, but not freedom to revolve thereon. By giving a slight oscillatory motion to the stopper proper it will more readily enter the neck of the bottle than if it were rigid upon the bail.

I accomplish the above-stated objects in the manner more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical section on the line *c c*, Fig. 4, of a bottle-stopper constructed according to my invention, showing the bail in side view. Fig. 2 is a cross-section on the line *k k*, Fig. 4. Fig. 3 is a cross-section on the line *k' k'*, Fig. 4. Fig. 4 is a top view of my improved stopper. Fig. 5 is a vertical central section of a modified form of my stopper, the bail being shown in side view; and Fig. 6 is a side view of a modified form of bail, showing the stopper-body in section.

In the drawings, A represents a bail adapted to embrace the neck of the bottle, and it is provided with end hooks, *a*, for engagement with a lever or support of suitable construction that holds it on the bottle-neck. Near the center of the horizontal parts *b* of the bail A is an eccentric portion, *d*, which may consist of a bend, as shown in Figs. 1 and 5, or a flattened or enlarged portion, as shown in Fig. 6.

B is the metal portion of the stopper-body, of construction suitable to receive and retain the rubber portion D. This metal portion B of the stopper is cast directly upon the hori-

zontal portions *b* of the bail A and around the eccentric portion *d*, as shown. Part of the stopper B directly beneath the horizontal part *b* of the bail is preferably in the form of a flange, *e*, and it extends somewhat each side of the eccentric portion *d* in the bail. The part *f* of the stopper B above the bail is narrower than the flange *e*, and extends but a slight distance beyond the eccentric portion *d*, as shown. The flange *e* may partially embrace the parts *b* of the bail, if desired. When the stopper-body is thus cast upon the bail, it will be rigid and immovable thereon. To effect a construction which will permit a slight oscillatory motion of the stopper B, thus rigidly cast upon the bail, I by force cause that part of the cast-metal stopper-body which embraces the bail to turn somewhat on said bail, thereby loosening it from the bail. When this turn is given, the eccentric portion *d* acts as the center of motion and pushes the edge of the part *f* of the stopper B forcibly aside, thereby making an opening in which the corresponding part of the bail is free to play. The opening is shown at *g* in Fig. 3. The stopper may now oscillate slightly upon the bail, the loosened eccentric portion *d* acting as the center of motion. As the stopper oscillates, the eccentric parts *b* will be thrown against an edge of the opening *g*, which limits the oscillation in that direction. With the above construction a stopper which has been cast fast upon the bail will be given a slight play, but no freedom of rotation.

In the modification shown in Fig. 5 the eccentric portion *d* is in the reverse position to that in Fig. 1. When the eccentric portion *d* of the bail is in the flattened form, as illustrated in Fig. 6, the parts *b* act as pivots, while the central flattened portion presses the metal about it aside, so as to slightly enlarge the opening through which it passes, this enlarged portion corresponding to the openings *g* and permitting a slight oscillation of the body on the bail.

I have already made application for a patent for the bottle-stopper herein described, which application was filed October 26, 1887, Serial No. 253,402.

What I now claim as new is—

The process of constructing a bottle-stopper herein described, said process consisting in first casting the stopper-body directly and
5 firmly upon a bail having a central eccentric portion, and in then by force causing the stopper-body to turn somewhat on the bail to

loosen it and to allow a slight degree of oscillation, as set forth.

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Witnesses:

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