

(No Model.)

H. P. & S. L. BARNHART.
BOTTLE STOPPER.

No. 561,191.

Patented June 2, 1896.

Fig. 1.

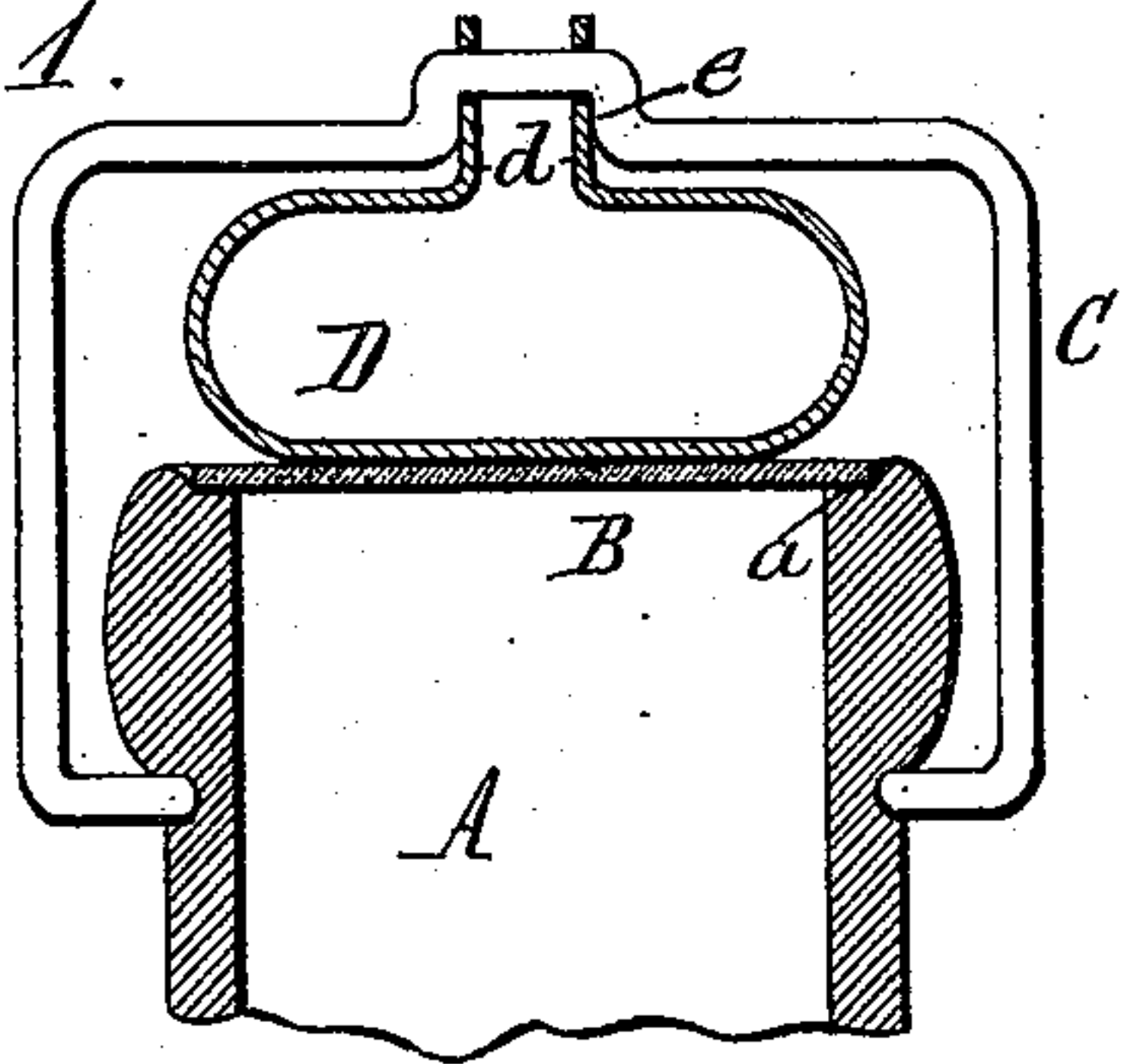


Fig. 2.

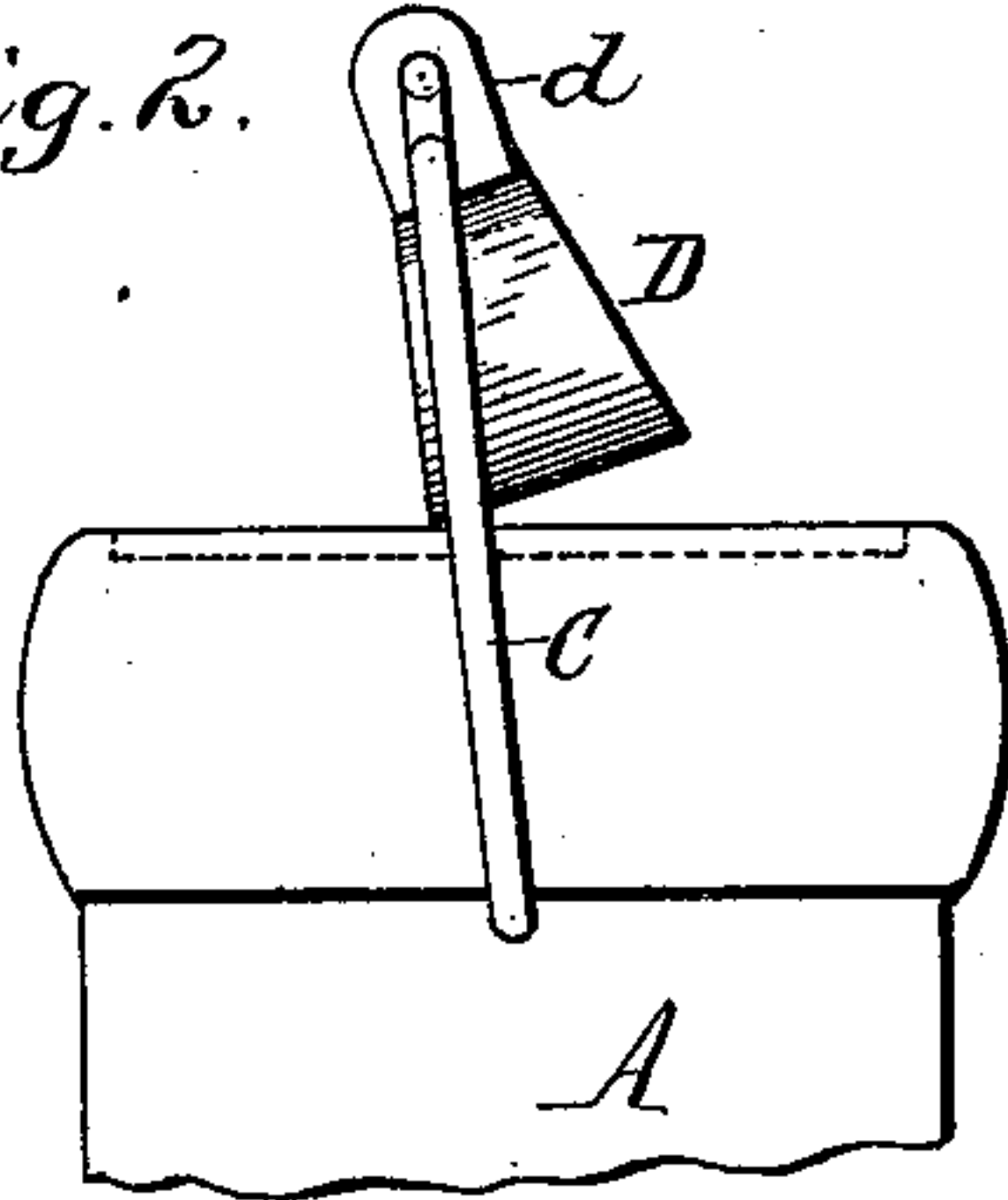


Fig. 3.

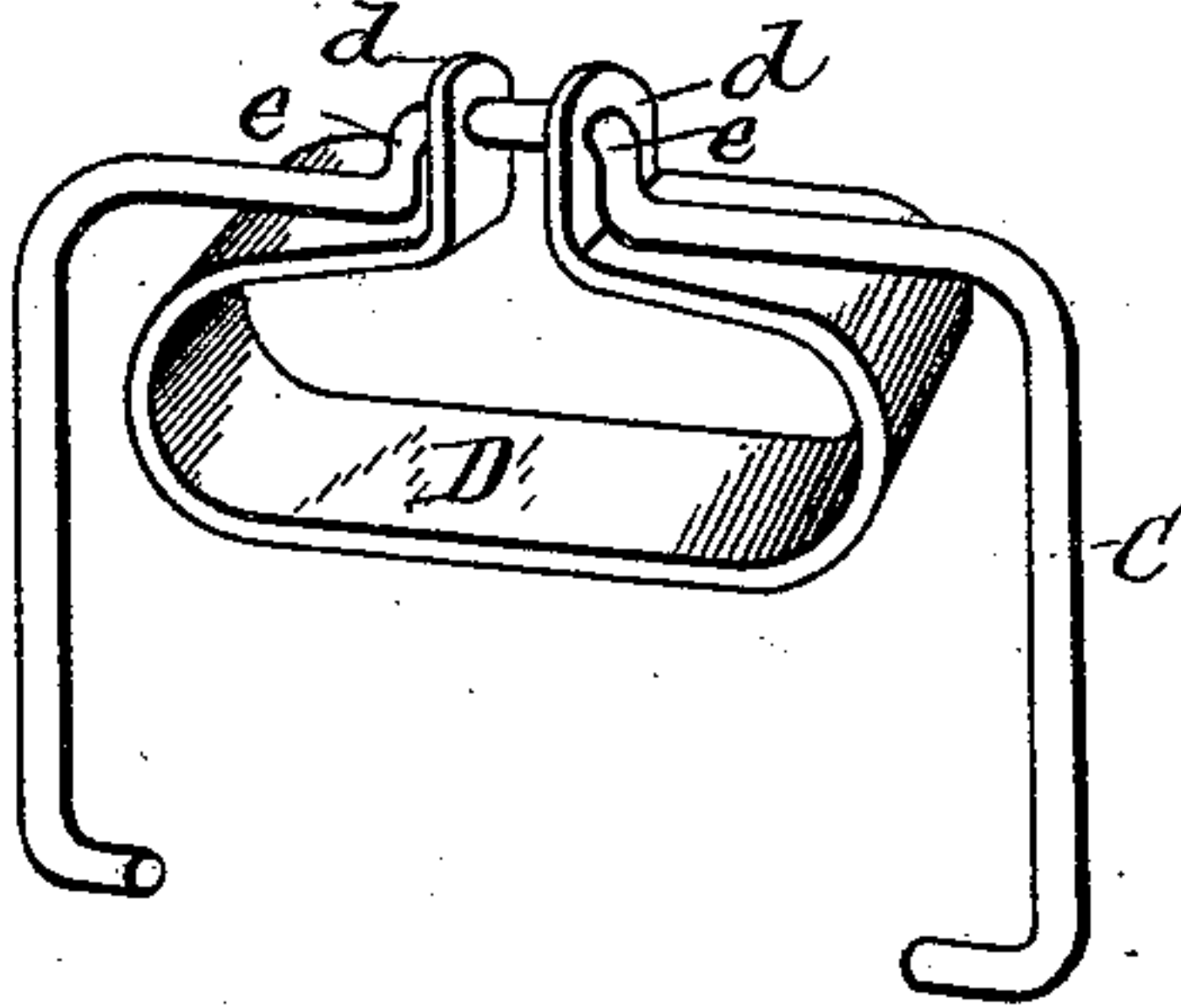


Fig. 4.

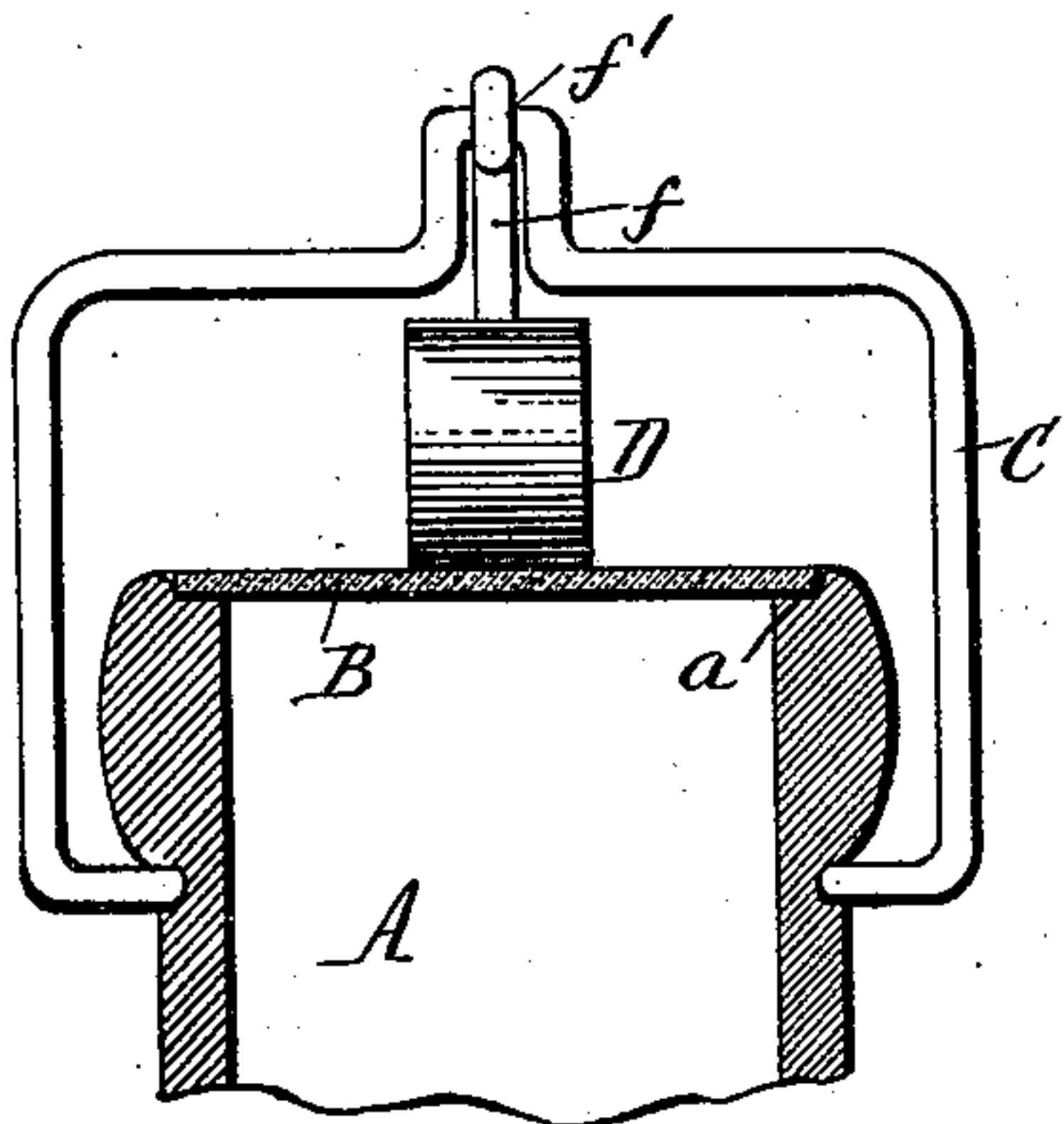
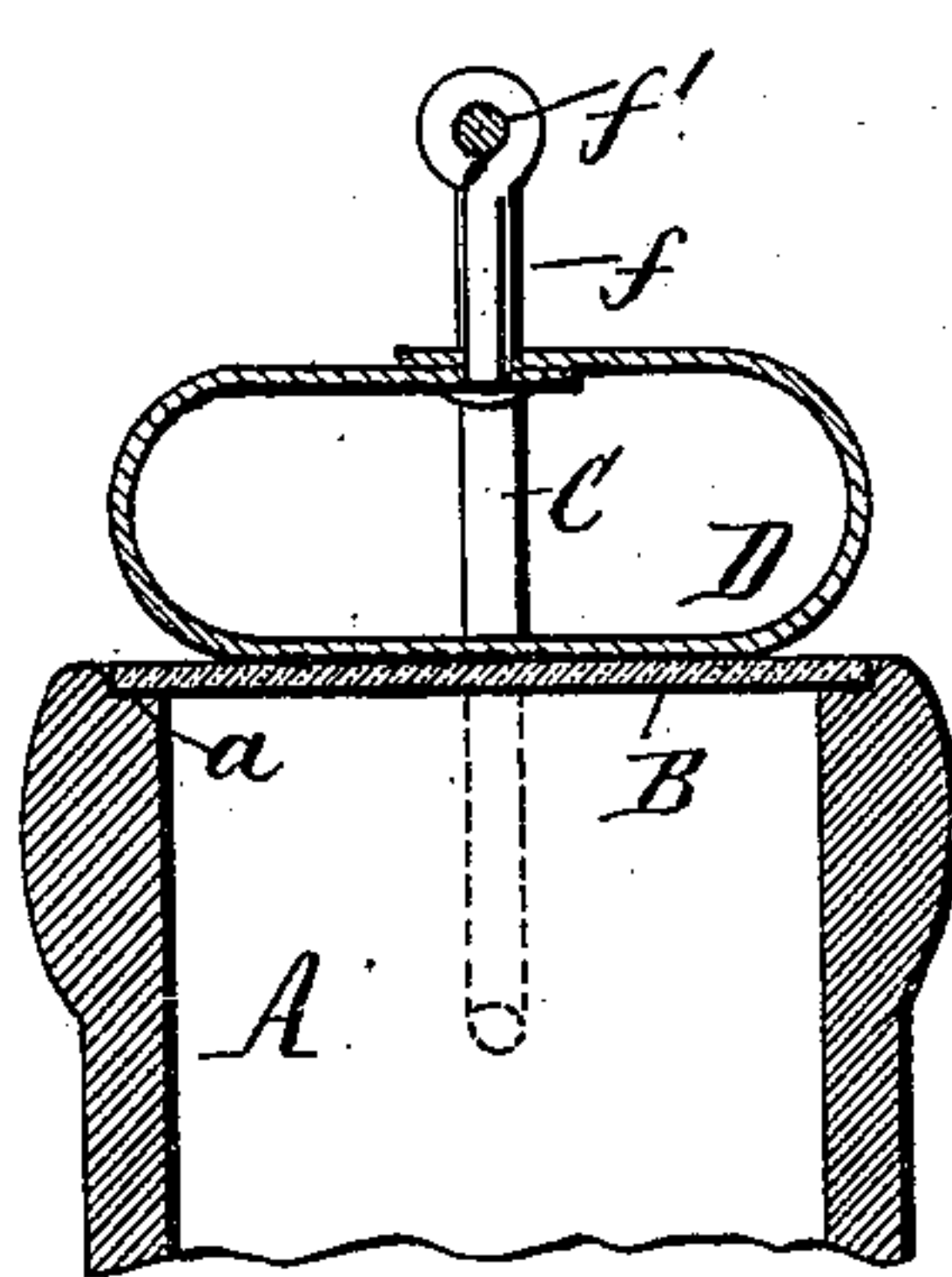


Fig. 5.



WITNESSES:

Henry L. Deck.
Chas. F. Burkhardt.

H. P. Barnhart.
S. L. Barnhart. INVENTORS.

By Wilhelm R. Bomer

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HARVEY P. BARNHART AND SAMUEL L. BARNHART, OF POTSDAM, NEW YORK, ASSIGNORS TO THE THATCHER MANUFACTURING COMPANY, OF SAME PLACE.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 561,191, dated June 2, 1896.

Application filed July 2, 1895. Serial No. 554,717. (No model.)

To all whom it may concern:

Be it known that we, HARVEY P. BARNHART and SAMUEL L. BARNHART, citizens of the United States, residing at Potsdam, in the county of St. Lawrence and State of New York, have invented a new and useful Improvement in Bottle-Stoppers, of which the following is a specification.

This invention relates to bottle-stopper fasteners which consist, essentially, of a swinging bail pivoted to the neck of the bottle and a clamping device carried by the bail and adapted to bear upon the cap or cover of the bottle, our present improvement being especially advantageous in connection with milk-bottles which are closed by a separate cap or disk. Such a bottle is shown and described in Letters Patent of the United States No. 411,368, granted to us September 17, 1889.

The object of our invention is the provision of a fastening of this kind whereby the cap can be readily secured and released and which can be produced at small cost.

In the accompanying drawings, Figure 1 is a fragmentary vertical section of a milk-bottle provided with our improved fastener. Fig. 2 is a view at right angles to Fig. 1, showing the position of the parts preparatory to clamping the cap or disk. Fig. 3 is a detached perspective view of the bail and cam. Fig. 4 is a sectional elevation showing a modified construction of the cam. Fig. 5 is a vertical section thereof at right angles to Fig. 4.

Like letters of reference refer to like parts in the several figures.

A represents the neck of the bottle, provided in its upper end with a shallow annular recess *a*, and B is a cap or cover closing the mouth of the bottle and seated in said recess, whereby the cap is held against lateral displacement. This cap preferably consists of a thin disk of wood or paper-board, such as is described in the Letters Patent hereinbefore referred to.

C is the swinging bail or yoke having its side members provided with inwardly-extending pivots which are preferably journaled in sockets or indentations formed in the neck of the bottle, as shown in the drawings.

D is the clamping-cam carried by the bail and adapted to bear upon the cap of the bot-

tle for confining the same in its seat. This cam consists of a swinging loop depending from the cross-bar of the bail and bearing with its lower horizontal portion upon the cap. The loop is split or divided on its upper side, and its end portions are bent upward at right angles to the body of the loop to form attaching-lips *d*, which latter are provided with openings through which the cross-bar of the bail passes loosely. In order to confine the lips upon the middle of the bail, the central portion of the latter is offset, as shown, to form stop-shoulders *e*. The curved end portions of the loop render the same elastic, and the lips thereof are separated by an intervening space which permits the same to move toward or from each other in locking and releasing the loop, whereby the elasticity of the loop is increased. The loop is preferably bent from a comparatively wide strip of sheet metal to afford the requisite bearing-surface upon the cap.

In securing the cap or disk the bail is swung into its upright position, and the cam-loop is at the same time swung under the cross-bar of the bail, the flat lower portion of the loop bearing squarely upon the cap when both the bail and the loop stand in an upright position, as shown in Fig. 1, thereby firmly clamping the cap upon its seat. To release the cap, the bail is simply pressed laterally, whereby the cam-loop is swung out of line with the bail and unlocked, permitting the removal of the cap.

In the modification of our invention shown in Figs. 4 and 5 the ends of the cam-loop are rigidly connected by an upright swivel-bolt *f*, which is pivoted to the offset portion of the bail by an eye *f'*. The lower portion of this bolt passes loosely through openings formed in the overlapping ends of the cam-loop, and its lower end is headed for retaining the loop on the bolt. This swiveling connection permits the cam-loop to be turned at right angles to the bail, if desired, as shown, whereby the fastener is rendered more secure.

While we prefer to employ a thin disk-like cap of wood or paper-board for closing the bottle, it is obvious that our improved fastening may also be used with a glass or metallic cover.

We claim as our invention—

1. The combination with a bottle or similar vessel and a cover, of a swinging bail pivoted to the upper portion of the bottle and adapted
5 to extend over the cover, and a clamping-cam consisting of an open elastic loop pivotally suspended from said bail and having a flat and comparatively wide lower side which bears upon the cover of the bottle, the upper side
10 of the loop being substantially parallel with its lower side and the end portions which connect its upper and lower sides being curved, whereby the flat lower side is rendered yielding substantially as set forth.

15 2. The combination with a bottle or other vessel and a cover, of a swinging bail pivoted to the upper portion of the bottle and adapted to extend over the cover, and a split cam-loop pivotally suspended from the swinging bail

and having a continuous unbroken lower side 20 which bears upon the cover of the vessel and having its end portions arranged on the upper side of the loop and bent upwardly at an angle to the upper side of the loop and perforated to receive the cross-bar of the bail, 25 said perforated end portions being separated by a space which permits the same to move toward and from each other, as the cam-loop expands and contracts in locking and releasing it, substantially as set forth. 30

Witness our hands this 17th day of June, 1895.

HARVEY P. BARNHART.
SAMUEL L. BARNHART.

Witnesses:

C. E. SANFORD,
F. M. PECK.