

No. 844,332.

PATENTED FEB. 19, 1907.

G. DEMACAKOS.
VALVED CLOSURE.

APPLICATION FILED JULY 28, 1906.

Fig. 1.

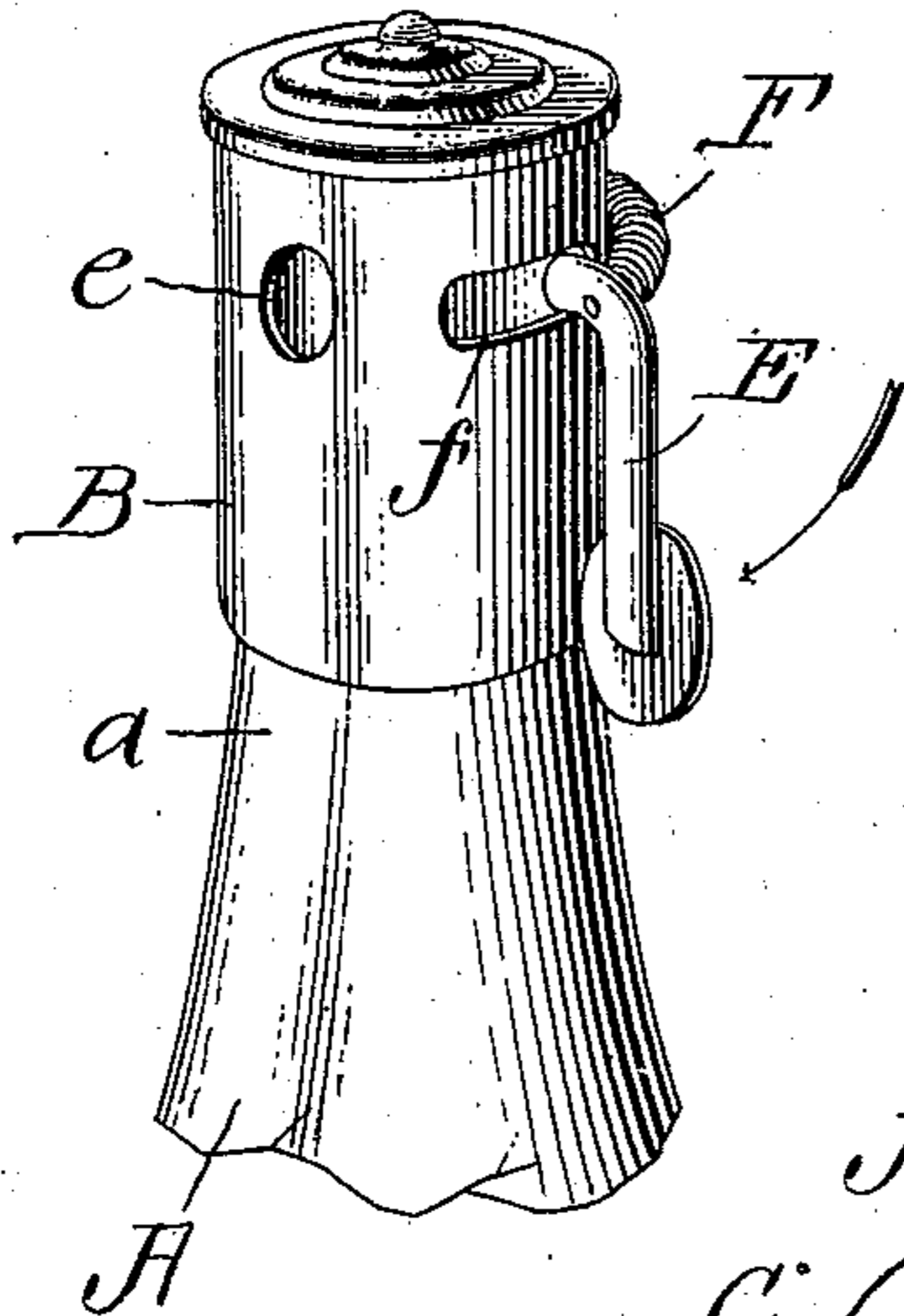


Fig. 2.

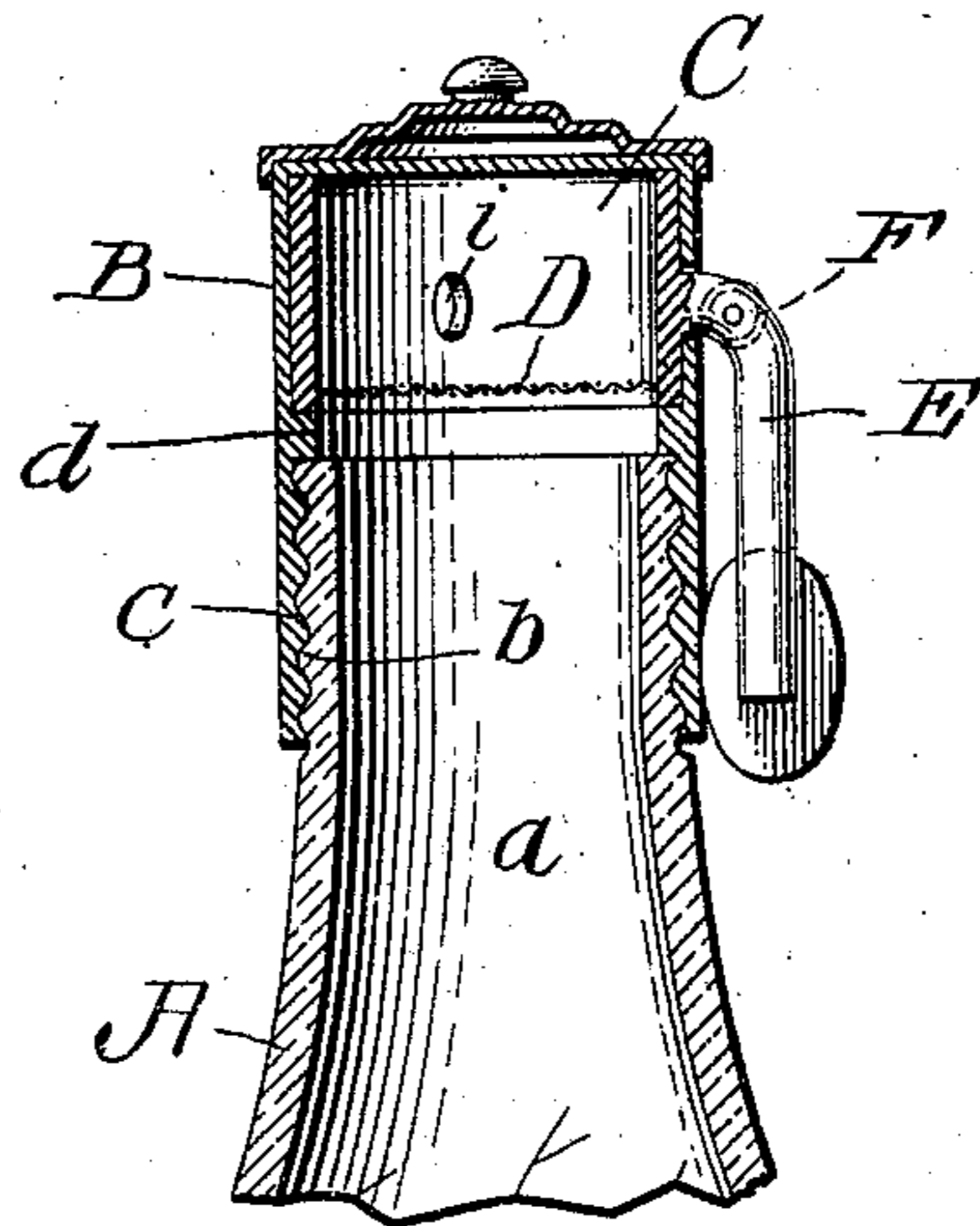


Fig. 3.

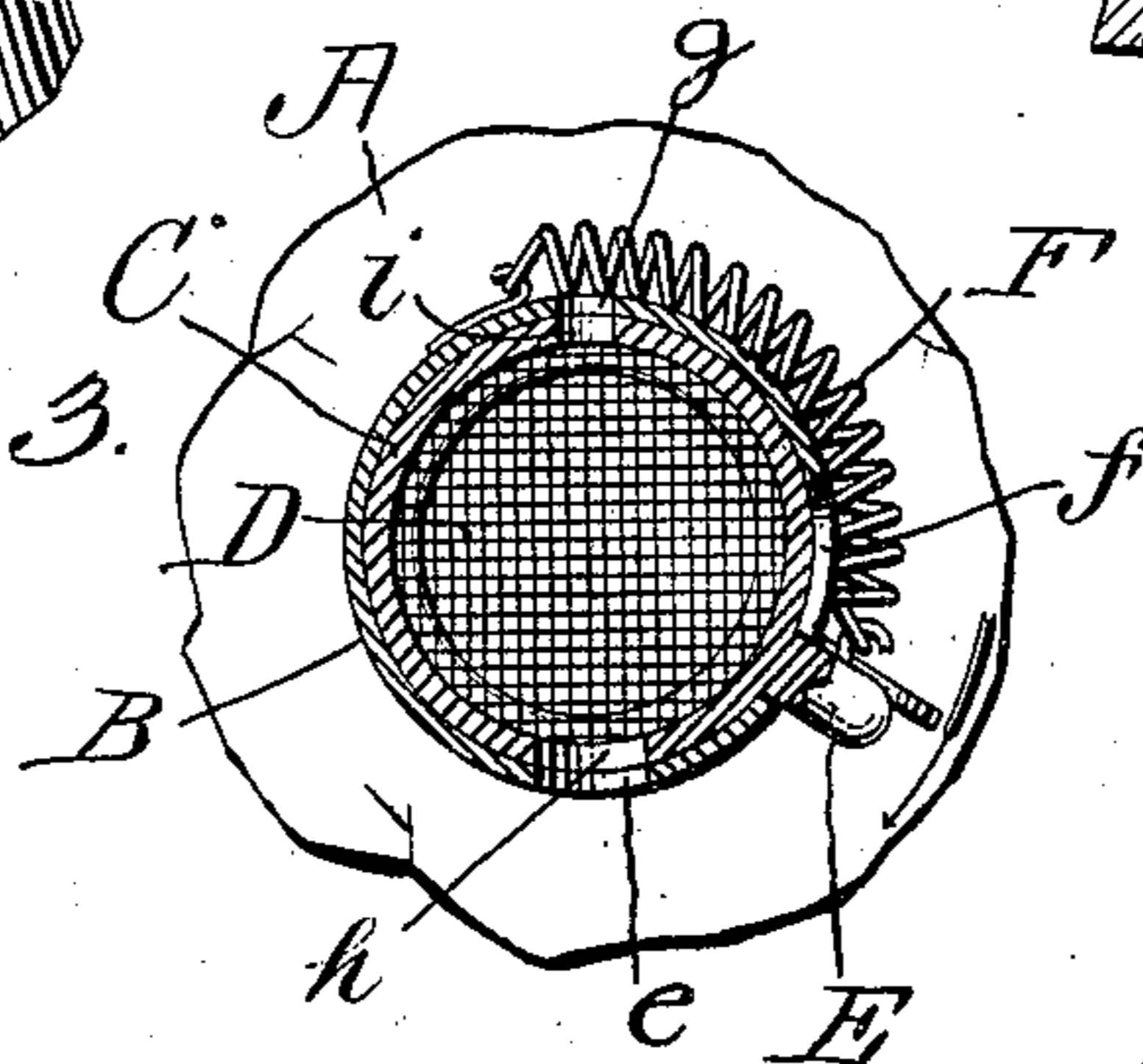


Fig. 4.

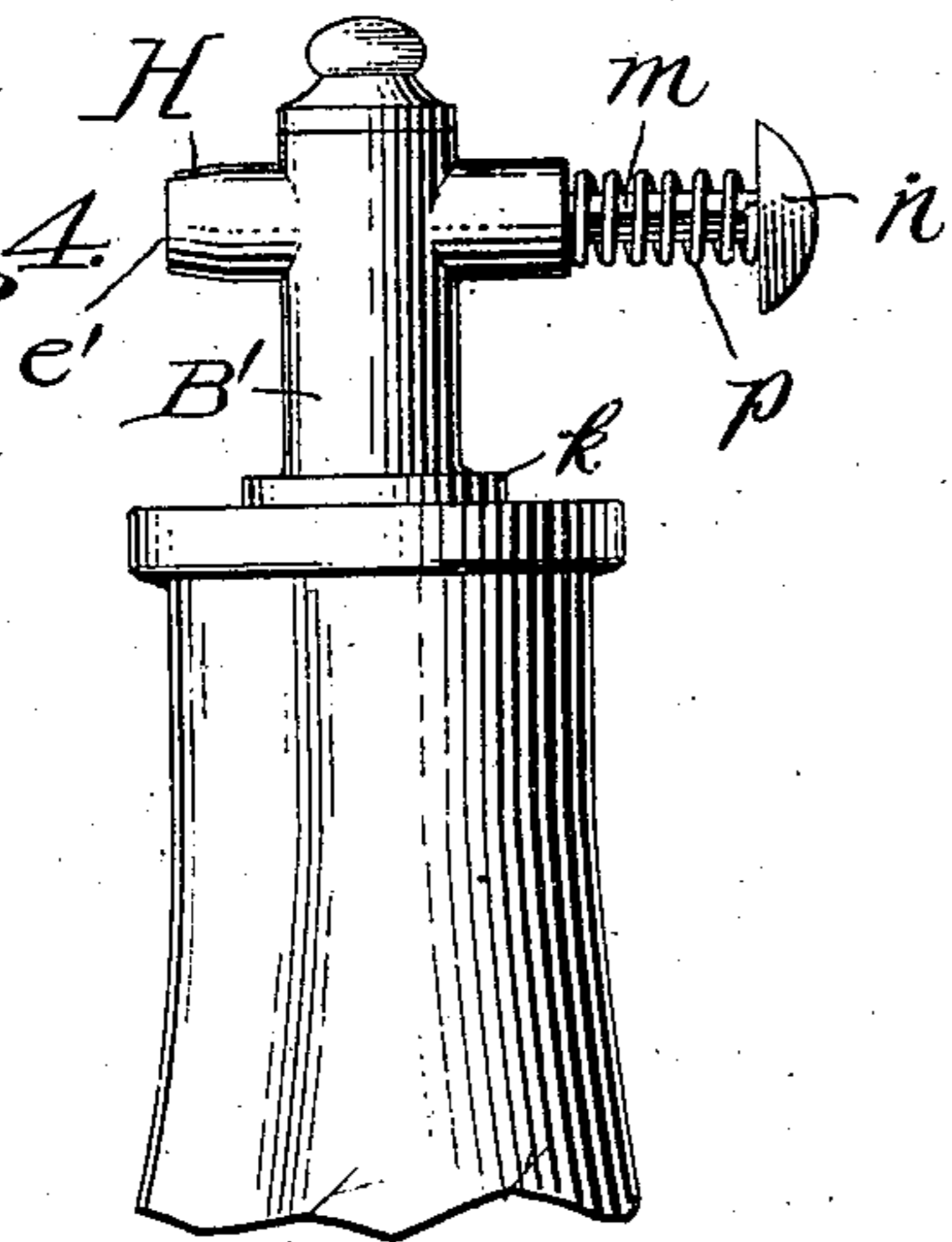
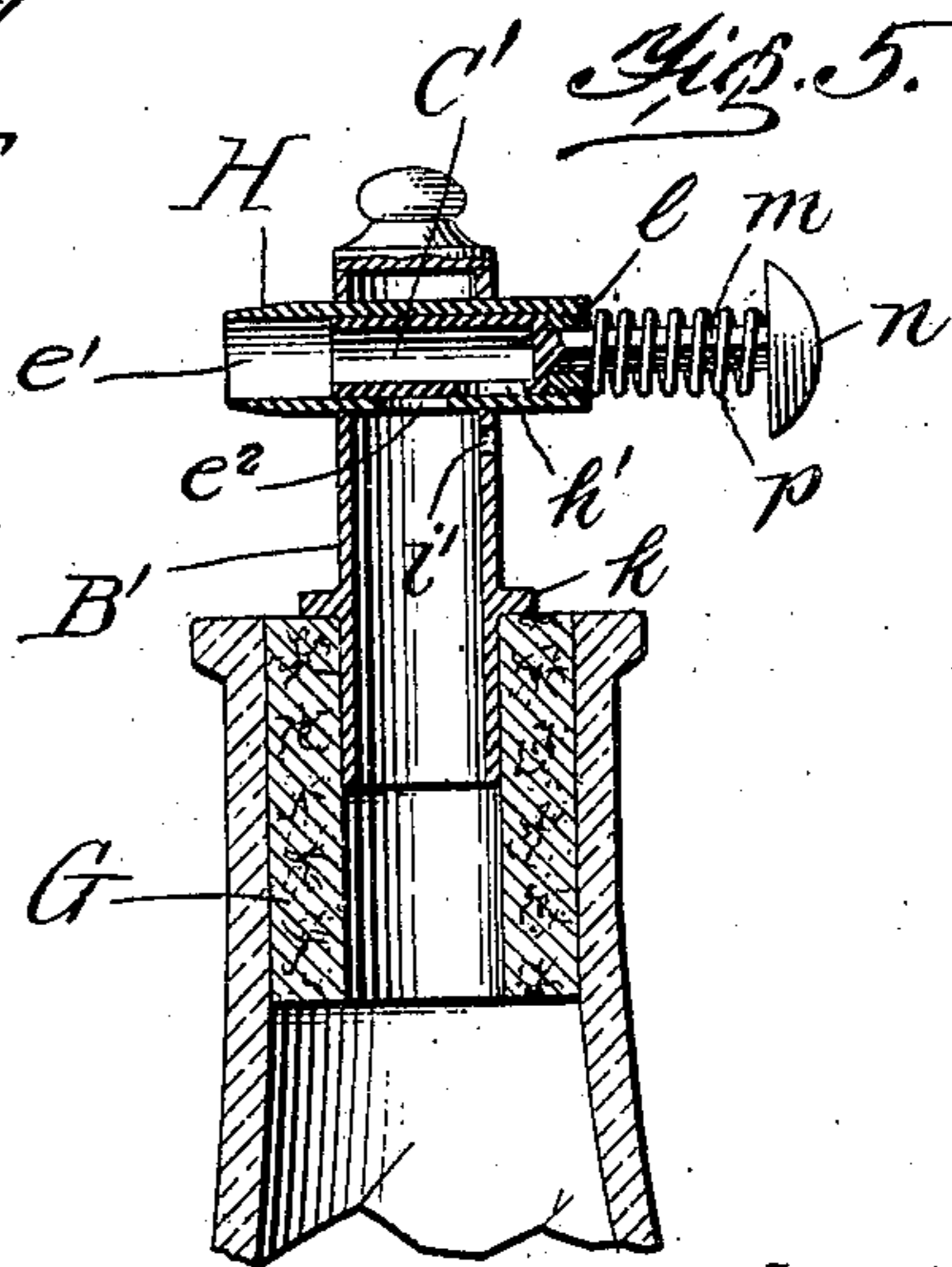


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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VALVED CLOSURE.

No. 844,332.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed July 28, 1906. Serial No. 328,270.

To all whom it may concern:

Be it known that I, GEORGE DEMACAKOS, citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Valved Closure, of which the following is a specification.

My invention pertains to valved closures for bottles and other receptacles from which liquids are dispensed, and it will be fully understood from the following description and claims when the same are read in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a valved closure constituting one embodiment of my invention as the same appears when properly positioned on a bottle-neck, the valve being shown in a closed position. Fig. 2 is a diametrical section of the same. Fig. 3 is a horizontal section showing the valve as open. Fig. 4 is a side elevation illustrating a modified valved closure as properly positioned on a bottle-neck, and Fig. 5 is a diametrical section of the same.

Referring by letter to the said drawings, and more particularly Figs. 1 to 3 thereof, A is a bottle having a neck *a*, exteriorly threaded at *b*, and B is the cap-like casing of my novel valved closure. The said casing B is made of metal or other material suitable to the purpose, with its upper end closed and its lower end open, and it is provided with interior threads *c*, arranged to engage the threads *b* of the bottle-neck, and is also provided at a point above the threads *c* with an interior shoulder *d*, which is designed when the cap is placed in the first instance upon the bottle-neck to bear upon a disk (not shown) and tightly hold the same against the upper end of the neck. The disk mentioned has for its purpose to seal the bottle when the bottle is placed upon the market; but when the contents of the bottle are to be dispensed the casing B is turned off the bottle and the said disk is removed, after which the casing is replaced on the bottle to adapt the construction to operate in the manner presently described. For these reasons I have deemed it unnecessary to illustrate the interposed disk. In lieu of the interior thread *c* the casing B may be exteriorly threaded to adapt it to be turned into an opening in a barrel or other receptacle from which liquid is to be dispensed; but I have deemed it unnecessary to illustrate the exterior threads. I also desire

it understood that when it is not desired to use the sealing-disk mentioned the shoulder *d* in casing B may be omitted without involving a departure from the scope of my invention. The cap-like casing B is further provided with a discharge-aperture *e* for liquid, a circumferential slot *f*, and a vent-aperture *g*.

Disposed in the upper portion of the casing B is a tubular valve C, which preferably, though not necessarily, carries a foraminated diaphragm D and has apertures *h* and *i* arranged above the diaphragm D and positioned to register with the apertures *e* and *g*, respectively, when the tubular valve is turned on its axis from the positions shown in Figs. 1 and 2 to the position shown in Fig. 3. The said tubular valve C is provided with a thumb-piece E, movable in the slot *f*, and it is normally held in and returned to the position shown in Figs. 1 and 2, with a view of closing the apertures *e* and *g*, through the medium of a tractile spring F, which is connected at one end to the thumb-piece E and at its opposite end to the casing B, as best shown in Fig. 3.

When it is desired to register the aperture *h* of the tubular valve C with the casing-aperture *e*, so as to permit the contents of the bottle to pass out of the same, the operator has but to press the thumb-piece E in the direction indicated by arrow in Figs. 1 and 3, while when it is desired to close the interior of the bottle to the atmosphere the operator has but to remove pressure from the thumb-piece, when the spring F will cause the valve to assume the position shown in Figs. 1 and 2. At this point it will be noticed that when the apertures *e* and *h* are registered the apertures *g* and *i* will also be registered to permit air to enter the bottle and assist the pouring of the contents therefrom, while when the aperture *e* is closed the aperture *g* will also be closed.

The foraminated diaphragm D is made of reticulated material and is designed to serve when the device is used for dispensing pepper-sauce to prevent the peppers from reaching and clogging the apertures of the tubular valve C.

In the modified construction (shown in Figs. 4 and 5) the casing B' is of a diameter to extend through an opening in a cork G, contained in the mouth of a bottle, and is provided with a collar *k*, designed to bear upon the upper end of the cork or stopper. In the

casing B' and forming a part thereof is a fixed diametrically-arranged conduit H, which terminates at one end in a spout e' and is provided with an aperture e^2 in communication
 5 with the interior of the casing B' and is also provided at its end remote from the spout e' with a bushing l , having an aperture of angular form in cross-section, as best shown in Fig. 5. The valve C' of the modified construction (shown in Figs. 4 and 5) is tubular,
 10 like the valve C, and is provided with an aperture h' , designed to register with the casing-aperture e^2 . Said valve C', however, is movable rectilinearly in the conduit H, its stem
 15 m , which is of rectangular form in cross-section, being guided in the bushing l , whereby the valve C' is held against turning on its axis. On the outer end of the valve-stem m is a head or enlargement n , and between the
 20 said head or enlargement n and the adjacent end of the conduit H is interposed a spring p , which operates to return the valve C' to and normally retain the same in the closed position. (Shown in Figs. 4 and 5.) When it is
 25 desired to pour liquid from the bottle shown in Figs. 4 and 5, the operator has but to press the valve C' against the action of the spring p until the aperture h' of the valve registers with the aperture e^2 in the casing, when, as
 30 will be readily apparent, liquid may freely flow out of the bottle through the valved closure.

The casing C' is preferably provided with a minute vent-aperture v' , and it may when desired be threaded to permit of the casing being
 35 turned on a threaded bottle-neck or into an opening in a barrel or other receptacle from which liquid is to be dispensed; but I have deemed it unnecessary to illustrate the
 40 said threads.

It will be gathered from the foregoing that both embodiments of my invention are simple, inexpensive, and durable and that they are neat and finished in appearance, and
 45 hence calculated to enhance rather than detract from the neatness of the bottles or other receptacles to which they are connected.

While I have described my novel valved closures in detail, it is obvious that in practice various changes in the construction and relative arrangement of the parts may be made without involving departure from the scope of my invention as claimed.

It is obvious that when the embodiment shown in Figs. 4 and 5 is to be used on a seltzer or like bottle the casing B' may be extended or may be connected to a rubber or glass tube extended to a point adjacent to the bottom of the bottle.

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

1. The combination in a valved closure, of a casing having a circumferential slot, a

valve arranged to turn on its axis in the casing and having a stem movable in said circumferential slot, and a spring connecting the casing and valve and arranged to return the latter to and normally hold the same in one position. 65 70

2. A valved closure comprising a casing arranged to receive from a receptacle and having a discharge-aperture, a valve controlling the said aperture, and a foraminated diaphragm disposed in the casing at a point
 75 intermediate the receiving portion thereof and the discharge-aperture.

3. The combination in a valved closure, of a casing having a circumferential slot, a valve arranged to turn on its axis in the casing and having a stem movable in said circumferential slot, a foraminated diaphragm arranged in and carried by the valve for preventing the passage of solid particles through the valve, and a spring connecting the casing
 80 and valve and arranged to return the latter to and normally hold the same in one position. 85

4. The combination in a valved closure, of a casing having a discharge-aperture, a tubular valve arranged in the casing and having an aperture adapted in one position to register with that of the casing; said valve snugly occupying and arranged to be turned on its axis in the casing, and a spring connecting
 90 the casing and valve and arranged to return the latter to and normally hold the same in one position. 95

5. The combination in a valved closure, of a casing having a discharge-aperture, a tubular valve snugly fitting and arranged to turn on its axis in the casing and having an aperture adapted in one position to register with that of the casing, a foraminated diaphragm arranged in and carried by the tubular valve
 100 for preventing the passage of solid particles to the discharge-aperture thereof, and a spring connecting the casing and valve and arranged to return the latter to and normally hold the same in one position. 105 110

6. A valved closure comprising a casing having discharge and vent apertures and also having a circumferential slot, a tubular valve arranged to turn on its axis in the casing and control the discharge and vent apertures thereof and having a stem movable in the slot of the casing, and a spring connecting the casing and the valve and arranged to normally hold the latter in a closed position. 115

7. The combination in a valved closure, of a casing having a discharge-aperture and also having a vent-aperture, a tubular valve snugly fitting and arranged to turn on its axis in the casing and having a discharge-aperture and a vent-aperture adapted in one position of the valve to register with the discharge-aperture and the vent-aperture, respectively, of the casing, and a spring connecting the casing and valve and arranged to return the latter to and normally hold the same in one position. 120 125

necting the casing and valve and arranged to return the latter to and normally hold the same in one position.

8. A valved closure comprising a casing
; having a discharge-aperture and also having
an aperture for the admission of air to assist
the passage of liquid through the discharge-
aperture, a valve contained in the casing and
adapted to be moved in one direction; said
10 valve being tubular and having an aperture
arranged in one position of the valve to regis-

ter with the discharge-aperture of the casing,
and a spring for moving the valve in the op-
posite direction with reference to that first
mentioned.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

GEORGE DEMACAKOS.

Witnesses:

MENELAY STAMATAKOS,
KRISTOS G. DOUKERS.

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