

(Model.)

J. F. KING.
Bottle Stopper.

No. 230,423.

Patented July 27, 1880.

Fig. 1

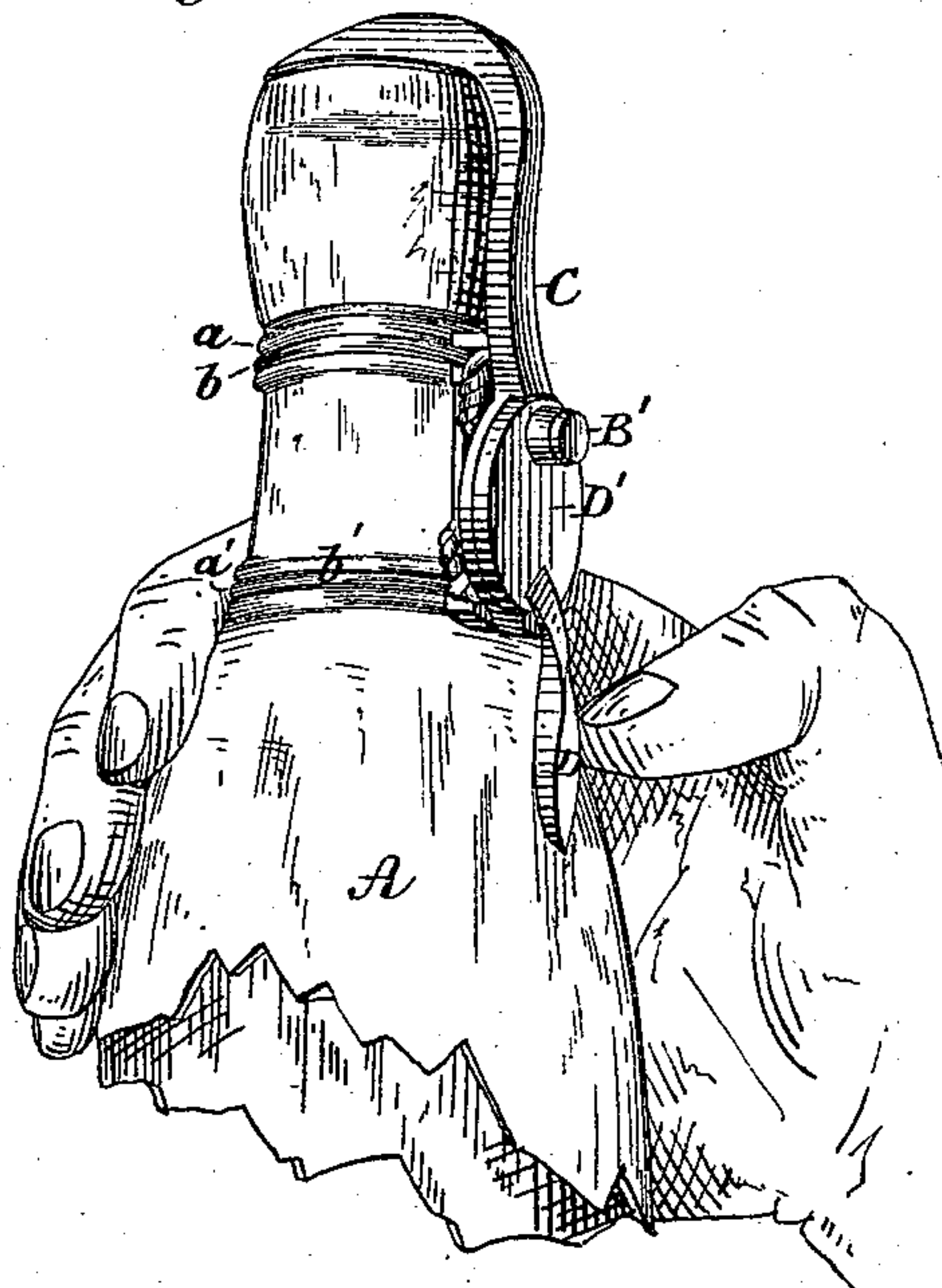


Fig. 2

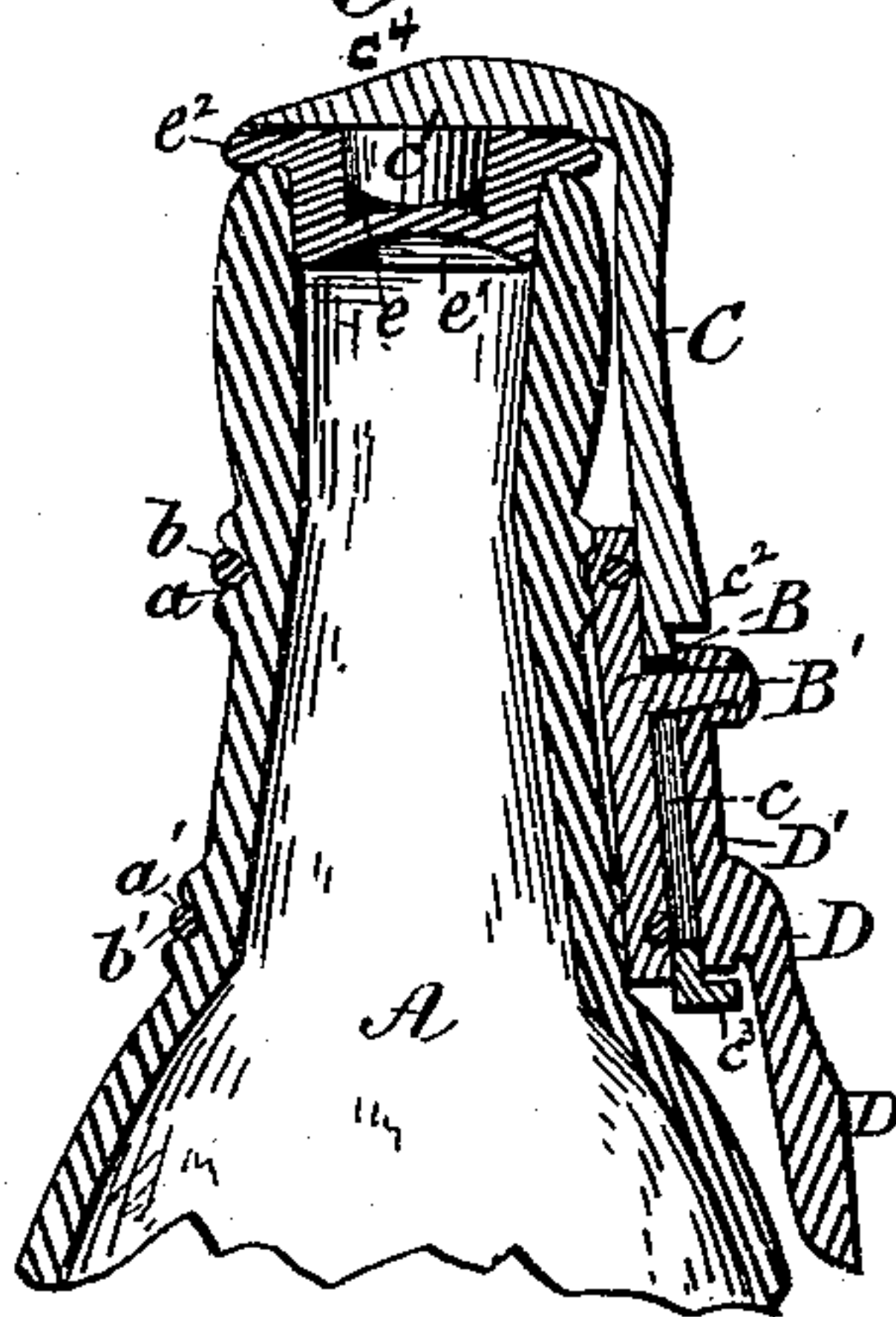
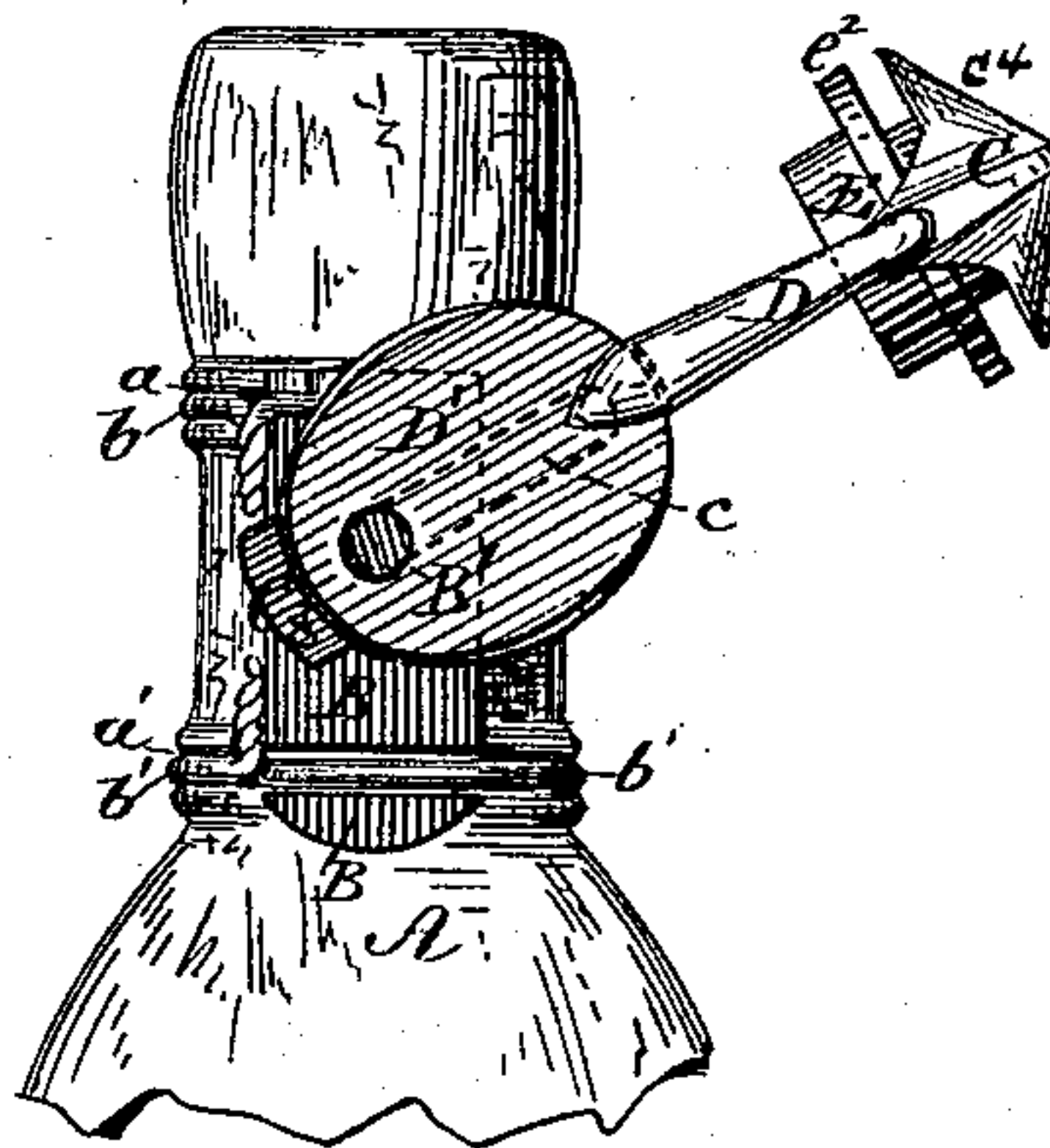


Fig. 3



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN F. KING, OF WASHINGTON, DISTRICT OF COLUMBIA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 230,423, dated July 27, 1880.

Application filed May 1, 1880. (Model.)

To all whom it may concern:

Be it known that I, JOHN F. KING, a citizen of the United States, residing at Washington city, in the District of Columbia, have invented certain new and useful Improvements in Bottle-
5 Stoppers and mechanism for operating them; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the
10 art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

15 The object of my invention is to provide a cheap, simple, and effective mechanism for fastening a stopper to a bottle, whereby such stopper may be readily operated by means of the finger or thumb of the hand grasping the
20 bottle, while the other hand is free to grasp the tumbler or vessel into which the contents of the bottle are to be discharged, and whereby the stopper may be permanently fastened to the neck of the bottle to prevent loss, as
25 more fully hereinafter specified. These objects I attain by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved stopper-operating mechanism secured
30 to the neck of a bottle; Fig. 2, a vertical section through the neck of the bottle and stopper mechanism, showing the mouth of the bottle closed; and Fig. 3, a side elevation of the same, showing the bottle open.

35 The neck of the bottle A is formed with an upper and a lower annular depression, a a' , into which tie-wires b b' are fitted, which also fit into grooves in the upper and lower edges of a metal plate B, which is thereby closely
40 held against the side of the neck of the bottle.

The plate B has a pintle or pivot-pin, B' , that projects from it and passes freely through an elongated slot, c , in the end of the finger-plate C, the upper end of which is bent over to press
45 upon the upper end of the stopper, and is in this instance provided with a downwardly-projecting hub or boss, c' , that fits into the upper end of a rubber packing, hereinafter described, and partly enters the mouth of the bottle.

50 The pintle or pivot-pin B' projects beyond the plate C, and passes through one end of a

cam, D' , so that the cam D' of the lever will rest against the outer face of the lower end of the finger-plate C and completely cover its
55 slotted portion. The outer edge of the cam D' bears against the shoulders c^2 c^3 upon the side of the finger-plate, so that when the cam D' is turned upon the pin B' the finger-plate C will be raised or lowered, the pin B' passing
60 through the slot c of the finger-plate, which will admit of the movement of the cam-lever.

The ends of the wires b b' , which hold the plate B to the neck of the bottle, are twisted and turned in, so that they will be covered by
65 the projecting edge of the plate B, and the sharp points of the wire will not be exposed to cut the hands.

The rubber stopper packing E is of peculiar shape, and is provided with a recess, e , in its
70 upper end to receive the plug or stopper c' of the finger-plate C. The rubber stopper E is also provided with an annular rim or flanged portion, e^2 , which rests upon the upper edge of
75 the mouth of the bottle and is closely pressed against it by the cap c^4 of the finger-plate. A perfectly air-tight stopper is thus obtained, and the pressure of the gas within the bottle
80 will exert itself upon the dished face of the lower end of the stopper and exert itself to force the lower outer edge of the stopper more
85 closely against the inner surface of the neck of the bottle.

The stopper is, by means of the above-described mechanism, at all times under complete control, so that it may be opened slowly,
85 or only partially opened, to let off an excess of gas when the bottle is overcharged, and thus prevent the waste of its contents when
90 poured out. When the lever is down the bottle is closed. When it is forced to one side the pressure of the gas within the bottle will
95 completely raise the stopper, so that the stopper and its connections will either fall to one side or may, with a slight movement of the hand or fingers, be thrown to one side of the
100 mouth of the bottle, so that its contents may be poured out without obstruction.

I claim as my invention and desire to secure by Letters Patent—

1. The combination, with the neck of a bottle and an arm provided with a suitable stopper and arranged to slide vertically and swing

laterally on a suitable bearing at one side of the bottle, of a pivoted rotating cam-lever arranged to operate said arm in its vertical movements to both open and close the stopper, substantially as described.

5 2. The combination, with the longitudinally sliding and swinging finger-plate C, provided at its upper end with a stopper, and having two shoulders on its vertical portion, of a pivoted cam, arranged to play between said shoulders, for operating said finger-plate, substantially as described.

10 3. The combination, with the neck of the bottle, of the pivot-plate B, finger-plate C, provided with a stopper upon its upper end and

15 slotted at its lower end to embrace the pivot-pin of the plate B, and cam-lever D, secured to said pivot-pin, and held between lugs upon the finger-plate to open and close the stopper by means of the cam-lever, substantially as described.

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

JOHN F. KING.

Witnesses:

WM. H. ROWE,
H. A. HALL.