

A. BREESE.
Watch-Case.

No. 222,235.

Patented Dec. 2, 1879.

FIG. 1.

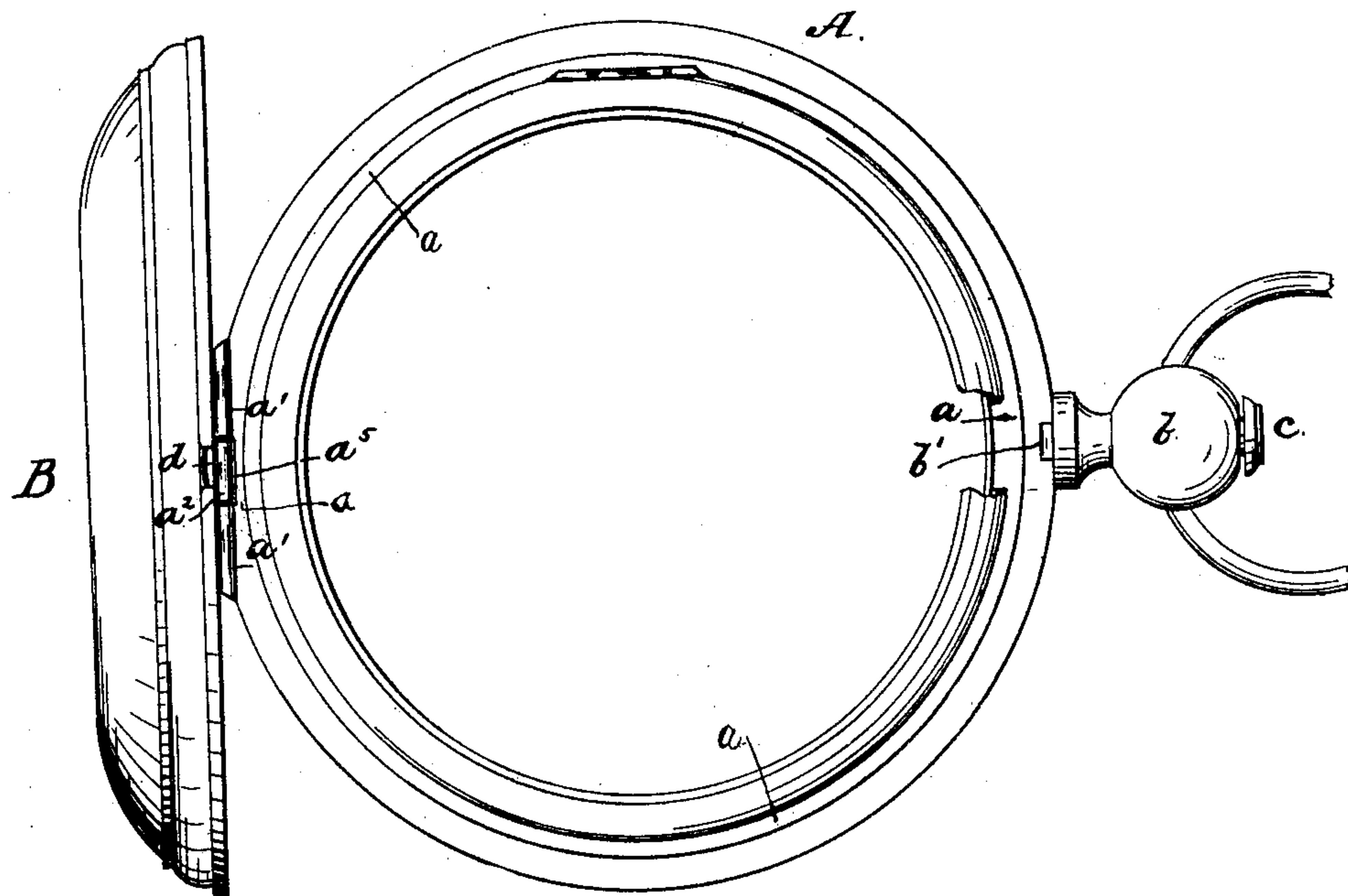


FIG. 2.

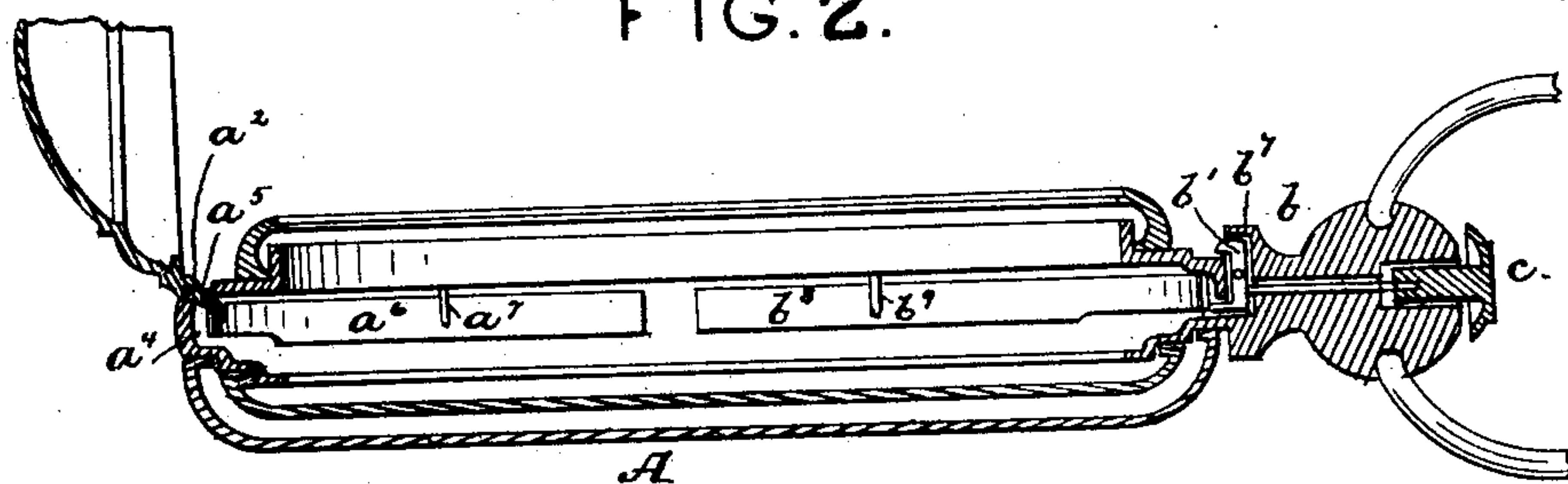


FIG. 3.

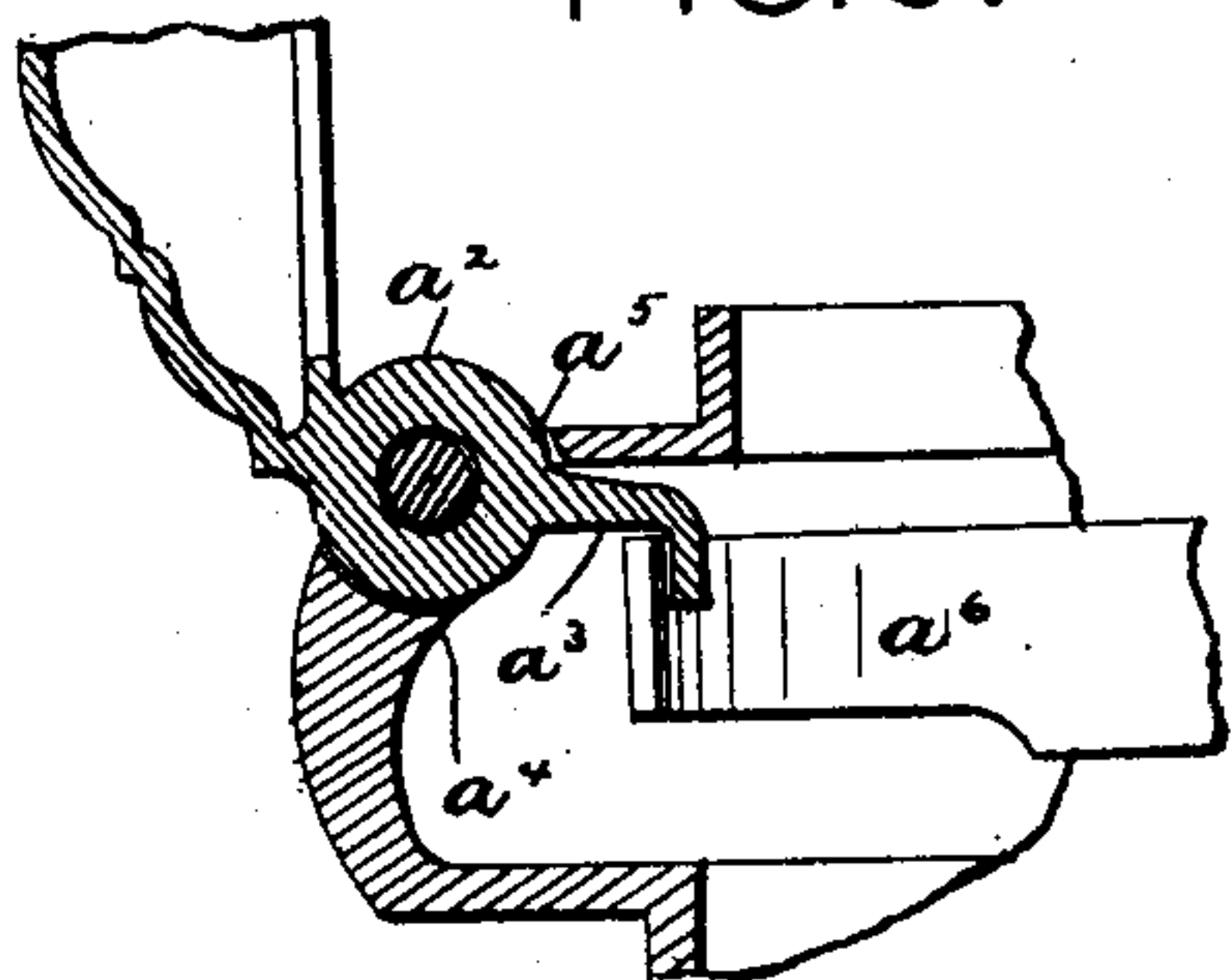
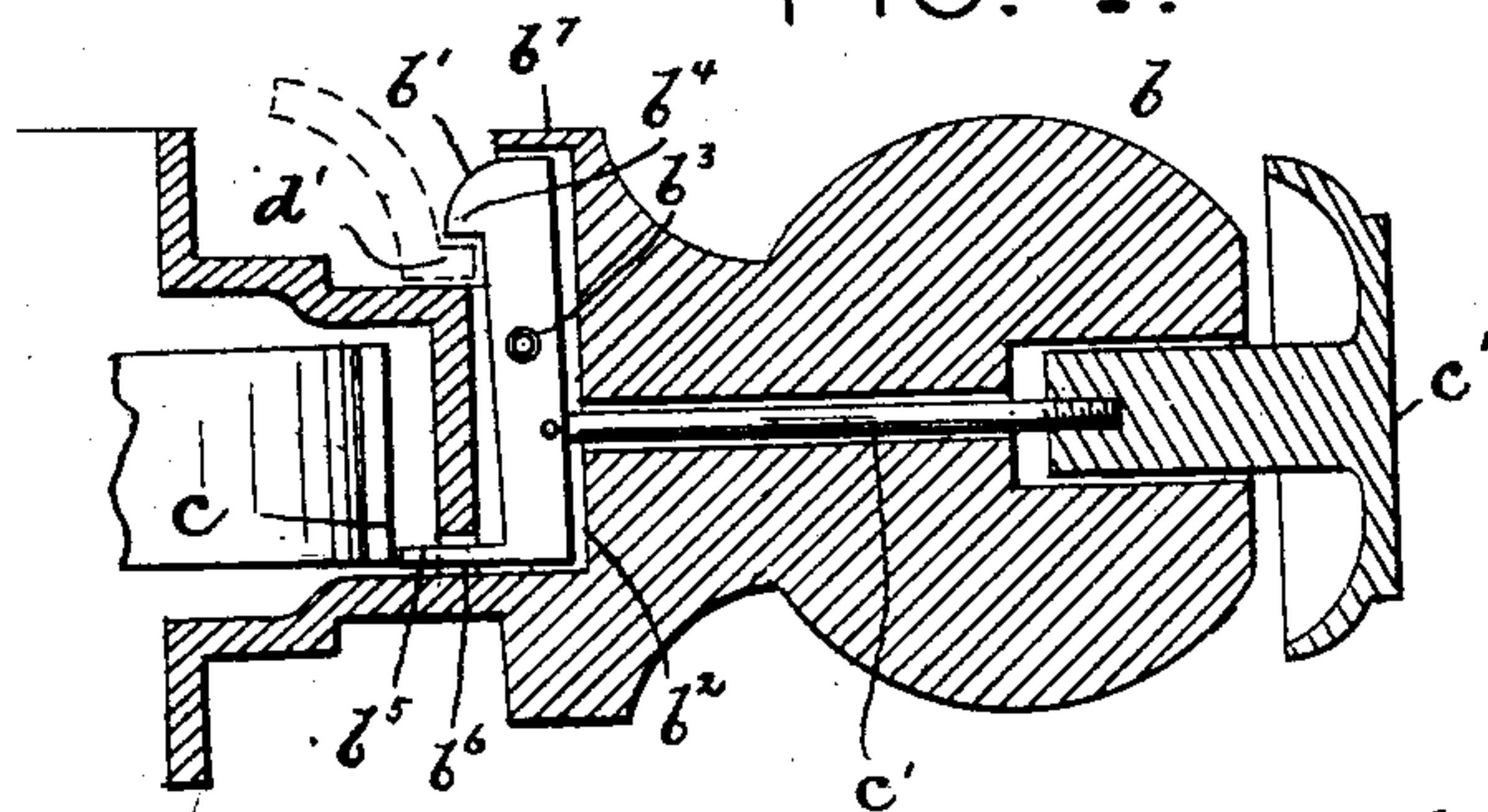


FIG. 4.



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UNITED STATES PATENT OFFICE.

AMBROSE BREESE, OF BELLEVUE, IOWA.

IMPROVEMENT IN WATCH-CASES.

Specification forming part of Letters Patent No. **222,235**, dated December 2, 1879; application filed September 22, 1879.

To all whom it may concern:

Be it known that I, AMBROSE BREESE, of Bellevue, in the county of Jackson and State of Iowa, have invented certain new and useful Improvements in Watch-Cases; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to an improvement in watch-cases; and it consists of a new and novel construction and arrangement for holding closed and releasing the lid, and a hinge and spring for raising the lid, all in such relation to the case as to leave no opening into the works, through which dust can get to them, all of which will hereinafter be more fully explained.

In the drawings, Figure 1 is the watch with lid open, showing all of the hinge and catch-bar that is exposed to view. Fig. 2 is a cross-section, showing the construction and arrangement of the catch-bar and its spring, and the spring with hinge and arm. Fig. 3 is a magnified sectional detail view of the hinge, spring, and arm, as shown in Fig. 2. Fig. 4 is the same of the catch-bar and its spring.

A is a watch-case of ordinary construction, having my improvements, which dispense with the holes usually to be found in the face-flange *a*, for protruding springs to raise and catch the lid and leave a perfectly dust-tight case, as shown in Fig. 1.

a' is the hinge, the tongue *a*² of which has an arm, *a*³, so attached to the under and inner side that when the lid is raised to its full extent the said arm rests against the under surface of the upper side of the case, in front of the hinge, as is shown in Figs. 2 and 3. When the lid is closed this arm, being rigidly attached, is carried down and back near to the back of the case at *a*⁴. There being no spring protruding between the hinge and the case, as is common in other watches, the case is made to fit close to the hinge, so as to leave no opening for dust to get through, all of which is shown at *a*⁵ in Figs. 1, 2, and 3.

To raise the lid a spring, *a*⁶, is arranged on the curved side of the interior of the case, ad-

jacent to the works, and extending half-way from the hinge to the stem and held in its place by a pin or screw, *a*⁷, fixed in the upper side of the case. The hinge end of this spring is arranged behind and against the arm *a*³, so that in closing the lid the arm presses it back, thus giving the tension that opens the lid when released from the catch.

I dispense with the ordinary catch and spring, and construct a catch-bar, *b'*, with a hole, *b*³, intermediate between its ends, and a lip, *b*⁴, on its front and *b*⁵ on its rear end, parallel with the hole *b*³. The top end of the bar *b'*, over the lip *b*⁴, is beveled, for the purpose hereinafter explained.

At the base of the stem *b* I make a hole or chamber, *b*², at right angles to the wide side of the watch, and extending back, but not through the stem. This chamber communicates with the interior or movement chamber of the watch by the passage or hole *b*⁶ at the inner end of the chamber *b*². The chamber *b*² is large enough to receive the catch-bar *b'*, with some additional vertical room relative to the stem. I place the catch-bar in it, and by corresponding holes in the stem I pivot it in the center of said chamber, through the hole *b*³, with the lips *b*⁴ *b*⁵ facing the interior of the watch. Thus pivoted the ends of the bar are allowed to move vertically to the upper and lower sides of the chamber. The lip *b*⁵ extends through the passage or communication *b*⁶ to the movement-chamber, while the outer end of the bar extends far enough front to allow a space between the lip *b*⁴ and the case, which is designed to receive and hold the edge of the case, as will more fully hereinafter appear.

Over the end of the catch-bar I preferably place a covering, so as to inclose and protect it more perfectly from dust. A spring, *b*⁸, is now fastened in the movement-chamber to the curved side by the pin or screw *b*⁹, and so arranged that its stem end *c* presses against the lip *b*⁵ and forces the inner end of catch-bar *b'* up, while the outer end is depressed in position to hold the lid closed.

The stem *b* is provided with the usual push *c'*, which is in contact and arranged with the inner end of the bar *b'* for depressing it, which elevates the outer end and releases the lid.

The lid B at the point d of its juncture with the stem is made to conform to the said stem, and provided with a tongue, over which the lip b^4 springs and holds the lid down.

It will be seen the operation of my invention is as follows: The tongue of the hinge has the arm a^3 rigidly attached to it on the interior of the case, so that when the lid is raised to its full extent the arm rests against the upper inner side of the case, and is arranged to push the spring a^6 back in closing the lid. This, while it gives a strong, durable, and elastic spring arrangement, and one that does not wear the case, also dispenses with the hole common in ordinary methods to admit the action of the case-spring, thereby protecting the delicate mechanism of the watch from particles of dust.

The catch-bar b' , pivoted in the chamber b^2 , receives the pressure of the spring c on its inner end, keeping it forced up, while the outer end is forced down and in position to hold the lid. The tongue d' , sliding down the bevel of the lip b^4 , presses back the catch-bar until it escapes, when the lip closes over the tongue and holds the lid. Pressure on the push de-

presses the inner end of the catch-bar and releases the lid. The stem b , thus containing all this mechanism, the face-flange a can be made without holes, which completes the protection to the movements.

What I claim is—

1. The dust-tight case A, constructed with a hollow stem, b , and a chamber, b^2 , open at its top, and arranged at the inner end of said stem and communicating with the movement-chamber, substantially as set forth.

2. The combination, with the casing A, provided with the hinged lid or cap B, and having a hollow stem, b , and a chamber, b^2 , open at its upper end, and arranged at the inner end of the said stem, of the push-bar c' , catch-bar b' pivoted in the chamber b^2 , and provided with finger b^5 , and the spring c , substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

AMBROSE BREESE.

Witnesses:

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