

(Model.)

2 Sheets—Sheet 1.

C. K. COLBY.

WATCH CASE.

No. 333,057.

Patented Dec. 22, 1885.

Fig. 1.

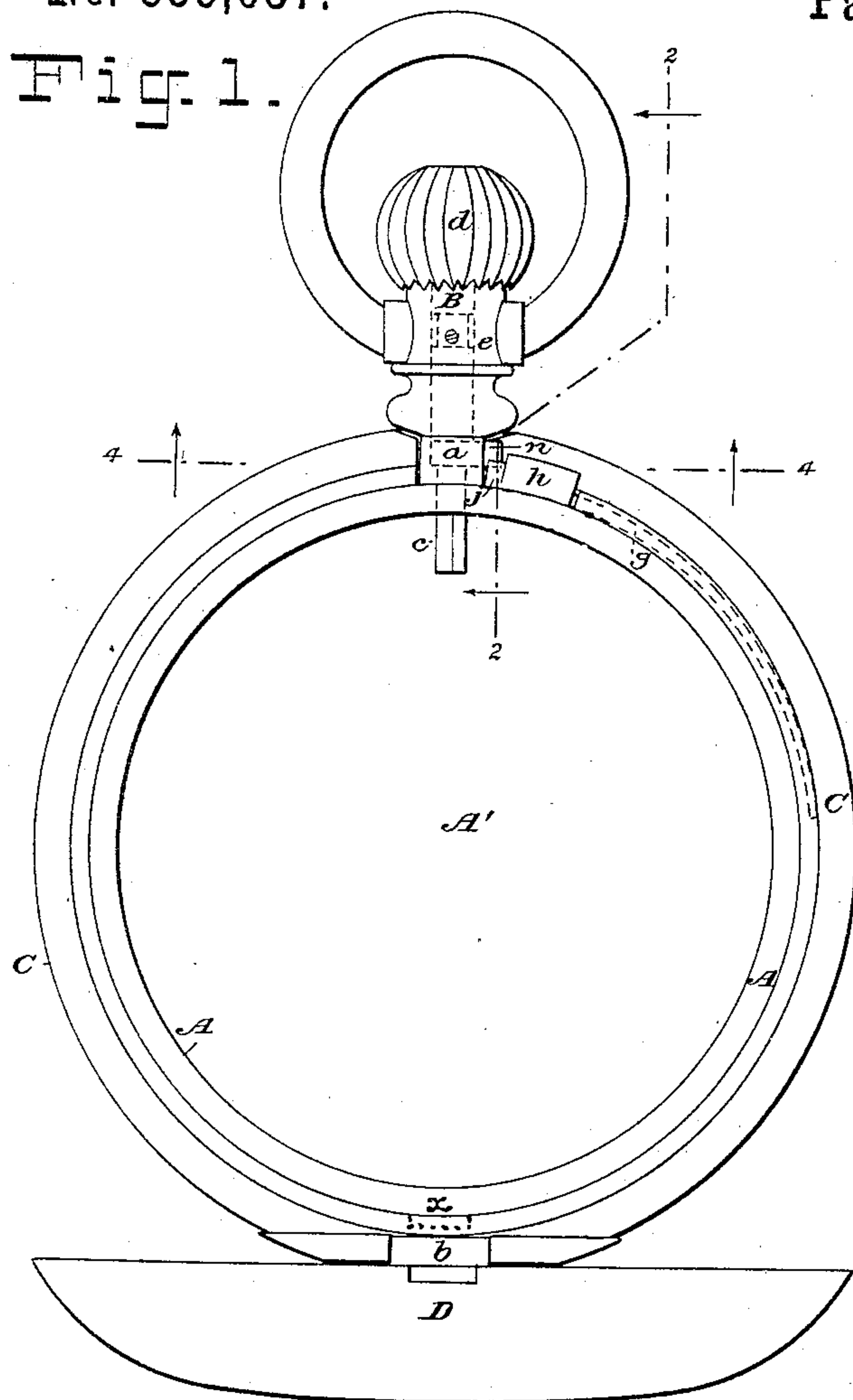


Fig. 2.

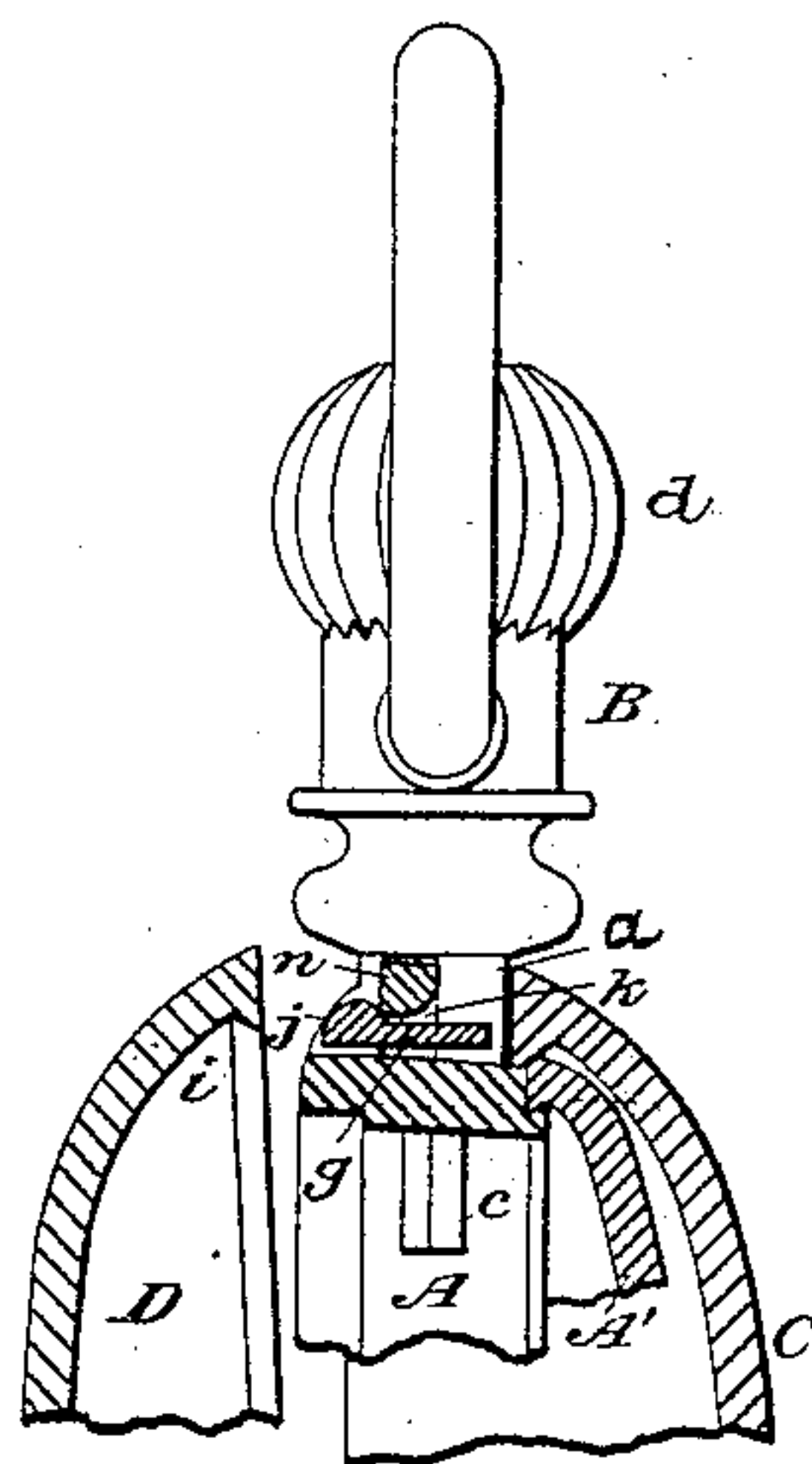


Fig. 4.

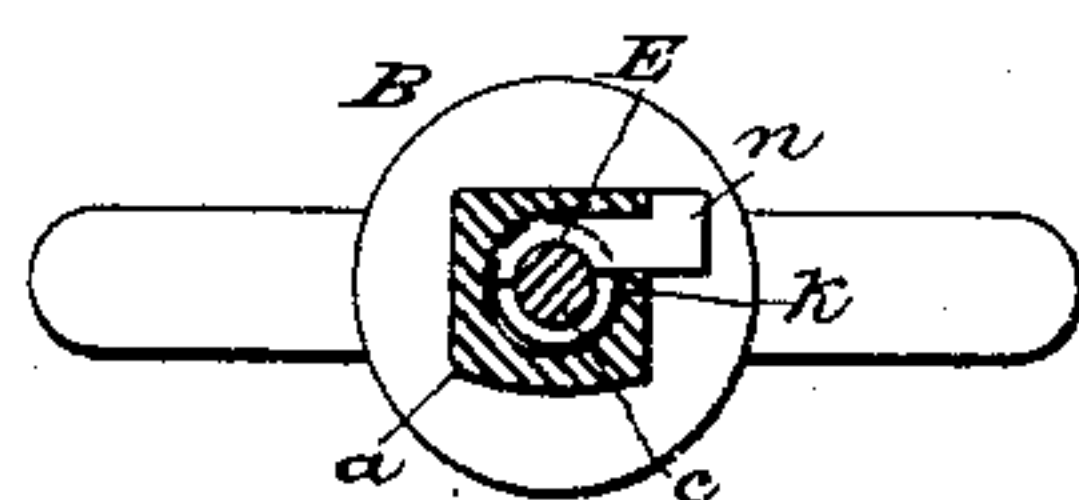
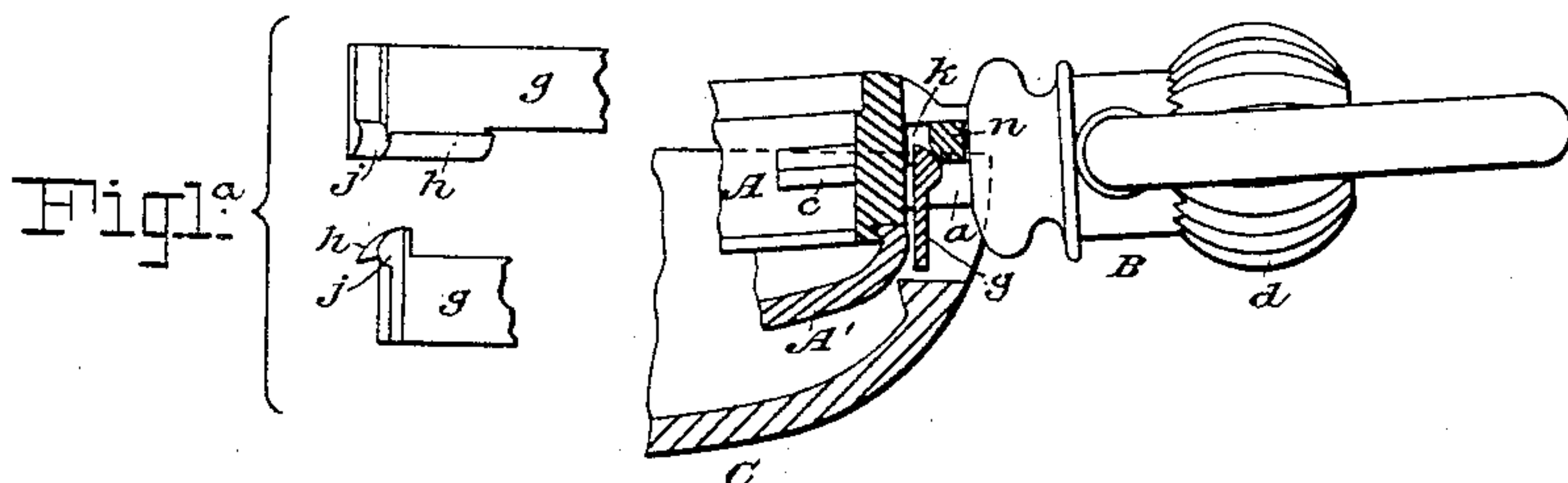


Fig. 4^a.



WITNESSES:

E. B. Bolton

Geo. Bainson

INVENTOR:

C. K. Colby

By his Attorneys,

Burke, Fraser & Co.

C. K. COLBY.

WATCH CASE.

No. 333,057.

Patented Dec. 22, 1885.

Fig. 6.

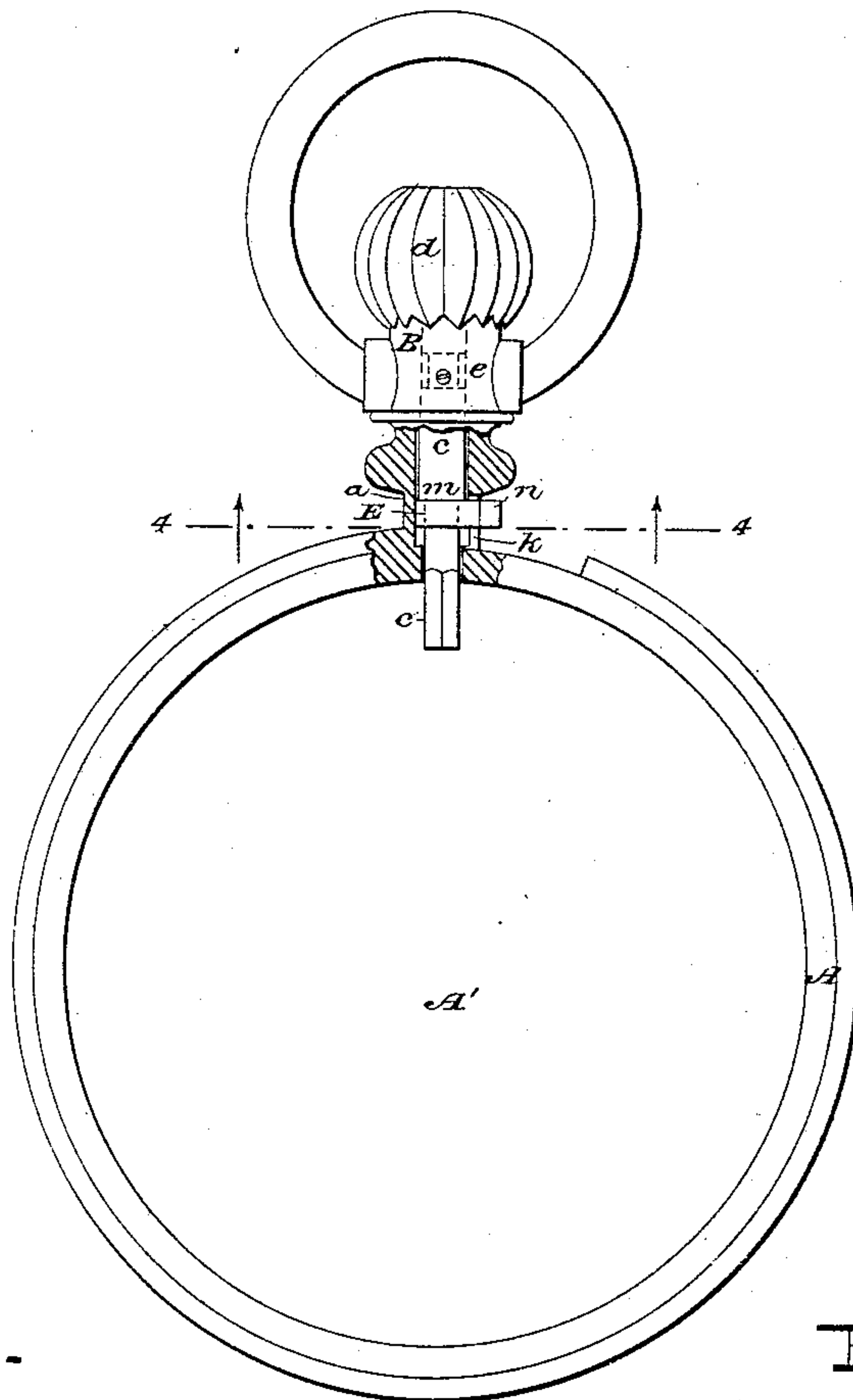
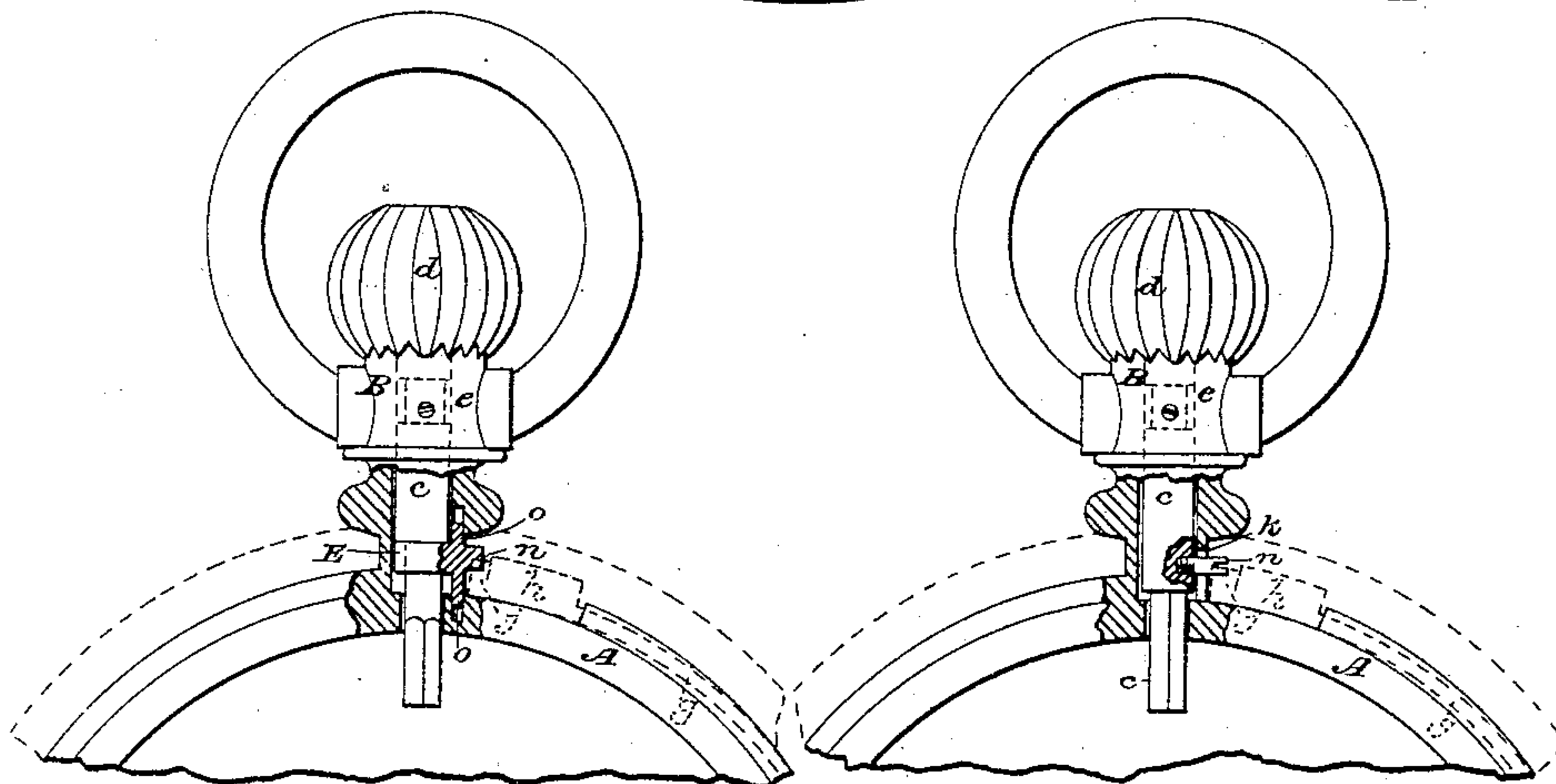


Fig. 6.

Fig. 7.



WITNESSES:

E. B. Bolton

Geo. Bainton

INVENTOR:

Caleb K. Colby

By his Attorneys,

Rich. Frazer & Co.

UNITED STATES PATENT OFFICE.

CALEB K. COLBY, OF BROOKLYN, NEW YORK.

WATCH-CASE.

SPECIFICATION forming part of Letters Patent No. 333,057, dated December 22, 1885.

Application filed April 4, 1885. Serial No. 161,187. (Model.)

To all whom it may concern:

Be it known that I, CALEB K. COLBY, a citizen of the United States, and a resident of Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Watch-Cases, of which the following is a specification.

In watch-cases as ordinarily constructed the stem or pendant is attached to the ring of the case to which the back cap and face-cap (where the latter is employed) are hinged, or where the case is a cup-case to the cup or body of the same. The face-cap is snapped down and retained by a catch formed on a leaf-spring secured in the ring or cap, as the case may be. The winding-stem, which passes through the pendant, serves as a push-pin to release the spring-catch from the face-cap and allow it to fly open. To effect this the free end of the catch-spring is prolonged to cross the path of the push-pin, which latter passes through a hole in the end of said spring and has a shoulder to take against the spring and press it back when the push-pin is depressed by the thumb. Thus a slight pressure on the crown of the winding-stem or push-pin suffices to press back the spring, release the catch from the face-cap, and allow the spring at the hinge of the latter to throw this cap open.

In the above-described construction the spring is mounted on the same part of the case on which the pendant is mounted, and the extension of a push-pin through a hole in the spring offers no disadvantages; but there are watch-cases where it is desirable that the spring and pendant shall be mounted on different parts of the case, and in such constructions the passage of the push-pin through the spring would be a serious objection. An example of such a case will be found in my patent of April 5, 1881, No. 239,732, wherein is shown and claimed a watch-case having the pendant attached to a ring which holds the movement, while the case proper, comprising usually a cup and a face-cap hinged thereto, is made detachable from said movement-ring and pendant and entirely incloses the same, fitting close around the neck of the pendant. The face-cap is designed to engage, when closed, a spring-catch on the cup, and not on the movement-ring, and when the case is

opened this ring and the attached pendant may be lifted out of the cup. Sometimes the movement-ring is hinged at its side to the cup, and sometimes it is provided with a back cap; but in any case the neck of the pendant lifts out of a notch or recess in the edge of the cup, forming the back of the case.

I have been thus particular to describe the present constructions in order that the purpose of my invention may be the better understood.

My invention is especially well adapted to that class of watch-cases of which the case described in my aforesaid patent is a type, and my object is to provide a case with a spring-catch to retain the face-cap when closed, which spring-catch may be operated by the winding-stem in the pendant acting as a push-pin, and which spring shall be so constructed and arranged with reference to the push-pin, as will be hereinafter described, that it will not in any way interfere with the separation of the pendant from the cup or part that bears the spring-catch; also, to provide a means, which will be hereinafter described, whereby the catch and releasing device for the face-cap shall serve as a retaining device to prevent the accidental lifting of the neck of the pendant out of the recess in the cup or back plate wherein it rests.

The novel features of my invention will be fully described hereinafter, and carefully defined in the claims.

In the drawings which serve to illustrate my invention I have shown it applied to a watch-case constructed similar to that shown in my aforesaid patent.

Figure 1 is a face view of such a case on a scale somewhat larger than the actual size, and showing the face-cap thrown open. This case is provided with my invention, which is seen in front elevation. Fig. 1^a shows the catches on the end of the spring, in front and end elevation, detached. Fig. 2 is a section taken in the plane indicated by line 2 2 in Fig. 1, and showing the face-cap nearly closed. In this view the lower portion of the case is broken away, as non-essential to the full illustration of my invention. Fig. 3 is a similar view to Fig. 1, but showing the movement-holding ring bearing the pendant removed

from the case proper or outer shell, and the neck of the pendant in section. Fig. 4 is a cross-section of the neck of the pendant, taken in the plane of lines 4 4 in Figs. 1 and 3, and looking upward. Fig. 4^a shows the push-bar in plan and elevation detached. Fig. 5 is a view similar to Fig. 2, but showing the position of the parts when the neck of the pendant is just entering the recess in the cup-case. Figs. 6 and 7 illustrate slight modifications, which will be hereinafter fully described.

Let A represent a ring to receive and hold the movement, (not shown,) and A' a back cap hinged to said ring, as found in some constructions. To this ring A is fixed the pendant B, which usually, as in this instance, has a neck, *a*, that is substantially square in cross-section, (see Fig. 4,) and which neck, when the parts of the case are put together, rests in a recess formed in the edge of the cup or back cap C of the case.

D is the face-cap, hinged to the cup C at *a*. When this cap D is closed, the ring A is inclosed by C and D, which embrace the neck of the pendant B and give to it the appearance of being attached to the cup C.

Within the pendant B, which is tubular, is rotatively mounted the winding-stem *c*, which projects through ring A and into the space occupied by the movement, its squared end being adapted to engage the winding-arbor of the movement in a well-known way. On the end of this winding-stem is fixed the crown *d*.

Various means are employed for retaining the winding-stem in the pendant, while allowing it to rotate freely axially in winding and setting. The common method is to form a circumferential groove in the stem and drive a screw through the wall of the pendant until its tip engages said groove. Then by enlarging this groove so that it is wider than the tip of the screw enough longitudinal movement of the stem is obtained to enable the stem to serve as a push-pin for actuating the spring-catch of the face-cap. In the present instance I have adopted the above construction, *e* representing the retaining-screw.

All of the above-described features are old, so far as my present invention is concerned; but I have deemed it necessary to describe them for the better understanding of my present invention, the novel features of which I will now describe.

In the cup C, or in the part of the case corresponding to it, is fixed a leaf-spring, *g*, of considerable length, as indicated by the dotted lines in Fig. 1. This spring is usually placed against the inner wall of the cup, and on its end is formed the usual catch, *h*, to engage the inwardly-projecting flange *i*, formed on the margin of the face-cap D. This catch *h* projects upwardly through a suitable recess in the wall of cup C.

So far as I have described it there is nothing novel in this spring and its catch, but in the common construction the end of the spring *g* is prolonged and perforated for the passage

of the stem *c*. In my construction the spring terminates at the wall of the recess in C, which is designed to receive the neck *a* of the pendant, and on its end, beyond catch *h*, is formed a catch, *j*, the function of which will be hereinafter described. The catches *h* and *j* on spring *g* are seen detached in Fig. 1^a. In the side wall of the neck *a* of pendant B is formed a slot, *k*, which extends into the tubular cavity in the pendant, and through this slot projects a push-bar, E. (Best seen in Figs. 3, 4, and 4^a.) The purpose of this bar is to provide a lateral branch from the push-pin *c* to take against spring *g*, and it may have almost any form. I will describe the form I prefer. The inclosed end of the bar E has a rounded recess, *l*, in Fig. 4^a, formed in it to fit over the reduced extremity of the push-pin *c*, and when in place the bar rests against or adjacent to a shoulder, *m*, in Fig. 3, formed on the push-pin. The projecting extremity or head *n* of bar E, I usually make a little deeper than the inclosed portion, so as to bring it up flush with the surface of the neck *a* of the pendant, as best seen in Fig. 4, and I round off its lower front angle, as seen in Figs. 2 and 5, so that it may "wipe" over the catch *j* the more readily when the ring A, with the pendant, is inserted in C. When the ring A is inserted in the cup D, that portion of the same opposite the pendant is first inserted, and on this part is usually formed a slight projection, (indicated by dotted lines at *x* in Fig. 1,) which takes under the overhanging ledge on the wall of C. The pendant B is then lowered until the lower side of its neck *a* has engaged the recess in C, constructed to receive said neck. The rounded shoulder on the head *n* of push-bar E will now have engaged the rounded catch *j* on the extremity of spring *g*, as seen in Fig. 5, and by exerting a slight downward pressure on the pendant the spring *g* will yield, the head *n* will wipe over catch *j*, and the neck of the pendant will have assumed its proper place in the recess in C. Thus it will be seen that the engagement of head *n* below the catch *j* serves to form a latch-fastening to prevent the neck *a* from being too readily lifted out of its recess; yet it may be lifted by the exertion of a little force, by reason of the rounding of the catch *j*. The head *n* of the push-bar stands normally, as seen in Fig. 2, in contact with the end of spring *g* below catch *j*, and in order to release catch *h* from its engagement with flange *i* on face-cap D it is only necessary to press on the push-pin *c*, when the shoulder *m* on same, taking against the back of push-bar E, will drive said bar forward, and through its head *n* push back spring *g* and catch *h*. The movement required is very slight, and a bar, E, constructed and arranged as I have described, will effect the object perfectly.

In Fig. 6, which is a similar view to Fig. 3, I have shown the push-bar E provided with guides *o o*, which play in prolongations of the slot in the pendant. This construction im-

parts steadiness to the bar in its movement. Fig. 7 is a similar view showing the bar E replaced by a simple screw driven into the thicker portion of the push-pin *c*, its projecting head *n* being arranged to engage spring *g*. This construction is open to the objection that the screw must be removed before the pin *c* can be withdrawn from the pendant.

In Figs. 6 and 7 I have indicated the cup C and the spring *g* and its catches by dotted lines.

I will say that it is not essential to my invention whether the ring A has a back cap, A', or not, nor whether it is hinged to C or not. The face-cap D may be of solid metal, or be left open at its center; or it may have a "crystal" set in to form an open face. In the present instance I have supposed cap D to be solid, as in a "hunting-case," so called, and the dial of the movement to be covered with a bezel and crystal secured to the ring A. I have not deemed it necessary to show the movement and the said bezel and crystal.

Having thus described my invention, I claim—

1. The combination, with the pendant of a watch-case, of the push-pin mounted in said pendant, the push-bar arranged to project from the push-pin laterally through a slot in the wall of the pendant, and the spring provided with a catch arranged in front of the projecting end of said push-bar, whereby pressure on the push-pin acts through the push-bar to press back the spring and catch, as set forth.

2. The combination, with the pendant of a watch-case, of the push-pin mounted in said pendant, the push-bar arranged to project laterally from the push-pin through a slot in the wall of said pendant, and the spring *g*, pro-

vided with a catch, *h*, and also a catch, *j*, substantially as and for the purposes set forth.

3. The combination, with the cup C of a watch-case, provided with a spring, *g*, a catch, *h*, on said spring *g*, and a recess to receive the neck of the pendant, of the ring A, the pendant B, fixed to said ring and constructed to fit in the recess in the cup C, the push-pin *c*, mounted in said pendant, and the push-bar mounted in the pendant, substantially as described, and its head arranged to engage the spring *g*, substantially as described, and for the purposes set forth.

4. The combination, with the pendant of a watch-case, of the push-pin provided with a shoulder, the push-bar provided with a recess, *l*, to engage the push-pin, and a head, *n*, arranged to project through a slot in the wall of the pendant, and a spring, *g*, mounted on the watch-case and provided with a catch, *h*, said spring being arranged with reference to the head of the push-bar, substantially as set forth.

5. The combination, with the cup C and its hinged face-cap D, of the ring A and the pendant fixed thereto, the spring *g*, mounted on cup C, and provided with the two catches *h* and *j*, the shouldered push-pin mounted in the pendant, and the push-bar E, mounted in the pendant, and provided with the head *n* to engage the spring *g*, all constructed and arranged to operate substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CALEB K. COLBY.

Witnesses:

HENRY CONNETT,

FRANKLIN P. TRAUTMANN.