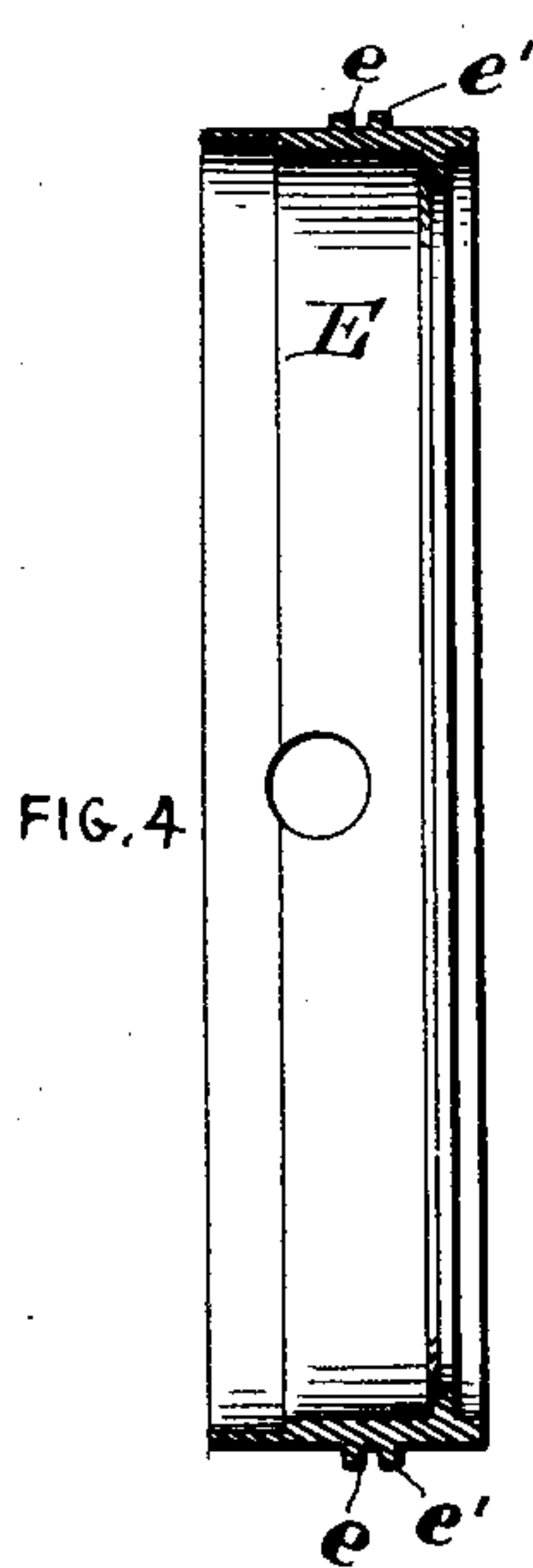
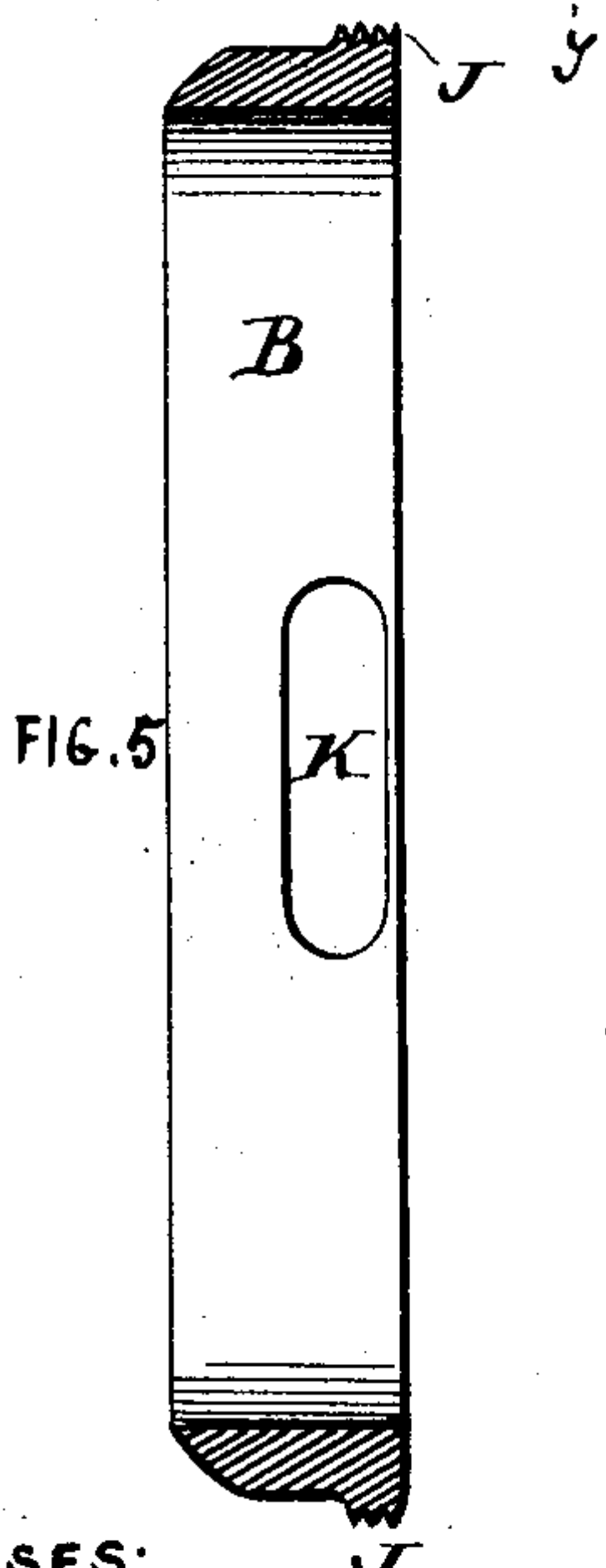
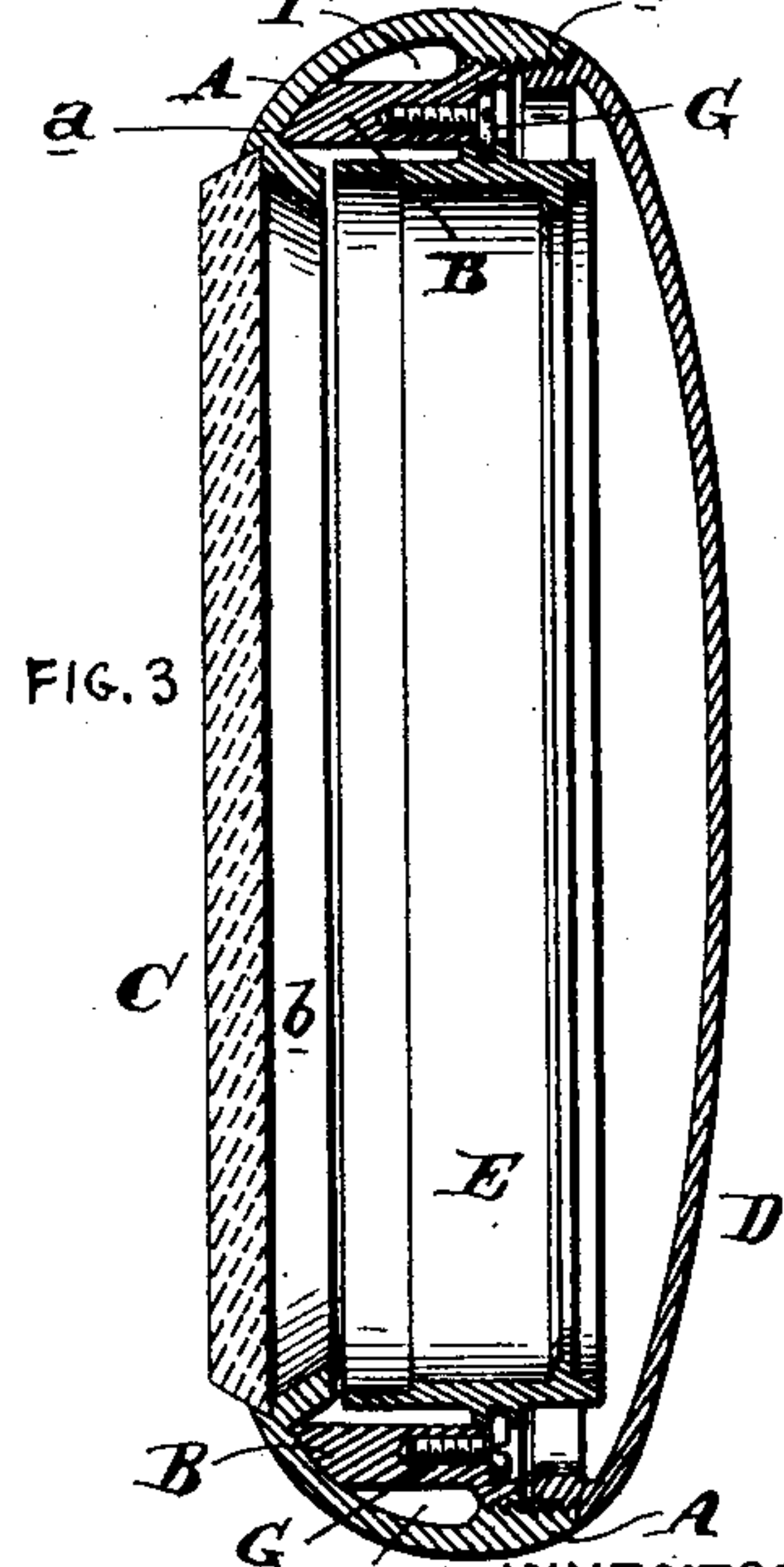
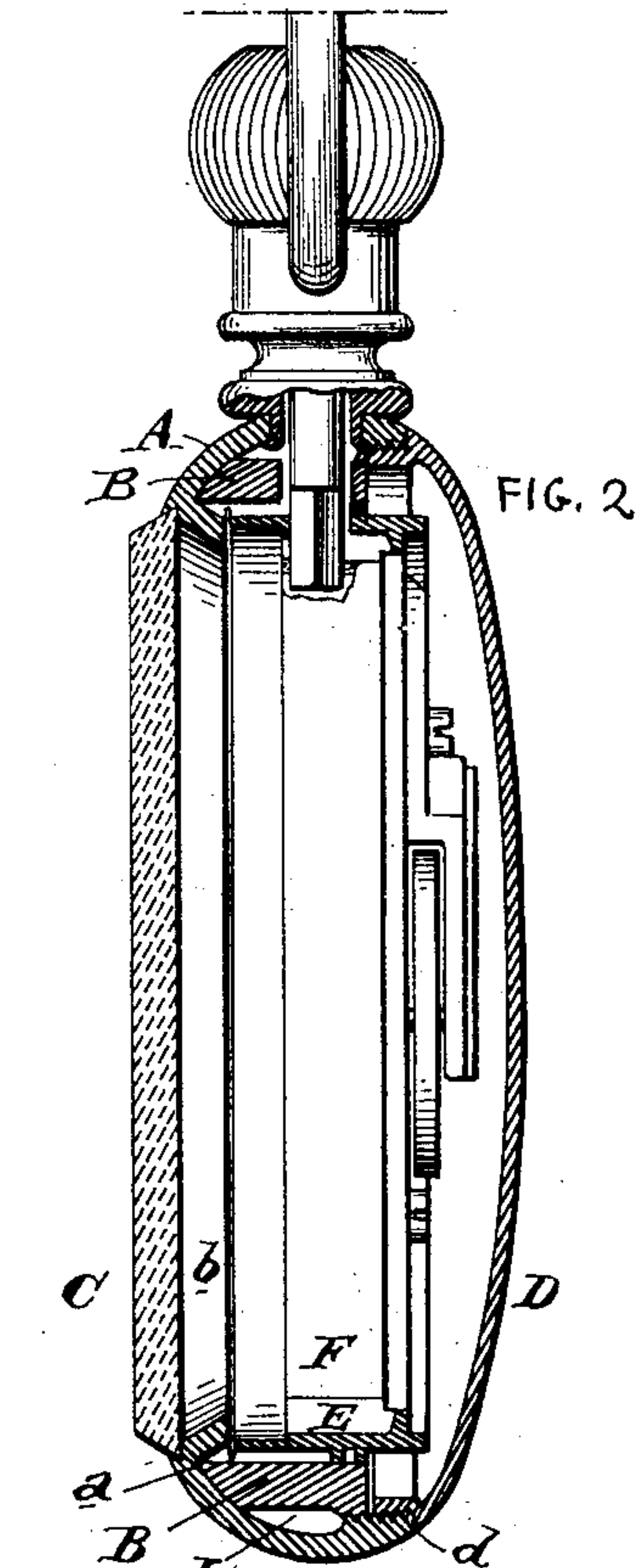
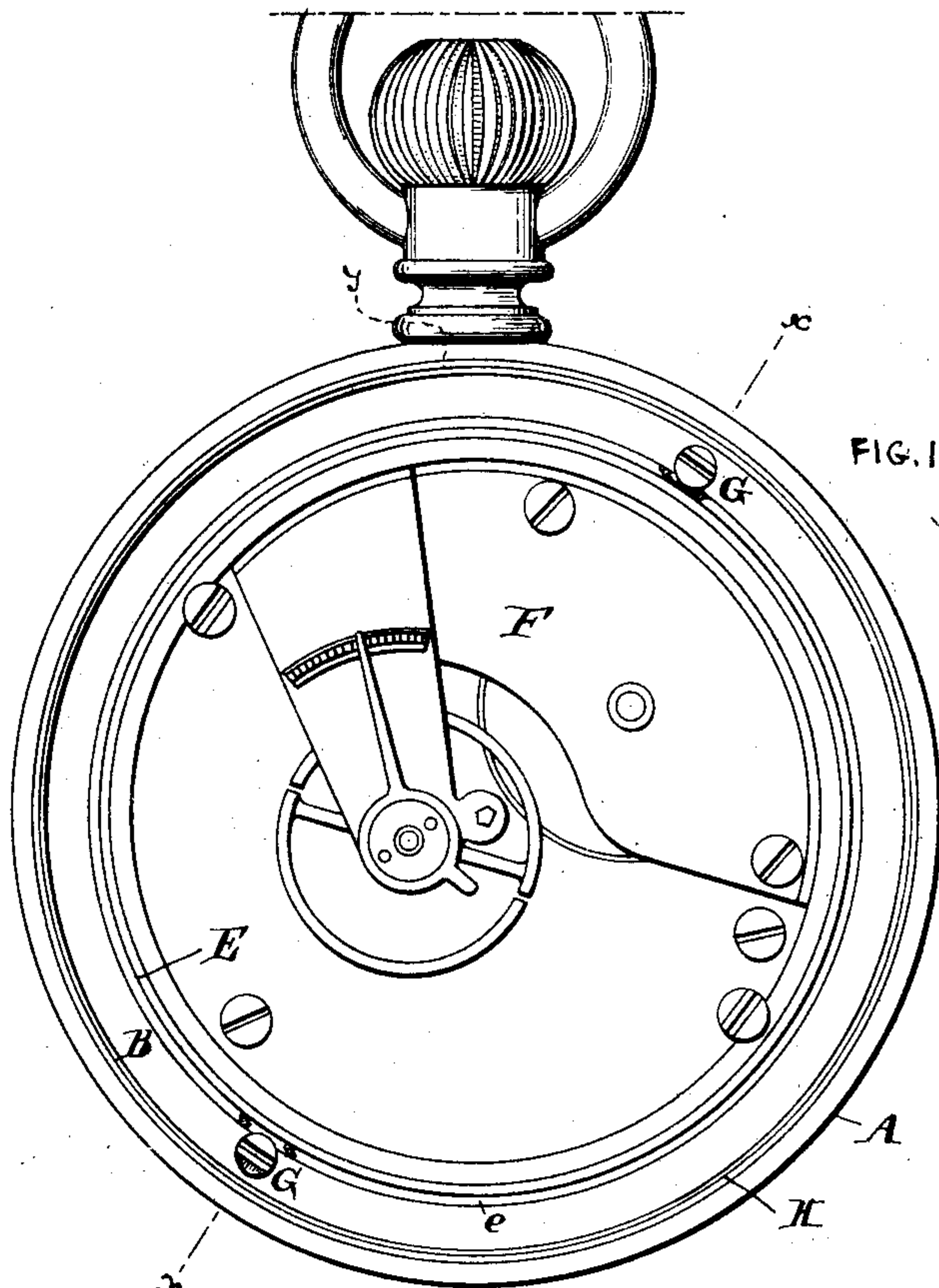


F. MINK.  
WATCH CASE.

Patented Apr. 1, 1890.



**WITNESSES:**

David S. Williams  
Mist Minded Man

**INVENTOR:**

Fritz Meier  
 By his wife *[Signature]*



# UNITED STATES PATENT OFFICE.

FRITZ MINK, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE  
KEYSTONE WATCH CASE COMPANY, OF SAME PLACE.

## WATCH-CASE.

SPECIFICATION forming part of Letters Patent No. 424,491, dated April 1, 1890.

Application filed June 14, 1889. Serial No. 314,210. (No model.)

*To all whom it may concern:*

Be it known that I, FRITZ MINK, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement  
5 in Watch-Cases, of which the following is a specification.

My invention relates to watch-cases; and it consists of certain improvements, which are fully set forth in the following specification,  
10 and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to form a comparatively inexpensive watch-case having the strong and handsome appearance of more ex-  
15 pensive cases, and with certain improved devices for securing the movement-holding ring within the watch-case center.

My invention is particularly suited to dust-proof watch-cases formed with a combined  
20 bezel and center, to which the back is secured, though it is not necessarily limited thereto.

In carrying out my invention I form the combined center and bezel of an outer piece of comparatively thin metal of finer quality—  
25 such as gold, or silver, or filled metal—which is held in shape and given solidity by means of an inner re-enforcing or strengthening ring of cheaper metal—such as brass—this latter also forming the support for the movement-  
30 holding ring. There is given to the case a solid and rich appearance with great saving of expensive metal, owing to the employment of the inner strengthening-piece of cheaper metal and forming the outer portion of thin  
35 metal, firmness being supplied by the inner piece or ring. The movement-ring is secured within this inner piece which constitutes the inner ring of the watch-case center by means of screws or similar devices located upon this  
40 inner piece or ring and having their heads operating in a groove formed upon the movement-holding ring, as is hereinafter more fully disclosed.

In the drawings, Figure 1 is a plan view of  
45 a watch-case embodying my improvements with the back removed. Fig. 2 is a cross-sectional view of the same on the line *y y* of Fig. 1 with the back attached. Fig. 3 is a cross-sectional view on the line *x x* of Fig. 1 with  
50 the back attached. Fig. 4 is a sectional side

view of the detached movement-ring, and Fig. 5 is a similar view of the detached strengthening or re-enforcing ring of the center.

A is the outer portion of the watch-case center, formed of comparatively thin metal and  
55 having the inwardly-projecting bezel-reflector *b* at one edge, forming the internal annular groove *a*. The other or rear edge of the portion A is provided with screw-threads *d*.

B is a strengthening or re-enforcing ring, of  
60 cheaper metal, forming the inner face of the watch-case center, having one edge curved to fit snugly into the annular groove *a*, formed between the outer portion A and the bezel-reflector *b*, and having its other edge provided  
65 with screw-threads *J*, adapted to engage the threads *d* of the portion A to secure the ring B and the outer part A together. By this means the curved edge or rim of the ring B is forced down into the groove *a*. This inner  
70 ring B is thus in contact with the outer part A at its extremities, thereby forming a support and backing for it. At the central portion, however, I prefer to have the outer part A and the inner ring B not in contact, form-  
75 ing the annular chamber or space I, because owing to the curvature of the metal of the outer part A at this point it is provided with sufficient strength without having the back-  
80 ing or re-enforcement of the ring B, and the case is not made needlessly heavy, and room is left for the location here of certain devices sometimes used in stem-setting watches. This construction also greatly reduces the trouble of fitting of the parts A and B. It is  
85 apparent, however, that this annular chamber I may be omitted and the parts A and B made in contact with each other throughout their adjacent surfaces.

D is the back, which is provided with a screw-  
90 threaded rim adapted to engage the screw-threads *d* of the part A, which are made sufficient in number to receive both the threads *J* of the inner ring B and the back D.

G are half-headed screws carried on the  
95 upper surface of the ring B, preferably countersunk therein, and adapted to have their heads project over the edge of the ring B for the purpose of securing the movement-holding ring E within the watch-case center.



The movement-ring E contains the works F, and is provided with two annular ledges or flanges *e e'* about its outer surface, forming an annular groove or recess between them adapted to receive the heads of the screws G to secure the movement-ring E. It is apparent that these flanges or ledges *e e'* need not be continuous, as shown; but in place thereof lugs may be used only at the points at which the screw-heads G will project. As these flanges, however, act as guides or supports between the movement-holding ring and the inner surface of the watch-case center, I prefer to form them continuous to obtain a greater guiding or supporting surface. It is apparent also that in place of using the flanges *e e'* the groove may be formed directly in the surface of the movement-ring.

By using two flanges *e e'* on the movement-holding ring it is held rigidly against movement to or from the glass, and thus the entire strain of holding the works comes on the screws. The countersinking of the screw-heads is to enable the upper flange *e'*, as well as the screw-head, to be received below the outer surface of the re-enforcing ring B, so that the inner flange of the back D may screw down close to the ring B, as shown in Fig. 2.

If desired, in place of screwing the back D to the center B, as shown, the parts may be snapped together over an undercut edge in the ordinary manner, or they may be hinged together.

C is the glass, secured to the bezel in the usual manner.

While I prefer the details of construction here shown, I do not limit my invention to them, as it is apparent that they may be varied without departing from the principles of the invention.

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

1. In a watch-case, a combined center and bezel consisting of an outer portion of thin metal having an inner screw-threaded rim and an inner strengthening or re-enforcing ring of heavier metal having its upper edge screw-threaded for attachment to said screw-threaded rim of the outer portion, and having its lower edge curved and in contact with said outer covering of thin metal to impart strength thereto.

2. In a watch-case, a combined center and bezel consisting of an outer portion of thin metal having an inner screw-threaded rim and an inner strengthening or re-enforcing ring of heavier metal having its upper edge screw-threaded for attachment to said screw-threaded rim of the outer portion, and having its lower edge curved and in contact with said outer covering of thin metal to impart strength thereto, and having an annular space between said inner ring and outer portion and between the extremities of said inner ring.

3. A combined watch-case center and bezel consisting of an outer covering of thin metal and an inner re-enforcing ring attached to the outer covering at one extremity and having its other extremity in contact with the inner surface of said thin outer covering to impart strength thereto, and leaving an annular space between the inner surface of said outer portion and the outer surface of said inner ring, in combination with a back adapted to be secured to said outer portion.

4. A combined watch-case center and bezel consisting of an outer portion of thin metal, having one of its rims provided with screw-threads and the other rim with an inwardly-projecting bezel-reflector, forming an annular groove, and a re-enforcing or strengthening ring adapted to receive the movement-ring of the watch, having one of its rims curved to fit into said annular groove and the other rim provided with threads for attachment to said outer portion.

5. A combined watch-case center and bezel consisting of an outer portion of thin metal having one of its rims provided with screw-threads and the other rim with an inwardly-projecting bezel-reflector, forming an annular groove, and a re-enforcing or strengthening ring adapted to receive the movement-ring of the watch, having one of its rims curved to fit into said annular groove and the other rim provided with threads for attachment to said outer portion, a movement-ring, and devices carried by said re-enforcing ring to secure the movement-ring therein.

6. A combined watch-case center and bezel consisting of an outer portion of thin metal having one of its rims provided with screw-threads and the other rim with an inwardly-projecting bezel-reflector, forming an annular groove, and a re-enforcing or strengthening ring adapted to receive the movement-ring of the watch, having one of its rims curved to fit into said annular groove and the other rim provided with threads for attachment to said outer portion, in combination with the back of the watch, adapted to be secured to said outer portion of the center with a dust-proof connection.

7. A combined watch-case center and bezel consisting of an outer portion of thin metal having one of its rims provided with screw-threads and the other rim with an inwardly-projecting bezel-reflector, forming an annular groove, and a re-enforcing or strengthening ring adapted to receive the movement-ring of the watch, having one of its rims curved to fit into said annular groove and the other rim provided with threads for attachment to said outer portion, a movement-ring, and devices carried by said re-enforcing ring to secure the movement-ring therein, consisting of half-headed screws adapted to project over an edge of said movement-ring to secure it within the center.

8. In a watch-case, a combined center and  
bezel consisting of an outer portion of thin  
metal formed with an inwardly - projecting  
bezel-reflector and an inner re-enforcing or  
5 strengthening ring having its upper edge in  
contact with the upper rim of said outer por-  
tion and its lower edge curved and fitting  
against the inner surface of the metal of said  
outer portion and within the annular groove  
formed by the bezel-reflector. 10

In testimony of which invention I have here-  
unto set my hand.

FRITZ MINK.

Witnesses:

NICHOLAS MOORE,  
A. MINNICK.