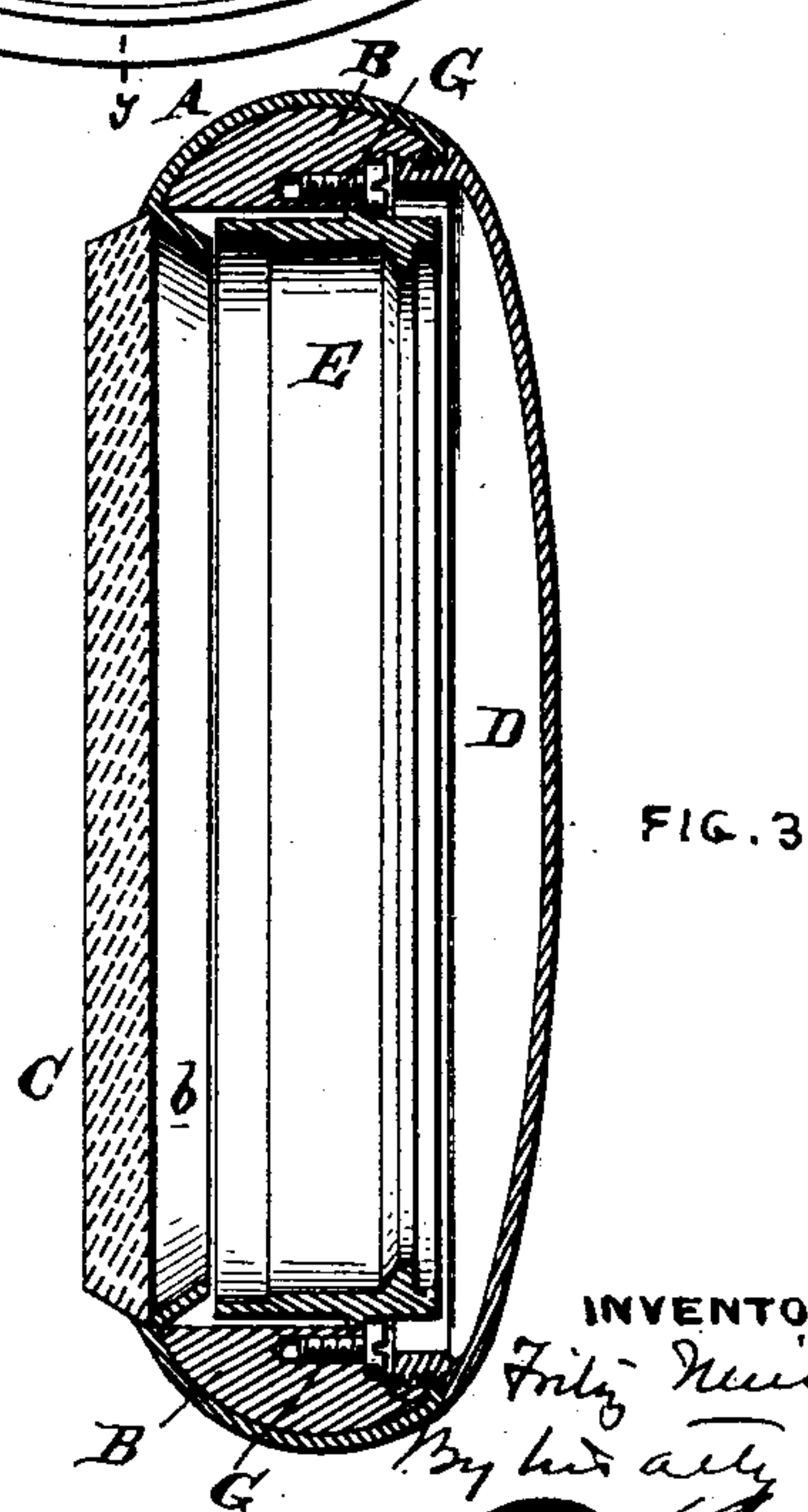
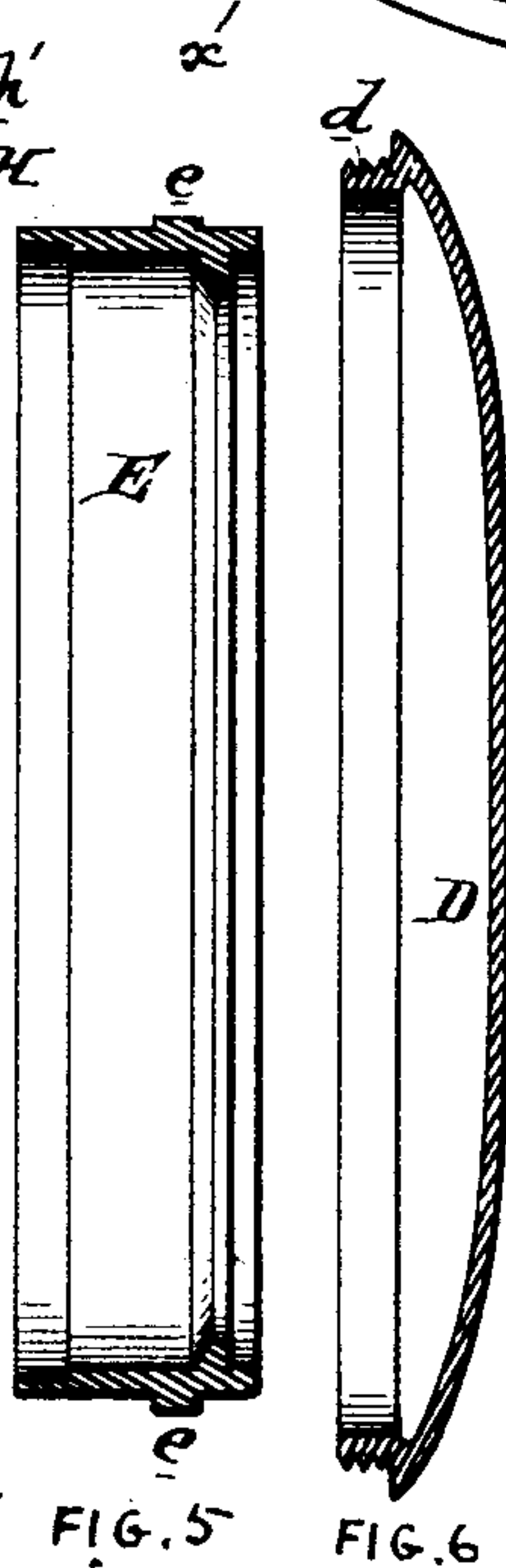
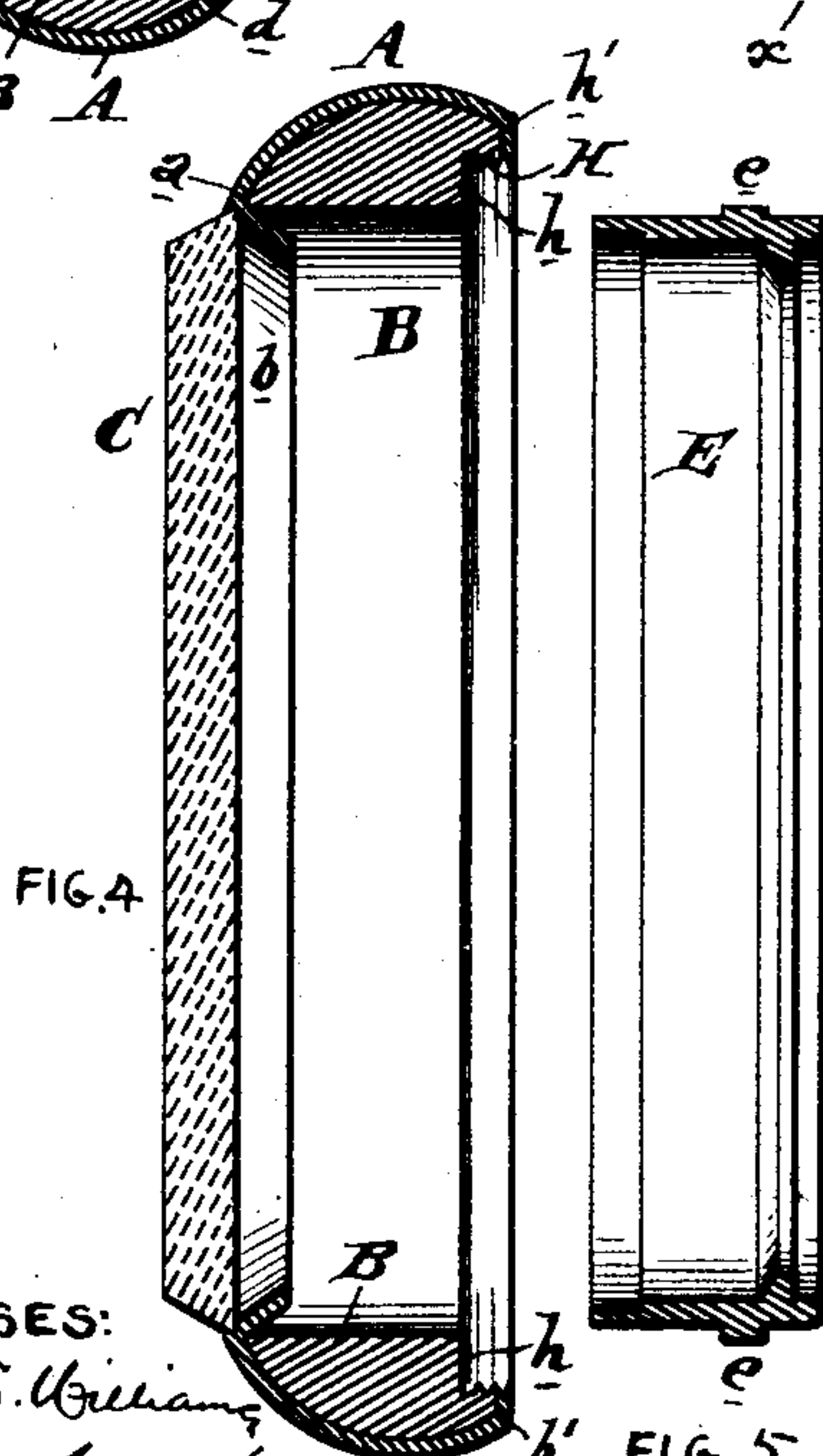
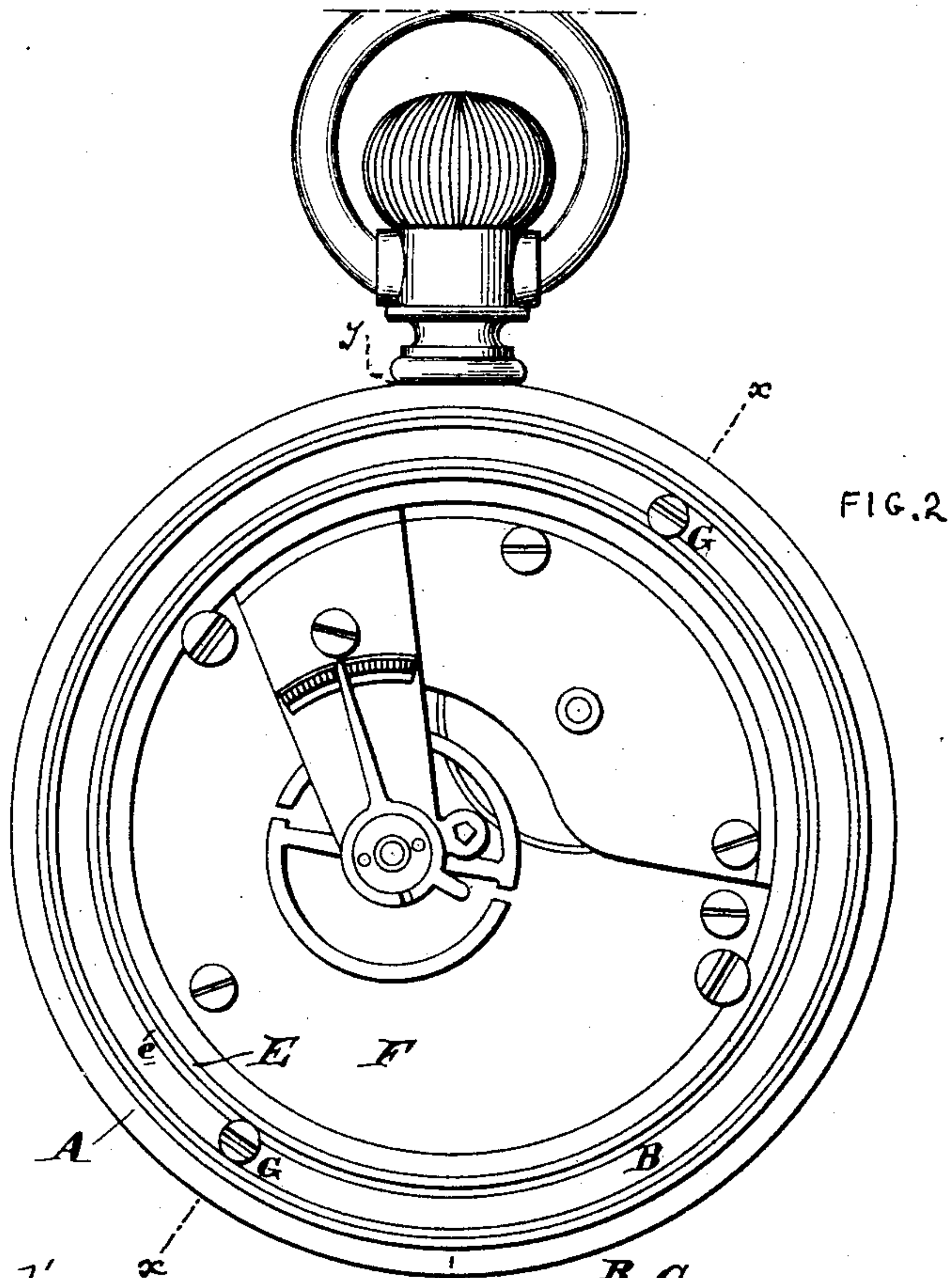
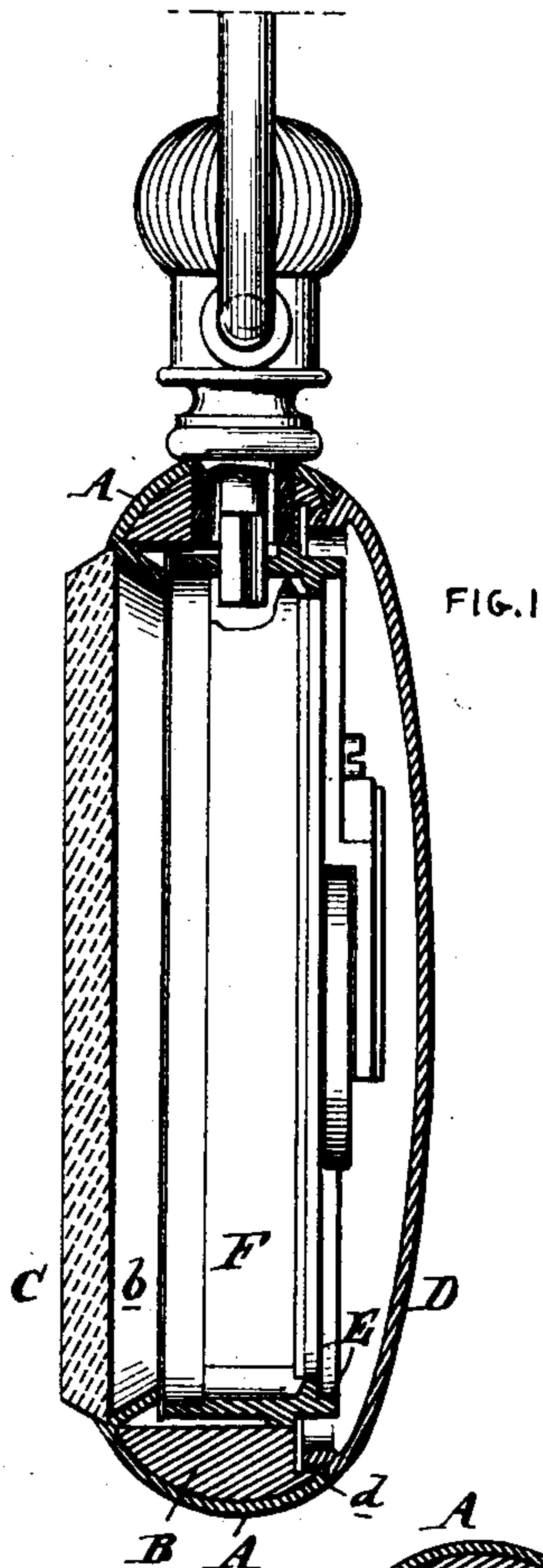


(No Model.)

F. MINK.
WATCH CASE.

No. 423,939.

Patented Mar. 25, 1890.



WITNESSES:

David S. Williams

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INVENTOR:

Felix Mink

By *his atty*

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UNITED STATES PATENT OFFICE.

FRITZ MINK, OF PHILADELPHIA, PENNSYLVANIA.

WATCH-CASE.

SPECIFICATION forming part of Letters Patent No. 423,939, dated March 25, 1890.

Application filed June 14, 1889. Serial No. 314,209. (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 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, 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 the more expensive cases, and with certain improved device 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 bezel and center to which the back is secured, though it is not necessarily limited thereto.

In carrying out my invention I construct the watch-case center with a substantially annular piece of cheap metal—such as brass—over which is placed an outer covering of thin metal of more expensive quality—such as gold or silver or filled metal—forming the combined bezel and center. In this manner there is given to the case the rich appearance with great saving of expensive metal, owing to the employment of the annular supporting or re-enforcing piece of cheap material, with the outer covering of very thin sheet metal, the form and firmness of which are supplied by the inner ring. This inner ring forms the support for the movement-ring, which is secured thereto by means of screws or other suitable devices located upon a shoulder formed upon this annular piece and operating upon a projection or ledge upon the movement-holding ring, as is hereinafter more fully disclosed.

In the drawings, Figure 1 is a cross-sectional view of a watch-case embodying my improvements on the line *y y* of Fig. 2, with the back secured thereto. Fig. 2 is a plan view of the same without the back. Fig. 3 is a cross-sectional view on the line *x x* of Fig. 2. Fig. 4 is a sectional side view of the detached bezel-center. Fig. 5 is a similar view of the movement-ring, and Fig. 6 is a similar view of the back.

The combined bezel and center is formed of the outer part A, of thin metal, having the inwardly-projecting bezel-reflector *b*, and of the heavier annular re-enforcing piece B, against which the outer covering A fits closely, so that it entirely conceals the part B on the outside of the watch-case. The outer part A is preferably constructed of thin sheet metal—such as gold or silver or filled metal—obtaining form and firmness from the inner portion B, which is constructed of cheaper material—such as brass—so that the case has the appearance of being constructed of solid gold or silver.

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

The inwardly-projecting reflector *b* forms, with the outer portion A, an annular groove into which the edge of the ring B fits, holding it firmly in position, the outer surface of the ring B being curved to give the desired form and support to the center, and the inner surface being practically straight to receive the movement-holding ring E.

The outer edge of the annular piece B is cut away to form a shoulder *h*, and the metal covering A is bent or extends over this edge, as at *h'*, to hold the annular piece B firmly to it and to conceal it from view. Threads H are formed in the rim of metal of the annular piece B, above the shoulder *h*, and in the bent-over edge of the outer metal covering A for attachment of the back D, which is provided with a screw-threaded rim *d* for this purpose, so that a dust-proof connection is formed between the back and the center. It is preferable to form these threads H both in the metal B and covering A, because the latter, on account of its thinness, might not afford sufficient strength.

The movement-holding ring E, in which the movement F is contained, is provided with an annular ledge or flange *e*, which is adapted to fit within the opening in the watch-case center formed by the annular piece B when the movement-ring is placed therein, coming immediately below the shoulder *h*. G are half-headed screws, preferably countersunk in the shoulder *h* and adapted when turned to have their heads project over the edge of the shoulder above the annular flange *e*, and thereby secure the movement-ring E within

the center and in such manner that it may readily be removed, when desired, by turning the screws G so that the heads do not project over the shoulder *h*. It is apparent that in place of constructing the flange or ledge *e* continuous, as shown, two or more short flanges or lugs *e* may be formed only at those points which will come under the heads of the screws G; but I prefer the construction shown, since the flange *e* acts as a guide or support between the ring B and the movement-ring E, and it is therefore desirable to have it continuous, so as to present a greater guiding or supporting surface. It also seals the interior of the case from the back.

I prefer to have the screws G countersunk in the shoulder *h*, so that the rim of the back D may be screwed down upon the shoulder *h* to form a perfectly dust-proof joint.

It is apparent that in place of screwing the back D to the center B, as shown, the parts may be snapped together over an undercut edge or hinged together in the ordinary manner, though I prefer the construction herein set out for the purpose of forming a dust-proof connection and because of cheapness of manufacture.

The back D is preferably formed of the finer metal, similar to the outer covering A.

It will be observed that the annular part B fits down into the annular socket part *a* of the center A, formed by its juncture with the reflector-ring *b*, and thus provides a strong foundation or backing for the bezel and glass, preventing springing and consequent injury.

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

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a watch-case center consisting of a heavy re-enforcing ring of base metal, having its outer surface smooth and its inner annular edge cut away to form an annular shoulder having its inner surface pro-

vided with screw-threads, and an outer covering of thin metal fitting close to the smooth outer surface of said heavy ring, in combination with a back or cap having its outer annular edge cut away to form a screw-threaded shoulder adapted to be secured to the screw-threaded shoulder of the heavy re-enforcing ring and form therewith a dust-proof joint.

2. The combination, with a heavy re-enforcing ring of base metal, having its outer surface smooth and its inner annular edge cut away to form a screw-threaded shoulder having flat annular upper rim, of an outer covering of thin metal fitting close to the smooth outer surface of said heavy ring and extending over the flat upper annular rim thereof, and a cap or back having a flat annular rim and a screw-threaded shoulder adapted to be secured to the screw-threaded shoulder of the heavy re-enforcing ring, with the flat annular rim seating upon the flat annular surface of the heavy ring covered by the outer covering of thin metal.

3. The combination, in a watch-case, of a center formed of an outer covering of thin metal, and an inner re-enforcing or strengthening ring having an annular shoulder, a movement-holding ring adapted to be received within the inner re-enforcing or strengthening ring, half-headed screws located on said annular shoulder and adapted when turned to project over said movement-holding ring to secure it within the center, but having their heads countersunk below the upper surface of said shoulder, and a watch-case back having a screw-threaded rim adapted to engage with the threads about said shoulder, whereby the back may be tightly screwed down upon said shoulder of the re-enforcing or strengthening ring to form a dust-proof joint.

In testimony of which invention I have hereunto set my hand.

FRITZ MINK.

Witnesses:

NICHOLAS MOORE,
A. MINNICK.