

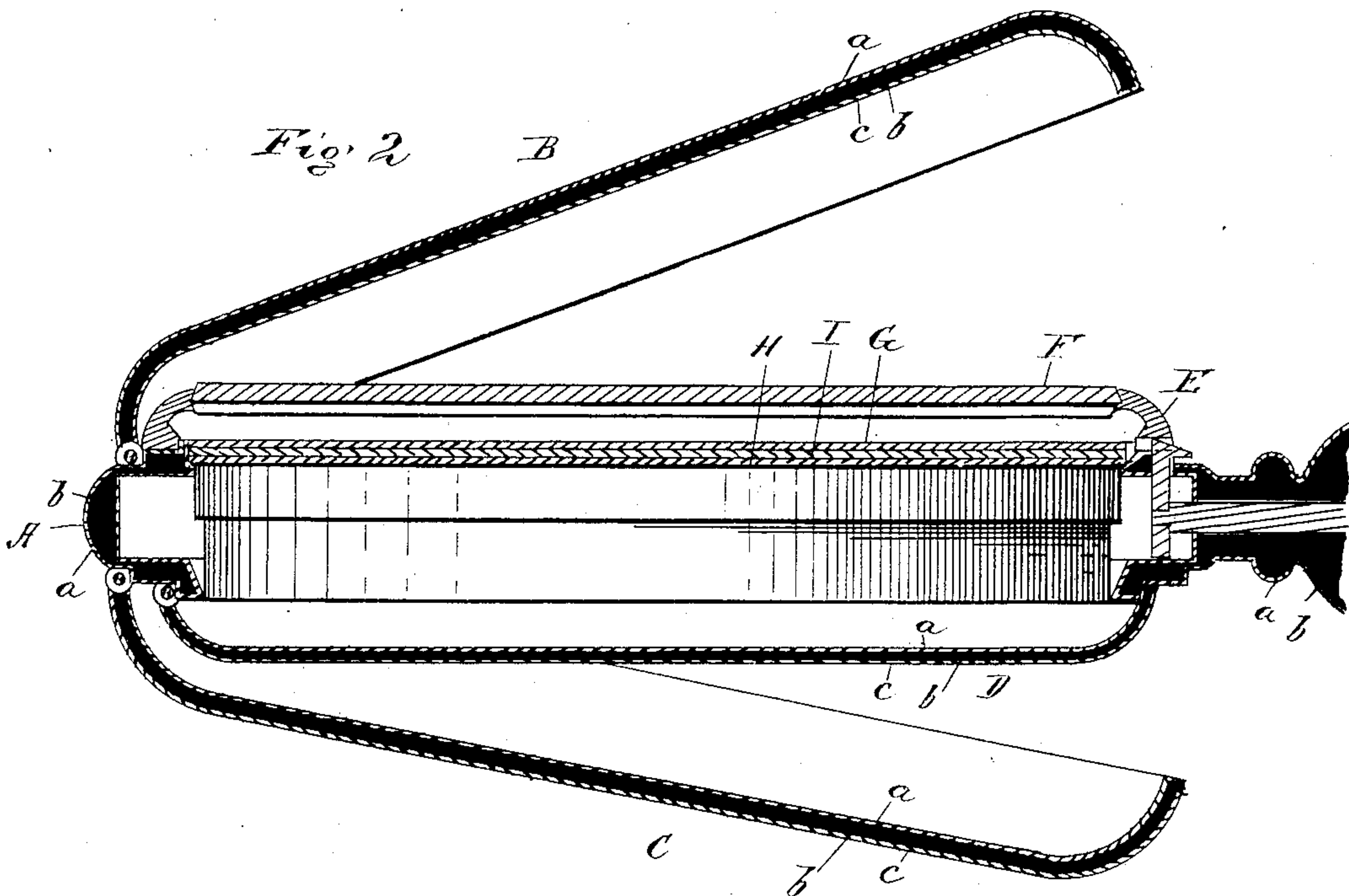
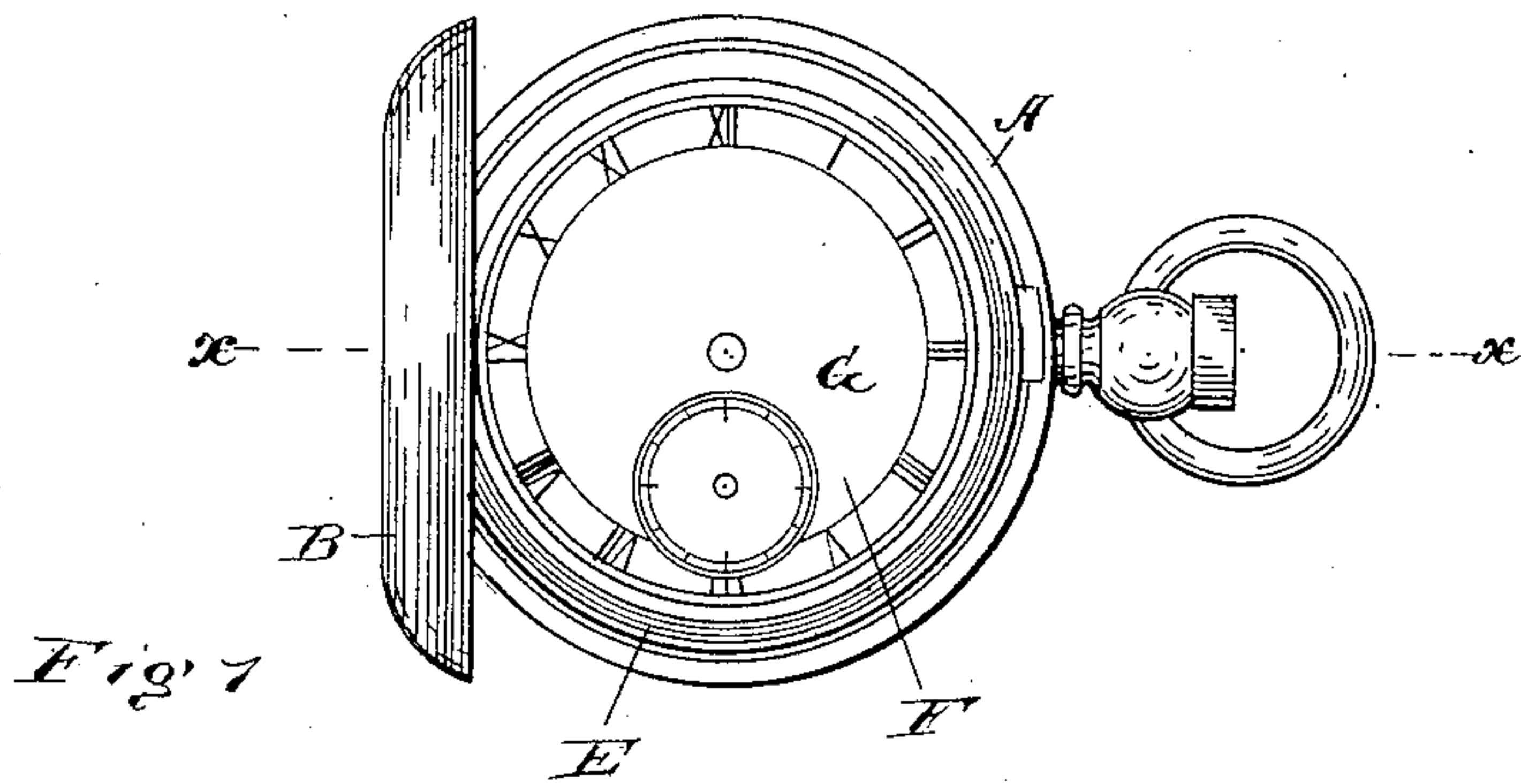
(No Model.)

C. K. GILES.

ANTI MAGNETIC WATCH CASE.

No. 312,458.

Patented Feb. 17, 1885.



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHARLES K. GILES, OF CHICAGO, ILLINOIS.

## ANTI-MAGNETIC WATCH-CASE.

SPECIFICATION forming part of Letters Patent No. 312,458, dated February 17, 1885.

Application filed April 25, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES K. GILES, a citizen of the United States, and residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Anti-Magnetic Protectors for Watches, which are fully set forth in the followingspecification, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan view of a watch-case embodying my improvement with the front plate thrown open; and Fig. 2, a vertical section of the same, taken on the line *xx*, Fig. 1, with both front and back plates partly thrown open, and on an enlarged scale.

My invention relates to means for protecting the movement of watches from the deleterious effects of magnets and magnetic currents. Letters Patent No. 289,642 were issued to me December 4, 1883, for anti-magnetic shields for watches. In this patent the object and effect of such protectors are fully set forth, and I refer to the specification thereof for further explanation, which is not necessary to repeat here.

My present invention consists in the special way of applying the invention set forth in the said Letters Patent, and may be said to be an improvement in this sense on the general invention therein described and shown. The present improvement consists in making the watch-case itself an anti-magnetic shield for the movement inclosed therein.

I will proceed to describe in detail some ways in which my invention may be carried out in practical form, and will then point out definitely in the claims the special improvements which I believe to be new, and wish to protect by Letters Patent.

In my Patent No. 289,642 I have explained that I accomplish the result sought by surrounding the watch-movement with a shield of highly-magnetic metal or alloy, or combination of metals, which will absorb or turn aside magnetic currents, speaking in a general way, and not scientifically. In the special application of this general invention, described and shown in my said patent, I made a box of such metal, within which the watch-movement is inclosed, and which is afterward set in the case. The same result may be ob-

tained, however, by making the case itself either wholly or in part of a metal having the characteristic set forth in my prior patent. This may be done in several ways. In the drawings I have illustrated one way of embodying the invention by applying it to the particular kind of watch-case generally known as a "filled case." This particular kind of case, as is well known, is composed of a central plate of baser material, with a plate of gold or silver on each side thereof. In the application of my improvement to this kind of case the middle or filling plate is made of highly-magnetic metal, which has the property mentioned in my prior patent.

In the drawings, A represents the center of a watch-case; B, the front plate, and C the back plate, a hunting-case being illustrated in this instance. All these parts of the case are made by the filling process described above, being composed of three plates, *a*, *b*, and *c*, the first and last of which are of gold, or other precious metal, while the middle plate, *b*, is of some highly-magnetic metal—such, for instance, as iron, though any other highly-magnetic metal or metal alloy may be used. Now, it will be seen that when the movement is placed in a case of this construction, it will be completely inclosed by an anti-magnetic protector or shield, as is contemplated in my former patent, except that in the present instance the case itself constitutes the shield or protector. As an additional protection in this direction the back cap, D, may also be made in the same way as described above—that is, by filling with a highly-magnetic metal—and, in fact, I think it desirable that this part of the case should be thus constructed, leaving the construction of the back plate to be changed by making it either solid or filled, if this change is to be made in either of these pieces.

A bezel, E, is provided as usual, within which the crystal F is fitted. I have also shown a dial-plate, G, and between it and the movement-plate H there may be placed a thin plate, I, of highly-magnetic metal, the same as described in my prior patent. This may be used as an additional protection, even when the case is of the description generally known as a "hunting-case," and the front



plate thereof is made a shield by filling, as described, and the introduction of this plate under the dial will enable the movement to be applied to an open-face watch with tolerably good results, for this thin plate will make a front shield for the movement and protect the same from magnetic influence in connection with the center and back plate or back cap.

10 But this is only one way of applying my invention. It is obvious that the case may be made of some highly-magnetic metal, which is then plated with gold or silver by any known process for this purpose. The same results

15 will be obtained if the case is constructed in this way. It is also possible that an alloy suitable for cheap cases may be found, which at the same time will be highly magnetic, and, therefore, if the case be constructed of

20 this alloy, it will make an anti-magnetic shield for the movement inclosed within, and therefore effect the desired result. I do not, therefore wish to be understood as limiting my invention to a filled case, though that

25 is a very convenient form for the application of the movement; but I wish to be understood as claiming a watch-case made in any way, wholly or in part, of some highly-magnetic metal, so that the case is also a protector

30 or shield to the movement inclosed therein against the effect of magnets and magnetic currents. I wish it to be understood, also, that my invention does not necessarily require the

making of all the parts of the case so as to be such shields as I have mentioned; but I 35 contemplate such modifications as may be made by restricting the application of the shield to such parts only of the case as are necessary to provide the desired protection for the movement.

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

1. A watch-case some or all parts of which are made either wholly or in part of highly-magnetic metal, whereby the case constitutes 45 an anti-magnetic protector for the movement inclosed within, substantially as and for the purposes set forth.

2. A watch-case of hunter-type some or all 50 the parts of which are made wholly or in part of a highly-magnetic metal, whereby the case, when closed, forms an anti-magnetic shield or protector to the movement within, substantially as and for the purposes set forth.

3. A filled watch-case wherein the filling 55 of some or all the parts is composed of highly-magnetic metal, whereby the movement within the case is protected from the effects of magnets and magnetic currents, substantially as and for the purposes set forth. 60

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