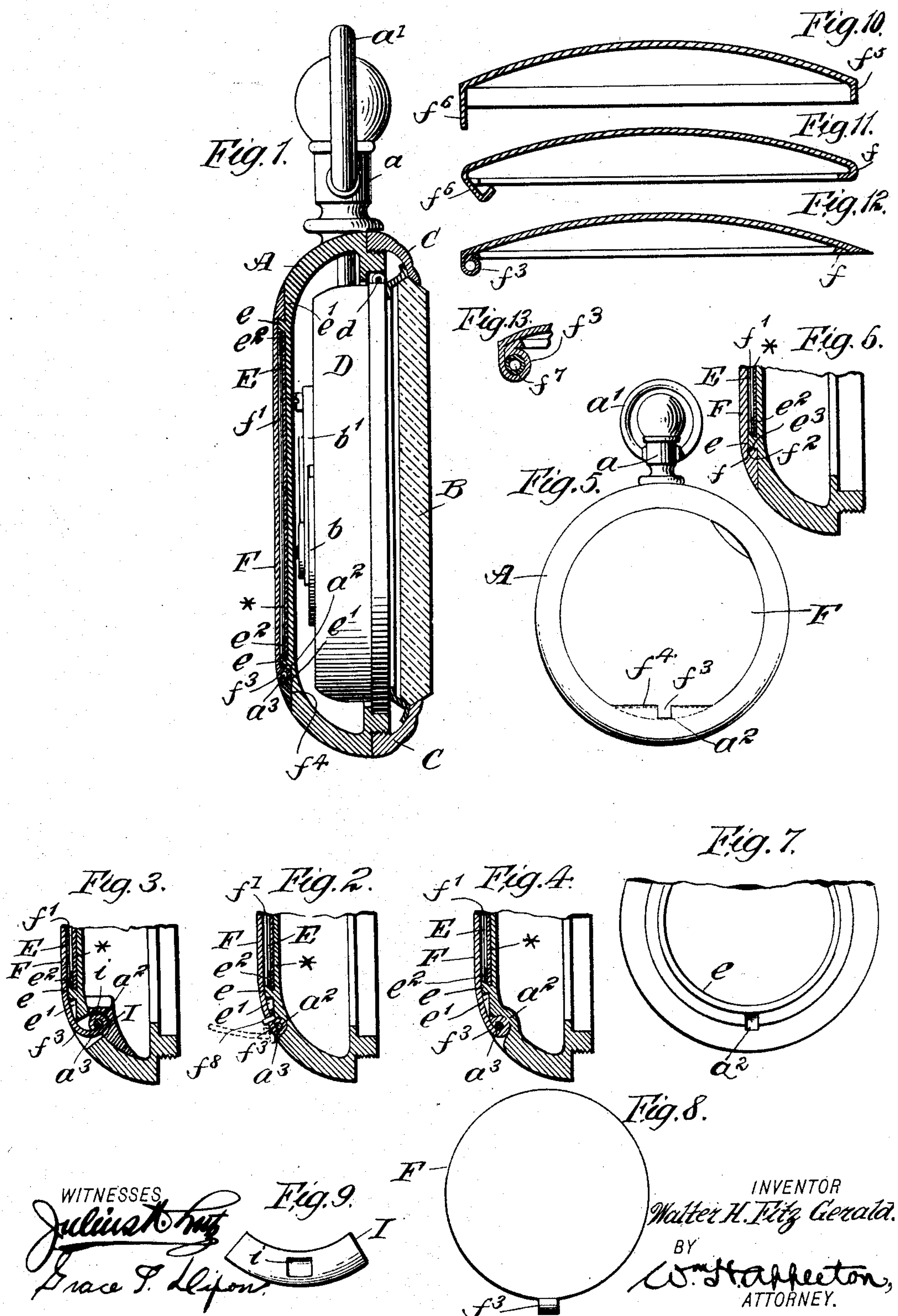


No. 885,149.

PATENTED APR. 21, 1908.

W. H. FITZ GERALD.
WATCHCASE.

APPLICATION FILED SEPT. 18, 1907.



WITNESSES
Julius H. [Signature]
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Fig. 9.



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WATCHCASE.

No. 885,149.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed September 18, 1907. Serial No. 393,428.

To all whom it may concern:

Be it known that I, WALTER H. FITZ GERALD, a citizen of the United States, and a resident of the borough of Brooklyn, in the city of New York, county of Kings, and State of New York, have invented a certain new and useful Improvement in Watchcases, of which the following is a specification.

My invention, while relating to the general class of watch cases, and especially to the forms thereof known as "miniature watch cases", has reference more particularly to that type of such case which is known to the art as a "screw bezel or cup dust proof case." In watch cases of this class, as ordinarily constructed, the body portion thereof which receives the work is usually struck up in cup shaped form, and has the bezel, which carries the glass or crystal, threaded upon the edge thereof. As thus constructed, no provisions are made for carrying photographs or other sheets therein, unless they are arranged within the bottom of the cup shaped portion, between the interior thereof and the works of the watch, and, when thus arranged, they are not only extremely liable to, and frequently do come into contact with the balance wheel of the watch, but their display or exhibition can only be effected by unscrewing the bezel and swinging the works of the watch up out of the case upon the hinge of their carrying ring. These two results, as is obvious, are extremely objectionable if not ruinous in practice, for, in addition to the arresting of the movement of the watch, the works are exposed and subject to the reception of dust and dirt, with the consequent effect that the watch is rendered practically useless in the hands of railroad engineers and others, whose movements and those of the machinery under their charge, must be controlled as to time with the greatest accuracy.

To obviate these objections therefore, and produce a watch case of the screw bezel class, which, while thoroughly dust proof and rendered cheap of construction, shall, at the same time, contain a chamber or receptacle for the reception and the holding of photographs and other similar sheets, that is remote from the works of the watch and capable of being opened and closed, to permit of their exposure and display without increasing the thickness of the case, are the objects of my invention.

To these ends the invention consists, first, in a watch case having a chamber or compartment formed in its back for receiving and holding a photograph or other sheet or plate, with means for closing the same; second, in the manner of connecting the back of the chamber or compartment to the case, and third in various other details of construction and combination of parts, all as will hereinafter more fully appear.

In the drawings; Figure 1, is an axial section of a screw bezel watch case constructed in accordance with my invention, showing the movement holding ring, the suspending ring and pendant, and a portion of the watch movement in side elevation; Fig. 2, an axial section of a portion of a screw bezel watch case broken away, showing one form of hinge for articulating the photograph compartment cover or back to the case; Fig. 3, a similar axial section, broken away, of the parts illustrated in Fig. 2, but showing a different form of hinge joint for securing the photograph compartment cover or back to the case; Fig. 4, a further axial section of a portion of a screw bezel case, similar to Fig. 2, but showing an additional form of hinge for jointing the photograph compartment cover or back to the case; Fig. 5, a rear elevation of a watch case constructed in accordance with my invention, and showing the form of hinge for jointing the cover or back of the photograph receiving compartment to the case illustrated in Fig. 1; Fig. 6, an axial section of a portion of a screw bezel watch case broken away, and showing a still further modification in the manner of securing the cover or back of the photograph receiving compartment to the case; Fig. 7, a rear view of a watch case constructed in accordance with one form of my invention, with parts broken away, and the cover or back for the photograph receiving compartment removed, showing a hinge member for such cover or back similar to that illustrated in Fig. 4; Fig. 8, a cover or back for the photograph receiving compartment, similar to that in Fig. 4, detached; Fig. 9, a front view of the reinforcing strip in which one of the hinge members of the construction shown in Fig. 3 is formed, detached; Fig. 10, a central section of a blank from which the cover or back for the photograph receiving compartment is formed, having its edge and the portion forming its hinge member bent

downward, as in the first step of its transformation; Fig. 11, a similar central section of the blank with its edges and hinged portion bent inward, as in the second step of its conversion; Fig. 12, a similar central section of the blank, showing its edges and hinged portion bent into the form that they severally occupy when in the completed structure, and Fig. 13, a sectional detail of the hinged portion of the cover or back broken away, and showing the interior of the hinge as provided with a bushing.

In all the figures, like letters of reference are employed to designate corresponding parts.

A indicates the cup shaped portion of the case, which, in practice, is usually struck up into the required form, and is or may be provided with a pendant a , and a suspending ring a^1 .

B indicates the glass or crystal, and C indicates the screw bezel by which the glass or crystal is threaded upon the open edge of the cup shaped back A.

D indicates the movement holding ring, which receives and carries the "watch movement", so called, and which is hinged to the cup shaped portion A by a pin d , whereby to be capable of being swung upwardly out of such cup shaped portion, when the screw bezel C is removed, to expose the watch movement, or backward into the same when returned to its normal position.

The parts thus far described possess no novelty in themselves, but are or may be the same as those ordinarily employed in connection with watch cases of this class as heretofore constructed, and require no further description herein. The same is also true respecting the watch movements which may be used in connection with cases of this character, and any of the well known forms may be employed. In practice however the form of movement which is usually appropriated to this class of cases has the balance wheel b , and the cock b^1 therefor, extending some distance above the plane of the rear edge of the movement holding ring D, and, when swung into the case, occupy positions in close relationship to the interior of the back of the cup shaped portion A, as shown in the drawings. As thus constructed no provision is made for receiving and supporting the photograph or other sheet within the case, other than within the interior of this cup shaped portion thereof, and when thus received and carried, as it sometimes is, it is disposed intermediate the rear face of the movement and the interior of the cup shaped portion A. With the photograph or other sheet thus arranged it is extremely liable to, and in practice frequently does, come in contact with the balance wheel b , in consequence of the jars and vicissitudes experienced by the watch, with the result that the movements of the watch are re-

tarded or wholly arrested; and this objection is not always obviated even when the photograph or sheet is secured to the interior of the cup shaped portion by adhesive material, as in consequence of the variation in temperature to which the case may be subjected, and otherwise, it frequently becomes more or less detached therefrom, and, when so detached, warps or wrinkles, and, in that condition, it is forced into interference with the proper movements of the watch. Moreover, when the photograph or other sheet is thus carried, its exhibition or exposure, as is obvious, can only be effected, by unscrewing and removing the bezel C, with its supported glass or crystal, and then swinging the watch movement up out of the case, with the consequent effect that the parts of such movement are exposed to dust and possibly other obstructing agencies, which readily accumulate in them. To remedy these defects therefore I construct the cup shape portion A of these cases with provision in their outer surfaces for the reception and carrying of the photographs or other sheets, and it is respecting this provision that my invention is more particularly concerned.

The special provision which I make for receiving and holding the photograph or other sheet is shown in Figs. 1, 2, 3, 4, 6 and 7, and consists in a chamber or compartment E, formed in the rear exterior of the one-piece, cup-shaped, back-portion A of the watch case, and in a cap or cover F for coöperation with it. In the formation of this chamber or compartment E, it may be struck up in the production of the cup shaped portion A, or it may be formed therein by turning or otherwise, it only being essential that, however formed, it may be constructed to receive and hold the photograph or other sheet without in any way impairing the dust proof qualities of the case, and be provided around, and outside of, its circumscribing walls or abutment e , with a flat seat e^1 , upon which the outer edge of the cover or back F may rest, when closed upon and over the chamber E. As thus constructed, the photograph or other sheet is placed within it, and, resting upon its bottom, may be held therein by any appropriate means. I prefer however to employ, as a holding means, a ring e^2 which is forced into the chamber or recess over the photograph or sheet, being held in place therein by engagement with the walls thereof; and, in order to thus retain the photograph or sheet in place, the circumscribing walls of the chamber or compartment may be slightly undercut if so desired. The cover or back F, on the other hand, is preferably constructed with its inner face adapted to rest upon the flat seat e^1 , and to engage with the upwardly extending walls or abutment e with the exterior surface of said cover or back so fashioned as to form the rear surface of the

case and to merge off at its edges into coincidence with the surface of the case that surrounds it. With the cover or back constructed as thus explained, and so that its contour does not project beyond the natural contour of the back of the watch case, its securement to the case may be effected in various ways. In some instances this securement may be effected by a screw thread, in which case the walls f surrounding the recess or chamber f^1 in its back will be provided with a screw thread f^2 , which will engage with a corresponding screw thread e^3 , formed in the exterior of the walls or abutment e of the cup shaped portion A, as shown in Fig. 6. In other instances, on the other hand, this cover or back may be hinged to the cup shaped portion A, so as to be capable of an upward and downward swinging movement thereon, away from and toward the chamber or recess E, and when thus hinged, one member of the hinge will be formed on the cover, as shown, for instance, at f^3 in Figs. 5 and 8, and the other member a^2 thereof will or may be formed in various ways in the cup shaped portion A. In Fig. 2, I have, for instance, shown this member a^2 as formed in the cup shaped portion A, outside of the flat seat e^1 thereof that surrounds the walls of abutment of the chamber or compartment E, without extending through such portion to the interior thereof. In Fig. 3, on the other hand, I have illustrated it as formed entirely through the cup shaped portion A, and extending into a recess i formed in a reinforcing strip I, which receives and holds the hinge pin a^3 , and which extends entirely over the orifice formed by the hinge member and along the interior of the case, so as to prevent the ingress of dust or other substances thereto and render the case dust proof. Again, in Figs. 4 and 7, I have portrayed this hinge member a^2 as formed by forcing the material of the cup shaped portion A inwardly sufficiently for the purpose, without breaking through the same; while in Figs. 1 and 5 I have illustrated it as formed in a circular segmental block or abutment f^4 , which is secured to the cup shaped portion A of the case across the flat seat e^1 thereof, the portion of the cover or back adjacent thereto, when this form of construction is adopted, being cut away to conform to such block or abutment, and the hinge member f^3 being formed upon the edge of this cut away portion instead of upon the circumferential edge of the cover, as in the other constructions. With the cover or back thus connected with the cup shaped portion A of the case in any of the ways specified, it may be closed down over the chamber or recess E, so as to form a closed compartment therein for the photograph or other sheet, or it may be removed from over the same to expose it as may be de-

sired, the walls f engaging with the wall or abutment e , when the parts are closed to hold it in that position, either through the intermediary of the screw threads or by being snapped or sprung thereover; and any one of these forms for connecting the cover or back to the cup shaped portion of the case may be adopted as may be preferred. The cover or back being thus secured to the case or cup shaped portion A, may be either struck up from a mass of metal, or be formed from a sheet thereof. I prefer however to form it from metal that is in sheet form, and, in the drawings, I have shown the successive steps necessary to its transformation when made therefrom.

In Fig. 10, I have portrayed the metal as severed from the sheet in disk form, with the same pressed into cup shape, and with the edge f^5 , and the portion f^6 that is to form the hinge member, bent downward to positions that are substantially parallel to an axis passed through the center of the disk. In Fig. 11, on the other hand, the portion f^5 is shown as bent inward until its parts all lie in a plane, with the part f^6 similarly bent inward to a less angle, and its inner end likewise bent upward; while in Fig. 12 I have shown these depending portions f^5 and f^6 as still further transformed, with the portion f^5 converted into the walls f , and the portion f^6 as converted into the hinged member f^3 .

In some instances the hinge member f^3 will be formed wholly from the portion f^6 , which, in that case, will be bent around into the appropriate form to suit it to the intended purpose. In other cases, on the other hand, it may be found desirable to reinforce this member, and, in such case, I employ a bushing f^7 , which is inserted within the portion f^6 , that is bent around it, as shown more particularly in Fig. 13, but, in whichever of these two ways it is constructed, the end of the hinge will either be soldered in place, or be held therein by a pin f^8 , which, extending therethrough and through the portion of the cover or back upon which it is bent, projects slightly above the surface thereof, and may act as a stop to limit the backward movement of the cover or back, as shown in Fig. 2.

With the parts constructed as above explained, it will be seen that I provide a watch case with means for receiving and holding a photograph or other sheet, which, while removing the photograph or sheet from all possibility of interference with the watch movement, and without increasing the thickness of the case, shall, at the same time, be so disposed as to not allow of the entrance of any dust or dirt to the interior of the case, or impair, in any way, the dust proof quality of the latter.

Having now described my invention, and

specified certain of the ways in which it is or may be carried into effect, I claim and desire to secure by Letters Patent of the United States,—

5 1. The combination with a one-piece, cup-shaped, back portion, of a screw-bezel watch-case having a closed back, of a movable cover attached to said cup-shaped back portion and between which cover and the back wall
10 of said back portion is formed a chamber or compartment, normally closed by said cover, for holding a photograph or other thin article which may be exposed to view, by opening said cover, without impairing the dust-proof
15 qualities of said case, the exterior of said cover forming the rear surface of the case and being so shaped that its contour does not project beyond the natural contour of the said back-piece, so that the thickness of the
20 watch case is not increased by the said exposable compartment.

2. The combination with a one-piece, cup-shaped, back portion of a screw-bezel watch-

case having a closed back, of a cover hinged to said cup-shaped back portion and be- 25
tween which cover and the back wall of said back portion is formed a chamber or compartment, normally closed by said cover, for holding a photograph or other thin article which may be exposed to view, by opening 30
said cover, without impairing the dust-proof qualities of said case, the exterior of said cover forming the rear surface of the case and being so shaped that its contour does not project beyond the natural contour of the 35
said back-piece, so that the thickness of the watch-case is not increased by the said exposable compartment.

In witness whereof I have hereunto set my hand in the presence of two witnesses this 40
16th day of September, 1907.

WALTER H. FITZ GERALD.

Witnesses:

WM. H. APPLETON,
W. C. HAUFF.