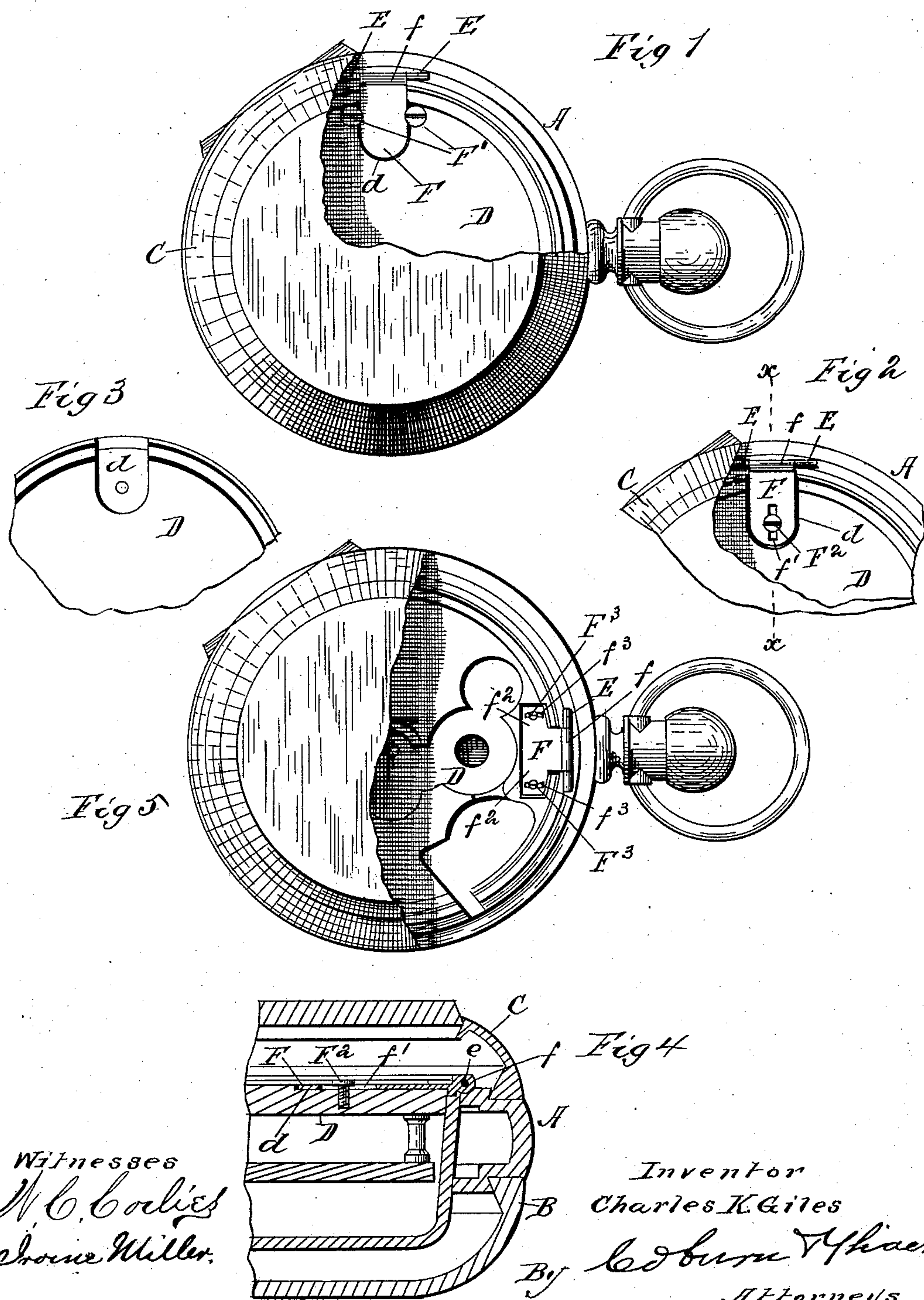


(No Model.)

C. K. GILES.
WATCH CASE HINGE.

No. 365,989.

Patented July 5, 1887.



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UNITED STATES PATENT OFFICE.

CHARLES K. GILES, OF CHICAGO, ILLINOIS.

WATCH-CASE HINGE.

SPECIFICATION forming part of Letters Patent No. 365,989, dated July 5, 1887.

Application filed June 30, 1886. Serial No. 206,748. (No model.)

To all whom it may concern:

Be it known that I, CHARLES K. GILES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Watches, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

10 Figure 1 is a face view of a watch embodying my improvement, a portion of the case being broken away to show its construction; Fig. 2, a detail view, similar in its nature, showing a modified form of my improvement; 15 Fig. 3, a detail view of a portion of the movement-plate; Fig. 4, a sectional view taken on the line *xx* of Fig. 2; and Fig. 5, a face view of a watch embodying a modified form of my invention, a portion of the case being broken 20 away to show its construction.

Like letters refer to like parts in all the figures of the drawings.

My invention relates to watches, and more particularly to that class of watches in which 25 the movement is hinged to the case, so as to swing outward to permit inspection of the same. In watches of this description the hinged connection has heretofore been effected by forming upon the movement-plate, to which 30 the movement is attached, one member of the hinge, the other member being formed upon the case-center and the two being connected by a pintle.

In practice the manufacture of watch-cases 35 is to a great extent entirely independent of the manufacture of watch-movements, the case-maker buying his movements and placing them within his cases. Owing to this fact it is a frequent occurrence that the two members 40 of the hinged joint in watches of the description above mentioned cannot be properly assembled, owing to minute inaccuracies in the relative location of the parts.

The object of my present invention is to 45 overcome this difficulty; and to this end my invention consists in an adjustable hinged joint for connecting the two parts, whereby by the adjustment of one or both of the members of the hinged joint the parts may be 50 readily and accurately assembled, as will be

hereinafter described, and pointed out in the claims.

In the drawings the case proper is shown as consisting of a center, A, back cap, B, and front cap, C, which latter consists of a hinged 55 bezel provided with a crystal.

D indicates the movement-plate which receives the movement, the latter being attached to it in the usual manner.

In the present instance the hinge is shown 60 as composed of one fixed and one adjustable member, the fixed member being attached to the case-center A and consisting of two tubular sections, E, secured to the inner edge of the center in any approved manner and having a 65 space between them to receive a third tubular section. The adjustable member of the hinge consists of a piece, F, which is adjustably connected to the movement-plate and which is provided with a tubular section, *f*, at its outer 70 extremity, which fits between the tubular sections E, the pintle *e* passing through the three sections to unite the whole and form the hinge-joint.

The adjustable connection between the piece 75 F and the movement-plate D may be effected in various manners. In any case, however, it is preferable to have this piece countersunk into the movement-plate, so as to be flush with the surface thereof, and this is effected by forming a recess, *d*, in the movement-plate of some- 80 what larger dimensions than those of the piece F. In the construction shown in Fig. 1 of the drawings the piece F is secured to the movement-plate D by means of two screws, *F'*, which 85 pass into said plate at each side of the said piece, their heads projecting over the piece and clamping the same down upon the plate when the screws are screwed down into position. In the construction shown in Figs. 2, 3, 90 and 4 of the drawings a single screw, *F''*, is employed to secure the piece F, the said screw taking into the movement-plate and passing through a slot, *f'*, in the piece F, the said screw being capable of clamping the said piece in 95 position after adjustment, in an obvious manner.

In the two constructions just described the hinge-joint is located at a point at one side of 100 the case, so that the movement can swing out

sidewise, and this location is of such a nature as to permit the employment of a piece of the size and configuration shown. In case it is desired, however, to locate the hinge-joint at that portion of the center where the pendant is attached, I adopt the construction shown in Fig. 5 of the drawings. In this arrangement the winding and setting mechanism, the location of which is indicated in said figure, by means of the recesses in which it is arranged, will not permit the use of a piece of the character just described, and I therefore extend the piece F laterally, forming wings or extensions f^2 , and in these wings or extensions I form slots f^3 , which are preferably given a slight curvature, as shown. Screws F^3 , passing through these slots, serve to secure the piece F to the movement-plate D, the curvature of the slots permitting a slight lateral adjustment in addition to the other adjustment.

In the drawings the case and movement are shown with the dial and that portion of the mechanism which is on the upper side of the movement-plate removed. It will be understood, of course, that when the dial is placed in position that portion of the hinge-joint underneath will be covered up and thereby concealed from observation.

By means of the adjustable hinge-joint above described movements and cases which have been separately manufactured may be readily assembled by hinging the movement to the case, any difficulty in effecting the connection between the two being easily overcome by the adjustment provided for.

I have described my improved adjustable joint as having its adjustable member attached to the movement-plate and its fixed member attached to the case-center, and I prefer this arrangement for various reasons, among others superior convenience and the effectual concealment of the adjustable connection; but it is obvious that this arrangement may be reversed without departing from the principle of my invention; or, in other words, the ad-

justable member may be attached to the case-center and the fixed member to the movement-plate. It is further obvious that instead of employing a fixed and an adjustable member both members may be adjustable; but I deem the adoption of this construction generally inadvisable on account of its increased cost and complication. Moreover, various modifications in the details of the construction hereinbefore described may be employed without departing from the principle of my invention, and I therefore do not wish to be understood as limiting myself strictly to the precise details hereinbefore described, and shown in the drawings. I am aware, however, that adjustable hinges are not, broadly considered, new, a hinge of this description for builders' use on doors, &c., being shown in Letters Patent No. 67,904, granted October 20, 1867, and I therefore do not wish to be understood as claiming the same, broadly.

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

1. In a watch provided with an outswinging movement, the combination, with the case-center and movement-plate, of a hinge-joint connecting the two and having one or both of its members adjustably connected to their respective parts, substantially as specified.

2. The combination, with the case-center and movement-plate, of a hinge-joint consisting of a fixed member attached to the center, and an adjustable member attached to the movement-plate, substantially as specified.

3. The combination, with the case-center provided with the tubular sections E, of the piece F, adjustably connected to the movement-plate and having the tubular section f , and the pintle e , passing through the three sections, substantially as specified.

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