

UNITED STATES PATENT OFFICE.

LOUIS S. HANSON, OF CHIPPEWA FALLS, WISCONSIN.

WATCHCASE-HINGE.

No. 918,043.

Specification of Letters Patent.

Patented April 13, 1909.

Application filed July 9, 1908. Serial No. 442,724.

To all whom it may concern:

Be it known that I, LOUIS S. HANSON, a citizen of the United States, residing at Chippewa Falls, in the county of Chippewa and State of Wisconsin, have invented certain new and useful Improvements in Watchcase-Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an improved watch case hinge and is especially directed to the improvement of the spring mechanism for forcing open the front lid when released by its latch, and to the above ends the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a bottom view of the case, some parts being broken away and some parts being shown in section. Fig. 2 is a vertical section taken radially on the line $x^2 x^2$ of Fig. 1, some parts being broken away. Fig. 3 is a vertical section taken radially on the line $x^3 x^3$ of Fig. 1, some parts being broken away, showing the lid opened up. Fig. 4 is a horizontal section taken on the line $x^4 x^4$ of Fig. 2, some parts being broken away. Fig. 5 is a bottom view of the case-center, some parts being broken away. Fig. 6 is a bottom view of the top lid of the case, some parts being broken away. Fig. 7 is a view corresponding to Fig. 2, but illustrating a slightly modified construction; and Fig. 8 is a view corresponding to Fig. 5, but showing the construction illustrated in Fig. 7.

Of the principal parts of the case, the numeral 1 indicates the case-center, the numeral 2 the customary bottom lid, and the numeral 3 the top lid, the hinge lug 5 of which latter is connected to thin laterally spaced internal flanges 10 of the said case-center. The hinge lug 5 has a radially projecting lug 6, that is notched in one side, to-wit, in that side that is adjacent to the wall of the case-center, so as to receive the free end of the reduced spring portion of a segmental spring 7, which spring closely follows the wall of the case-center 1, and is,

as shown, provided with a multiplicity of transverse corrugations 8 on its wide body portion, and is anchored to the said case-center by a pin or screw 9. The said corrugations 8, it will be noted by reference to Fig. 1, are formed by pressing one edge of the body portion of the spring 7 laterally so that the pin or screw 9 may be passed there-through and into a suitable seat formed in one of the inwardly extended annular flanges of the case-center 1. The tension of the spring 7 is, of course, such that it will force the upper cover 3 open when the latter is released from its spring latch (not shown, but which may be of the usual or any suitable construction.) With this arrangement of the spring 7 and lug 6 the free end of the spring may be applied to or disconnected from the notched lug 6 without removing from the watch case either the spring or the hinged cover; or the said hinged cover may be removed from the watch case without removing the said spring from the case-center.

In the construction illustrated in Figs. 1 to 6 inclusive, the laterally spaced ears or piping 10 to which the lids 2 and 3 are hinged, are shown as connected by an integrally formed segmental web 11 that is notched at 11^a to afford clearance for the lug 6, so as to thereby permit the engagement of the spring 7 with said lug 6 and to permit such movements of said lug 6 as is required when the lid 3 is moved from its closed into its open position, or vice versa. By reference to Fig. 3 it will be noted that when the cover 3 is thrown into its open position the lug 6 strikes the upper annular flange of the case-center 1 and thereby affords a stop for determining the extreme open position of said cover.

The construction illustrated in Figs. 7 and 8 is like that described above, except that the segmental web 11 is dispensed with. The only purpose of the said web 11 is to cover or inclose the hinge joint of the interior of the case, but considerable work and expense is done away with by the elimination thereof. In both constructions the case-center 1 is cut away at 11^b to afford a seat for the hinge lug 5 between the ears or piping 10. In the best arrangement the notched lug 6 is located at one extremity of the hinge lug 5, but it might be intermediately located in some instances. The above de-

scribed construction gives an extremely efficient spring and hinge joint which may be made at small cost and which, as above stated, may be very easily put together and
5 taken apart.

What I claim is:

1. The combination with a watch case comprising a case-center having laterally spaced ears and an opening between said
10 ears, of a lid having a hinge lug located between and pivotally connected to said ears, said hinge lug having a radially projecting lug notched at one side and located at one
15 end of said hinge lug adjacent to one of said ears, the side of said lug which is opposite to the notch thereof being arranged to directly engage one of the flanges of the case-center to positively limit the opening movement of the lid, and a segmental spring anchored at one end to said case center and
20 having a reduced end engaged with the notched side of said notched lug and exerting an upward force thereof tending to move said hinged lid into an open position, substantially as described.
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2. The combination with a watch case comprising a case-center having laterally spaced ears and a segmental web connecting the same, said web having a notch at one
end, of a lid having a hinged lug located
20 between and pivotally connected to said ears and provided at one end with a radially projecting lug notched at one side and projecting through the notch of said segmental web, the side of said lug which is opposite
25 to its notch being arranged for direct engagement with one of the flanges of said case-center to limit the opening movement of the lid, and a segmental spring anchored at one end to said case-center and having a
40 reduced free end engaged with the notched side of said notched lug and exerting an upward force tending to move said lid into an open position, substantially as described.

In testimony whereof I affix my signature
45 in presence of two witnesses.

LOUIS S. HANSON.

Witnesses:

OSCAR VAN VALKENBURG,
KATIE HAYES.