

J. GORDON.
Spring-Joints for Watch-Cases.
 No. 141,045. Patented July 22, 1873.

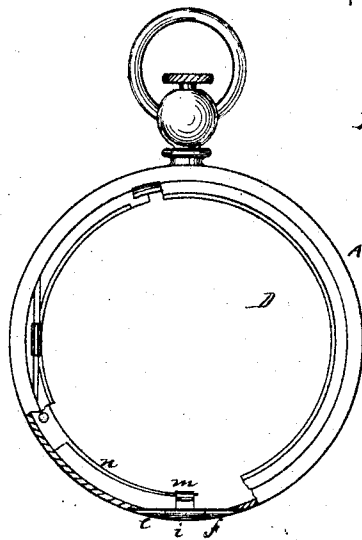


Fig. 1.

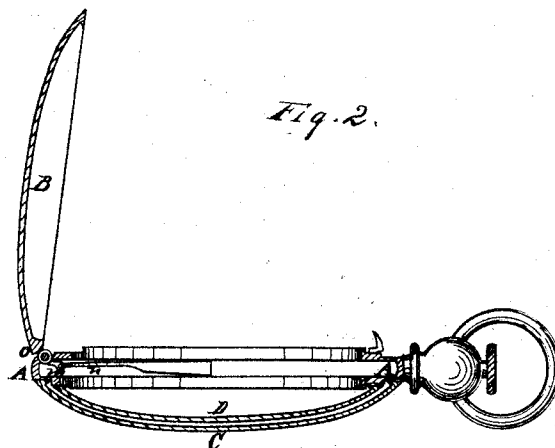


Fig. 2.

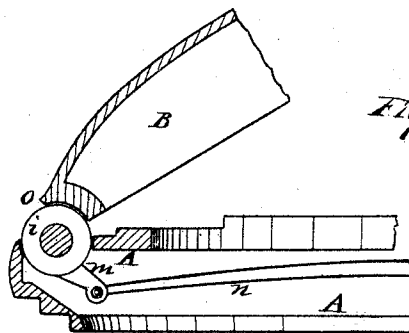


Fig. 3.

Witnesses

S. L. Bone
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UNITED STATES PATENT OFFICE.

JOHN GORDON, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN SPRING-JOINTS FOR WATCH-CASES.

Specification forming part of Letters Patent No. **141,045**, dated July 22, 1873; application filed November 16, 1872.

To all whom it may concern:

Be it known that I, JOHN GORDON, of San Francisco city and county, State of California, have invented a Spring-Joint for Watch-Cases; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention without further invention or experiment.

My invention relates to certain improvements in watches that have one or more cases, which are thrown open when released by the action of a spring-joint; and it consists, mainly, in a novel construction and arrangement of the spring-joint which controls and opens the front case, whereby I am enabled to so construct the joint that no hole or opening is presented at any time whether the case be open or closed, and all dust is thus excluded.

The joint is also so made that it gives a double stop or support to the case as it flies open from the impulse of the spring.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a front view of the watch with a portion removed to show the joint-spring and lug. Fig. 2 is a sectional view taken through the joint. Fig. 3 is an enlarged view of the joint and lug.

A is the frame of a watch having the front and back cases B and C and the inside case D. The front case is hinged at the spring-joint, and is kept closed by a spring-catch operated in the usual manner by the thumb-piece in the stem. The hinge-joint is made in the present case in three sections, the two outer ones, *e* and *f*, being secured to the frame, while the middle one, *i*, is secured to the case, a pin passing through the three, and serving as an axis about which the case moves. The middle joint-section *i* has an arm or lug, *m*, which projects below or inside the frame through an opening made for the purpose, and which the section just fills as it turns, and into the end of this lug the end of the operating-spring *n* passes or is secured.

This spring extends some distance around inside the frame, and is properly attached, its free end having a forward-and-back motion,

by which it operates the lug *m*, and through this the case B. The case is thus opened when released from the spring-catch. The lug *m* being entirely below the joint, the latter is complete where it passes through the frame, and the frame itself has no opening, as in the case of the ordinary joint. All possibility of dust entering is thereby avoided. As the case opens the lug *m* is arrested by striking the inner side of the frame, thus serving as a stop.

A slight projection, *o*, at the back of the case strikes a projection upon the outer edge of the frame, as shown, when the case reaches its extreme limit in opening in the ordinary manner, and the lug *m* thus acts as an assistant or secondary stop, taking the strain off the joint, and rendering it more secure from being broken.

In the case of watches having more than three sections to the hinge, two springs are sometimes employed; but it is manifest that my device is as applicable to this form as the present one, and also to the back cases of watches if the spring-joint be used.

Some modifications of my arrangement may be found desirable in some cases, but the devices will be equivalent and essentially the same, the principal point being to do away with the opening from the exterior to the interior of the watch.

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

1. The case, joint, or hinge having the attached lug *m*, in combination with the operating spring, as herein shown, whereby I am enabled to construct a joint and case spring without having any opening for the admission of dust, and avoiding the piercing of the plate A, as set forth.

2. The lug *m* attached to the case B, when constructed to act as a stop or guard, substantially as set forth.

In witness whereof I hereunto set my hand and seal.

JOHN GORDON. [L. S.]

Witnesses:

J. L. BOONE,

C. M. RICHARDSON.