

J. K. BIGELOW.

Improvement in Reversible Pinion for Watches.

No. 131,208.

Patented Sep. 10, 1872.

Fig. 1.

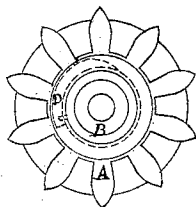


Fig. 2.

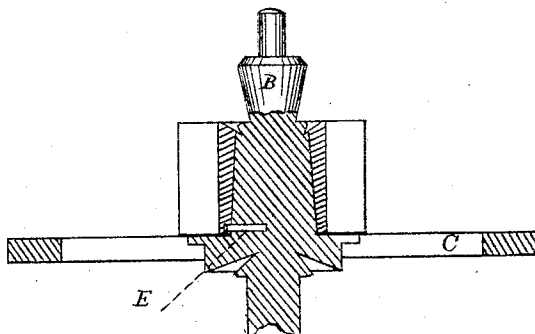
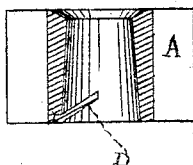


Fig. 3.



Witnesses:

*Fred. Astor*  
*S. M. Pool*

Inventor:

*John K. Bigelow*  
*By Daniel Breed*  
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# UNITED STATES PATENT OFFICE.

JOHN K. BIGELOW, OF SPRINGFIELD, ILLINOIS, ASSIGNOR TO SPRINGFIELD WATCH COMPANY, OF SAME PLACE.

## IMPROVEMENT IN REVERSIBLE PINIONS FOR WATCHES.

Specification forming part of Letters Patent No. **131,208**, dated September 10, 1872.

### SPECIFICATION.

I, JOHN K. BIGELOW, of Springfield, in the county of Sangamon and State of Illinois, have invented certain Improvements in Watches, of which the following is a specification:

The object of my invention is to prevent the train from being broken by the recoil when the mainspring breaks; and it consists of a groove and pin to connect the pinion of the center or of the third wheel to its staff in such manner as to allow the pinion to reverse or become detached from its staff when the mainspring or winding-gear breaks.

In the drawing, Figure 1 is an end view of the pinion detached from its staff or arbor; also, showing the groove. Fig. 2 is a vertical section of the same pinion in place upon the center staff and wheel. Fig. 3 is a vertical section of the pinion, Fig. 1.

In the application of my improvement the pinion A, Fig. 1, is made separate from the center-staff B, Fig. 2, which also carries the center-wheel C in the usual manner. A groove, D, Fig. 3, is made in the pinion, and a pin, E, Fig. 2, is fixed in the staff B, in order to enter or lock into the groove, and thus prevent the pinion from turning in one direction, and yet

allow the pinion to turn in the other direction, and thus become detached from the staff.

This is a very simple construction and may be applied to any pinion in the train; but I prefer to apply the same to the center-staff and pinion so as to guard the whole train.

In case of a hollow staff a projection may be used instead of a pin, which is more easily made.

My invention will prevent damage to the train by the breaking of the mainspring, click, or ratchet, and the consequent recoil, which is liable to break the teeth of the wheels and other parts. My groove and pin are easily made to work with accuracy, and they are not liable to any derangement or injury.

I do not broadly claim a safety-pinion, but confine my invention to the above-described pin and groove.

Having described my invention, I claim—

The above-described pin E and groove D, for the purpose of connecting the pinion and staff and allowing the pinion to become detached when its motion is reversed, substantially as set forth.

Witnesses: JOHN K. BIGELOW.

JOHN S. STUART,  
W. B. MELLEN.