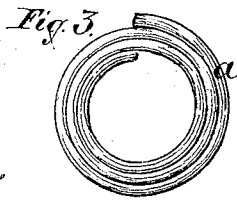
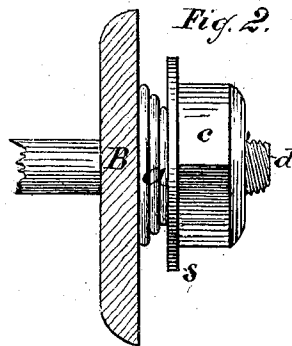
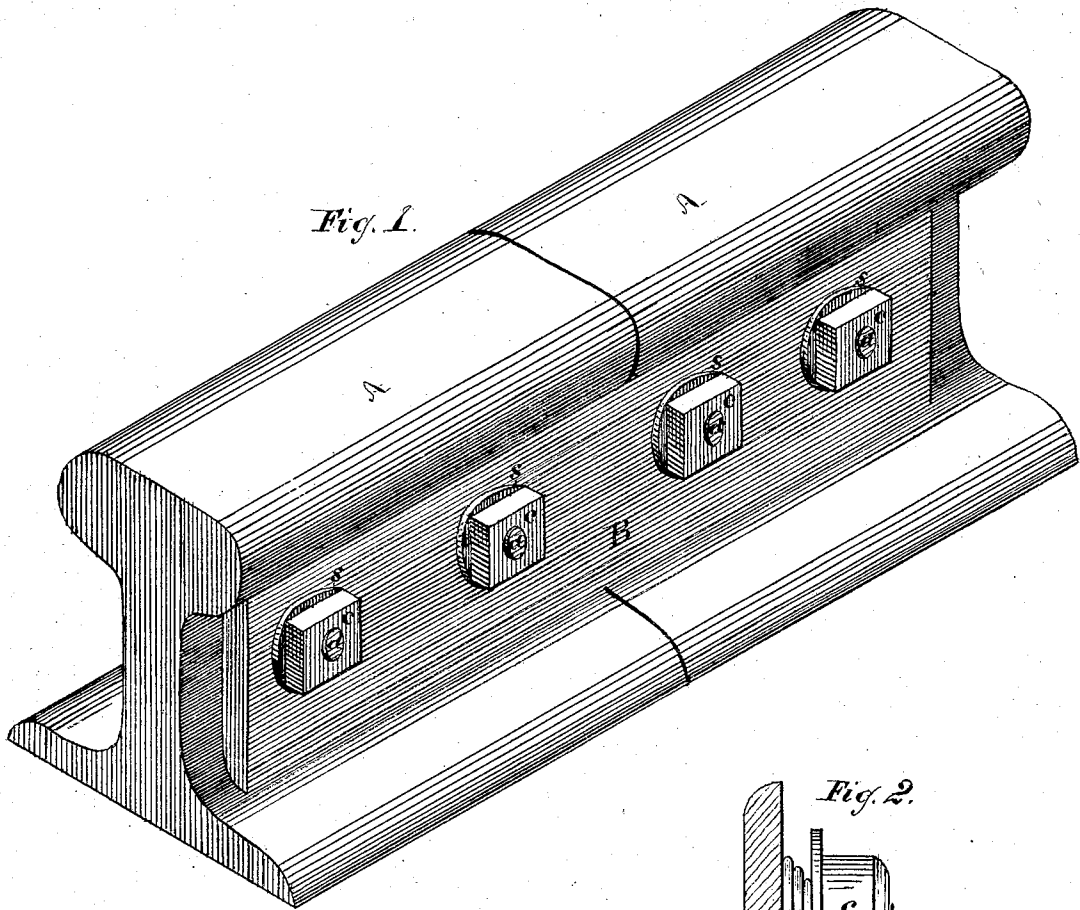


L. WINSLOW.

Improvement in Nut-Locking Washers.

No. 130,097.

Patented July 30, 1872.



Witnesses

W. L. Bishop,  
D. M. Dewey

Lorenzo Winslow.

# UNITED STATES PATENT OFFICE.

LORENZO WINSLOW, OF ROCHESTER, NEW YORK.

## IMPROVEMENT IN NUT-LOCKING WASHERS.

Specification forming part of Letters Patent No. 130,097, dated July 30, 1872.

*To all whom it may concern:*

Be it known that I, LORENZO WINSLOW, of the city of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in the manner of holding Bolt-Nuts in their places when screwed up, as applied to fish-joints of railroad rails and in other places. The following is a full and accurate description of the same, reference being had to the accompanying drawing making part of this specification, and to the letters marked thereon.

My invention consists in a volute conical spring, formed of brass, iron, or steel wire, round or square, which I denominate and call a spring-washer, which is placed on the bolt *d*, followed by the friction-washer *s*, both of which are brought to their place by turning the nut *c* firmly against them.

Figure 1 shows a perspective view of two ends of rails joined by fish-plates and bolts. A A show ends of rails; B, fish-plates; *d d* ends of bolts; *s s s*, friction-washers; *c c c*, nuts. Fig. 2 shows an end view of nut

*c*, friction-washer *s*, fish-plate B, volute conical spring-washer *a*, all placed on bolt *d*.

To apply my device, the fish-plate being placed on either side of the rails at the joint, with the bolts in the holes, I place the spring-washer *a* on the bolt with its base to the fish-plate, followed by the friction-washer *s*, both being brought to their place by turning the nut firmly against them. Thus it will be seen that the constant pressure of the spring-washer *a* against the nut *c*, although it may be only partially turned up, will prevent the turning back of the nut, thus preventing the bolt becoming loose. Hence the superiority of my device over most other devices for holding bolt-nuts from turning back.

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

The volute conical spring-washer, for the use and purposes herein set forth.

Witnesses: LORENZO WINSLOW.

W. L. BISHOP,  
D. M. DENNY.