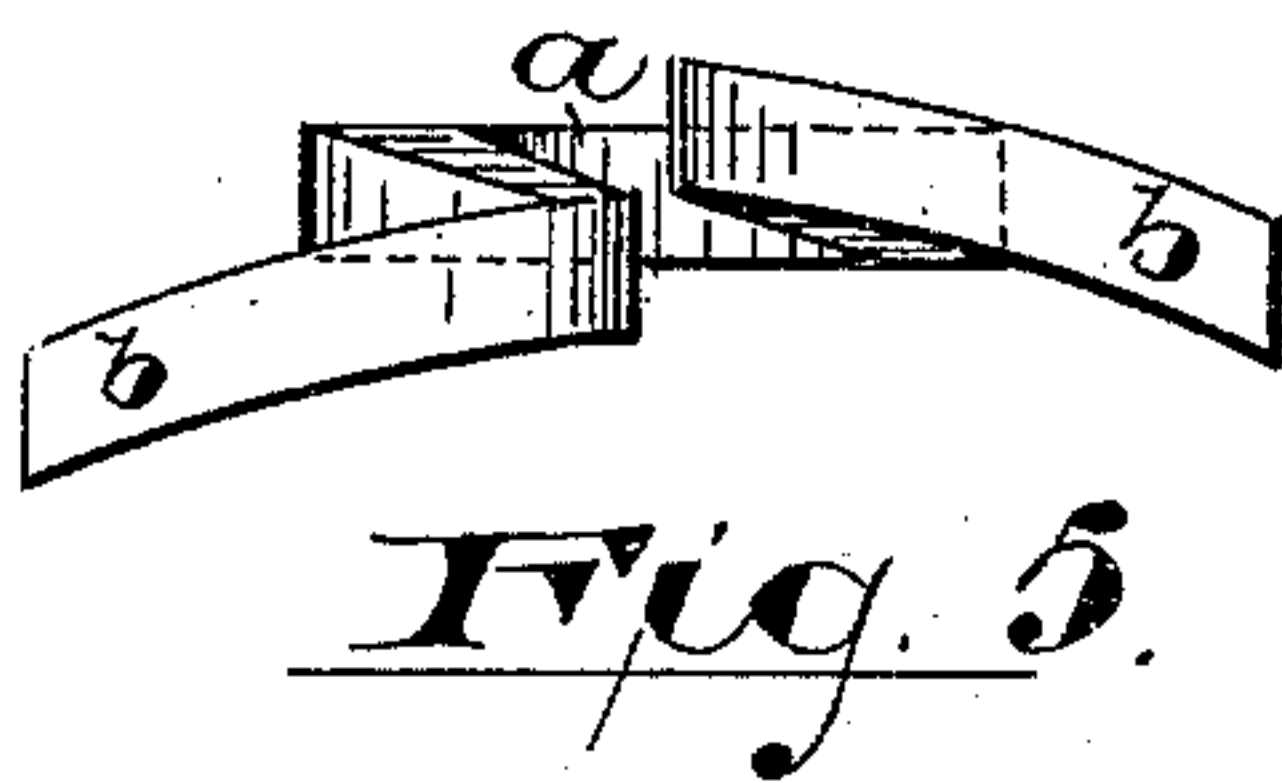
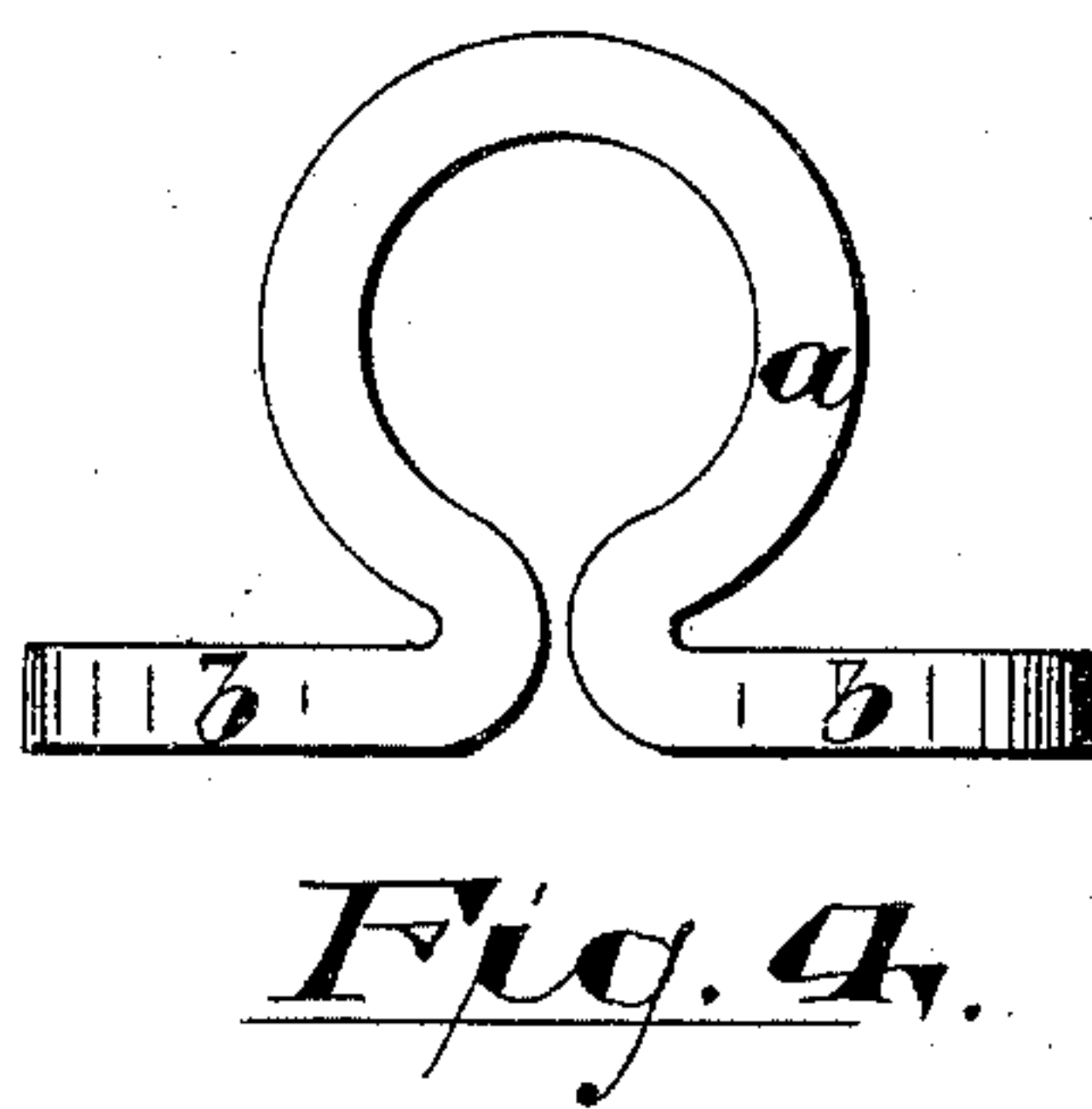
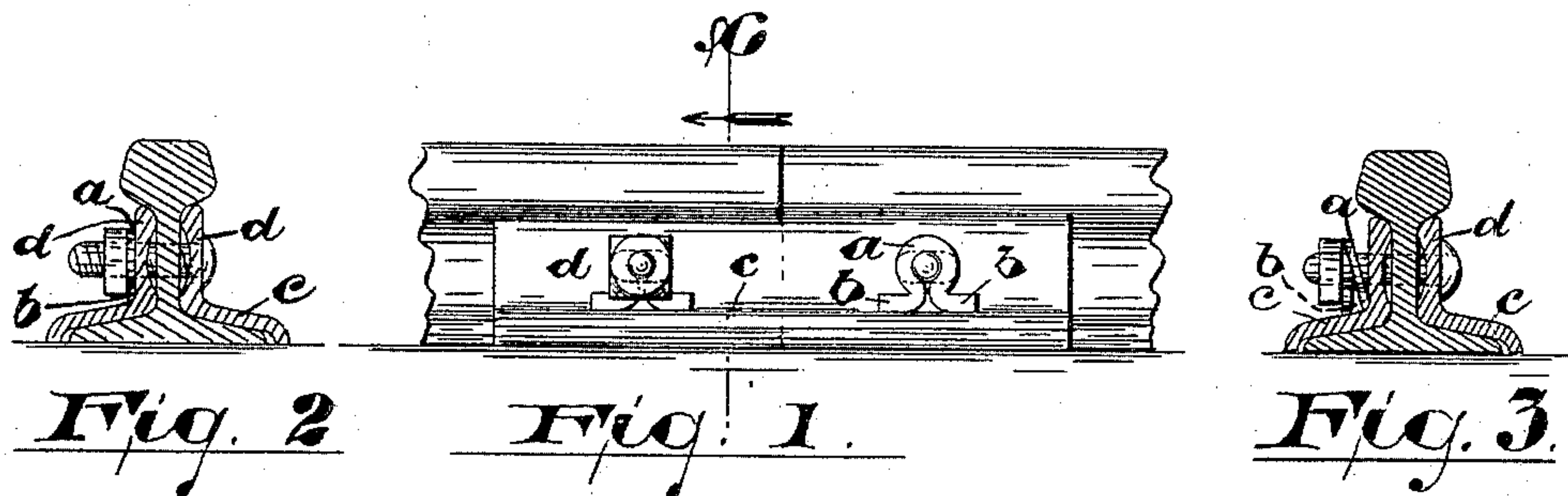


(No Model.)

D. O. WARD.
NUT LOCK.

No. 458,782.

Patented Sept. 1, 1891.



Witnesses

Inventor:

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UNITED STATES PATENT OFFICE.

DANIEL O. WARD, OF NEWARK, NEW JERSEY.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 458,782, dated September 1, 1891.

Application filed November 10, 1890. Serial No. 370,912. (No model.)

To all whom it may concern:

Be it known that I, DANIEL O. WARD, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Nut-Locks; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a nut-lock which shall also supply the place and perform the functions of a washer, to render the same more effective and reliable in operation than those heretofore used, and to secure other advantageous results.

The invention consists in the improved nut-lock and in the arrangement and combination of the several parts thereof, as herein set forth, and finally pointed out in the claims.

Referring to the accompanying drawings, in which similar letters of reference indicate corresponding parts in each of the several figures where they occur, Figure 1 represents in elevation sections of two railway-rails lying in juxtaposition with each other, with an angle-bar or fish-plate united thereto, and showing my improved nut-lock in operative position. Figs. 2 and 3 are sections taken through line *x* of the same, the former showing the nut-lock as it appears after and the latter before the nut has been screwed home. Fig. 4 represents in elevation a view of the nut-lock full size, and Fig. 5 a bottom plan view of the same.

In carrying out my invention I provide a single coil *a*, of spring-steel, having its extremities returned and extending in a horizontal plane in opposite directions, as shown in Figs. 4 and 5, forming arms *b*, which, when the device is in position on a bolt, are adapted to rest upon the flange *c* of the angle-bar or

fish-plate, and thus effectually prevent the nut-lock from rotating or turning on the bolt, as is sometimes the case, and thereby injuring or destroying the thread thereof, and, further, to obviate the liability of the ends of the nut-lock dropping into the oblong holes in the angle-bar, which frequently happens with the ordinary single-coil nut-locks, thereby rendering them practically useless. The coil *a* is twisted in the ordinary manner, as indicated in Figs. 3 and 5, to obtain the desired set or spread of the ends, in order to impart a certain amount of resistance or spring thereat. The laterally-extending arms *b* are also curved inward, as shown in Fig. 5, to engage the face of the angle-bar for the purpose of increasing the resistance, thereby adding largely to the efficiency of the device as a nut-lock, as will be obvious.

Having thus described my invention, what I claim as new, and desire to have secured by Letters Patent of the United States, is—

1. The herein-described nut-lock, consisting of a loop of tempered spring-steel closely fitting the bolt, twisted out of plane to give resiliency, and provided with horizontal extensions or foot-pieces to rest upon the rail-base or underlying structure and prevent turning, substantially as described.

2. The herein-described nut-lock, consisting of a loop of tempered spring-steel closely fitting the bolt, twisted out of plane to give resiliency, and provided with inwardly-curved horizontal extensions or foot-pieces to rest upon the rails or underlying structure and prevent turning and aid in the resilient action between the fish-plate and nut, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of November, 1890.

DANIEL O. WARD.

Witnesses:

OLIVER DRAKE,
OSCAR A. MICHEL.