K. H. LOOMIS.

Nut-Locks.

No. 133,324. Patented Nov. 26, 1872.

Fig. 1.

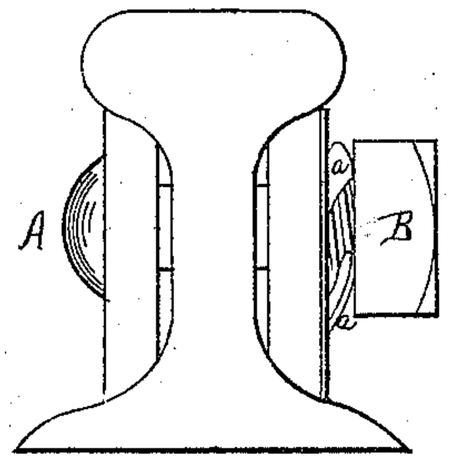
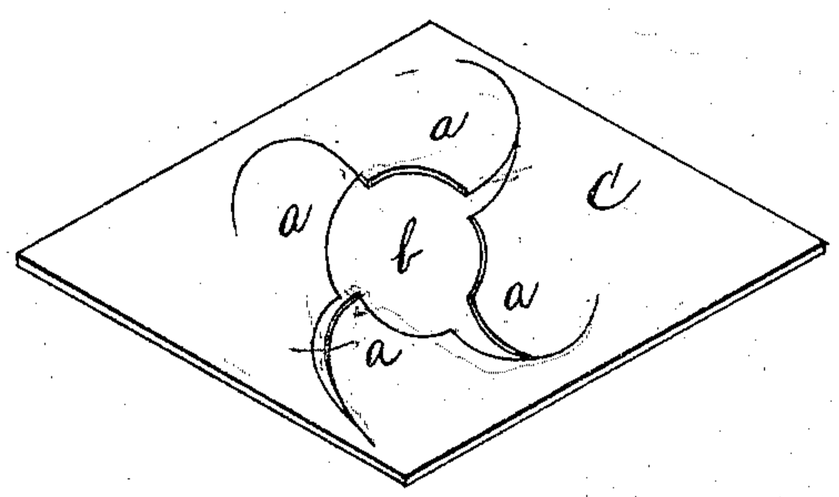


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

KELLOGG H. LOOMIS, OF NEW YORK, N. Y.

IMPROVEMENT IN NUT-LOCKS.

Specification forming part of Letters Patent No. **133,324**, dated November 26, 1872; antedated November 20, 1872.

To all whom it may concern:

Be it known that I, KELLOGG H. LOOMIS, of New York, in the county of New York and in the State of New York, have invented certain new and useful Improvements in Nut Lock and Washer; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

My invention is intended for the purpose of securing nuts on their bolts; and consists in the use of a washer made of spring-steel and provided with a series of slots and outward projections, against which the inner face of the nut is placed and held by the friction of the spring projections on the washer.

In Figure 1 of the accompanying drawing is represented an end view of a railroad rail, the two fish-pieces, the bolt, nut, and spring-washer. Fig. 2 represents a perspective view of the washer.

The principal object I have in view is to provide a means for preventing the nut from turning on the bolt, and to use an ordinary bolt and an ordinary nut, and secure them together by a device that is simple, economical, and convenient. To this end I take a flat, rectangular piece of spring-steel and cut a circular opening in its center for the passage of the bolt. I then cut in this plate a series of curved slots, opening into the central orifice, and bend the spaces between said cuts outward from the main plate. These slots are all cut of a size and on the arc of a circle, (or near thereto,) and the pieces between the slots equally bent outward, so that when completed the plate assumes somewhat the appearance of a "rose." I, therefore, prefer to designate it the "rose washer."

The operation of the nut-lock is as follows: The bolt is passed through the thing or things desired and the washer is then passed over the threaded end; the nut is then screwed on so that it will revolve and ride forward over the bent projections or springs on the washer. As the nut is screwed up the projections are correspondingly depressed, and should the nut be turned backward the edges of the series of plates will bear and catch against the inner face of the nut and hold the same by the friction of the springs, unless considerable pressure is brought to bear on the nut. It will be seen that the cuts which form the outward projections are just far enough apart so that the face of the nut rests upon all of them, and when the nut is turned forward it rides upon the inclined planes of each, and should the nut be turned backward the front edges of each projection act on the face of the nut. By means of this spring-washer, as described, the nut is at all times upon an elastic cushion, so that the expansion and contraction of the material are compensated for.

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

In combination with a nut, B, and bolt A, the flat steel spring-washer C provided with a series of curved cuts and outward projections, *a a*, around the central orifice *b*, all substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of March, 1872.

KELLOGG H. LOOMIS.

Witnesses:
C. L. EVERT,
EDM. F. BROWN.