

J. J. ADGATE.

NUT-LOCK.

No. 173,385.

Patented Feb. 15, 1876.

Fig 1

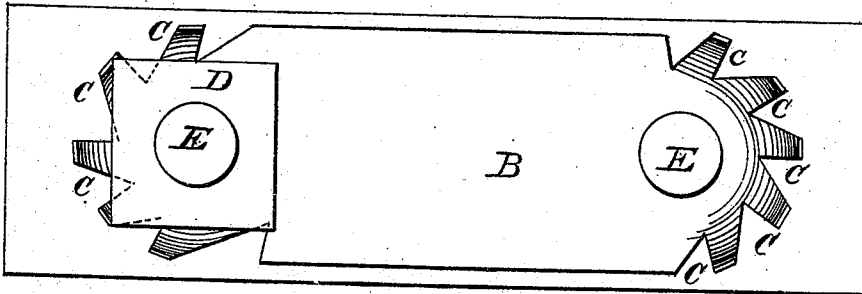


Fig 2

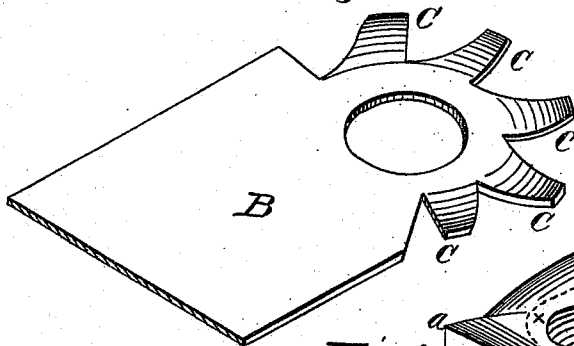


Fig 3

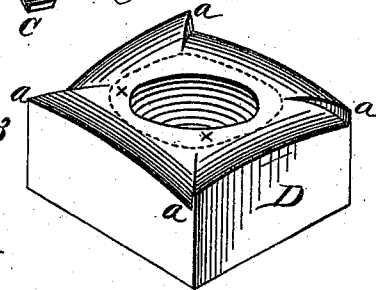


Fig 4

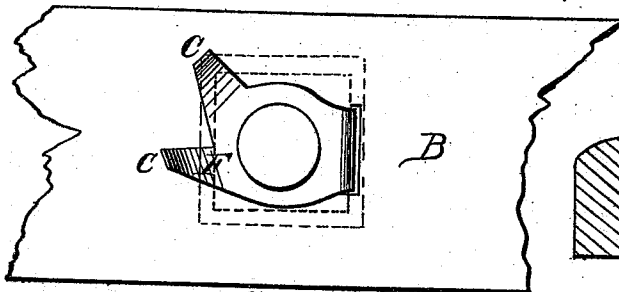


Fig 5

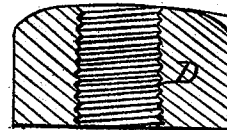
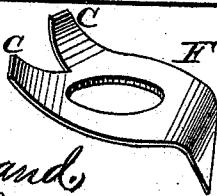


Fig 6



WITNESSES
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UNITED STATES PATENT OFFICE.

JOSEPH J. ADGATE, OF NEW YORK, N. Y., ASSIGNOR OF THREE-FOURTHS
HIS RIGHT TO MARK H. RICHARDS, NATHANIEL P. HOBART, JR., AND
HIRAM C. FEGER, OF POTTSTOWN, PENNSYLVANIA.

IMPROVEMENT IN NUT-LOCKS.

Specification forming part of Letters Patent No. 173,385, dated February 15, 1876; application filed
January 27, 1876.

To all whom it may concern:

Be it known that I, JOSEPH J. ADGATE, of New York city, in the county of New York and in the State of New York, have invented certain new and useful Improvements in Nut-Locks; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the peculiar construction of nut-lock plates, as also of the nut to be used therewith, and in combination and adaptation of the two together, as will be hereinafter more particularly described.

In the accompanying drawings, making a part of this specification, Figure 1 represents a plan view of a plate which secures two nuts. Figure 2 represents a perspective view of one-half of this plate. Fig. 3 is a perspective of the nut representing the formation of its under side. Figs. 4 and 5 are views of a small plate used with one nut; and Fig. 6 is a cross-section of the nut.

In the annexed figures, A represents the fish-plate which binds together the two sections of a rail or contiguous rails, as usual. B represents a steel plate, which is long enough, so that the bolts from each rail pass through it. The ends of this plate are formed with two or more tongues, as represented, the ends of said tongues being bent or turned up slightly from the surface of the fish-plate. These tongues are so cut that the edge on one side is cut on a radial line from the center of the hole in the plate which receives the bolt; but the cut does not extend into said hole. The cut of the other edge of the tongue is on a tangential or nearly tangential line. F represents a smaller plate, having tongues similar to those just described. It has an opening or hole to receive the bolt, and its end opposite that upon which the tongues are formed is made pointed, and a portion of it is bent at right angles to the plate, as represented. The object of bending this end of the plate and pointing it is that said end may be forced into an opening made in a piece of wood or metal to receive it, for the

purpose of holding the plate securely in its place and preventing it from turning where there is but one nut used. The nut represented by D is made similar to other nuts for the same purpose, with the exception of its under side. It will be seen that this under side, in its general character, is oval or rounding. It has ledges or shoulders, as seen at *a*, at its four corners. The metal inclines slightly until it comes to the shoulders, then drops off suddenly, or nearly so, but sufficiently to form a detent as the shoulders pass over the tongues. A portion of the under side of the nut where the pressure comes, and immediately around the opening through it which receives the bolt, is made flat, as seen at *x x*, Fig. 3, and the plates B and F are found to correspond, so that two flat bearing-surfaces come together when the nut is screwed up.

It will be seen that, in using this nut, when it is turned the inclined portions ride over the ends of the tongues and bend them downward. As soon as the shoulder is passed the tongue drops in behind it, and the nut is thus detained, and at every one-eighth turn of the same. The object in rounding off the bottom of the nut is to prevent strain upon the bolt. When pressure is put on the rail it bends down some, and when the nut is perfectly level on its inner face the bolt is strained and often broken. This construction entirely remedies this. This nut can be applied or removed without injury to either the nut or the washer. The nut may be made either rectangular, round, or polygonal, and formed on the inner face, as heretofore described.

What I claim, and desire to secure by Letters Patent, is—

A nut, having its inner face made oval or rounding, and provided with shoulders equidistant or at its corners, combined with a metallic plate, having two or more radially-curved spring tongues, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of January, 1876.

JOSEPH J. ADGATE.

Witnesses:

H. A. HALL,
J. M. MASON.