

No. 756,145.

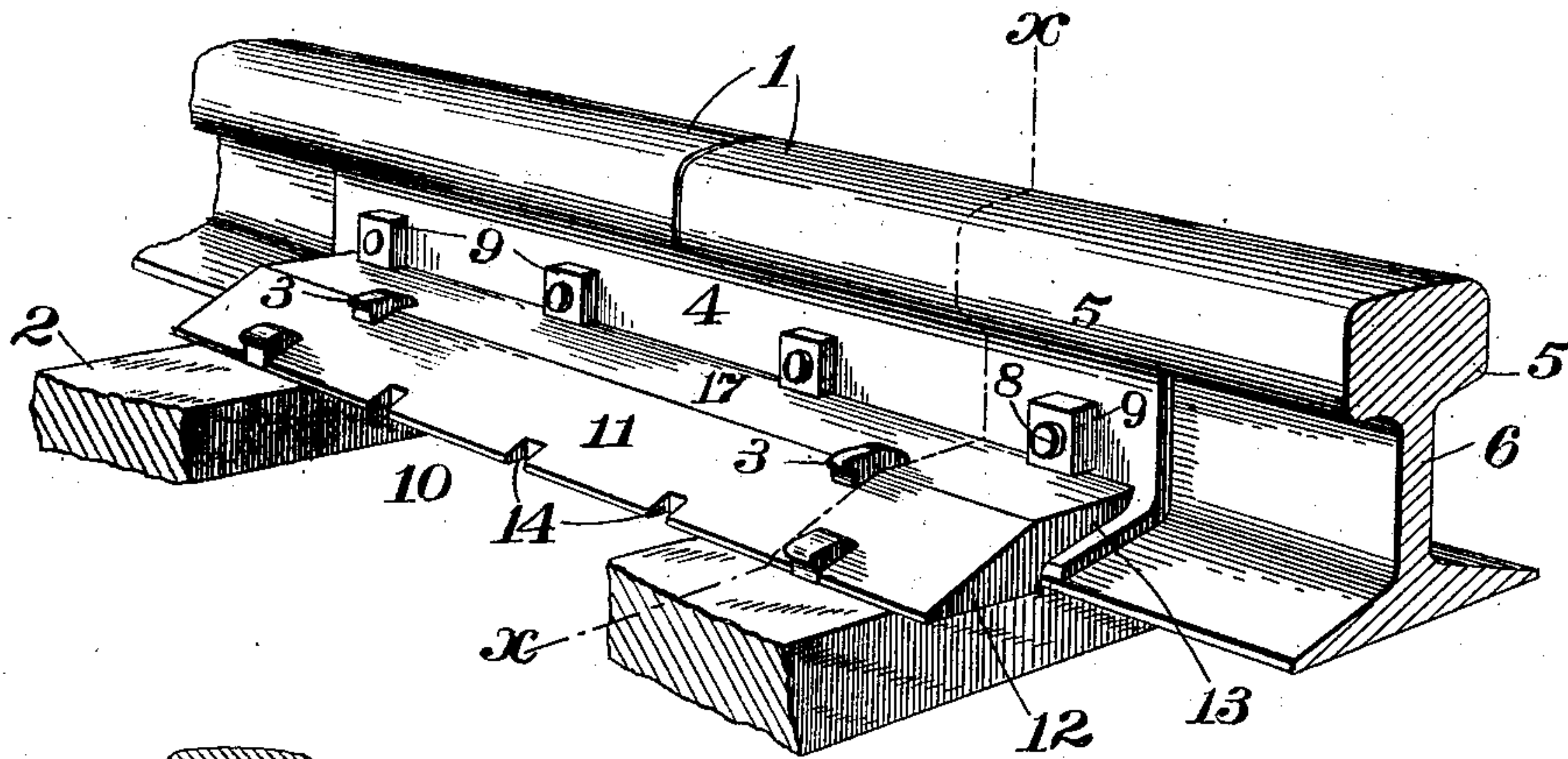
PATENTED MAR. 29, 1904.

T. L. RUSSELL.  
NUT LOCK.

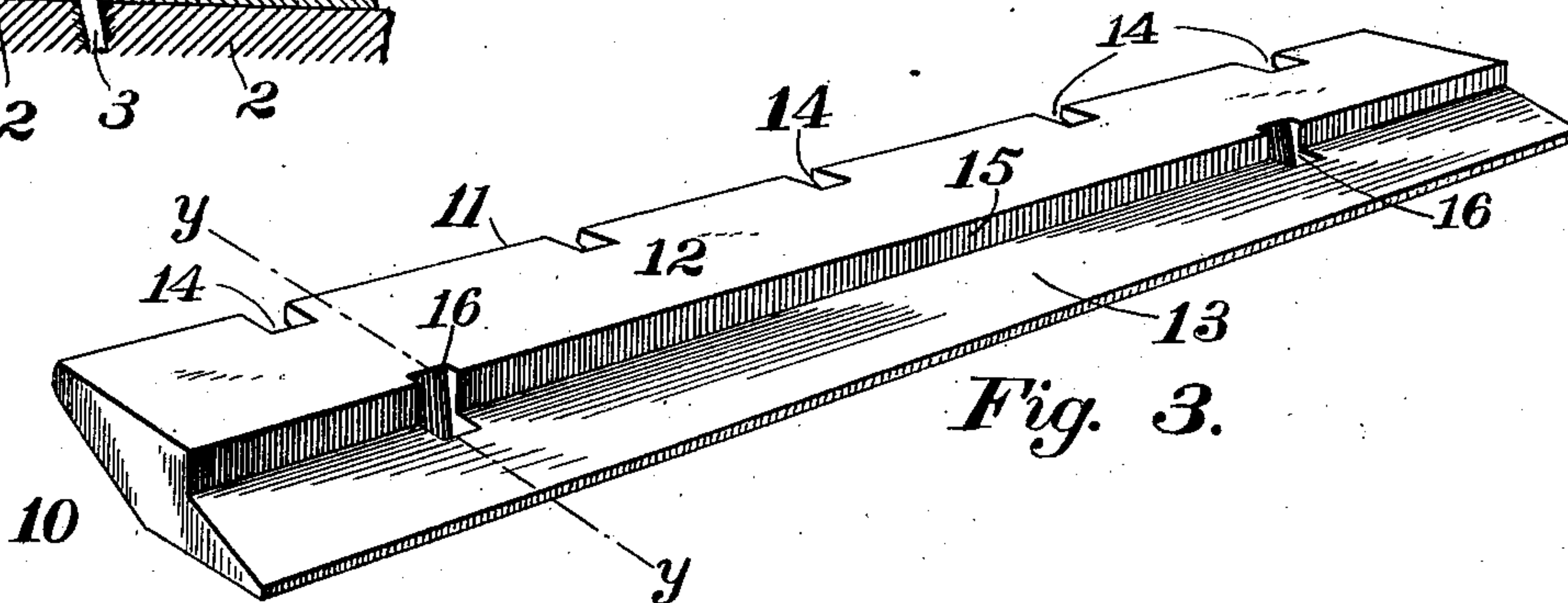
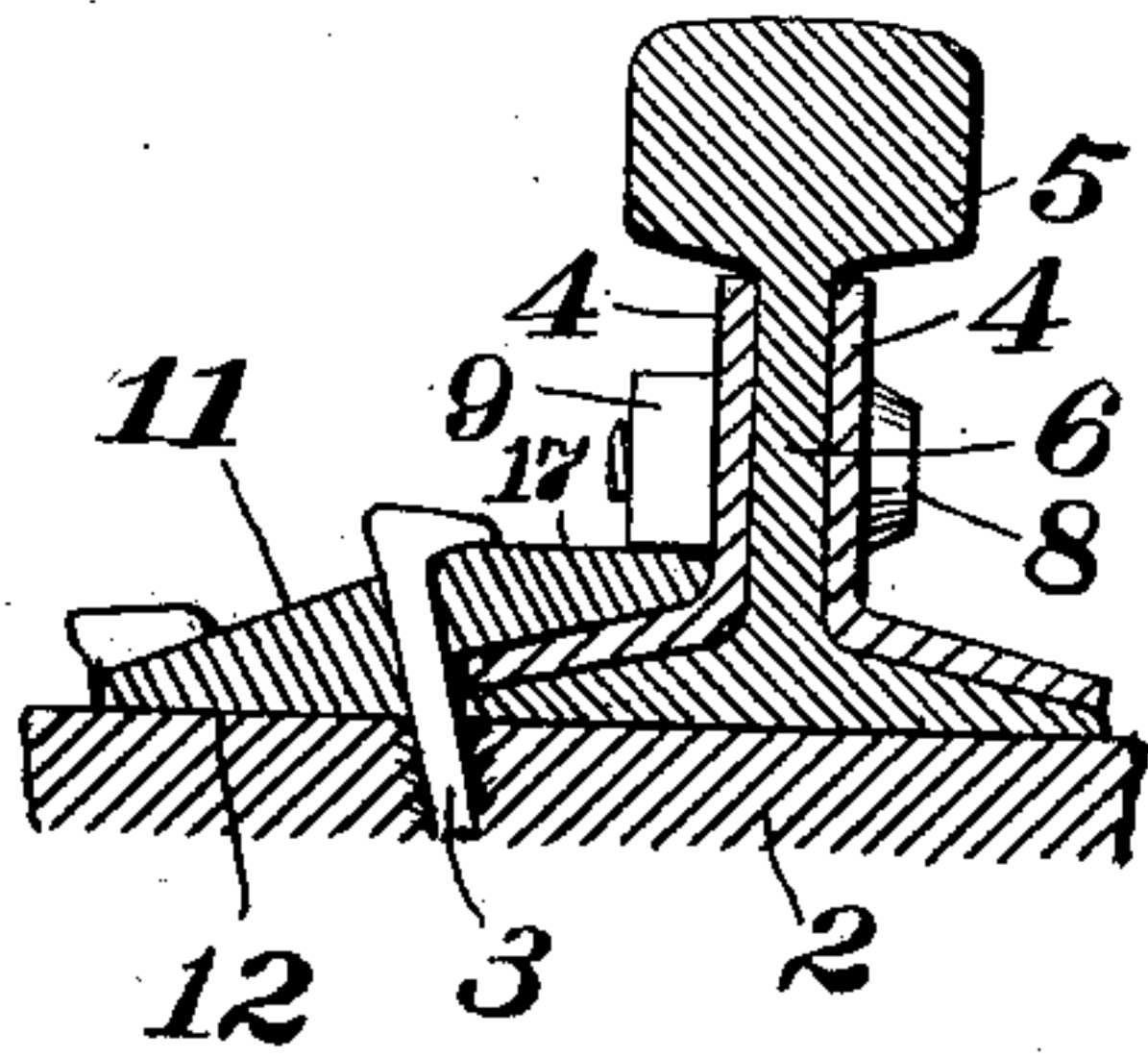
APPLICATION FILED DEC. 6, 1902.

NO MODEL.

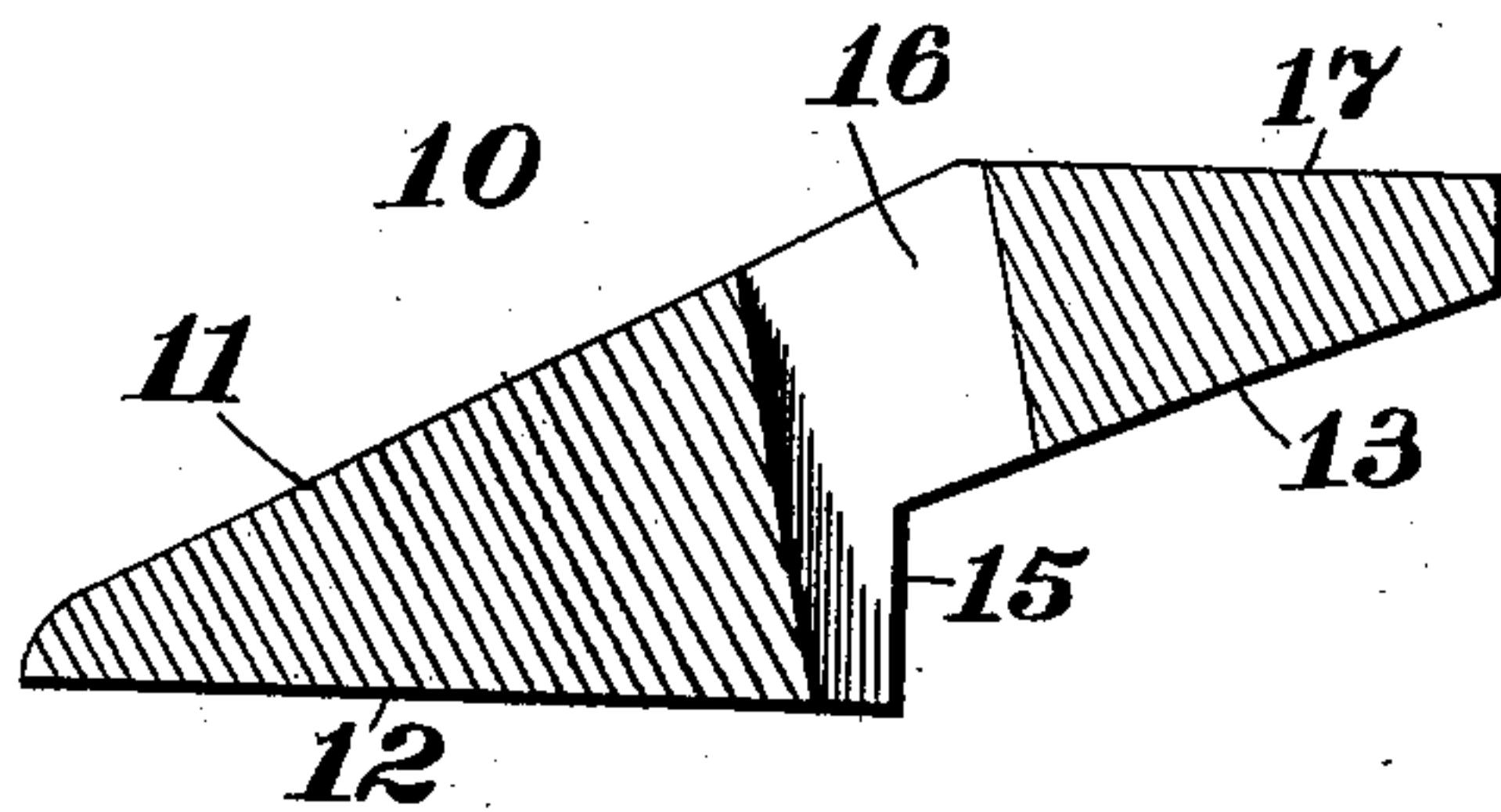
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

WITNESSES:

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# UNITED STATES PATENT OFFICE.

THEODORE LEANDER RUSSELL, OF EMLENTON, PENNSYLVANIA.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 756,145, dated March 29, 1904.

Application filed December 6, 1902. Serial No. 134,220. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE LEANDER RUSSELL, a citizen of the United States, residing at Emlenton, in the county of Venango and State of Pennsylvania, 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.

This invention relates to nut-locks; and it relates particularly to that class of these devices which are designed to prevent the turning of nuts on bolts used for connecting the abutting ends of rails of steam and street railways.

The primary object of the present invention is to provide a nut-lock for the purpose mentioned which shall be simple and cheap in construction, be capable of being quickly applied and removed, and whereby nuts on bolts applied to rail-joints may be securely held against turning.

With these objects in view the invention consists of the device constructed and arranged substantially as hereinafter described, illustrated, and claimed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a rail-joint with my improved locking-plate applied thereto. Fig. 2 is a transverse vertical sectional view on the line *x x* of Fig. 1. Fig. 3 is a perspective view of my improved locking-plate; and Fig. 4 is a transverse sectional view of the locking-plate, the section being taken on the line *y y* of Fig. 3.

In the drawings the numbers 1 1 represent, respectively, the meeting ends of two rails of the universally-employed T shape, which rest upon and are secured to cross-ties 2 by spikes 3, passing through openings in the edges of base-flanges of the rails and entering the cross-ties.

My device contemplates the use of the ordinary angle-bars 4 for connecting the rails. These angle-bars are of a shape and size to rest against the under sides of the treads 5 of adjacent rails, bear against the respective

shanks 6, and to lie upon and parallel to the outer base-flanges of the rails. Each rail is provided through its shank 6 near the end of the rail with openings, and the angle-bars are provided with corresponding openings for the reception of bolts 8, having on their outer edges the nuts 9, by which the angle-bars are firmly attached to the rails. The purpose of my invention is to prevent the loosening of these nuts 9 by jarring incident to the passage of cars or trains over the rails or from other causes. To this end I employ the locking-plates 10 of the peculiar and novel form illustrated. The plates are composed of the outer portions 11, having their flat lower faces adapted to rest upon and be secured to the cross-ties, and the inner portions 13, adapted to rest upon the lower flanges of the angle-bars when the latter are in position on the rails. The outer portions 11 of the locking-plates have their upper faces inclined from their inner edges outward, and in the edges are a series of openings 14 for the reception of spikes having their heads resting on the upper inclined faces 11 and entering the cross-ties in a manner to aid in holding the locking-plates securely in place. The described form presents a comparatively thin outer edge, so that the greater portion of the length of the spikes by which the plates are attached to the ties may enter the latter, affording a secure fastening. The inner portion of each of the locking-plates has in its lower face an indentation of a form and size corresponding to the contour of the structures formed by the application of the lower flanges of the angle-bars to the base-flanges of the rail ends. The outer ends of the indentations are formed by the abutments 15, against which bear the outer edges of the base-flanges of the rails and the outer edges of the angle-bars. The locking-bars are provided with holes 16, the outer edges of which are substantially parallel to the abutment, and these are adapted to receive spikes driven into the cross-ties. The inner edges of the spikes thus driven enter openings in the edges of both the rail and of the angle-bars, and thus when the spikes are firmly driven all the parts are firmly held in place. The upper faces 17 of the inner portions of

the locking-plates are when the parts are in place substantially in a horizontal plane, and the plates are so proportioned that when the nuts 9 are turned to present flat lower faces 5 the upper faces 17 of the plates will bear tightly against such lower faces of the nuts, and thus as the plates are firmly seated turning of the nuts from any cause is prevented.

Having thus described my invention, what I 10 claim as new, and desire to secure by Letters Patent, is—

The combination with the abutting ends of railway-rails, angle-plates applied thereto, and bolts having nuts on their outer ends passing through the rails and plates, of a locking- 15 plate having its outer portion inclined on its upper face and flat on its lower face adapting it to rest firmly on cross-ties, the outer edge being provided with openings, and having its

inner portion formed on its lower face with 20 an indentation tapering from its inner edge outward and of a size and shape to receive the base-flanges of the rails and the lower flange of the angle-bars, and having its upper face plane to bear against the sides of the nuts, 25 the outer edges of the base-flanges and of the lower portions of the angle-bars bearing against an abutment forming the outer face of the indentation, and openings through the plates adjacent to the abutments for the re- 30 ception of spikes, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

THEODORE LEANDER RUSSELL.

Witnesses:

HARRY BENNETT MITCHELL,  
GEORGE FRANKLIN FOX.