

(No Model.)

W. J. JONES.
NUT LOCK.

No. 498,660.

Patented May 30, 1893.

Fig. 1.

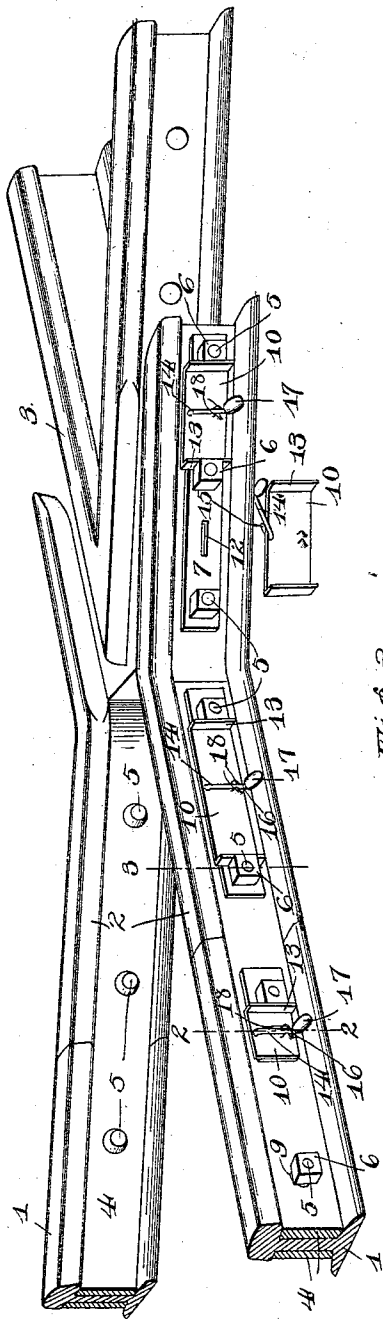


Fig. 4.

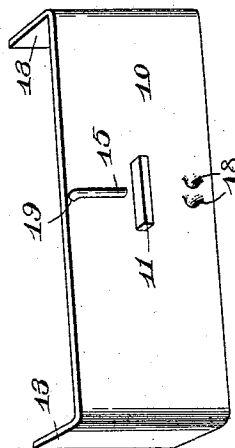


Fig. 3.

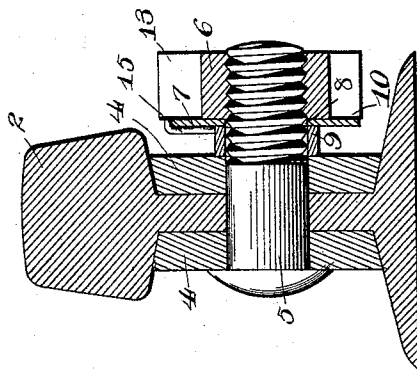
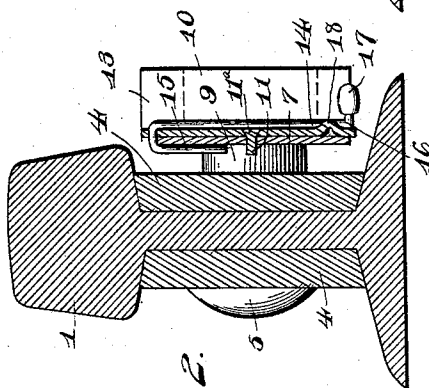


Fig. 2.



Witnesses

Chas. Ford.

J. E. Doyle.

By his Attorneys,

Chas. Snow & Co.

Inventor
Wm. J. Jones.

UNITED STATES PATENT OFFICE.

WILLIAM JEFFERSON JONES, OF PINSON, TENNESSEE, ASSIGNOR OF ONE-
THIRD TO LONNIE A. DANIELS, OF SAME PLACE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 498,660, dated May 30, 1893.

Application filed February 27, 1893. Serial No. 463,913. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JEFFERSON JONES, a citizen of the United States, residing at Pinson, in the county of Madison and State of Tennessee, have invented a new and useful Nut-Lock, of which the following is a specification.

My invention relates to improvements in nut-locks, and it has for its object to provide a cheap, simple, and effective locking device for the nuts of bolts used in connection with railway rails, and in other situations where the parts are subjected to continuous or often repeated jarring.

A further object of my invention is to provide a device of the class named which can be readily detached without injury to the bolt or other parts for purposes of repair, &c.

Further objects and advantages of my invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

In the drawings: Figure 1 is a perspective view of locking devices embodying my invention, shown in connection with a section of a track. Fig. 2 is a vertical transverse section, on line 2—2 of Fig. 1. Fig. 3 is a similar view on line 3—3 of Fig. 1. Fig. 4 is a perspective view of one of the locking plates, detached, showing its rear side.

Similar numerals refer to corresponding parts in all the figures of the drawings.

1 and 2 refer to the ends of adjoining rails and 3 to a frog which I have illustrated for the purpose of showing a position in which three adjacent bolts are employed.

4 represents fish-plates of the ordinary construction which are employed to connect the ends of the adjoining rails but which, as will be seen, are omitted opposite the frog for the reason that they are unnecessary. The bolts 5 extend through coincident perforations in the rails and fish-plates, and are provided with the usual nuts 6.

One, two or more nuts may be locked in series, as indicated in the drawings, Fig. 1, and the stationary, spring plate, 7, is provided with a number of holes, 8, corresponding to the number of bolts, the intervals between the said holes corresponding with those between

the bolts so as to fit thereover. The nuts are screwed down upon, so as to engage and hold, the spring plates.

In carrying out my invention it is necessary to support the spring plate so that its center or an intermediate portion thereof is out of contact with the fish-plate or rail or other means of support. It is necessary that there should be an interval or space in rear of the spring plate. This may be accomplished in various ways, but that which I prefer and which I have illustrated in the drawings, is to arrange upon the bolt, between the spring plate and the fish-plate or rail, a sleeve or collar 9, against the outer end of which said spring plate bears and is locked by the nut. The rear or inner end of this sleeve or collar bears against the fish-plate or rail around the perforation therein.

When the nut or nuts are tightened the parts are as firmly secured together as they would be if the nut came down firmly upon the fish-plate, and the spring-plate is firmly held at the desired distance from the surface of the fish-plate or rail.

10 represents a locking-plate which is removable from the spring plate and is provided upon its rear or inner side with a projecting web 11 to engage a slot 12 in the spring-plate. The locking plate is provided with 80 terminal, up-struck flanges 13, (one or two according to the number of nuts to be locked,) which engage the inner or adjacent sides of the nuts, and 14 represents a locking-lever which is fulcrumed in the locking-plate, near its upper edge, and is provided with a short rear or inner arm 15 to engage the upper edge of the spring plate (passing between the rear surface of the latter and the surface of the fish-plate or rail) and a handle 16 which moves over the front or outer surface of the locking plate. The handle and locking-arm 15 of the said lever are parallel, whereby when the former is in its vertical hanging or depending position the locking-arm is in engagement with the spring plate.

The handle of the locking lever is preferably weighted at its lower end as shown at 17 to cause it to normally maintain its locking position, but in addition to this I prefer

to employ up-struck studs 18 near the lower edge of the locking-plate to engage the free end of said handle.

It will be noted that the locking-lever is fulcrumed in a perforation 19 in the locking-plate, whereby it is held from accidental displacement or disengagement. It can be detached, if necessary, when the locking-plate is removed from the spring plate, by turning the lever up to a vertical position, or a position opposite to that shown in the above description to be its normal position, and then inclining the free end of the handle to the rear. This is the only manner in which the lever can be disengaged, and it will be obvious that accidental displacement is not liable to occur.

The retaining web 11 which is attached to the rear side of the locking plate to engage the corresponding slot in the spring plate is preferably secured thereto by means of an integral stud 11^a fitted in a perforation in the locking-plate and spread upon the outer surface of the latter.

It will be seen that all parts or members of the locking device, with the exception of this retaining web, may be struck from sheet metal, as shown in the drawings, thus enabling the same to be manufactured at a small expense.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

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

1. In a nut-lock, the combination with a stationary plate provided with bolt holes and a slot, of a locking-plate provided with a retaining web to engage the slot and means for engaging the nuts, and a locking-lever carried by the locking plate to engage the stationary

plate and retain the said web in the slot, substantially as specified.

2. In a nut-lock, the combination with a stationary plate having bolt-holes and a slot, of a locking-plate provided with upstruck flanges to engage the nuts, and a retaining web to engage the slot in the stationary plate, a locking-lever fulcrumed upon the locking plate and engaging the stationary plate, and studs to engage and hold the free end of the locking-lever when the latter is in its locking position, substantially as specified.

3. In a nut-lock, the combination with a stationary-plate provided with a bolt hole and adapted to lie in rear of and be held in place by the nut, and means to support said plate and provide a space in rear thereof, of a locking-plate provided with means to engage the nut, and a locking-lever fulcrumed upon the locking-plate and provided with a locking arm to engage the upper edge of the stationary plate and lie in rear thereof to retain the locking plate in its operative position, substantially as specified.

4. In a nut-lock, the combination with the bolt and nut, of a stationary plate provided with an opening to receive said bolt, a sleeve or collar fitted upon the bolt in rear of said plate to provide a space in rear of the plate, a locking-plate provided with means to engage the nut which bears upon the outer surface of said stationary plate, and a locking-lever, fulcrumed upon the locking-plate and provided with an arm to engage the rear surface of the stationary plate, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM JEFFERSON JONES.

Witnesses:

W. F. WATLINGTON,
W. P. HARRIS.