

S. B. LOWE.

Devices for Locking Nuts.

No. 123,831.

Patented Feb. 20, 1872.

Fig. 1.

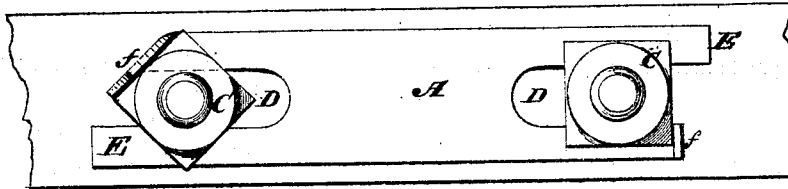
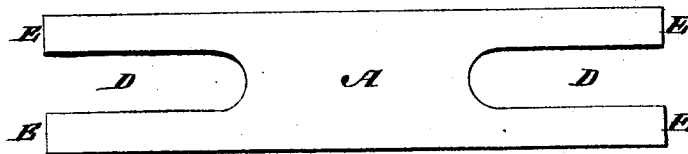


Fig. 2.



Witnesses:

E. Wolff.
Francis McArdle.

Inventor:

S. B. Lowe
PER *Wm. M. L.*
Attorneys.

UNITED STATES PATENT OFFICE.

SAMUEL B. LOWE, OF CHATTANOOGA, TENNESSEE.

IMPROVEMENT IN DEVICES FOR LOCKING NUTS.

Specification forming part of Letters Patent No. 123,831, dated February 20, 1872.

Specification describing certain Improvements in Bolt-Nut Locking-Plate, invented by SAMUEL B. LOWE, of Chattanooga, in the county of Hamilton and State of Tennessee.

The object of this invention is to provide convenient and efficient means for securing the nuts of bolts from getting loose and turning off, more especially designed for securing the nuts of bolts used in rail-joints, and in applying "fish-plates" to the joints of railroad rails, but applicable to other purposes; and it consists in a slotted plate constructed as hereinafter shown and described.

In the accompanying drawing, Figure 1 represents a side view, showing the slotted locking plate applied. Fig. 2 is a view of the locking plate detached.

Similar letters of reference indicate corresponding parts.

A is the locking-plate, sometimes called a washer-plate. B is the "fish-plate." C represents the bolt-nuts. D D are slots in my improved locking-plate. The plate itself is made of iron, one and a half inch, more or less, wide, and one-eighth of an inch, more or less, in thickness. The slots D D are cut from each end, and may be of any length and width, according to size of the bolts and their distance from each other; but in all cases the slots must allow of the longitudinal movement of the plate, and the plate must be of sufficient length to allow the ends to project more or less beyond the nuts, as seen in Fig. 1. The plate is placed over the bolts, and the nuts are turned tightly on, and then one or both of the ends E are turned or bent up at a right angle against the side of the nut, as seen at *f*, which effectually prevents the nut from turning back on the bolt. The nut may be securely locked when in any position, as seen in the drawing.

The constant vibration produced by the passing trains will, after a while, loosen the bolt, and the nuts will require turning up or tightening. To do this, the turned-up ends or locks *f*, one or both, are bent down with a hammer, so as to allow the nuts to be turned up with

a wrench and tightened, after which the other end, E, one or both, are turned up, and the nuts are locked as before. Should one or two of the ends E show sign of fracture, as to make it undesirable to use the metal in the same place again, the slots D will allow the plate to be moved endwise, so that the metal may be bent in a new place.

This locking-plate is very easily manufactured, and readily applied, and changed in position, thus rendering it cheap, durable, and secure.

This distance between the holes of the fish-plate need not be arbitrary; most manufacturers of rails make a slight difference in this distance, which seldom exceeds one inch. This lock is available in all these cases.

I am aware that plates having end slots and lips to lock the two end nuts, and also two central apertures to receive the two middle nuts which hold a fish-plate to its rail, are not new; but this construction compels these lock-plates to be rigid and unadjustable, while by employing a separate and independent plate for every two nuts each becomes adjustable, and it is no longer required that the middle nuts should be always placed in one arbitrary position. I am also aware that a plate having a long slot at one end and a notch or short slot at the other, and which is applied between the threads of a screw, is not new. This construction would not admit of adjustment on the two nuts of a fish-plate, because the movement forward under one nut would remove it from the other.

Having thus described all that is necessary to a full understanding of my invention, what I esteem to be new, and desire to protect by Letters Patent, is—

The plate A, having only a long slot and two long arms at each end, to adapt it to be applied adjustably to a pair of nuts, as and for the purpose described.

S. B. LOWE.

Witnesses:

T. B. MOSHER,
GEORGE W. MAREE.