No. 811,011. PATENTED JAN. 30, 1906.

J. C. WEEMS.

NUT LOCK.

APPLICATION FILED APR. 20, 1905.

Fig. 1.

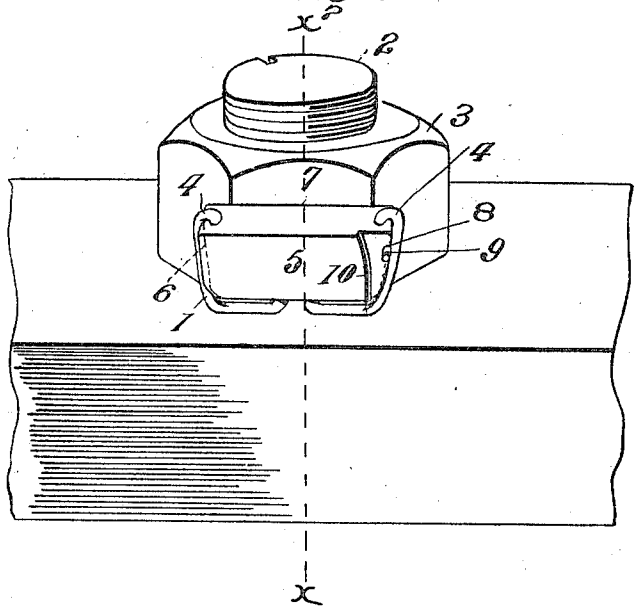


Fig. 2.

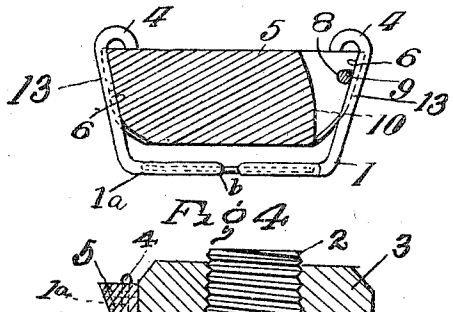


Fig. 3.

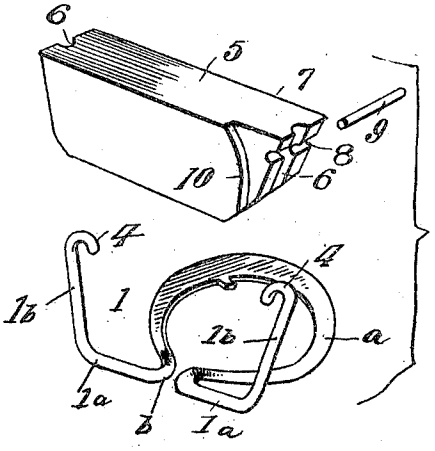
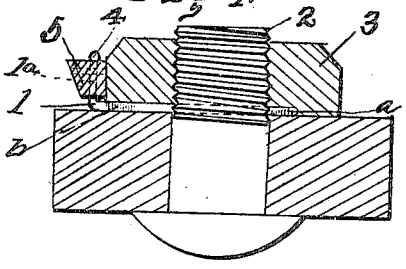


Fig. 4.



Inventor

J. C. Weems.

Witnesses

By Lacey, Attorneys

UNITED STATES PATENT OFFICE.

JOHN C. WEEMS, OF DILLARDS, ALABAMA.

NUT-LOCK.

No. 811,011. Specification of Letters Patent. Patented Jan. 30, 1906.

Application filed April 20, 1905. Serial No. 256,572.

To all whom it may concern:

Be it known that I, JOHN C. WEEMS, a citizen of the United States, residing at Dillards, in the county of Dale and State of Alabama, have invented certain new and useful Improvements in Nut-Locks, of which the following is a specification.

This invention relates to nut-locks, and has for its object to produce a device of this character which will be very simple in construction and which can be readily attached and detached, thereby admitting of its repeated use without detracting from its efficiency.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a perspective view showing the nut-lock as applied; Fig. 2, sectional view through the locking-plate. Fig. 3 is a perspective view of the parts in detail. Fig. 4 is a section on the line *x x* of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

It is a well-known fact that the plates and bolts in rail-joints are usually so constructed that the bolt cannot turn. My device is intended to also lock the nut against working loose, and thus produce a positive lock in every respect.

The numeral 1 indicates a piece of spring wire or metal, which is bent so as to fit around the bolt 2 to form a washer *a* under the nut 3. The ends of the wire are then bent back upon themselves at *b* to form oppositely-extended arms 1^a, thence upward to provide arms 1^b, which terminate in inwardly-projecting lugs or hooks 4. The locking-plate 5 has grooves 6 at its opposite ends for the reception of the upwardly-extending wires and has its ends inclined so that they will act like a wedge and force the upright wires apart when being placed in position. When the locking-plate has been forced home, the lugs or hooks 4 spring over the upper side of same and in conjunction with the grooves 6 hold it securely in position. This plate is intended to fit against one side of the nut after same has been screwed into position and prevent it from turning. It will be noticed that the engaging faces 7 of the locking-plate are also inclined to form a wedge construction which insures a close engagement with a side of the nut. A transverse groove 8 extends across one of the ends of the locking-plate, and a pin 9 fits therein under the upwardly-extending wires. A shoulder 10 is located upon the outer face of the locking-plate and at the same end thereof as the transverse groove 8 and is adapted to be used as a rest for a tool or lever used to force the pin 9 outward in releasing the locking-plate. It will be observed that the shoulder 10 is curved away from the end of the locking-plate at the top thereof. This prevents the hook 4 from catching on the top of said shoulder 10 when the spring-arm is moved transversely so as to slip into the space caused by cutting away a portion of the locking-plate to form the shoulder, and thus enables the locking-plate to be easily removed. It will be also observed that the washer portion of the device is formed with a lug which operates in a longitudinal groove in the bolt to prevent the entire device from turning upon the bolt.

From the foregoing it will be readily understood that I have invented a nut-lock which is very effective and durable in operation and which is so simple in construction as to be rendered practical for every-day use.

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

1. In a nut-lock, the combination of a bolt, a nut having a flattened side, a washer formed by bending a piece of spring metal around said bolt and having means to prevent its turning thereon, the ends of said piece of metal being bent back upon themselves and upward, and a locking-plate having depressions in its ends to engage said upwardly-extending ends and adapted to fit against a flattened side of the nut to prevent it from turning.

2. In a nut-lock, the combination of a bolt, a nut having a flattened side, a washer formed by bending a piece of spring metal around said bolt and having means to prevent its turning thereon, the ends of said piece of metal being bent back upon themselves and upward, and having inwardly-projecting lugs or hooks on their ends, and a locking-plate fitting under said inwardly-projecting lugs and having depressions in its ends to engage said upwardly-extending arms of the spring metal, and adapted to fit against a flattened side of the nut to prevent it from turning.

3. In a nut-lock, the combination of a bolt, a nut having a flattened side, a washer formed by bending a piece of spring metal around said bolt and having means to prevent its turning thereon, the ends of said piece of metal being bent back upon themselves and upward, and having inwardly-projecting lugs or hooks on

their ends, and a locking-plate fitting under said inwardly-projecting lugs and having depressions in its ends to engage said upwardly-extending ends of the spring metal and adapted to fit against a flattened side of the nut to prevent it from turning, and a pin located in a transverse groove in the end of the locking-plate and under the engaging arms of spring metal to enable them to be easily forced apart to release the locking-plate.

4. In a nut-lock, the combination of a bolt, a nut having a flattened side, a washer formed by bending a piece of spring metal around said bolt and having means to prevent its turning thereon, the ends of said piece of metal being bent back upon themselves and upward, and having inwardly-projecting lugs or hooks on their ends, and a locking-plate fitting under said inwardly-projecting lugs and having depressions in its ends to engage said upwardly-extending ends of the spring metal and adapted to fit against a flattened side of the nut to prevent it from turning and also having a shoulder on one of its sides, and a pin located in a transverse groove in the end of the locking-plate and under the engaging arms of spring metal to enable them to be easily forced apart to release the locking-plate, the beforementioned shoulder being adapted to be used as a rest for a tool or lever used to force said pin outward.

5. In a nut-lock, the combination of a bolt, a nut having a flattened side, a washer formed by bending a piece of spring metal around said bolt and having means to prevent its turning thereon, the ends of said piece of metal being bent back upon themselves and upward and having inwardly-projecting lugs or hooks on their ends, and a locking-plate to fit against a flattened side of the nut and having depressions in its ends to engage said upwardly-projecting arms of spring metal and also being formed with inclined ends which serve as a wedge to enable it to be easily forced into position under the inwardly-projecting lugs.

6. In a nut-lock, the combination of a bolt, a nut having a flattened side, a washer formed by bending a piece of spring metal around said bolt and having means to prevent its turning thereon, the ends of said piece of metal being bent back upon themselves and upward and having inwardly-projecting lugs or hooks on their ends, and a locking-plate to fit against a flattened side of the nut and having depressions in its ends to engage said upwardly-projecting arms of spring metal and also being formed with inclined sides which act like a wedge to insure a close engagement with the nut.

7. In a nut-lock, the combination of a member for locking the nut having companion spaced spring-arms, and a lock-plate fitted against a side of the nut and held in place by spring engagement of said arms.

8. In a nut-lock, a washer comprising a wire having its middle portions bent to encircle the bolt and its end portions extended to form spring-arms, and a lock fitted against an edge of the nut and held between the said spring-arms.

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

JOHN C. WEEMS. [L. S.]

Witnesses:

MADISON F. HAYS,

ELI S. WINDHAM.