(No Model.)

C. C. COLEMAN.

NUT LOCK.

No. 420,294. Patented Jan. 28, 1890.

Fig. 1.

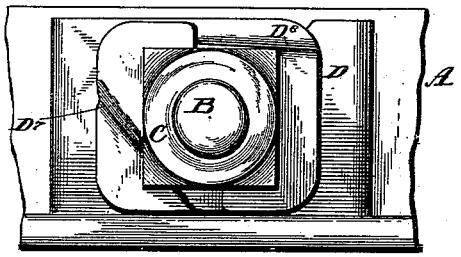


Fig. 2.

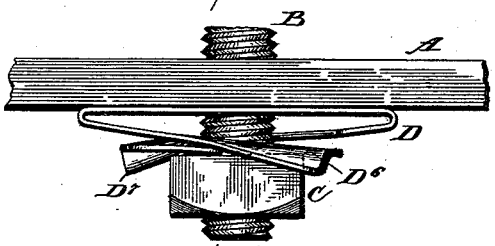


Fig. 3.

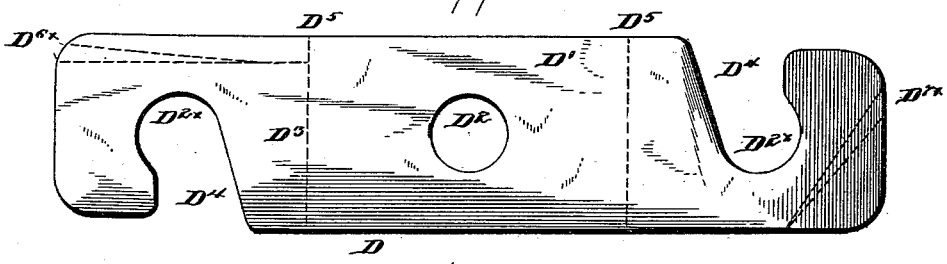
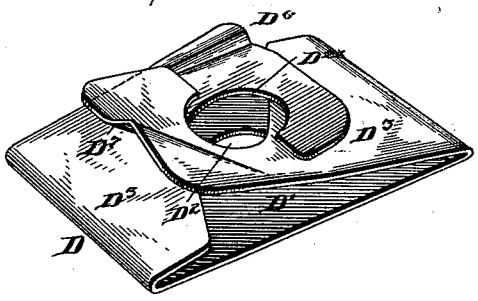


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES C. COLEMAN, OF BIRMINGHAM, ALABAMA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 420,294, dated January 28, 1890.

Application filed June 12, 1889. Serial No. 314,028. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. COLEMAN, a citizen of the United States, residing at Birmingham, in the county of Jefferson, State of Alabama, have invented certain new and useful Improvements in Nut-Locks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to nut-locks; and it is adapted for use in connection with railway-joints and with any bolt and nut where it is desired to prevent the loosening of the nut upon the bolt.

The invention consists in certain features of construction hereinafter described, and the novel features of the invention are particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a front elevation of the nut-lock in operative position, together with a bolt and nut and a structure in which the bolt is seated. Fig. 2 is a plan of the parts shown in Fig. 1. Fig. 3 is a plan of the blank of which the nut-lock proper is formed, and Fig. 4 is a perspective of the completed lock.

Like letters refer to like parts in all the figures.

Let A represent a fish-plate, railroad-rail, beam, girder, or any other structure in which is seated or through which passes a bolt B, having a nut C.

D represents a washer constructed in accordance with my invention, and it comprises a body portion D′, having an aperture D^2 to permit of the passage of the bolt B therethrough. At each end of the body portion there are extensions D^3, each having an opening $D^{2\times}$ and a slot D^4, communicating with said opening and terminating at the edge of the extension. The slot D^4 of one extension terminates at an opposite edge to that at which the slot in the opposite extension terminates.

The dotted lines D^5, Fig. 3, indicate the line of folding or bending whereby the extensions are brought over the body portion D′. The slots D^4 being on opposite edges, the extensions are interlocked when folded over the body, as illustrated in Fig. 4.

As thus far described, it will be seen that the bolt passes through the openings D^2 and $D^{2\times}$, and that the nut rests upon the outer surfaces of the extensions, and that these latter have frictional contact with the inner face of the nut, and thereby serve in a measure to prevent the turning of the nut upon the bolt. Now, in order to insure a positive prevention of the turning of the nut by accidental means, steps D^6 and D^7 are formed in the extensions. These steps are formed by folding or crimping the extensions on the lines $D^{6\times}$ and $D^{7\times}$, respectively, the former—that is, the lines $D^{6\times}$—being disposed longitudinally on the extensions, and the latter diagonally on the extensions. The object of this particular disposition of these steps will be apparent in that, when folded, as shown in Fig. 4, the extensions will have steps occurring at diagonally-opposite corners of a square nut, so that one or the other of the extensions will present a step or shoulder against the side of any polygonal nut at each one-eighth turn thereof. Another feature of the steps or shoulders is, that they are each wedge-shaped longitudinally by reason of the mergence of the lines $D^{6\times}$ and $D^{7\times}$ at a common point, as clearly shown in Fig. 3, and the said steps or shoulders are slightly inclined transversely, as clearly shown in Fig. 4. These features permit a reversed motion of the nut on the bolt for the purpose of loosening the same when a wrench is applied and the passage of the nut over the steps when the nut is being tightened. Yet the steps are sufficiently abrupt to prevent an accidental turning of the nut to loosen the same.

The nut-lock being made of a material with sufficient resiliency, the extensions are held in contact with the nut at any point within their movements toward or from the body of the nut-lock, and at the same time permit of their being forced snugly against the body portion when the nut is run on the bolt sufficiently to bring them into that position.

Having described my invention, what I claim is—

1. A nut-lock having a body portion and extensions folded over the same, interlocked and provided with openings for the passage of a bolt, substantially as specified.

2. A nut-lock having a body portion and

extensions folded over the same, interlocked and provided with openings for the passage of the bolt, and having steps on each of the extensions, substantially as specified.

3. A nut-lock having a body portion and extensions folded over the same, interlocked and provided with openings for the passage of a bolt, and having steps on each of the extensions, the step of one extension being disposed longitudinally thereon and the step of the other extension being diagonally disposed, substantially as specified.

4. The blank for nut-locks, consisting of the body portion D′, provided with the bolt-opening D^2, and having the extensions D^3, each provided with an opening $D^{2\times}$ and a communicating slot D^4, substantially as specified.

5. The nut-lock herein described, consisting of the body portion D′, provided with a bolt-opening D^2, the integral extensions D^3, each having the bolt-opening $D^{2\times}$ and communicating slot D^4, the slot of one extension being disposed oppositely to that of the other extension, and each extension having a step disposed, the one longitudinally and the other diagonally, thereon, substantially as specified.

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

CHARLES C. COLEMAN.

Witnesses:
S. J. CUMMING,
E. L. BULLARD.