

(No Model.)

M. S. ALEXANDER.
NUT LOCK.

No. 549,303.

Patented Nov. 5, 1895.

Fig. I.

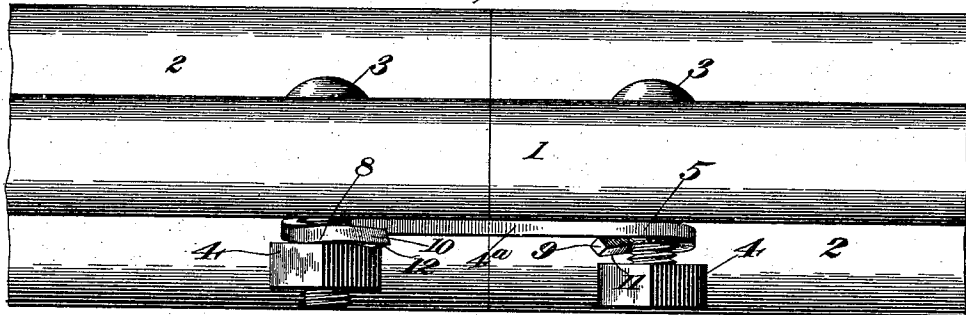


Fig. II.

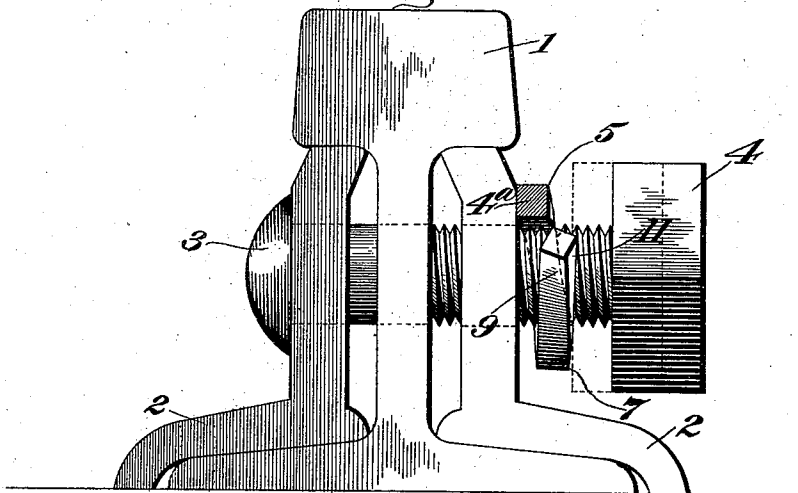
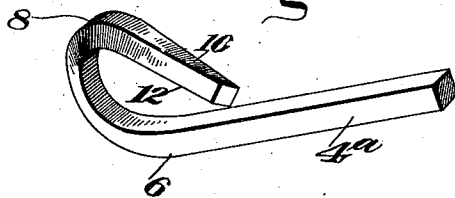


Fig. III.



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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 549,303, dated November 5, 1895.

Application filed February 25, 1895. Serial No. 539,612. (No model.)

To all whom it may concern:

Be it known that I, MARCELLUS S. ALEXANDER, of the city, county, and State of New York, have invented certain new and useful
5 Improvements in Nut-Locks, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce such improvements in nut-locks of that general description shown in my Patent No. 449,023, issued March 24, 1891, as will simplify the construction, cheapen the cost of manufacture, and facilitate the operation of the locking device.

15 In the nut-lock shown in my above-recited patent the nut in turning moves over the end of a resilient metallic piece provided with notches or ratchet-teeth which engage and hold the sides of the nut as it is screwed
20 down upon it. With a lock of that kind, however, its use is largely limited to the employment of square nuts, and the same lock cannot be used interchangeably with square and hexagonal nuts. Moreover, a turn of
25 the nut must be given sufficient to engage one of the ratchet-teeth, and under some circumstances the distance of movement of the nut from one ratchet-tooth to another may be too great or too small to adjust the nut
30 with the nicety desired.

By my present invention I produce a lock adapted to be used with any kind of a nut and to permit the nicest degrees of adjustment.

35 In the accompanying drawings, Figure I is a top plan view of a portion of a T-rail and fish-plates, showing a double nut-lock attached, with one of the nuts screwed down and the other elevated above the lock. Fig.
40 II is an end view thereof, looking toward the elevated nut. Fig. III is a view of one end of the nut-lock detached, looking toward the loop and showing the twist of its end somewhat exaggerated.

45 Referring to the figures on the drawings, 1 indicates a T-rail, 2 the fish-plates, and 3 a bolt of any ordinary construction, shown as employed for fastening the parts together.

4 indicates any ordinary nut.

50 Referring, therefore, to the special features of the lock, 4^a indicates the shank or body part of my lock, which in practice is pref-

erably rectangular in cross-section and which lies flat against the part to which it is secured, which in the example illustrated is a fish-plate. The lock terminates in looped
55 ends that are adapted to encircle adjacent bolts, the nut of each of which is to be secured. The flat body part of the lock extends between points opposite or nearly opposite
60 the tangents which its opposite sides make with the two bolts, (indicated in the drawings by reference-numerals 5 and 6.) The lock is made preferably of spring-steel, and from the
65 points 5 and 6, respectively, the loop is tilted so as to form an inclined plane curvilinear in direction, the planes beginning to rise, respectively, from the points 5 and 6. The inclined plane continues to the extremities of
70 the piece, and to the points 7 and 8, respectively, continues flat, corresponding with the body part 4. The extremities 9 and 10, respectively, of the loops are from the points 7 and 8, respectively, slightly twisted outwardly to present the inner edges 11 and 12
75 against the bottom of the nut 4, the extreme end portion projecting entirely beyond the exterior of the nut. In consequence, therefore, of the twist imparted to the respective
80 extremities of the lock, the inclined flat planes from 5 to 7 and 6 to 8, respectively, merge into what may be called "sharp-edge
85 planes" on the extremities 9 and 10, respectively, of the loops. When, therefore, a nut is forced down against one of the loops, it
rides with comparative ease over the flat plane, overcoming the resiliency of the loop
90 and forcing itself firmly in place upon it. With each turn, after it has come into contact with the loop, the edge indicated at 11 or 12 begins, with gradually-increasing force, to
bite against the bottom of the nut. Following the inclined plane of the loop, the nut
95 may be screwed down firmly into place, compressing the end of the loop more and more with each turn. The movement of the nut in the opposite direction, however, is resisted by the sharp engagement of the edge of the
100 twisted extremity of the loop with the bottom of the nut and is confined securely in place. By this arrangement any required adjustment of the parts may be effected by merely screwing the nut in place in the ordinary manner.

What I claim is—

1. In a nut lock, the combination with a body part, a resilient, flat inclined continuation thereof, and a twisted extremity terminating in the same direction of inclination as the continuation of the body part, and projecting beyond the outside of a nut, in practice, substantially as set forth.
2. In a nut lock, the combination with a flat untwisted body part, and a resilient flat untwisted inclined continuation thereof bent

into a curvilinear form and having a straight twisted extremity adapted to project beyond the side of the nut to dog the same, substantially as specified.

In testimony of all which I have hereunto subscribed my name.

MARCELLUS S. ALEXANDER.

Witnesses:

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