(No Model.)

W. H. LEWIS.

NUT LOCK.

No. 537,692. Patented Apr. 16, 1895.

Fig. 1.

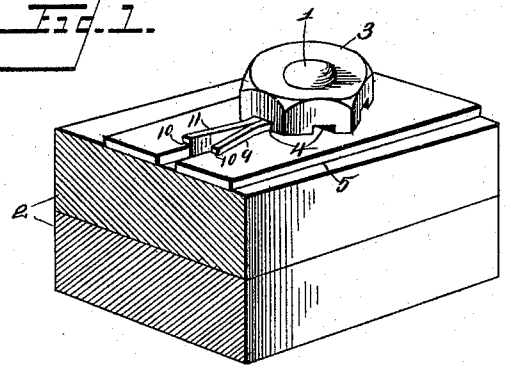


Fig. 2.

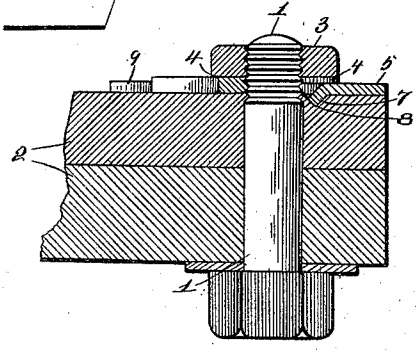


Fig. 4.

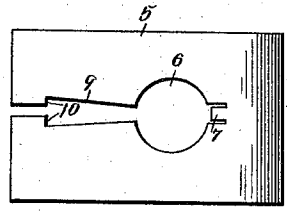


Fig. 3.

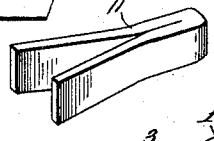


Fig. 5.

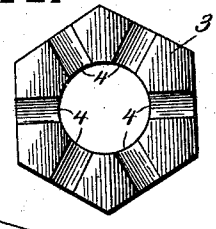
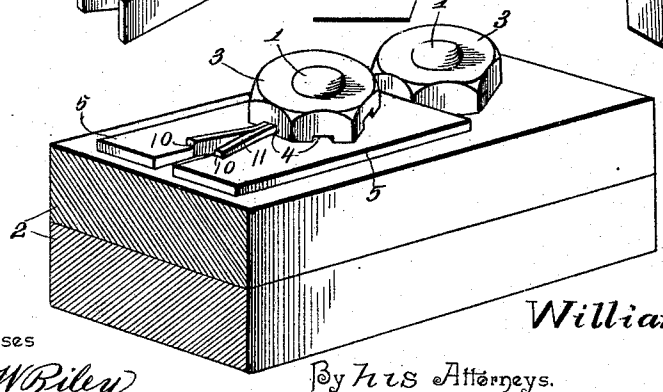


Fig. 6.



Inventor

William H. Lewis.

Witnesses

Thos. W. Riley

J. B. Owens.

By his Attorneys.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM HENRY LEWIS, OF ADAIRVILLE, KENTUCKY, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO JACOB W. MORRISON, OF SAME PLACE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 537,692, dated April 16, 1895.

Application filed September 21, 1894. Serial No. 523,731. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY LEWIS, a citizen of the United States, residing at Adairville, in the county of Logan and State of Kentucky, have invented a new and useful Nut-Lock, of which the following is a specification.

The invention relates to an improvement in that class of nut locks wherein a key is provided and adapted to pass into engagement with the nut, means being provided for holding said key in place and my invention lies in certain improvements in the construction of these means and in the key for co-operation therewith, whereby a more efficient and easily operated lock is produced.

In the accompanying drawings:—Figure 1 represents a perspective view of a nut lock constructed after the manner of my invention; Fig. 2, a section thereof taken vertically through the bolt; Fig. 3, a detail perspective of the key; Fig. 4, a plan view of the key retaining plate or washer; Fig. 5, a bottom plan of the nut showing the key receiving grooves thereof; Fig. 6, a view showing how two nuts may be locked with one of my appliances.

The reference numeral 1, indicates the bolt to which I have shown my improvements as applied, and 2, the parts bolted by the said bolt.

3, indicates the nut which operates with the bolt 1, and which is preferably of octagonal form, though this may be varied to suit the conditions under which the device is used.

The nut 3, is formed with a series of radial grooves 4, in its under side, said grooves being preferably six in number, though this is also immaterial. The purpose of the grooves 4, is to receive the nut locking key, as will be more fully described hereinafter.

Lying snugly against the parts 2, is the plate or washer 5, which may be of any form, though it is preferably rectangular. Formed in the plate 5, is the circular opening 6, adapted for the passage of the bolt 1, as will be understood. The plate is provided with a downwardly projecting lug 7, formed by cutting away and then bending down a portion of the plate. The purpose of such lug is to hold the plate 5, incapable of movement independent of the parts 2; and this is effected by forming in said parts an opening 8, into which the lug fits.

Formed in the plate 5 and diametrically opposite the lug 7, is the slot 9, which communicates with the opening 6, and with the outer edge of the plate, said slot being formed with two shoulders 10, disposed one on each side of the slot and near the end of the plate. The purpose of the slot 9, is to receive the key for locking the nut 3, and this key consists of a metallic pin 11, split longitudinally so as to have two portions, said portions being formed with a spring tendency away from each other, as will be more fully described hereinafter.

In the use of my invention the nut 3, is screwed down upon the bolt 1, until it lies flush with the plate 5, said plate having been first placed upon the parts 2, and with its lug 7, seated in the opening 8, thereof. The key 11, is now placed horizontally and moved through the slot 9, until the spring arms or projections at its rear end pass the shoulders 10, whereupon said arms will spring laterally and bind one against each shoulder. When this position has been assumed, the front end of the key or pin will be seated partially within one of the grooves 4, and partially within the inner end of the slot 9, thus securely and immovably locking the nut with the plate 5.

Since it is impossible for the plate to turn, owing to the operation of lug 7 and opening 8, it will be equally impossible for the nut to turn since the said nut will be locked with the plate. To remove the key, the arms at the rear end thereof should be compressed or moved toward each other, thus making it possible to pass the key through the contracted portion of the slot 9 directly adjacent to the end of the plate. When the arms have been so contracted, it will be easy to draw the key through the slot and out of engagement with the nut, thereby releasing the latter.

In using my improvements with railway joints or with other metallic devices, it will be possible to form therein by drilling or punching, a depression capable of receiving the lug 7, as will be fully understood.

Fig. 6 illustrates how, by means of my invention, two nuts directly adjacent to each other may be locked by only one of my improved nut locks. This is effected by forming the plate 5, with a square edge, as shown in the drawings and extending said plate so that it will lie at said square edge against the second nut, thus preventing said nut from turning. This arrangement may be continued or multiplied as will be fully understood, and by making the plate long enough to extend to a third nut or to any increase thereof.

The plate 5, may be formed especially for the purpose of my invention or if so desired an ordinary washer may be used. In the latter case it will be necessary of course to form in the washer the slot 9, and provide it with the lug 7, as was the case with the plate of the drawings. No further description or illustration is necessary on this point since the change in the shape of the plate is most obvious.

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

Having described the invention, what is claimed, and desired to be secured by Letters Patent, is—

A nut lock, consisting of a plate adapted to have the bolt with which the lock is used passed through it, and provided with a stud or lug adapted to project into a corresponding opening in the parts bolted, whereby the plate is held incapable of independent movement thereon, the said plate having formed therein and extending to the bolt a slot provided intermediate of its ends with a pair of oppositely arranged shoulders, and a key having its rear end split or bifurcated to form two arms having a spring tendency away from each other, the key being adapted to pass through the slot in the plate and to have its front end locked with the nut and to have the arms of its rear end bind against the shoulders in the slot, substantially as set forth.

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

WILLIAM HENRY LEWIS.

Witnesses:
F. G. WAKE,
GEO. D. CREGOR.