

(No Model.)

H. E. SMITH.
NUT LOCK.

No. 505,856.

Patented Oct. 3. 1893.

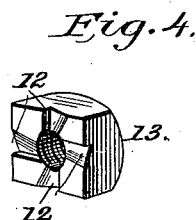
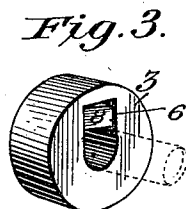
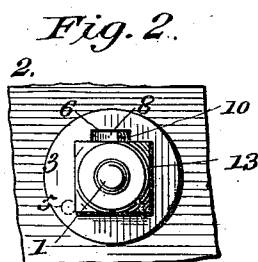
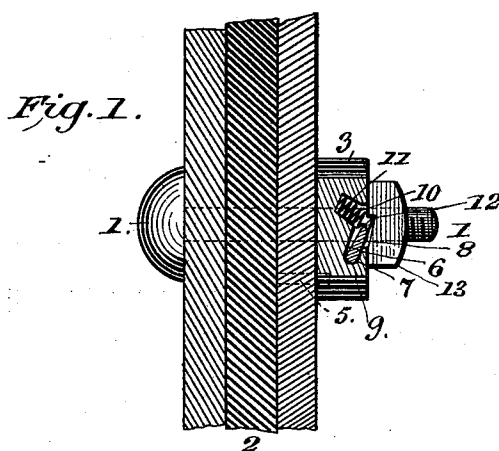
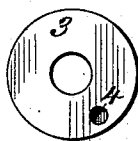


Fig. 5.



WITNESSES:

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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 505,856, dated October 3, 1893.

Application filed March 9, 1893. Serial No. 465,340. (No model.)

To all whom it may concern:

Be it known that I, HARVEY E. SMITH, a citizen of the United States, residing at Benton, in the county of Holmes and State of Ohio, have invented certain new and useful Improvements in Nut-Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in a new and improved nut-lock, which combines great simplicity of construction, which will enable it to be easily manufactured and placed on the market at a very small cost, and effectiveness in operation; and my invention will be hereinafter fully described and claimed.

In the accompanying drawings, in Figure 1 is a plan view partly section, of my improved nut lock. Fig. 2 is a front view of the same. Fig. 3 is a perspective front view of the washer. Fig. 4 is a perspective rear view of the nut and Fig. 5 is a rear view of the washer.

Referring to the accompanying drawings, in which the same numerals of reference indicate corresponding parts in all the figures: 1 indicates an ordinary bolt, and 2 the block or substance through which it passes in the accompanying views.

3 indicates my novel washer, which forms practically the entire invention, being formed either of malleable iron or any other suitable metal, with a central opening through which the bolt passes, and having in its inner side a small hole or recess, 4, adapted to receive a stud or pin, 5, projecting from the face of the block 2, which prevents the washer from turning on the bolt.

In the outer side of the washer a recess, 6, is formed, having an inclined bottom, and having its inner end extended in beneath the outer side of the washer to form a seat, 7.

8 indicates the small metal pawl or detent, having a beveled or pointed outer end, and having its inner end, 9, rounded to adapt it to fit and turn easily in the curved seat 7 which is formed at the inner end of the washer-recess. The outer end of the pawl or detent is normally pressed outward by a spiral spring, 10, preferably formed of light coiled

brass wire, which is seated in an inclined recess, 11, formed at an angle at the outer end of the main washer-recess 6, as shown; the outer end of the spring engaging with the outer end of the pawl, preferably by taking into a small aperture in the said end of the pawl.

Depressions, 12, are pressed or formed on the inner face of the nut, 13; and it will now be seen that when the washer has been placed in position and the nut is screwed home on the threaded bolt, the spring will press the outer pointed end of the pawl 8 into engagement with each of the depressions 12 in turn, until the nut is finally screwed tight home, when the pawl, engaging with or in one of said depressions will securely lock the nut on the bolt, and render it impossible for it to become loosened.

It will be seen that the great and especial advantages of my invention are: its great simplicity of construction; the one washer employed if made of malleable iron can be finished with one stroke of the drop hammer, or if made of other metal can be cast complete from a pattern; the pawl or detent is very small and simple in construction, and can be made by one stroke of the drop hammer; the detent fits and is retained and works in the retaining-seat 7 without requiring any pivot-pin or any other retaining device, and can therefore be placed in operative position or removed when worn out instantly and by hand without requiring any tools, or without requiring any time for the securing or removing of pivot-pins for the detent to turn on, this being one of the most important features of my invention; and the spring is small, simple, and inexpensive.

My invention can further be used with old nuts of the common construction, by simply striking the depressions in the inner side of the nut to receive the end of the pawl.

Another advantage of my invention is that the pawl is readily accessible when it is desired to unlock and unscrew the nut.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a nut lock, the combination, of the washer

having in its inner side a hole, 4, adapted to receive a retaining stud, 5, and having formed in its outer side the recess terminating at its inner end in the retaining-seat 7, and the inclined spring-recess 11, the pawl 8 formed with the inner end adapted to fit, and turn in, the retaining-seat 7, the spring 10 seated in the recess 11 and engaging the outer end of the pawl as specified, and a nut having de-

pressions formed in its inner face; substantially as set forth.

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

HARVEY E. SMITH.

Witnesses:

GEORGE W. SHARP,
JOHN C. SUMMERS.