

Dec. 10, 1929.

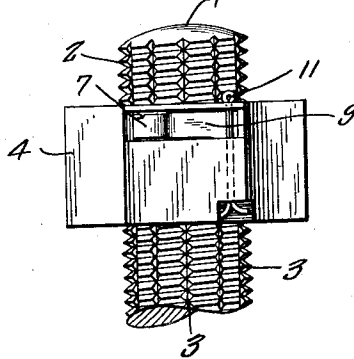
C. MURPHY

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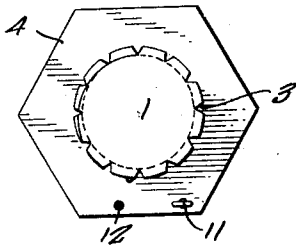
LOCK NUT

Filed Jan. 9, 1928

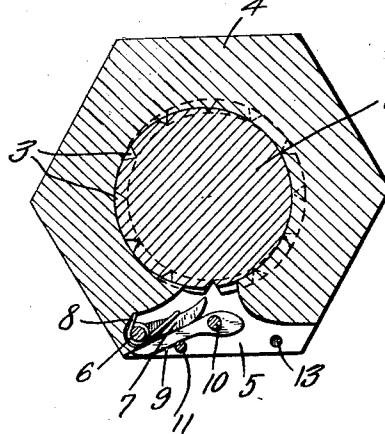
*Fig. 1.*



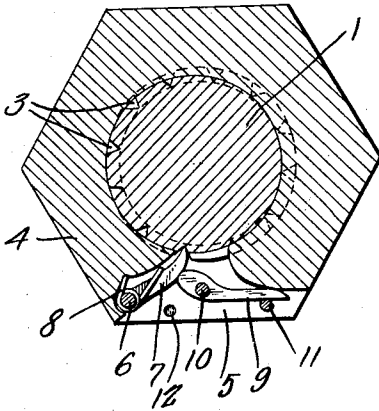
*Fig. 2.*



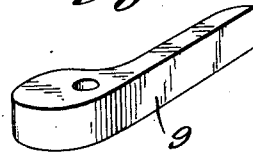
*Fig. 3.*



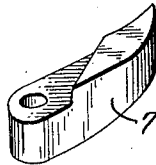
*Fig. 4.*



*Fig. 6.*



*Fig. 5.*



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## UNITED STATES PATENT OFFICE

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## LOCK NUT

Application filed January 9, 1928. Serial No. 245,565.

This invention relates to lock nuts, and its general object is to provide a bolt including a nut that is normally retained in a position whereby it can be threaded on and off of its bolt by a wrench or the like, or can be secured against movement in either direction.

A further object of the invention is to provide a lock nut that is positive in function, simple in construction, inexpensive to manufacture and efficient in operation and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described; illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a fragmentary side elevation of a bolt and nut constructed in accordance with my invention.

Figure 2 is a top plan view thereof.

Figure 3 is a horizontal sectional view taken through the bolt and nut and showing the locking mechanism thereof in open position.

Figure 4 is a similar view with the parts in locked position.

Figure 5 is a perspective view of the latch member.

Figure 6 is a similar view of the cam lever.

Referring to the drawings in detail, the reference numeral 1 indicates a bolt which as shown is provided with threads 2 interrupted at spaced intervals by rows of substantially V-shaped recesses 3. The rows of recesses extend longitudinally of the bolt as shown.

The nut which is indicated by the reference numeral 4 is shown as being hexagon in shape, but of course it can be of any desired shape, and formed in the nut in a manner to extend from one flat surface thereof and terminating at the inner portion is a slot 5 provided with inwardly disposed curved side walls as best shown in Figure 3.

Pivottally secured through the medium of

a pin 6 and disposed in the slot 5 is a latch member 7 formed with a recess at its secured end to accommodate a coil spring 8 carried by the pin 6 and having its end convolutions engaging the adjacent side wall of the slot and the latch member respectively for the purpose of retaining the latch member normally in unlatched position as shown in Figure 3. The side wall of the slot that receives the end convolution of the spring is notched for that purpose so as to avoid casual displacement of the spring as will be apparent.

In order to operate the latch member to its operative position as shown in Figure 4, I have provided a lever 9 pivottally secured in the slot through the medium of a pin 10 and said lever is formed with a cam surface for engagement with the latch to secure the free end of the latter into some of the recesses of one of the rows so as to prevent movement of the nut in either direction as will be apparent.

The lever 9 may be held in either of its positions as shown in Figures 3 and 4 through the medium of a pin 11 adapted to be detachably received in either one of openings arranged in cooperating pairs and indicating respectively by the reference numerals 12 and 13. The openings 12 and 13 are formed in the top and bottom walls of the slot and extend entirely through the top wall so that the pin 11 can be inserted in the openings as set forth.

From the above description and disclosure of the drawings, it will be obvious that I have provided a bolt and nut cooperating with each other in a manner whereby the nut can be locked at any desired position on the bolt to prevent movement of the nut in either direction, or if desired the latch can be retained in its normal position as shown in Figure 3, so as to allow free movement of the nut.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several

parts, provided that such changes fall within the scope of the appended claim.

What I claim is:

In a lock nut, a threaded bolt having recesses interrupting the threads thereof and extending longitudinally of the bolt, a nut for said bolt and being provided with a slot laterally formed therein and having rounded walls curved into the bore of the nut, a pivoted latch arranged in said slot and adapted to be received in the recesses to prevent movement of said nut on said bolt, said latch having a recess formed in its secured end, a coil spring received by the pivot of the latch and having its ends engageable with a wall of the recess of the latch and one wall of the slot to put the latch under pressure to hold it out of the recesses of the bolt, said last mentioned wall being notched to receive its end of the spring, a lever pivoted in said slot and having a cam face engageable with the latch for moving the same to its operative position in the recesses of the bolt, and a pin adapted to be arranged in any one of a pair of openings disposed through the walls of the slot and the nut for securing said lever in normal or operative position.

In testimony whereof I affix my signature.  
CHARLES MURPHY.

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