

No. 865,513.

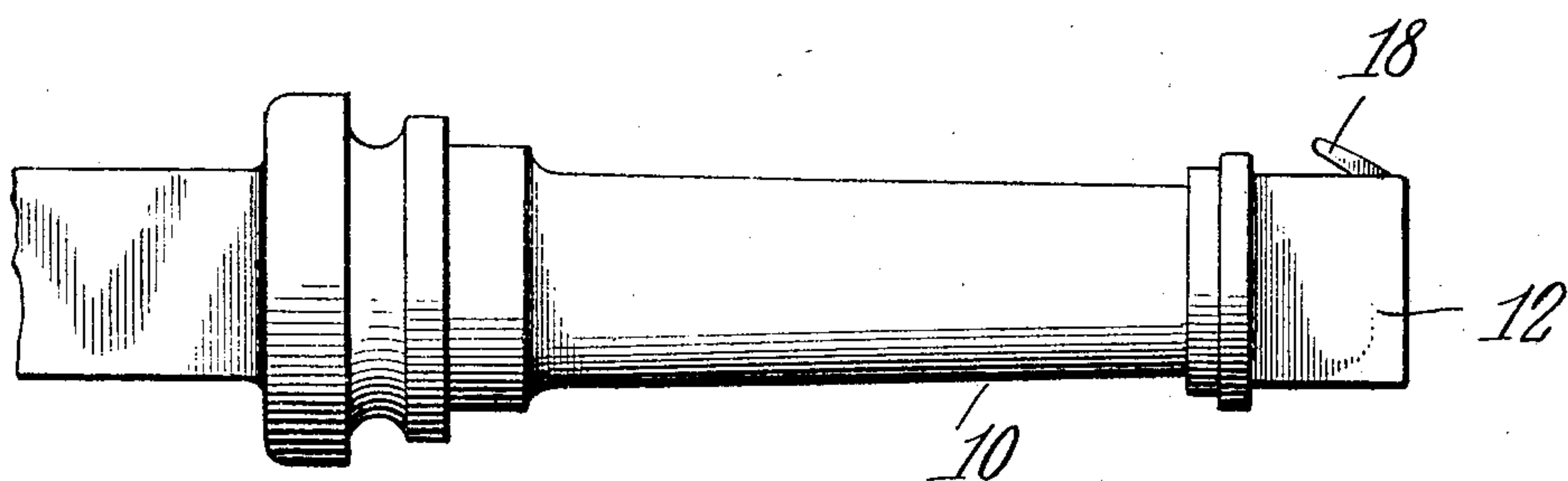
PATENTED SEPT. 10, 1907.

M. MOORE.

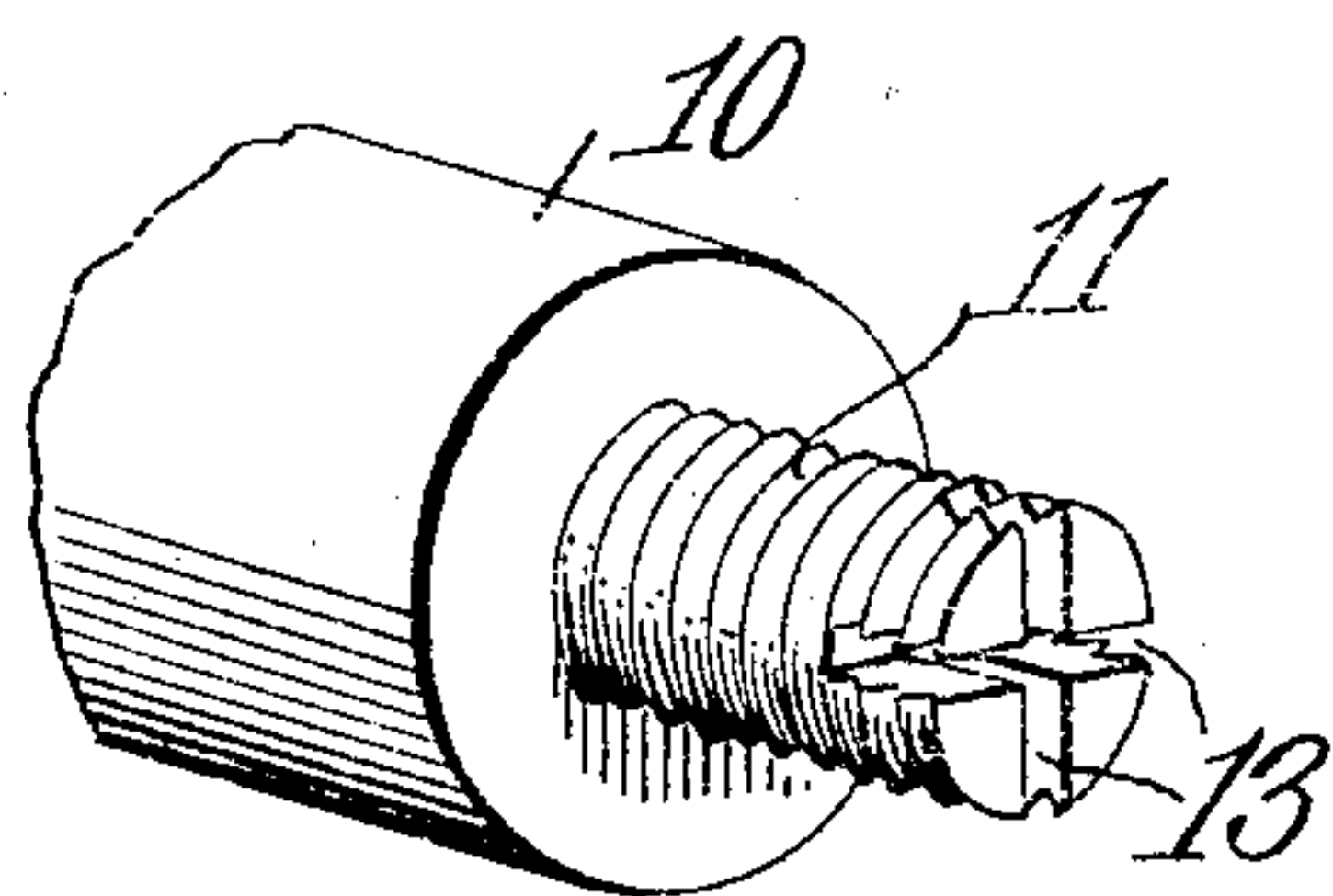
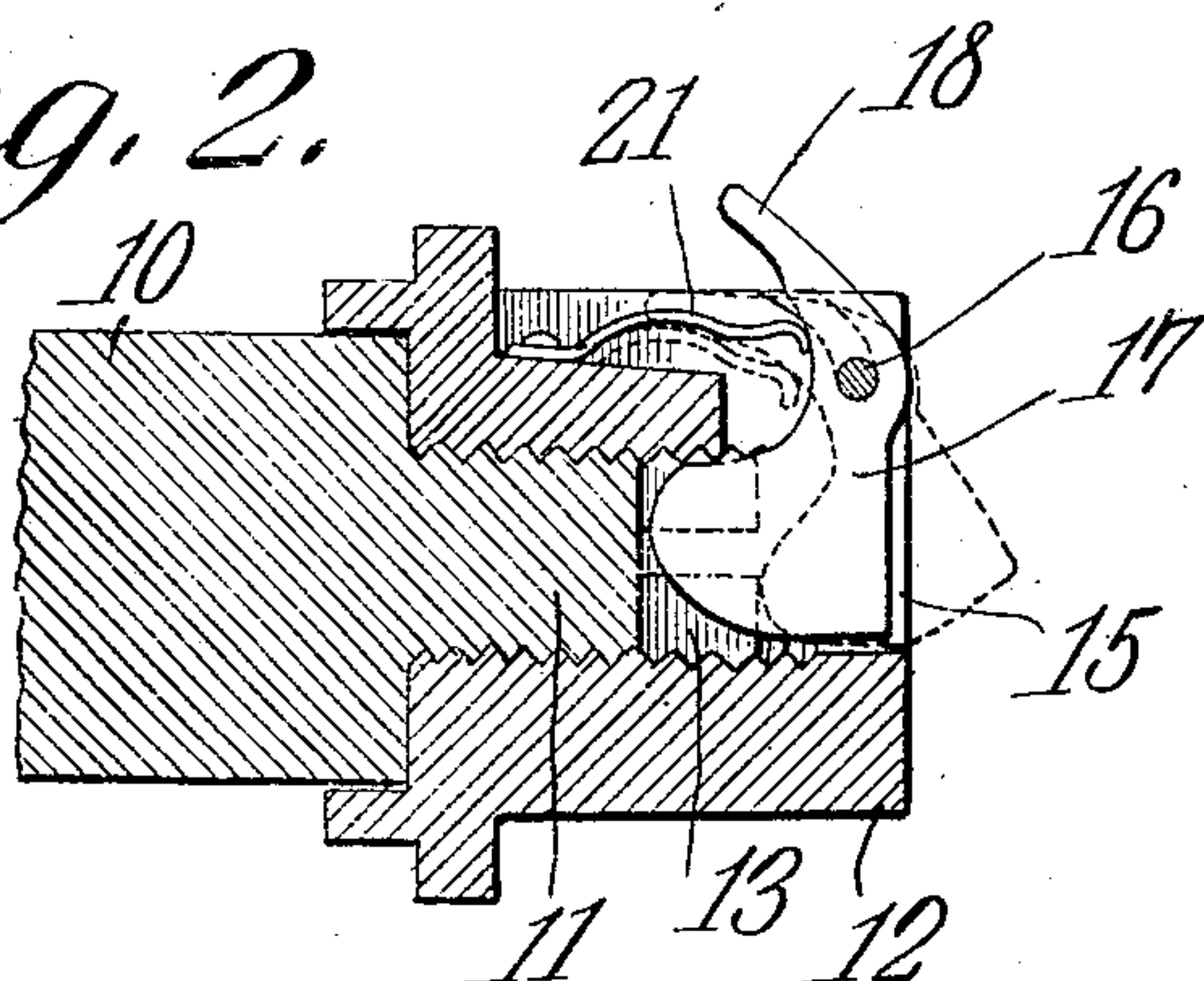
NUT LOCK.

APPLICATION FILED FEB. 26, 1907.

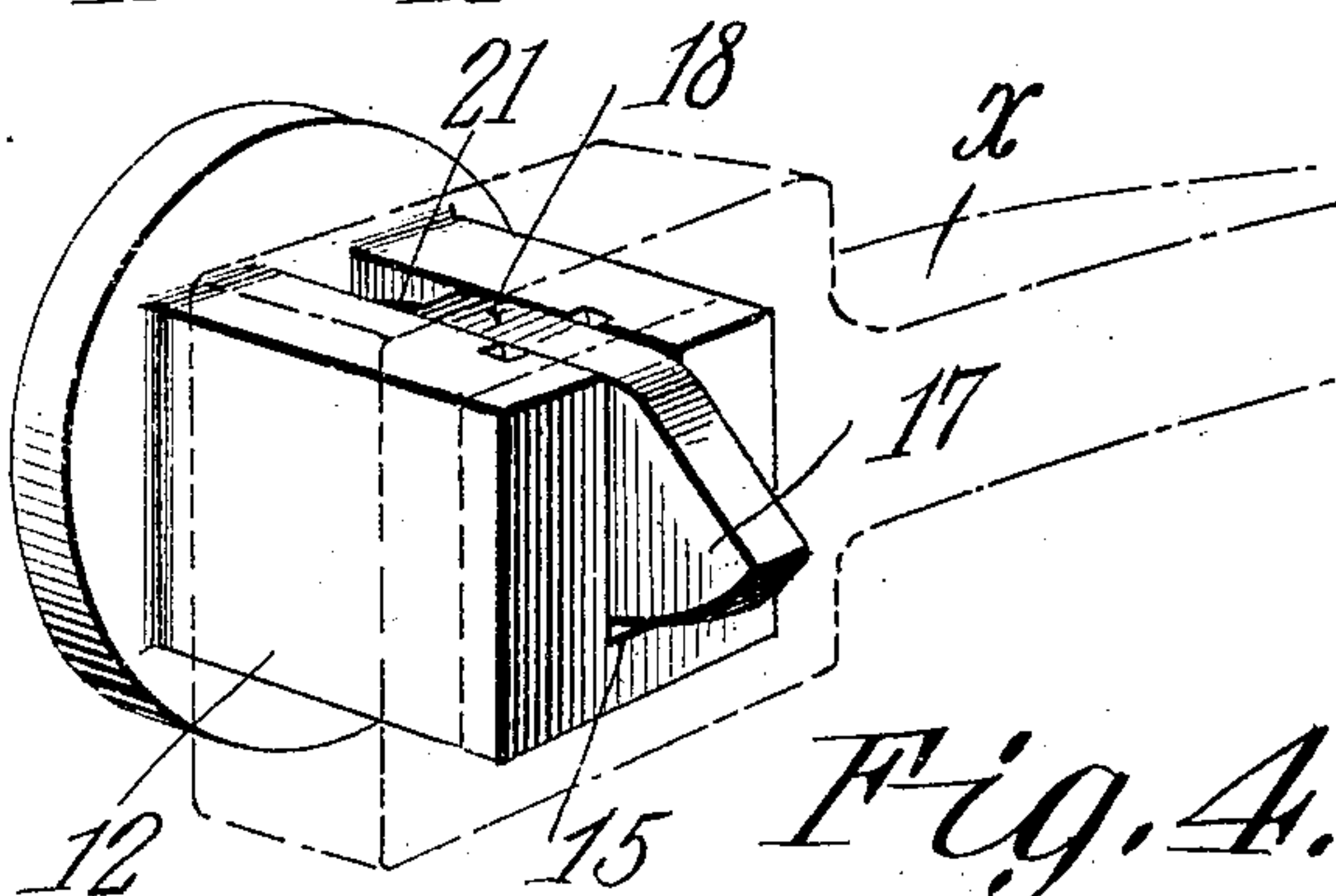
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

*Marion Moore,*

INVENTOR

By

*C. A. Snow & Co.*

ATTORNEYS

WITNESSES:

*E. J. Stewart*  
*J. M. Parker*



# UNITED STATES PATENT OFFICE.

MARION MOORE, OF LANCASTER, OHIO, ASSIGNOR OF ONE-THIRD TO CLARENCE M. ROWLEE  
AND ONE-THIRD TO FRANCIS P. BARR, OF LANCASTER, OHIO.

## NUT-LOCK.

No. 865,513.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Application filed February 26, 1907. Serial No. 359,366.

*To all whom it may concern:*

Be it known that I, MARION MOORE, a citizen of the United States, residing at Lancaster, in the county of Fairfield and State of Ohio, have invented a new and useful Nut-Lock, of which the following is a specification.

This invention relates to nut locks, and has for its principal object to provide a device for securing axle nuts in position on the outer ends of vehicle axles.

10 A further object of the invention is to provide a device of this class in which the nut may be locked in any desired position of adjustment and retained in place without being turned tightly home.

15 A still further object of the invention is to provide a nut locking device which may be readily moved to inoperative position when it is desired to remove or replace the nut.

20 A still further and important object of the invention is to provide a nut lock which is under the control of a wrench or similar tool, the locking device being moved to release position when the wrench is applied to the nut and automatically returning to locking position when the wrench is removed.

25 With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that 30 various changes in the form, proportions, size and minor details of construction may be made without departing from the spirit or sacrificing any of the advantages of the invention.

35 In the accompanying drawings:—Figure 1 is a side elevation of a portion of a vehicle axle provided with a cap nut and a locking device constructed in accordance with the invention. Fig. 2 is an enlarged sectional detail of the same. Fig. 3 is a detail perspective view of the end of the spindle. Fig. 4 is a similar view 40 of the nut and its locking device, showing the manner in which the locking device is moved to release position on the application of a wrench.

45 Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

50 The spindle 10, which is of any ordinary construction, is provided with a threaded tenon or extension 11 adapted for the reception of a cap nut 12 which is preferably rectangular in form, as usual, in order to permit the application of the ordinary carriage wrench *x*. The tenon 11 is provided with two diametrically arranged intersecting grooves 13 which are designed for the reception of the nut locking member, the num-

ber of such grooves being increased or diminished as desired although two of such grooves are found best 55 for the purpose, and permit all necessary adjustments without undue weakening of the spindle.

The cap nut 12 is provided with a radial slot 15 across which extends a pivot pin 16, and on this pin is mounted a swinging locking wing 17 which is provided with an 60 outwardly projecting tongue 18, the latter extending some distance beyond the periphery of the nut in order that it may be employed for moving the locking wing to inoperative position by hand, or it may be moved to inoperative position by simply forcing the usual wrench 65 *x* on the nut, as illustrated in Fig. 4. The inner face of the tongue is curved and is engaged by a locking spring 21 that is riveted or otherwise secured to the nut, and said spring constantly tends to turn the locking wing to the position shown in full lines in Fig. 2, in order to 70 lock the nut in place.

When the nut is in position on the end of the spindle with the wing in locking position, and it is desired to remove the same, the tongue is forced backward to the position shown in Fig. 4 either by hand or by the ap- 75 plication of a wrench. In practice the wrench is forced on the nut in such manner that the tongue will be engaged by one wall of the wrench socket and will be moved down to the dotted line position shown in Fig. 2, and the full line position shown in Fig. 4 by the time 80 the wrench is fully on the nut, so that the locking wing will have been moved to release position. The wrench may then be turned in the usual manner for the purpose of removing the nut, it being observed that the spring pressed tongue is at this time forced against one wall 85 of the wrench socket, and thus serves as a means for holding the nut in place in the wrench, so that there is no danger of the nut falling to the ground. The nut may remain in the wrench socket until after the wheel has been removed and replaced, and then the nut is applied 90 and screwed tight, and on withdrawing the wrench, the spring will move the locking wing into engagement with one of the grooves of the spindle, the locking being accomplished automatically as the wrench is withdrawn. 95

It will be noted that the wing 17 is of such width that it will always fully protect the radial slot 15 from the entrance of foreign matter without regard to the position of the wing. It will be observed that when the device is in unlocked position, as shown in Fig. 4, the 100 inner end of the wing fully closes the mouth of the recess and acts as a guard to prevent the entrance of dust and dirt.

I claim:—

In a device of the class specified, the combination with a 105 bolt having diametrically arranged slots at its end, of a

nut having a slot intersecting the threaded opening of the  
nut and extending to the outer or end face thereof, the  
slot being continued along one wall of the wrench engag-  
ing face of the nut, a locking wing pivoted within the  
5 slotted nut and arranged to engage the slotted bolt, said  
wing having a tongue projecting beyond the slotted face  
of the nut and rounded for engagement with the wall of a  
wrench socket, said wing being of such width as to perma-  
nently close the end wall of the nut slot in both locking  
0 and releasing position and thus prevent the entrance of  
foreign matter, and a spring seated within the nut slot

and engaging said tongue, the spring tending to move the  
wing to locking position and to hold the tongue in engage-  
ment with the socket of the wrench.

In testimony that I claim the foregoing as my own, I 15  
have hereto affixed my signature in the presence of two  
witnesses.

MARION MOORE.

Witnesses:

JAS. C. BARR,

PEARL ANDERSON.