No. 721,990. PATENTED MAR. 3, 1903.

W. R. & G. W. YOUNG.

NUT LOCK.

APPLICATION FILED SEPT. 16, 1902.

NO MODEL.

Fig. 1.

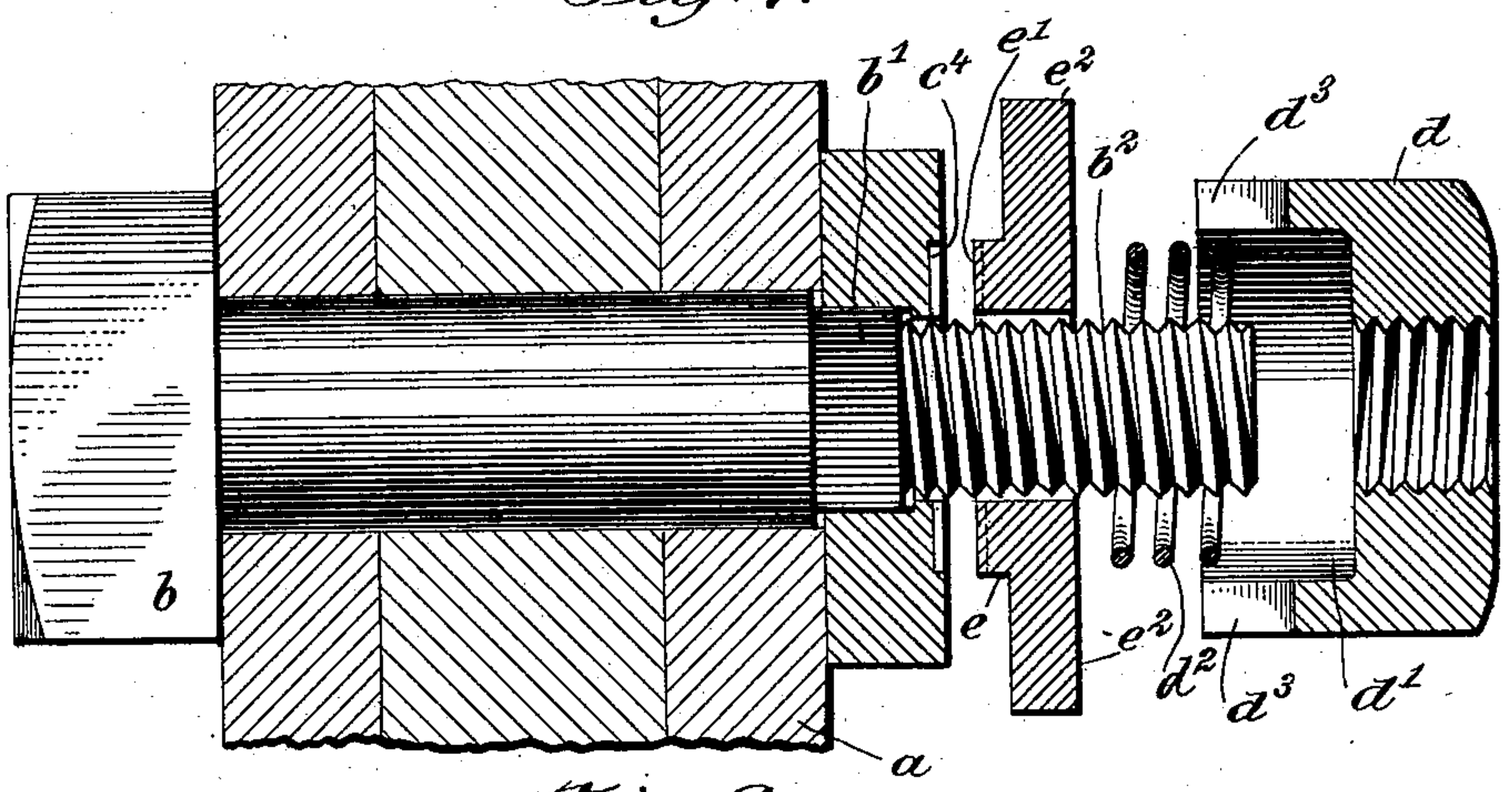


Fig. 2.

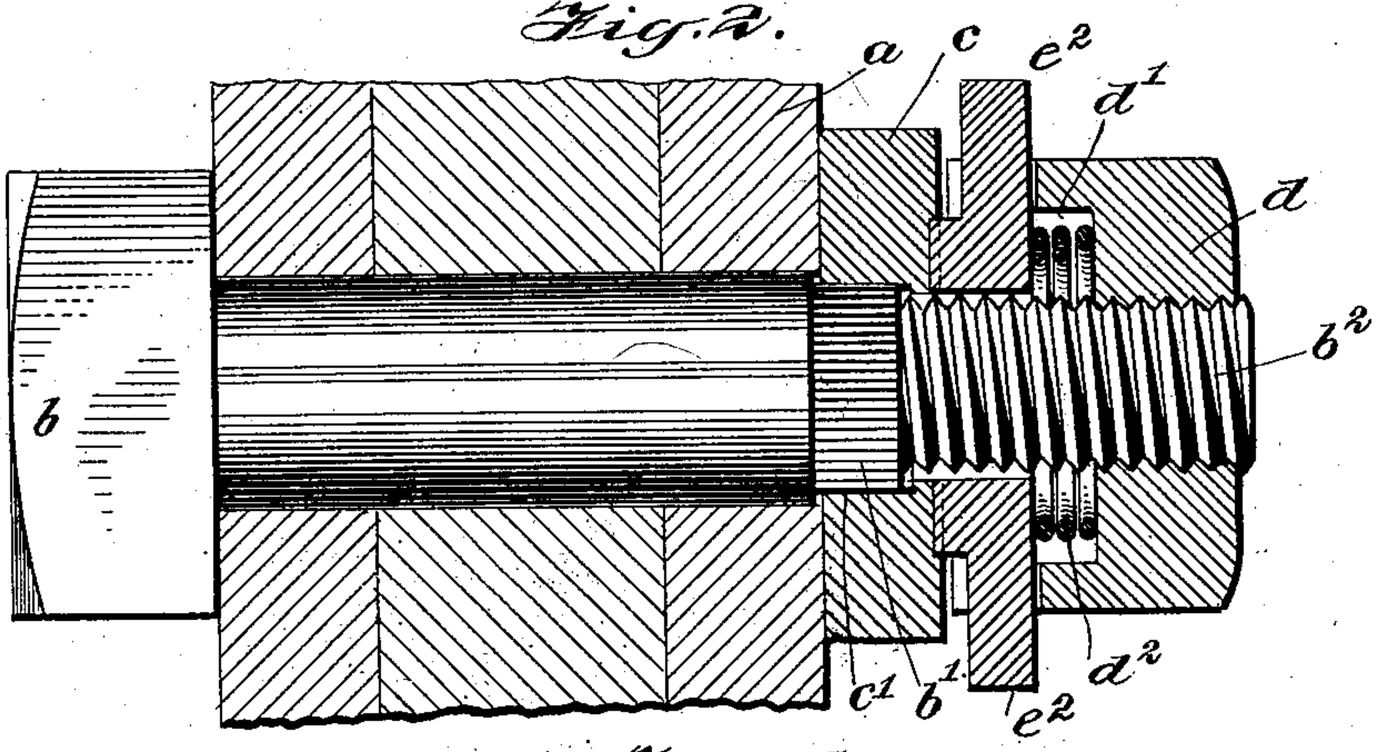


Fig. 3.

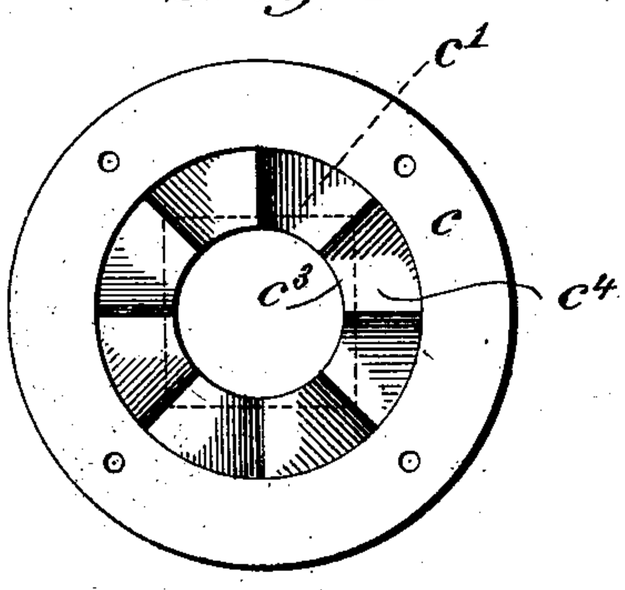


Fig. 4.

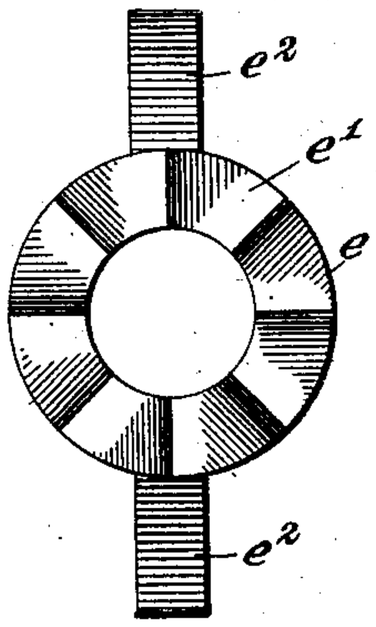
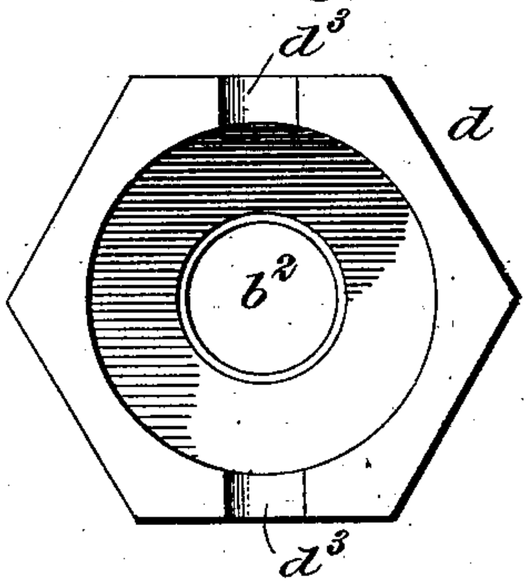


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM R. YOUNG AND GEORGE W. YOUNG, OF STOCKTON, CALIFORNIA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 721,990, dated March 3, 1903.

Application filed September 16, 1902. Serial No. 123,588. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM R. YOUNG and GEORGE W. YOUNG, citizens of the United States, and residents of Stockton, in the county of San Joaquin and State of California, have invented a new and Improved Nut-Lock, of which the following is a full, clear, and exact description.

This invention relates to a nut-lock of that class in which a pawl is connected with the nut and works on a ratchet fastened stationary with respect to the bolt. The device involves certain novel features of construction, which will be fully described hereinafter.

This specification is an exact description of one example of our invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional view of the invention, showing the parts of the lock dissociated. Fig. 2 is a sectional view showing the nut locked. Fig. 3 is a plan view of the ratchet. Fig. 4 is a bottom plan view of the pawl-collar, and Fig. 5 is a bottom plan view of the nut.

a indicates the parts which it may be assumed are to be held together, and *b* indicates the bolt, which has a squared portion b' and a round threaded portion b^2, the threaded portion b^2 being outward from the squared portion b', and the squared portion b' lying just beyond the adjacent face of the part *a*.

c indicates a disk, which has a squared central orifice c' receiving the squared part b' of the bolt *b*. Outward from the square orifice c' the plate *c* is formed with a round opening c^3, through which the threaded part b^2 of the bolt may pass. *d* indicates the nut, which is threaded to screw on the part b^2 of the bolt, as usual, and which is formed with a cavity d'. In this cavity is placed an expansive spiral spring d^2, which presses on the pawl-collar *e*. Said collar *e* fits in the cavity d' outward from the spring d^2 and has its under side formed with teeth e', serving as pawls, these teeth working with corresponding ratchet-teeth c^4, formed on the top of the plate *c*. The pawl-collar *e* has outwardly-projected finger-pieces e^2, and these extend through notches d^3 in the side walls of the cavity d' of the nut *d*.

In using the invention the ratchet-plate *c* is placed in position, and then the nut is screwed on the part b^2 of the bolt, the pawl-collar *e* and the spring d^2 having previously been placed in position. Upon moving up the nut it advances on the pawl-collar until the arms e^2 project through the openings d^3. Then the rotary movement of the nut causes the collar *e* to perform a like movement, which gradually works the teeth c^4 and e' together and causes these teeth to interlock, thus holding the nut in place and preventing it from being backed off or turned in the reverse direction until the fingers e^2 are first grasped and moved outward. These fingers carry with them the pawl-collar *e*, and as this disengages the plate *c* the nut is free to turn, carrying with it the pawl-collar *e*, until the nut moves so far out that the walls of the cavities d^3 disengage the fingers e^2.

Various changes in the form and details of our invention may be resorted to at will without departing from the spirit thereof. Hence we consider ourselves entitled to all forms of the invention as may lie within the intent of our claims.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination with a bolt, of a stationary ratchet-plate, said plate being centrally orificed to permit the bolt to pass through it, a pawl-collar, an arm projecting therefrom, a nut having a cavity therein for receiving the pawl-collar, said collar having an outwardly-projected finger fitting in an opening in the side wall of the cavity of the nut, and a spring pressing between the nut and collar.

2. A nut-lock, comprising the combination with the bolt, of a ratchet-plate held stationary with respect thereto and having a central orifice through which the bolt is projected, said plate having ratchet-teeth on its side, a pawl-collar encircling the bolt and having ratchet-teeth coacting with the teeth on the ratchet-plate, a nut-tooth which the collar is connected to slide but not to turn, and a spring bearing between the pawl-collar

and nut to hold the collar removably in engagement with the ratchet-plate.

3. A nut-lock, comprising the combination of a bolt having an angular portion and a threaded portion outward thereof, a ratchet-plate encircling the angular part of the bolt and having ratchet-teeth on its upper surface, a pawl-collar turning over the ratchet-plate and having a series of teeth thereon to engage the teeth of the ratchet-plate, a nut connected to the pawl-collar to move axially independently thereof, said nut screwing over the threaded portion of the bolt, and a spring set in the cavity of the nut and bearing against the pawl-collar.

4. The combination with a bolt, of a stationary ratchet-plate, a pawl-collar arranged to turn with respect to the ratchet-plate, a nut with which the pawl-collar is connected to move axially independently thereof, and a spring bearing between the nut and collar.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM R. YOUNG.
GEORGE W. YOUNG.

Witnesses:
P. J. MARTIN,
S. A. HATHAWAY.