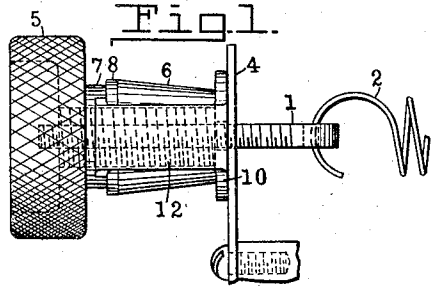
N. H. ANDERSON.

LOCK NUT.

APPLICATION FILED JUNE 12, 1914.

1,200,689. Patented Oct. 10, 1916.

Fig. 1.



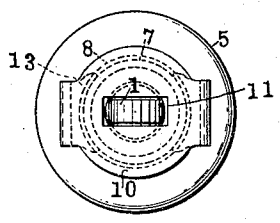


Fig. 2.

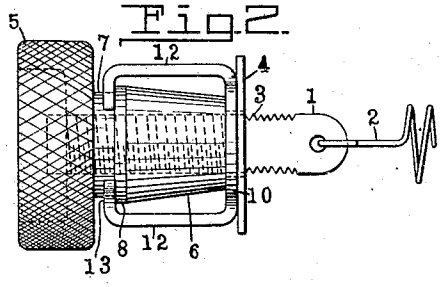


Fig. 3.

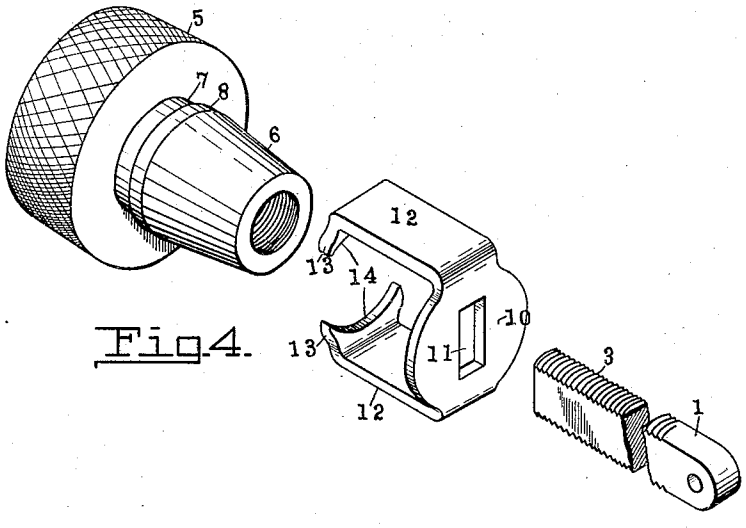


Fig. 4.

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UNITED STATES PATENT OFFICE.

NILS H. ANDERSON, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO THE NOISELESS TYPEWRITER COMPANY, OF MIDDLETOWN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

LOCK-NUT.

1,200,689. Specification of Letters Patent. Patented Oct. 10, 1916.

Application filed June 12, 1914. Serial No. 844,655.

To all whom it may concern:

Be it known that I, NILS H. ANDERSON, a citizen of the United States, residing at Middletown, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Lock-Nuts, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to lock-nuts.

One of the objects of the present invention is to provide a simple and practical lock-nut which will be automatic in its operation.

Another object is to provide a lock-nut of the above character having few parts, which will be cheap to manufacture and easy to assemble.

A further object is to provide a lock-nut which will be efficient and reliable in operation and use.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing, wherein is shown one of the various possible embodiments of my invention, Figures 1 and 2 are elevational views at right angles to each other; Fig. 3 is an end view, with support removed, and Fig. 4 is a perspective view with the parts in disassembled relation.

Similar reference characters refer to similar parts throughout the various views of the drawing.

Referring now in detail to the accompanying drawing, and more particularly to Figs. 1 and 2, 1 denotes a member adapted to be locked or held in fixed position. This member, for example, may be considered a bolt or screw to which a spring 2 is adapted to be connected whereby the tension of the spring may be regulated. This member 1 is preferably irregular or rectangular in cross section, and has its upper and lower edges 3 milled or provided with portions of screw threads. The member 1 passes through a relatively fixed part or holding plate 4, against which the spring 2 reacts, after which it is engaged by a knurled nut 5. This nut is provided with a central threaded opening adapted to coact with the milled or threaded portions of the member 1 and is provided with a conical or tapering projection 6 separated from the head of the nut 5 by a relatively short cylindrical neck 7. It will be noted that the neck 7 is slightly smaller in diameter than the large end of the tapering portion 6, thus providing a shoulder 8 therebetween. These parts 5, 6 and 7 are preferably made integral. Co-acting with this nut 5 is a locking member 10, which comprises a front wall portion adapted to bear against the plate 4 having a rectangular opening 11 through which the member 1 is adapted to pass and be held against rotation. From opposite sides of the portion 10 extend resilient arms 12, the ends 13 of which are bent toward each other at substantially right angles and are curved at 14 corresponding to the curvature of the neck 7. In assembling these parts, the small end 6 of the nut 5 is forced between the curved surfaces 14 until the ends 13 slip over the shoulder 8 and clamp down upon the neck 7. The locking member 10 is then pushed over the end of the bolt 1 and the nut 5 rotated to carry it on to the end of the bolt to the desired position. The friction between the surfaces 14 and the neck 7 is sufficient to hold the parts against such rotation as might be caused, for example, by vibration which would otherwise tend to loosen the nut, yet permitting rapid adjustment thereof when desired without the use of special tools. The nut 5 may, however, be rotated by hand in either direction to increase or decrease the tension of the spring or vary the relative position of the member 1 to the plate 4 according to the application to which the lock-nut is put, and after being rotated it is automatically locked in its adjusted position.

The present invention, therefore, comprises a simple and practical automatic lock-nut having few parts, which will be cheap to manufacture and easy to assemble, and in short one which is adapted to accomplish, among others, all of the objects and advantages above set forth.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all

matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

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

1. In a device of the character described, in combination, a polygonal member having a partially threaded periphery, a manipulative nut threaded thereon and having a central conical projection with an adjacent cylindrical groove, and a locking device having a polygonal aperture to receive said member and a resilient arm with an offset extremity to ride over said conical projection of said nut and bear in said groove of the latter for frictionally resisting rotation of the same on said member.

2. In a device of the character described, in combination, a longitudinally adjustable member having a partially threaded portion of non-circular cross section, a fixed part having a non-circular aperture to receive said portion of said member for preventing rotation of the latter, a locking device having a portion to abut said fixed part and provided with a non-circular aperture to receive said threaded portion of said member for preventing rotation relative thereto and having resilient arms with inturned curved extremities, and a manipulative nut threaded on said adjustable member and having a portion to engage said apertured portion of said locking device and a cylindrical portion to receive and be confined between said inturned extremities of said device for frictional locking thereby.

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

NILS H. ANDERSON.

Witnesses:

FRANCIS A. BEACH,

EDWARD A. WILCOX.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."