

(No Model.)

I. Q. HOLMES.

NUT LOCK.

No. 284,013.

Patented Aug. 28, 1883.

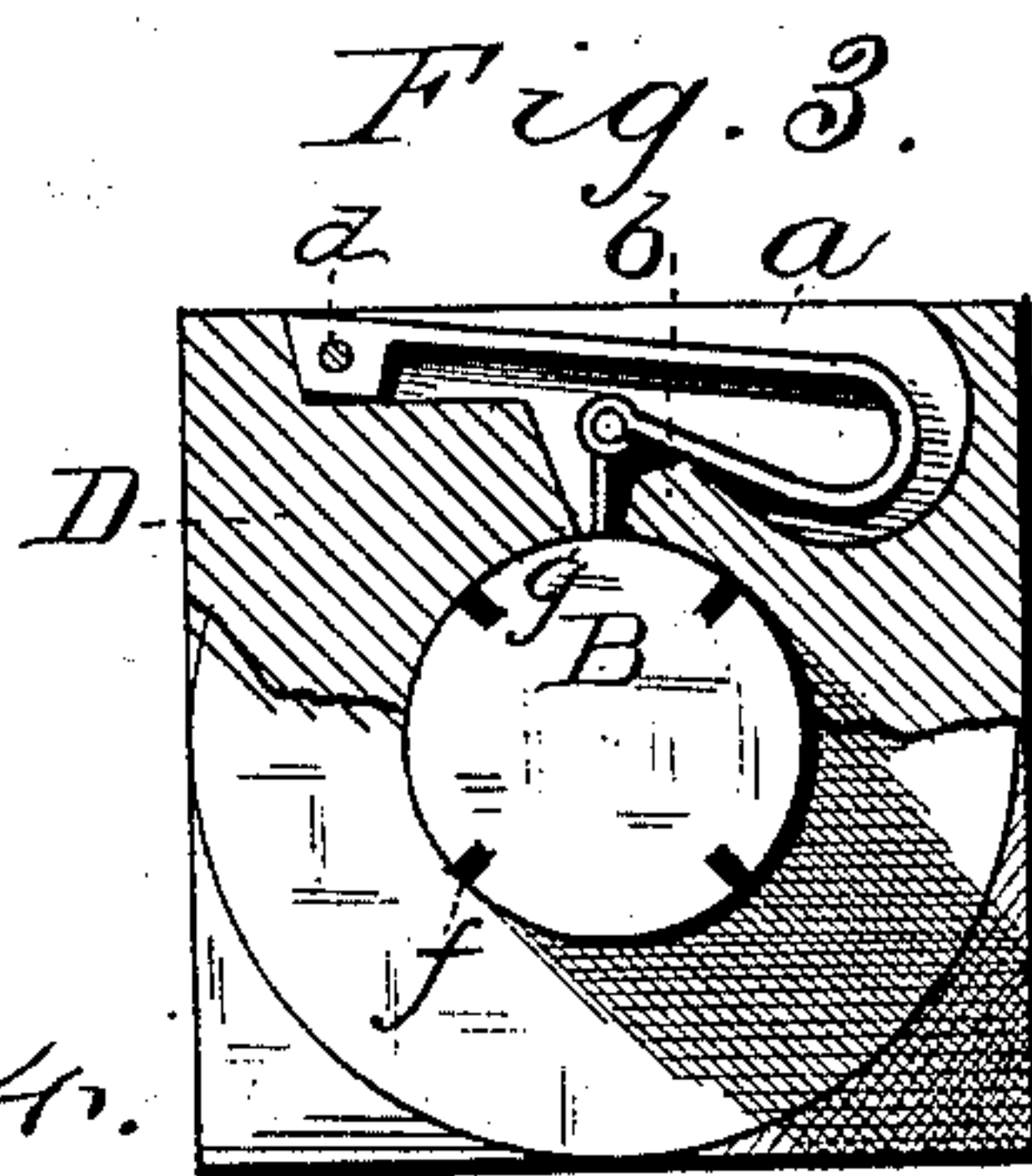
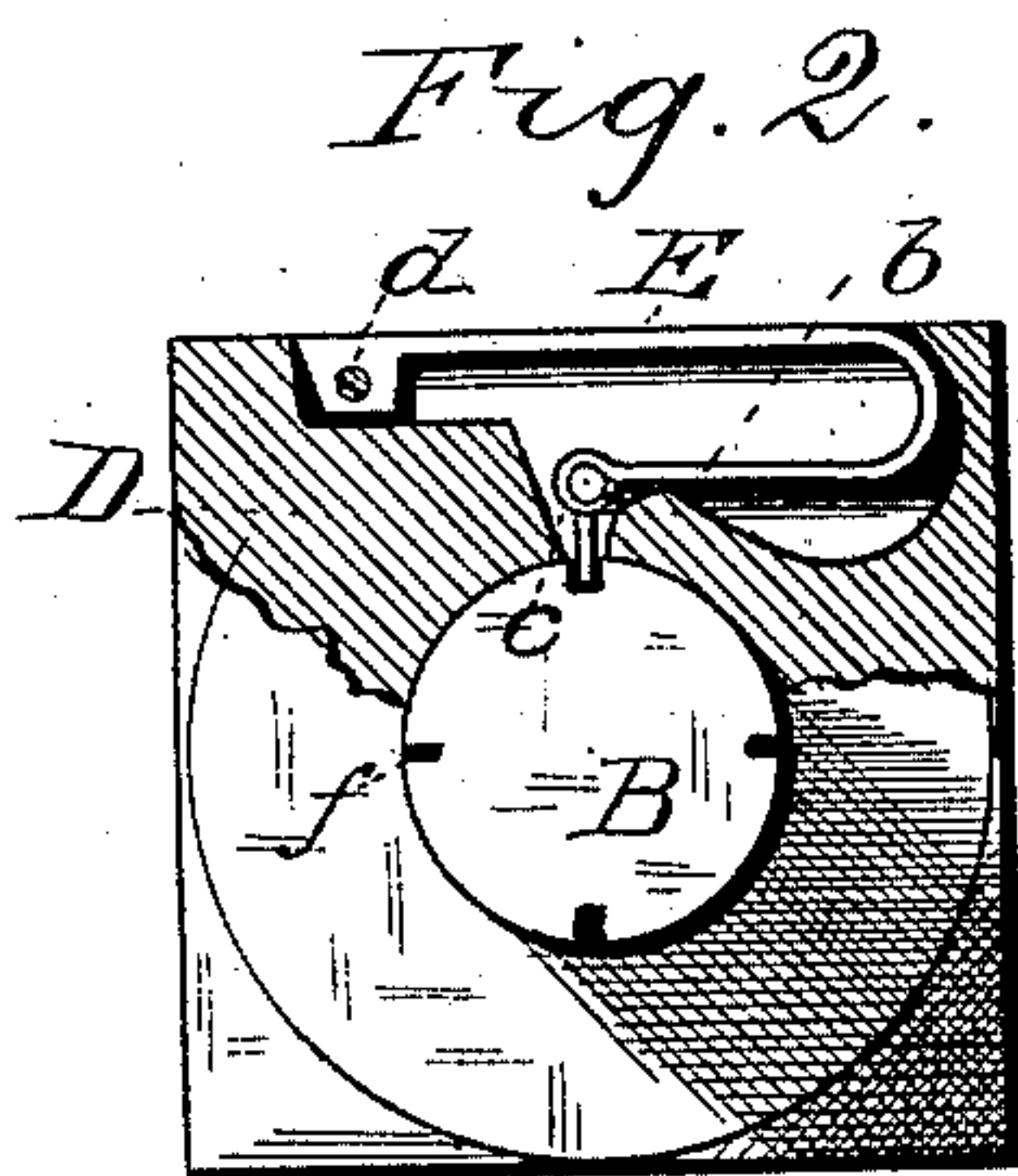
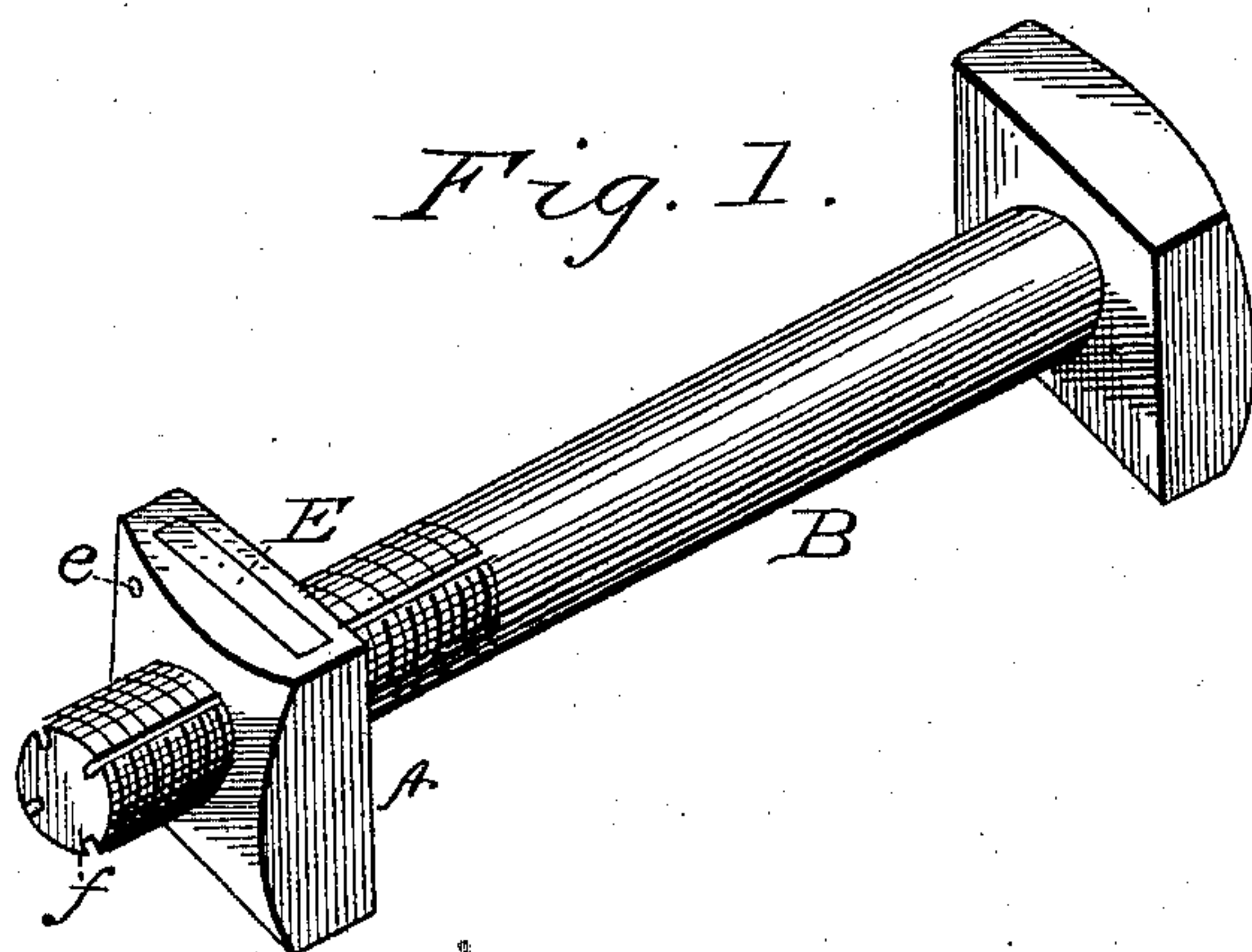


Fig. 4.



Witnesses:
J. W. Reynolds
Edward C. Ellis

Inventor
Isaac Q. Holmes
per *O. E. Duffy*
Att'y

UNITED STATES PATENT OFFICE.

ISAAC Q. HOLMES, OF CLARKSVILLE, ARKANSAS.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 284,013, dated August 28, 1883.

Application filed May 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, ISAAC Q. HOLMES, of Clarksville, in the county of Johnson and State of Arkansas, have invented certain new and useful Improvements in Nut-Locks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My improvements relate to that class of inventions known as "nut-locks," having for their object to provide suitable means whereby the nut, when screwed on a bolt, is prevented from turning of itself or from being turned until the locking means is released from its engagement with the bolt; and to this end it consists in forming in one side of the body of the nut a cavity of such contour as will be hereinafter explained, and locating in said cavity of the nut a suitable spring having a hinged plate for holding the nut against the bolt, all combined to operate substantially as will be hereinafter more particularly described and pointed out.

In the drawings hereunto annexed, Figure 1 is a perspective view; Fig. 2, a side view of the nut, broken away to show the contour of the cavity and the location therein of the spring as when locked. Fig. 3 is a like view, showing how, by the depression of the spring, the nut is released. Fig. 4 is a view in detail of the hinged plate of the spring.

Reference being had to the letters marked thereon, A is the nut and B the bolt. In one side of the body of the nut is a cavity, *a*, the wall of which is formed with a shoulder, *b*, having to the side a downwardly-converging aperture, *c*, which communicates with the bore of the nut.

D is a ridge in the cavity, between which and the shoulder *b* is the converging aperture, and on said ridge rests the lug *d* of the spring E, said spring working pivotally on a pin, *e*, which runs through the sides of the nut. The spring E is bent and formed substantially as herein shown, it having pivoted to its end a hinged portion, which works through the

aperture *c* and engages in the longitudinal grooves or slots *f* of the bolt, and, as shown in Fig. 2, when normally in position—that is, locked—its upper straight portion is flush with the surface of the nut. The hinge-plate *g* of said spring extends down through the aperture *c* (as before stated) to engage the bolt B. This aperture, where it communicates with the bore of the nut, converges into a small opening, as shown, and which allows the hinge *g* of the spring but very slight play to either side, so that when the nut is locked and it should be attempted to turn it either to the right or left the hinge-piece is pressed against by the opposite wall of the aperture and renders impossible the turning of the nut either way. In whatever direction it may be attempted to turn the nut the action is the same as though a contrary force was exerted on the spring, and the strain on the hinge-plate thus counteracted by the walls of the aperture.

I have in an application for improved wrench, filed of even date herewith, set forth and claimed certain improvements whereby nut-locks (and especially this) can be screwed onto a bolt and again taken off, and in connection therewith I will describe the operation of my present invention, viz: The nut is placed in the wrench, and the adjusting-pin in the sliding jaw thereof is screwed up to depress the spring, which raises the hinge-plate from contact with the bolt, the shoulder *b* being a fulcrum on which the under portion of the spring rests and works. When the nut is screwed on the bolt sufficiently tight and the wrench taken off the spring relaxes and the hinge-plate is pressed into engagement with the bolt, as explained, the manner of which operation is substantially illustrated in Fig. 3.

While I have described the operation of putting on and taking off the nut by means of the wrench specified, it will be apparent that it can be done by other means, and it will also be apparent that the lock-nut herein set forth is simple and thoroughly effective for the purpose intended.

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

1. In a nut-lock, the nut having a concavity

in its body within which is formed the shoulder and ridge, and having the converging aperture, in combination with the bent spring for engaging the bolt, said spring having at
5 one end the shoulder, which rests on the ridge, and through which it is pivotally secured in the nut, and at the other end the hinged plate, substantially as set forth.

2. In a nut-lock, the nut having the cavity
10 and converging aperture, said aperture communicating with its bore, in combination with the bent spring E and hinge-plate g, the whole to operate substantially as described.

3. In a nut-lock, the spring herein described,
15 in combination with the nut having in its body the cavity, and within which is formed the ridge and shoulder, said shoulder serving as a

fulcrum for the spring when depressed, in the manner and for the purpose set forth.

4. In a spring-nut-locking device, the nut 20 having in its body the cavity within which is formed the ridge and shoulder, having converging aperture between, the pivoted bent spring secured therein, and having the hinge-plate, as set forth, and a longitudinally-grooved 25 and screw-threaded bolt, as an article of manufacture.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ISAAC Q. HOLMES.

Witnesses:

FRANK O. MCCLEARY,
EDWARD E. ELLIS.