

(No Model.)

M. S. ALEXANDER.
NUT LOCK.

No. 449,023.

Patented Mar. 24, 1891.

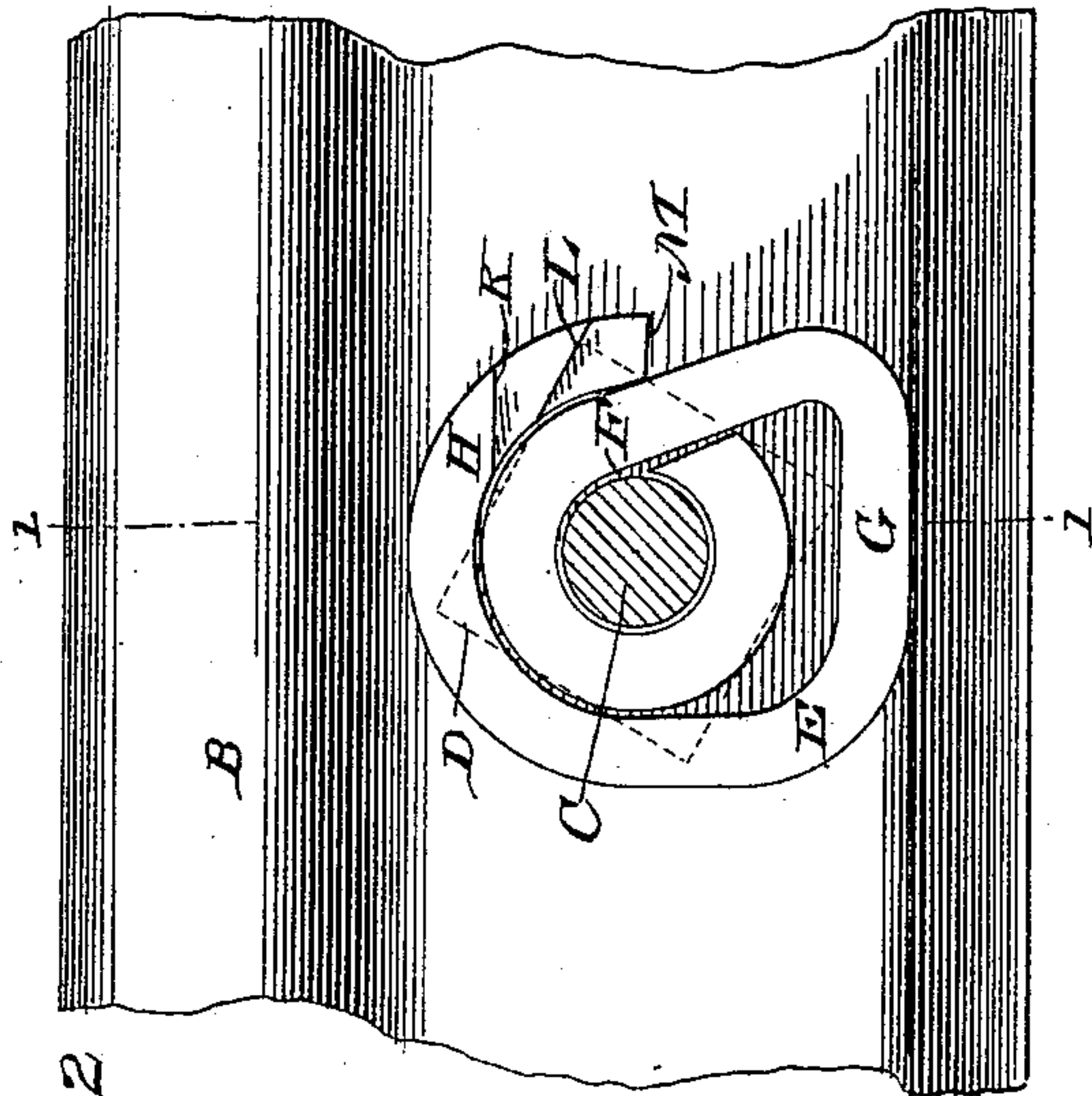


Fig. 2

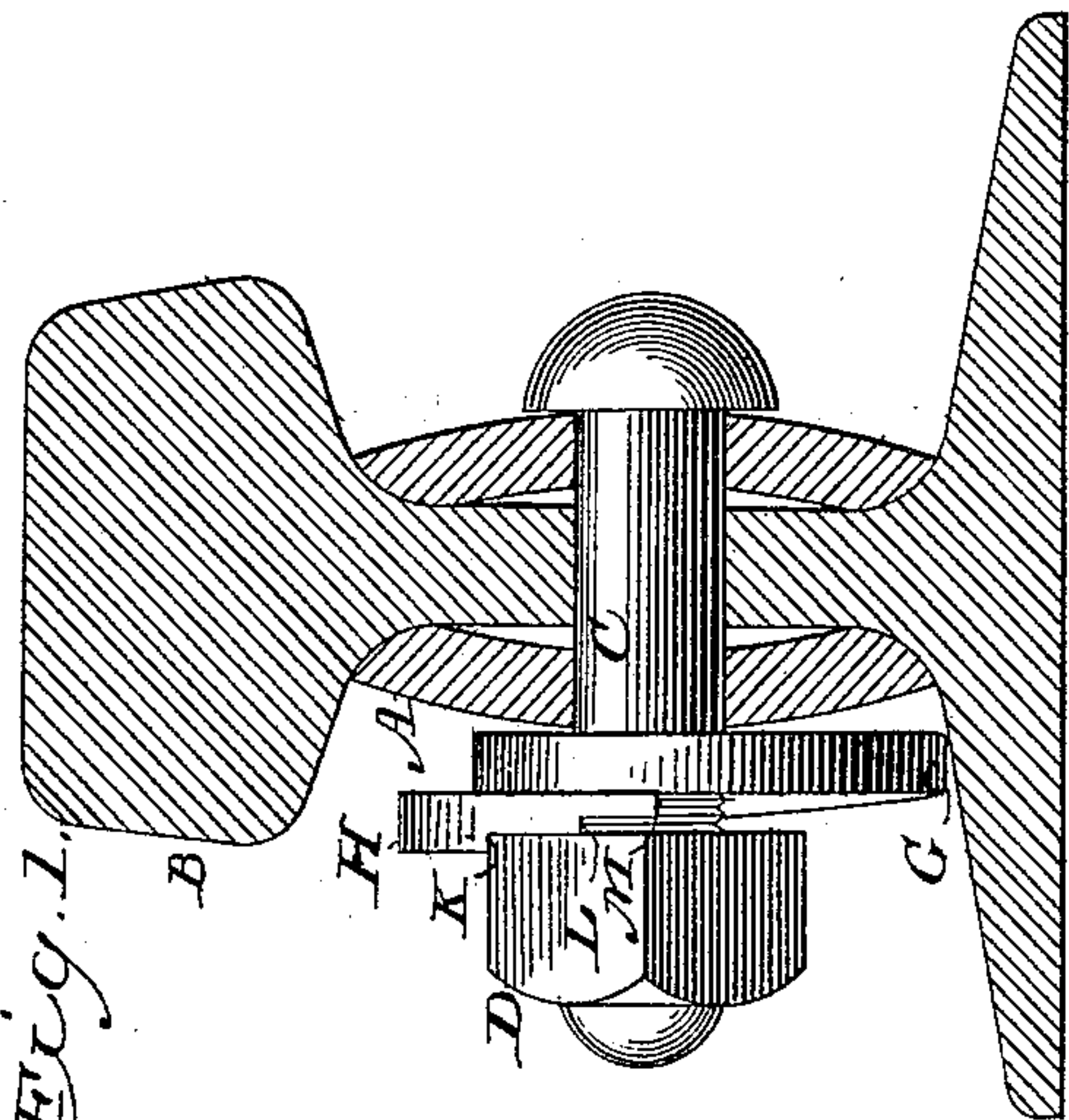


Fig. 1

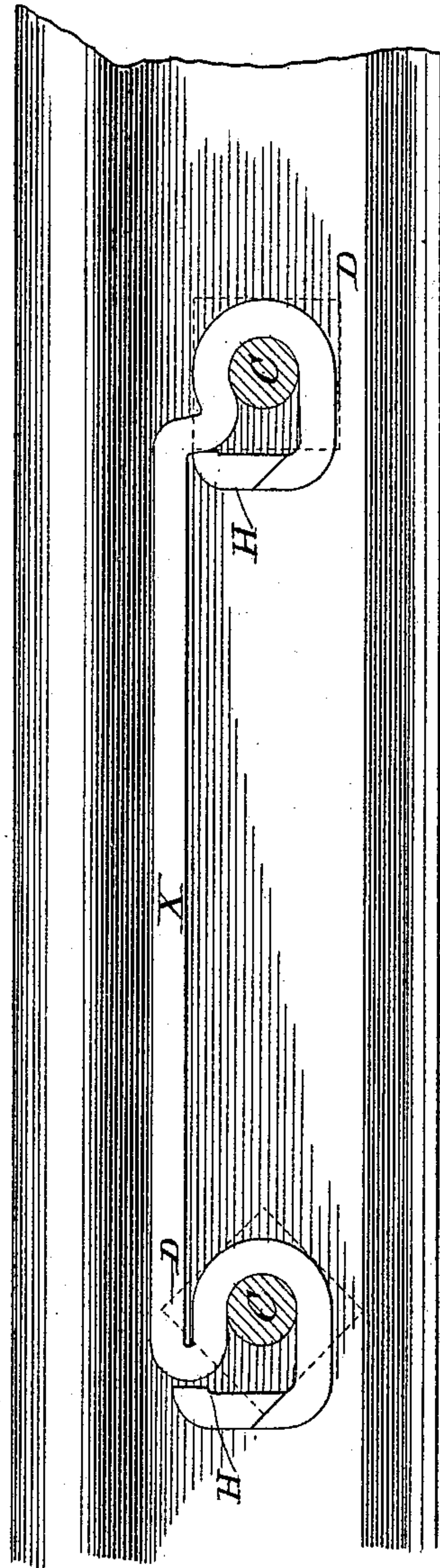


Fig. 3

Witnesses

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UNITED STATES PATENT OFFICE.

MARCELLUS S. ALEXANDER, OF BIRMINGHAM, ALABAMA.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 449,023, dated March 24, 1891.

Application filed May 29, 1889. Renewed August 28, 1890. Serial No. 363,242. (No model.)

To all whom it may concern:

Be it known that I, MARCELLUS S. ALEXANDER, of Birmingham, in the county of Jefferson and State of Alabama, have invented an Improved Nut-Lock, of which the following is a specification, reference being had to the accompanying drawings.

My nut-lock belongs to that general class in which a coiled spring acting upon the nut like a spring-pawl is interposed around a bolt between a nut and the bar-plate or other part through which the bolt passes. A variety of forms of this class of nut-locks have been made, in all of which the principle of operation is that a spring-pawl shall engage with a nut as it is screwed to place and prevent its unscrewing. My nut-lock, however, differs from all others of this class in that I provide for an engagement of the spring pawl or stop against the side of a nut and provide several different points of engagement, so that a very exact adjustment and seating of the nut can be secured, and at the same time it will be perfectly locked.

Another feature of my improved nut-lock is that I can form two or more of them in one piece, which is sometimes very convenient in applying them to use.

Another feature of my improved nut-lock is that it is adapted to apply to all ordinary nuts and bolts in common use without any modification of them whatever.

In the accompanying drawings, Figure 1 is a cross-section of a T-rail and fish-plates, showing my improved nut-lock applied. Fig. 2 is a side elevation of the same, the nut being removed to show the lock. Fig. 3 is a similar view showing two nut-locks united by a bar.

Referring to the letters upon the drawings, A indicates a section of a plate; B, a portion of a rail, and C a bolt, which is applied to bolt the plate to the rail.

D is an ordinary nut, which may be rectangular or of any other polygonal form, such as in common use.

E is my nut-lock, which consists of a steel piece spirally bent or coiled, so as to leave an opening at F suitable to receive a bolt. A single turn or coil is generally sufficient, but more than this may be employed, if desired,

and I frequently make more than one turn in bending the blank to form the lock, in order to give a broad flat seat to it on the side next to the bar or plate on which it rests. Besides this, I prefer to make my lock with a straight side G, so that it may bear against some part of the structure, being bolted together to prevent it from turning, as shown, for example, in Fig. 2.

The inclined part H of the coil is provided with any desired number of shoulders K L M, running in such lines that they will engage with the sides of the nut whenever it is turned, so as to begin to compress the spring of the lock, and the angle of the nut passes the line of either shoulder. As the nut is being screwed to place the part H will spring up, so that the shoulder will engage as a stop against the side of the nut, as shown, for example, in Fig. 1.

By forming two or more shoulders an adjustment sufficiently accurate for practical purposes is provided for, so that the nut may be seated firmly and there held.

In Fig. 3 I show two of my nut-locks formed from a single blank bent at its ends, the middle part X connecting the two locks. For special uses two or more can be formed of a single piece, so that they can be rapidly applied, and of course where they are formed together in this way there is no danger of their turning on their seats.

What I claim as new, and desire to secure by Letters Patent, is—

A nut-lock consisting of a metallic piece bent or coiled, as described, and adapted to be applied around a bolt between its nut and a bar, plate, or beam, and a resilient part H, tending to press at all times against the bottom of the nut and provided with one or more shoulders adapted to engage with the vertical sides of the nut as it is turned to place, whereby substantially a pawl-and-ratchet action between the nut and the part H is effected, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

MARCELLUS S. ALEXANDER.

Witnesses:

JNO. G. FARLAND,
MICHAEL MÜLLER.