

(No Model.)

P. C. THOMPSON.
NUT LOCK.

No. 424,836.

Patented Apr. 1, 1890.

Fig. 1.

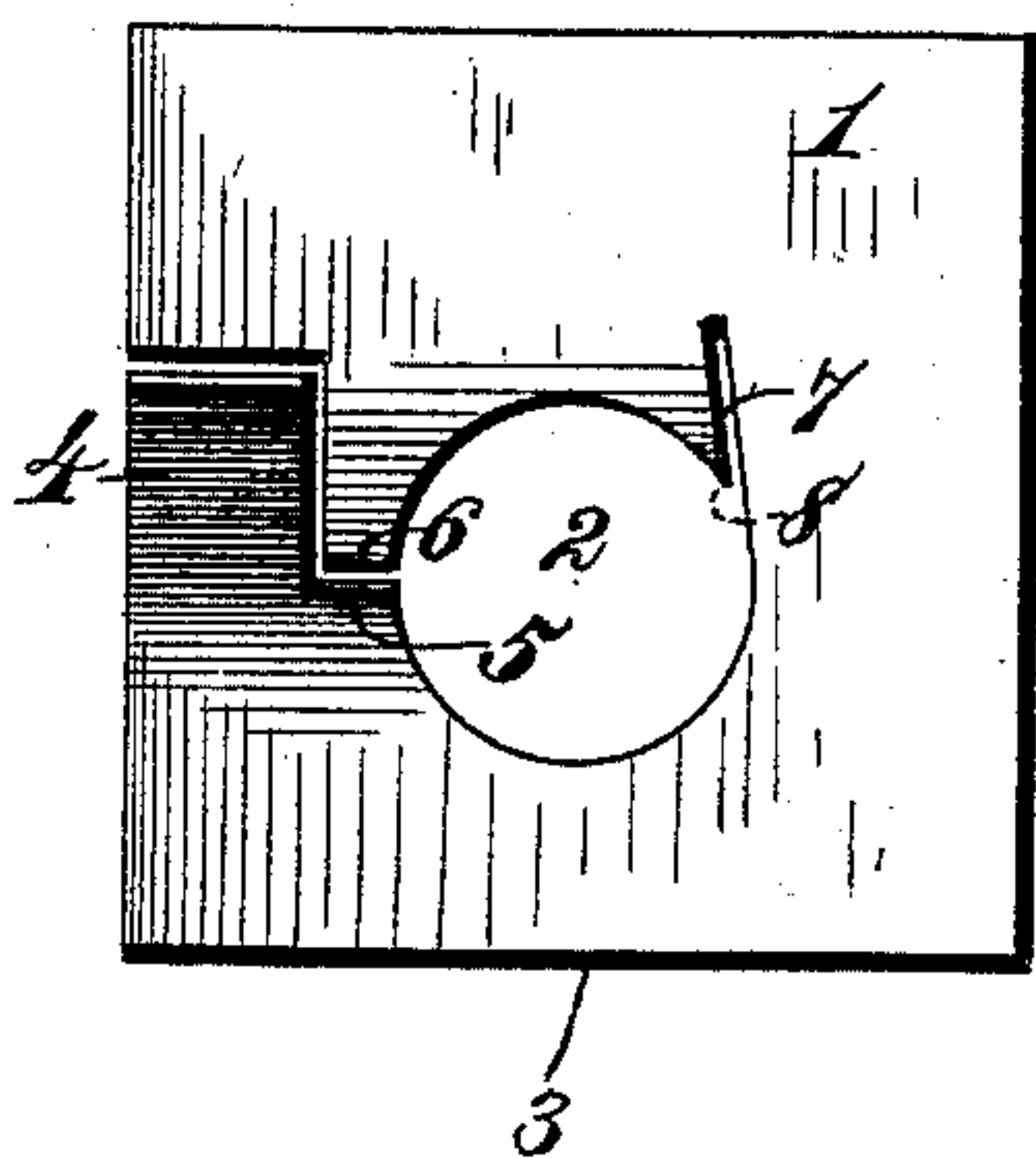


Fig. 2.

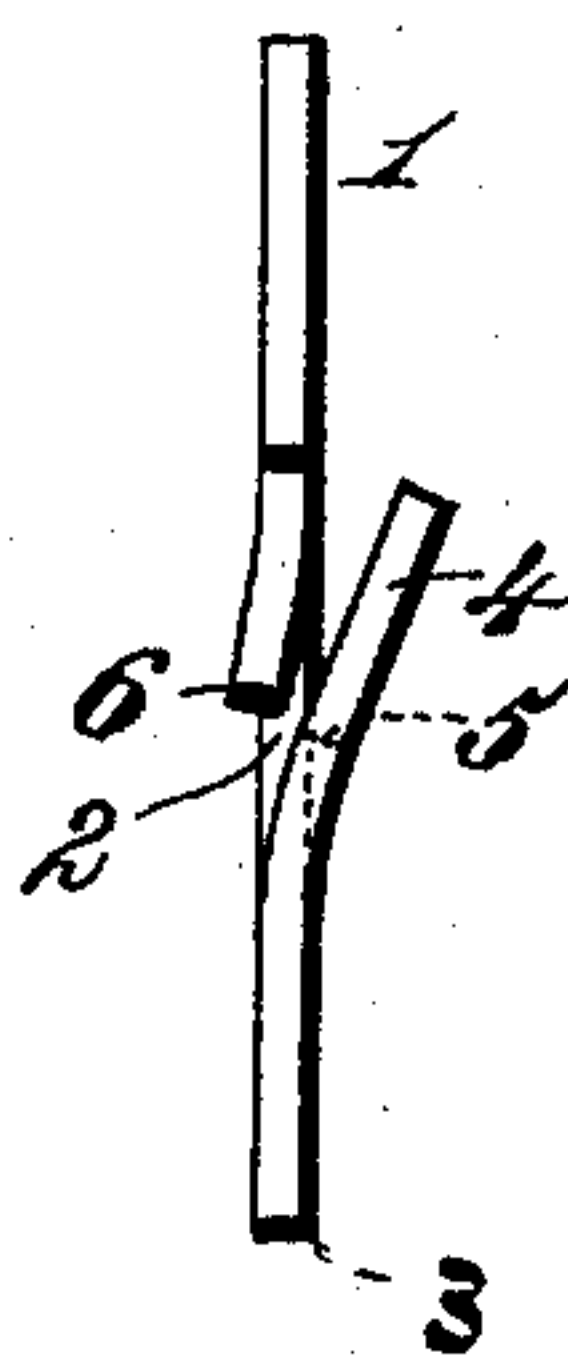
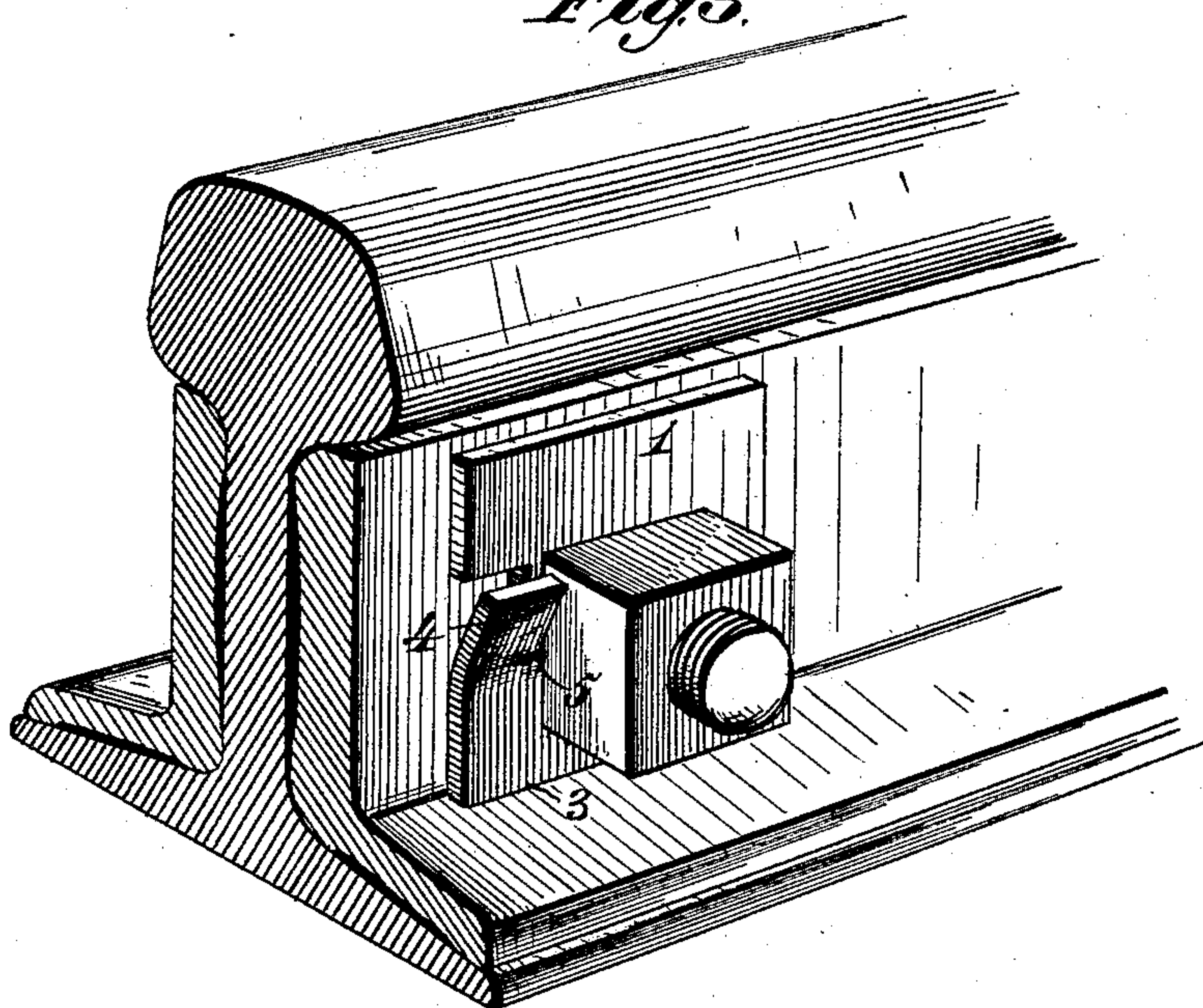


Fig. 3.



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UNITED STATES PATENT OFFICE.

PHARAOH C. THOMPSON, OF KNOXVILLE, MISSISSIPPI.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 424,836, dated April 1, 1890.

Application filed November 29, 1889. Serial No. 331,923. (No model.)

To all whom it may concern:

Be it known that I, PHARAOH C. THOMPSON, a citizen of the United States, residing at Knoxville, in the county of Franklin and State of Mississippi, have invented new and useful Improvements in Nut-Locks, of which the following is a specification.

My invention relates to certain new and useful improvements in nut-locks, the purpose thereof being to provide a simple and inexpensive device which may be cut or stamped from a sheet of metal, and by which the nut is not only positively locked in place, but is held together with the bolt firmly and rigidly, preventing rattling and the wear of the fastenings produced thereby, and keeping the bolts always tight as they wear.

It is the purpose of my invention also to provide a nut-lock or locking-washer formed from a single integral piece of sheet metal, and provided with a spring-shoulder, over which the nut turns and against which the edge of the nut lies, and an elastic cushion lying permanently behind and against the rear face of the nut and exerting its pressure upon the latter.

The invention consists in the several novel features of construction and new combinations of parts hereinafter fully set forth, and then definitely pointed out in the claims following this specification.

To enable others skilled in the art to make and use my said invention, I will proceed to describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation showing my invention. Fig. 2 is an edge elevation of the parts shown in Fig. 1. Fig. 3 is a view showing the parts in use.

In the said drawings, the reference-numeral 1 designates a substantially rectangular piece of sheet metal—such, for example, as spring-steel or hard iron. In this plate is formed a preferably non-central opening 2 of a size adapted to freely admit the bolt at such point that the straight edge 3 of the plate shall engage the foot-flange of the rail or of the fish-plate. One lateral portion of the plate is severed by an angular cut carried from the outer edge of the plate horizontally inward, and then downward to a point about in the plane of the axis of the bolt-opening, and then

inward again, thereby forming a tongue 4 and a shoulder 5, the latter lying adjacent to the opening 2. The vertical portion of the angular cut is formed at such a point that the edge of the tongue lies in a vertical line separated from the axis of the bolt-opening by a distance equal to the semi-diameter of the nut. A point 6 is also formed by the same cut, and a separate cut 7 is made upon the other side of the opening 2 to form a point 8. The tongue 4 is bent slightly outward, as shown in Fig. 2, and the points 6 and 8 are preferably turned somewhat inward. When the plate is placed upon the bolt and the nut turned on the latter, the nut rides over the tongue 4 and shoulder 5 at each revolution, the tongue springing outward behind each of the straight edges of the nut, and being drawn inward by the further revolution of the nut, by which its angle rides up on said tongue from its base to its free end. When the nut is firmly drawn up to place, the tongue will lie behind one of its straight edges, as shown in Fig. 4, while the elasticity of the outwardly-bent portion carrying the tongue and shoulder 5 will press the latter with considerable force outward. It will thus have a constant tendency to draw the head of the bolt closely up to the plate in which it lies and to hold the nut firmly in engagement with the threads of the bolt. Should the latter become loose by wear, it is prevented from rattling by the tension exerted upon it by the elastic shoulder.

The points 6 and 8 are preferably turned inward somewhat, as already described, in order that they may exert a tendency similar to that exerted by the shoulder 5—viz., to hold or press the nut outward with a yielding elastic pressure.

The nut-lock may be formed of a single piece of sheet metal of any size and adapted to any size of nuts and bolts. It can be produced at small expense, as it may be struck out at a single blow by means of swaging and cutting dies, and it forms a strong, durable, and accurate fastening for the nut, permanently locking it against all retrograde movement, besides preventing rattling and wear, in the manner already described.

What I claim is—

1. A nut-lock formed of a single piece of sheet metal having an opening for the bolt,

and provided with an elastic outwardly-bent tongue locking the nut, and a shoulder carried by said tongue and bearing upon the rear face of the nut with a permanent elastic pressure, substantially as described.

2. A nut-lock composed of a single piece of sheet metal having an opening for the bolt, one lateral portion of the plate being cleft by a cut forming an outwardly-bent tongue having an edge locking the nut, and a shoulder carried by the tongue and pressing against the rear face of the nut, a cut entering the other side of the bolt-opening to form a point which, in conjunction with a similar point op-

posite, is bent inwardly, substantially as described. 15

3. A nut-lock consisting of a substantially rectangular plate having a non-central opening 2, an elastic outwardly-bent tongue 4 and shoulder 5, and inwardly-turned points 6 and 8, substantially as described. 20

In testimony whereof I have affixed my signature in presence of two witnesses.

PHARAOH C. THOMPSON.

Witnesses:

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