

(No Model.)

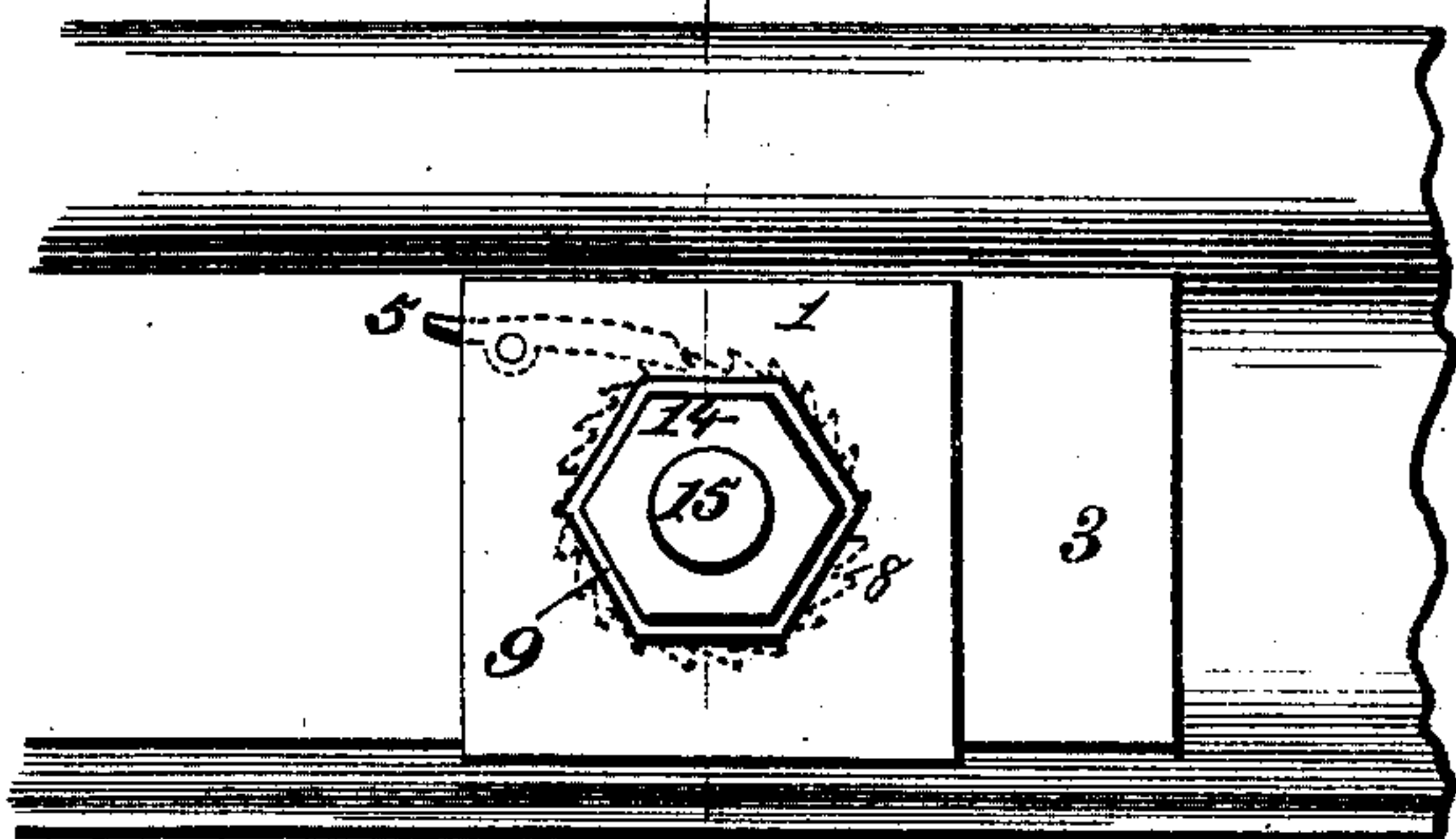
P. J. DAMBACH & J. S. HANNAN.

NUT LOCK.

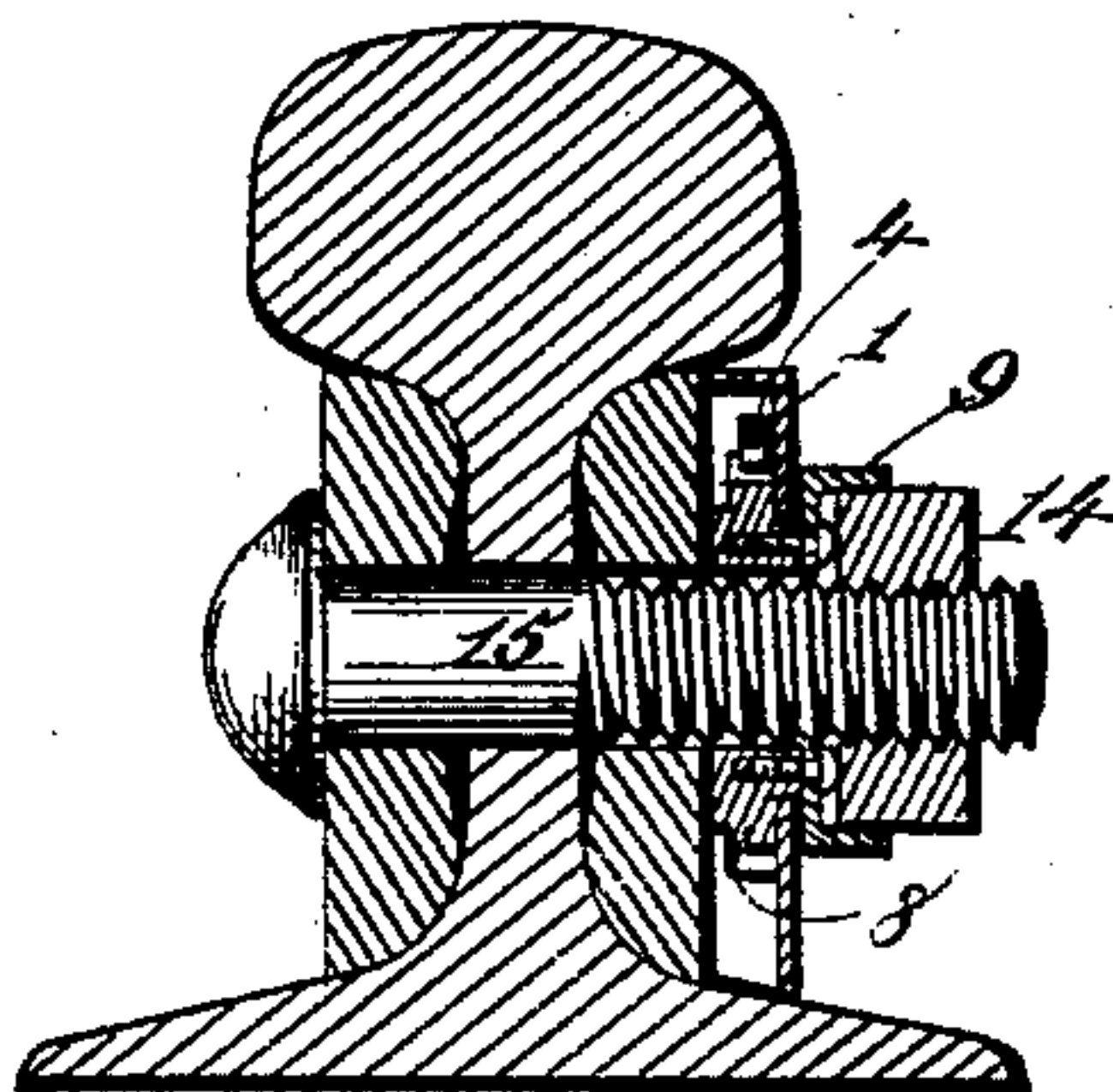
No. 359,385.

Patented Mar. 15, 1887.

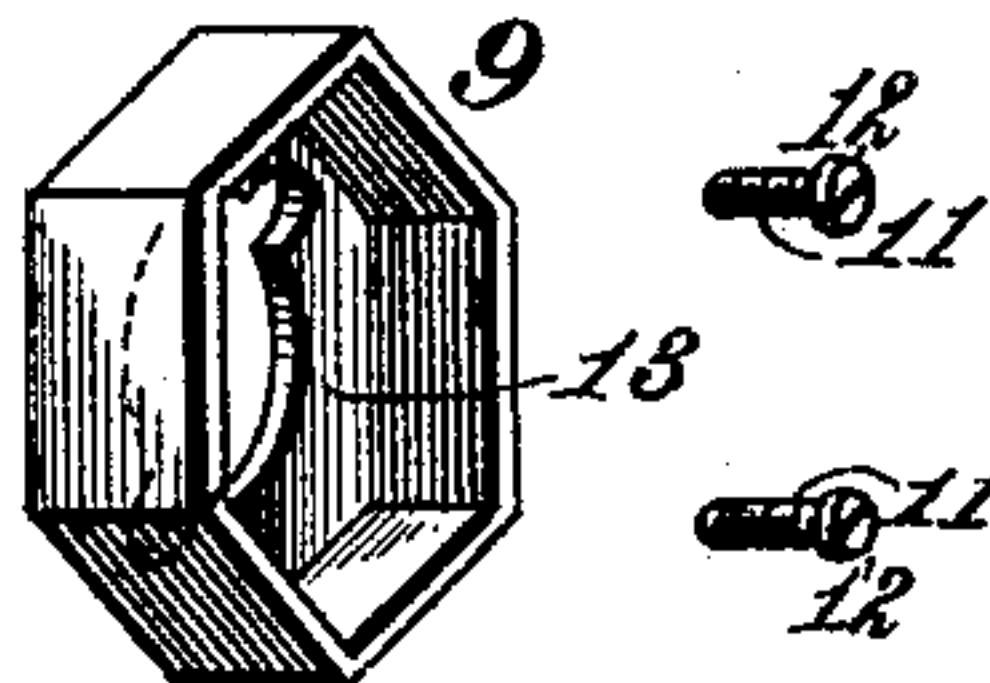
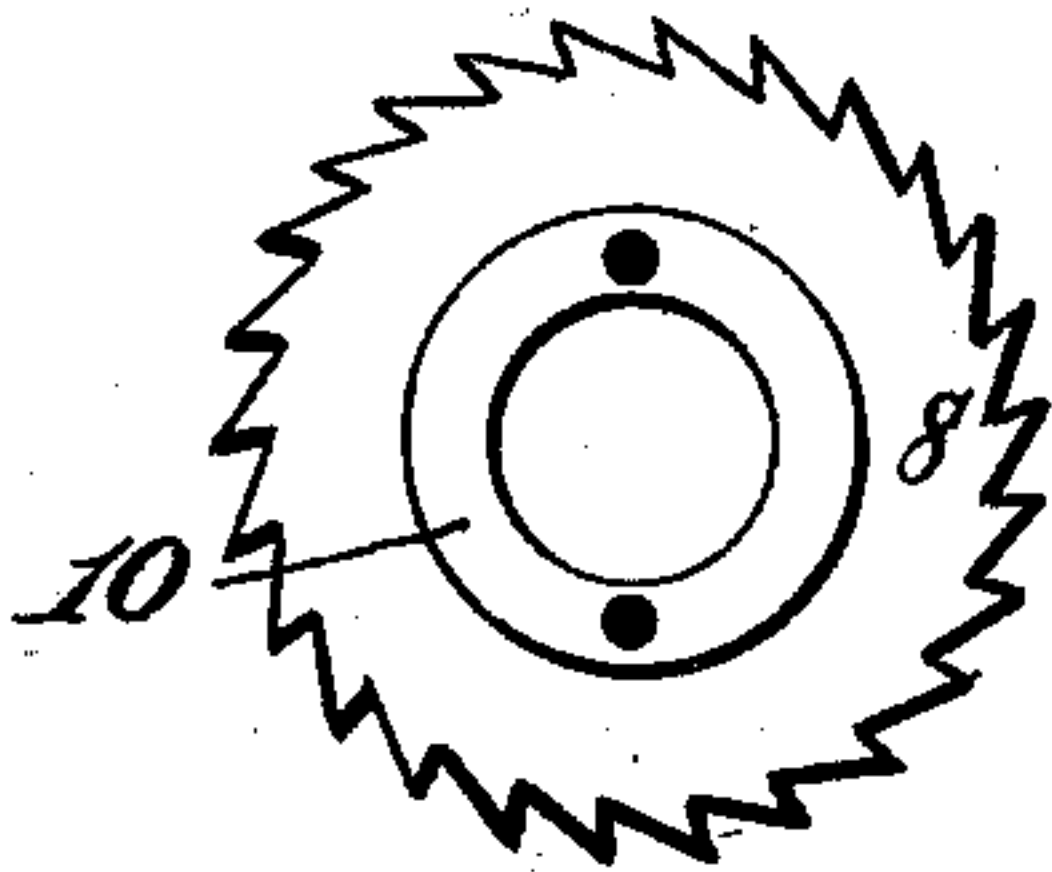
*Fig. 1.*



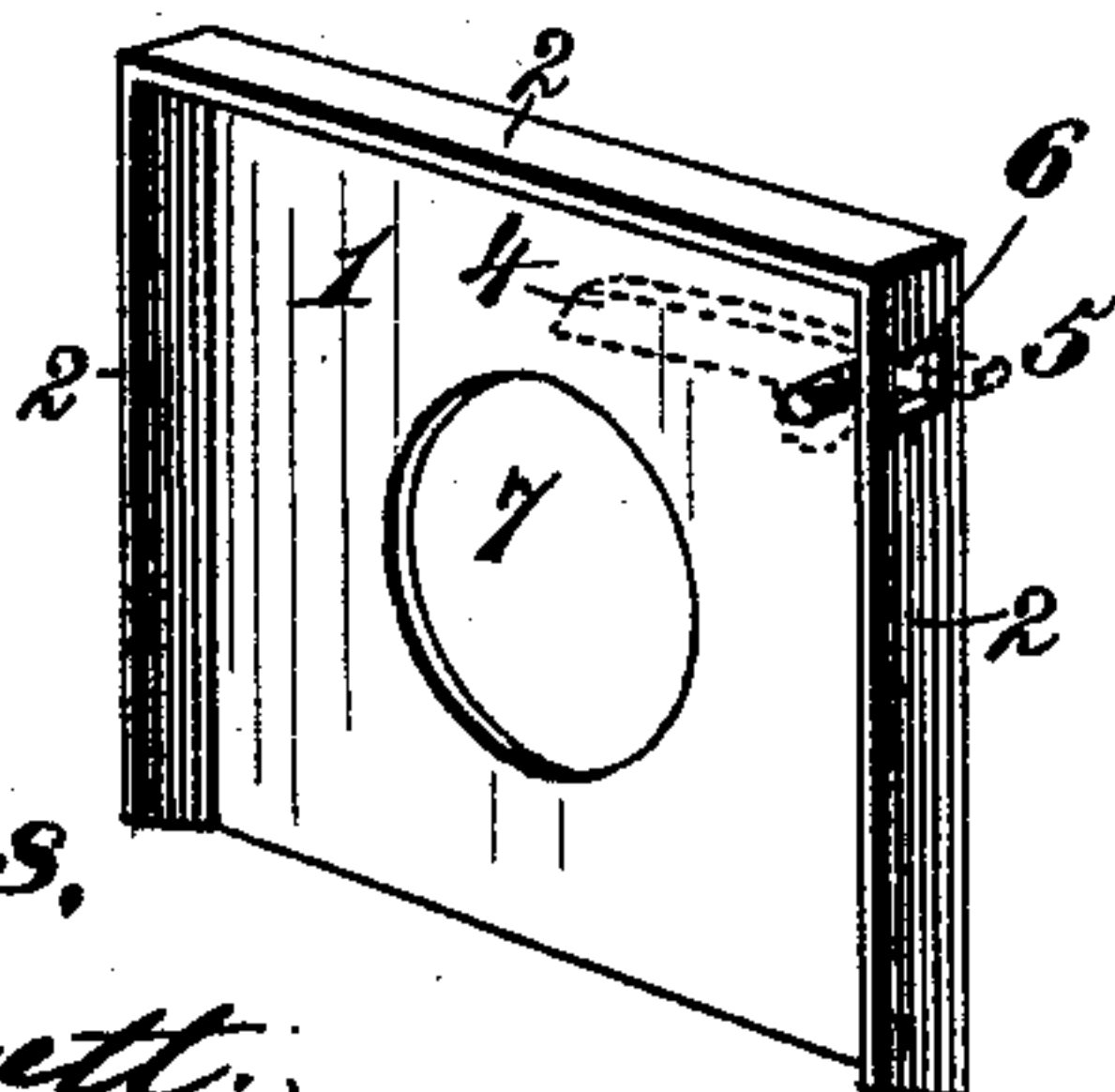
*Fig. 2.*



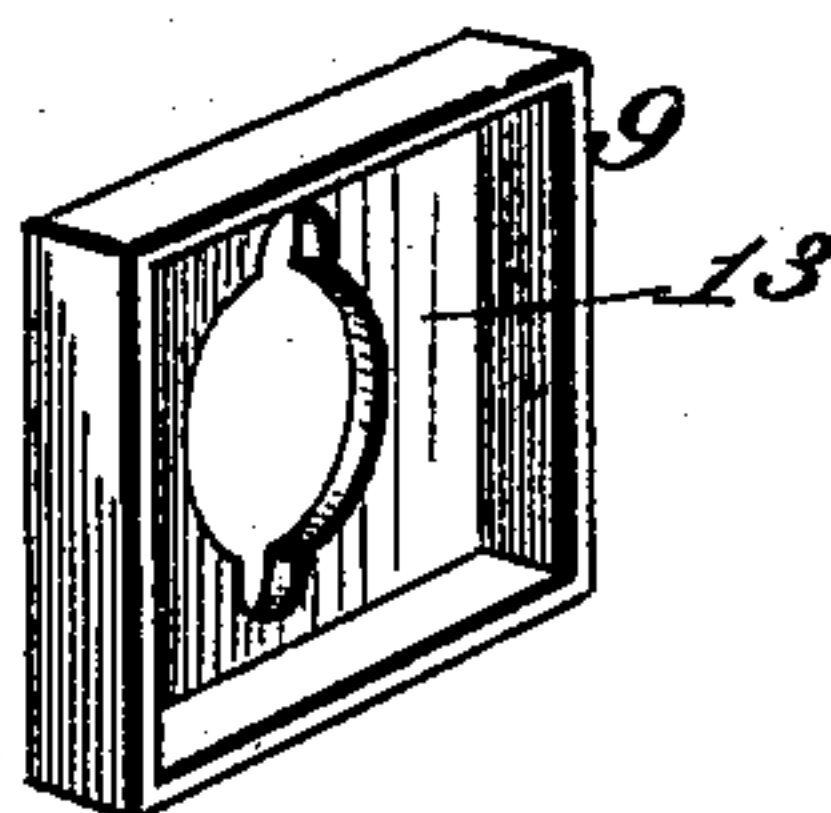
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

PHILIP JACOB DAMBACH AND JOHN S. HANNAN, OF SHAWNEE, OHIO.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 359,385, dated March 15, 1887.

Application filed November 9, 1886. Serial No. 218,406. (No model.)

*To all whom it may concern:*

Be it known that we, PHILIP JACOB DAMBACH and JOHN S. HANNAN, citizens of the United States, residing at Shawnee, in the county of Perry and State of Ohio, have invented new and useful Improvements in Nut-Locks, of which the following is a specification.

This invention has for its object to provide novel and efficient means for locking nuts on screw-bolts for securing various objects—such as the fish-plates of railway-rails.

The invention consists in the features of construction and combination of devices herein-after described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation showing the invention applied to the bolt and nut for securing the fish-plates of a railway-rail; Fig. 2, a sectional view taken on the line *x x* of Fig. 1; Fig. 3, detail views of the ratchet-disk and the cap for the nut; Fig. 4, a detail perspective view of the flanged plate in which the ratchet-disk is swiveled; and Fig. 5, a detail perspective view showing the cap adapted for a square or four-sided nut.

In order to enable those skilled in the art to make and use our invention, we will now describe the same in detail, referring to the drawings, where—

The numeral 1 indicates a square or similar shaped plate having its top and side edges provided with lateral flanges 2, to rest against the fish-plate 3, and form in connection therewith and the base or flange of the rail or other object a closed casing. A pawl, 4, is pivoted to the inside of the plate, and is furnished with a tail or finger piece, 5, projecting through an aperture, 6, in one of the side flanges, 2. The flanged plate is provided at its center with a circular orifice, 7, in which are swiveled or journaled to rotate the ratchet-disk 8 and nut-cap 9, as we will now explain. The disk 8 is provided on its periphery with the ratchet-teeth, and from one side projects a circular sleeve or hub, 10, located and adapted to rotate in the circular orifice of the plate, the ratchet-disk bearing against the inside of the latter. The nut-cap 9 is placed at the outside of the plate, and is connected with the sleeve or hub of the ratchet-disk in any suitable manner—as, for example, by screws or pins 11 entering the sleeve or hub, and having heads 12 engaging

the base 13 of the nut-cap. The pawl 4 engages the ratchet-disk and prevents its backward rotation, while permitting its free forward rotation for the purpose of tightening up the nut 14 on the screw-bolt 15.

If the nut be hexagonal, the nut-cap is furnished with a hexagonal cavity to receive it; but obviously where the nut is of other form—as, for instance, square or four-sided—the nut-cap will be correspondingly formed to receive it, as in Fig. 5.

The ratchet-disk and nut-cap are provided with orifices to permit them to pass onto the bolt, after which the nut is applied and entered into the nut-cap. The rotation of the nut in screwing it up rotates the nut-cap, and the latter in turn rotates the ratchet-disk until the nut is screwed to the proper position, where it is locked by the pawl engaging the ratchet-disk. The flanged plate during such movements of the ratchet-disk and nut-cap remains stationary as regards any rotation, such plate simply advancing along the bolt. If it is desired to loosen or remove the nut for any purpose, the tail or finger piece of the pawl is operated to disengage the latter from the ratchet-disk, when obviously the nut-cap and disk can be turned backward on the bolt.

When the parts are in position to lock the nut in its position, the ratchet-disk is inclosed and snow and dirt prevented from gaining access thereto, which is important, in that the disk is preserved in correct working order.

Obviously the nut-cap need not embrace or engage all sides of the nut, it only being necessary to provide such a construction that the cap will engage the nut and be rotated when the nut is turned.

The nut-locking devices described can be applied to the fastening-bolts of ordinary fish-plates and other objects without changing the construction of the latter, which is an important advantage over such ratchet-nut locks as require some specially-constructed device to engage the fish-plate or other object to be secured.

The invention is applicable to nearly, if not all, places where a nut is to be locked on a screw-bolt.

Having thus described our invention, what we claim is—

1. The combination, in a nut-lock, of a stationary flanged plate having a circular orifice, a



ratchet-disk and nut-cap located, respectively, on opposite sides of the plate, and rigidly connected together and swiveled to rotate in the orifice therein, and a pawl for engaging the ratchet, said nut-cap receiving within it the nut of the bolt, whereby the nut, cap, and disk rotate together, substantially as described.

2. The combination, in a nut-lock, of a stationary flanged plate having a circular orifice, a ratchet-disk having a sleeve or hub rotatable in said circular orifice, a nut-cap rigidly connected with the sleeve or hub, and a pawl for engaging the ratchet-disk, said nut-cap receiving within it the nut of the bolt, whereby the nut, cap, and disk rotate together, substantially as described.

3. The combination, in a nut-lock, of a stationary plate having a circular orifice and

edge flanges, one of which is provided with an aperture, and a pawl pivoted to the plate and having a tail or finger piece projecting through the aperture in the flange, with the ratchet-disk and nut-cap located, respectively, at opposite sides of the plate, and rigidly connected together and swiveled to rotate in the orifice therein, said nut-cap receiving within it the nut of the bolt, whereby the nut, cap, and disk rotate together, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

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