

No. 646,425.

Patented Apr. 3, 1900.

J. C. GENTRY.

NUT LOCK.

(Application filed Feb. 20, 1899.)

(No Model.)

Fig. 1.

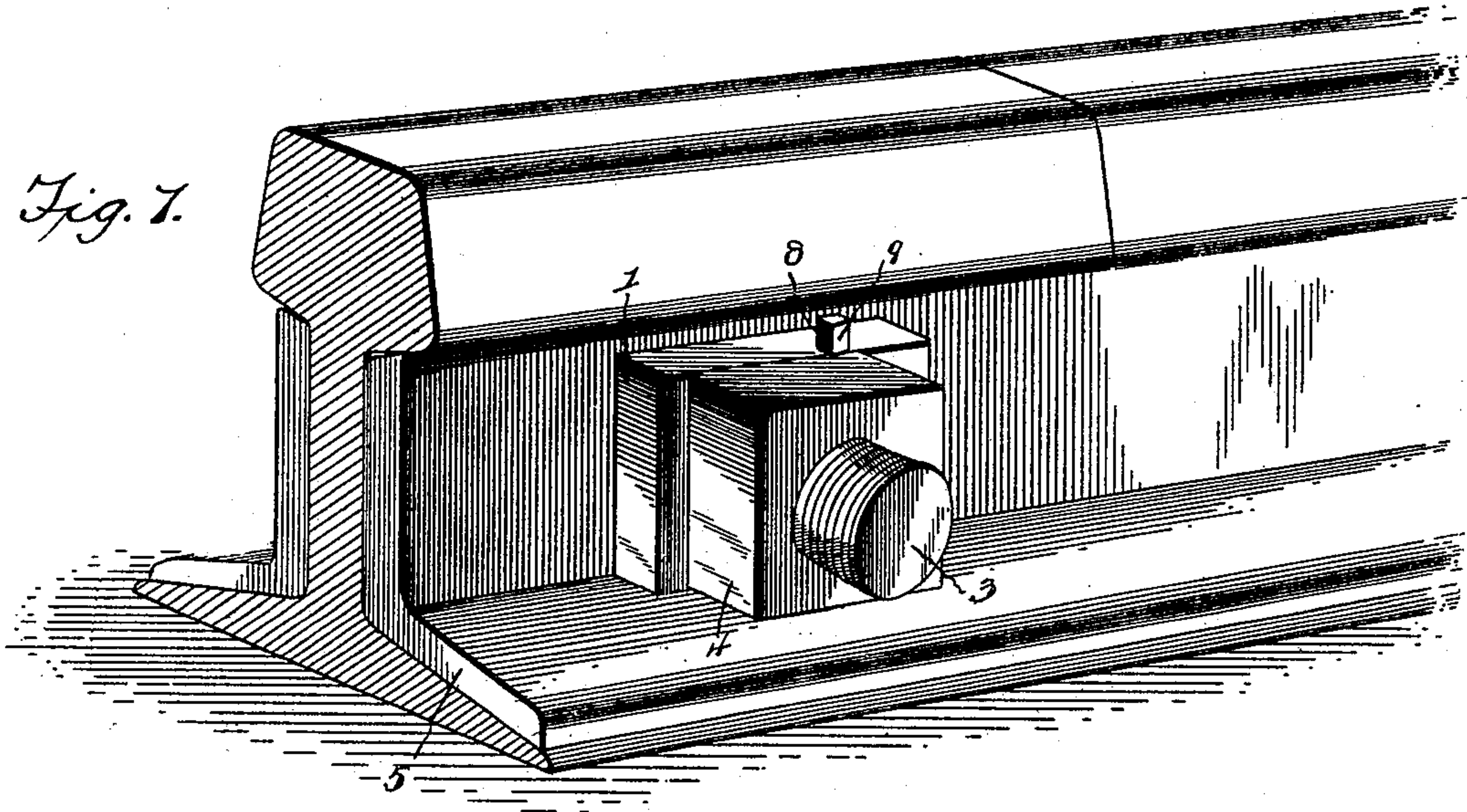


Fig. 2.

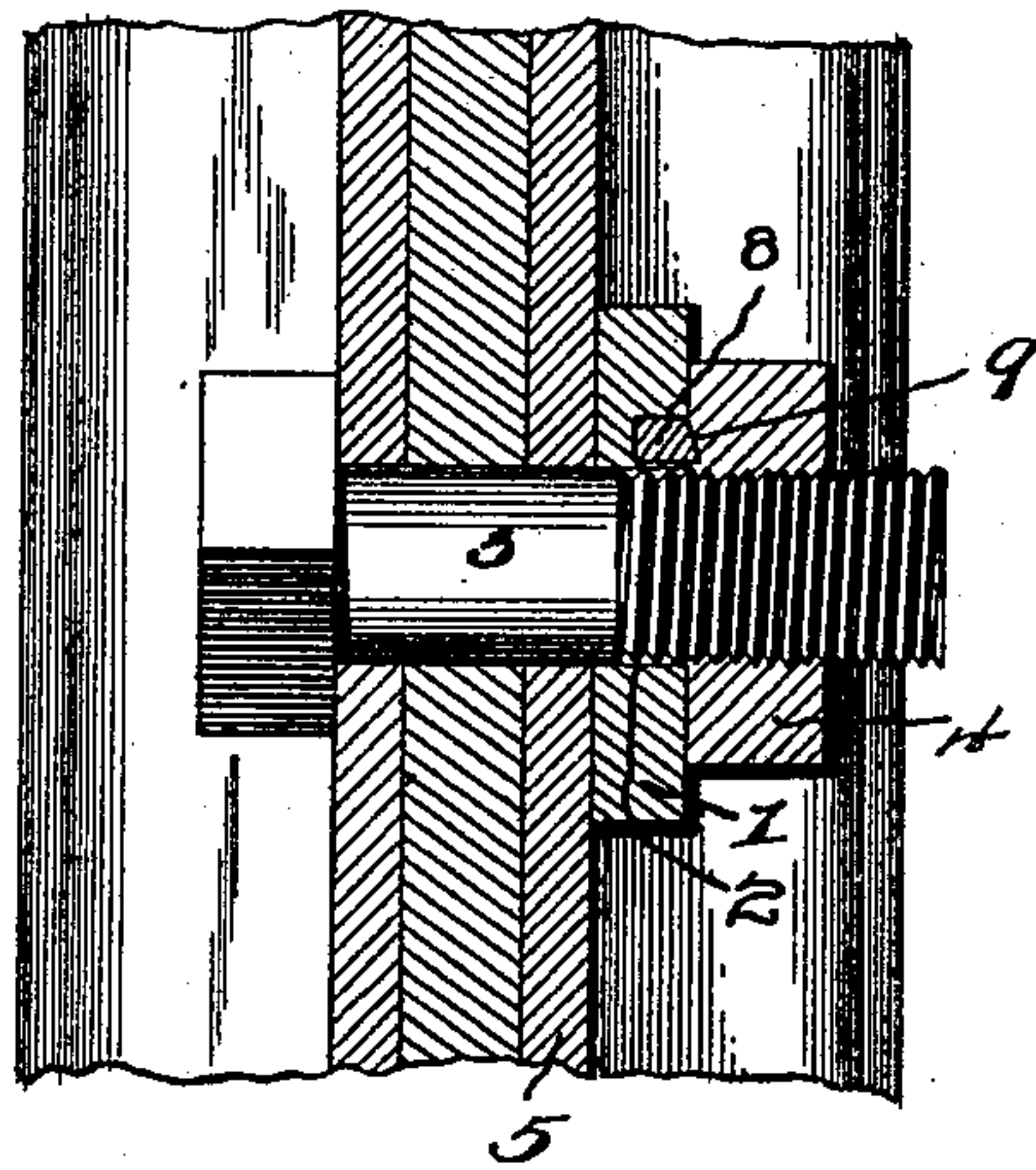


Fig. 3.

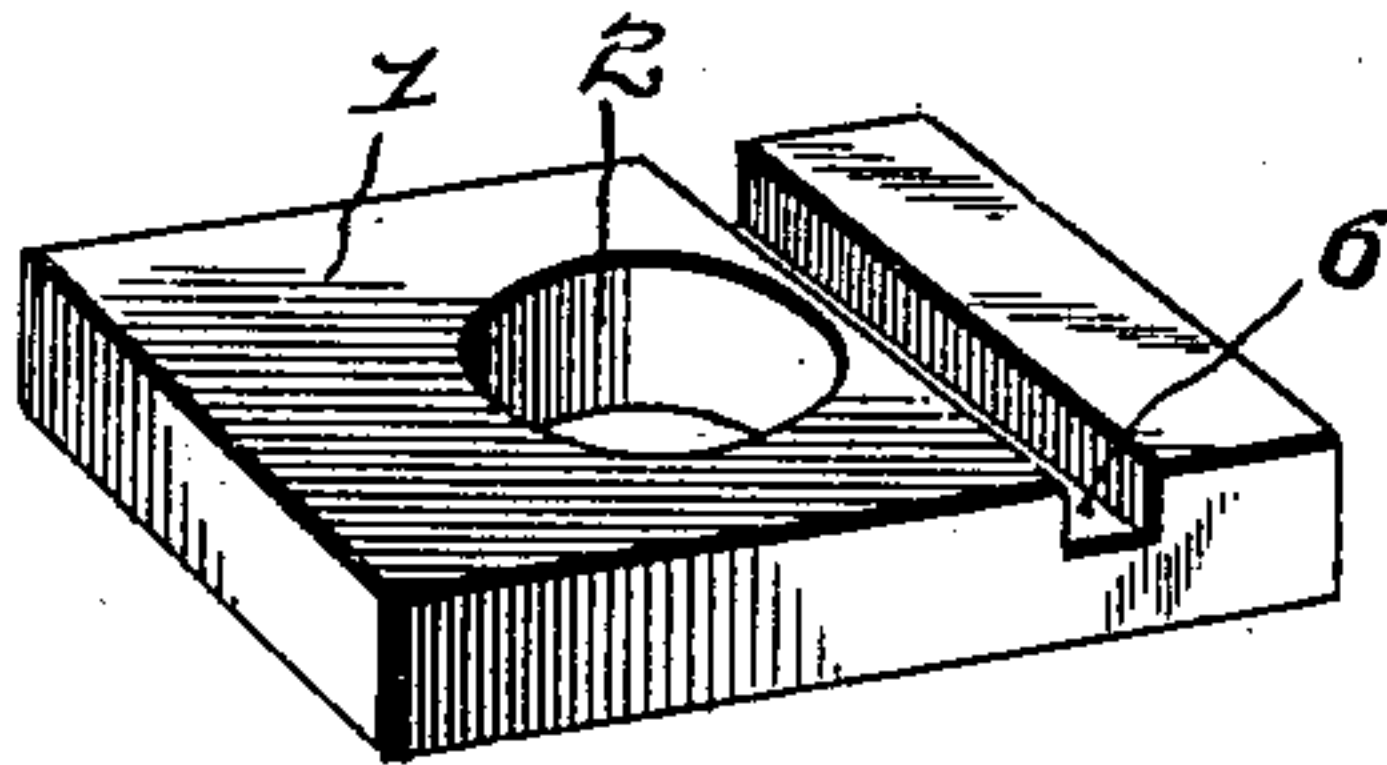
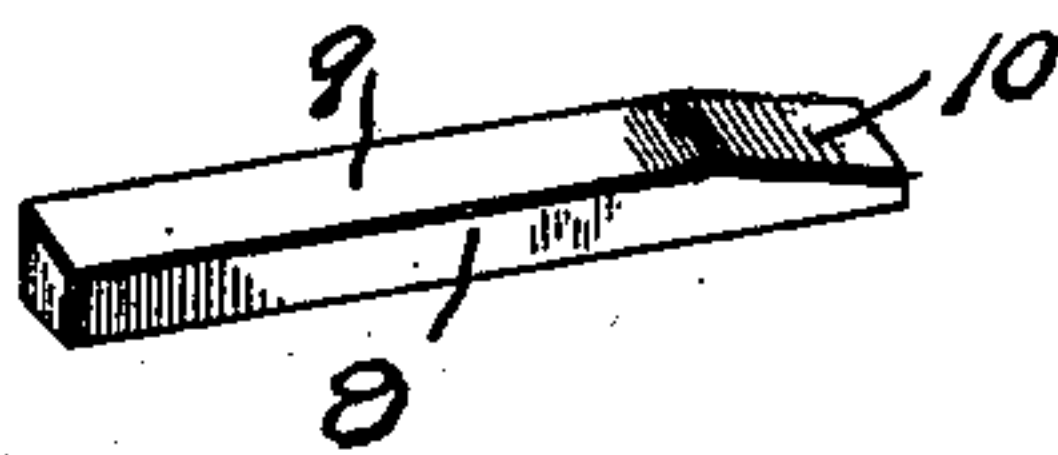


Fig. 4.



Witnesses

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By his Attorneys,

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UNITED STATES PATENT OFFICE.

JAMES C. GENTRY, OF MONROE CITY, MISSOURI.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 646,425, dated April 3, 1900.

Application filed February 20, 1899. Serial No. 706,202. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. GENTRY, a citizen of the United States, residing at Monroe City, in the county of Monroe and State of Missouri, have invented a new and useful Nut-Lock, of which the following is a specification.

The invention relates to improvements in nut-locks.

The object of the present invention is to improve the construction of nut-locks and to provide a simple, inexpensive, and efficient device of great strength and durability, designed for use on rail-joints and other constructions subject to vibration and capable of being applied to an ordinary bolt and nut without necessitating any alteration in the construction thereof, and adapted, after a nut has been screwed home, to engage the inner face of the same and effectually prevent the nut from accidentally unscrewing.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a nut-lock constructed in accordance with this invention and shown applied to a portion of a rail-joint. Fig. 2 is a horizontal sectional view. Fig. 3 is a detail perspective view of the plate or washer. Fig. 4 is a similar view of the key.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a solid metal plate or washer provided with a bolt-opening 2 and designed to be arranged on a bolt 3 and to be interposed between a nut 4 and a fish-plate 5, and the lower edge of the plate or washer 1 is straight and abuts against the lower flange of the angle fish-plate 5, whereby it is held against rotation; but the lower edge of the plate or washer may be arranged against the bottom flange of a rail when a flat fish-bar is employed. The bolt 3 and the nut 4 are of the ordinary construction, and the latter is screwed tightly against the outer face of the washer or plate 1, which is provided with a vertical groove 6 in its outer face for the reception of a locking-key 8, which engages

the inner face of the nut, and the said groove is located adjacent to the bolt-opening of the plate or washer, as clearly illustrated in Fig. 3 of the accompanying drawings, in order that the locking-key may engage the nut in any position the latter may assume.

The plate or washer is constructed sufficiently thick to avoid being weakened by the vertical groove and to enable it to support the fish-plate should the latter become cracked or otherwise injured, and the key, which is adapted to slide freely in the groove, has its side and rear faces conforming to the configuration of the same. The front or outer face of the key 8 is beveled transversely to provide a cutting edge 9, which projects beyond the front or outer face of the plate or washer and which is disposed longitudinally of the key along one edge. The front end of the key is slightly tapered or pointed to enable it to be readily introduced behind the nut to facilitate placing the key in its locking position. As the key is driven into the groove of the plate or washer its projecting cutting edge, which is preferably located adjacent to the opening through the nut, engages the inner face of the nut and embeds itself sufficiently in the same to prevent effectually the nut from accidentally unscrewing. By inclining one side of the wedge relatively to the other side it forms a cutting edge flush with one side of the wedge, which projects slightly above the groove in the washer at that point, and by locating this edge adjacent to the hole in the nut the tendency of the nut in turning backward to rotate the key in its seat is obviated and a better result is secured than if the wedge were made perfectly rectangular in cross-section and the cutting edge located substantially midway of the sides of the groove. The locking-key is designed to be constructed of steel in order that the projecting edge, which engages the nut, may readily cut its way into the latter. The nut may be removed from the bolt by employing sufficient pressure to ride it over the key, or the latter may be forced out of the groove by any suitable means for releasing the nut.

The invention has the following advantages: The nut-lock, which is simple and comparatively inexpensive in construction, is adapted to be applied to rail-joints, bridges, machin-

ery and other constructions subject to vibration, and it is capable of securely locking a nut against accidental unscrewing without necessitating any alteration in the construction of either the nut or the bolt. The locking-key, which is guided in the groove of the plate or washer, is adapted to engage the smooth inner face of a nut at any point on the latter, and the nut may be screwed up to the desired extent without interfering with the operation of the key. The tapered or slightly-pointed end of the key is readily introduced behind the nut, and the sharp projecting edge will readily cut its way into the smooth inner face of the same.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A nut-lock comprising a rectangular washer, one surface of which is provided with a transverse groove adjacent to the perfora-

tion therethrough, and a key in said groove, said key being substantially rectangular in cross-section upon three sides, one of the opposing sides of which is wider than the other one, and the remaining side is beveled or inclined and forms a cutting portion along one edge of the key, one end of said beveled face being inclined or wedge-shaped.

2. The combination, with a bolt, of a nut and a washer thereon, the face of the washer adjacent the nut being provided with a transverse groove, and a key in said groove, one edge of which projects beyond the surface of the washer adjacent to the opening through the nut, one end of the key being beveled upon the side provided with the projecting portion.

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

JAMES C. GENTRY.

Witnesses:

THOS. J. SHARP,
MANNING ELLIOTT.