

No. 627,953.

Patented June 27, 1899.

T. W. CROZIER.

NUT LOCK.

(Application filed Nov. 8, 1898.)

(No Model.)

Fig. 1.

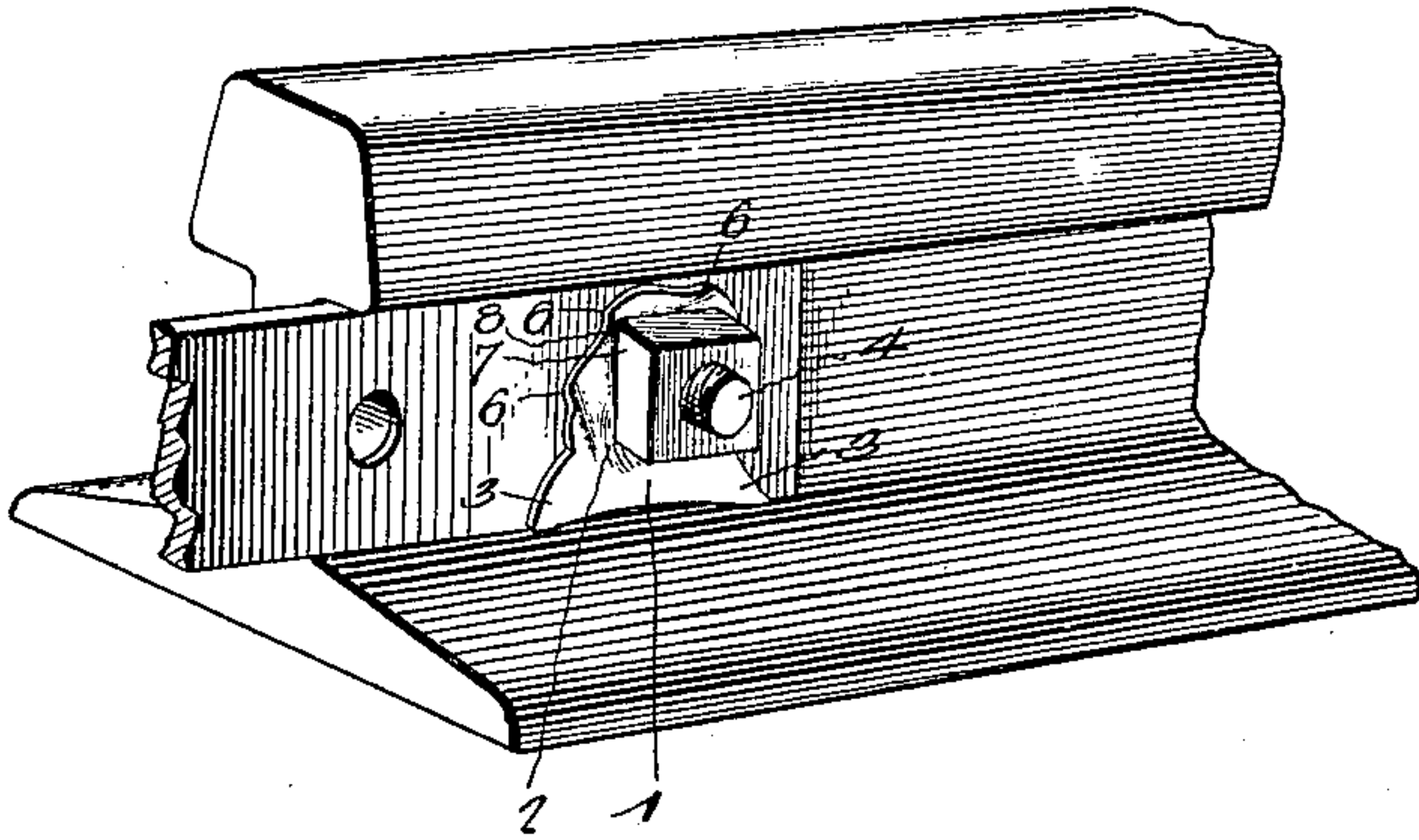


Fig. 5.

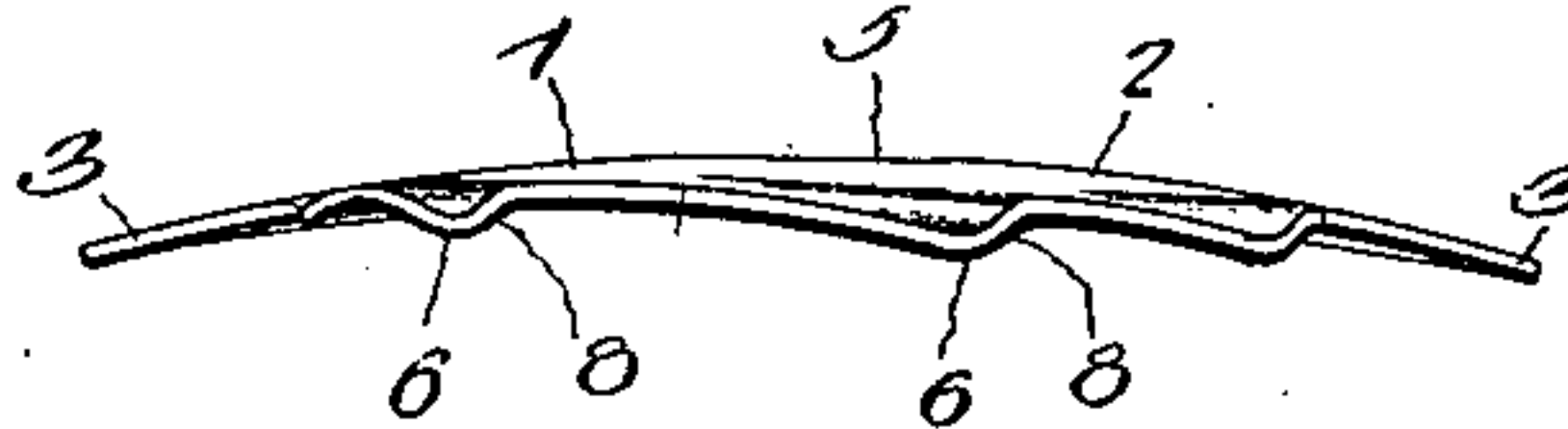


Fig. 2.

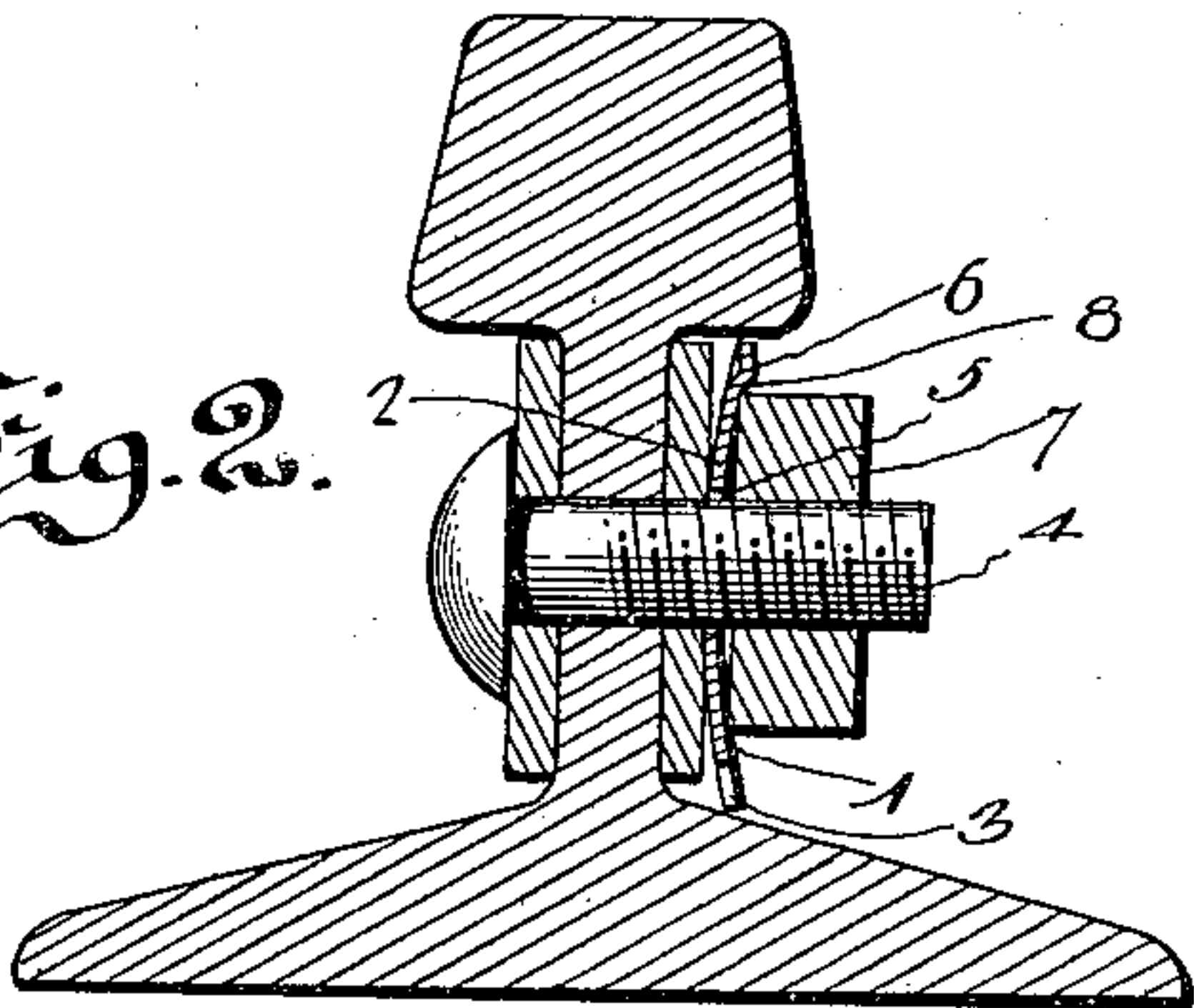


Fig. 6.



Fig. 3.⁶

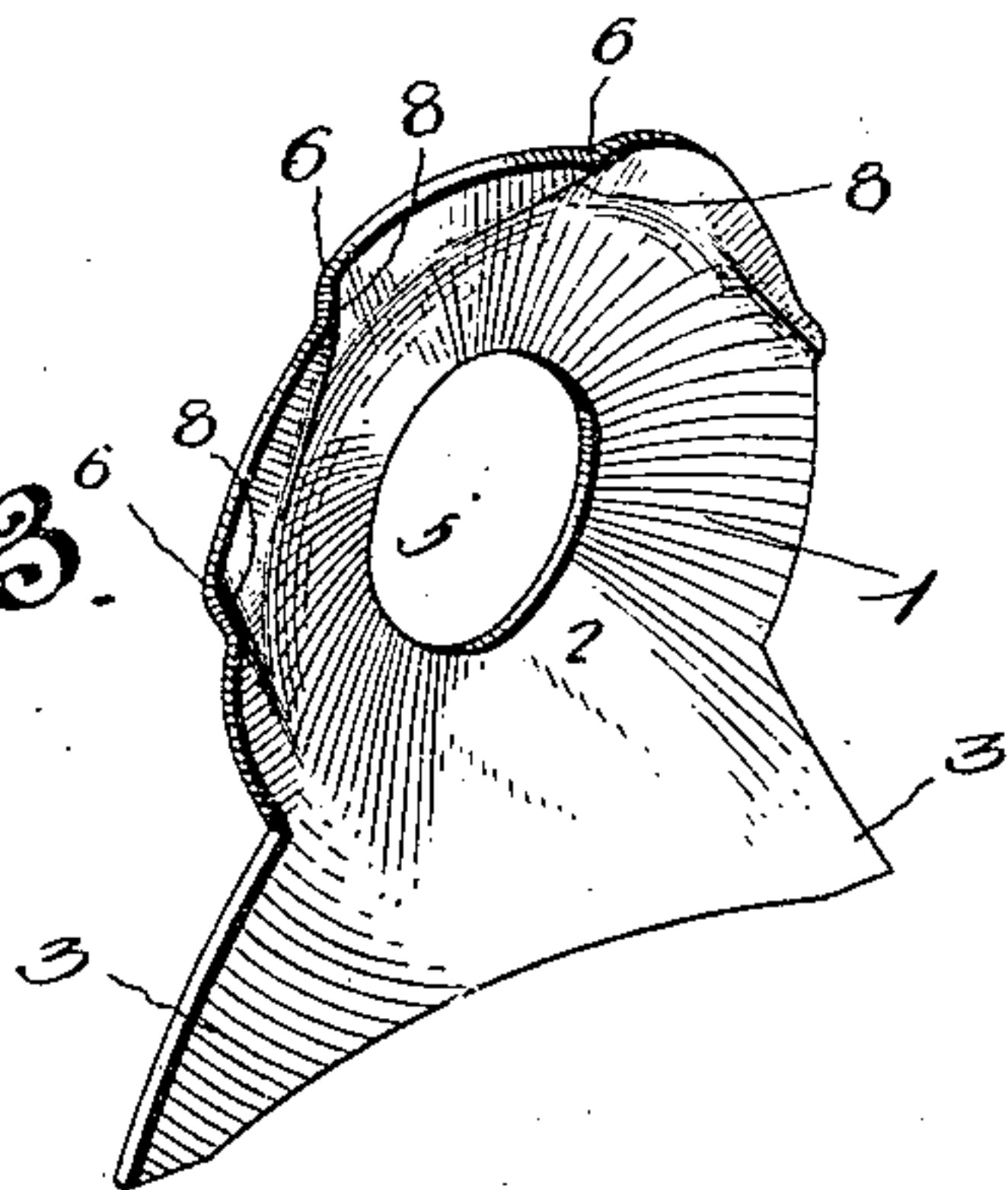
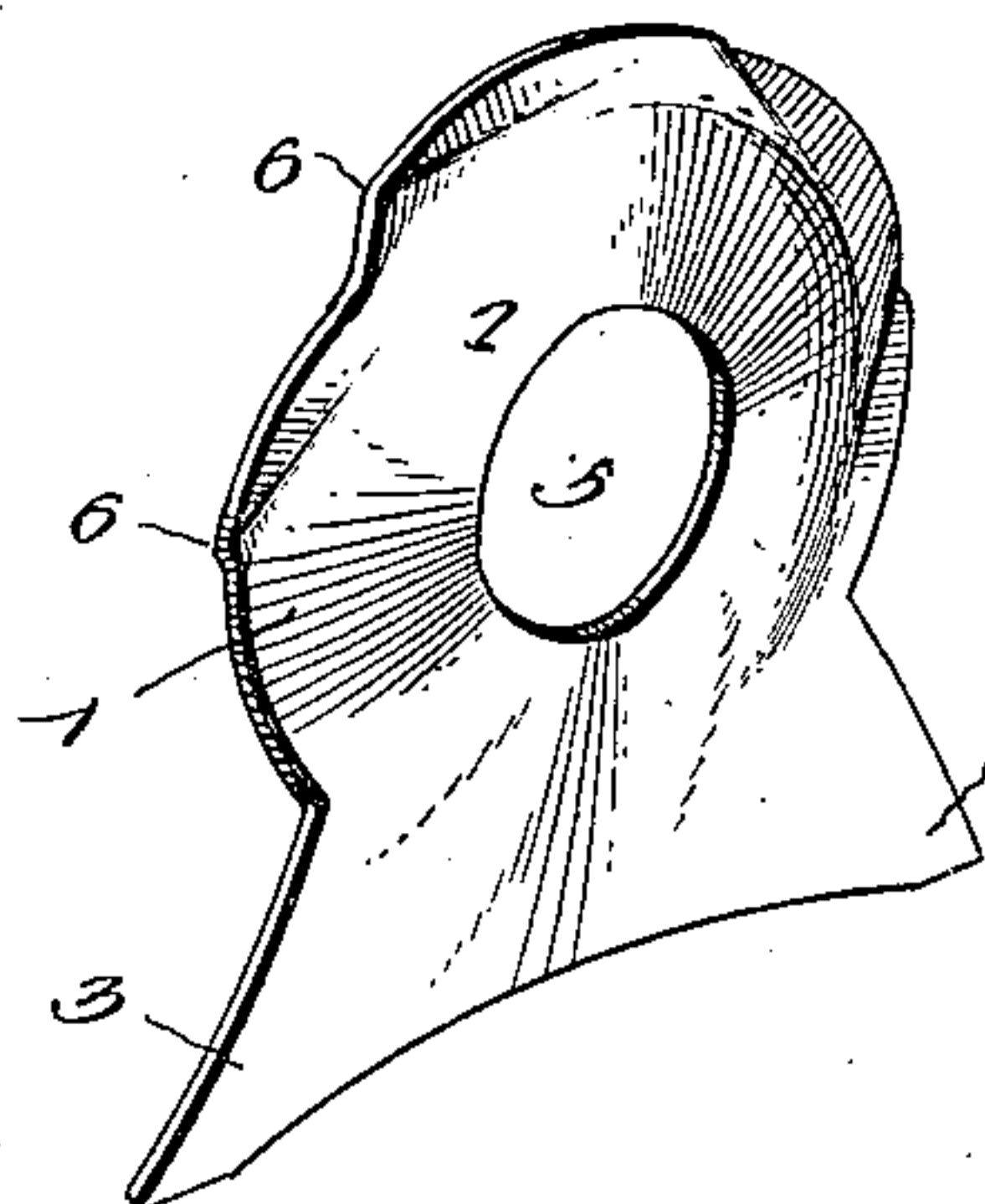


Fig. 4.



Witnesses

Witnesses
J. Gaultierwell By his Thomas W. Crozier, Inventor.
Attorneys,
J. F. Riley C. A. Snow & Co.

Thomas W. Crozier, Inventor.

By his Attorneys,

Cashover

UNITED STATES PATENT OFFICE.

THOMAS WASHINGTON CROZIER, OF ROANOKE, VIRGINIA, ASSIGNOR OF
ONE-HALF TO ELIZA S. GALE, OF SAME PLACE, AND M. G. MCCLUNG,
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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 627,953, dated June 27, 1899.

Application filed November 8, 1898. Serial No. 695,867. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WASHINGTON CROZIER, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented a new and useful Nut-Lock, of which the following is a specification.

The invention relates to improvements in nut-locks.

10 The object of the present invention is to improve the construction of nut-locks and to provide a simple, inexpensive, and efficient device adapted to be readily applied to ordinary bolts and nuts without necessitating any alteration in the construction thereof and capable of securely locking the same and preventing the nuts from accidentally unscrewing.

Another object of the invention is to enable the nuts to be readily removed when desired without injuring them or the bolts or impairing the future usefulness of the locking device.

25 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 claim 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 rail-joint. Fig. 2 is a sectional view taken longitudinally of the bolt. Fig. 3 is a detail perspective view of the locking plate or washer, showing the concave face thereof. Fig. 4 is a similar view showing the convex face of the same. Fig. 5 is a plan view of the upper edge of the locking plate or washer. Fig. 6 is a horizontal sectional view of the locking plate or washer.

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

1 designates a locking plate or washer constructed of sheet-steel or other resilient metal, and consisting of a dished or concavo-convex body portion 2, provided at the bottom with oppositely-disposed substantially triangular extensions 3, forming a base adapted to fit against the bottom flange of a rail or the bot-

tom flange of an angle fish bar or plate, whereby the locking plate or washer is prevented from rotating on a bolt 4.

The concavo-convex body portion of the locking plate or washer is provided with a central bolt-opening 5, and its upper curved edge or periphery is provided with a curved series of protuberances 6, formed by depressing or indenting the inner or rear face of the locking plate or washer and providing at each protuberance a long inclined face and an abrupt shoulder 8, which is adapted to engage an edge of the nut 7, whereby the latter is prevented from accidentally unscrewing. The metal of which the locking plate or washer is constructed possesses sufficient resiliency to enable the nut to be readily forced over the protuberances without injuring the same, and the abrupt shoulders 8, which hold the nut against accidental retrograde rotation, have a slight incline, as clearly shown in Fig. 5 of the accompanying drawings, so that when sufficient power is applied the nut may be forced backward to unscrew it.

The rear or inner face of the locking plate or washer is adapted to fit against a fish-plate similar to an ordinary washer, and the concavo-convex body portion permits the parts to expand and contract, and if compressed when the nut is screwed home will operate to hold the parts perfectly tight.

The invention has the following advantages: The locking plate or washer, which is simple and inexpensive in construction, is adapted to be readily applied to bolts and nuts without necessitating any alteration in the construction of the same, and an efficient ratchet is provided at the periphery of the plate or washer without slitting the same to form the ratchet-teeth. The concavo-convex body portion of the locking plate or washer permits the parts to expand and contract without releasing its grip on a nut, and the tapering protuberances are sufficiently resilient to enable a nut to ride over them without destroying their shape, and while the abrupt shoulders are adapted to engage a nut sufficiently to prevent it from accidentally unscrewing they have a slight incline, so that

when the necessary power is applied the nut may be unscrewed and removed from a bolt without injuring the nut-lock or the threads.

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

Having thus described the invention, I claim—

10 A nut-lock made of a plate of resilient material, and comprising a concavo-convex body portion provided at its upper edge or periphery with a series of tapering resilient protuberances, formed by corrugating or depressing

the inner or rear face of the plate, and providing long, gradual-inclined faces, and having abrupt shoulders adapted to engage a nut, said shoulders being disposed at a slight inclination, whereby, when sufficient pressure is applied, a nut may be forced over them, substantially as described. 15 20

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

THOMAS WASHINGTON CROZIER.

Witnesses:

T. F. BARKSDALE,
E. HIBARGER.