

No. 626,093.

Patented May 30, 1899.

W. J. PURVIS.
NUT LOCK.

(Application filed Mar. 18, 1899.)

(No Model.)

Fig. 1.

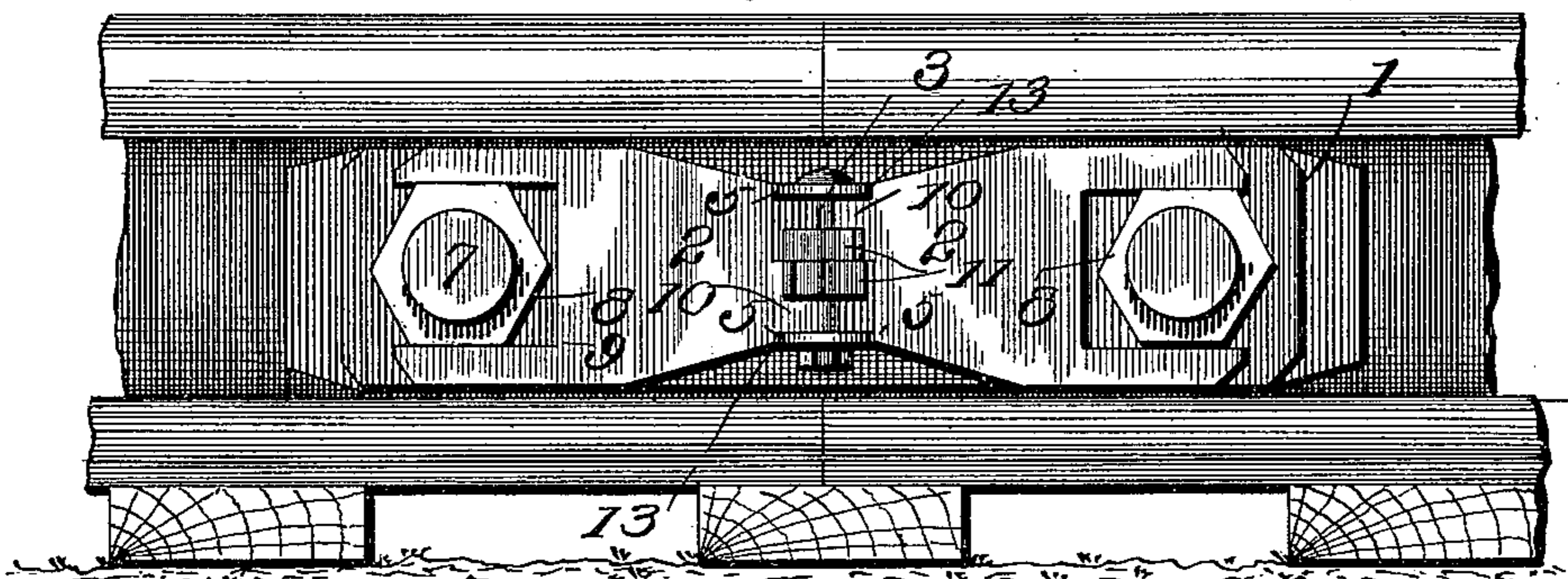


Fig. 2.

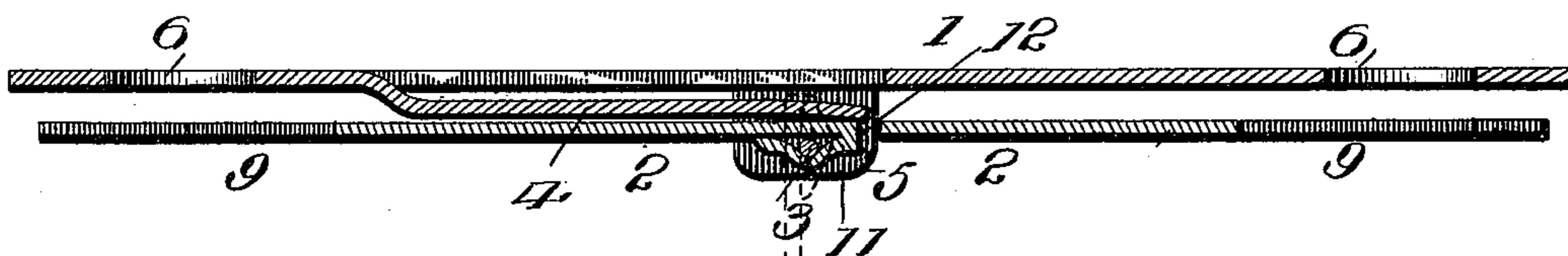


Fig. 3.

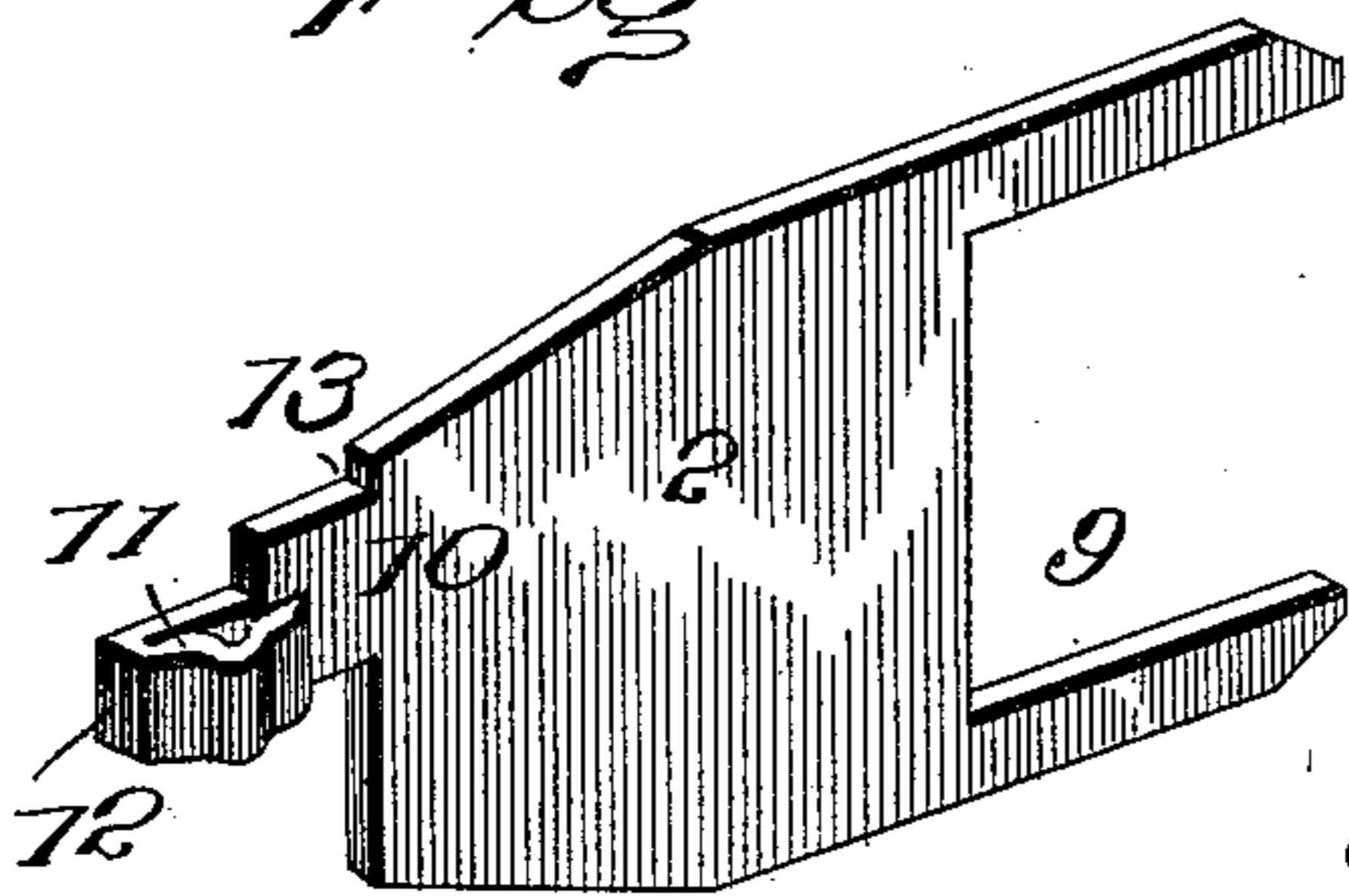
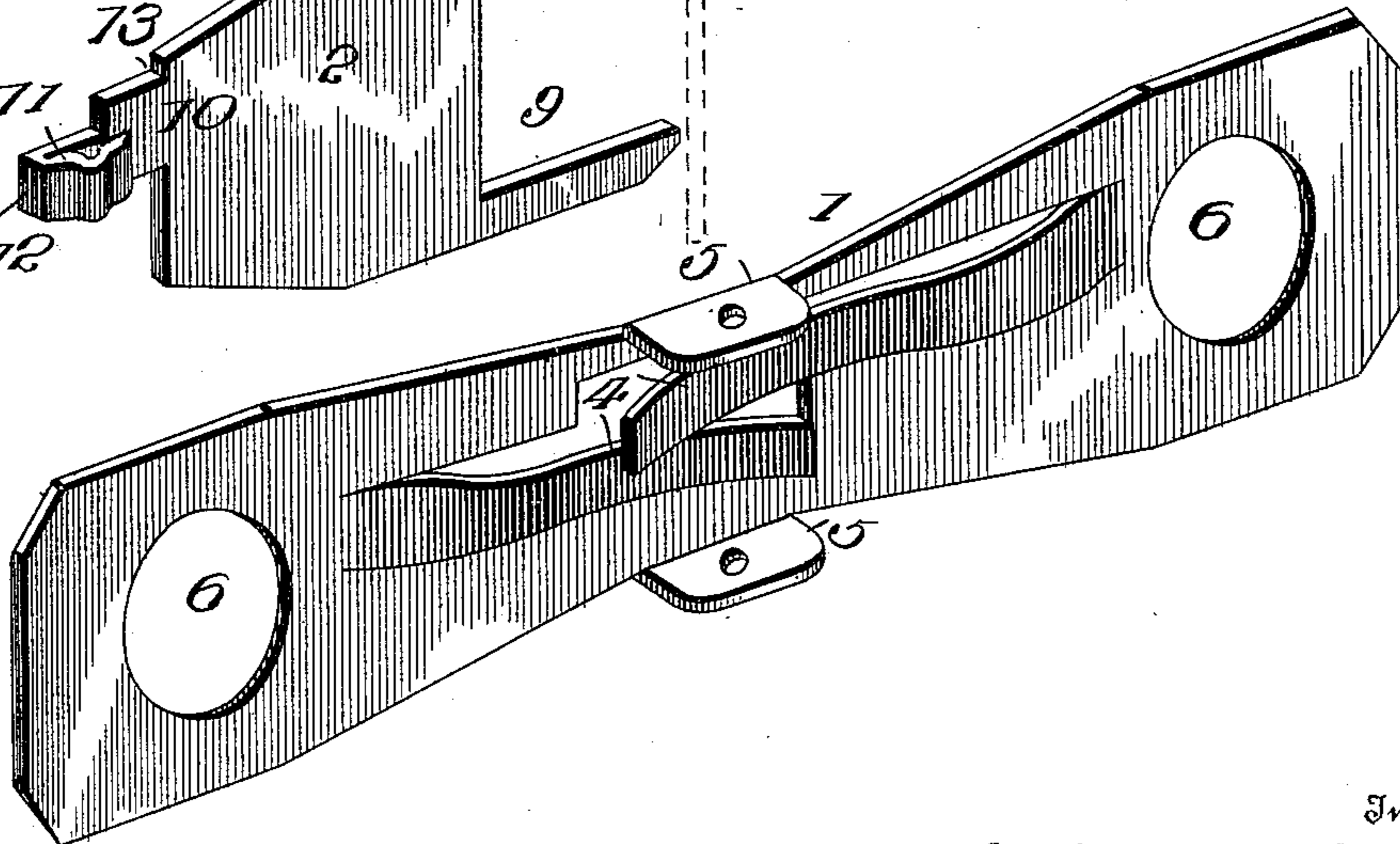


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 626,093, dated May 30, 1899.

Application filed March 18, 1899. Serial No. 709,612. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. PURVIS, a citizen of the United States, residing at Moultrie, in the county of Colquitt and State of Georgia, have invented certain new and useful Improvements in Nut-Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Many devices have been provided for securing the nuts of bolts applied to rail-joints in the construction and maintenance of railways and many have been tried and abandoned for one reason or another, either because inefficient, complicated, and not susceptible of easy application or because too costly and impracticable.

This invention provides a nut-lock which will prevent the turning or loosening of the nuts due to vibration of the rails and contraction and expansion or other usual cause or causes, admit of the instant release of the nuts when it is required to retighten them or to remove the securing-bolts for any purpose, permit of the lock being quickly removed and used over again, and which will be of simple construction and give satisfactory results.

With these and such other ends in view as may result from the special formation of the nut-lock the invention consists principally of the novel features, details of construction, and combination of the parts, which hereinafter will be more fully described, claimed, and shown in the annexed drawings, in which—

Figure 1 is a front view of the nut-lock, showing it applied to a rail-joint. Fig. 2 is a longitudinal section, the dotted lines showing a lock-wing turned aside. Fig. 3 is a detail view of a lock-wing. Fig. 4 is a perspective view of the base-plate.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The nut-lock comprises a base 1, lock-wings 2, and a pin or pivot 3, connecting the lock-wings with the base.

The base 1 is struck or cut from sheet steel, iron, or other material suitable for the purpose and is formed with spring-tongues 4 and

parallel ears 5. Openings 6 are provided in the end portions of the base to receive the threaded ends of the bolts 7 of the rail-joint. The ears 5 are integral portions of the base and are formed by cutting away edge portions of the base at an intermediate point of its length. The spring-tongues 4 are formed by longitudinal slits and inner cross-slits of the base, the portions separated by the slits being pressed outward from the plane of the base. The inner ends of the tongues overlap for a short distance, the overlapping portions lying side by side and alining transversely with the ears 5. The terminal portions of the tongues curve away from the plane of the base, so as to exert an outward pressure against the inner ends of the lock-wings 2 to hold their outer notched ends in engagement with the nuts 8, applied to the bolts 7. In some instances the spring-tongues 4 may be separate from and applied to the base; but such construction is not desirable, as it is more costly and requires the formation of joints, which are objectionable.

The lock-wings 2 are of similar construction and are formed from sheet metal and have their outer ends notched, as shown at 9, to embrace and engage with the edges of the nuts 8 and prevent turning or loosening thereof when the lock is set. The inner or pivotal ends of the lock-wings are reduced, forming shanks 10, which lie side by side and touch at their edges against the inner sides of the ears 5. The end portions of the shanks are further reduced and folded upon themselves, as shown at 11, to provide eyes for the passage of the pin or pivot 3, upon which the lock-wings are mounted so as to turn. The opposing edges of the folded parts 11 touch, so as to limit the inward movement of the lock-wings and act jointly with the ears 5 to prevent lateral play of the parts 2 when assembled. The shank portions of the lock-wings project a short distance in the rear of the eyes or bearings, so as to receive the outward pressure of the spring-tongues 4, whereby the lock-wings are held in operative relation. The folded extremities are cut square across, as shown at 12, so as to obtain sufficient bearing against the spring-tongues, whereby the lock-wings are held about at right angles to the base when turned to release the nuts 8,

as indicated most clearly by the dotted lines in Fig. 2. The lock-wings are held a distance from the plane of the base 1 by the spring-tongues 4, thereby insuring the engagement 5 of the nuts 8 by the outer notched ends of the said wings when the latter are turned into an operative position.

The nut-lock constructed substantially as herein set forth is applied to a rail-joint by 10 having the base 1 fitted to the bolts 7, the latter passing through the bolt-openings 6 of the said base. The lock-wings are turned upon the pin or pivot 3, so as to stand about at right angles to the plane of the base, when 15 their notched ends will be out of the way and will admit of the nuts 8 being applied to the bolts 7 and screwed home. After the nuts 8 have been turned up tight against the fish-plate the lock-wings are turned so as to cause 20 their notched ends to engage with and embrace opposite sides of the nuts, thereby preventing turning or loosening thereof by vibratory action or from other cause. The lock can be readily removed and used again by 25 turning the lock-wings so as to liberate the nuts 8, and after the latter have been removed from the bolts 7 the lock can be displaced and is in condition for further service in the manner specified.

30 The shanks 10, formed at the inner ends of the lock-wings, provide shoulders 13 at their bases, and these shoulders engage with the edges of the ears 5 when the lock-wings are turned into engagement with the nuts 8, 35 thereby bracing the structure and relieving

the pin or pivot from the strain incident to longitudinal stress coming upon the outer or engaging ends of the lock-wings.

Having thus described the invention, what is claimed as new is—

1. In a nut-lock, a base-plate having a pair of 40 ears and oppositely-disposed spring-tongues, a pin supported in the said ears, and lock-wings having their inner or pivotal ends formed with shanks and having the shanks 45 reduced and folded upon themselves forming eyes to receive the aforesaid pin, the folded portions touching at their inner edges, and the outer edges of the shanks touching the inner faces of the ears, substantially as speci- 50 fied.

2. The herein-described nut-lock, comprising a base-plate formed with integral ears and oppositely-disposed spring-tongues, the 55 latter having their inner end portions overlapping and curved outwardly, a pin supported in the said ears, and lock-wings having shank portions at their inner ends provided with folded parts which form eyes to receive the aforesaid pin, the shoulders formed 60 at the bases of the shank portions touching the edges of the ears, and the folded extremities being cut square across, substantially as set forth.

In testimony whereof I affix my signature 65 in presence of two witnesses.

WILLIAM J. PURVIS. [L. S.]

Witnesses:

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