

D. WILSON.
 LOCKING DEVICE FOR NUTS AND THE LIKE.
 APPLICATION FILED JAN. 9, 1909.

915,643.

Patented Mar. 16, 1909.

FIG. 1.

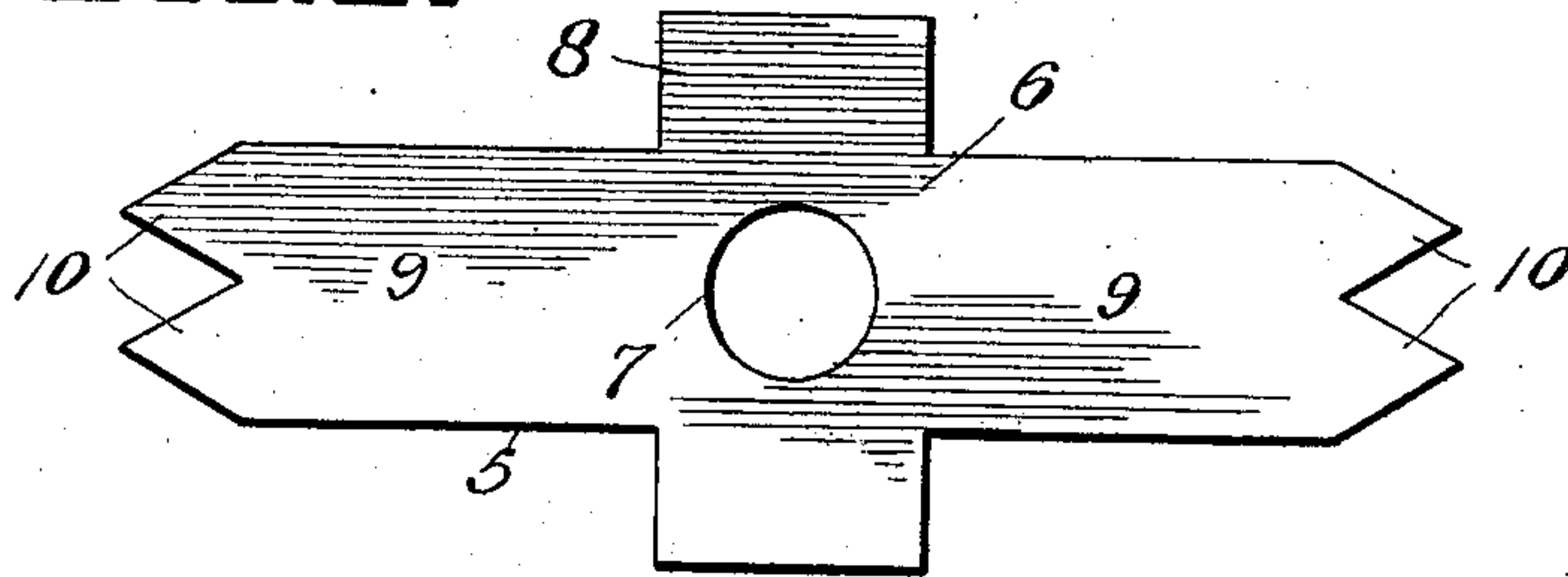


FIG. 2.

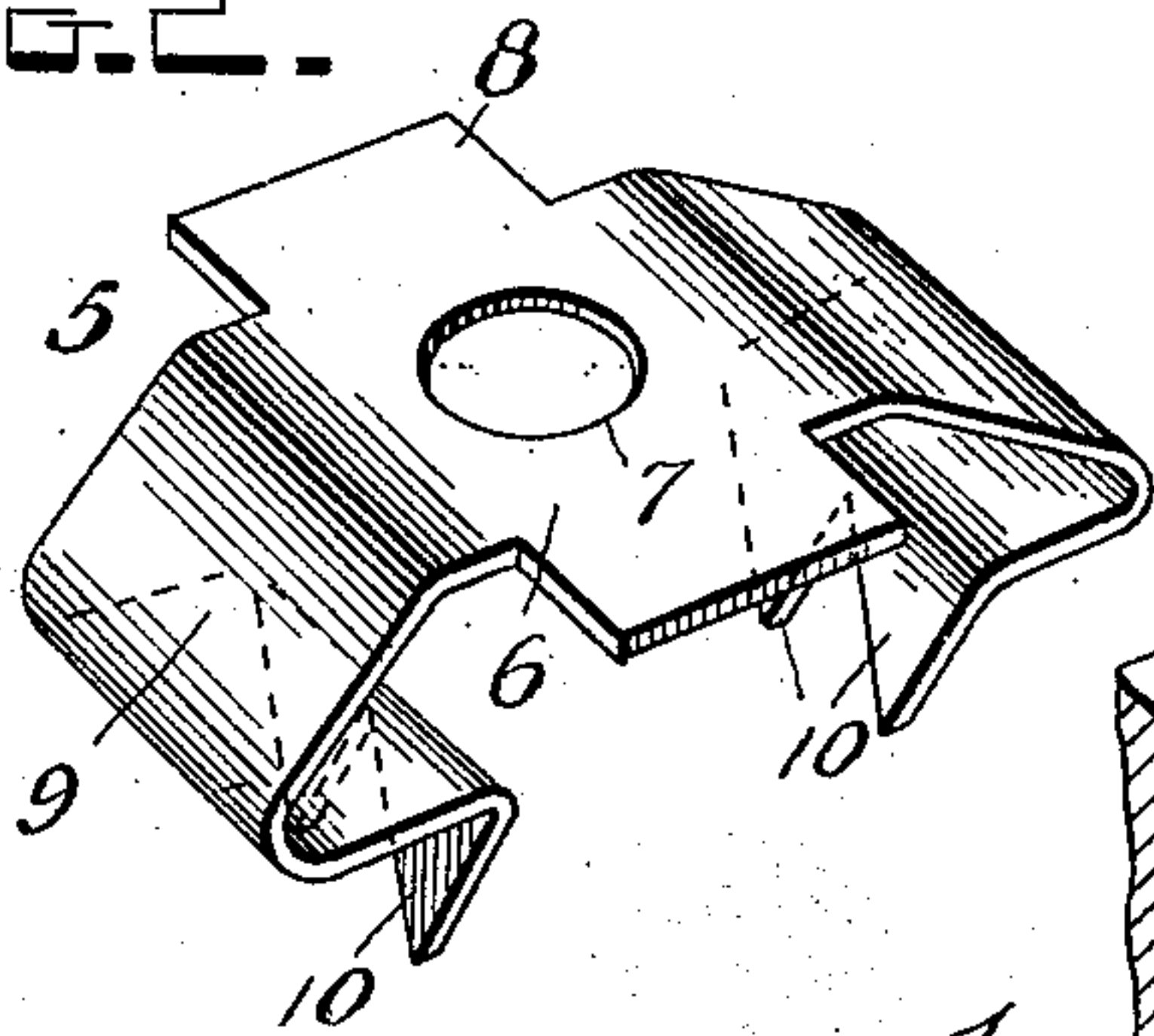


FIG. 3.

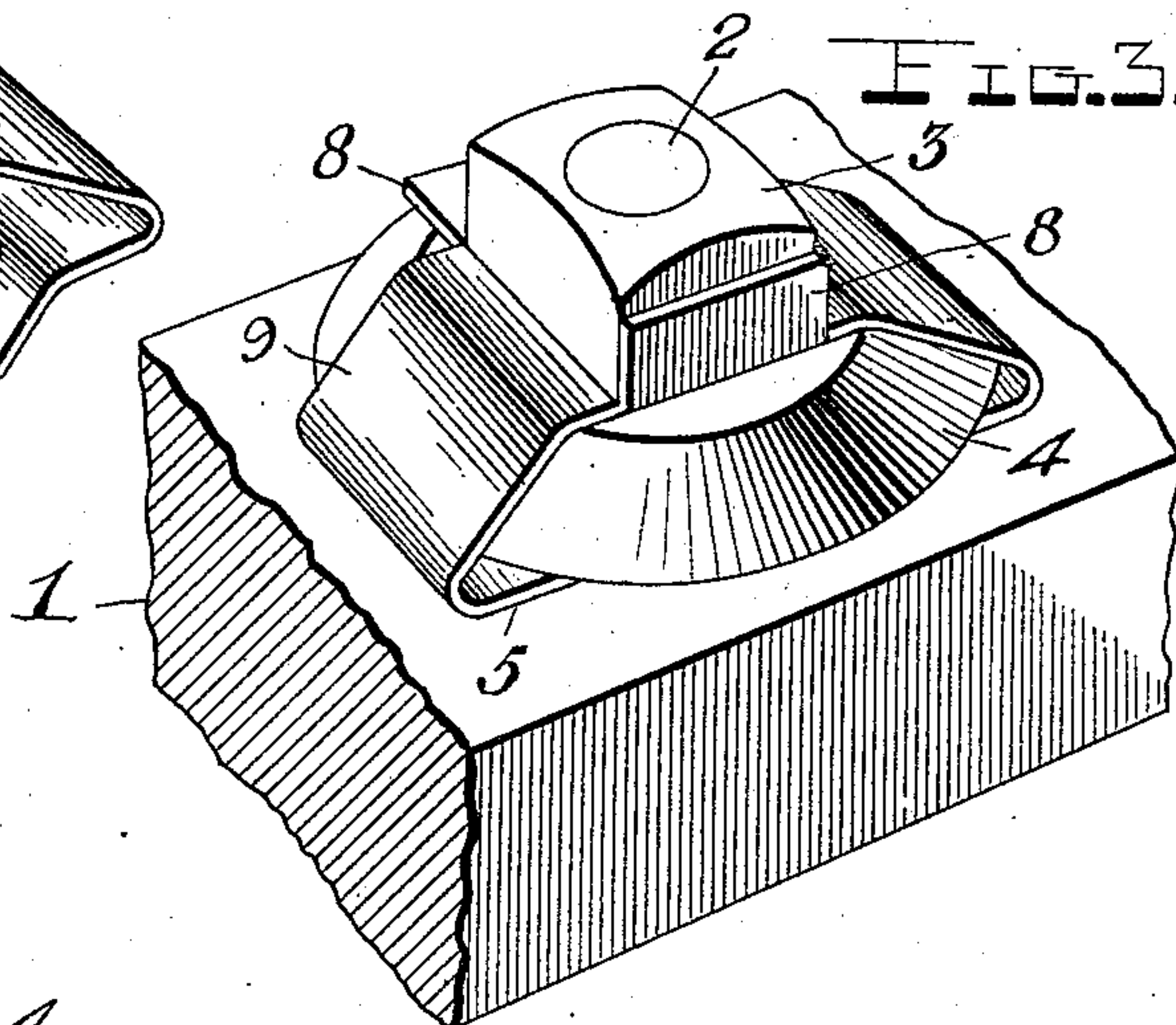
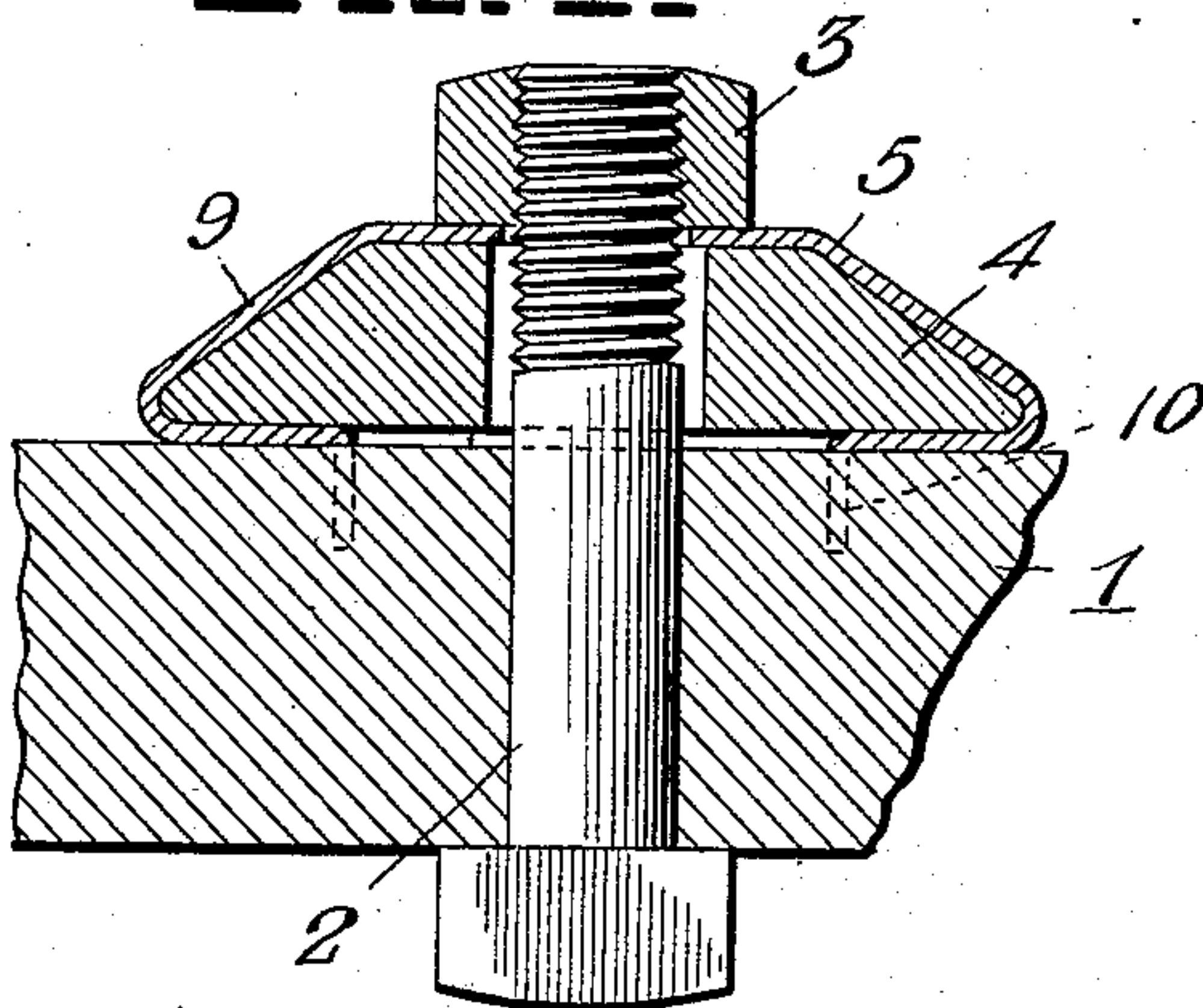


FIG. 4.



Witnesses

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LOCKING DEVICE FOR NUTS AND THE LIKE.

No. 915,643.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed January 9, 1909. Serial No. 471,465.

To all whom it may concern:

Be it known that I, DAVID WILSON, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Locking Devices for Nuts and the Like, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in locking devices for nuts, bolts, tie rods, lag screws and the like and more particularly to one especially adapted for use over the usual bridge washer.

15 The object of the invention is to provide a simple and practical device of this character which may be produced at a small cost, which may be readily applied or removed and used repeatedly, and which will effectively lock the nut, washer and bolt or the like to which it is applied so that it will be impossible for them to loosen and thereby weaken the bridge or other structure and endanger the loss of life and property.

25 With the above and other objects, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

30 Figure 1 is a plan view of the blank from which my improved locking plate or device is made; Fig. 2 is a perspective view of the locking device bent ready for application to the usual bridge washer; Fig. 3 is a perspective view showing the use of the invention, one of the flexible locking tongues being bent up against one of the side faces of the nut to hold the latter against rotation; Fig. 4 is a sectional view through the parts shown in Fig. 3.

35 In the drawings 1 denotes a wooden beam, 2 a bolt passing through the same, 3 a nut upon the bolt, 4 a washer of the kind usually used on bridges and similar structures, and 45 5 denotes my improved locking device. The latter is formed from a single piece of flexible sheet metal by stamping out a blank of the form shown in Fig. 1 and then bending the same into the form shown in Fig. 2.

50 The locking device or plate 5 comprises an elongated body portion 6 of substantially rectangular shape having at its center an opening 7 to receive the bolt and on the 55 central points of its opposite longitudinal or side edges outwardly projecting tongues 8,

one or both of which may be bent up to engage the nut, as shown in Fig. 3, and thereby lock it against rotation. The oppositely projecting end portions or arms 9 of the body 60 6 are adapted to be bent upon themselves, as shown in Fig. 2, so as to extend around the opposite side edges of the washer 4 and under the bottom face of the same, as shown more clearly in Fig. 4. The washer 4, as above 65 mentioned, is of the form usually employed on bolts and tie rods of bridges and it has a circular body with a beveled edge. The extremities of the ends or arms 9 of the body of the locking plate are formed with one or 70 more pointed, V-shaped locking spurs 10 which are bent at right angles to the portions of the arms 9 beneath the washer 4 so that they will be forced into the wooden beam 1 or other object when the nut 3 is 75 screwed home to effectively lock said parts to the beam. I preferably notch the ends of the arms 9 so as to form two of the spurs 10 and I make them pointed and V-shaped so that they may be readily driven into the 80 wooden beam either with or across its grain when the nut is screwed up upon the bolt. It will be noted that by bending the arms or ends 9 of the locking plate or body 6 under the washer 4 that said spurs or prongs 10 85 will be disposed under or beneath the washer 4, thereby insuring their entrance into the wooden beam when the nut is tightened on the bolt.

In operation, the bolt, tie rod or the like 2 90 is passed through the opening in the beam or other object 1, the locking plate is then slipped over the washer 4 and the latter is applied to the threaded end of the bolt, and the nut 3 is then screwed upon said end of 95 the bolt and tightened. As the nut is screwed home it will force the washer 4 and locking plate inwardly or toward the beam 1 so that the spurs 10 will be forced into the beam, as indicated in Fig. 4 of the drawings. The 100 spurs 10 effectively lock the device and, consequently, the washer 4 against rotation on the beam 1 and by bending up one or both of the tongues 8, after the nut has been screwed home, said nut will be effectively 105 locked against rotation.

From the foregoing it will be seen that my improved locking plate or device may be produced at an exceedingly small cost and will effectively lock the nut upon the bolt 110 and the nut and washer to the beam or other object. By making the device of flexible

metal, it may be used repeatedly since only one of the tongues 8 need be bent to lock the nut and after one has been repeatedly bent up and down and breaks off, the other
5 may then be used.

The provision of the pointed V-shaped spurs 10 renders unnecessary a prepared base, since they are forced in the wooden beam or base 1 when the nut is screwed tight.
10 Owing to their pointed shape and their disposition on the portions of the ends or arms 9 that are beneath the washer, it will be seen that they will be effectively forced into the wooden beam 1 as the nut is screwed home
15 and there will be no likelihood of them bending and not penetrating the beam or base.

Having thus described the invention what is claimed is:

The herein described nut lock, comprising
20 a body portion formed of a single piece of flexible sheet metal having a central opening to receive the bolt, oppositely disposed locking tongues projecting radially from the body portion and adapted to be bent up

against the sides of the nut, oppositely dis- 25
posed arms located between said tongues and projecting laterally from said body portion, said arms being bent downwardly and then inwardly substantially parallel with the body portion and forming a space 30
between said body portion and the inwardly projecting portion of said arms adapted to receive a washer, the inner ends of said inwardly projecting portions of said arms being bent downwardly and cut away to form 35
pointed spurs, said spurs being disposed within the outer diameter of the washer, whereby as the nut is turned, pressure is applied through the washer directly over said spurs and the spurs are embedded in the ob- 40
ject being clamped.

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

DAVID WILSON.

Witnesses:

J. A. GRIESBAUER, Jr.,
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