

No. 637,710.

Patented Nov. 21, 1899.

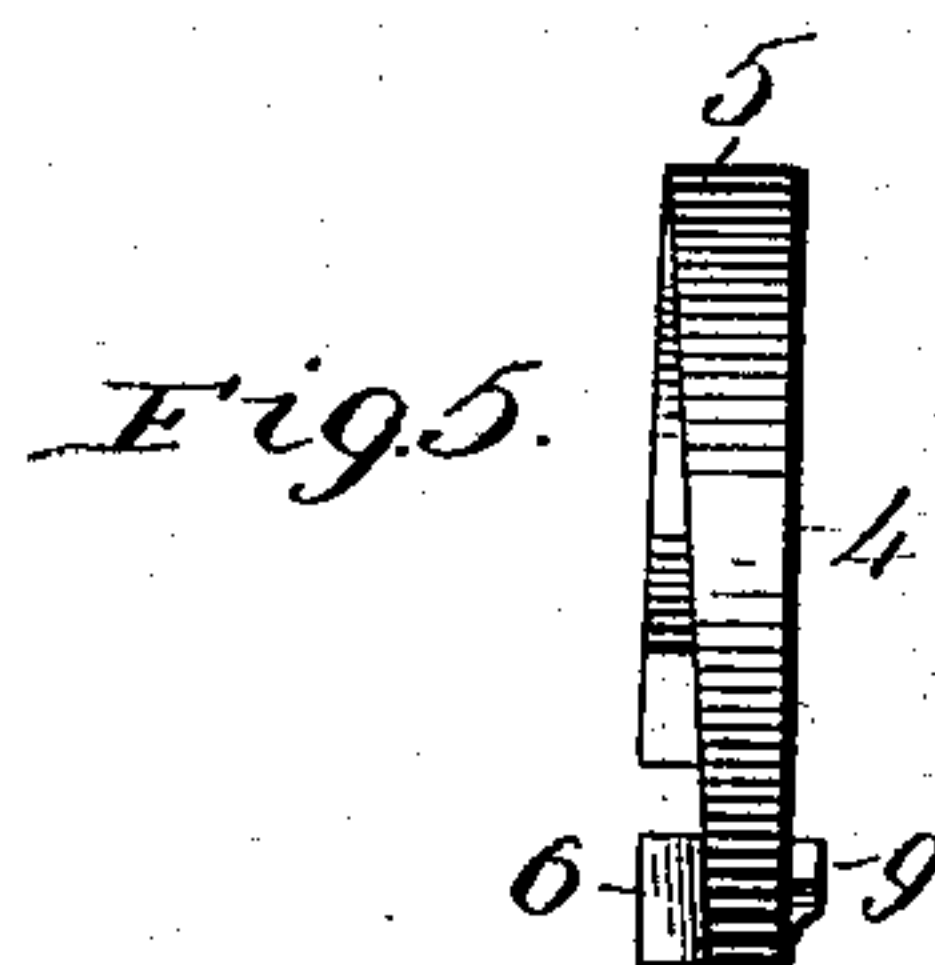
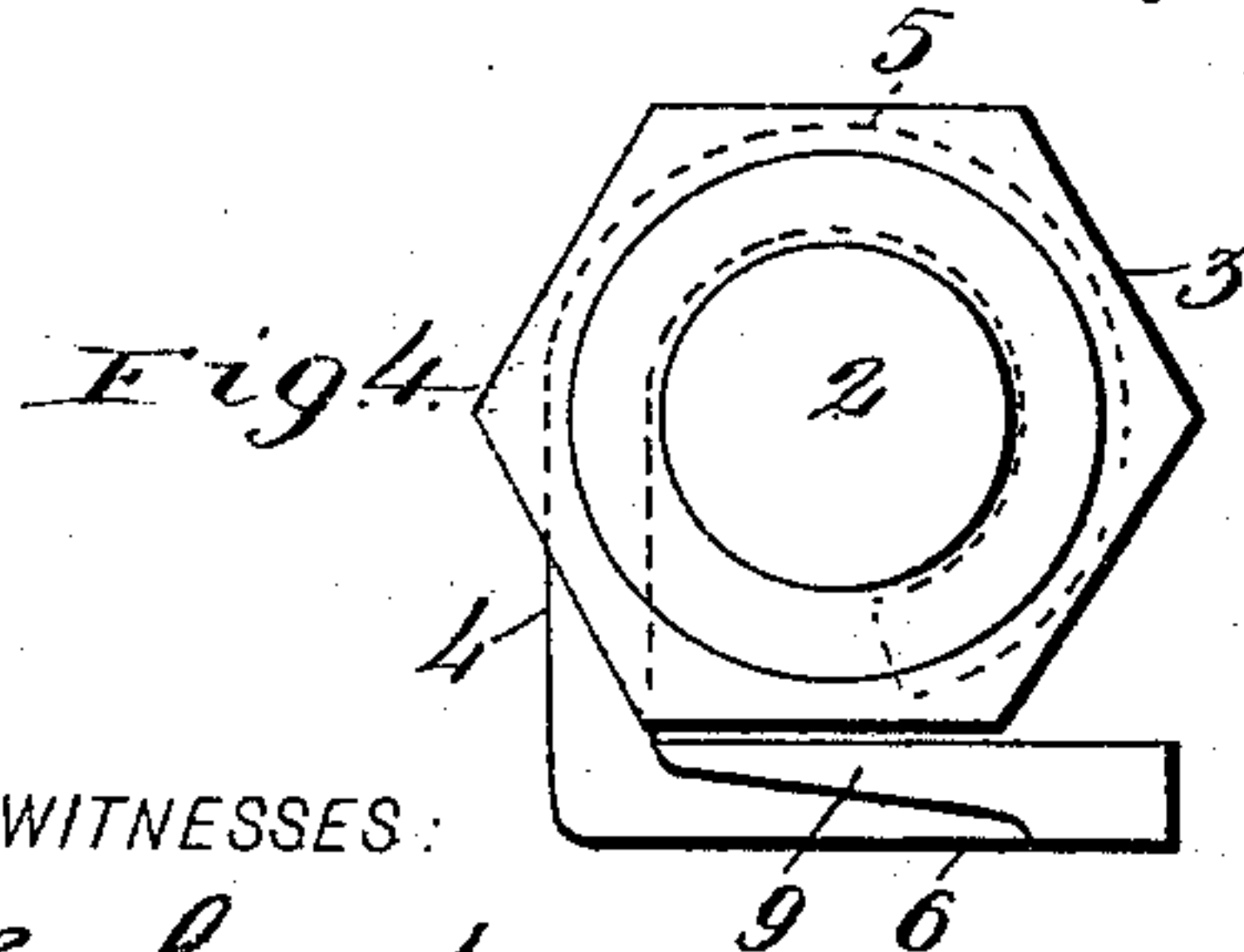
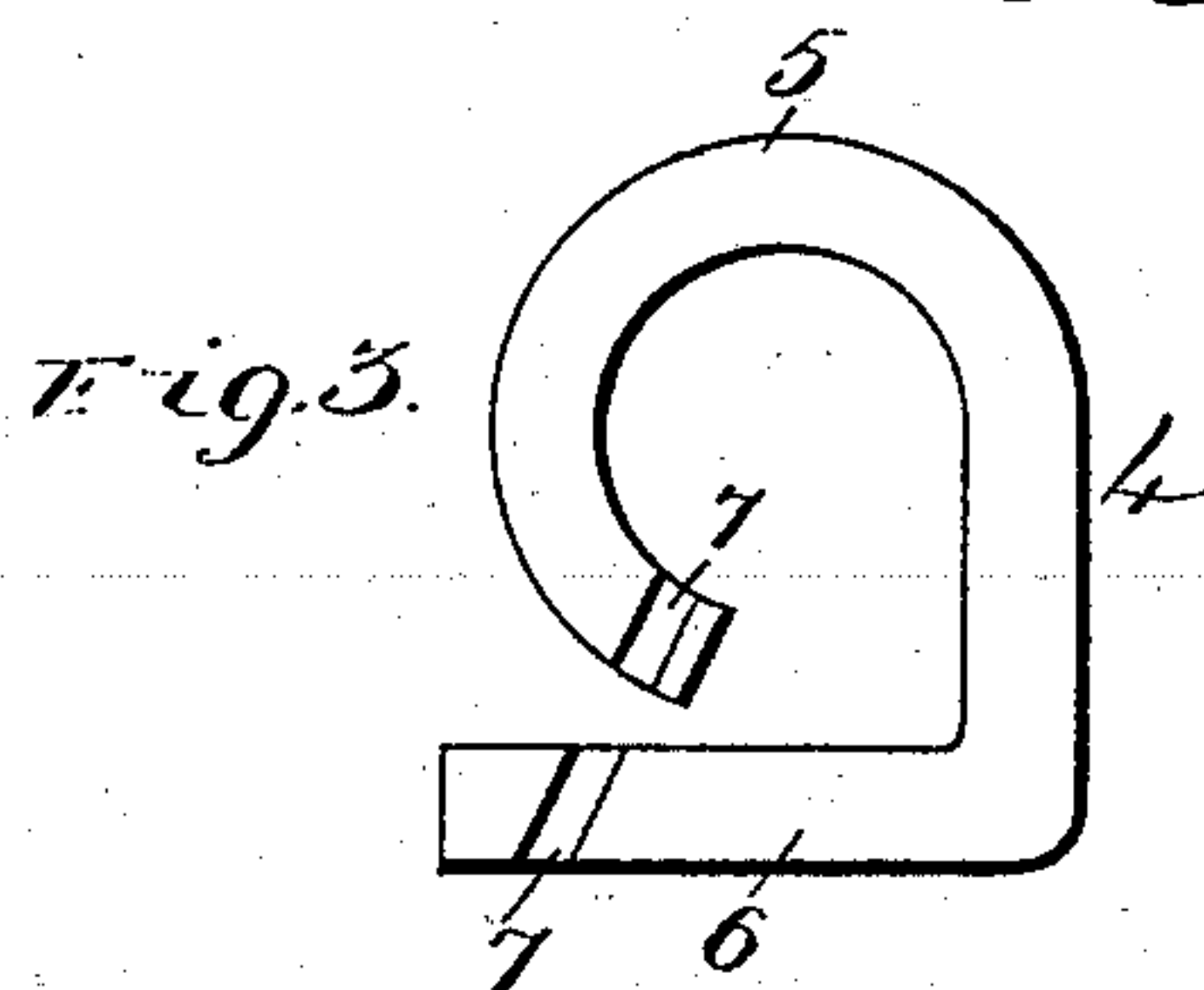
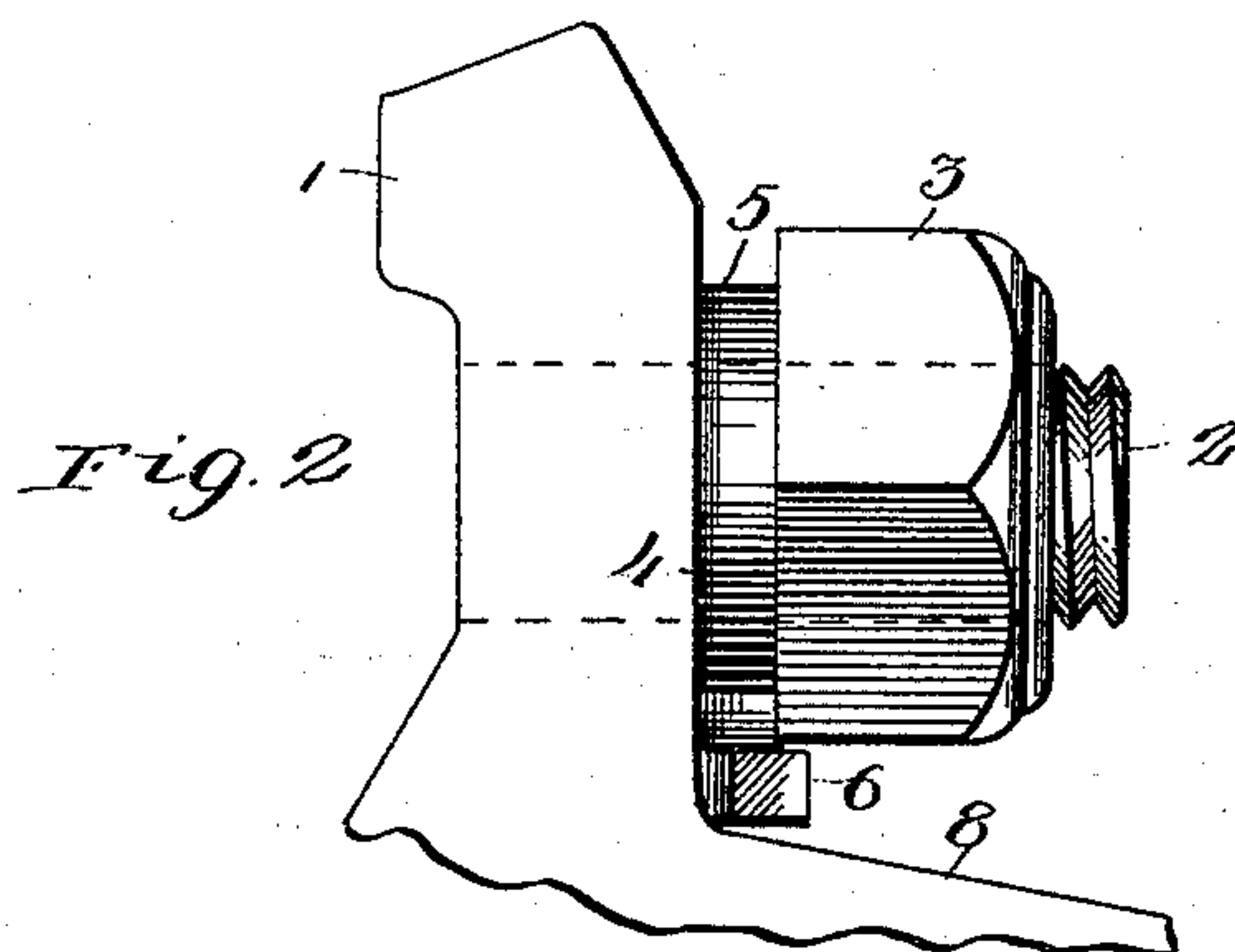
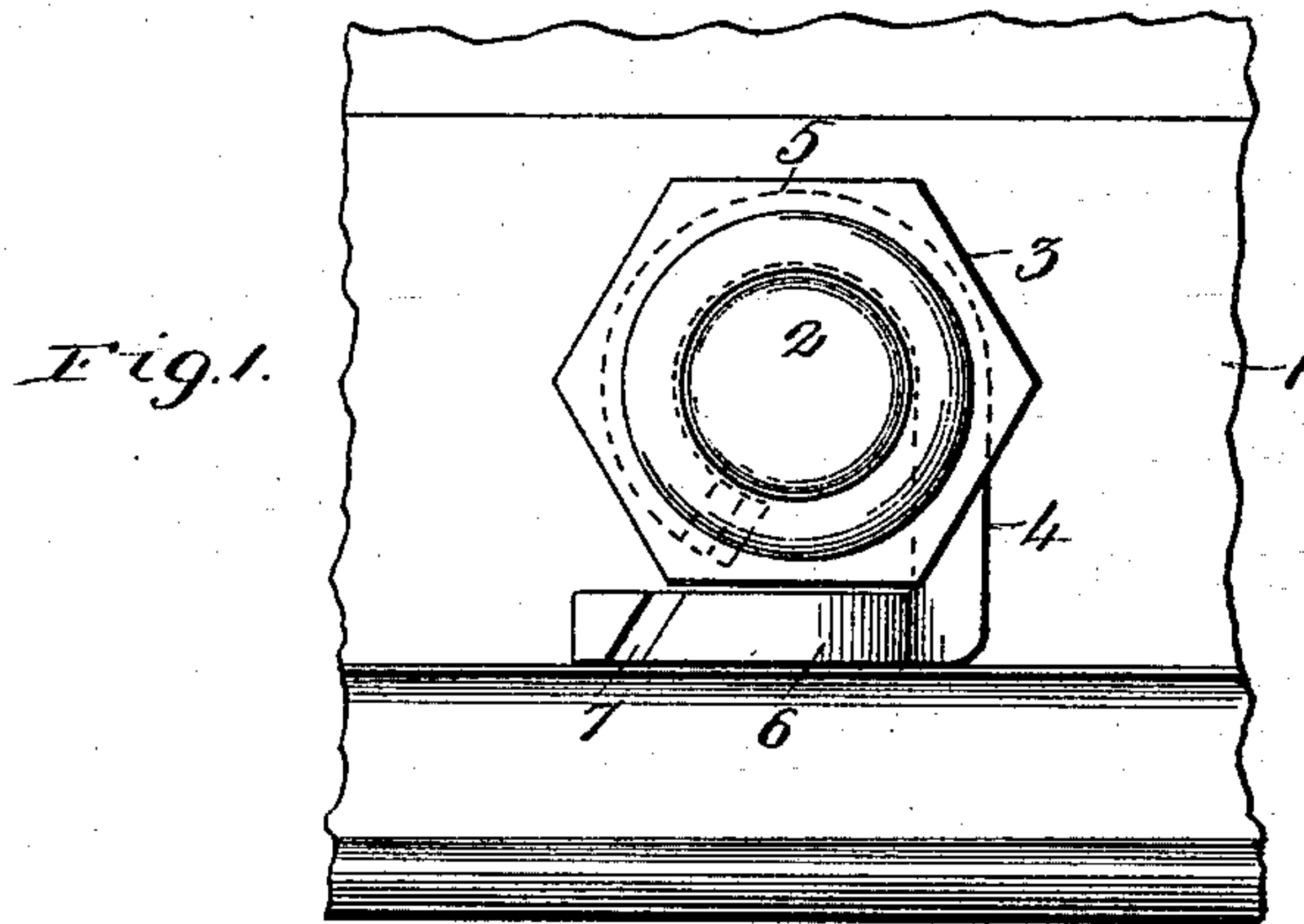
J. W. B. COOK, Dec'd.

Z. T. DUNCAN, Executor.

NUT LOCK.

(Application filed Sept. 26, 1898.)

(No Model.)



WITNESSES:

*W. E. Leeds*  
*Alfred A. Mathew*

INVENTOR

*John W. B. Cook*

BY

*Rolland & Rolland*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN W. B. COOK, OF ST. LOUIS, MISSOURI; ZACK T. DUNCAN, EXECUTOR OF SAID COOK, DECEASED, ASSIGNOR TO ZACK T. DUNCAN, OF CAMDEN, ARKANSAS.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 637,710, dated November 21, 1899.

Application filed September 26, 1898. Serial No. 691,927. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. B. COOK, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Nut-Locks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in nut-locks; and it consists in the novel combination and arrangement of parts, as will be hereinafter particularly described, and pointed out in the claims.

In the drawings, Figure 1 is a front elevation of my complete invention. Fig. 2 is a side view of the same. Fig. 3 is a front elevation of the lock proper. Fig. 4 is a front elevation of a modification of my invention, and Fig. 5 is a side view of the same.

The object of my invention is to provide a simple, durable, and effective nut-lock in which the ordinary bolt and nut are employed without the slightest alteration or modification, and, further, is of such a nature that the nut may be removed from the bolt without destroying or injuring any of the parts in the slightest manner.

Referring to the drawings, 1 represents an ordinary angle-bar or fish-plate which is employed in connecting the meeting ends of the rails of a railroad-track; 2, the bolt, which is passed through the several parts, and 3 the nut, which is screwed upon the screw-threaded end of the bolt, all of which is of the usual construction.

My invention is constructed in the form of a washer and is adapted to encircle the bolt and be interposed between the vertical outer surface of one of the angle-bars and the inner engaging face of the nut, whereby the ordinary washer may be dispensed with.

The nut-lock proper is composed of a single piece of metal and is bent or otherwise formed from a bar which is rectangular in cross-section, the same being formed in the shape hereinafter described by a suitable machine designed for the purpose.

4 represents the nut-lock, which is of a uniform size throughout its entire length and is provided with a curved upper portion 5,

which is adapted to freely encircle the screw-threaded end of the bolt 2, the free end of said curved portion terminating adjacent to the lower horizontal extension 6, which operates to prevent the lock from being turned when the nut is brought against the same and, further, acts as a lock or fastening device when the nut is properly turned to thoroughly secure the several parts together. The lower horizontal extension 6 of the nut-lock is slightly bent at an angle to the remaining or curved portion 5, or in such a direction that the same will be out of contact with the angle-bar 1 when the said nut-lock is placed in its proper position upon the bolt, whereby when the nut is screwed upon the bolt and the inner vertical flat surface comes in contact with the outer vertical surface of said extension the latter will be forced inwardly or against the vertical surface of the angle-bar, the said nut being turned until the parts are firmly secured together and one of its flat sides is parallel with the upper straight surface of said extension, when the latter by its own nature (a spring) will move outwardly or from its depressed position and securely lock the nut against rotation in the opposite direction. It is to be observed that the lower horizontal straight extension 6 of the nut-lock extends beyond the curved portion 5 of the same in order to prevent the nut from turning the said nut-lock in a direction to remove the latter from the bolt.

Should it be desired to remove the nut from the bolt for any reason, the same can be accomplished in a very simple and convenient manner. Formed in the outer vertical surfaces of the curved portion and the horizontal extension of the nut-lock adjacent to the ends of the same are grooves 7, which are arranged at an angle and on a line with one another and are adapted to receive the end of a suitable hand tool or implement flush with the outer surfaces of the nut-lock, whereby after the nut has been slightly turned to the right the said extension will be forced inwardly or against the angle-bar, and thus the nut will be free to be turned in the reverse direction for removing the same from the bolt. From an inspection of the drawings it will



be seen that the nut-lock is prevented from turning by the extension 6, the lower flat surface of which is located adjacent to and parallel with the flanged portion 8 of the angle-bar, or should the ordinary fish-plates or splice-bars be employed the said lower flat surface of the extension will be adjacent to the upper surface of the flange of the rail and operate in a like manner.

10 In Figs. 4 and 5 of the drawings I have shown a modification of my invention in which substantially the same form and shape are carried out as in the preceding figures, except as to the means for locking the nut and  
15 the manner in which the spring is formed to permit the locking-lug 9 to be depressed. In this construction the nut-lock is formed in such a manner as to cause only a part of the curved portion and the free end of the horizontal extension, respectively, to first come  
20 in contact with the angle-bar; but as the nut is gradually tightened and the same is turned against the lug 9 the remaining portion of the nut-lock is forced inwardly against the  
25 said angle-bar, the said remaining or central portion being reduced to form an inclined inner surface, whereby a suitable space is left between that part of the nut-lock and angle-bar to permit the lug to be depressed, the latter operating to lock the nut, as in the preceding illustrations and description. It is  
30 to be noted in connection with the modification that the nut-lock is placed over the bolt in the reverse position to that shown in the other figures of the drawings in order to obtain the desired result.

40 It is to be observed from the foregoing description and an inspection of the drawings that the extension in my present application extends in the same direction as the loop or curved portion and, further, that said extension

forms a right angle with the medial portion of the nut-lock, all of which forms a very simple and desirable construction.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an article of manufacture, the herein-described nut-lock composed of a single piece of metal, and having a curved portion adapted to loosely embrace the bolt, a vertical medial portion, forming a continuation of said curved portion, and arranged at an angle to the same, and a horizontal straight extension forming a continuation of said vertical medial portion, and at an incline to the same, the upper edge of which is adapted to cooperate with the nut, for preventing rotation of the latter, the end of the curved portion being inclined in the opposite direction, as and for the purpose described.

2. As an article of manufacture, the herein-described nut-lock composed of a single piece of metal having an upper curved portion adapted to embrace the bolt, a horizontal extension forming a continuation of said curved portion and adapted to not only prevent rotation of the lock proper but also lock the nut, said extension being slightly bent in an inclined direction to the plane of said curved portion, against the vertical surface of which the nut cooperates, and grooves formed on the outer surfaces of the curved portion and extension respectively, as and for the purpose described.

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

JOHN W. B. COOK.

Witnesses:

C. F. KELLER,  
W. E. LEEDS.