

181. NUT AND BOLT LOCKS,  
Coupled Nut and Bolt,  
Thread Lock,  
Superposed Nuts,  
Oppositely Threaded,  
Key or Pawl Locked.

No. 835,217.

PATENTED NOV. 6, 1906.

L. E. DARST & W. H. HARRELSON.  
DEVICE TO LOCK NUTS ON BOLTS.

APPLICATION FILED SEPT. 7, 1905.

Fig. 1.

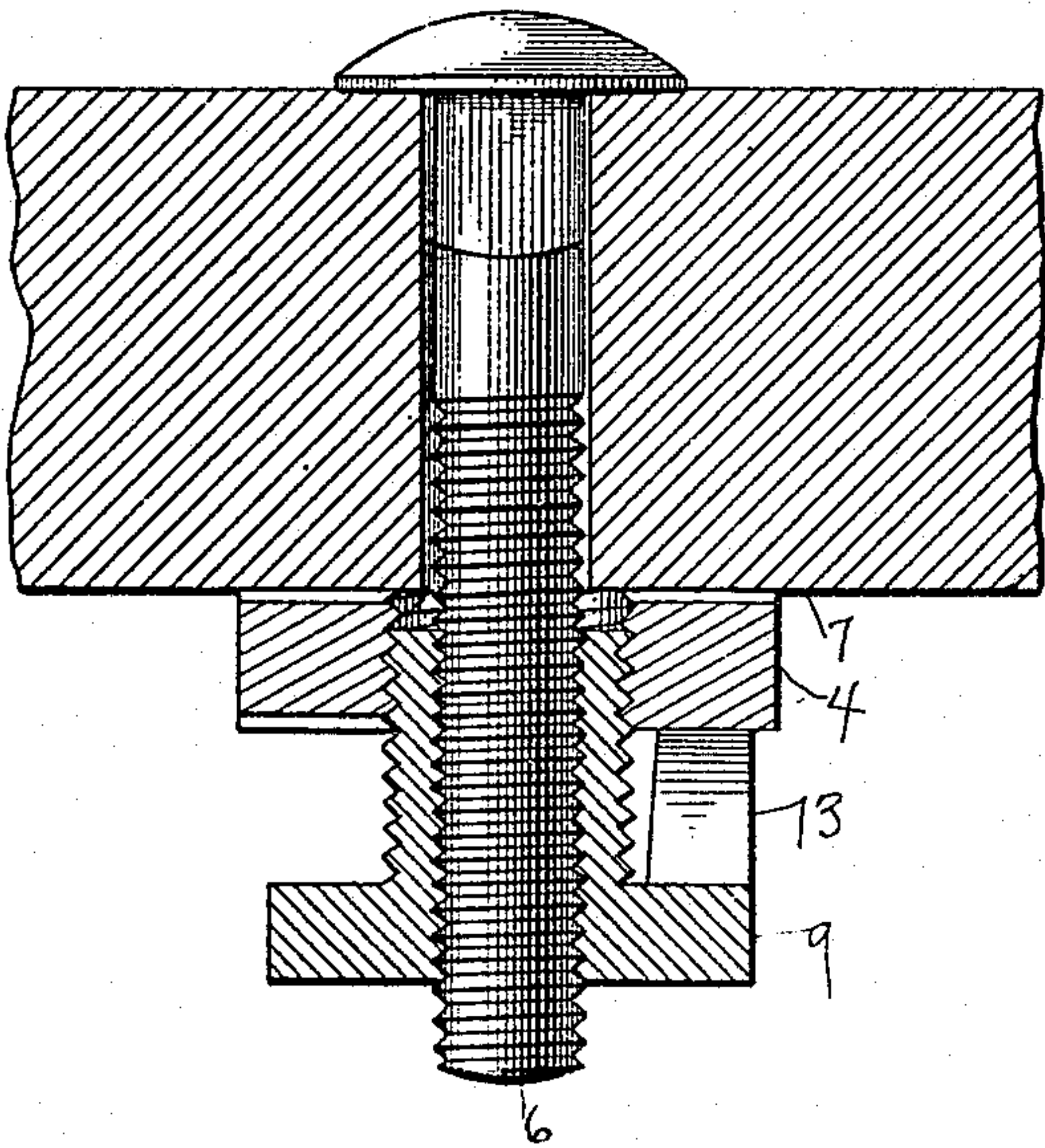


Fig. 3.

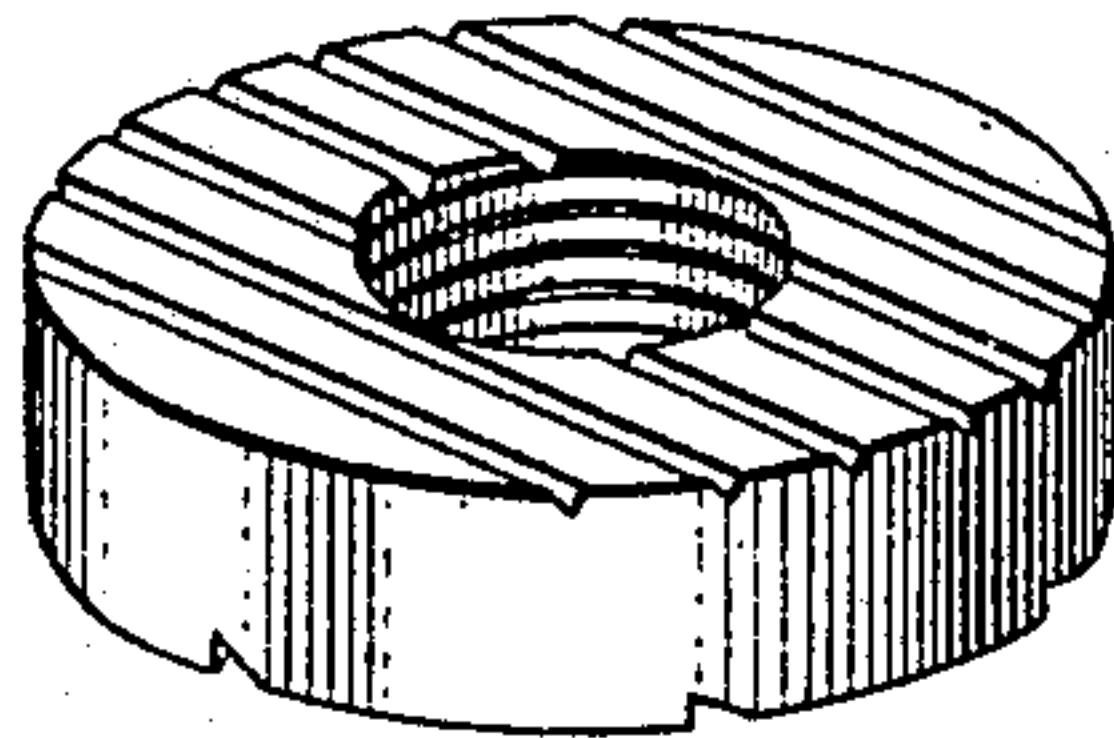


Fig. 4.

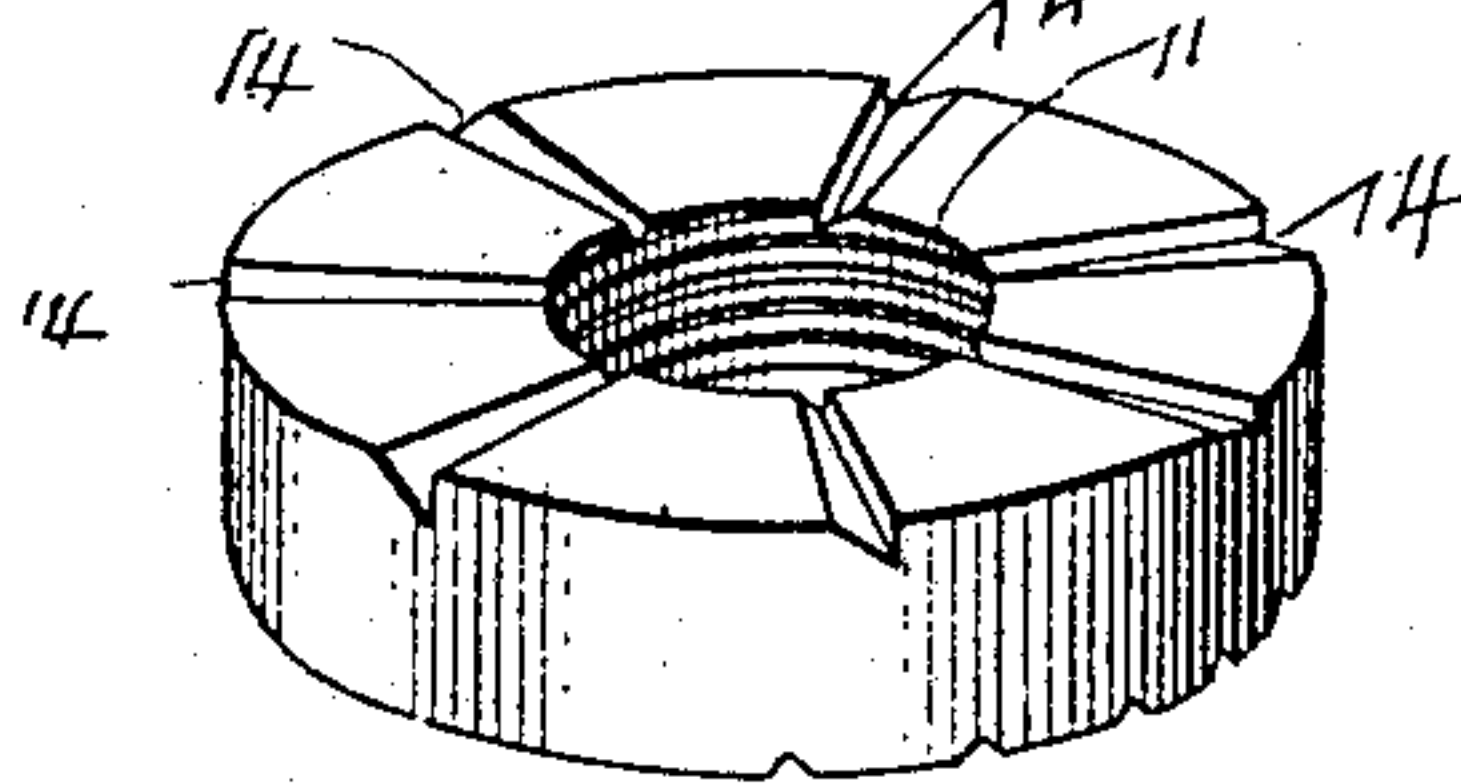


Fig. 2.

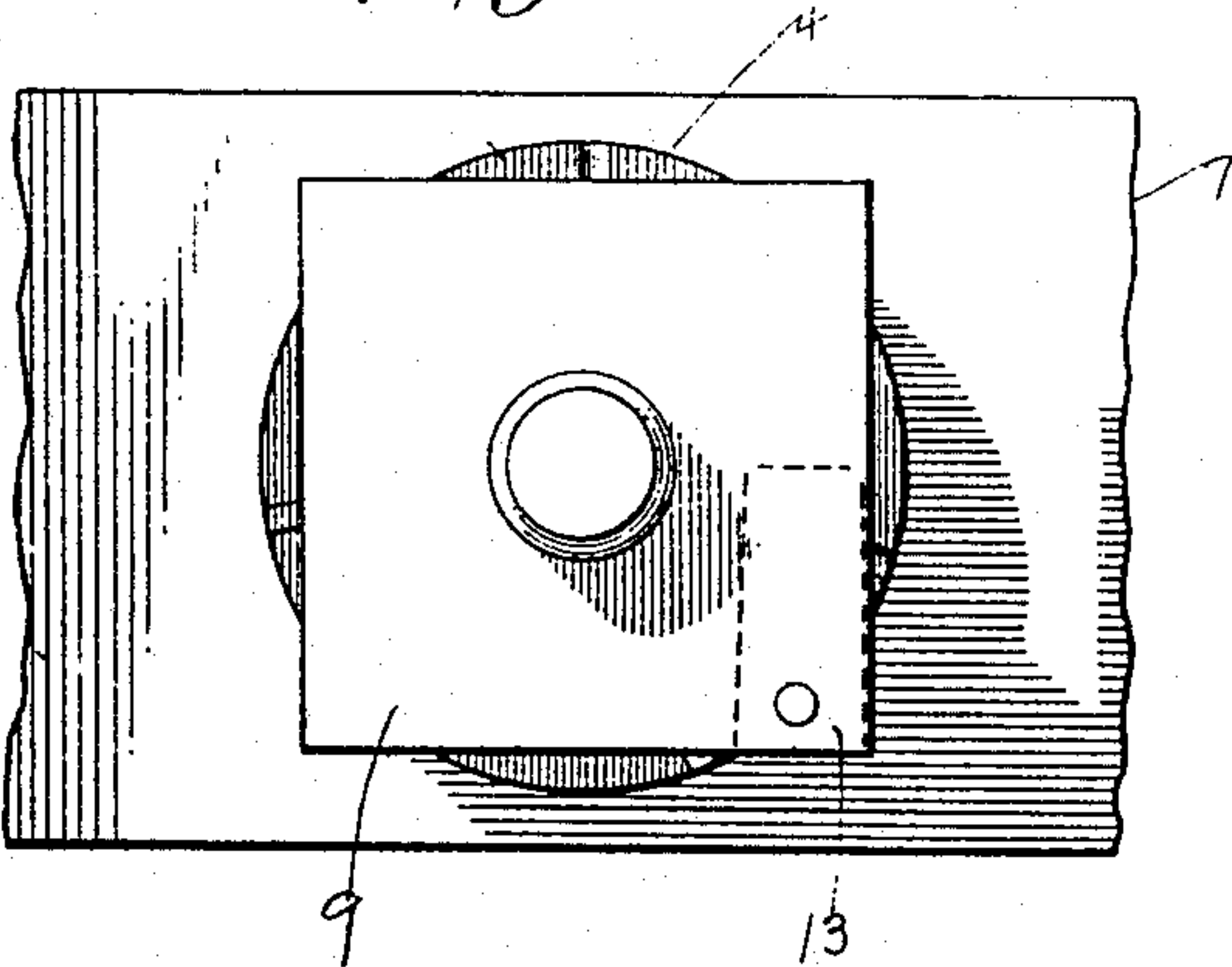
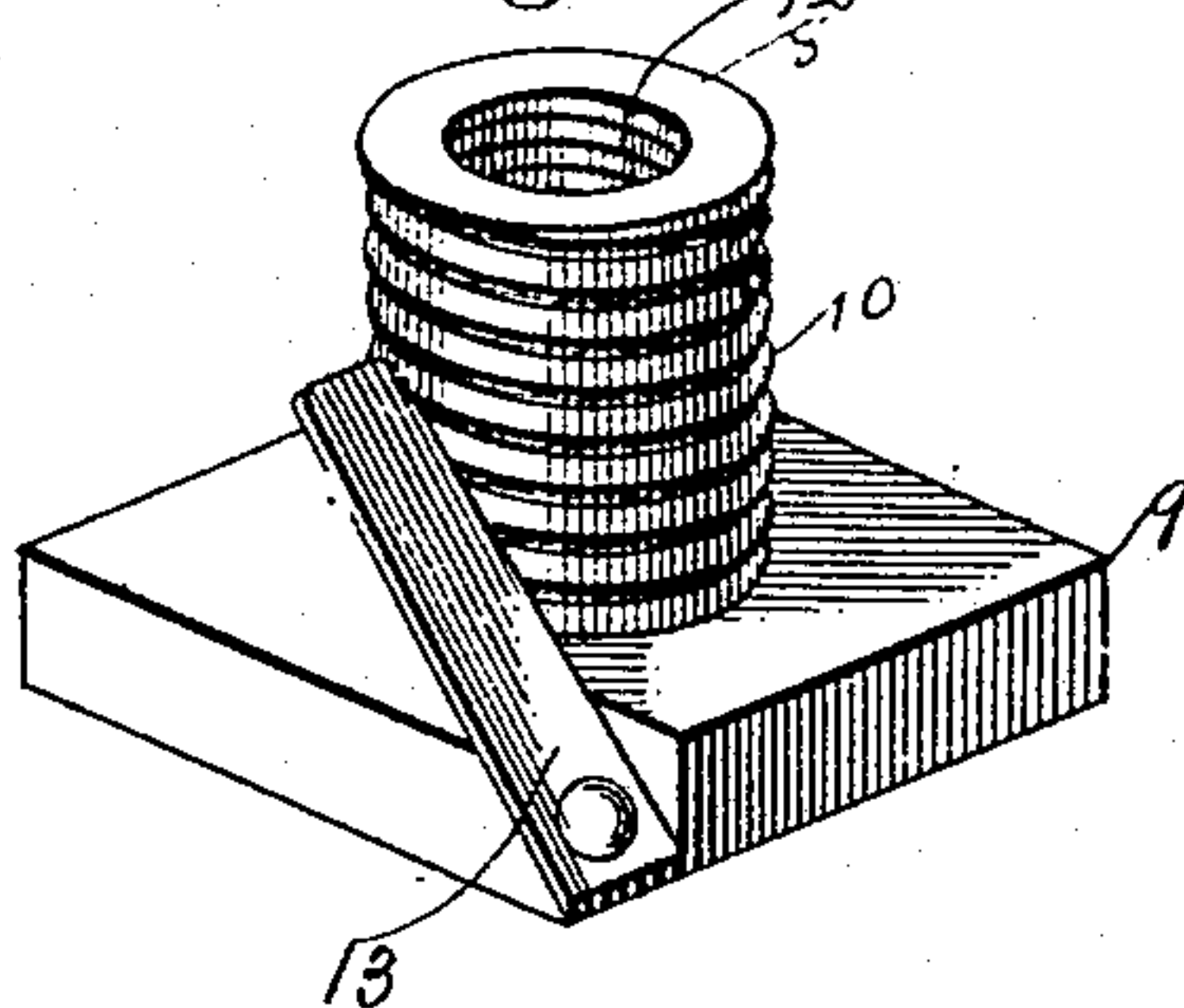


Fig. 5.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## DEVICE TO LOCK NUTS ON BOLTS.

No. 835,217.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed September 7, 1905. Serial No. 277,289.

*To all whom it may concern:*

Be it known that we, LUTHER EDWARD DARST, residing at Louisiana, and WILLIAM HENRY HARRELSON, residing at Cyrene, in the county of Pike and State of Missouri, citizens of the United States of America, have invented an Improved Device to Lock Nuts on Bolts, of which the following is a specification.

This invention relates to certain new and useful improvements in that class of devices which are designed to prevent screw-nuts from being worked loose from their bolts by frequent or continuous jarring in service, which are commonly called "lock-nuts."

The object of our invention is to bind the nut upon the bolt by the use of a spring which locks the nut upon the bolt so that it cannot be worked loose without releasing the spring and yet which may be turned loose handily when desired by releasing the spring.

To this end our invention consists in the construction and combination of parts forming a lock-nut, hereinafter more fully described, and particularly defined in the claim, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view of the lock-nut applied to the bolt which is through the object to be fastened. Fig. 2 is a plan of the lock-nut when so applied. Fig. 3 is a perspective view of the base-section of the lock-nut, showing the corrugations to engage in similar corrugations on the surface of the object against which the lock-nut fits when applied to the bolt. Fig. 4 is a perspective view of the base-section of the lock-nut, showing the side of same which faces the cap-section of the lock-nut. Fig. 5 is a perspective view of the cap-section of the lock-nut, showing the square head with the nose, which has internal right-handed threads and left-handed threads outside and a spring riveted to one corner.

Numerical 6 represents a screw-threaded bolt onto which the lock-nut, consisting of the base-section (shown in Figs. 3 and 4) and the cap-section, (shown in Fig. 5,) is to be screwed and secured.

7 represents the surface which the lock-nut is to fit against when screwed onto the bolt 6 to the desired position.

8 represents the nose on the square head

9 of the cap-section of the lock-nut, which nose has left-handed screw-threads 10 on the outside to engage and fit into corresponding internal threads 11. (Shown in Figs. 3 and 4.) This nose also has internal right-handed screw-threads 12, which engage and screw onto the corresponding threads on the bolt 6.

13 represents a stiff steel spring one end of which is riveted to the square head 9 of the cap-section of the lock-nut and the other end of which fastens into the ratchets or notches 14. (Shown on Fig. 4.)

When the nose 8 of the cap-section of the lock-nut is screwed into the internal threads 11 on Fig. 4 to the extent of the thickness of Fig. 4, the lock-nut, consisting of both the base-section (shown in Figs. 3 and 4) and of the cap-section, (shown in Fig. 5,) is screwed onto the bolt 6, the internal threads in the nose 8 of the cap-section of the lock-nut screwing onto the threads of the bolt until the side of the base-section of the lock-nut (shown in Fig. 3) is forced firmly against the surface to be fastened to some other object by the bolt and lock-nut. Then by turning the square head of the cap-section of the lock-nut to the right as far as possible the nut is locked onto the bolt in such a manner that it cannot be jarred or shaken loose, for as the lock-nut is screwed onto the bolt until tight the spring is gradually tightened until it is more and more impossible to release it without intention to do so. The spring so locks the base-section and the cap-section of the lock-nut that they cannot turn in opposite directions, and as one is held by right-handed threads and the other is held by left-handed threads it is manifestly impossible for them to be separated or taken off the bolt until the spring is released from the ratchets 14. When the end of the spring is released from the ratchets 14, however, the lock-nut, as stated, can be readily taken off without any injury.

Having thus fully described our invention, what we believe to be new, and desire to secure by Letters Patent, is the following:

The combination with a bolt, of a locking-nut in two sections, one of which is an ordinary nut with internal threads and which nut has corrugations on one side to fit against the surface to which it is to be applied, and ratchets or notches on the other side; and



the other section of which is a square-headed  
nut with a spring riveted on one corner and  
adapted to engage the said ratchets or  
notches, said second section having a pro-  
5 jecting nose which has internal right-handed  
threads and left-handed threads on the out-  
side of same which projecting nose is adapted

to engage the screw-threads of the first-men-  
tioned nut.

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