

No. 765,247.

PATENTED JULY 19, 1904.

J. McCOMB.
NUT LOCK.

APPLICATION FILED NOV. 12, 1903.

NO MODEL.

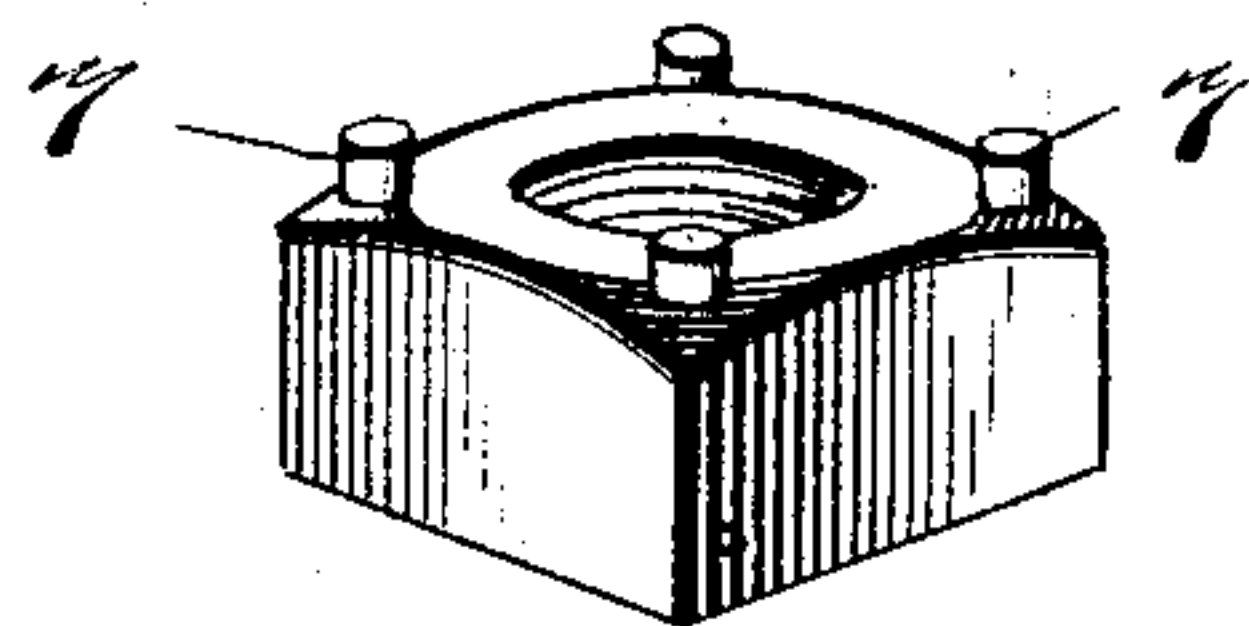


Fig. 2.

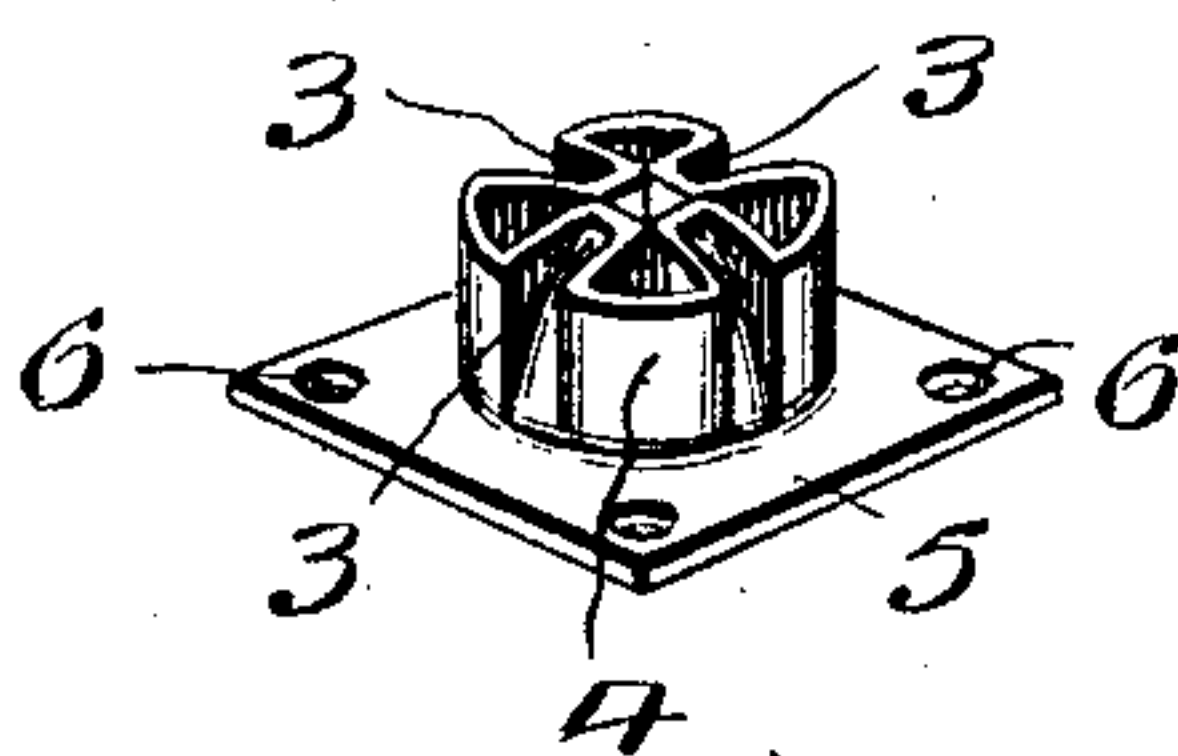


Fig. 3.

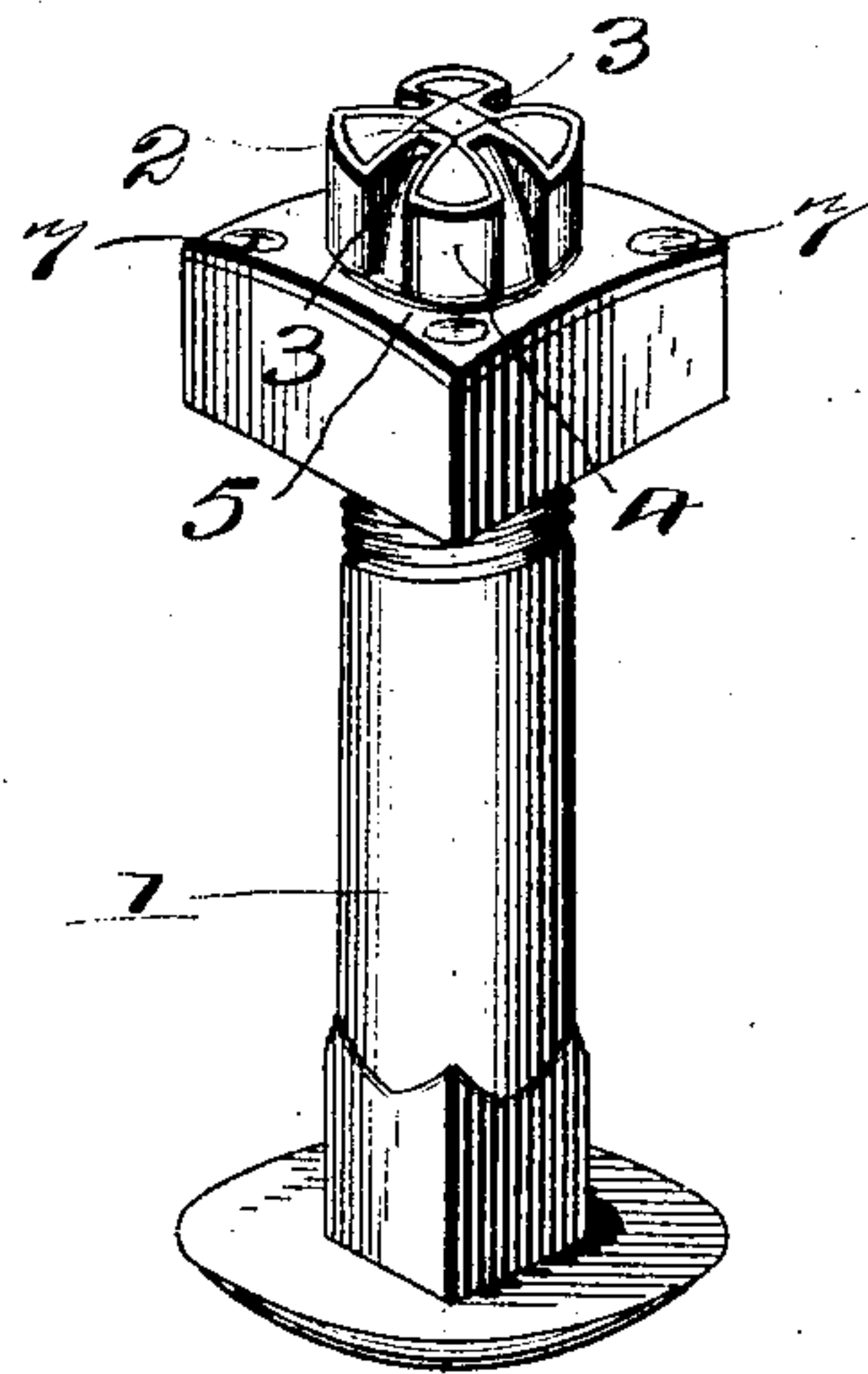


Fig. 1.

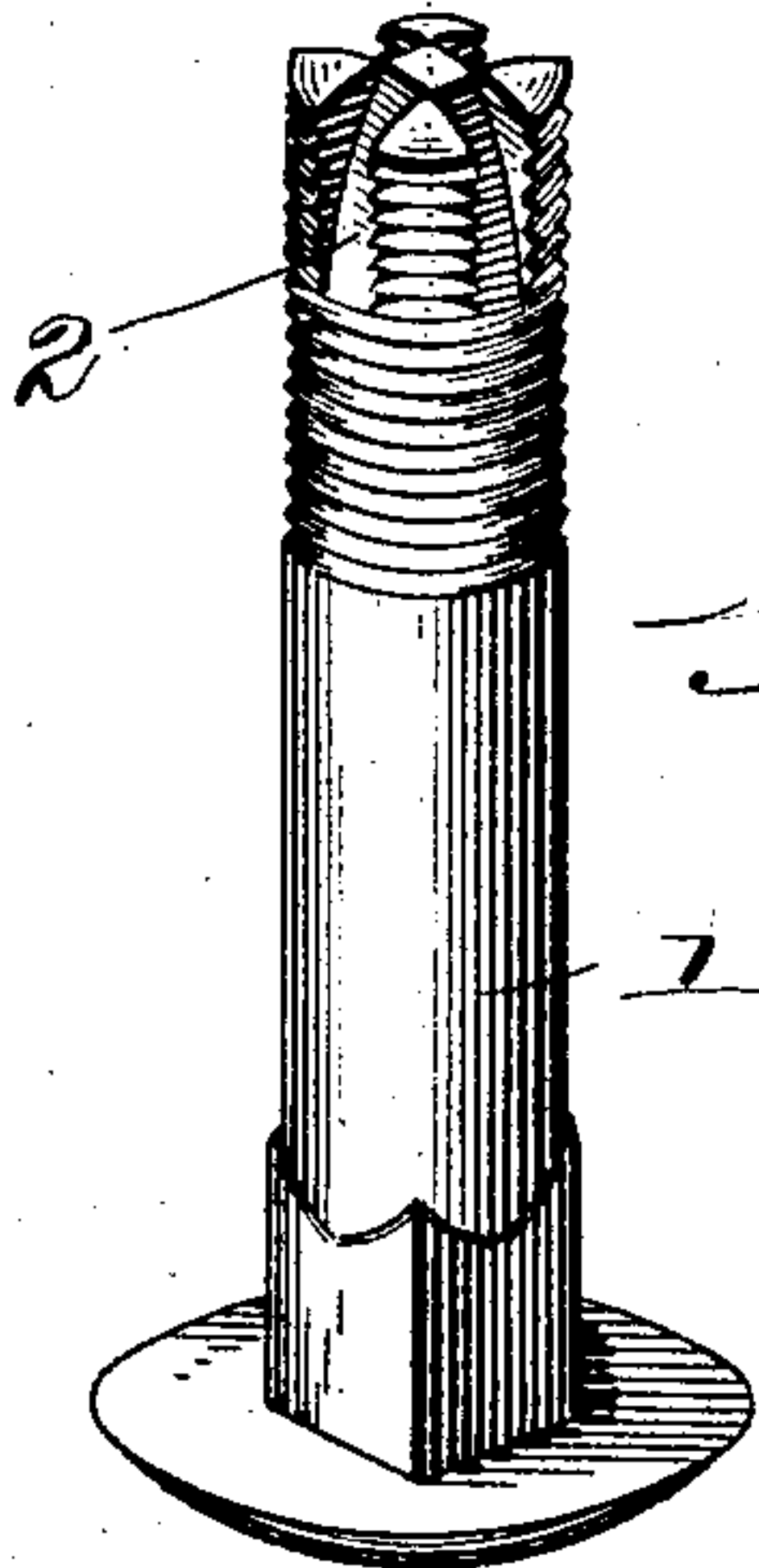


Fig. 4.

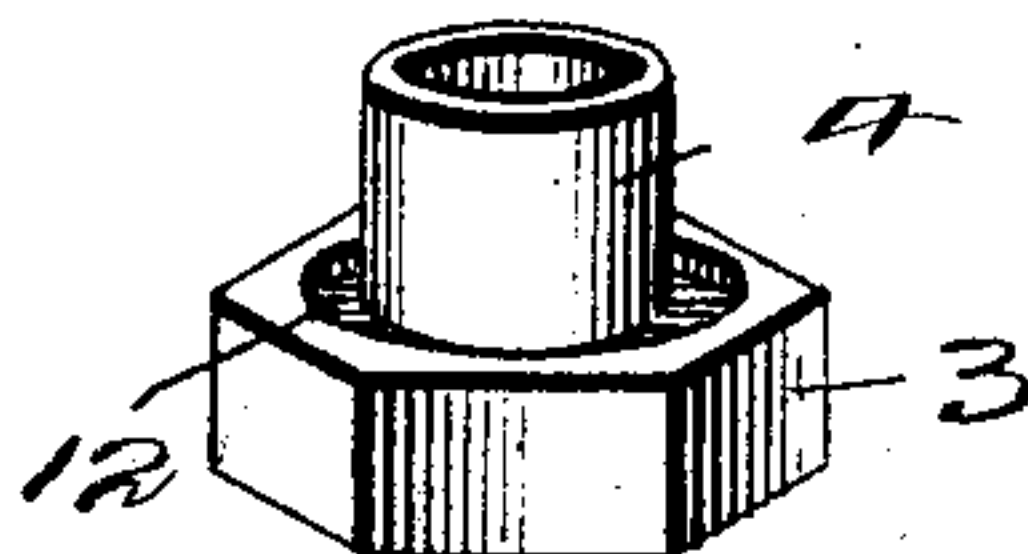


Fig. 5.

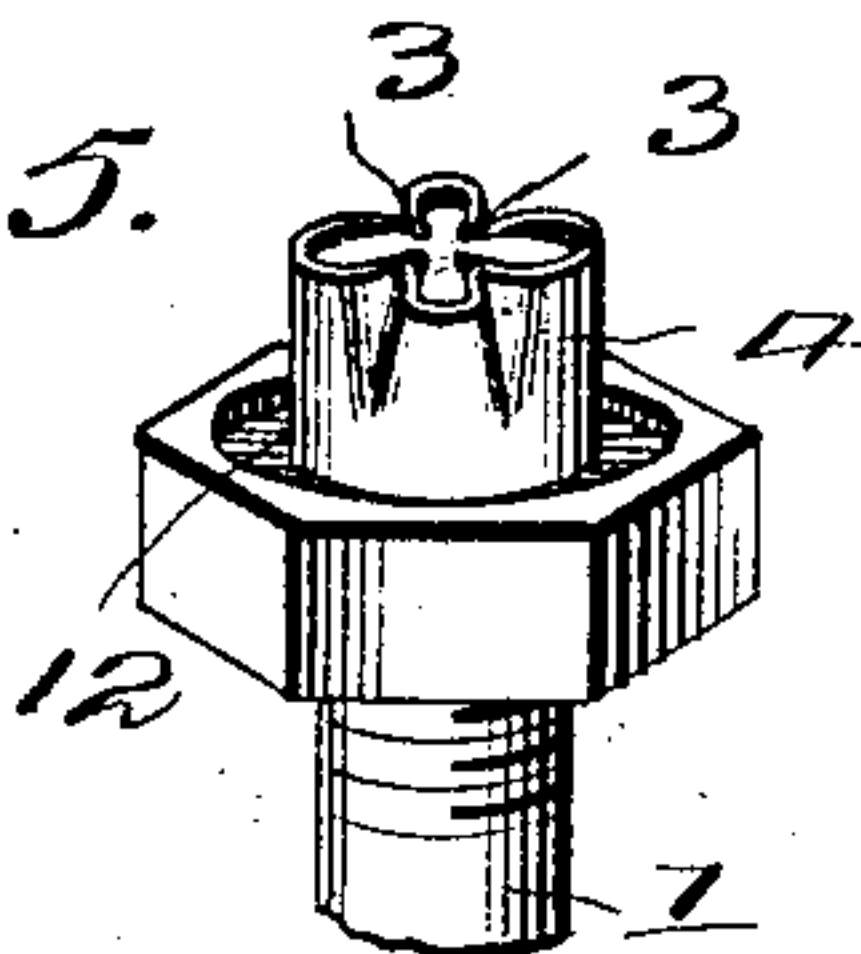
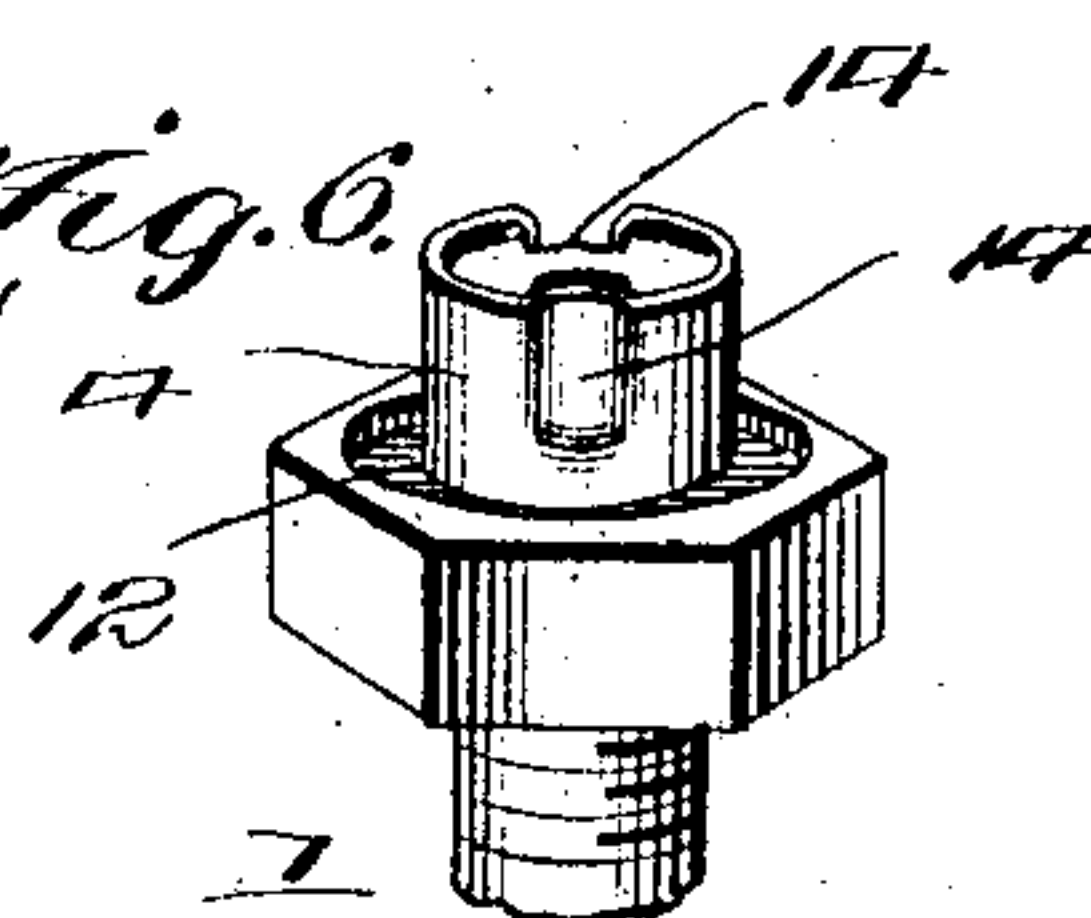


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES McCOMB, OF ST. CHARLES, MICHIGAN, ASSIGNOR OF ONE-HALF TO
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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 765,247, dated July 19, 1904.

Application filed November 12, 1903. Serial No. 180,892. (No model.)

To all whom it may concern:

Be it known that I, JAMES McCOMB, a citizen of the United States, residing at St. Charles, in the county of Saginaw and State of Michigan, 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.

My invention relates to nut-locks or means for holding the nut upon the threaded end of a bolt; and my invention consists of certain novel features of combination and construction of parts, the preferred form whereof will be hereinafter clearly set forth.

The object of my invention, among others, is to provide simple though reliably efficient means for locking the nut upon the end of a bolt after the nut has been turned home to the desired point.

A further object of my invention is to provide means carried by the nut which will prevent casual reverse rotation thereof after the same has been secured in an adjusted position.

Other objects and advantages will be hereinafter made clearly apparent, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a perspective view of a bolt properly shaped to receive my locking-nut. Fig. 2 is a perspective view of the locking attachment designed to be carried by the nut. Fig. 3 is a perspective view of the bolt and locking-nut secured in their operative positions. Fig. 4 is a perspective view showing another form of my invention wherein the part shown in Fig. 2 is practically formed integral with the nut. Figs. 5 and 6 show the part illustrated in Fig. 4 after it has been crimped around the end of the bolt.

For convenience of reference the details of my invention and cooperating features will be designated by numerals, the same numeral applying to a corresponding part throughout the several views, and referring to the numerals on the drawings 1 indicates a bolt of

the usual or any preferred pattern, which is properly threaded at one end, as is common. Upon the threaded end of the bolt I form a plurality of recesses or grooves 2, which deepen gradually from "nothing" at their inner ends, so as to extend near the axial plane or central portion of the bolt at the outer ends of the recesses. I utilize the plurality of recesses 2 as means for engaging with or receiving the inwardly-directed members 3, carried by the tubular extension 4 of the locking-plate 5. The locking-plate 5 is also provided with the aperture 6, preferably in each corner thereof, said aperture being designed to receive one of the lugs 7, constituting an integral extension of the locking-nut 8.

It will be understood that the locking-plate 5 and its tubular extension 4 will have certain portions thereof directed inward to form the members 3, adapted to fit in the recesses 2 in the end of the bolt.

It is therefore obvious that when the nut 8 is turned home to the proper point upon the threaded end of the bolt 1 and the plate 5 entered over the protruding end of the bolt, so that the members 3 will fit in one of the recesses 2, the nut will be reliably locked against casual reverse rotation after the ends of the lugs 7, which protrude through the hole 6, have been properly upset, thereby securely riveting the plate 5 to the nut, as more clearly shown in Fig. 3.

It will be understood that the cooperating locking device illustrated in Fig. 2 may be formed as therein shown, or said plate 5 may have a simple tubular uncrimped extension 4, and after the same has been slipped over the end of the nut a portion of the edges of said extension 4 may be directed inward, so as to fill each of the recesses 2, inasmuch as this may be readily accomplished from soft pliable sheet metal, as copper or the like.

In Figs. 4, 5, and 6 I have shown the thimble 4 as being swaged from or formed integral out of a portion of the metal of the nut itself, inasmuch as it will be observed that an annular recess 12 is formed surrounding the base or inner end of the thimble 4, representing the space from which the material form-

ing said thimble was taken. By thus integrally forming the thimble 4 with the nut itself, which can be done by a comparatively simple well-known swaging process, the weight of the nut is in no wise increased, while at the same time the extra work of connecting the plate 5 to the nut, as by means of the integral lugs 7, carried by the nut, is obviated.

In Figs. 5 and 6 I have shown how the free end of the thimble 4 may be readily crimped or crushed inward to occupy recesses formed in the end of the bolt, this being done after the nut shall have been turned home to the proper point upon the end of the bolt.

It is therefore obvious that the simple form of integral extension whereby the thimble 4 is produced from the material of the nut itself will be found reliably efficient in locking the nut in an adjusted position after the free end of the thimble has been crimped, so that such free edge will occupy recesses in the end of the bolt. Obviously a pair of diametrically-disposed recesses 14, as shown in Fig. 6, may be formed in the end of the bolt, or a plurality of said recesses, as indicated by the numeral 2 in Fig. 1, may be provided.

It will be seen that the various parts of my invention may be very cheaply and expeditiously manufactured and readily assembled each in its respective operative position, and while I have described the preferred combination of parts deemed necessary in carrying out my invention I wish to comprehend in this application such substantial equivalents and substitutes as may be considered as falling fairly within the scope of my invention.

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

1. The herein-described nut-lock comprising the combination with a bolt having a threaded end and a plurality of longitudinally-disposed recesses in the extreme threaded end thereof, said recesses starting at the surface and gradually deepening toward the outer end of the bolt, of a nut having a plurality of integral lugs thereon, a plate having apertures to receive said lugs and also having a tubular extension, said extension having inwardly-directed members 3 adapted to take into the recesses in the bolt and lock the nut in position thereon.

2. In a nut-lock, the combination with a bolt having a threaded end and a plurality of longitudinally-disposed recesses in the extreme threaded end thereof, the bottom of said recesses being at an oblique angle to the axial plane of said bolt, of a nut having a plurality of integral lugs thereon, a plate having apertures to receive said lugs, said plate also having a tubular extension with portions thereof directed inwardly to form the members 3, whereby when said plate is inserted over the end of the bolt said members will take into said recesses and the apertures onto the lugs, and said nut locked to the bolt.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES McCOMB.

Witnesses:

THOS. CURRIE,
ROBERT GILLESPIE.