

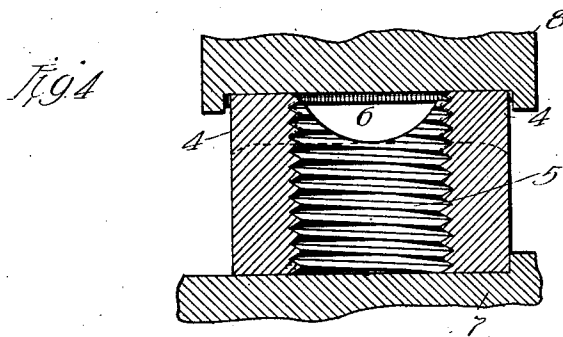
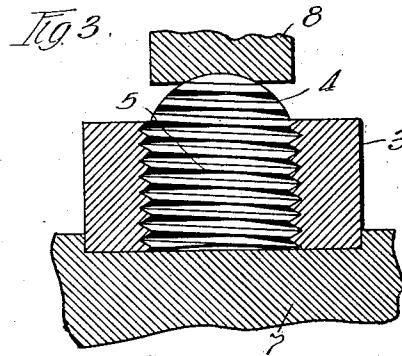
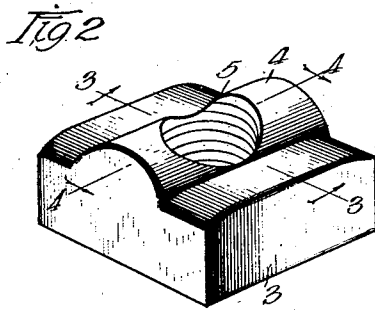
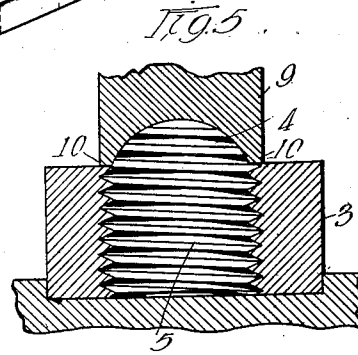
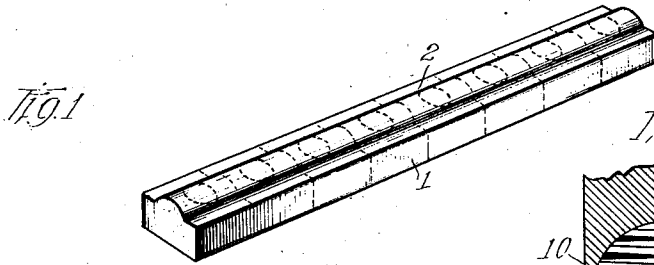
W. E. SHARP.

LOCK NUT.

APPLICATION FILED MAR. 29, 1915.

1,265,123.

Patented May 7, 1918.



Witnesses:
Arthur W. Carlson
Robert H. Furr

Inventor:
William E. Sharp,
By Hill & Hill atty.

UNITED STATES PATENT OFFICE.

WILLIAM E. SHARP, OF CHICAGO, ILLINOIS, ASSIGNOR TO GRIP NUT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

LOCK-NUT.

1,265,123.

Specification of Letters Patent.

Patented May 7, 1918.

Application filed March 29, 1915. Serial No. 17,681.

To all whom it may concern:

Be it known that I, WILLIAM E. SHARP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lock-Nuts, of which the following is a description.

My invention belongs to that general class of lock or grip nuts so constructed that while they may be readily threaded upon the bolt initially by substantially a finger fit, as they are screwed down upon the bolt they so engage or bind upon the same that they are not accidentally disengaged therefrom even in places subjected to great vibration and jar. The object of my invention is to produce a simple and very economical nut of the class described.

To this end my invention consists in the novel nut and the process of forming the same herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference characters indicate like or corresponding parts,

Figure 1 represents a bar of metal from which the nut blanks are adapted to be cut;

Fig. 2 is a perspective view of a completed nut;

Fig. 3 is a section taken on line 3, 3 of Fig. 2, and showing in fragmentary form a compressing element or bar, and the base upon which the nut may be seated when so compressed; and

Fig. 4 is a section taken substantially on line 4, 4 of Fig. 2, showing the same base and compressing bar, and

Fig. 5 is a view similar to Fig. 3, showing a modified form of compressing bar.

In the preferred form shown in the drawings, the nut blanks may be formed from a suitable bar rolled to the form desired, as indicated in Fig. 1, in which 1 indicates the bar and 2 a longitudinal bead centrally disposed upon one face thereof. The nuts in this form may be punched for the bolt hole, and thereafter cut of suitable lengths. When the nut blanks are thus arranged, the bolt hole intersects the bead, as indicated, 3 forming the body of the nut and 4 the bead thereof, 5 indicating a bolt hole. It will thus be seen that on the line indicated on 4, 4 there will be a depression, as at 6, between the proximate walls of the bead which has been intersected. After the nut

has been thus punched, and the thread therein cut in the usual manner, it is then placed upon a firm base or body 7, which conforms to the face of the nut, preventing the springing or bending of the body of the nut as it is compressed. A compressing bar 8 of suitable form is operated by suitable mechanism, and positioned to descend upon the bead of the nut, as clearly shown in Figs. 3 and 4, compressing the beaded portion to cause the distance between the proximate threads in the beaded part to be slightly decreased from the normal, as indicated in the drawings. It will be obvious that a nut thus formed may be readily threaded upon a bolt at its flat face by a finger fit, and may be screwed down upon the bolt by such finger fit until the modified threaded portion in the beaded part reaches the thread upon the bolt, at which point the nut will bind, or grip upon the threads of the bolt in such manner as to cause a tight, firm fit. In any effort to back the nut off the bolt this tight fit is supplemented by the cutting advance points of the threads cut in the bead. The engagement of such a nut with its bolt is such that the parts are not likely to be accidentally disengaged, even when there is great jar or vibration.

The modification in the threads of the nut, as shown in the drawings, is necessarily exaggerated to show the construction. In practice the deflection need be but slight in order to secure the effect sought. As shown in Fig. 5, the compressing tool 9 may be constructed to span the bead 4 and bear on the proximate wall of the body as at 10, 10. In this form the compression may be brought to bear on the bead alone, on the proximate walls alone, or on both bead and walls, depending upon the form of the face of the compressing tool. The latter construction results in a most satisfactory nut for all places subjected to heavy vibration.

It is obvious that, if preferred, the nut may be finished and completed in hexagonal or any other preferred form rather than in the square nut shown in the drawings.

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

1. A bolt nut comprising a suitable nut provided with one flat face and with a dia-

metrically disposed bead on the other face thereof intersected by the threaded bolt hole, the beaded part being compressed and the threads thereof distorted to slightly decrease the normal distance between the proximate threads thereof.

2. A bolt nut comprising a suitable nut provided with one flat face and with a diametrically disposed bead on the other face thereof intersected by the threaded bolt hole, the bead being compressed and the threads thereon and near the surface on each side of the bead, but adjacent the bolt hole being slightly distorted to decrease the normal distance between the proximate threads.

3. A bolt nut comprising a nut provided with one flat face and with a diametrically disposed bead on the other face thereof intersected by the threaded bolt hole, the threads near the upper surface of the nut being distorted to slightly decrease the normal distance between the proximate threads thereof.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM E. SHARP.

Witnesses:

W. C. COOK,
S. S. SWASEY.