

R. A. CLARK.
NUT LOCKING TOOL.
APPLICATION FILED JUNE 20, 1910.

975,677.

Patented Nov. 15, 1910.

Fig. 1.

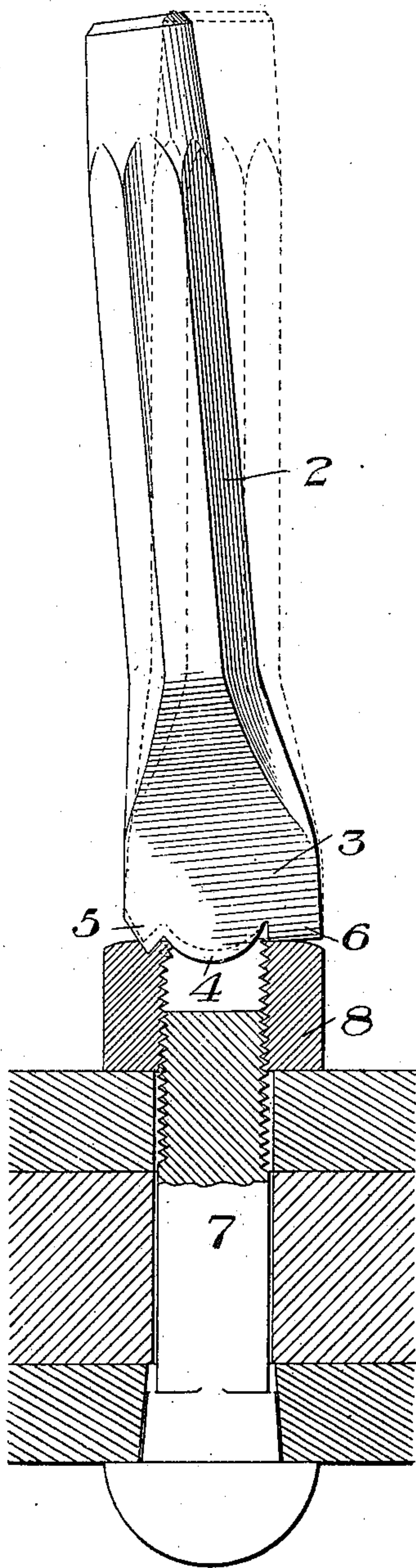


Fig. 2.

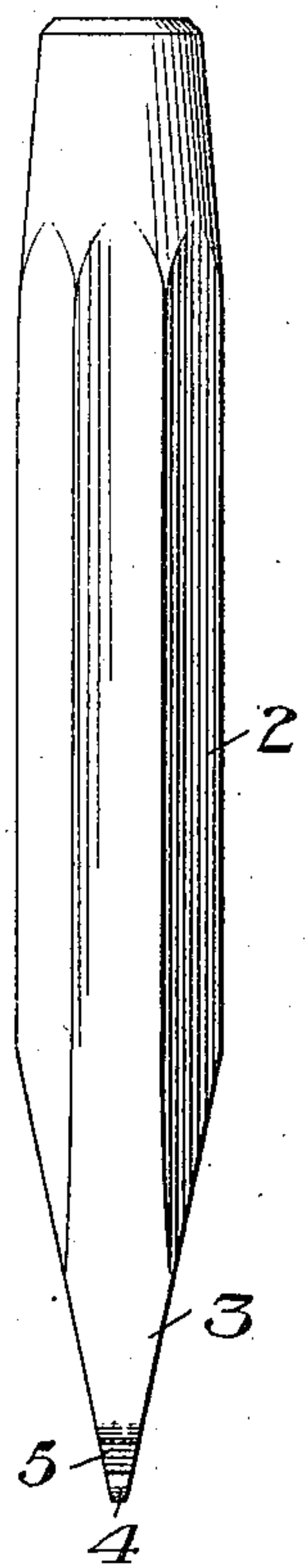
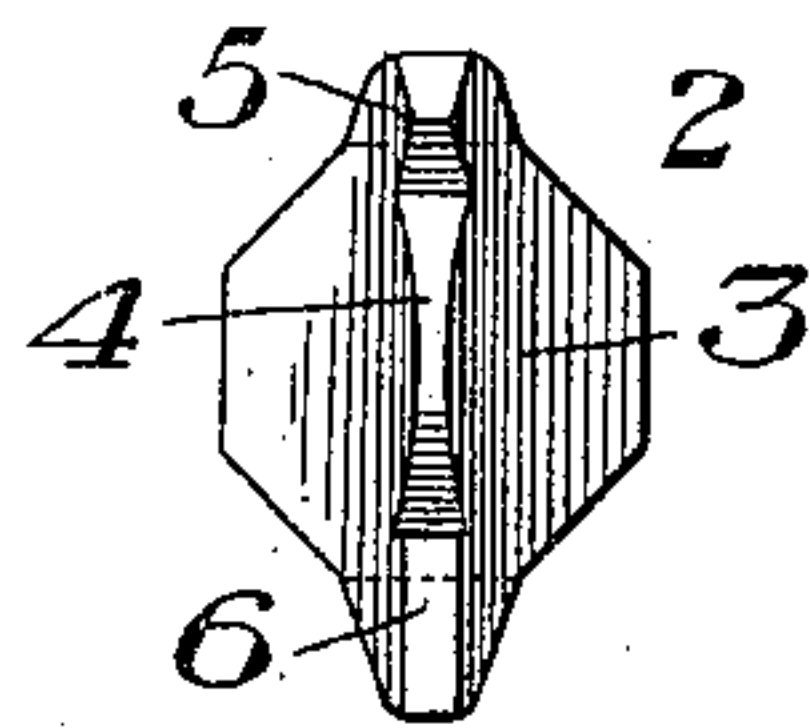


Fig. 3.



WITNESSES

R. A. Balderson
W. H. Harris

INVENTOR

R. A. Clark
by Baker, Byrnes & Carmichael
his Atty.

UNITED STATES PATENT OFFICE.

RUSSELL A. CLARK, OF PITTSBURG, PENNSYLVANIA.

NUT-LOCKING TOOL.

975,677.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed June 20, 1910. Serial No. 567,849.

To all whom it may concern:

Be it known that I, RUSSELL A. CLARK, of Pittsburgh, Allegheny county, Pennsylvania, have invented a new and useful Nut-Locking Tool, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view partly in side elevation, and partly in vertical section illustrating my improved tool and the manner of using the same; Fig. 2 is an edge view of the tool; and Fig. 3 is a bottom plan view.

My invention has relation to nut-locking tools, and more particularly to a tool which is adapted to enter the split threaded end of a bolt and spread the same into locking engagement with a nut, the tool also having means for compressing the material of the nut into the spread end of the bolt. Heretofore in tools of this character, it has been customary to provide a tool having two swaging spurs at opposite sides adapted to simultaneously compress material from opposite sides of the nut into opposite sides of the spread end of the bolt, in the manner described and claimed in the patent to Kootz and Shrimer, No. 819,288, dated May 1st, 1906.

My invention is designed to provide a tool of this general character, but which is provided with only a single swaging spur, the opposite side of the tool having a fulcrum-ing spur adapted to seat upon the face of the nut and form a bearing upon which the tool rocks sidewise as it is forced into the split end of the bolt and as its swaging spur enters the material of the nut.

Referring to the accompanying drawings, the numeral 2 designates the body of the tool, which consists of a shank of any suitable form, and which has a wedge-shaped lower portion 3. The lower edging of this wedge-shaped portion is formed with a central convex tooth 4, which is of substantially the width of the diameter of the bolt with which it is to be used, and with a swaging spur 5 at one side thereof and a fulcrum-ing spur 6 at the other side thereof. The swaging spur 5 and the fulcrum spur 6 are preferably of about the same length, and the convex tooth is slightly longer so as to immediately seat itself in the slot of the bolt and center the tool.

The manner of using the tool will be clearly apparent from Fig. 1. It is applied in the position shown in dotted lines in Fig. 1 and is forced into engagement with the bolt and nut to the final position shown in full lines in said figure, the convex tooth 4 entering the split end of the bolt 7 and spreading it into engagement with the internally threaded nut 8. At the same time the swaging spur 5 is forced into the metal of the nut at one side of the bolt, and compresses the metal inwardly into engagement with the spread end of the bolt, thus making a secure locking engagement.

By the provision of a tool of this character several important advantages are gained. In the first place, the tool is especially adapted for use in locking nuts which may require to be removed more or less frequently. Inasmuch as the metal of the nut is swaged inwardly at one point only, it will be obvious that the total life of the nut is doubled, since the fresh material available for relocking is doubled over the old method. A further advantage is that due to the fulcrum-ing spurs 6, since the natural movement of the tool on this fulcrum as it is forced into the split end of the bolt is such as to cause the swaging spur 5 to more effectively engage the metal of the nut and force it inwardly. This spur 6 also acts as an effective fulcrum in withdrawing the tool after the locking operation has been effected. In such cases the tool often tends to stick and considerable effort is required to remove it. This is entirely obviated by the present form of tool. The life of the tool is also greatly increased.

What I claim is:—

A nut-locking tool, comprising a shank having a wedge-shaped lower portion, the lower edge having a central convex spreading tooth, a pointed swaging spur at one side of the tooth, and a blunt fulcrum-ing spur at the other side of the spreading tooth adapted to have a rocking bearing on the face of a nut as described.

In testimony whereof, I have hereunto set my hand.

RUSSELL A. CLARK.

Witnesses:

GEO. H. PARMELEE,
H. M. CORWIN.