

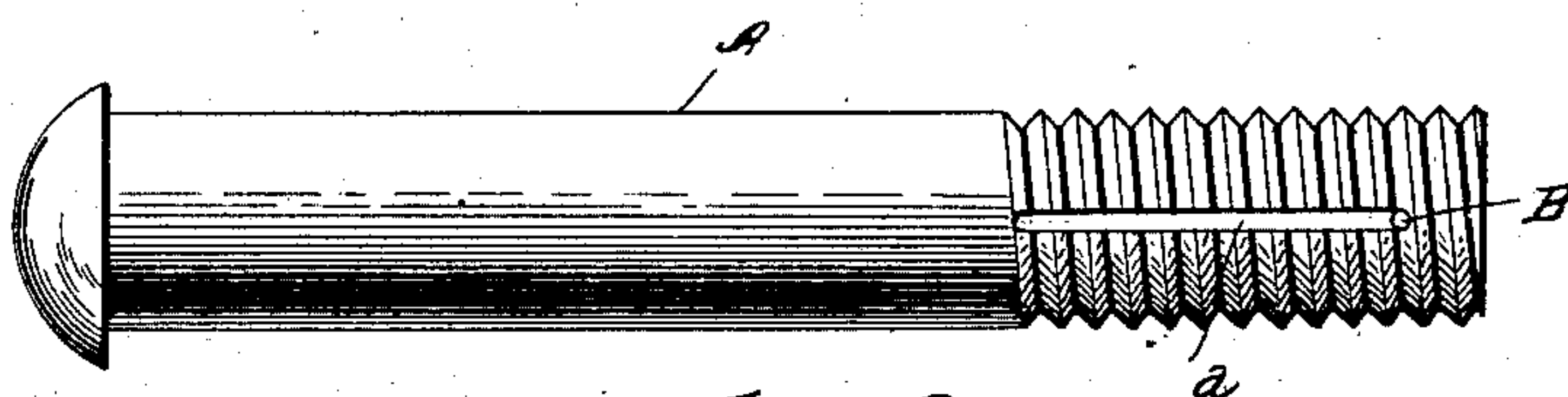
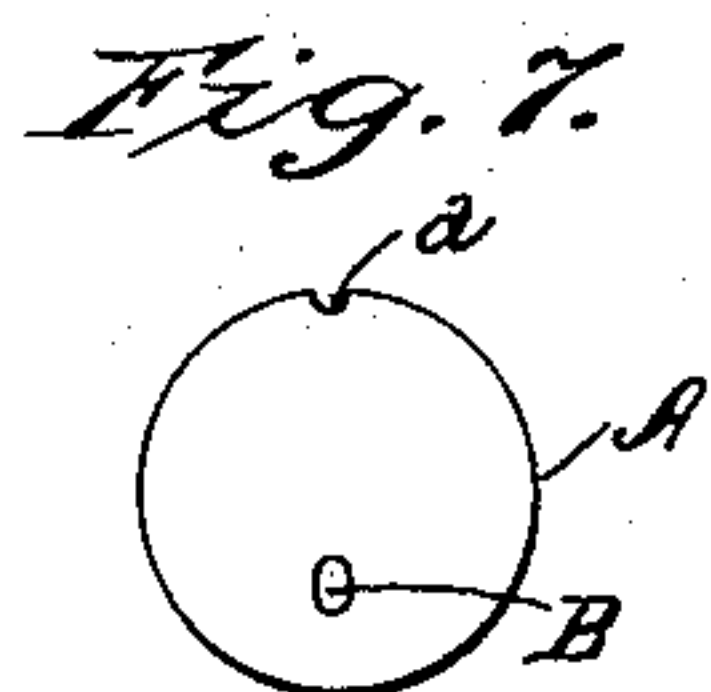
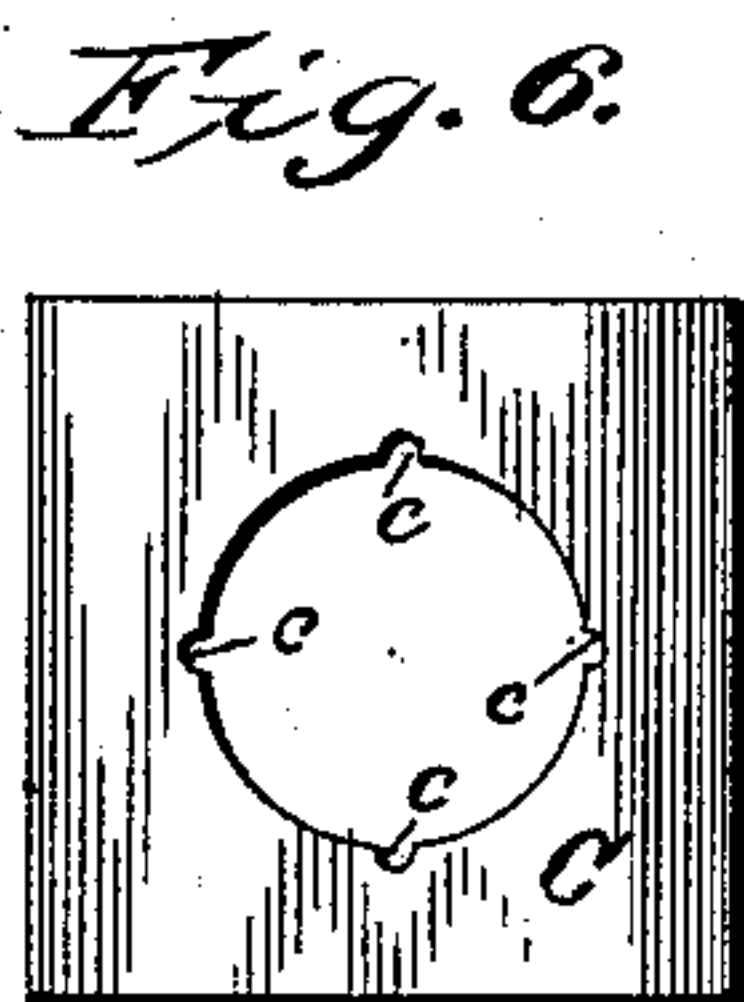
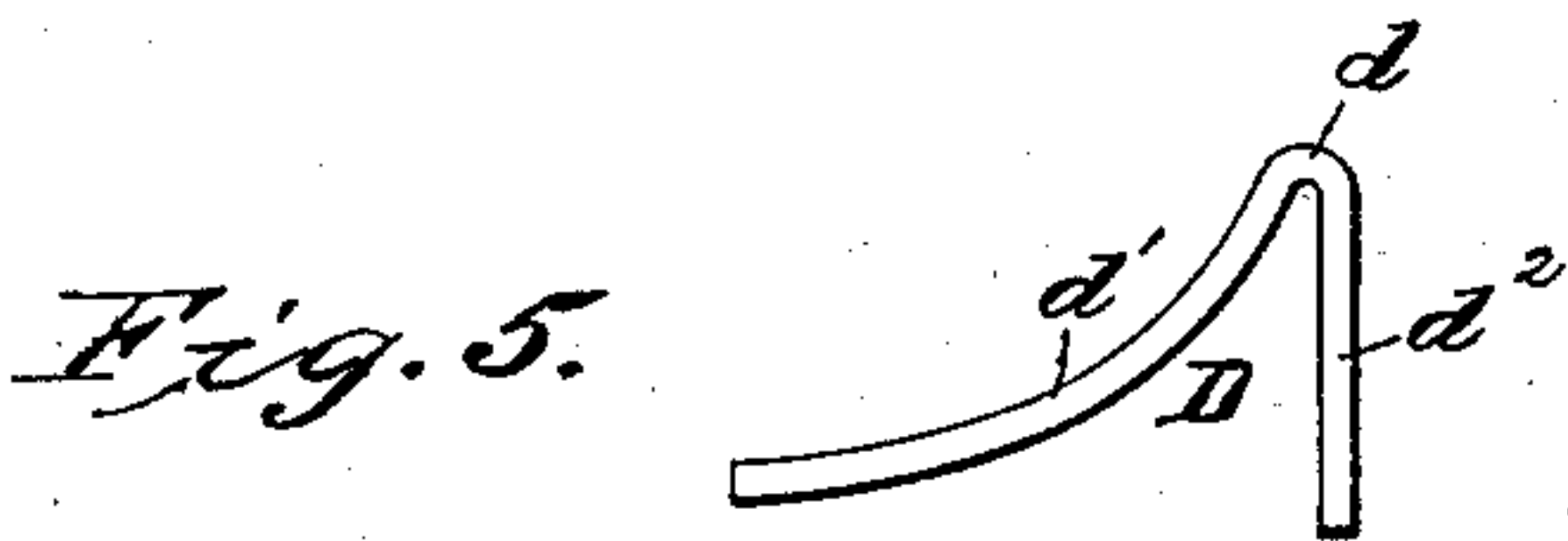
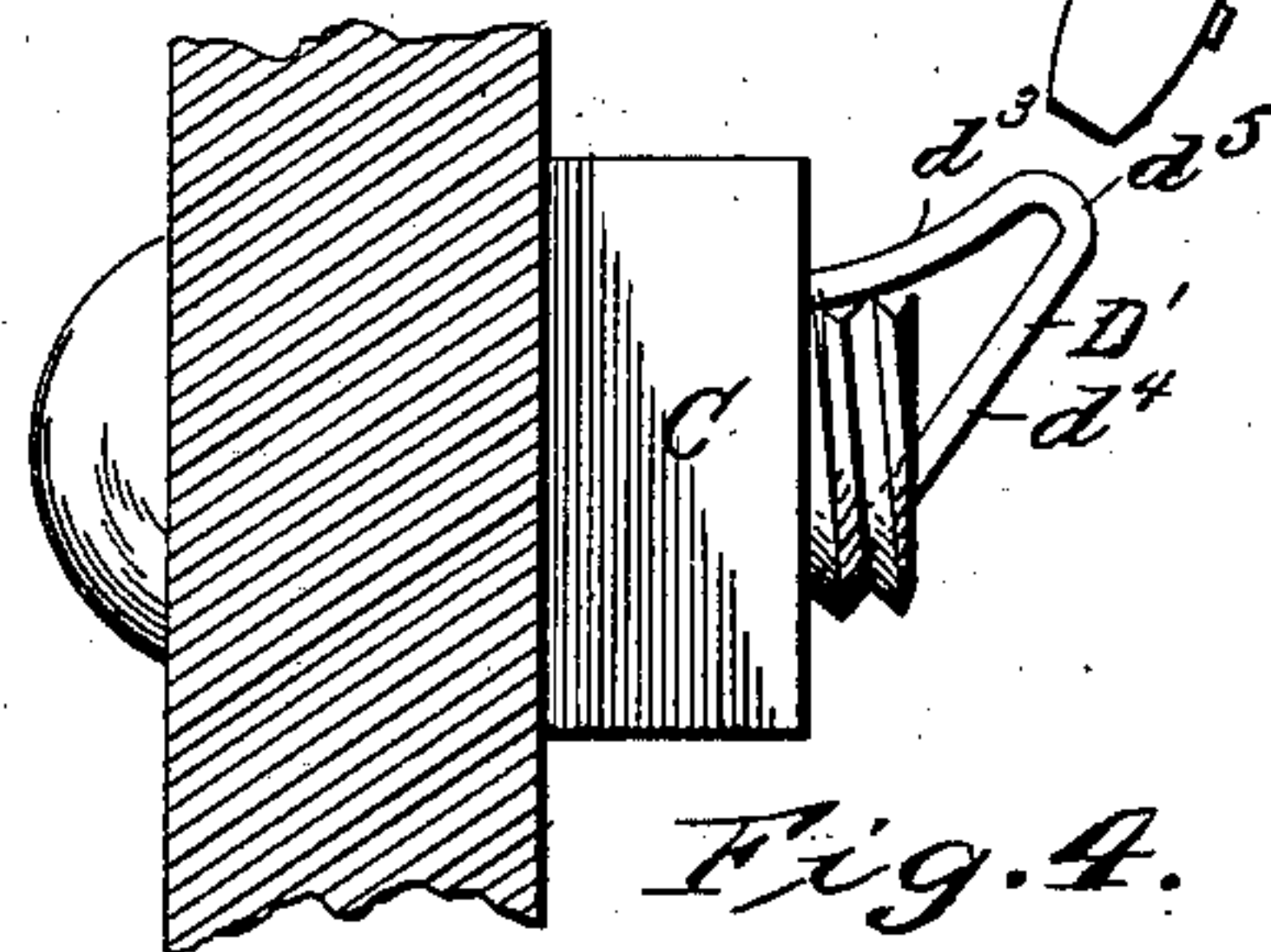
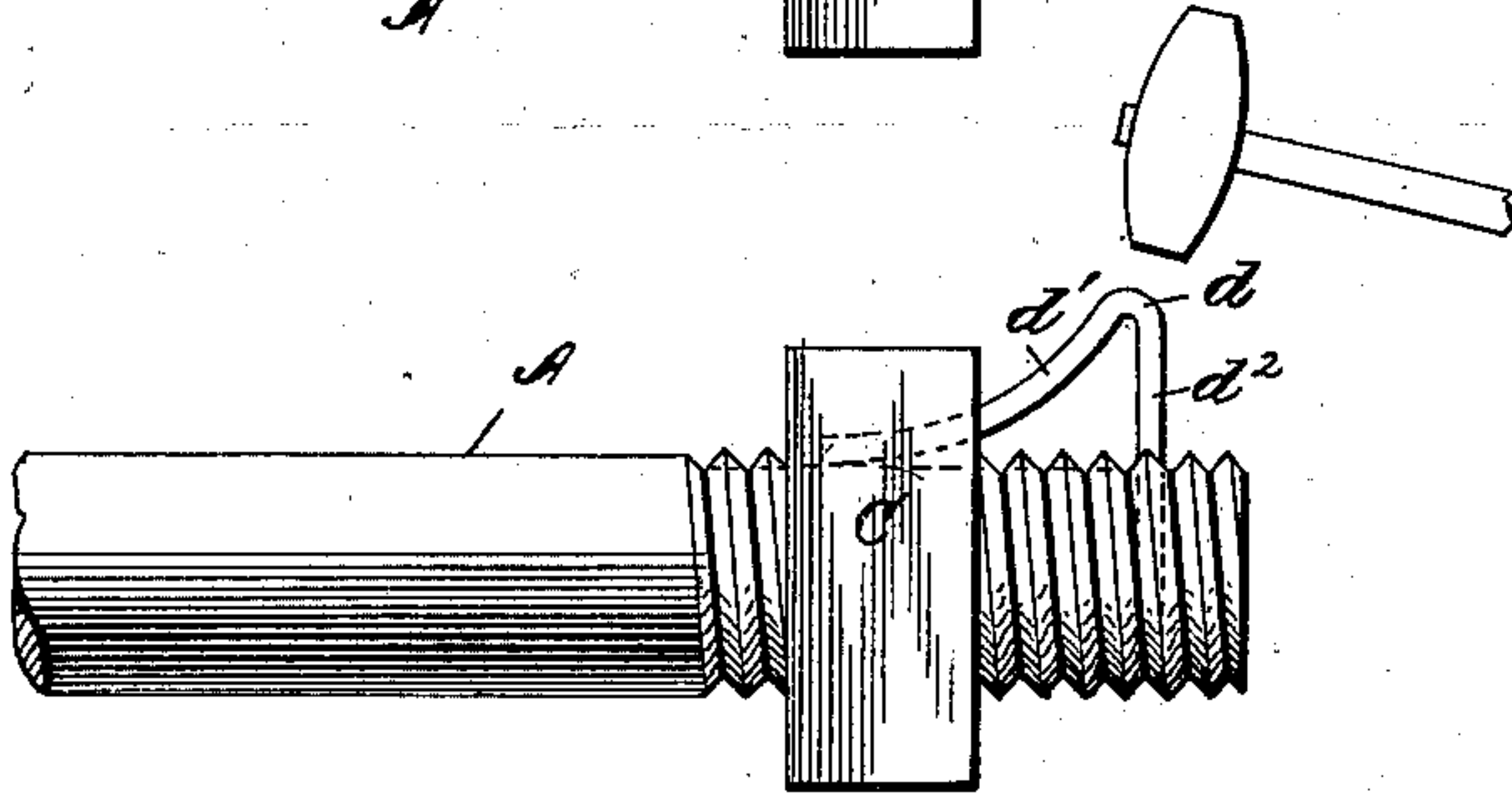
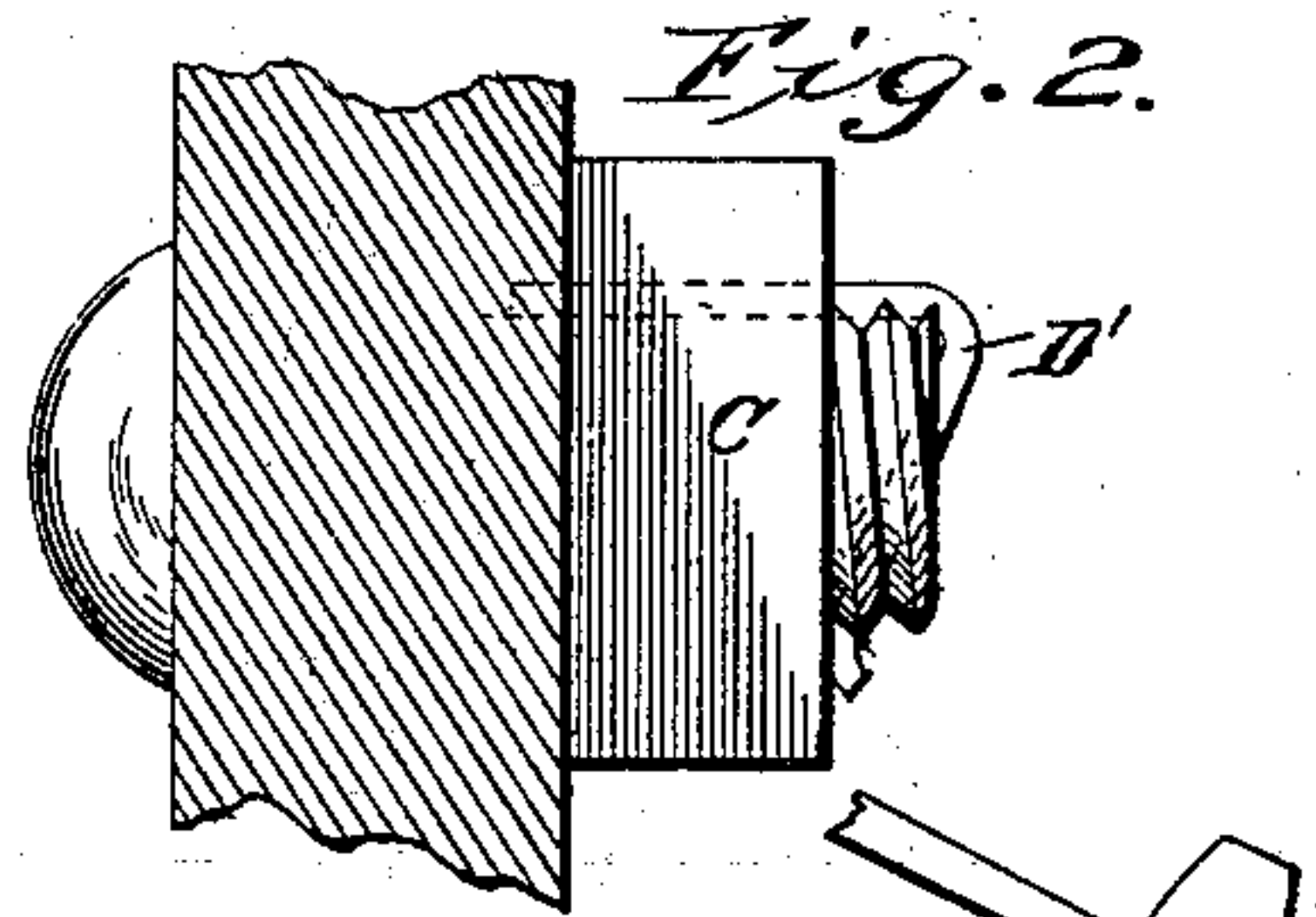
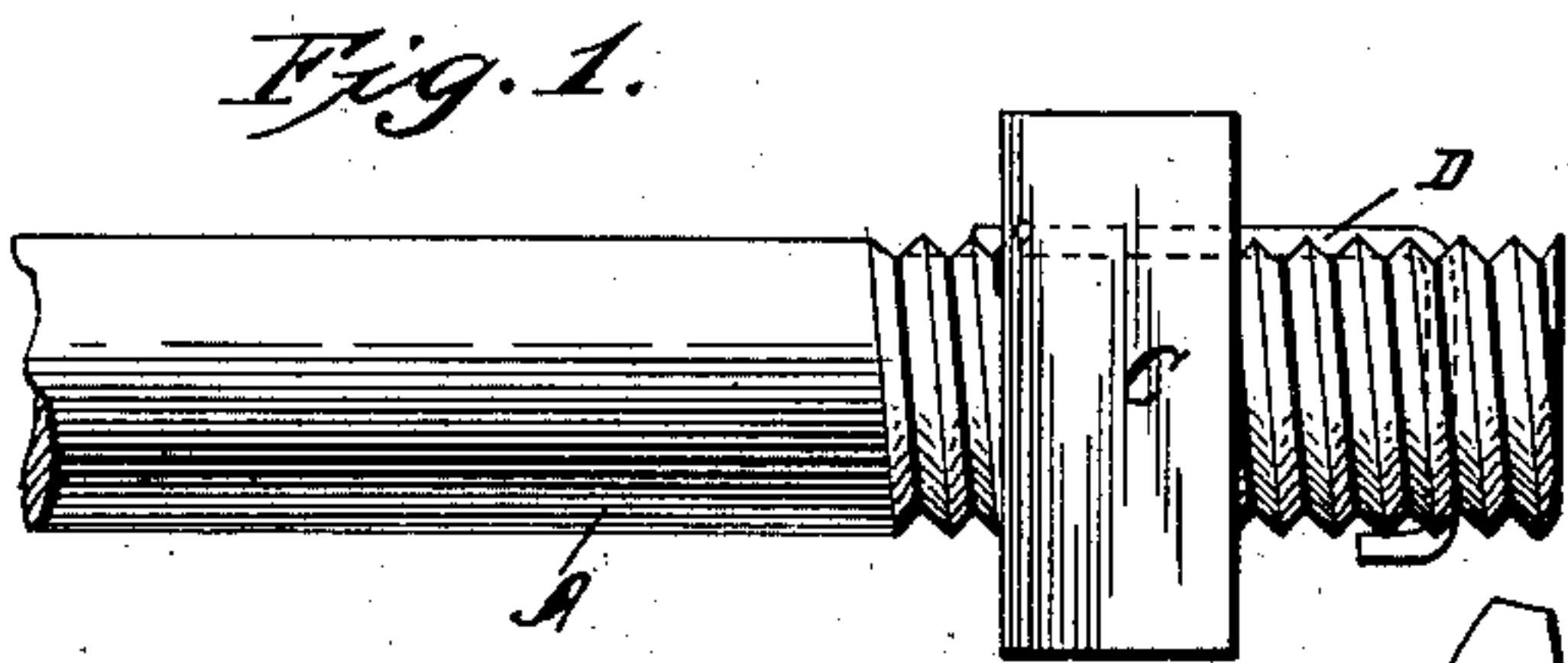
No. 654,744.

Patented July 31, 1900.

L. W. LOVING.
NUT LOCK.

(Application filed Apr. 20, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

LESLIE WAGGENER LOVING, OF PARIS, TENNESSEE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 654,744, dated July 31, 1900.

Application filed April 20, 1900. Serial No. 13,661. (No model.)

To all whom it may concern:

Be it known that I, LESLIE WAGGENER LOVING, a citizen of the United States, residing at Paris, in the county of Henry and State of Tennessee, 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, and has for its object to provide a lock for nuts which is cheap to manufacture, simple in its construction, and, above all, durable and easy of operation.

A further object of my invention is to provide a nut-lock which is particularly designed and adapted to be used on short bolts and on those bolts whereon the distance between the nut and the end of the threads is limited.

With these objects in view I have constructed a nut-lock the points of novelty of which will first be particularly described, and afterward more particularly pointed out in the appended claims.

Referring to the drawings, Figure 1 shows my device in an operative position. Fig. 2 is a similar view showing my device as applied to a short bolt. Fig. 3 shows the key in position to drive in as applied to the bolt shown in Fig. 1. Fig. 4 shows the key in position to drive in as applied to the bolt shown in Fig. 2. Fig. 5 is a side elevation of my improved form of key. Fig. 6 is a top plan view of the nut constructed in accordance with my invention. Fig. 7 is an end view of the bolt shown in Fig. 2. Fig. 8 is a modified form of key to be used in connection with this form of bolt. Fig. 9 is a plan view of the bolt shown in Fig. 1.

Like letters of reference indicate like parts throughout the several figures, in which—

A is the bolt, provided with a longitudinal groove a and a vertical circular opening B near the end thereof, C is the nut, provided with a series of grooves c in bore thereof, and D is the key.

When my device is applied to a short bolt, the opening B is in the face of a bolt and runs backward at an angle of about forty-five degrees.

The key D is bent at d , forming two arms

d' and d^2 , d^2 being vertical and d' curved outward away from the vertical arm d^2 . The key D' used in Fig. 2 is also bent at d^5 , having two arms d^3 and d^4 , d^3 being curved outward from d^4 ; but the arm d^4 is bent away from the perpendicular and toward the arm d^3 .

Having described the several parts of my invention, its operation is as follows: When the nut is threaded on over the bolt to the desired position and the groove c in the nut is made to register with the groove a in the bolt, the end of the arm d' of the key D is placed therein, while the end of the arm d^2 is placed in the circular opening B in the bolt A. A hammer is applied at the bend d , as shown in Figs. 3 and 4, and the arm d' is driven into the groove a by the same stroke that drives the arm d^2 into the circular opening B in the bolt A. The end of the arm d^2 is then clenched under the bolt, as shown in Fig. 1, and the nut is securely locked. When a short bolt, as shown in Fig. 4, is desired to be locked, the end of the arm d^3 of the key D' is placed in the groove a of the bolt A, and the end of the arm d^4 of the key D' is placed in the circular opening B in the face of the bolt A, as shown in Fig. 4. A hammer is applied at the bend d^5 , and the arms d^3 and d^4 are driven home by the same stroke. The end of the arm d^4 entering the bolt obliquely strikes the face of the nut as it emerges from the opening B on the under side of the bolt A and is turned outwardly, as shown in Fig. 2, thus clenching itself. When it is desired to unlock the nut, the end of the arm d^4 is straightened and the key driven out.

Having thus specifically set forth the several parts of my invention and fully described its operation, I do not wish to be understood as limiting myself to the exact construction herein set forth, as various slight changes might be made therein, and I consider myself fully entitled to all such changes and modifications which fall within the spirit and scope of my invention.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a nut-lock, the combination with the bolt and nut, of a groove in said bolt, a series of grooves in said nut, of a key having one arm straight its entire length, and one arm curved outwardly in such a manner that the

nut and bolt are locked by one stroke of a hammer, substantially as described.

2. In a nut-lock, the combination of a bolt provided with a longitudinal groove, a substantially-vertical opening in the end thereof, a nut provided with a series of grooves in the bore thereof, a key having one straight arm, and one arm curved outwardly in such a manner that the nut and bolt are locked by one stroke of a hammer, substantially as shown and described.

3. In a nut-lock, the combination with the bolt and nut, of a key having one straight arm and one arm curved outwardly, and an opening in the bolt arranged in such a manner that the nut and bolt are locked and the key is clenched by the same stroke of a hammer, substantially as described.

4. In a nut-lock, the combination with the bolt and nut, of a key having one straight

arm and one arm curved outwardly forming a bearing for a hammer in such a manner that the nut and bolt are locked and the key clenched by the same stroke of a hammer, substantially as described.

5. In a nut-lock the combination with the nut, of a bolt provided with a longitudinal groove, an opening in the end thereof, and a key arranged in such a manner that one arm of said key is driven into said groove while the other is driven into said opening by the same stroke of a hammer, substantially as described.

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

LESLIE WAGGENER LOVING.

Witnesses:

JAMES A. HICKS,
A. G. CHERRY.