S. W. Kirk.

Lock-Nut.

No. 76201 Patented Mar. 31, 1868.

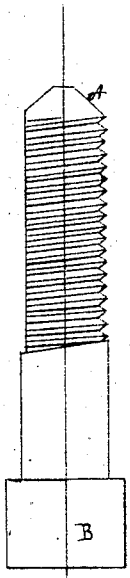

FIG. 1.

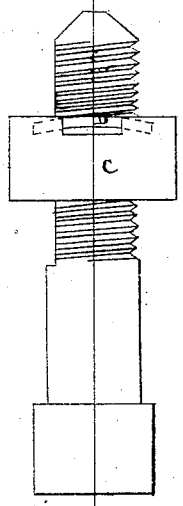

FIG. 2.

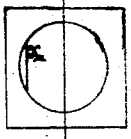

FIG. 3.

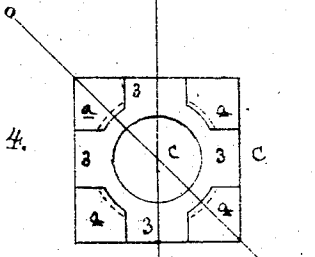

FIG. 4.

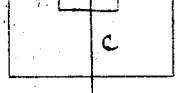

FIG. 5.

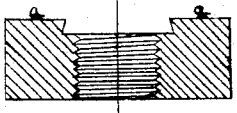

FIG. 6.

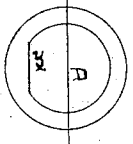

FIG. 7.

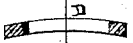

FIG. 8.

Witnesses.

Wm. Abbatt Jr.

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S. W. Kirk

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SOLOMON W. KIRK, OF COATESVILLE, PENNSYLVANIA.

Letters Patent No. 76,201, *dated March* 31, 1868.

IMPROVEMENT IN LOCK-NUTS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SOLOMON W. KIRK, of Coatesville, Chester county, Pennsylvania, have invented an Improvement in Retaining the Nuts of Bolts; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a device described hereafter, whereby the nut of a bolt, after it has been screwed home, may be effectually prevented from turning.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe the mode of carrying the same into effect, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 represents a bolt prepared for my improved nut-retainer.

Figure 2, the same, with the nut and its retainer.

Figure 3, an end view of the bolt.

Figure 4, a top view of the nut.

Figure 5, a side view of the same.

Figure 6, a section of the nut on the diagonal line *o o*, fig. 4; and

Figures 7 and 8, views of the retaining-ring.

A is the screw-stem of the bolt, and B the square head of the same. A flat surface is made on one side of the stem, as shown at *x*, fig. 3, for a purpose explained hereafter.

The upper surface of the nut is recessed in the centre, and at the four points 3 3 3 3, so as to leave at each corner of the nut a projection, *a*, the concave inner edge of which is bevelled inwards, as shown in fig. 6.

D is the retaining-ring, of the concavo-convex form represented in fig. 8, the ring being of such external diameter that it will fit snugly between the inner edges of the projections *a a* of the nut, the internal diameter being such that the ring will pass freely over the screwed portion of the stem of the bolt. There is, however, a straight portion, *y*, in the ring, adapted to the flat portion, *x*, of the bolt's stem.

After the nut has been screwed tight home, the ring D is passed, concave side downwards, over the screwed portion of the stem, the straight portion, *y*, of the ring, being in contact with the flat portion of the stem until the ring is finally lodged in the recess of the nut. By a suitable instrument applied to the convex side of the ring, and by blows imparted to the instrument, the ring is flattened, and consequently increased in diameter, so that its bevelled edges are driven tightly against the bevelled inner edges of the projections *a* of the nut; in other words, the ring is jammed tight to the nut, which cannot be turned until the ring is forcibly removed.

I claim as my invention, and desire to secure by Letters Patent—

The within-described nut-retainer, consisting of the concavo-convex ring D, having a straight portion, *y*, adapted to a flat place on the stem of the bolt, and being arranged for fitting, and being jammed in the recess of a nut, all substantially as set forth.

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

S. W. KIRK.

Witnesses:

E. L. BOMEISLER,

WM. ALBERT STEEL.