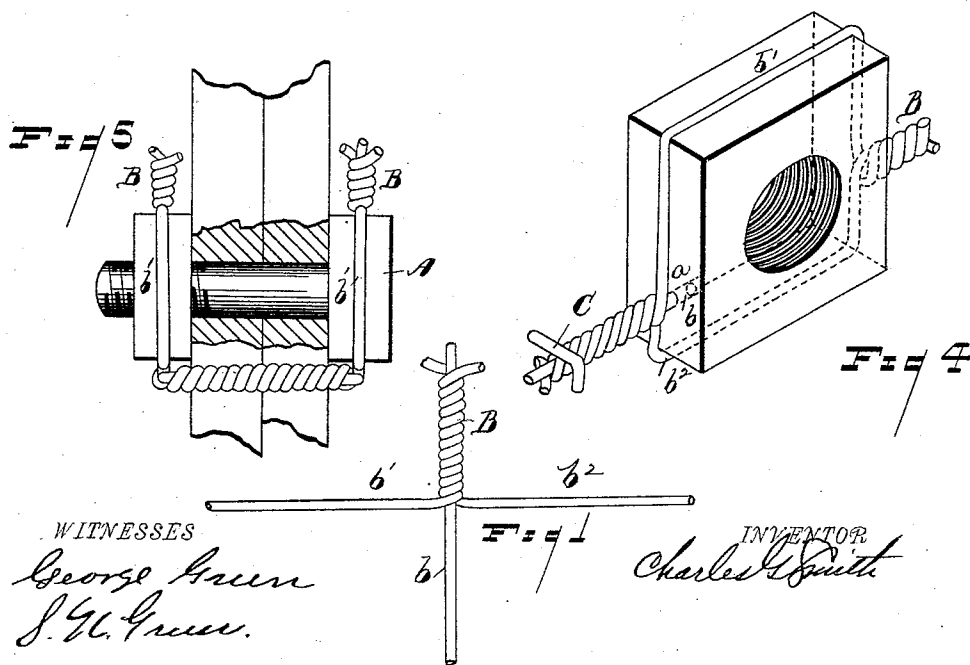
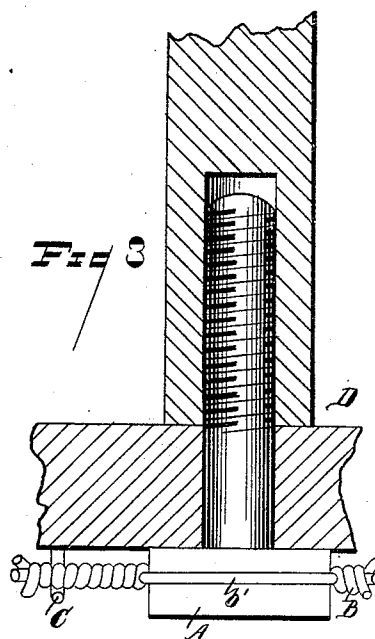
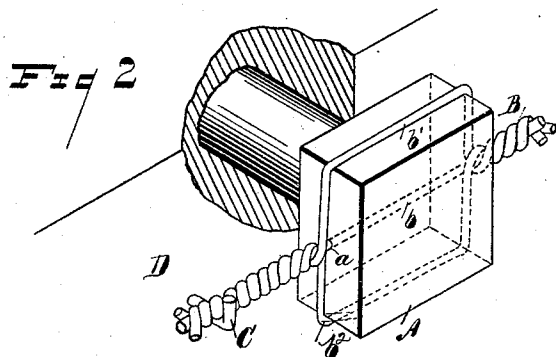


(No Model.)

C. G. SMITH.
BOLT AND NUT LOCK.

No. 484,616.

Patented Oct. 18, 1892.



WITNESSES

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BOLT AND NUT LOCK.

SPECIFICATION forming part of Letters Patent No. 484,616, dated October 18, 1892.

Application filed April 29, 1891. Serial No. 390,957. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. SMITH, a citizen of the United States, and a resident of the city of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Bolt and Nut Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to that class of bolt and nut locks in which the bolt and nut may both be locked by a lock passing into or through the bolt-head or the nut, and also embracing the side or sides of the bolt-head or nut.

The object of my invention is to provide a lock which can be easily made and put on and which can be used whenever a bolt-head or nut can be employed; and it consists in the twisted shank and the three branches of the lock, one to pass through or into the perforation through or into the bolt-head or nut, and the other two to pass around and embrace the sides of the bolt-head or nut, and united to the first on the opposite side of the head of the screw or nut, the perforation into or through the bolt-head, and the stop or stops against which the twisted shank rests, and in the peculiar construction, arrangements, and combination of the several parts, as hereinafter more particularly set forth and claimed.

Figure 1 is a perspective view of the lock detached. Fig. 2 is a perspective view of the lock attached to a perforated screw-head. Fig. 3 is a section view showing a frame and the cap-screw and lock. Fig. 4 is a perspective view of the lock attached to a nut. Fig. 5 is a sectional view showing the bolt-head and the nut both locked by a double lock.

In the drawings, A represents the head of a cap-screw provided with the perforation *a* for the insertion of one arm of the lock. B is a twist of three strands of wire which branch out into the three arms *b b' b²*. The central arm *b* is inserted in the perforation *a* in the head of the cap-screw and passes through. The other two arms *b' b²* pass around the head of the cap-screw in close contact with the sides of the head until they join the arm *b* projecting from the opposite side of the head to that in which it entered, where the

three are twisted together, securely enveloping the head of the cap-screw.

The twist B, projecting from the screw-head, rests against or is secured to the stop of hook C, which is placed at any convenient point in the beam or frame D, through or in which the screw is inserted. The twist on the opposite side of the screw-head may be extended so as to form another twist, which may in like manner rest against its stop or hook, thus locking the screw-head on each side.

In case this is used as a nut-lock, and a perforation cannot be made entirely through the nut, a slighter perforation may be made in the side of the nut and the arm *b* shortened to correspond. As the arm *b* does not pass through the other two are twisted together after they have passed around the nut. If desired, a perforation can be made through one corner of the nut and the arm *b* inserted in it; but in such case one arm—*b²* for instance—must be made long enough to reach almost around the nut, and the other arm *b'* correspondingly shortened, so that the three can be twisted together after the arm *b* has reached through the perforation in the corner of the nut.

When the screw or nut is turned home or has reached the point where it cannot be turned any farther, this lock is put on in the following manner: The coiled end is placed against the stud or stop on the frame, the center wire is passed through the perforation in the screw-head or nut, and the other two are passed around the screw-head, one on each side, in close contact with the screw-head, until they meet the outer end of the center arm, when they are all twisted together, forming a strong lock through and around the screw-head or nut. If the perforation through the screw-head should not be through the side next to the stud or stop on the frame against which the coiled end is to rest, the coiled end is placed against the stud, the arms extended against the face or side of the screw-head next to the stud, two in one direction and one in the other, the two are twisted together and passed around the screw-head until the perforation is reached, then one of the wires is passed through the perforation and the other is carried around the screw-head until it meets the one passed through the perforation, the

third wire is brought around from the opposite direction until it meets the other two, when they are all twisted together, forming a lock through and around the screw-head or
5 nut. If the center arm does not pass through the screw-head, but only enters a cavity or recess, the two outer arms are carried around the screw-head and twisted together at their junction and form a lock.

10 What I claim as my invention is—

1. The wire bolt or nut lock consisting of the twisted shank B, in combination with the wire arm *b*, passing through the bolt-head A,

the wire arms *b'* *b''*, which pass around the bolt-head, the three being twisted together to
15 lock the bolt-head, and the perforated bolt-head, all substantially as described.

2. In a wire bolt and nut lock, the combination of the twisted wire shank with the
20 wires encircling the bolt-head or nut and the means for preventing the bolt or nut from revolving in the encircling wire arms.

CHARLES G. SMITH.

Witnesses:

GEORGE GREEN,

S. H. GREEN.