A. C. VAUGHAN.
Nut-Lock.

No. 219,783. Patented Sept. 16, 1879.

Fig. 1.

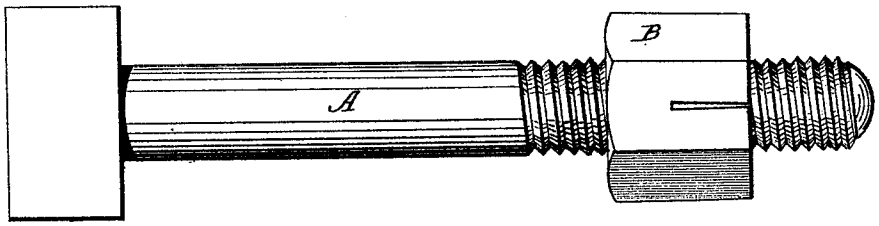


Fig. 2.

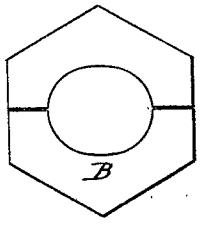


Fig. 3.

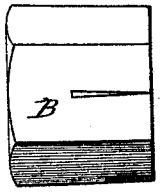
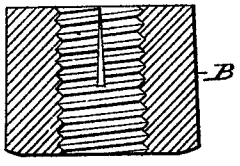


Fig. 4.



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AARON C. VAUGHAN, OF SHANE'S CROSSING, OHIO.

IMPROVEMENT IN NUT-LOCKS.

Specification forming part of Letters Patent No. **219,783**, dated September 16, 1879; application filed June 4, 1879.

To all whom it may concern:

Be it known that I, AARON C. VAUGHAN, of Shane's Crossing, in the county of Mercer and State of Ohio, have invented a new and Improved Nut-Lock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of the locking-nut applied to a bolt. Fig. 2 is a view of the exterior face. Fig. 3 is a side view of the nut when off the bolt, showing the slit closed, or before it is expanded by the protrusion of the bolt. Fig. 4 is a sectional view of the nut.

The object of my invention is to provide a simple and effective form of nut-lock which shall be applicable to the ordinary screw-threaded bolt without alteration of or injury to the same; and to this end it consists in a nut constructed for the most part in the ordinary form, with a screw-threaded hole through the center having the same size and pitch of thread all the way through, and having its face slotted about half-way through the thickness of the nut, and the edges of the slot drawn together, so as to form a nut with a uniform thread, having a hole of the same size as the bolt on one side and a smaller hole on the other.

By this construction the side of the nut having the smaller orifice is made to bind against the screw-threads of the bolt and clamp the same so firmly that it cannot be dislocated except by direct pressure.

In the drawings, A represents a screw-bolt of the ordinary form, and B the nut, constructed in accordance with my invention. The said nut, it will be seen, is formed with a screw-thread of uniform size and pitch through it, is then slotted upon its face to about one-half its depth, and then has its slotted side pressed together until the threaded orifice assumes the shape of an ellipse.

In pressing the edges of the slot together they are preferably made to approach each other until they touch at the outer face, so as to give practically a continuous annular face.

In defining my invention more clearly, I would state that I would not have it confounded with that form of nut-lock in which a nut having a uniform thread is slitted and its slitted ends or sides made to pinch the screw-bolt from abrasion against a bearing-surface, as in Patent No. 168,597. This form of nut-lock, it will be seen, does not have the orifice on one side smaller than on the other, and does not jam until it is entirely screwed up and made to abrade against a face, and cannot be used when the face is a wooden surface.

My construction, it will be seen, locks at any point on the threaded bolt, and does not require a bearing against its inner face to cause its slotted side to clamp the bolt; and this gives it general application to wood-work, as well as to such uses as require a metal face-plate.

I am also aware that a nut has been constructed with one side slotted and having a tapering screw-thread, and the other side solid and having a straight screw-thread, as in Patent No. 118,238. In this case the thread is not of the same pitch through the nut, and the smaller size of the hole on the slotted side is due to the tapering thread, and not to a compression of its slitted ends. With this construction, no matter how much the tapering thread may be expanded by the entrance of the bolt, the pitch of the thread cannot be made to correspond with the pitch of the thread on the bolt, and the jam results in the derangement of the threads, for the reason that the segments of a smaller section of the nut rest upon the bolt (which is of larger diameter) only at their points.

By making the pitch of the thread uniform throughout, as in my case, and pressing together one side of the nut, the spreading of the smaller orifice of the nut by the protrusion of the bolt only serves to throw the threads to the circle upon which they were originally cut, while the closing of the slots by the swaging of one side of the nut makes the thread practically continuous for the entrance of the bolt, so that the edges of the slots do not act as chisel-edges to cut the thread of the bolt.

As a matter of simplicity and economy, I prefer to make but a single cut across the face of the nut, and when the slot formed thereby is pressed together it forms an elliptical orifice. I may, however, as a modification, make two cross-cuts, which will divide the face of the nut into four sections, which, when pressed to-

gether, have a circular orifice of smaller size than on the unslitted side. This does not depart from the spirit of my invention, which consists, essentially, in cutting a thread of uniform pitch and size, then slotting one side of the nut and pressing it together, so that while the hole is smaller on that side the pitch of the thread is the same, and when the bolt is in the thread of the smaller orifice is restored to the arc upon which it was originally cut, which causes it to hug the bolt and fit the thread of the same accurately without derangement to the threads.

Having thus described my invention, what I claim as new is—

The nut B, having a thread of uniform size and pitch cut through the same, and having one face slotted and pressed together to form a smaller orifice upon such face, substantially as and for the purpose set forth.

AARON C. VAUGHAN.

Witnesses:
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