

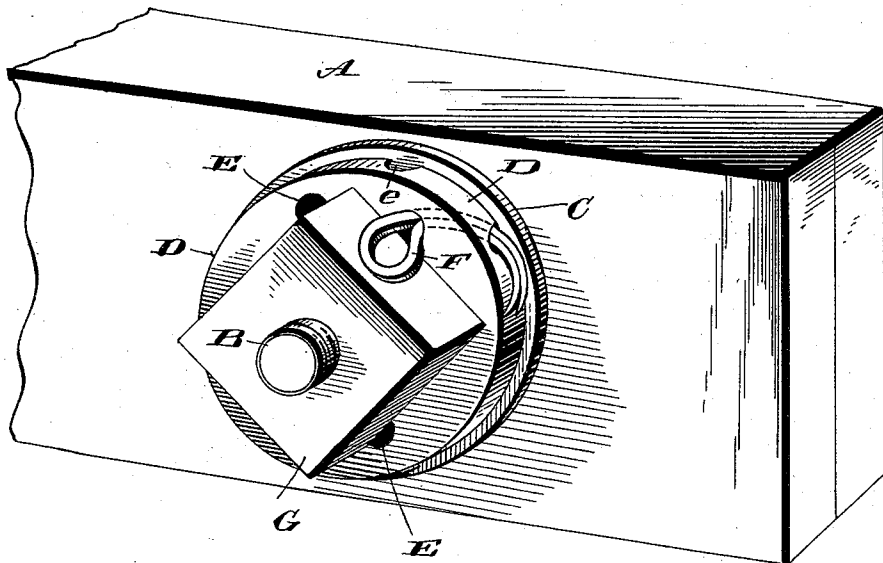
(No Model.)

J. C. CRUM.  
NUT LOCK.

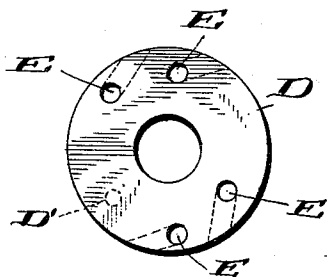
No. 543,176.

Patented July 23, 1895.

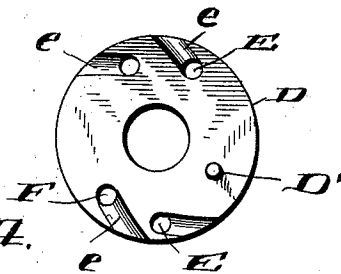
*Fig. 1.*



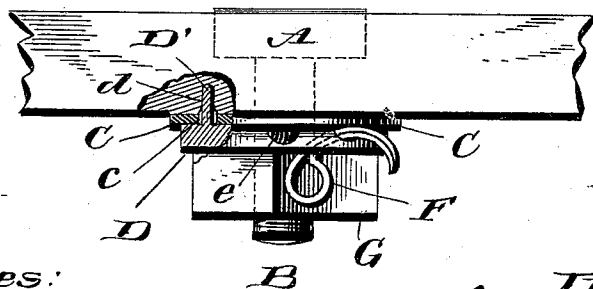
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

*L. C. Hills.*  
*A. L. Drough*

*Inventor*  
*James C. Crum*  
*by*  
*Franklin H. Hough*  
*Atty.*

# UNITED STATES PATENT OFFICE.

JAMES C. CRUM, OF LADIESBURG, MARYLAND.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 543,176, dated July 23, 1895.

Application filed January 24, 1896. Serial No. 536,098. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES C. CRUM, a citizen of the United States, residing at Ladiesburg, in the county of Frederick and State of Maryland, have invented certain new and useful Improvements in Nut-Locks; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in nut-locks, and especially to the class of locks in which the nut is securely held to the washer by means of a key, the washer being prevented from rotating by means of an integral lug, which is designed to engage in a perforation in the object to which it is applied.

A further object of the invention is to construct a washer carrying on one side an integral lug, and the said washer having a plurality of perforations which are spirally inclined and terminating on one side of the washer in recesses about the periphery thereof, which perforations are adapted to receive a curved wrought-iron pin, which is inserted into the washer after the nut has been screwed home, the key or pin being placed in the aperture which would come nearest to a corner of the nut and be in the path of the latter when the nut is unscrewed or loosened, by which arrangement of locking means there will be sixteen different positions in one revolution of the ordinary quadrangular nut at which it will be possible to insert the key, made preferably of wrought-iron, and which, after being inserted in an aperture of the washer, may be bent up over the edge of the washer, presenting the head of the said key on the outer face of the washer and in the path of the nut.

To these ends and to such others as the invention pertains the same consists, further, in the novel construction, combination, and adaptation of the parts, as will be hereinafter more fully described, and then specifically defined in the appended claim.

I clearly illustrate my invention in the accompanying drawings, which, with the letters

of reference marked thereon, form a part of this specification, and in which drawings similar letters of reference indicate like parts throughout the several views, in which—

Figure 1 is a perspective view of my nut-lock as applied to a beam, and with the key in its locking position. Fig. 2 is a top plan view of my improved washer; Fig. 3, a reverse view of the same, showing the spirally-inclined perforations and recesses. Fig. 4 is a plan view of Fig. 1, with parts broken away to show the integral lug.

Reference now being had to the details of the drawings by letter, A designates a beam or other member through which the bolt B passes.

C is a washer having a perforation *c*, which is adapted to register with a perforation *d* in the beam or other member to which the bolt is applied.

D is a washer having an integral lug D', which, when the said washer D is placed on the shank of the bolt, is designed to engage in the apertures *c* and *d* to prevent the washers from turning. The said washer D has preferably four perforations E, located as seen in the drawings, and the path of each aperture or perforation is slightly spiral and terminates in a recess *e* opening on the reverse side, and which extends outwardly to the periphery of the washer.

F is a curved pin or key, made preferably of wrought-iron, and after the nut G is screwed home on the threads of the bolt the said key or pin is inserted in the spirally-inclined aperture which comes nearest to the corner of the nut, as the nut is inclined to work loose on its threads, and it will be readily seen that by the peculiar arrangement of the apertures about the washer there will be sixteen different positions in one revolution of the nut at which it will be possible to lock the nut on the washer.

When it is desired to use the lock on fish-plates or other iron members, the washer C may be dispensed with and the bolt-head need not be countersunk.

Having thus described my invention, what I claim to be new, and desire to secure by Letters Patent, is—

A nut lock having in combination with a bolt a washer D having an integral lug de-

signed to engage in apertures in the beam or  
plate and the washer C, the said washer D  
having a plurality of spirally inclined aper-  
tures terminating in recesses about the pe-  
riphery of the washer, and the wrought iron  
5 pin or key F adapted to be inserted in one of  
the said apertures E, and present its head in  
the path of one of the corners of the nut, as  
it loosens from the shank of the bolt, all sub-

stantially as shown and for the purpose set  
forth.

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

JAMES C. CRUM.

Witnesses:

A. L. HOUGH,  
FRANKLIN H. HOUGH.