

(No Model.)

J. P. KOONTZ.
NUT LOCK.

No. 474,837.

Patented May 17, 1892.

Fig. 1.

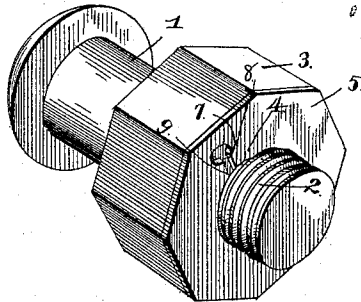


Fig. 2.

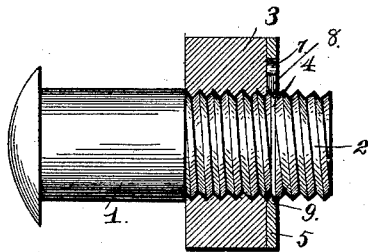


Fig. 3.

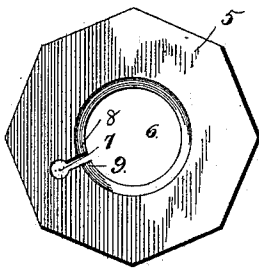
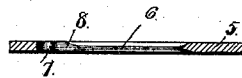


Fig. 4.



Witnesses

Chas. A. Ford

W. S. Duwall

Inventor

J. P. Koon t z.

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JOHN PETER KOONTZ, OF NEWARK, OHIO, ASSIGNOR OF ONE-HALF TO EZRA H. SMITH AND ROBERT M. DAVIDSON, OF SAME PLACE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 474,837, dated May 17, 1892.

Application filed December 26, 1891. Serial No. 416,241. (No model.)

To all whom it may concern:

Be it known that I, JOHN PETER KOONTZ, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented a new and useful Nut-
Lock, of which the following is a specification.

This invention relates to that class of nut-locks employing a sheet-metal disk having a
bolt-opening and adapted to be introduced
over the threaded end of the bolt and to be
screwed down against the crown of the nut
somewhat after the manner of a jam-nut,
for which purpose the inner edge of the bolt-
receiving opening has heretofore either been
threaded by cutting or by the formation given
to said edge or to the lock.

The objects of my invention are to provide
a lock of this class which shall be of simple
construction, may be simply stamped from
sheet metal, and which when in position upon
the bolt will be non-retrograding, except by
the application of a tool for starting the same,
for the reception of which tool the said lock
is adapted.

With these objects in view the invention
consists in certain features of construction
hereinafter specified, and particularly pointed
out in the claims.

Referring to the drawings, Figure 1 is a per-
spective of a bolt, the nut of which is locked
in accordance with my invention. Fig. 2 is
a side elevation of the bolt in section and the
nut and washer, the latter two being in sec-
tion. Fig. 3 is a detail in plan of the lock.
Fig. 4 is a transverse or radial section of the
same.

Like numerals of reference indicate like
parts in all the figures of the drawings.

1 designates a bolt, the same being provided
with the usual thread 2 and having run there-
on the nut 3. Immediately in rear of the nut
the thread is provided with a cut or groove
4, so that the thread, instead of being contin-
uous from the outer end of the bolt to the inner
end thereof, is broken and forms, in conjunc-
tion with the groove, an annular groove exten-
ding completely around the bolt.

The locking plate or disk is formed of sheet

metal, the plate being stamped therefrom. 5
designates the said locking plate or disk, the
external contour of which is polygonal (in this
instance octagonal, as shown) and is adapted
to be grasped between the jaws of an ordi-
nary nut-wrench and to be applied to the
bolt in a similar manner. 55

The locking plate or disk is provided with
a central bolt-receiving opening 6, the oppo-
site edges of which are uniformly beveled or
rounded to conform to the space between the
threads of the bolt. One edge of the opening
6 is provided with a key-hole slot or perfora-
tion 7, the same constituting a pair of angu-
lar shoulders 8 and 9 at its intersection with
the opening 6. After the nut is in position
upon the bolt the locking plate or disk is run
down upon the threads of the bolt, one of the
corners (in this instance the corner 9) being
induced to enter and engage the thread of the
bolt, as will be obvious. The movement of
the locking-disk continues along the bolt until
it arrives at the cut or groove 4, which causes
a forcing together of the two shoulders 8 and
9, so that they realign with each other and
form a continuous circle or edge, which, as will
be seen, will take within the annular groove
hereinbefore described as being formed by
the combined thread, or rather space, be-
tween the same and the groove 4, so that the
said locking-plate will be free to turn in
either direction, but by reason of its aligning
shoulders, cannot again be induced to take
up the thread of the bolt and either advance
or retrograde therefrom. It will be seen that
the nut will have absolutely no play upon the
bolt in either direction, but will bind firmly
against the plate and remain so until the bolt
is removed.

In order to remove the lock, it is simply
necessary to introduce a pointed tool into the
keyhole-slot formed in the edge of the open-
ing 6. Then using the same as a prying-lever,
the shoulder 8 may be raised out of the plane
of the shoulder 9 and the plate or lock being
turned to the left the thread of the bolt will
be taken up by said shoulder and followed,
and thus the plate or lock removed without
any injury whatever to the thread of the bolt. 95

In practicing my invention I contemplate using any kind of sheet metal, whether hard or soft, malleable or spring.

Having described my invention, what I claim is—

1. The combination, with the bolt and the nut, the said bolt being provided with a screw-thread and grooved annularly immediately in rear of the nut, of the sheet-metal locking-plate having a bolt-receiving opening adapted to be threaded on the bolt, substantially as specified.

2. The combination, with the bolt and the nut, the said bolt being provided with a thread grooved annularly immediately in rear of the nut, said groove combining with the adjacent space between the threads to form an annular groove encircling the bolt, of the sheet-metal locking-plate having an opening for the reception of the bolt and having one edge

of its opening provided with a radiating slot, substantially as specified.

3. The combination, with the bolt and the nut, the said bolt being provided with a thread grooved annularly immediately in rear of the nut, said groove combining with the adjacent space between the thread to form an annular groove encircling the bolt, of the sheet-metal locking-plate having an opening for the reception of the bolt and having one edge of its opening provided with a radiating keyhole-slot, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN PETER KOONTZ.

Witnesses:

AMOS BERHOPE,
GEO. W. HORTON.