S. MUNSON.

BOLT LOCK.

APPLICATION FILED JAN. 17, 1919.

1,346,907. **Patented July 20, 1920.**

Fig 1

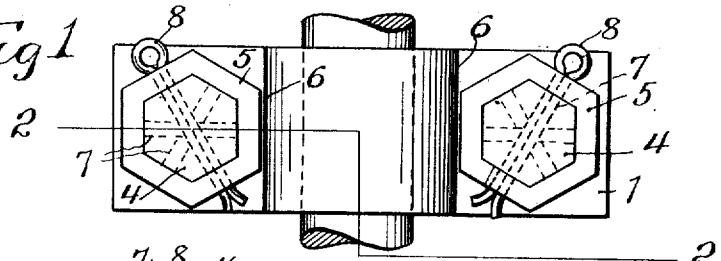


Fig 2

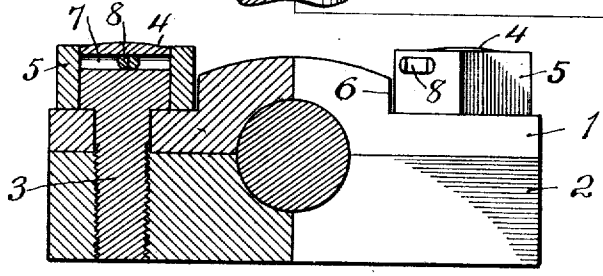


Fig 4

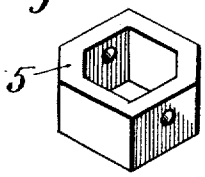


Fig 5

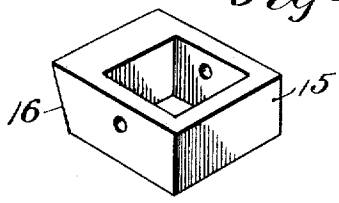
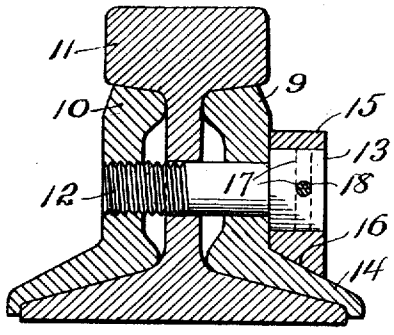


Fig 3



Witness:

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BOLT-LOCK.

1,346,907. Specification of Letters Patent. Patented July 20, 1920.

Application filed January 17, 1919. Serial No. 271,589.

To all whom it may concern:

Be it known that I, SWENEY MUNSON, a citizen of the United States, residing at Fowler, in the county of Otero and State of Colorado, have invented a certain new and useful Improvement in Bolt-Locks, of which the following is a specification.

My invention relates to improvements in bolt locks.

It is particularly adapted for locking tap bolts to hold them from turning and is adapted for use in connection with a bolt having a head otherwise than circular.

My invention provides a locking member which is adapted to embrace the bolt head and to interlock with the member against which the bolt head bears. My invention provides further novel means for holding the locking member from longitudinal movement on the bolt head.

My invention is particularly well adapted for use in connection with devices embodying two members, through one of which the bolt extends and with the other of which members the bolt has screw-threaded engagement.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawing, which illustrates my invention,

Figure 1 is a plan view of my invention shown applied to an ordinary shaft bearing.

Fig. 2 is a vertical sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a vertical sectional view of a rail joint provided with my improvement.

Fig. 4 is a perspective view of a hexagonal collar adapted for use in connection with the bolts which have hexagonal heads.

Fig. 5 is a perspective view of a square collar adapted for use on a square headed bolt, such as is shown in Fig 3.

Similar reference characters designate similar parts in the different views.

Referring first to Figs. 1 and 2, 1 designates the cap and 2 the base of an ordinary box or shaft bearing. 3 designates the screw-threaded shank of an ordinary tap bolt having a hexagonal fixed, preferably integral, head 4 which bears against the upper side of the cap 1, the shank 3 having screw-threaded engagement with the base 2. Fitted on each head 4 is a hexagonal collar 5 which is disposed between the bolt head and a shoulder or raised portion 6 on the cap 1 and is arranged to interlock with the raised portion 6 so as to be held from turning, thereby holding the bolt to which the collar is fitted, from turning.

Suitable means are provided for holding the collar 5 from longitudinal movement on and from slipping off from the bolt head 4. In Figs. 1 and 2, I have shown each bolt head 4 provided with one or more transverse holes 7, through one of which may be extended a suitable locking pin, such as a cotter pin 8, which may also be extended through the adjacent collar 5.

In the operation of my invention, as shown in Figs. 1 and 2, the bolts 3 are extended through the cap 1 and screwed into the base 2 so as to have the heads 4 bear tightly against the upper surface of the cap 1 The bolts are turned until one side of each bolt is disposed parallel with the adjacent shoulder 6. The collars 5 are then slipped onto the bolt heads 4 respectively, the thickness of the collar being such as will permit it to slip between the bolt head and the adjacent shoulder 6 and such as will cause it to interlock with the shoulder 6 so that the collar will be held from turning. The cotter pins 8 are then extended respectively through the collars 5 and the adjacent bolt heads 4.

In the form of my invention shown in Fig. 3, 9 and 10 designate respectively two angle plates, between which is clamped a rail, in the manner usual to rail joints.

12 designates the screw-threaded shank of a bolt which extends horizontally through the angle plates 9 and 10 and the web of the rail 11, the threaded end of the bolt being fitted in the screw-threaded hole provided in the angle plate 10.

The head 13 of the bolt 12 is square and bears against the outer side of the angle plate 9. The latter is provided with a raised portion comprising a longitudinal flange 14 which bears in the usual manner upon the adjacent upper side of the base of the rail. Fitted on the square head 13 of the bolt is a locking member, preferably comprising a collar 15 having a beveled side 16 which bears against the flange 14 and holds the collar from turning relatively to the angle plate 9. The collar 15 thus holds the bolt from turning.

The head 13 of the bolt is provided with one or more transverse holes 17, through one of which and through the collar 15 extends a suitable locking device, such as a cotter

pin 18. The cotter pin 18 holds the collar 15 from longitudinal movement on the head 13.

The angle plates 9 and 10 having been clamped in the usual maner to the rail 11 by the bolt 12, the collar 15 is slipped onto the head 13 of the bolt, with the beveled edge 16 of the collar resting against the flange 14. The cotter pin 18 is then extended through the collar 15 and bolt head 13, in which position it is held in the usual manner by having its ends bent laterally in opposite directions at the outer side of the collar.

It will be noted that the collars 5 and 15 embrace only the sides of the head of the bolt. This permits the employment of a bolt having any length of head without changing the length of the collar, as the head of the bolt can be slid through the collar.

I do not limit my invention to the structures shown and described, as many modifications, within the scope of the appended claim, may be made without departing from the spirit of my invention.

What I claim is:—

In a bolt lock, the combination with an angle plate, of a bolt extending through one flange of said plate and having a head other than circular bearing against said flange, a collar embracing and fitted to the sides only of said bolt head and at one side having a bearing against the other flange of said plate, the other side of the collar being clear of said plate, and a pin insertible through and removable from the collar and the head of said bolt while the collar is in the locked position, substantially as set forth.

In testimony whereof I have signed my name to this specification.

SWENEY MUNSON.