

No. 613,040.

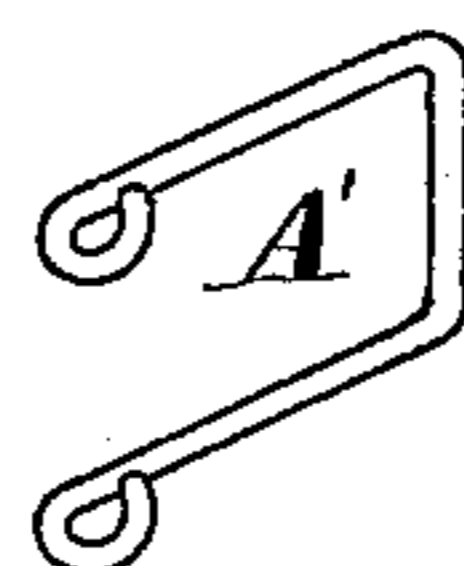
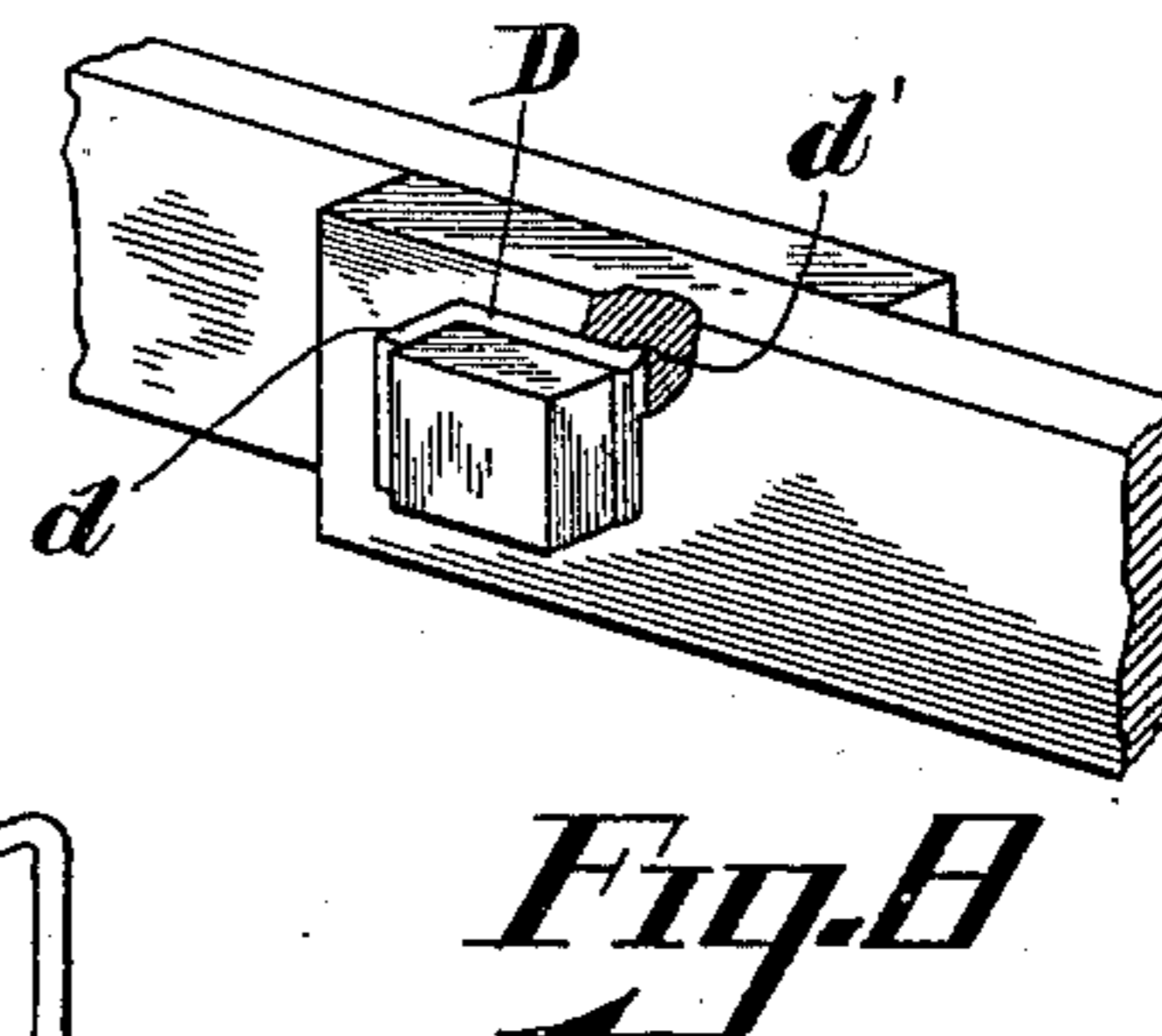
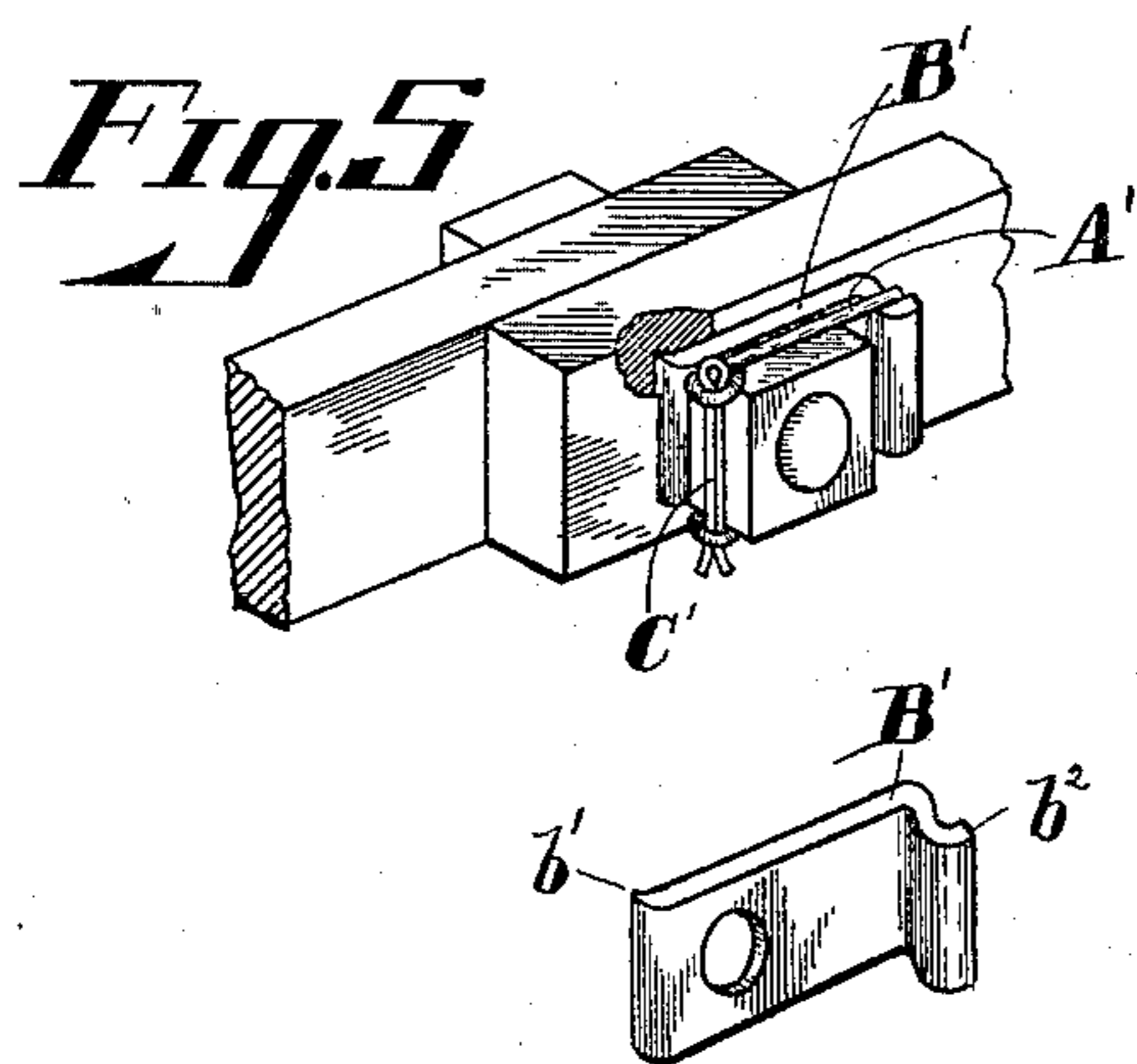
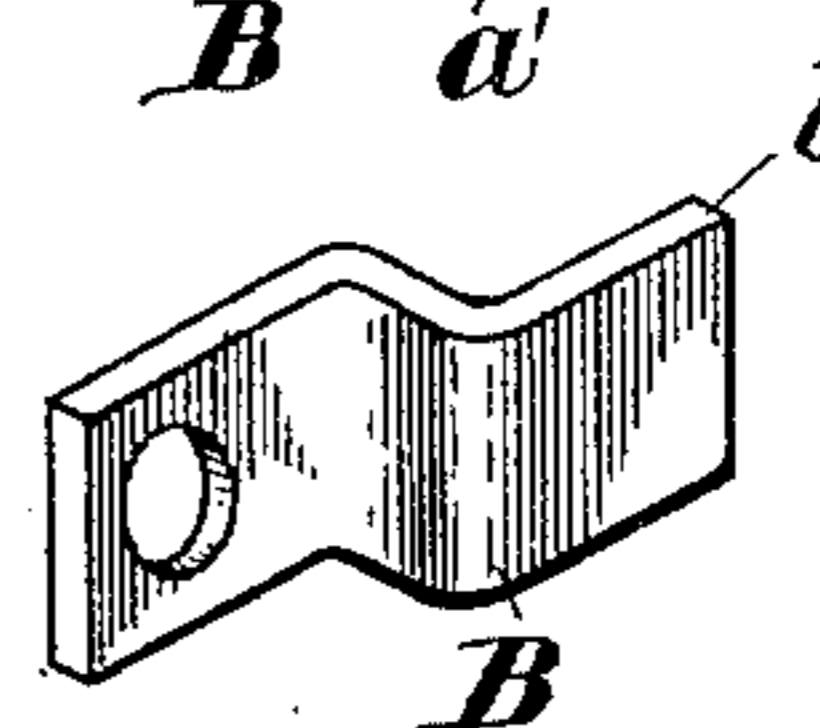
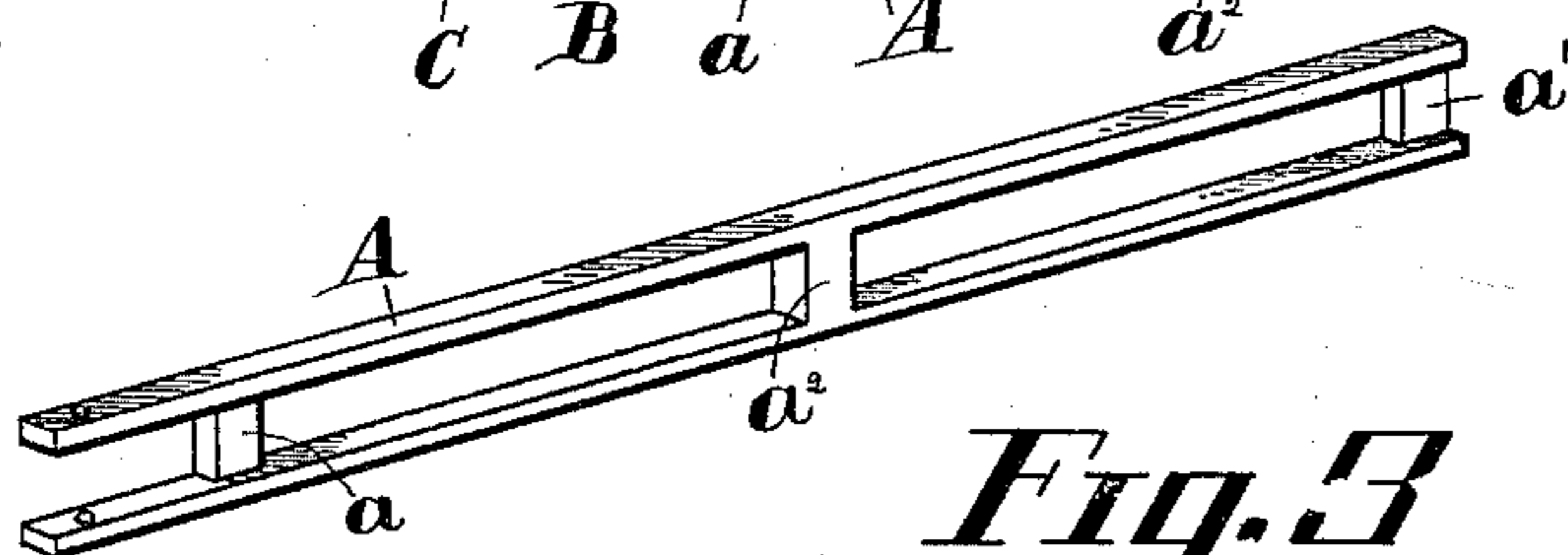
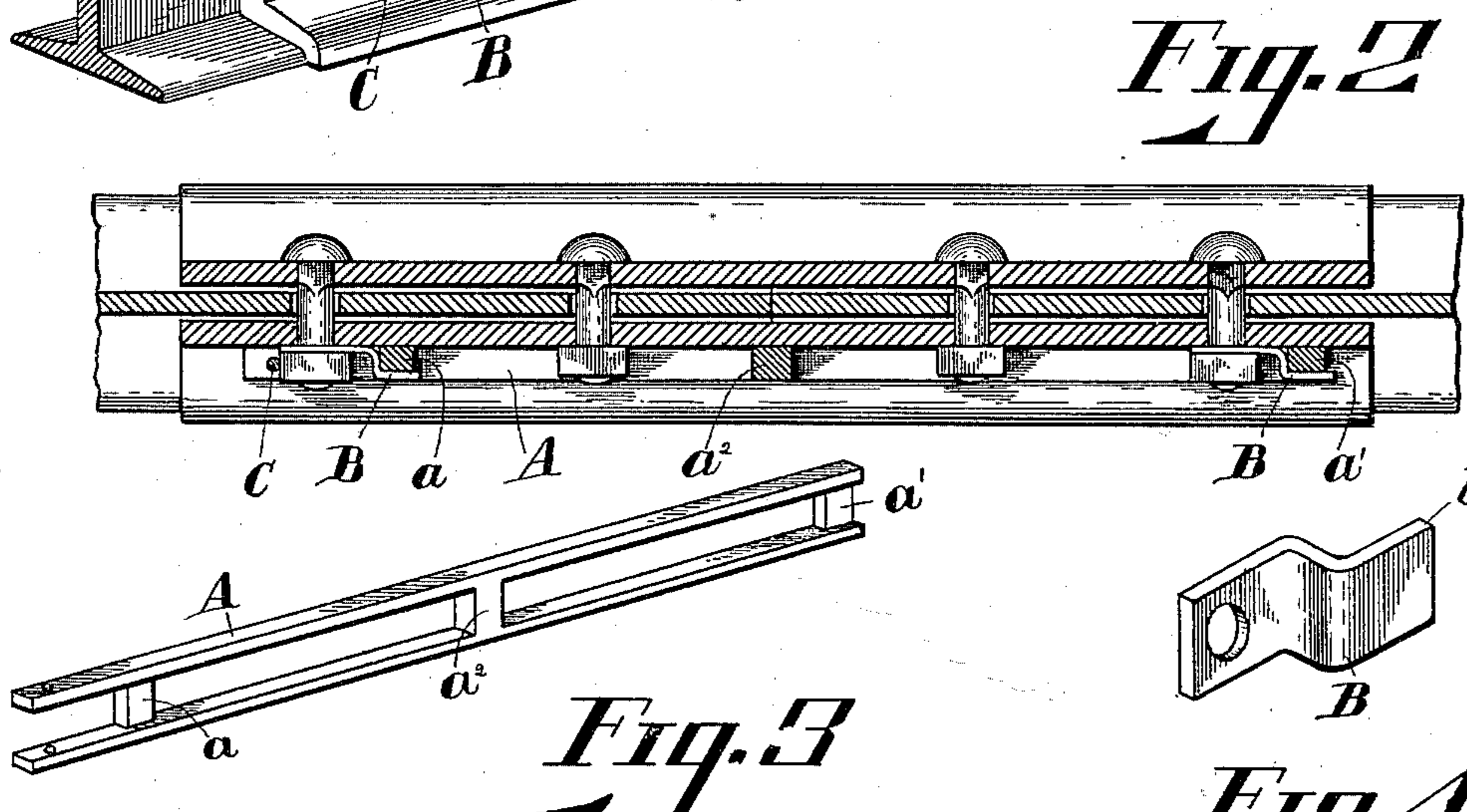
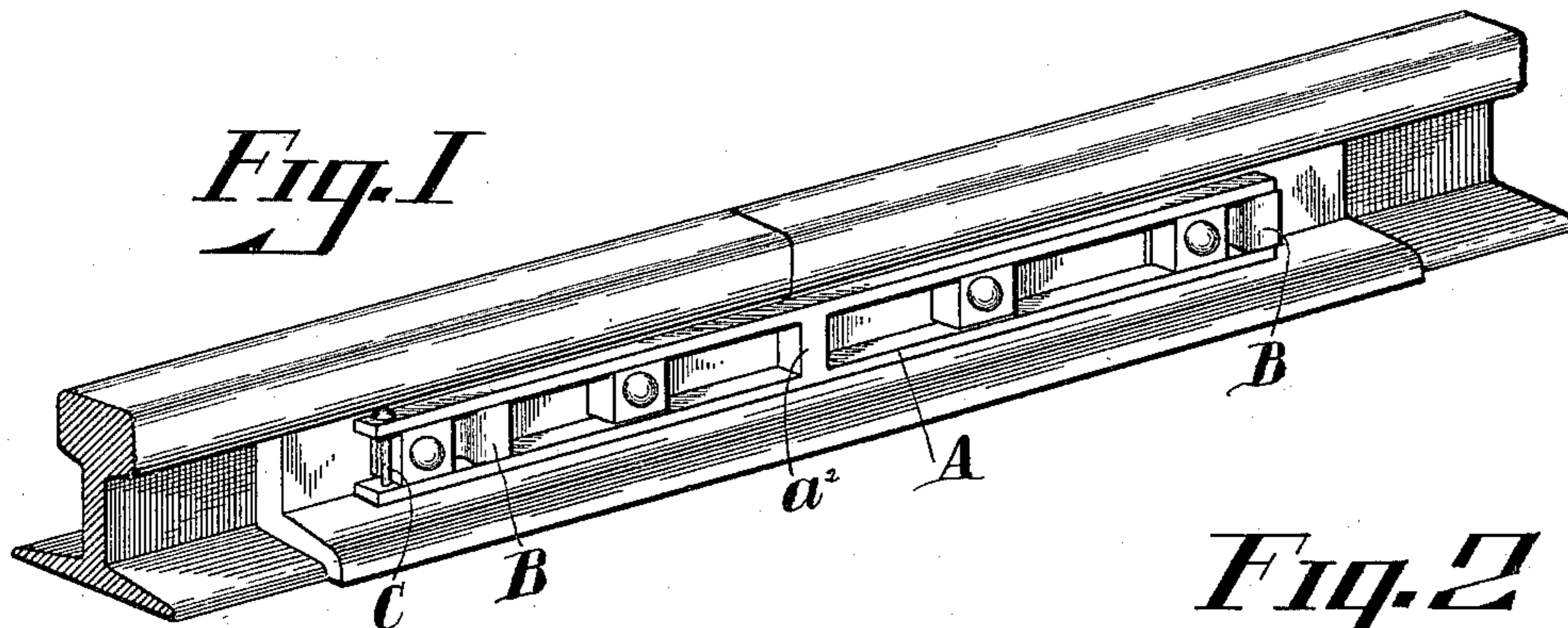
Patented Oct. 25, 1898.

J. M. INSKEEP.

NUT LOCK.

(Application filed Aug. 26, 1897.)

(No Model.)



WITNESSES  
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# UNITED STATES PATENT OFFICE.

JAMES M. INSKEEP, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO  
R. PEARL OVERTURE, OF SAME PLACE.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 613,040, dated October 25, 1898.

Application filed August 26, 1897. Serial No. 649,621. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES M. INSKEEP, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Nut and Bolt Locks, of which the following is a specification.

My invention relates, primarily, to novel means for permanently locking the nuts on fish-plates of railroad-rails and to prevent the nuts from becoming loosened through the shaking and jarring caused by the trains passing over the joints, thereby adding safety to travel and saving expense in having the nuts frequently tightened, as now generally required; and it also relates to means for locking bolts and nuts from turning wherever it is necessary or desirable to hold a bolt from turning or to lock a nut upon its bolt.

The object of my invention is to provide effective and durable means for accomplishing the same; and it consists in the parts and combination of parts illustrated in the drawings and hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view illustrating my invention when applied to lock nuts and bolts together upon a rail-joint. Fig. 2 is a horizontal section taken through the center line of the bolts, Fig. 1, leaving the nuts and bolts in elevation. Fig. 3 is a perspective view of the nut-holder. Fig. 4 is a perspective view of the catch-washer. Fig. 5 is a view showing a modified form of my nut-lock as applied to a single nut. Fig. 6 is a perspective view of the catch-washer when used to lock a single nut. Fig. 7 is a perspective view of a single-nut holder. Fig. 8 is a perspective view showing bolt-lock for a single bolt.

I prefer to construct the nut-holder A of two parallel bars joined together by stays  $a$   $a'$   $a''$ , the bars being far enough apart to take over the nut or nuts to be locked, and the stays  $a$   $a'$  also serving as lugs to engage with the catch-washers, which are placed upon the bolts beneath the nuts.

The washers B are constructed with catches  $b$  and  $b'$ , preferably formed in the shape of an elbow, to engage with the lugs of the holder, the elbows being far enough from the

bolt-hole to permit the nut to be turned and tightened upon the bolt.

The lugs  $a$   $a'$  are formed of a thickness adapted to occupy the space between the catch and adjacent surface.

If there should be any obstruction on the surface near any of the nuts of a series to be locked, one of the bars may be made shorter at that point or otherwise modified to adapt itself to varying situations.

The nut-holder for locking a single nut may be formed of wire bent in the shape of a clevis, with an eye at each end to receive the retaining-pin, or may be made of a piece of metal formed in the same shape with a hole in each end.

To lock a row of nuts upon bolts, place a catch-washer upon two or more bolts, preferably the end bolts, allowing each catch to project in the same direction, as shown in Figs. 1 and 2, tightening the nuts upon them, so that they will be squared or in alinement with each other. Then place the nut-holder over the nuts against the object bolted, so that each lug will come just in front of its corresponding catch, push the nut-holder endwise until the lugs fit snugly beneath and against the corresponding catches of the washer, and then insert a pin C through the holder adjacent any nut in the series, but preferably the end nut, to retain the holder in place. To unlock the nuts, reverse the operation.

If desired, when locking a series of nuts upon bolts secure two of the catch-washers in place, leaving the catches projecting in opposite directions, then place a long nut-holder over the nuts, allowing one end thereof to fit beneath one catch, and insert a pin through the eyes or holes of the other end beneath the opposite catch, thus retaining the holder in place and locking the nuts.

To lock a single nut, I form a claw  $b'$  upon the end of the washer B' adjacent the bolt-hole and countersink the object against which it is to take correspondingly, so that it will fit therein and allow the washer to bear snugly against said object and nut, screw the nut upon the bolt until it is sufficiently tight, and place the holder A' over the nut and under the catch  $b'$ , and insert a split or other pin

C' in the eyes of the holder, and the nut is securely and effectually locked upon the bolt.

The bolt-lock D consists of a washer having a flange upon one edge, which forms a holder  
5 *d*, against which the head of the bolt impinges, and having a claw *d'* at the other end adapted to take into a corresponding depression in the surface against which the washer abuts.

10 A series of bolts may be locked from turning by extending the washer and forming a hole therein for each bolt, in which case the depression may be omitted, as its function is to prevent the washer from turning, and this  
15 object is accomplished by the bolts when two or more bolts are locked.

I have illustrated my invention as applied to railroad-rail joints; but it may be employed to lock bolts or nuts together wherever the  
20 same are used.

One advantage of my nut and bolt locks is the ease and rapidity with which they can be applied and removed, and also that they may be used or reused indefinitely without  
25 injury to them or to the parts to which they are applied.

I claim—

1. The combination in a nut-lock, of a washer secured beneath a nut and having an  
30 elbow-catch, a nut-holder having a closed end adapted to engage with said elbow-catch, and its parallel free ends adapted to take against opposite sides of the nut to be locked, and retaining-pin adapted to connect the free ends  
35 of said holder and prevent lengthwise disengagement thereof, substantially as set forth.

2. In a nut-lock, the combination of a bolt having a nut, a washer comprising a flat  
40 portion having at one side a projection, a nut-holder comprising parallel side portions

adapted to engage opposite sides of a nut to hold the same against turning, and having at one end a lug connecting said side portions and adapted for engagement with the projecting part of said washer, the opposite ends  
45 of said side portions being perforated, and a retaining-pin passed through said perforations and arranged to engage the nut to hold the nut-holder against endwise movement, substantially as set forth.

3. The combination, in a nut-lock, of washers having rigid elbow-catches and secured beneath nuts in a series to be locked, a nut-holder having lugs adapted to engage with  
55 said elbow-catches and retaining-pin adapted to prevent lengthwise disengagement of the catches and holder, substantially as set forth.

4. The combination in a nut-lock, of a washer having a flat portion to receive the bolt and engage with the nut, a rigid elbow-  
60 catch integral with and extending upwardly and away from the flat portion whereby space is formed between the nut and elbow-catch to screw home the nut to the washer without turning the latter and whereby space is formed  
65 to receive the nut-holder beneath the elbow-catch, to receive one end of the nut-holder and prevent movement thereof upwardly and toward the nut, substantially as set forth and  
70 for the purposes specified.

5. The combination, in a bolt-lock, of a bolt-holder, rigid elbow-catch washer, nut-holder and retaining-pin secured together upon a bolt, substantially as set forth and for the purposes specified.

JAMES M. INSKEEP.

Witnesses:

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