

(No Model.)

C. TOTTEN.

NUT LOCK.

No. 354,587.

Patented Dec. 21, 1886.

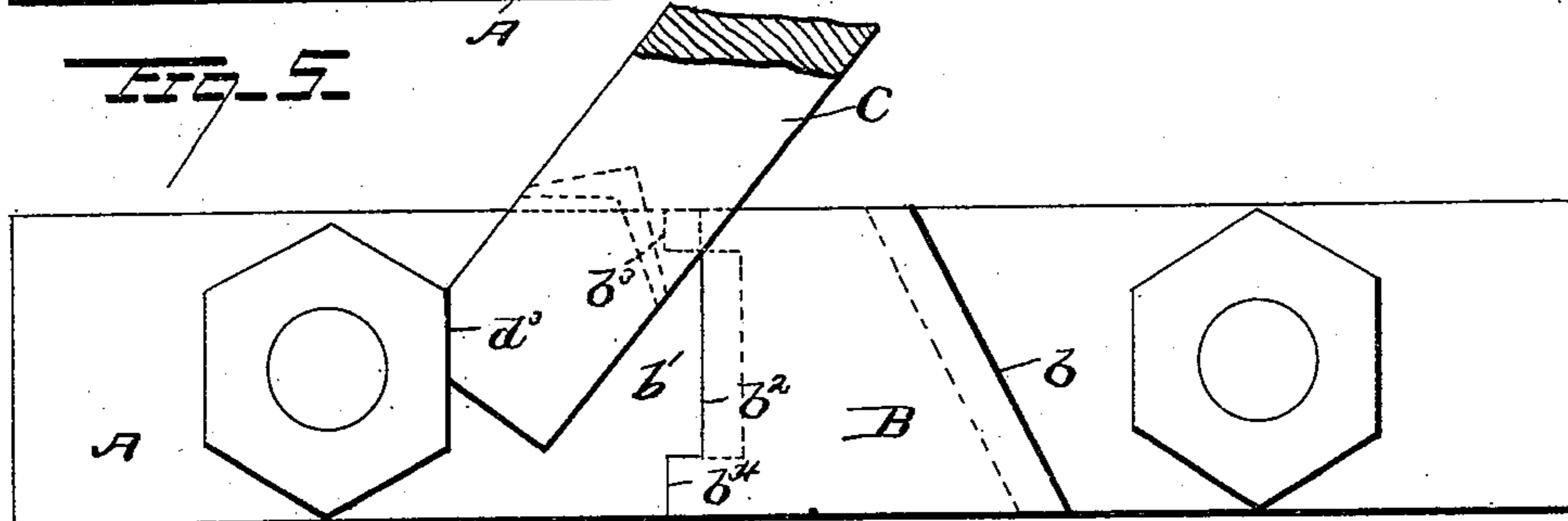
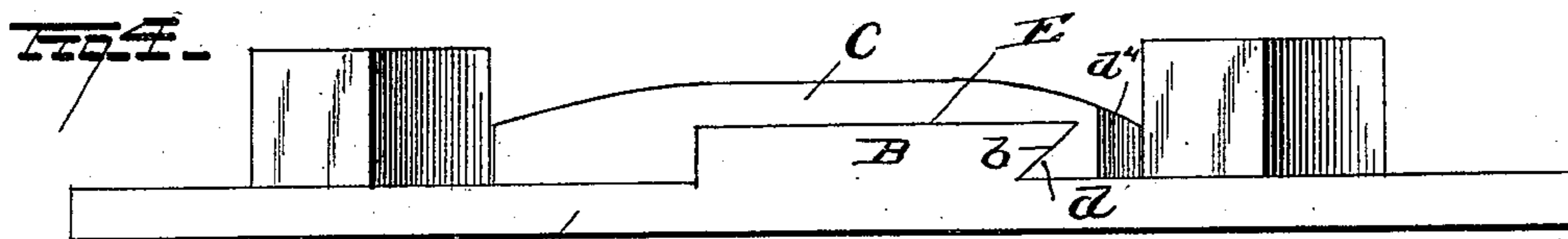
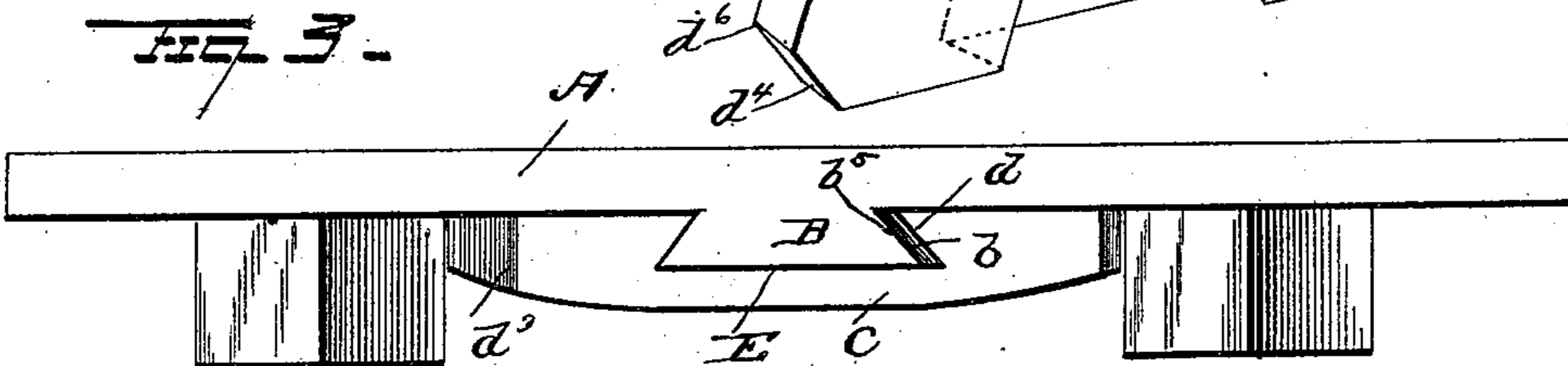
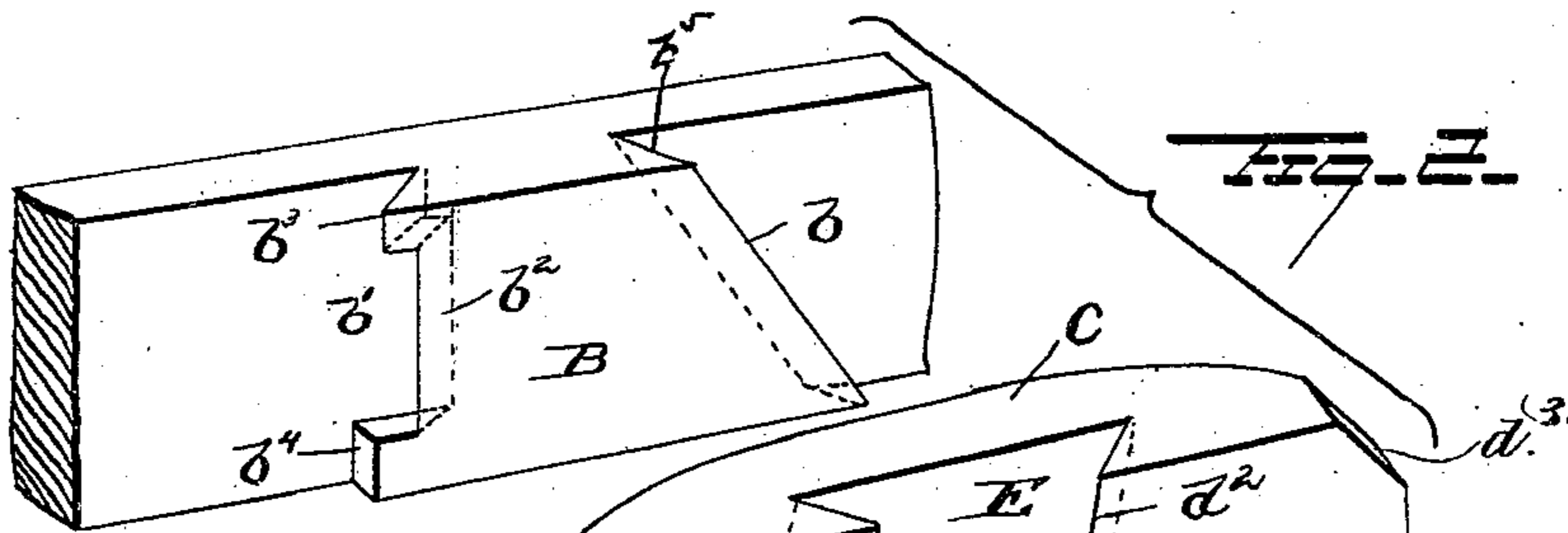
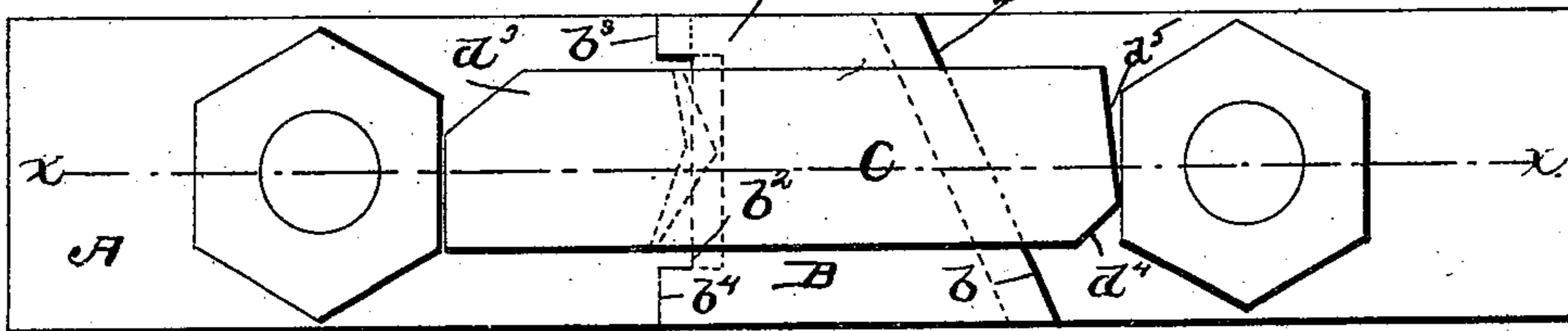


FIG. 6.

Witnesses

*Wm. H. Gill*

*Chas. N. Moore*

*Phosphor Totten*  
Inventor

By *Wm. H. Gill* Attorneys

*C. A. Shaw & Co.*

# UNITED STATES PATENT OFFICE.

CLEOPHAS TOTTEN, OF LEESVILLE, OHIO.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 354,587, dated December 21, 1886.

Application filed August 16, 1886. Serial No. 211,036. (No model.)

*To all whom it may concern:*

Be it known that I, CLEOPHAS TOTTEN, a citizen of the United States, residing at Leesville, in the county of Carroll and State of Ohio, have invented a new and useful Improvement in Nut-Locks, of which the following is a specification.

My invention relates to improvements in nut-locks; and it consists of the peculiar combination and novel construction and arrangement of parts for service, substantially as hereinafter set forth, and particularly pointed out in the claims.

The object of my invention is to provide a nut-lock of simple and cheap construction, which will effectually hold the nuts in position and prevent them from turning on the bolts, and to permit the same to be readily detached when the locking or key plate is removed.

In the accompanying drawings, Figure 1 is a side elevation of a nut-lock constructed in accordance with my invention. Fig. 2 is a perspective detail view of the parts comprising my invention, the locking-plate being reversed and drawn on a slightly larger scale than the fixed block in order to more fully show details of construction. Fig. 3 is a top plan view of Fig. 1. Fig. 4 is a bottom plan view of my improved nut-lock. Fig. 5 is a view showing the manner of locking my improved nut-lock. Fig. 6 is a horizontal sectional view on the line  $x x$  of Fig. 1.

Referring to the drawings, in which similar letters of reference denote corresponding parts in the several figures of the same, A designates a fish-plate of a rail-joint to which my improved locking devices are shown as applied.

B designates a metal block, which may be formed integral with the fish-plate or rigidly secured thereto. This block B is formed with a slanting side,  $b$ , which is inclined downwardly in a straight line from the upper to the lower side or edge of the fish-plate, and this slanting side is beveled inwardly toward the rear side of the block, from the outer face thereof toward the fish-plate, as shown at  $b^5$  in Figs. 2, 3, and 6 of the drawings. The opposite side edge of the block B is formed in a straight vertical line, and it is beveled inwardly in reverse direction to the beveled side

$b$  of the block, as shown. This vertical side  $b'$  of the block is notched or cut out at an intermediate point of its length at  $b^2$ , to provide the projecting tongues or lugs  $b^3 b^4$  at the upper and lower sides of the block. The lower lug,  $b^4$ , however, is not beveled, but is formed with a straight vertical face which lies at right angles to the outer exposed faces of the fish-plate and the block, as clearly shown.

C designates the locking or key plate, which is adapted to be fitted between the two adjoining nuts of a railway-joint and detachably connected to and held by the block to prevent the nuts from retrograde movement on the bolts. This locking or key plate is inclined on one of its edges and at its lower right-hand corner, at  $d^4$ , and at its upper right-hand corner it is also inclined in reverse direction at  $b^5$ , these two beveled sides being arranged at an angle to each other and meeting or intersecting at a point,  $d^6$ . The opposite end of the said plate is beveled or inclined at its upper left-hand corner, as at  $d^3$ , the function of which will be hereinafter explained.

The locking or key plate is recessed on its rear side to form a chamber for the reception of the block B, and one of the sides  $d$  of this chamber is formed in a slanting line and beveled to correspond with the inclination and bevel of the side  $b$  of the block, which fits very snugly and closely therein. The opposite side of the recess or chamber has the two inclined or beveled portions  $d'$   $d^2$ , which are arranged at an angle and intersect each other at a point to form a projection,  $e$ , that enters the notch  $b^2$  of the block B, the said block being beveled, as clearly shown in Figs. 2 and 6.

The operation of my invention is as follows: The locking or key plate C is turned to an inclined position, as shown in Fig. 5, so that its beveled side  $d^3$  will bear against one of the nuts of the rail-joint, and its projection  $e$  will enter the beveled under side of the notched portion  $b^2$  of the block B. The elevated end of the locking or key plate is now forced or pressed down by hand to cause the slanted beveled side  $d$  thereof to interlock with the beveled side  $b$  of the block, and the tongues or lugs  $b^3 b^4$  of the said block lie on opposite sides of the plate C and impinge against the said upper and lower sides of the plate to limit

the vertical movement or play thereof, the lower lug,  $b^1$ , and the beveled side of the block limiting the downward movement of the locking or key plate, and the upper lug,  $b^3$ , limiting the upward play of the said plate. The beveled under side of the notched portion  $b^2$  and the lug  $b^3$  permit the beveled sides of the projection  $e$  of the plate C to ride freely beneath the same, so that the plate can be very easily and readily fitted in place on the block B, and the beveled ends  $b^3$   $b^4$  of the said locking-plate also facilitates the adjustment and removal of the locking or key plate. When the left nut of the locking-plate turns on its bolt it strikes or impinges against the straight portion of the plate beneath the beveled corner  $d^3$  thereof and forces the plate inwardly, so that it will impinge against the lug  $b^3$ , and the nut on the right of the locking-plate strikes the angle  $d^6$  of the plate and forces it downward, so that the lug  $b^4$  will limit the play of the plate in that direction, thereby effectively locking the key-plate and nuts in place.

My improved nut-lock is simple and durable in construction, easily and readily operated and applied, and cheap.

I claim—

1. In a nut-lock, the combination of a dovetailed block having the widest portion at the

lower edge thereof and rigidly affixed to a fish-plate between two adjoining bolts, and a locking-plate provided with a dovetailed recess in its rear side in which the said block is snugly fitted and thereby partially concealed from view, substantially as described, for the purpose set forth.

2. In combination with a plate, A, having rigid block B, formed with slanting dovetailed edge  $b$ , dovetailed vertical edge, and a locking-plate having a dovetailed recess to receive the block, as set forth.

3. The combination, with a plate, A, a block, B, secured thereto, having slanting edge  $b$ , straight edge, and notches  $b^2$  and  $b^3$ , of a dovetailed locking-plate, C, formed with the slanting edge  $d$ , and the angular portions  $d^2$  and  $d^3$ , adapted to fit on the block B, and the said plate C being cut on its corner with the inclines  $d'$  and  $d^4$ , all combined, and serving for the purpose set forth.

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

CLEOPHAS TOTTEN.

Witnesses:

J. H. MOORE,  
WM. ADAIR.