(Model.)

D. F. BLIGHTON.

LOCKING DEVICE FOR BOLTS.

No. 287,795. Patented Nov. 6, 1883.

Fig. 1.

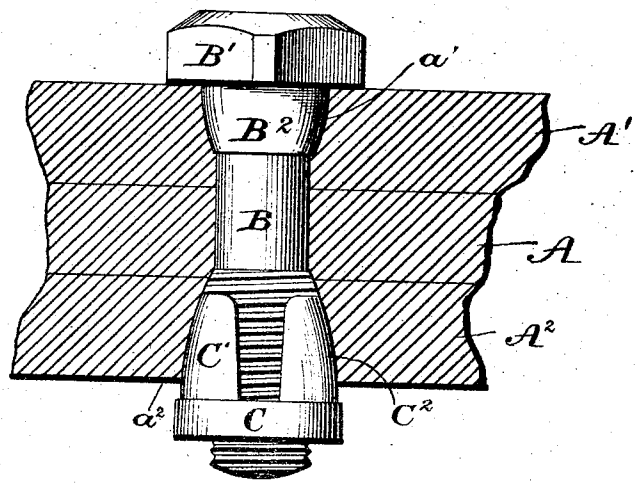


Fig. 4.

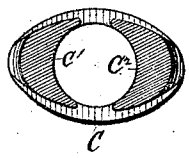


Fig. 2.

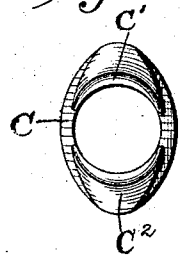
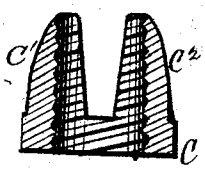


Fig. 3.



Witnesses:
F. M. Burnham
Geo. W. Gibbons

Inventor:
D. Franklin Blighton
By M. Kalb
Atty.

UNITED STATES PATENT OFFICE.

D. FRANKLIN BLIGHTON, OF TONAWANDA, NEW YORK.

LOCKING DEVICE FOR BOLTS.

SPECIFICATION forming part of Letters Patent No. 287,795, dated November 6, 1883.

Application filed May 10, 1883. (Model.)

To all whom it may concern:

Be it known that I, D. FRANKLIN BLIGHTON, a citizen of the United States, residing at Tonawanda, in the county of Erie and State of New York, have invented certain new and useful Improvements in Locking Devices for Bolts; 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 and figures of reference marked thereon, which form a part of this specification.

My invention has reference to locking devices for bolts.

My lock is formed of two tapering lugs joined by a band at the larger or outer end, the band being also threaded. The two lugs thus united possess a compressibility which allows to be pinched in against the bolt when brought in contact with a proper seat. The seat is formed in one of the parts which is to be secured, or in a separately-formed washer, if desired. The lugs are formed thick near their centers, and are tapered off to thin edges at the sides, as seen in Fig. 4. Thus formed, when they are placed upon the band they will present a circular interior and an oval or elongated exterior, which insures a neat fit upon the bolt, and prevents the locking device from turning round when placed in a proper seat.

The bolt to be used in combination with this lock is formed with a square, polygonal, or other conveniently-shaped head for a wrench to take hold upon when it is desired to tighten up the parts. Beneath the head is a tapering portion, which may extend more or less distance toward the threaded end of the bolt. This neck or tapering portion is intended to fit in the seat provided for it in the part to be joined with a continually-increasing tightness which will serve to draw the parts to be united strongly together.

The lock is set in place in the seat and the bolt inserted from the other side and screwed up, whereby the lock is drawn forcibly into the seat, the tapering portion of the bolt in the meantime drawing in upon the opposite side. A correspondingly-shaped seat is provided for the tapering portion of the bolt.

Instead of inserting the lock first and then screwing in the bolt from the opposite side, the lock may be forced down upon the bolt; but it is preferable to proceed as before explained.

It is essential in this invention that the lock when in position be incapable of turning.

Heretofore the lugs which have been used as parts to tighten upon the screw-threads of the bolt while said bolt is being screwed into them, or while the nut is being screwed upon the bolt, have formed a circle, and the edges of the lugs have been as thick as the middle, so that they have tapered in only one direction—*i. e.*, from base to point. This prevented their use as a self-holding or locking device. A washer having lugs tapered, as herein set forth, has been known; but as used upon a washer and upon a locking device or interiorly screw-threaded nut the difference is great. Upon the washer they can serve only to prevent said washer turning in its seat, while upon the nut they answer this function and the further and more important one of closing down upon the threads of the bolt to hold it securely.

The accompanying drawings form a part of this specification, and illustrate what I consider the best means for carrying the invention into practice. Figure 1 is a section of the parts to be united, with the bolt and lock in place. Fig. 2 is an inverted plan view of the lock, showing the lugs. Fig. 3 is a section of the locking device, taken lengthwise of the lugs. Fig. 4 is a section of the same, taken across the lugs.

Similar letters of reference indicate corresponding parts in all the figures.

A is a rail of a railroad or analogous part to be secured; A′ A^2, the fish-plates or analogous parts on either side.

B is the bolt; B′, the square or other conveniently-shaped head for grasping with a wrench. B^2 is the neck or tapering portion, extending from the head toward the threaded end of the bolt.

The lock is formed of two tapering lugs, C′ C^2, interiorly screw-threaded, and joined at the larger end by a similarly-threaded ring, C. These lugs are oval on the exterior, where they form the end of the lock, and a space is left between them, so as to give them compressibility when drawn into the seat, whereby they are

pinched upon the sides of the bolt and clamp it securely. The lugs may be of any suitable length and taper. The ring C, which joins them, is of any suitable depth, and is preferably somewhat larger than the lugs set upon it. The ring is of oval or elongated form, thus conforming in general outline to the exterior of the lock formed by the lugs.

The fish-plate A′ is provided with a seat, a', for the neck B^2, and the plate A^2 is provided with a tapering oval seat, a^2, for the reception of the oval tapering lock.

I have shown my invention applied to railroad-rails and fish-plates; but I would not be understood as confining it to such use, as it is evident that it can be used in every situation requiring a bolt and locking device.

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

A locking device for bolts, formed of two tapering lugs having thick centers and thin edges, forming a circular interior and an oval exterior, and a uniting-band secured to the outer larger end of the lugs, the interior of both the lugs and the band being screw-threaded and adapted to tighten upon the screw-threaded end of the nut and to hold one position in the seat provided for them, substantially as herein set forth.

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

D. FRANKLIN BLIGHTON.

Witnesses:

J. J. WHITTEMORE,

W. V. R. BLIGHTON.