(No Model.)

T. TAYLOR.

BOLT FASTENER.

No. 363,021. Patented May 17, 1887.

Fig. 1.

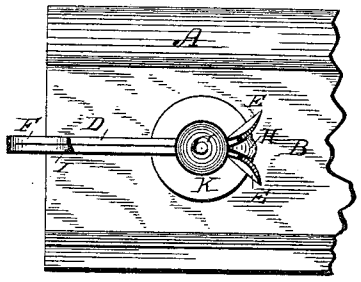


Fig. 2.

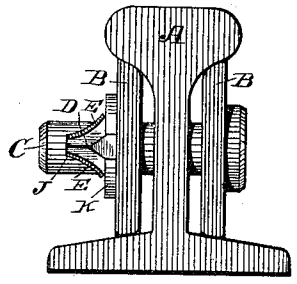


Fig. 3.

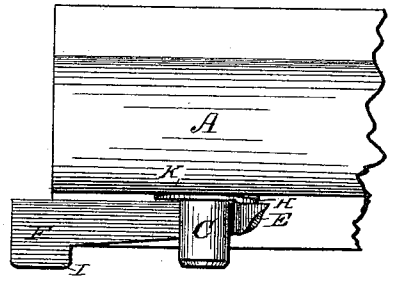


Fig. 4.

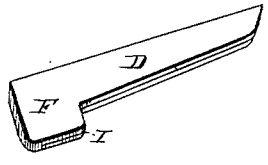


Fig. 5.

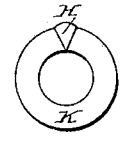
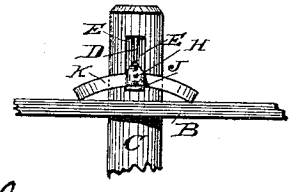


Fig. 6.



Witnesses:

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[illegible]

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Thomas Taylor

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UNITED STATES PATENT OFFICE.

THOMAS TAYLOR, OF KEOKUK, IOWA.

BOLT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 363,021, dated May 17, 1887.

Application filed February 25, 1887. Serial No. 228,866. (No model.)

To all whom it may concern:

Be it known that I, THOMAS TAYLOR, a citizen of the United States, residing at Keokuk, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Bolt-Fasteners; and I do hereby 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.

The object of my invention is to provide a strong, cheap, durable, and efficient bolt-fastening especially adapted for rail-joints.

To this end my invention consists in the peculiar construction and combinations of parts, more fully described hereinafter, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a side elevation; Fig. 2, an end elevation; Fig. 3, a top view; Figs. 4 and 5, detail views of the key and washer, and Fig. 6 a side view showing the position of parts before being driven in locking engagement.

A represents an ordinary T-rail, and B a pair of straps or plates upon opposite sides thereof. These plates are held together by means of a bolt, C, which extends through the plates and rail.

J is a transverse perforation or keyway extending through the bolt, and through which passes a split linchpin or key, D. By thus splitting the end of the pin two prongs, E, are formed, the width of which gradually tapers from the head F to the free ends of the prongs. This lug is preferably wedge-shaped, with walls which diverge outwardly from the center of the washer, and which are perpendicular, or nearly so, to the face thereof.

The washer K is made, preferably, of spring-steel and slightly arc-shaped, as will be seen in Fig. 6. The spreading lug is located at the vertex of the arc, so that when the washer is forced down against the plate by the insertion of the wedge-shaped key it will by its elasticity have a tendency to constantly spring outward, and thereby assist in keeping the key in place. A head, F, is so formed upon the key that a shoulder, I, is provided, by means of which the key may be withdrawn by the use of a hammer or similar instrument.

In using my device the operator has simply to place the washer over the end of the bolt in such a manner that the spreading lug will come opposite the transverse perforation or keyway. The key is then inserted in the perforation opposite the spreading lug in such a manner that the vertex of the lug will enter between the prongs E, and a few taps of the hammer upon the head of the wedge or linchpin will force it forward and will spread apart the prongs E, which pass astride the lug. The size of the perforation, key, and lug are so arranged that only a few taps of the hammer will suffice to securely hold the key in place, after which the flaring ends of the prongs E will prevent it from becoming jarred loose by passing trains. To withdraw the key it is only necessary to strike the shoulder upon the head a few taps with the hammer.

The key is made wedge-shaped, so that any wear by constant jarring can be taken up by simply driving it in a little farther with the hammer.

The advantages of my device are simplicity, cheapness, durability, and ease of operation. When the key is once driven in place, it locks itself and cannot drop out, and hot and cold weather do not affect it.

Although I have shown and described my invention as applied to rail-joints, it is obvious that it can be applied with equal success upon bridges, cars, and, in fact, wherever a bolt-fastening is needed.

It is evident that the details of my device could be varied in many ways which might suggest themselves to a skilled mechanic. Therefore I do not limit myself to the precise construction herein shown, but consider myself entitled to all such variations as come within the scope of my invention.

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

1. In a bolt-fastening, a washer provided with a spreading lug having diverging sides perpendicular to the face of the washer, substantially as described.

2. In a bolt-fastening, a washer provided with a wedge-shaped lug, in combination with a split key, substantially as described.

3. In a bolt-fastening, the combination of a perforated bolt, a split key, and washer provided with a lug, substantially as described.

4. In a bolt-fastening, a washer provided

with a lug, in combination with a perforated bolt and key, substantially as described.

5. In a bolt-fastening, an arc-shaped washer provided with a lug located at the vertex thereof, substantially as described.

6. In a bolt-fastening, the combination of a spring-washer provided with a spreading lug, a perforated bolt, and split key, substantially as described.

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

THOMAS TAYLOR.

Witnesses:
C. E. LAMB,
J. E. BAUER.