

(No Model.)

W. L. VAN HARLINGEN.

FASTENING FOR RAILROAD RAIL JOINTS.

No. 362,861.

Patented May 10, 1887.

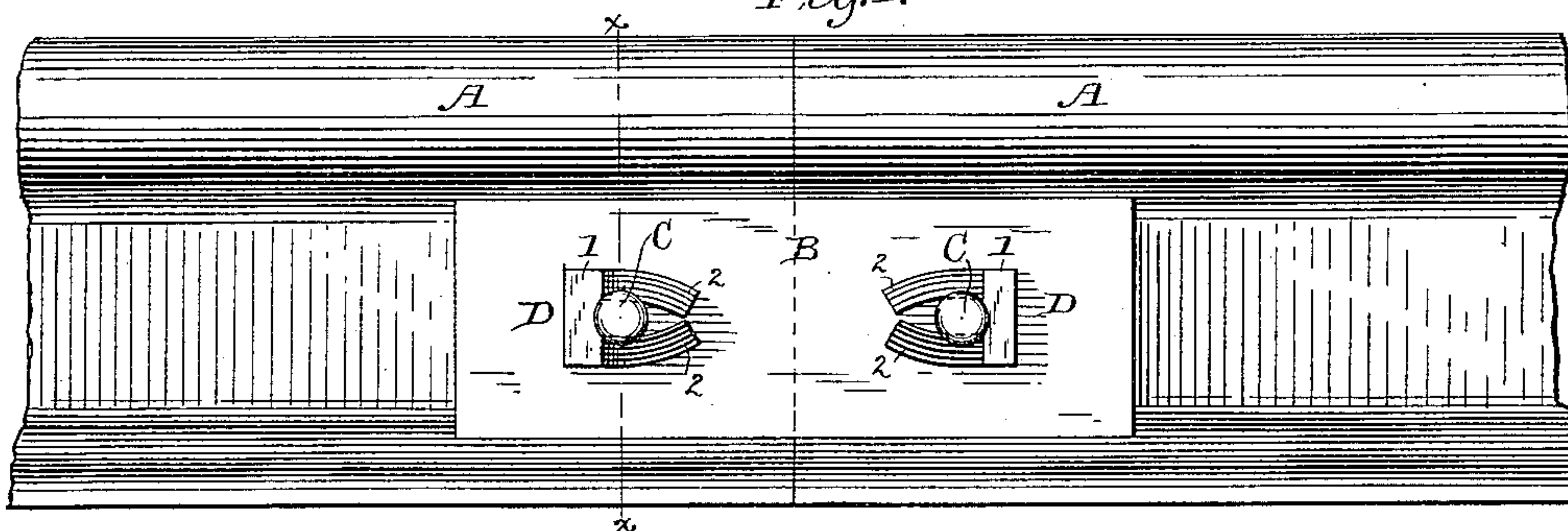


Fig. 2.

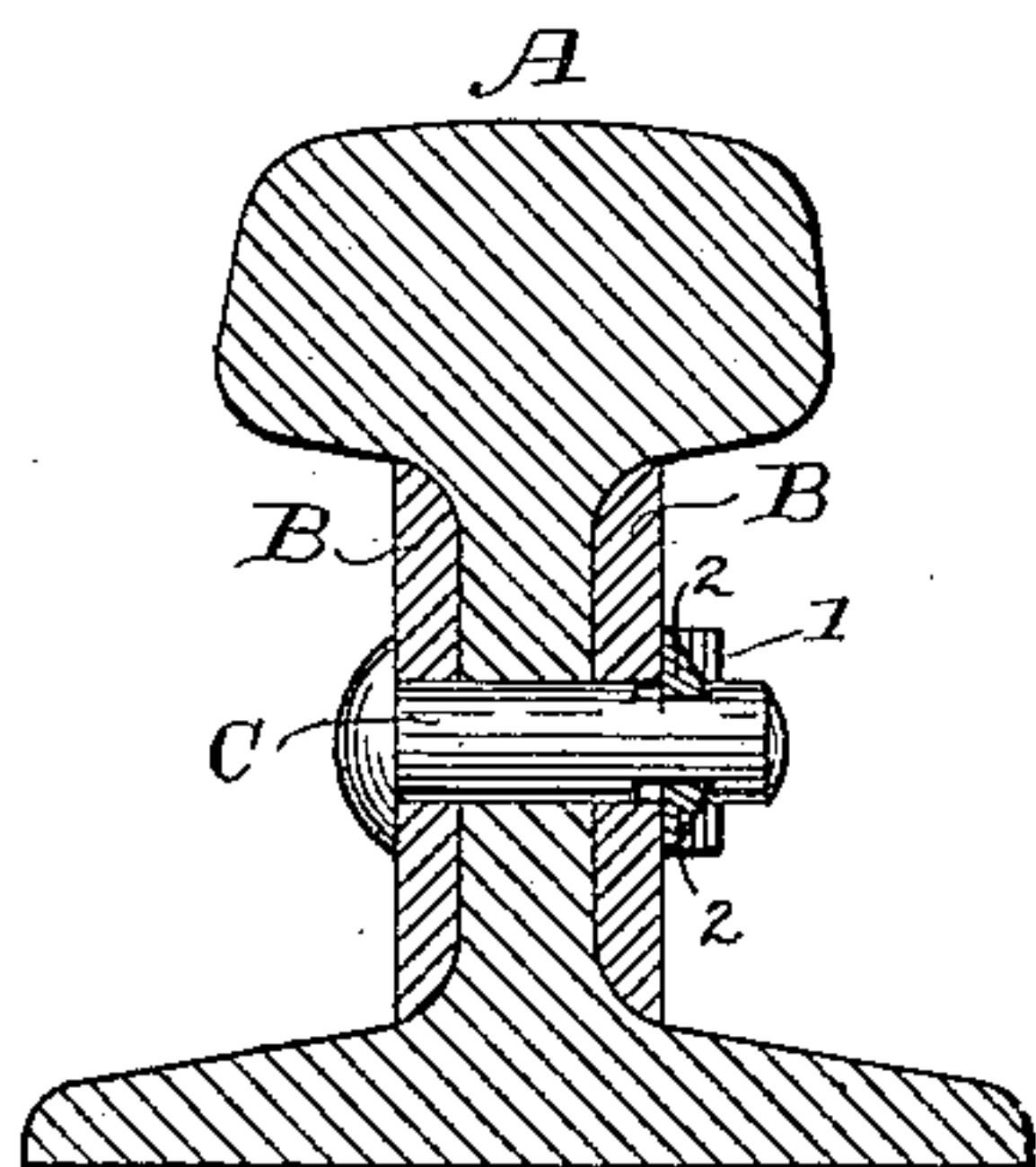


Fig. 3.

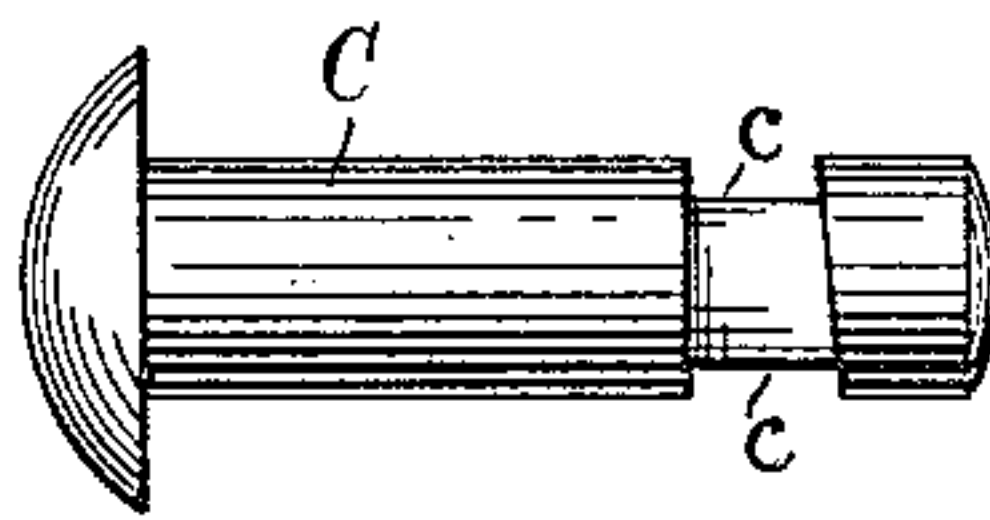


Fig. 4.

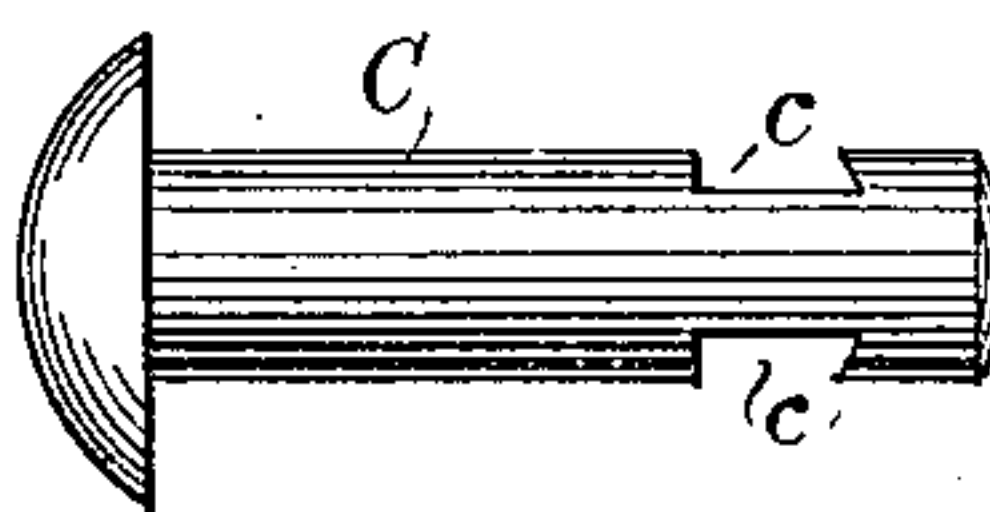
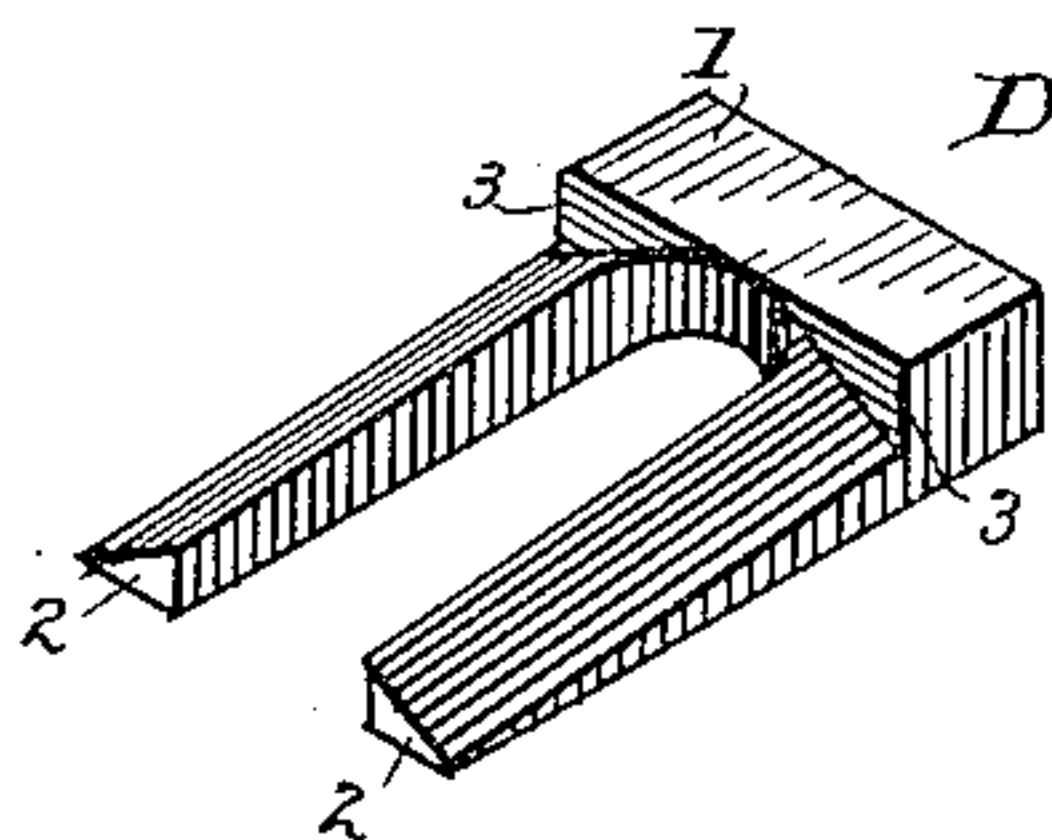


Fig. 5.



William Lawren Van Harlingen

Inventor

Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM LAWSON VAN HARLINGEN, OF SAN FRANCISCO, CALIFORNIA,
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FASTENING FOR RAILROAD-RAIL JOINTS.

SPECIFICATION forming part of Letters Patent No. 362,861, dated May 10, 1887.

Application filed February 21, 1887. Serial No. 228,353. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LAWSON VAN HARLINGEN, a citizen of the United States of America, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Fastenings for Railroad-Rail Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to fastenings for railroad-rail joints; and it consists of a headed bolt, the shank of which is of uniform diameter throughout its length, and has a recess on two opposite sides near its outer end, one of the walls of each of said recesses being at an acute angle to the axis of the bolt and inclined toward the head, and a two-armed key flat on one side, the opposite side of the arms of the key being wedge-shaped and beveled toward their outer edges, the bolt and key being combined in the manner hereinafter described.

Figure 1 is a side elevation of two railroad-rails secured together by fish-plates and my improved bolts and keys. Fig. 2 is a transverse section taken on the line *xx* of Fig. 1. Fig. 3 is a plan view of the bolt. Fig. 4 is a side elevation of the bolt. Fig. 5 is a perspective view of the key.

Referring to the drawings, A A represent two T-rails, and B B the fish-plates, all of the ordinary construction.

C represents my improved bolt, which may be either round, square, or of other regular shape, its diameter being equal throughout its length. The bolt is provided with a suitable head at one end, and near its other end, on opposite sides, are formed recesses *c*, for the reception of the key. The bottom of each recess is in a horizontal plane with the axis of the bolt, the back wall at a right angle to the bottom, and the front wall at an acute angle to the bottom and slightly inclined toward the head of the bolt, all as clearly shown in Figs. 3 and 4.

D represents my two-armed key for tightening the bolt and locking it in position, of which 1 is the head, and 2 2 the arms, formed

integral with the head. As will be seen in Fig. 5, the key is flat on its rear side, but the arms are wedge shaped on the front side and beveled off toward their outer edges, leaving shoulders 3 3 on the under side of the head. The key is made of wrought-iron or other suitable flexible material.

In use the bolt is put through the rail and fish-plates, the recesses in the bolt being so positioned as not to extend quite through the plate on the inner side of the rail. The key is then placed on the bolt with the flat side against the plate and the wedge-shaped and beveled side of the arms in engagement with the inclined front walls of the recesses. The key is then driven transversely of the bolt, and exerts a wedging action on the plates and bolt. When the plates are drawn tightly to the rails, the protruding ends of the arms of the key are bent, as shown in Fig. 1, to prevent the key from working loose on the bolt. Should it be desirable at any time to remove the key, this can easily be done by straightening the arms and driving any suitable instrument against the shoulders on the heads.

The merits of my invention reside in its extreme simplicity and effectiveness. Any ordinary bolt may be used by simply cutting the recesses in them. The holes through the rails and fish-plates need be no larger than is necessary to receive the shank of the bolt, and no appliance is required to prevent the bolt from turning, as, no matter in what position it may be, the key cannot work loose.

It will be apparent that my invention is applicable not alone to the use above stated, but that it can be cheaply, conveniently, and effectively employed in securing together the timbers of bridges and other like structures.

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

1. The combination, with a headed bolt the shank of which is of uniform diameter throughout its length and has a recess on two opposite sides, near its outer ends, one of the walls of each of said recesses being at an acute angle to the axis of the bolt and slightly inclined toward the head, of a two-armed key flat on

one side, the opposite side of the arms of the key being wedge-shaped and beveled toward their outer edges, for the purpose set forth.

2. The combination, with a headed bolt the
5 shank of which is of uniform diameter throughout its length and has a recess on two opposite sides, near its outer ends, the bottoms of said recesses being parallel with the axis of the bolt, and one of the walls of each being at
10 an acute angle to the bottom of the recess and slightly inclined toward the head of the bolt,

of a two-armed flexible key flat on one side, and having a shouldered head, the opposite side of the arms of the key being wedge-shaped and beveled toward their outer edges, for the 15 purpose set forth.

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

WILLIAM LAWSON VAN HARLINGEN.

Witnesses:

WM. H. MYERS,

WM. LOWRY VAN HARLINGEN.