

(No Model.)

E. GILMORE.

BOLT PROTECTOR FOR RAIL JOINTS.

No. 360,519.

Patented Apr. 5, 1887.

Fig. 1.

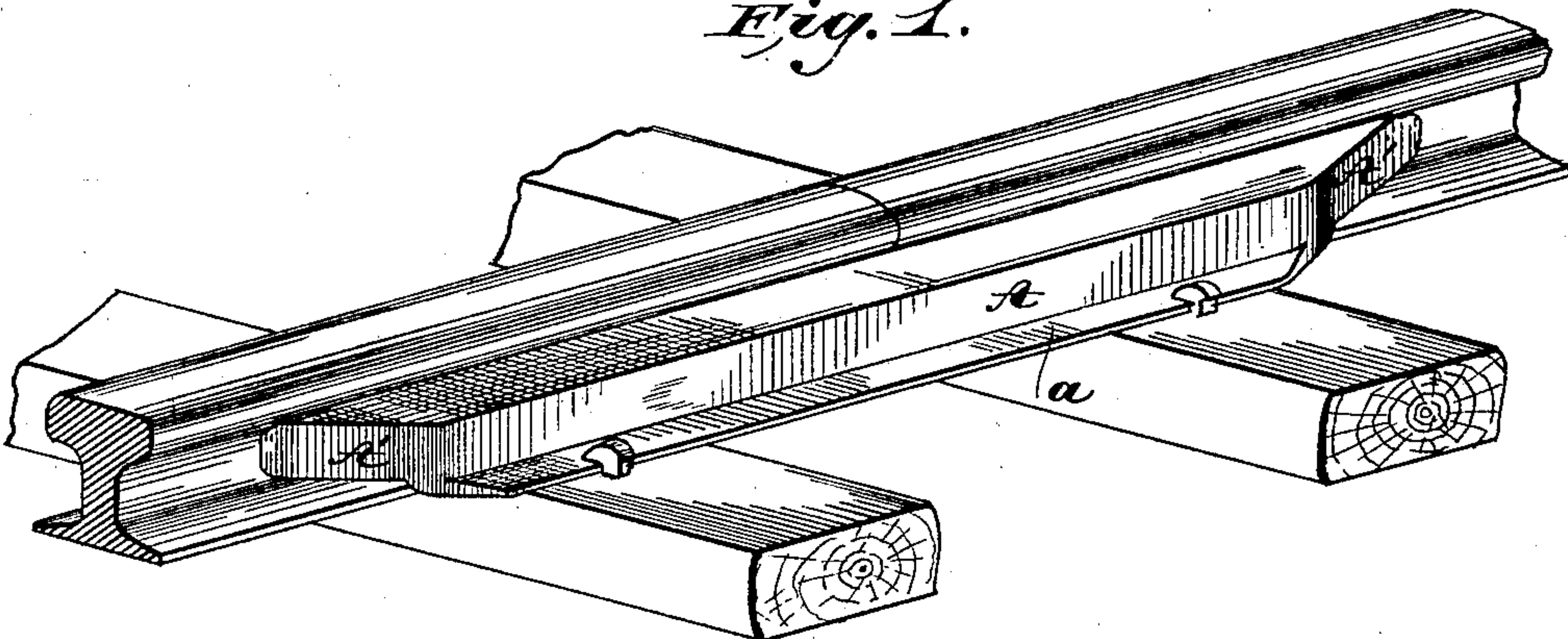


Fig. 2.

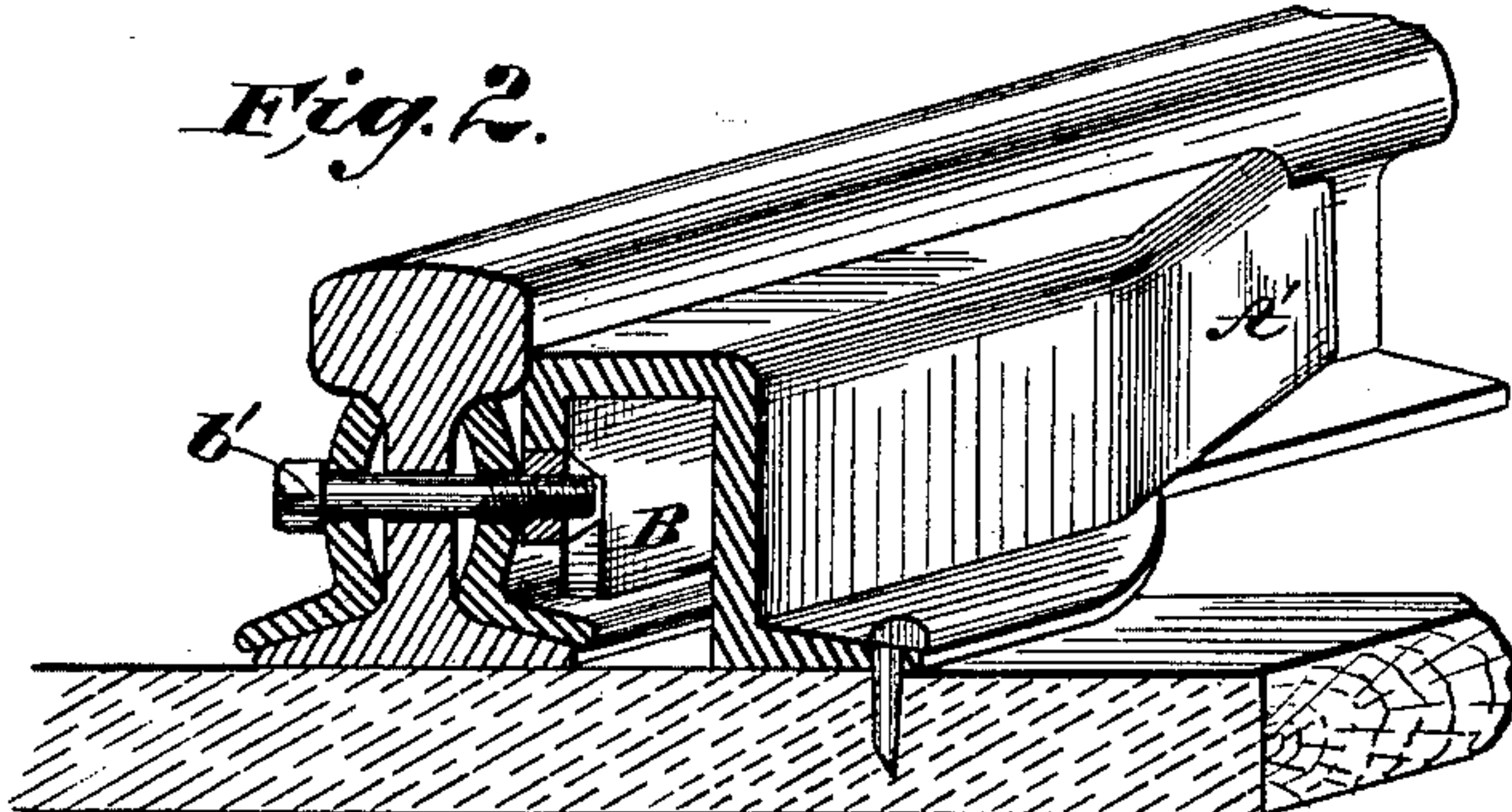


Fig. 3.

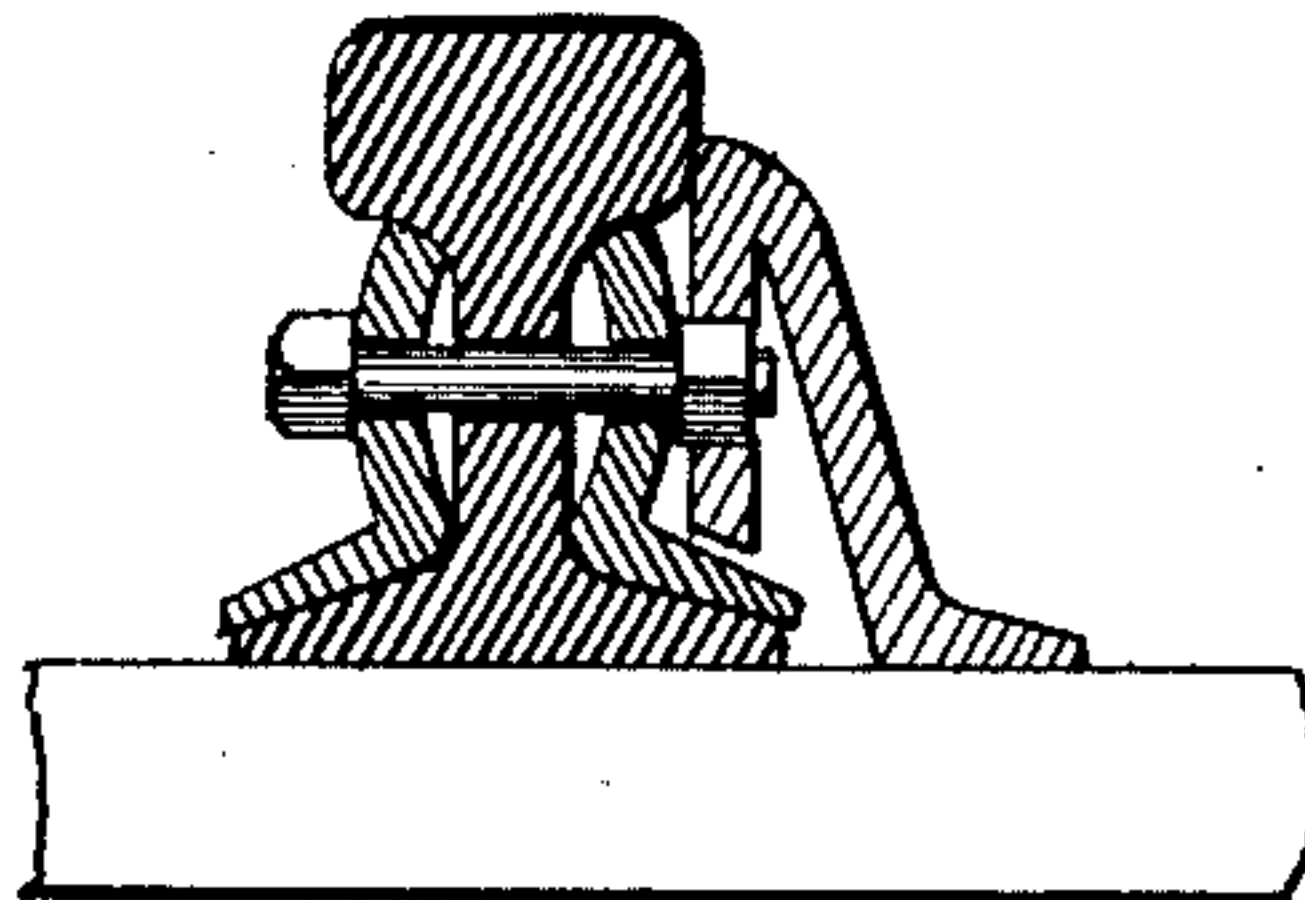
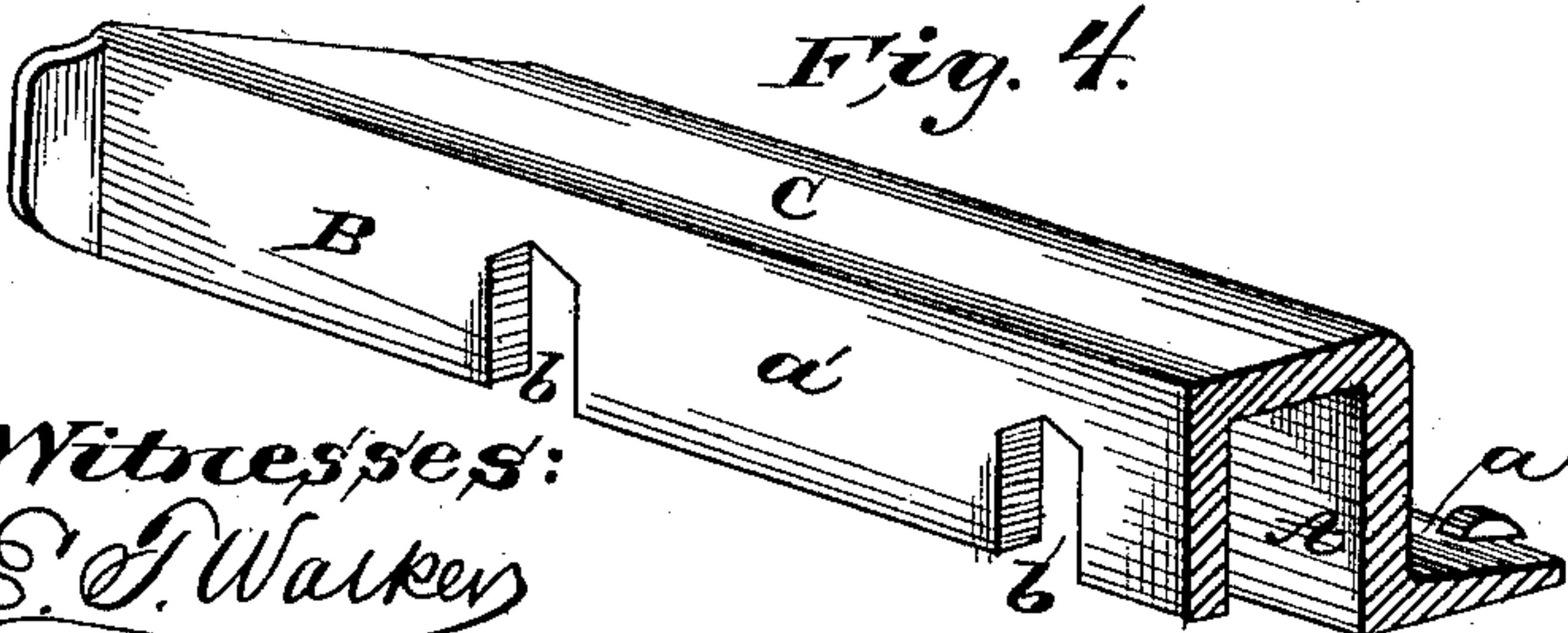


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD GILMORE, OF SOMERVILLE, NEW JERSEY.

BOLT-PROTECTOR FOR RAIL-JOINTS.

SPECIFICATION forming part of Letters Patent No. 360,519, dated April 5, 1887.

Application filed July 9, 1886. Serial No. 207,543. (No model.)

To all whom it may concern:

Be it known that I, EDWARD GILMORE, a citizen of the United States, residing at Somerville, in the county of Somerset and State of New Jersey, have invented certain new and useful Improvements in Bolt-Protectors for Rail-Joints; 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.

My invention consists of a device constructed for the following purposes: First, to protect the ends of the bolts used with fish-plates to join rails on railroads; second, to afford a lock for the nuts on said ends of the bolts, and, third, to prevent any cutting or injury to said bolts and nuts in cases of derailment of the engine or cars.

The annexed drawings clearly illustrate my bolt-protector and nut-lock, and will be referred to in the following specification.

Figure 1 is a view in perspective of my invention. Fig. 2 is also a view in perspective, with a part broken away, showing a section through the point where the bolt passes. Fig. 3 is a sectional view embodying a modification of my bolt-protector and nut-lock. Fig. 4 shows the inner face of the same.

The same letters of reference indicate identical parts in all the figures.

My bolt-protector and nut-lock consists of a metal frame having three sides, A B C. The side A is bent near each extremity, and the bent portion A' inclined toward the ends of the side B, but extend beyond and fit snugly in the web of the rail, the side C being shaped so as to permit this. The lower outer edge of the side A is provided with a flange, *a*. The side B is provided with slots *b*, made to fit closely over the nuts on the ends of the bolts *b'*. The entire frame is kept in place by means of ordinary railroad-spikes driven either through the flange *a* or just at the outer edge thereof, as shown.

The metal frame comprising my bolt-protector and nut-lock may, however, be constructed as represented in Fig. 3, where only two sides are used, the side A inclining from the top of side B, while the remaining features are the same as in the form just described.

Instead of the slots *b*, the side B may be pro-

vided with perforations fitting over the bolts and nuts, and in some cases I may dispense with the side B entirely. This construction would be employed in cases where it is found desirable to provide nut-locks separate from the protector, or where such nut-locks have already been provided.

Instead of my bolt-protector being constructed as shown and described—viz., of a hollow frame—it may be made solid and provided on its inner side with recesses to admit the ends of the bolts and nuts. The manner of using my invention is apparent. The slots or recesses *b* in the side B, fitting closely over the nuts on the ends of the bolts *b'*, afford a very secure lock, and protect them from being fouled by oil, rust, or dirt. Also, in cases of derailment, owing to the peculiar shape of my device, the flange of the car or engine wheels will be warded off, thereby preventing any damage to the bolts and nuts, which is liable to result from such an accident when they are left exposed and unprotected.

I claim as my invention—

1. A protector for the ends and nuts of bolts used with fish-plates to join the ends of railroad-rails, consisting of a metallic structure separate from the fish-plates, one side of which touches the rail above and below the said bolts and nuts, while the ends of said structure fit snugly in the web of the rail, inclosing and covering the ends of the bolts and nuts, substantially as described.

2. A protector for the ends and nuts of bolts used with fish-plates to join the ends of railroad-rails, consisting of a metallic structure separate from the fish-plates having inclined or tapering ends, said ends fitting against the side of the rail, and the structure also fitting against the rail above and below the said bolts and nuts and inclosing and covering the same, substantially as described.

3. A protector for the ends and nuts of bolts used with fish-plates to join railroad-rails, consisting of a metallic structure separate from the fish-plates, fitting at its ends against the rail and also fitting against the rail above the nuts and bolts, inclosing and covering said nuts and bolts, and provided on the side nearest the rail with projections forming nut-locks, substantially as described.

4. A protector for the ends and nuts of bolts

used with fish-plates to join railroad-rails, consisting of a metallic structure separate from the fish-plates having inclined or tapering ends, said ends fitting against the side of the
5 rail, and one side also fitting against the rail above the said bolts and nuts and inclosing and covering the same, the said side being provided with a downwardly-extending projection or projections forming nut-locks to receive the nuts on the ends of the bolts, substantially as described.

15 5. A protector for the nuts and bolts used with fish-plates to connect the ends of railroad-rails, consisting of a metallic structure separate from the fish-plates having inclined or tapering ends fitting against the side of the rails, the side forming the outer portion of the structure fitting against the rails above the bolt and nuts, and being provided with a down-

wardly - extending flange having openings forming nut-locks, substantially as described.

6. A protector for bolts and nuts used with fish-plates to join the ends of railroad-rails, consisting of a metallic structure having two or more sides, A B, the ends of the side A being bent toward and fitting into the web of the
25 rail, and the lower outer edge of the said side A being provided with a flange, *a*, extending between the points of bending, and the side B, fitting against the rail above the nuts and bolts
30 and being provided with nut-locks *b*, substantially as before set forth.

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

EDWARD GILMORE.

Witnesses:

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JAMES J. BERGH.