

No. 614,171.

Patented Nov. 15, 1898.

D. N. HURLBUT.
RAIL JOINT ATTACHMENT.

(Application filed Feb. 15, 1898.)

(No Model.)

Fig. 1.

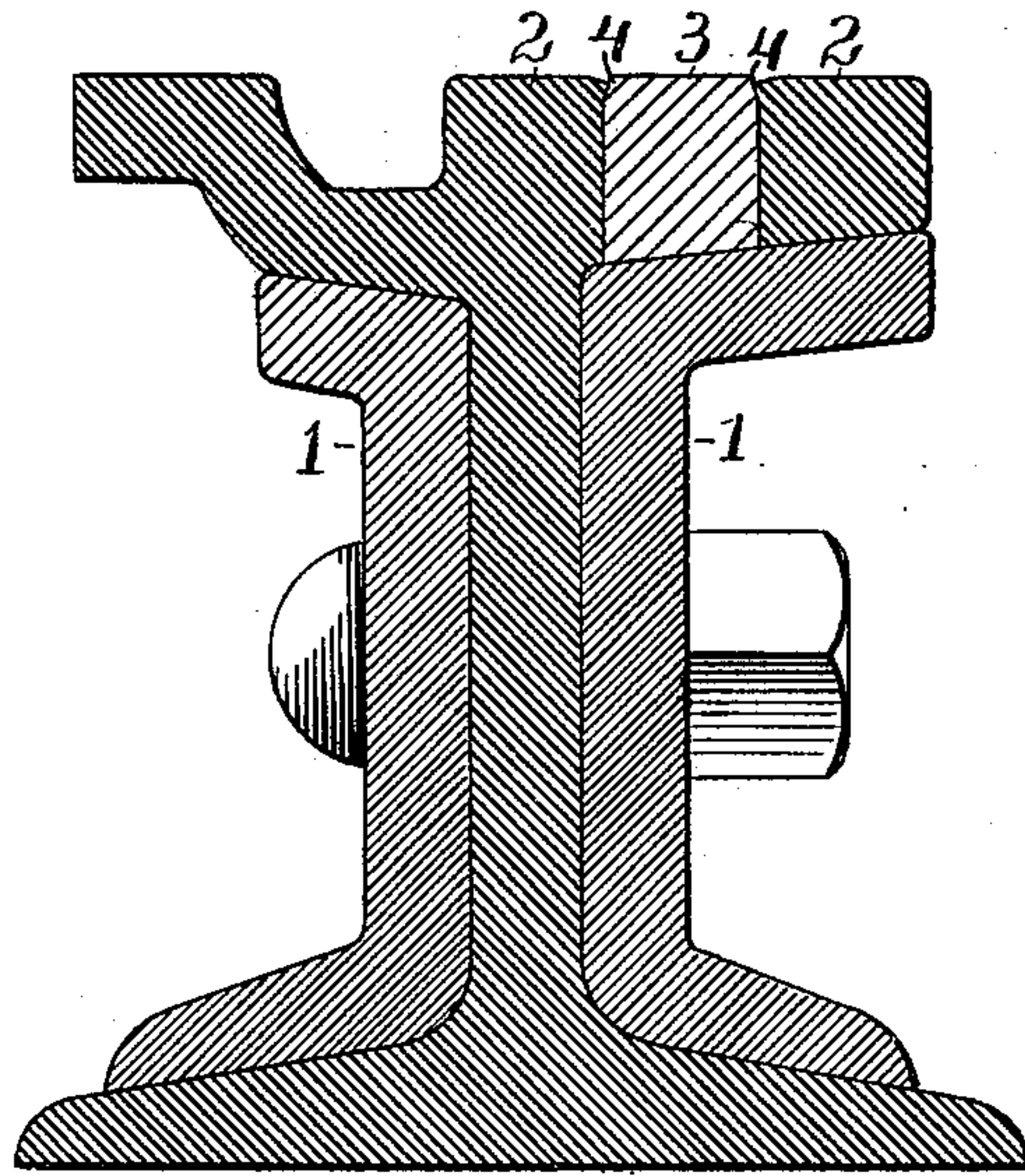
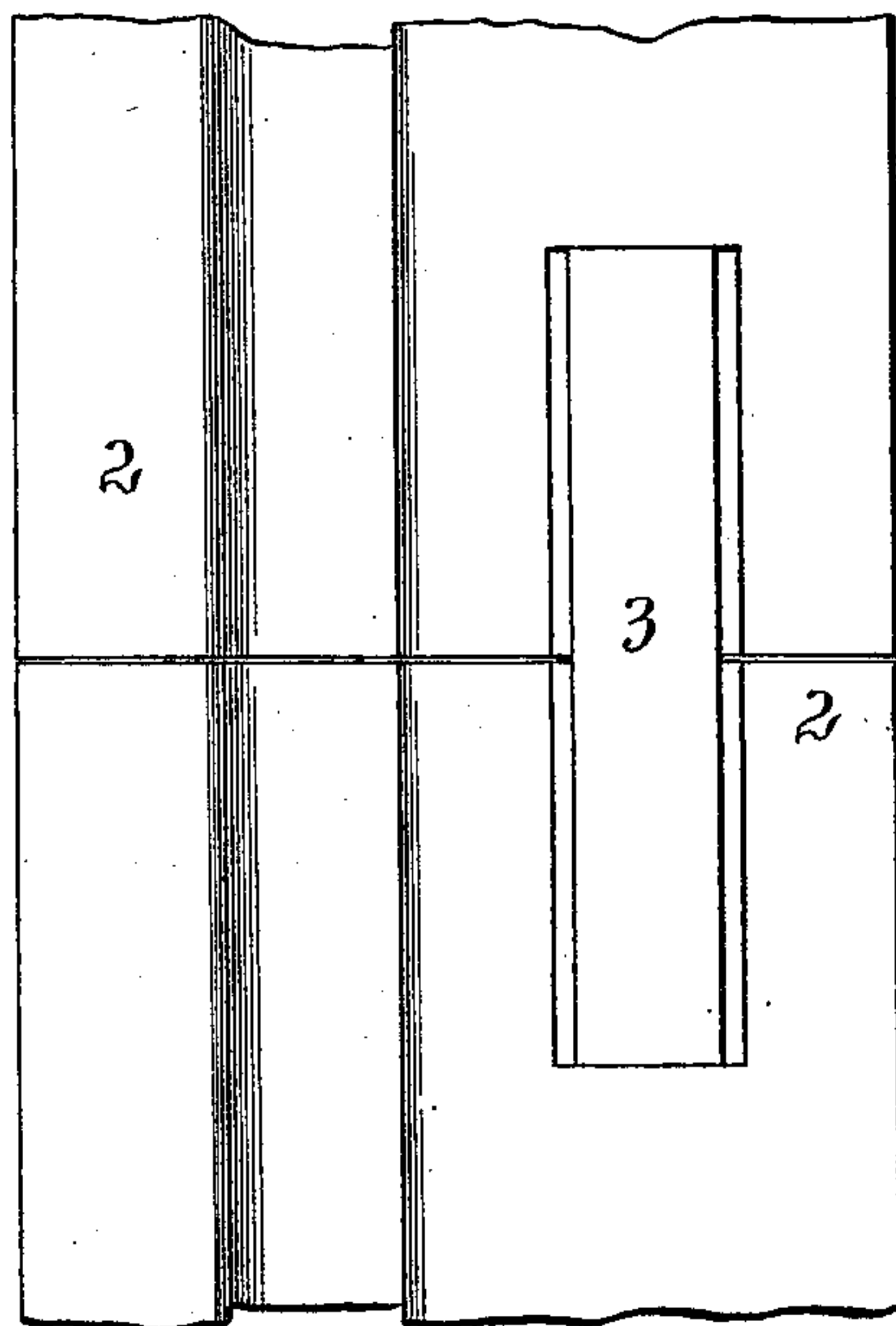


Fig. 2.



Witnesses:
C. L. Belcher
A. Stetson

Inventor
Daniel N. Hurlbut
By
G. H. Stocking
his Attorney

UNITED STATES PATENT OFFICE.

DANIEL N. HURLBUT, OF NEW YORK, N. Y.

RAIL-JOINT ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 614,171, dated November 15, 1898.

Application filed February 15, 1898. Serial No. 670,438. (No model.)

To all whom it may concern:

Be it known that I, DANIEL N. HURLBUT, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Rail-Joint Attachments; 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.

I have invented a simple improvement intended to be applied to the joints of railway-rails, the purpose of the improvement being to provide a smooth and continuous tread for the car-wheels at such joints by combining with the rail ends an overlapping piece of steel which receives the wear at the point indicated and relieves the rail ends and their joints from the jar which now affects them when the trucks travel over them. To be more specific, I provide at the point where the rail ends come together slots or openings in the adjacent rail ends, which slots or openings, cut in the side of the web of the rail, when the rail ends are placed together, are continuous. Then I set in, within the continuous slot thus formed, a piece of steel having straight sides for the most part, but beveled off at the upper edges or corners. This piece of steel is adapted to rest at its bottom upon the fish-plate and to be held in place by riveting or swaging the rails along the slot firmly against the beveled edges. The riveting is done when the rails are in position, so as to insure perfect alinement of the adjoining rails and also to make it certain that the upper surfaces of the rails and of the steel piece which is set into the slot shall be flush with one another. By using the steel tongue in this manner the disturbing jar or vibration caused by the striking of the truck-wheels upon the rail ends in the travel of the car is done away with by forming a rest for the wheels while they pass over the joints. This last is the main object of my invention.

In the drawings which illustrate my invention, Figure 1 is an end view of one rail with a transverse section of the fish-plates and a section also of the steel tongue in position, and Fig. 2 is a top view of a rail-joint.

In the drawings, 1 1 are fish-plates. 2 is a rail on either side of the joint, and 3 is the piece of steel uniting them and at the same time furnishing a tread or rest for the car-wheel at the joints. It will be seen that the steel piece 3 is beveled off at 4 4 and that the rail on either side is riveted along the bevels, thus making a firm and rigid connection and holding said steel piece in place.

This invention is designed not as a rail-joint pure and simple—that is to say, the function of securing the rail ends together is accomplished mainly by the fish-plates, while I have in mind chiefly the smoothness of travel and the saving of the rails and the rolling-stock which will result from inserting my piece of steel in the manner described.

I have shown the upper surface of the tongue 3 as flush with the upper surface of the rails throughout its entire length. I may, however, rivet or swage the rails at the ends of the key in the same manner as at the sides, if it is found desirable. In the same way, if thought best, I may lower the ends of the tongue very slightly in order that there may be no possibility of jarring or striking when the wheels first come upon the tongue. This amounts to saying that I may have the tongue a little higher in the middle than at the ends, with a gradual slope or incline from the middle to the ends. Such incline should be infinitesimal in amount; but it would serve to relieve the jar or stroke at the ends of the adjoining rails and would so fulfil the purposes of this invention. This tongue can be adapted to T-rails by cutting a slot on each side of the web of the rail, so that the tongue will rest on the side plates (fish-plates) while binding the rails together.

I do not intend claiming a tongue or key for binding the rails together, as this is not new. My invention relates, rather, to a particular position of the tongue, as resting on the fish-plates for its support, and the riveting in of the said tongue, instead of cutting out difficult and practically impossible portions of the rails, as disclosed in the art. My method insures a firmer hold than any other known method that is practicable.

Having described my invention, I claim—
1. A pair of railway-rails having slotted

ends, the said rails being joined by suitable fish-plates, and a tongue in said slot overlapping both rails and resting on the fish-plates.

- 5 2. In a railway-joint, the combination of a girder-rail having a groove cut parallel with the web, with a tongue having sides parallel throughout nearly their entire length, but tapering slightly at the top, and adapted to

be held in place by the hammered-down edges of the slot, substantially as set forth.

In testimony whereof I have signed my name, in the presence of two witnesses, this 17th day of January, A. D. 1898.

DANIEL N. HURLBUT.

Witnesses:

G. H. STOCKBRIDGE,
LOUIS GUNN.