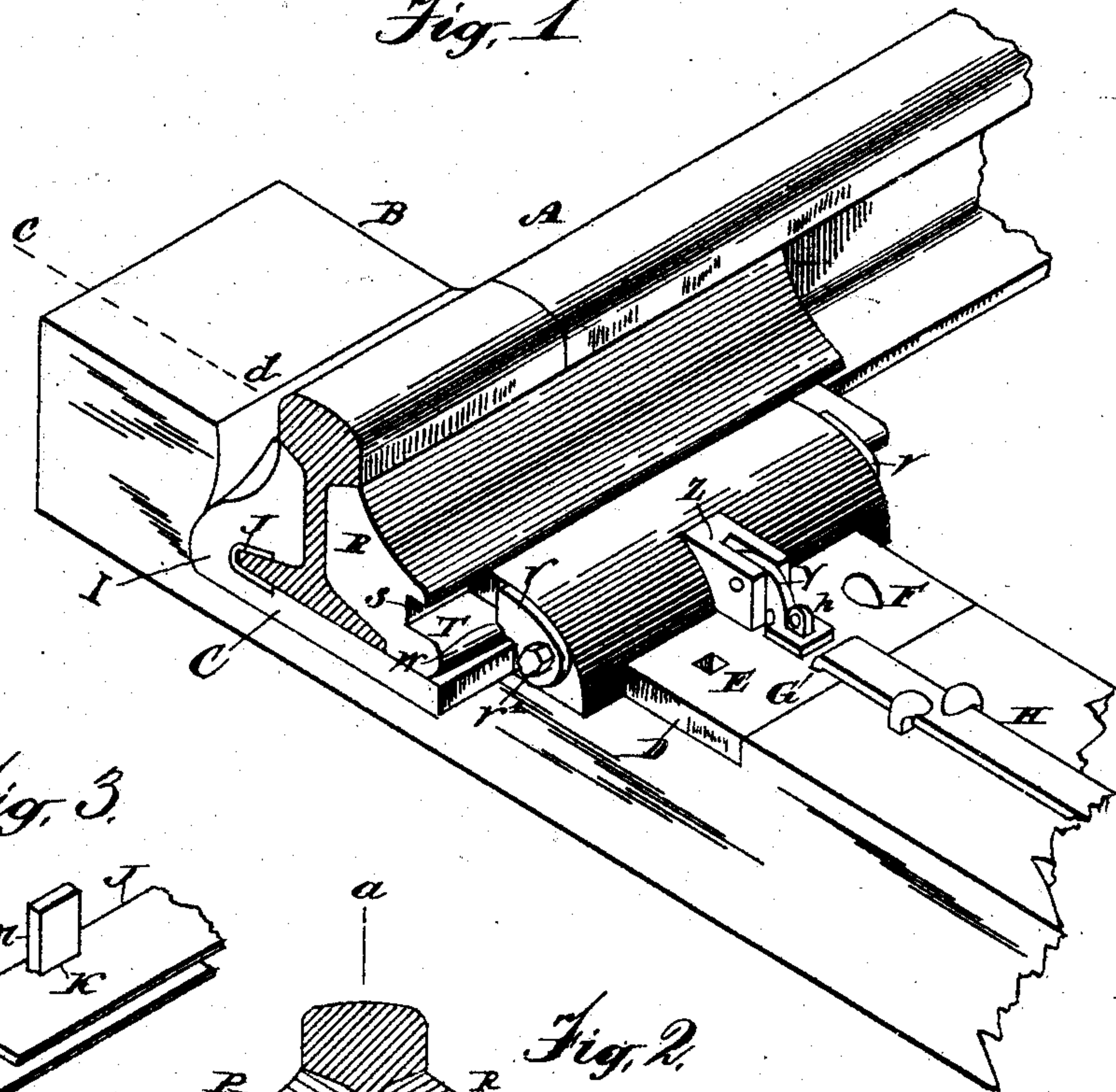


M. J. & R. A. DRUMMOND.  
RAILWAY RAIL JOINT.  
APPLICATION FILED MAY 7, 1908.

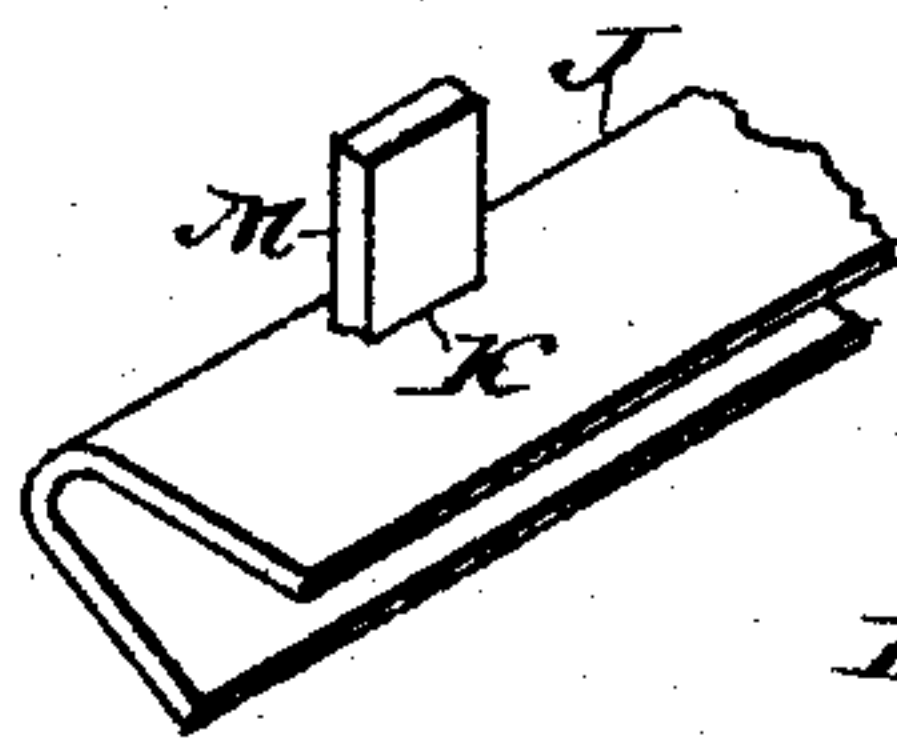
908,978.

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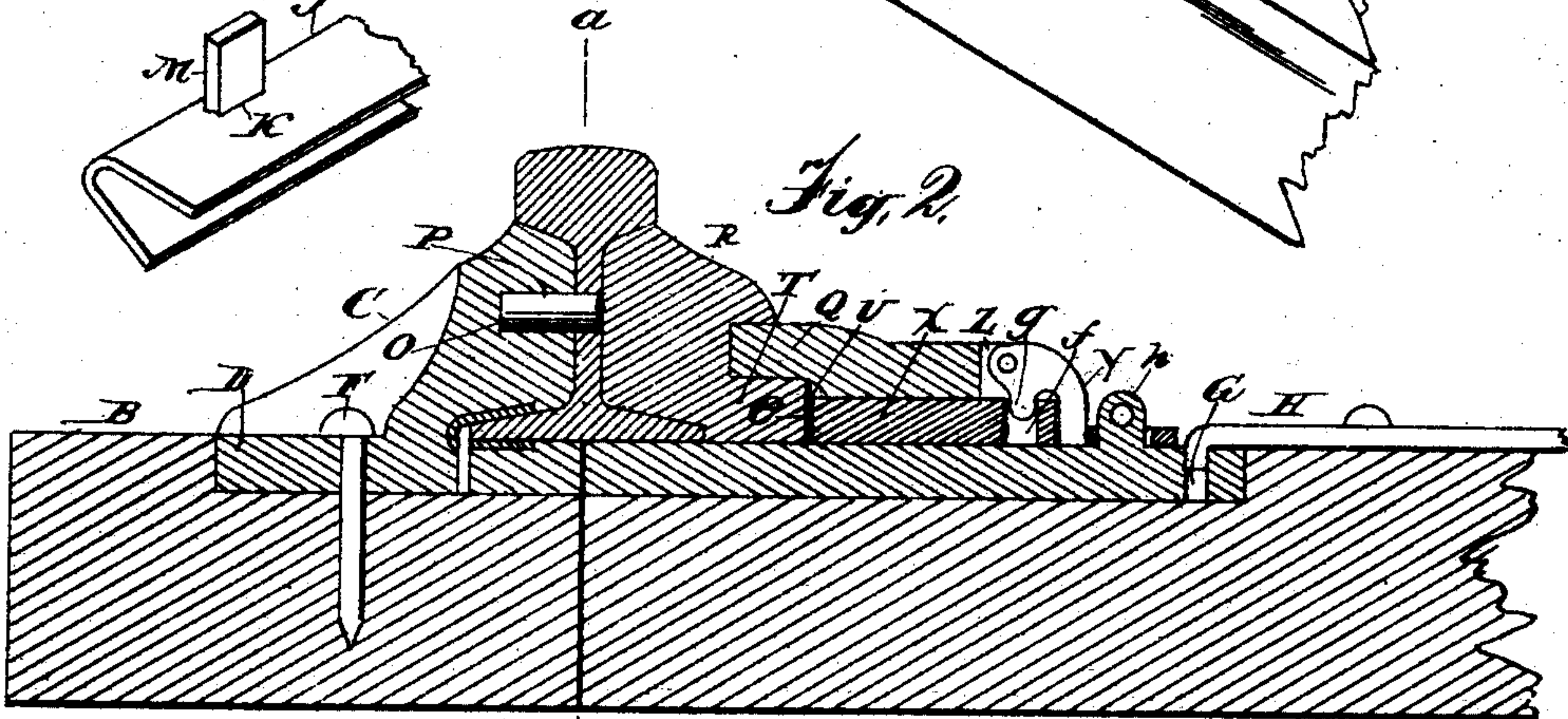
*Fig. 1*



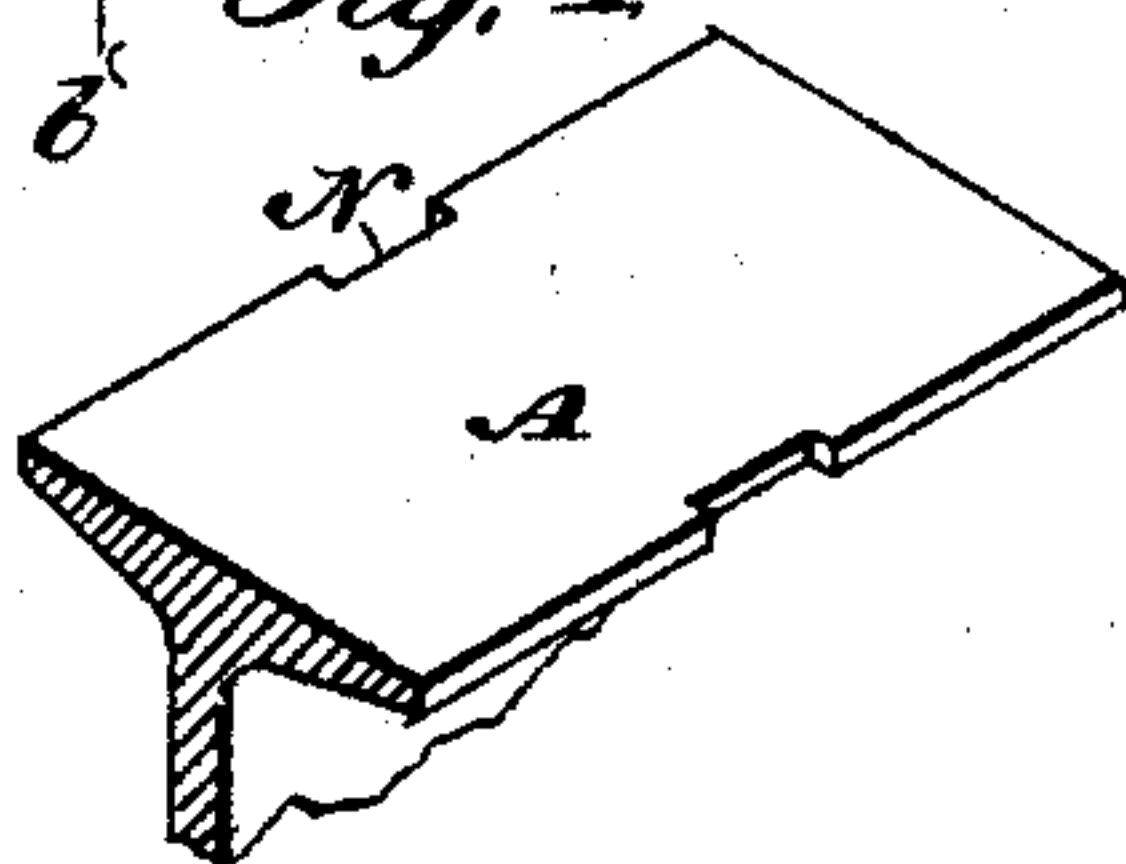
*Fig. 3.*



*Fig. 2.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

MARY J. DRUMMOND AND ROBERT A. DRUMMOND, OF CEDAR RAPIDS, IOWA.

## RAILWAY-RAIL JOINT.

No. 908,978.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed May 7, 1908. Serial No. 431,509.

*To all whom it may concern:*

Be it known that we, MARY J. DRUMMOND and ROBERT A. DRUMMOND, citizens of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Railway-Rail Joints, of which the following is a specification.

The object of this invention is to provide a rail-joint adapted to connect the abutting ends of railway rails and prevent any possible displacement, without the use of bolts.

The invention is fully set forth and claimed in the description and claims following, reference being had to the accompanying drawings, in which—

Figure 1 is a view in perspective of a device embodying my invention, one of the rails being shown in section. Fig. 2 is a section of the same on two lines, that part of the figure shown at the right of the line *a b* being central to the device as shown in Fig. 1, and the part at the left of said line being on the section line *c d*. Fig. 3 is a fragmentary detail showing the construction of a steel bushing set in the main casting. Fig. 4 is a fragmentary view, showing the notching of the rail flange.

In the drawing, A designates an ordinary tee rail, and B a supporting tie. On the tie, and preferably set in a rabbeted recess therein, is mounted the main, rail-holding casting C. This comprises a flat base D to rest on the tie, and take the bottom flange of the rail. It is provided with suitable holes E, and is spiked to the rail by spikes F. Near the inner end is a slot G to take the downturned end of a bar H also spiked to the tie. It is to be understood that this bar connects a pair of the base-plates on opposite sides of the track, and thus positively prevents spreading of the track, regardless of the rabbeted seat for the base-plate. At one side of the base casting is a shoulder I conforming to the profile of this side of the rail below the ball thereof. In the angle formed by this shoulder and the base-plate is set a stirrup-shaped bushing of sheet steel J. This is cast in position, and one of the principal objects to be attained by its use is a perfectly clean and uniform seat for the rail flange on this side. Through a slot K is inserted a plug M, also cast in position, and this serves, by engagement with corresponding notches N in the rail flange, to hold the rail against displacement endwise. Holes O are also cast in the face of the shoulder, to take pins P,

which are inserted through the usual bolt-holes with which rails are provided. It is presumed that one or the other fastening might be dispensed with, but the construction is made doubly safe by the use of both.

Opposite the shoulder I is an inwardly projecting shoulder Q, the inner face of which is slightly out of line with the web of the rail. Between this shoulder and the rail is a wedge-block R, the inner face of which conforms to the profile of the rail on this side below the ball. On the outer side is a groove S fitting the tongue or shoulder Q, and below this is a flange T fitting a channel U in the base casting. All these parts have a slight taper, so that the whole block acts as a wedge, and when driven home holds the rail-ends tightly in place by compression. This wedge-block is held from loosening by latches V bolted at V<sup>1</sup>, and engaging notches W in the wedge-block. To prevent the possibility of the apparatus being tampered with without detection a bolt X is mounted in the base casting, and engages a notch *e* in the wedge-block. The bolt connects by a slot *f* with a finger *g* on a hasp-lever Y pivoted between lugs Z. The slotted end of the hasp drops over a lug or stirrup *h*, and may be secured in this locked position by a padlock or seal, as desired.

It will be evident upon an examination of Fig. 2 that there could be but little displacement of the rail, even if the wedge-block were not in position, as the pressure of the wheel flange on the inner side of the rail would tend to force the rail against the shoulder or abutment I. In this position it is impossible for the rail to escape from its seat, as the space between the two opposite shoulders of the base casting is shorter than the width of the rail flange. To insert the rail, therefore it is necessary to tip it inwardly, when the flange will go diagonally to its seat.

Having thus described our invention, we claim:

1. Combined with abutting rail-ends, a base casting having an abutment fitting the rails on one side, a wedge-block seat on the other side, a wedge-block fitting therein, and also fitting the inner sides of the rails, a notch therein a bolt engaging said notch, and a hasp connecting with the bolt, and adapted to be locked in position, substantially as described.

2. A base casting for the meeting ends of



railway rails having an abutment conforming to the profile of the outer side of the rail below the ball, the flange receiving part thereof being a channel of steel cast into the  
5 body of the base-block, substantially as described.

3. Combined with the base casting forming a seat for the meeting ends of railway rails, the described channel for the outer  
10 flanges, composed of sheet steel, and pro-

vided with a slot in one side and a plug inserted therein, the whole being cast into the base-block, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

MARY J. DRUMMOND.

ROBERT A. DRUMMOND.

Witnesses:

J. M. ST. JOHN,

W. E. YESSLER.