J. C. WRIGHT.

Railroad Rail-Joint.

No. 167,047. Patented Aug. 24, 1875.

Fig. 1

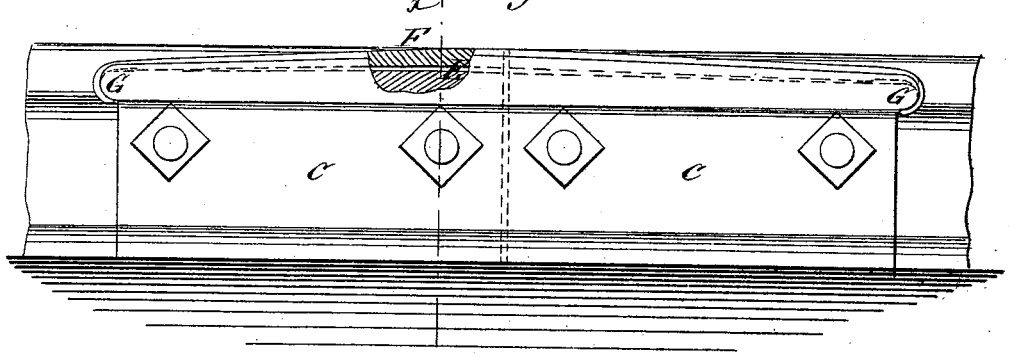



Fig. 2

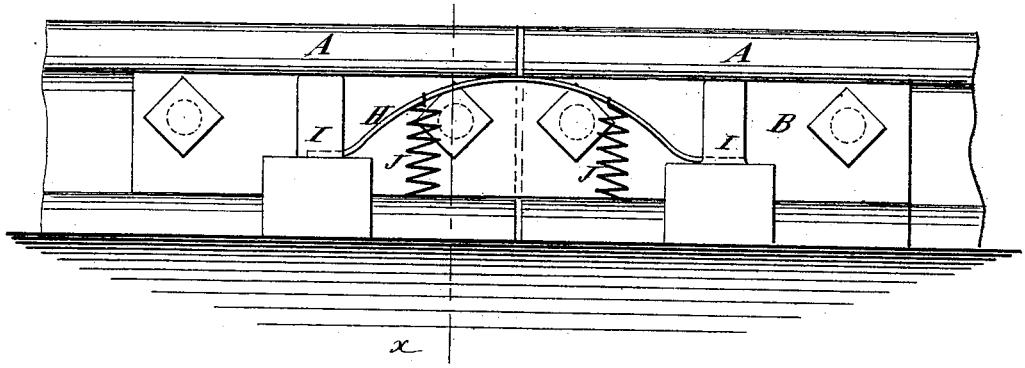
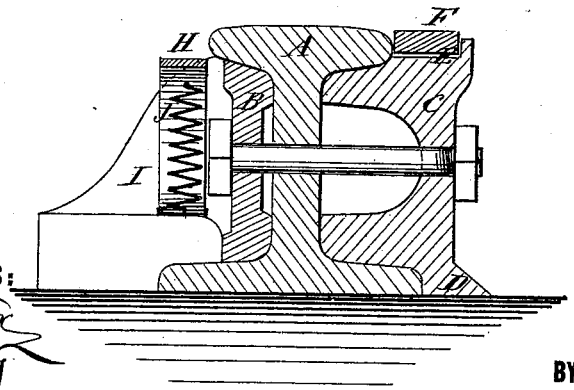



Fig. 3




WITNESSES:

C. Neveux

A. F. Troop

INVENTOR:

BY J. C. Wright

Munn & Co

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOSEPH C. WRIGHT, OF MONOCACY STATION, PENNSYLVANIA.

## IMPROVEMENT IN RAILROAD-RAIL JOINTS.

Specification forming part of Letters Patent No. **167,047**, dated August 24, 1875; application filed April 24, 1875.

*To all whom it may concern:*

Be it known that I, JOSEPH C. WRIGHT, of Monocacy Station, in the county of Berks and State of Pennsylvania, have invented a new and Improved Splice for Rail-Joints, &c., of which the following is a specification:

My invention consists of an inside spring-plate for the flange, and an outside spring for the tread, of the wheel, to take off the weight of the wheel, or a portion of it, from the ends of the rails, and thus prevent the pounding and hammering due to the springing down of the rails when the wheel passes over the ends. It also consists in the form of the plates, and arrangements for fastening them in position, whereby they are secured without bolts or screws, so that they are not weakened by screw-holes, nor obstructed in endwise movement, by expansion and contraction, or by the elongating effect of the hammering of the wheels upon them. Neither are the splice-plates, to which they are attached, weakened by holes for fastening-bolts. The wearing-plates can thereby be made somewhat lighter and still have enough strength, and the strain is greatly reduced, as the wearing-plates are free to lengthen by springing down a little when the weight is passing over them. This gives also a considerable elasticity, which assists in relieving the shocks of the passing trains. It is also cheaper, on account of dispensing with the bolts, and the consequent reduction in size thereby admissible, and the facility with which they can be removed and others put in their places. Moreover, they can be allowed a little spring, and be hardened on account of not being bolted down, so that a lighter plate will answer the purpose, and will wear longer than a heavy one not hardened.

By the arrangement of the plates to spring a little the shocks of the passing wheels are greatly relieved, and, although they may not be raised off the rails, the battering, flattening, and laminating action is effectually prevented.

Figure 1 in the accompanying drawing is a side elevation of a rail-joint, showing an outside wearing-plate arranged according to my invention. Fig. 2 is a side elevation, showing the inside wearing-plate; and Fig. 3 is a transverse section, taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

A represents the rails to be spliced; B, an ordinary fish-plate, to be arranged on the inside; C, an outside splice-plate, made considerably thicker than the ordinary plate, with a base, D, outside of the base of the rail, and resting on the ties or other foundation, and having a channel, E, along the upper face next to the head of the rails, in which the wearing-plate F is arranged, and at each end it has a projection, G, of the bottom of the channel, around which the ends of the bearing-plate are bent or hooked, as shown in the drawing, so as to confine it in place without bolts or screws. Along the middle portion the bearing-plate springs up from the bottom of the channel, so as to be enabled to yield slightly when the wheels run upon it.

It will be noted that the wearing-plate does not overlap or fit on the edge of the head of the rail, so as to be in any way prevented from springing down when the wheels run on it.

H is the inside plate for receiving the flange of the wheel. It is confined at the ends by the cleats I of the base-plate, under which they are free to slide forward and backward a little as the plate elongates and contracts. J represents spiral springs, which may be employed in connection with a flat spring, if preferred.

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

1. The wearing-plates F H, splice-plate C, and blocks I, combined as shown and described, whereby the plates are allowed to extend and contract, as set forth.

2. The inside-spring wearing-plate H, for the flange of the wheel, and outside-spring wearing-plate for the tread, combined with a rail-joint in the manner described.

3. The wearing-plate F, arranged in the channel E of the splice-plate to spring or yield under the wheels, and fastened therein by the ends bent around the projections at the ends of the splice-plate, substantially as herein described.

JOS. C. WRIGHT.

Witnesses:
JOS. A. RANDLE,
NATHL. E. JANNEY.