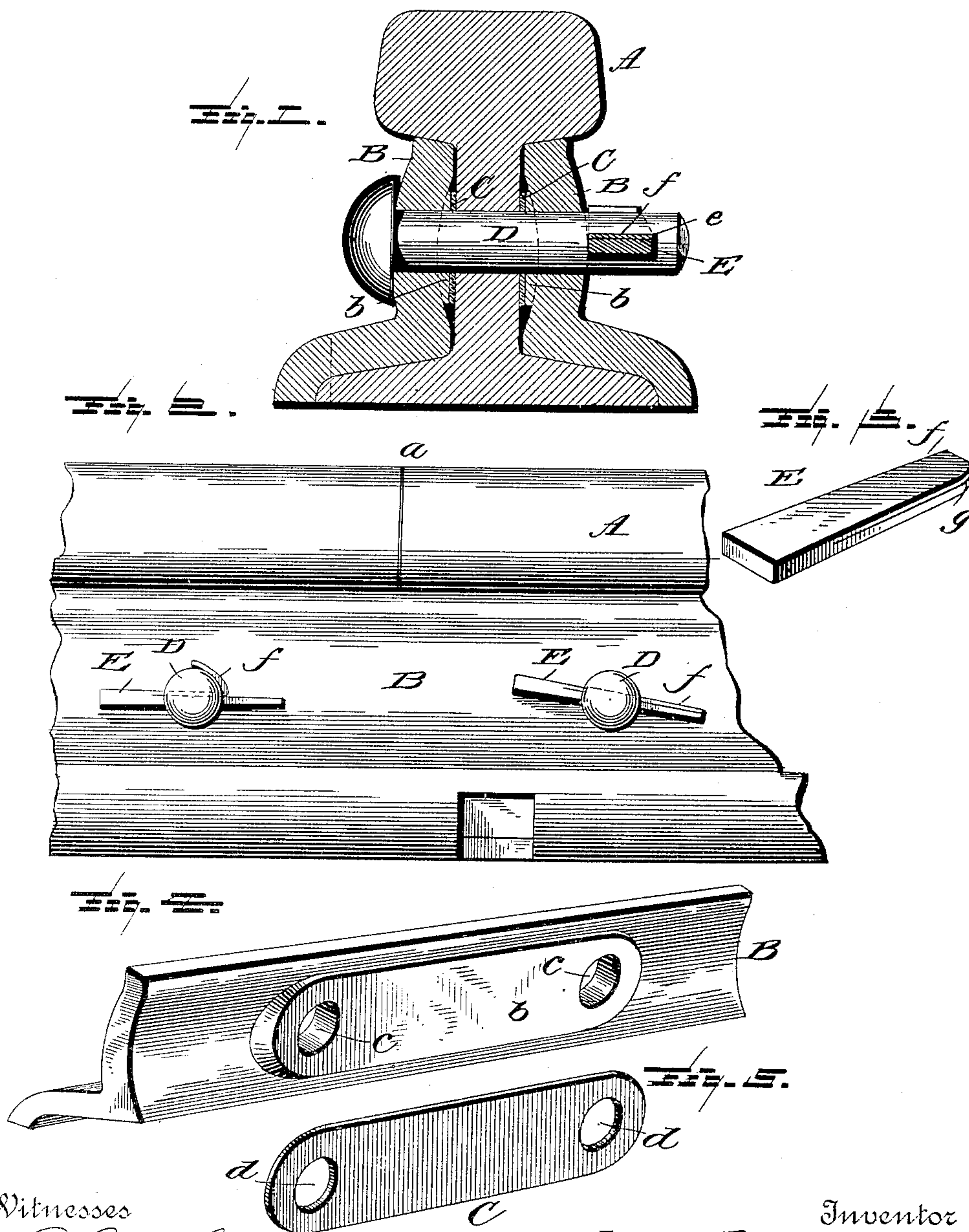


(No Model.)

J. M. WILEY.
RAIL JOINT.

No. 461,088.

Patented Oct. 13, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN MARTIN WILEY, OF BONHAM, TEXAS.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 461,088, dated October 13, 1891.

Application filed June 5, 1891. Serial No. 395,239. (No model.)

To all whom it may concern:

Be it known that I, JOHN MARTIN WILEY, a citizen of the United States, residing at Bonham, in the county of Fannin and State of Texas, have invented certain new and useful Improvements in Rail-Joints; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in rail-joint fastenings; and it has for its objects among others to provide an improved joint and fastening by which the rails may be securely retained in position, easily removed when desired, and provision made for preventing rattling sounds as the cars pass over the rails. I provide curved fish-plates with bearing-surfaces adapted to receive rubber washers, and the bolt has a slot through which the tapered split key is passed and the thin portion thereof turned up against the bolt to prevent displacement thereof.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a vertical cross-section through a railroad-rail with my improvements applied. Fig. 2 is a side view thereof. Fig. 3 is a perspective view of the split key removed. Fig. 4 is a perspective view of one of the fish-plates, looking at the inner face thereof. Fig. 5 is a perspective view of one of the rubber washers removed.

Like letters of reference indicate like parts throughout the several views in which they occur.

Referring now to the details of the drawings by letter, A designates a portion of a railroad-rail of known construction, the joint between the two adjacent ends being shown at *a*.

B are the fish-plates, the vertical portions

of which are curved or concave upon their inner faces, as seen best in Fig. 1, the said fish-plates being applied across the joint in the usual manner. Upon their inner faces the fish-plates are formed with bearing-surfaces *b*, as shown best in Fig. 4, the bearing-faces of which are parallel with the web of the rail, and holes *c* are formed through the fish-plates at such points as to pass through the said bearing-surfaces, as seen in Fig. 4. Rubber washers C are provided, which bear against these bearing-surfaces, as seen in Fig. 1, and against the web of the rail, the said washers being provided with holes *d*, coincident with the holes in the bearing-surfaces of the fish-plates, as shown in Fig. 5.

In practice the fish-plates are applied at the joints in the rails, the washers being placed against the web of the rail between the same and the bearing-surfaces of the fish-plates, as seen in Fig. 1, and the bolts D then passed through the holes in the bearing-surfaces and washers and through coincident holes in the rail, and then a split key E is passed through the slot *e* in the end of the bolt and driven in until the parts are drawn tightly together, when the thin portion *f* of the key is turned up against or around the bolt, as shown at the left of Fig. 2, thus preventing displacement of the bolt. The entering end of the wedge-shaped key is rounded, as shown at *g*, to facilitate its entrance into the slot of the bolt.

The curvature of the fish-plates prevents contact thereof with the rail except at the bearing-surfaces and the very top and bottom thereof, allows slight resiliency, and prevents the disagreeable noises so frequent in railroad traffic. Where the bearing-surfaces come into contact with the parts, the rubber washers are interposed and prevent direct contact of the two metallic portions, and thus prevent and deaden the sound at these points.

It will thus be seen that I not only present an absolutely safe fastening, and one that can be quickly applied or removed, but one that will make railroad traveling more pleasant and agreeable and less dangerous.

What I claim as new is—

The combination, with the rails, of the con-

caved fish-plates provided with vertical bearing-surfaces upon their inner faces, the rubber washers interposed between said bearing-surfaces and the web of the rail the bolt, and
5 the split key passed through a slot in the bolt and turned around said bolt, as and for the purposes specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN MARTIN WILEY.

Witnesses:

O. R. MARSCHALL,

H. G. EVANS.