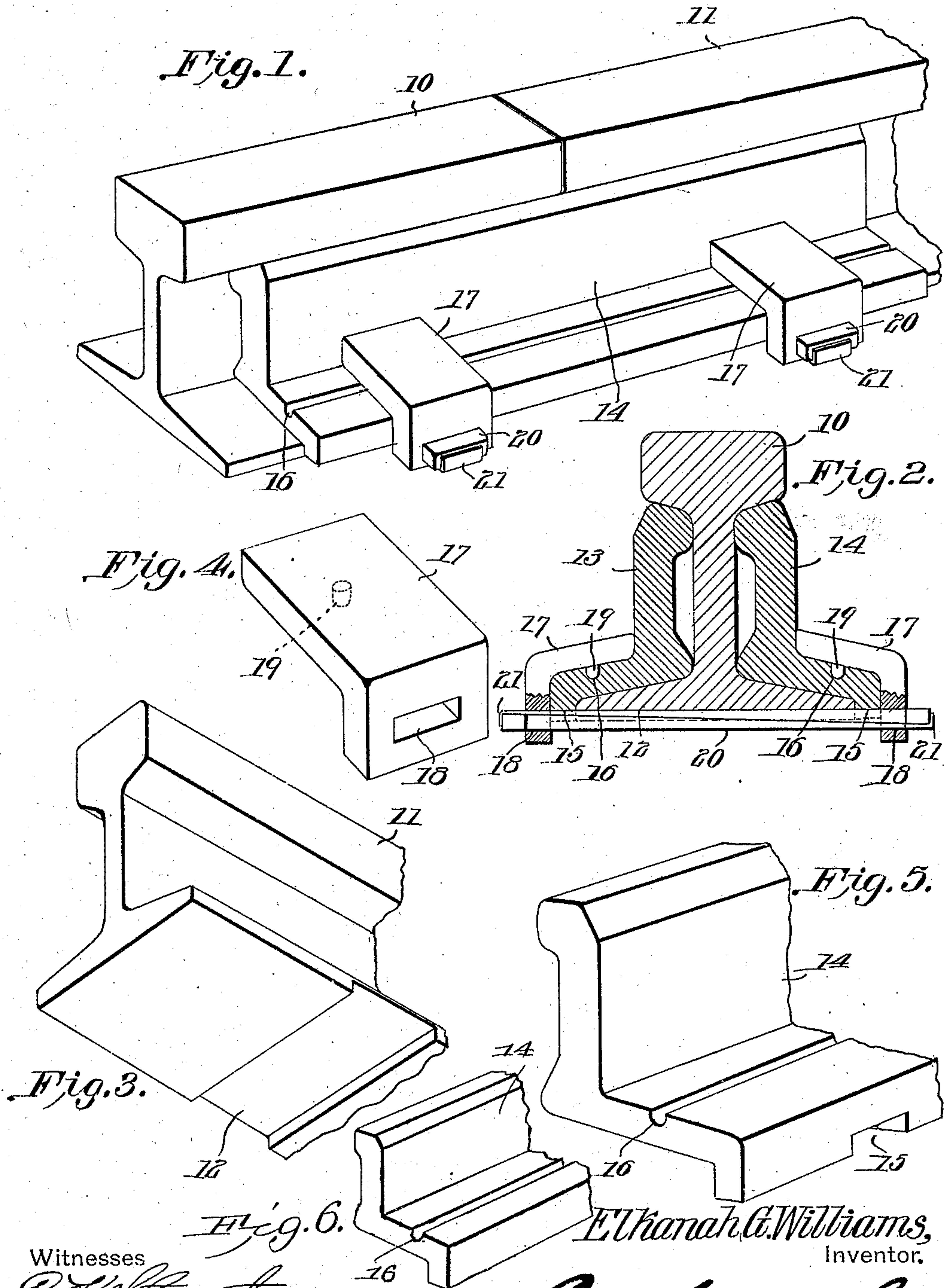


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PATENTED MAR. 13, 1906.

E. G. WILLIAMS.
RAIL JOINT.
APPLICATION FILED JULY 11, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

ELKANAH G. WILLIAMS, OF HARPSTER, OHIO.

RAIL-JOINT.

No. 815,243.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed July 11, 1905. Serial No. 269,220.

To all whom it may concern:

Be it known that I, ELKANAH G. WILLIAMS, a citizen of the United States, residing at Harpster, in the county of Wyandot and State of Ohio, have invented a new and useful Rail-Joint, of which the following is a specification.

This invention relates to railway-rail joints, and has for its object to improve the construction and increase the strength, efficiency, and durability of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation.

In the drawings thus employed, Figure 1 is a perspective view of the adjacent ends of two rails with the improvements applied. Fig. 2 is a transverse section opposite one pair of the stirrup members. Fig. 3 is a perspective view from beneath of one of the rails, illustrating the construction of the same. Fig. 4 is a perspective view of one of the stirrup members detached. Fig. 5 is a perspective view of a portion of one of the clamp-plates. Fig. 6 is a view similar to Fig. 5, illustrating a modification in the construction of the clamp-plate.

The rails are represented at 10 11 and are each provided with a transverse recess near the end, one of these recesses being represented at 12 in Fig. 3; but it will be understood that each end of each rail will be provided with a like recess. Bearing against the webs and beneath the heads or treads of the rails and also extending over the tie-flange portions of the rails are clamp-plates 13 14, the lower or depending edges of the plates having recesses 15 opposite the recesses 12 in the rails, but of less width than the rail notches, and each clamp-plate provided with a longitudinal groove 16. Each clamp-plate will be provided with two of the recesses 15 in alignment transversely of the plates and opposite the recesses 12 in the rails. Bearing over the clamp-plates 13 14, opposite each of the recesses 15, is a stirrup member 17 with depending outer ends and

with apertures 18, corresponding in width to the recesses in the depending portions of the clamp-plates and also with studs 19 engaging the channels 16 in the plates 13 14. The apertures and recesses are designed to receive wedge-keys 20, which are driven there-through from opposite sides and in superimposed position, as shown in Fig. 2, and with the smaller ends bent over or "clenched" upon the larger ends of the adjacent wedge-keys, as at 21. By this simple arrangement the clamp-plates may be forcibly and firmly clamped to the rail ends and extending over the joint between their abutting ends.

The wedge-keys provide a simple means for "taking up" slack, if any exists, and also for remedying looseness between the parts or tightening the joint in event of wear or from other causes. The recesses 12 in the rails being wider than the wedge-keys permit the expansion and contraction of the rails. The wedge-keys fit the apertures 18 and the recesses 15 closely at their side edges, so that no "play" exists in that direction.

If required, the clamp-plates 13 14 may be constructed without recesses 15, as indicated in Fig. 6, when the plates are applied to rails not having the recesses 12.

Having thus described the invention, what is claimed is—

1. In a rail-joint, the combination with the rails of clamp-plates bearing against the webs and provided with longitudinal grooves spaced stirrup members bearing over said clamp-plates and provided with projections engaging the grooves therein and depending below the rails and provided with transverse apertures in the depending portions, and wedge-keys passing through said apertures and bearing beneath the rails.

2. In a railway-joint, the combination with the rail of clamp-plates bearing against the webs and extending over the tie-flange and provided with longitudinal grooves, and stirrup members depending below the rails and provided with transverse notches, spaced stirrup members bearing over said clamp-plates and provided with projections engaging the grooves therein and depending below the rails and provided with transverse apertures in the depending portions, and wedge-keys passing through said apertures and bearing beneath the rails and likewise engaging the notches in said clamp-plates.

3. In a railway-rail joint the rails having transverse recesses in the tie-flanges near the

ends, clamp-plates bearing against the webs of the rails and extending over the tie-flanges and provided with longitudinal channels and with transverse recesses opposite the recesses 5 in the tie-flanges but of less width than the same, spaced stirrup members bearing over said clamp-plates and provided with projections engaging the grooves therein and provided with transverse apertures corresponding 10 to the recesses in said clamp-plates, and wedge-keys passing through said apertures and the recesses in said clamp-plates and bearing beneath the rails within the transverse recesses in the tie-flanges of the same.

15 4. In a rail-joint, the combination with the rails of clamp-plates bearing against the webs and provided with longitudinal grooves,

spaced stirrup members bearing over said clamp-plates and provided with projections engaging the grooves therein and depending 20 below the rails and provided with transverse apertures in the depending portions, and wedge-keys superimposed and passing through said apertures from opposite sides and bearing beneath the rails. 25

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of witnesses.

ELKANAH G. WILLIAMS.

Witnesses:

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