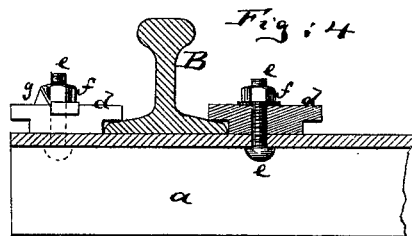
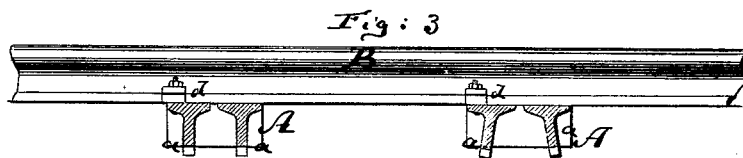
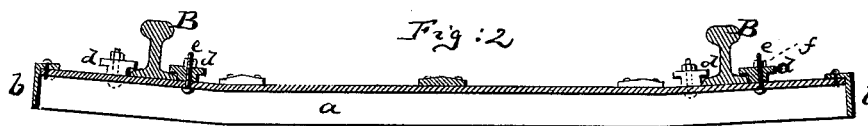
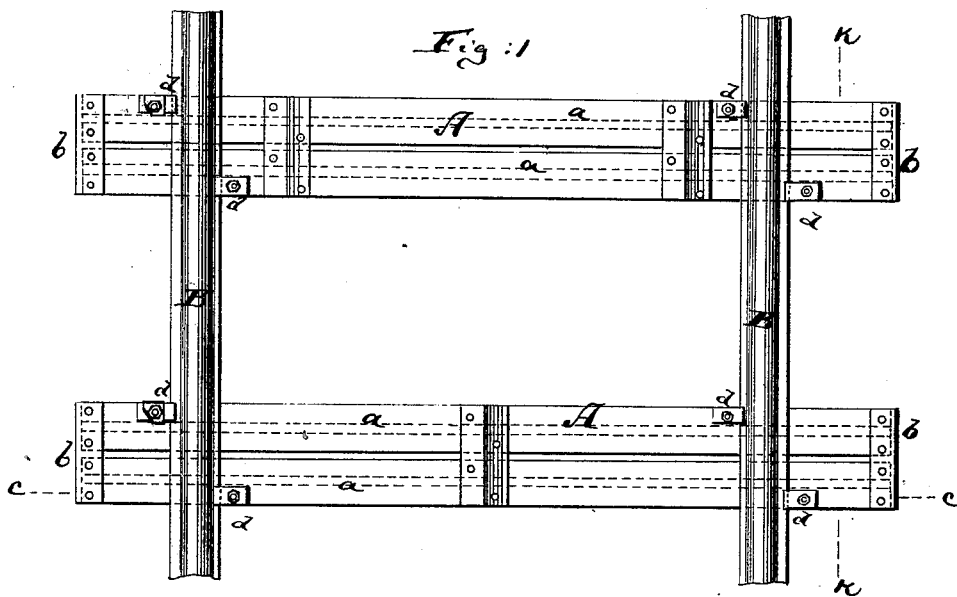


C. F. WAGNER.
Railway-Tie.

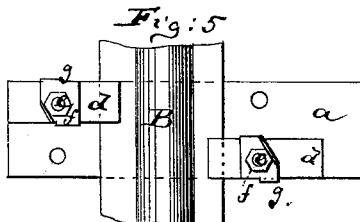
No. 218,648.

Patented Aug. 19, 1879.



Witnesses:

John C. Dunbridge
W. G. C. Schultz.



Inventor:

Carl F. Wagner
by his attorney
A. Briesen

UNITED STATES PATENT OFFICE.

CARL F. WAGNER, OF BUDA-PESTH, HUNGARY, EMPIRE OF AUSTRIA, ASSIGNOR TO LOUIS A. WAGNER, OF HAVANA, CUBA.

IMPROVEMENT IN RAILWAY-TIES.

Specification forming part of Letters Patent No. 218,648, dated August 19, 1879; application filed July 3, 1879.

To all whom it may concern:

Be it known that I, CARL FRIED. WAGNER, of Buda-Pesth, Hungary, in the Empire of Austria, have invented a new and useful Improvement in Railway-Ties, of which the following is a specification.

In the accompanying drawings, Figure 1 is a face view of a section of a rail-track provided with my improved ties or sleepers; Fig. 2 is a vertical transverse section on the line *c c*, Fig. 1; Fig. 3, a vertical longitudinal section on the line *k k*, Fig. 1. Fig. 4 is a detail vertical transverse section, on an enlarged scale, through a rail and tie, showing more particularly the rail-fastening devices. Fig. 5 is a detail face view showing such fastening devices, and Fig. 6 a detail perspective view of the nut-lock.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to an improvement in railway ties or sleepers made from old rails, and to improved clamps and means for fastening the rails to the ties.

The invention consists in the several details of improvement hereinafter more fully pointed out.

In the drawings, the letters *A A* represent two of my improved ties. Each of these ties is composed of two or more old rails, *a a*, which are cut to the required length, and from which the treading-flanges are first detached. These two pieces *a a* are united at their ends by preferably L-shaped plates or clamps *b b*, which are riveted to the ends of the pieces *a a*.

I place the rails *a a* in an inverted position, as shown in Fig. 3, so as to obtain a broad surface for the attachment of the rails *B* of the track.

By detaching from the sleeper-rails the old worn heads or treading-flanges I obtain a sharp edge which will firmly imbed itself into the road-bed. It will be seen that the two rails *a a* of each tie *A*, with their L-shaped connecting-plates *b b*, form a box-shaped bottom, which is easily sunk into the road, and which when properly embedded will retain its position. I prefer to bend the rails *a a* slightly upward at their ends, as shown in Fig. 2.

In order to obtain a wide base for each tie *A*, I may bend the old rails *a a* which constitute each tie outward at their lower ends, so that they diverge, as shown at the right-hand side of Fig. 3.

The rails *B* are secured to the sleepers *a a* by T-plates *d*. Each of these T-plates is secured to its tie *A* by a screw-bolt, *e*, and nut *f*, and projects with its head above the lower flange of the rail *B*. The rails *a* of the tie are perforated for the reception of the bolts *e*. In order to prevent the nuts *f* from working loose there may be placed between each T-plate *d* and nut *f* around the screw-bolt *e* a small perforated plate, *g*, Fig. 6, which has one or two downwardly-projecting lips that bear against the edge or edges of the plate *d*. After the nut has been screwed fast, one corner or side, *g^x*, of the plate *g* is turned up against one edge or side of the nut *f*, thereby preventing it from working loose.

The T-plates *d* may be attached at both sides of each rail *B*, or they may be attached to only one side, in which latter case a spike must be used on the opposite side in the usual manner.

In order to be enabled to change the gage of the road, or to shift the rails in making curves, I prefer to make the aperture for the bolt in each T-plate *d* eccentric, so that the two flanged arms shall be of unequal length therefrom. Thereby on turning the clamp on its bolt *e* the position of the rail can be changed.

I claim—

1. As a new article of manufacture, the tie *A*, composed of the inverted rails *a a*, united by clamps *b b*, substantially as specified.

2. The combination, in a railway-tie, of the two inverted rails *a a*, bent to diverge at their lower parts, and connected by clamps *b*, substantially as specified.

3. The combination of the rail-ties *A* with the reversible T-plates *d*, having arms of different length from the aperture, bolts *e*, and nuts *f*, substantially as specified.

CARL FRIED. WAGNER.

Witnesses:

JOLTÁN SZÉHER,

FRANZ RIEGERSPERGER.