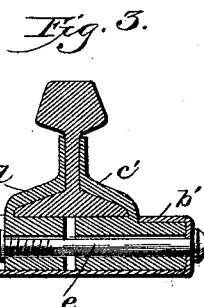
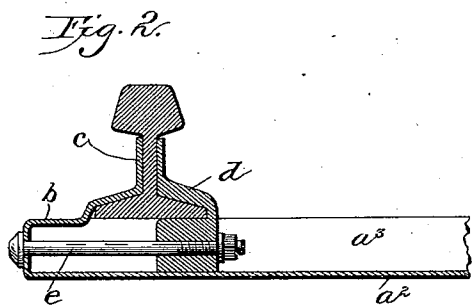
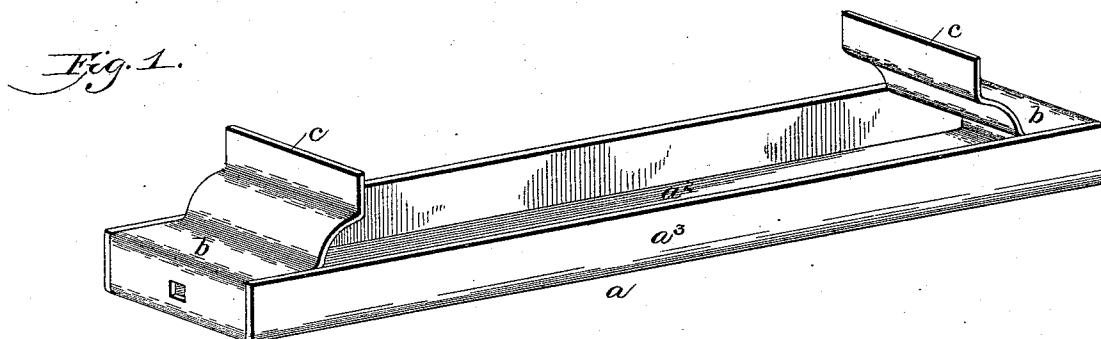


(No Model.)

C. P. HOWELL.
RAILROAD TIE AND CHAIR.

No. 473,071.

Patented Apr. 19, 1892.



WITNESSES

J. L. Ourand
Examiner

INVENTOR

Commodore P. Howell
by W. H. Finckel
his Attorney

UNITED STATES PATENT OFFICE.

COMMODORE P. HOWELL, OF CHATTANOOGA, TENNESSEE.

RAILROAD TIE AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 473,071, dated April 19, 1892.

Application filed July 28, 1891. Serial No. 400,930. (No model.)

To all whom it may concern:

Be it known that I, COMMODORE P. HOWELL, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented a certain new and useful Improvement in a Combined Railroad Tie and Chair, of which the following is a full, clear, and exact description.

In my patent, dated July 14, 1891, No. 456,096, I have set forth a metallic tie for railroads having side and end flanges, the latter being turned up and over to form a pocket for the outer chair, and have set forth therein also a chair made by folding a plate of metal, and also a fastening for the inner chair. In the present case I design to cover a metallic tie having its ends bent up to embrace the foot and web of the rails and having the inner chairs secured by bolts passed longitudinally through them and the tie.

I will describe the principle of my invention first and the best manner in which I have contemplated applying that principle, and then will particularly point out and distinctly claim the part or improvement which I claim as my invention.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view of the tie. Fig. 2 is a longitudinal section of one form, and Fig. 3 is a similar view of another form, of the invention.

The tie *a* is made of wrought-iron or steel in the form of a trough and having the bottom *a*² and side flanges *a*³. The ends *b* of the tie are turned up substantially parallel with the side flanges, then curved to receive the feet of the rails, and then continued upwardly to form braces *c* for engaging the web of the rails, thus taking the place of the chairs and

being integral with the tie. As shown in Figs. 2 and 3, an inner chair *d* of any approved construction may be secured in place by a bolt *e*, passed through the end of the tie and longitudinally of the tie and through the chair.

Instead of making the outer rail-support integral with the tie, I may make it separate therefrom, as shown at *c'*, and apply it in a pocket *b'*, as shown in Fig. 3 and in my patent referred to, and secure it and the inner chair about the rail by the bolt *e*. The separate chairs may be castings, or, as in my patent referred to, they may be made by folding wrought metal upon itself. The ties and their integral rail-supports may be pressed or struck up in dies.

I do not limit my invention in integral ties and rail-supports to any particular shape or construction. I have shown only the simplest and what I believe to be the best form.

What I claim is—

1. A railroad-tie constructed of wrought-iron or steel, made as a trough, with side flanges and having its ends turned up substantially parallel with such side flanges and curved to receive the foot of the rail and turned up vertically to engage the web of the rail, substantially as described.

2. A tie made as a trough, with a bottom *a*², side flanges *a*³, and upturned and overturned ends, combined with rail-supports and horizontal fastening-bolts for such supports, substantially as described.

In testimony whereof I have hereunto set my hand this 23d day of March, A. D. 1891.

COMMODORE P. HOWELL.

Witnesses:

WM. H. FINCKEL,
E. A. FINCKEL.