

W. S. HUNTER.

Railroad Rails.

No. 134,749.

Patented Jan. 14, 1873.

FIG. 1

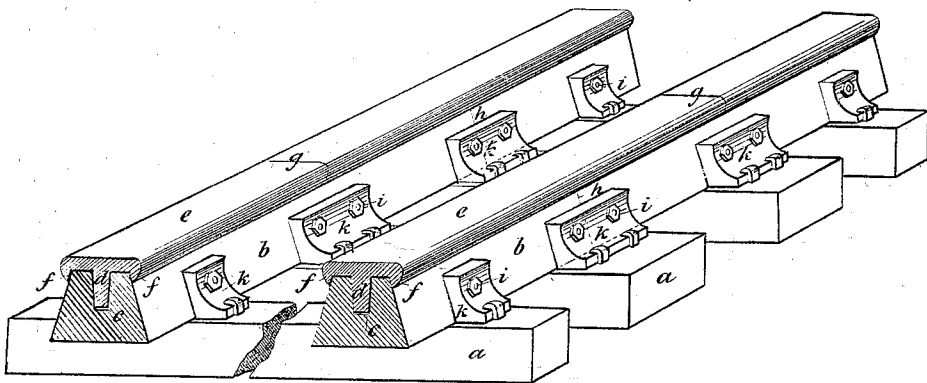
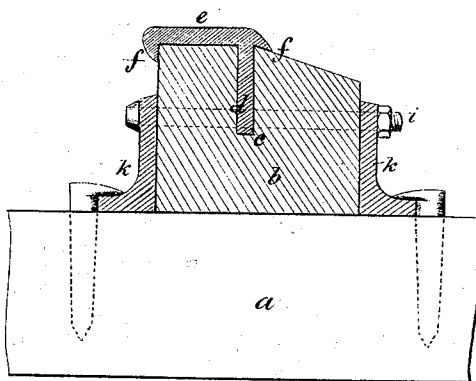


FIG. 2



Witnesses

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IMPROVEMENT IN RAILROAD RAILS.

Specification forming part of Letters Patent No. **134,749**, dated January 14, 1873.

To all whom it may concern:

Be it known that I, WILLIAM STUART HUNTER, of the town of Stanstead, in the district of St. Francis, in the Province of Quebec, Canada, have invented certain new and useful Improvements on Combination Rails for Railways; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has reference to improvements on rails for railways, constructed of wood and iron or steel combined, for the purpose of producing, first, an easy and elastic rail, doing away with the jar and concussion to both rolling-stock and rails; second, a continuous rail, so arranged that, should the metal part break, no danger of accident may arise therefrom; and, third, a rail having the above advantages in a cheap and durable form.

In the drawing hereunto annexed, where similar letters of reference indicate like parts, Figure 1 represents a perspective view, embodying my invention. Fig. 2 represents a first modification of Fig. 1.

Letters *a* are the sleepers, as in ordinary use, upon which the ordinary rails are laid. Upon these are laid the longitudinal rails of wood *b*, of suitable sectional area to give the required amount of strength, and having a groove, *c*, extending down the center of their upper side. This groove is the exact size in width and depth to receive the web *d* of the metal rail *e*, provided with side flanges *f*. The bottom side of the rail *e* and the top side of the rail *b* are configured, as shown in Fig. 1, to fit one another, and by this means and the hold of the flange *f* on the rail all lateral movement of the rail *e* in the wood rail *b* is prevented; and this is so clearly illustrated in the drawing as to require no further explanation on this point.

In constructing and laying the rails *b* and *e*, it is my intention that they shall be arranged so that the joints *g* of the rails *e* shall be central between the joints *h* of the rails *b*, thus forming a continuous rail throughout. The combined rail is made up of *e* and *b*, which are secured together by means of bolts and nuts *i* passing through suitable holes bored through the rails *b* and the web *d* of the rail *e*. The situation of the bolts will be equally spaced off from the end of the rails, and from each other, so that when the inner edge of the rail *e* becomes worn out the form of rail shown in

Fig. 1 may be turned about, changing what has been the outer edge to the position of the inner one. The holes in the web of the rail *e* are elongated a sufficient amount to provide for the longitudinal expansion and contraction caused by the changes of temperature between midsummer and winter. The bolts *i* may be made either with a head on one end and a nut on the other, or they may be made with a nut on each end; in either case sufficient length of bolt must be provided between head and nut to attach and hold, along with the rails, the chair-pieces *k*, or any other suitable chair provided for the purpose of attaching, by the ordinary means, the rails to the sleepers *a*. Although, as shown in the drawing, but short rails are delineated, it will be well understood that they may be made any length, the sleepers *a*, chairs *k*, and bolts *i* being placed at such equal intervals as the weight of the rolling-stock employed on the railway may require. Where the joints *g* and *h* occur the chair-pieces are made of a double form, to receive the end bolts of the two contiguous rails for the purpose of binding the ends more securely together.

By the above arrangements it will be seen that, should the rail *e* break, the two parts into which it is divided will be securely held in place by the rails *b* and bolts *i*. It is also provided that, as the rail *b* is attached to the sleepers *a*, the working down grade of the rail *b* and *e* is prevented. Thus far I have confined my description to the rail as shown in Fig. 1.

In Fig. 2 the same general features and parts exist, only that the web *d* is placed at the outer side instead of in the center.

This rail cannot be turned about when worn on its inner edge.

What I claim as my invention is as follows:

The combination of the wooden beams *b* having a recess, as described, the covering-rail *e* provided with a corresponding tongue, and the chair *k* with bolts *i*, the bolts being adapted to pass through the tongue of the covering rail, as described.

Stanstead, 1st day of October, A. D. 1872.

WILLIAM S. HUNTER.

Signed in the presence of—

V. W. WYMAN,
L. A. STEARNS.