O. J. Hall,

Railroad Chair,

No. 34,612. Patented Mar. 4, 1862.

Fig. 1.

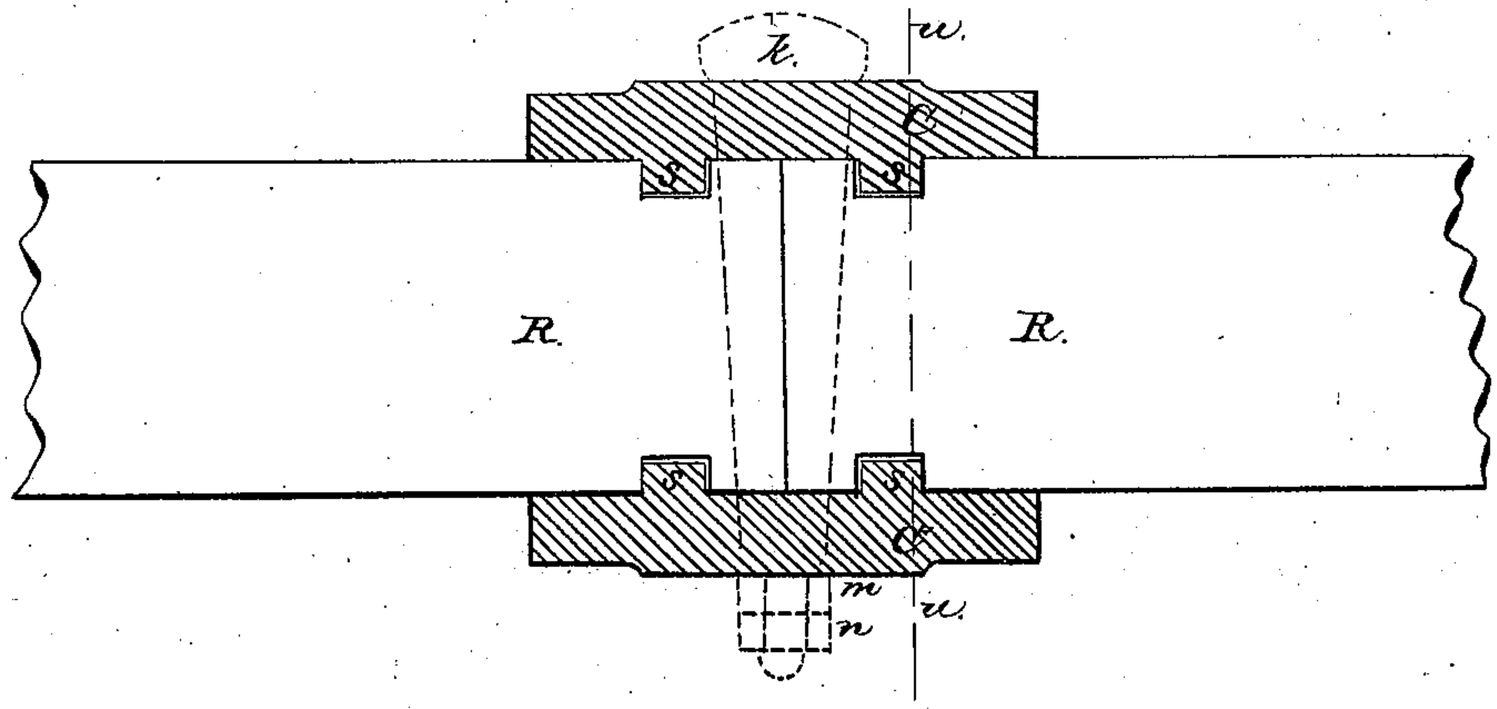
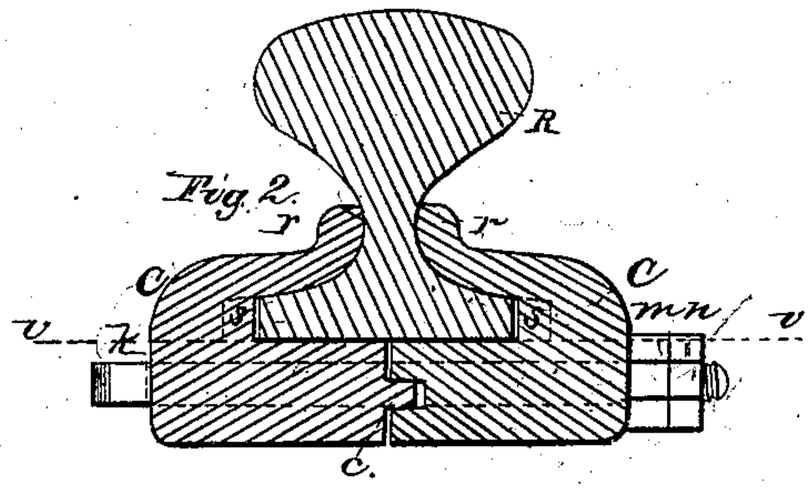


Fig. 2.



Witnesses.
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Inventor:
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O. J. HALL, OF PITTSFORD, NEW YORK, ASSIGNOR TO HIMSELF AND FRANKLIN DECKER, OF SAME PLACE.

IMPROVEMENT IN RAILROAD-CHAIRS.

Specification forming part of Letters Patent No. **34,612**, dated March 4, 1862.

To all whom it may concern:

Be it known that I, O. J. HALL, of Pittsford, in the county of Monroe and State of New York, have invented a new and useful Improvement in Railroad-Chairs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a plan of the under side of the rails R, with that portion of the chair below the red line *v* in Fig. 2 removed and showing the shape and position of the clamping-key *k* by dotted lines. Fig. 2 is a transverse section of the rail and chair through the plane indicated by the red line *u* in Fig. 1, and showing the manner in which the two halves C and C′ of the chair are matched together at *c*.

This invention relates to that class of railroad-chairs which are divided in the center longitudinally; and its nature consists in clamping the two halves of the chair together when their base parts are matched longitudinally by a tongue and groove, and each half being provided with stops to catch into the notches in the edges of the base of the rails by means of a single flat tapering key, which is firmly held to its place by a primary and a secondary or "jam" nut, thus producing a simple and substantial chair and one that is not liable to spread apart, and therefore insures perfect safety to the trains without requiring any extra care or watchfulness on the part of the track-men.

The chair is composed of two parts C and C′, which may be made of cast or wrought iron. That shown in the drawings is cast, which is considerably heavier than would be required if made of wrought-iron.

The stops *s* constitute a part of the body of the chair, whether it be cast or wrought and they should be made one-fourth of an inch shorter than the notches in the rails, so as to admit of the expansion and contraction of the latter, the amount of play required depending upon the length of the rails.

The mortise to receive the key *k* is of a corresponding size and shape through both C and C′ with that portion of the key lying through each. The said mortise may be located as shown in Fig. 2, or it may be placed so that the base of the rail shall rest on the upper face of the key, which would probably be desirable for wrought chairs especially.

The key *k* is made of wrought-iron, and its broad end is upset, as seen in Fig. 1, forming a sort of head which shall clamp against the chair if the key should become worn or otherwise fail to fit snugly in the taper mortise, and the shoulder of the threaded shank for the nuts *m* and *n* should lack one-fourth of an inch (more or less) of reaching through the chair when the nuts are turned up to their place against the chair.

The matching-tongue *c* runs the whole length of the chair except what is cut away by the width of the key-mortise.

The chair is applied as seen in Fig. 2, the nut *m* being turned up until the jaws *r* and *r′* clamp the rail firmly when the auxiliary nut *n* is screwed up tight against the first, which effectually secures the key from working out, and the stops *s* are perfectly effective to prevent the chair from sliding away from the joint or the rails from "running down," which latter is very liable to occur on descending grades, and they prove to be much more efficient than the spikes, (which are used in other chairs,) because the latter are constantly breaking off or working out and leaving the chair and the rails both loose longitudinally and consequently always liable to derangement. They are used without jointties, there simply being a shoulder-tie placed each side of them.

This chair is especially adapted for making hasty repairs—for instance, where a rail is found to be broken and a train is expected before a new one could be laid. The track-man who is furnished with two or three pairs, which are made without the stops *s*, has only to apply the chair, as shown in Fig. 2, which renders the break as strong and secure as any of the joints and a new rail may be sub-

stituted for the broken one at the convenience of the workmen.

I claim—

Clamping the two halves C and C′ of the chair together by means of a single flat tapering key *k*, as specified, when the said halves C and C′ are matched together by a tongue and groove running horizontally under the base of the rail, as shown and described, and are provided with stops *s*.

O. J. HALL.

Witnesses:

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