# J. H. Mabbett.

## Railroad Chair.

No. 37,045. Patented Dec. 2, 1862.

Fig. 1.

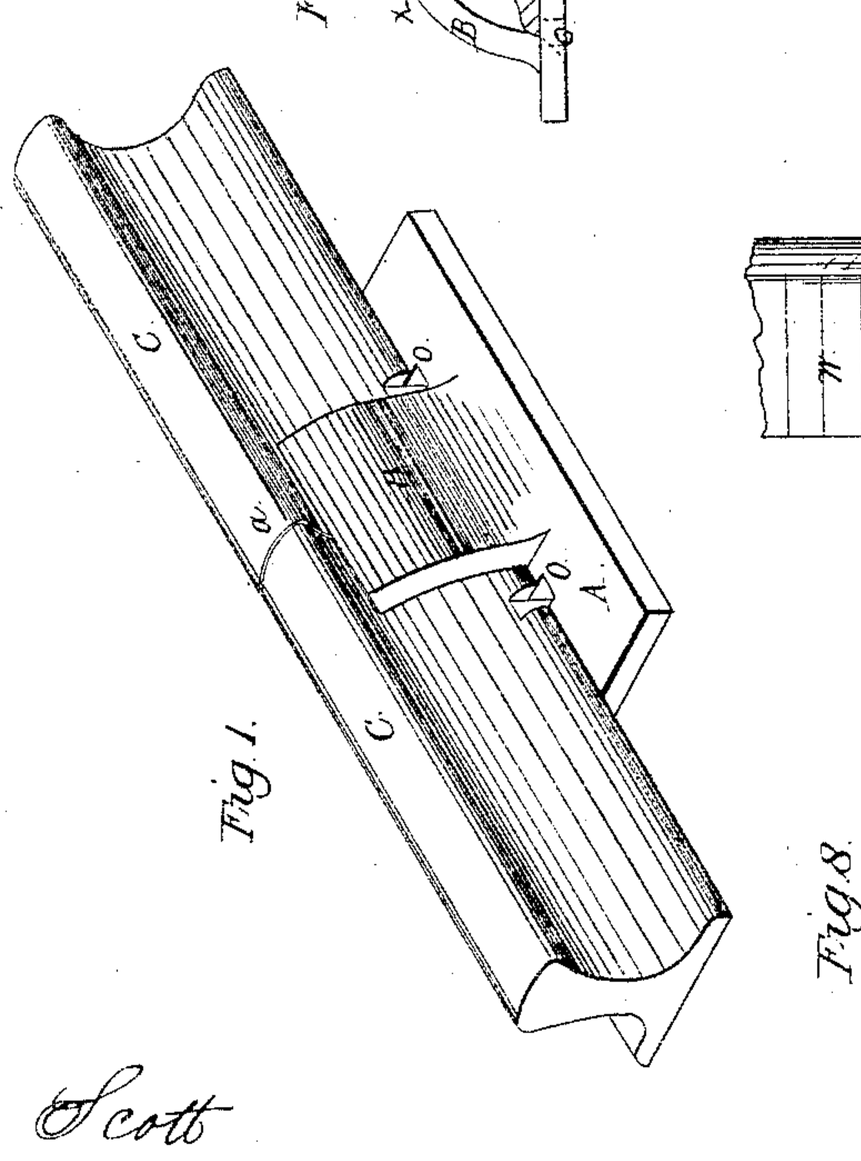



Fig. 2.

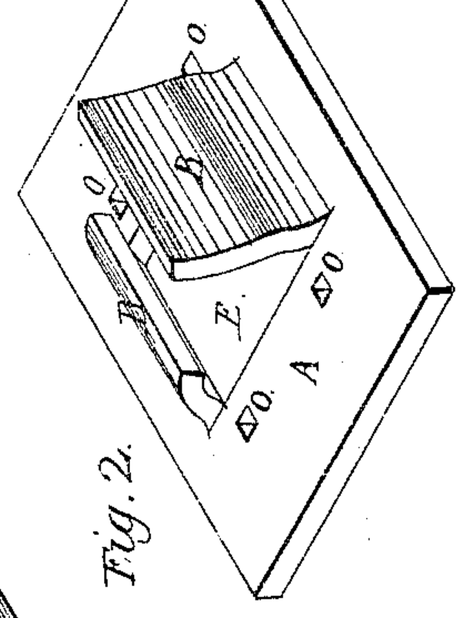
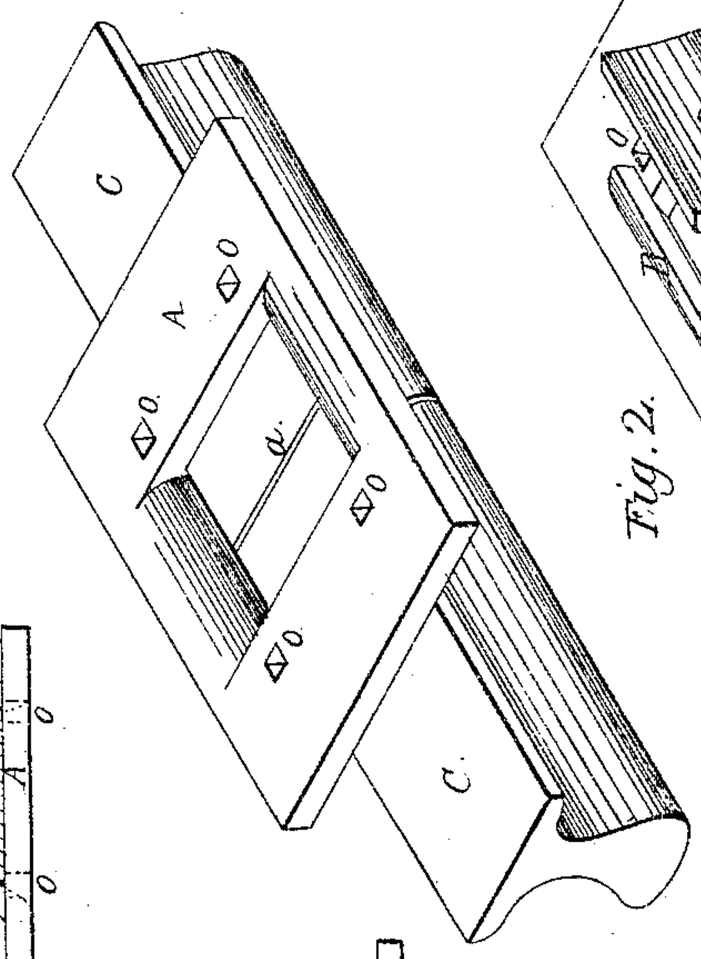



Fig. 3.

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# UNITED STATES PATENT OFFICE.

JOHN H. MABBETT, OF MECHANICSVILLE, NEW YORK.

## IMPROVEMENT IN RAILROAD-CHAIRS.

Specification forming part of Letters Patent No. **37,045**, dated December 2, 1862.

*To all whom it may concern:*

Be it known that I, JOHN H. MABBETT, of Mechanicsville, county of Saratoga, State of New York, have invented new and useful Improvements in Railroad-Chairs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being hereby had to the accompanying drawings, which make a part of this specification.

Like letters represent and refer to like or corresponding parts.

Figure 1 shows the chair with track-rails meeting therein and ready for use. Fig. 2 is a perspective view of said chair, showing the different parts and the construction thereof. Fig. 3 shows the said chair and two track-rails meeting therein from the under side thereof, and also shows the open space under the immediate ends of said rails and through the said chair, and hereinafter described. Fig. 4 shows an end view of said chair with track-rail therein and car-wheel thereon, while the outside support, B, does not quite reach the under side of the table of said rail C. Fig. 5 shows also an end view of the track-rail and that the said outside support, B, may be bent in a different form and reach the table of the rail C at *x*. Fig. 6 shows that the said chair may also be applied to and used with the common T-rail or any other kind of rail. Fig. 7 shows that the said chair may have a lip over each web of any rail, as hereinafter described. Fig. 8 shows a block, which may be of wood, rubber, or other elastic material, in size to fit the open space in the said chair under the immediate ends of the rails when the same meet or join, and shown at Fig. 3 for the purpose hereinafter described.

The nature of my invention consists in making railroad-chairs from wrought-iron plate of any desired size and thickness, with lips for the purpose of receiving the web of any track-rail and firmly holding the same, while one lip outside of said rail may be extended upward near to or in close proximity to the under side of the table of any railroad-rail, so as to support the same and keep such rails in a firm position by punching or swaging such lips from the under side of such wrought-iron plate, as hereinafter described and set forth.

It also consists in constructing a railroad-chair of wrought or cast iron with a recess or opening entirely through the base of such chair and immediately under the ends of the track-rails when the same meet or unite and of full width of said rail and in length as far as may be desired, so that the said recess or opening may receive a piece of wood, rubber, or other elastic substance for the purpose of relieving the immediate ends of the track-rail united therein from a pounding or crushing blow caused by the passing train of cars, whereby and by means of which the immediate ends of said track-rails are greatly prevented from undue wear and fracture, thus saving expense in the repairs of railroads and preventing injury to the rolling-stock and liability to accident.

To enable others to manufacture and put into use my improved railroad-chair, I will here describe the same and the manner in which it is manufactured, whether of wrought or cast iron, which is as follows, to wit:

I roll a wrought-iron plate of any desired width and thickness and of any convenient length, which is then sawed into the required length for the chair. This piece thus made is then put into a machine having suitable dies therein, male and female, which are constructed to correspond to the lip desired upon either side of the said rail. The machine is then operated. The corresponding dies approach each other, one or both moving, as the case may be, whereby and by means of which the lips B and D, Fig. 2, are punched or swaged from the said plate, and each raised to the desired height, shape, and position to receive the track-rail C, Figs. 4, 6, and 7, thereby leaving a recess or opening through the base A of said chair of the size of said dies or lips cut and turned therefrom, and shown at Fig. 3. The said space or opening may then be filled with wood, rubber, or other elastic substance, so as to give great relief to the downward pressure at the immediate ends of such rails, as shown at the joint *a*, Fig. 3. This relieves the said immediate ends of the track-rails from becoming fractured and worn out, as well as dangerous, by reason of the pounding or crushing blow from the wheels of the passing train of cars. The outside lip, B, Fig. 2, may come very near the under side of the table of the track-rail, as shown at Fig. 4; or it may be in shape, and support the under side of the said rail, as shown at *x*, Figs. 5 and 6. The inside lip, D, Fig. 2, may turn over upon the web

of said rail, as seen at Figs. 4 and 6, or as seen at Fig. 7. The block P, Fig. 8, is made in size to fit the recess or opening E, Fig. 2, and is the piece of wood, rubber, or other elastic substance hereinbefore described, and may be used in said wrought-iron or in cast-iron chairs cast for that purpose. *o o* are holes punched for the spike used to secure said chair to the cross-ties of the railroad, and may be punched before or after the said lips B D are made.

A is the base of the chair, from which the said inside and outside lips are made, and through which is constructed the aforesaid recess or opening to receive the said elastic substance for the purposes aforesaid. This chair is of less weight than any other kind of wrought-iron chair, and is not as expensive to make, and accomplishes a three-fold purpose—first, a saving in the weight of iron; second, gives relief to the immediate ends of the track-rails where they join together, whereby undue wear and fracture is prevented; and, third, it supports the table of the track-rail from downward pressure or from the lateral thrusts of the engine and passing train of cars, thereby lessening liabilities to accident. This kind of chair may be made of cast-iron, if desired, or of semi-steel. It is a cheap, durable, and economical chair for railroads.

Having thus described my invention and improvements in railroad-chairs, what I claim, and desire to secure by Letters Patent, is—

1. A railroad-chair having a recess or opening, E, through the bottom plate or bed thereof, with lip D upon the inside and the lip B on the opposite side thereof, and each next adjoining the said recess or opening E on opposite sides of the same, in combination with the block P, substantially as herein described and set forth.

2. Supporting the head or table of railroad-rails at their respective joints on the outside thereof and immediately under and adjoining the same by means of the brace B, in combination with the bottom plate or bed of the chair and with the head or table of such rails, whereby great strength is given thereto and undue wear and fracture thereof prevented, substantially as herein described and set forth.

In testimony whereof I have hereunto set my hand this 23d day of April, 1862.

JOHN H. MABBETT.

Witnesses:

FRANKLIN SCOTT,

WM. M. STRONG.