

D. M. GRAHAM.
Railroad Chairs.

No. 144,332.

Patented Nov. 4, 1873.

Fig. 1.

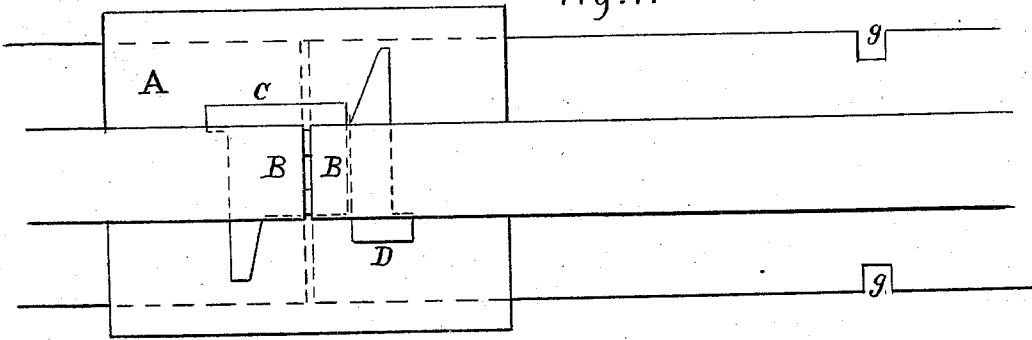


Fig. 2.

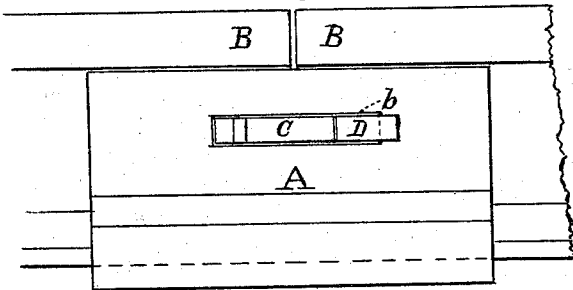


Fig. 3.

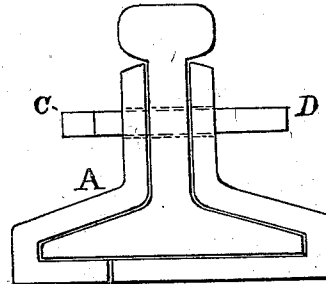


Fig. 4.

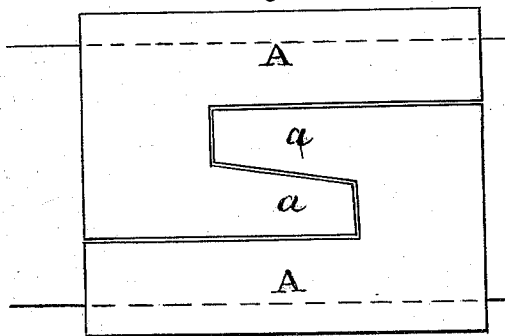


Fig. 5.

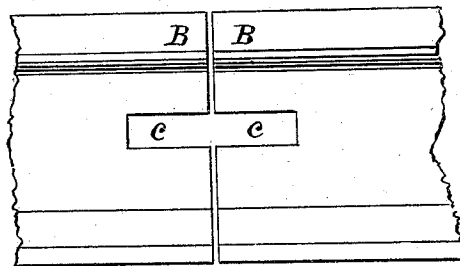
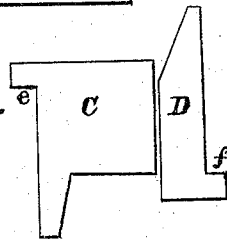


Fig. 6.



Witnesses.

H. A. Daniels
C. H. Isham

Inventor.

David M. Graham
by C. B. Towles.
Attorney.

UNITED STATES PATENT OFFICE.

DAVID M. GRAHAM, OF EVANSVILLE, INDIANA.

IMPROVEMENT IN RAILROAD-CHAIRS.

Specification forming part of Letters Patent No. **144,332**, dated November 4, 1873; application filed September 18, 1873.

To all whom it may concern:

Be it known that I, DAVID M. GRAHAM, of Evansville, in the county of Vanderburg and State of Indiana, have invented an Improved Railroad-Chair or Joint-Supporter, of which the following is a specification:

My invention relates to devices for securing railway-rails in position; and consists in certain improvements and novel construction of parts, the rails at the joint being provided with a chair or joint-supporter, which clamps them, and by means of keys passed through apertures and slots in the chair and rails, the latter are held firmly in place without any rigid attachment to the chair, as heretofore.

In the accompanying drawing, which illustrates my invention and forms a part of the specification thereof, Figure 1 is a top view of rails with my invention applied thereto. Fig. 2 is a side view of same. Fig. 3 is an end view. Fig. 4 represents the bottom of chair. Fig. 5 represents the ends of rails in position. Fig. 6 represents the keys.

The object of this invention is to provide a chair or joint-supporter for the rails, by means of which the rails are securely held in position without any rigid attachment to the joint-supporter, and, at the same time, the rails are allowed to expand or contract without damage or displacement from the running of the cars.

In the drawing referred to, letter A designates the chair or joint-supporter, constructed to inclose an end of each rail at a joint, and to clamp the rail about the sides and base, as shown in Fig. 3. The said chair is made in two parts, the division being in the base, where the two parts *a* are beveled, and formed so that each extends within the other, as shown in Fig. 4. The chair has also two mortises or oblong apertures, *b*, one in each side, they being directly opposite each other, and correspond-

ing in form and size. The ends of the rails are constructed with the slots *c*, which, when the rails are in position, together form an oblong aperture, corresponding with the apertures *b* in the chair, so that when the chair is in position, with the ends of the rails *B* passed therein, the keys *C D* may be passed through the whole, as indicated in Fig. 1. *g* are niches in the base of the rail, of the usual construction, the same being formed to receive spikes, so that the rail can be rigidly fastened to the ties, to prevent shoving or "crawling" of the rail. The chair or joint-supporter is adjustable, being made in two divisions, as shown, and provided with the beveled parts *a*, which pass within each other, forming a lock beneath the rail in the chair. The keys *C D*, having the shoulders *e f*, are passed from opposite sides of the joint-supporter through the opening formed by the oblong aperture *b* in the chair and the slots *c* in the ends of the rails, thus holding the chair and the ends of the rails firmly in position as the cars pass over the joint, and at the same time allowing the expansion of the rails.

Having thus described the construction and operation of my invention, I will state what I claim in the following clause:

The chair or joint-supporter provided with apertures *b* and beveled parts *a*, in combination with keys *C* and *D*, and slots *c* in the ends of the rails, substantially as and for the purpose set forth.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

DAVID M. GRAHAM.

Witnesses:

ALLEN C. HALLECK,
WM. H. BONIFACE.