

No. 649,439.

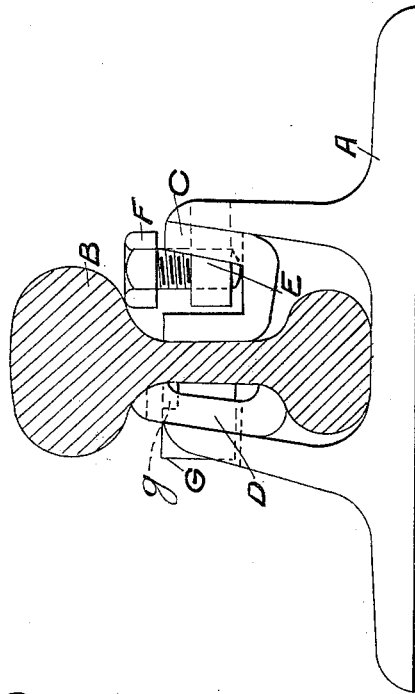
Patented May 15, 1900.

G. F. DEWDNEY.  
RAIL CHAIR OR SUPPORT.

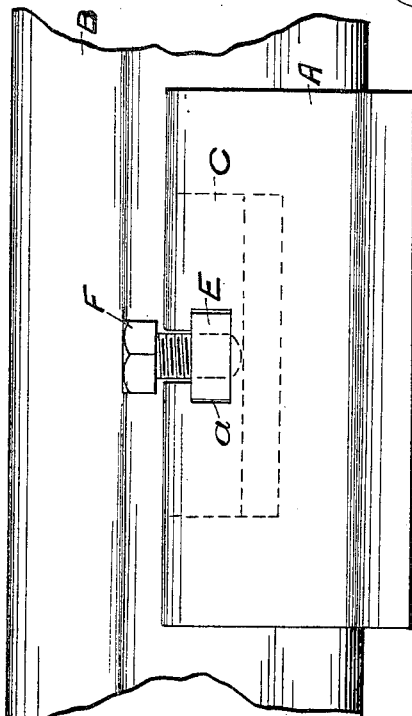
(Application filed Oct. 20, 1899.)

(No Model.)

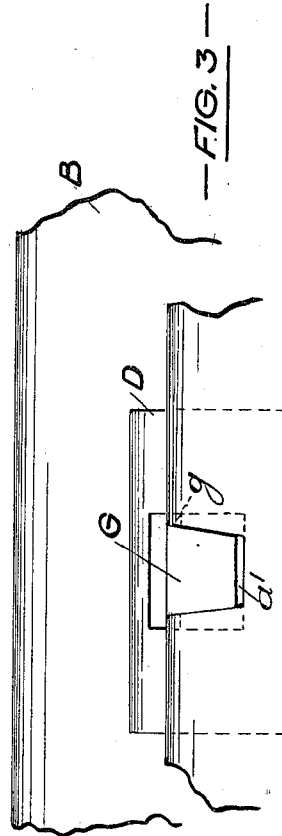
2 Sheets—Sheet 1.



— FIG. 1 —



— FIG. 2 —



— FIG. 3 —

WITNESSES:  
*Edw. L. Giles*  
*Edw. L. Giles*

INVENTOR  
*George Titewood Dewdney*  
BY *Richard R. [Signature]*  
ATTORNEYS

No. 649,439.

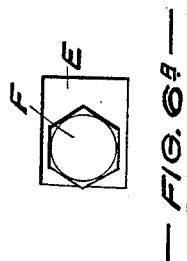
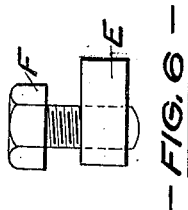
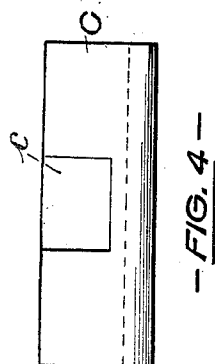
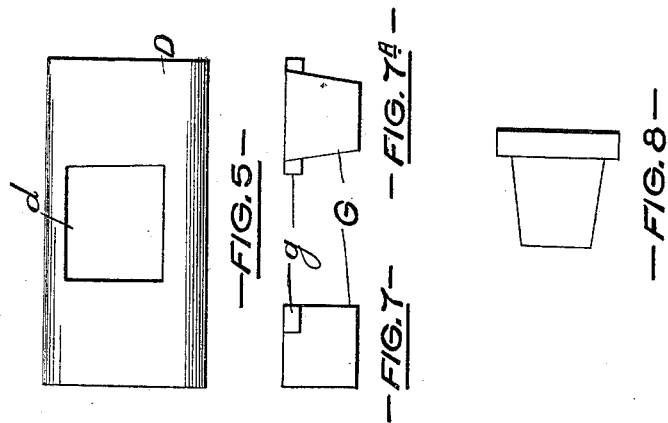
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(Application filed Oct. 20, 1899.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:  
*Ella L. Giles*  
*Oliver*

INVENTOR  
*George Titewood Dewdney*  
BY *Richard*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

GEORGE FILEWOOD DEWDNEY, OF CARDIFF, ENGLAND.

## RAIL CHAIR OR SUPPORT.

SPECIFICATION forming part of Letters Patent No. 649,439, dated May 15, 1900.

Application filed October 20, 1899. Serial No. 734,229. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE FILEWOOD DEWDNEY, a subject of the Queen of Great Britain and Ireland, and a resident of Dumballs Road, (Docks,) Cardiff, in the county of Glamorgan, England, have invented certain new and useful Improvements Relating to Rail Chairs or Supports, (for which I have filed an application in Great Britain, No. 6,133, bearing date March 21, 1899,) of which the following is a specification.

My invention has for its object the construction of rail-supports or chairs and fastening devices that shall more effectually secure and retain the rails in position than the ordinary chairs with wooden keys or wedges at present in general use.

In order that my invention may be the more readily understood, I append hereunto two sheets of explanatory drawings, to be hereinafter referred to.

Figure 1 is an end elevation showing one of my improved chairs with the rail secured in position therein. Fig. 2 is an elevation showing one side of the chair, and Fig. 3 a similar view showing a portion of the other side. Figs. 4 and 5 are side elevations of the respective wedges shown at Fig. 1. Fig. 6 is an elevation, and Fig. 6<sup>A</sup> a plan, of a bolt and nut for securing or adjusting wedge. Fig. 7 is a side elevation, and Fig. 7<sup>A</sup> an end elevation, of a wedge-retaining key. Fig. 8 is an elevation of another form of retaining-key.

The same reference-letters in the different views indicate the same parts.

I make the body of the chair A from a rolled steel bar of a trough or channel section, such bar being cut into lengths corresponding with the required length of chair. The channel sides, between which the rail B is placed, are formed at an angle other than a right angle to the base of the chair, as shown at Fig. 1, so that when the rail is in position in the trough or channel the spaces between the web of the rail and the channel sides are of a wedge-like shape or section. The dimensions of the rolled section-bar are made to suit the particular service and type of rail for which the chairs are required, as are also the wedges and other parts.

The rail is secured within the chair or sup-

port by means of wedges, preferably such as C and D, of rolled metal; but they may be of cast or malleable cast metal or wood, made to suit the section of rail in use. The wedge C is preferably trough or U shaped, as illustrated, and has a slot or aperture, as *c*, formed in same to admit the nut E, which is inserted in the wider part of the slot *a*, Fig. 2, in one side of the chair. The bolt F works through the nut E, and its lower end abuts against the wedge, as illustrated. Thus on tightening up the said bolt the wedge C is forced between the rail and chair side, and when the wedge is properly secured the end of the bolt will project below the bottom of the slot *a* in the chair side, and so both the bolt and the nut will be prevented from working out through the said slot. The wedge C will also be prevented from working out of the chair. The wedge D, I preferably retain in position by means of a key G, of a tapered or wedge-shaped section, as shown at Fig. 7<sup>A</sup>, having ears or projections *g*. The hole or aperture *d* in the wedge D is of sufficient dimensions to admit any part of the key G; but the wedge-shaped or tapered slot or recess *a'*, Fig. 3, in the side of the chair or rail-support is not wide enough to admit the upper portion of the key where the aforesaid ears or projections *g* are disposed; but the wedge hole or aperture *d* is so disposed that when the wedge D is placed in position the said aperture *d* projects sufficiently above the top of the chair side to admit the projections *g* of the key G. The key is afterward driven tightly home to the position indicated until the projections *g* are below the top of chair side. Neither the key nor the wedge can then work out of position when in service. I sometimes employ a key-pin, such as shown at Fig. 8, either of a circular or angular section and tapered or straight, and fit the same into corresponding holes or apertures in the body of the chair and the wedges, and I also employ other fastenings or retaining-pieces in place of those hereinbefore described. In some cases I dispense entirely with the use of wedge fastening or retaining devices. After the rail has been properly secured within the chair by means of the aforesaid wedges any tendency of the rail to lift, to sink, or to

cant over when in service will impart or tend to impart a corresponding movement to the wedges, and thus owing to the inclined position of the chair sides forming the wedge-shaped spaces hereinbefore described the rail and the wedges will automatically jam, and so become the more effectually and rigidly secured together.

To prevent creeping of the rail relatively to the chair by the action of the rolling-stock, I sometimes pass a bolt entirely through the chair-body and the rail and fastening devices, thus effectually securing them together.

When constructing a joint-chair in accordance with my invention, I make the chair-body of sufficient length to receive wedges that shall extend a sufficient distance along the adjacent ends of each rail. No independent fish-plates are required with such a joint-chair. The wedges on one or both sides of rail may be in one or more lengths, as desired.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a rail chair or support having sides parallel to each other but inclined to the base at an angle other than a right angle, of a trough-shaped wedge C, bolt F, and nut E, engaging both the wedge C and the adjacent side of the chair, as set forth.

2. The combination with a rail chair or support having sides parallel to each other but inclined to the base at an angle other than a right angle, of a wedge D, and a tapered retaining-key G having ears or projections *g* which abut against the adjacent side of the chair, as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

GEORGE FILEWOOD DEWDNEY.

Witnesses:

EDWARD MARKS,  
HERBERT BOWKETT.