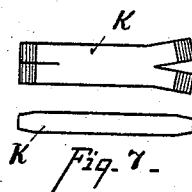
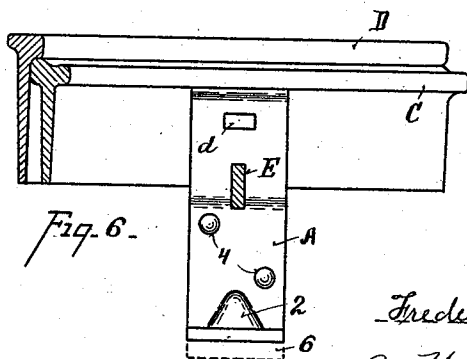
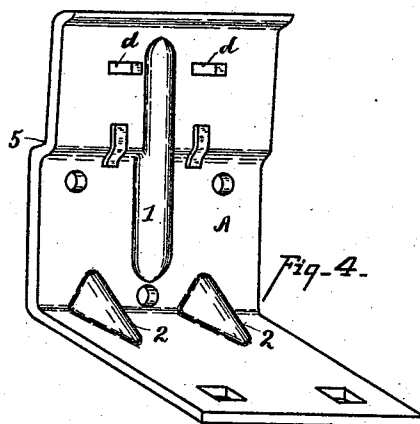
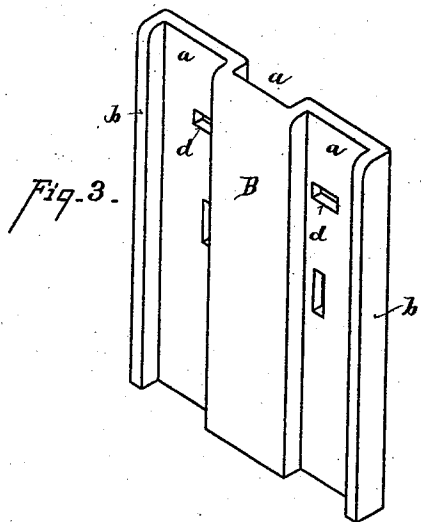
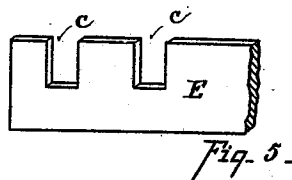
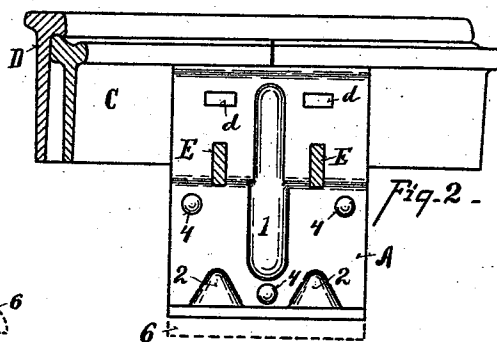
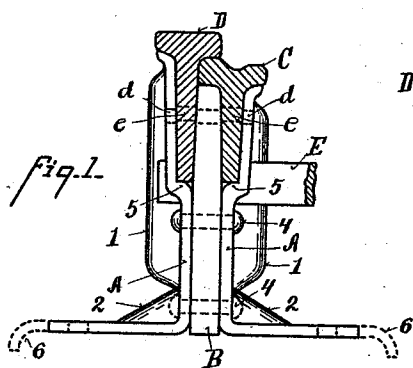


(No Model.)

F. C. WEIR.
RAILWAY CHAIR.

No. 499,154.

Patented June 6, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERIC C. WEIR, OF CINCINNATI, OHIO.

RAILWAY-CHAIR.

SPECIFICATION forming part of Letters Patent No. 499,154, dated June 6, 1893.

Application filed September 21, 1892. Serial No. 446,427. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC C. WEIR, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Railway-Chairs, of which the following is a specification.

The object of my invention is to provide a suitable chair for a duplex, flangeless T-rail.

The object of my invention is to provide a cheap, strong and durable support which will serve as a base for the rail without the use of ties, if desired.

The various features of my invention are fully set forth in the description of the accompanying drawings making a part of this specification, in which—

Figure 1 is an end elevation of my improvement with the rail supported in position. Fig. 2 is a side elevation of the same. Fig. 3 is a perspective view of the filling piece. Fig. 4 is a perspective view of the side chair. Fig. 5 is a perspective view of the key lock. Fig. 6 is a side elevation showing a modification of Fig. 2. Fig. 7 is a detail view of the rail keys.

The chair herein shown is made of three sections in the preferred form, A, A, representing the side sections, B the filling piece. In order that these parts may be made light and yet strong they are corrugated. It is desirable to support the rail joints by these chairs. In this case the chair is made wide, as shown in Figs. 1, 2, 3 and 4, so as to employ two sets of key locks. I prefer three corrugations in the outside piece A, one being a perpendicular corrugation 1, and two fillet corrugations 2, at the knee. In the filling piece B for these wide chairs I prefer to have three corrugations, *a, a, a*; the flange sides *b* being of sufficient width to fill the space between the base portions of the pieces A, A, and to fill the space between the webs of the rails C, D. The corrugations may be of various forms and more or less of them placed in parts A, B, as desired, so as to give the parts the requisite strength.

4 represents rivet bolts passing through the pieces A, B, and headed, thereby firmly uniting the parts together.

5 represents knees formed in the side pieces A, A, to form a seat for the bottoms of the webs

of the rails C, D, to receive the vertical strain on the rails. The pieces A, B, are bent and arranged to fit together.

In order to hold the two sets of rails forming the railway track firmly together, and to prevent spreading of the same where ties are not employed, I use a tie-rod E; it is provided with notches *c*, into which the webs of the rails rest. This tie rod E is the same at both ends and is placed in position in the two opposite chairs when the rails C, D, are dropped into the chairs and enter the notches *c* in the tie rods. This assists in bending the parts of the chair and rails together, as well as tying the two tracks together. In order to hold the rails in position vertically I apply one or more taper keys K which are driven through slots *d* pierced in the pieces A, B, and slots *e* pierced in the rails. The ends of these keys are split and spread apart after they are driven home.

In Fig. 7 I have shown one end in position for driving and the opposite end spread apart for holding the key in position. By this means the rails and chair are held both vertically and laterally. The base I have shown in Fig. 1, in full lines as being flat; but the ends of the base may be turned off as shown in dotted lines 6, so as to form hooks to more securely anchor the chair to the ground for support when no ties are used. When the chair is required to support jointed sections of one of the rails D or C, the form shown in Figs. 1, 2, 3 and 4, is employed, that is, a full width chair. Between the joints a narrow and lighter chair may be employed as shown in Fig. 7. In this case there is only one taper key and one tie rod shown; a single tie rod, may, however, be used in the wide form of chair, but I prefer two as the structure is more rigid. By the form of construction herein shown, duplex, flangeless rails are rigidly secured without ties, or when it is desired to employ a base either longitudinal or cross base ties may be employed. The corrugations are used for strengthening the parts so as to employ thinner sheet metal, thereby lightening the structure, but they are not absolutely indispensable.

Having described my invention, what I claim is—

1. A railway chair composed of the sides A, A, the central filling B, one of said side pieces containing an offset to receive and sup-

port the flange of the rail, and the whole united together by rivets, substantially as specified.

5 2. A railway chair composed of the sides A, A, the central filling B, said sides being bent to form offsets and openings to receive the flanges of abutting rails, the whole united together by rivets and keys, substantially as herein specified.

10 3. A railway chair composed of corrugated side pieces A, A, and filling pieces B, said sides being bent to form a base at the bottom, and provided with offsets at the top to receive and support the flanges of rails between the sides
15 and filling piece, and united together, substantially as herein specified.

4. A railway chair composed of the corrugated sides A, A, bent at the top to form openings adapted to receive the flanges of rails,
20 and a corrugated filling piece interposed between said corrugated sides, and the parts securely united together by rivets, substantially as specified.

5. A railway chair composed of the corrugated sides A, A, the corrugated filling block B, the said sides having offsets or knees 5, to form a base support for the webs of rails, and pierced with key holes d, and united together
25 by rivets 4, substantially as specified.

6. The combination of two or more railway chairs formed of the sides A, A, filling piece B, and pierced with slots adapted to receive a common tie rod E engaging with the rail adapted to receive and hold the rails in said chair, substantially as specified. 30

7. In combination with a railway chair composed of the sides A, A, provided with the offsets or knees 5, the filling piece B one or more rails inserted between the filling pieces and sides, and the taper key K for anchoring said rails vertically to the chair, substantially as specified. 35 40

8. In combination with the railway chairs, the rails D, C, supported in said chairs on either side of the track, the tie rod E provided with notches c, c, engaging with the webs of the rails and chairs, substantially as specified. 45

9. The side pieces A formed of sheet metal bent to form a horizontal base and offset on either side, with a corrugation 1 upon the side, and one or more corrugations 2 at the base, substantially as specified. 50

In testimony whereof I have hereunto set my hand.

FREDERIC C. WEIR.

Witnesses:

T. SIMMONS,

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