F. HEINEMANN.

COMBINED RAIL JOINT AND CHAIR.

APPLICATION FILED AUG. 11, 1911.

1,015,437. Patented Jan. 23, 1912.

Fig. 1.

Section A-B.

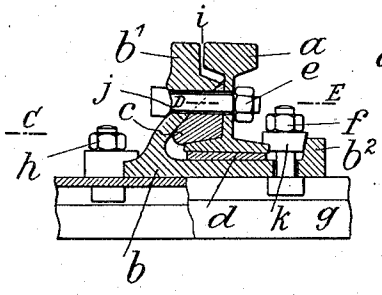


Fig. 2.

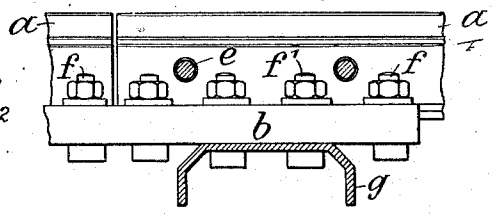


Fig. 3.

Section C-D-E.

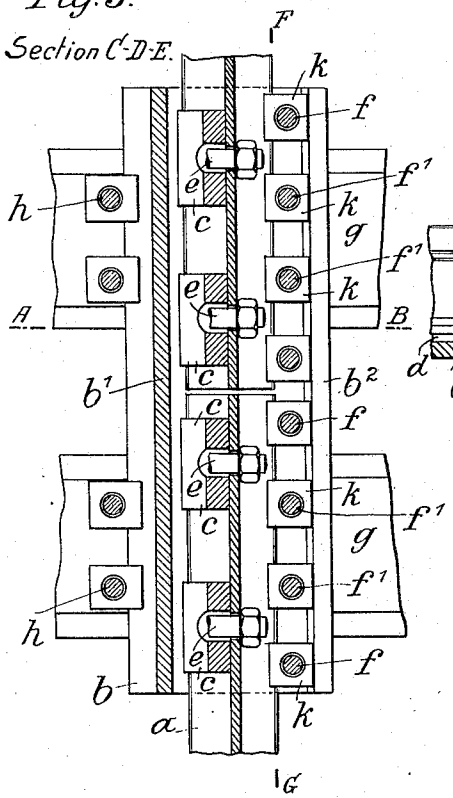
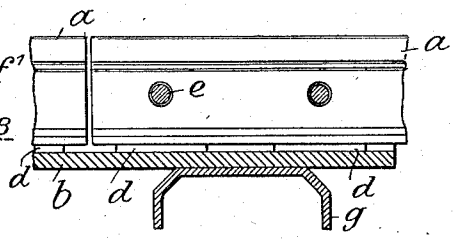


Fig. 4.

Section F-G.



Witnesses.

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COMBINED RAIL JOINT AND CHAIR.

1,015,437. Specification of Letters Patent. Patented Jan. 23, 1912.

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To all whom it may concern:

Be it known that I, FRITZ HEINEMANN, a subject of the King of Prussia, German Emperor, residing at Hamburg, in the Empire of Germany, have invented a new and useful Combined Rail Joint and Chair, of which the following is a specification.

My invention consists of a novel combined rail joint and chair, by which it is rendered possible to take up all the vertical and horizontal forces acting upon the two rail-ends direct from the surfaces of the latter by means of triangular blocks, which at the same time permit a nice readjustment of the rail-ends after any wear has taken place. At the same time the load above the joint of the two rail ends is taken up by the projection of the chair, whereby the rail-ends are protected from excessive wear.

I will now proceed to describe my invention with reference to the accompanying drawing, in which—

Figure 1 is a vertical cross section through the combined rail joint and chair on the line A—B in Fig. 3, Fig. 2 is an elevation of the same, seen in the direction from right to left in Fig. 1 and a cross section through one sleeper, Fig. 3 is a horizontal section through the broken line C—D—E in Fig. 1, and Fig. 4 is a vertical section through the line F—G in Fig. 3, seen in the direction of the arrows.

Similar letters of reference refer to similar parts throughout the several views.

A chair *b* is made to rest on two sleepers *g g* (Fig. 3) and is fastened thereon on the left side in Figs. 1 and 3 by means of two bolts *h* for each sleeper. The chair *b* has an inclined rib b^1 extending upward to the level of the head of the rail *a* and a ledge b^2 on the right edge in Figs. 1 and 3. Two plates *d d* for each rail end (Fig. 4) of a slightly wedge-shaped cross section are placed on the upper surface of the chair *b* for supporting the base flanges of the two rail-ends *a a*, which leave a narrow space *i* between their heads and the rib b^1. The rib b^1 has an inner inclined surface *j* extending upward to a point near the stem of the rails. Two triangular blocks *c c* for each rail-end are made to fill up the space between the inclined surface *j* of the rib b^1, the stem and the left base flange (Figs. 1 and 3) of the rails *a a* and are each provided with a hole for a horizontal adjusting bolt *e*. Four wedges *k k* for each rail end are inserted between the ledge b^2 of the chair *b* and the right base flange of the rails in Figs. 1 and 3 and are secured by means of bolts *f f* f^1 f^1, of which the bolts f^1 f^1 serve at the same time for connecting the chairs *b b* with the sleepers *g g*.

It will be seen, that by means of the bolts *e e* and *f f*, f^1 f^1 it is easy to so adjust the two rail-ends *a a* as to make their outer surfaces perfectly register with one another and to enable the upper surface of the rib b^1 to take up the load of the wheels rolling over the rail-ends *a a*. In case any wear has taken place in the surfaces of contact between the parts *c d k*, the two rail-ends and the chair, it is also possible to readjust the two rail-ends by means of the said bolts. The lower wedges *d d* serve for properly inclining the rails, as is well known. Evidently it is possible to vary the thickness of the parts *c* and *d* by exchanging them for other ones, so as to render possible the correct adjustment by compensating for any irregularity of the upper inner edge of the head of the rails.

I claim:

1. In a combined rail joint and chair, the combination with two rail-ends butting against one another, of a chair overlapping the base flanges and one side of said two rail-ends leaving a space of wedge-shaped cross section along the inner base flanges of the rails and a space of triangular cross section between the outer base flange and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flanges of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and said chair, horizontal adjusting bolts through the webs of said rail-ends said triangular blocks and said chair, and vertical adjusting bolts through said downwardly tapering wedges and said chair.

2. In a combined rail joint and chair the combination with two sleepers, of a chair adapted to rest on said two sleepers, two rail-ends butting against one another, said chair overlapping the base flanges and one side of said two rail-ends leaving a space of wedge-shaped cross section along the inner base flange of the rails and a space of triangular cross section between the outer base flange and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flange

of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends, and said chair, horizontal adjusting bolts through the webs of said rail-ends said triangular blocks and said chair, vertical adjusting bolts through said downwardly tapering wedges and said chair, also through said sleepers where occurring, and bolts on the side opposite to said vertical bolts for connecting said chair with said sleepers.

3. In a combined rail joint and chair, the combination with two rail-ends butting against one another, of a chair overlapping the base flanges of said two rail-ends leaving a space of wedge-shaped cross section along the inner base flanges of the rails and having a rib extending upward to the level of the head of the rails and so shaped as to leave a space of triangular cross section between the outer base flanges and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flange of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and the rib of said chair, horizontal adjusting bolts through the webs of said rail-ends said triangular block and the rib of said chair, and vertical adjusting bolts through said downwardly tapering wedges and said chair.

4. In a combined rail-joint and chair, the combination with two sleepers, of a chair adapted to rest on said two sleepers, two rail-ends butting against one another, said chair overlapping the base flanges of said rail-ends leaving a space of wedge-shaped cross section along the inner base flange of the rails and having a rib extending upward to the level of the head of the rails and so shaped as to leave a space of triangular cross section between the outer base flanges and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flanges of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and the rib of said chair, horizontal adjusting bolts through the stems of said rail-ends said triangular blocks and the rib of said chair, vertical adjusting bolts through said downwardly tapering wedges and said chair, also through said sleepers where occurring, and bolts on the side opposite to said vertical bolts for connecting said chair with said sleepers.

5. In a combined rail joint and chair, the combination with two rail-ends butting against one another, of a chair overlapping the base flanges and one side of said two rail-ends leaving a space of wedge-shaped cross section along the inner base flanges of the rails and a space of triangular cross section between the outer base flange and the webs of the rails and the chair, downwardly tapering wedges inserted in the space between the inner base flanges of said rail-ends and said chair, triangular blocks inserted in the outer triangular space between said rail-ends and said chair, horizontal adjusting bolts through the webs of said rail-ends said triangular blocks and the side projection of said chair, vertical adjusting bolts through said downwardly tapering wedges and said chair, and wedge shaped plates interposed between the lower sides of the base flanges and the foot of the chair.

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Witnesses:
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