June 15, 1937. J. DOBROWOLNY 2,084,286

RAIL JOINT

Filed Aug. 11, 1936 2 Sheets-Sheet 1

Fig. 1.

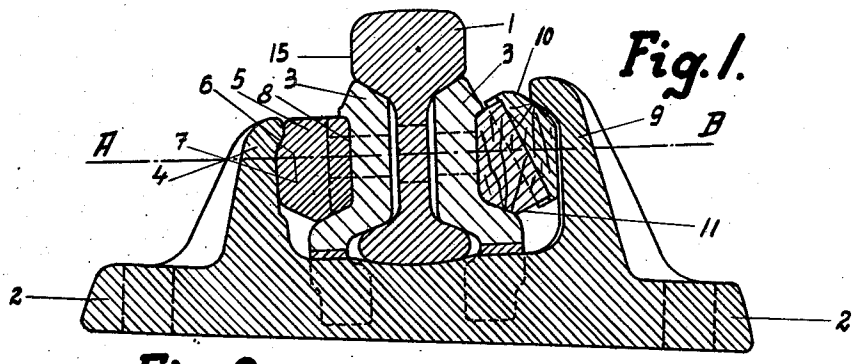


Fig. 2.

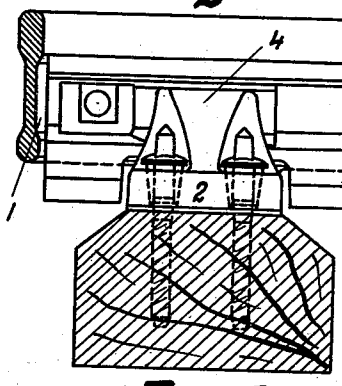


Fig. 3.

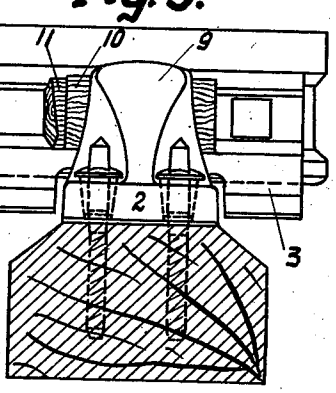


Fig. 5.

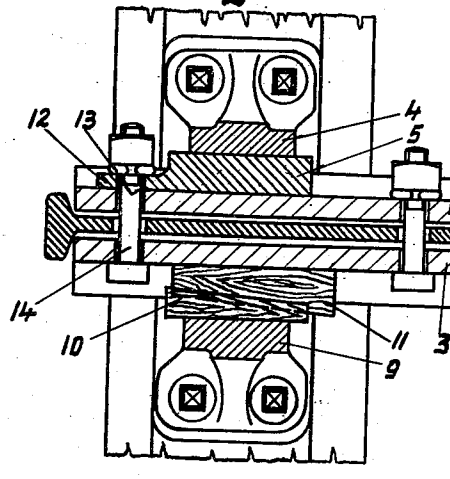
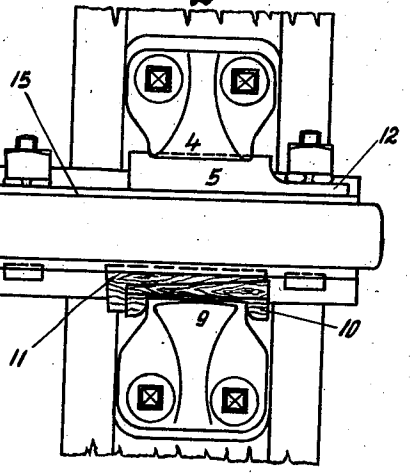


Fig. 4



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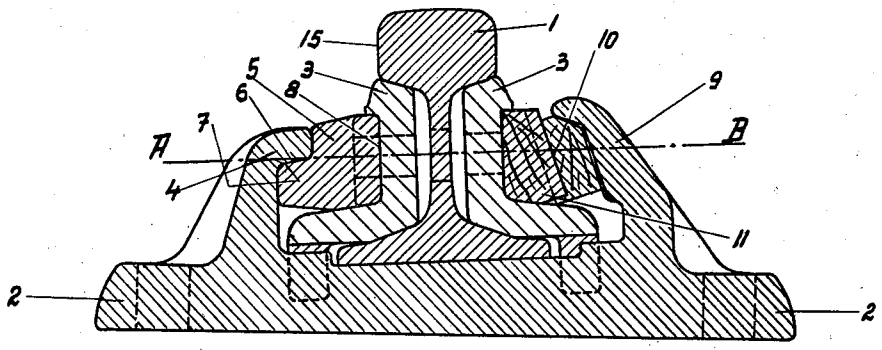
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Fig. 6.



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UNITED STATES PATENT OFFICE

2,084,286

RAIL JOINT

Josef Dobrowolny, Vienna, Austria

Application August 11, 1936, Serial No. 95,398
In Austria July 9, 1935

1 Claim. (Cl. 238—208)

This invention relates to rail joints for rails which are laid in chairs as opposed to being merely clamped to the sleepers by holding-down screws.

In the hitherto used rail joints for rails laid in chairs, more particularly when angle fish-plates are used, the spacing of the joint sleepers must be fairly great to enable suitably long fish-plates to be used. This, however, puts a disproportionate strain on the joint, and gives rise to a great tendency to creep and to work at the joint. The result is inordinately rapid working loose of the fish-plates and great wear and tear on the fish-plates. Likewise the strain on the sleepers at the bearing points becomes excessive owing to the springing and "see-sawing" action resulting from the wide spacing of the sleepers.

The invention renders it possible to obviate this drawback and to employ fish-plates of normal length with close spacing of the sleepers, by providing the chair on the running side of the rail with a recess which permits the fish-plate to be passed through the chair, and by inserting into the gap between the chair and the fish-plate a filling piece which furnishes the bearing surface for the fish-plate against the chair. The gap and the filling piece are preferably of such size that the angle fish-plates used can readily be removed, after the slackening of the fastening nuts and removal of the filling piece, thus permitting of easy replacement of the fish-plates.

In further development of the invention the filling piece is provided with a drilled or socketed extension projecting beyond the bearing surface of the chair, to enable the filling piece to be secured to one of the fish-plate bolts.

The invention is illustrated in the accompanying drawings, in which:—

Fig. 1 is a cross-section through rail and chair at a rail joint according to the invention.

Fig. 2 is an inner side elevation.

Fig. 3 is an outer side elevation.

Fig. 4 is a plan view.

Fig. 5 is a section taken on the line A—B of Fig. 1, on a reduced scale.

Fig. 6 is a cross-section similar to Fig. 1 of a modified construction.

Referring to the drawings, the rail 1 bears with its foot flange upon the chair 2. 15 is the running edge of the rail. On both sides of the web of the rail there are disposed the two angularly bent fish-plates 3 which bridge over the rail joint. On the running edge side of the rail the rail chair is provided with a cheek 4 against which the filling piece 5 bears, filling out the free space between the cheek 4 on the chair and the fish-plate 3. The cheek 4 is provided with an overhanging shoulder 6 against which a corresponding shoulder 7 on the filling piece 5 bears. The bearing surface 8 on the filling piece 5 is shaped to conform to the surface of the fish-plate 3. The gap between the cheek 4 of the chair and the running edge side of the rail, and accordingly also the thickness of the filling piece 5, are such that when the filling piece is taken out the fish-plate 3 can be lifted out of the chair without the necessity of moving the rail. The rail chair is further provided with a second cheek 9 which serves for the reception of two oppositely acting wooden wedges 10 and 11, and which admits of the pressing up of the rail and of the fish-plate against the bearing surface 8 on the filling piece 5.

As can be seen from Figs. 4 and 5, the filling piece 5 is provided with an extension 12 which is drilled at 13 to receive the fish-plate bolt 14, so that the filling piece is held fast in position.

The construction according to Fig. 6 differs from that according to Figs. 1 to 5 only by the fact, that instead of double-headed rails girder rails are used and that the chairs are built up accordingly.

What I claim is:

In a rail joint for rails having heads and bases, wherein the meeting ends of the rails are located intermediate two supporting sleepers, splice bars connecting said rail ends and being wedgingly secured between the heads and bases of the joining rails and each extending over both of said sleepers to support the rail ends, a chair mounted on each of said sleepers to receive said rails and splice bars, said chairs having upwardly extending cheeks formed with inwardly extending shoulders, filler elements adjacent each side of the chair positioned between the splice bars and said cheeks and being held against vertical movement by said shoulders, one of said filler elements being bolted to said rails and splice bars and the other of said filler elements comprising cooperating wedge members.

JOSEF DOBROWOLNY.