

963,844.

Patented July 12, 1910.

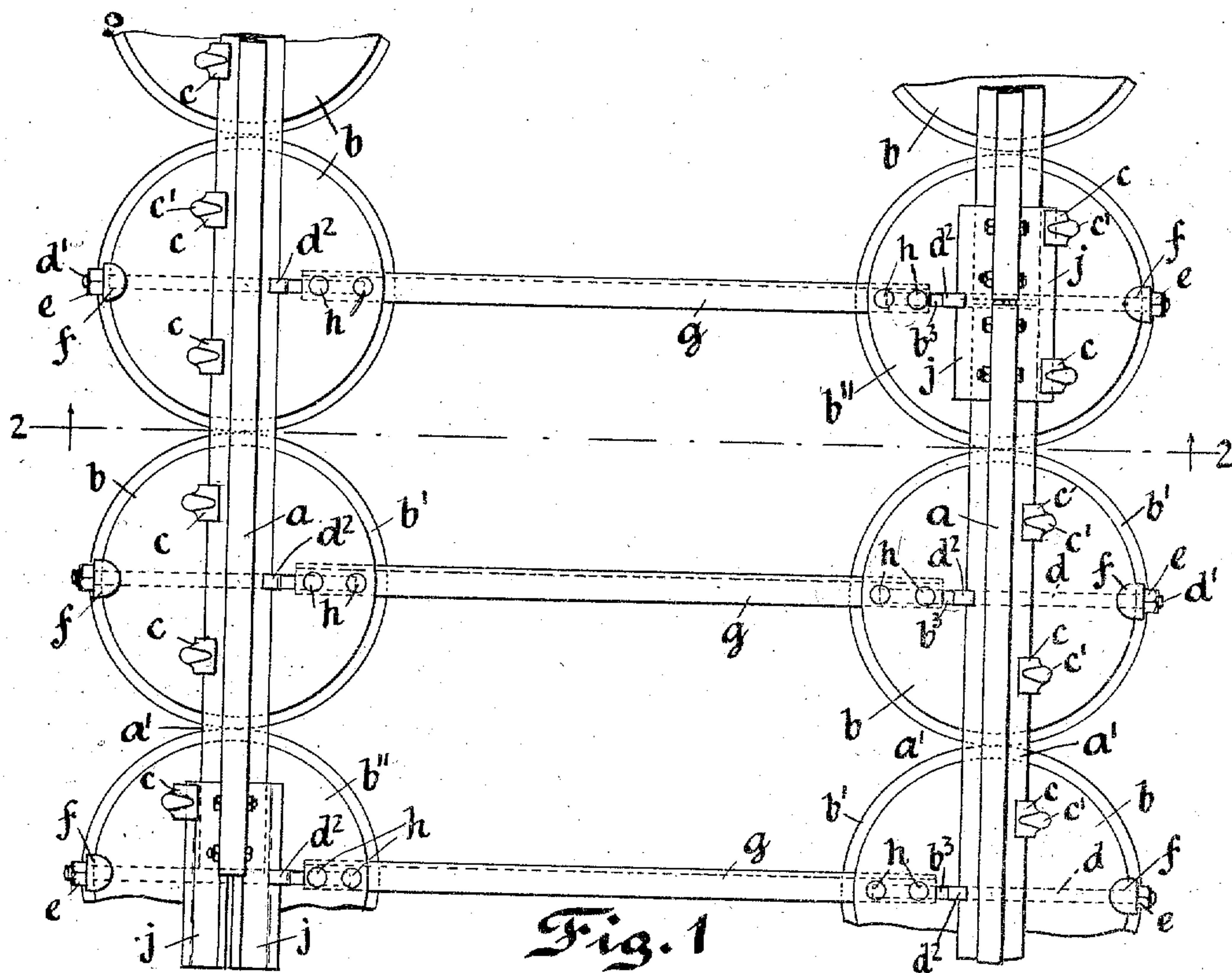


Fig. 1

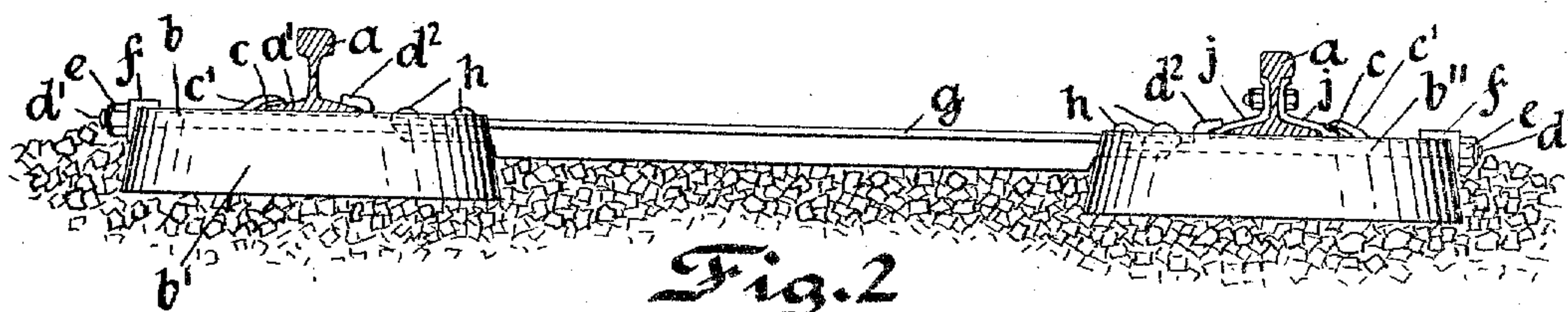


Fig. 2

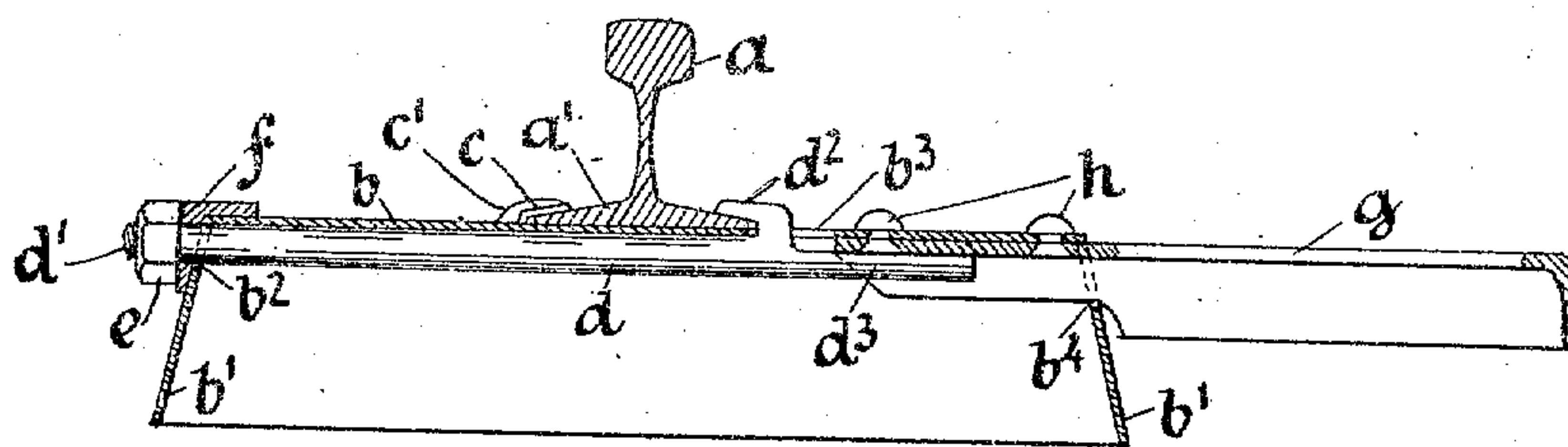


Fig. 3

Witnesses

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RAILWAY-TRACK CONSTRUCTION.

963,844.

Specification of Letters Patent.

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Application filed March 8, 1909. Serial No. 481,982.

To all whom it may concern:

Be it known that I, ADELBERT WINN, of Milwaukee, Wisconsin, have invented a Railway-Track Construction, of which the following is a specification.

This invention relates to railway tracks and my object is to provide an improved method of holding the rails of a railway-track in place as a substitute for the cross-tie method in common use.

Many attempts have been made to improve the cross-tie system by the substitution of steel or concrete for wooden ties, by the use of tie-plates, screw-spikes, inserted wooden dowels, treatment with preserving compounds, etc., all having for their object either to increase the life or diminish the expense of the costly wooden ties.

In the present invention I dispense with cross-ties entirely and substitute therefor a series of circular metallic pans or pedestals under each rail, the said pans or pedestals being tied together from rail to rail by tie-rods.

The nature of my invention will be best understood by the particular description thereof which follows, taken in connection with the accompanying drawings, wherein,

Figure 1 is a plan view of a railway-track built according to my construction; Fig. 2 is a transverse section thereof on the plane 2, showing the pans in elevation; and Fig. 3 is a transverse section through the track and one of the pans on a larger scale.

In these drawings every reference letter and numeral refers always to the same part.

The rails, designated *a*, are mounted and rest upon a series of circular pans *b* which are preferably made of steel-plate pressed into the shape shown with circular inclined flanges *b'*, these pans being mounted centrally under each rail. Adjacent to the outer rail-flange *a'* one or more tongues *c* are cut from the metal of each pan and pressed up so as to form hooks which grip over the edge of the rail-flange and hold it in place; these hooks being preferably formed with strengthening ribs *c'*. On the opposite side the flange is held by means of a hook-bolt *d*, which is placed transversely to the track with its screw-threaded end *d'* extending through a hole *b²* in the flange *b'* and having a nut *e* mounted thereon, between which and the pan is placed an angular washer or plate *f* to distribute the pressure of the nut. The bolt *d* has a hook

d² formed thereon which grips over the rail-flange on the opposite side from the tongues *c*, said hook passing through a slot *b³* formed in the top of the pan. The pans under the two rails are mounted in transverse alinement and are connected together in pairs by tie-rods *g*, which are preferably of angle-shaped section to secure rigidity and are secured to the pans in any suitable manner, as for example by passing through apertures *b⁴* in the flanges *b'* of the pans and having their ends secured to the top of the pans by rivets *h*. The lower heads of these rivets are preferably countersunk and the bolt *d* has an extension *d³* which takes under the end of the tie-rod and thereby the holding power of the hook *d²* is increased against any tendency of the rail to tip over. The construction is completed by filling the interior of each pan with ballast *i* of broken stone, gravel, or earth, which may be done by means of the usual tamping devices, and when so filled the pan is so solidly connected with the ground as to make it substantially immovable.

It will be seen that this provides for securing each pan rigidly and immovably to the rail in such manner as to practically form an integral part thereof, and as the rail is supported at all points of its length, the bending which is inevitable in a rail laid with cross-ties when a train passes over it is completely eliminated. This bending, as is well known, by producing a wave of curvature along the track, produces creeping of the rails, which in some cases it has been found impossible to prevent. Of course rail-stays or anticreeping devices can be attached to the rails in my construction as in the tie-construction if found desirable, by leaving a sufficient space between two adjacent pans for the purpose, or by providing means for positive attachment of the rails to the pans; but, in general, this will be found unnecessary in my construction. By this construction I avoid also an effect which is usually present in the cross-tie construction and which causes an unbalanced effect of the track due to the fact that the ties yield more at their ends than in the middle and thereby depress the ballast immediately under the rails more than they do in the center of the track; whence it comes that the whole track is substantially supported by the center of the ties, consequently a pressure upon one rail causes it

to descend when the other ascends, thus producing a see-sawing or unbalanced effect. This effect is impossible in my construction because the weight upon the rails is necessarily supported from a point directly beneath the rails.

At the rail-joints, if special forms of joint-plates are used which interfere with the gripping action of the tongues *c* and hooks *d*², as for example the plates *j* in the drawing, a special pan *b*² may be provided in which the tongues *c* and hooks *d*² are set farther back, or otherwise shaped to correspond with the form of the joint-plates.

Various changes and modifications in the constructions as herein shown may be made without departing from the spirit of my invention, and I wish it understood therefore that the latter is not otherwise limited than by the reasonable scope of my claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A device for supporting railway-tracks comprising a pair of pan-shaped devices having flat upper surfaces and marginal down-turned flanges extending around the periphery thereof, said devices having tongues projecting from said upper surfaces adapted to take over and hold the outer side of the rail-flange, a tie-rod uniting the two devices and having its ends extending through holes in the peripheral flanges of the respective devices and secured to the upper surface of said devices, and

hook-bolts on each of said pan-shaped devices having hooks taking over and gripping the inner sides of the respective rail-flanges, said hook-bolts extending through holes in the peripheral flanges of said devices on the outer sides of said devices and having nuts on the ends whereby said bolts are drawn up.

2. A device for supporting railway-tracks comprising a pair of pan-shaped devices having flat upper surfaces and marginal down-turned flanges extending around the periphery thereof, said devices having tongues projecting from said upper surfaces adapted to take over and hold the outer side of the rail-flange, a tie-rod uniting the two devices and having its ends extending through holes in the peripheral flanges of the respective devices and secured to the upper surface of said devices and hook-bolts on each of said pan-shaped devices having hooks taking over and gripping the inner sides of the respective rail-flanges, said hook-bolts extending through holes in the peripheral flanges of said devices on the outer sides of said devices and having nuts on the ends whereby said bolts are drawn up; and said bolts having further extensions which take under the ends of the tie-rod.

In witness whereof I have hereunto set my hand this fourth day of March, 1909.

ADELBERT WINN.

Witnesses:

LURQUE COLLE,
ALFRED Y. ANDREWS.