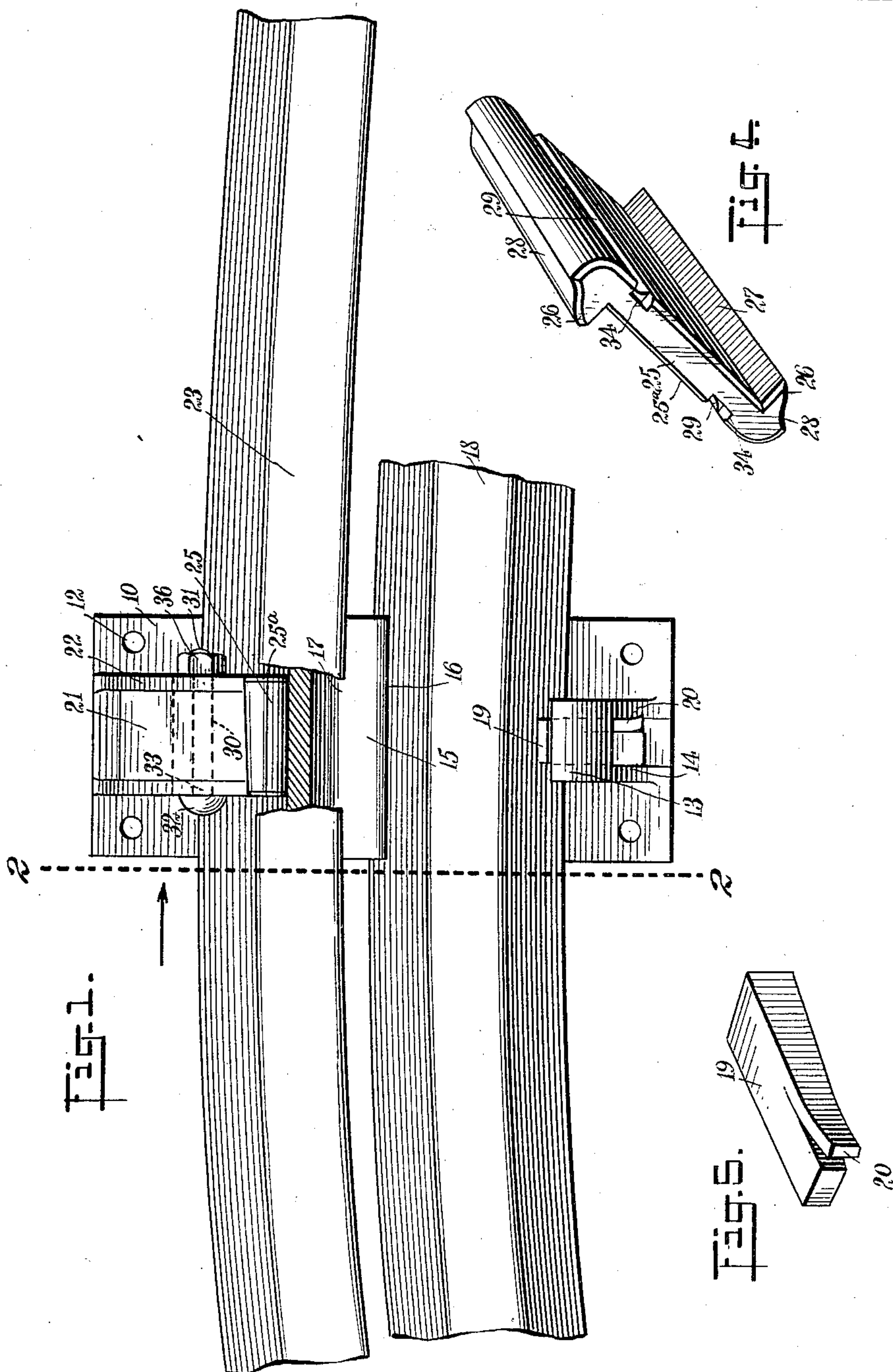


O. PAYZANT.
RAIL CHAIR AND BRACE.
APPLICATION FILED JULY 19, 1910.

999,588.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.



WITNESSES:

John K. Baehring et al

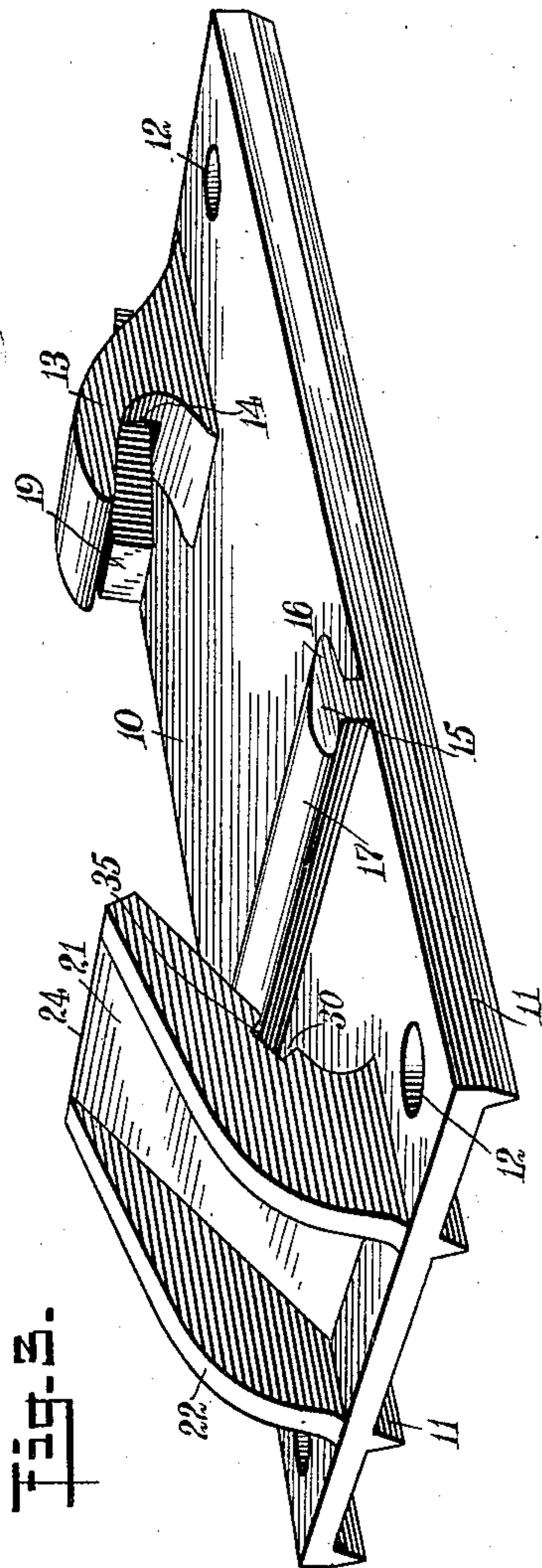
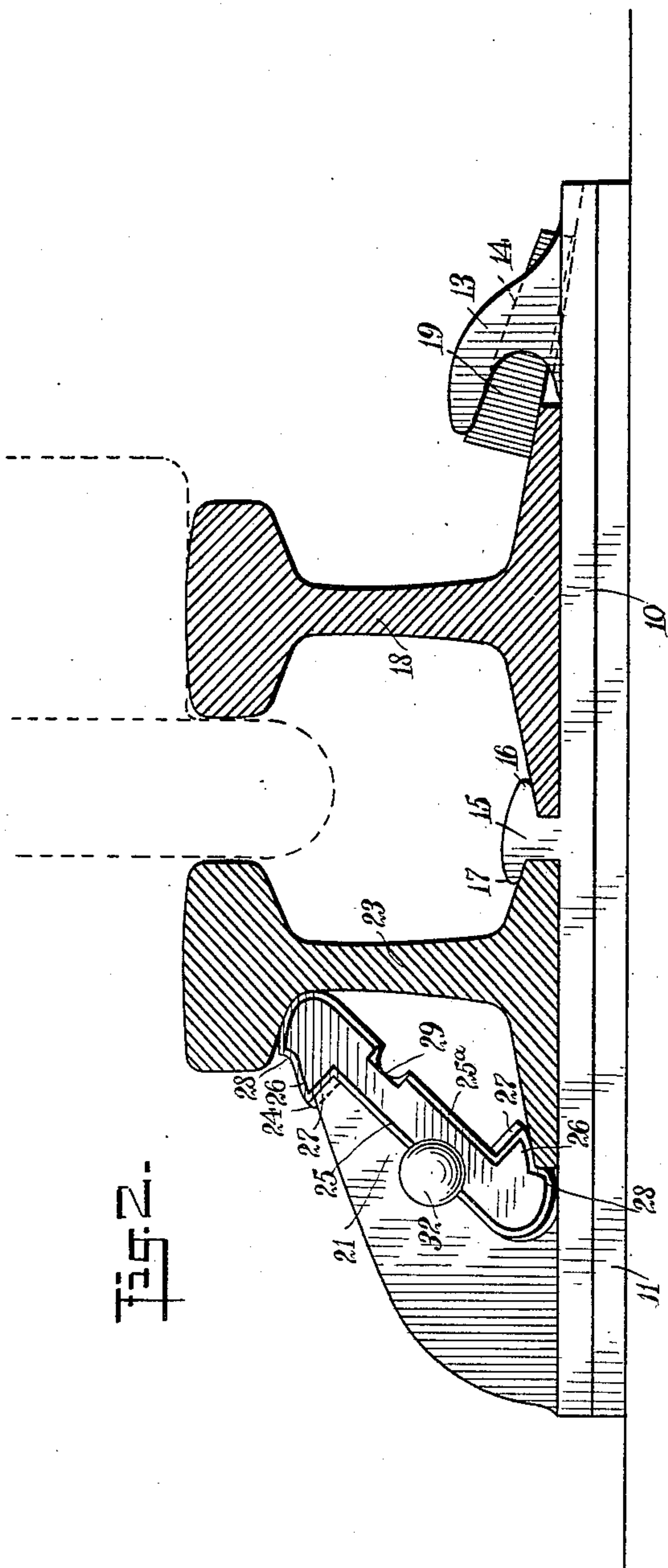
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2 SHEETS-SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

OCTAVE PAYZANT, OF NEW YORK, N. Y.

RAIL CHAIR AND BRACE.

999,588.

Specification of Letters Patent.

Patented Aug. 1, 1911.

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To all whom it may concern:

Be it known that I, OCTAVE PAYZANT, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Rail Chair and Brace, of which the following is a full, clear, and exact description.

This invention relates to rail chairs and braces for use in connection with railway tracks, and has reference more particularly to a device of this class which may provide means for holding both the running rail and the guard rail, and comprises a base adapted to be secured in any suitable manner upon the tie, and having an overhanging projection adapted to receive under it the base flange of the running rail, and an inwardly inclined holding lug having a gap, and a wedging key removably located in the gap and adapted to engage the rail base to hold the same in place, the base also having an inwardly inclined brace, and a wedging lock member adapted to be positioned between the guard rail and the brace and to engage at the guard rail base and under the head thereof, the guard rail being also engaged by the overhanging projection.

An object of the invention is to provide a rail chair and brace by means of which, if so desired, both the running rail and the guard rail can be securely positioned upon the tie, which permits the rails to be removed without displacing the chair itself, which tends to lengthen the life of the ties by obviating the necessity of pulling and driving the spikes or holding bolts in the removal of the rails, and which obviates the necessity of providing drill or other holes in the rail webs.

A further object of the invention is to provide a device of the class described, which permits the rails to be placed in position, and to be removed easily and rapidly, which can be used with the ordinary wooden ties, or with steel, concrete, or other ties, which securely holds the rails against lateral and other displacement, and which permits the removal and replacing of curved rails, without displacing the chair itself.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompany-

ing drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a plan view of an embodiment of my invention, showing the same used for holding a running rail and a guard rail, the rails being broken away; Fig. 2 is a transverse section on the line 2—2 of Fig. 1; Fig. 3 is a perspective view of the chair, the rail being removed; Fig. 4 is a perspective view of the wedging lock member; and Fig. 5 is a similar view of the wedging key.

Before proceeding to a more detailed explanation of my invention, it should be clearly understood that while the same comprises means for carrying and holding both the running and the guard rails, these means need not be combined in a single chair, but can be used independently of one another if so desired. The rail chair is preferably fashioned from cast-iron, and has the holding lug, overhanging projection and the inclined brace, formed integral with the base thereof. It is secured in place upon the tie by means of the ordinary rail spikes or in any other suitable manner. These and others of the details of construction form no part of the invention, and can be varied in accordance with individual preference and special conditions, without departing from the underlying spirit of the invention.

Referring more particularly to the drawings, I provide a base 10 of elongated shape, and preferably rectangular in form. At the under side it has tapered, longitudinal spurs 11, which are adapted to be driven into the tie, and assist in securing the chair in position. The base, near the corners, has openings 12 for the insertion of holding spikes or bolts for fastening the chair upon the tie. At one end the chair has an inwardly curved and tapered holding lug 13, the inner side of which is undercut or concave, and which is enlarged at its junction with the base. The spur has a gap formed by an opening 14, which is tapered and is inclined downwardly from the inside of the spur, toward the outer edge of the base.

Near the middle, the base has a transverse projection 15, consisting of a rib extending across the base, and having oppositely disposed, overhanging lips 16 and 17. The rib, with its projecting lips is of rounded cross section. The running rail 18

is positioned between the projection 15 and the lug 13, having its base flange engaging under the lip 16 of the rib. I provide a tapered wedging key 19, adapted to be driven into the opening 14 of the lug, and to engage at the other end base flange of the running rail, to hold the same in place. The key has near one edge, a split forming a spring lock 20, which can be outwardly bent, as is shown in Fig. 1, to prevent the accidental displacement of the key.

At the end of the base remote from the lug 13 is an inwardly inclined brace 21, having at the longitudinal edges outwardly disposed, strengthening ribs or buttresses 22, which extend to the end of the base. The guard rail 23 is positioned between the brace 21 and the rib 15. It has the base flange cut away, so that it can be spaced a suitable distance from the running rail, and has this flange positioned under the laterally projecting lip 17 of the rib. The inner face of the brace 21 is rounded at its junction with the base of the chair. The upper edge face 24 of the brace is inclined with respect to the transverse center line of the chair base, and with the lengths of the rails, for a purpose which will appear hereinafter.

I employ a wedging lock member 25 which is of symmetrical form, and at the ends, which are rounded, has oppositely disposed, transverse extensions 26. These extensions present inclined inner faces 27, at right angles to the sides of the member. At the ends, the member also has rounded, transverse grooves or depressions 28. In the opposite faces are symmetrically disposed grooves 29, extending transversely of the length of the member, and of substantially semi-circular cross section. A similarly formed transverse groove 30 is provided in the inner face of the brace 21. The wedging lock member is positioned between the brace and the guard rail, as is shown most clearly in Fig. 2. One of the faces 27 engages at the end face 24. The inclination of the end face 24, and of the base 27 of the lock member in engagement therewith, permits the member to be inserted from the side, *i. e.*, in the direction of the length of the rail, and to be wedged in place, engaging at the base flange of the rail and under the head thereof. The member has the rounded, upper end fitting snugly under the rail head, and has the lower, transverse groove 28 engaging at the edge of the rail base flange. Owing to the symmetrical form of the member it will fit in place when reversed. I employ a retaining bolt 31 for holding the wedging lock member against displacement. The bolt is mounted in the opening formed by the groove 30 of the brace and one of the grooves 29 of the lock member. The arrangement is such that

when the lock member is in position, these grooves register, to form a transverse opening of substantially circular section. The retaining bolt, at one end has a suitable head 32 and a part 33 of angular cross section adapted to fit into correspondingly formed portions 34 and 35 of the grooves 29 and 30. A suitable nut 36 is used in connection with the bolt.

The form of the holding key and the inclined disposition thereof, is of advantage in that the vibration incident to the traveling of railway trains upon the track will cause the key to wedge more firmly in the opening, and to shake downward securely into the same. In other words, the greater the travel, the more firmly will the running rail be held in position. When it is desired to remove the running rail, the wedging key can be easily driven out by means of a hammer, and the rail is then moved toward the lug, and under the overhanging, concave, inner side thereof. This permits the opposite rail base flange to be disengaged from under the lip 16. As the entire rail can be moved bodily toward the holding lug without necessitating a rocking of the rail, it makes no difference whether the rail is straight or curved. Moreover, the rail can be disengaged from any number of chairs upon which it is supported, by a simple manipulation, and without altering the positions of the chairs themselves. The guard rail can be removed by a similar operation, the wedging lock member being first displaced.

The wedging lock member 25 at the side edges is preferably provided with a bevel or chamfer 25^a, which facilitates its introduction into position between the brace 21 and the rail. The bolt 31, in addition to securing the wedging lock member in position, acts as a stop to prevent the member from riding along the inner face of the brace 21, toward the edge of the rail 23. It thus serves to prevent the rail from being upset when the wedging lock member is being driven home.

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

1. In a device of the class described, a base having an overhanging projection adapted to receive under it a base flange of a rail, an inwardly inclined holding lug having a downwardly and outwardly directed gap, and a wedging key removably located in said gap and adapted to engage the rail base to hold the rail in position.

2. In a device of the class described, a base, means for securing the same upon a tie, said base having an overhanging projection adapted to receive under it a base flange of a rail, an inwardly-disposed holding lug having an opening therethrough, inclined

downwardly and outwardly and a wedging key removably located in said opening and adapted to engage the rail base to hold the same in place, said lug, at the side adjacent to said projection, being concave, the distance between said projection and said lug at the concavity thereof, exceeding the width of the rail base.

3. In a device of the class described, a base, means for securing the same upon a tie, said base having a transverse rib provided with an overhanging lip, and adapted to receive under said lip the base flange of a rail, and an inwardly disposed lug, concave at the side adjacent to said rib, said lug having a downwardly-inclined opening therethrough, said opening tapering toward the outside of said lug, and a projecting key removably located in said opening and adapted to extend over the base of the rail, said key having a part forming a spring lock to hold it against accidental displacement.

4. In a device of the class described, a base having an overhanging projection, adapted to receive under it the base flange of a rail, and an inwardly-inclined brace, and a wedging lock member adapted to be positioned between a rail and said brace and to engage at the rail base and under the rail head.

5. In a device of the class described, a base having an overhanging projection adapted to receive under it the base flange of a rail, an inwardly inclined brace, the distance between said projection and said inclined brace near the junction thereof with said base, exceeding the width of the rail base, and a symmetrical, reversible lock member removably positioned between the rail and said brace and adapted to engage at the rail base and under the rail head.

6. In a device of the class described, a base having an overhanging projection adapted to receive under it the base flange of a rail, an inwardly inclined brace, the distance between said projection and said inclined brace near the junction thereof with said base, exceeding the width of the rail base, a symmetrical, reversible lock member removably positioned between the rail and said brace, and adapted to engage at the rail base and under the rail head, said brace having an edge inclined with respect to the length of the rail, said lock member having correspondingly inclined faces each adapted to engage said inclined edge, whereby said lock member can wedge in position between

said brace and the rail, and a retaining device for securing said lock member in place.

7. In a device of the class described, a base having an overhanging projection adapted to receive under it the base flange of a rail, an inwardly inclined brace, the distance between said projection and said inclined brace, near the junction thereof with said base, exceeding the width of the rail base, a symmetrical, reversible lock member removably positioned between the rail and said brace, and having at the ends, oppositely disposed extensions presenting faces each adapted to engage at the edge face of said brace, said lock member having the ends rounded, and being provided with transverse grooves at said rounded ends, said rounded ends being adapted to engage under the rail head, said grooves being adapted to engage at the edge of the rail base, said edge face of said brace being inclined with respect to the length of the rail, said brace and said member having grooves adapted to register, and a retaining bolt located in said registering grooves.

8. In a device of the class described, a base having a projection provided with overhanging lips at the opposite sides thereof, said projection being adapted to receive under the lips thereof, the bases of a running rail and a guard rail, an inwardly inclined holding lug having a gap, a wedging key removably located in said gap, and adapted to engage the base of the running rail, an inwardly inclined brace, and a wedging lock member adapted to be positioned between said brace and the guard rail and to engage at the base and under the head of the guard rail.

9. In a device of the class described, a base adapted to support a rail and having a lug extending toward the rail base, and having an opening extending transversely of the length of the rail, and a wedge arranged in said opening and adapted to engage the rail base to hold the rail in position, said wedge extending transversely of the length of the rail and being inclined downward, whereby it tends gravitationally to maintain an operative position within said gap and in engagement with the rail base.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OCTAVE PAYZANT.

Witnesses:

R. M. HEGGIE,
E. S. LYMAN.