J. C. PHILLIPS.

COMBINED RAILWAY RAIL AND BED PLATE.

APPLICATION FILED DEC. 2, 1907.

898,986. Patented Sept. 15, 1908.

FIG. 2

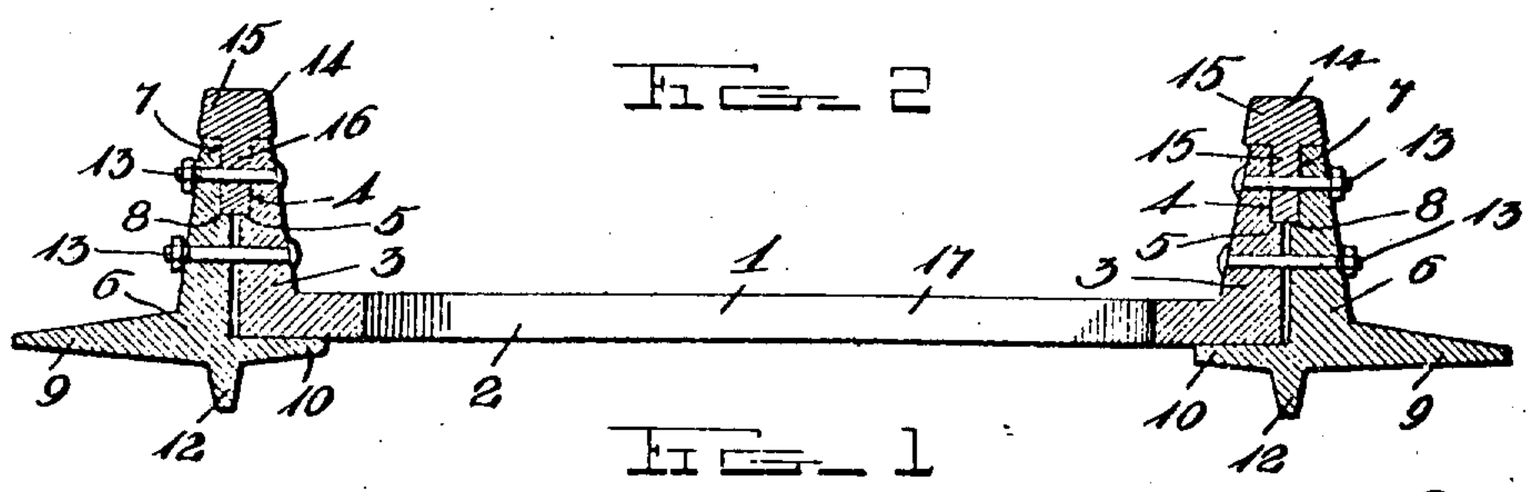



FIG. 1

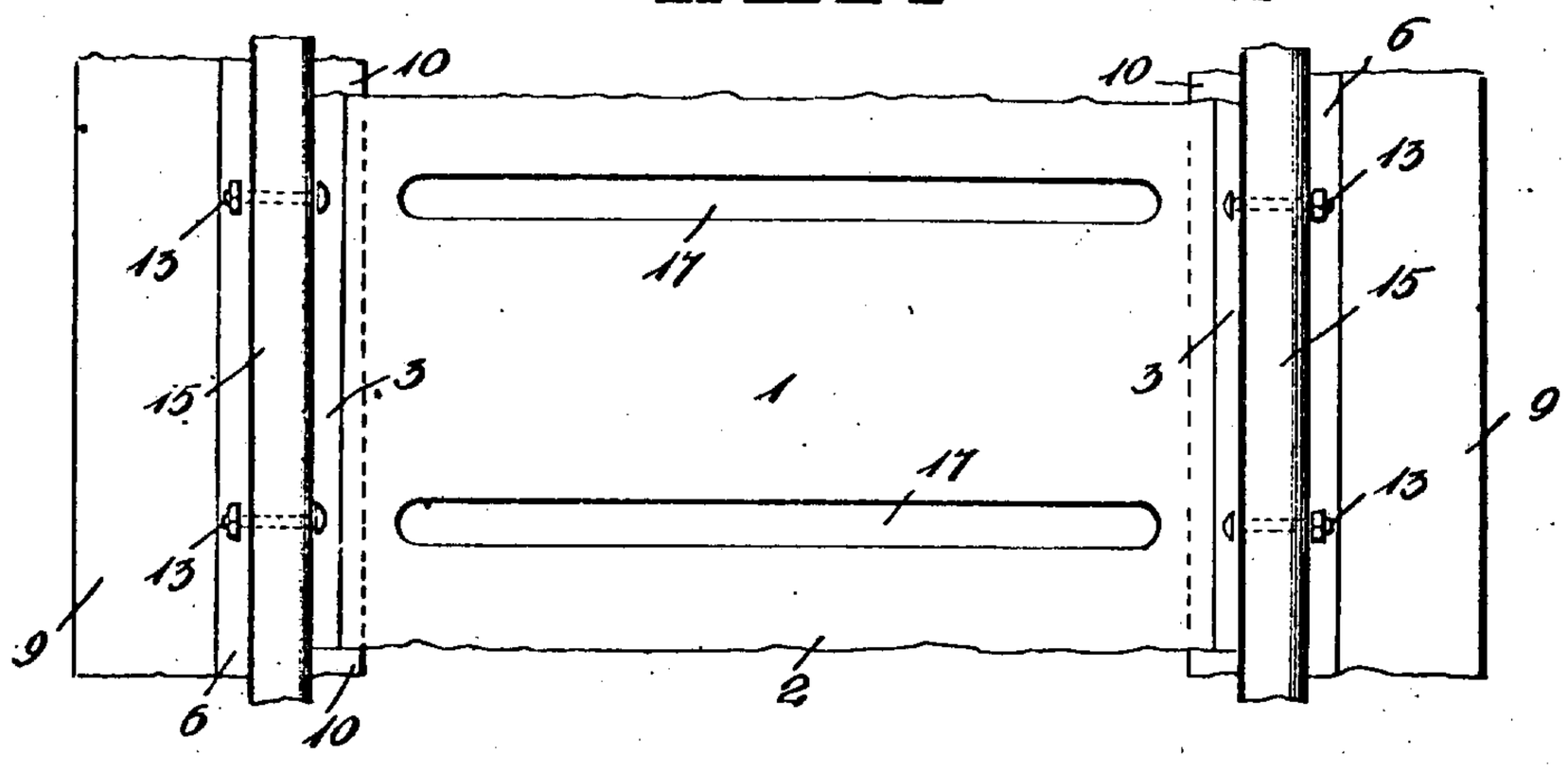



FIG. 3

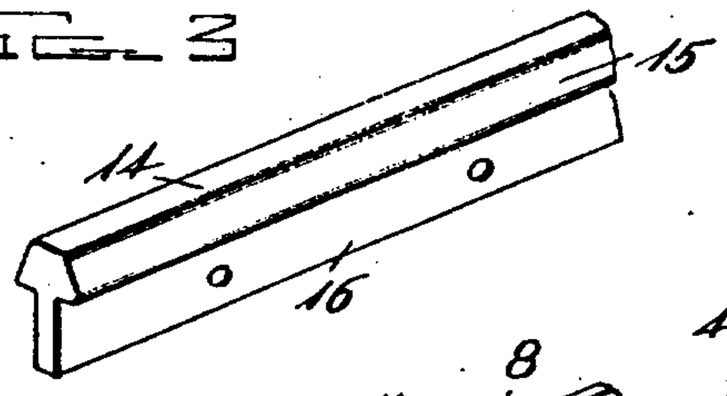



FIG. 4

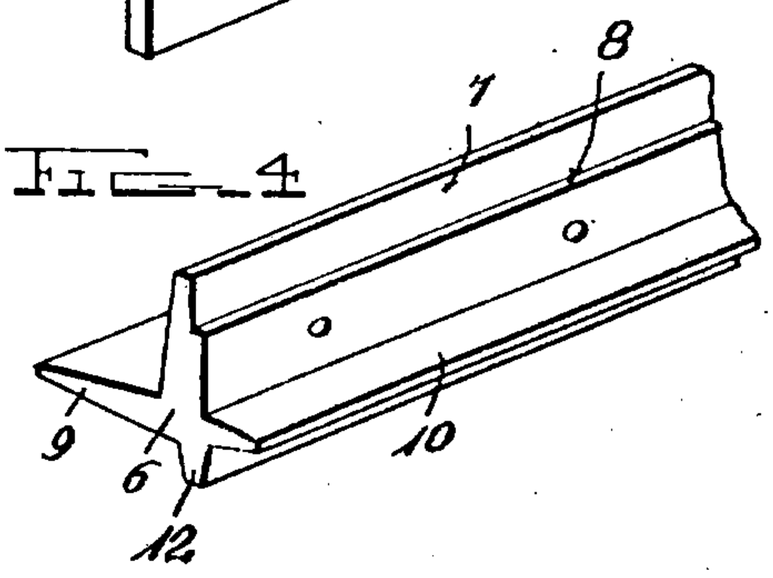
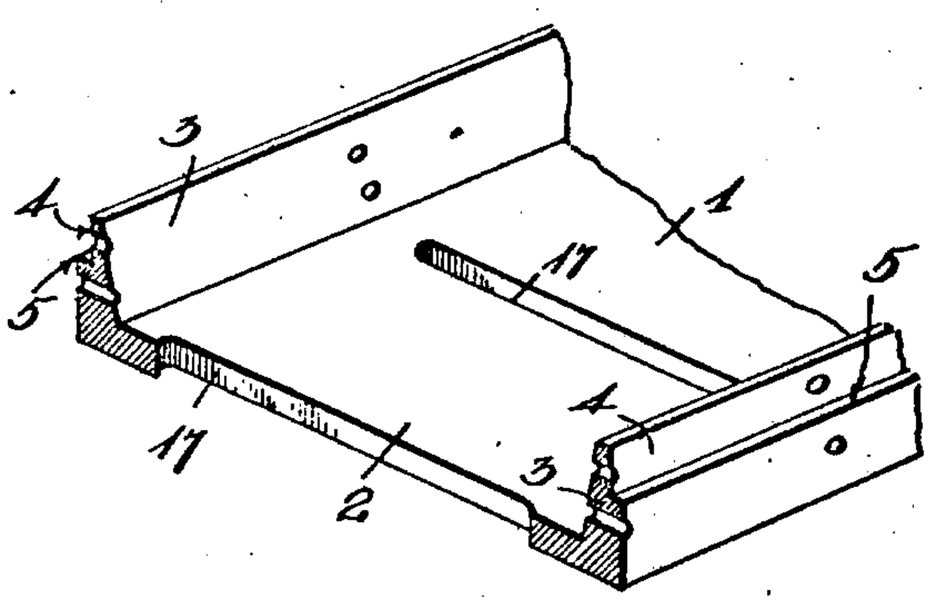



FIG. 5




Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN C. PHILLIPS, OF AKRON, OHIO.

## COMBINED RAILWAY RAIL AND BED-PLATE.

No. 898,986. Specification of Letters Patent. Patented Sept. 15, 1908.

Application filed December 2, 1907. Serial No. 404,702.

*To all whom it may concern:*

Be it known that I, JOHN C. PHILLIPS, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in a Combined Railway Rail and Bed-Plate; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in railway track rails.

The object of the invention is to provide a railway track having combined with the rails and forming a part of the same, a bed or supporting plate and chair or sleeper rails.

With this object in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be described hereinafter and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan view of a portion of a railway track constructed in accordance with the invention; Fig. 2 is a vertical cross sectional view; Fig. 3 is a fragmentary perspective view of the tread portion and web of the rail; Fig. 4 is a similar view of the chair or sleeper rail; and Fig. 5 is a similar view of the bed or supporting plate which forms a part of the track.

Referring more particularly to the drawings, 1 denotes a bed or supporting plate which is arranged between the rails, said plate consisting of a flat central portion, 2, the width of which corresponds to the gage of the track, and is adapted to rest upon the ground. The plate 1 is provided along its opposite side edges with upwardly projecting flanges, 3, the inner walls of which are inclined and the outer walls are vertical and have formed therein adjacent to their upper ends a longitudinal notch or recess, 4, the lower edge of which forms a shoulder, 5, adapted to support the track rail proper.

Bolted or otherwise secured to each edge of the bed plate, 1, are longitudinally disposed chair or sleeper rails 6, said rails having inclined outer walls and vertical inner walls adapted to engage the outer walls of the flanges, 3, of the bed plate. In the vertical inner walls of the rails, 6, adjacent their upper ends is formed a longitudinally disposed notch or recess, 7, the lower edge of which forms a shoulder, 8, which, when the rails, 6, are in place, coincide with the shoulder, 5, formed by the recess, 4, of the flange, 3, on the bed plate. The notches or recesses, 4 and 7, in the flanges, 3, and rails, 6, form longitudinally disposed channels, the purpose of which will hereinafter appear. On the lower portions of the rails 6 are formed outer laterally projecting flanges, 9, and inner longitudinally disposed flanges, 10. Said flanges 10 project beneath the outer portions of the bed plate 1, and form supports for the bed plate and serve to take the strain from off the bolts which secure the sleeper rails to the bed plate. The rails, 6, are also provided with downwardly projecting flanges, 12, which form stops or holding devices when the rails are in place on the roadbed and prevent lateral movement of the former. When the rails, 6, and bed plate are arranged in operative position they are secured together by bolts, 13, which are passed through alined apertures or bolt holes formed in the flanges, 3 of the bed plate, and through the body portion of the rails, 6, as shown.

Adapted to be engaged with the sleeper rails and bed plate are track rails, 14, said rails comprising a head or tread portion, 15, and a web portion, 16, said web portions being adapted to be engaged with the longitudinally disposed channels formed by the recesses, 4 and 7, in the flanges, 3, and sleeper rails, 6. The lower edges of the webs 16 are adapted to rest upon the shoulders, 5 and 8, which form the lower edges of the recesses, 4 and 7, while the upper edges of the flanges, 3, and the rails, 6, engage beneath the heads, 15, of the track rails, thereby firmly supporting the latter. The webs, 16, are provided with bolt holes which aline with the upper bolt holes in the flanges, 3, and rails, 6, and are adapted to receive the upper fastening bolts, 13, which securely hold the track and rails in place. In the bed plate 1 is formed a series of transversely disposed slots or passages, 17, through which water is permitted to drain from the bed plate.

By providing a combined bed plate and sleeper rail to support the track rails as herein shown and described, the necessity of providing ties or other supports is obviated, the flanges on the sleeper rails forming anchors which, when embedded in the ground, firmly hold the rails in place on the roadbed.

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

1. In a railway track, an integral bed plate extending between and forming a support for the opposite track rails, longitudinally disposed side flanges on said bed plate, sleeper rails adapted to be bolted to said side flanges, and track rails connected to and supported by said flanges and sleeper rails, substantially as described.

2. In a railway track, a bed plate, upwardly projecting side flanges formed on the outer edges of said plate, said flanges having formed therein longitudinally disposed recesses, sleeper rails adapted to be secured to said flanges of the bed plate, said sleeper rails having formed therein longitudinally disposed recesses, which, together with the recesses in the flanges of the bed plate, form longitudinally disposed channels, and track rails adapted to be secured in said channels, substantially as described.

3. In a railway track, a bed plate, longitudinally disposed flanges formed on the outer edges of said plate, said flanges having formed therein recesses, sleeper rails adapted to be secured to said flanges, said rails having formed therein recesses adapted to coincide with the recesses in said flanges to form longitudinally disposed channels, means on the lower edges of said sleeper rails, whereby the same and said bed plate are anchored, track rails adapted to be supported by said bed plate and sleeper rails, said track rails comprising a head or track portion, and a web portion, said web portion being adapted to be engaged with said channels formed by the recesses in the flanges and sleeper rails, substantially as described.

4. In a railway track, a bed plate having formed therein a series of drain passages, longitudinally disposed upwardly projecting flanges formed on the side edges of said plate, said flanges having formed in their outer walls longitudinally disposed recesses, the lower edges of which form shoulders, sleeper rails adapted to be bolted to said flanges, said rails having formed in their inner walls longitudinally disposed recesses, the lower edges of which form shoulders, said recesses, together with the recesses in the flanges, forming channels, a laterally projecting supporting flange formed on the lower edge of said sleeper rails and adapted to project beneath the outer edges of said bed plate, anchor flanges formed on the outer lower edges of said sleeper rails, stop flanges formed on the lower edge of said rails, track rails adapted to be supported by said sleeper rails and bed plate, said track rails comprising a head or tread portion, and web portions adapted to be engaged with the channels formed by the recesses in said flanges and sleeper rails and to rest on the shoulders formed by said recesses, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN C. PHILLIPS.

Witnesses:
WM. A. MARTIN,
WM. BADER.