

No. 857,780.

PATENTED JUNE 25, 1907.

F. E. ABBOTT.
BRIDGE AND GAGE PLATE FOR RAILROAD RAILS.

APPLICATION FILED AUG. 20, 1906.

4 SHEETS—SHEET 1.

FIG. 1

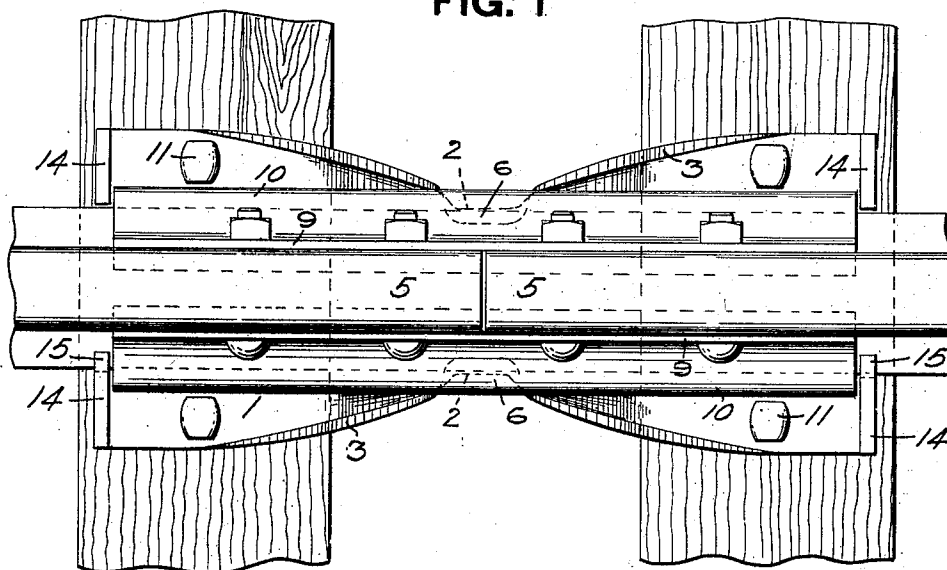
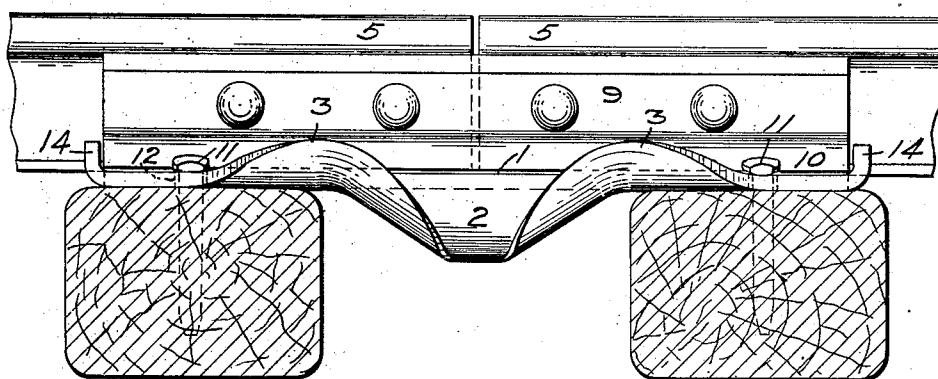


FIG. 2



WITNESSES.

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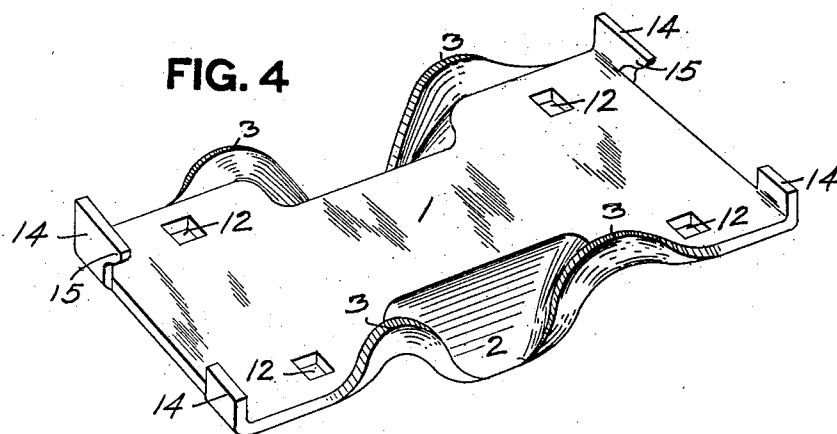
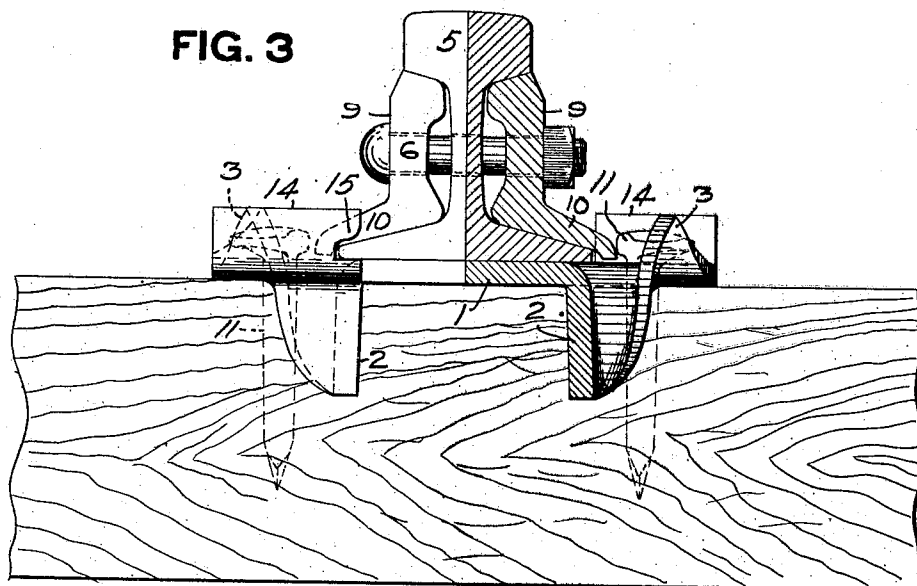
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4 SHEETS—SHEET 3.

FIG. 5

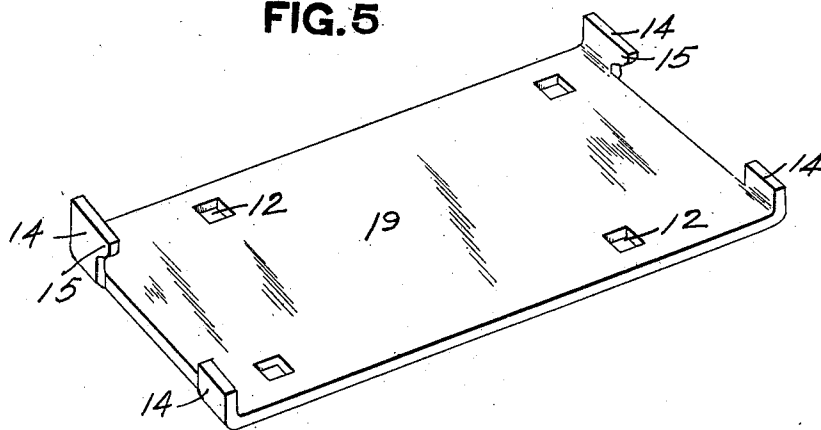
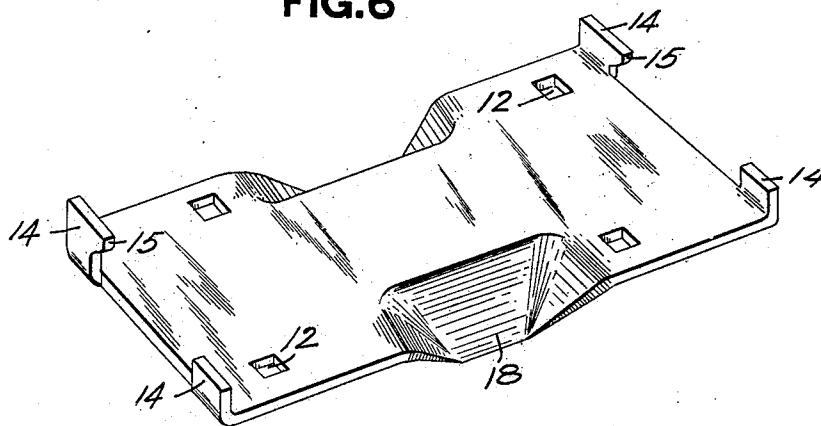


FIG. 6



WITNESSES.

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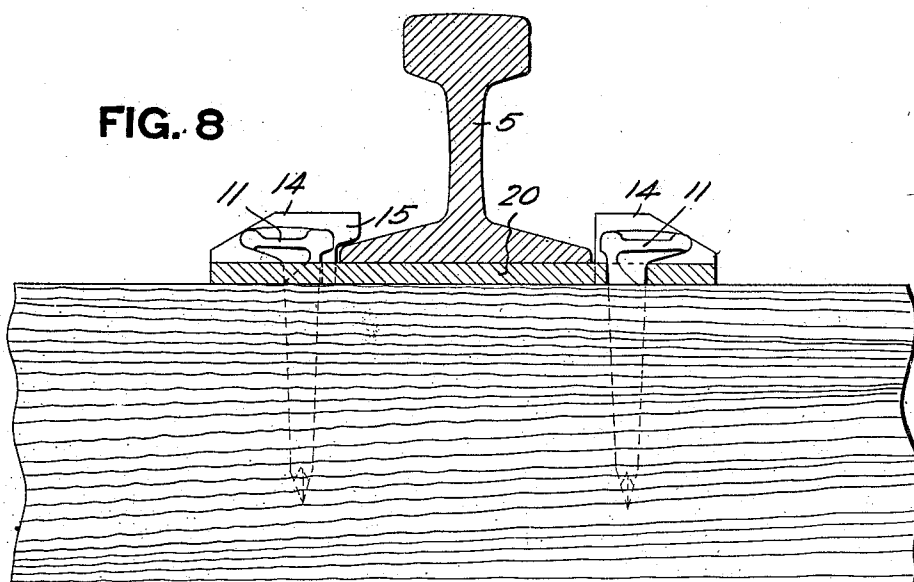
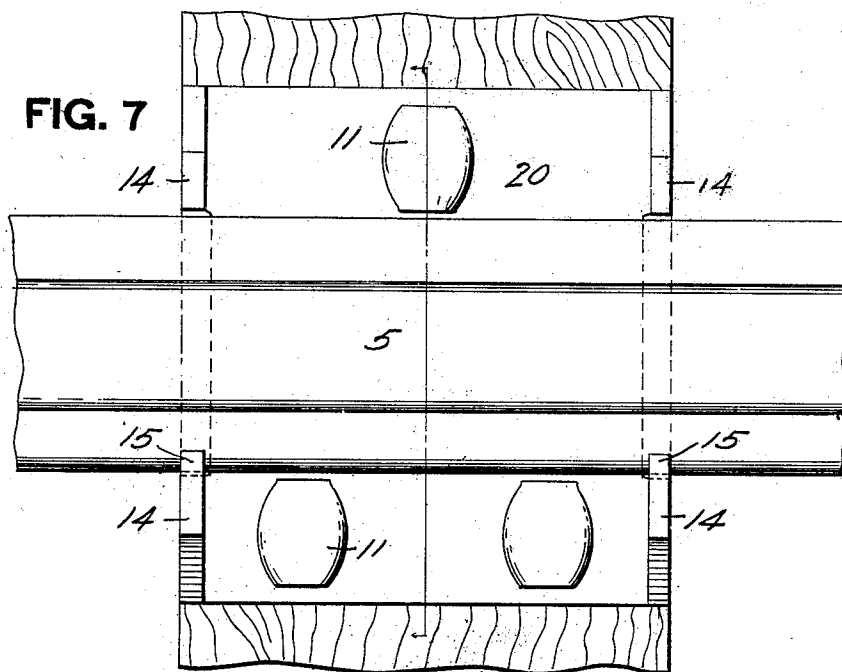
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4 SHEETS—SHEET 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

FRANKLIN E. ABBOTT, OF BUFFALO, NEW YORK.

BRIDGE AND GAGE PLATE FOR RAILROAD-RAILS.

No. 857,780.

Specification of Letters Patent.

Patented June 25, 1907.

Application filed August 20, 1906. Serial No. 831,401.

To all-whom it may concern:

Be it known that I, FRANKLIN E. ABBOTT, a resident of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Bridge and Gage Plates for Railroad-Rails; and I do hereby declare the following to be a full, clear, and exact description thereof.

This invention relates to railway track plates, and more especially to such plates as are known as gage plates and bridge plates.

The object of the invention is to provide a device of this kind which is adapted to hold the rails against turning or rolling, and which is so constructed that the spikes or other usual fastening means are not subjected to the up and down movement of the rails, thus preventing the partial drawing of the spikes, more securely holding the plates in position, and relieving the spikes to a large extent from bending moments.

The further object of the invention is to provide a bridge plate arranged to span the space between adjacent ties and which is so constructed as to prevent endwise movement of the rail joint as well as to secure the object above stated.

To the accomplishment of the foregoing results, the invention consists of a railway track plate constructed and designed as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a rail joint showing my invention in the form of a bridge plate applied thereto. Fig. 2 is a side view of the same. Fig. 3 is in part an end view and in part a cross section of the same. Fig. 4 is a perspective view of the preferred form of bridge plate. Fig. 5 is a similar view showing a flat bridge plate; Fig. 6 is a similar view showing another form of flanged bridge plate; and Figs. 7 and 8 are respectively plan and cross-sections showing the invention applied to an ordinary gage plate.

In Figs. 1 to 6 I have shown the invention applied to a bridge plate, and in Figs. 1, 2, 3 and 4 have shown the preferred form of bridge plate, this plate having the body portion, 1, with continuous reverse flanges at the side edges, these flanges having a downwardly bent portion 2, at their centers, with upwardly bent reverse portions 3 at each end of the downwardly bent portion. The downwardly and upwardly bent portions merge one into the other, forming a complete reverse flange.

The rails are shown at 5, with their ends abutting at the center of the bridge plate and are fastened by means of joint angles 6, forming the ordinary fish plates and secured to the webs of the rails by bolts. The fish plates may be of any desired form, having the vertical portion 9, and the bottom angle portion or flange, 10. The bridge plate rests upon the ties in the usual manner. It is fastened to the ties by ordinary spikes 11, passing through holes 12, in the bridge plate, which are so positioned that the heads of the spikes are not in contact with either the base flange of the rail or the fish plate. Consequently vertical movements of the rails due to the passing of trains, have no effect upon the spikes, and do not partially draw the same as is ordinarily the case. It is well known by all railway track men that the rails are subjected to more or less vertical motion due to the weight of passing trains and that this has a tendency to partly draw the spikes, which not only loosens the connection of the rail to the tie, but also subjects the spikes to a considerable bending movement. By my arrangement of having the spikes so located that they are not in contact with the base of the rail, that is entirely avoided.

To hold the rail in position and prevent it from rolling or turning, the plates are provided at the ends with upturned lugs or projections, 14, which are in such position that they abut against the ends of the fish plates so as to prevent the longitudinal movement of the rail joint. The lugs on one side of the rail are provided with inwardly projecting portions 15, which overhang the base flange of the rail, and thus prevent the rail from either rising or rolling. The plates will be so placed that the inwardly projecting portions, 15, on the lugs 14, will be on that side of the rail which is opposite to the direction in which the rail is liable to roll, so that the rolling or tipping of the rail is entirely prevented. By having these projections on only one side of the plate, there is no difficulty in putting the rail in place.

Fig. 6 shows a bridge plate having downwardly turned flanges 18, but having no upwardly turned flanges. This bridge plate is provided at its ends with the same upwardly projecting lugs 14, having the inwardly projecting portions 15, and is secured to the ties in the same manner as the bridge plate shown in the preferred form.

Fig. 5 shows another form of bridge plate

19, which is entirely flat, having no side flanges, but having the end projections 14 with inwardly extending portions 15 identical with the preferred form of plate.

5 In Figs. 7 and 8 the invention is shown applied to an ordinary gage plate 20, this being so short that it rests upon only a single tie, and having no side flanges, but having at its ends the upwardly projecting lugs 14, and inwardly projecting portions 15, extending over the base flange of the rail, and the plate being fastened by spikes which have no contact with the rail base.

15 In all the forms the invention has been shown applied to a pressed plate, but it is obvious that it can be applied to a plate formed either by forging or casting.

20 The advantage of the invention is obvious being that the rail is securely held in position against rising and rolling and the fastenings for the plates are not subjected to the ordinary vertical movements of the rails; consequently there is not the danger of loosening the spikes in the wood or otherwise endangering the security of the fastening.

25 What I claim is:

1. A railway track plate consisting of a pressed plate having a flat body adapted for insertion between the ties and the rail base, and having edge portions at its end turned upwardly to provide vertical lugs, said upturned lugs having projection portions extending over the rail base.

30 2. A bridge plate having a body adapted for insertion between the ties and the rail base and having at its end upwardly projecting lugs arranged to contact with the ends of the fish plates, and having inwardly extending portions overhanging the base flange of the rail.

40 3. A bridge plate for railways having a body adapted for insertion between the ties

and the rail base and having at its ends upwardly projecting lugs arranged to abut against the ends of the rail joint, the lugs on one side of the rail base having inwardly extending portions adapted to overhang the rail base.

4. A bridge plate having a body adapted for insertion between the ties and the rail base, and having at its ends upwardly projecting lugs for contacting with the ends of the rail joint, and having inwardly extending portions to overhang the base flange of the rail, said plate also having spike openings so arranged that the spike heads will not overhang the rail base or joint.

5. A railway bridge plate formed of pressed metal and having flanges on the side edges, and upturned portion at the ends arranged to contact with the ends of the rail joints, said upturned end portions having inwardly projecting portions overhanging the rail base, and the plate having spike openings arranged so that the head of the spike will not overhang the rail base or flange.

6. A bridge plate having a flat body and having pressed flanges on its side edges with upwardly bent end portions on each side of the rail base arranged to contact with the ends of the rail joint, said upwardly projecting portions at one side of the rail base having inwardly extending portions projecting over the base flange of the rail and said plate having spike openings so located that the spike heads will not overhang the rail base or joint.

In testimony whereof, I the said FRANKLIN E. ABBOTT have hereunto set my hand.

FRANKLIN E. ABBOTT.

Witnesses:

ROBERT C. TOTTEN,
J. R. KELLER.