Oct. 2, 1934. W. H. SHARP 1,975,377

RAILROAD RAIL TIE PLATE AND FASTENING MEANS

Filed June 9, 1933

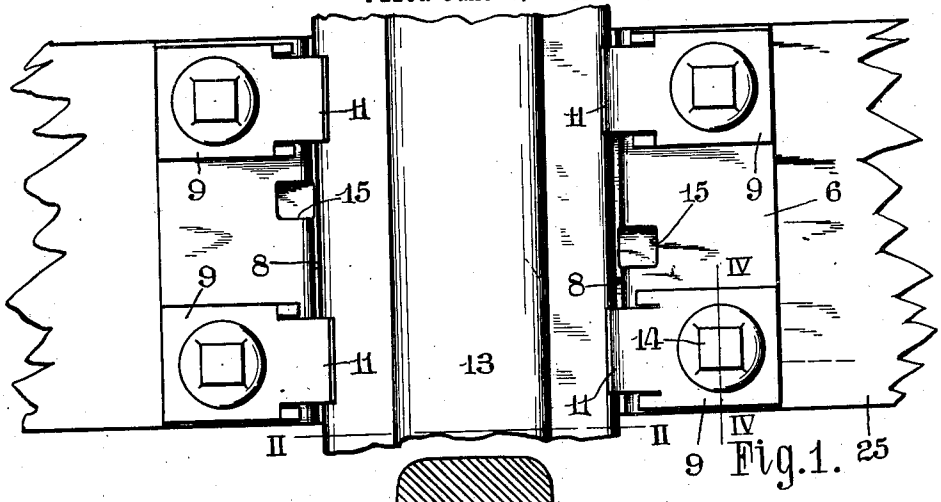


Fig.1.

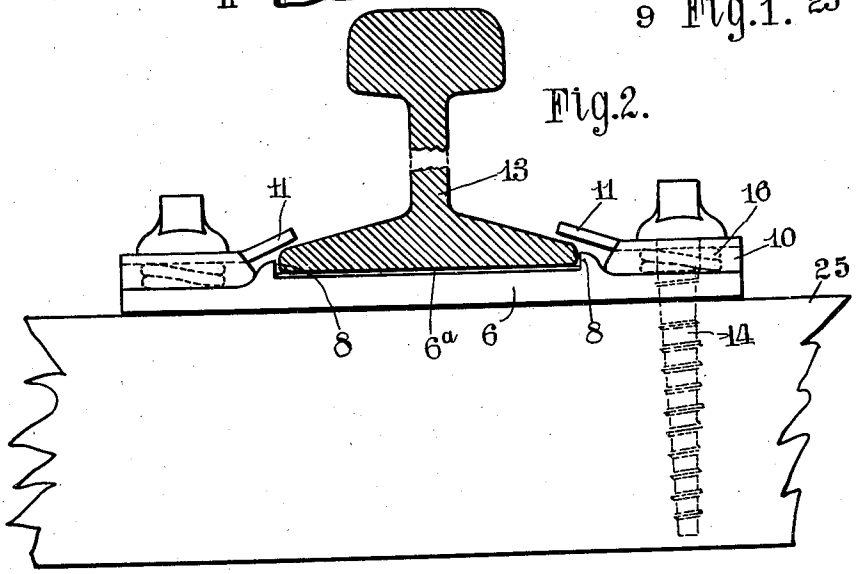


Fig.2.

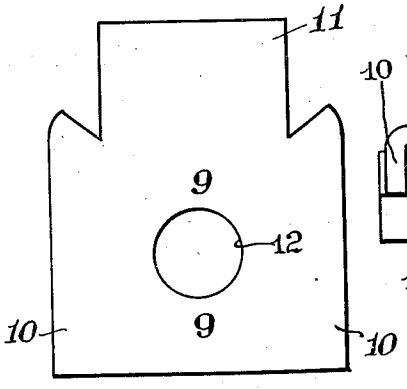


Fig.5.

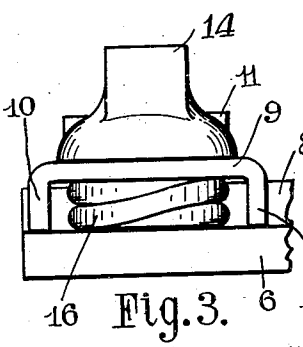


Fig.3.

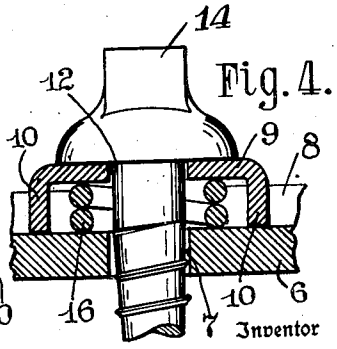


Fig.4.

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Patented Oct. 2, 1934 1,975,377

UNITED STATES PATENT OFFICE

1,975,377

RAILROAD RAIL TIE PLATE AND FASTENING MEANS

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Application June 9, 1933, Serial No. 675,100

1 Claim. (Cl. 238—338)

This invention relates to means for securing and supporting railroad rails on ties and has for one of its objects to dispense, normally, with the use of cut spikes to secure the rails to the ties. A further object is to provide improved means for supporting the rail and prevent rapid destruction of wood by the sinking of the rail into the material of the tie. In railroad construction ties of wood are usually preferred. To prolong their life ties of wood are treated with creosote which penetrates the wood to a shallow depth only. Because such ties are set in ballast of broken stone and because the weight of the cars imparts a waving action to the rails it follows that such waving action either rocks the ties in the ballast or causes them to rise and fall in the ballast with a pumping-like action, such ties are rapidly ground off by abrasion at their creosoted surfaces thereby exposing the interior of the tie to water and insects with the result that the tie is rapidly destroyed. Hence another object of the invention is to provide a rail support in which the rail can wave up and down without rocking or carrying the tie with it and thereby to a large extent avoid the destructive action of the road bed on the tie. Another object is to so construct the rail confining parts that rattling is prevented. Other objects will appear from the disclosure herein.

The invention is embodied in the example herein shown and described, the feature of novelty being finally claimed.

In the accompanying drawing—

Figure 1 is a plan view of the invention showing a small fraction of rail secured to a fraction of tie.

Fig. 2 is a cross section on line II—II, Fig. 1, the rail being shown as broken out a little at the web.

Fig. 3 is an end view of one of the clip members.

Fig. 4 is a section on line IV—IV Fig. 1, on a larger scale.

Fig. 5 is a plan view of the clip blank before bent to final form.

In the views 25 designates the tie or sleeper which is usually of wood. 6 designates a plate or chair for application to the tie to support the usual rail 13, said chair being provided at its upper surface with a seat for the rail flanked by parallel shoulders 8 to prevent lateral shifting of the rail on its seat. The rail seat has the usual camber extending transverse the rail at 6^a to permit rocking of the rail without rocking the tie in the ballast.

The end margins of the chair are each provided with suitable holes 7 for the passage of a screw spike or bolt into the tie or sleeper below.

Each end of the chair 6 beyond the rail is provided with a pair of clips, each consisting of a cut and bent plate to form a top or cover portion 9 with side legs 10, 10, and an upwardly slanting tongue 11. The lower edges of the legs are shaped to fit over the end portion of the chair 6 and near the external side of the shoulder 8 while the tongue 11 projects over and out of contact with the upper side of a margin of the usual foot of the rail 13, so as to allow some vertical as well as rocking movement of the rail without lifting the tie with it. The top or cover portion 9 is made with an orifice 12 through which is inserted a spike or bolt 14, said orifice alining with the hole 7 in the chair when the clip is properly placed in position on the chair. When the sleeper is of wood a screw spike can be used and when the sleeper is of metal the fastening means can be a bolt having a nut secured to its lower end at the lower side of the sleeper.

Inserted between the cover portion 9 and the margin of the chair is a double coil spring washer 16 that encircles the screw 14, said spring being compressed by the head of the spike when secured in the tie to hold the chair down and prevent the clip from rattling. The clip covers the washer at its top and two opposite edges but being open at its outer end there is ample opportunity for ventilation to promote evaporation of moisture and inspection to ascertain the condition and intactness of the spring.

The chair is provided with spike holes 15, that can, in the event of damage to the holding means, be used for applying spikes to hold the rails pending replacement of the damaged parts of my invention.

The forms of the parts can be changed without departing from the gist of the invention as claimed.

What I claim is:

In means for holding a rail having a laterally extended foot, a sleeper, a chair having shoulders forming a seat therebetween for the rail, a clip member including a cover portion, side legs to rest on the chair and a tongue to reach over but normally out of contact with the foot of the rail, said side legs contacting at their inner ends with the base of the adjacent shoulder of the chair, a spring washer supported on the chair below the cover portion of the clip and between the side legs of the latter and a spike device securing the clip and said spring, the latter in a compressed condition, to the sleeper.

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