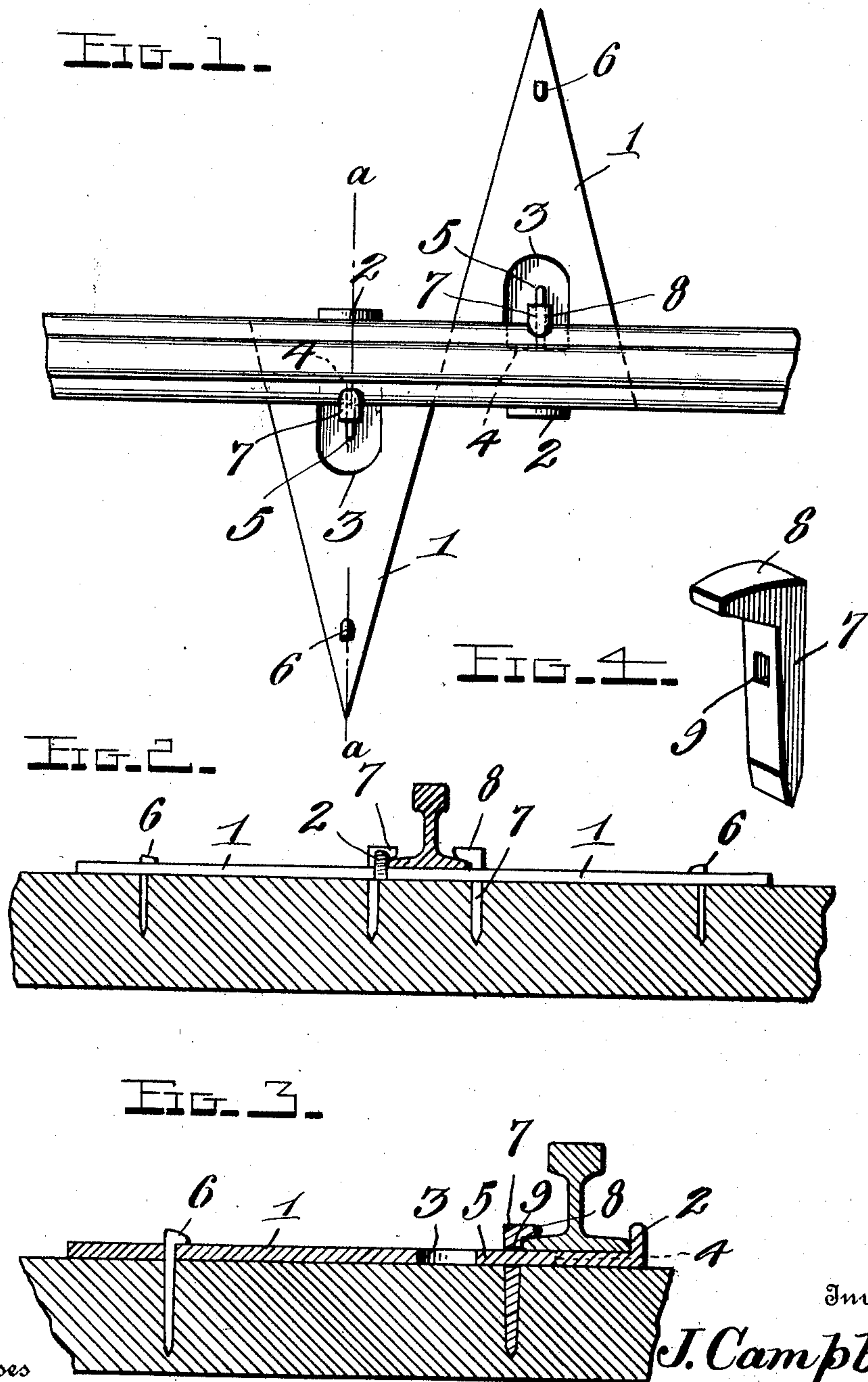


J. CAMPBELL.
RAIL BINDER.
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998,276.

Patented July 18, 1911.



Witnesses

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RAIL-BINDER.

998,276.

Specification of Letters Patent.

Patented July 18, 1911.

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To all whom it may concern:

Be it known that I, JOHN CAMPBELL, a citizen of the Dominion of Canada, residing at Dominion, in the Province of Nova Scotia and Dominion of Canada, have invented certain new and useful Improvements in Rail-Binders, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in railway rail binders, and especially with reference to devices of this character to secure the rails in place on the ties, and for use especially at curves to prevent the rails
15 from spreading, the object of the invention being to provide improved devices of this character which may be readily secured in place on the ties and engaged with the rails, which effectually serve to bind the rails, and
20 prevent them from spreading, and which may be also readily released so as to permit the removal of the rails.

The invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

25 In the accompanying drawings—Figure 1 is a plan of a portion of a railway rail and a pair of rail binders or chairs constructed in accordance with my invention, and showing them in use in connection with the rail.
30 Fig. 2 is an elevation of the same, the rail being indicated in cross section. Fig. 3 is a sectional view on the plane indicated by the line *a-a* of Fig. 1. Fig. 4 is a detail perspective view of one of the securing spikes.

35 My improved rail binders or chairs are used in pairs. Each binder or chair comprises a triangular plate 1, of suitable size and thickness, which is provided at its
40 broadened end, with an upwardly extending flange 2, to engage one side of the base of a rail, the plates being adapted to be placed on the ties and under the rails so as to support the latter. Each plate is provided at
45 a suitable distance from its broadened end with an opening 3. A tongue 5 is disposed medially of the opening 3, and projects thereinto for a considerable distance from the side 4 thereof. Near its smaller outer
50 end, each plate is provided with an opening 6 for the reception of an ordinary spike by means of which the plate may be secured on the tie. The plates extend in opposite directions from the rail, as indicated in Fig. 1,
55 so that their flanges 2, engage opposite sides of the rail base.

In connection with each plate 1, I employ a securing device of special construction. This securing device in the embodiment of the invention here shown is a spike 7, which
60 has a head 8 to engage over one side of the base of the rail, and the shank of the spike is provided with a transverse opening 9, of sufficient size to receive the tongue 5, of the plate. When the plates have been disposed
65 in place under the rail, and while their flanges 2 are at some slight distance from the base flanges of the rail, the spikes 7 are driven down into the ties through the outer ends of the openings 3, and at the outer ends
70 of the tongues 5, until the openings 9 of the spikes are in line with the said tongues. The plates are then driven endwise so as to engage their flanges 2 with opposite sides of the rail base, and to also engage their
75 tongues 5 with the openings 9 of the said spikes, and thereupon the spikes are driven home so that they secure the plates and so that their heads 8 also bear on the base flanges of the rail, and in coaction with the
80 flanges 2 secure the rail firmly in place on the plates. Ordinary railway spikes are then driven into the ties through the openings 6, of the plates, thus securing the plates in place. Since the base flanges of the rail
85 are engaged on opposite sides by the flanges 2 of the plates, and the heads 8 of the spikes 7, it will be understood that the rails are effectually secured so that they cannot possibly spread.
90

In order to release and remove the plates, the spikes are first drawn from the openings 6. A crowbar or other suitable implement is then placed behind the flange 2, of the plate and employed to push the plate
95 endwise until the tongue 5 comes out of the opening 9 of the spike 7. The said spike can then be drawn from the tie and thereafter the plate can be readily removed.

I claim:—

100 1. In combination with a tie, a pair of reversely disposed triangular plates thereon each having an opening at a suitable distance from its broadened end and a medially disposed tongue extending into the said
105 opening, a rail bearing on the broadened portions of the triangular plates and securing spikes driven into the tie, having heads engaging opposite sides of the rail base and having openings engaged by the tongues of
110 the plates.

2. The herein described rail binder com-

prising a triangular plate having an opening at a suitable distance from its broadened end and a medially disposed tongue extending into the said opening to engage an opening in a rail securing spike.

3. The herein described rail binder comprising a triangular plate, having a rail base engaging flange at its broadened end, an opening at a suitable distance from its broadened end, a medially disposed tongue,

extending into the said opening, and a spike receiving opening near the point of the said plate.

In testimony whereof I hereunto affix my signature in the presence of two witnesses. 15

JOHN CAMPBELL.

Witnesses:

GEORGE BURROWS,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
