

No. 817,336.

PATENTED APR. 10, 1906.

J. R. PRING.
RAIL JOINT.

APPLICATION FILED OCT. 18, 1905.

Fig. 1.

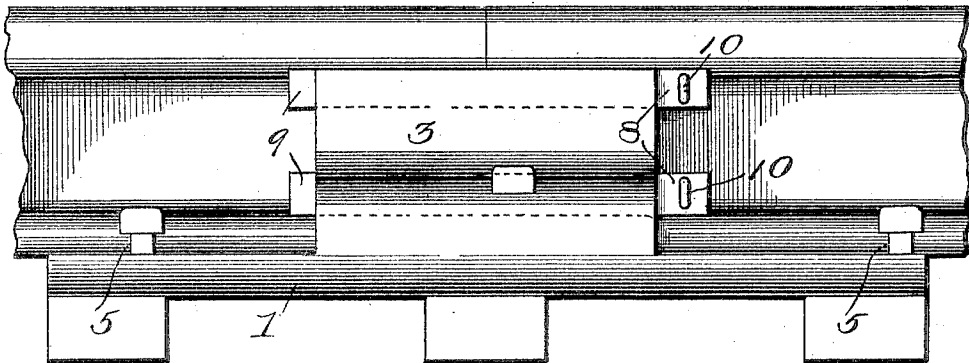


Fig. 2.

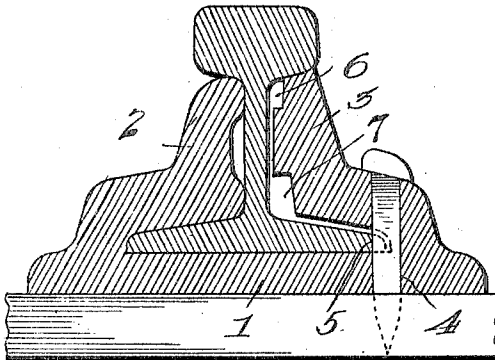


Fig. 3.

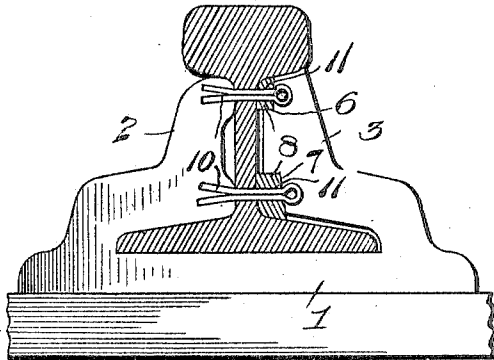


Fig. 4.

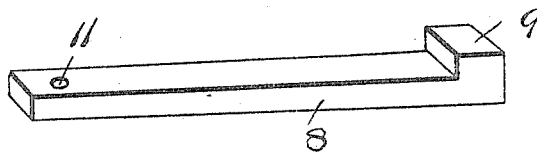
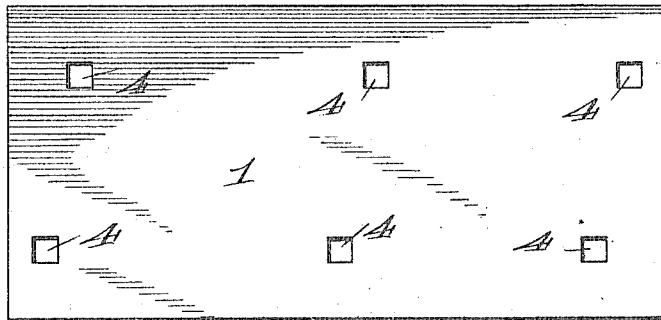


Fig. 5.



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RAIL-JOINT.

No. 817,336.

Specification of Letters Patent.

Patented April 10, 1906.

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To all whom it may concern:

Be it known that I, JOHN R. PRING, a citizen of the United States, residing at Shawnee, in the county of Pottawatomie and Territory of Oklahoma, have invented a certain new and useful Rail-Joint, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to rail-joints, the object of the invention being to provide a simple, cheap, and effective joint of the class referred to by means of which the ends of the rails are coupled together and thoroughly braced without the aid of the usual bolts, nuts, and similar fastenings.

A further object of the invention is to so construct and arrange the parts of the joint as to produce a joint which is rigid vertically, for preventing the sinking or depression of the extremities of the rails immediately adjacent to the joint, and thereby overcoming the usual clicking or pounding of the wheels as they pass over the joints.

A further object of the invention is to so construct and combine the parts of the joint that any rail throughout the entire road-bed may be taken up and replaced or renewed without disturbing the other rails.

With the above and other objects in view the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination, and arrangement of the parts, as herein fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a side elevation of the rail-joint embodying the present invention. Fig. 2 is a vertical cross-section through the joint with the keys or wedges and their retaining devices omitted. Fig. 3 is a similar section taken in line with the key-retaining devices. Fig. 4 is a detailed view of one of the keys. Fig. 5 is a bottom plan view of the joint.

Like reference-numerals designate corresponding parts in all the figures of the drawings.

Referring to the drawings, I have therein shown what may be termed a "chair," comprising a bottom plate 1 and side braces 2 and 3, formed integrally with the bottom plate 1 and extending upward from the opposite sides or longitudinal edges thereof, as shown.

The bottom plate 1 is generally made of sufficient length to rest upon three ties, although the length of said plate may be varied without departing from the principles of this invention.

Spike-receiving holes 4 are located in the bottom plate 1 at suitable points to receive the spikes which fasten the chair to the ties, and said holes 4 are set inward far enough to allow the spikes to also engage the opposite edges of the base of the rail, the said base being for that purpose provided with notches 5 in line with the holes 4. In this way the rail ends are locked to the chair and longitudinal movement or slipping of the rails prevented, except to an extent necessary for the ordinary purpose of contraction and expansion due to changes in the weather, sufficient looseness being left to admit of such expansion and contraction.

The braces 2 and 3 are considerably shorter in extent than the bottom plate 1, and the brace 2 at one side of the joint is made to accurately fit and bear against the head, web, and base-flange and form a firm and efficient support for the rail. The brace 3 at the opposite side of the joint is similar to the brace 2, except that it is rabbeted or grooved, as shown at 6 and 7, the rabbets extending the entire length of the inner face of the brace 3, immediately opposite and in line with the rounded angle between the head of the rail and the web, the other rabbet being formed also in the inner face of the brace 3, opposite to and in line with the rounded angle between the web and bottom flange of the rail, as clearly shown in Figs. 2 and 3.

Keys 8 are driven into the spaces formed by the rabbets or ways 6 and 7. These keys are made tapering and are provided at one end with a head 9, adapting them to be driven between brace 3 and the rail and also enabling them to be withdrawn or driven out of place to release the rail when repair to the road-bed is necessary. The keys 8 are driven firmly into place, and when in place they form a firm bearing between the brace 3 and the rail at the top and bottom of the web of the rail and between said brace and the head and base-flange of the rail, setting the rail over firmly against the brace 2 at the opposite side of the joint. Each of the keys 8 is held in place by passing a split pin or cotter

10 through a hole 11 in the key and also
through an aperture in the web of the rail in
line with the hole 11. After the cotter-pin
has been driven into place the ends thereof
5 are spread, the pin thus forming a retainer
for the key and preventing the accidental
displacement of the key. Furthermore, each
of the rails is held independently of the other
rails by the means described, and thus the
10 rails are prevented from creeping lengthwise,
an important factor, especially on inclines.
In other words, the rails are independently
held by the spikes under the arrangement set
forth, at the same time allowing for the nec-
15 essary expansion and contraction thereof..

Having described the invention, I claim—

1. A boltless rail-joint consisting of a chair
adapted to rest upon a plurality of ties and
embodying a bottom plate, and braces lo-
20 cated at opposite sides thereof, one brace be-
ing formed to bear against the head, web and
base-flange of the rail ends at one side of the
joint, and the other brace being provided
with a rabbet extending throughout the
25 length thereof opposite one of the angles
formed between the web and base-flange
of the rail, and a tapering key fitting into the

rabbet and forming a bearing between the
brace and the base-flange and web of the rail.

2. A boltless rail-joint consisting of a chair 30
embodying a bottom plate, braces located at
opposite sides thereof, one brace being formed
to bear against the head, web and base-flange
of the rail and the other brace being rabb- 35
beted in line with the angles between the
web, head and base of the rail, and tapering
keys fitting the rabbets and forming bearings
between said brace and rail at the points
named.

3. A boltless rail-joint consisting of a chair, 40
braces located at opposite sides thereof, one
brace being formed to bear against the head,
web and base-flange of the rails, and the
other brace being rabbeted along its upper
and inner corner or angle, a tapering key fit- 45
ted in the rabbet and forming a bearing be-
tween said brace and the head or web of the
rail, and key-retaining means.

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

JOHN R. PRING.

Witnesses:

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