

J. B. BAUM.
RAIL JOINT.
APPLICATION FILED JULY 13, 1907.

905,783.

Patented Dec. 1, 1908.

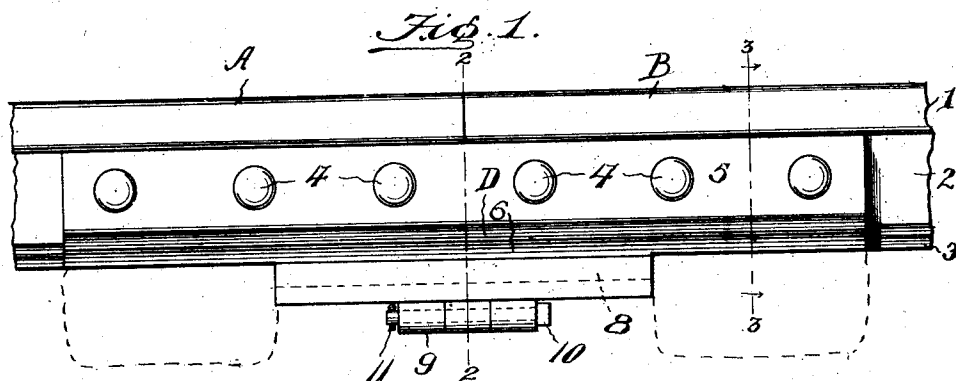


Fig. 2.

Fig. 3.

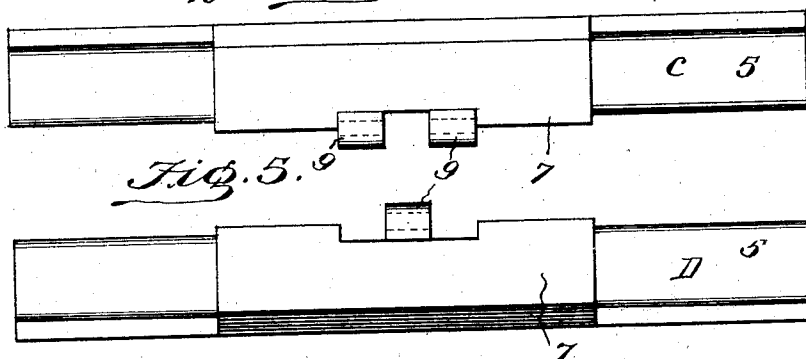
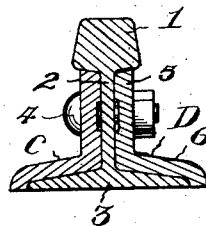
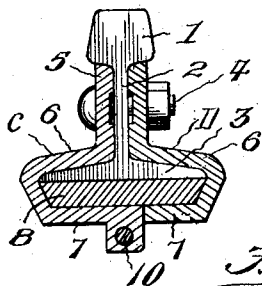
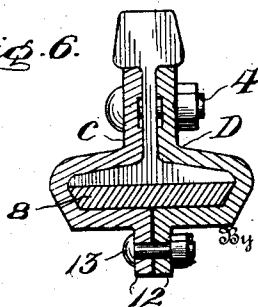


Fig. 6.



Inventor

James B. Baum,

Witnesses

J. L. Wright,
C. Bradley.

Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

JAMES B. BAUM, OF GRAND JUNCTION, COLORADO, ASSIGNOR OF ONE-SIXTH TO JAMES A. CANNELL, OF MESA COUNTY, COLORADO.

RAIL-JOINT.

No. 905,783.

Specification of Letters Patent.

Patented Dec. 1, 1908.

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To all whom it may concern:

Be it known that I, JAMES B. BAUM, a citizen of the United States, residing at Grand Junction, in the county of Mesa and State of Colorado, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to railroad track construction and more particularly to a clamp rail joint of that type in which the adjacent ends of the rail sections are clamped together by combined fish and bridge plates that serve to hold the rails in perfect alignment and to prevent sagging and noise, as the wheels of the trains pass thereover.

The invention has for one of its objects to improve and simplify the construction of devices of this character so as to be comparatively easy and inexpensive to manufacture, of durable design, and capable of being used in connection with rails of standard form.

A further object of the invention is the provision of a rail joint having combined fish and bridge plates which are connected by means of a pin located under the adjacent ends of the rails so as to prevent the plates from spreading, the parts being so designed that the rail sections can be readily laid or taken up in constructing or repairing the track.

Another object is the employment of clamping plates of the character specified, in combination with an under supporting plate disposed between the bases of the meeting ends of the rail sections and the bridge portions of the plates so as to cooperate with the latter to form a strong and substantial joint.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claim appended hereto.

In the accompanying drawing, which illustrates one of the embodiments of the invention, Figure 1 is a side elevation of a rail joint. Figs. 2 and 3 are vertical transverse sections on lines 2—2 and 3—3, respectively, of Fig. 1. Fig. 4 is a bottom plan view of one of the clamping plates. Fig. 5 is a similar view of the other clamping plate. Fig. 6 is a transverse section of a modified form of joint.

Similar reference characters are employed

to designate corresponding parts throughout the several views.

Referring to the drawing, A and B designate the meeting ends of two rail sections which are of standard construction and comprise treads 1, webs 2, and bases 3. The webs 2 are provided with apertures for receiving the clamping bolts 4 in the usual manner.

The meeting ends of the rails are secured together by combined fish and bridge plates C and D, each of which comprises a vertical fish plate portion 5 extending in the usual manner along the webs of the rail sections and having outwardly curved base-engaging portions 6 that extend over the top sides of the bases of the rail sections. The portions 5 and 6 are of any desired length and are secured on opposite sides of the rail sections by the bolts 4 that pass through apertures in the vertical portions 5. Formed integral with the portions 6 are bridge plate portions 7 that extend under the bases of the rails and are of such length as to be accommodated between two adjacent cross ties of the track. The base portions 7 meet directly under the webs of the sections and are spaced apart from the bases 3 so as to accommodate a strengthening or reinforcing supporting plate 8 which is also of a length to be accommodated between adjacent cross ties. The meeting edges of the base portions 7 are provided with registering apertured lugs 9 for receiving a longitudinally extending pin provided with a head at one end and having an aperture for receiving a cotter pin 11 at the opposite end, whereby the parts are held securely together. This hinge-like joint is disposed vertically below the webs of the rails and serves to prevent the clamping plates C and D spreading apart at the bottom.

In practice, the rail sections are laid on the cross ties in the usual manner and the clamping plates C and D applied to opposite sides of the rail sections, the supporting plate being inserted between the base portion 7 and bases of the rails of one of the clamping members before the other member is applied. The pin 10 is then inserted to connect the parts together, after which the bolts 4 are applied and the parts firmly clamped together. It will thus be seen that the rail sections can be easily and quickly united in laying a track, or disconnected when a rail sec-

tion has to be taken up for repair. The disposition of the parts is such that relative displacement of the rail sections is prevented and since perfect alinement is maintained, there is comparatively little noise and shock by the passage of the wheels over the meeting ends of the rail sections.

In the modified form shown in Fig. 6, the clamping plates C and D are formed with vertical ribs 12 that extend downwardly from the portions 7 and these ribs are apertured to receive bolts 13 which cooperate with the bolts 4 to clamp the plates and member 8 to the rail sections.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the apparatus which I now consider to be the best embodiment thereof, I desire to have it understood that the apparatus shown is merely illustrative and that such changes may be made when desired, as are within the scope of the claim.

Having thus described the invention, what I claim is:

The combination of a pair of rail sections

having apertured webs, fish plates disposed on opposite sides of the webs at the abutting ends of the rail sections and provided with flanges extending the full length thereof to engage the top sides of the bases of the sections, said flanges having horizontal inwardly-extending portions disposed under and spaced from the bases of the sections and of such length as to fit between two adjacent cross-ties, a supporting plate flat on its top and bottom sides and bearing on the bases of the rails and on the said horizontal portions of the flanges and of the same length as the latter, said supporting plate being of the same width as the bases of the rail sections and having its ends coincident with the ends of the said flanges for fitting between the said cross-ties so as to be prevented from creeping by the latter, bolts passing through the fish plates and rail sections, apertured lugs formed on the meeting edges of the said horizontal portions, and a fastening passing through the apertures of the lugs.

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

JAMES B. BAUM.

Witnesses:

O. P. M. STEEL,
J. H. GALLUPE.