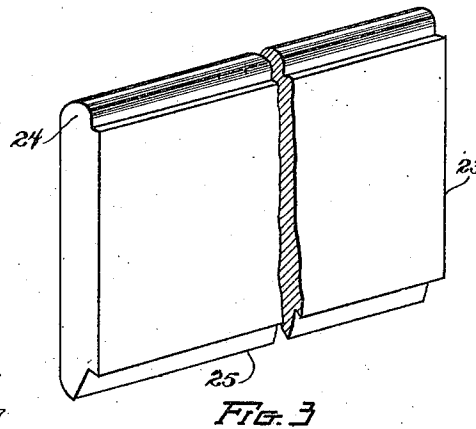
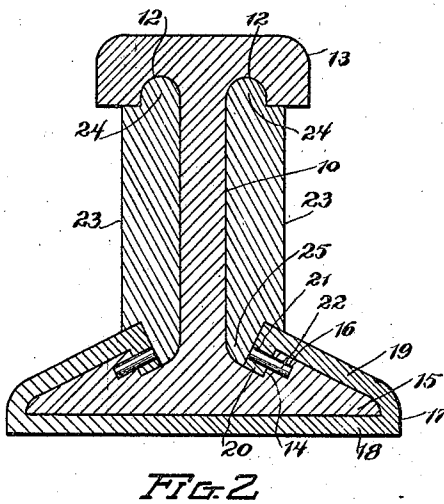
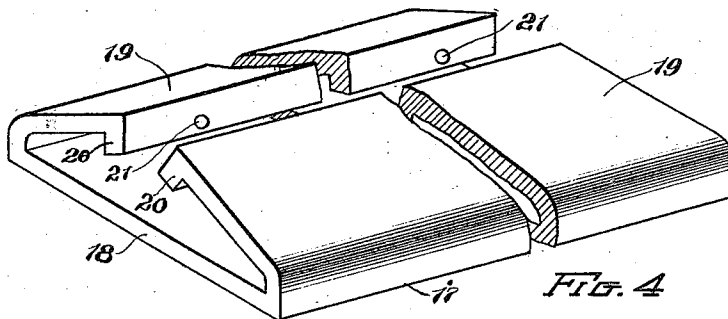
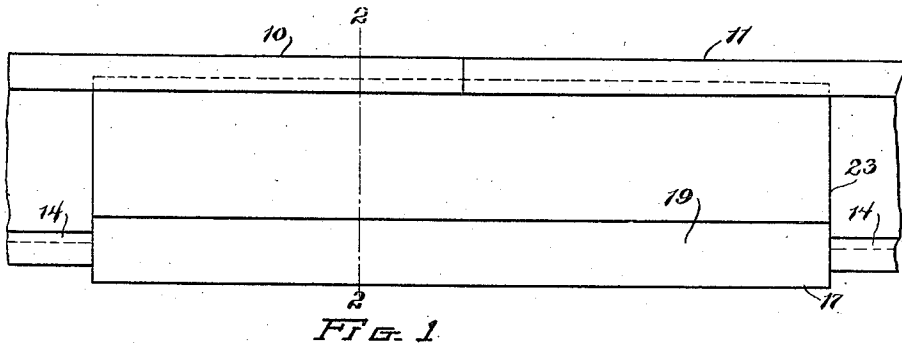


W. W. McQUAID.
RAIL JOINT.
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1,041,502.

Patented Oct. 15, 1912.



Witnesses

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UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

1,041,502.

Specification of Letters Patent.

Patented Oct. 15, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM W. McQUAID, a citizen of the United States, residing at Petroleum, in the county of Ritchie and State of West Virginia, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

An object of the invention is to provide a device for connecting rail ends without interfering with the normal expansion or contraction of the rails through heat or cold.

To accomplish the desired result, use is made of a plurality of fish plates for slidable engagement with the rail ends, the fish plates being retained in position by a sleeve mounted to connect the rail ends and retained in rigid engagement therewith by suitable keys.

In the further disclosure of the invention, reference is to be had to the accompanying drawings constituting a part of this specification in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side elevation showing a pair of rail ends connected by my device. Fig. 2 is a vertical sectional view taken on the line 2—2 in Fig. 1. Fig. 3 is a perspective view of one of the fish plates. Fig. 4 is a perspective view of the sleeve.

Referring more particularly to the views, I provide rail ends 10, 11 having recesses 12 formed in the under sides of the heads 13 thereof, recesses 14 being provided in the bases 15 of the rail ends 10, 11, apertures 16 being also provided in the bases 15 at certain intervals. A sleeve 17 consisting of a base 18 having upwardly bent inclined plates 19 formed thereon, the said plates being provided at their free edges with flanges 20 having apertures 21 therein, is adapted for slidable engagement with one of the rail ends, and then with the other rail end, keys 22 being mounted in the apertures 21 and adapted to extend into the apertures 16 in the bases 15 of the rail ends, the flanges 20 being mounted in the recesses 14 formed in the rail ends. Mounted between the heads of the rail ends and the bases thereof and

on both sides of the webs of the rails are fish plates 23, provided at their upper edges with flanges 24 adapted to be received in the recesses 12 and at their lower edges with flanges 25 adapted to engage the flanges 20 of the sleeve 17.

One of the methods of mounting my device on the rail ends 10, 11 is to first mount the keys 22 in the apertures 21 of the flanges 20, and the sleeve 17 is then slid into engagement with the base 15 of the rail end 11 until the keys 22 at one end of the sleeve 17 register with the apertures 16 in the base of the rail end, the keys being then pushed into the apertures 16 in the rail end 11 to lock the sleeve 17 to the rail end.

The fish plates 23 can then be slid into engagement with the rail end 11 beyond normal position, after which the rail end 10 is slidably engaged with the sleeve 17, the keys 22 at the other end of the sleeve being adapted to register with the apertures 16 in the rail end 10 so that the keys 22 can be pushed into the apertures, thus locking the sleeve 17 to the rail ends 10, 11 after which the fish plates 23 are moved so that equal portions of the fish plates will be on both sides of the point of connection of the rail ends as will be readily understood by referring to Fig. 1.

I claim:—

1. In combination with rail ends having recesses in the heads thereof and recesses in the bases thereof, a sleeve mounted to slidably engage the bases of the rail ends, apertured flanges formed on the sleeve and received in the recesses in the bases of the rail ends, keys mounted in the apertures of the said flanges and adapted to extend in the apertures in the bases of the said rail ends to lock the said sleeve to the bases of the rail ends, fish plates mounted to slidably engage the rail ends and the said sleeve and flanges formed on the upper and lower edges of the fish plates and adapted to be received in the recesses in the heads and bases of the rail ends respectively.

2. A rail joint comprising a sleeve, upwardly extending inclined plates formed on the said sleeve, laterally extending flanges

formed on the free edges of the said plates and provided with apertures, the said sleeve being adapted for engagement with the bases of rail ends, fish plates for slidable engagement with the rail ends and keys mounted to extend through the apertures in the said flanges and into apertures in the bases of the rail ends to retain the said sleeve in

rigid engagement with the bases of the rail ends.

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

WILLIAM W. McQUAID.

Witnesses:

M. J. Cox,

W. D. BRADEN.

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