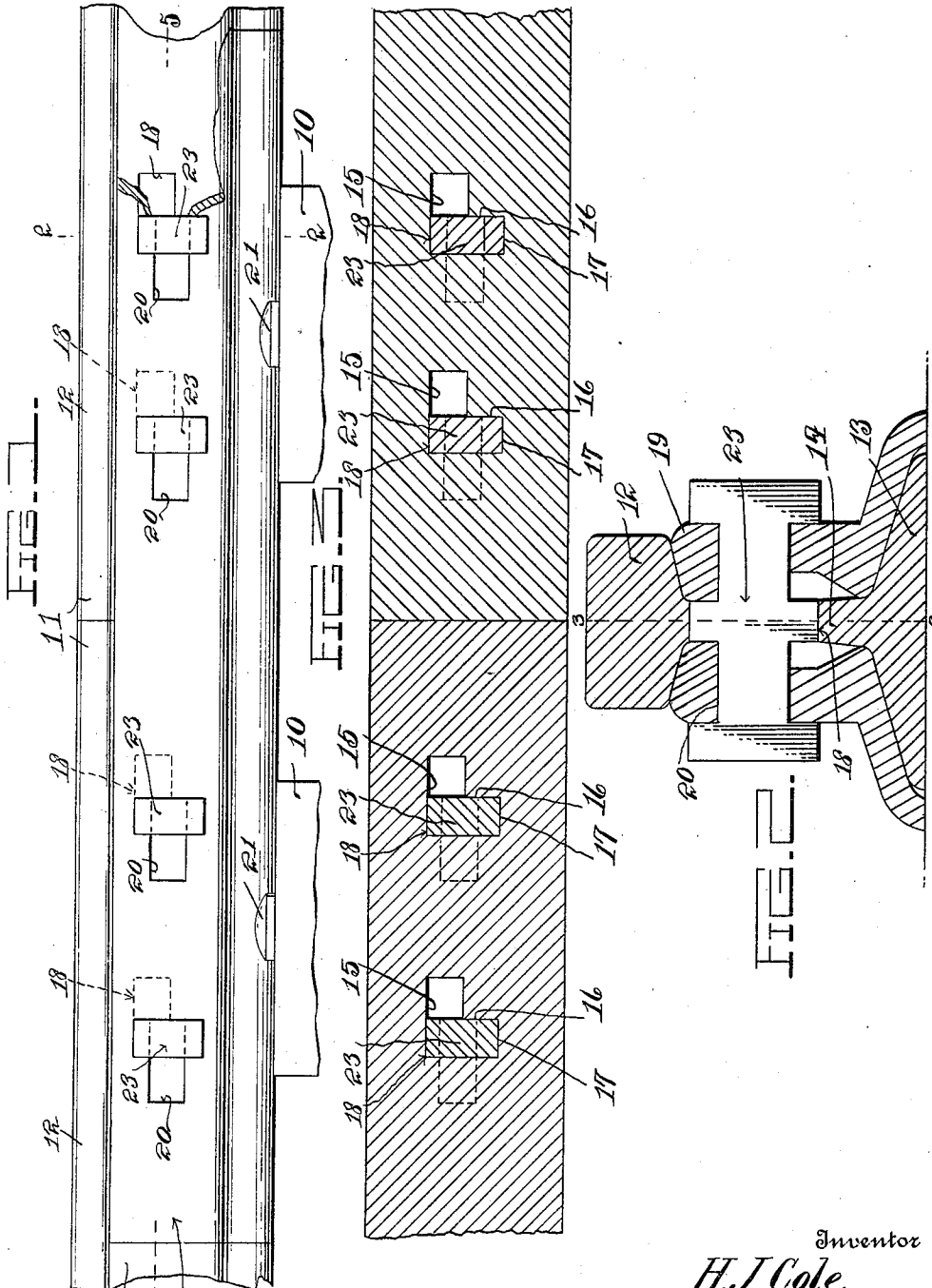


1,052,711.



Witnesses
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RAILWAY JOINT.

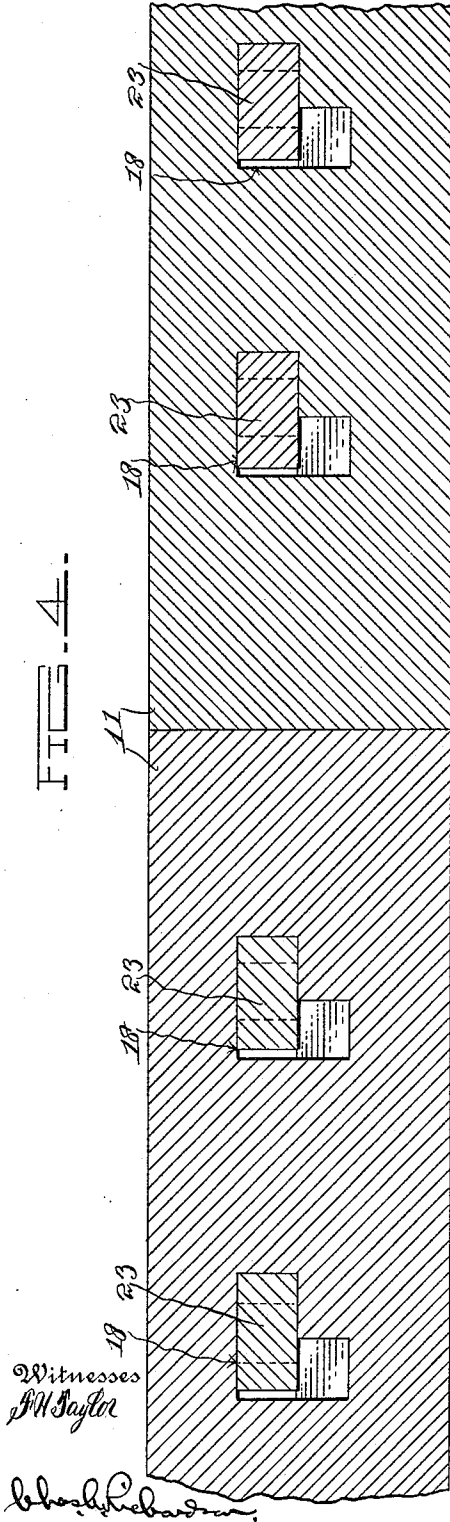
APPLICATION FILED MAY 13, 1912.

Patented Feb. 11, 1913.

2 SHEETS—SHEET 2.

1,052,711.

FIG. 4.



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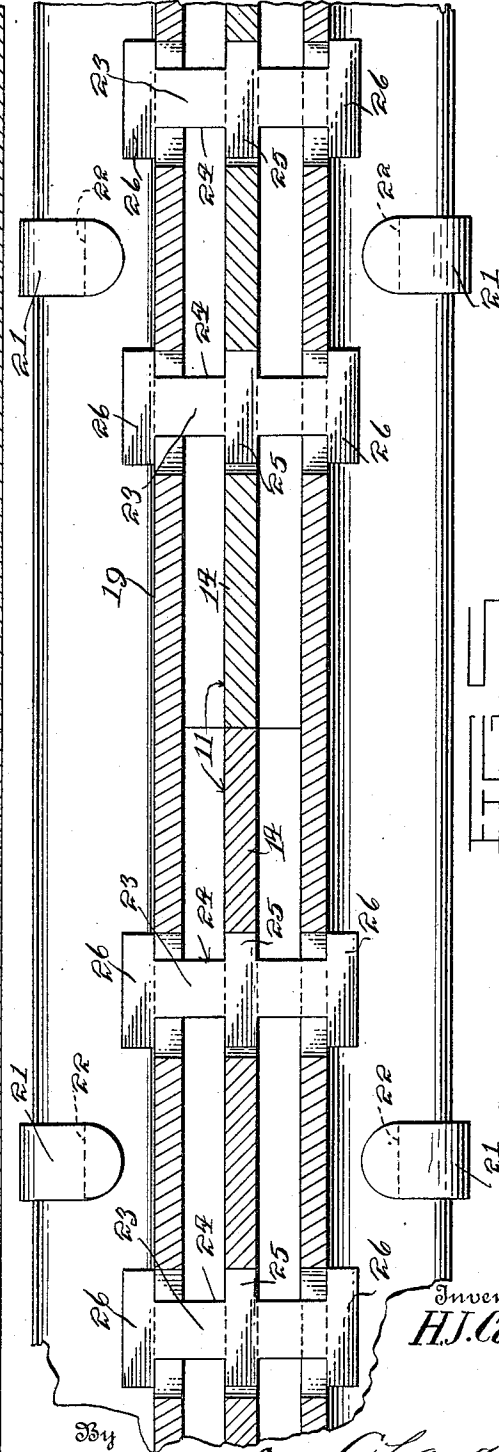


FIG. 5.

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UNITED STATES PATENT OFFICE.

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RAILWAY-JOINT.

1,052,711.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed May 13, 1912. Serial No. 696,947.

To all whom it may concern:

Be it known that I, HENRY J. COLE, a citizen of the United States, residing at Gainesville, in the county of Cooke and State of Texas, have invented certain new and useful Improvements in Railway-Joints, of which the following is a specification.

This invention relates to new and useful improvements in railway joints.

An object of this invention is the provision of a rail joint which is provided with a novel locking means whereby the fish plates will be held in engagement with the meeting ends of a pair of rails preventing any undesired disconnection of the latter.

Another object of this invention is the provision of a locking key for preventing the displacement of the fish plates in a rail joint from the meeting ends of a pair of rails, the said fish plates and rails being of such construction that the locking key when applied thereto will be held against displacement therefrom.

A further object of this invention is to improve and simplify devices of this character, rendering them comparatively simple and inexpensive to manufacture, reliable and efficient in use and readily operated.

With the above and other objects in view, this invention resides in the novel features of construction, formations, combinations and arrangements of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my invention. Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a longitudinal sectional view taken on the line 3—3 of Fig. 2. Fig. 4 is a view similar to Fig. 3 showing the fish plates in a different position, and Fig. 5 is a horizontal sectional view taken on the line 5—5 of Fig. 1.

Referring to the accompanying drawings throughout the several views, the numeral 10 designates generally a plurality of cross ties upon which are located the meeting ends of a pair of rails 11. These said rails 11 each comprise a head 12 and base flanges 13 united by the customary connecting web 14.

The connecting webs 14 of the rails 11

are formed with longitudinally extending elongated slots 15, the like ends of which are off-set as at 16 to produce depending lateral extensions 17 which together with the said slots 15 produce inverted L-shaped slots 18, the opposite sides of which are of equal length as clearly shown in the drawings.

The customary fish plates 19 engage the opposite sides of the connecting webs 14 and base flanges 13 and are formed with longitudinal elongated slots 20 equal in length to the slots 15 and adapted for registration therewith. These fish plates 19 are secured to the ties 10 by the usual spikes 21 which engage the notches 22 provided in the lower edges of the said fish plates 19. The fish plates 19 are held in engagement with the rails 11 by a plurality of locking keys 23 provided and constructed for interlocking engagement with the slots 18 and 20. These locking keys 23 are substantially rectangular in shape being of a width equal to the length of the slots 15 and 20 and of a thickness equal to the width of the said slots 15 and 20. The opposite edges of the keys 23 are formed adjacent their terminals with oppositely disposed notches 24 which produce lugs 25 and 26 the former of which are disposed intermediate the ends of the said keys 23 in equi-spaced relation from the lugs 26 which are formed at the terminals of the keys. The lugs 25 are of a width equal to the thickness of the connecting web 14 while the notches 24 are of such width that the inner ends of the lugs 26 will contact with the outer faces of the fish plates 19.

The device is used as follows: The fish plates 19 are placed in their proper relation to the meeting ends of the rails 11 with the slots 20 in alinement with the slots 15 and the keys 23 are inserted therethrough until the lugs 25 register with the off-set portions 16 of the said slots 15. The keys 23 are then rotated so that the adjacent lugs 25 are forced into the extension 17 of the slots 15 and until the adjacent sides of the said keys 23 contact with the vertical sides of the slots 18. The fish plates are then slid longitudinally of the rails 11 until the ends of the slots 20 contact with the sides of the keys 23 which obviously as clearly shown in the drawings prevents any further rotation of the keys 23. The fish plates 19 are then

secured to the ties 10 by the spikes 21 which holds the several parts against any undesired displacement.

It should be understood in this connection that various minor changes in the details of construction can be resorted to without departing from or sacrificing any of the advantages of the invention.

From the foregoing disclosures taken in connection with the accompanying drawings it will be manifest that a rail joint of the nature described is provided which will fulfil all of the necessary requirements of such a device.

Having thus fully described this invention what I claim as new and desire to protect by Letters Patent is:—

1. The combination with the meeting ends of a pair of rails, said rails having longitudinal slots formed therein, said slots being off-set to produce L-shaped slots, of a pair of fish plates engaging said rails, said fish plates having slots formed therein for registration with the like sides of the L-shaped slots, keys disposed within said slots, said keys having lugs formed thereon for interlocking engagement with the edges of the slots upon the rotation of the keys and means for preventing the displacement of the keys.

2. The combination with the meeting ends of a pair of rails, said rails having slots formed therein, said slots being off-set to produce L-shaped slots having equal lengthed sides, fish plates engaging said rails, said fish plates being formed with slots equal in size to the upper portions of the first mentioned slots formed in the rails, keys disposed within said slots, said keys being in cross section equal in size to the slots formed in the fish plates, said keys being provided with notches producing resultant lugs, the inner of said lugs being arranged for engagement with the off-set portion of the slots formed in the rails and the outer of the lugs adapted to engage the outer sides of the fish plates at the edges of the slots upon the rotation of said keys, said fish plates being slidable whereby the ends of the slots formed therein will engage the adjacent sides of the keys and by the engagement of the inner lugs with the off-sets of the first-mentioned slots, hold the keys against rotation.

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

HENRY J. COLE.

Witnesses:

O. H. SMOAT,
M. M. WEAR.

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