No. 743,811. PATENTED NOV. 10, 1903.

O. D. BINETT.

DEVICE FOR REPAIRING OR SPLICING RAILS.

APPLICATION FILED APR. 2, 1903.

NO MODEL.

Fig. 1.

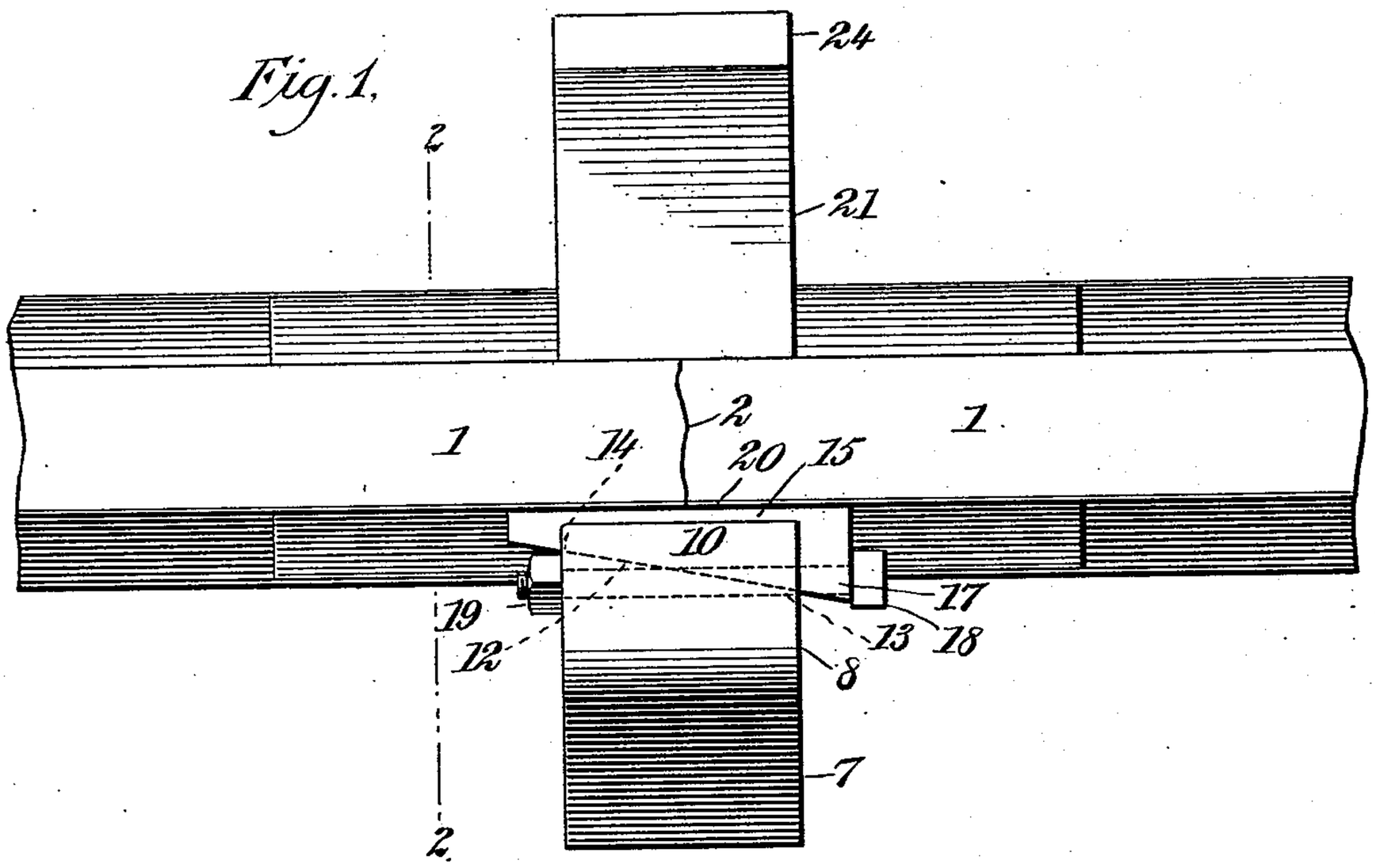


Fig. 2.

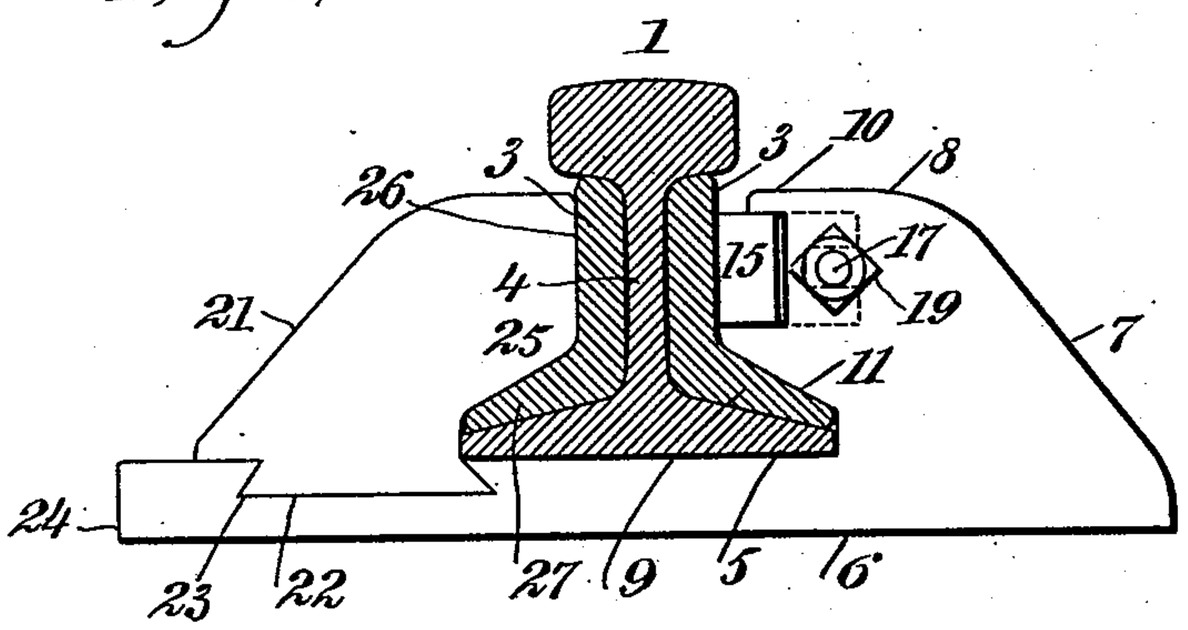
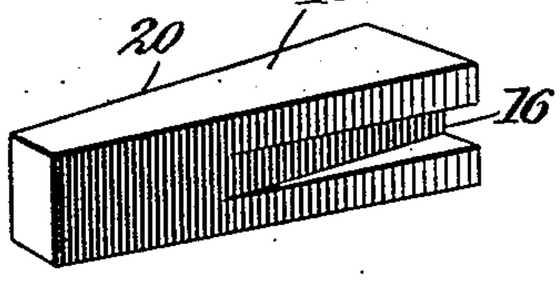


Fig. 3.



WITNESSES:

Edward Thorpe.

E. E. Ellis

INVENTOR

Oliver D. Binett

BY Munn & Co

ATTORNEYS.

No. 743,811. Patented November 10, 1903.

UNITED STATES PATENT OFFICE.

OLIVER D. BINETT, OF NEW YORK, N. Y.

DEVICE FOR REPAIRING OR SPLICING RAILS.

SPECIFICATION forming part of Letters Patent No. 743,811, dated November 10, 1903.

Application filed April 2, 1903. Serial No. 150,735. (No model.)

To all whom it may concern:

Be it known that I, OLIVER D. BINETT, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Device for Repairing or Splicing Rails, of which the following is a full, clear, and exact description.

This invention relates to devices for repairing or splicing broken rails; and it consists substantially in the construction, organization, and combinations of parts hereinafter particularly described and claimed.

It frequently happens that railway-rails become broken intermediate the ends of joints thereof due to various causes—as, for instance, when subjected to undue lateral strains or pressure exerted thereon by trains passing over the same, and more especially is this true in climates which are subject to rapid alterations or changes of temperature, it being a well-known fact that serious accidents have often resulted from such causes notwithstanding that different expedients have been resorted to for the purpose of preventing the same.

The principal object of the present invention is to provide a device or means by which a broken rail may be quickly repaired in a manner to render the same equally as safe for its purpose as in the original or unbroken form thereof and also to provide a device of this kind which is simple in construction and organization, besides being comparatively cheap to manufacture and comprising but few parts, which are not liable to get out of order.

A further object is to provide a device of the character referred to which may be readily applied for the execution of the intended function thereof without the necessity of detaching the rail or any portion thereof for that purpose.

A still further object of the invention is to provide a device of this kind which is strong and durable, besides possessing the capacity for long and continued service.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of adjacent portions of a broken rail having my improved splicing device applied thereto. Fig. 2 is a transverse sectional elevation of the rail, taken on the line 2 2 of Fig. 1 and showing my improved device in elevation from one end; and Fig. 3 is a view in perspective of a wedge employed for securely holding together the several parts of the device on either side of a broken rail.

Before proceeding with a more detailed description it may be stated that in the embodiment of my improvements herein shown I employ a suitable chair for the rail, which is specially constructed, by which to enable a member thereof to be inserted beneath the base of the rail at the broken part thereof, and I also provide specially-constructed coacting devices by which the said chair is securely held in position and by which also the adjacent portions of the rail at the break therein are held in rigid relationship, so as not to interfere with the travel thereover of wheels of the car or train in the ordinary way.

The rapidity with which my splicing device may be applied in use constitutes an important factor of my improvements, since the same enables serious accidents to be frequently avoided, especially over lines of railway traversed by trains following closely one upon the other in point of time.

While I have herein represented a certain preferred embodiment of the device, it will be understood, of course, that I am not limited to the precise details thereof in practice, since immaterial changes therein may be resorted to coming within the scope of my invention.

Specific reference being had to the accompanying drawings, 1 1 represent portions of a rail, shown at 2 to be broken transversely at some point intermediate the ends of the rails, and 3 3 indicate fish-plates applied to either side of the web 4 of the rail, so as to extend on either side of the said break 2 in the rail. Inserted beneath the base 5 of the rail, also at the break 2 therein, is a base member 6 of a chair 7, formed with an upwardly-projecting portion 8 slightly overhanging the base-flange 9 of one of said fish-plates, as indicated at 10, for instance, said

upwardly-projecting portion being recessed or undercut at 11, by which to adapt the same to the general formation of both the said base-flange of the adjacent fish-plate and the corresponding portion of the base 5 of the said rail. The said overhanging part 10 of the upright portion of the base member 6 is formed with a longitudinal rectangular recess, the inner vertical face 12 (see dotted lines, Fig. 1) of which is beveled or inclined inwardly from the point 13 to the point 14, (also see dotted lines, Fig. 1,) and working longitudinally in said recess is a wedge 15, the outer face of which is inclined in correspondence with the said inclined vertical face 12 of the recess, as shown, and working partly in a recess 16 in the wedge and partly in a corresponding recess (not shown) in the said overhanging part 10 is a longitudinal pin or rod 17, provided at one end with a head 18 abutting the broader end of the wedge and being threaded at its other end and provided with a nut 19 thereon, by the screwing up of which the said wedge may be forced very tightly within the recess in which the same works and also thereby forcibly carried into contact along the inner longitudinal edge 20 thereof with the adjacent fish-plate. The form of the recess 16 in the wedge is clearly indicated in Fig. 3, and from this view the corresponding recess referred to as being formed in the said overhanging part 10 will be clearly understood without further explanation. As a means of resistance to the forcible insertion of the wedge in the manner set forth I employ on the opposite side of the break 2 in the rail a removable block 21, which is provided on the under surface thereof with a flaring tenon 22, fitting a mortise 23, formed in the upper surface of a lateral extension 24 of the base member 6, the said removable block being also formed with an overhanging portion 25, adapted on its vertical and undercut surfaces to fit closely against corresponding vertical and outwardly and downwardly inclined surface portions 26 27, respectively, of the adjacent fish-plate 3, substantially as shown in Fig. 2.

From this construction it will be seen that the several parts or elements of the device may be quickly applied to the broken portion of the rail for the purpose of mending or splicing the same and also that whenever it is desired to remove the device from about the break it is simply necessary first to loosen the nut upon the threaded end of the rod 17, so as to enable the wedge to be loosened and withdrawn, whereupon the said removable block 21 may be removed by sliding the tenon 22 along its mortise, all of which is thought to be clearly apparent.

The device is exceedingly simple and effective for the purpose stated, and quantities of the same may be always kept on hand at the nearest available places by which to enable the mending or splicing of broken rails to be attended to with as little delay as possible.

In some instances I may dispense with the use of fish-plates altogether, in which case the wedge will be of dimensions sufficient to tightly confine the parts of the device in place substantially in the manner hereinbefore explained.

Having thus described my invention, I I claim as new and desire to secure by Letters Patent—

A device for repairing broken rails, comprising a chair having a base member adapted to be slipped beneath the base of the rail while the latter is in fixed position upon the ties, said chair having an extended portion at one side, formed in its upper surface with a mortise, and also provided with a raised or elevated portion constructed to overhang the adjacent portion of the base of the rail, and formed with a longitudinal recess having beveled vertical side, fish-plates for lapping the sides of the rail at the break therein, a wedge working in said recess, and means for tightening the same, and a removable block having a tenon working in said mortise, and constructed on its inner surface to conform to adjacent surface portions of one of the fish-plates.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OLIVER D. BINETT.

Witnesses:
GEORGE M. FORMAN,
WILLIAM A. SILENCE.