

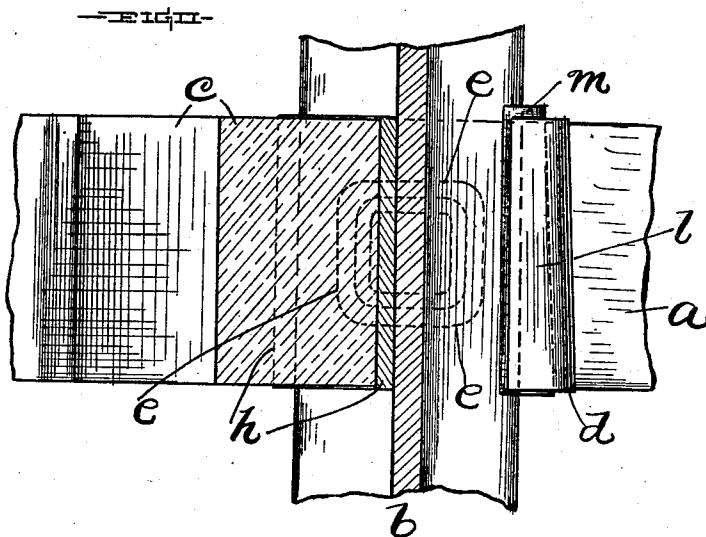
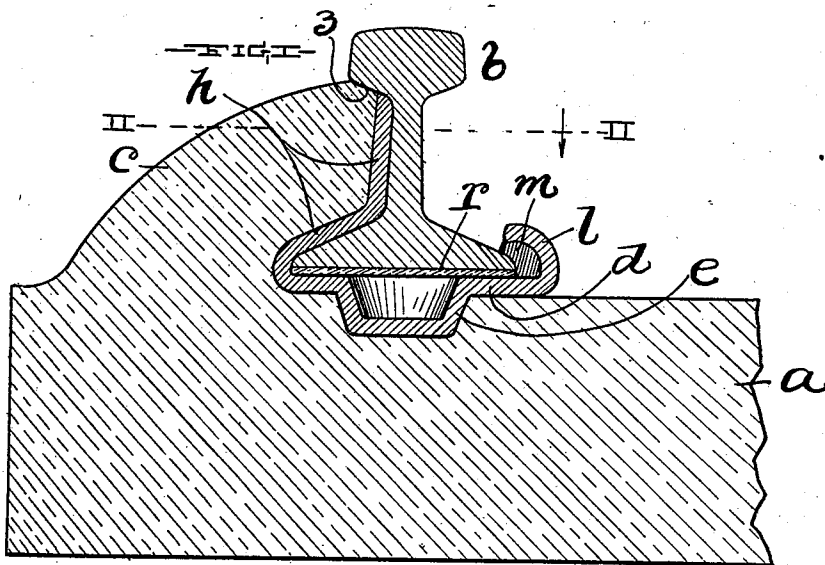
No. 710,152.

Patented Sept. 30, 1902.

W. E. JAGUES.
RAIL SUPPORT.

(Application filed Jan. 24, 1902.)

(No Model.)



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RAIL-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 710,152, dated September 30, 1902.

Application filed January 24, 1902. Serial No. 91,061. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. JAKES, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Rail-Supports; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in rail-supports, and pertains more especially to improved means for fastening the rail of a railway-track to ties of cement or artificial stone.

One object of this invention is to provide a rail-support which will effectually brace the rail at its outer side.

Another object is to provide efficient means for preventing displacement of the rail upon a railway-tie which is simple and durable in construction, readily applied, and reliable in its operation.

With these objects in view and to the end of realizing other advantages hereinafter appearing the invention consists in certain features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure I is a vertical section showing a rail secured upon a tie supporting it by means embodying my invention. Fig. II is a top plan in section on line II II, Fig. I.

Referring to the drawings, *a* designates a tie which is instrumental in supporting a rail *b*, extending over and across the said tie. The tie *a* consists, preferably, of a block of cement or artificial stone.

The tie *a* at the outer side of the rail has an upwardly and inwardly projecting lug *c*, which overhangs the base of the rail at the outer side of the rail and forms an abutment or brace for the outer side of the rail from the head to the base of the rail and (see Fig. I) snugly engages the under side of the rail-head, as at 3. The lug or projection *c* extends a suitable distance longitudinally of the rail or crosswise of the tie and prevents the rail from displacement laterally and outwardly and counteracts any tendency of the

rail to roll or tip outwardly. Preferably the rail is not seated directly upon the tie, but rests upon the upper side of a plate *d*, which is preferably a metal plate. A cushion-forming layer *r* of elastic and compressible material—such, for instance, as rubber—is preferably interposed between the rail-base and the plate *d* and reduces the wear upon the opposing surfaces of the said plate *d* and the said base to a minimum.

The plate *d* has its central portion preferably depressed, as at *e*, below and centrally widthwise of the rail. The said depressed portion *e* is preferably quadrilateral and depends and is embedded in the tie. The embedding or seating in the tie of the depressed portion *e* of the plate *d* effectually prevents displacement of the plate laterally as well as longitudinally of the tie.

The plate *d* is provided at the outer side of the rail with an upwardly and inwardly projecting flange *h*, which engages the outer edge of the base of the rail and preferably overhangs and tightly engages the upper side of the rail-base at the said side of the rail and is instrumental in holding the rail down upon the plate *d*. The flange *h* constitutes a stop arranged to prevent lateral outward displacement of the rail.

The flange *h* preferably engages the outer side of the web of the rail and preferably extends upwardly into contact with the head of the rail, as shown very clearly in Fig. I.

The lug *c* snugly engages the outer side of the flange *h*, which forms a lining between the said lug and the rail and prevents wear upon the said lug without interfering with the rail-bracing capacity of the lug.

It will be observed that by the construction hereinbefore described the plate *d* is not only prevented from displacement longitudinally and laterally of the tie, but vertical displacement of the said plate is also avoided.

The plate *d* extends inwardly a suitable distance beyond the inner side of the base of the rail, and at the said edge is bent or flanged upwardly, as at *l*, and a wedge *m* is driven between the flange *l* and the said inner edge of the rail-base, which wedge also engages the upper side of the said base, and obviously the application and operation of the said wedge results in a clamping or close engagement be-

tween the opposing surfaces of the rail-base and the flange *h*, and the wedge also constitutes a clamp which causes the rail at the inner side of its base to be tightly held down upon the said plate.

It appears almost superfluous to remark that by the construction hereinbefore described wear upon the tie and upon the rail is reduced to a minimum, that the parts are readily assembled, that bolts or similar fastening devices are rendered unnecessary, that the flange *l* of the plate *d* and the wedge *m* are adequately instrumental in preventing displacement of the rail inwardly and laterally from the rail-bracing lug *c* of the tie, and that the parts are not liable to get out of order.

What I claim is—

1. The combination, with the rail, and the tie arranged below and transversely of the rail, of means for bracing the outer side of the rail; a plate interposed between the base of the rail and the tie and provided, at one side of the rail, with a flange which is arranged opposite the side edge of the rail-base at the said side of the rail, which plate is provided, at the opposite side of the rail, with an upwardly-projecting flange, and a wedge interposed between the inner side of the last-mentioned flange and the rail-base.

2. The combination, with the rail, and the tie arranged below and transversely of the rail, of a plate interposed between the base of the rail and the tie and provided, at the outer side of the rail, with an upwardly-projecting flange extending along the rail-base at the said outer side of the rail, which plate is provided, at the inner side of the rail, with an upwardly-projecting flange, and a wedge interposed between the inner side of the last-mentioned flange and the rail-base.

3. The combination, with the rail, and the

tie arranged below and transversely of the rail and provided with a recess below the rail, of a plate interposed between the under side of the rail-base and the tie and provided, below the rail, with a depressed portion snugly engaging the aforesaid recess, means for holding the rail down upon the plate, and means for preventing upward displacement of the rail and the plate.

4. The combination, with the rail, and the tie arranged below and transversely of the rail and having a lug arranged to brace the outer side of the rail, of a plate interposed between the rail-base and the tie and having a portion or member extending into the tie, which plate is provided, at the outer side of the rail, with a flange which overhangs and extends upwardly between the aforesaid lug and the rail, and means for preventing lateral displacement of the rail inwardly from the aforesaid lug.

5. The combination, with the rail, and a tie arranged below and transversely of the rail and having a lug overhanging the base of the rail at the outer side of the rail and bracing the said side of the rail, of a plate interposed between the under side of the rail-base and the tie, which plate is provided, at the outer side of the rail, with a flange which overhangs the rail-base and extends upwardly between the outer side of the web of the rail and the aforesaid lug, and means for preventing lateral displacement of the rail inwardly from the aforesaid lug.

In testimony whereof I sign the foregoing specification, in the presence of two witnesses, this 6th day of January, 1902, at Detroit, Michigan.

WILLIAM E. JAKUES.

Witnesses:

JOHN C. HICKEY,

JAMES E. DICKINSON.