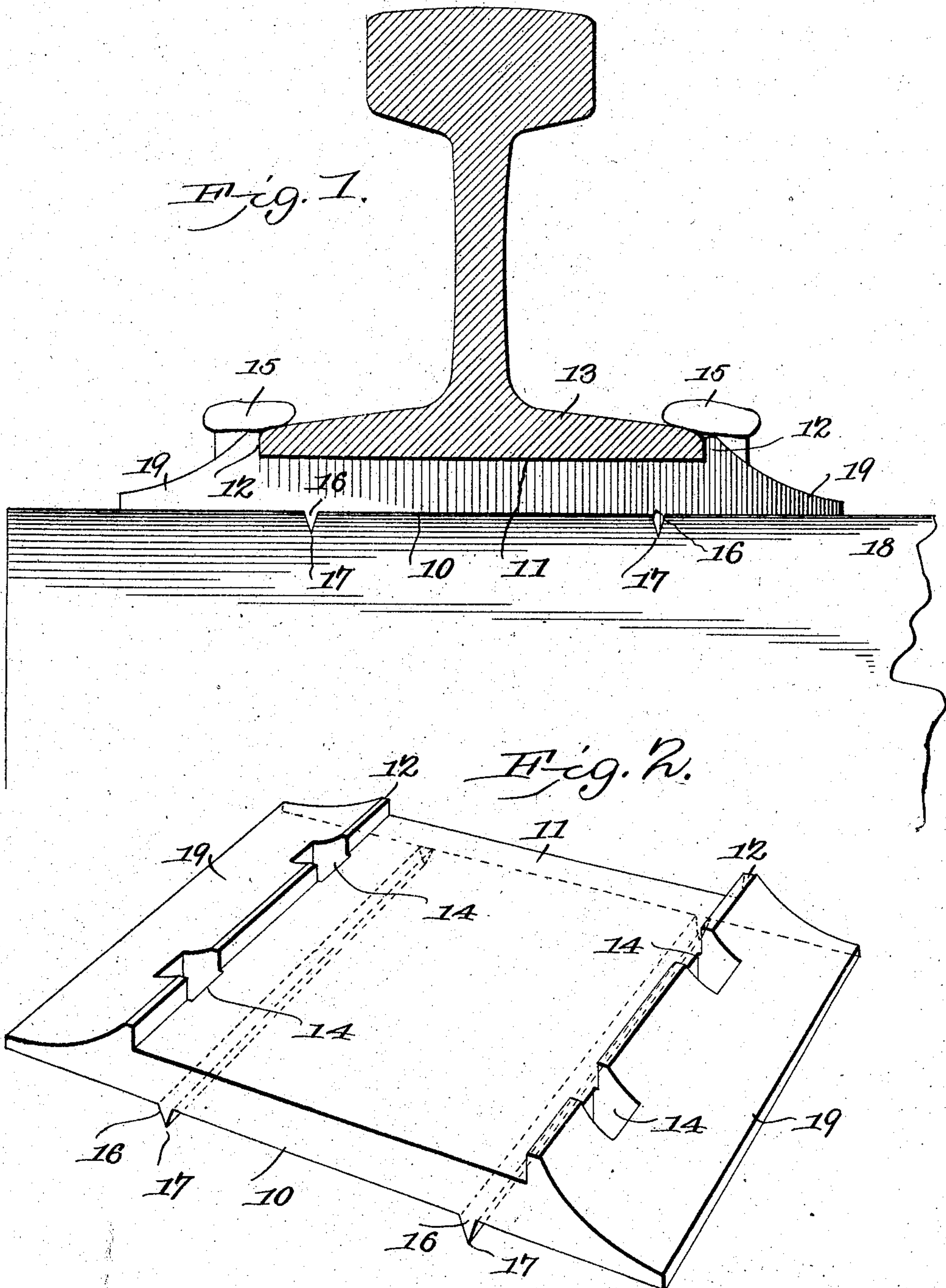


No. 815,590.

PATENTED MAR. 20, 1906.

W. B. JOHNSON.  
RAILROAD TIE PLATE.  
APPLICATION FILED SEPT. 19, 1905.



Witnesses  
*E. J. Stewart*  
*L. L. Merrill*

*William B. Johnson,*  
Inventor.  
by *C. A. Snow & Co.*  
Attorneys



# UNITED STATES PATENT OFFICE.

WILLIAM B. JOHNSON, OF GALLUP, TERRITORY OF NEW MEXICO,  
ASSIGNOR OF ONE-HALF TO ERASTUS PINNEY, OF GALLUP,  
TERRITORY OF NEW MEXICO.

## RAILROAD-TIE PLATE.

No. 815,590.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed September 19, 1905. Serial No. 279,194

*To all whom it may concern:*

Be it known that I, WILLIAM B. JOHNSON, a citizen of the United States, residing at Gallup, in the county of McKinley and Territory of New Mexico, have invented a new and useful Railroad-Tie Plate, of which the following is a specification.

This invention relates to tie-plates for railroads, and has for an object to provide a device of the class embodying new and improved features of economy, durability, utility, and efficiency.

A further object of the invention is to provide a tie-plate having ribs along the under surface parallel with and between the longitudinal edges of the rail, and in such position that the force employed in driving the ribs into the tie will be imparted directly above the ribs, the weight of the rails and the passing trains being also directly above the ribs.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made without departing from the spirit or sacrificing any of the advantages of this invention.

In the drawings, Figure 1 is a view of the improved tie-plate in end elevation applied to a tie and with a rail shown in transverse section thereon. Fig. 2 is a perspective view of the tie-plate.

Like characters of reference indicate corresponding parts in all the figures of the drawings.

In its preferred embodiment the improved device forming the subject-matter of this application comprises a plate designated as a whole by the numeral 10 and with a channel 11 formed in its upper surface, with the upstanding side walls 12 adapted to receive between them the base of the rail 13. In the adjacent sides of the channel 11 openings 14 are formed through the plate and the walls 12 to receive spikes 15, by which the plate is secured upon the tie and the rail secured upon the plate. The apertures 14 extend for a short distance into the body of the plate or inwardly from the inner faces of the rail-engaging ribs 12, so that the inner faces of the

spikes bear with full force against the edges of the tie-flanges of the rails and firmly bind them in position and readily adapt themselves to varying widths of rails. Along the under side of the plate are formed ribs 16, having sharpened longitudinal edges, as at 17, to cut into the fiber of the tie 18 and across the grain thereof. The plate outside the channel-walls is beveled or reduced in thickness at the edge, as shown at 19.

It will be readily seen that the ribs 16, being directly under the channel 11, the blows of a sledge in driving the ribs into the fiber will fall directly over the ribs, and thereby lessen the liability of breakage. Again, with the ribs 17 disposed beneath the rail 13 and the outer edges of the plate 10 reduced in thickness and weight, as shown at 19, the strain is reduced, and the tendency of the plate to be more securely embedded in the material of the tie is correspondingly increased under the influence of the blows employed to force the ribs 17 into the tie and also under the influence of the weight of the rails and the hammer-blows imparted by passing trains. The portion of the plate 10 between the rail-supporting ribs 12 being therefore relatively thick and the portions 19 outside the rail-supporting ribs being relatively thin, the downward pressure exerted by the driving of the spikes 15 and by the blows required to force the ribs 17 into the tie increases the density of the tie material between the latter ribs, and therefore insures a more secure bed for the same.

While the bottom of the channel 11 is shown as parallel with the base of the plate, it will be understood that in those positions where it is desirable to set the rail at an inclination the plane of the channel may be inclined to the plane of the base, the angle of inclination depending always on the desired inclination of the rail.

Having thus described the invention, what is claimed is—

1. A railway-tie plate having a relatively thick central portion and relatively thin side portions and with spaced ribs for bearing against the sides of the rail and disposed at the juncture of the thicker central portion and the thinner side portions, and tie-engaging ribs beneath the thicker portion and between said rail-engaging ribs.



2. A railway-tie plate having a relatively thick central portion and relatively thin side portions and with spaced ribs for bearing against the sides of the rail and disposed at  
5 the juncture of the thicker central portion and the thinner side portions, and with tie-engaging ribs beneath said thicker portion and between said rail-engaging ribs, and spike-apertures through said plate and rail-

engaging ribs and extending into the body of the plate between said ribs.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM B. JOHNSON.

Witnesses:

GUST. STROMBERG,  
PALMER KETNER.