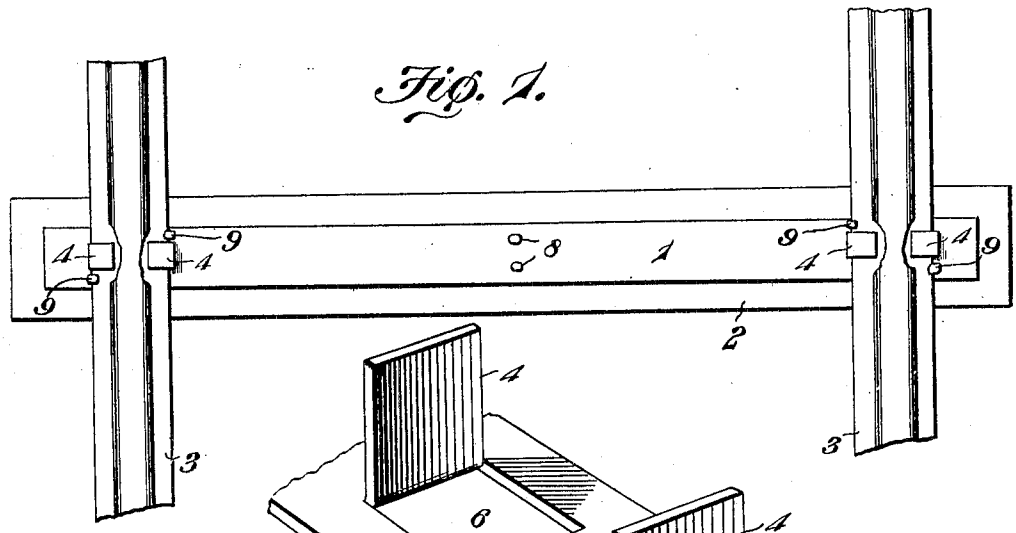
No. 856,442. PATENTED JUNE 11, 1907.

L. H. BOWMAN.

TRACK FASTENING DEVICE.

APPLICATION FILED AUG. 3, 1906.

Fig. 1.



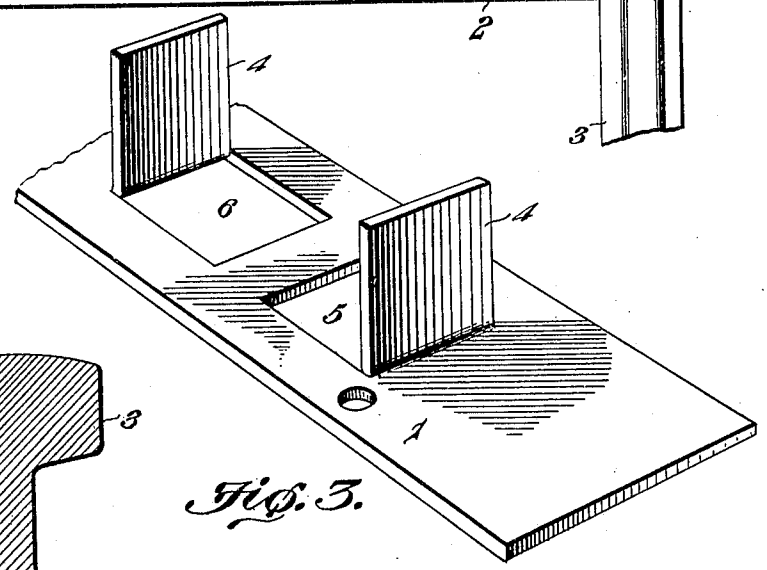


Fig. 3.

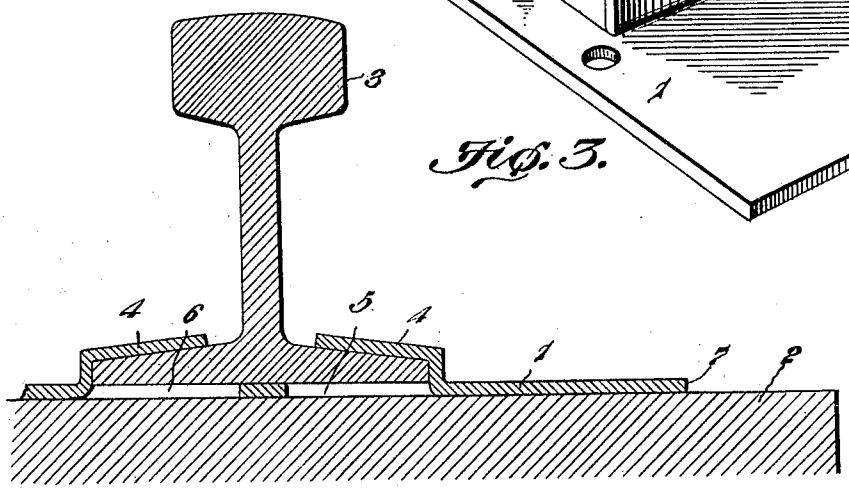


Fig. 2.

Lewis H. Bowman, Inventor.

Witnesses

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UNITED STATES PATENT OFFICE.

LEWIS H. BOWMAN, OF LOS ANGELES, CALIFORNIA.

TRACK-FASTENING DEVICE.

No. 856,442. Specification of Letters Patent. Patented June 11, 1907.

Application filed August 3, 1906. Serial No. 329,064.

To all whom it may concern:

Be it known that I, LEWIS H. BOWMAN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Track-Fastening Device, of which the following is a specification.

The invention relates to improvements in track fastening devices.

The object of the present invention is to improve the construction of track fastening devices, and to provide a simple, inexpensive and efficient track fastening device of great strength and durability designed for use on wooden cross ties, and adapted to avoid the wrecks due to the spreading of rails and capable of effectually preventing the rails from spreading under the heaviest engines.

A further object of the invention is to provide a track fastening device of this character adapted to protect a wooden cross tie, and capable of materially increasing the life of the latter and of effectually preventing the rails from spreading, should the cross ties rot at the ends.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a plan view of a track fastening device, constructed in accordance with this invention. Fig. 2 is a sectional view of one of the devices. Fig. 3 is a detail perspective view of one of the devices, the clamping jaws being arranged vertically.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a metallic plate, designed to be arranged on the upper face of a wooden cross tie 2, and constructed preferably of steel of three-eighths of an inch in thickness, but the size and weight of this rail-connecting and tie protecting plate may be varied to secure the desired strength. The plate 1, which extends entirely across the space between the rails 3 of a track, is provided at its ends with spaced rail engaging clamping jaws 4, which are formed integral with the plate.

The clamping lips or jaws, which are arranged in pairs, are substantially rectangular, and are formed by partially severing the metal, and then bending the partially severed portions upward into a vertical position, as illustrated in Fig. 3 of the drawing. The outer lip or jaw of each pair is connected with the plate at the outer side of the opening 5, formed by cutting such lip or jaw from the said plate, and the other lip or jaw is connected with the plate 1 at the inner side of the opening 6. By this arrangement, the openings in the ends of the plate 1 are covered by the rails, when the latter are in position.

The plate 1 is arranged flat upon the upper face of the cross tie, and the lower face of the said plate may be corrugated, or otherwise roughened, so that the weight of a heavy engine or train will partially embed the plate in the upper face of the cross tie, and thereby effectually prevent the plate from accidentally slipping. The plate is provided with central openings for the reception of spikes 8, which secure the plate to the cross tie before the rails are placed in position. After the rails are placed upon the plate in the space between the vertically disposed clamping jaws or lips 4, the latter are bent downwardly and inwardly into engagement with the bottom flanges of the rails, whereby the latter will be securely clamped in an upright position, and will be effectually prevented from accidentally spreading. This construction will entirely eliminate the wrecks due to the spreading of the rails. After the rails have been clamped by the lips or jaws 4, the spikes 9 are driven through the ends of the plate at the inner and outer edges of the rails. The heads of the spikes engage the bottom flanges of the rails, and serve to hold the latter and at the same time fasten the ends of the plate to the cross tie. The central spikes 8, which may be either one or two in number, will hold the plate to the tie, even should the end spikes 9 loosen, through partial decay of the end portions of the cross tie, as the end portions of the cross tie are subject to earlier decay than the central portions. The clamping jaws or lips do not interfere with the "creeping" or expansion and contraction of the rails due to the changes in temperature.

The track fastening device may be arranged at any desired points along a track, but only two are necessary between the joints of 35 foot rails, and only one on every sixth tie on curves. At the joints of the rails the

device is made twice the width of the plate, which is used between the joints, and two sets of lips or jaws are employed at each end of such enlargement plates. As this is a mere duplication of that shown in the drawing, illustration of such change is deemed unnecessary.

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

The combination with a wooden cross tie, of a continuous flat tie-protecting and rail-connecting plate constructed of a single piece of metal and arranged on and secured to the upper face of the cross tie at the central portion thereof, said plate being extended beyond the outer side of each of the rails and provided at its ends with integral clamping jaws formed by slitting the end portions of the plate, said jaws being arranged in pairs and adapted to be bent downward into engagement with the bottom flanges of the rails at the inner and outer edges thereof, and spikes located at the opposite side edges of the jaws for securing both the rails and the plate to the ends of the cross tie.

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

LEWIS H. BOWMAN.

Witnesses:
J. D. BUCKWALTER,
JESSE SIMMONS.