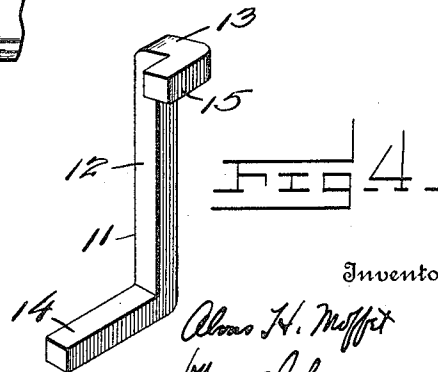
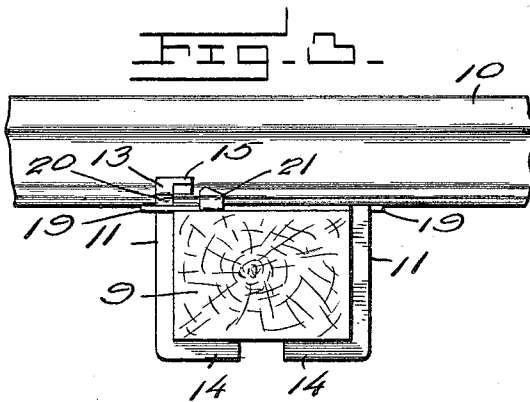
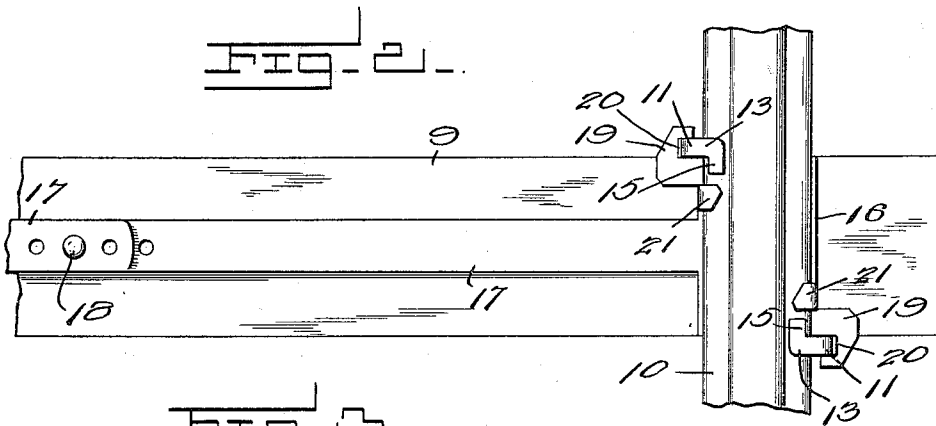
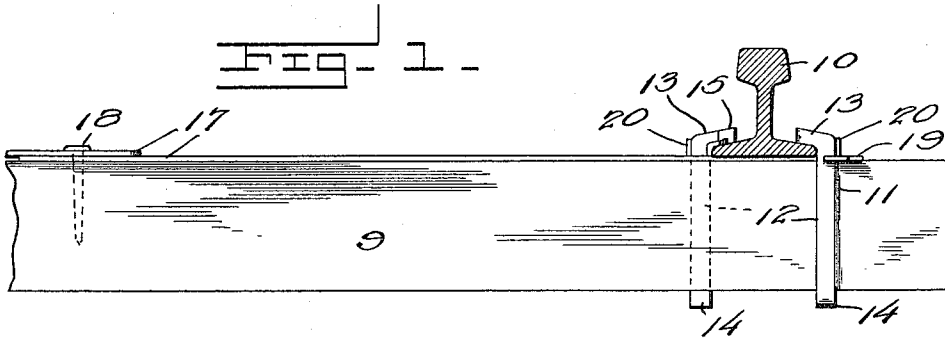


A. H. MOFFET.
RAIL FASTENING MEANS.
APPLICATION FILED MAY 25, 1912.

1,042,462.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 1.



Witnesses
E. H. McCarthy
E. H. McCarthy

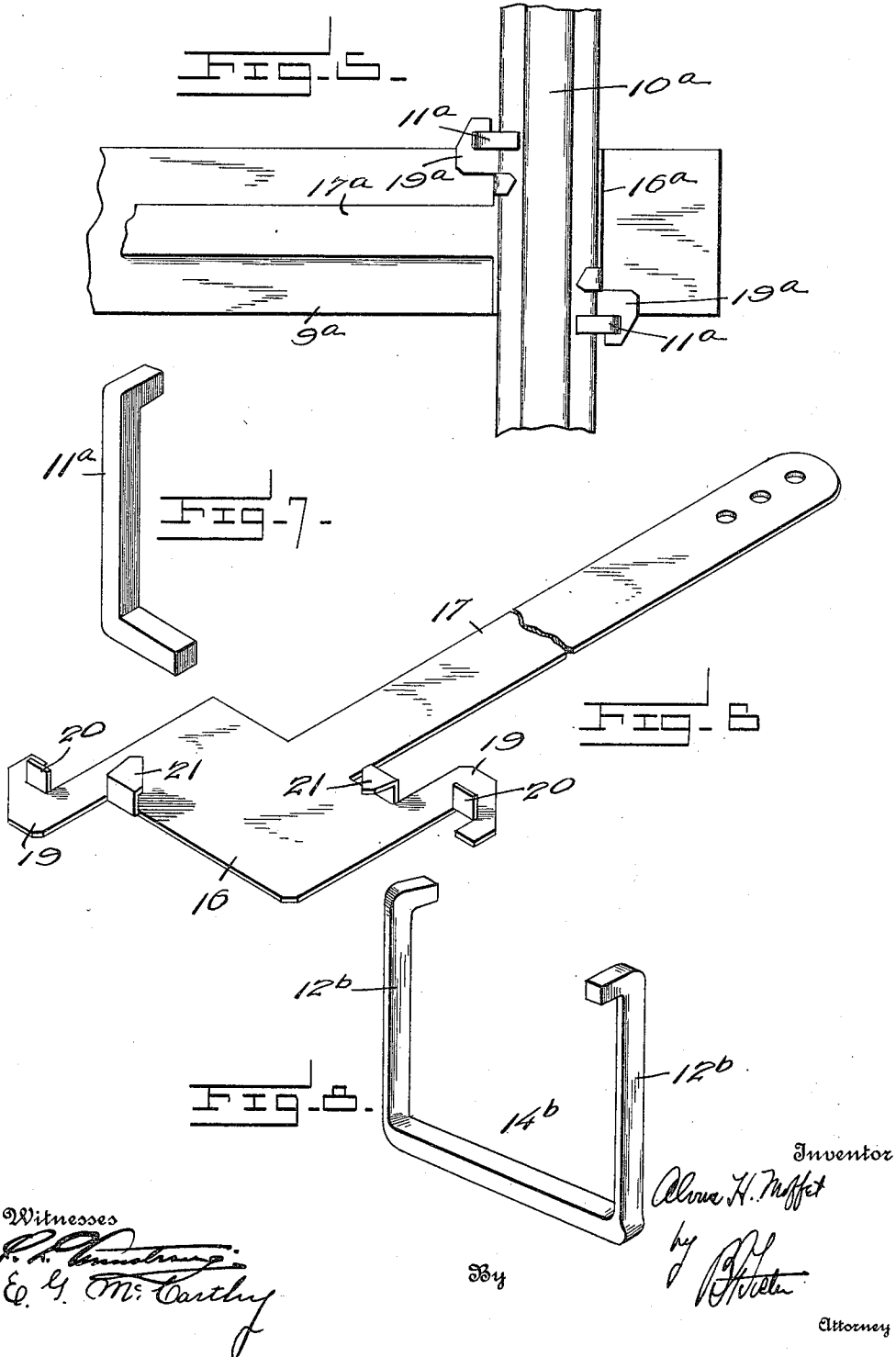
By

Inventor
Alma H. Moffet
by *W. H. H. H.*
Attorney

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Witnesses
E. H. Cunningham
E. L. McCarthy

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Inventor
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Attorney

UNITED STATES PATENT OFFICE.

ALVUS H. MOFFET, OF LARNED, KANSAS.

RAIL-FASTENING MEANS.

1,042,462.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed May 25, 1912. Serial No. 699,697.

To all whom it may concern:

Be it known that I, ALVUS H. MOFFET, a citizen of the United States, residing at Larned, in the State of Kansas, have invented new and useful Improvements in Rail-Fastening Means, of which the following is a specification.

The present invention relates to means for fastening rails to ties, and the primary object is to provide a simple and inexpensive structure that can be readily applied to and detached from an ordinary track structure, and will very effectively hold the rails in position on the ties.

In the embodiment disclosed in the accompanying drawings, Figure 1 is a side elevation of a portion of a tie, with a rail thereon held by the novel means. Fig. 2 is a plan view of the same. Fig. 3 is an end elevation. Fig. 4 is a detail perspective view of one of the holding hooks. Fig. 5 is a plan view of a slightly modified form of construction. Fig. 6 is a perspective view of one of the tie plates. Fig. 7 is a perspective view of the hook, shown in Fig. 5. Fig. 8 is a perspective view of another form of hook.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment disclosed in Figs. 1-4 inclusive, the tie is designated 9, and the rail thereon, is shown at 10. This rail is held to the tie by a pair of diagonally opposite hooks 11, the shanks 12 of which are located on opposite sides of the tie 9, the upper portions being bent inwardly, as shown at 13, so as to engage over the base flanges of the rail. The lower ends of the hooks are bent transversely of the tie, as illustrated at 14, so as to engage beneath the same. It will be also noted that the upper inturned ends 13 terminate in portions 15, that are disposed longitudinally of the rail, thus producing a comparatively long bearing which will prevent the shanks 12 from swinging outwardly, so as to cause the lower ends 14 to become disengaged from the ties. Interposed between the tie and rail, is a tie plate 16 having an arm 17, which in the normal position, is disposed longitudinally of the tie and rests thereupon, being connected, as illustrated at 18, to the corresponding arm of the tie plate for the opposite rail. The plate 16 has at its diagonally opposite corners, outstanding portions 19, in the form of hooks that are engaged behind the hooks

11, and these portions 19 furthermore are provided with sockets to receive said hooks 11. To form these sockets, lips 20 are cut out of the portions 19 and are turned up, whereby they act as reinforcements. The tie plate 16 is furthermore preferably provided with hook portions 21 that directly engage over the base flanges of the rail 10.

In applying the fastening means, above described, the tie plate is first interposed between the tie and rail, with the arm 17 disposed in angular position to the tie. The hooks 11 are then positioned, and the tie plate 17 is swung by means of the arm until said arm is arranged longitudinally upon the tie. It is then fastened to the arm of the opposite tie plate. In this action, it will be evident that the hooks 11 will be clamped effectively on the base flanges of the rail, and will be permanently secured in position, until the arm 17 is again swung outwardly. A simple and effective fastening is thus provided.

In the structure shown in Fig. 5, practically the same arrangement is employed, the only exception being that the extensions 15 are eliminated. The tie is illustrated at 9^a, and the rail at 10^c. The hooks are shown at 11^a, and the tie plate is designated 16^a. This tie plate has the usual arm 17^a, and the corner extensions 19^a engage behind the hooks. Instead of having two independent hooks, as illustrated in Figs. 1-7 inclusive, the said hooks may be formed from a single bar, as illustrated in Fig. 8. In this form, the hook shanks are illustrated at 12^b, and are connected by a lower bar 14^b, which of course extends diagonally beneath the tie and the rail. The structure otherwise is the same.

From the foregoing it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. The combination with a tie and a rail thereon, a tie-embracing rail fastening means, and a rotatable tie plate that de-

tachably engages behind the fastening means to hold them in operative relation.

2. The combination with a tie and a rail thereon, of diagonally disposed hooks engaging on the opposite base flanges of the rail and having shank portions on opposite sides of the tie, and a rotatable tie plate that detachably engages behind the hooks to hold them in operative relation.

3. The combination with a tie and a rail thereon, of diagonally disposed means engaging opposite sides of the rail and opposite sides of the tie, and a rotary tie plate interposed between the tie and rail and having portions engaging said means.

4. The combination with a tie and a rail thereon, of diagonally disposed hooks engaging over the opposite base flanges of the rail and having shank portions on opposite sides of the tie, and a rotary tie plate interposed between the rail and tie and having outstanding portions engaging the rear sides of said hooks.

5. The combination with a tie and a rail thereon, of tie-embracing rail fastening means, and a tie plate engaging the fastening means to hold them in operative relation, said plate also having means directly adjacent to the fastening means for engaging opposite sides of the rail.

6. The combination with a tie and a rail thereon, of diagonally disposed hooks engaging over the opposite base flanges of the rail and having shank portions on opposite sides of the tie, and a rotary tie plate interposed between the rail and tie and having outstanding portions at its diagonally opposite corners that engage the rear sides of the hooks, said plate also having hooks on diagonally opposite portions for engaging opposite sides of the base flanges of the rail.

7. The combination with a tie and a rail thereon, of hooks engaging over the opposite base flanges of the rail, extending downwardly on opposite sides of the tie, said hooks having inturned portions beneath the tie, and a tie plate interposed between the

tie and rail and having an inwardly extending arm, said tie plate having outwardly extending portions engaging the rear sides of the hooks and also having hooks engaging over the opposite base flanges of the rail.

8. The combination with a tie and a rail thereon, of diagonally disposed hooks embracing the tie and engaging over opposite base flanges of the rail, and a rotatable tie plate having opposite diagonal portions engaging behind the hooks for holding them in position, said plate also having hooks located adjacent the diagonal portions and engaging the rail.

9. The combination with a tie and a rail thereon, of diagonally disposed hooks embracing the tie and engaging over opposite base flanges of the rail, and means engaging behind the hooks for holding them in position, said means also engaging over the opposite base flanges of the rail.

10. The combination with a tie and a rail thereon, of a rod having its lower portion in the form of a hook engaging beneath the tie and having its upper portion bent to form a hook that is engaged over a base flange of the rail, said portion having its free terminal bent to extend longitudinally of the rail.

11. The combination with a tie and a rail thereon, of diagonally opposite hooks disposed alongside the tie and engaged over opposite base flanges of the rail, said hooks having terminal portions arranged longitudinally upon the base flanges of the rail, and a rotary tie plate interposed between the tie and the rail and having diagonally opposite outstanding portions detachably engaged behind the hooks to hold the same in operative positions.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALVUS H. MOFFET.

Witnesses:

E. B. MOFFET,
A. TIEKELL.