

No. 711,751.

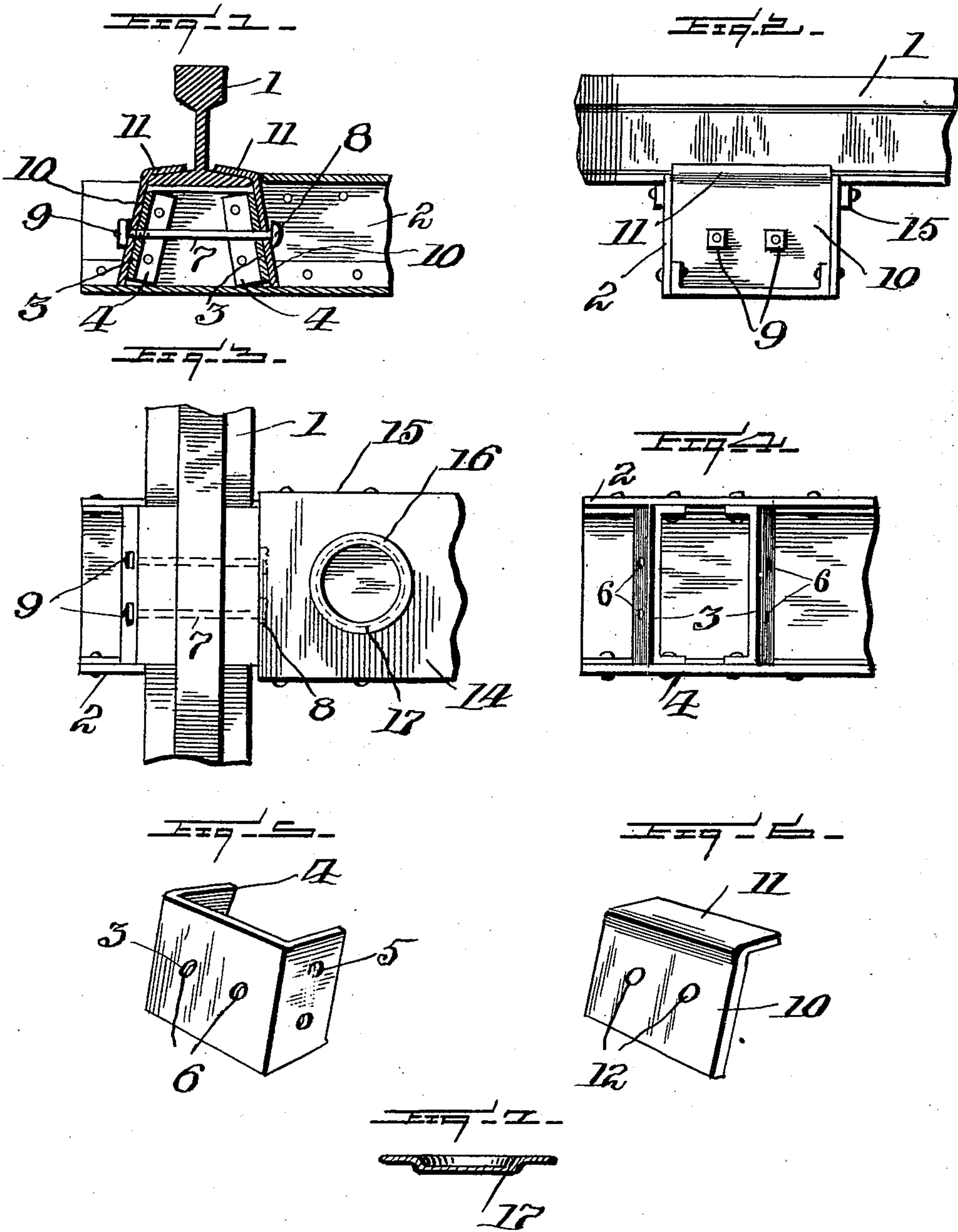
Patented Oct. 21, 1902.

G. T. ABEL.

METALLIC TIE AND RAIL FASTENER.

(Application filed Apr. 10, 1902.)

(No Model.)



Witnesses:  
J. L. Butten  
C. E. Potter,

Inventor,  
Geo. T. Abel,  
By  
Attorneys.



# UNITED STATES PATENT OFFICE.

GEORGE THOS. ABEL, OF EDINBURG, PENNSYLVANIA.

## METALLIC TIE AND RAIL-FASTENER.

SPECIFICATION forming part of Letters Patent No. 711,751, dated October 21, 1902.

Application filed April 10, 1902. Serial No. 102,182. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE THOMAS ABEL, a citizen of the United States of America, residing at Edinburg, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in metallic ties and rail-fasteners combined, and has for its object the provision of novel means whereby two rails may be securely seated in the tie; furthermore, to provide means whereby the rails may be easily removed from the ties when desired.

The invention further aims to provide a device of this character that will be extremely simple in construction, strong, durable, comparatively inexpensive to manufacture, and highly efficient in its use.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a longitudinal sectional view of my improved tie with the rail secured thereon. Fig. 2 is a side elevation of the rail and end elevation of the tie. Fig. 3 is a top plan view thereof. Fig. 4 is a similar view with the rail, clamps, and top removed therefrom. Fig. 5 is a perspective view of one of the clamps. Fig. 6 is a like view of one of the securing-plates which are attached in the tie. Fig. 7 is a detail vertical sectional view of one of the lids which are adapted to close the openings formed in the cover.

In the drawings the reference-numeral 1 indicates the rail, and 2 indicates the metallic tie, which is of the channel-bar construction. In said channel-bar are attached inclined securing-plates 3, having flanges 4, said flanges having openings 5 formed therein to receive rivets or other suitable fastening means to rigidly attach said securing-plate in the tie. A

pair of said securing-plates 3 are provided for each rail. These securing-plates also have formed therein openings 6, through which extend bolts 7, carrying on one end heads 8 and on the other end washers and securing-nuts 9. Clamps 10, carrying flanged portions 11, which engage the upper face of the base of the rail 1, are arranged adjacent to the securing-plates 3 and are likewise provided with openings 12, which correspond with the openings 6 to receive the bolt 7. The cover 14 is provided for the metallic channel-bar tie, said cover having downwardly-extending flanges 15, and having formed therein openings to receive fastening means to fasten the cover over the channel-bar tie. This cover also has large openings 16 formed through the upper face thereof, which are in close proximity to the rails, said openings serving to gain access to the bolts, these openings being usually closed by means of lids 17, which are of sufficient weight and are slightly dish-shaped for the purpose of retaining the lids in position upon the cover.

The many advantages obtained by the use of my improved device will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

The combination with a metallic channel-bar tie, of inclined plates arranged in said tie and provided with end flanges, securing means passing through the said flanges and side walls of the tie, clamps arranged on opposite sides of the said plates and having their upper ends bent to form inturned flanges to engage the base of the rail, said plates and clamps being provided with registering openings, securing-bolts extending therethrough, a flanged cover extending over said tie, and provided in its upper face with openings, and lids for said openings, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE THOS. ABEL.

Witnesses:

W. W. CUBBISON,

EDWIN D. JACKSON.