

(No Model.)

W. F. GOULD.  
RAILWAY TIE PLATE.

No. 598,222.

Patented Feb. 1, 1898.

Fig. 1.

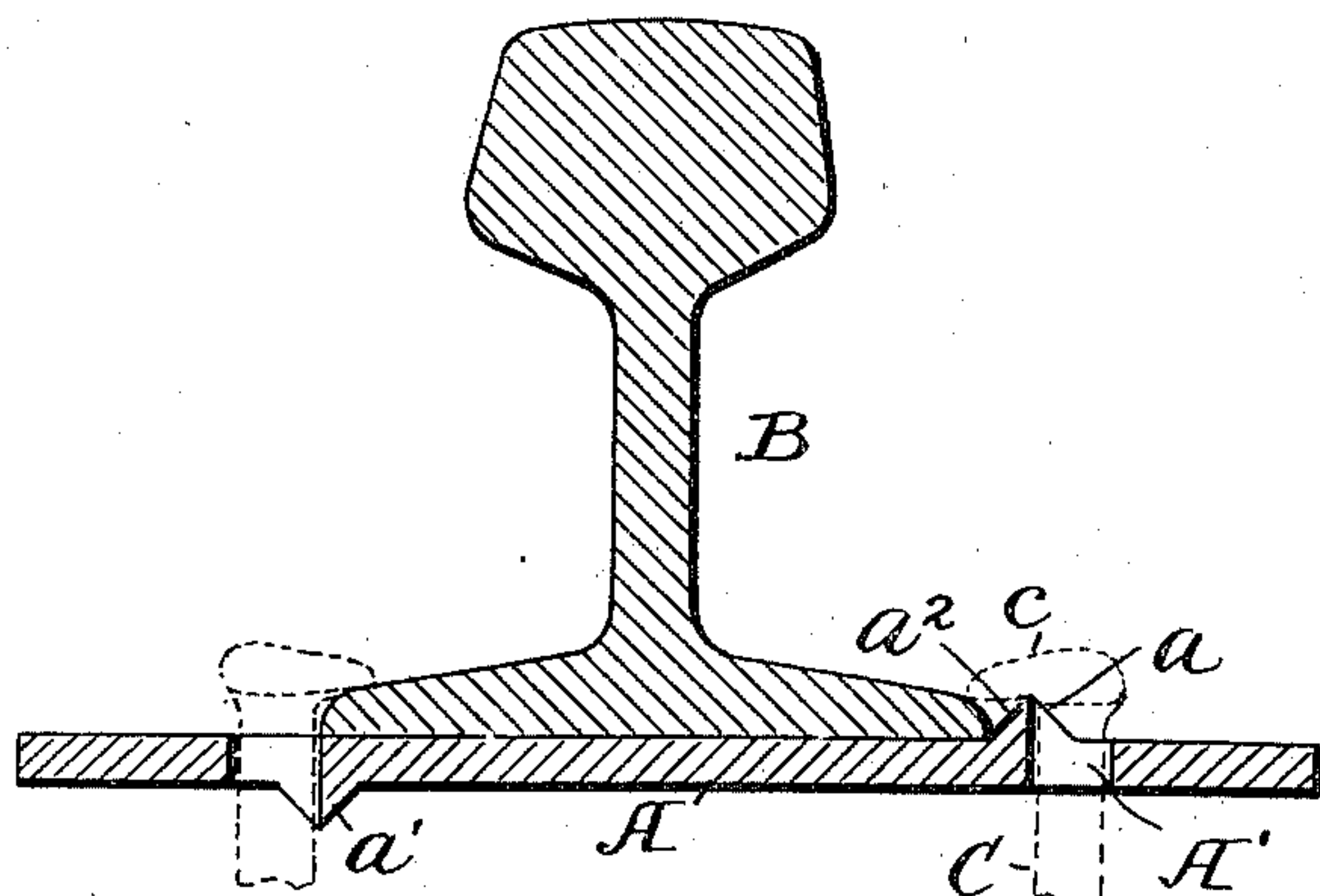


Fig. 2.

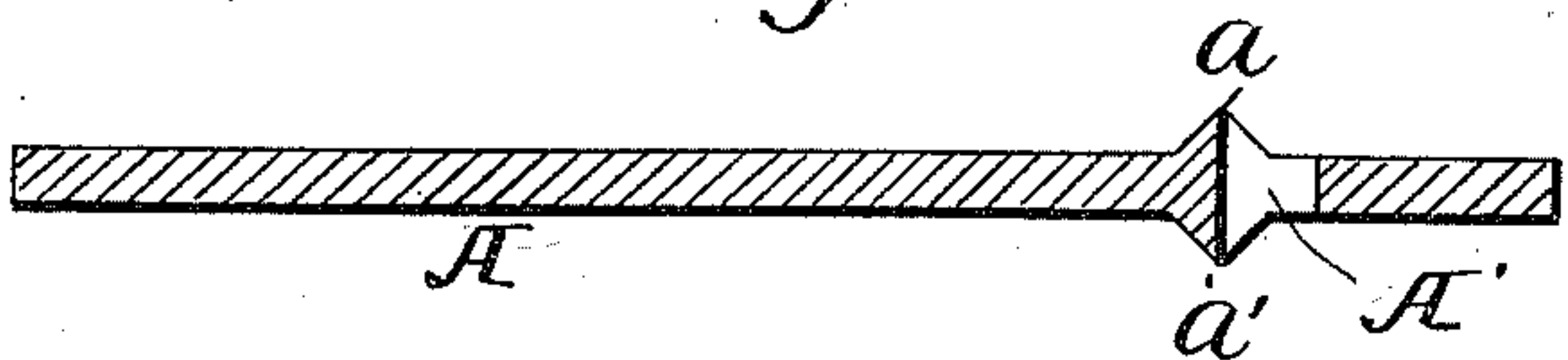


Fig. 4.

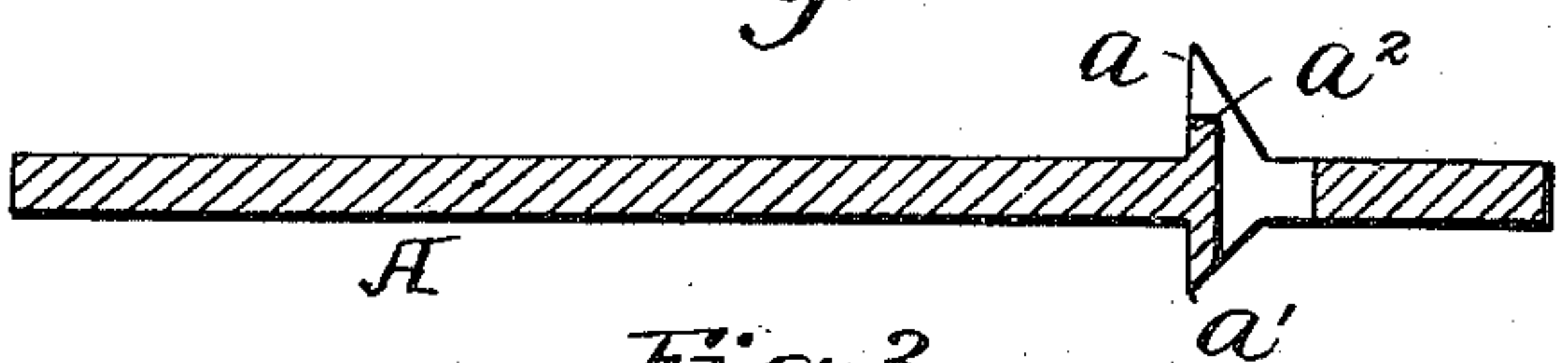
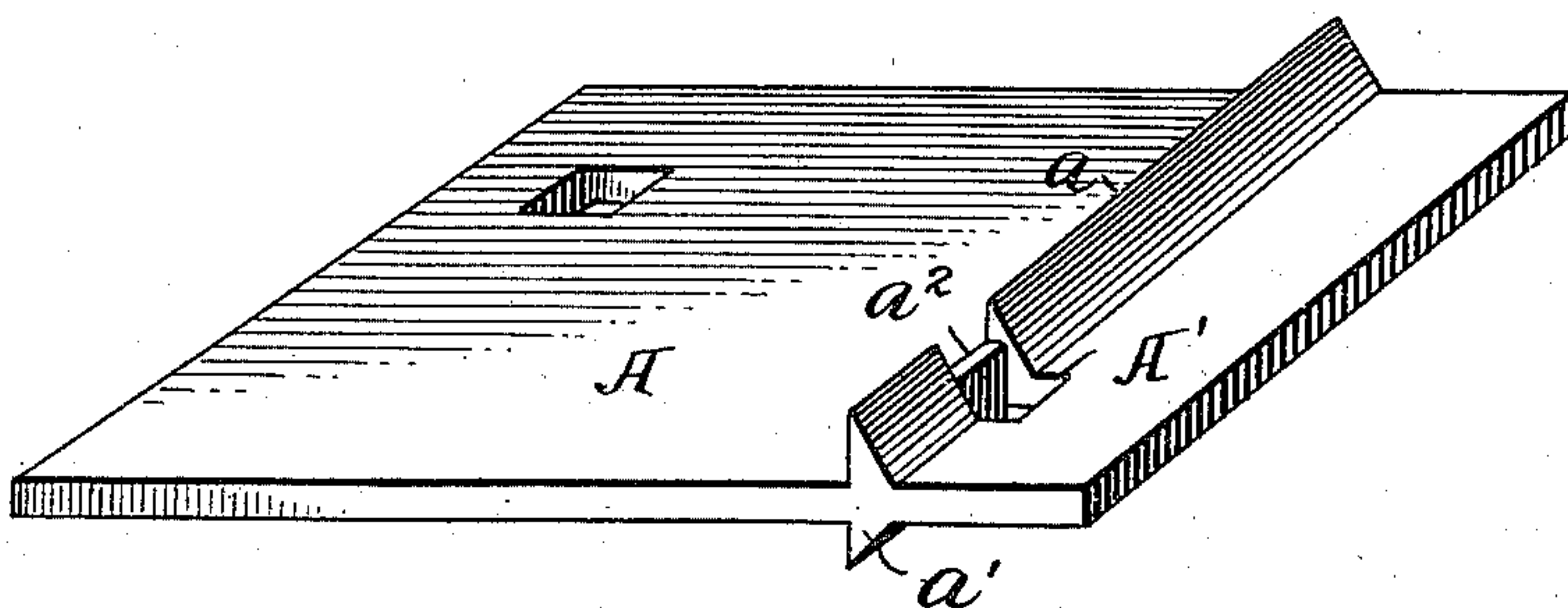


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## RAILWAY-TIE PLATE.

SPECIFICATION forming part of Letters Patent No. 598,222, dated February 1, 1898.

Application filed February 13, 1897. Serial No. 623,304. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. GOULD, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented certain new and useful Improvements in Railway-Tie Plates, of which the following is a specification.

This invention relates to tie-plates, and has for its object to improve the construction of such plates with the view of extending their usefulness and overcoming objections inherent to those heretofore used; and to these ends my invention consists in a tie-plate embodying the features of construction substantially as hereinafter more fully set forth.

In the accompanying drawings, wherein I have illustrated an embodiment of my invention to aid in explaining the principles thereof, Figure 1 is a vertical section of a tie-plate and a portion of a rail. Fig. 2 is a vertical section of another form of tie-plate. Fig. 3 is a perspective view. Fig. 4 is a vertical section of the same.

In the use of tie-plates it is common to provide them with ribs or projections, against which the outer edge of the flange of the rail bears, and it is common to secure the plate to the tie by spikes which pass through openings in the plate and the heads of which bear upon flanges of the rail, thus utilizing the spike both to hold the plate and the rail in position. The edge of the flange of the rail under these circumstances bears against the inner face of the spike and tends to wear the same and penetrate the shoulders of the spike, and, further, moisture collecting on the flange of the rail tends to follow the inner face of the spike and enter the opening in the tie receiving the spike. By my invention I overcome these disadvantages and provide a practical tie-plate in which the spike can be utilized to secure the plate and the rail without danger of wear of the spike or rotting of the tie.

Referring to the drawings, in Fig. 1, A represents a tie-plate which may be variously constructed and which is provided with a rib or ribs  $a$   $a'$ , one of which, as  $a$ , is arranged on the upper side of the tie-plate adjacent the edge of the flange B of the rail. A spike

C is shown as passing through the opening A' in the plate and having its head  $c$  bearing on the upper face of the rail-flange. The opening A' passes through the rib  $a$ , but instead of the opening extending to the inner face of the rib adjacent the rail I provide a bar  $a^2$ , which may be a part of the rib  $a$  and which is interposed between the inner face of the spike and the outer edge of the rail, constituting what may be termed a "metal wall" or "partition" between the spike and the rail. This prevents any wear on the inner face of the spike tending to cut or wear away or penetrate the spike, and, further, it forms a wall to prevent moisture which may pass from the face of the flange of the rail running down into the opening in the tie around the spike. This wall or bar  $a^2$  may be applied in various ways, effecting substantially the same result. Thus in Fig. 2 I have shown an invertible tie-plate, in which the ribs  $a$   $a'$  are on opposite sides of the plate, substantially in the same vertical plane, and the wall or bar  $a^2$  adjacent the spike-hole A' is practically the height of the rib. When, however, the rib is higher than the thickness of the flange of the rail, it is necessary to make the wall lower than the rib, and in Figs. 3 and 4 I have shown the wall or bar  $a^2$  as less in height than the adjacent portions of the rib  $a$ . If the ribs  $a$  and  $a'$  on opposite sides of the plate vary in height, the wall on one side may be recessed or cut away, as shown in Fig. 4, and on the other side may extend the full height of the rib.

It will be observed that not only does the interposition of the wall or bar  $a^2$  prevent the wearing of the spike, but it also furnishes broader bearing-faces of the openings in the tie-plate against the sides and face of the spike.

While I have shown my invention applied to an invertible tie-plate, it may be applied to other forms of tie-plates with greater or less advantage.

What I claim is—

1. An invertible tie-plate having ribs on its opposite sides adapted to engage the outer edge of the flange of the rail, a perforation through said ribs, and a protecting-wall be-

tween the perforation and the bearing-faces of the ribs, substantially as described.

2. An invertible tie-plate having a rib upon its opposite sides in the same vertical plane,  
5 an opening through the ribs, and a wall extending above and below the face of the plate to furnish a bearing for the spike, substantially as described.

3. An invertible tie-plate having ribs of  
10 different heights on its opposite sides, a spike-opening partially intersecting the higher rib,

and a wall of less height than the rib interposed between the opening and the bearing-face of the rib, substantially as described.

In testimony whereof I have signed my  
15 name to this specification, in the presence of two subscribing witnesses.

WILLIAM F. GOULD.

Witnesses:

MILLIGAN L. SILLIMAN,  
ROBERT L. HUSTON.