No. 631,873. Patented Aug. 29, 1899.

G. K. KINNEY & S. L. TRUEBLOOD.

RAILWAY TIE PLATE.

(Application filed Mar. 29, 1899.)

(No Model.)

Fig. 1.

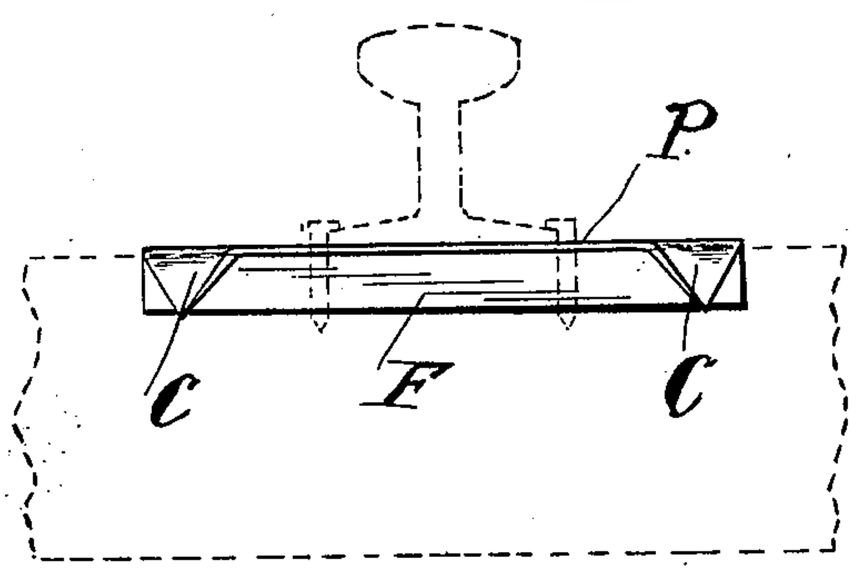


Fig. 2.

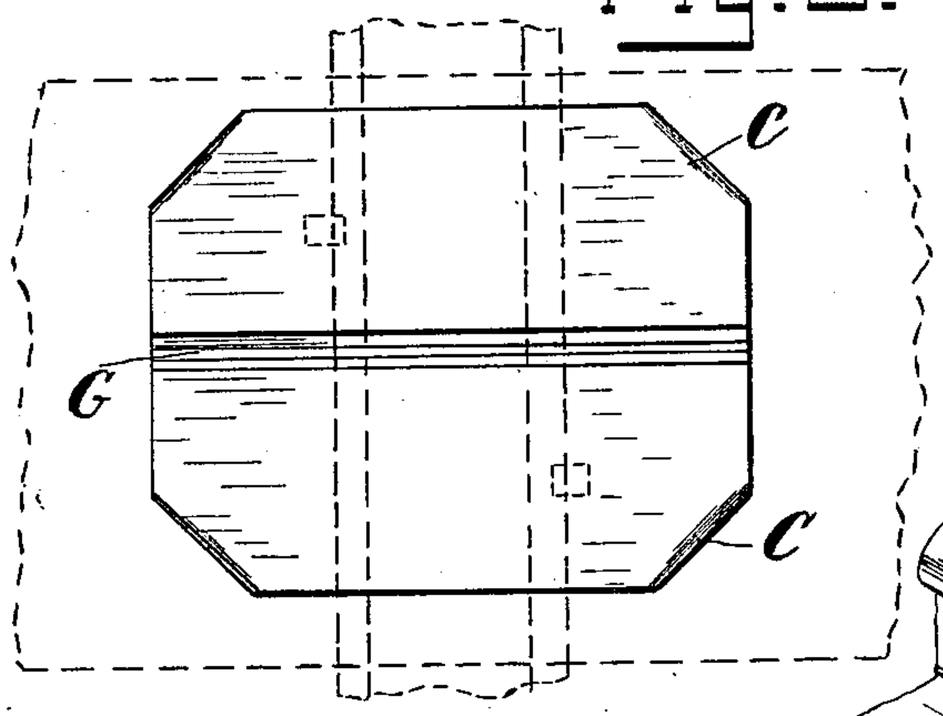


Fig. 3.

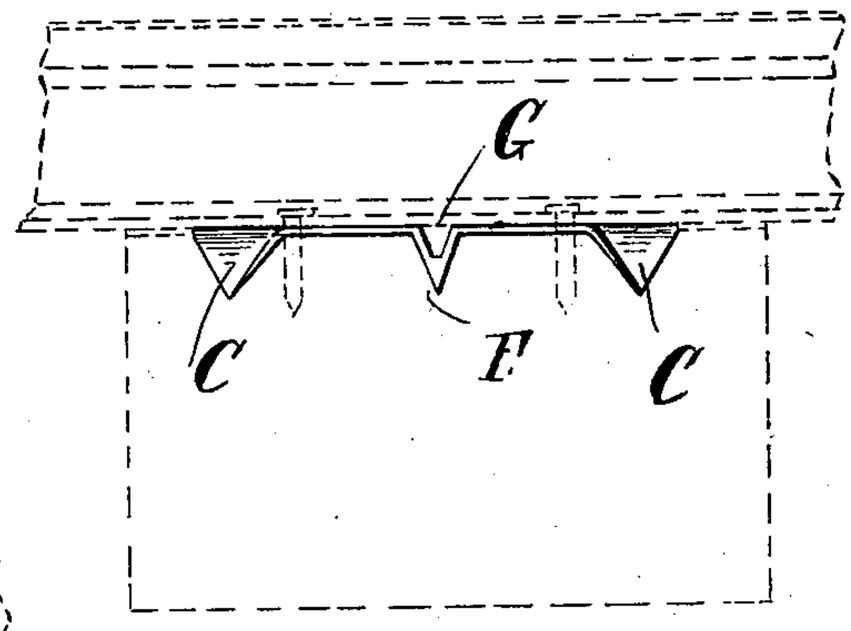
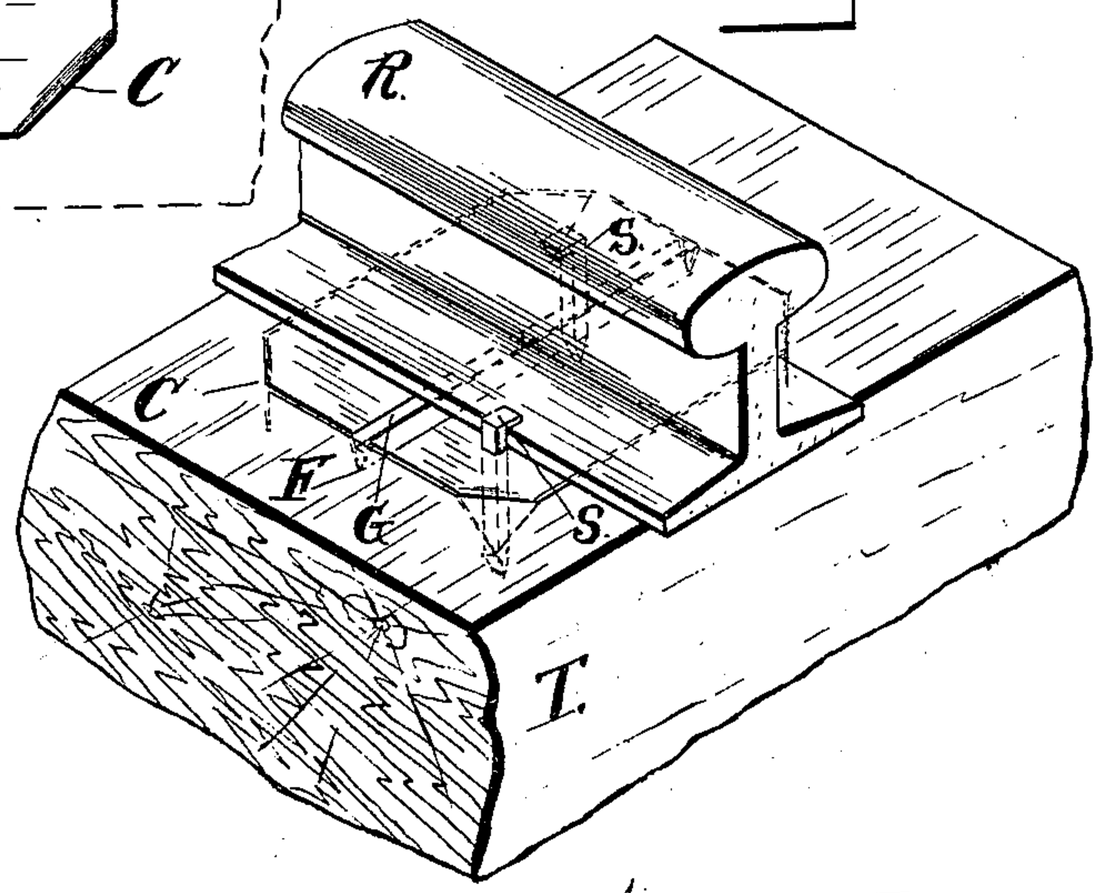


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE KILBURN KINNEY, OF CHICAGO, ILLINOIS, AND SAMUEL LEONARD TRUEBLOOD, OF WELDON, NORTH CAROLINA.

RAILWAY-TIE PLATE.

SPECIFICATION forming part of Letters Patent No. 631,873, dated August 29, 1899.

Application filed March 29, 1899. Serial No. 710,911. (No model.)

To all whom it may concern:

Be it known that we, GEORGE KILBURN KINNEY, a resident of Chicago, Cook county, State of Illinois, and SAMUEL LEONARD TRUEBLOOD, a resident of Weldon, Halifax county, State of North Carolina, citizens of the United States of America, have invented certain new and useful Improvements in Railway-Tie Plates, of which the following is a specification.

The object of the invention is to provide a tie-plate which combines a maximum of effectiveness with a minimum of cost.

In the drawings, Figures 1, 2, and 3 are respectively end, plan, and side views of the novel tie-plate, the rail and tie being indicated in dotted lines. Fig. 4 is a perspective view showing the tie, plate, rail, and spikes in position.

The office of a tie-plate being to distribute the load over a larger portion of the tie's surface to protect the tie from wear under slight movements of the rail and to aid the spikes in resisting strains, it is evident that there should be no relative movements of the plate and tie, for if the plate moves upon the tie it can at best serve only to distribute the load. Our plate, although less expensive than most others, secures all the desired results, successfully resisting all strains without loosening when subjected to ordinary use.

In the drawings, P designates the plate; R, the rail; T, the tie, and S the spikes. In general outline the plate is rectangular and appears like a plane rectangular plate of uniform thickness, having its corner portions bent at angles of about forty-five degrees, with its margins into planes perpendicular to the plane of the plate, and also having its central portion bent sharply downward to form a V-shaped groove along the line of its longer axis. The plate thus has four pointed downwardly-turned flanges C and a downwardly-projecting V-shaped rib F transverse to the direction of the rail when the plate is in use. The plate is further provided with suitable apertures for spikes, and the points of the flanges and the edge of the rib are made as sharp as the method of construction conveniently permits, so that all may readily enter the tie. Obviously when forced into the tie each wedges firmly in place and the flanges, owing to their peculiar oblique positions, are never thrust edgewise, but always offer a large resisting area whatever the direction in which displacing force may act. The rib being transverse to the direction of the rail prevents springing of the plate and distributes the strain from end to end of the plate and longitudinally with respect to the tie.

In practical use we have found this plate lighter, less expensive, and more efficient than other plates for the same general purpose.

What we claim is—

1. A tie-plate having its body in the form of an approximately rectangular plane plate perforated within its margins for the passage of spikes and with its four corners turned downward at right angles.

2. A tie-plate approximately rectangular in general outline, having its four corners turned downward at right angles, an axial V-shaped rib upon its lower surface, and perforations for the passage of spikes, substantially as set forth.

3. A tie-plate of the class described having the longitudinal central V-shaped rib below, the corresponding groove above, and the triangular flanges depending at an angle with the plate's margins, substantially as set forth.

GEORGE KILBURN KINNEY.
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