(No Model.)

T. S. WEED.

TIE GUARD OR PLATE.

No. 566,828. Patented Sept. 1, 1896.

Fig. 1.

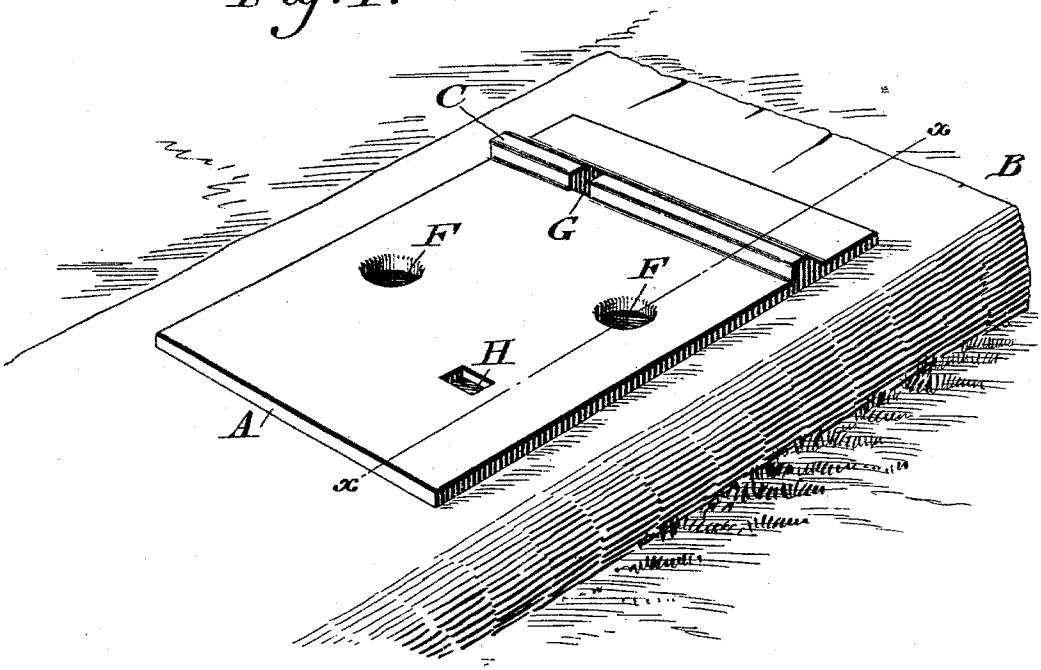
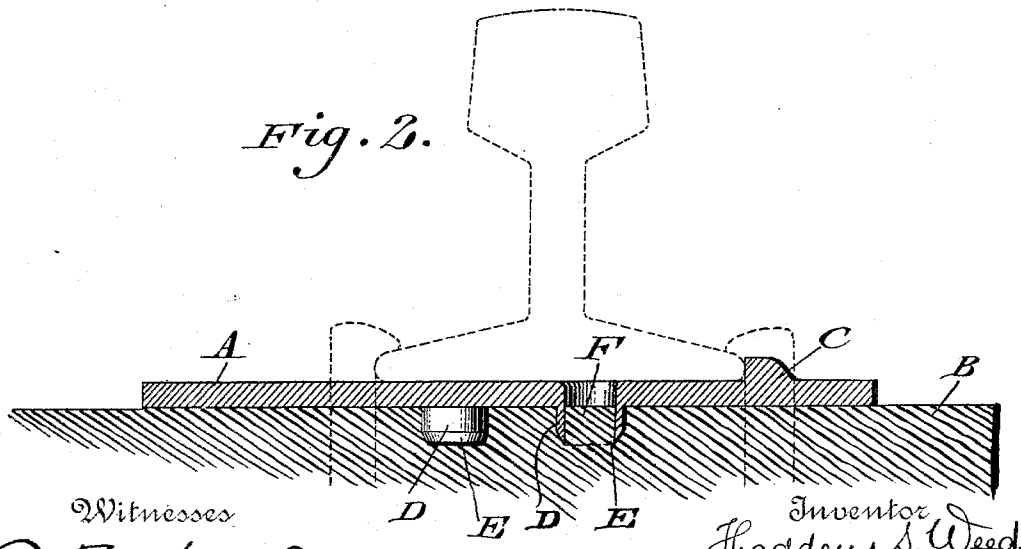


Fig. 2.



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TIE GUARD OR PLATE.

SPECIFICATION forming part of Letters Patent No. 566,828, dated September 1, 1896.

Application filed March 19, 1896. Serial No. 542,312. (No model.)

To all whom it may concern:

Be it known that I, THADDEUS S. WEED, a citizen of the United States, residing at Chester, in the county of Delaware, State of Pennsylvania, have invented a new and useful Improvement in Tie Guards or Plates, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of tie guard or plate, in which provision is made for causing a greater portion of the same than heretofore to be in contact with a tie, said plate being immovably held in position relative to the latter by the employment of suitable flanged sockets, which are of hollow tubular shape and project from the bottom of said plate and are adapted to enter said tie when the plate is secured thereto, whereby said sockets have points of contact and resistance within the tie, both on the inner and outer circumference, all as will be hereinafter set forth and claimed.

Figure 1 represents a perspective view of a tie guard or plate embodying my invention and a portion of a tie to which the same is applicable. Fig. 2 represents a section on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings, A designates a tie guard or plate, and B a portion of a tie adapted to sustain the same. The said plate has a transversely-extending ridge C on the top portion thereof, against which the base of a rail is adapted to contact, as seen in Fig. 2. D designates flanged sockets projecting from the bottom of said plate, said sockets being of hollow tubular shape and preferably punched and shaped by means of suitable dies and having their ends E sharpened, so that they may readily enter the tie, and since said sockets are hollow a core of wood F will extend up into each when they are in position, as will be understood from Fig. 2, the plate A thus being held immovably in place, especial emphasis being laid upon the fact that by reason of the extension of the core of wood into said socket the latter will have points of contact and resistance both on its inner and outer circumference, and the tie-plate will therefore be positively held rigid with respect to the tie. G and H designate holes or slots in said plates through which the spikes pass, it being noticed that the hole G passes through the ridge C and that the hole H is preferably diagonally opposite thereto.

The operation is as follows: The plate having been placed on the tie, the flanged sockets D are caused to enter therein, and the core F projecting up into each socket, as indicated in Fig. 2, will cause said plate to be held in fixed position relative to the tie, as is evident, a greater portion of the latter than heretofore being in contact with the plate, and it will thus be seen that when a rail is placed on the latter and held in position by the spikes, as shown dotted in Fig. 2, all the parts will be rigid and immovable relatively to each other. The number of sockets may be increased or diminished according to requirements, two being shown in the present instance, although it is evident that three or more may be employed, if desired.

It will thus be apparent from the foregoing that a tie-guard constructed in accordance with my invention and having one or more flanged sockets turned downwardly and adapted to be embedded in the wood of a tie possesses more points of contact and more adhesion, and there is less liability of shifting than in plates having solid spurs or lugs, since the fiber of the wooden ties is less disturbed, and a very solid bearing of the tie is obtained on all points of the flanged socket on both its inner and outer circumference, and the wood of the tie being tightly inserted inside the sockets prevents lateral motion and forms a support not obtainable in the case of plates having solid spurs or lugs projecting therefrom. It will also be noticed that plates having flanged sockets, as above described, can be made from the same metal and weight as plain plates, thus saving the weight of spurs and lugs while securing all their advantages to a greater degree. It will further be evident that the flanged sockets above described can be attached to plates having either a plain or beveled surface, as desired, and that said sockets can be made of any reasonable length, diameter, or degree of sharpness,

and, further, that tie-guards provided with said sockets, when properly secured to wooden ties, will not absorb water or decay the wood to such a degree as plates having solid lugs or projections extending therefrom.

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

1. As a new article of manufacture, a tie-plate having a tubular socket depending therefrom, said socket being open throughout, and having a cutting edge adapted to cut into a wooden tie, and thus receive the core of said tie, whereby any movement of said plate relative thereto is prevented, said socket having points of contact and resistance, both on its inner and outer circumference, substantially as described.

2. As a new article of manufacture, a tie-plate having a transversely-extending ridge on the upper side thereof, and provided with a depending tubular socket, the latter being open throughout, and having its lower end sharpened, whereby it is adapted to cut into a wooden tie, the core of the latter extending into said plate, whereby movement of the latter relative to said tie is prevented, substantially as described.

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