

S. CLARY.  
WEAR PLATE FOR RAILWAY TIES.  
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900,982.

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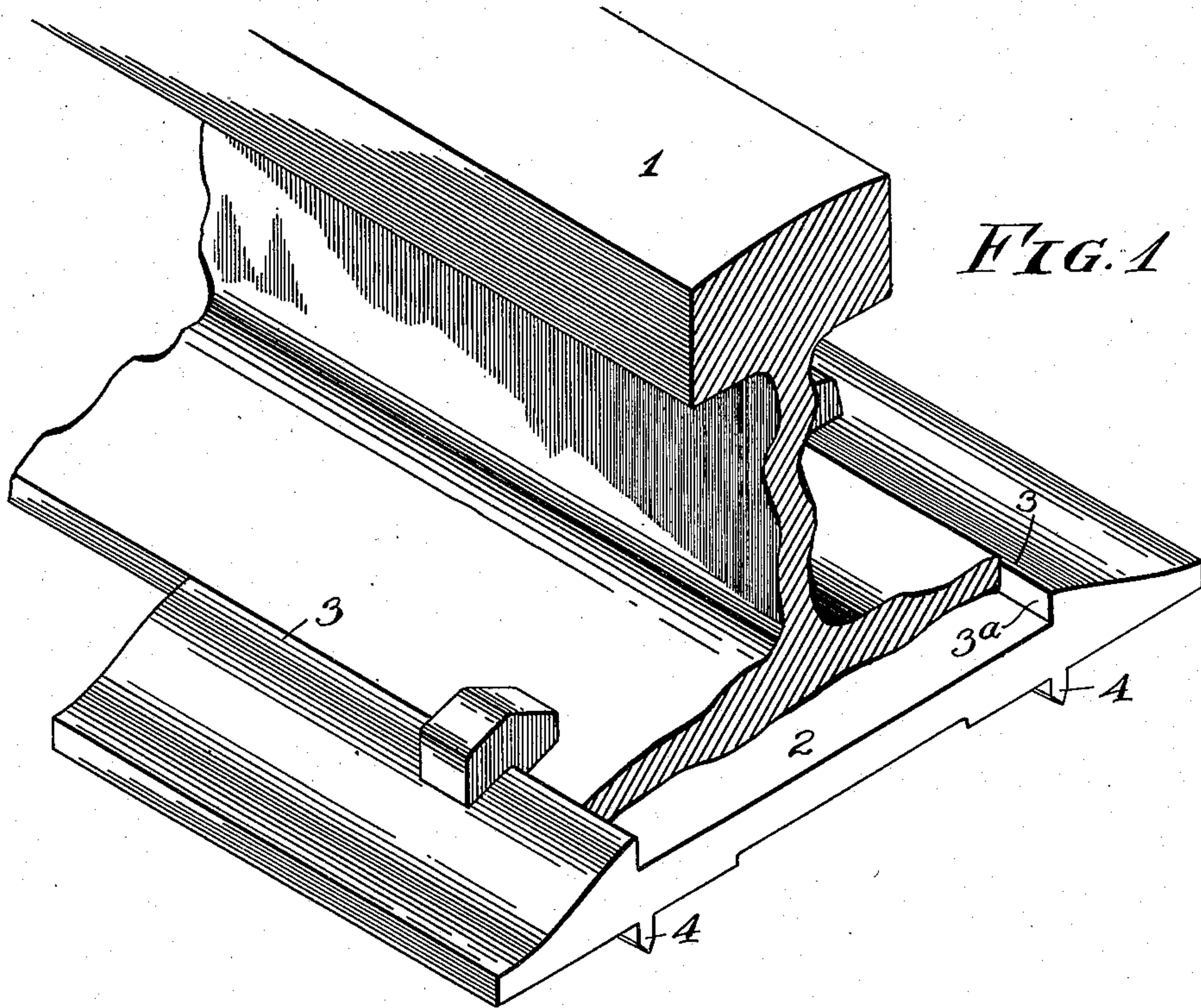


FIG. 1

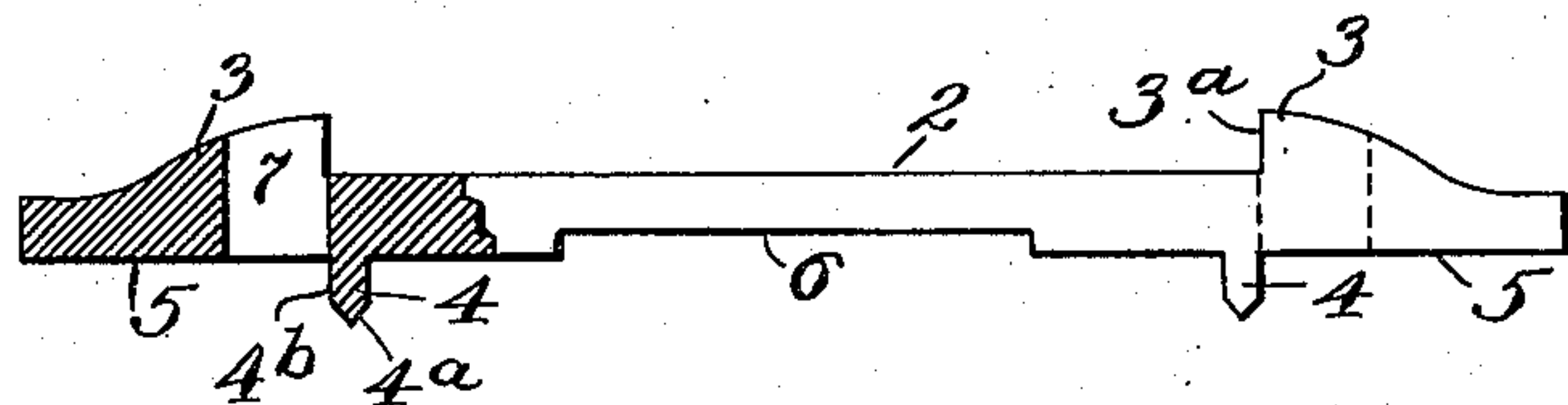


FIG. 2

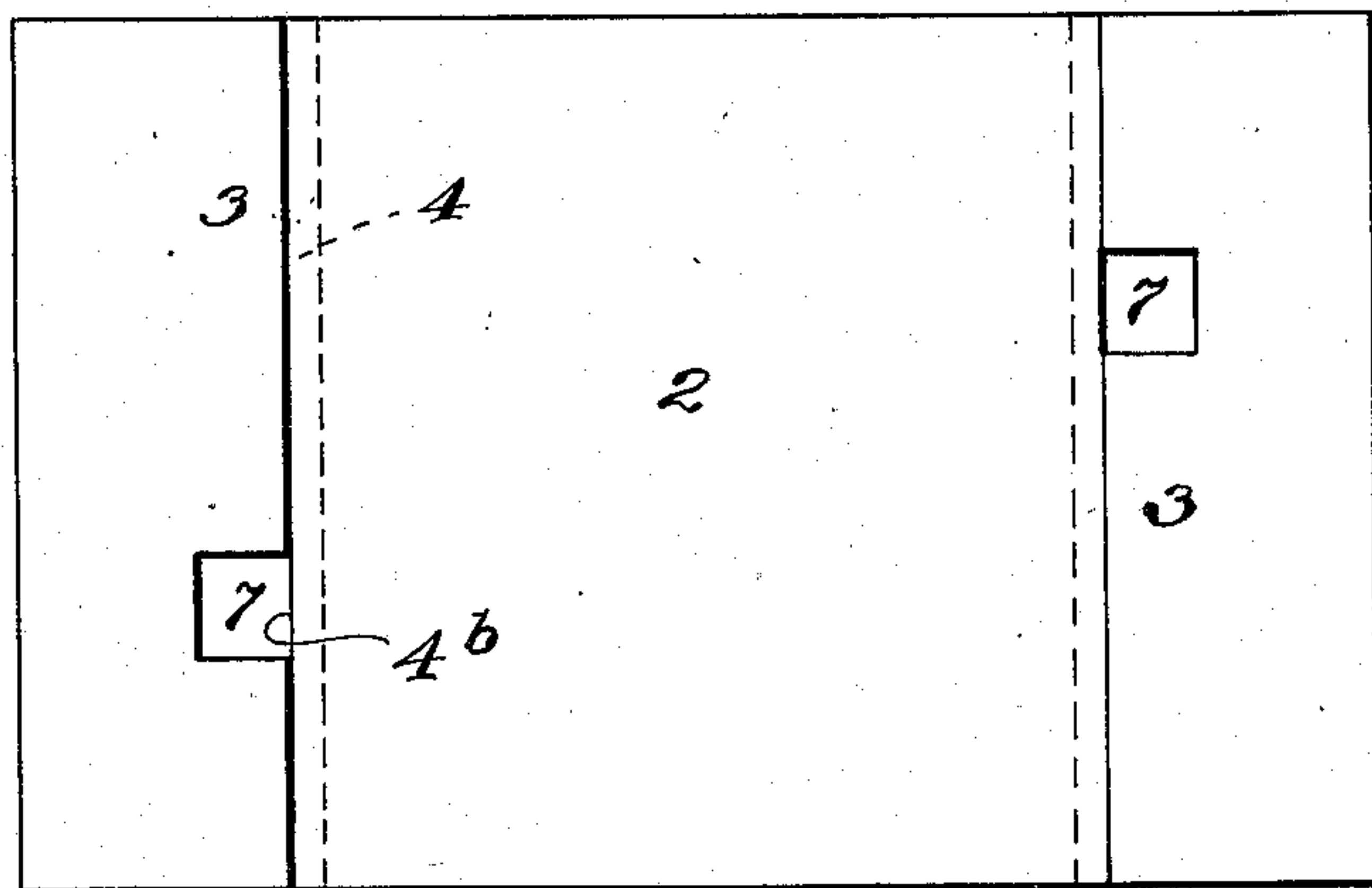


FIG. 3

Witnesses:  
Brennan B. West  
Nathan F. Fetter

Inventor:  
Simon Clary  
By Bates, Fouts & Hill,  
Attys.



# UNITED STATES PATENT OFFICE.

SIMON CLARY, OF CARNEGIE, PENNSYLVANIA.

## WEAR-PLATE FOR RAILWAY-TIES.

No. 900,982.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed January 11, 1908. Serial No. 410,332.

*To all whom it may concern:*

Be it known that I, SIMON CLARY, a citizen of the United States, residing at Carnegie, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Wear-Plates for Railway-Ties, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

10 This invention relates to improvements in metal wear plates for railway ties, and has for its object to provide a plate of this character which shall be simple and economical of production, and one which shall be so constructed that, when installed in place between the bottom flange of a rail and the sub-  
15 jacent tie, it will prevent the creeping of the rails and will also practically eliminate the shearing of the spikes by the thrust of the rail  
20 flanges either directly or indirectly there-against.

Generally speaking, the invention may be defined as consisting of the combinations of elements embodied in the claims hereto an-  
25 nexed and illustrated in the drawings forming part hereof, wherein

Figure 1 represents a perspective view showing my plate applied to a rail; Fig. 2 represents an end elevation of said plate  
30 with parts broken away to show the arrangement of one of the laterally extending ribs with reference to the corresponding spike hole; and Fig. 3 represents a top plan view of said plate.

35 Describing the parts by reference characters, 1 denotes a rail to which my plate is applied, the plate being substantially rectangular in outline and being provided with a central flat rail-receiving portion 2 bounded  
40 at opposite edges thereof by upwardly extending shoulders 3 and having on its under side a pair of downwardly extending ribs 4. The shoulders and ribs are shown as extending the full width of the plate.

45 As will appear from the drawing, the inner faces 3<sup>a</sup> of the shoulders are abrupt or vertical and, from the upper ends of said shoulders the plate diminishes gradually in thickness toward its outer edges. The under surface of the plate comprises two flat or plane  
50 portions 5 each extending inwardly from the outer edge of the plate beyond a rib 4, the central under surface of the plate being recessed at 6.

55 As will appear more particularly from Figs. 2 and 3, the ribs 4 are located just within or

toward the center of the plate from the shoulders 3 and are each provided with a tapered edge 4<sup>a</sup> to facilitate the insertion of the rib into a tie, and with an outer vertical face 4<sup>b</sup>, 60 which forms, in effect, an extension of the vertical inner face of the shoulder 3. Each shoulder is provided with a spike hole 7 interposed between the longitudinal center and an end of the shoulder, the spike holes in 65 the two shoulders being diagonally opposite each other. As shown, this spike hole extends entirely through the inner vertical face of each shoulder and, in the construction of the plate, the vertical faces 4<sup>b</sup> of the ribs 4 are 70 inset very slightly with reference to the inner vertical faces of the shoulders so as to insure that the tool which is employed for punching the spike holes through the plate will cut through the inner face of each should- 75 der and will just clear the outer vertical face of each rib. The outer face of each rib forms, in effect, a continuation of the inner face or wall of the spike hole.

The advantages of a plate constructed as 80 described are as follows:

1. The provision of the two shoulders secures the proper facing of the plates on the rails and on the ties, as the space between the shoulders is substantially the width of the 85 bottom flange of the rail, whereby the shoulders will be parallel with the edges of the rail flanges and in substantial contact therewith throughout the width of the plate.

2. The provision of the two shoulders pre- 90 vents the creeping of the rails as, should the tie tend to twist in either direction, the rail flange will be gripped by the opposite ends of the shoulders respectively.

3. The location and construction of the 95 ribs increases the bearing surfaces of the spikes, whereby liability to shear off the spikes by the thrust of the plate is practically eliminated. The inner face of each spike will bear not only against the metal of which 100 the body of the plate is composed but also against the vertical face 4<sup>b</sup> of each rib. While the vertical faces 4<sup>b</sup>, for the purposes of my invention constitute an extension of the vertical inner faces of the shoulders thereabove, 105 the slight inset given to the outer faces of these ribs with reference to said shoulder accommodates the slight variations in width which occur in the flanges of standard rails of the same weight.

4. The construction and arrangement of the ribs also provide guides for the spikes 110



which keep them straight while being driven into the ties.

From the foregoing description, it will be seen that I have devised a plate which is cheap of construction, readily applied to a rail and tie, and which, after having been so applied, will be particularly immune from further manipulation.

Having thus described my invention, I claim:

1. A wear plate for railways having on its upper face one or more transversely extending shoulders each having a spike aperture therethrough and having on its under face one or more transversely extending ribs extending continuously and unbroken across the plate, each rib being provided with a vertically extending surface forming a continuation of one of the faces of the corresponding spike aperture.

2. A wear plate for railways having spike apertures extending therethrough and having a plurality of ribs on its under surface said ribs extending continuously across the plate transverse to the grain of the tie and having a vertically extending outer face forming a continuation of the inner face or wall of said spike aperture.

3. A wear plate for railways having a pair of ribs on its under surface and extending transversely thereof, each of said ribs having a vertically extending outer surface along the entire length of the rib said plate having spike holes extending therethrough and each having its inner face in substantial vertical alinement with the vertically extending surface of a rib.

4. A wear plate for railways having on its upper face a pair of transversely extending shoulders, each shoulder having an inner vertical face, a pair of ribs on the under surface of said plate, each rib having an outer vertically extending surface in substantial alinement with the inner vertical face of a

shoulder, said plate being provided with a spike hole extending through each shoulder, each spike hole extending through the inner face of a shoulder and having its inner face or wall forming in effect a continuation of the vertical outer surface of the subjacent rib.

5. A wear plate for railways having on its upper face a transversely extending shoulder, said shoulder having an inner vertical face, a rib on the under surface of said plate, said rib having an outer vertically extending surface in substantial alinement with the inner vertical face of said shoulder, said plate being provided with a spike hole extending through said shoulder, said spike hole extending through the inner face of the shoulder and having its inner face or wall forming in effect a continuation of the vertical outer surface of the subjacent rib.

6. A wear plate for railways having on its under surface a transversely extending rib, said rib being provided with a vertical surface, said plate having a shoulder on its upper surface in substantial alinement with the vertical surface of the subjacent rib, said shoulder having a spike hole extending there- through and through the inner face thereof, the inner face or wall of said spike hole being in substantial alinement with the said vertical surface of the subjacent rib.

7. A wear plate for railways having a spike aperture therethrough, a projection on the under surface of the plate, said projection extending past the aperture and having a vertically extending surface that forms substantially a continuation of the inner face of the spike aperture.

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

SIMON CLARY.

Witnesses.

D. C. REARDON,  
EDITH F. GARWOOD.