

No. 760,246.

PATENTED MAY 17, 1904.

W. H. PRITCHARD.
CAR REPLACER.

APPLICATION FILED MAR. 17, 1904.

NO MODEL.

Fig. 1.

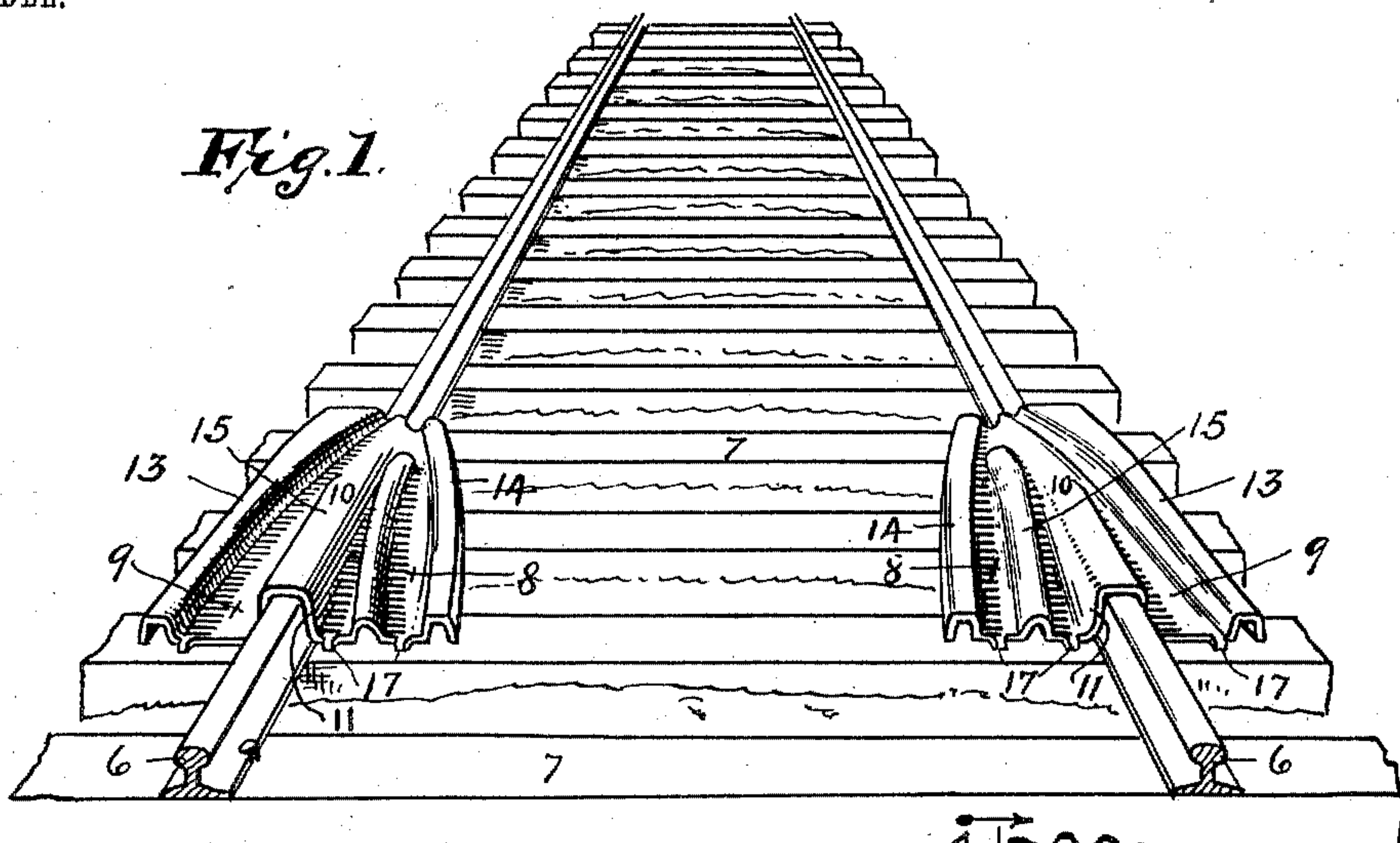


Fig. 3.

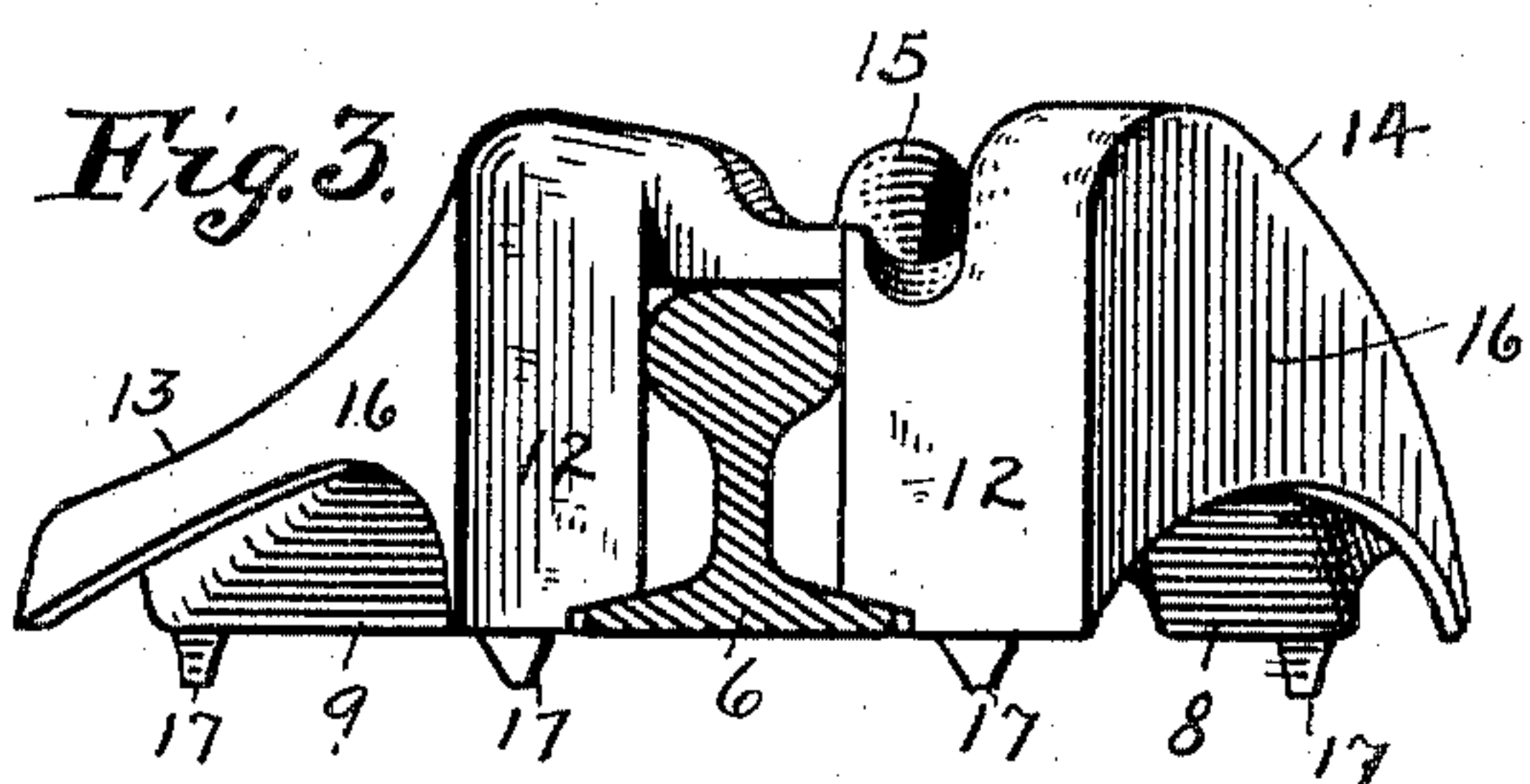


Fig. 4.

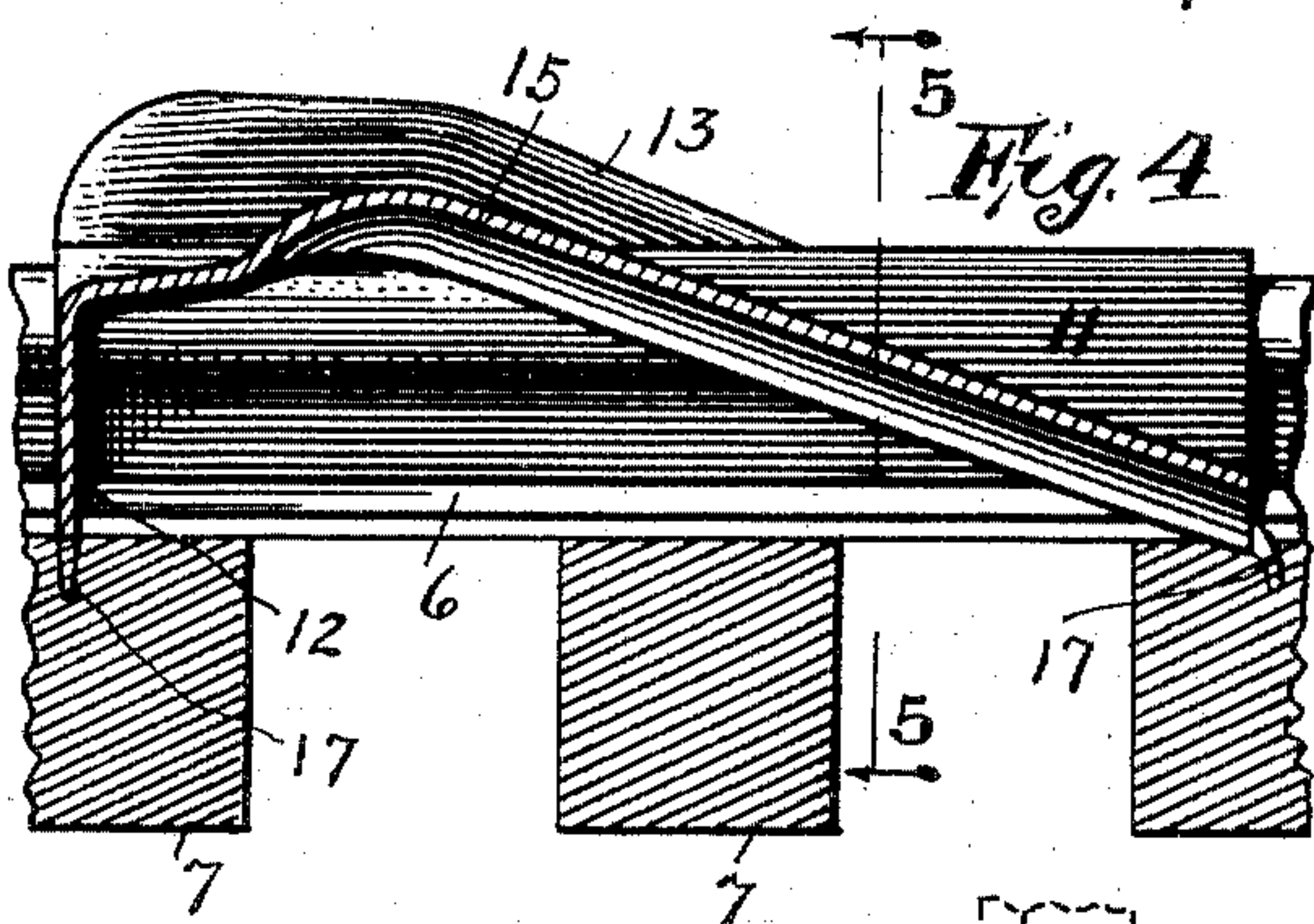


Fig. 2.

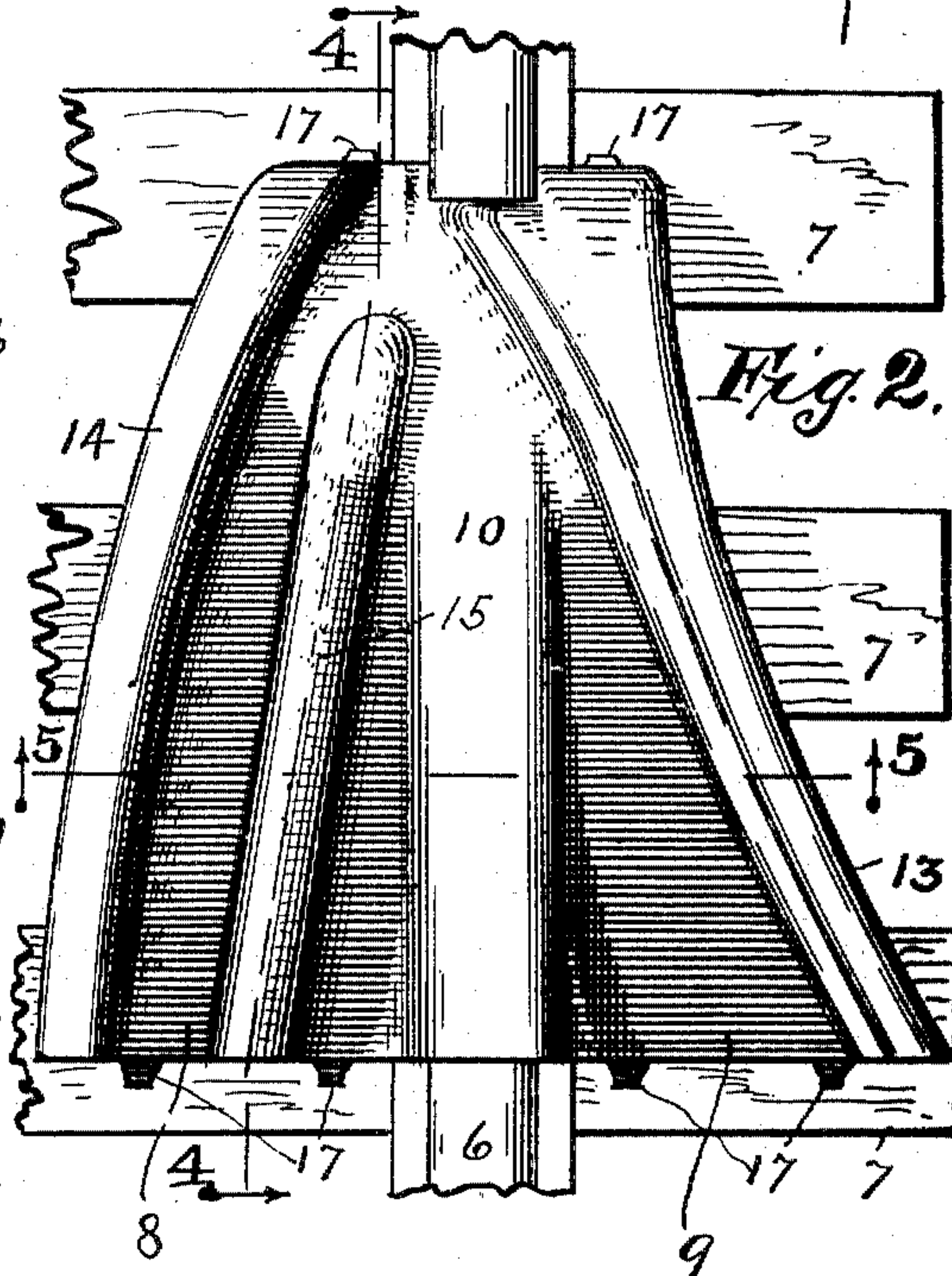
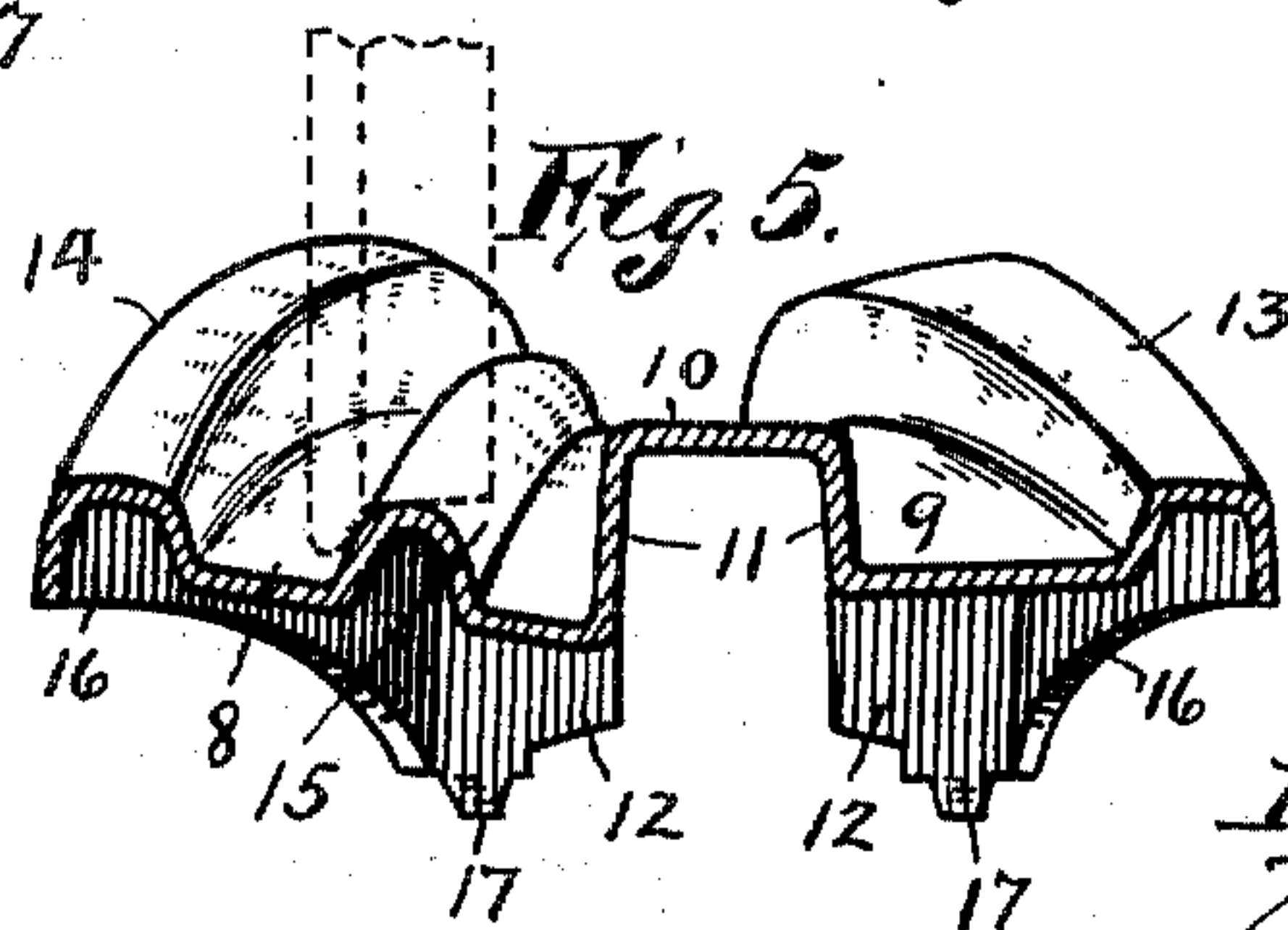


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. PRITCHARD, OF INDIANAPOLIS, INDIANA.

CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 760,246, dated May 17, 1904.

Application filed March 17, 1904. Serial No. 198,817. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PRITCHARD, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Car-Replacers, of which the following is a specification.

This invention relates to improvements in portable frogs for placing derailed engines and cars on the track. It is an improvement on the device described and claimed in Patent No. 683,223, issued to me September 24, 1901.

The object of this invention is to strengthen and stiffen the construction whereby the frog may be made out of sheet metal of a much thinner gage than heretofore, thereby securing greater lightness for convenient handling and greater economy in the cost of the material used in the manufacture of the frog.

The object also is to improve on the details of construction in various ways, which will be fully described, and pointed out in the claims.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a railway-track with a pair of my improved frogs laid in operative position thereon; Fig. 2, a top plan view of the frog used on the right side of the track; Fig. 3, an end elevation of the frog shown in Fig. 2; Fig. 4, a vertical section on the dotted line 4 4 of Fig. 2; and Fig. 5 a cross-section on the dotted lines 5 5 of Figs. 2 and 4.

Like characters of reference indicate like parts throughout the several views of the drawings.

Inasmuch as the two frogs forming a pair differ from each other only in having their parts in reverse order to each other, a description of one will suffice for both.

6 is the rail of the track, and 7 the ties, both of usual and well-known construction.

The body of the frog comprises a pair of wing-plates 8 and 9, having straight edges which rest upon a tie when the frog is in operative position. These plates extend in the direction of the proposed movement of the derailed car, which may be called in a "forward"

direction. They slope upwardly in that direction until their lower faces are above the top of the rail, whereupon they are connected by an integral portion which lies upon said rail-top. This portion 10 extends back upon the rail even with the said straight edges of the wing-plates and is connected with said wing-plates by means of the vertical integral portions 11 11, whereby a sort of housing is formed which provides an under-side channel or groove to receive the rail when the frog is in operative position. The front end of the wing-plate on the inside of the rail is dropped in or curved to a suitable distance below the top of the rail to facilitate the delivery of the car-wheel upon the rail without the abrupt drop which would follow if the wheel with its flange were delivered from the frog without this lowering of the wing-plate. Both of the plates 8 and 9 are preferably inclined toward the rail, as shown in Fig. 5, in order to work the car-wheel over to the rail by gravity, and both plates taper toward the front and have their narrowed front ends supported by the vertical plates 12 12. The latter rest upon the tie below and upon the base of the rail, as shown in Fig. 3. The outer plate 9 has the marginal rib 13, which keeps a car-wheel moving up the plate from rolling off and which directs the wheel in toward the rail. This rib crosses the plate 10 diagonally at the forward end of the latter. The rib is high enough to raise the wheel so the flange of the wheel will be out of contact with the plate 9, the face of the car-wheel bearing upon and being supported by the face of the rib, and by means of the latter the car-wheel is carried across the rail and is deposited in right position on the track. The plate 8 is provided with a similar marginal rib 14, which keeps the car-wheel from rolling off of the frog and by its oblique position directs the wheel in toward the rail of the track. As this rib is on the inside wing, the flange of the car-wheel only touches it; but the face of the wheel does not ride upon the rib. In consequence the whole weight resting on the car-wheel is brought to bear, through the flange of the wheel, against the face of the plate 8, with the result that the cutting edge which the flange

of the wheel provides cuts grooves in the said plate and causes them to sag down and sometimes break unless the thickness of the material of the frog is excessive. In order to relieve the plate 8 from the cutting contact with the car-wheel flange, I provide the corrugation or rib 15, which runs in a longitudinal direction of the plate 8 between the housing for the rail and the rib 14. This rib projects upwardly to a height sufficient to raise the flange of the car-wheel clear of the plate 8, and the face of the rib forms a track for the face of the wheel. This rib 15 not only saves the plate 8 from the cutting action of the car-wheel flange, but it very materially stiffens and strengthens the frog, and as the strain comes directly on it the advantages derived all combine to permit of the use of much thinner sheet metal in the frog's construction. This not only cheapens the cost, but provides a lighter article that can be placed and removed with more ease. The outer sides of the marginal ribs 13 and 14 are continued down to form the stiffening sides 16. The front and rear ends of the frogs will preferably have the spurs 17 to enter the ties and keep the frogs from slipping.

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

1. In a car-replacer, inclined planes having their lower ends resting on or near the tie and their highest portions rising above the face of the rail, a housing longitudinally of the replacer between the planes to receive the rail, ribs on the outside edges of the planes to direct the car-wheels to the rail and a rib between the inside marginal rib and the housing to raise the car-wheel passing over the inside plane out of contact with said plane.

2. A car-replacer pressed out of sheet metal having a pair of oblique planes separated by a housing forming an under-side groove to

receive the railway-rail, ribs formed in the sheet metal at the side edges of the two planes and an upward corrugation or rib between the marginal rib and housing extending in the same general direction therewith.

3. A car-replacer pressed out of a single piece of sheet metal comprising a pair of oblique planes reaching from above the rail at or near the front to or near the tie at the rear, a housing between the planes forming an under-side groove to receive the rail, a rib on the side edge of the outer plane continued over the front end of the housing and forming a track for the car-wheel, a rib on the side edge of the inner plane to direct the car-wheel toward the rail and a rib between the last rib and the housing to prevent contact of the flange with the plane below.

4. A car-replacer pressed out of a single sheet of metal having a pair of oblique planes connected by a housing which forms an under-side groove for the rail, said planes having direct support at their ends on the base of the rail and on the ties, marginal ribs at each of the side edges of the two planes and an intermediate rib between the housing and the inside marginal flange.

5. A car-replacer pressed out of a single sheet of steel having a pair of oblique planes connected by a housing which completely covers the rail, said planes having support at their ends on the ties and having spurs to enter the ties, and said planes having ribs at their side edges to direct the car-wheel toward the rail and having an additional rib between the marginal one and the housing.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 8th day of March, A. D. 1904.

WILLIAM H. PRITCHARD. [L. s.]

Witnesses:

C. A. DU BOIS,

JAS. A. WALTON.