A. C. KELLEY.

CAR REPLACER.

APPLICATION FILED APR. 22, 1909.

951,532. Patented Mar. 8, 1910.

2 SHEETS—SHEET 1.

Fig. 1

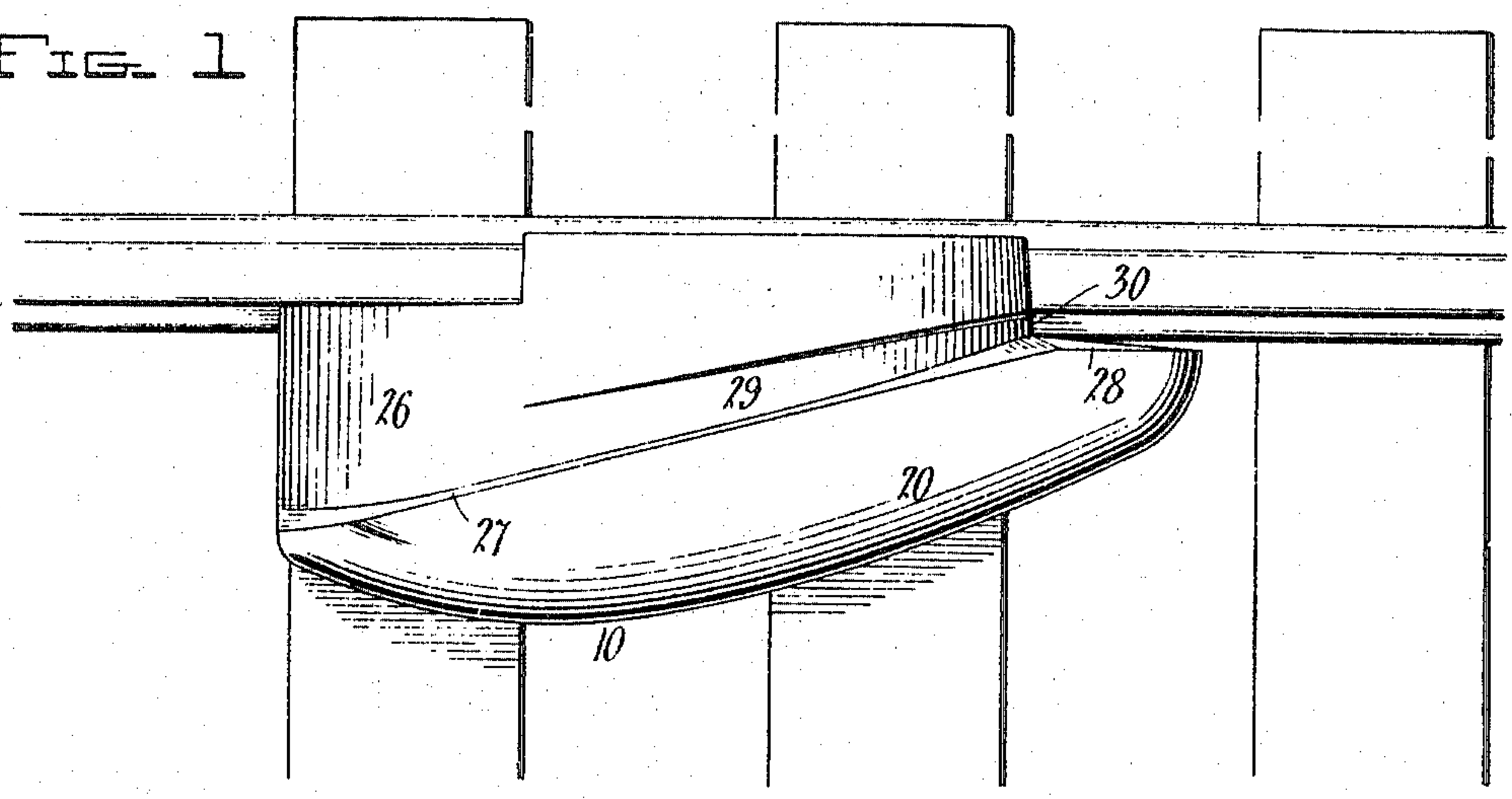


Fig. 4

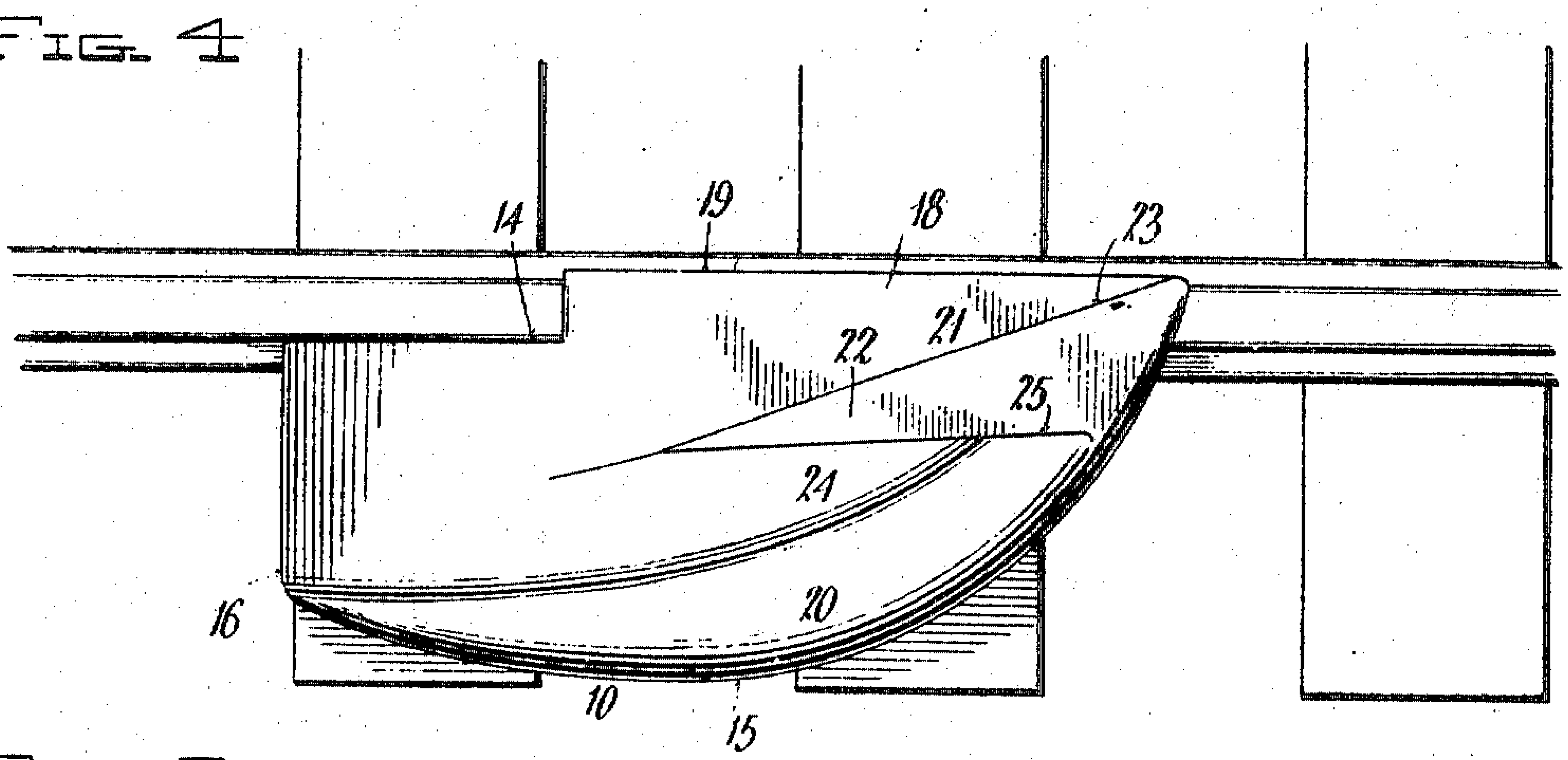
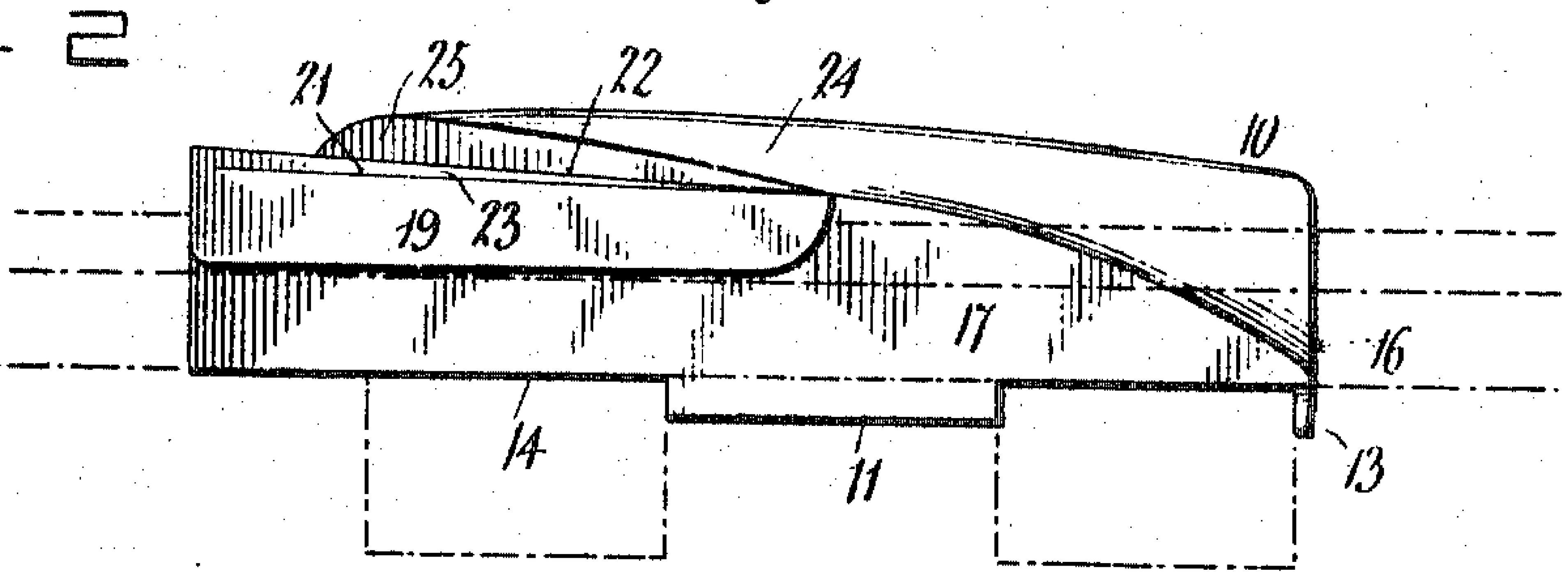


Fig 2



Witnesses

[signature]

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2 SHEETS—SHEET 2.

Fig. 3

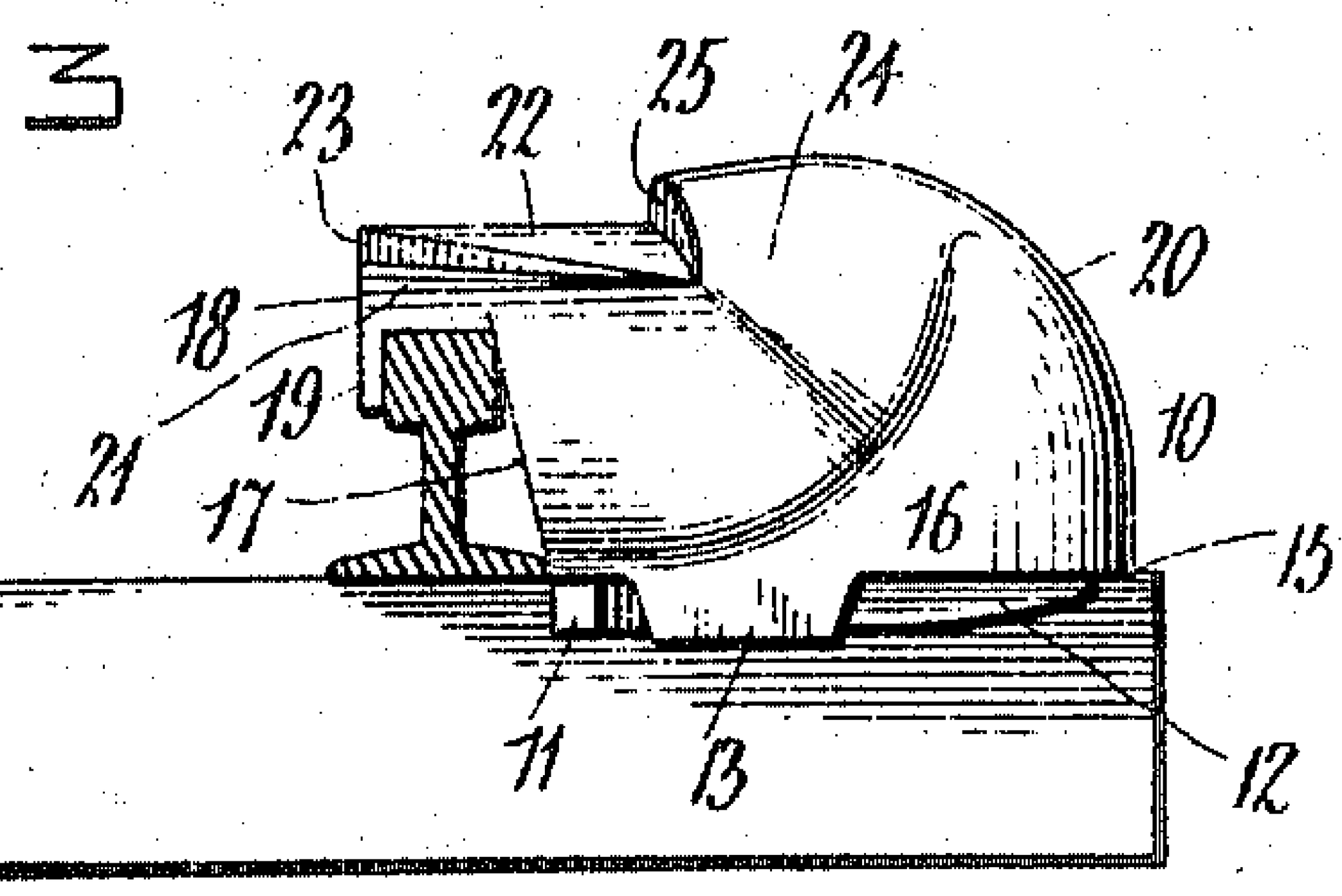


Fig. 5

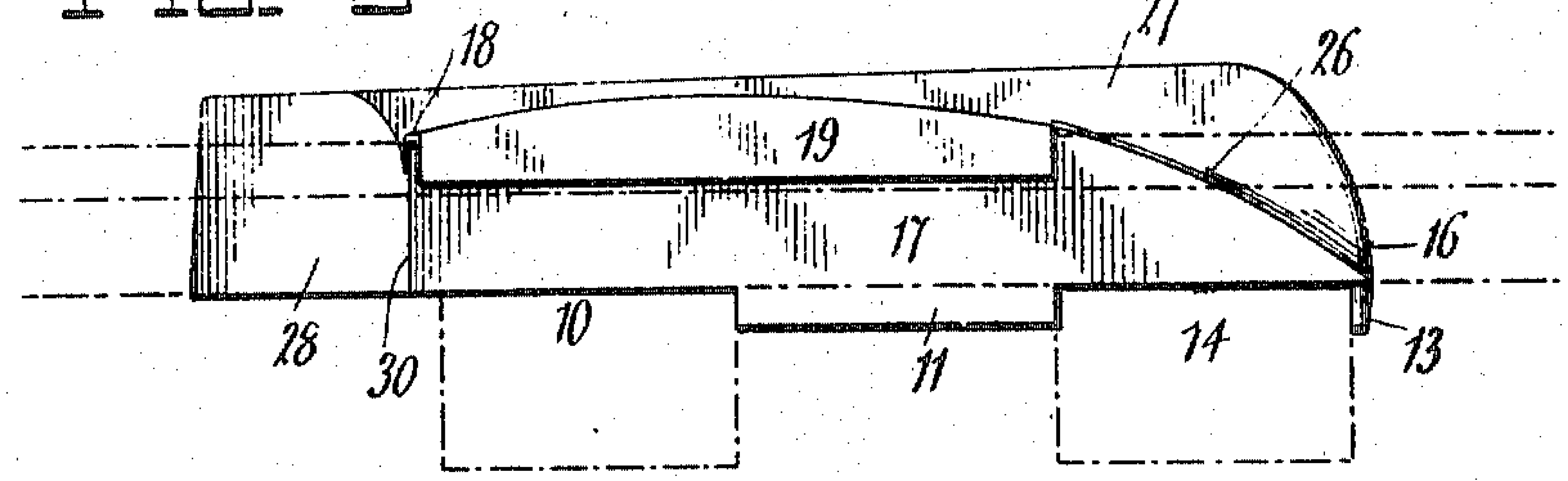


Fig. 6

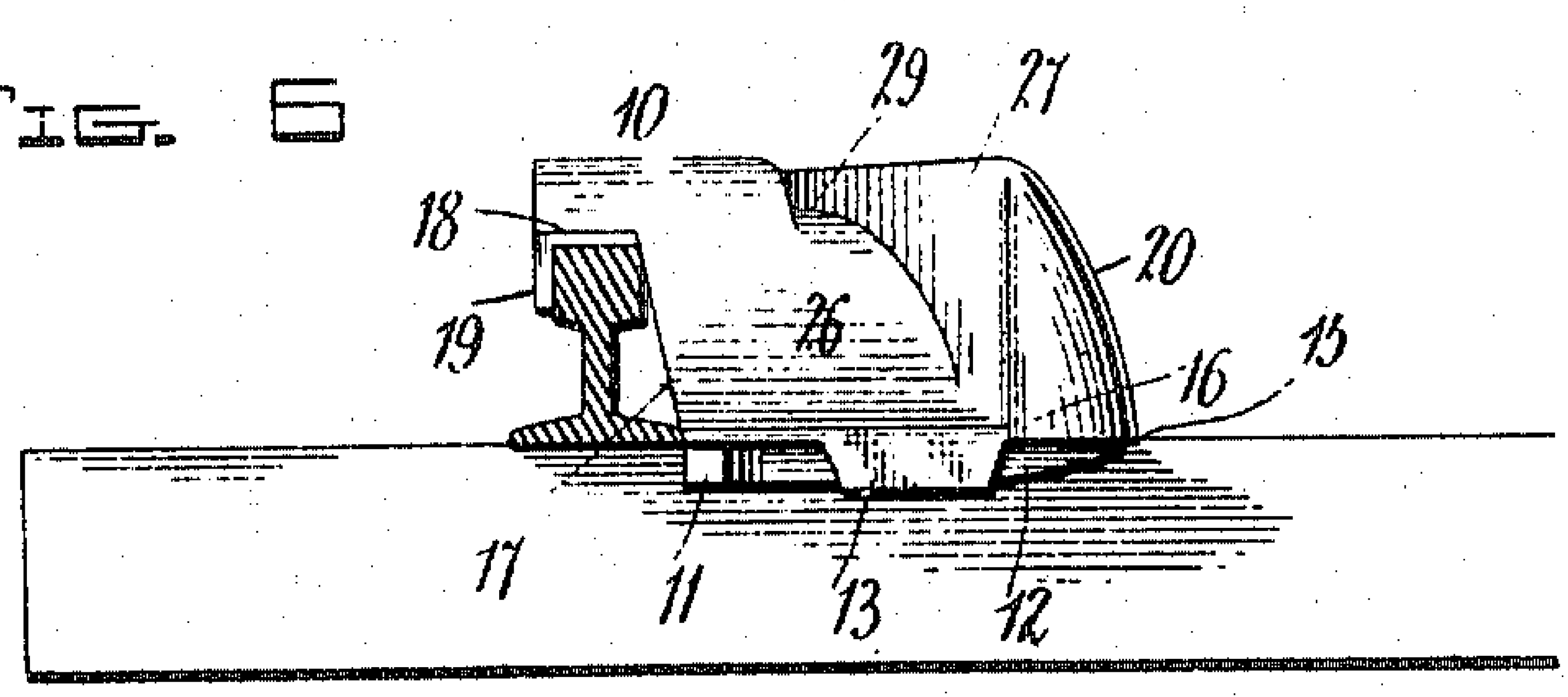
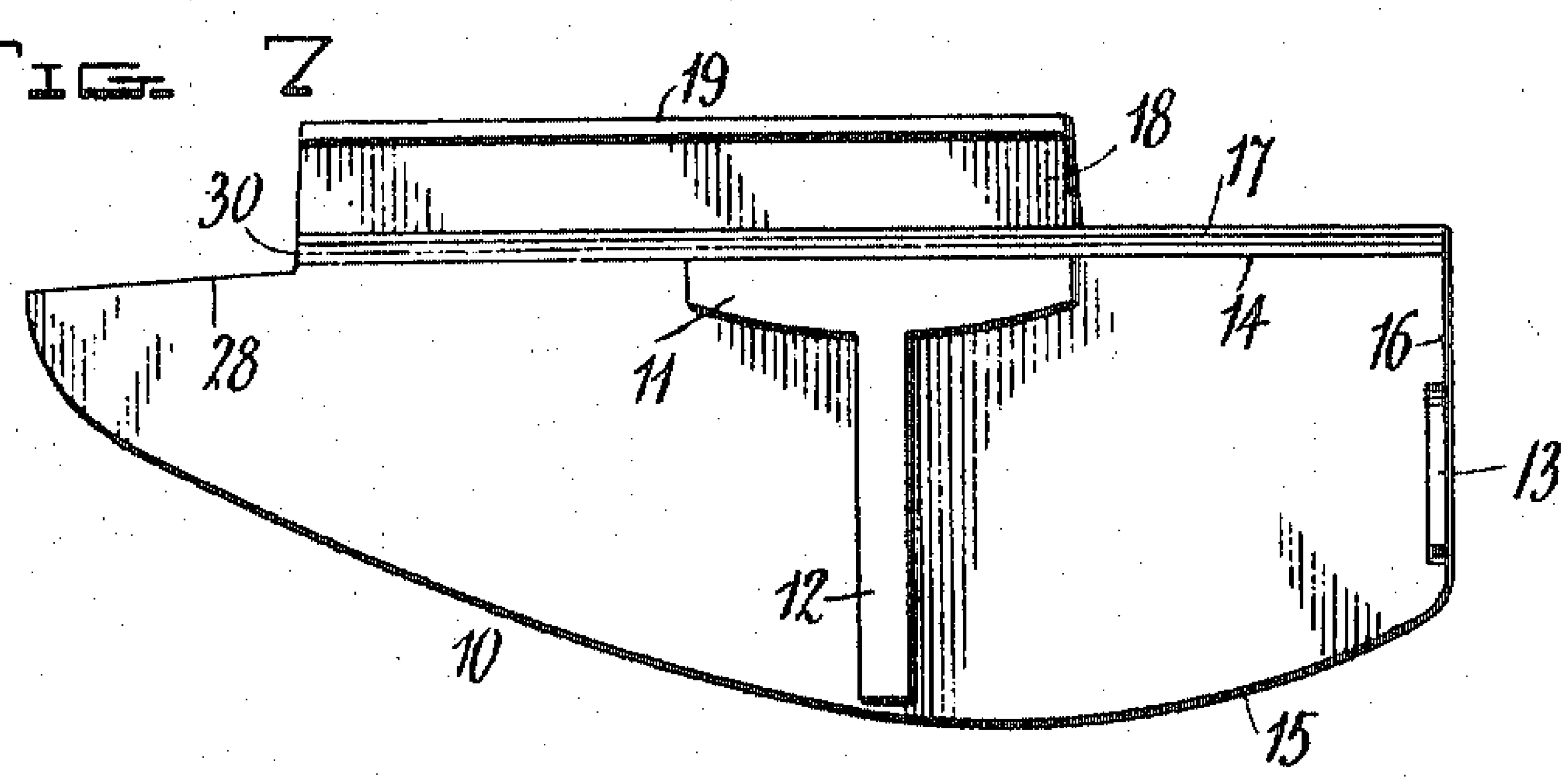


Fig. 7



Inventor

Albert C. Kelley

Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT C. KELLEY, OF SLOCOMB, ALABAMA.

CAR-REPLACER.

951,532. Specification of Letters Patent. Patented Mar. 8, 1910.

Application filed April 22, 1909. Serial No. 491,428.

To all whom it may concern:

Be it known that I, ALBERT C. KELLEY, a citizen of the United States, residing at Slocomb, in the county of Geneva, State of Alabama, have invented certain new and useful Improvements in Car-Replacers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to car replacers and its principal object is to improve the general construction of devices of this character so that cars may be readily and accurately replaced upon the track when they have jumped or run off of the same.

The invention consists in general of an inside and an outside replacer forming a cooperative pair of devices of this character, the same being of novel form and construction.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a top plan view of the inside replacer as constructed in accordance with this invention. Fig. 2 is a side elevation of the outside replacer taken from the side which goes next to the rail. Fig. 3 is an end view of the outside replacer, the view being taken from the low or front end. Fig. 4 is a top plan view of the outside replacer. Fig. 5 is a side elevation of the inside replacer taken from the side which goes next to the rail. Fig. 6 is an end view of the inside replacer taken from the low or front end. Fig. 7 is a bottom view of the inside replacer, the other being similarly arranged.

The outside replacer comprises a body 10 provided with a flat bottom whereon is located a projecting rib of T-shape provided with a head 11 and a stem 12. The head 11 extends longitudinally of the replacer and is of such length as to fit between a pair of ties while the stem 12 extends transversely from the head and merges into the bottom. The bottom is also provided on one end with a biting lip 13 adapted to engage the material of a tie so that the replacer is prevented from slipping along a rail. The general contour of the bottom of the replacer comprises a straight side 14 adapted to fit against a rail, an arcuate side 15 meeting the straight side at the rear end of the replacer, and a straight front end 16 meeting the arcuate and straight sides, said straight front end being the end at which the lip portion 13 is formed. Extending upward from the side 15 of the bottom is a plane surface 17 and along the upper portion of this plane surface is a projecting rib 18 having a downwardly depending lip 19 adapted to engage over the head of a rail. The outer side of the replacer forms a curved surface 20. The inner replacer is similarly formed and provided with similar projections insofar as the bottom and sides are constructed and these parts are numbered in accordance with the parts on the outside replacer.

The top of the outside replacer comprises a main body portion which is convex in its longitudinal sections at the front end of the replacer and concave in the transverse sections taken at this end. What may be termed the floor of this top merges at the rear end into a flat or plane surface 21 and a second plane surface 22, the latter rising gradually from the first surface so that a flange guiding rib 23 is formed between the two plane surfaces 21 and 22, this rib being deeper at its rear than at its forward end. The concavo-convex forward end of this top portion is so formed that the outer portion of the concavity forms what is substantially an upwardly extending side wall which merges into a slanting side wall 24. From the point at which the plane 22 merges into the plane 21 this slanting side wall is provided with a substantially vertical side wall 25 which extends upward from the plane 22 and forms a guide for the outside of the wheel so that the flange is properly directed onto the wall 23.

The inside replacer has its top formed with an arcuate surface 26 the cross sections of which at the front end are straight lines. This arcuate surface is bounded on the outside by a slanting side wall 27 which continues from one end to the other of the replacer, being concaved at the front end to merge into the surface 26 while at the rear end it is extended down to the bottom of the replacer in spaced relation to the plane of the side 17 as indicated at 28. In the top of the inside replacer is formed a slot 29 which merges into the surface 26 at the front end

and terminates at the rear end in an abrupt shoulder 30. This slot 29 is wider at the front end than at the rear so that it forms a slot narrowed laterally from front to rear and deepens vertically in the same direction.

In using these devices the rail head of the outside replacer is hooked over the outside of the rail while that of the inside replacer is hooked over the other rail so that the replacer lies inside of said rail. By reason of the top surfaces of both replacers terminating at their forward ends in relatively the planes of the bottoms, the wheels of the derailed car may be moved up the two convexed surfaces. As the outside wheel moves up the outside replacer the concavity of the forward end of that replacer guides the wheel so that when the latter reaches the planes 21 and 22 the flange of that wheel will strike the wall 23 and be deflected toward the rail. As this wall terminates inside of the rail the flange will be carried over the projecting portion 28 and will drop inside of the rail in its proper position. Meanwhile, the other wheel has entered the broadened end of the channel or slot 29, the rim of the wheel riding on the arcuate surface 26 and being guided thereon by the side wall 27. As the slot 26 narrows toward the rear end the flange is held from passing over the rail and as the wheel passes out of the slot 29 the flange will drop between the rail and the surface 28 this insuring the tread of the wheel being properly positioned on the rail.

There have thus been provided simple and efficient devices of the kind described and for the purpose specified.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the kind described, an outside replacer provided with a bottom having means for positioning the replacer on railroad ties, a rail engaging means formed on said replacer and a top surface on said replacer having a front end transversely concave and longitudinally convex, said surface merging at the rear into an inclined side wall and a floor formed in two vertically displaced planes merging at their forward end and separated by an inwardly directed wall increasing in height from front to rear and arranged to guide a wheel flange.

2. In a device of the kind described, an inside replacer provided with a bottom having means for positioning the replacer on railroad ties, a rail engaging means formed on said replacer, and a top surface having a longitudinally convex floor and an inwardly directed side guide wall terminating in an extension adapted to lie adjacent and in spaced relation to a rail, and a channel merging into the floor at the front and narrowing and deepening from front to rear to form a flange guide said channel having one of its sides formed by said inwardly directed side guide wall.

3. In a device of the kind described, the combination of an outside replacer provided with a bottom having means for positioning the replacer on railroad ties, a rail engaging means formed on said replacer and a top surface on said replacer having a front end transversely concave and longitudinally convex, said surface merging at the rear into an inclined side wall and a floor formed in two vertically displaced planes merging at their forward end and separated by an inwardly directed wall increasing in height from front to rear and arranged to guide a wheel flange; with an inside replacer provided with a bottom having means for positioning the replacer on railroad ties, a rail engaging means formed on said replacer, and a top surface having a longitudinally convex floor and an inwardly directed side guide wall terminating in an extension adapted to lie adjacent and in spaced relation to a rail, and a channel merging into the floor at the front and narrowing and deepening from front to rear to form a flange guide said channel having one of its sides formed by said inwardly directed side guide wall.

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

ALBERT C. KELLEY.

Witnesses:
M. T. MILLER,
GEO. H. CHANDLEE.