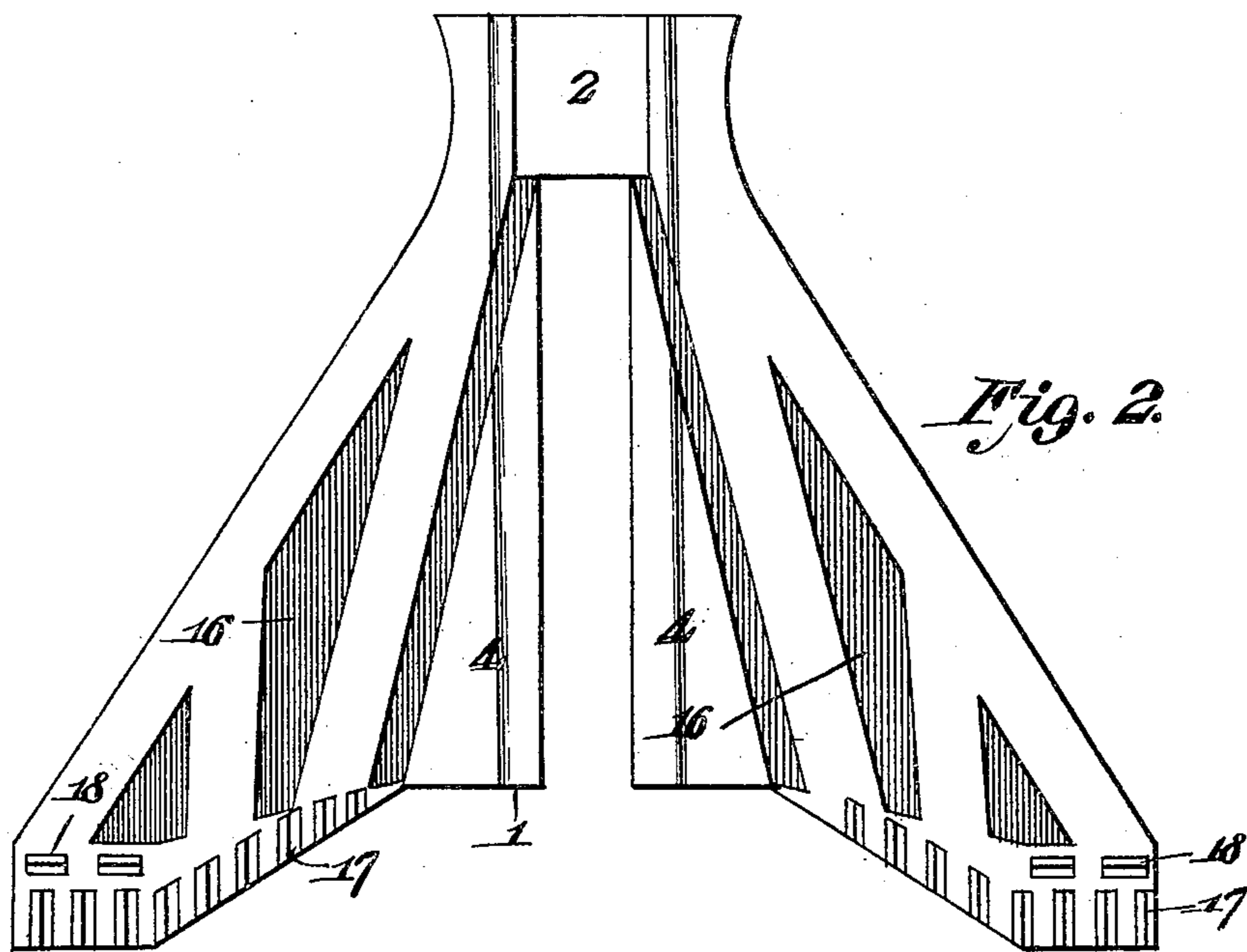
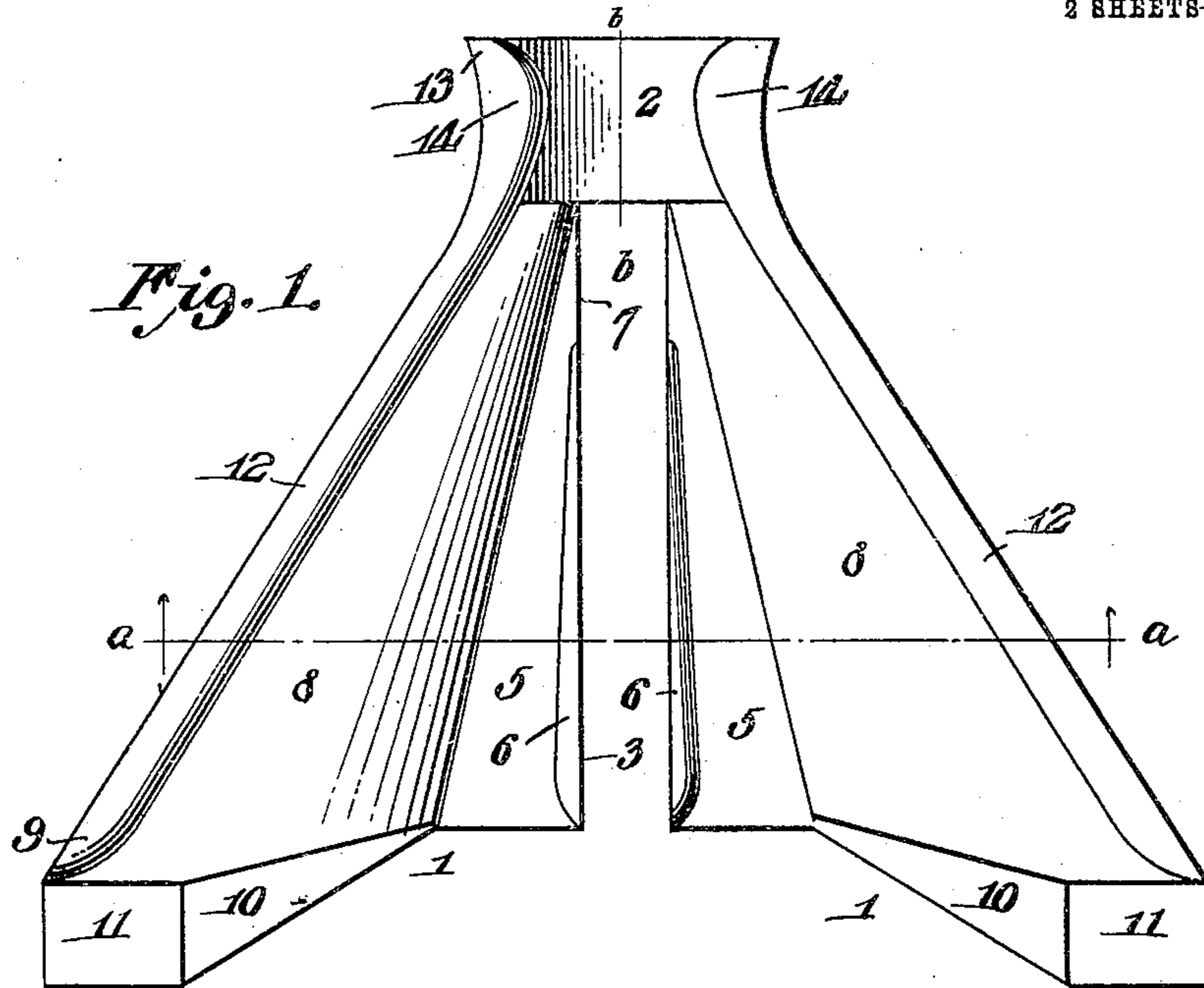


L. L. COATS.  
CAR AND ENGINE REPLACER.  
APPLICATION FILED NOV. 30, 1909.

979,131.

Patented Dec. 20, 1910.

2 SHEETS—SHEET 1.



Witnesses

*D. B. Salt.*

*J. C. Garner*

Inventor

*Louis L. Coats*

By

*Victor J. Evans,*

Attorney

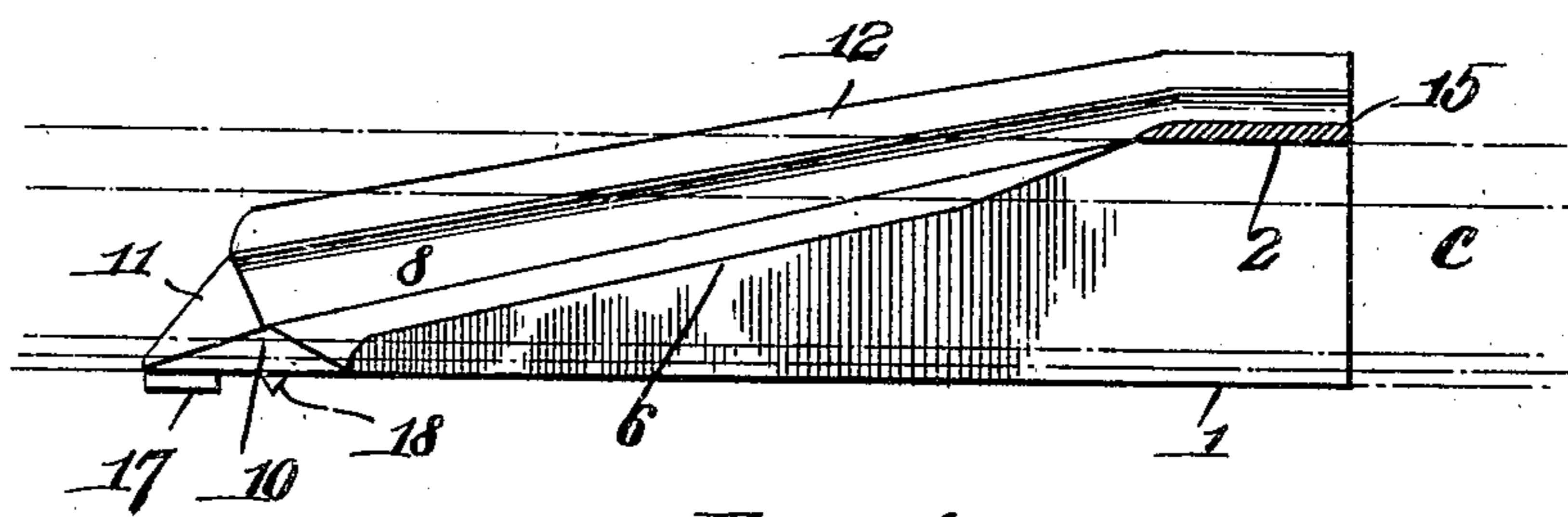
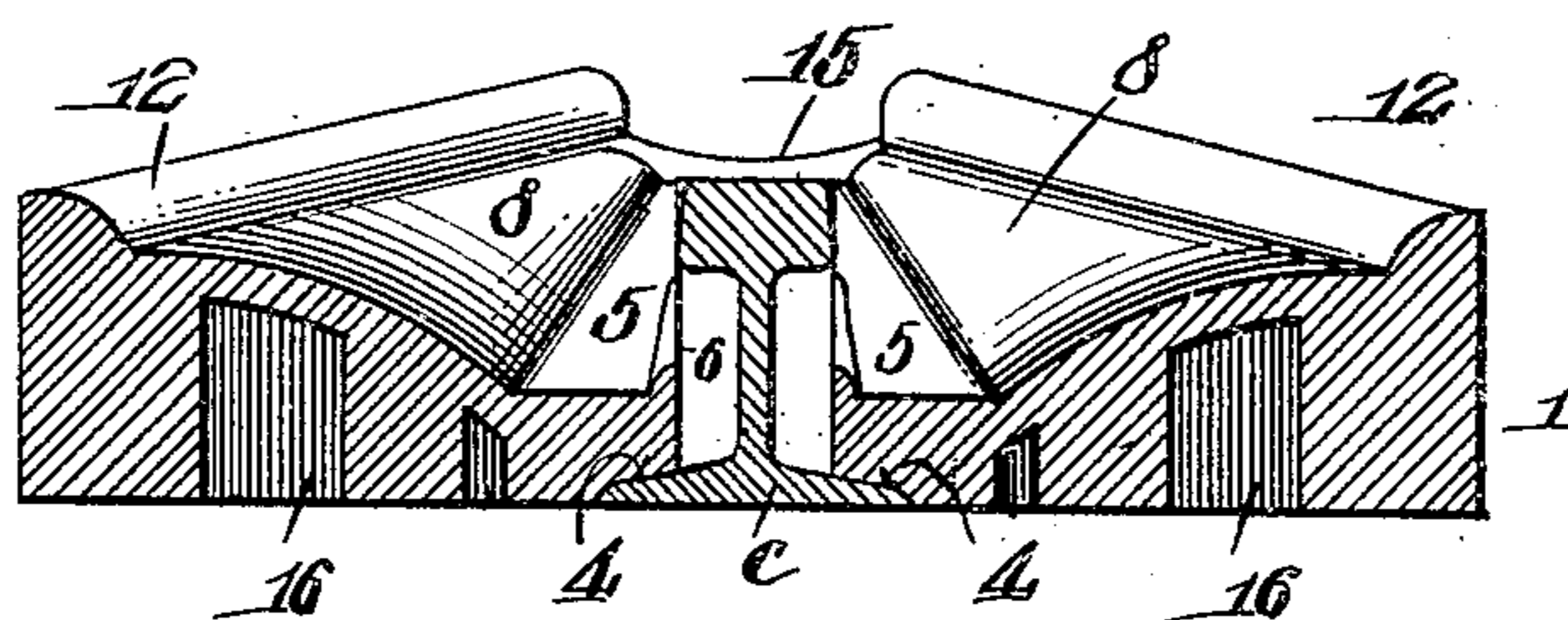
L. L. COATS.  
CAR AND ENGINE REPLACER.  
APPLICATION FILED NOV. 30, 1909.

979,131.

Patented Dec. 20, 1910.

2 SHEETS—SHEET 2.

*Fig. 3.*



*Fig. 4.*

Witnesses

*D. B. Galt.*

*J. W. Garner*

Inventor  
*Louis L. Coats.*

By *Victor J. Evans*

Attorney

# UNITED STATES PATENT OFFICE.

LOUIS L. COATS, OF BINGHAM, UTAH.

CAR AND ENGINE REPLACER.

979,131.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Application filed November 30, 1909. Serial No. 530,638.

*To all whom it may concern:*

Be it known that I, LOUIS L. COATS, a citizen of the United States, residing at Bingham, in the county of Salt Lake and State of Utah, have invented new and useful Improvements in Car and Engine Replacers, of which the following is a specification.

This invention is an improved frog block for application to a railway rail for use in replacing the wheels of a derailed engine or car on the track, the object of the invention being to provide an improved device of this character which may be used on either side of either of the rails so as to avoid the necessity of providing rights and lefts and which operates in such a manner as to cause the wheels of a car or engine while mounting the track to be gradually slued on to the rails, the invention consisting in the construction, and arrangement of devices hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a plan view of a replacer constructed in accordance with my invention. Fig. 2 is an inverted plan view of the same. Fig. 3 is a transverse sectional view of the same on the plane indicated by the line *a—*a** of Fig. 1. Fig. 4 is a vertical longitudinal central sectional view of the same on the plane indicated by the line *b—*b** of Fig. 1.

My improved replacer frog or block, in the embodiment here shown comprises a pair of substantially triangular wings 1 which are connected together at the higher end by a bridge piece 2. The said wings are spaced apart a sufficient distance to receive a railway rail *c* between them so that the replacer is adapted to be placed on the cross ties and astride of the rail and the bridge piece 2 when the replacer is thus disposed extends across and bears upon the head of the rail. The wings are identical in construction and I will, therefore, only describe one of them. Each wing presents a straight inner or rail side 3 to bear against one side of the rail and is recessed in its under side, at the rail side as at 4 to receive the base flange of the rail. The inner portion of the wing forms a longitudinally disposed depressed inclined run surface 5 next the rail side which run surface narrows and tapers toward its upper end where it joins the bridge piece 2. At the inner side of the runway is an upstanding longitudinally disposed flange 6 which lies in the same vertical plane with the side of the head of the

rail and also tapers toward its upper end and terminates short of the bridge piece 2 so that a space 7 is formed at the upper end of the runway to clear the flanges of the wheels and permit the wheels to be slued on to the track rails. At the outer side of the inclined runway 5 each wing is formed with a longitudinally and laterally inclined sluing surface 8 which rises outwardly from the depressed runway and also narrows toward its upper end where it joins the bridge piece. The said sluing surface is here shown as laterally convex. At the lower end of the sluing surface the wing is extended somewhat beyond the runway 5 as at 9 and is formed with abruptly inclined planes 10 and 11 which serve to raise the wheels from the roadbed on to the sluing surfaces if the wheels are in line with either of these planes. At the outer side of each sluing surface is an upstanding longitudinally disposed inclined guard flange 12 which extends from end to end of the sluing surface and also extends to the extreme rear side of the bridge piece 2 so that the said guard flanges are co-extensive in length with the sluing surfaces and the bridge piece. The upper end portions of the said guard flanges curve outwardly as at 13 to the rear corners of the bridge piece and said guard flanges are broadened as at 14 where they bear on the bridge piece at points about midway between the front and rear sides of the latter so that the said guard flanges are greatly strengthened at such broadened portions thereof and also serve to materially strengthen the bridge piece. The upper surface of the bridge piece is hollowed or concaved transversely thereof as at 15.

In practice, the replacer is preferably constructed as a single casting and it will be understood that since it is composed of two reversely disposed wings, otherwise identical in construction and connected together at the upper or rear end by a bridge piece, the replacer may be used on either track rail no matter on which side thereof the wheels of the derailed car or engine may be and the necessity for using right and left replacers is entirely obviated. To lighten the replacer, to economize in material and cost of production and to also facilitate the handling of the same, the wings of the replacer are preferably formed with recesses 16 in their under sides, as shown. The extended lower front portions 9 of the wings are

formed on their under sides with longitudinally disposed spurs 17 to bite into the ties and prevent the replacer from slipping when the wheels of the car or engine are run thereon. Near its outer rearward corners, the replacer is also formed on its under side with transversely disposed spurs 18 which perform the same function as spurs 17.

In the operation of the replacer, the flanges of the wheels run up the inclined run surfaces 5 and are slued by the sluing surfaces 8 across the rails, as will be understood. Should the wheels be at such a distance from the track as to be in line with the sluing surfaces, the inclines 10 or 11 will raise the wheels to such sluing surfaces and the latter together with the guard flanges will slue the wheels into the depressed run surfaces so as to cause the wheels to ride upon the rail. The effect of the upwardly narrow depressed inclined run surfaces is to gradually raise the wheels so that the latter are slued upon the track gradually and without excessive jarring.

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

1. A car replacer having a depressed longitudinally inclined run surface on each side of the rail and narrowing toward its upper end, a longitudinally and laterally inclined sluing surface on the outer side of the said run surface and also narrowing toward its upper end, a bridge piece at the upper ends of said run surface and sluing surface and adapted to bear on the head of a rail, and a guard flange at the outer side of said sluing

surface and extending longitudinally on one side of said bridge piece.

2. A car replacer comprising a pair of wings to bear on opposite sides of a track rail and each having a depressed longitudinally inclined run surface on the rail side narrowing toward its upper end, and a longitudinally and laterally inclined sluing surface on the outer side of the said run surface and also narrowing toward its upper end, and a bridge piece connecting said wings at the upper ends of said run and sluing surfaces and extending across and bearing upon the head of the rail.

3. A car replacer comprising a pair of wings to bear on opposite sides of a track rail and each having a depressed longitudinally inclined run surface on the rail side narrowing toward its upper end, and a longitudinally and laterally inclined sluing surface on the outer side of the said run surface and also narrowing toward its upper end, and a bridge piece connecting said wings at the upper ends of said run and sluing surfaces and adapted to extend across and bear upon the head of the rail, and guard flanges at the outer sides of said sluing surfaces and extending rearwardly along the sides of the said bridge piece.

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

LOUIS L. COATS.

Witnesses:

J. S. LOCKER,  
GEO. W. CORNELL.