

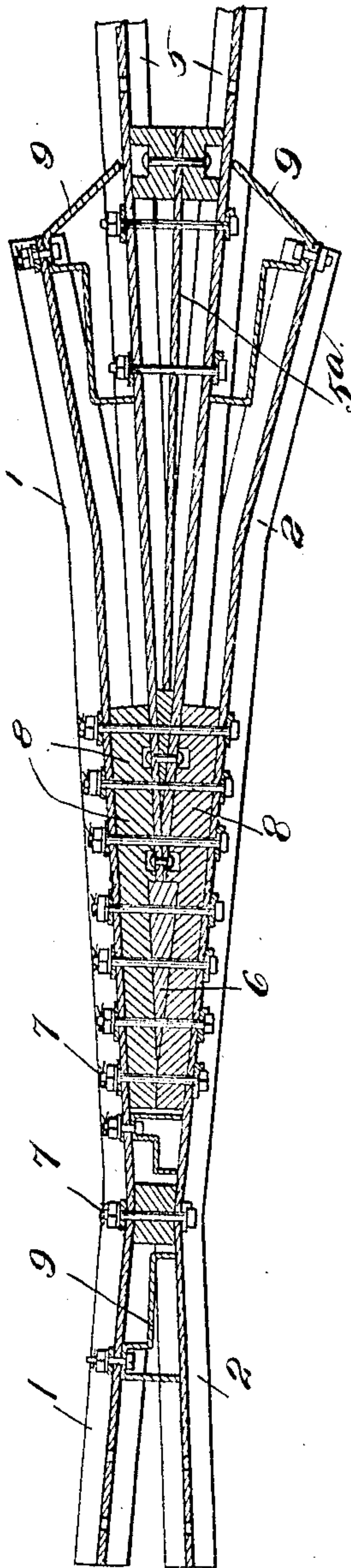
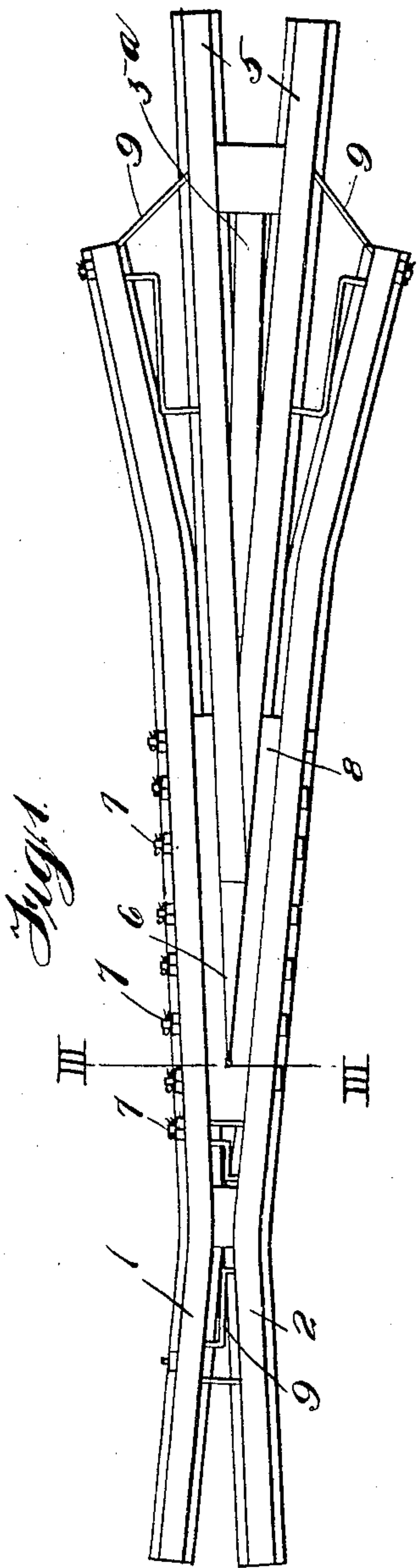
No. 869,695.

PATENTED OCT. 29, 1907.

T. F. DONAHOE.  
RAILWAY FROG.

APPLICATION FILED AUG. 1, 1907.

2 SHEETS—SHEET 1.



Witnesses

Samuel Payne  
W. H. Butler

Inventor

*T. F. Donahoe.*

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H. Everett

Attorneys

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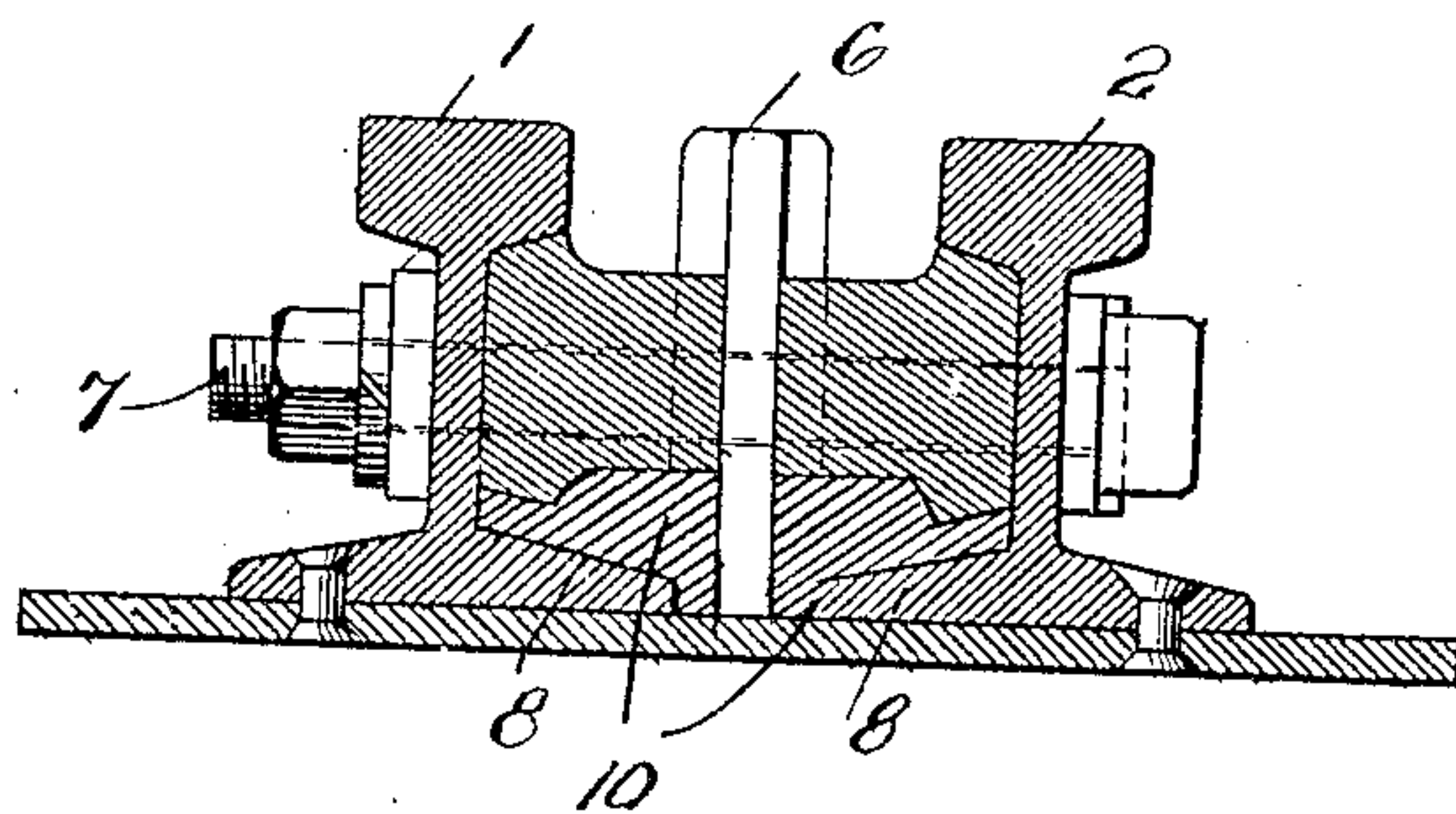
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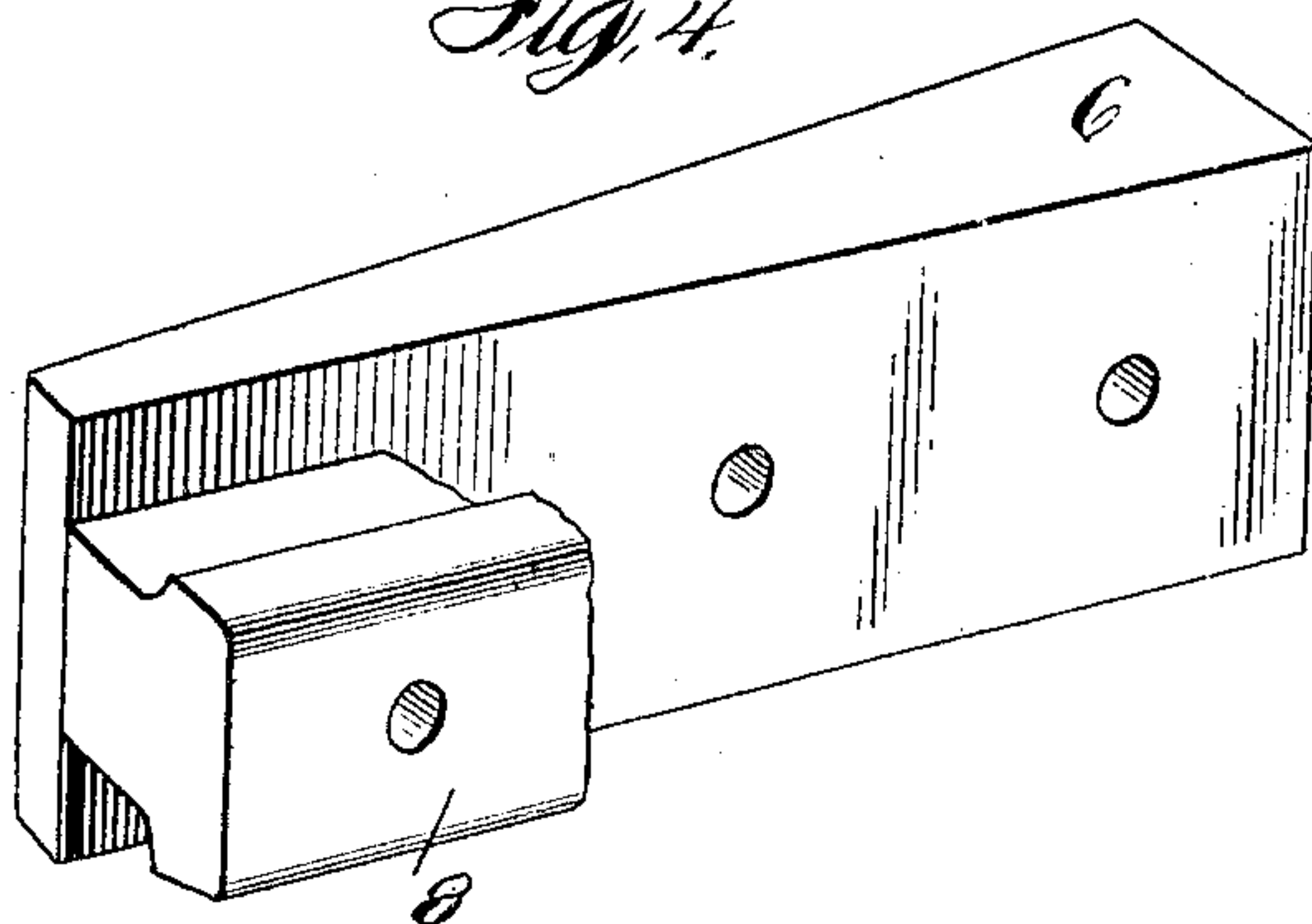
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2 SHEETS—SHEET 2.

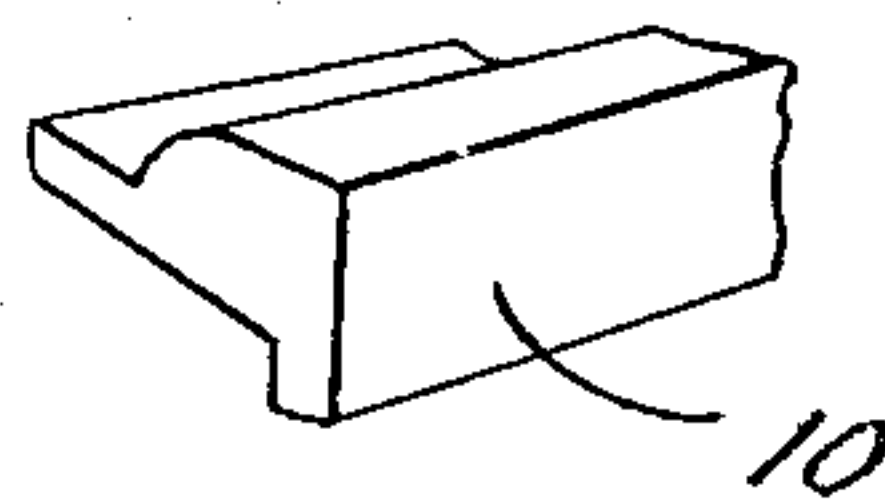
*Fig. 3.*



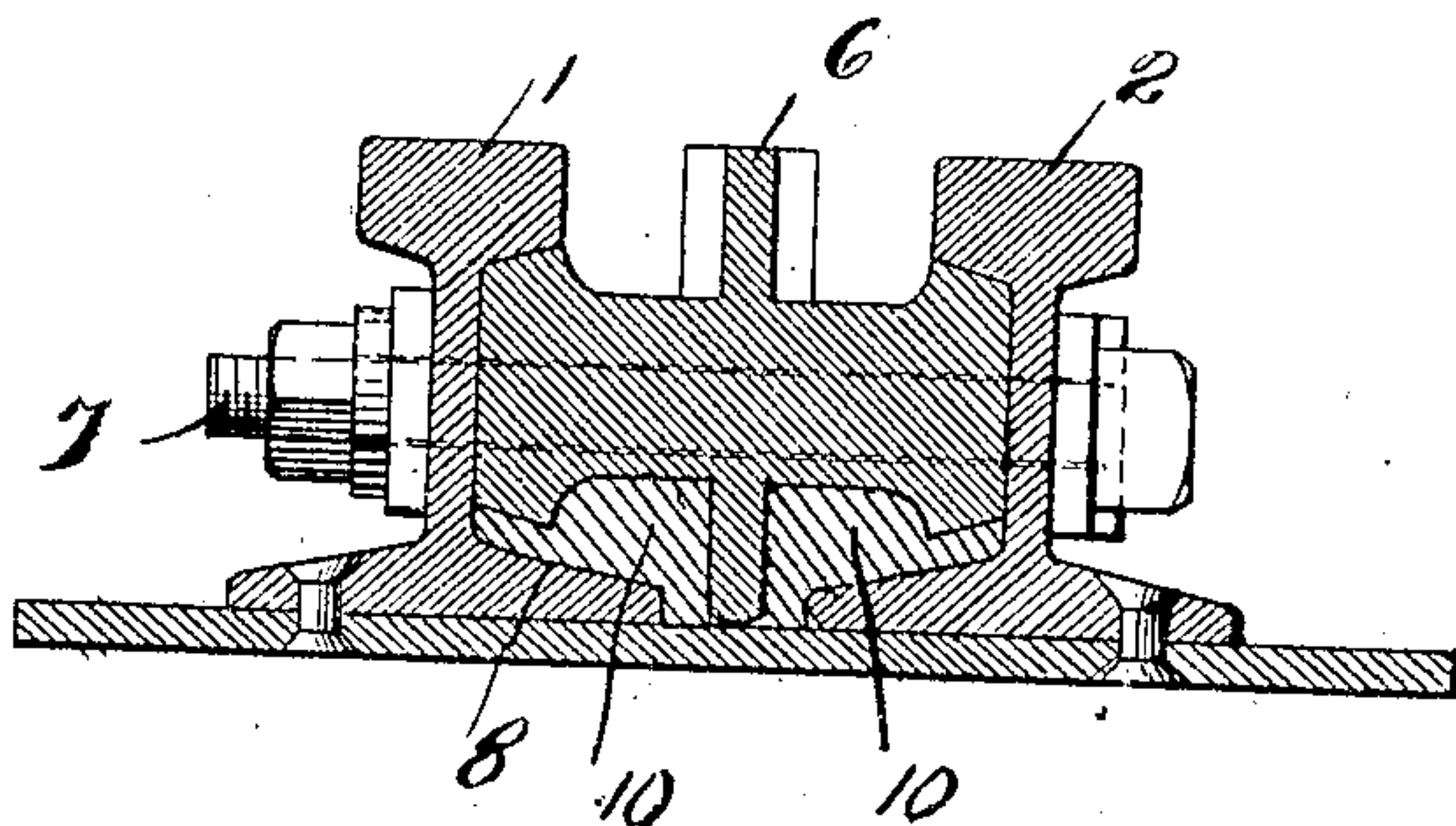
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



Inventor  
T. F. Donahoe.

Witnesses

Samuel Payne.  
A. H. Butler.

By

H. E. Court & Co.

Attorneys



# UNITED STATES PATENT OFFICE.

THOMAS F. DONAHOE, OF PITTSBURG, PENNSYLVANIA.

## RAILWAY-FROG.

No. 869,695.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed August 1, 1907. Serial No. 386,617.

*To all whom it may concern:*

Be it known that I, THOMAS F. DONAHOE, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Frogs, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to railway frogs, and the invention has for its object to provide reversible rails and points for stiff frogs, permitting of the rails being rearranged and the points inverted, when worn by rolling stock passing over the same.

It is a well-known fact that certain parts of the rails of a frog, particularly the rails forming the wings of the frog are subject to considerable wear by the tread of wheels, passing over same. This is also true of points of frogs, the points wear as the wing gets low, and heretofore, it has been necessary to construct new wings or discard the frogs that have become worn to that extent as to cause a derailment or injury to rolling stock.

My invention aims to obviate the discarding of frogs on account of injured wings and points, and to construct the same whereby they can be changed, and made to serve twice the period of time as ordinary frogs.

The detail construction entering into my invention will be presently described, and then specifically pointed out in the appended claims.

In the drawings, Figure 1 is a plan of a frog constructed in accordance with my invention, showing similar angles on each end of wings, Fig. 2 is a horizontal sectional view of the same, Fig. 3 is an enlarged cross sectional view of the frog taken on the line III—III of Fig. 1, Fig. 4 is a perspective view of an invertible point, Fig. 5 is a sectional view of a point made solid with the filler block so that point and filler would both be invertible, this part of filler to be made the same length as the invertible point, and Fig. 6 is a perspective view of a filler plate for invertible points.

To put my invention into practice, I construct a frog of two wing rails 1 and 2, constituting the wings of a frog. In connection with these rails, I use heel rails 5, and heel blocks 5<sup>a</sup> and a point 6, these parts being secured together by fastenings, generally bolts 7, said bolts passing through the web portions of said elements. Foot guards 9 are used, these guards together with the

filler blocks and heel rails being common to the present type of railway frog. The rails 1 and 2 are constructed and bent with similar angles, whereby when the tops of the rails 1 and 2 constituting the wing of the frog, have become worn at the point, these rails can be reversed and transposed, the rail 1 turned end for end being used where the rail 2 was originally used and rail 2 turned end for end in the position originally occupied by rail 1. This has been impossible heretofore due principally to the angularity of the rails 1 and 2, also owing to the fact that said rails were not of a proper length.

The point 6 of the frog, Fig. 4, is made without a base or especially designed head, the top and bottom of the point being identical in construction, whereby when the top of the point has become worn, said point can be inverted and what was then the lower surface thereof used as the top of the point. This point can also be made solid with filler blocks, as per Fig. 5, then by inverting the filler, the point would be the same as new. Filler plates 10 can be used to brace and form a foundation for the invertible points of a frog.

It will be apparent to track supervisors and those familiar with the construction and maintenance of stiff frogs, that I have devised a frog that will last twice the life of ordinary frogs, thus reducing the expense of track maintenance, besides, insuring greater safety of rolling stock.

Having fully described my invention, what I claim and desire to secure by Letters Patent, is:—

1. A frog consisting of elongated wing rails of similar angularity and an invertible point, said rails and point being suitably connected together.

2. A frog consisting of interchangeable elongated wing rails having similar angularity, an invertible point, and means for securing said rails and point together.

3. A frog consisting of elongated wing rails having similar angles adapting said rails to be interchanged, and an invertible point.

4. A frog consisting of elongated and interchangeable wing rails, an invertible point, and filler blocks between the lower face of the invertible point and base of the wing rails.

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

THOMAS F. DONAHOE.

Witnesses:

MAX H. SROLOVITZ,  
A. J. TRIGG.