

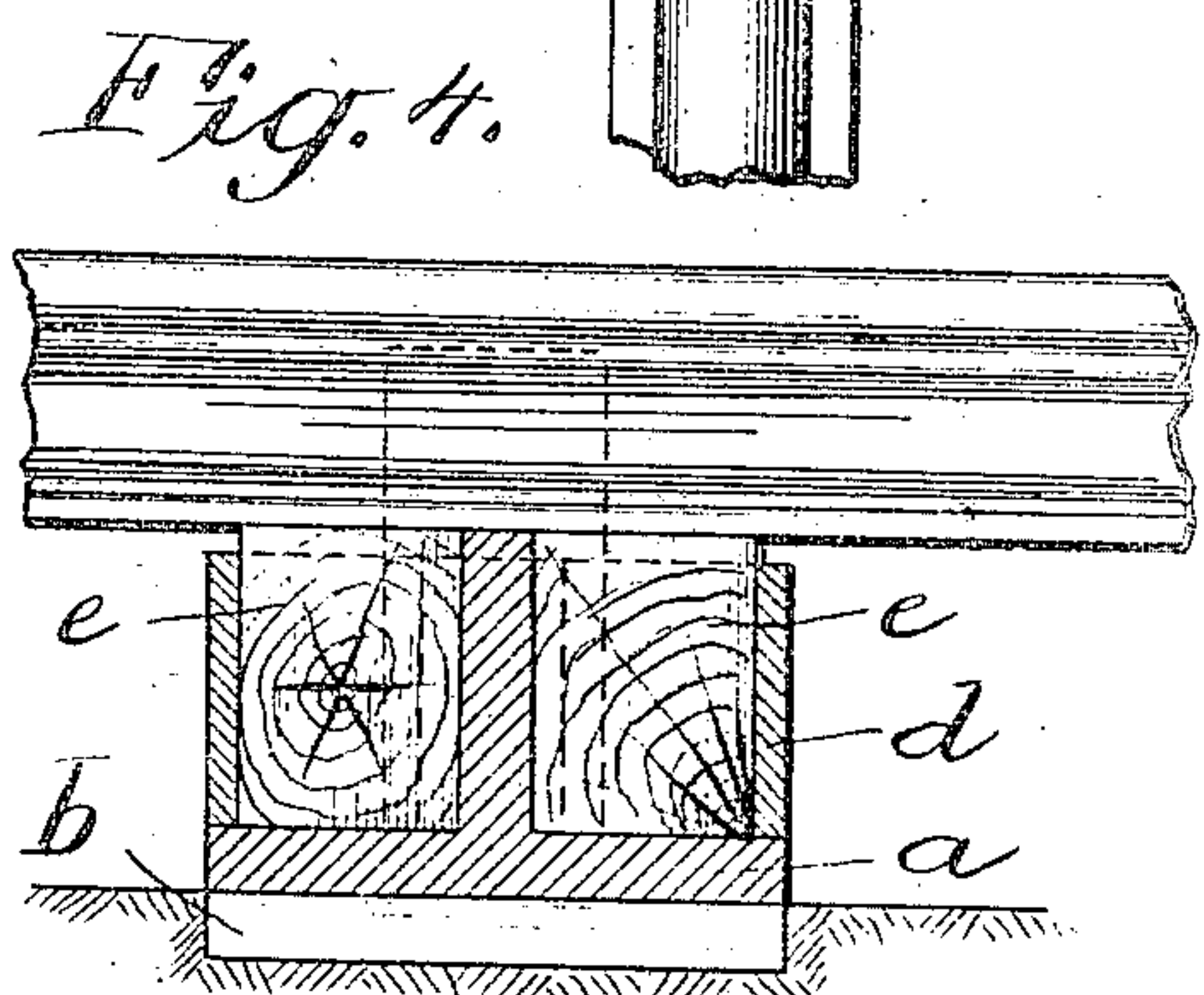
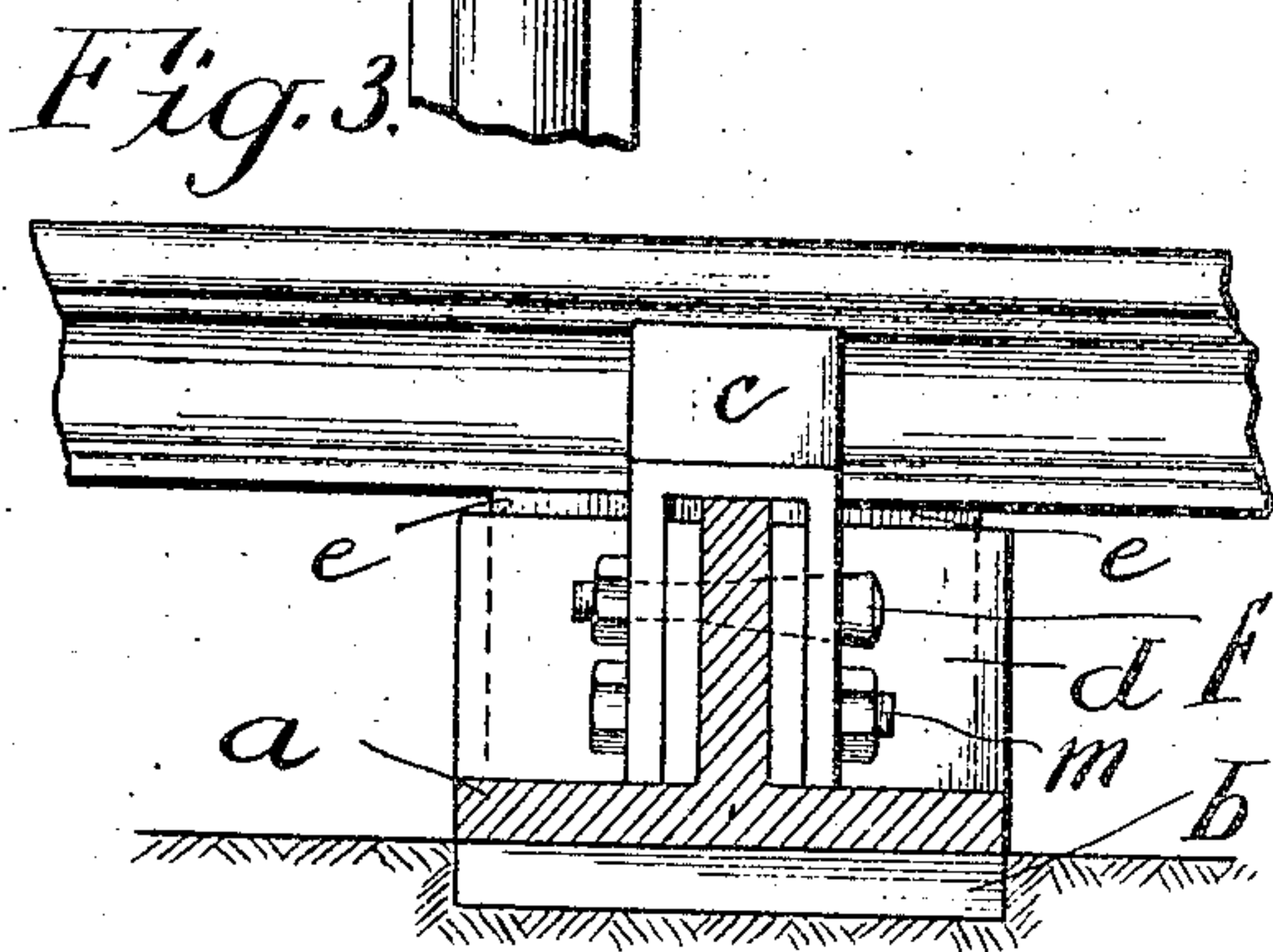
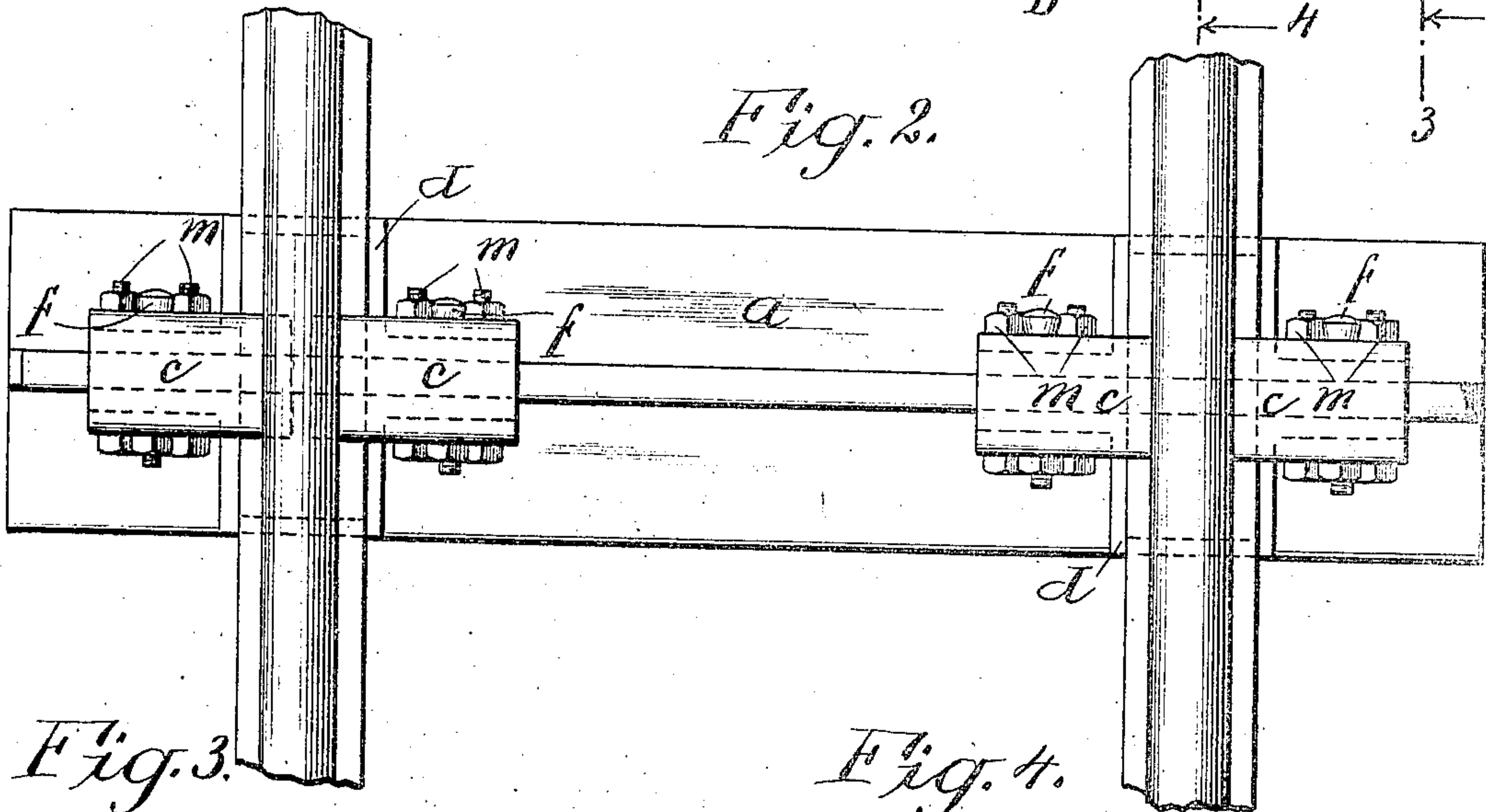
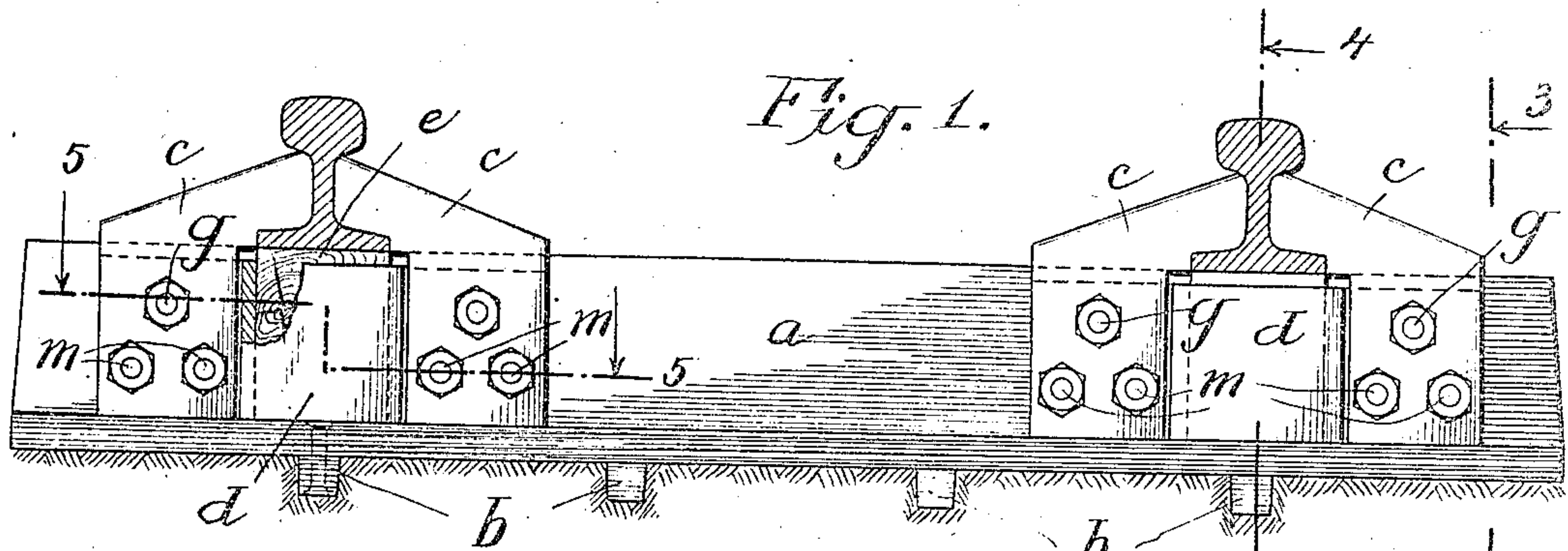
No. 891,663.

PATENTED JUNE 23, 1908.

A. S. BOUCHARD & J. A. WILKINSON.
METALLIC RAILWAY TIE.

APPLICATION FILED OCT. 16, 1907.

3 SHEETS—SHEET 1.



WITNESSES:

J. E. Hutchinson
R. Crut

INVENTORS:

A. S. Bouchard
J. A. Wilkinson
BY
Penner & Goldsborough
ATTORNEYS

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Fig. 5.

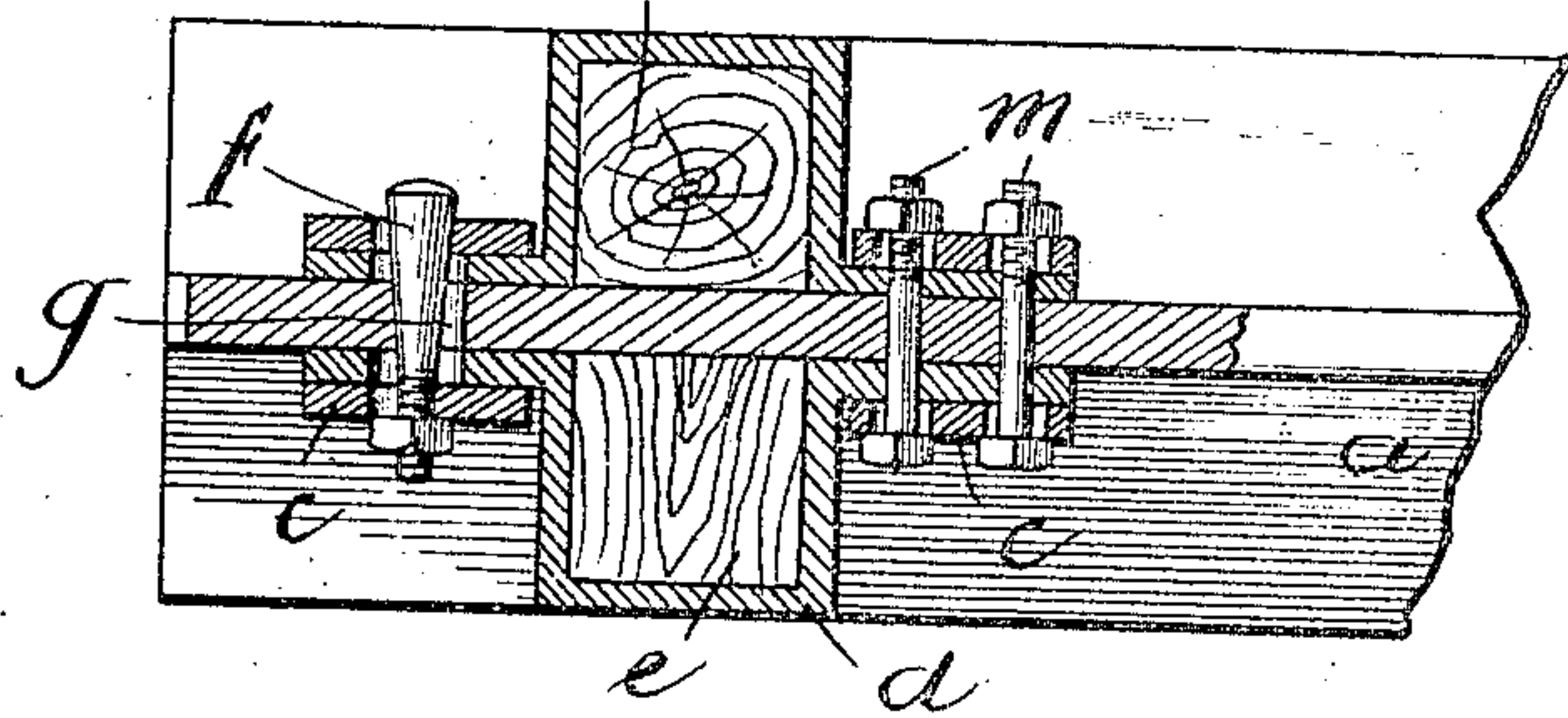


Fig. 6.

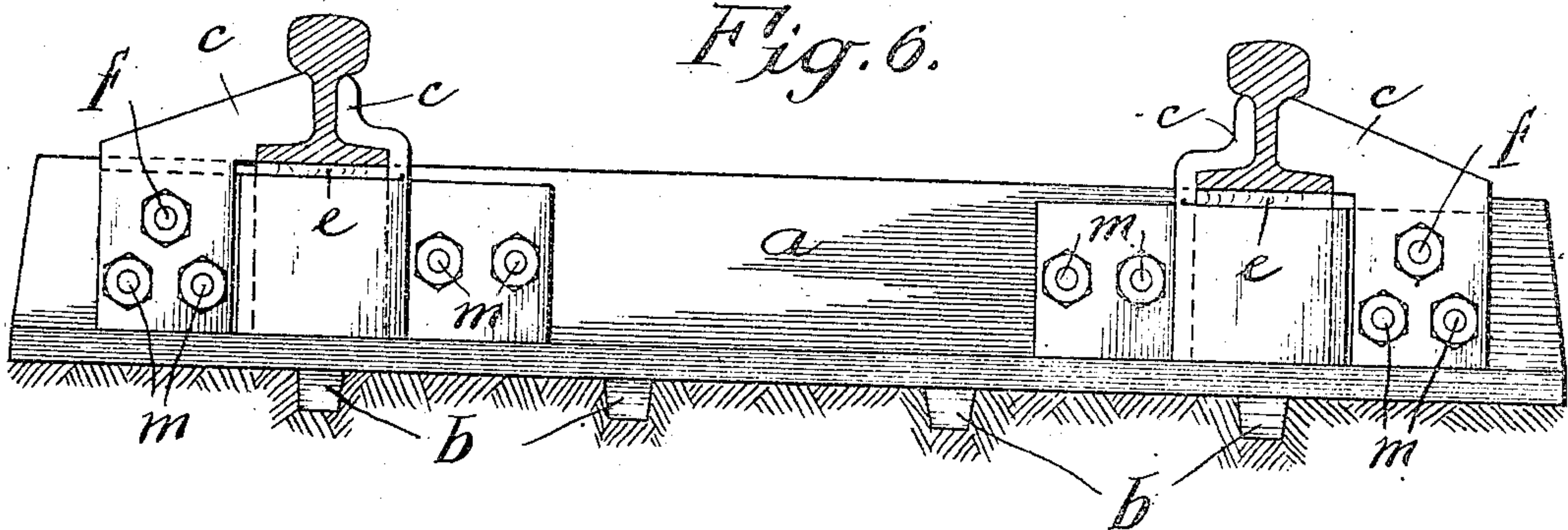


Fig. 7.

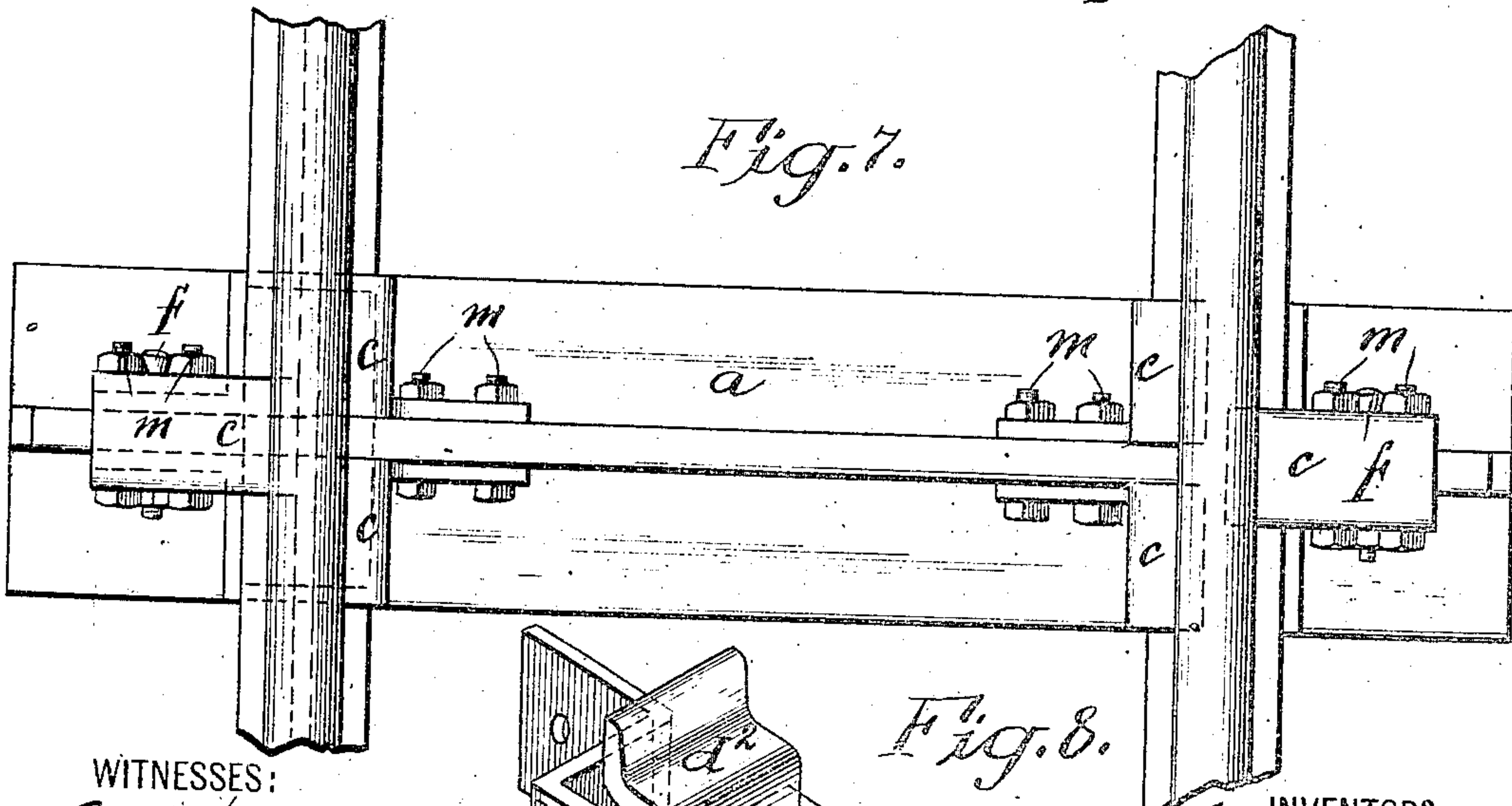
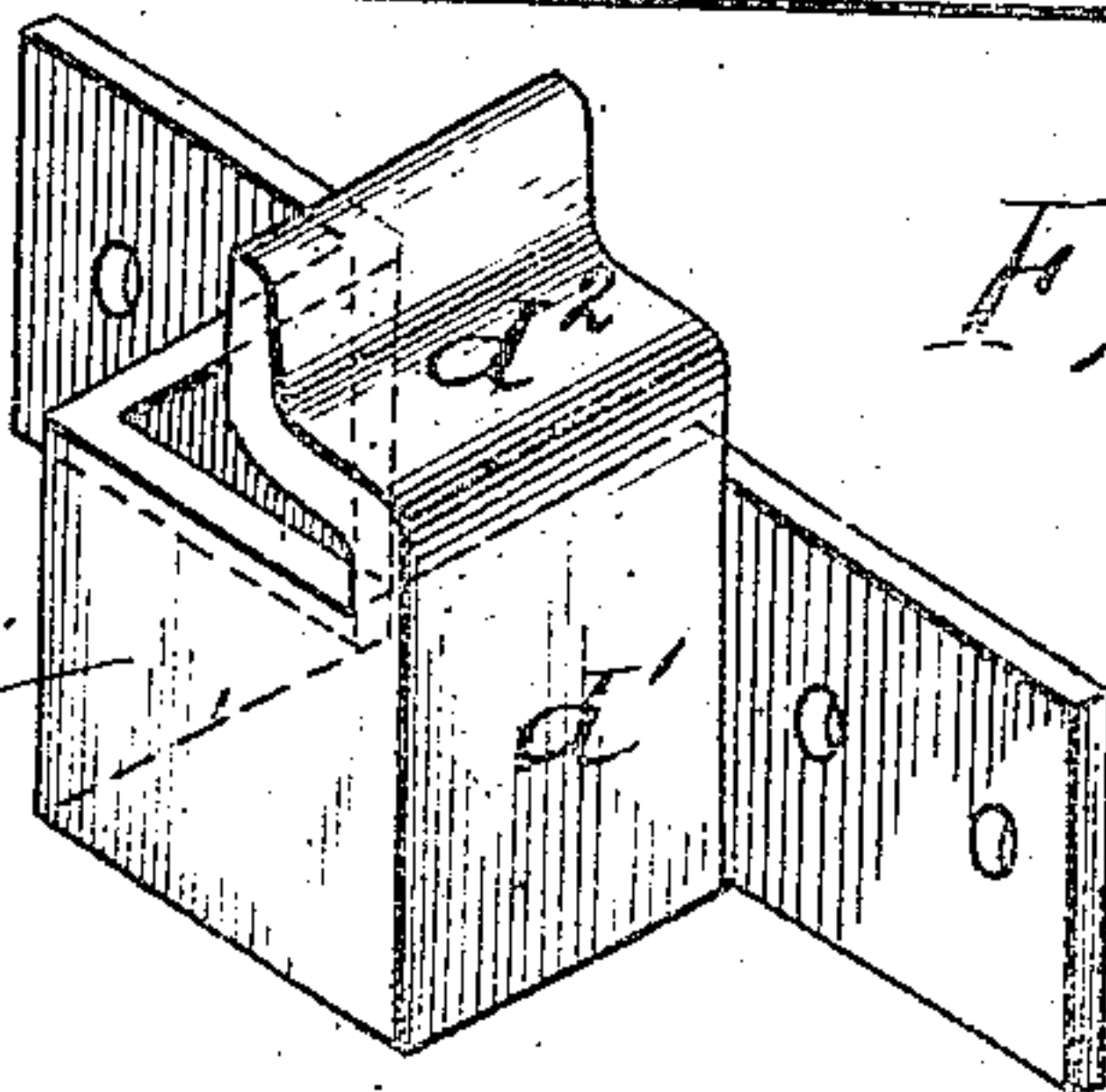


Fig. 8.



WITNESSES:

J. E. Hutchinson
R. B. Burt

INVENTORS:

A. S. Bouchard
J. A. Wilkinson
BY
Lumir Goldsborough
ATTORNEYS

No. 891,663.

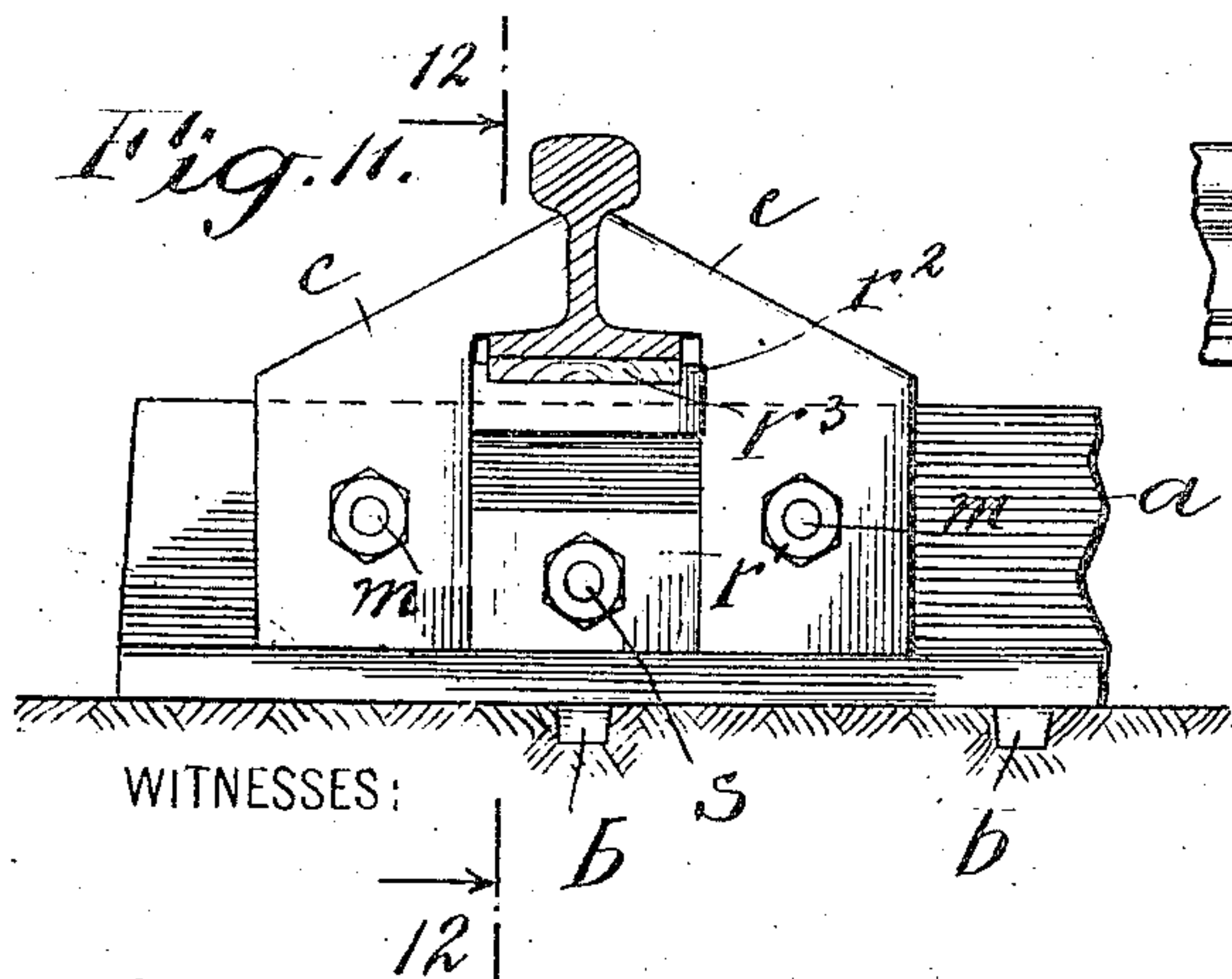
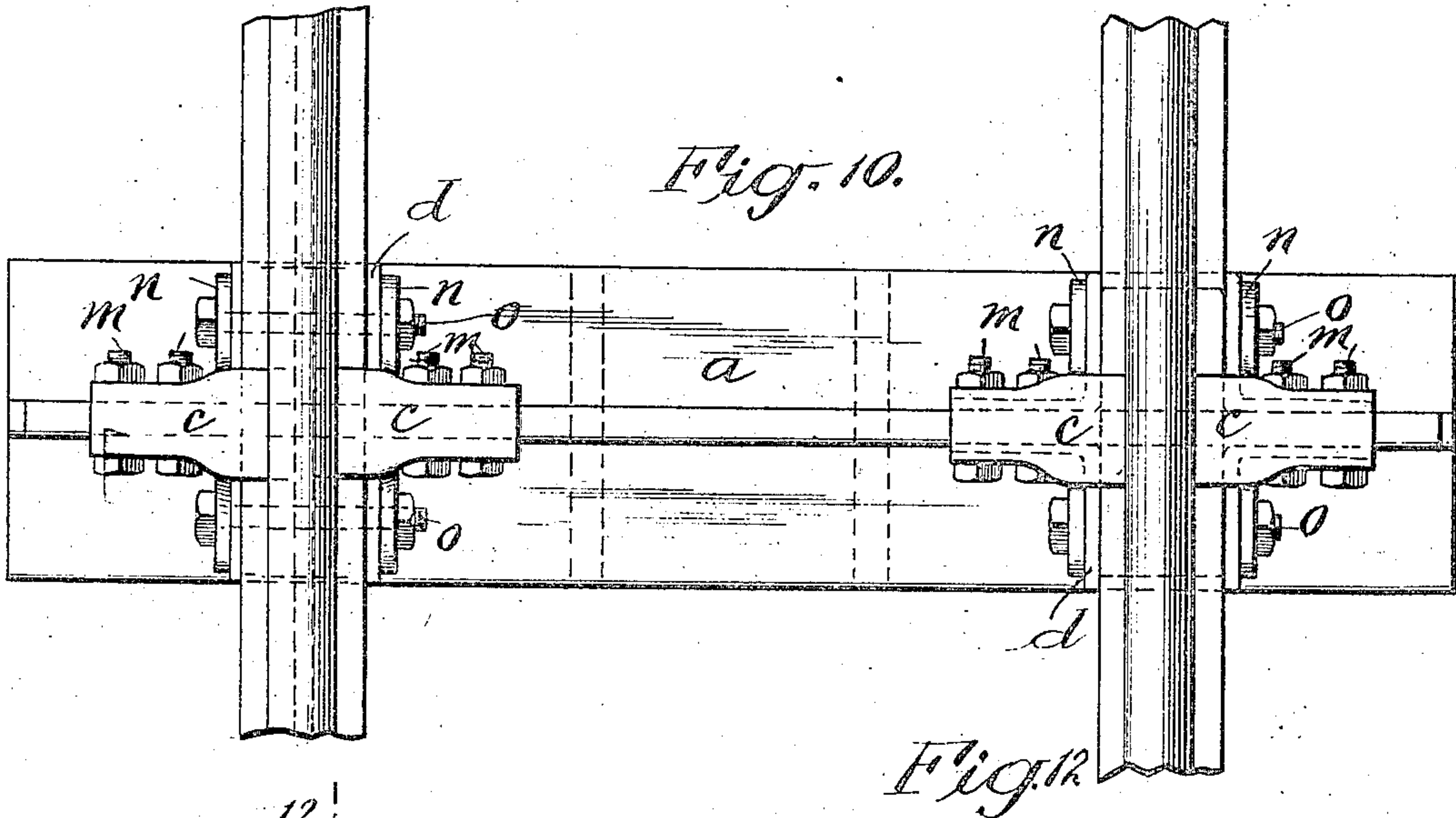
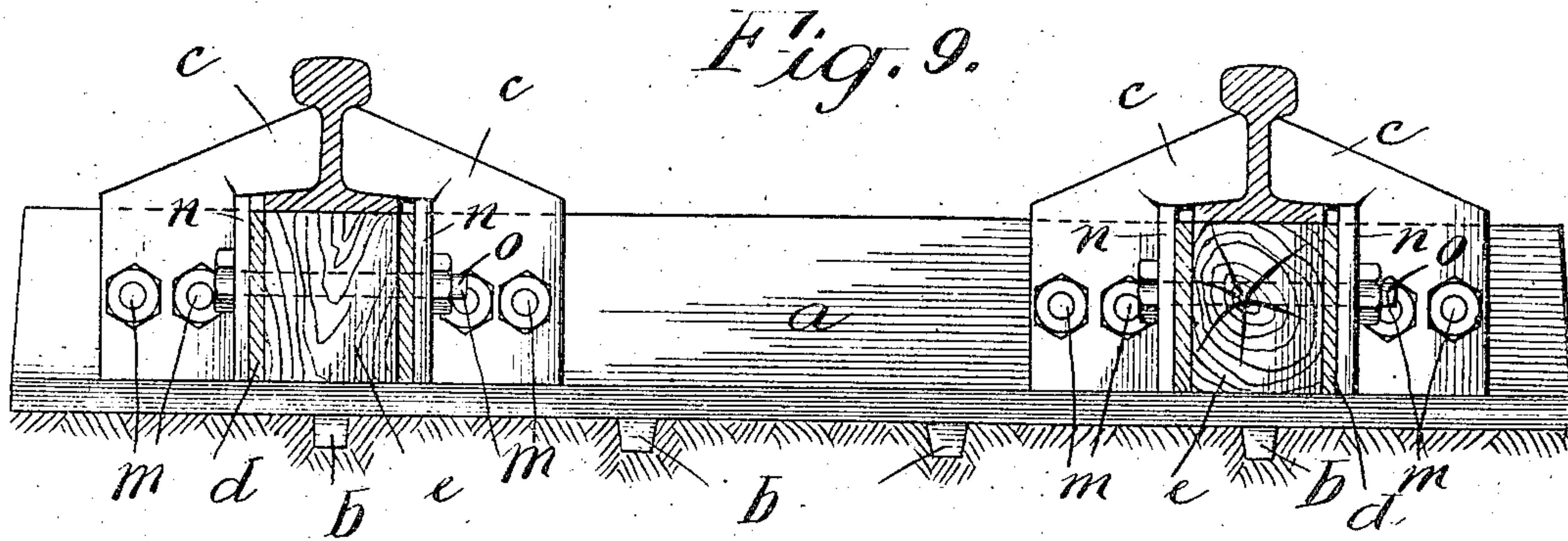
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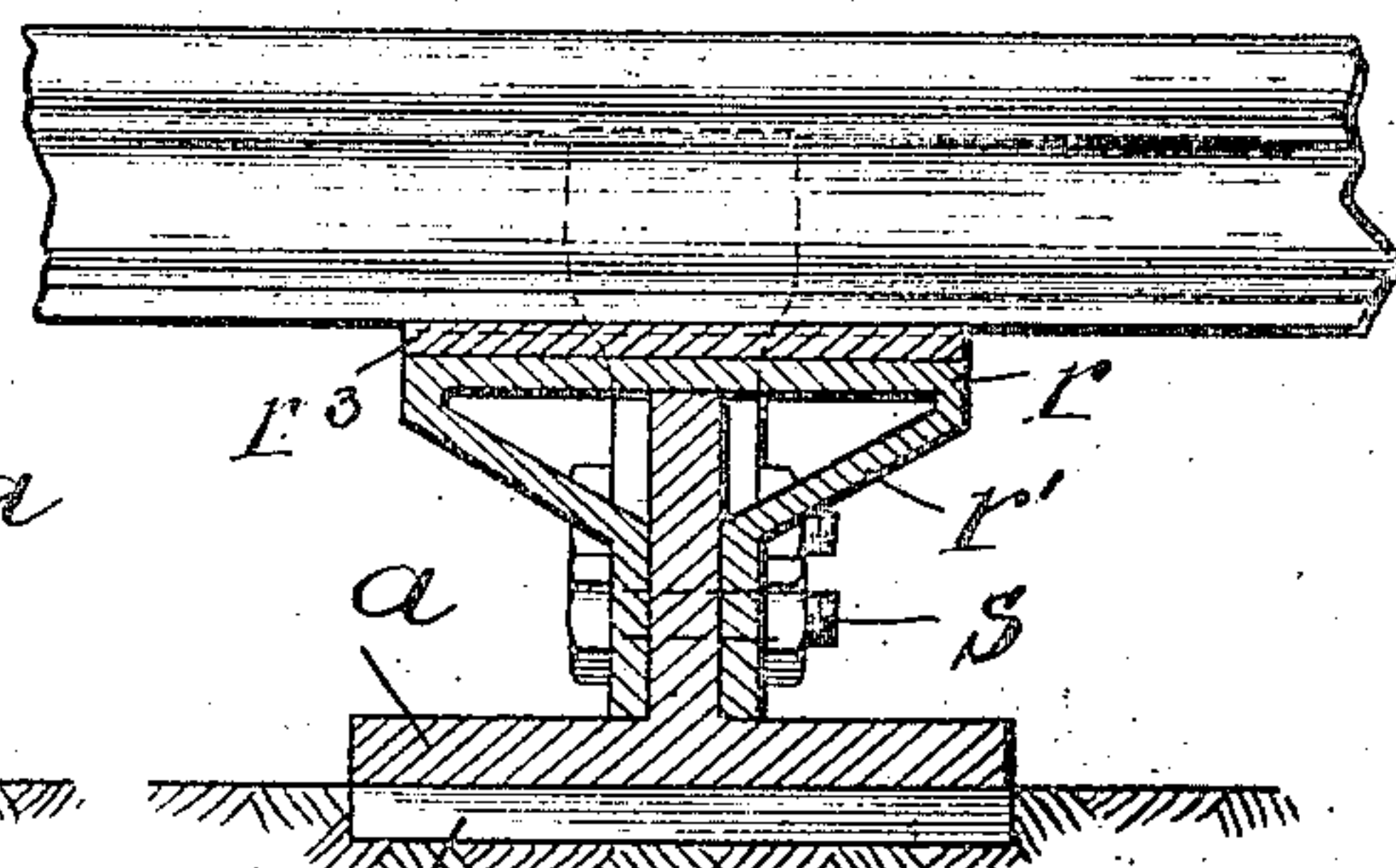
METALLIC RAILWAY TIE.

APPLICATION FILED OCT. 16, 1907.

3 SHEETS—SHEET 3.



J. E. Hutchinson Jr.
R. E. Grant



INVENTORS:
B. A. Bouchard
J. A. Wilkinson
BY
Henry Goldsborough
ATTORNEYS

UNITED STATES PATENT OFFICE.

AULSON S. BOUCHARD, OF ST. LOUIS, MISSOURI, AND JOHN ALLAN WILKINSON, OF NEW YORK, N. Y.; SAID WILKINSON ASSIGNOR TO SAID BOUCHARD.

METALLIC RAILWAY-TIE.

No. 891,663.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed October 16, 1907. Serial No. 397,674.

To all whom it may concern:

Be it known that we, AULSON S. BOUCHARD, a citizen of the United States, residing at St. Louis, in the State of Missouri, and JOHN ALLAN WILKINSON, a subject of the King of Great Britain, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Metallic Railway-Ties; and we 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

The object of our invention is to produce a metallic railway tie of satisfactory construction which may be cheaply made and easily placed and which furthermore provides adjusting means for taking up the wear between the railroad rail and the parts of the tie which engage the rail to hold it in place.

The nature of our improvements will be understood from the following description and the accompanying drawings, in which the same reference characters indicate like parts throughout.

In the accompanying drawings, Figures 1 and 2 represent, in side elevation and plan one form or modification of our invention; Figs. 3, 4 and 5 represent sectional views thereof on the lines 3—3, 4—4 and 5—5 of Fig. 1; Figs. 6 and 7 represent, in side elevation and plan, another form or modification of the invention; Fig. 8 represents a perspective view of a detail thereof; Figs. 9 and 10 represent, in side elevation and plan, another modification, and Figs. 11 and 12 represent a side elevation and a sectional view of a still further modification.

The body of the tie is composed of a rolled T-beam *a* and it is intended that the flat surface of the beam shall be placed on the road bed. For the purpose of increasing the grip of the tie on the road bed, we prefer to rivet or weld, or otherwise secure to the under surface thereof, the transverse strips *b*. To the upstanding flange of the T-beam we secure the saddle blocks *c* adapted to engage the foot of the road rail and preferably engaging also the web and acting as a support for the head. These saddle blocks are preferably formed of rolled, forged or malleable metal bent to the inverted U-shape shown in Fig. 3 and adapted to slide along the upstanding flange of the T-beam.

The upper edge of the upstanding flange will not ordinarily afford a sufficiently extended bearing surface for the rail. To provide such a bearing surface we adopt the construction shown, in which we attach to each side of the upstanding flange a metallic, box-like construction *d* formed in the desired shape. Into the chamber formed by this box-like construction on each side of the flange we insert a wooden block *e* which rises to a level with or slightly above the edge of the box *d*. The bolts which secure the saddle blocks to the flange also secure these boxes *d* thereto.

For the purpose of taking up the wear of the faces of the saddle blocks which engage the road rail, we provide means for adjusting the saddle blocks toward the rail. It is ordinarily sufficient to apply such adjusting means to the outside saddle blocks alone, but where it is advisable to do so, it may be applied both to the inside and outside saddle blocks. One form of this adjusting mechanism is shown in Figs. 1 to 5 in which the bolts *m* secure the saddle blocks to the upstanding flange of the tie through elongated slots. Above these securing bolts is a wedge bolt *f* which passes through elongated slots in the saddle block and in the portions of the boxes *d* which extend along the flange. In the body of the flange there is an elongated slot *g* which is staggered with relation to the slots in the saddle block, as shown most clearly in Fig. 5, whereby a tightening up of the wedge bolt *f* forces the saddle blocks toward the rail, thereby taking up the wear.

In Figs. 6, 7 and 8 we have shown a modified construction of the boxes *d* by which the inner saddle block may be dispensed with. To this end these modified boxes *d'* (see Fig. 8) are provided with turn over flanges *d''* engaging the foot of the rail and, if desired, extending up the web to engage the under surface of the head.

In Figs. 9 and 10, we have shown a modified means for adjusting the saddle blocks toward the road rail, in which the saddle blocks *c* have flanges *n* extending along the sides of the boxes *d* and bolts *o* extend through the lateral flanges *n* on one saddle block, the box *d*, the block *e* and the lateral flanges *n* on the other saddle block. By tightening these bolts *o* the saddle blocks are drawn toward the rail.

In Figs. 11 and 12 we have shown a modi-

fied construction of bearing block which comprises a member having a flat surface r and inwardly bent depending flanges r' which engage the upstanding flange of the 5 T-beam so that the flat surface r overlies the upper edge of the flange. This surface r is preferably provided with ridges r^2 along its edges and in the space between these ridges is placed a wooden cushioning block r^3 on 10 which the road rail rests. These bearing blocks are secured to the flange of the T-beam by the bolts s .

What we claim is:—

1. In a metallic railway tie, a body por- 15 tion formed of a T-beam extending across the road bed, saddle blocks straddling the upstanding flange of the T-beam in position to engage the road rail, and means for adjusting the saddle blocks toward the road rail 20 comprising a wedge bolt which engages staggered slots in the upstanding flange and in

the saddle blocks respectively; substantially as described.

2. In a metallic railway tie, a body portion formed of a T-beam extending across the 25 road bed, an elongated bearing surface for the road rail formed by a box-like structure secured at each side of the upstanding flange of the T-beam, a holding member secured to the said flange to engage the outside of the 30 road rail and a second holding member engaging the inside of the road rail and projecting from and formed integral with the inner side of the box structure; substantially as described. 35

In testimony whereof we affix our signatures, in presence of two witnesses.

AULSON S. BOUCHARD.

JOHN ALLAN WILKINSON.

Witnesses:

WILLIAM H. DAVIS,
LAURA B. PENFIELD.