

No. 616,365.

Patented Dec. 20, 1898.

W. E. SMITH.
RAIL JOINT.

(Application filed Sept. 27, 1898.)

(No Model.)

Fig 1

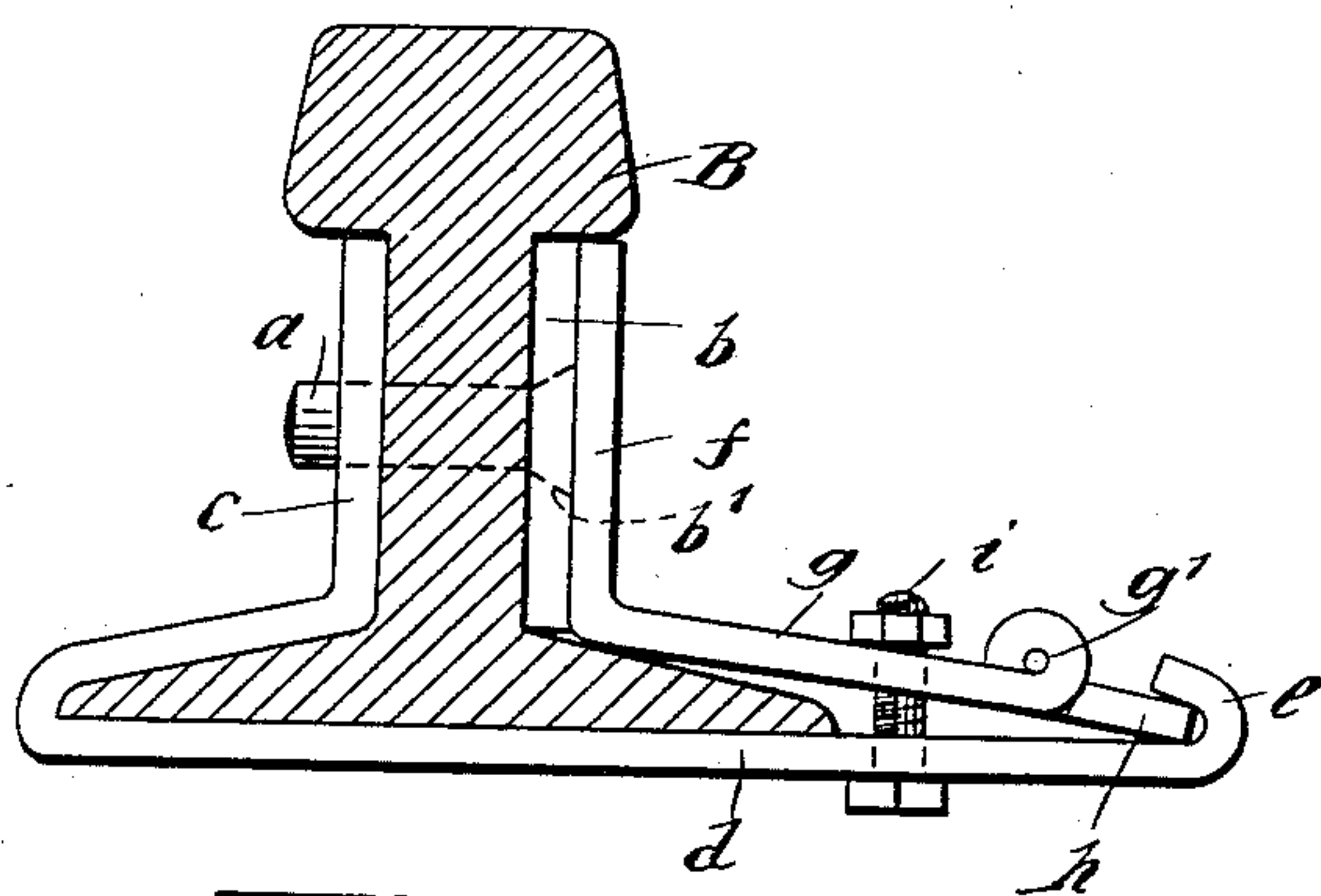
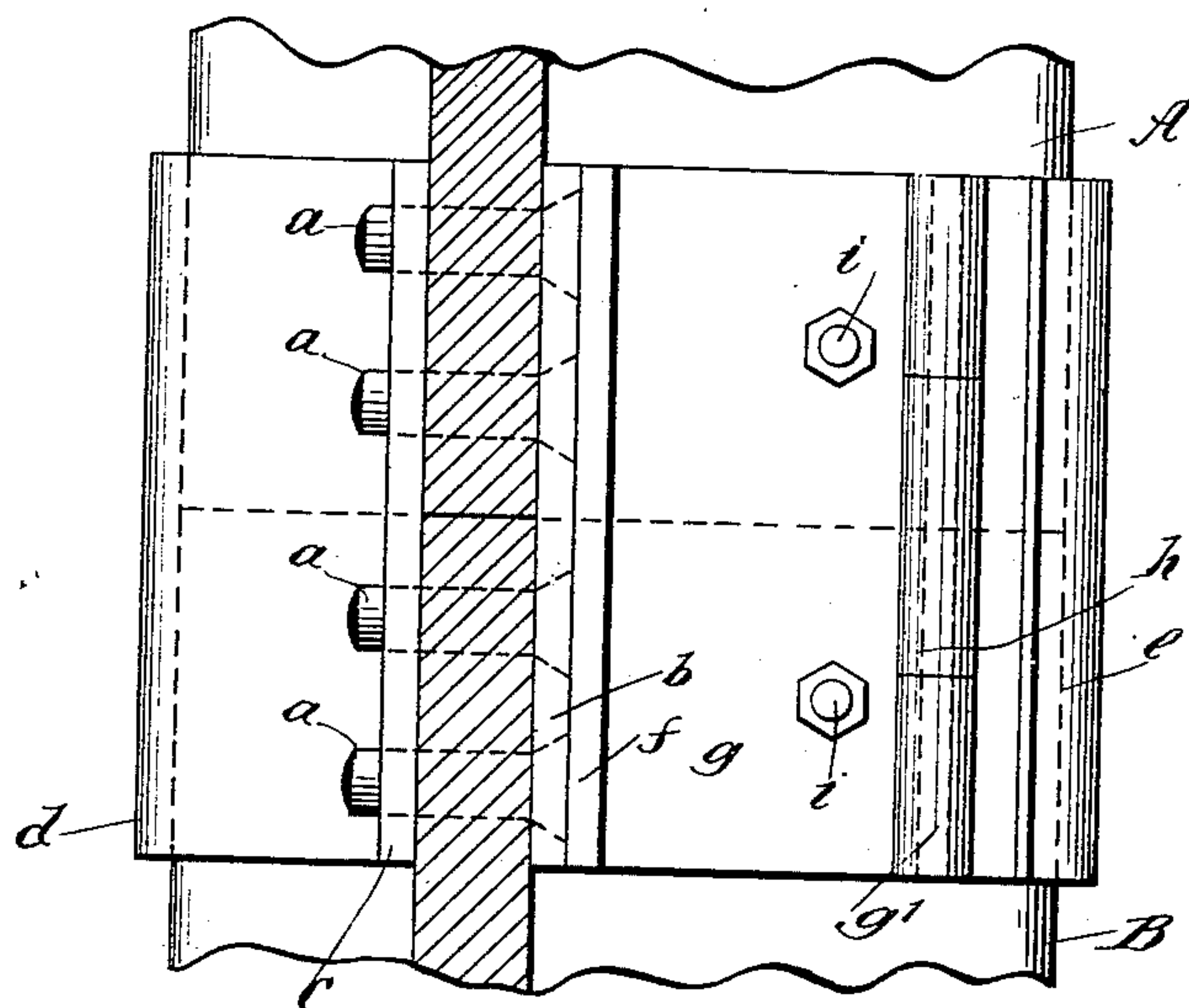


Fig 2

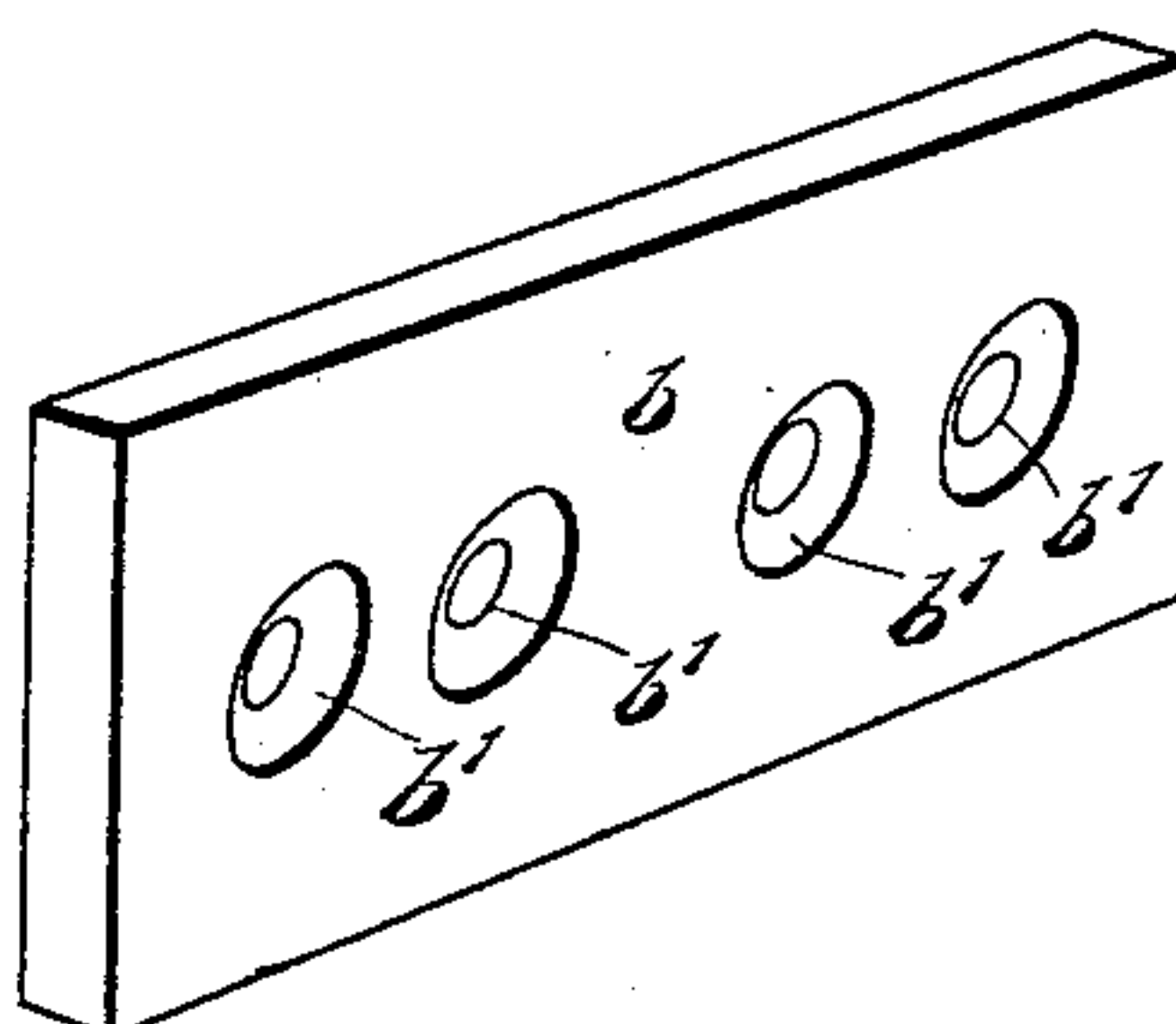


Fig 3

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM EDWARD SMITH, OF TELLURIDE, COLORADO, ASSIGNOR TO HIMSELF AND JOHN HEBBARD ADAMS, OF SAME PLACE.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 616,365, dated December 20, 1898.

Application filed September 27, 1898. Serial No. 692,013. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EDWARD SMITH, of Telluride, in the county of San Miguel and State of Colorado, have invented a new and useful Improvement in Rail-Joints, of which the following is a full, clear, and exact description.

This invention relates to a rail-joint of that class in which fish-plates are employed and joined to each other so that the contiguous ends of the rails are braced and fastened between the fish-plates; and the invention comprises certain peculiar means by which the fish-plates are secured and the whole structure rendered rigid and durable.

This invention is a disclosure of one form of my invention, while the claims define the scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the invention with the rails in section. Fig. 2 is an end elevation of the invention with the rail in cross-section, and Fig. 3 is a perspective view of one of the fish-plates.

The rail-sections A and B are each provided with openings, through which are passed the pins *a*, such pins serving the function of the usual bolts and having heads seated in countersunk openings *b'* in the fish-plate *b*. The fish-plate *b* lies against one side of the rail, the pins *a* projecting through the fish-plate and through the rails. The pins *a* also project through the fish-plate *c*, which is formed by the upturned end of the chair *d*, said chair extending beneath the rails and having at its side edge an upwardly and inwardly turned flange *e*.

The pins *a* are held in place without nuts or other fastening devices by means of a hinge-section *g*. This hinge-section is joined by a pintle *g'* to a coacting hinged section *h*, that is adapted to bear beneath the flange *e*. A bolt or bolts *i* pass through the hinged section *g* and through the chair *d*, so as to draw the section *g* downward, and by the action of the hinge, which is essentially that of a toggle, the presser-plate *f* is forced against the

head of the pins *a* and the pins held from displacement. At the same time the parts *f* and *c* are drawn forcibly toward each other and the sides clamped firmly, thus making a secure connection.

The bolt *i* should be tightened only sufficiently to project the parts *g* and *h*, respectively, against the fish-plates and the flange *e* and not sufficiently to break down the toggle. The position shown in the drawings, Fig. 2, is approximately the limit of the downward movement of the joint *g'* of the parts *g* and *h*.

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

1. The combination of a railway-chair, a fish-plate attached thereto, two hinge-sections, one of said sections bearing against the chair, a presser-plate carried on the other of said pin-sections, a second fish-plate against which the presser-plate bears, pins passed through the two fish-plates and held in place by the presser-plate, and means for drawing one of the hinge-sections downward toward the chair, substantially as shown and described.

2. The combination of a railway-chair, a fish-plate having connection with one side thereof, two hinge-plates joined to each other by a pintle, one of said plates bearing against the remaining side of the chair, a presser-plate rigid on the other of the hinge-plates, and means for drawing one of the hinge-plates downward toward the chair, substantially as shown and described.

3. The combination of a railway-chair, two hinge-plates having hinged connection with each other, one of said plates bearing against the chair and the other plate being adapted to exert pressure against the rail, and means for drawing one of the hinge-plates down to the chair, substantially as shown and described.

4. The combination of a railway-chair, a fish-plate attached rigidly to one side thereof, a second fish-plate, pins passed through the two fish-plates, a flange formed on the side of the chair opposite the side having the fish-plates, two hinge-sections pivotally joined to each other, one of said sections bearing against

the flange of the chair, a presser-plate formed on the other of said sections and adapted to engage the second-named fish-plate to hold the bolts in place, and means for drawing one
5 of the hinge-sections down on the chair, substantially as shown and described.

5. In a railway-joint the combination of a chair fish-plates, pins adapted to pass through the same and through the rails, a presser-
10 plate engaging one of the fish-plates to hold the pins in place, and means bearing against

the chair for forcing the presser-plate against the fish-plate, substantially as described.

6. In a rail-joint, the combination of a chair, a pressure-plate extending alongside the rail, 15 and a toggle working between the chair and the pressure-plate, the toggle having means for holding it in extended position.

WILLIAM EDWARD SMITH.

Witnesses:

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