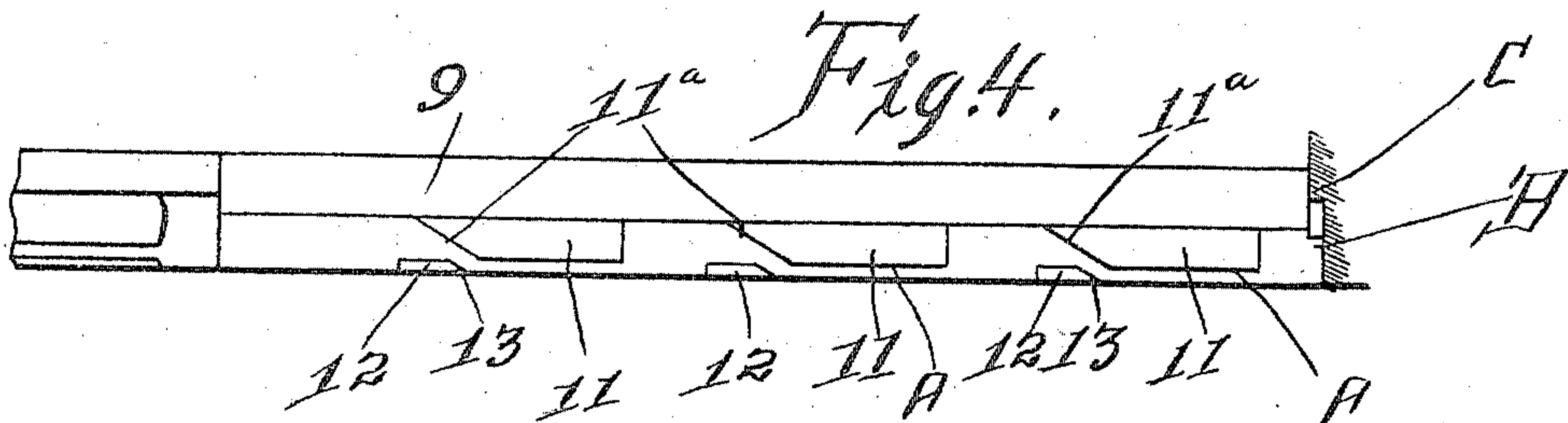
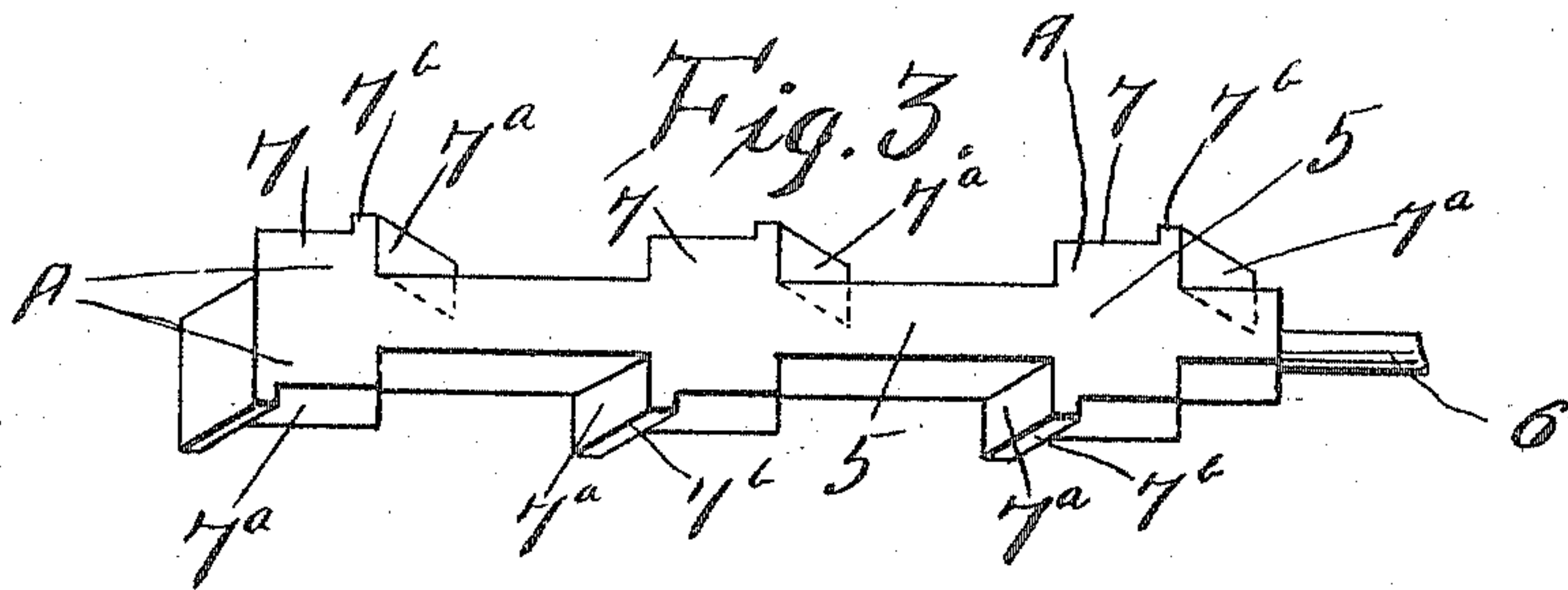
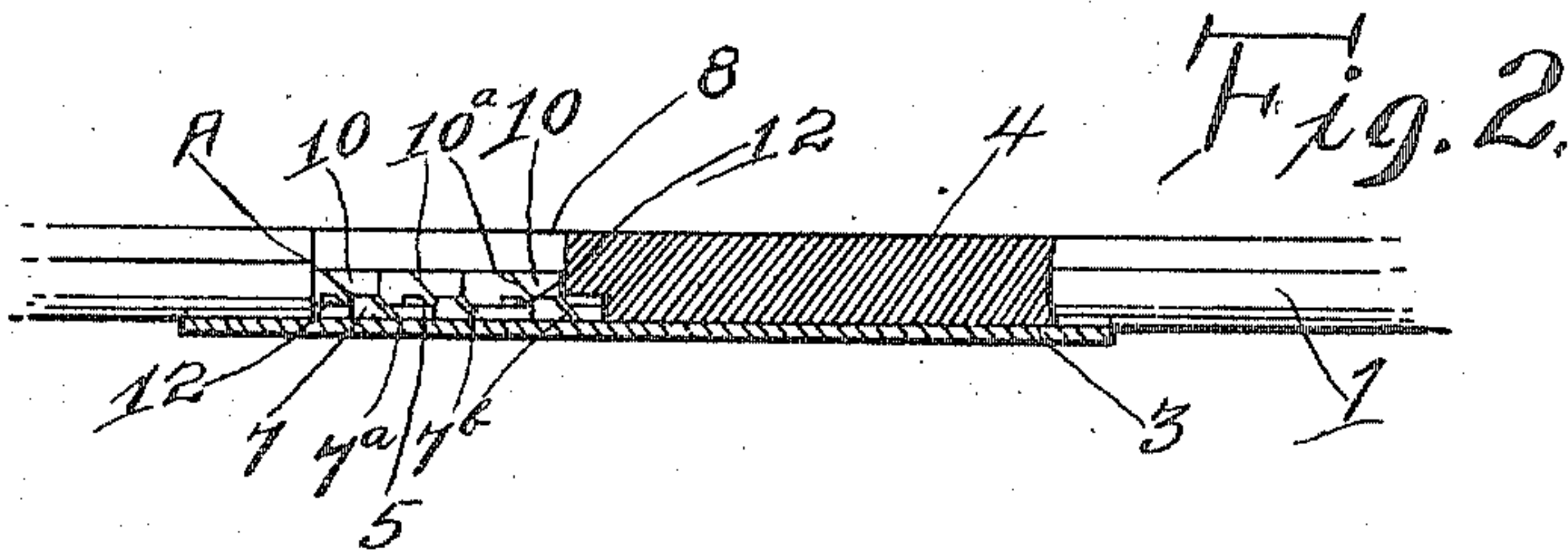
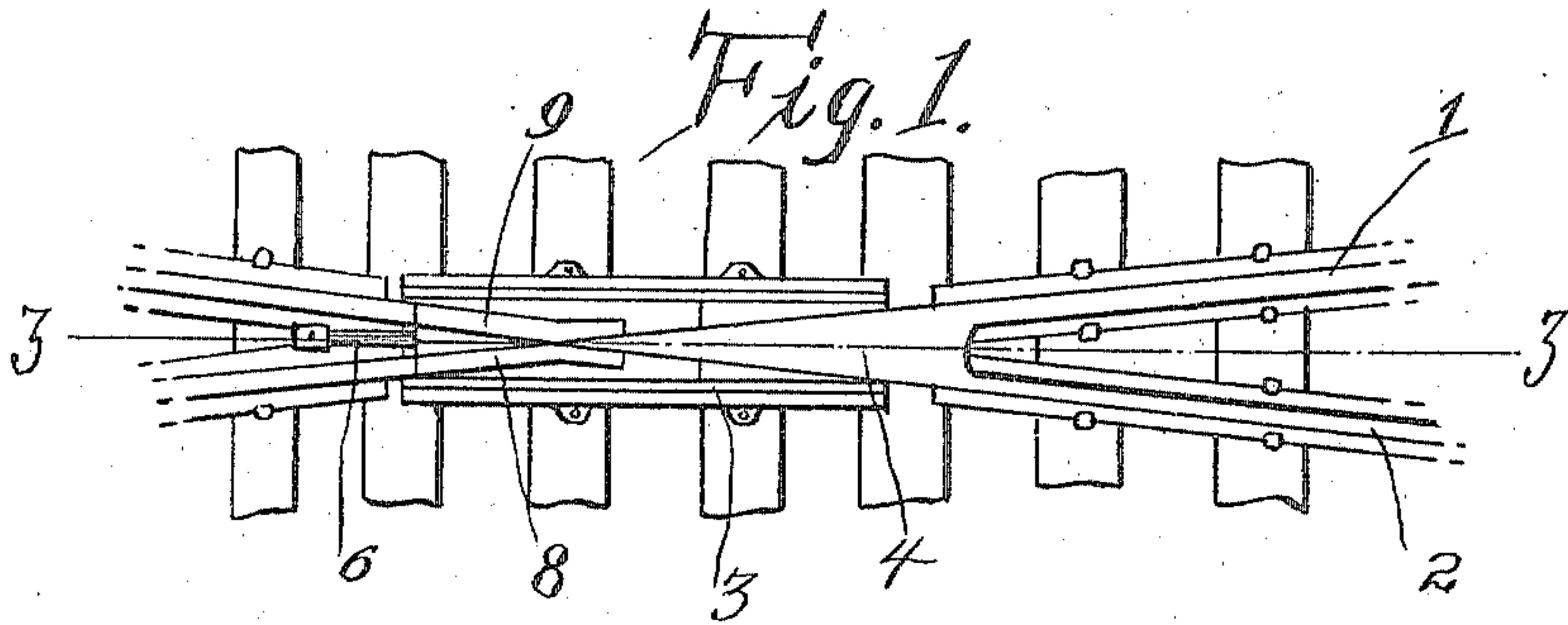


J. M. STREET.
RAILWAY FROG AND SWITCH.
APPLICATION FILED AUG. 18, 1909.

947,766.

Patented Jan. 25, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES MONROE STREET, OF CHICAGO HEIGHTS, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF TWO-THIRDS TO GEORGE H. FULLER, OF CHICAGO, ILLINOIS.

RAILWAY FROG AND SWITCH.

947,766.

Specification of Letters Patent.

Patented Jan. 25, 1910.

Application filed August 18, 1909. Serial No. 513,432.

To all whom it may concern:

Be it known that I, JAMES MONROE STREET, a citizen of the United States, residing at Chicago Heights, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway Frogs and Switches, of which the following is a specification.

My invention relates to railway frogs, and the principle of which may also be used in connection with switch points, derailing points, and on crossings.

More particularly my invention has relation to a device of this character in which vertical movable rail sections are employed to effect the purposes for which devices of this kind are provided.

Still more particularly, however, my invention is an improvement over the one shown in Patent No. 917,737, issued to A. L. McMasters, April 6, 1909, of which I was assigned one-half interest.

The principal object of my invention comprehends the production of a device of this character, having means whereby the movable rail sections, when either is in a raised position so as to connect the tracks to be used, will be positively locked in such position by the continued forward movement of the sliding member which causes it to rise, and could not be accidentally lowered from any cause whatsoever except by the return movement of said sliding member.

A further object of the invention resides in a device of the kind having means carried by the rail sections and the sliding member, which will cause one of the said rail sections to lower when the other is rising, thereby preventing any liability of the sections not working properly.

In the accompanying drawings which illustrate the invention as applied to a frog, and in which like reference characters indicate corresponding parts throughout the several views, Figure 1 is a top plan view thereof; Fig. 2 is a longitudinal sectional view taken on the line 3—3 of Fig. 1; Fig. 3 is a perspective view of the sliding member for raising and lowering the rail sections; and Fig. 4 is a side elevation of one of the rail sections.

In the drawing, 1 indicates the inner rail of one track and 2 the inner rail of the other track, provided at their intersection with my improved frog. Structurally speaking,

the frog comprises a box or casing 3 which is located below the frog point 4. Placed within the box or casing 3, and resting on the bottom thereof, is the reciprocating member 5 which has a stem 6 working through a hole in one end of the box, said stem being provided with suitable means for attachment to either manually or electrically operated means for reciprocating the member 5 for the purpose to be hereinafter described.

Formed on opposite sides of the member are a plurality of beveled projections 7, usually 3 in number, the beveled faces 7^a of which being inclined in opposite directions on the respective sides of the member. Formed along the beveled faces 7^a of each of the projections is an inclined rib 7^b, to be hereinafter referred to.

The vertical movable rail sections 8 and 9 are adapted to be alternately raised and lowered by the reciprocation of the member 5, this action being caused by the beveled faces 7^a of the projection 7 engaging the correspondingly beveled faces 10^a and 11^a of the projections 10 and 11, formed on the inner sides of the movable rail sections 8 and 9, respectively.

It will be noted, by referring to the drawings, that the depth of the projections 10 and 11 is slightly less than that of the projection 7, and formed on the sections 8 and 9 are a series of lugs 12, one for each of the projections, and so positioned that their upper edges will be on a line with the plane of the lower edges of said projections. These lugs are each provided with an inclined face 13 which is inclined in the same direction as the beveled faces of the adjacent projection, and are placed therefrom a distance to correspond to the width of the ribs 7^b, so as to permit said rib 7^b to occupy a position between the beveled faces of the projections and the inclined faces of said lugs. It will thus be seen that the rail section, in raised position, will be positively lowered on the return movement of the member 5, owing to the fact that the inclined faces 13 of the lugs 12 will engage the adjacent faces of the inclined ribs 7^b, which will cause the rail section to be drawn downwardly, thereby preventing the liability of the same becoming stuck in raised position.

It will be noted, by referring to the drawings, that one edge of the projections, both

on the rail sections and the reciprocating member, are perpendicular, which affords a comparatively long bearing surface A for the purpose to be hereinafter described.

5 The rail sections 8 and 9 are arranged at an angle to each other and in line with the opposite sides of the frog point 4, and have their heads offset, to extend a short distance along said sides of the frog point, and beveled to fit closely thereagainst. However, 10 the base or that portion of the rail sections which work within the box or casing 3, and between which the member 5 works, are parallel with said member, in order that the 15 projections 10 and 11 will at all times be in engagement with the projections 7.

Briefly stated, the operation of my invention is as follows: When it is desired to connect the frog point to one or the other of the 20 tracks, the member 5 is reciprocated in the proper direction by either manually or electrically operated means, and in consequence of the wedging action of the projections, one section will be raised to connect the frog 25 point to the rail to be used, while the other section will be lowered, owing to the lugs 12 engaging the inclined ribs 7^b, to allow the flanges of the wheels of the rolling stock to pass thereover. After the member 5 has 30 been moved a certain distance, the surfaces A of the projections on one side of the member will come in alinement with projections on the raised section, and on a continuation of the same movement the surfaces A of the 35 projection 7 will slide under the surfaces A of the projections on the raised rail section, thereby locking the same in such position, and by reason of the fact that the member 5 rests on the bottom of the box or casing 3, 40 said rail section is firmly supported and could not be accidentally lowered.

While I have shown the principle of my invention as applied to a frog, it may also be applied to switch points, derailing points 45 and crossings, and no limitation is implied by reason of the fact that my invention as illustrated and described is applied to a frog.

From the foregoing it will be seen that a 50 continuous connection is formed between the track to be used and the frog point, and the rail section which forms the connection cannot be accidentally lowered to break the same.

55 To limit the upward movement of the rail sections I provide each of the rear ends

thereof with a projection B which is adapted to engage shoulder C formed on the adjacent end wall of the box or casing 3.

I claim:

1. The combination with alined rails, of vertically moving rail sections located therebetween, a reciprocating member located between the base of said rail sections, having oppositely inclined projections adapted to 65 engage correspondingly inclined projections formed on the inner sides of the rail sections, whereby, when said reciprocating member is reciprocated in either direction, one section will be raised, and the other lowered, to 70 make and break the continuity of the track to be used, and inclined ribs formed along the beveled faces on the side of the projections on the reciprocating member, adapted to be engaged by the correspondingly beveled 75 faces of lugs formed on the rail sections to draw the same down.

2. The combination with alined rails, of movable rail sections located at an angle to each other at the point of intersection of 80 the alined rails, projections formed on the rail sections having beveled faces, the inclination of the beveled faces on one section being set in an opposite direction to those on the other section, a reciprocating member 85 mounted between the said sections and having oppositely beveled projections formed on opposite sides thereof, said beveled faces adapted to engage the correspondingly beveled faces of the projections on the rail sections, whereby when the member is moved in either direction one section will be raised and the other lowered, the projections on said reciprocating member being of a height equal to the distance the rail sections are 95 adapted to travel, whereby when said member is moved in either direction the upper faces of the projections on one side thereof will be on a line with the lower faces of the projections on the raised rail section, whereby a continuation of the same movement 100 of said member will cause the projections on one side thereof to slide under the projections on the raised rail section to firmly lock the same in such position. 105

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

JAMES MONROE STREET.

Witnesses:

ARTHUR WESLEY,
ETHEL JOHNSTON.