

No. 814,081.

PATENTED MAR. 6, 1906.

M. W. ROGERS.
GUARD RAIL FOR CARS.
APPLICATION FILED JULY 14, 1905.

2 SHEETS—SHEET 1.

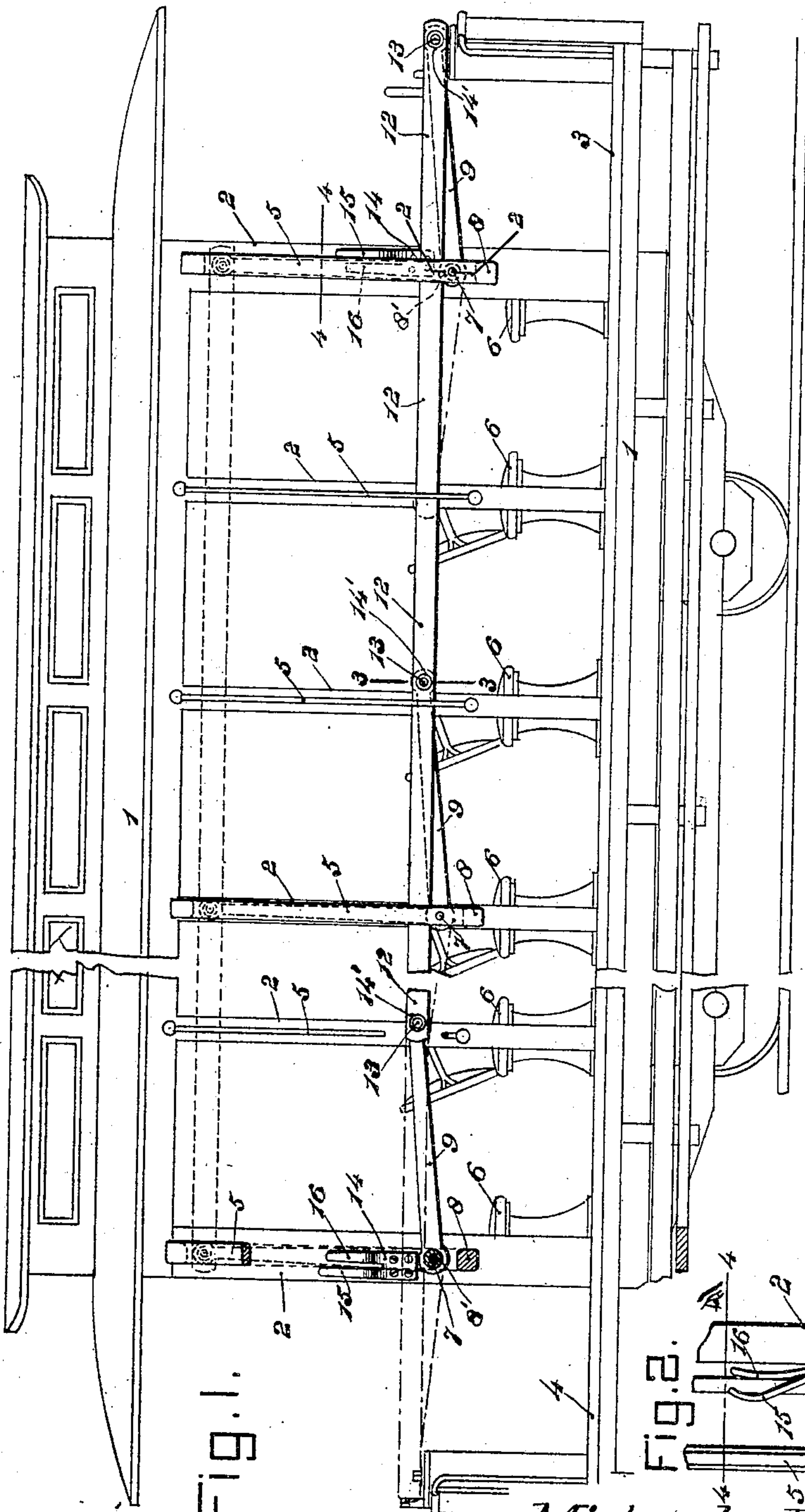


Fig. 1.

Fig. 2.

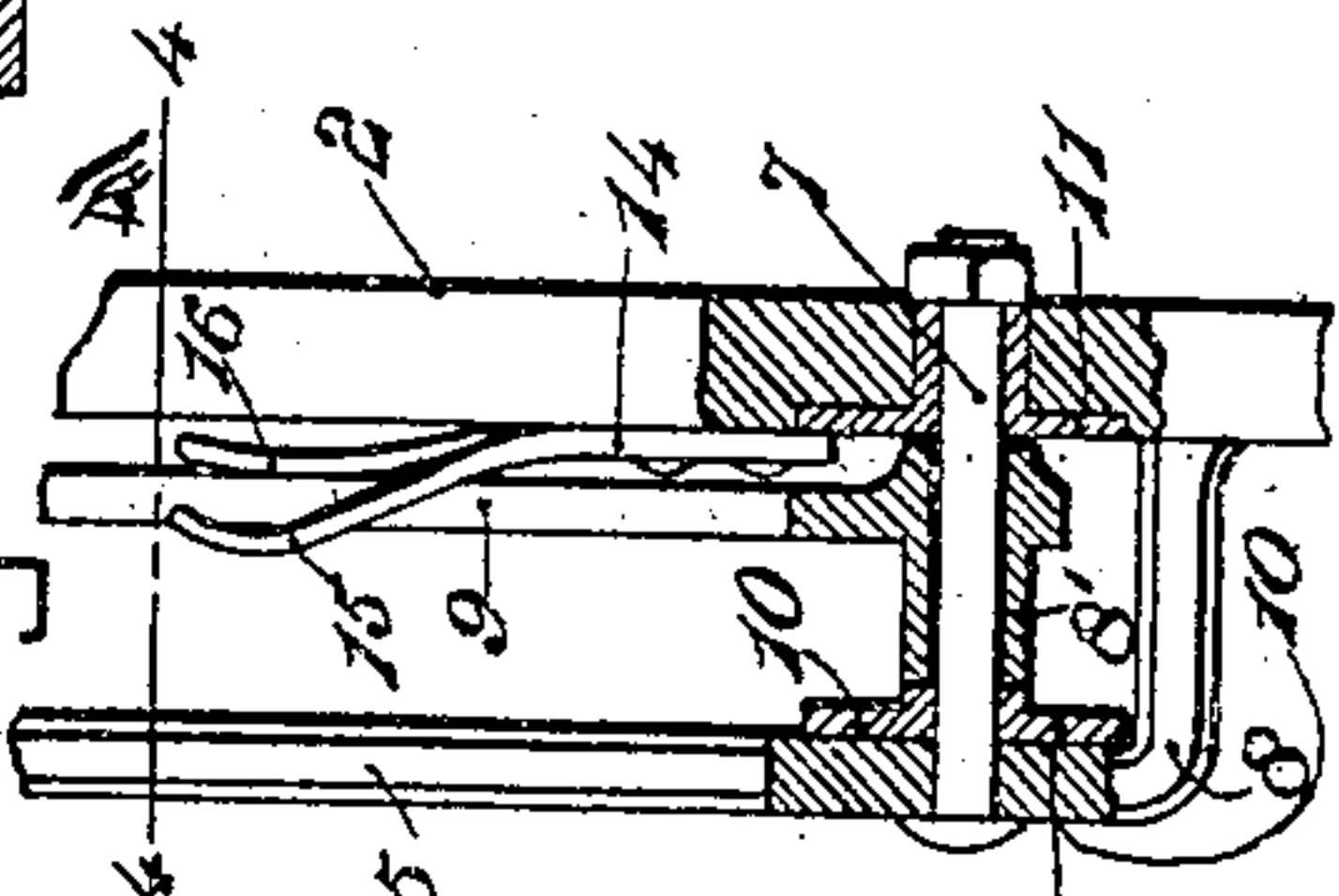


Fig. 3.

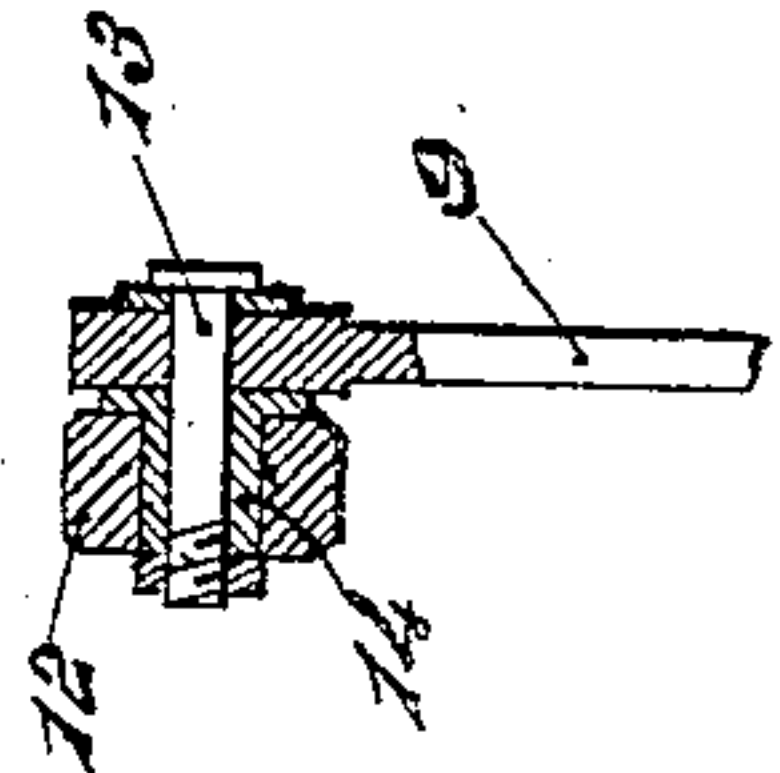
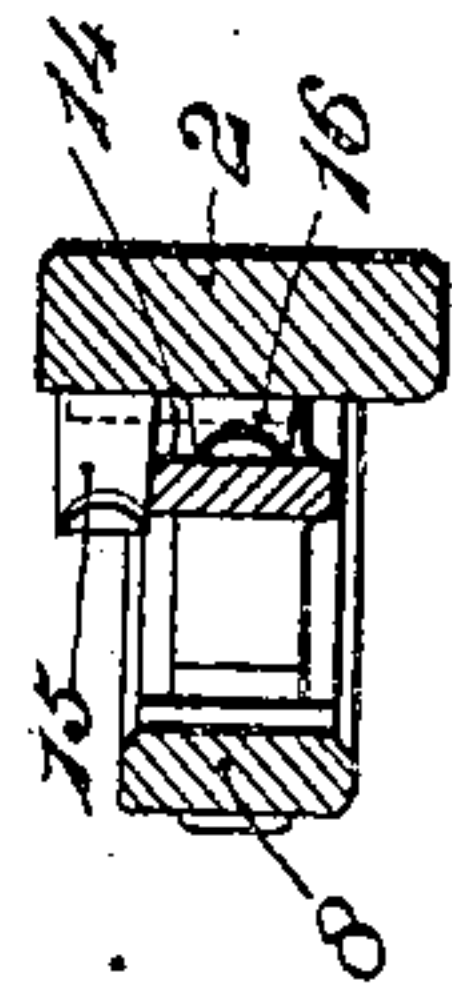


Fig. 4.



Witnesses

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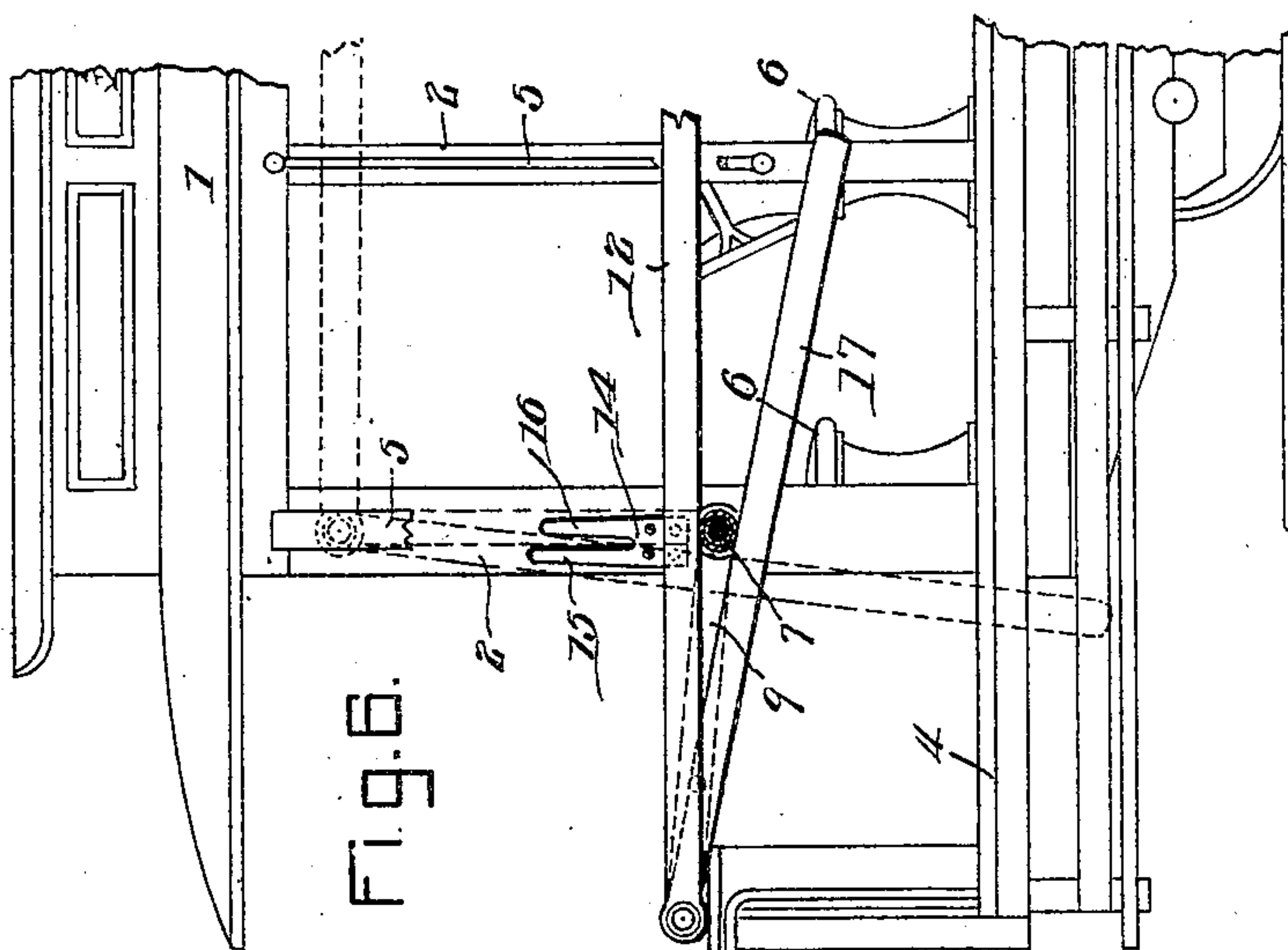
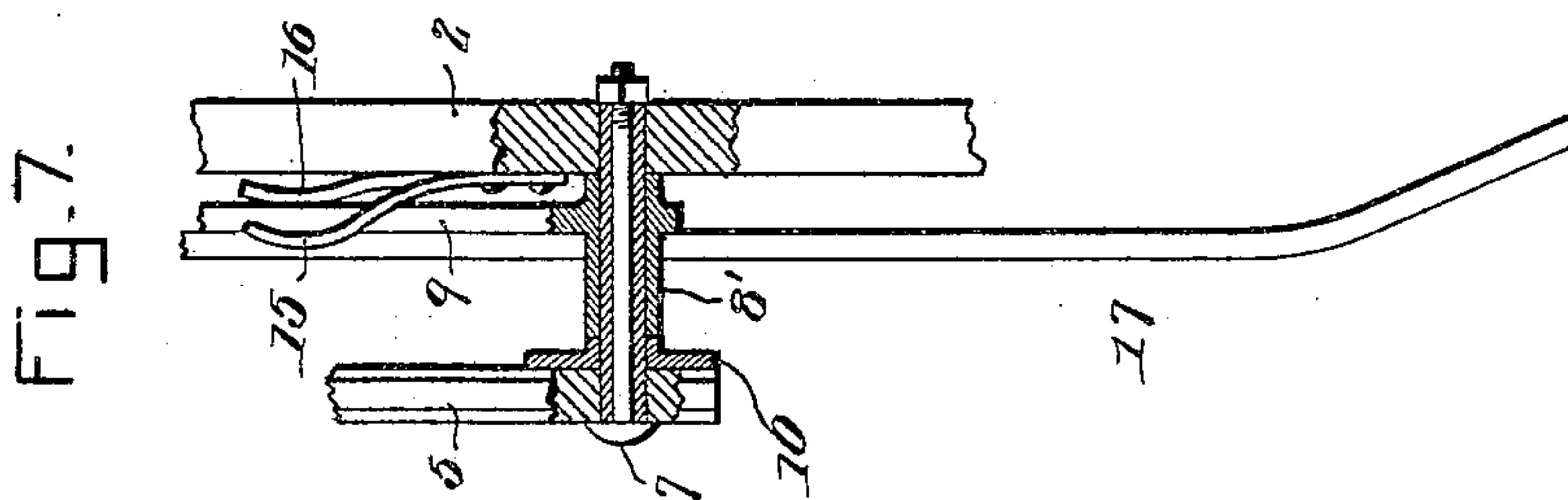
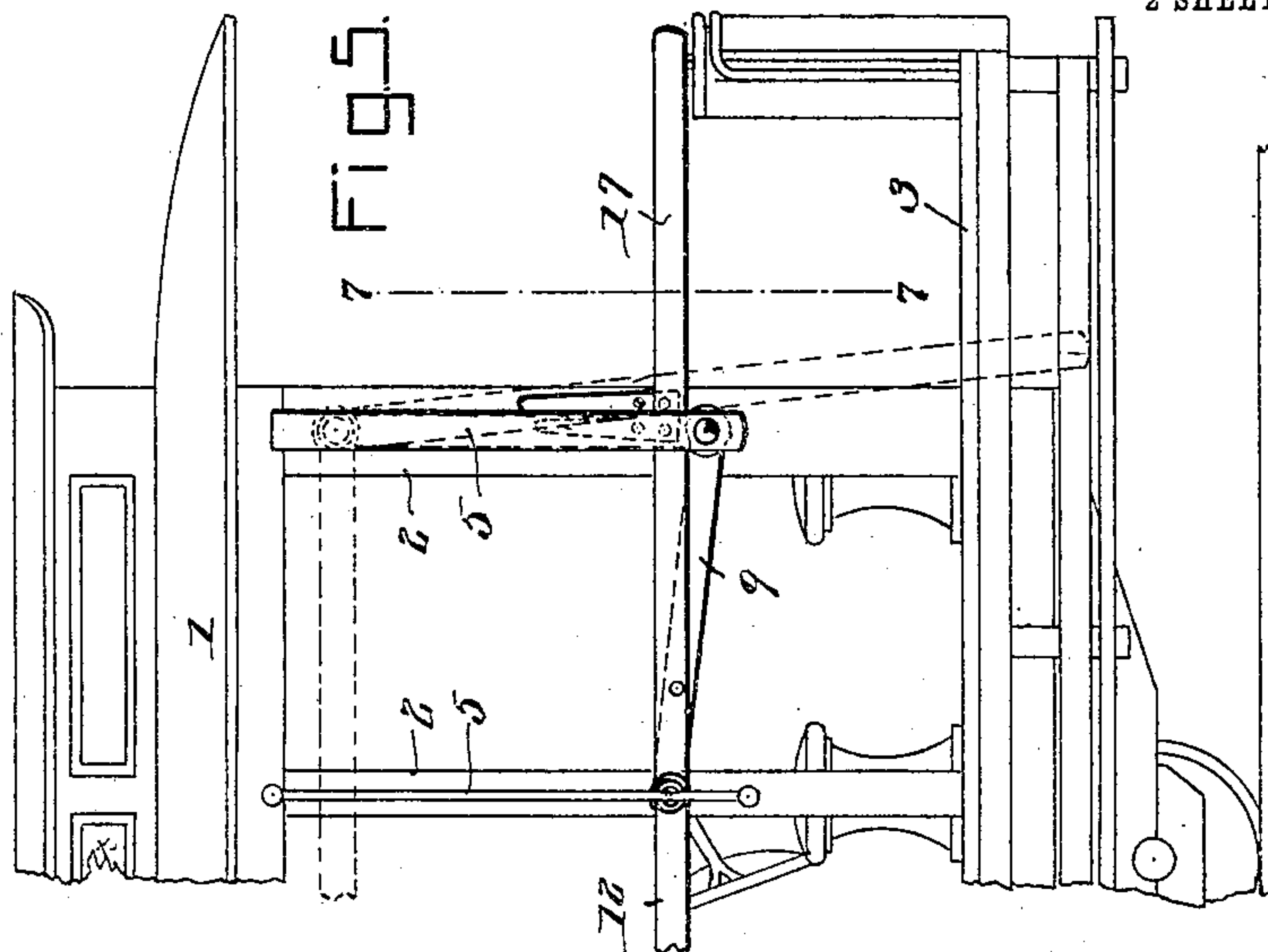
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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

MICHAEL W. ROGERS, OF LEXINGTON, KENTUCKY.

GUARD-RAIL FOR CARS.

No. 814,081.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed July 14, 1905. Serial No. 269,682.

To all whom it may concern:

Be it known that I, MICHAEL W. ROGERS, a citizen of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented a new and useful Guard-Rail for Cars, of which the following is a specification.

This invention relates to cars, and especially to that type of cars known as "open" or "summer" cars.

The object of this invention is to provide a guard-rail for the sides of cars which may be manipulated readily by one man and from either end of the car.

A further object of the invention is to provide a guard-rail pivotally mounted on levers on the side of a car and to be swung upon the levers and retained in the elevated position to open the seat-passages and to be released from either end of the car and swung downwardly to rest on the pivots and to close the seat-passages and the platform-passage at that end.

A further object of the invention is to provide an angularly-movable bar for closing the seat-passages and one platform-passage and with an arm pivotally mounted for closing the opposite platform-passage.

A further object of the invention is to provide a bifurcate spring-catch for holding the bar and levers in the elevated position and having an arm to hold the lever from pivotal movement and one to hold the lever and bar from contact with the car.

For the frequent opening and closing of the guard-rail of a car it is highly desirable to have means whereby the bar may be manipulated conveniently and easily by one man and from the end platform of the car.

It is an object of this invention to pivot a series of levers to the side posts of a car and thereon mount a guard-bar. When the levers are swung and retained in an upright position, the bar is adjacent the top of the car and seat-passages open. When the bar is down, it rests on the pivots and closes all of the passages; but resting as it does above the pivots a lift and push at one end will raise it and open the passages.

With these and other objects in view the present invention consists in the combination and arrangement of parts as will be hereinafter fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood

that changes in the form, proportions, size, and minor details may be made without departing from the spirit or sacrificing any of its advantages.

In the drawings, Figure 1 is a view of a car in side elevation with the improved guard-rail mounted thereon in operative position and shown with the seat-passages and one platform-passage closed and in outline with the bar reversed to close the opposite platform and also raised and the seat-passages open. Fig. 2 is a vertical sectional detail view showing the pivots and retaining-catch and taken on line 2 2 of Fig. 1 with the lever raised. Fig. 3 is a detail sectional view on line 3 3 of Fig. 1. Fig. 4 is a detail sectional view on line 4 4 of Figs. 1 and 2. Fig. 5 is a view in side elevation of one end of a car with an arm added and closing the platform not closed by the bar. Fig. 6 is a view in side elevation of one end of a car with the platform-closing arm added and shown in reversed position. Fig. 7 is a vertical sectional view taken on line 7 7 of Fig. 5, showing the preferred shape of the platform-closing arm.

Like characters of reference designate corresponding parts throughout the several views.

In its preferred embodiment the invention forming the subject-matter of this application is adapted to be mounted upon any car, as 1, having side posts 2 and the usual front and rear platform 3 and 4 and hand-bars 5. The spaced side posts 2 form passages between the seats 6, through which the passengers enter and depart. Adjacent the lower ends of hand-bars 5 a pivot-pin 7 is extended from the hand-bar bracket 8 to and into the side posts 2. About the pin 7 is mounted the sleeve 8', to which is rigidly secured the lever 9, and wear-plates 10 and 11 may be interposed between the sleeve and the hand-bar bracket 8 and the post 2. The lever 9 is by the sleeve 8' held out of contact both with the hand-bar 5 and the post 2 and extends upwardly between the hand-bar and post adjacent the top of the seat-passages. Upon the upper end of the lever 9 is pivotally mounted the guard-bar 12 by means of a pivot-pin 13, passing through the lever 9 and through a bearing 14, secured through the bar 12. To hold the levers and the bar at the top, a bifurcated spring 14 is secured to the side posts 2 at the ends of the car and with the farthest outstanding arm nearest

the end of the car and the other arm 16 near the middle.

With the parts disposed as shown in Fig. 1 a lifting and rearward motion imparted to any portion of the bar 12 will cause the levers 9 to rotate on the pins 7 until the levers come in contact with the curves of the spring-arms 15 and 16 at opposite ends of the car and a continual movement will force the springs downward until the spring 15 springs outwardly in the rear of and retains the swinging lever. To close the passages, either of springs 15 may be manually depressed and the lever permitted to swing downwardly until the bar rests upon the pivot-sleeve 8. It will be noted that when the bar is down the seat-passages and one platform-passage is closed and that the device may be easily and conveniently operated by one person and from the platform at either end of the car.

The rules of some street-railways require both front and back platforms to be closed, and for use upon such lines an arm 17 is provided and rigidly secured to the levers 9, occupying extreme position on the car and extending approximately opposite thereto.

When the bar is at its highest position, the arms 17 are in a position approximately vertical and adjacent the end post, as shown in outline in Figs. 5 and 6. When the bar 12 is down and closing one platform, as in Fig. 6, the arm 17 on that end is reversed, as shown, and the arm on the opposite end of the car closes the opposite platform-passage, as shown in Fig. 5.

Having thus described the invention, what is claimed is—

1. An open car provided with a guard-rail equal in length to the length of the car-body, and swinging arms pivotally supported upon the car-body and pivotally supporting the guard-rail, the arms capable of swinging in opposite directions from an upright position to shift the guard-rail from one end of the car to the other to alternately close the platform-passages.

2. An open car provided with a guard-rail equal in length to the length of the car-body, said guard-rail capable of being shifted endwise to alternately close the platform-passages.

3. An open car provided with a guard-rail equal in length to the length of the car-body, said rail capable of being shifted endwise to alternately close the platform-passages and also capable of being elevated to an overhead position, and means to support the rail in its elevated position.

4. An open car provided with a guard-rail equal in length to the length of the car-body, arms pivotally supported upon the car-body and pivotally supporting the rail, and means to hold the arms in upright positions to support the rail in an overhead position, the

arms capable of swinging in opposite directions from the vertical to shift the rail endwise from one end of the car to the other for alternately closing the platform-passages.

5. An open car provided with a guard member pivotally mounted upon the side of the car at one end thereof and capable of swinging in opposite directions from the vertical to alternately close the adjacent platform and seat passages.

6. An open car provided with a swinging guard member pivoted to the side of the car at one end thereof and capable of swinging in opposite directions from the vertical to alternately close the adjacent seat and platform passages, and means upon the car to engage the guard member and support the latter in an upright inoperative position.

7. A lever pivoted to a side post and a bifurcated spring secured to the post with one arm arranged to hold the lever from contact with the post and the other to prevent an angular displacement of the lever.

8. A lever pivoted to a side post of a car, a bar pivoted to the lever and a bifurcated spring secured to the post with one arm arranged to hold the lever from contact with the post and the other to prevent an angular displacement of the lever.

9. A lever pivoted to a side post of a car, a bar pivoted to and extending longitudinally of the car, and a bifurcated spring secured to the post and with one arm arranged to hold the lever and bar from contact with the post and the other to permit an angular movement of the lever.

10. A car having side posts forming seat-passages, levers pivotally secured to the posts intermediate their ends and proportioned to extend upwardly adjacent the top of the seat-passages, a bar pivotally mounted upon the upper end of the levers and extending longitudinally of the car and capable of a movement in either direction to rest upon the lever-pivots, and a bifurcated spring secured to the post with one arm arranged to hold the lever and bar from contact with the posts and the other to prevent an angular movement of the lever.

11. In a guard-rail for cars the combination with the side posts of the car, brackets secured to and outstanding from the side posts, vertical hand-rods secured to the extremities of the brackets, pivot-pins disposed transversely between the side posts and the hand-rods, levers mounted upon the pivot-pins and movable in vertical planes, sleeves rigidly secured to opposite sides of the lever upon the pivot-pins and spacing the levers from the hand-rods and the end posts, a guard-rail extending between the side posts and the hand-rod and longitudinally of the car and resting upon the sleeves, pivot-pins secured to the ends of the levers and to the rail, catches ar-

5 ranged to retain the levers removably in a vertical position and the rail at the top of the side posts and arranged to release the arms in either direction and permit the rail to swing downwardly upon the sleeves.

10 12. An open car provided with an arm pivoted to the side of the car-body at one end thereof to swing in opposite directions from the vertical for alternately closing the adjacent seat and platform passages, said arm being provided with an extension projecting beyond the pivotal support thereof and adapted to close the platform-passage when the arm is closing the seat-passage.

15 13. An open car provided at opposite ends with swinging arms pivotally supported upon one side thereof and capable of swinging in opposite directions from the vertical to alternately close the adjacent platform and seat passages, a guard-rail pivotally carried by the arms, and an extension projecting beyond the pivotal support of each of the arms and adapted to close the adjacent platform-

passage when the arm is closing the adjacent seat-passage.

25 14. An open car provided at opposite ends with swinging arms pivotally supported at their lower ends upon the side of the car and capable of swinging in opposite directions from the vertical to alternately close adjacent seat and platform passages, each arm being provided with an extension projecting beyond the pivotal support thereof for closing the adjacent platform-passage when the arm is closing the adjacent seat-passage, a guard-rail pivotally carried by the arms, and means upon the car to hold the arms in their upright positions.

30 In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MIKE W. ROGERS.

Witnesses:

B. T. SOUTHGATE,
ALAN P. GILMOUR.