

No. 610,688.

Patented Sept. 13, 1898.

J. G. McLAUGHLIN.
GUARD RAIL FOR OPEN TRAMWAY CARS.

(Application filed Oct. 27, 1897.)

(No Model.)
FIG. I.

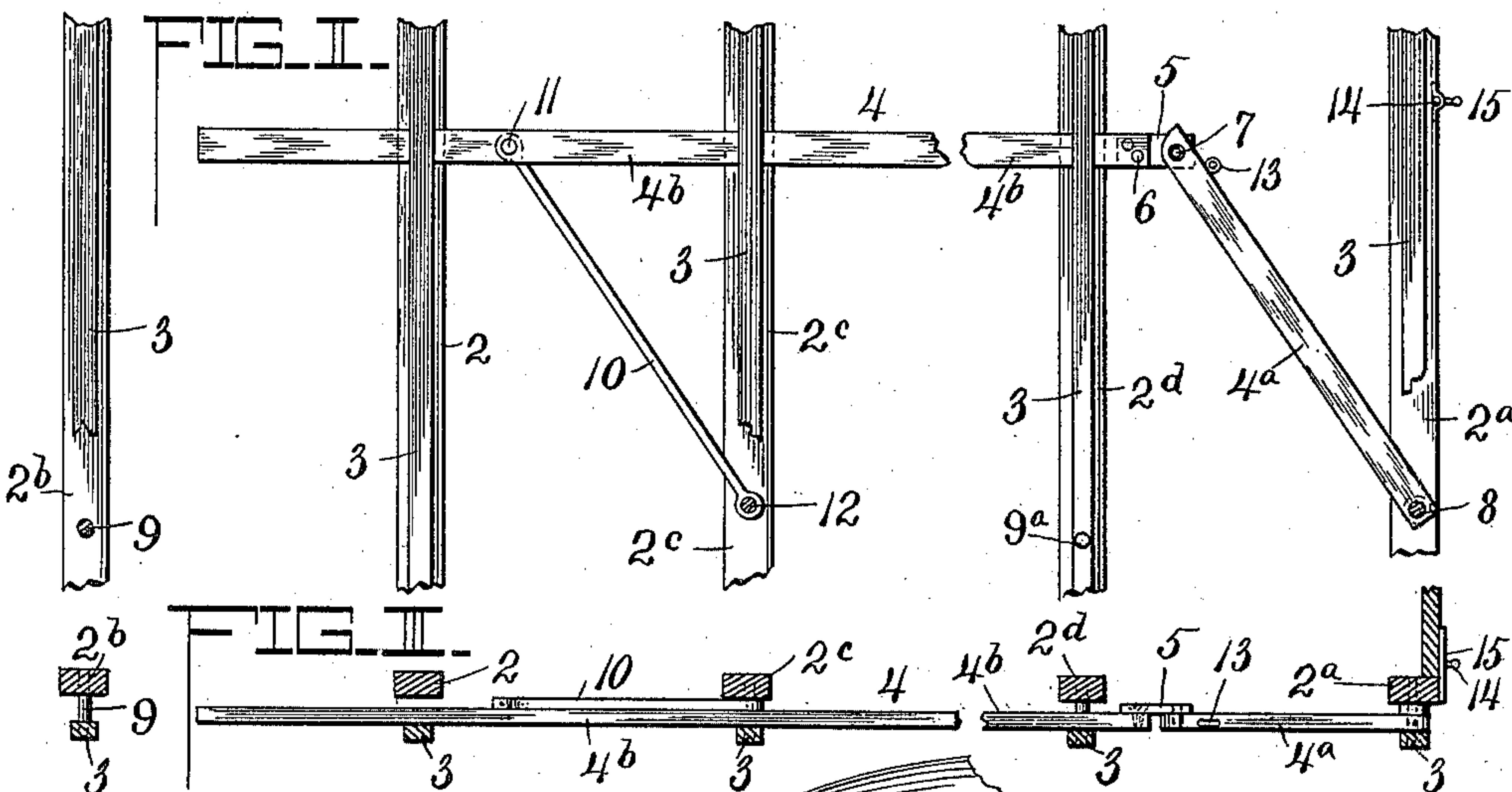
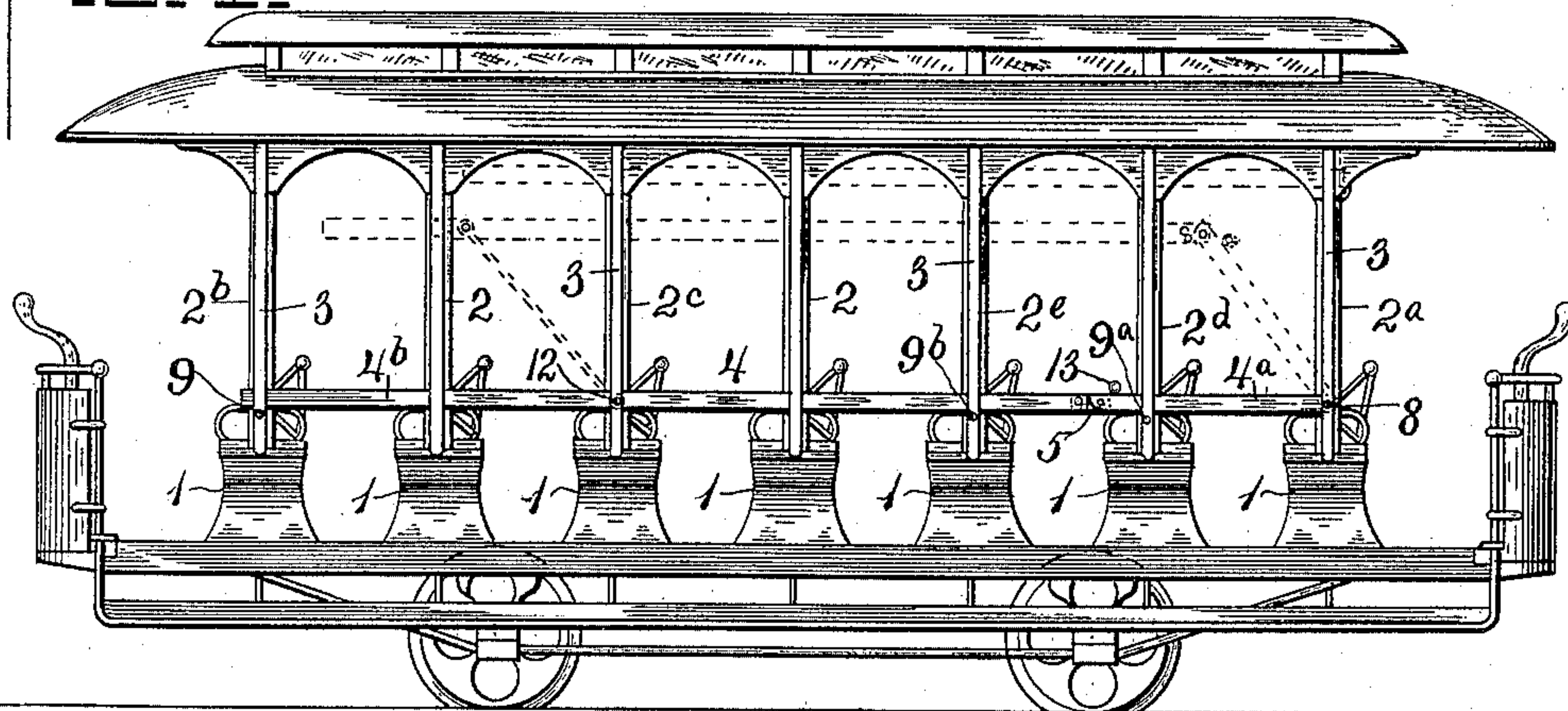
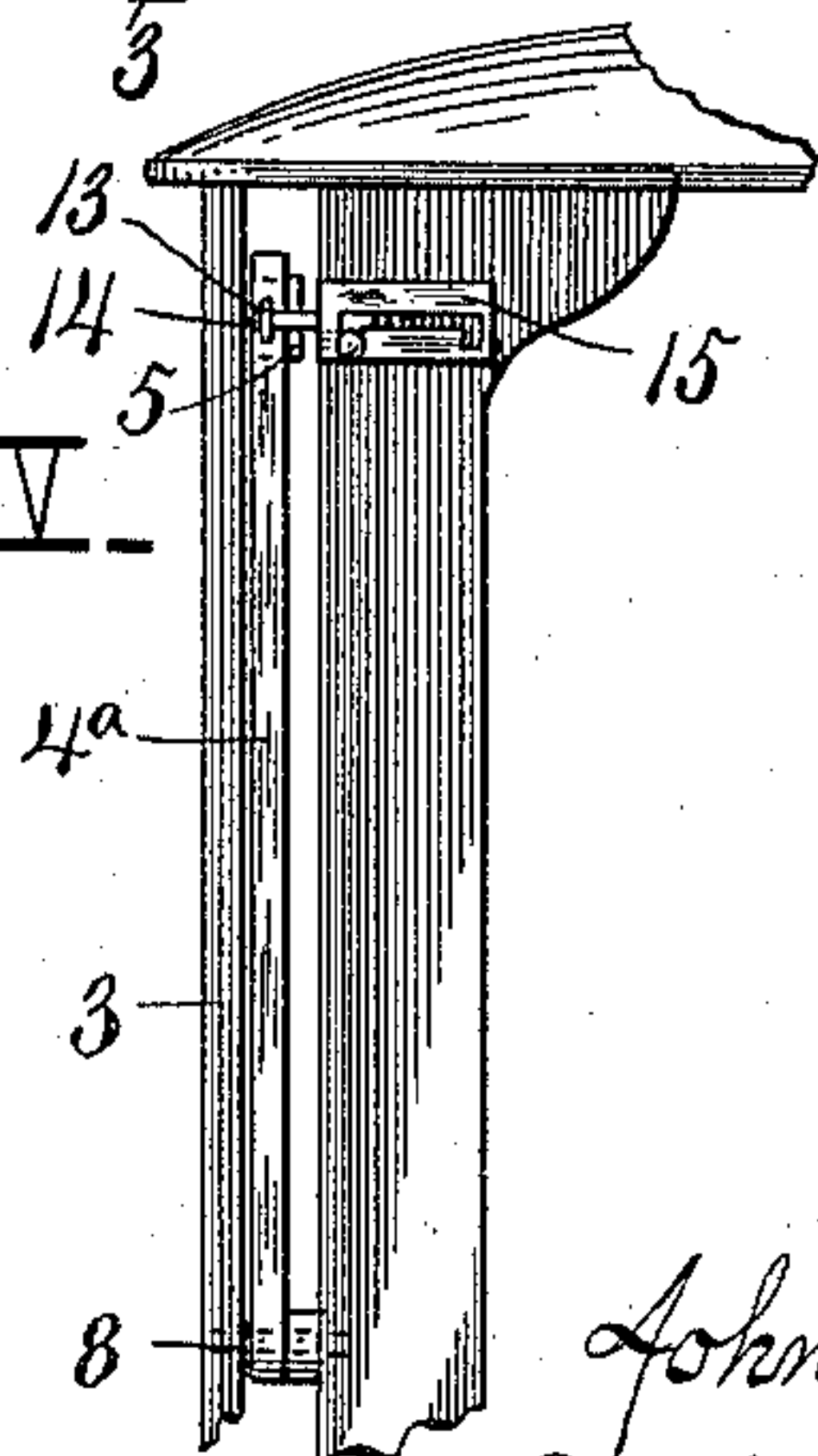


FIG. IV.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN G. McLAUGHLIN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
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GUARD-RAIL FOR OPEN TRAMWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 610,688, dated September 13, 1898.

Application filed October 27, 1897. Serial No. 656,582. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. McLAUGHLIN, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Guard-Rails for Open Cars, of which the following is a specification.

My invention relates to an improvement on those guard-rails for open cars which are divided and hinged, so as to be raised and lowered, as required.

My improvement comprises a rail which is formed of a single bar divided near one end, so as to provide a short section and a long section, which sections are hinged together, a pivot whereby the short section is hinged at its outer end to the car-body, a link whereby the long section is connected to and supported on the car-body, and means for securing the rail when raised, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a side view of an open car provided with my improved guard-rail, the intermediate and upper positions of the guard-rail being shown in dotted lines. Fig. II is a detail side view of the guard-rail, showing parts of the standards and the guard-rail partly raised. Fig. III is a detail top view of the same. Fig. IV is a detail end view of the car-body, showing the means for securing the guard-rail when raised to its upper position.

I have shown my guard-rail applied to one side of a car, though it can be applied to the opposite side of the car or be placed on both sides, if desired.

The drawings show an ordinary open car provided with a body having seats 1, standards 2, and vertical hand-rails 3. Between the standards and the hand-rails my improved guard-rail 4 is located. The guard-rail is composed of two sections—a short section 4^a and a long section 4^b—located in the same plane. The adjacent ends of the short section and long section are hinged together, the extremity of the inner end of the short section being rounded and abutting against

the inner end of the long section, so that when the sections are in alinement they may provide a rigid rail. The sections are hinged together by means of a plate 5, rigidly secured by fastenings 6 to the long section, and by means of a transverse pin 7, secured to the plate and extending into the short section. The outer end of the short section is pivoted by a pin 8 to a standard 2^a at one end of the car-body, and the outer end of the long section rests upon a cross-pin 9, secured to a standard 2^b at the opposite end of the car-body. When the guard-rail is raised, the short section assumes a vertical position over its pivot-pin and the inner end of the long section is supported thereon. For supporting the outer end of the long section in this position I provide a link 10, connected by a cross-pin 11 to the long section and by a cross-pin 12 to an intermediate standard 2^c. It will thus be understood that I merely employ a single guard-rail formed in two sections and a link, with necessary hinge and pivot-pins, to provide all that is necessary for a substantial guard-rail, thus dispensing with the series of levers and connections formerly employed. For the purpose of securing the guard-rail in its raised position I provide an eye 13 at the outer edge of the inner end of the short section, with which engages a draw-bolt 14, sliding in a keeper 15, secured adjacent to the upper end of the end standard 2^a. As an intermediate support for the rail when in lowered position I provide additional transverse pins 9^a 9^b, secured to the standards 2^d 2^e, respectively.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination with a car-body; of a guard-rail comprising a single bar formed with a short section and a long section located in the same plane as the short section, having their adjacent ends hinged together, abutting against and mutually supporting each other when in alinement, a pin whereby the outer end of the short section is pivoted to one end of the car-body, and means whereby the outer end of the long section is supported on the car-body when the sections are raised, to cause the inner end of the long section to be sup-

ported on the top of the short section; substantially as described.

2. The combination with a car-body; of a guard-rail comprising a single bar formed with a short section and a long section located in the same plane, having their adjacent ends hinged together, abutting against and mutually supporting each other when in alinement, a pin whereby the outer end of the short section is pivoted to one end of the car-body, a cross-pin whereby the outer end of the long section is supported on the other end of the car-body, and a pivoted link whereby the outer end of the long section is supported on the car-body when the sections are raised; substantially as described.

3. The combination with a car-body; of a guard-rail comprising a single bar formed with a short section and a long section located in the same plane, having their adjacent ends hinged together, a pin whereby the outer end of the short section is pivoted to one end of the car-body, a cross-pin whereby the outer end of the long section is supported on the other end of the car-body, intermediate cross-pins on the car-body whereby the adjacent

ends of the sections are supported, and a pivoted link whereby the outer end of the long section is supported on the car-body when the sections are raised; substantially as described.

4. The combination with a car-body; of a guard-rail comprising a single bar formed with a short section having an eye at its outer edge, and a long section, said sections having their adjacent ends hinged together, a pin whereby the outer end of the short section is pivoted to one end of the car-body, a pivoted link whereby the outer end of the long section is supported on the car-body when the sections are raised, and the draw-bolt for engaging the eye, secured adjacent to the hinge of the sections when the sections are raised; substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 20th day of October, 1897.

JOHN G. McLAUGHLIN.

Witnesses:

S. L. HAWKSHURST,
T. M. CARR.