

(No Model.)

2 Sheets—Sheet 1.

F. C. CASH.
RAILWAY GATE.

No. 466,156.

Patented Dec. 29, 1891.

Fig. 1.

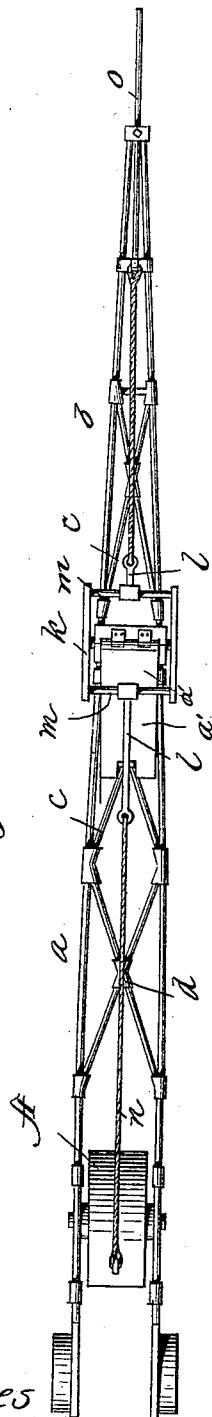
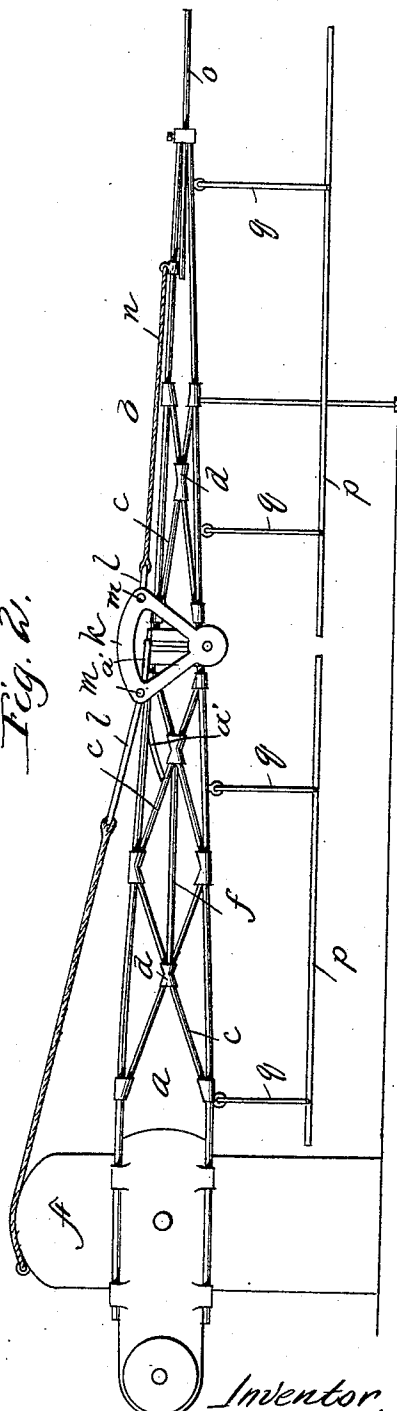


Fig. 2.



Witnesses
W. T. Keene.
F. L. Middleton

Inventor,
Francis C. Cash,
by Ellis Spear
Atty

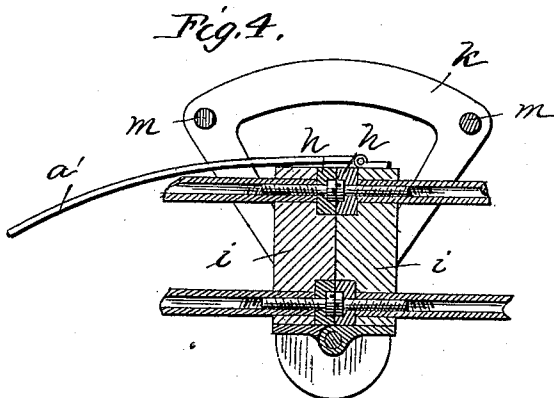
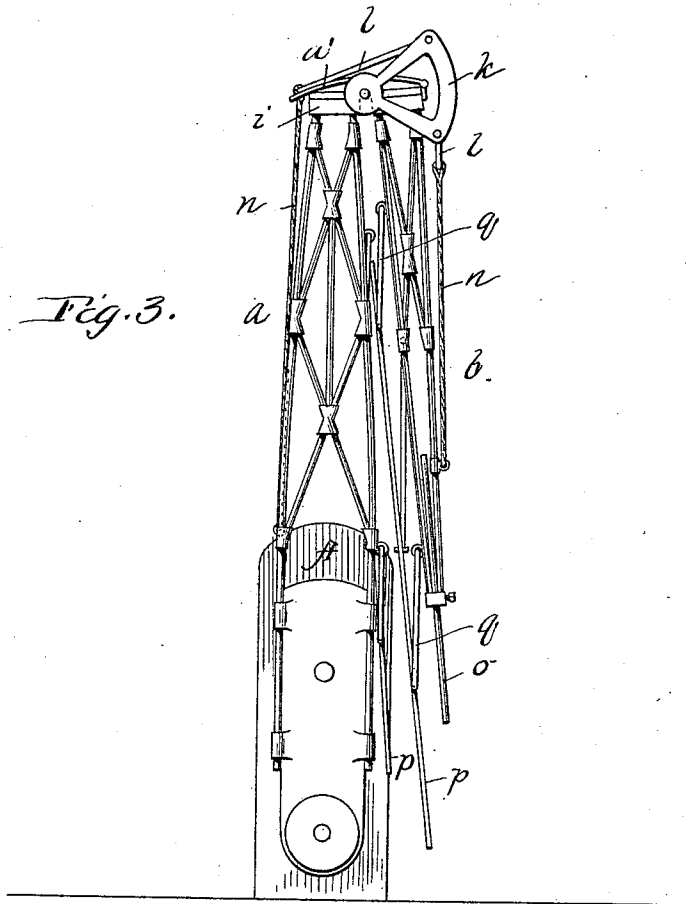
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Atty

UNITED STATES PATENT OFFICE.

FRANCIS C. CASH, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE CASH
SAFETY CAR COMPANY, OF PORTLAND, MAINE.

RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 466,156, dated December 29, 1891.

Application filed February 24, 1891. Serial No. 382,462. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS C. CASH, a citizen of the United States of America, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Railway-Gates, of which the following is a specification.

My present invention is designed as an improvement upon the form of railway-gate shown in United States Patent No. 446,325, granted to me on the 10th day of February, 1891, and has for its object a more perfect arrangement of the style of gate illustrated in the aforesaid specification.

I modify the form of the hinge-joint by interposing a pivoted frame intermediate of the length of the operating connection between the standard and the outer end of the pivoted section, whereby I am enabled to lessen the friction incident to the arrangement shown in my former specification, in which the operating connection bore at the joint directly upon the upper part of the cross-pieces, connecting the side bars of the two sections of the gate at the joint. I also provide means for bracing the gate throughout its length, and in order to prevent small children or other persons from passing beneath the gate when it is down I arrange pivoted guards, which, while not adding materially to the weight of the structure, very effectually prevent persons from passing beneath the gate when it is in a lowered position.

I provide my gate with an adjustable extension, so that a single gate may be made to cover a roadway of more than usual width.

In the accompanying drawings I have shown in Figure 1 a plan view of my improved gate. Fig. 2 is a side elevation of the gate when down, and Fig. 3 is a side elevation when the gate is folded. Fig. 4 is a sectional view showing the manner of connecting the two sections of the gate.

In the drawings, A represents the ordinary standard, to which is pivoted the swinging gate composed, as in my former specification, of the main section *a* and the extension *b*, hinged thereto and adapted to be folded inward and downward as the gate rises. These gates are ordinarily composed of boards set on edge, and thus present considerable surface to the wind, making it necessary to make

them very short, so as to prevent the pressure of the wind from breaking them, the construction being objectionable for another reason—namely, that in case they are broken or dismantled considerable time must elapse before the damage can be repaired.

Instead of wood, I prefer to make my gate of tubing of suitable diameter, each gate being composed of two tubes on each side, these tubes being made up of any suitable number of sections held together by couplings, so as to be interchangeable and readily replaced when damaged. This provides a light frame-work for the gate, which is suitably braced by the rods *c*, extending from the centrally-arranged couplings *d*. These couplings have sockets fitted to receive a centrally-arranged tube *f*, also serving to brace and strengthen the structure. The tubes on either side are sustained by a suitable tubular support. Both sections may be braced and strengthened in like manner. The tubes at the abutting faces of the sections are connected by cross-pieces *h*, screws passing through the ends of these cross-pieces into the open ends of the tubes, which are screw-threaded to receive them. Between the tubes composing the sections wooden blocks *i* are arranged, these being secured to the cross-pieces *h* by screws or bolts. The sections of the gate are hinged together on the lower edge to form a rule-joint, the laps of the hinge being screwed to the wooden blocks. Supported on the pintle of the hinge are light skeleton frames *k*, constituting segments of a circle. Bails *l* are pivoted to each of their cross-pieces *m*, and to these bails are secured the ends of the rope, wire, or chain *n*, extending between the standard and the outer end of the extension. The frames constitute in effect rear extensions of the supplemental section, the point of connection between the operating-cord, which reaches from the standard to the supplemental section, being in rear of the hinge. It will be seen that the interposition of these skeleton frames in the length of the operating connection reduces the friction by preventing contact between the wire, cord, or rope and the cross-pieces of the gate when the same is lifted. Instead of being connected to bails, the ends of the connection may be secured to the cross-bars and

the cross-pieces and blocks at the ends of the gate-sections cut away.

The four tubes constituting the gate proper converge until they come together at the outer end of the extension. I add to the length of the gate by providing a second extension *o* in the shape of a tube or bar, which passes through an opening left in the end of the extension at the junction of the tubes forming the gate, and the extension tube or bar may be adjusted in or out and held by a set-screw in its adjusted position.

In order to guard the space beneath the gate when it is lowered, I provide guard-rails *p*, which have pivoted connection with the main part of the gate by means of links *q*, one guard being provided for each section, so as to permit them to fold in snugly when the gate is raised.

In order to protect the joint of the sections when in a raised position from snow, hail, and ice, I provide a snow-guard *a'* in the form of a plate, which effectually keeps the joint free from such obstruction. This plate is hinged to the block on the rear end of the forward section and extends to the rearward sufficiently to extend over the joint when the gate is raised.

What I claim is—

1. In combination, the main section of the gate, the standard therefor, the supplemental section hinged to the main section, the bar *m*

in rear and above the pivot of the sections, the operating-rope extending from the standard to the bar *m*, and the connecting means between the said bar and the supplemental section, substantially as described.

2. In combination, the main section and the supplemental section hinged thereto, the connected bars *m*, pivotally supported on opposite sides of the joint, and the operating connections extending from said bars, substantially as described.

3. A railway-gate comprising the main section and the pivoted extension hinged to the main section by a rule-joint, and a frame carried by the pivot of the joint and interposed in the operating-rope, combined with an operating connection secured to the said frame, substantially as described.

4. In a railway-gate, a main section and an extension hinged thereto, said extension having an adjustable rod or tube *o*, carried thereby, substantially as described.

5. In a railway-gate, a main section, an extension pivoted thereto, and a snow-guard consisting of a plate covering the joint when the gate is raised, substantially as described.

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

FRANCIS C. CASH.

Witnesses:

C. H. WELCH,

M. O. WHEELER.