(No Model.)

3 Sheets—Sheet 1.

G. E. ADAMS.

FOLDING GATE FOR CARS.

No. 389,867. Patented Sept. 25, 1888.

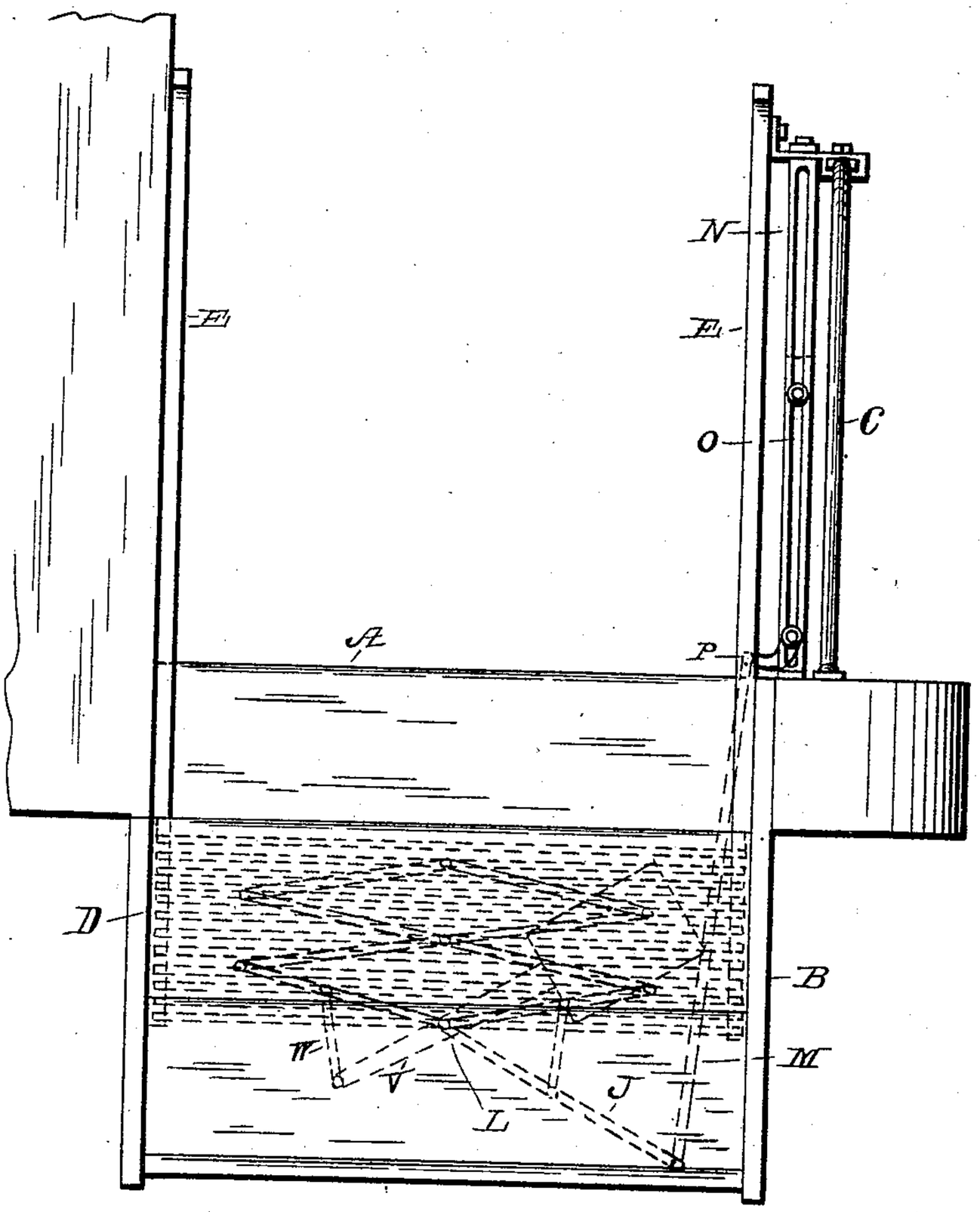

FIG. 1.

WITNESSES.

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Thomas H. Adamson

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By Walter B. Vincent Atty.

(No Model.)

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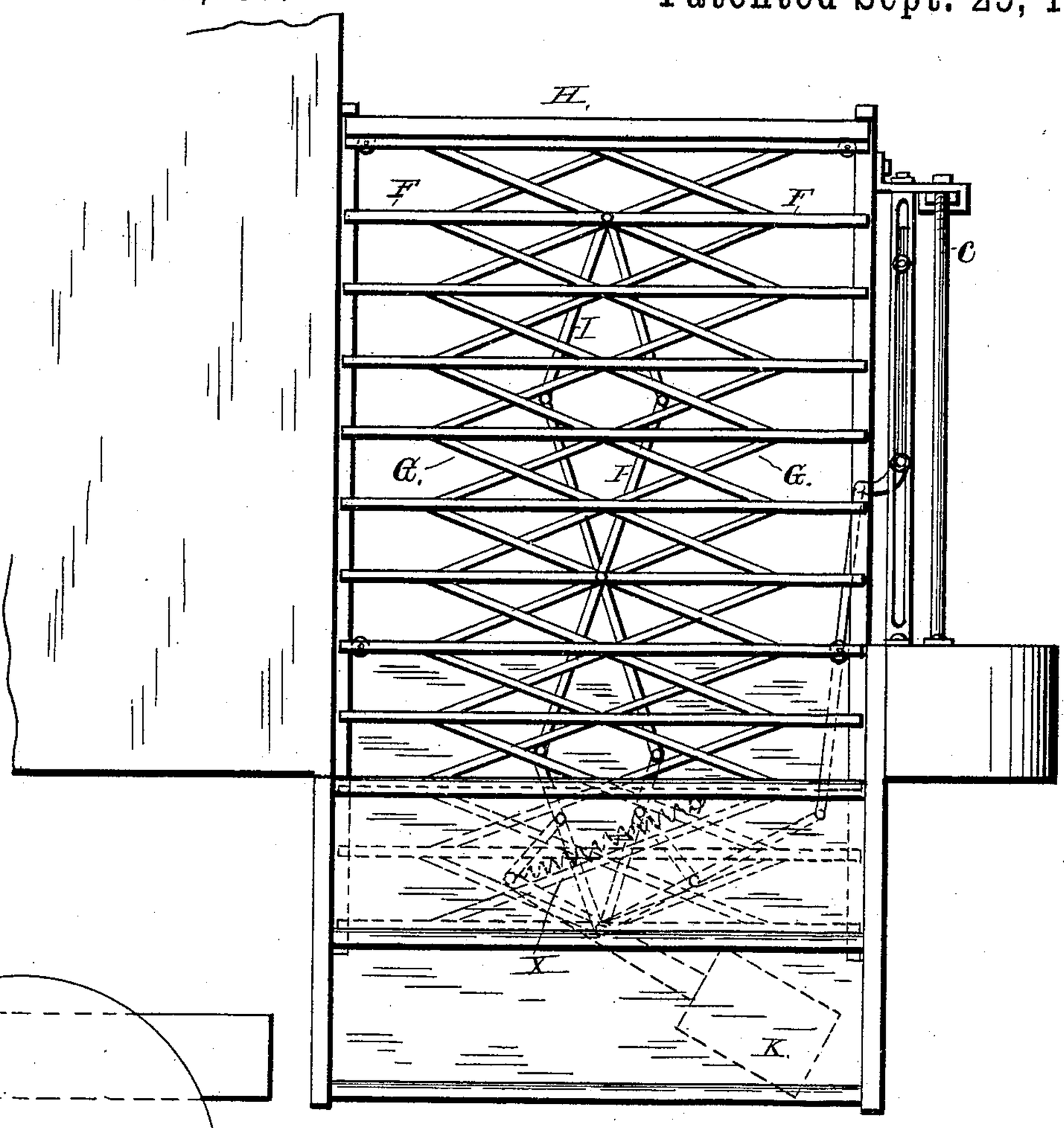

FIG. 2.

WITNESSES:

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(No Model.)

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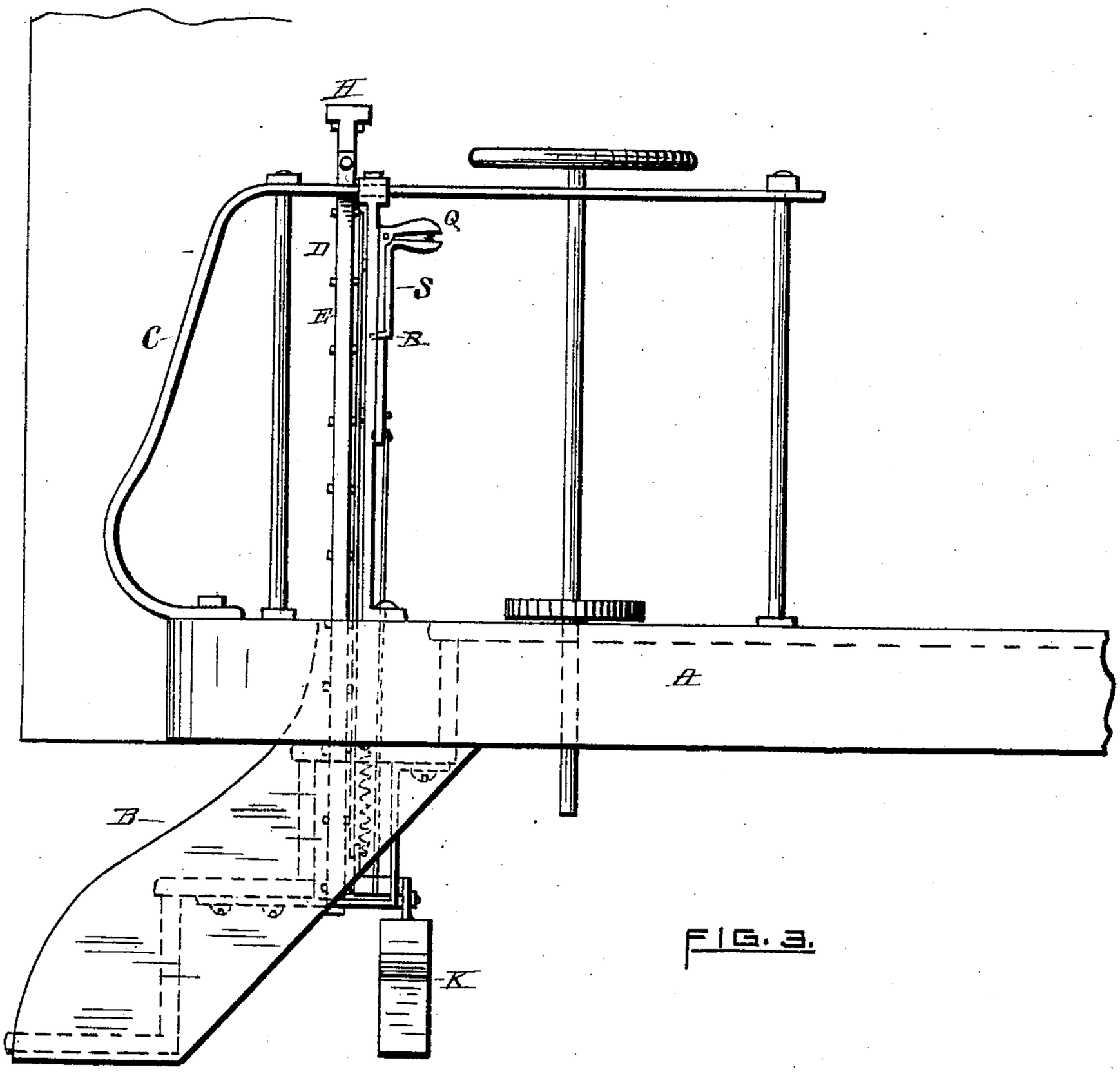

FIG. 3.

WITNESSES.

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INVENTOR

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UNITED STATES PATENT OFFICE.

GEORGE E. ADAMS, OF PROVIDENCE, RHODE ISLAND.

FOLDING GATE FOR CARS.

SPECIFICATION forming part of Letters Patent No. 389,867, dated September 25, 1888.

Application filed April 12, 1888. Serial No. 270,454. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. ADAMS, of Providence, in the State of Rhode Island, have made certain new and useful Improvements in Folding Gates for Cars; and I do hereby declare that the following specification, taken in connection with the drawings, making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a side view of end of car, showing platform and steps with gate folded away. Fig. 2 is same view with gate raised. Fig. 3 is an end view of platform with gate in raised position.

The object of my invention is to produce a gate which can be more readily, easily, and effectively operated than those now in use, and which when folded up will not occupy any portion of the space generally used for passage to and from the car; and it consists in the construction, arrangement, and operation of the devices hereinafter described.

In the drawings, A is the platform of the car, and B the steps.

C is the railing across the platform, having the usual opening for passage from one car to another.

Underneath the steps and below the level of the platform A is a folding gate, D, having an upward expansion through the steps or platform, as the case may be, and moving in or upon suitable perpendicular guides, E E. The vertical plane within which the gate may operate may be varied to suit the requirements of different purchasers; but will usually be located so as to work immediately in the rear of the "riser" of the top step or of the step preceding it.

The gate is composed of a series of horizontal rods, F F, the ends of which are either slotted to receive the edges of the guides E E, or the guides may be grooved to receive the ends of the rods, as may be preferred, and a series of oblique bars, G G, which are pivoted to each other and to the horizontal rods F F in such a manner as to permit the expansion or contraction of the whole. The top bar, H, may be made of wood and wider than the others, and will, when the gate is folded, form the outer edge of the step or car, according to the vertical plane in which it operates.

To the back of the gate D and to each other are pivoted a series of suitable bars or levers, I I, through which a movement is imparted to the gate, and which are connected at the bottom with a common lever, J. The lever J is fulcrumed at L, and is also pivoted to a perpendicular rod, M, and has a pivoted cross-bar, T, connecting it with the levers I I. Also, fulcrumed at L is another lever, V, having one end pivoted to a cross-bar, W, connecting it with the levers I I, and upon the other a weight, K, equal to the weight of the gate D.

N is a slotted guide, within which operates a sliding bar, O, which is connected with the rod M by a curved arm, P. The bar O has at the upper end a handle, Q, having a latch, S, to hold it in either its elevated or depressed position.

Commencing with the parts in the position shown in Fig. 1, the operation of my invention is as follows: As soon as the last passenger has stepped upon the platform the guard seizes the handle Q, unlatches it, and with it raises the bar O to the position shown in Fig. 2. This upward movement of the bar O will, through the rod M and lever J, assisted by the weight K, spread open the series of levers I I, which in turn will spread and raise the gate to the position shown in Fig. 2. When the gate has reached its extreme upward throw, the handle Q is released and the whole is again locked by the latch S. The weight of the gate being offset by the weight K, the quick and easy operation of the device, assisted by a spiral spring, X, if desired, is insured, and the several parts are not subjected to any sudden strain or jar.

When it is desired to remove the gate to permit the exit of passengers, the sliding bar O is unlatched, as before, and forced down to the position shown in Fig. 1, which folds the gate beneath the steps, the several parts operating reversely from their operation before described, the top bar H resting in the same horizontal plane with and forming a part of the step or platform.

With this construction and arrangement of my invention the gate can be easily and quickly operated, and when not in use is entirely removed out of the way of passengers.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a car, the combination, with the guides

E, a series of horizontal bars, D, working therein, and a series of oblique bars, G, pivoted to each other and to the horizontal bars, of a lazy-tongs lever, I, connected to the said bars and operated from the platform of the car, as and for the purpose set forth.

2. In a car, the combination, with the guides E, a series of horizontal bars, D, working in said guides, and a series of oblique bars pivoted to each other and to the horizontal bars of a lazy-tongs lever, I, lever J, connected thereto, vertical sliding rod O, connected to lever J, slotted standard N, in which rod O works, and provisions for securing rod O at any height in standard N, and weighted lever V, also connected to the lazy-tongs lever, as set forth.

GEORGE E. ADAMS.

Witnesses:
WALTER B. VINCENT,
THOMAS H. ADAMSON.