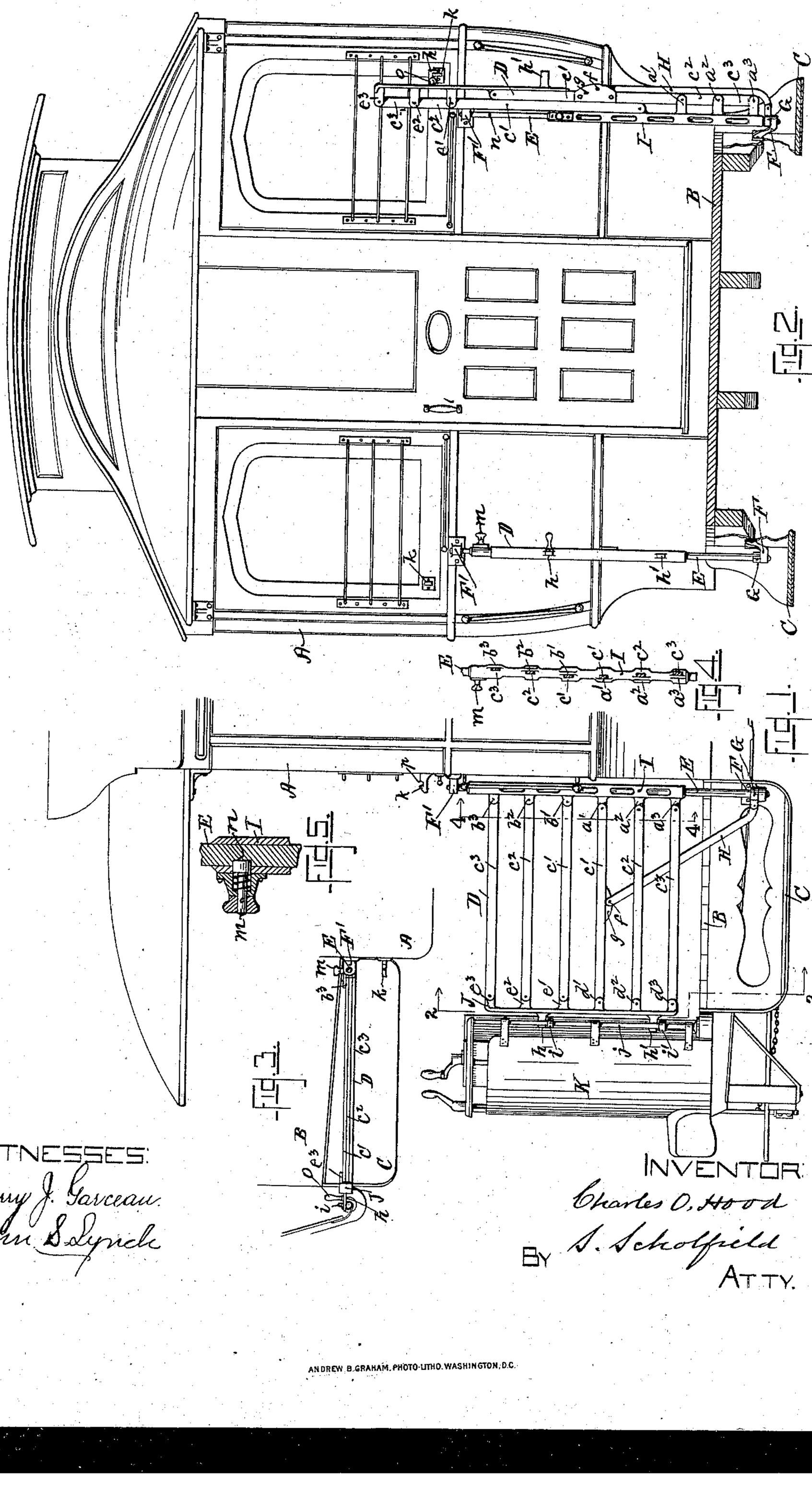
(No Model.)

C. O. HOOD.

FOLDING GATE FOR CARS.

No. 559,331. Patented Apr. 28, 1896.



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FOLDING GATE FOR CARS.

SPECIFICATION forming part of Letters Patent No. 559,331, dated April 28, 1896.

Application filed March 11, 1895. Serial No. 541,328. (No model.)

To all whom it may concern:

Be it known that I, CHARLES O. HOOD, a citizen of the United States, residing at Central Falls, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Folding Gates for Cars, of which the following is a specification.

It is the object of my invention to provide a folding gate adapted for street and railway cars and which may be conveniently operated and occupy but little space when in its folded condition; and it consists in the improved construction and arrangement of parts whereby when the gate is being operated in a vertical plane to open or close the same the ends of the gate will be caused to move in opposite directions, as hereinafter fully set forth.

In the accompanying drawings, Figure 1 presents in side elevation one end of a street-car provided with the improved folding gate, the gate being shown in its closed condition. Fig. 2 presents an end elevation of the street-car with the dasher removed by a cross-section taken in the line 2 2 of Fig. 1. Fig. 3 presents a detail top view of the gate in its closed condition. Fig. 4 presents a section of the gate, taken in the line 4 4 of Fig. 1. Fig. 5 presents an enlarged detail section showing the bolt for locking the sliding bar of the gate.

In the drawings, A represents the body of the car; B, the platform; C, the step, and D the gate, the rear of said gate being adapted to slide up and down upon the rod E, which is firmly held in the brackets F F′. To the revoluble collar G, loosely held at the lower end of the rod E, or, if preferred, at the upper end with the same effect, is pivoted the inclined bar H, which operates as a turning fulcrum to cause the required upward and downward movement of the inner vertical bar I of the gate, the said bar sliding loosely upon the rod E. The sliding bar I is provided at its lower portion with the projecting ears a' a^2 a^3, preferably of equal length, and at its upper end with the shorter ears b' b^2 b^3, likewise of equal length, and to the said ears are jointed the bars c' c' c^2 c^2 c^3 c^3, of equal length, the outer ends of the said bars being also jointed to the vertical end bar J, the said end bar being provided at its lower portion with the inwardly-projecting ears d' d^2 d^3, of equal length, and at its upper portion with the longer inwardly-projecting ears e' e^2 e^3, also of equal length, the inclined bar H, which forms the turning fulcrum of the gate, being jointed at f to the middle portion of one of the jointed bars c', being secured to the said bar c' by means of the bracket-piece g. The ears a' and b' on the sliding bar I are so arranged that the two middle bars c' c' will lie in the same vertical plane, the said bars being jointed to opposite sides of the said ears, and the ears a^2 and b^2 are so arranged that the bars c^2 c^2 will lie in the same vertical plane and back from the plane of the bars c' c' at a distance equal to the thickness of one of the said bars, and the ears a^3 and b^3 are so arranged that the upper and lower bars c^3 c^3 will lie in the same vertical plane and back from the plane of the bars c^2 c^2 at a distance equal to the thickness of one of said bars, in order that the bars of the gate may occupy the desired small space when folded, the jointed ears upon the end bar J being correspondingly located out of line with each other, the three upper bars of the gate being jointed to one side of their respective equal ears, while the three lower bars are jointed to the opposite side of their respective equal ears, as shown in Fig. 1, the ears being made of different lengths in opposite sets and offset laterally, in order to cause the folding of the bars of the gate in different planes, thus causing the gate to be folded to the smallest practicable width. The end bar J is also provided with the forwardly-projecting latch-lugs h h', which engage with the catches i i', secured to the post j of the dasher K, and to the end of the car is attached the catch k, which, by engaging with the latch-lug h, serves to hold the gate in its upwardly-folded and outwardly-turned position, as shown in Fig. 2, the gate being locked in its closed position by means of the spring-actuated sliding bolt m, arranged upon the side of the sliding bar I, the inner end of the said bolt being caused to enter a notch n, made in the

side of the rod E, which rod forms the pivot for the gate.

In opening the gate from its closed position (shown in Fig. 1) by taking hold of the handle *o* and raising the forward end of the gate the fulcrum action of the inclined bar H will be such as to cause the downward sliding movement of the bar I, and such downward movement will continue until the forward end of the gate attains its highest elevation. The gate is then to be turned outwardly upon its pivoting-bar E until the latch-lug *h* strikes the incline of the catch *k*. Then the action of said incline will serve to slightly raise the gate upon the rod E until the latch-lug *h* can pass into the holding-notch *p* of the catch *k*, when the gate will be firmly held in the upright folded position at the end of the car, as shown in Fig. 2, and upon the release of the gate from its locked position at the end of the car it may be turned and brought down to its former closed position, as also shown at the opposite side of the car in Fig. 2.

I claim as my invention—

1. In an upwardly-folding gate, the combination of the inner sliding bar, the outer bar, and the gate-bars pivoted to the inner sliding bar and to the outer bar, with an inclined support which constitutes a movable fulcrum for the closing and opening movement of the gate, substantially as described.

2. In an upwardly-folding gate, the combination of the inner sliding bar, the outer bar, and the gate-bars, pivoted to the inner sliding bar and to the outer bar, with an inclined support which constitutes a movable fulcrum for the closing and opening vertical movement, and means for holding the gate in its opened position substantially as described.

3. In an upwardly-folding gate, the combination of the inner sliding bar provided with sets of long and short ears offset from each other in different planes, the outer bar provided with corresponding sets of long and short ears similarly offset from each other, and the gate-bars pivoted to the inner sliding bar and to the outer bar, with an inclined support which constitutes a movable fulcrum for the closing and opening movement of the gate, substantially as described.

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