(No Model.) 2 Sheets—Sheet 1.

J. A. BRILL.

FOLDING GATE FOR CAR PLATFORMS.

No. 457,933. Patented Aug. 18, 1891.

Fig. 1

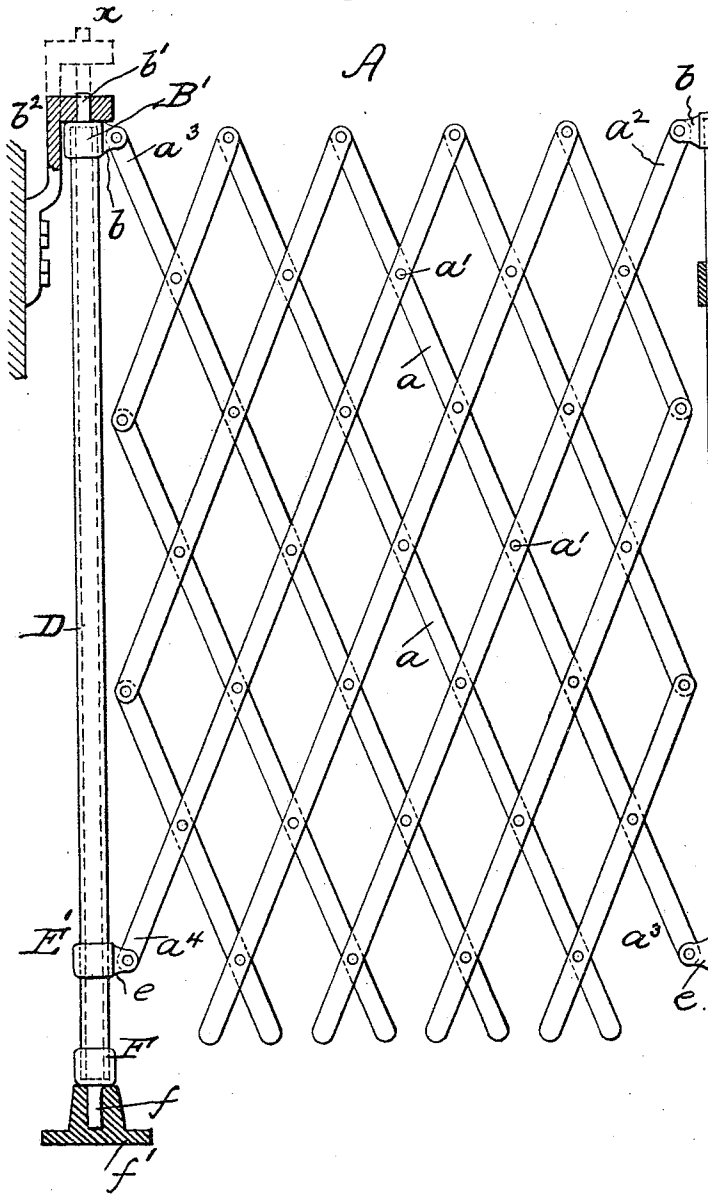
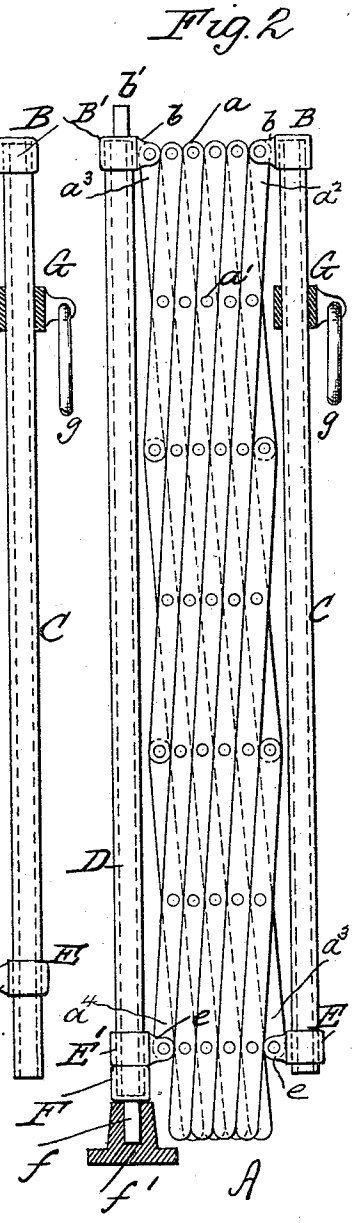


Fig. 2



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(No Model.) 2 Sheets—Sheet 2.

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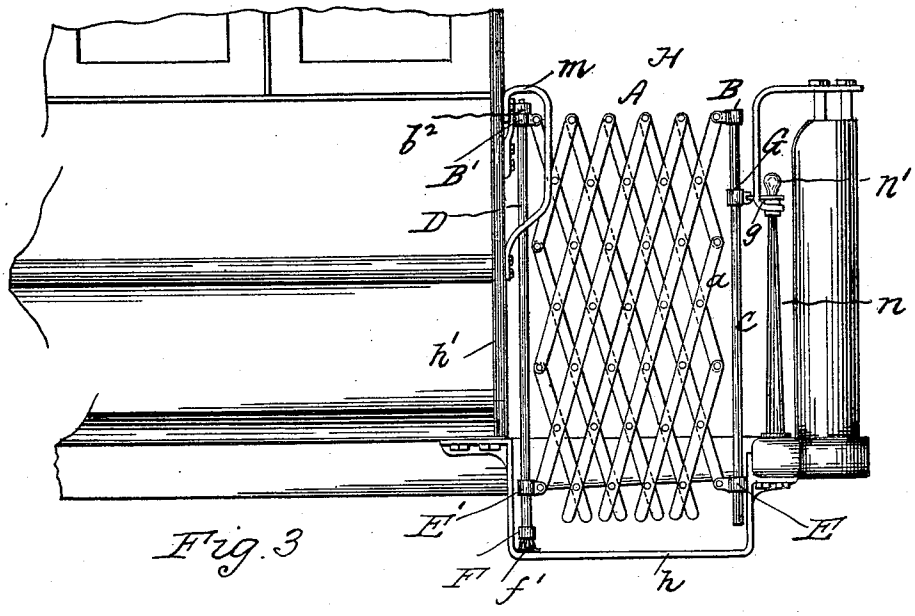


Fig. 3

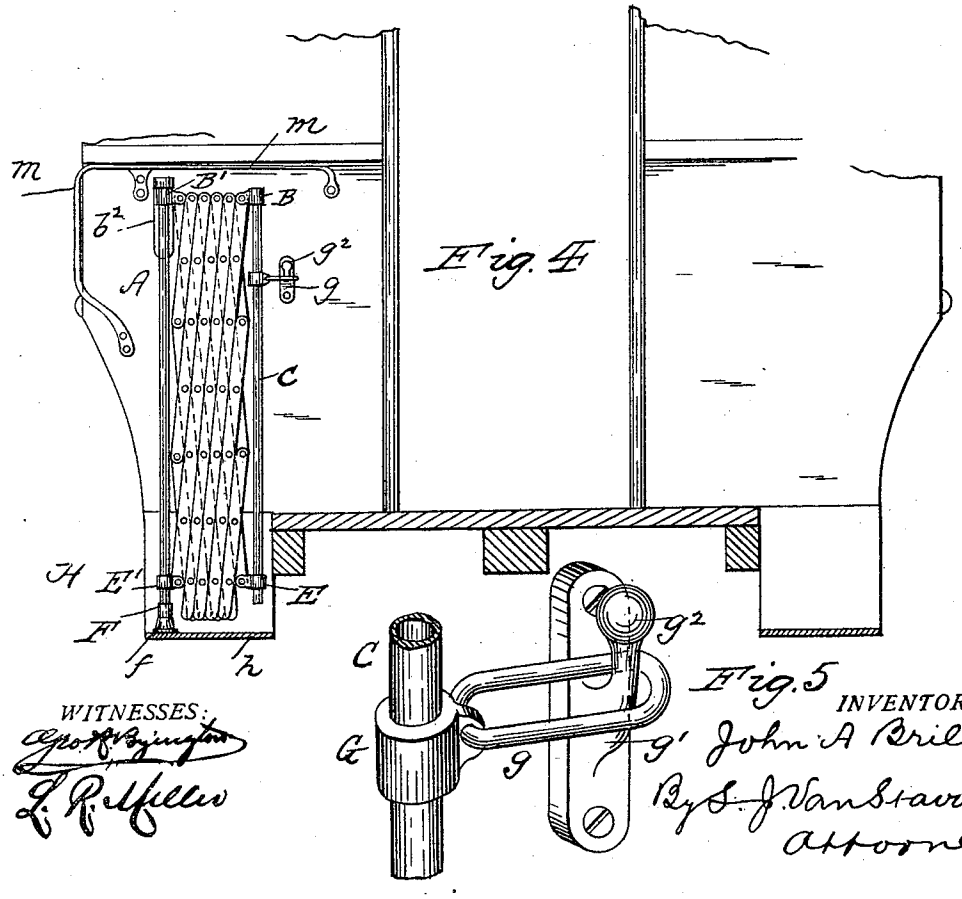


Fig. 4

Fig. 5

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UNITED STATES PATENT OFFICE.

JOHN A. BRILL, OF PHILADELPHIA, PENNSYLVANIA.

FOLDING GATE FOR CAR-PLATFORMS.

SPECIFICATION forming part of Letters Patent No. 457,933, dated August 18, 1891.

Application filed October 26, 1889. Serial No. 328,224. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BRILL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Folding Gates for Car-Platforms, of which the following is a specification.

My invention has relation to lazy-tongs form of folding and extension gates for general use, and particularly for use upon street and other car platforms; and it has for its objects, first, a comparatively light weight and inexpensive but strong and durable form of folding gate for general use, and which when applied to the usual street or other car platforms, either in the course of erection or already in use, can be easily, expeditiously, and inexpensively mounted thereon without necessitating any alteration of said platforms and without interfering with the usual hand-rails on the ends of the car and on the dashers, said gate being adapted to swing on its hinges when folded and assume a position which does not interfere with the egress and ingress of passengers, and when folded and extended is held securely in either position by a single locking device engaging with a fixture on the car and on the dasher, respectively, for said positions.

My invention accordingly consists of the combinations, constructions, and arrangements of parts, as hereinafter more particularly set forth in the specification and pointed out in the claims.

Reference is had to the accompanying drawings, wherein Figure 1 shows an elevation of the gate in its extended form and showing in section a form of pivotal bearings or mountings therefor. Fig. 2 is a like view showing it closed or folded and indicating in section the lower step or other bearing therefor. Fig. 3 is an elevation showing part of one end of a street-car with platform and the gate mounted thereon in an extended position and provided with a locking device embodying my improvements. Fig. 4 is an end view of the same, partly sectional through the platform, showing the gate in its folded position and swung or turned against the end of the car, so as to be out of the way of passengers; and Fig. 5 is a perspective of locking devices for holding the gate in its folded and extended positions.

A represents a lazy-tong form of gate, the lazy-tong levers *a* of which are made of flat metal or other strips suitably united to one another at their crossings, as indicated at *a'*, as desired. The upper corner ends a^2 and a^3 of levers *a* are respectively pivoted to lugs *b* of caps or plugs B B', which are driven onto or are sweated or otherwise secured to the upper ends of the parallel or end tubular bars C and D for the gate. In the drawings I have shown the plugs B B' of tubular form, closed at their upper ends to form caps for covering the tops of the tubular bars C and D, so as to make a finish therefor. The lower corner ends a^4 and a^5 of the levers *a* are correspondingly secured to lugs *e* of sleeves E and E', which are loose or sliding on the tubular bars C and D, respectively. The cap or plug B connects the tubular bar C to the levers *a* to form the free end or side of the gate and folds and extends with the levers *a* and moves with the gate as it is swung upon its pivots or hinges. The latter may be provided for, as desired; but I prefer to form the cap B' with an upwardly-projecting stud or pintle *b'* and a corresponding cap F with pintle *f*, but without any side lug *b*, and is secured, as above described, for cap B to the lower end of bar D. These studs *b'* and *f* are suitably mounted in brackets, or, if desired, a step-bearing *f'* may be used for pintle or stud *f* and a bracket b^2 for pintle or stud *b'*, as illustrated, so that the gate can be swung or turned around when folded.

If desired, the bracket-bearing b^2 may be in close impingement to the cap B', as indicated in full lines, Fig. 1; but when it is desired to so mount the gate that it is to be raised out of its bearings or supports the bracket b^2 will extend above the cap B' a distance greater than the depth or length of the lower pintle or stud *f* and the stud or pintle *b'* will be prolonged to meet said bracket, as indicated by dotted lines *x*, Fig. 1, which construction gives ample space between cap B' and bracket-bearing b^2 to lift the stud *f* clear of its step *f'*, whereupon a slight lateral movement of the gate throws the stud *f* out of the line of its

step f' and by then lowering the gate the stud b' is withdrawn from the bracket b^2.

At any suitable point or location on bar C is suitably secured a fixed sleeve G, provided with a ring g, which engages with a stud, knob, pin, or hook g', having an enlarged end g^2, preferably suitably secured to the usual post or other fixture, against which bar C closes when the gate is folded and turned on its pivots and when extended.

In applying the foregoing-described gate to street or other car platforms H, as indicated in Figs. 3 and 4, the step-bearing f' is screwed to the bottom step h near the body end h' of said step and the bracket b^2 is fastened to said car-body end below the horizontal member of the hand-rail m and back of its vertical member, so as not to interfere with the freedom of use of said rail by the passengers. At the top of one of the dasher-posts n in line with the sleeve G on the gate end bar C is an enlarged head or knob-nut n' for engagement with the link or ring g on sleeve G to hold or lock the gate in its extended position to close the end of the platform, as indicated in Fig. 3, and in line with said sleeve G on the car-body end is the hook or stud-bracket g', for engagement with the ring g when the gate is folded and turned or swung on its pintles, as indicated in Fig. 4, in which position the gate is folded and stands close against and parallel with the said car-body end, so as not to interfere with the egress and ingress of passengers. Both ends of both platforms can be provided with the gates, which are folded or extended as the requirements of service demand, each gate having its locking ring or link g for holding it secure in its folded and extended positions.

From the foregoing it will be noted that the gate with its tubular end bars C and D is of a comparatively light weight, yet is strong and durable; that when applied to cars as above described the lower edge of the gate is adjacent to the bottom steps of the platform and when extended closes the said bottom steps, so that the latter as well as the platform ends are completely closed by the gate; that the latter when closed and swung on its pintles turns within the space of the tread of the bottom steps; that the gate can be applied to the platforms without alterations of the same or additions thereto; that the gate is partly mounted on the platform-step and partly on the end of the car-body; that the gate is locked in its extended and folded positions, and that it does not in any manner interfere with the use of the hand-rail on the car-body end and on the dasher, nor does it interfere with the egress and ingress of the passengers when in its folded position.

It is obvious that the sleeve G may be dispensed with and the link or ring or equivalent fastening device used may be secured directly to the end bar C. So, too, any other suitable form of hooks on the dasher and car-body end may be substituted for those shown, the enlarged headed hooks indicated being preferably used, as they prevent the ring g jumping from the hooks by jolting of the car.

I am aware that folding gates are old in themselves, and for general purposes only claim the specific form of gate or its equivalent, as herein described; but as the mode of mounting the gate on the platform ends, as above described, is, so far as I am aware, new with me, I do not limit myself in so mounting a folding gate on a car-platform to the exact construction and arrangement of the bearings for the gate, its locking devices, nor to the form of the gate, as the same may be varied without departing from these features of my invention.

What I claim is—

1. In a folding gate, the combination of lazy-tongs levers a, tubular end bar C, fixed cap B, having lug b, and loose sleeve E, having lug e, connected to said levers a, tubular bar D, having cap B′, with lug b and pintle b', and sleeve E′, with lug e for connection to levers a, and cap F, with pintle f, substantially as set forth.

2. In a folding gate, the combination of a series of lazy-tongs levers a, end bar C, having ring or link g opposite end bar D, having pintles b' f, and fixed and loose sleeves with lugs connected to said levers a, substantially as set forth.

3. In combination with a bar D, having lower end pintle f and step-bearing f', loose sleeve E′, with lug e, upper fixed cap B′, with lug b and pintle b', bracket b^2 for pintle b, a series of lazy-tongs levers a, connected at one end to the lugs b and e, cap B′ and sleeve E′, end bar C, having fixed cap B and loose sleeve E for connection to the opposite end of said levers, and a link or ring g, substantially as set forth.

4. In combination with a car and platform-step, a folding gate mounted in bearings on said step and the end of the car-body, and having a link or ring for connection with the dasher when the gate is extended and for connection with a stud or hook on the car-body end when the gate is folded, substantially as set forth.

5. In combination with a car, its platform and platform-step, a folding gate having a step-bearing in the platform-step and upper bearing in a bracket secured to the car-body below the horizontal member and back of the vertical member of the hand-rail for said car-body end, a fastening-link on said gate, and knobs or hooks on the dasher and on the car-body end, substantially as set forth.

6. In combination with the platform-step and car-body end of a car, a folding gate mounted on said step and end and having a locking link or ring for engagement with a dasher hook or knob when the gate is extended to close the end of the platform and for engagement with a hook on the car-body

end when the gate is folded and turned or swung around to the car-body end, substantially as set forth.

7. In combination with a car and platform ends, folding gates mounted on said ends, so as to be extended to the dasher and folded to and turned on their pintles to and parallel with the car-body ends, substantially as set forth.

8. In combination with a car-platform, a folding gate mounted on the platform-step and on the car-body end, so as to close the step-space when the gate is extended, and said gate folding and swinging or turning parallel to the car-body end, substantially as set forth.

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

JOHN A. BRILL.

Witnesses:
S. J. VAN STAVOREN,
CHAS. F. VAN HORN.