No. 810,592. PATENTED JAN. 23, 1906.

H. WITTE.

FOLDING GATE FOR CAR PLATFORMS.

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Fig. I.

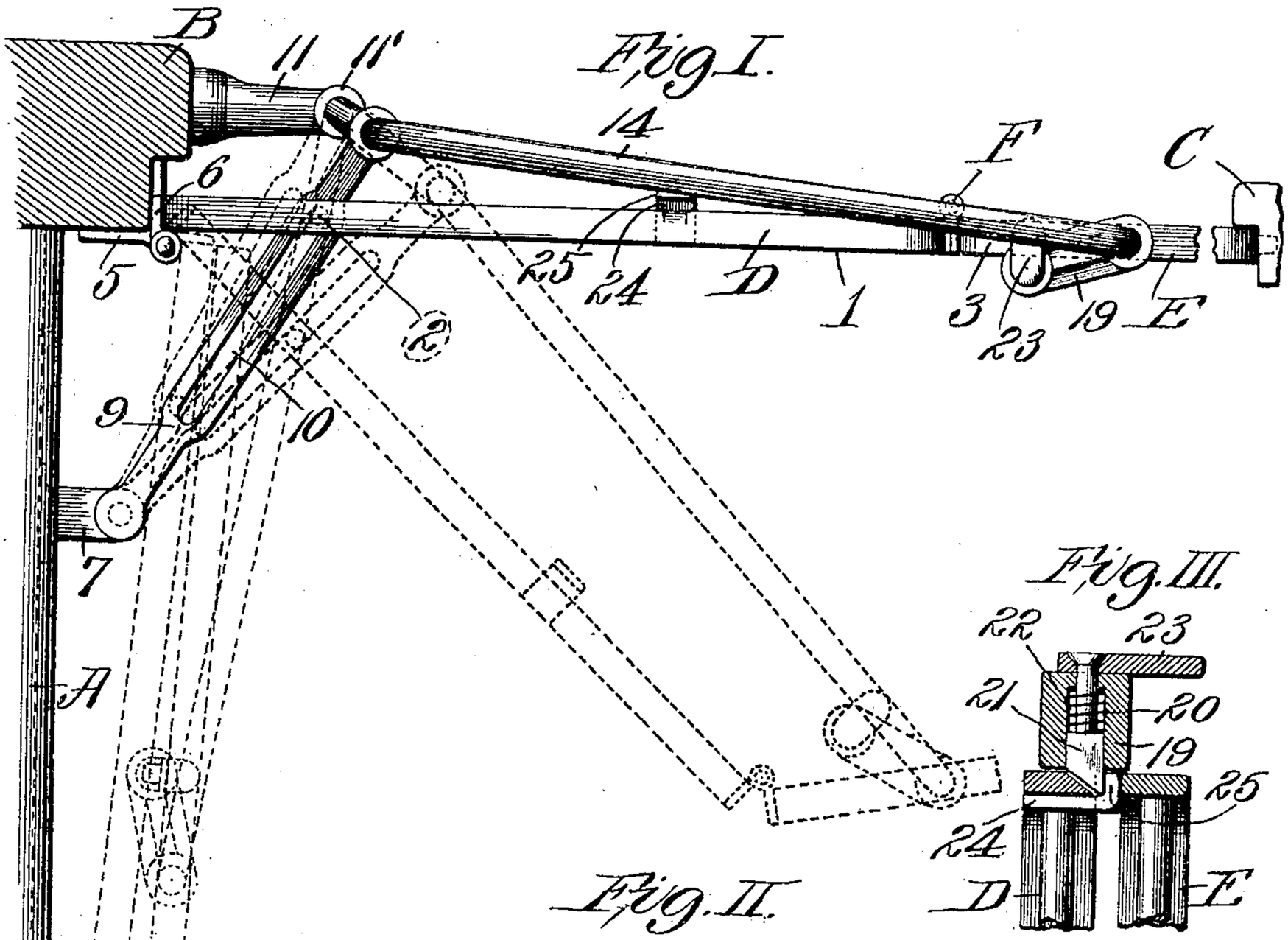
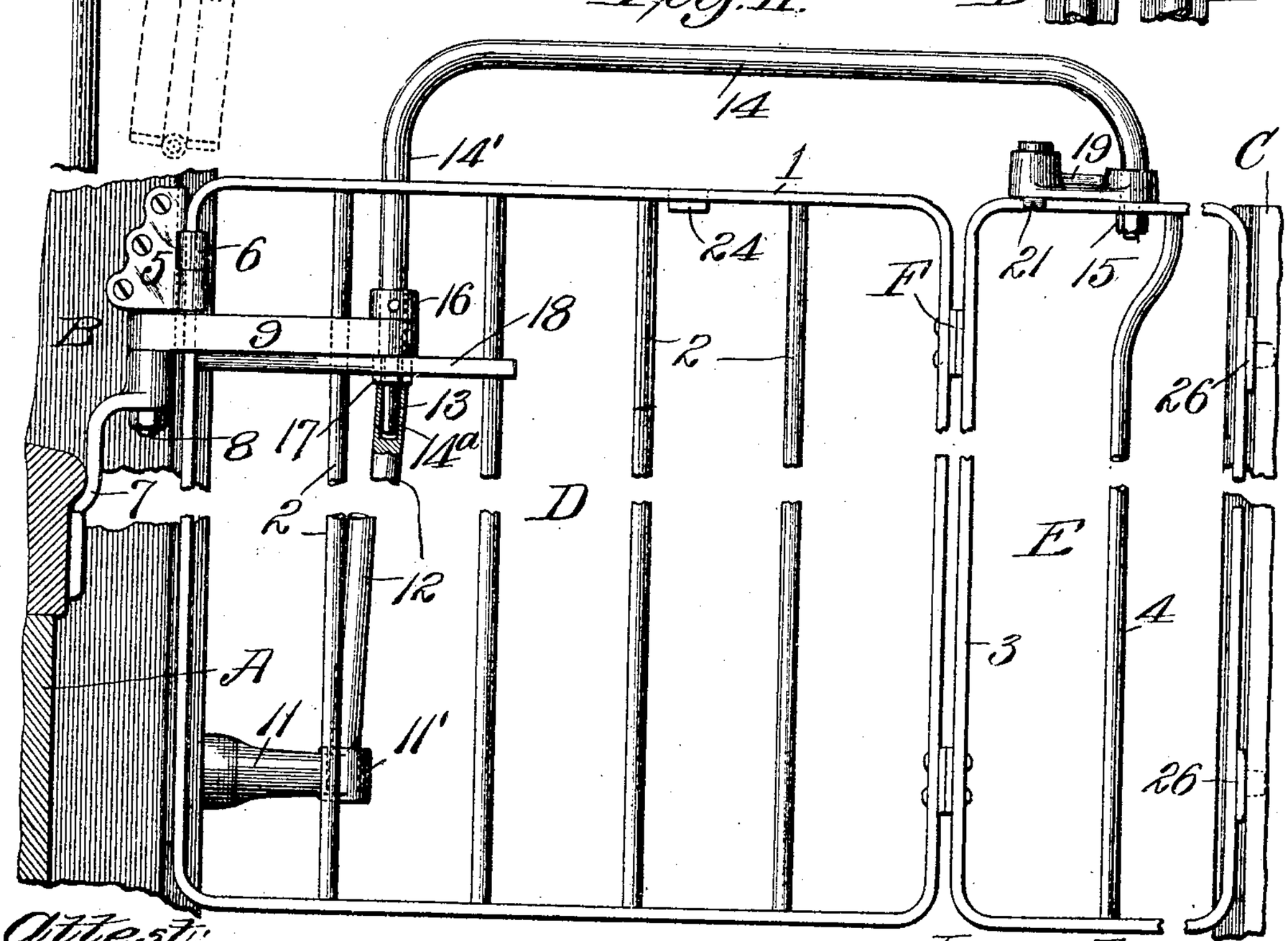


Fig. III.

Fig. II.



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FOLDING GATE FOR CAR-PLATFORMS.

No. 810,592. Specification of Letters Patent. Patented Jan. 23, 1906.

Application filed October 19, 1905. Serial No. 283,400.

To all whom it may concern:

Be it known that I, HUBERT WITTE, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Folding Gates for Car-Platforms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a folding gate for use upon the platforms of railway-cars, and more particularly upon platforms of street-railway cars.

Figure I is a top or plan view of my gate, partly broken out. Fig. II is an elevation of the gate as illustrated in Fig. I. Fig. III is an enlarged vertical cross-section taken through the gate in folded condition and through the latch, by which the sections of the gate are held from movement with respect to each other.

A designates the end wall of a railway-car, B one of the corner-posts of the car, and C one of the corner-posts of the car-platform.

D designates the rear section of my gate, and E the forward section of the gate, which is swingingly connected to the section D by hinges F, of such form as to provide for the folding of the gate-section E on the gate-section D in one direction of movement only. The rear gate-section D consists of a border-band 1 and vertical rods 2. The forward gate-section consists of a border-band 3 and vertical rods 4.

5 designates the hinge-leaf secured to the corner-post B and in which the rear portion of the border-band of the rear gate-section D is rotatably fitted. On said border-band above the part of the hinge-leaf in which said border-band is fitted is a hinge-leaf 6, which serves as a support for said band to permit swinging action of said gate-section.

7 designates a bracket secured to the car end wall A at a point remote from the hinging-support of the rear gate-section and in which is seated a pivot-bolt 8.

9 is a link having its inner end fitted to the pivot-bolt 8 and adapted to swing horizontally when the gate is opened and closed for a purpose to be hereinafter explained. The link 9 is provided with a longitudinal slot 10, in which one of the vertical rods 2 of the rear gate-section is loosely fitted to provide for movement of said link when the rear gate-section is swung upon its hinge-support.

11 designates a socket-bracket secured to the corner car-post B.

12 is an oscillatory rod having its lower end loosely seated in the socket 11′ of the socket-bracket 11 and provided at its upper end with a pocket 13.

14 designates a handle-rod having one of its ends loosely seated at 15 in the top portion of the forward gate-section border-band 3 to permit free swinging movement of said forward gate-section. The handle-rod terminates at its other end in a vertical leg 14′, which is free of direct connection to either of the gate-sections and terminates in a stem 14ª, which is loosely seated in the pocket 13 at the upper end of the oscillatory rod 12. Fixed to the handle-rod leg 14′ is a collar 16, that occupies a position above the link 9, and beneath said link on the handle-rod leg is a nut 17. The outer end of the link 9 is loosely fitted to the handle-rod leg 14′ between the members 16 and 17, and said members serve to hold the link 9 from vertical movement on said handle-rod leg.

18 is a horizontal support-bar fixed to the border-band and one or more of the vertical rods of the rear gate-section. This horizontal supporting-bar occupies a position immediately beneath the link 9 and serves to sustain said link from downward movement and also to support the rear portion of the handle-rod 14, to which said link is fitted.

19 designates a latch-arm having one of its ends fixed to the end of the handle-rod 14, which is fitted to the forward gate-section E. In the other or free end of said latch-arm is a vertical bore 20. (See Fig. III.)

21 is a latch-bolt slidably seated in the bore 20 and having a beveled head. The shank of said latch-bolt is surrounded by an expansion-spring 22 and extends through the top of the latch-arm 19.

23 is a handle attached to the upper end of the shank of the latch-bolt exterior of the latch-arm 19 and by which the latch-bolt may be retracted.

24 designates a catch secured to the top portion of the rear gate-section border-band and preferably terminating in an upturned lip 25 This catch is designed to receive the

latch-bolt 21 under a condition that will be hereinafter explained.

26 designates stud-plates secured to the vertical portion of the forward gate-section border-band 3 at the free end of said section, these plates being provided with studs that are adapted to enter into suitable keepers in the platform corner-post C, as indicated in Figs. I and II.

When my gate is in closed condition, as illustrated in full lines, Figs. I and II, the various parts of the gate occupy the position shown in said views, in which connection it will be observed that the oscillating hand-rod 12 is inclined from a vertical line and the gate-sections being in alinement with each other are so held in their unfolded condition by the latch-bolt 21, which is in engagement with the top portion of the border-band of the forward gate-section, whereby the two gate-sections are retained from folding action. This restraint is due to the latch-arm 19 being fixed to the handle-rod 14 and the latch-bolt in said latch-arm engaging against the side of the forward gate-section border-band opposite to that at which the forward gate-section is pivoted to the rear gate-section. To permit the gate to be folded, the latch-bolt 21 is retracted from engagement with the border-band of the forward gate-section, for which purpose the latch-bolt handle 23 is grasped and lifted. The forward gate-section may then be swung in an arc toward the rear gate-section, at which time both of the gate-sections are moved inwardly and rearwardly over the car-platform, as seen in dotted lines, Fig. I. This movement of the parts is accomplished by an inward pull upon the handle-rod 14. As the handle-rod is drawn inwardly its rear end, being restrained by the link 9, constitutes a pivot member acting in conjunction with said link and its forward end constitutes a pivot member acting in conjunction with the forward gate-section. The movement of the handle-rod is continued until the gate-sections are entirely retracted into folded condition, and as the parts move into such condition the gate-section rod that passes through the slot in the link 9 travels in said slot from its outer end to its inner end.

The oscillatory rod 12 is by the construction previously described loosely supported and loosely fitted to the handle-rod 14, and as a consequence said oscillatory rod is permitted to assume an inclined position when the gate is opened in order that said handle-rod may partake of the desired movement. When the gate-sections are folded, this oscillatory rod is moved into vertical position, due to the variation in the movement of the handle-rod, particularly to its positioning and connection to the parts to which it is united.

It will be seen that the oscillatory rod 12 is by the construction described always placed in a vertical position when the gate is in open or folded condition. In this position it serves as a hand-rod to be grasped by passengers in entering or leaving the car-platform.

I claim as my invention—

1. In a folding gate of the character described, the combination of a rear swingingly-supported gate-section, a forward gate-section hinged to said rear section, a handle-rod loosely connected to said forward gate-section, and a swinging member in which said handle-rod is loosely supported, substantially as set forth.

2. In a folding gate of the character described, the combination of a rear swingingly-supported gate-section, a forward gate-section hinged to said rear section, a handle-rod loosely connected to said forward gate-section, a link loosely fitted to said handle-rod, and means for supporting said link, substantially as set forth.

3. In a folding gate of the character described, the combination of a rear swingingly-supported gate-section, a forward gate-section hinged to said rear section, a handle-rod loosely connected to said forward gate-section, a link loosely fitted to said handle-rod, means for supporting said link independent of either of said gate-sections, and a supporting-bar carried by said rear gate-section on which said link rests, substantially as set forth.

4. In a folding gate of the character described, the combination of a rear swingingly-supported gate-section, a forward gate-section hinged to said rear section, a handle-rod loosely connected to said forward gate-section, a link provided with a slot in which a member of said rear gate-section operates, and means for supporting said link; said link having loose connection with said handle-rod, substantially as set forth.

5. In a folding gate of the character described, the combination of a rear swingingly-supported gate-section, a forward gate-section hinged to said rear section, a handle-rod loosely connected to said forward gate-section, and a latch fixed to said handle-rod and arranged to engage said forward gate-section, substantially as set forth.

6. In a folding gate of the character described, the combination of a rear swingingly-supported gate-section, a forward gate-section hinged to said rear section, a handle-rod loosely connected to said forward gate-section, and a latch fixed to said handle-rod and arranged to engage said rear gate-section, substantially as set forth.

7. In a folding gate of the character described, the combination of a rear swingingly-supported gate-section, a forward gate-section hinged to said rear section, a handle-rod loosely connected to said forward section a latch-arm fixed to said handle-rod, and a latch-bolt carried by said latch-arm

and arranged to engage either of said gate-sections, substantially as set forth.

8. In a folding gate of the character described, the combination of a rear swingingly-supported gate-section, a forward gate-section hinged to said rear section, a handle-rod loosely connected to said forward gate-section, oscillatory rod loosely fitted to said handle-rod, and means for supporting said oscillatory rod, substantially as set forth.

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In presence of—
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