

No. 811,911.

PATENTED FEB. 6, 1906.

D. A. FAUT.
CAR STEP.

APPLICATION FILED FEB. 11, 1905.

3 SHEETS—SHEET 1.

Fig. 1.

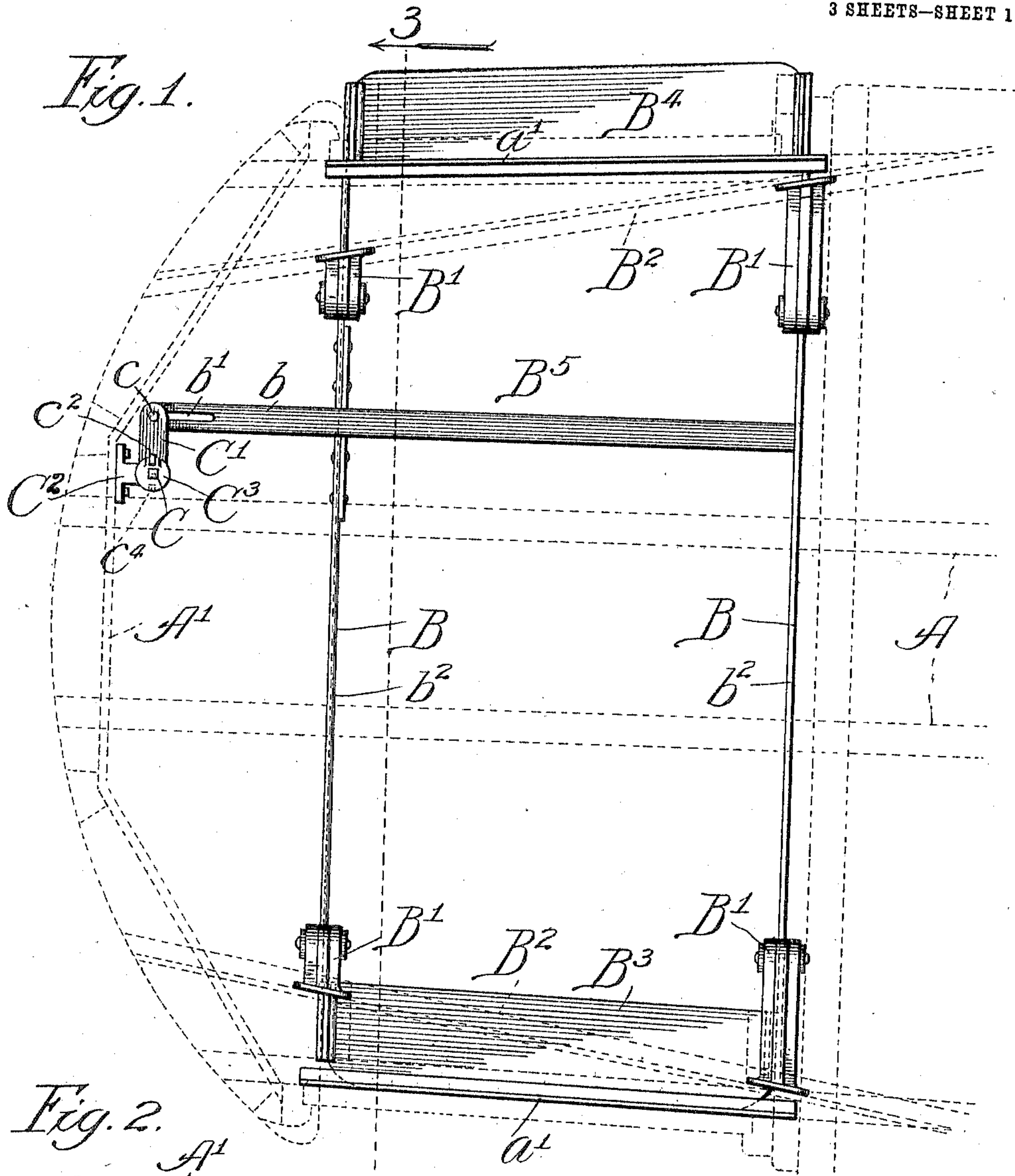
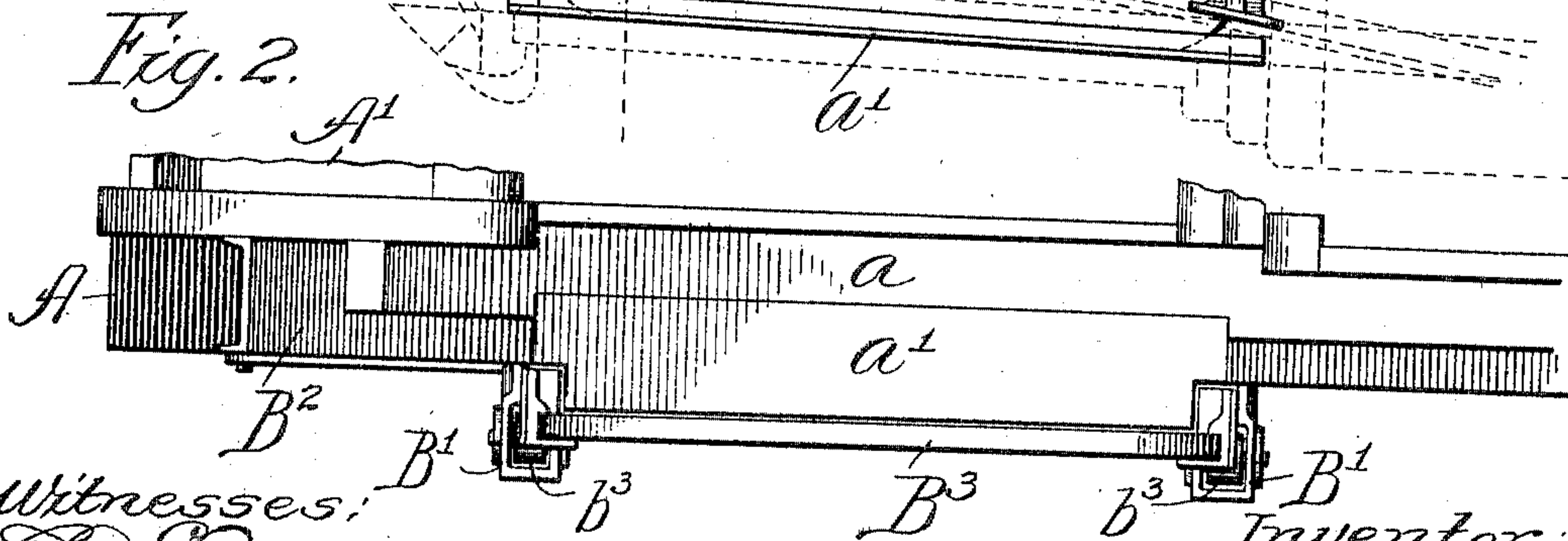


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

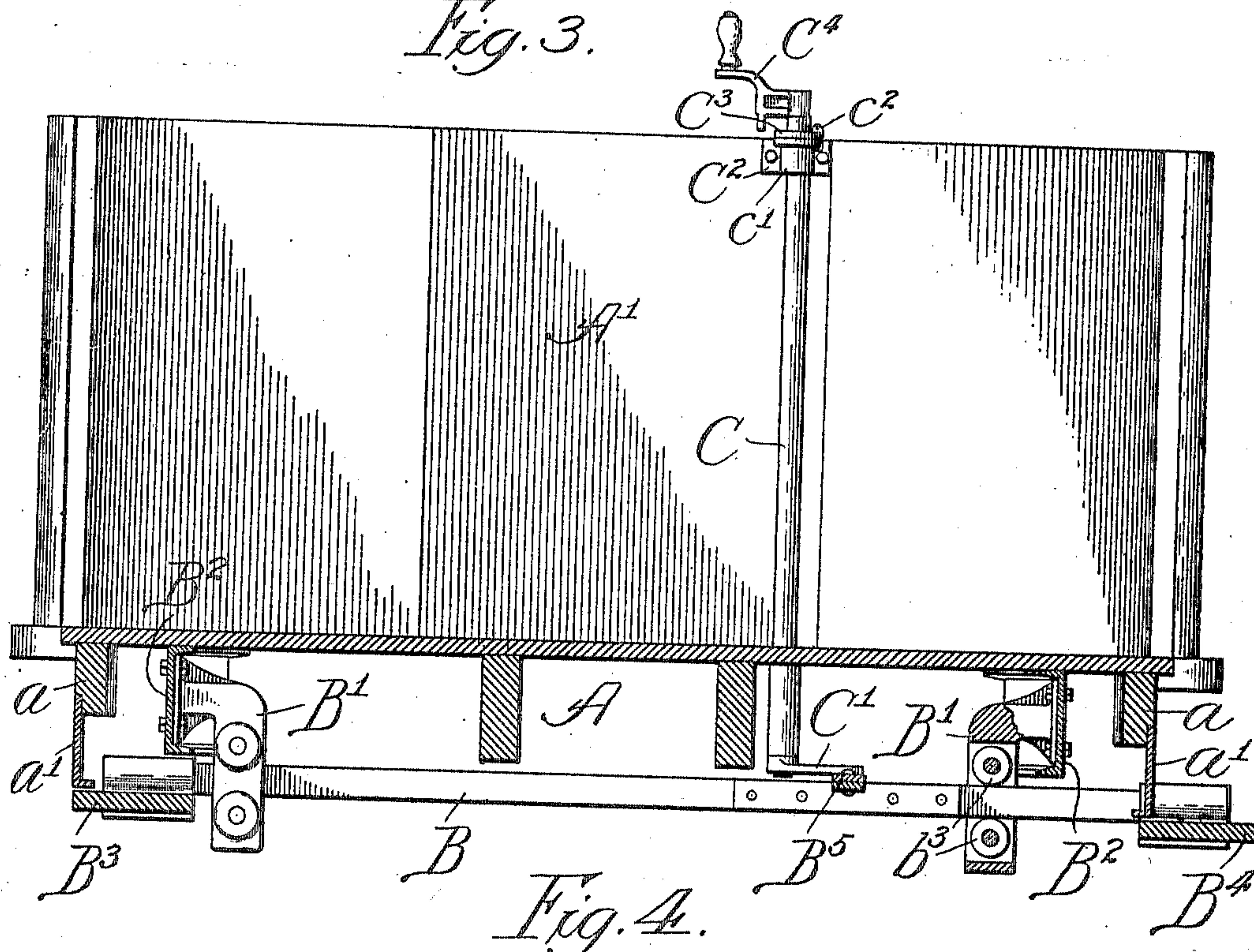
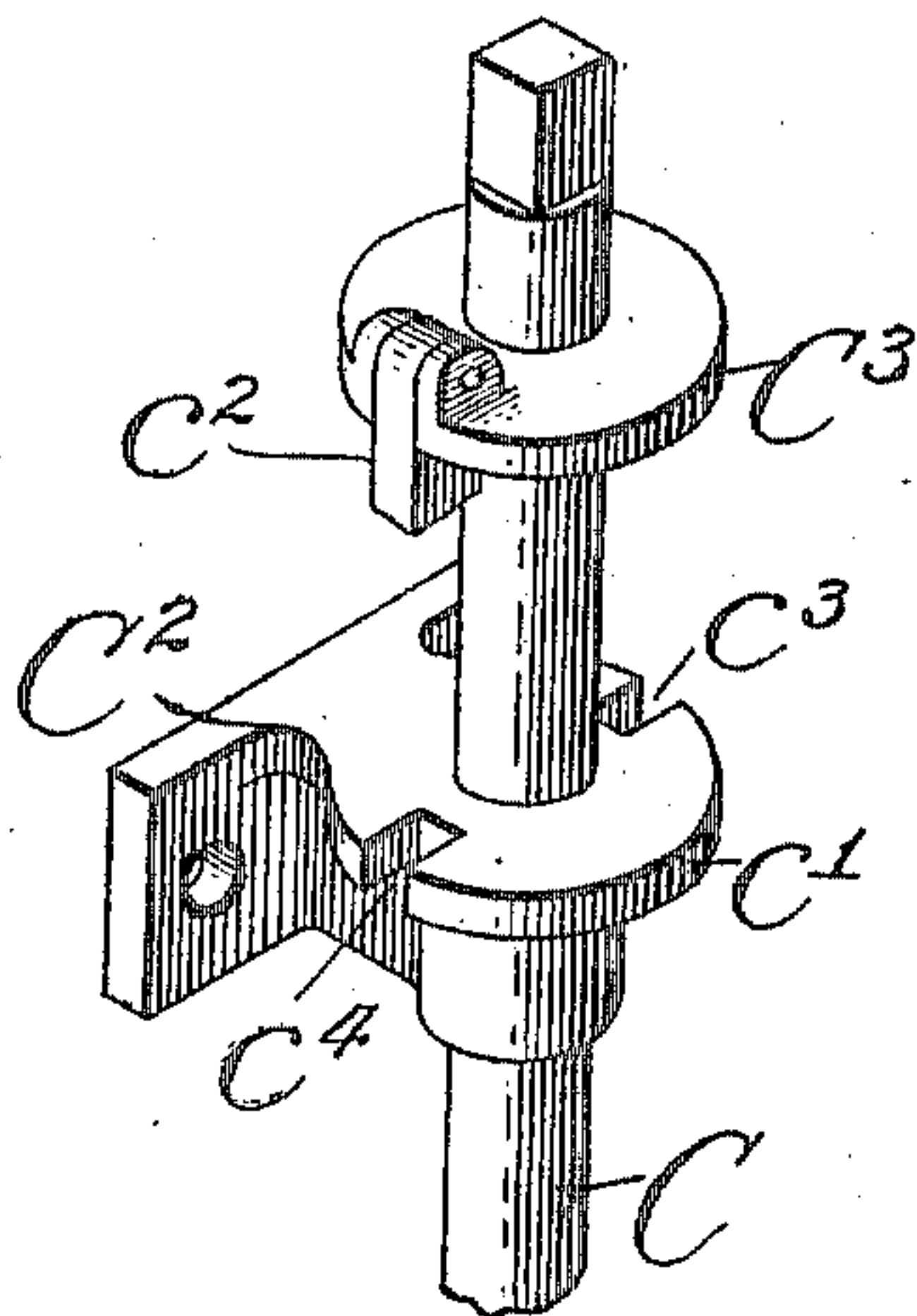


Fig. 4.



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3. SHEETS—SHEET 3.

Fig. 5.

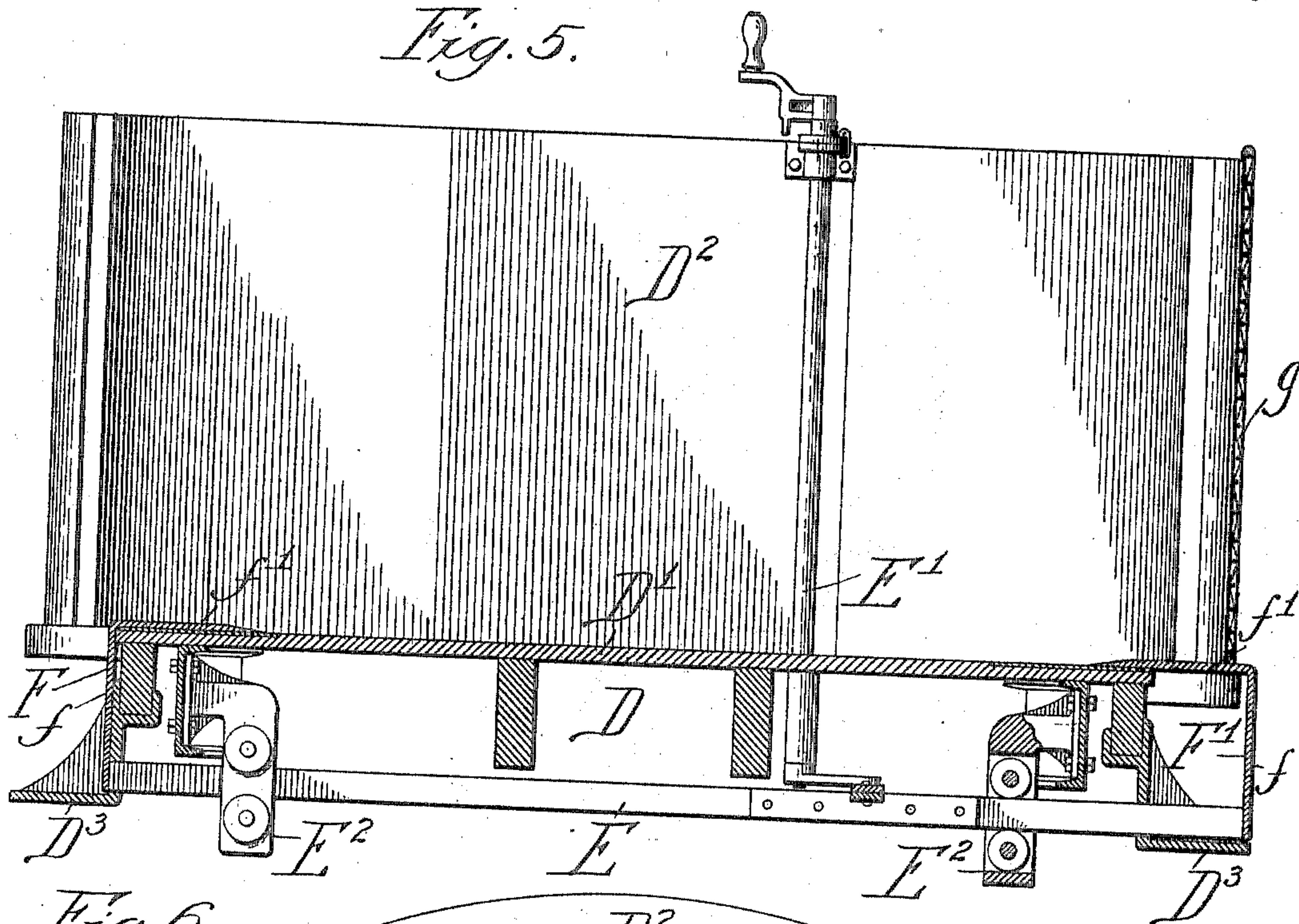
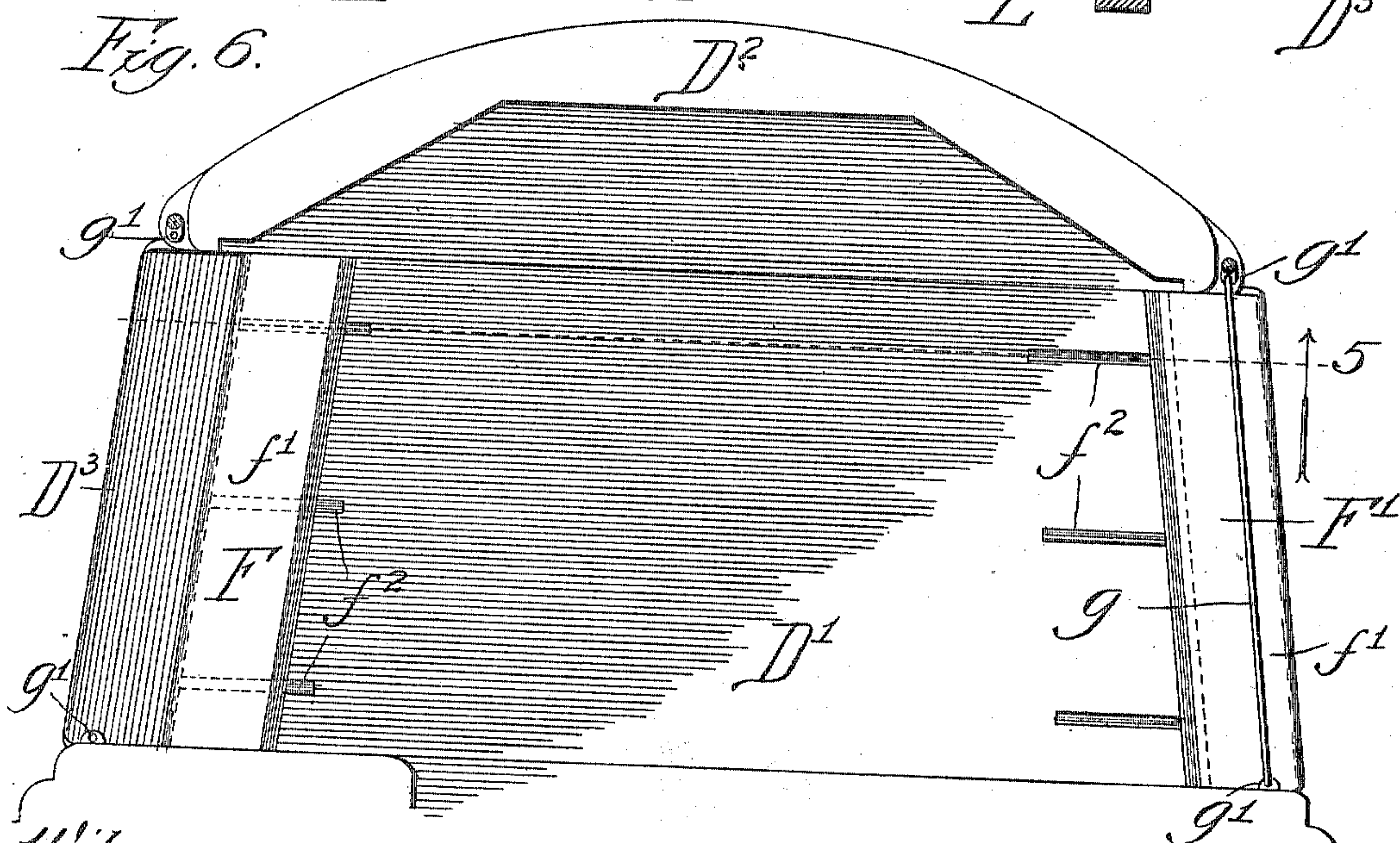


Fig. 6.



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UNITED STATES PATENT OFFICE.

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CAR-STEP.

No. 811,911.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed February 11, 1905. Serial No. 245,214.

To all whom it may concern:

Be it known that I, DELBERT A. FAUT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Steps, of which the following is a specification.

My invention pertains particularly to steps for closed street-cars, although the invention may be found useful in other situations.

My primary object is to provide a car-step which may readily be projected from the side of the car to enable it to be used and withdrawn or retracted to prevent unauthorized or prohibited use. Thus where two parallel street-car tracks are close together it is particularly desirable to prevent people from boarding the car on the side where they would be exposed to danger, and my invention enables this purpose to be readily accomplished. Preferably the two opposite steps on a car are mounted on a common frame which may readily be shifted transversely of the car, so that one operation serves simultaneously to project one step and sheathe or retract the other.

My invention in its preferred embodiment is illustrated in the accompanying drawings, in which—

Figure 1 represents a broken view of the substructure of a car with my improvements applied thereto, the substructure being indicated in the main by the dotted lines; Fig. 2, a broken side elevational view of the same, the substructure of the car-body being shown in full lines; Fig. 3, a transverse vertical section as indicated at line 3 of Fig. 1, one of the combination guides and supports for the sliding frame which supports the car-steps being shown in section, however; Fig. 4, a broken perspective view showing a detail of the means for securing the actuating rock-shaft in either of the two locking positions thereof, and Figs. 5 and 6 sectional and plan views of a modified construction.

In the construction illustrated A represents the substructure of a car-body, having the usual dash or end guard A' applied thereto; B, a transversely-slidable frame mounted in guides B', connected with beams B², which may constitute either a portion of the regular substructure of the car or may be provided for the special purpose of sustaining the members B'; B³ B⁴, steps carried by the frame B; B⁵, a bar constituting a portion of the frame B and having a forwardly-project-

ing end b, provided with a slot b'; C, an actuating rock-shaft equipped at its lower end with an arm C', having a pin c engaging the slot b'; C², a bracket connected with the dash A' near its upper edge and having a bearing c' for the shaft C; C³, a collar fixedly secured on the shaft C and equipped with a gravity-pawl c², adapted to engage with either desired one of notches c³ c⁴, with which the bearing c' is provided, and C⁴ a removable handle serving to actuate the shaft C.

The substructure of the car has the usual outside beams or stringers a, and with these are connected toe-boards a', beneath which the steps may move. The frame B may comprise simply two suitably-spaced transversely-extending bars b², arranged on edge in the hangers or guides B'. The hangers are provided with channels equipped with rollers b³, which afford antifriction-bearings for the members b². The space between the bars b² corresponds approximately with the openings or doors at the sides of the vestibule of the car, and the steps are therefore properly located to permit ingress to or egress from said vestibule. The shaft C is conveniently located close to the dash or guard A', and said shaft may be actuated in the same manner as the controller of an electric motor. In fact, the upper end of the shaft is squared to receive the controller-handle, which is the handle indicated by the reference-letter C⁴. It is understood, of course, that a pair of steps is provided at each end of the car in the usual type of construction.

In practice the outer steps are projected and the inner steps retracted or sheathed—that is, the steps which are at the side of the car not exposed to an adjacent track are projected, while the steps at the other side of the car are drawn beneath the body of the car. When the car arrives at the end of the route and is to be taken back over the other track, the motorman removes the controller-handle from the controller-shaft (not shown) and applies it to the shaft C, which is right at hand at the platform occupied by him. He then lifts the pawl c² and turns the rock-shaft, thereby shifting the pair of steps controlled by said rock-shaft. In this position the pawl c² enters the other notch of the bearing c', thereby locking the steps in the new position. It is understood, of course, that the pin c works in the slot b' in the shifting operation. The operator then takes the controller-handle to the opposite end of the car,

applies it there to the shaft corresponding with the shaft C, thereby shifting the steps at that end of the car, and finally applies the controller-handle to the controller of the motor. It will be understood that in Fig. 4 the shaft C is illustrated in a raised position to enable the notches c^3 c^4 to be viewed.

In the construction shown in Figs. 5 and 6 the invention is shown adapted to a car equipped with stationary steps. In this construction D represents the substructure of a car having a vestibule D' , a dash D^2 , and fixed steps D^3 at the sides of the vestibule; E, a slidable frame actuated through the medium of a shaft E' and supported by hangers E^2 , and F F' combination shields and steps carried by the ends of the slide. Each of the members F and F' is of angle form, having a downturned vertical portion f and an downturned horizontal portion f' , which slides on bearings f^2 on the platform or floor of the vestibule. The shifting operation is performed in the manner described above, the member F being retracted as the member F' is projected, and vice versa. This leaves either of the steps D^3 free to be used, depending upon the position of the slide. Thus when the slide is in the position shown the vertical portion of the member F' acts as a shield, preventing use of the step beneath it, and at the same time the horizontal portion of said member forms virtually a projection of the platform, covering the space above the shielded stationary step. In a broad sense the members F and F' may be regarded as steps or footboards and are to be regarded within the scope of the appended claims. A

transferable gate or guard g may be connected with eyes g' at either side entrance to the vestibule.

The advantages incident to my construction will readily be appreciated by those familiar with street-car operation, especially in the larger cities, and it may be stated that practical operation has demonstrated the utility of the construction and the facility with which the steps may be operated.

Obviously many changes in detail of construction within the spirit of my invention may be made. Hence no undue limitation should be understood from the foregoing detailed description. In the appended claims the term "step" is to be regarded as including a footboard of any description.

What I regard as new, and desire to secure by Letters Patent, is—

1. The combination with a car-body of a transversely-slidable frame, a step fixedly mounted upon each end thereof, one of said steps being normally sheathed and the other normally projected, and means for actuating said sliding frame, for the purpose set forth.

2. The combination with a car-body of a transversely-slidable frame, steps supported thereon, a forwardly-projecting member connected with said frame, a rock-shaft equipped with an arm having pin-and-slot connection with said member, and means for actuating the rock-shaft, for the purpose set forth.

DELBERT A. FAUT.

In presence of—

J. H. LANDES,
M. S. MACKENZIE.