

(No Model.)

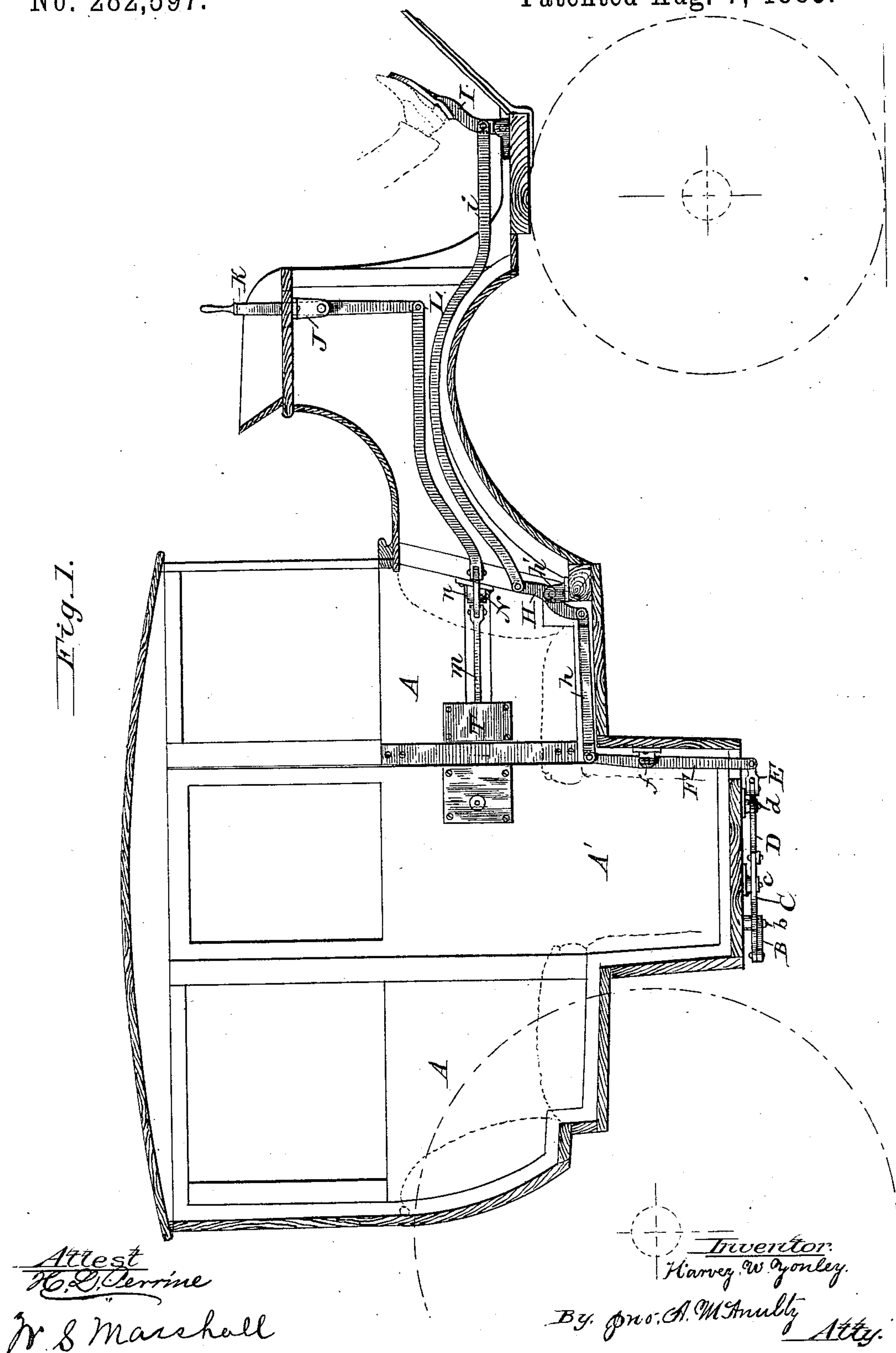
2 Sheets—Sheet 1.

H. W. YONLEY.

DEVICE FOR OPENING AND CLOSING CARRIAGE DOORS.

No. 282,597.

Patented Aug. 7, 1883.

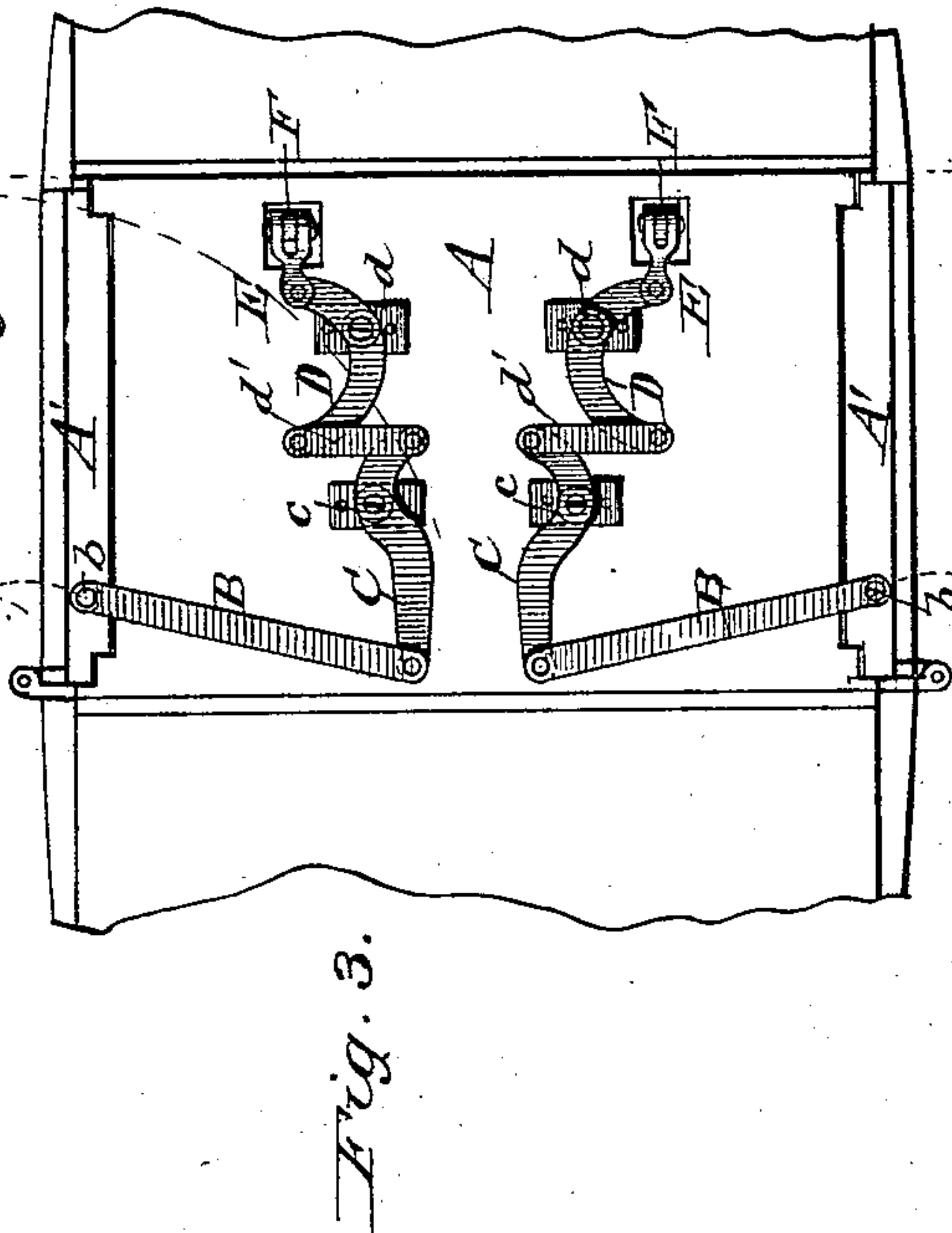
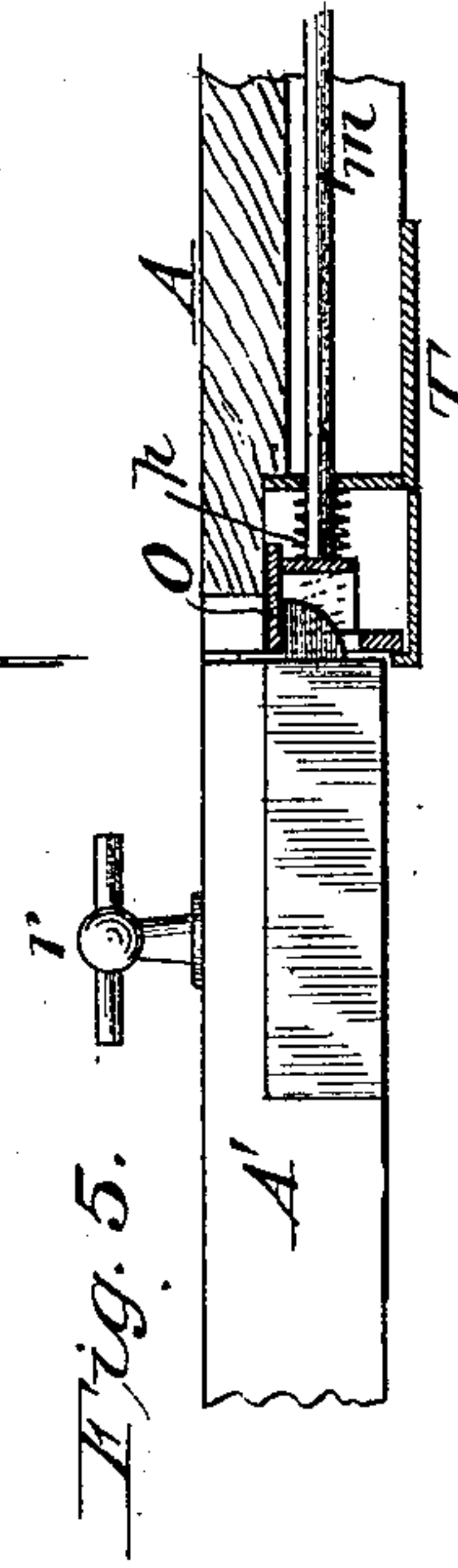
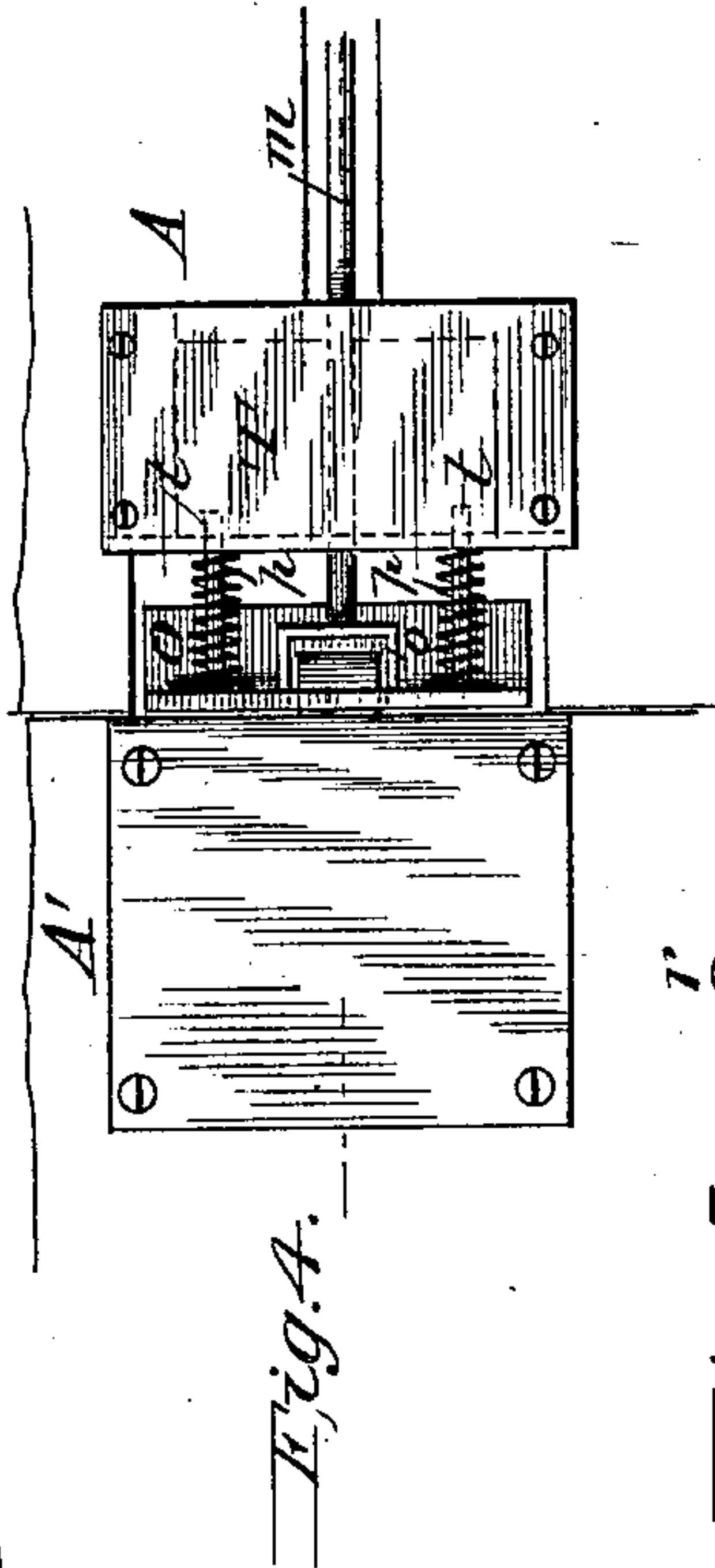
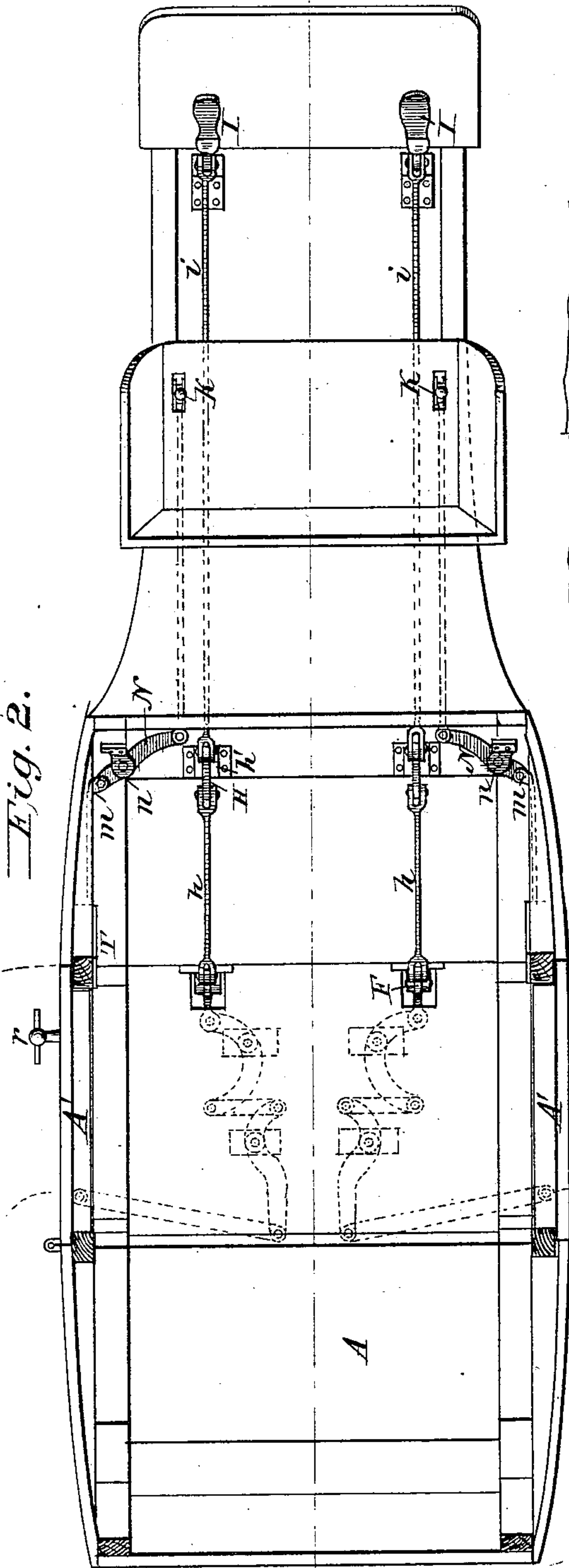


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*Attest:*  
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*Atty*



# UNITED STATES PATENT OFFICE.

HARVEY W. YONLEY, OF DENVER, COLORADO.

## DEVICE FOR OPENING AND CLOSING CARRIAGE-DOORS.

SPECIFICATION forming part of Letters Patent No. 282,597, dated August 7, 1883.

Application filed April 24, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, HARVEY W. YONLEY, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Devices for Opening and Closing Carriage-Doors, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in the opening and closing of carriage-doors by a system of levers.

The objects of my invention are to provide a means of opening and closing the doors of carriages from the driver's box, thus obviating the dangers arising from the driver leaving his position on the seat, and by so doing impairing his control of the team. These objects I attain by means of the device illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side view of my invention as attached to a carriage; Fig. 2, a top view having the top of carriage and front seat removed; Fig. 3, an inverted view of the carriage-body, showing the manner of attaching my invention to the bottom of carriage. Figs. 4 and 5 are detail views of the lock and strike-plate.

Similar letters refer to similar parts throughout the several views.

A in the drawings refer to a carriage-body; A', to the doors thereof, which are attached to the carriage-body by means of spring-hinges bearing outward, having a tendency to hold the doors wide open when not entirely closed and latched. In the lower edge of the doors are secured short pins *b*, extending downward. To the lower ends of the latter are coupled the long ends of the levers C by means of the draw-bars B. The levers C are pivoted to the bottom of the carriage at *c*. The short ends of the levers C are coupled to the long end of the curved levers D by means of draw-bars *d'*. The curved levers D are pivoted to the bottom of the carriage at *d*. The short ends of the curved levers D are attached by means of draw-bars E to the lower ends of the upright levers F, the latter being hinged to the carriage-body at *f* in Fig. 1. The upper ends of the levers F are coupled by the push-bar *h* to the lower ends of the levers H, which are hinged to the carriage-body at *h'*. The up-

per ends of the levers H are coupled by the curved draw-bars *i* to the foot-levers I, which are hinged to the carriage-body, as shown in Fig. 1.

A bracket, J, is attached under the driver's seat, to which is hinged a hand-lever, K. To the lower end of the latter is attached a push-bar, which extends back to and connects with a lever, N, (see Fig. 2,) which is hinged to the carriage-body at *n*, between the outside and inside casings thereof, as shown in Fig. 2. To the short ends of the levers N are attached rods M, which extend back through the case T and connect with sliding strike-plates O, arranged in the carriage-frame to connect with the bolts of the carriage-door locks. The strike-plates O are made to slide in the frames, as shown in detail in Figs. 4 and 5. The strike-plates O have guide-pins *t* attached thereto, which slide in holes situated in the front part of the case T. On the guide-pins *t* are placed springs P, for the purpose of holding the strike-plates O forward, in order to keep them engaged with the bolts of the locks when the doors are closed.

In Fig. 1 of the annexed drawings the carriage is represented as having the doors closed. In order to open the doors, the driver presses forward the upper end of the hand-levers K, which, through the connections L, force backward the long ends of the lever N, which, through the couplings M, draw forward the strike-plates O, releasing the bolt of the lock, which allows the door to swing open. The doors are closed at will by the driver pressing the foot-levers I forward, which, by their connection *i* with the levers H, draw forward the upper ends of the latter and force backward the lower ends of the same, and, by the couplings *h*, the upper ends of the lever F are forced backward, bringing forward the lower ends of the same, carrying with it the couplings E, which draw forward the short ends of the curved levers D, the long ends of which, carrying the couplings *d'*, draw outward the short ends of the levers C, the long ends of which being attached by the draw-rod B to the pins *b* on the doors A', which draw the doors closed, the latter having spring-locks fastened automatically, as will be seen by reference to the drawings.

That part of my invention designed to open



the carriage-doors is arranged between the outside and the inside casing of the carriage-body, and also the greater portion of the closing device.

5 The carriage-doors may be opened and closed by hand, as in ordinary carriages, from the outside or inside, at pleasure.

Having thus fully described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a device for opening and closing carriage-doors, of the foot-lever I, hinged to the carriage-body, the draw-bars *i*, the levers H, and hinges *h'*, the push-bars *h*, the hinged levers F, the draw-bars E, the curved levers D, the draw-bars B, and pins *b*, substantially as herein shown and described, for the purpose set forth.

20 2. The combination, substantially hereinbefore set forth, of the foot-levers I hinged to the carriage-body, the draw-bars *i*, the levers H, and hinges *h'*, the push-bars *h*, the hinged le-

vers F, the draw-bars E, the curved levers C, the draw-bars B, the pins *b*, securely attached 25 to the carriage-doors, as specified.

3. A device for unlatching carriage-doors, consisting of the hinged hand-lever K, the push-bar L, the lever N, pivoted at *n*, the draw-bar *m*, the strike-plate O, the stationary plate T, the pins *t t*, and the springs P P, as described 30 and specified.

4. The combination, in a device for opening and closing carriage-doors, of the hinged lever K, the push-bar L, the lever N, pivoted at *n*, the draw-bar *m*, the springs P P, the guide-pins *t t*, the stationary plate T, and the strike-plate O, thereby retaining and releasing the carriage-doors, as specified. 35

In testimony whereof I affix my signature in 40 presence of two witnesses.

HARVEY W. YONLEY.

Witnesses:

ALEX. B. MCKINLEY,  
J. N. STEVENS.