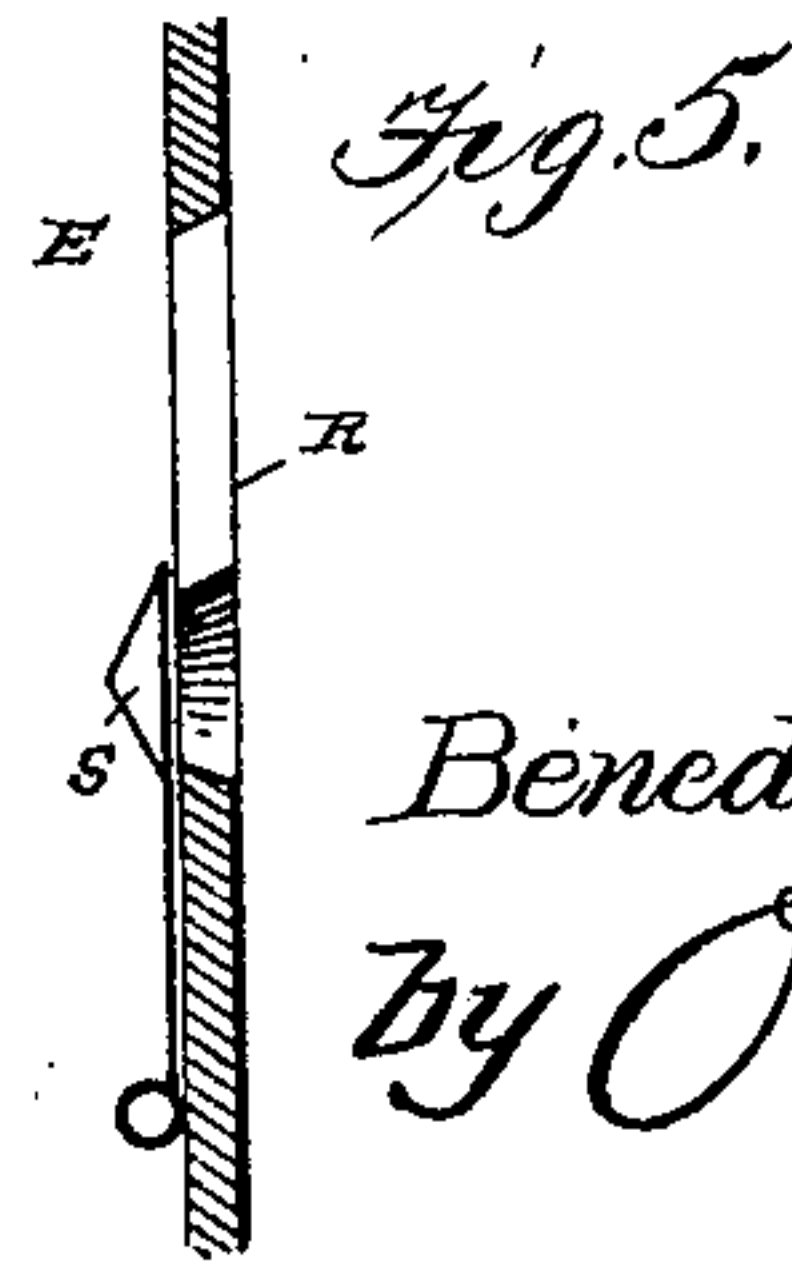
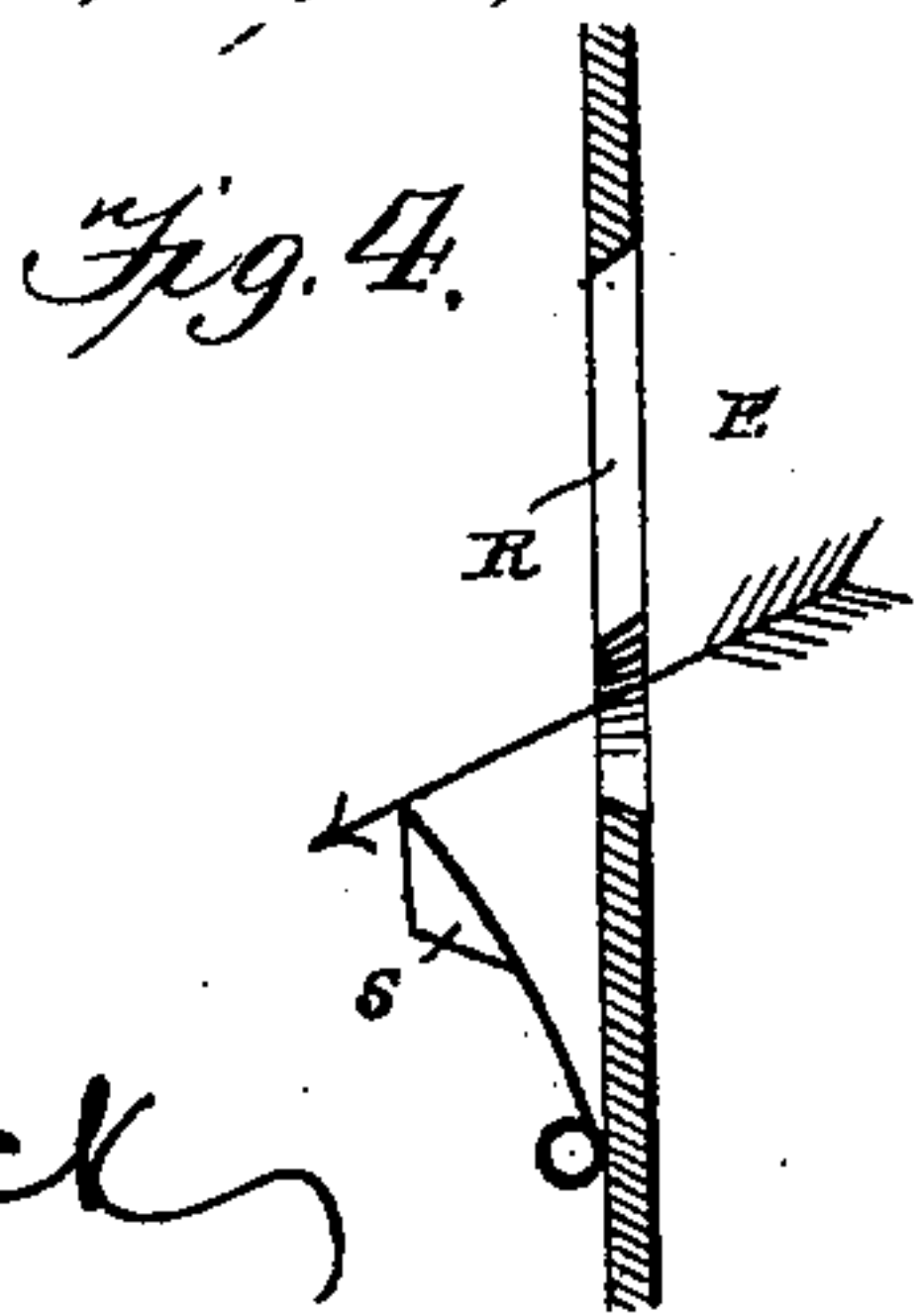
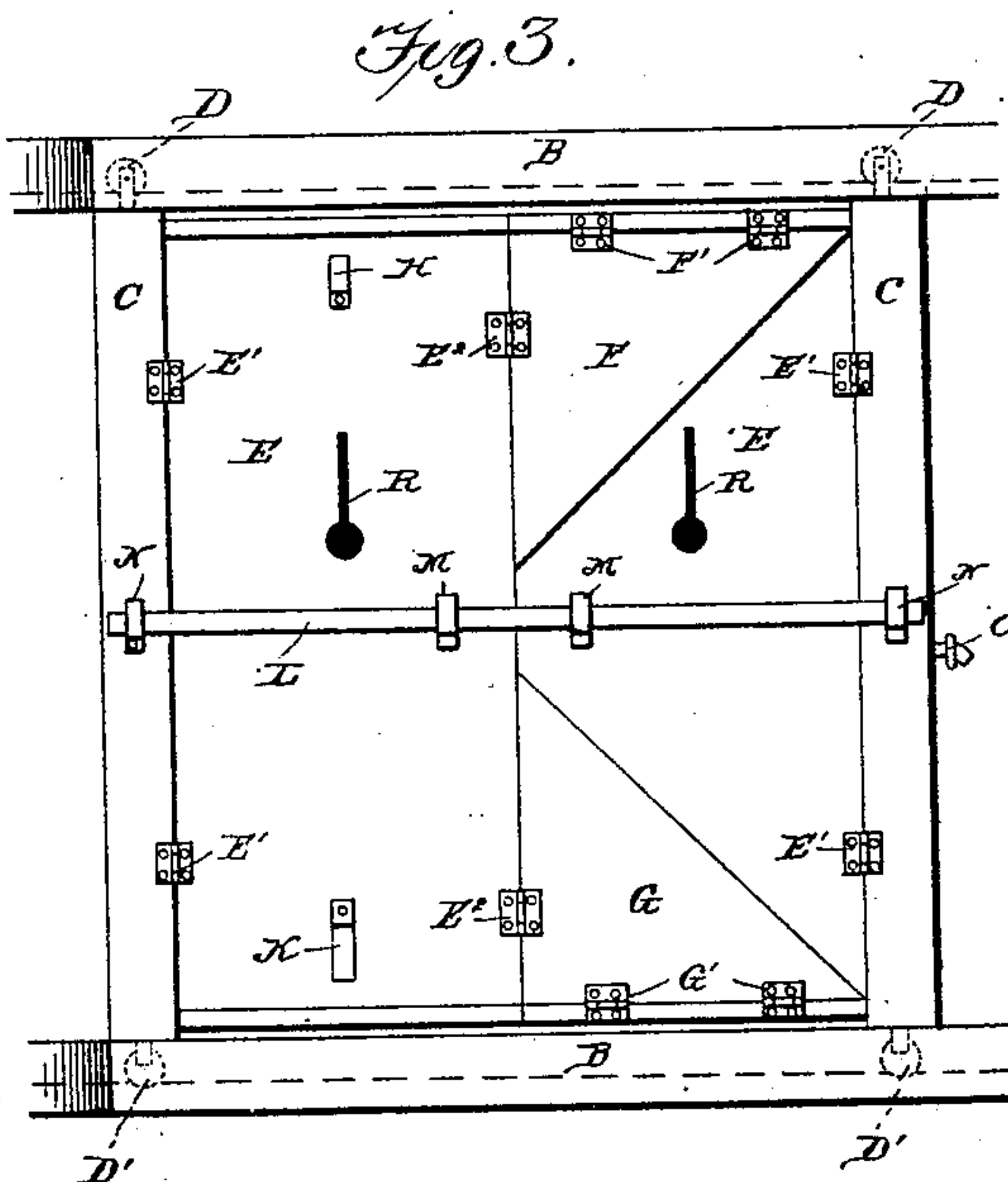
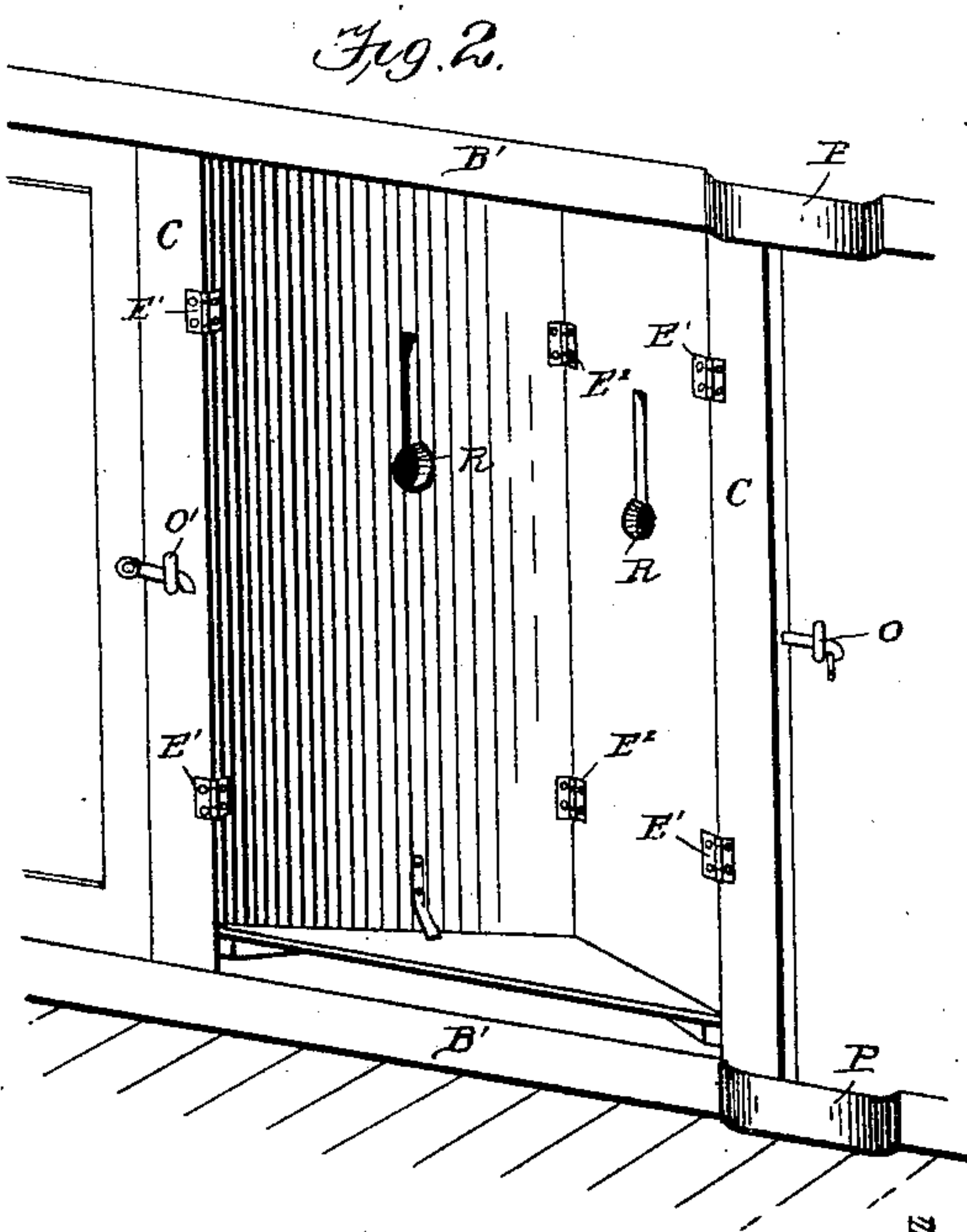
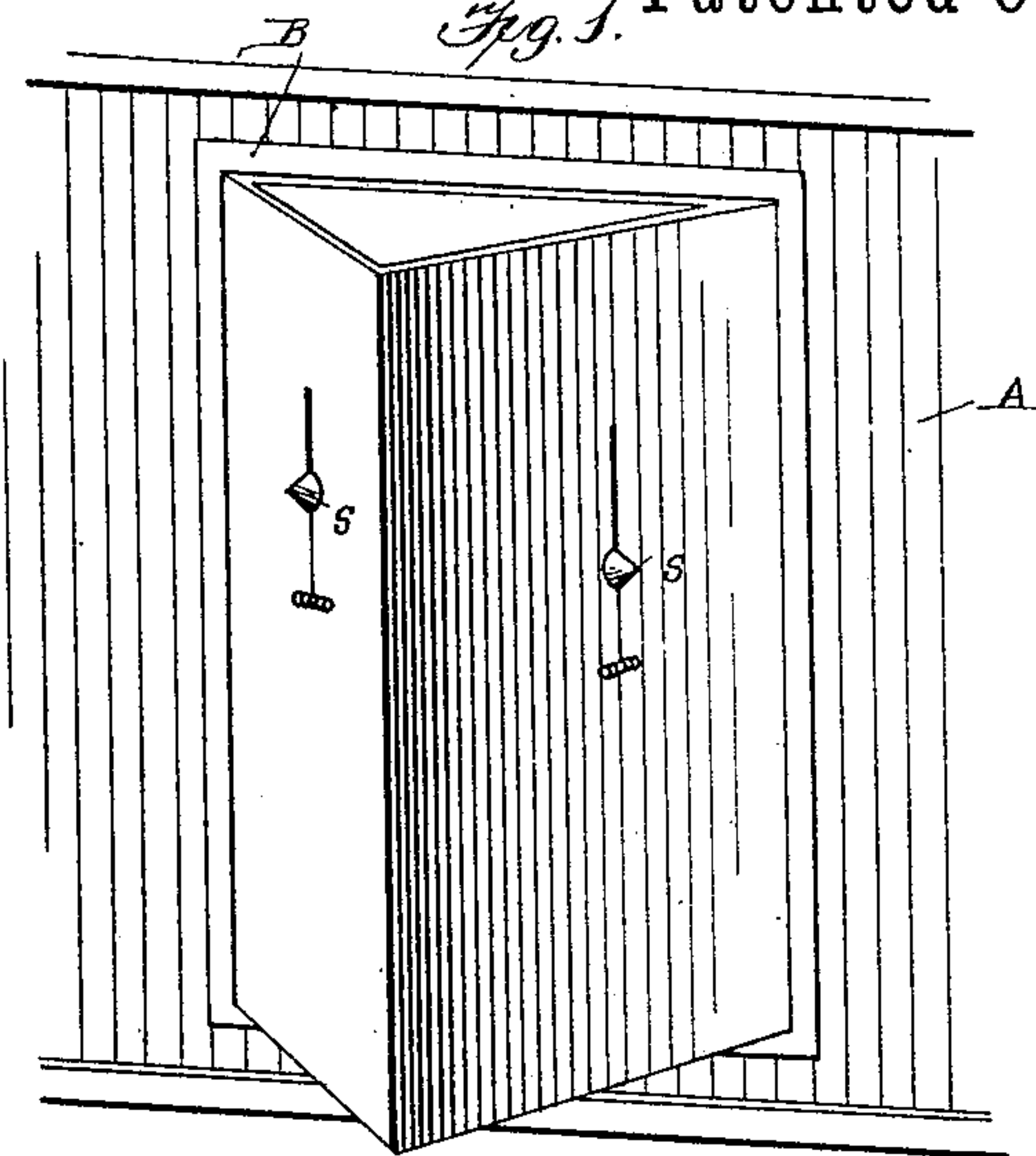


(No Model.)

B. OPPENHEIMER.
EXPRESS CAR PROTECTING DOOR.

No. 592,639.

Patented Oct. 26, 1897.



Witnesses

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UNITED STATES PATENT OFFICE.

BENEDICT OPPENHEIMER, OF TRENTON, TENNESSEE.

EXPRESS-CAR-PROTECTING DOOR.

SPECIFICATION forming part of Letters Patent No. 592,639, dated October 26, 1897.

Application filed December 14, 1894. Serial No. 531,858. (No model.)

To all whom it may concern:

Be it known that I, BENEDICT OPPENHEIMER, residing at Trenton, in the county of Gibson and State of Tennessee, have invented a new and Improved Door for Express-Cars, of which the following is a specification.

This invention relates to improvements in car-doors, and has for its object to provide means whereby the door of an express-car may be projected outwardly in such manner as to permit the express-messengers to project their guns or other arms through loopholes and have a firing-range parallel to the railroad-track as well as transversely thereof. As express-cars are now constructed the messengers therein have no way to fire at the robbers as the latter walk along the sides of the car.

My improved device provides for this deficiency of construction; and it consists, further, in the construction, arrangement, and combination of parts hereinafter fully explained, and pointed out in the claims following.

In the drawings herewith, forming part of this specification, in which like parts are indicated by similar letters of reference, Figure 1 is a perspective view showing my improved car-door arranged in a defensive position. Fig. 2 is an interior view thereof, the door having the same position as exteriorly shown in Fig. 1. Fig. 3 is a side elevation showing the door restored to its ordinary flattened form. Fig. 4 is a vertical section through one of the loopholes, showing the cap or cover for the loophole outwardly projected. Fig. 5 is a similar view showing the port-hole closed.

Referring to the drawings by letter, A is the vertical side of an express-car provided with the ordinary door-casing B, the door sliding upon the inner side of said casing along the wall of the car upon a sliding-way B'.

C represents vertical portions of the door-frame, which are secured between the tracks B' by means of rollers D, upon which said portions C are supported, the lower rollers D' serving to steady and guide the said portions C. I next provide two panels E, constituting the door, one of said panels being secured to one of the vertical portions C by means of hinges E', the other portion being similarly secured to the opposite portion C, and the two

panels being secured together by means of hinges E². To one of the panels E, at the top thereof, I secure a triangular portion F by means of hinges F', and to the bottom of the same portion I secure another triangular portion G by means of hinges G'. The said portion F is adapted to be raised and form a cover to close the top when the doors are distended, as shown in Fig. 1, a spring-catch H being provided upon the opposite panel to support the lower end of said triangular portion F when it is raised. The triangular portion G is adapted to be lowered and secured beneath a spring-catch K upon the opposite panel, so as to form a bottom portion when the doors are distended. I next provide a fastening-bar L, which is intended for use only when the door is in its ordinary form and closed, as shown in Fig. 3, the said bar being projected across the portion C and panels E, resting in keepers M and N. I also provide latches O and O', by which the door may be secured in both its distended and ordinary positions, as shown. The door-track B' is provided with two curvatures P in line with each other, so that the portion C at that point may in sliding be enabled to pass the projected catch portion O or the staples with which said catch engages.

Within each of the panels E, I provide suitable loopholes R, preferably of the form shown, said loopholes being protected exteriorly by means of spring-covers or conical caps S, secured resiliently in a closed position, so that they can be readily pushed aside by the muzzle of a gun or revolver. Any suitable number of such loopholes may be provided.

The operation of my improved door is exceedingly simple. When a train is attacked by robbers, an alarm located in the express-car is sounded by electrical means in connection with the cab of the engine, upon which the bar L is removed and the door pushed outwardly until it assumes the form shown in Fig. 1. The portions F and G are then raised and lowered, respectively, until secured within the catches H and K, upon which the messengers take their places within the angle formed by the panels E and proceed to fire through the loopholes R, the said panels being then in a position to afford range both out-

wardly and parallel with the tracks and toward the rear as well as the front of the train. The curvatures P and the tracks B' may be omitted, if desired, and other adequate means
 5 for fastening the door against sliding may be utilized. It is not intended that the door shall ever be used in its outwardly-projected form unless in the event of attempted robbery. Otherwise it is in the form of the ordi-
 10 nary express-car door, except that the horizontal portions of the door-casing are removed in order to allow the door to assume the form shown in Fig. 1.

I do not prescribe any particular material
 15 from which to construct my improved doors. It is apparent, however, that they should be strengthened in some suitable manner, preferably by an inner sheet-steel lining, so that they will not be subject to puncture by the
 20 bullets fired by the robbers.

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

1. The combination with an express-car, of
 25 a sliding door, said door being divided centrally and vertically and the divided portions hinged to each other and each to the vertical sliding frame and other portions hinged to one of said panels in such manner as to form
 30 a bottom and top covering when the panels are centrally pushed outwardly, substantially as herein shown and set forth.

2. The combination with an express or other car, of a lateral door therefor, consisting of
 35 side portions sliding in vertical positions upon upper and lower tracks by means of rollers, panels constituting the door hinged at their edges to said vertical portions and also hinged at their meeting edges, two diagonal portions
 40 hinged to the upper and lower edges of one of said panels adapted to be raised and lowered so as to form closing portions when said panels are pushed outwardly, a bar adapted to be held within keepers secured upon said
 45 vertical portion and upon the panels to main-

tain the latter in the form of a flat door, said panels being also provided with a number of suitably-formed loopholes with exterior spring-covers therefor, all substantially as
 50 herein shown and set forth.

3. The combination in a sliding car-door, of two vertical panels hinged respectively to supporting vertical portions and hinged to each other at their meeting edges, tracks and rollers in connection with the lateral portion of the
 55 car whereby said door may be operated in its sliding movement, triangular portions hinged to the top and bottom of one of said panels adapted when said panels are pushed outwardly to form upper and lower closing por-
 60 tions for the top and bottom, spring-catches upon one of said panels adapted to engage with and maintain said triangular portions when lifted and lowered respectively, a bar projected transversely across the inner sur-
 65 face of said panels and held within keepers secured to said vertical portions and other keepers secured upon said panels, and catches for securing said door in its ordinary flattened position, the whole constructed, arranged and
 70 adapted for operation substantially as herein shown and described.

4. An improved car-door consisting of a flat sliding door having vertical supports secured to rollers mounted upon track-panels hinged
 75 to said upright portions and to each other at their meeting edges, triangular portions hinged at the top and bottom of said panels adapted to be folded upwardly and downwardly respectively and form closing portions
 80 when said panels at their meeting edges are pushed outwardly, spring-caps covering loopholes formed in said panels, and a fastening-bar whereby the panels of the door are maintained in their ordinary flattened position, all
 85 substantially as herein shown and set forth.

BENEDICT OPPENHEIMER.

Witnesses:

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