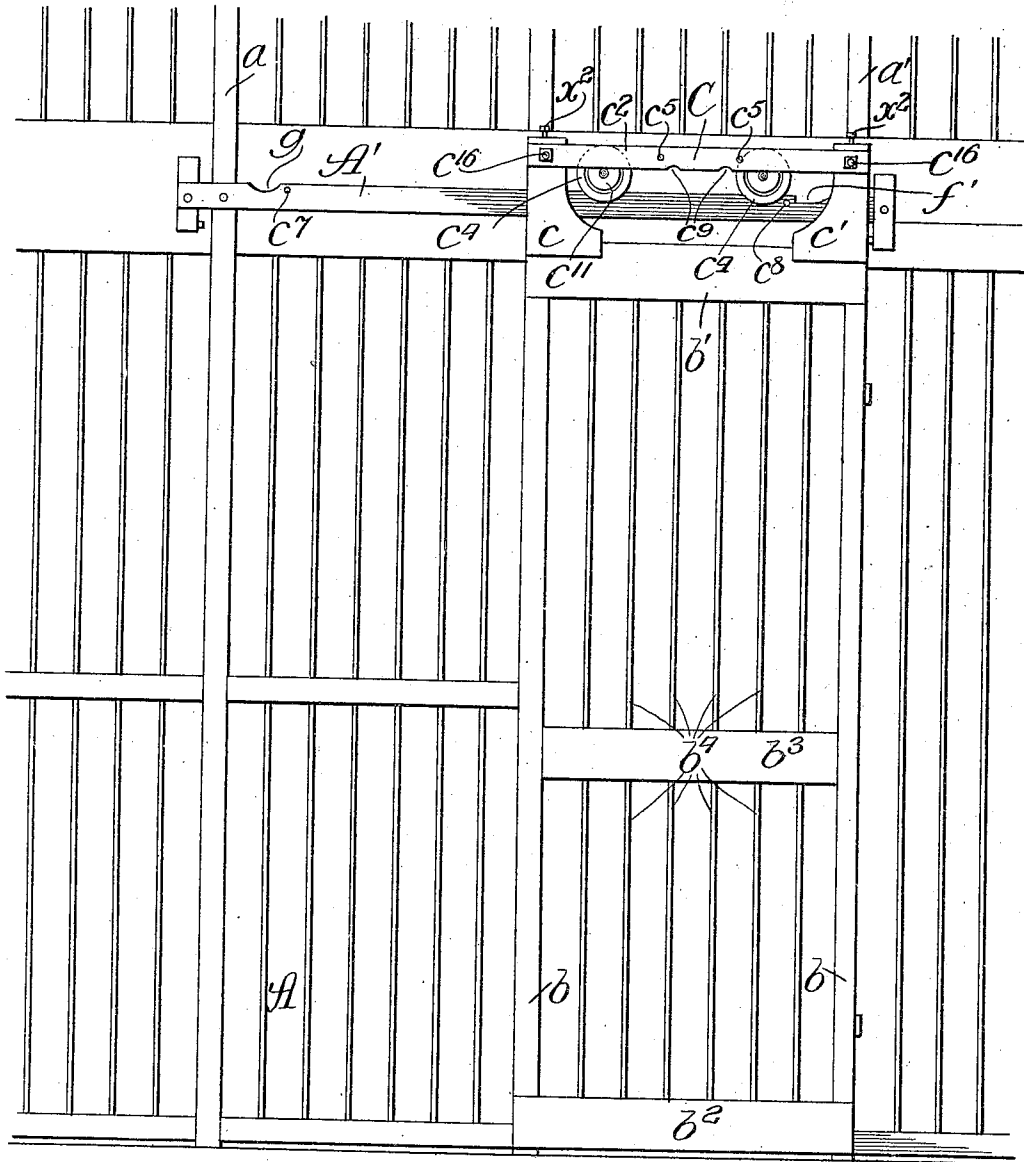


DOOR HANGER.

938,823.

2 SHEETS.—SHEET 1.

Fig. 1.



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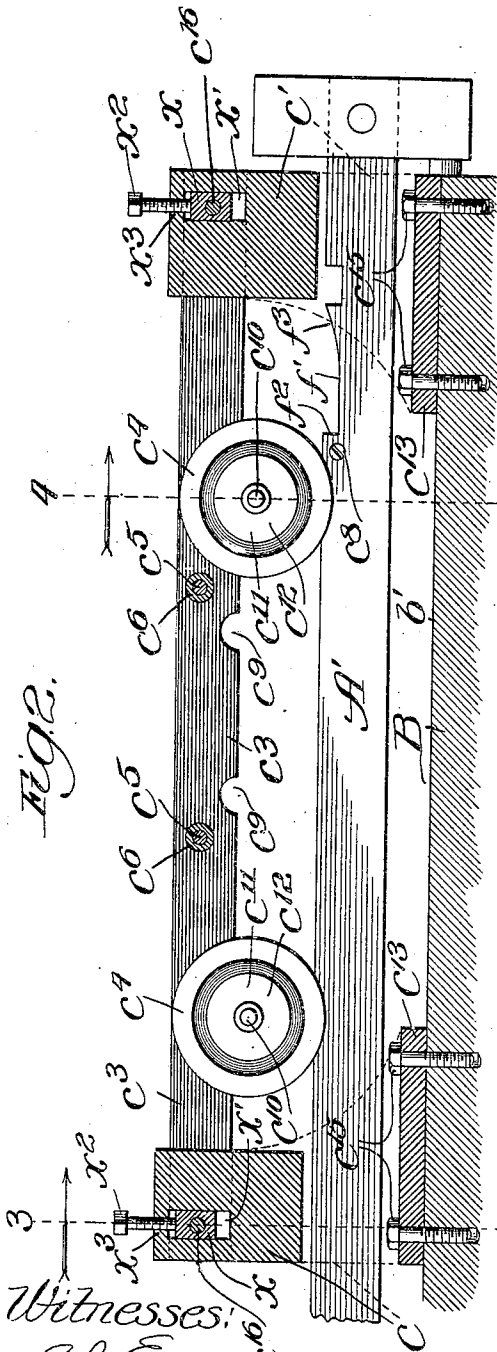
DOOR HANGER.

APPLICATION FILED MAR. 18, 1908.

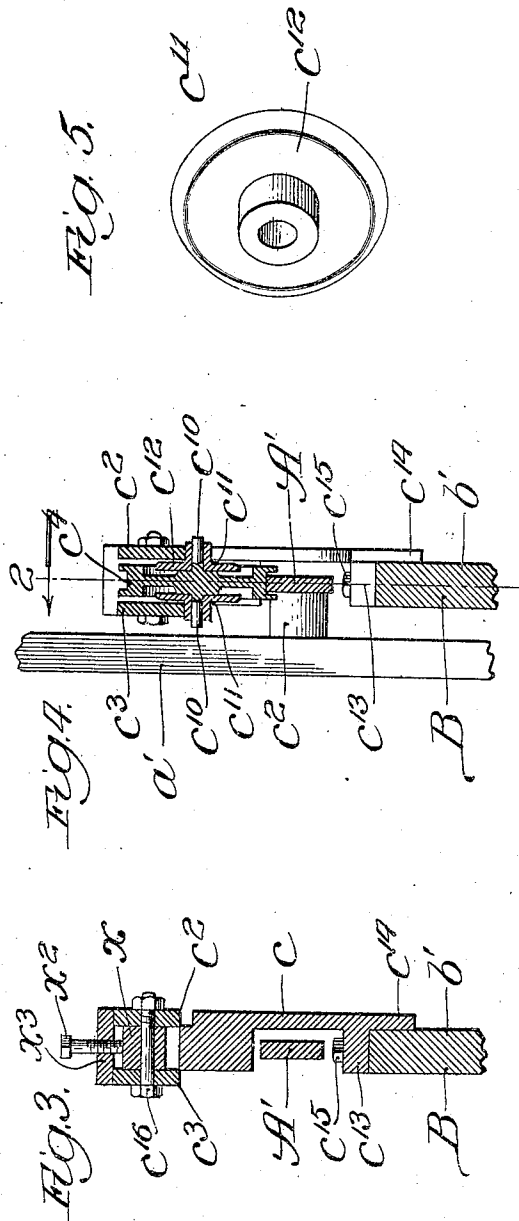
938,823.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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DOOR-HANGER.

938,823.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed March 18, 1908. Serial No. 421,951.

To all whom it may concern:

Be it known that I, GEORGE T. BUDDLE, 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 Door-Hangers, of which the following is a specification.

My invention pertains particularly to improved means for hanging elevator doors. However, certain features of the invention are also applicable to doors for other purposes.

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

Figure 1 is a broken view in inner elevation of the open frame or wall of an elevator shaft and the door combined therewith in accordance with my invention; Fig. 2, a broken vertical section taken as indicated at line 2, Fig. 4, and showing the relation of the upper part of the door, the track and the hanger through the medium of which the door is supported on the track; Figs. 3 and 4, vertical sectional views taken respectively at the lines 3 and 4, Fig. 2; and Fig. 5 is a perspective view of one of the removable hub-sections or bushings with which the door-supporting wheels are equipped.

In the construction illustrated, A represents the open framework or skeleton-wall of an elevator-shaft; A¹, a horizontal track carried thereby; B, an elevator-door, and C a hanger for the door.

The walls of the elevator-shaft A may be of any approved construction. In that illustrated, the framework has, as a part thereof, upright posts *a*, *a*¹, which carry laterally or inwardly projecting bosses *a*² which support the track A¹.

The door B may be of any approved construction. As shown, it comprises vertical marginal posts *b*; a top cross-bar *b*¹; a bottom cross-bar *b*²; an intermediate cross-bar *b*³, and vertical rods *b*⁴ joining said cross-bars.

The hanger C is preferably of the form shown, comprising hanger-arms or brackets *c*, *c*¹; a pair of rider-bars *c*², *c*³, secured to the upper portions of said brackets on opposite sides thereof, so as to lie on opposite sides of the plane of the track A¹, and peripherally-grooved wheels *c*⁴ mounted on the track A¹ and having trunnions *c*¹⁰ which in-

directly support the bars *c*², *c*³ of the hanger. The bars *c*², *c*³, are connected intermediately by studs *c*⁵ equipped with sleeves or rollers *c*⁶. These roller-equipped studs serve to stiffen and tie the bars together in spaced relation. The track A¹ is equipped with screws or projections *c*⁷, *c*⁸, in the paths of the wheels, serving to limit the movement of the wheels in their extreme movements. The bars *c*², *c*³, are provided at their lower edges, between the studs *c*⁵, with recesses *c*⁹ adapted to accommodate the trunnions of the wheels in the operation of hanging the door, or when it is desired to remove the wheels for the purpose of renewing the trunnions or bushings of the wheels. Each wheel *c*⁴ has trunnions *c*¹⁰ projecting from both sides, and upon said trunnions are journaled hub-sections or bushings *c*¹¹ having flanges *c*¹² which flank the sides of the wheel and lie adjacent to the inner surfaces of the bars *c*², *c*³. Each of the hanger-brackets *c*, *c*¹, has an enlarged upper end-portion notched on its opposite sides to receive the bars *c*², *c*³, and has an inwardly offset lower portion behind which the track A¹ lies. Near the lower end of the offset portions of the bracket is a lateral flange *c*¹³ adapted to lie above the edge of the top cross-bar *b*¹ of the door, and the lower end of the bracket affords a flange *c*¹⁴ which embraces the inner surface of the bar *b*¹. The flange *c*¹³ is connected with the upper edge of the door by screws *c*¹⁵ which support the door. The bars *c*², *c*³ are connected by bolts *c*¹⁶ with blocks *x* which are vertically movable in slots *x*¹ in the upper portions of the bracket-arms *c*, *c*¹; the blocks *x* being adjustable by means of screws *x*² which are secured through the walls *x*³ above said slots and bear upon the upper edges of the blocks. When the screws are turned down, the bracket-arms *c*, *c*¹, are elevated with relation to the bars *c*², *c*³, thereby elevating the door. The upper edge of the rail is provided with a recess *f*¹ preferably with an abrupt shoulder *f*² and a curved surface *f*³.

The bushings *c*¹¹ are preferably made of softer material than are the peripheries of the wheels, and the track and bars which are engaged respectively by the wheel-peripheries and by the bushings, so that the principal wear will come upon said bushings. When necessary, the door may be blocked up, the studs *c*⁵ may be removed, and

the wheels may be taken out by bringing their trunnions to a position corresponding with the recesses c^0 in the lower edges of the bars c^2 , c^3 .

- 5 The operation will be readily understood: The door may be moved upon its track in the usual way, the wheels traveling on the rail A^1 and the trunnions moving relatively to the bars c^2 , c^3 of the door. In case of
10 any tendency to bind, the trunnions c^{10} will turn within the bushing c^{11} ; and, when necessary, the trunnions will slide with relation to the bars c^2 , c^3 , while the wheels are traveling on the rail A^1 .
- 15 Near one end of the rail A^1 , and beyond or outside the screw c^7 , is a recess g in the upper edge of said rail. When the screw c^7 is removed, the adjacent wheel may be removed by bringing it to the location of
20 the recess g . In like manner, the other wheel may be removed by first removing the screw c^8 and utilizing the recess f^1 to accommodate the wheel in the operation of removal.
- 25 In the event of sagging of the door, the set-screw e^2 may be turned in farther to elevate the door.

The foregoing detailed description has been given for clearness of understanding
30 only, and no undue limitation is to be understood therefrom.

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

- 35 1. The combination of a frame provided with a track, wheels mounted on said track and provided with projecting trunnions, removable bushings on said trunnions, a door equipped with hangers, and rider-bars carried by said hangers bearing on said bush-
40 ings.
2. The combination with the framework of an elevator shaft equipped with a rail, of a door, a pair of hanger-brackets connected with said door and equipped with rider-
45 bars provided at their lower edges with recesses, and wheels mounted on said rail and having trunnions supporting said rider-bars

between said recesses and the ends of said bars.

3. The combination with the framework 50 of an elevator shaft, of a rail carried thereby, wheels mounted on said rail, a door provided with hangers and having rider-bars adjustably secured at their ends to said hangers, said bars lying on opposite sides 55 of the rail, and a recess in said rail to permit removal of a wheel.

4. The combination with a frame-work of an elevator shaft, of a rail carried thereby and provided on its upper edge with recesses, removable screws carried by said rail adjacent the recesses and projecting from 60 the rail, a door, a pair of hanger-brackets, wheels mounted on said rail and equipped with trunnions, and rider-bars connecting 65 the upper end-portions of said brackets and supported on said trunnions.

5. The combination with the frame-work of an elevator-shaft, of a rail carried thereby, a door, a pair of hanger-brackets slotted 70 transversely of their upper extensions, wheels mounted on said track and equipped with trunnions, blocks adjustably confined within said slots, rider-bars attached to said blocks and supported on the trunnions of 75 said wheels, and screws for adjusting said blocks, for the purpose set forth.

6. The combination with the frame-work of an elevator-shaft, of a rail carried thereby, a door, a pair of hanger-brackets, wheels 80 mounted on said track and equipped with trunnions, removable bushings on said trunnions, rider-bars adjustably secured to said brackets, adapted to ride on said bushings and provided with a recess in their lower 85 edges between said wheels, and removable studs at opposite sides of said recess surrounded by sleeves and adapted to hold said track-bars in spaced relation, for the purpose set forth.

GEORGE T. BUDDLE.

In presence of—

L. HEISLAR,
R. SCHAEFER.