

No. 615,674.

Patented Dec. 13, 1898.

R. B. BROWNE.
DOOR HANGER.

(Application filed Feb. 23, 1898.)

(No Model.)

Fig: 1.

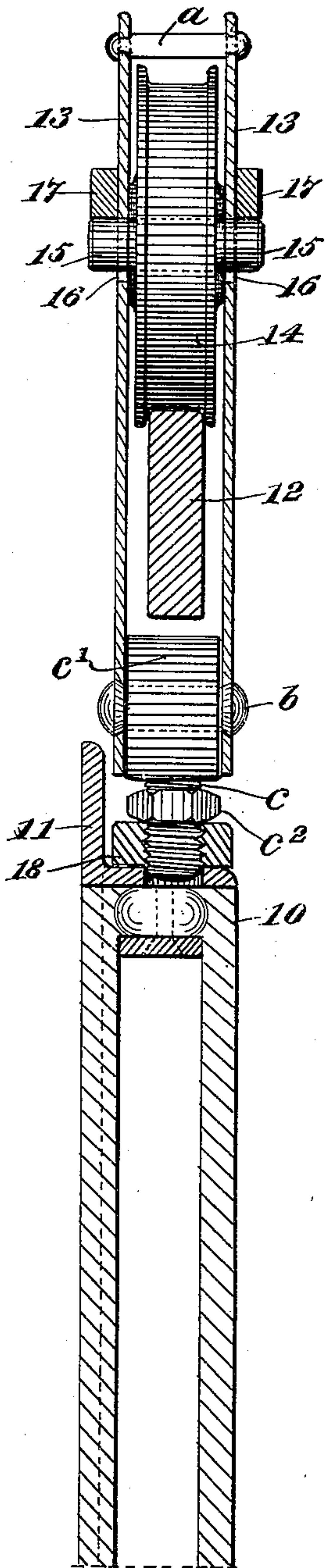
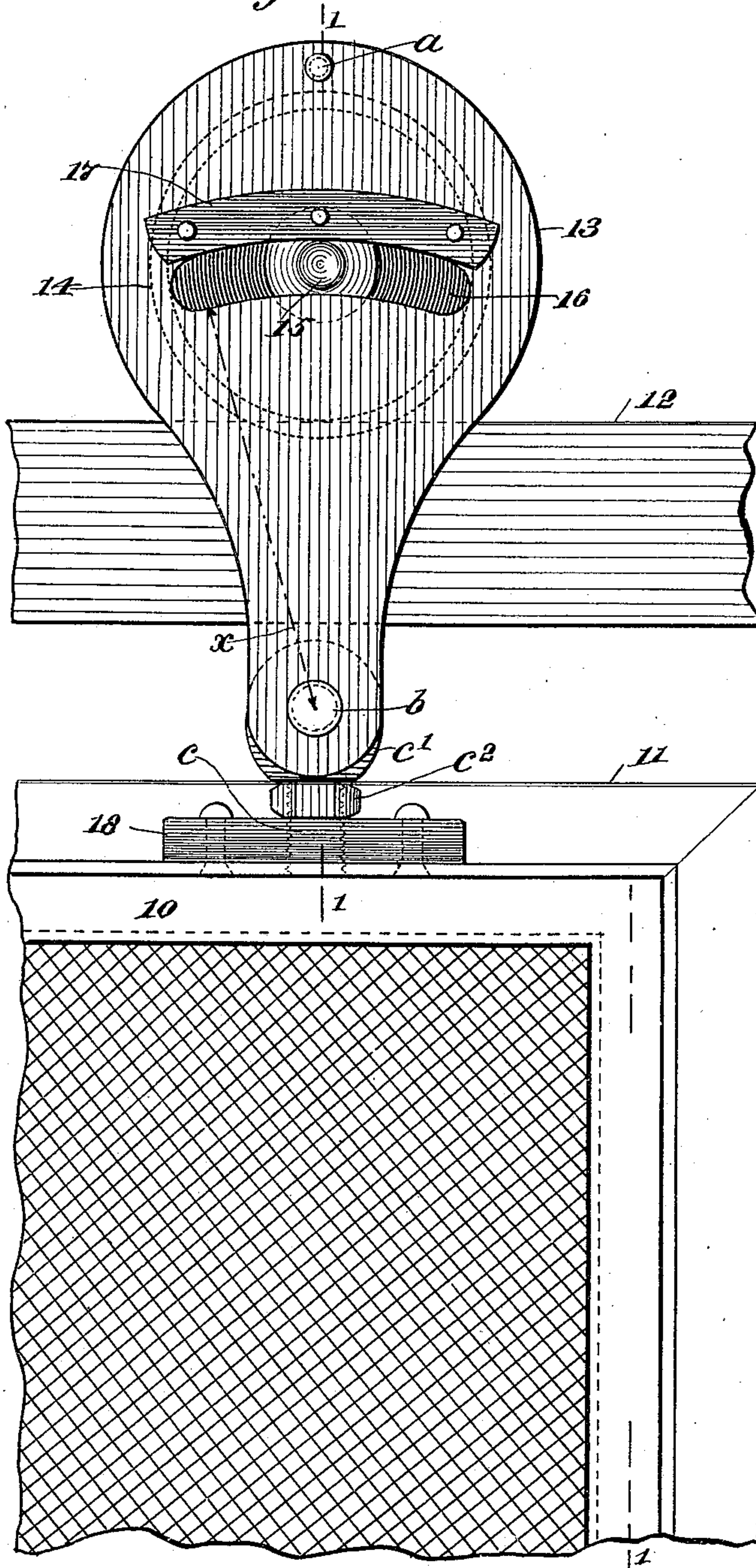


Fig: 2.



WITNESSES:

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DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 615,674, dated December 13, 1898.

Application filed February 23, 1898. Serial No. 671,376. (No model.)

To all whom it may concern:

Be it known that I, RICHARD BEASLEY BROWNE, of the city of New York, (Flatbush, borough of Brooklyn,) in the county of Kings and State of New York, have invented new and useful Improvements in Antifriction Self-Leveling Door-Hangers, of which the following is a full, clear, and exact description.

This invention is an improvement in means for suspending a door from a track-rail or the like, so as to permit the door to be readily moved along the track-rail to open or close the opening guarded by the door.

The object of my invention is to provide an antifriction self-leveling door-hanger having novel details of construction which adapt the device for highly efficient service and permit its manufacture at moderate cost.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both figures.

Figure 1 is a transverse sectional elevation of the improvement applied to a door, shown in part, the section being taken substantially on the line 1 1 in Fig. 2; and Fig. 2 is a side elevation of the same.

The improvement may be used for hanging any door, but is especially adapted for the hanging of an elevator-door, so as to facilitate its free reciprocation on a track-rail, and is herein shown as so applied.

In the drawings, 10 represents an elevator-door formed of metal and having an angle-iron border-frame 11. At a proper distance above the aperture guarded by the door a horizontally-disposed track-rail 12 is stably supported and is thus adapted to sustain the weight of the door, said track-rail being ordinarily a fixture on the side of the elevator-shaft.

The improved hanger is provided in sufficient number for the effective support of the door 10 and essentially comprises the following details: Two metal side plates 13 are held spaced apart by a shouldered rivet *a*, inserted near the upper ends of said plates 13, and a pivot-bolt *b*, secured in perforations near the lower ends of said plates, a flattened head

c' on an eyebolt *c* being introduced between the side plates and held in place by the pivot-bolt *b*, so that the pivot-bolt may rock in the eyebolt. A peripherally-grooved sheave-wheel 14 is provided having opposite journals 15 projected therefrom, and said journals loosely occupy the radial center of two curved transverse slots 16, oppositely formed in the plates 13 and defined in curvature by a radius *x*, which extends from the axis of the pivot-bolt *b*, as indicated in Fig. 2. Directly above the upper edge of each curved slot 16 a similarly-curved track-rib 17 is affixed, or said track-ribs may be formed integrally with the plates 13. The position of the track-ribs 17 adapts them to afford widened bearings whereon the journals 15 will impinge when the complete hanger is in service. Sufficient space is afforded between the lower edge of the sheave 14 and the head *c'* of the eyebolt *c* to permit the hanger to be strung upon the track-rail 12 before the latter is affixed in place. At a suitable point on the angle-iron border-frame 11 a nut-block 18 is secured by rivets or other means, said block having a threaded aperture therein to receive the threaded body of the eyebolt *c*, which when screwed into said aperture may be secured by a jam-nut *c*², that is first screwed upon the bolt-body, so as to locate it above the nut-block.

Assuming that a suitable number of the improved hangers have been attached upon the upper edge of the door 10, so that it will hang pendent at an opening in the elevator-shaft, it will be seen that the weight of the door will cause the journals of the sheave 14 to assume a position in the same vertical plane with the center of the pivot-bolt *b*, whereon the head of the eyebolt *c* is held to rock.

In service the weight of the door 10 when it is pushed to open it will cause the journal-supports of the sheave 12 to roll on the track-ribs 17, and this movement will be nearly frictionless, as the journals will always be equally distant from the center of rocking motion had by the hanger-sheave, and when at rest the hangers of the door will all assume their normal position, as shown in Fig. 2, the weight of the door then drawing the journals of the sheaves 14 to the highest point on the lower sides of the curved track-ribs 17, so that the axes of the journals 15 and center

of the pivot-bolts *b* will again be located in the same vertical plane.

Having thus described my invention, I claim as new and desire to secure by Letters

5 Patent—

1. An antifriction self-leveling door-hanger, comprising two spaced oppositely-slotted side plates, the slots in said plates being arcs of like circles, a journaled sheave, the journals
10 of which project loosely into the slots, and an eyebolt whereon the lower ends of the side plates are pivoted said eyebolt being adapted for attachment upon a door to hold it pendent, substantially as described.

15 2. An antifriction self-leveling door-hanger, comprising side plates spaced apart in parallel planes by a pivot-bolt near the lower ends of said plates and a spacing device near the upper ends thereof, the side plates hav-
20 ing opposite curved slots of which the pivot-bolt is a radial center, an eyebolt whereon the lower ends of the side plates are pivoted, a journaled sheave the journals of which extend loosely within the curved slots of the
25 side plates, and means for hanging a door from the eyebolt, substantially as described.

3. An antifriction self-leveling door-hanger, comprising two side plates held in parallel
30 ends, and by a pivot-bolt near the lower ends of said plates, an eyebolt hung on the pivot-

bolt and thereby connected to the side plates, said plates each having an upwardly-curved transverse slot of which the pivot-bolt is the radial center, a grooved sheave the journals 35 of which loosely engage in the curved slots of the side plates, a lateral track-rib on each side plate having a concave lower side whereon a journal of the sheave may travel, and means for hanging a door from the eyebolt, 40 substantially as described.

4. The combination with an elevator-door, and a horizontal track-rail fixed above said door, of an antifriction-hanger for the door, comprising two side plates that are oppositely 45 slotted, said slots being arcs of like circles, means to space the side plates apart in parallel planes, a grooved sheave the journals of which project loosely into the curved slots of the side plates and have contact with edges 50 of said slots, an eyebolt between the lower ends of the side plates which are pivoted thereto the pivot of the eyebolt being the radial center of the curved slots, and means for hanging the door from the eyebolt while 55 the sheave is seated upon the track-rail so as to suspend the door therefrom, substantially as described.

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Witnesses:

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