

(No Model.)

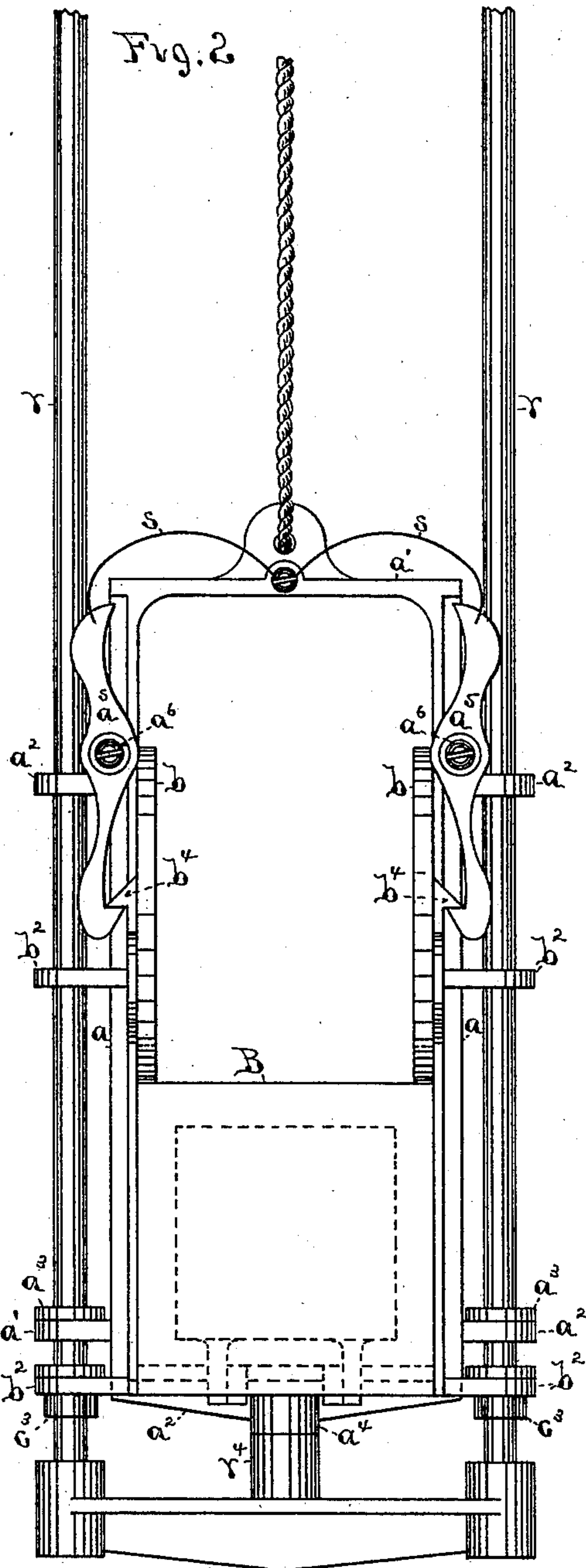
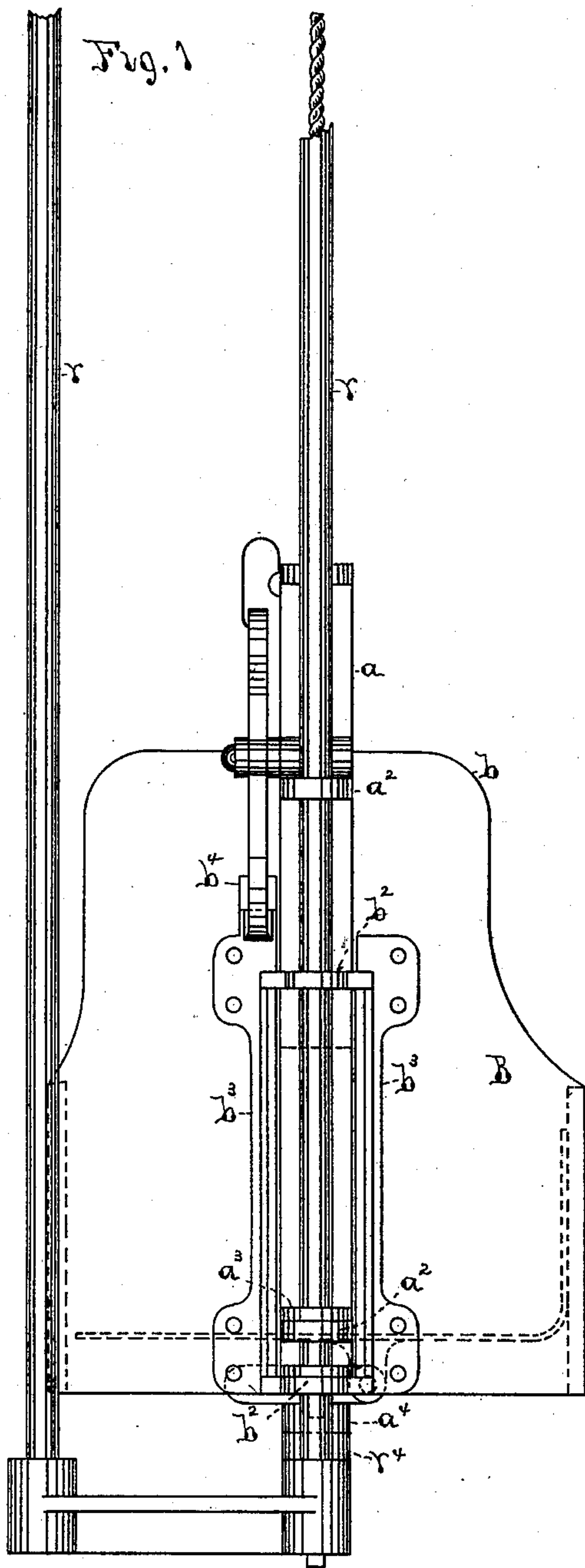
3 Sheets—Sheet 1.

F. POPE.

ELEVATOR FOR CASH CARRYING APPARATUS.

No. 361,371.

Patented Apr. 19, 1887.



Witnesses

Wm. S. Brown

A. P. Ockington

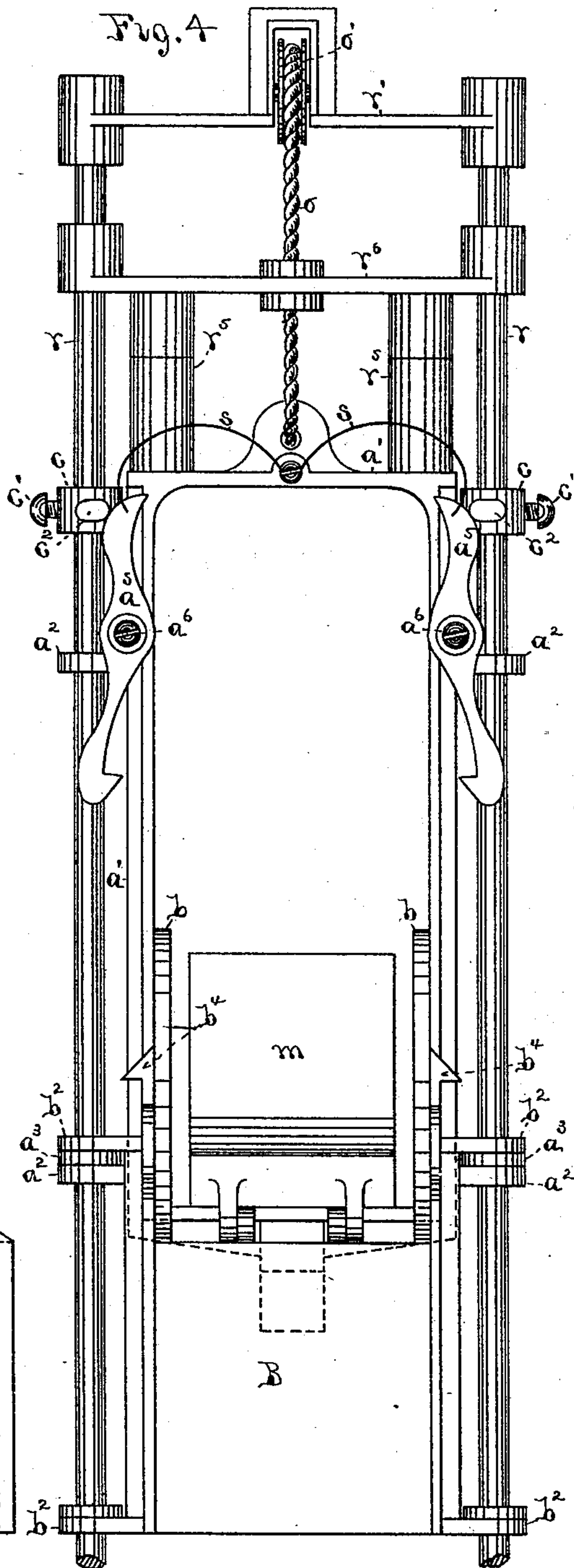
Inventor

Frederic Pope

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Frederic Pope

(No Model.)

3 Sheets—Sheet 3.

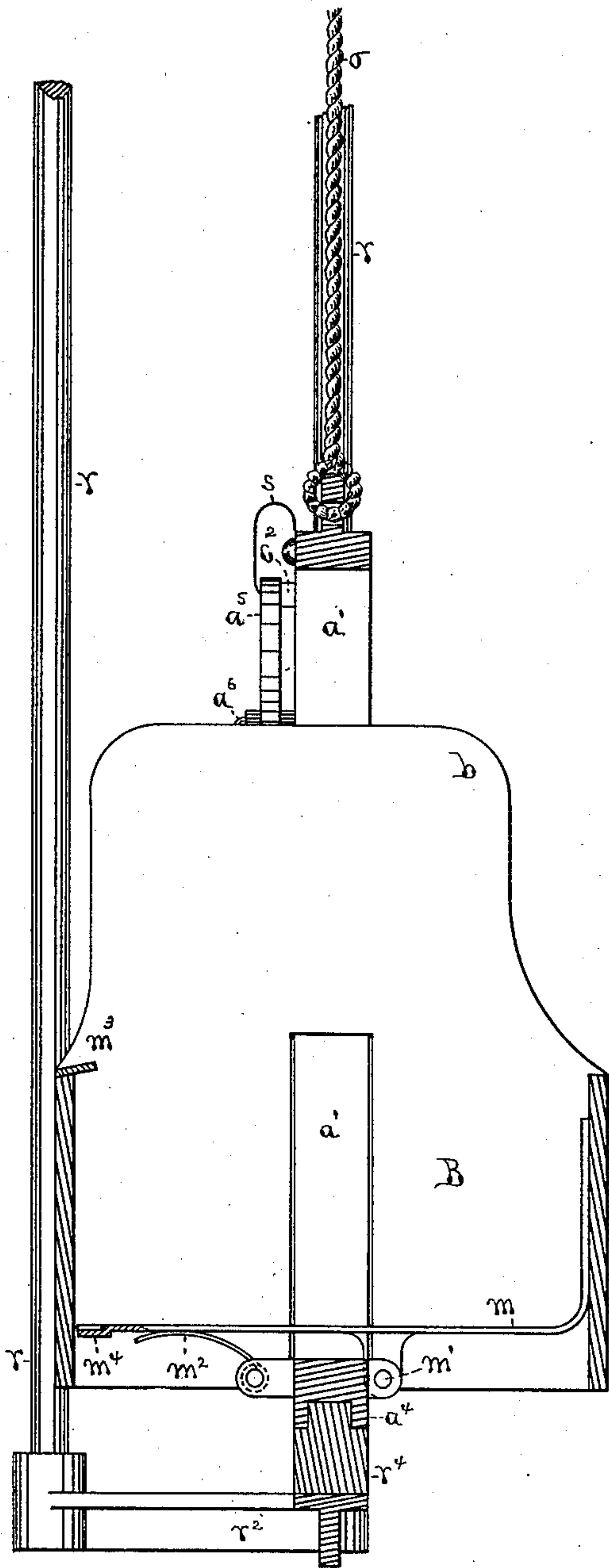
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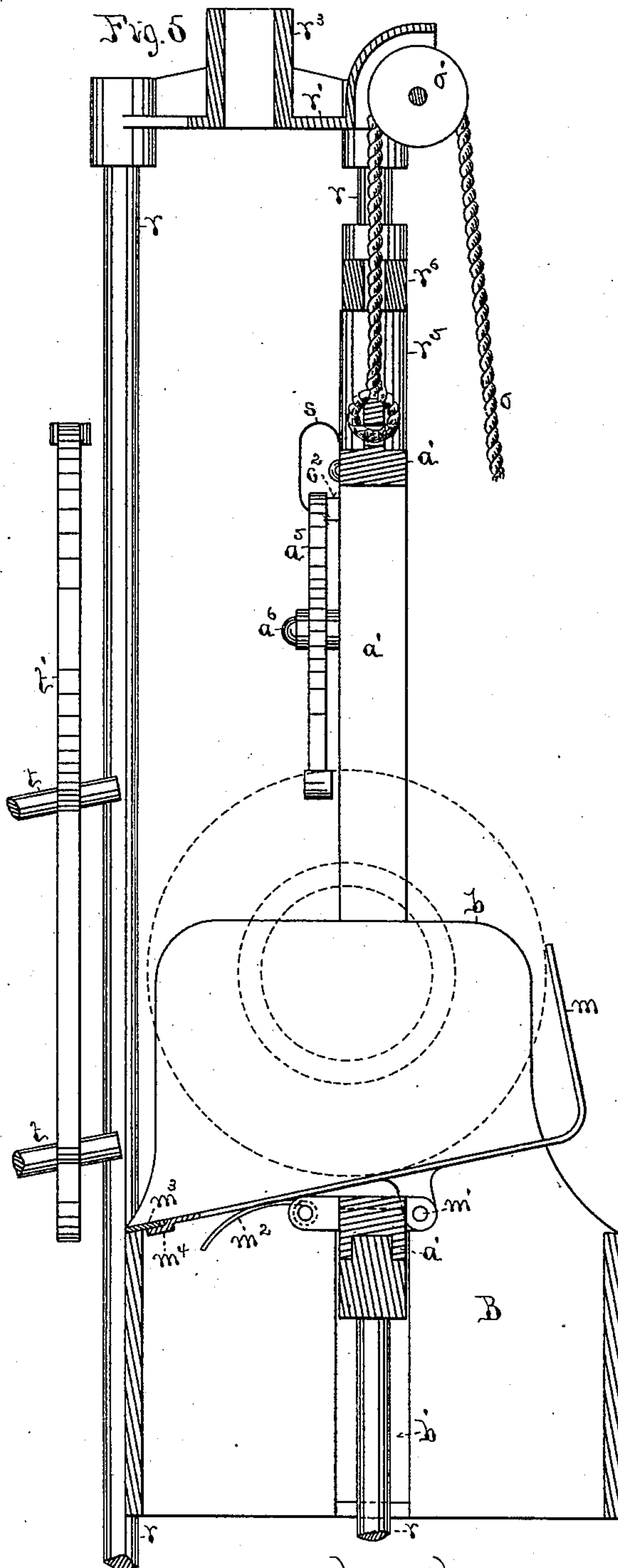
Fig. 6



Witnesses

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Fig. 5



Inventor

Frederic Pope

UNITED STATES PATENT OFFICE.

FREDERIC POPE, OF BOSTON, MASSACHUSETTS.

ELEVATOR FOR CASH-CARRYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 361,371, dated April 19, 1887.

Application filed January 17, 1887. Serial No. 224,532. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC POPE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Cash-Carrying Apparatus, of which the following is a specification.

My improvement relates to cash-carrying apparatus; and it consists in certain new and useful constructions and combinations of the several parts of the same, substantially as hereinafter described and claimed.

The particular form of cash-carrying apparatus to which my invention is shown as applicable is that of the Letters Patent of David Hall Rice, of May 19, 1885, No. 318,139, and other patents granted to him.

In the drawings, Figure 1 is a side elevation of the lower part of an elevator with its car for raising the carriers to the level of the track and delivering them thereon. Fig. 2 is a rear end elevation of the same. Fig. 3 is a side elevation of the upper part of the elevator shown in Fig. 1, with the track and the car in the act of delivering the carrier thereto. Fig. 4 is a rear end elevation of Fig. 3. Fig. 5 is a vertical section through Fig. 3 in the direction of the length of the track. Fig. 6 is the same as Fig. 5, except that it shows the position of the carrier and parts of the elevator-car before reaching the level of the track.

The track-rails t are supported on hangers t' in the usual manner. Four upright rods, r , are held together at the top and bottom by plates r' , having sockets at the corners of a rectangle to receive the rods, as shown. The plate r' has a sleeve or socket, r^3 , at its center to receive a suspension-rod, by which it is to be supported from the ceiling opposite the track-rails t . A frame composed of side strips, a , and top and bottom strips, a' , is connected to two of the rods r by ears a^2 on each side, fitted to slide up and down on the rods. On the bottom strip a' is mounted a platform, m , upon a transverse pivot, m' , and a spring, m^2 , attached to the same bottom strip or to a block screwed thereon, holds this platform normally in a horizontal position. To the top strip a' is attached, by an eye formed thereon, the cord o , which passes over the pulley o' , fixed in the top plate, r' , and thence

downward within reach of the operator. On top of the lower pair of ears, a^2 , are placed elastic washers a^3 . An elastic buffer, a^4 , is attached to the bottom strip of this frame and strikes against one, r^4 , attached to lower plate, r^2 . Two elastic buffers, r^5 , are attached to the lower side of an adjustable cross-girt, r^6 , attached to the two upright rods r , on which the frame slides, for the top strip a' of the frame to strike against when it is raised to the proper height to deliver the carrier upon the track.

A box or casing, B, consisting of side and end pieces attached together to inclose a rectangle, is placed inside of the frame - pieces a , around the platform m . The sides b of this box are considerably higher than its ends, as shown, and in each of these sides is cut through the same, upward from its bottom edge, a slot, b' , wide enough to allow the box to slide freely over the lower frame-strip a' , up and down, and long enough to allow the front end of the box (next the track-rails t) to drop below the platform m , as shown in Figs. 3 and 5.

The box B is held in its position around the platform m by means of ears b^2 , which encompass the outer circumference of rods r , being open on their inside faces, to introduce the rods therein, which ears are attached to metal strips b^3 on each side of the frame side pieces, a , the ears serving to connect said side strips, b^3 , together. These strips b^3 are thus, also, made to form a groove on each side b of box B, to guide the box in sliding up and down inside of the frame side pieces, a , as hereinafter described, the strips b^3 being screwed or riveted to the face of each side b of box B, as shown in Figs. 1 and 3. The inside portions of ears b^2 being open, this is accomplished by simply placing the pair of strips b^3 with their connecting-ears over the rod r and securing the strips to the box B.

It will now be perceived that the box B may be moved up and down in the frame a from the position shown in Figs. 1, 2, and 6, where it incloses the carrier, resting upon platform m on all sides, to the position shown in Figs. 3, 4, and 5, where its front end is below the level of the platform surface, and the carrier can roll off of the platform. In order to

govern this motion of the box B in the frame the following mechanism is employed: On each side of the box a stationary hook, b^4 , is attached to the upper end of one of the strips of metal b^3 . On each side, to the frame-pieces a , are attached the pivoted hooks or latches a^5 a^5 by pivots a^6 a^6 . These latches are held in position to engage with hooks b^4 b^4 by springs s s , connected with their upper arms. Two collars, c c , are fixed in any desired position, up or down, on the rods r r by set-screws c' c' , and have studs c^2 c^2 projecting from them in the paths of the cam-shaped upper arms of the hooks a^5 a^5 . Two other collars, c^3 c^3 , Fig. 2, are attached to the rods r r below the lower ears, b^2 b^2 . On the inner front end of box B, Figs. 5 and 6, a short stud, m^3 , projects inward over a lip, m^4 , attached to the front edge of platform m .

The operation of the elevator is as follows: The frame a a a' a' is brought to its lowest point on rods r r , as shown in Figs. 1 and 2, and the hooks a^5 a^5 locked into hooks b^4 b^4 . The platform m then forms a horizontal bottom for box B, and the carrier (indicated by dotted lines) is dropped into the box. When the sliding frame a a a' a' is drawn up by cord o , the box retains the carrier upon the platform until the latter is at the proper level to deliver the carrier to the track. At this instant the upper arms of hooks a^5 a^5 come into contact with studs c^2 c^2 of collars c c , and this withdraws hooks a^5 a^5 from hooks b^4 b^4 , allowing box B to slide downward in frame a a a' a' . As the box slides down, its stud m^3 engages with the lip m^4 on platform m and tilts the latter, as shown in Fig. 5, discharging the carrier upon the track t . As soon as the carrier is discharged, the cord o is released and the frame a a a' a' and box B fall by gravity until the lowermost collars, b^2 b^2 , of the box come into contact with the fixed collars c^3 c^3 on rods r r . This arrests the box, but the frame a a a' a' keeps on falling until its hooks a^5 a^5 engage with hooks b^4 b^4 of the box, at which instant the buffers a^4 a^4 arrest its descent, and the elevator is ready for another carrier. As the elevator holds the carrier in the box until the moment of discharge, it is safe and certain in its operation and requires no care in putting the carrier into the box or discharging it therefrom.

The elastic washers a^3 a^3 on collars a^2 a^2 and on the collars b^2 b^2 prevent unnecessary jar and injury to the working parts.

The internal width of the box B transversely is such that it holds the carrier true between its sides and delivers it upon the track accurately.

The platform m may be made inclined, and fixed on its guideways in that position, if desired; but I prefer to have it pivoted, as described.

What I claim as new and of my invention is—

1. The combination of the upright rods r r , the platform m , provided with guideways arranged to move thereon, the box B, arranged to move up and down around said platform, and mechanism adapted to retain said box in position around said platform until the latter is elevated to the level of the track and then release the same and allow it to drop below the platform and the carrier to be delivered therefrom, substantially as described.
2. The combination of the upright rods r r , the platform m , provided with guideways arranged to move thereon and pivoted to tilt forward, the box B, arranged to move up and down around said platform and tilt the same, and mechanism adapted to retain said box in position around said platform until the latter is elevated to the level of the track and then release the same and allow it to drop down below the platform and tilt the latter and the carrier to be delivered therefrom, substantially as described.
3. The combination of the rods r r , the platform m , provided with frame a a a' a' , and guideways a^2 a^2 upon said rods, the box B, provided with hooks b^4 b^4 , attached thereto, and with guideways upon said frame, and the pivoted hooks a^5 a^5 , attached to said frame, all arranged to operate substantially as described.
4. The combination of the rods r r , the platform m , provided with frame a a a' a' and guiding-ears a^2 a^2 upon said rods, the box B, provided with hooks b^4 b^4 , attached thereto, and with guiding-ears b^2 b^2 upon said rods, the elastic buffers a^3 a^3 , placed between ears a^2 a^2 and b^2 b^2 , and the pivoted hooks a^5 a^5 , attached to said frame, all arranged to operate substantially as described.

FREDERIC POPE.

Witnesses:

N. P. OCKINGTON,
DAVID HALL RICE.