No. 622,792. Patented Apr. 11, 1899.

F. A. BATES.

ELEVATOR GUIDE.

(Application filed Aug. 18, 1898.)

(No Model.)

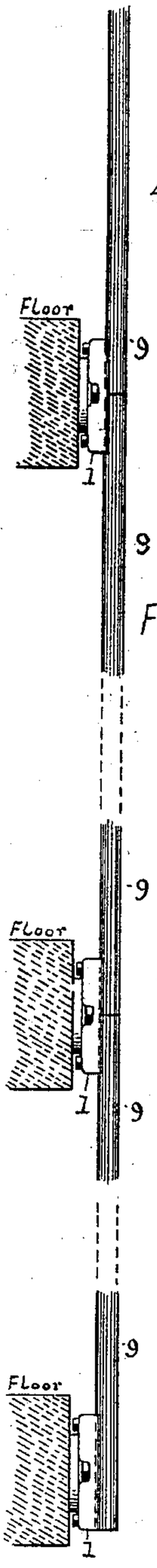

Fig. 6

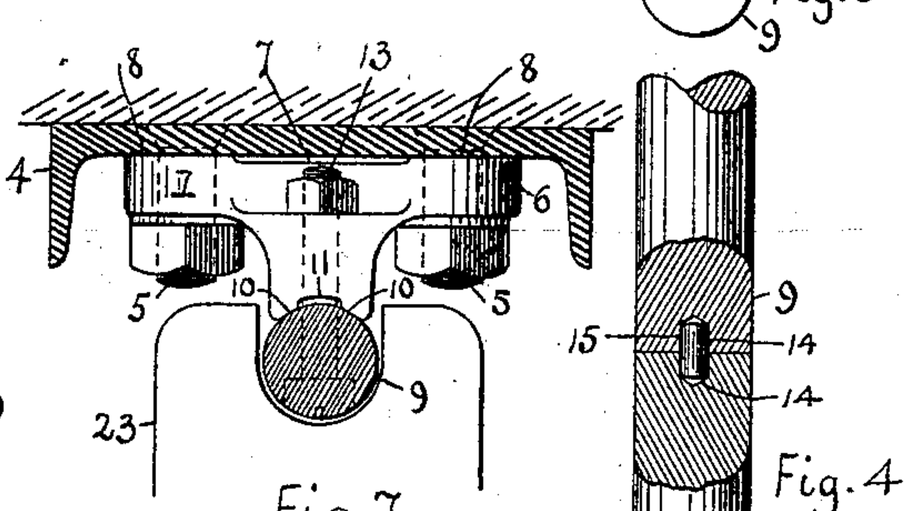

Fig. 7

Fig. 4

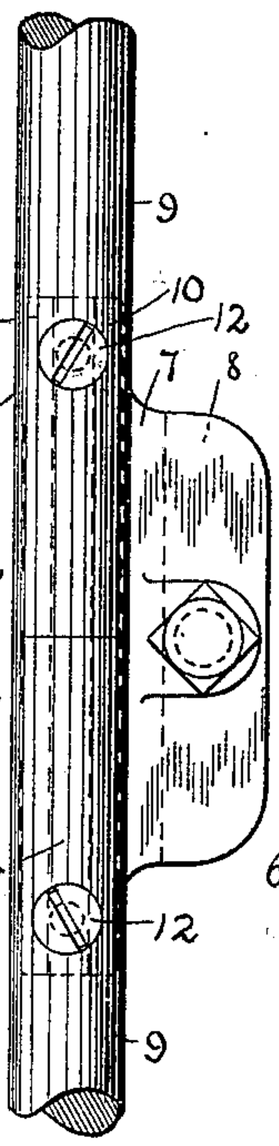

Fig. 2

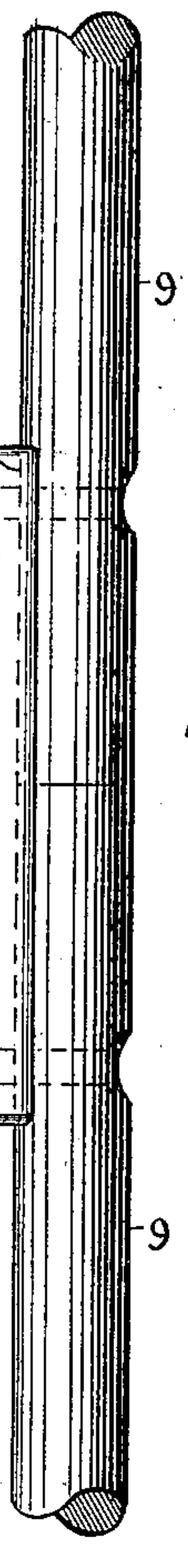

Fig. 3

Fig. 1

Witnesses.
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UNITED STATES PATENT OFFICE.

FRANCIS A. BATES, OF SWARTHMORE, PENNSYLVANIA, ASSIGNOR TO THE MORSE WILLIAMS & COMPANY, INCORPORATED, OF PHILADELPHIA, PENNSYLVANIA.

ELEVATOR-GUIDE.

SPECIFICATION forming part of Letters Patent No. 622,792, dated April 11, 1899.

Application filed August 18, 1898. Serial No. 688,842. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS A. BATES, a citizen of the United States, residing at Swarthmore, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Elevator-Guides; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to elevators used for passenger and freight service, and more especially to the means secured in the elevator-well for the guiding of the elevator-car and its counterweight in their passage up and down the well, and has for its object the providing of a more true, light weight, and less expensive means than heretofore employed for such purposes.

I attain the objects of my invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of one of the holders as directly secured to the well with the guide in cross-section. Fig. 2 is an elevation of a holder and adjoining parts of a guide as secured thereto. Fig. 3 is an edge view of a holder and adjoining parts of a guide secured thereto. Fig. 4 is an elevation of adjoining parts of a guide, the adjoining ends being in section. Fig. 5 is a plan of the adjoining ends of the guides. Fig. 6 is an elevation of the guides, showing attachment to the well at different floors or landings. Fig. 7 is a modification showing a plan of the holder and guide in section as secured to a vertical channel-bar placed within and secured to the well.

I am aware that hollow pipes or tubes have been used for the guiding of freight-elevators for building purposes, carrying bricks, mortar, &c.; but for the purpose of guiding passenger-elevators, where the slightest grating or jarring noise is objectionable on account of the annoyance to timid and nervous persons riding in the elevator-car, as well as to those occupying rooms adjacent to the elevator-well, such pipes or tubes are not only objectionable, but their use would be positively prohibited, owing to the reverberations of such hollow bodies and the ringing and scraping sounds produced by the guiding-shoes of the passing car, owing to the resonant qualities of pipes or tubes.

Similar figures of reference indicate similar parts in all the views.

The holders 1, as seen in Fig. 1, are secured to the well-wall 2 by bolts 3, while, as seen in Fig. 7, they are first secured to a channel-iron 4 by bolts 5, having countersunk heads, the channel-iron being secured to the well-wall in the usual way.

The holders 1 have a broadened and lengthened seat 6, which attaches to the wall 2 or channel 4, except at their vertical central part 7, where the seat is recessed, thus forming vertical bearing-faces 8. This construction enables a more perfect seating of the holders upon comparatively rough and uneven surfaces than if bearing upon their whole surface and facilitates the introduction of liners or the cutting away of the bearing-surfaces to secure a perfect vertical alinement of the guides, which is a requisite of the first importance. Upon the holders 1 I form a raised concave-faced seat somewhat longer than the seat first mentioned, in which I place and secure the adjoining sections 9 of the circular section-guides. This seat 10 is also recessed at its center 11 to facilitate fitting, and bolts 12, as seen in Figs. 1, 2, and 3, or bolts 13, as seen in Fig. 6, secure the guide-sections 9 firmly in place. To still further secure the guide-sections 9 to each other, I drill into the end of each adjoining guide-section 9 a hole 14 and insert a dowel-pin 15, as seen in Fig. 4. The great advantages of the circular solid section-guide over those heretofore in use are their greater stiffness at a greatly-reduced weight, thus cheapening first cost and transportation, a much larger wearing-surface, easier to handle and erect, non-resonant under the rubbing of the car-guides, and require less bolting to the elevator-well, while they can be bought in the open market already finished, they being preferably of solid cold-rolled steel.

In Fig. 1 elevator-car guide-plates 21 22 are shown, and in Fig. 7 a guided counterweight 23 is shown.

Fig. 6 shows my method of attaching the guide-holders to the well, illustrating the non-requirement of a continuous attachment to support the guides throughout the length of the elevator-well.

I claim—

1. Elevator-guides of solid circular cross-section, in multiple lengths, set one upon the other, holders having concave seats for the guides and securing them in continuous line, means to secure the guides to the holders, and means for securing the holders to the elevator-well, substantially as described.

2. Elevator-guides of solid circular cross-section, in multiple lengths, and abutting each other in continuous line, one holder for each two guide lengths, and having concave seats to receive the abutting guides, means to secure the guides to the concave seats, and means for securing the holders to the elevator-well, substantially as described.

3. Elevator-guides of solid circular cross-section, in multiple lengths, concave-seated holders to receive the abutting ends of two guide lengths, means to secure the ends of two guides to each holder, means to secure the holders to the vertical face of the elevator-well, and dowel-pins adapted to enter within the abutting guide lengths and thereby secure their true coincidence, substantially as set forth and shown.

4. Solid elevator-guides of circular cross-section, in multiple lengths, doweled one to the other, concave-seated holders adapted to embrace a portion of each guide length, means to hold the guides to the concave seats of the holders, bars of channel section, means to secure the holders to the channel-bars, and means for securing the channel-bars to the elevator-well, substantially as described.

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

FRANCIS A. BATES.

Witnesses:
R. C. WRIGHT,
WILLIAM C. STOEVER.