April 19, 1932. E. HUTCHINSON, JR 1,854,936

GUARD FOR ELEVATOR DOORS

Filed May 22, 1929

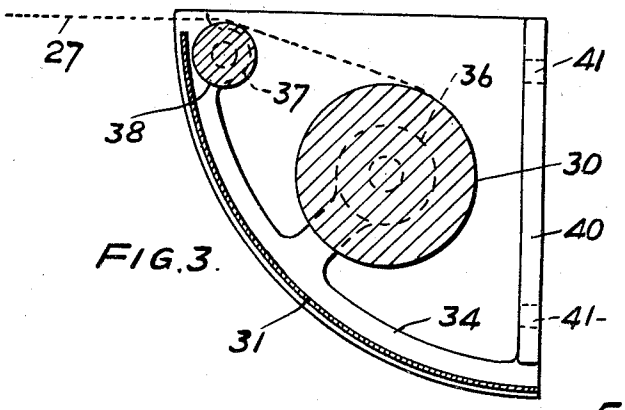

FIG. 3.

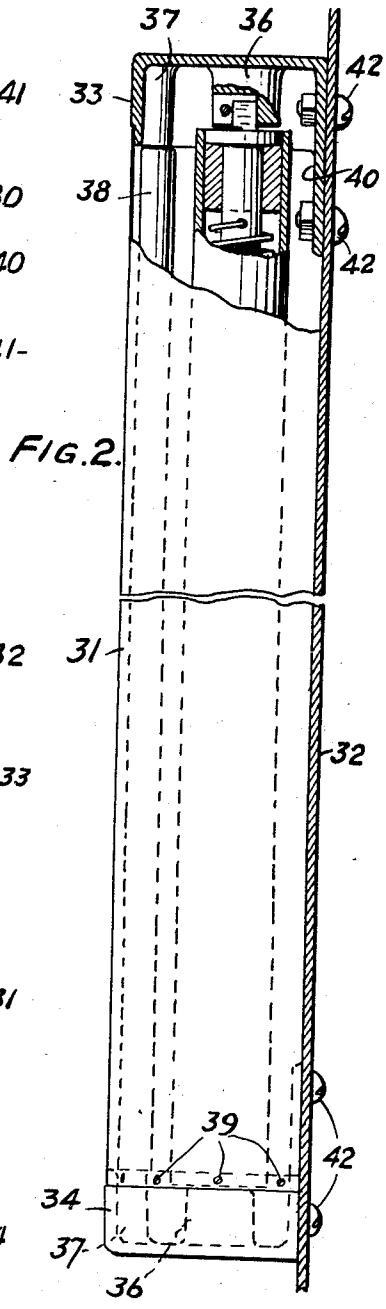

FIG. 2.

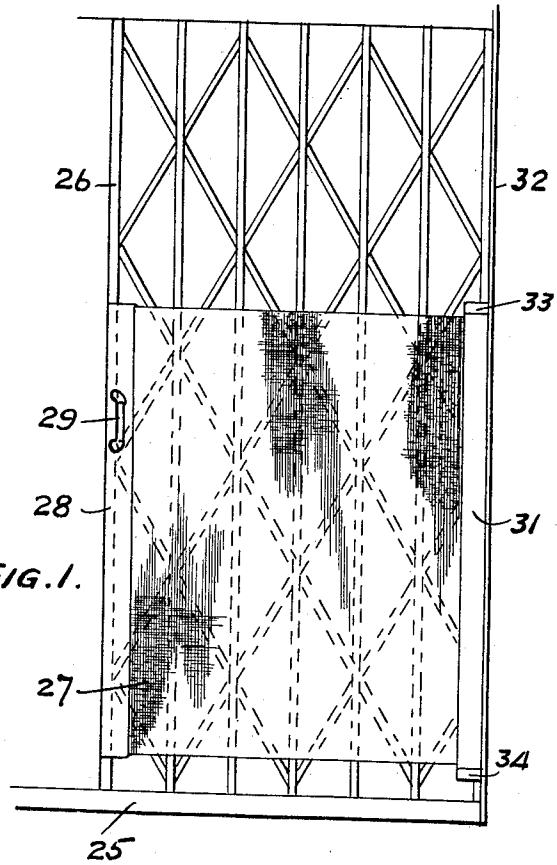

FIG. 1.

WITNESS:
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UNITED STATES PATENT OFFICE

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GUARD FOR ELEVATOR DOORS

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This invention, generally stated, relates to elevators as used in office buildings, apartment houses, business houses and the like, and has more especial relation to the equipment of the guard gate with additional protective means in the form of a curtain and in special casing parts for the curtain.

The leading object of the present invention is to provide an additional guard in the form of a curtain for the usual elevator guard gate and which may be moved simultaneously with the opening and closing of the guard gate, the curtain being preferably made of wire or wire mesh so that the elevator operator's vision is not obscured by the curtain, and in the provision of a special casing or housing fixed to the elevator in which the curtain is contained when the guard gate is in folded position.

A further object of the present invention is to provide a small roller and a roller of large diameter within the casing or housing, whereby the curtain automatically may wind or unwind with the closing and opening of the conventional guard and be concealed within said casing or housing when said gate is in folded position.

Other and further objects of the present invention reside in the provision of general details of construction and arrangement and combination of parts for attaining the results sought by the foregoing objects.

The invention consists of the novel constructions hereinafter described and finally claimed.

The nature, characteristic features and scope of the invention will be fully understood from the following description taken in connection with the accompanying drawings forming part hereof, and in which:

Fig. 1 is a view in elevation of an elevator guard gate provided with the curtain and its casing or housing embodying the invention.

Fig. 2 is a view in vertical section of the casing parts shown in Fig. 1.

Fig. 3 is a view in sectional plan of the casing and illustrating details of construction of the rollers and curtain shown in the foregoing figures.

For the purpose of illustrating my invention I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

In the drawings, the reference numeral 25 designates an elevator structure, and the reference numeral 26 designates an elevator guard gate of usual toggle-joint form. Practice dictates that in the opening and closing of the such guard gates, particularly when the elevator is in crowded condition, that umbrellas, canes and the like frequently become jammed within the toggle-joint parts of the gate, and not infrequently the passengers' fingers are pinched between the opening and closing parts of the gate. In order to obviate this inconvenient and sometimes dangerous condition, I provide an auxiliary guard or curtain 27, best seen in Fig. 1, and which preferably is comprised of wire mesh or the like, since the operator's vision is not obscured by wire mesh. The lower edge of the curtain preferably, as clearly shown in Fig. 1, may be slightly above the floor of the elevator and the upper edge of the curtain preferably is arranged considerably below the top of the elevator. The outer edge of the curtain is preferably bound by means of a strip 28, which strip is secured to the outer edge of the guard gate 26. The strip 28 is provided with a hand grip 29. The opposite parallel edge of the curtain is secured to the vertically disposed roller 30, best seen in Fig. 3. This roller 30 is of relatively large diameter and is contained within the casing or housing 31 which is fixed to the wall 32 of the elevator, see Fig. 2. Considered in plan, see Fig. 3, the casing or housing is in the general form of the segment of a circle and is closed at its top by a cap 33 and at its bottom by a cap 34. Each of these caps is provided with a pair of lugs 36 and 37, in practice cast integral with the caps. These lugs form bear-

ings for the roller 30 and the roller 38 which is relatively small in diameter and functions as a guide roller. The caps are removable and are secured to the casing or housing 31 by means of screws 39, see bottom of Fig. 2. Each cap is provided with a flange 40 apertured at 41 for the reception of bolts 42 whereby the casing with its caps may be secured to the elevator wall 32. The roller 30 is of the spring operated type so as to automatically wind the curtain as the operator moves the guard gate to the right in Fig. 1, the curtain being guided by the small roller 38. As the operator moves the guard gate and the curtain to the left in Fig. 1, obviously the spring in unwinding tends to reduce tension so that the elevator operator does not have to exert any more effort than he would naturally have to do in opening the guard gate, the advantages of which are apparent. It may be mentioned that the removable caps facilitate the ready insertion of the rollers and in case repairs are necessary, easy access may be had to the casing.

What I claim is:

A roller construction of the character stated comprising a pair of superimposed shell-like housing parts of segmental cross-section considered in plan, a cup-shaped segmental cap for closing the top of said housing parts, a similar cap for closing the bottom of said housing parts, each of said caps being provided with a vertically disposed, integral, inwardly extended attachment lug and each of said caps having an arcuate flange at its forward portion for seating the housing ends, a pair of lugs forming bearings formed integral with the inner faces of each of said caps to support a spring actuated roller, including an idler therein, and means for securing the housing ends to the arcuate flanges of said caps.

EDWARD HUTCHINSON, JR.