Oct. 23, 1934. M. S. McN. WATTS 1,977,706

EMERGENCY MEANS OF EGRESS FROM ELEVATOR CARS

Filed Feb. 14, 1931

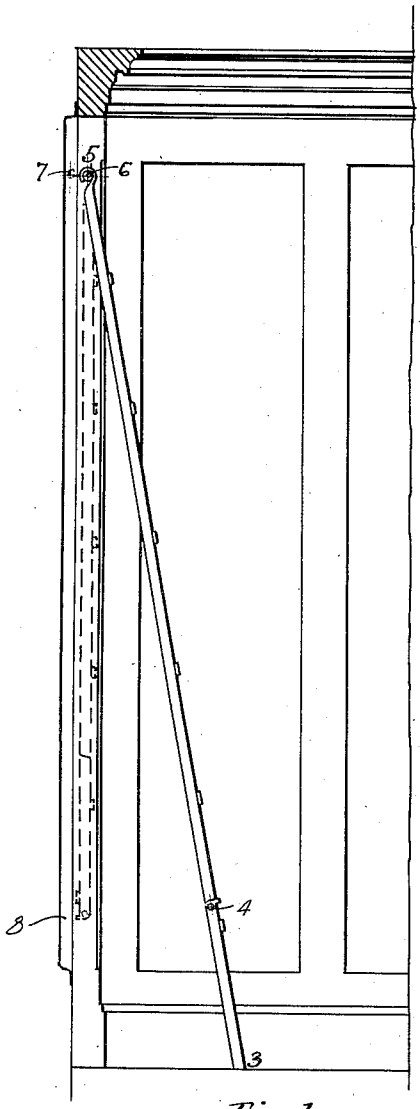


Fig. 1

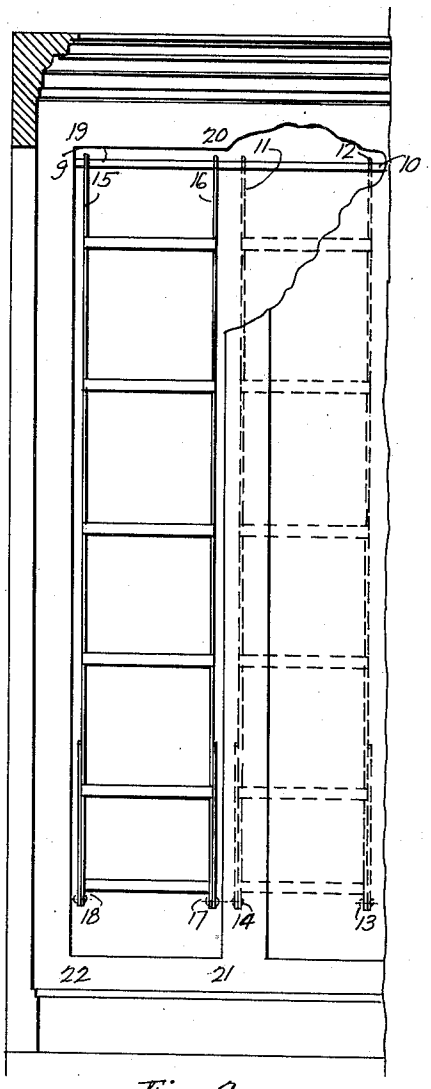


Fig. 2

INVENTOR.

Malcolm S. McN. Watts

Patented Oct. 23, 1934 1,977,706

UNITED STATES PATENT OFFICE

1,977,706

EMERGENCY MEANS OF EGRESS FROM ELEVATOR CARS

Malcolm S. McN. Watts, New York, N. Y.

Application February 14, 1931, Serial No. 515,822

2 Claims. (Cl. 187—1)

My invention relates to an emergency means of egress from an elevator car and has for its object provision of means of access to the emergency panel in the top or ceiling of an elevator car, which will be readily accessible when needed but which will be concealed behind the panelling or section of the wall of the said car and be out of sight except when used.

In the specifications and drawing I have described and shown my device as a means of access to the emergency exit in the top or ceiling of an elevator car, as consisting of a ladder partly jointed or collapsible, but this is intended merely to serve as an illustration and not intended to limit my invention to the particular forms of means of ascent illustrated or described.

Referring to the drawing:

Fig. 1 is a vertical elevation of a portion of the side of an elevator car partly in cross-section, showing in full lines my improved means of access to the emergency exit in the top of the car in position for use and showing in dotted lines the position it occupies when not in use.

Fig. 2 is a vertical section of a portion of the side of an elevator car showing the ladder above referred to in two positions which it may occupy before being extended out into the interior of the car for use.

An ordinary elevator car is provided with walls which may be constructed in a single thickness or with additional interior panels which may be set at a distance from the outside wall sufficiently clear to admit the accommodation of my device between them. My invention is applicable to either type of construction. In the top or ceiling of a car there is provided an opening or removable panel for emergency egress. The use of such an emergency exit is old and is not part of my invention, my invention residing in an improved means of access to this emergency exit and of confining or stowing the same when not in use, which I have provided.

In place of one panel or section or portion of the wall of a single walled elevator car, or of the interior panelling of such car, I have a hinged or removable panel or series of panels behind which there is a rod, track bar or other appropriate means of holding a ladder or a series of collapsible steps or other means of ascent in such manner that the same may move to right or left along the said bar, rod or track in a horizontal direction, thus permitting the section or panel to be opened and the ladder or other means of access moved horizontally from behind a fixed panel or non-movable section of the elevator wall, into a position where the same can be brought forward into the interior of the elevator car and unfolded into a position permitting access to the emergency exit at the top of the car.

The device may be developed by having the ladder or means of ascent wholly detachable from the bar or track upon which it moves horizontally or to remain partially supported thereupon, and I intend to cover either form of design by this patent.

In Fig. 1 I have illustrated a ladder, Nos. 3, 4 and 5, jointed at 4, extended in position for use, the top portion of said ladder resting upon a bar, Fig. 6. Figs. 7 to 8 shows the position of the ladder when folded and hanging concealed behind the interior panelling of the elevator car and within the usual wall of the said elevator car.

In Fig. 2 the said bar appears 9—10, and 11, 12, 13 and 14 represent the position of the ladder behind a fixed or immovable panel or portion of the elevator wall, the said ladder depending upon the bar 9—10. Figs. 15, 16, 17 and 18 represent the position of the ladder or other means of ascent opposite the opened or removed section of the elevator wall or panel to which it has been moved laterally from the position indicated by Figs. 11, 12, 13 and 14. The space indicated by Figs. 18, 19, 21—22 may be either a hinged or wholly removable section of the elevator wall or interior panel. The purpose of the lateral movement of the ladder or means of ascent is to permit a more convenient means of stowing or concealing the ladder or means of ascent and to facilitate bringing the same into a position nearer or more conveniently adjacent to the emergency exit at the top of the elevator car. The general purpose of providing for this lateral movement is to make the device more flexible and more easily adaptable to the conditions imposed by the design and construction of the elevator car, both as to the construction of the walls of said car and with respect to the location of the emergency exit or panel in the top of the car. The rod or carrier equipment designated in the drawing by Fig. 6 in Fig. 1, and 9—10 in Fig. 2, may be affixed and supported in the space between the panelling and the outer walls of the car or it may be affixed to the frame of the elevator car or attached to the back of the panels or the back of the sections of the elevator car where a single thickness of the wall is employed.

The means of ascent which I have illustrated in a ladder with a single joint, may be developed in various ways and may consist of a loose or flexible ladder or series of steps depending from the

said rod, Fig. 6, 9—10, attached to the floor or other part of the interior of the elevator car, or hanging loose.

I also cover the use of extension arms, brackets or other collapsible or folding supports moving upon the said rod or track which may be moved into a position opposite a removable or hinged panel or section of the elevator wall and then extended out into the interior of the elevator car for the purpose of supporting a means of ascent to the emergency exit at the top of the car.

What I claim is:

1. In a sectionally walled elevator car having an exit adjacent the top thereof, means for access to said exit, said means comprising a ladder, one of said wall sections movable for access to said ladder, said ladder movable sidewise therefrom and having a collapsible section for extending the same when free of said section.

2. In combination with an elevator car having a movable panel and exit through the top thereof, a ladder having a collapsible lower section for access through said exit, said ladder mounted for sidewise movement to and from position behind said panel, and said panel movable for the withdrawal of said ladder.

MALCOLM S. McN. WATTS.