Oct. 6, 1931. E. BOCCHINO 1,826,448

SAFETY FIRE BALCONY EXIT

Filed May 9, 1928

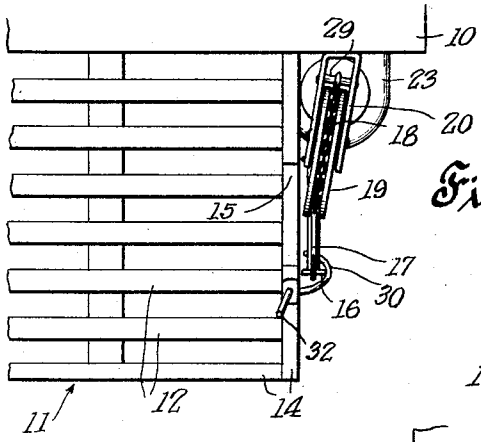


Fig. 1.

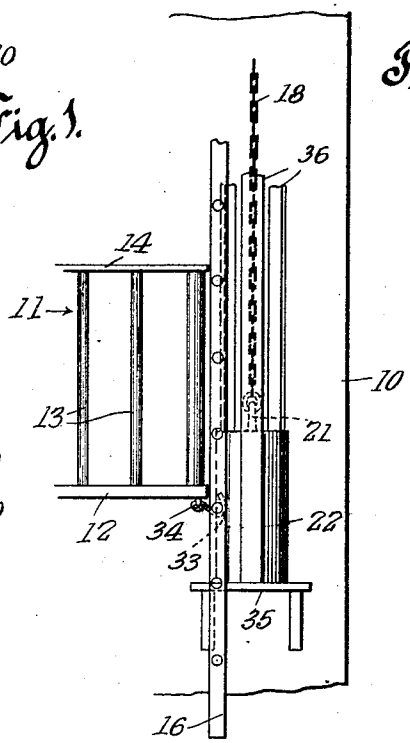


Fig. 3.

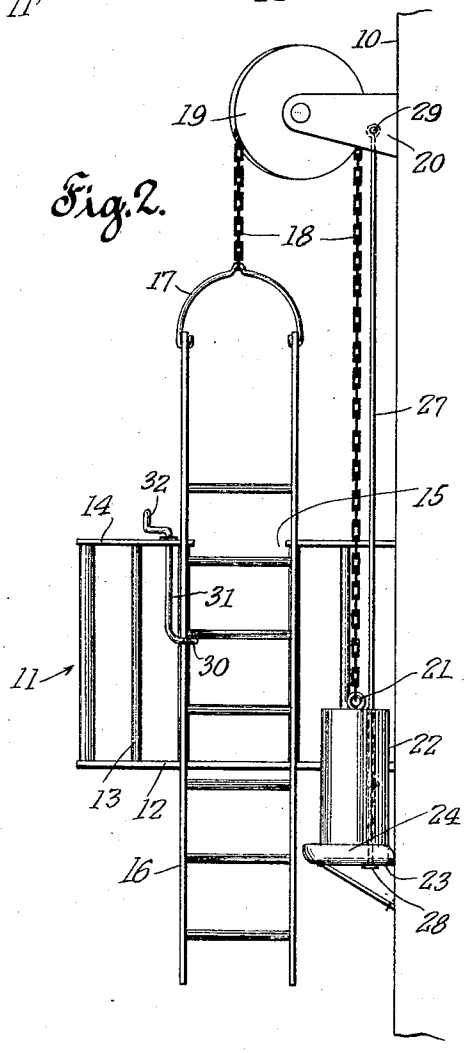


Fig. 2.

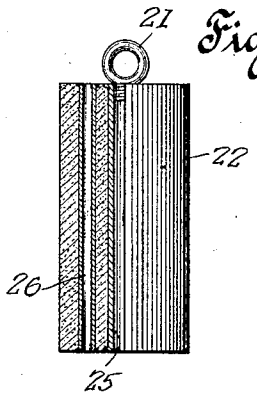


Fig. 4.

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SAFETY FIRE BALCONY EXIT

Application filed May 9, 1928. Serial No. 276,273.

This invention relates to improvements in fire escape structures as applied to the exteriors of buildings subject to fire hazards.

Such devices ordinarily consist of balconies secured to the walls adjacently in front of windows or like openings on each floor.

These balconies are generally of the lattice type and connected by metal stairways or ladders extending from the roof to the lowermost landing, at some distance above the ground surface, which is rendered accessible by a ladder normally held in a raised position to avoid its use as a means of entry.

Such ladders may be disposed at the front or ends of the balcony, as may be most convenient.

The present invention is an improvement over my co-pending applications, filed March 3, 1928, Serial Number 258,771 and April 18, 1928, Serial Number 270,831 respectively, its object being to provide a ladder support attached directly to the wall of the building adjacent the end of the balcony and having novel means for guiding and supporting the counter-weight with which the ladder is provided.

Another object is in the provision of an inexpensive form of counter-weight well suited for the purpose it performs.

A further object is to provide means carried by the balcony adapted to prevent swaying of the ladder and to preclude it from moving downward inopportunely.

These several objects are attained by the novel construction and combination of parts hereinafter described and shown in the annexed drawings, forming part hereof, and in which:—

Figure 1 is a partial plan view of a conventional fire escape balcony showing an embodiment of the invention as attached.

Figure 2 is an end elevational view of the balcony, the ladder and its associated elements being in front elevation.

Figure 3 is a partial front elevational view of a slightly modified form of the same.

Figure 4 is a partial side elevational, partial longitudinal sectional view of a preferred type of ladder counter-weight in detail.

Referring to the drawings in greater detail, the numeral 10 designates in general the wall of a building and 11 a conventional fire escape balcony attached to it, the same consisting of a latticed platform 12 having upright bars 13 at its front and ends to support rails 14.

The rail is cut away at one end, as at 15 and one or more of the bars omitted in order to provide a clear passage way to a ladder 16 disposed normally closely adjacent and which, when in a raised position, fills the gap 15 in the fence-like railing around the platform.

The ladder sides have between them the usual rungs and are further connected at their upper ends by a loop 17 to which is attached one end of a chain 18, the same being trained over a grooved pulley 19 rotatably mounted in a bracket 20 rigidly secured to the wall 10 at a point above and slightly beyond the end of the balcony as shown.

The other end of the chain 18 is attached to an eye 21 set in the end of a weight 22 slightly in excess of the weight of the ladder, and normally resting on a bracket 23 preferably fixed to the walls 10, the bracket having raised flanged edges 24 to prevent the counter weight from displacement.

Although the bracket is shown as separate from the platform, it may be considered preferable to form the same as an extension thereof rather than as a detached or isolated member.

The counter-weight may be made of any material, as iron or other metal, cement however being preferred, in which case it is molded to engage around an axial tube 25, in which the eye 21 is secured, and at one side is preferably fixed another tube 26 presenting a clear opening throughout the length of the weight, but the opening may be formed in any other manner.

A guide rod 27 is anchored at 28 in the bracket 23 and is held centrally at its upper end, as at 29, in the pulley bracket 20, the rod passing through tube 26, thereby acting as an efficient guide for the weight as it is raised and lowered by movement of the ladder when required for use, and it will be understood that the bracket 23 must be

sufficiently firm to receive and support the weight in the event that the chain 18 should break.

In order to retain the ladder in its normal raised position, a hook 30, formed at the lower end of a rod 31, is shaped to engage one of the ladder rungs, the hook being curved to encircle the side of the ladder, and the rod 31 is pivotally mounted in that portion of the rail 14, contiguous to the gap 15, the upper end of the rod being formed to present a handle 32 by which the hook is manually operated, the device acting in the manner of a lock.

In the modification shown in Figure 3 a plain hook 33 is pivoted to the lower frame of the platform 12, as at 34, the hook being engageable with one of the ladder rungs in an obvious manner, and is disengaged by raising the ladder sufficiently for the hook to drop free, thus releasing the ladder, permitting it to descend to the ground.

Also in this view is shown a plain support bracket 35 for the weight 22, and fixed on the upper face of the bracket are a series of guide bars 36 extending the full height that the weight 22 can be raised when the ladder touches the ground.

From the foregoing it will be seen that simple but effective devices have been disclosed for rendering a fire escape balcony safe and instantly available for use when danger is imminent, no special instructions being necessary.

Although the foregoing is descriptive of the best known embodiments of the invention, it will be understood that minor changes, not involving the inventive faculty may be made, without changing the general spirit of the invention as denoted by the appended claims.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent, is:—

1. In combination with a safety fire escape balcony having a serving ladder movable vertically with respect thereto, a molded cement counter-balance for said ladder, a tube disposed longitudinally in the counter-balance, and a fixed rod passing through the tube to act as a guide therefor.

2. In combination with a safety fire escape balcony having a serving ladder movable vertically with respect thereto, a molded cement counter-balance for said ladder, a tube disposed longitudinally in the counter-balance, a seat for the counter-balance, and means passing through said tube to guide the counter-balance to its seat.

In testimony whereof I affix my signature.

ERNEST BOCCHINO.