Oct. 11, 1932. S. S. HIRSCHMAN 1,882,145

ROTARY FIRE ESCAPE

Filed June 15, 1928

Fig. 1

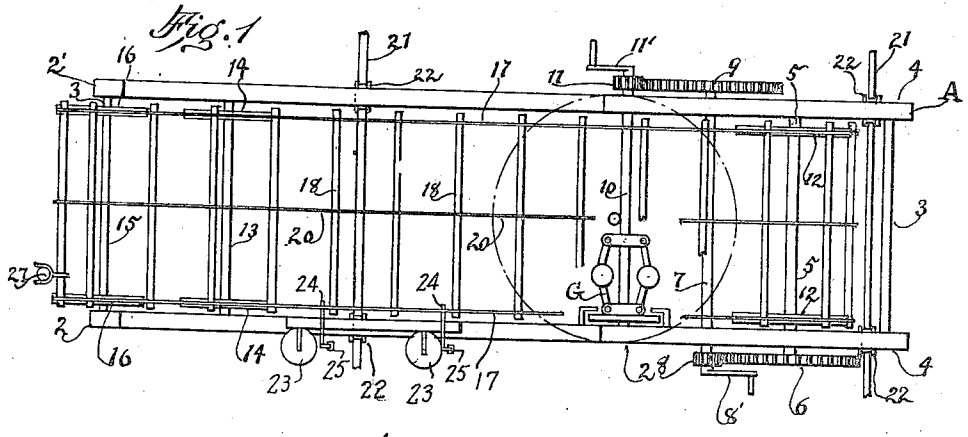
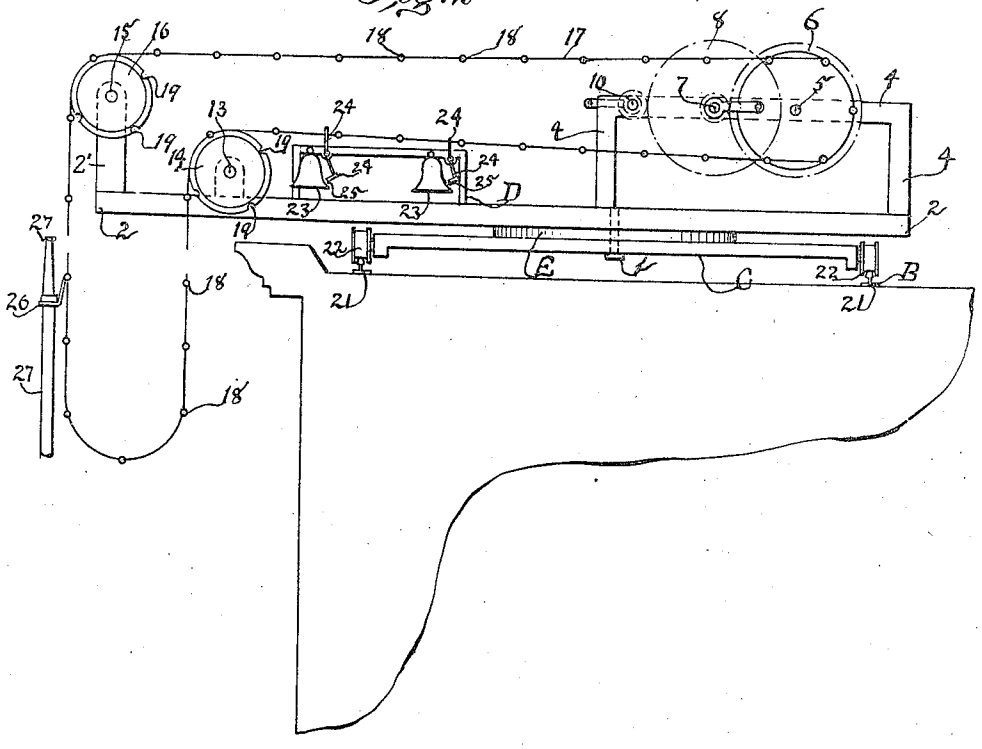


Fig. 2



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ROTARY FIRE ESCAPE

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The object of my invention is to provide a fire escape among other things, by which the occupants of a burning building may readily escape and may easily escape thru the windows of any of the floors of the building, and also to provide a fire escape that may be permanently attached to the outside of the roof of the building, and located upon a track way or rails mounted to run from one side of the building to the other and a movable carriage on which is constructed a turn table, whereby the ladder may be turned from the front to the side of the building and providing means of an endless ladder, one side of which descends and the other side ascends at a controlled speed; also providing means by which the speed may be regulated for the persons using it or by persons on top of the building; also to provide an alarm sounding fire escape.

With these and other objects in view my invention consists in the following details of construction and arrangement of parts as are more clearly hereinafter described and pointed out in the claims, reference being had to the accompanying drawing, in which:—

Fig. 1 is a plan view of my device.

Fig. 2 is a side view of my device.

The same reference characters denote like parts in each of the several figures of the drawing.

In carrying out my invention I provide a frame structure A, which is formed on a base of parallel side sills 2 and having conveniently spaced apart between the sills cross rods 3 producing a rectangular frame structure. At the rear end of the frame structure A I have mounted on the side sills the vertical frame supports 4, which form a rectangular frame work as shown in the drawing, or other form, in alinement with each other. Mounted between the raised side frames 4 I have a shaft 5, at right angles with the base sills of the frame A, and on shaft 5 is mounted a gear 6; also between the side frames 4 I have the additional shaft 7, parallel with shaft 5 and on one end of shaft 7 I have mounted a gear 8 which meshes with the opposite gear 6. A crank handle 8′ is provided on the shaft 7 adjacent the gear 6 and on the other end of the shaft is mounted a gear 9.

As a further part of my device, I have mounted between the side frames 4, the additional shaft 10 and on the outer end of shaft 10 I have mounted gear 11 and also crank handle 11′, and which gear meshes with gear 9.

As a further part of the device, also mounted on shaft 10, I have a rotary governor G; mounted on shaft 5 I have also between the side frames 4 the additional channeled pulleys 12.

As a further part of my device, towards the opposite end of sills 2 I have mounted shaft 13, parallel to shaft 10 and on each end of said shaft 13, I have mounted the channeled pulleys 14; also as a further part of my device and at the extreme outer end of the side sills 2 I have mounted a further parallel shaft 15 in the upper ends of the uprights 2′, and on each end of said shaft 15 and between the side sills 2 I have mounted the channeled pulleys 16.

As a further part of my device I have extending around and over the channeled pulleys 12 the ladder side chains 17, the said chains 17 extending from the upper surface of channel pulleys 12 and down over the channeled pulleys 16 and dropping to below the channeled pulleys mentioned a distance and then returning vertically up over the extremely positioned pulleys 16, thence back to the under side of and around over the channeled pulleys 12. Mounted on the pulleys before mentioned are the two side chains mentioned, each in parallel position, as to each other, and mounted between said parallel side chains I have the ladder rungs 18, with recesses 19 in the sides of the pulley channels. Mounted upon the rungs in alinement with the center thereof, I have a central cable 20, which is fastened to each separate rung for the better end manipulation and grasping of persons using the escape.

As a further part of my device and mounted upon the roof of the building, I have the rail track B, composed of the parallel rails 21 and extending parallel with the side of the building to which the track is adjacent.

Applicant elects to provide a single rail

track or a double rail track and to have said track curved at the corners of the roof surface to enable the fire escape body to be moved and turned from facing one side of the building to another. I have on said supporting rails 21*a* carriage C having wheels 22 traversing the rails.

As a further part of my device I have mounted upon the carriage C a turn table disk E and upon this turn table disk E the base sills and structure 2 of the fire escape body A may be mounted, and pivoted on pivot F.

As a further part of my device, mounted on the base sills 2 I have the side frame D, and mounted therein I have the suspended bell bodies 23 and pivotally suspended in frame D, adjacent each bell body 23, I have the pivotally mounted lever 24, the upper end of which is adapted to contact with the moving rungs 18 of the ladder in operation, and the hammer 25 at the lower end contacts with bell 23, as the chain ladder moves down or up.

As a further part of my device, I have mounted on one or more rungs of the ladder a spring grip 26, adapted to receive and hold a hose nozzle 27, for carrying a hose or other device to an upper part of the building or lowering the same.

Having thus described my invention, what I claim as new and for which I desire Letters Patent is as follows:—

1. In a rotary fire escape, the combination with an endless ladder, of supporting pulleys therefor, a governing mechanism for controlling the ladder in its downward movement when in use, a frame for supporting said ladder with the ladder depending from one end thereof, a carriage on which the frame is pivotally mounted with the end of the frame from which the ladder depends, projecting beyond the carriage, and wheels for the carriage.

2. In a fire escape, the combination with an endless ladder, of supporting pulleys therefor, a frame for supporting the ladder and pulleys, a carriage for supporting the frame, a turn table interposed between the frame and the carriage whereby the ladder may be swung relative to the carriage, and rails on which the carriage is movably mounted.

3. In a fire escape, the combination with a carriage, a turn table on said carriage, a frame supported by said turn table, pulleys arranged fore and aft of said frame, an endless ladder supported by said pulleys, means for operating the pulleys for raising and lowering the endless ladder, and governing means for regulating the descent of the ladder.

4. In a device of the class described, a carriage adapted to be moved to and fro on a building or the like, a turn table mounted on the carriage, a ladder frame rotatably mounted on the turn table, a pulley frame at one end of the ladder frame, flanged pulleys supported by the pulley frame, guide pulleys mounted at the other end of the ladder frame, an endless ladder traversing the pulleys supported by the pulley frame and the ladder frame, operable means for the pulleys in the pulley frame, and a regulator for one of the pulley shafts for controlling the speed of the endless ladder.

5. In a fire escape, the combination with a carriage, of rails on which the carriage is movable to and fro, a turntable mounted on said carriage, a frame supported by said turntable, pulleys mounted on the frame, an endless ladder supported by the pulleys, and operating means for the pulleys for imparting movement to the endless ladder.

In testimony whereof I have affixed my signature.

SEYMOUR S. HIRSCHMAN.