

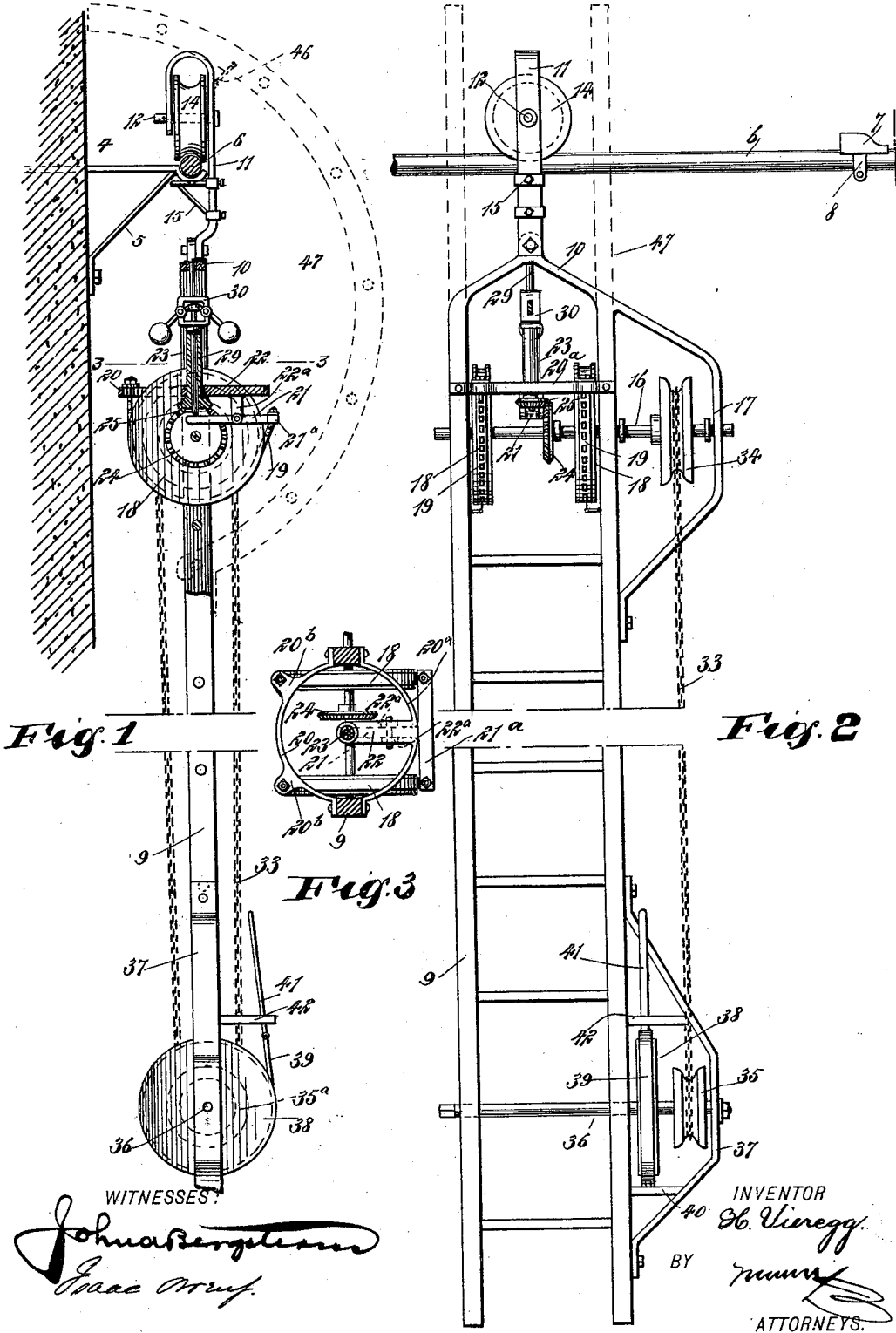
No. 614,043.

Patented Nov. 8, 1898.

H. VIIEGG.
FIRE ESCAPE.

(Application filed May 25, 1898.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

HENRY VIEREGB, OF GRAND ISLAND, NEBRASKA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 614,043, dated November 8, 1898.

Application filed May 25, 1898. Serial No. 681,672. (No model.)

To all whom it may concern:

Be it known that I, HENRY VIEREGB, of Grand Island, in the county of Hall and State of Nebraska, have invented a new and Improved Fire-Escape, of which the following is a full, clear, and exact description.

This invention is a fire-escape of that class in which a trackway or rail is mounted to run around the building at the top thereof and on which trackway is movable a carriage having means for permitting the descent of persons from the top of the building:

This specification is the disclosure of one form of my invention, while the claims define the actual scope of the invention.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section of the invention with parts shown in elevation. Fig. 2 is a front elevation of the invention; and Fig. 3 is a sectional plan view on the line 3 3 in Fig. 1, showing the means for transmitting the motion of the governor to the automatic brake.

The building 4 (represented in section in Fig. 1) is provided with a series of brackets 5, on which is carried a bar 6, forming a rail or track. On this rail or track runs the fire-escape, as will be hereinafter described. A stop-block 7 is provided and mounted on the rail 6 and is adjustably held by means of a clamp 8. This stop-block may be placed at any point along the track, so as to limit the movement of the carriage and by these means prevent the carriage from running off the end of the track should the track be not endless.

The fire-escape has a ladder 9, which is adapted to extend downward into proximity with the ground and which has at its upper end an arch-bar 10, to which is fixed an upwardly-extending and downwardly-turned carriage-plate 11. The carriage-plate 11 carries the axle 12 of the carriage-sheave 14, the sheave being grooved to run on the track 6. Carried by the carriage-plate 11 is a guide-bracket 15, which runs beneath the rail 6 and serves to prevent the carriage from being displaced from the rail. The bracket 15 is adjustable, so that its position with relation

to the rail 6 may be regulated. This construction mounts the carriage to roll freely on the rail, and the carriage holds the ladder 9, hanging pendent from the rail, so that it may be ascended and descended at will and placed in any position relative to the building.

Mounted horizontally in the ladder and at the upper end thereof is a shaft 16, the right-hand end of which projects beyond the ladder and is held by a bracket 17. Two brake-wheels 18 are mounted on the shaft 16 between the bars of the ladder and coact, respectively, with brake-chains 19. Bolted rigidly to the ladder 9, near the upper peripheries of the wheels 18, are two semicircular frames 20 and 20^a, which match to describe a circle, and of which the frame 20 has lugs 20^b, carrying respective ends of the chains 19. The other ends of the chains 19 are respectively fastened to the ends of the cross-bar 21^a of the lever 21, which is fulcrumed between lugs 22^a on the rigid bar 22, projecting inwardly from the frame 20^a. Mounted to turn in the inner end of the bar 22 and centrally with reference to the frames 20 and 20^a is a vertical tubular shaft 23, carrying a centrifugal governor 30 at its upper end. Splined in the hollow shaft 23 is a spindle 29, which is in connection with the governor, so as to be slid thereby. The shaft 23 carries a bevel-pinion 25 at its lower end, which pinion meshes with a spur-gear 24 on the shaft 16. The spindle 29 bears down on the lever 21, and when the speed of the governor becomes abnormal the spindle is thrown down and the outer end of the lever 21 is thrown upward, thus tightening the chains 19 and causing a stoppage of the shaft 16. The shaft 16 in revolving transmits a rotary movement to the hollow shaft 23, which in turn drives the governor 30.

For the purposes of lowering persons and property down the ladder I provide an endless chain 33, which runs over a grooved sheave 34 at the top and under a grooved sheave 35 at the bottom. The sheave 34 is fixedly mounted on the right-hand extension of the shaft 16, so that as the chain 33 runs the sheave 34 will be turned and movement will be imparted to the shaft 16. Thus the governor operates to restrain the movement of the chain 33 should such movement be-

come excessively fast. The sheave 35 is mounted on a shaft 36, that is revolubly mounted on the lower extremity of the ladder and has its right-hand end projected beyond the ladder and held by a bracket 37, somewhat similar to the bracket 17. The sheave 35 is carried by this right-hand extension of the shaft 36. The left-hand extremity of the shaft 36 is square for the reception of a crank-handle by which to manually drive the shaft should such an operation become desirable. A brake-wheel 38 is fixed to the shaft 36 and coacts with the brake-strap 39, the lower end of which is fixed to an arm 40 on the bracket 37 and the upper end of which is connected with a lever 41, fulcrumed on a forwardly-extended arm 42 on the bracket 37. This brake is adapted to be operated manually and provides a means for controlling the mobile parts of the apparatus at the will of an attendant stationed at the bottom of the ladder. The brake mechanism at the top of the ladder, however, operates automatically and at all times.

I may also provide, as indicated by the dotted lines in Figs. 1 and 2, an extension-ladder section 47, which has its lower end suitably fastened onto the upper portion of the ladder 9 and which swerves upwardly and inwardly above the ladder and above the track 6. The upper portion of the extension-section 43 may be held by suitable fastening devices—such, for example, as the link 46. (Indicated by dotted lines in Fig. 1.)

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a fire-escape, the combination with a ladder, of a shaft mounted at the upper portion thereof, a brake-wheel driven by the shaft, a brake-strap coacting with the wheel, a lever having a cross-bar in connection with the brake-strap, a circular frame mounted at the upper portion of the ladder and having an inwardly-extending arm, a hollow shaft

mounted to turn in the arm and geared with the first-named shaft to be driven thereby, a governor-spindle splined in the hollow shaft and engaging the lever, a governor carried by the hollow shaft and connected with the governor-spindle, and an endless chain connected to drive the first-named shaft.

2. In a fire-escape, the combination of a support, a shaft mounted to turn therein, a chain running around the shaft and driving the same, a bearing supported rigidly on the support, a hollow shaft mounted to turn in said bearing, a governor the spindle of which is splined in the hollow shaft, and a brake apparatus for controlling the first-named shaft, such apparatus being actuated by the governor.

3. In a fire-escape, the combination of a rigid structure forming a framing or support, a shaft revolubly mounted in said structure, a chain running around the shaft to drive the same, a hollow shaft revolubly held by said rigid structure, gearing driving the hollow shaft from the first-named shaft, a governor the stem of which is splined in the hollow shaft, and a brake apparatus controlling the first-named shaft and actuated by the governor.

4. In a fire-escape, the combination of a rigid structure forming a framing or support, a shaft revolubly mounted in said structure, a chain running over the shaft to drive the same, a circular frame held by said rigid structure, an arm rigid on the circular frame and projecting inwardly from the same, a hollow shaft mounted to turn in the arm, gearing driving the hollow shaft from the first-named shaft, a governor the stem of which is splined in the hollow shaft, and a brake apparatus controlling the first-named shaft and actuated by the governor.

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Witnesses:

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