

(No Model.)

J. H. McENTIRE.
FIRE ESCAPE.

No. 561,425.

Patented June 2, 1896.

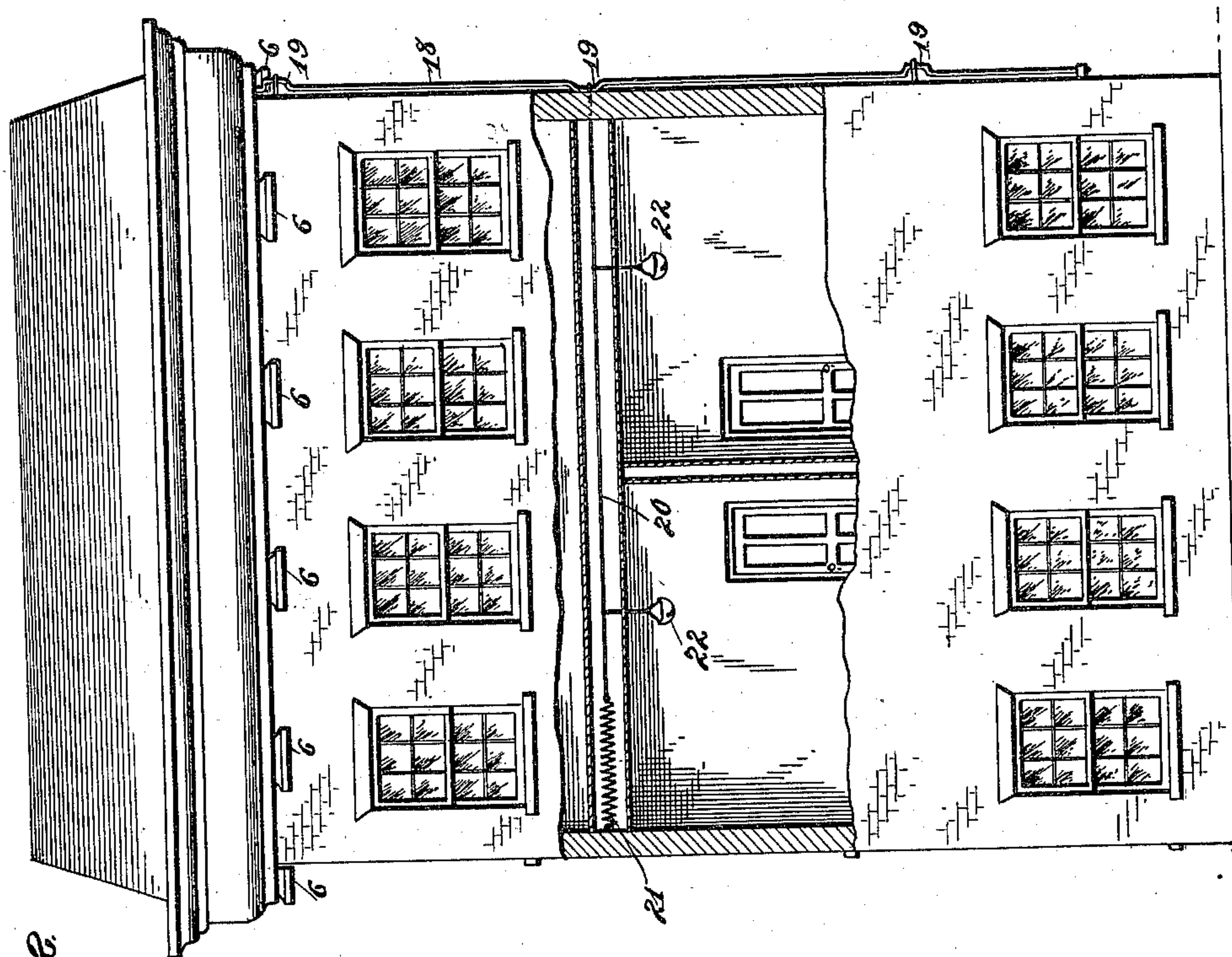


Fig. 2.

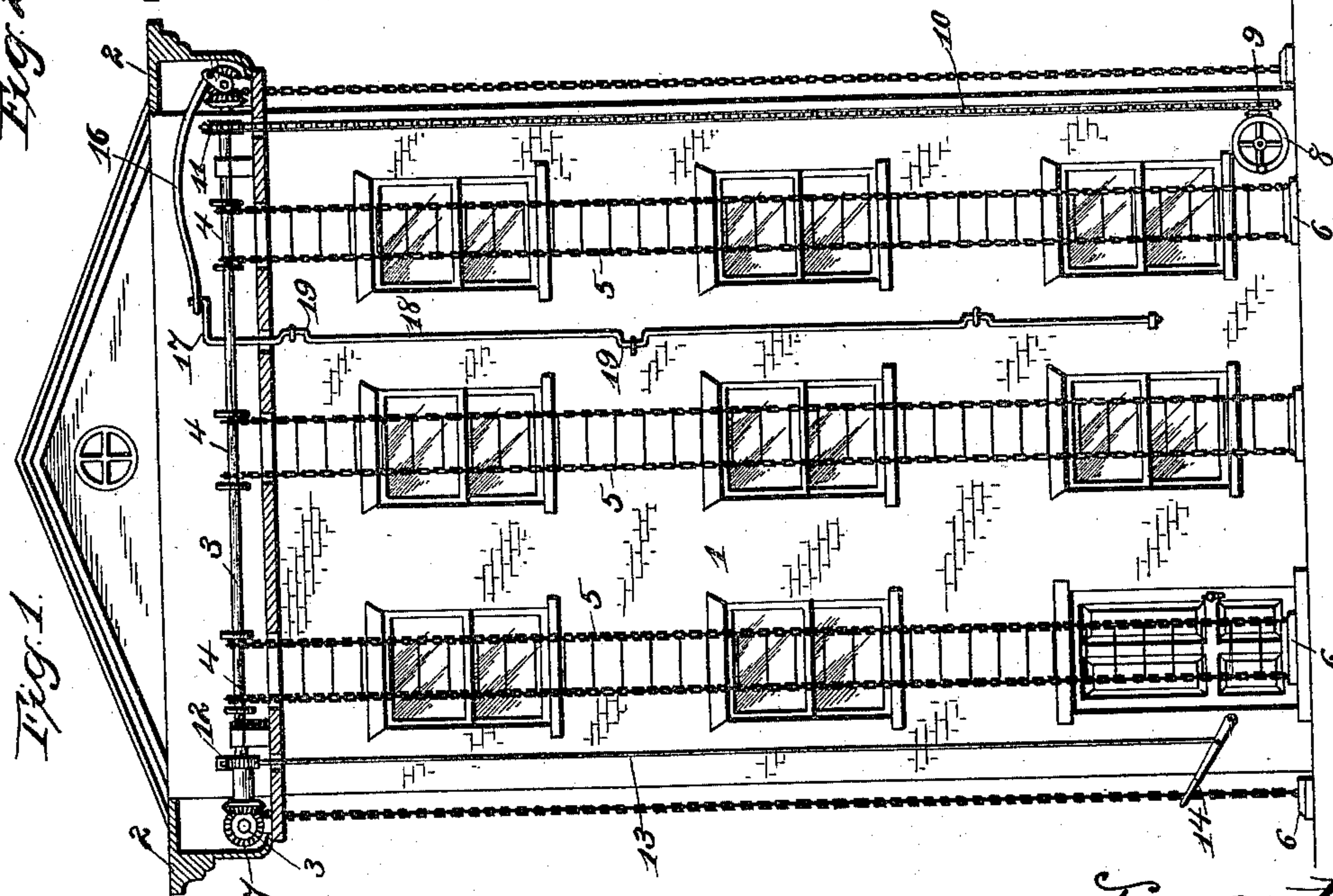


Fig. 1.

Witnesses:

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 561,425, dated June 2, 1896.

Application filed October 1, 1895. Serial No. 564,331. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. MCENTIRE, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a full, clear, and exact specification.

My invention relates to a new and useful improvement in fire-escapes, and has for its object to produce such a device that will render a building perfectly safe by enabling the occupants thereof to escape therefrom in case it should be dangerous by fire or otherwise.

With these ends in view the invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claim.

In order that those skilled in the art to which my invention appertains may understand how to make and use the same, I will describe its construction and operation in detail, referring by number to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is an elevation of a building having my improvement applied thereto, the corners being sectioned so as to show the operating mechanism which is inclosed therein; and Fig. 2 is an elevation of a building at right angles to Fig. 1, showing my improved fire-escapes in their normal position when out of use, a portion being broken from the building, so as to show the alarm-bells therein.

Similar numerals denote like parts in both views of the drawings.

1 represents the building, and 2 the eaves thereof, so constructed as to contain the shafts 3, which are four in number and extend along each side of the building, and these shafts are provided with drums 4, to which are attached the flexible chain-ladders 5, adapted to be wound upon said drums when the shafts are revolved.

6 are a number of weights secured to the lower ends of the ladders, by which the latter are caused to unwind when the shafts are revolved in the proper direction, and when the ladders are in the position shown in Fig. 1 these weights serve to hold them taut, so that persons may ascend or descend therein

in escaping from the building or gaining access thereto. The several shafts 3 are connected by bevel-gears 7, so that they revolve in unison.

8 is a hand-wheel placed upon the face of the building within easy reach from the ground and geared in any well-known manner to a sprocket-wheel 9, over which passes a drive-chain 10, and this drive-chain also passes over a sprocket-wheel 11, secured upon one of the shafts 3. Thus it will be seen that by revolving the hand-wheel 8 the shafts 3 will be revolved in either direction desired.

A suitable brake 12 is arranged to bear upon one of the shafts 3 and is connected by the rod 13 to a hand-lever 14, pivoted to the face of the building, so that, should occasion require, the shafts may be released from the brake through this hand-lever and rod, thus permitting them to revolve and feed out the ladders, which, on account of the weights 6, will drop to the ground and be retained in a position for use, as described.

15 is a crank secured to one end of one of the shafts 3 and connected by a pitman 16 to the larger crank 17, carried upon the upper end of the vertical rock-shaft 18, and this rock-shaft is provided with a number of cranks 19, to which are connected rods 20, which latter pass into the building between the floors and ceilings thereof and have secured at their opposite ends coiled springs 21.

22 are bells depending through the ceiling of each floor, which will be caused to ring by the reciprocation of the rods 20, from the oscillation of the cranks 19, when the rock-shaft 18 is oscillated by the action of the crank 15, as will be readily understood.

From this description the operation of my improvement is as follows: The ladders being wound up and in the position shown in Fig. 2, where they will be protected from the weather by the eaves of the building should a fire break out in the building, it is only necessary to release the brake 12 by manipulation of the handle 14, as before described, when all the ladders will be baled out and assume the position shown in Fig. 1, when either the occupants of the building may escape by descending these ladders or the firemen from outside may gain access to the building for the pur-

pose of extinguishing the fire, and when the danger is over the ladders may be replaced in their normal elevated position by the proper manipulation of the hand-wheel 8, which will
5 cause the shafts 3 to revolve and wind the ladders upon their respective drums, when the brake 12 may be applied to these shafts, thus retaining them in their position. When the
10 ladders are released and start upon their downward movement, the bells 22 will be caused to ring, as before described, thus alarming the occupants of the building and giving them time to escape, and as this may
15 be brought about from the outside of the building it will be seen that any passerby discovering the fire, from smoke or otherwise, may precipitate the ladders and alarm the occupants, so that but little danger of injury or loss of life is occasioned.
20 It is a well-known fact that by the use of the present fire appliances, if a fire has gained considerable headway before the occupants are aware of their danger, it is very difficult for said occupants to either escape from the
25 building or be assisted in so doing, as one room at a time must be emptied through access to the building by one window, and while this is going on occupants of other rooms are in great danger of being burned or becoming
30 excited and leaping from the windows to almost certain death; but by the use of my improvement every window is supplied with a ladder simultaneously and every occupant of the building has an immediate opportunity
35 of escaping therefrom, and those who are not

capable of so doing may readily have assistance from the outside.

Having thus fully described my invention, what I claim as new and useful is—

In a device of the character described, a 40 series of shafts journaled within the eaves of a building, a series of drums carried by said shafts, a series of ladders adapted to be wound upon said drums, each ladder having a weight attached to its free end, whereby it is caused 45 to unwind and remain in a taut position, a rock-shaft connected by pitman and crank to one of the first-named shafts, a series of spring-actuated rods extending between the ceilings and floors of the building, a series of bells, 50 connected to said spring-actuated rods, a series of cranks formed upon the said rock-shaft, to which the spring-actuated rods are connected whereby the bells are rung when the shafts 3, are revolved, a hand-wheel con- 55 nected through a drive-chain to the shafts 3, by which the latter are operated, a brake for retaining said shafts in their normal position, and a hand-lever connected by a suitable rod with said brake, whereby the shafts are freed 60 and the ladders permitted to descend, as specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JAMES H. McENTIRE.

Witnesses:

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