

C. W. L. WARTENBERG.
FIRE ESCAPE.

APPLICATION FILED MAY 6, 1909.

945,065.

Patented Jan. 4, 1910.

2 SHEETS—SHEET 1.

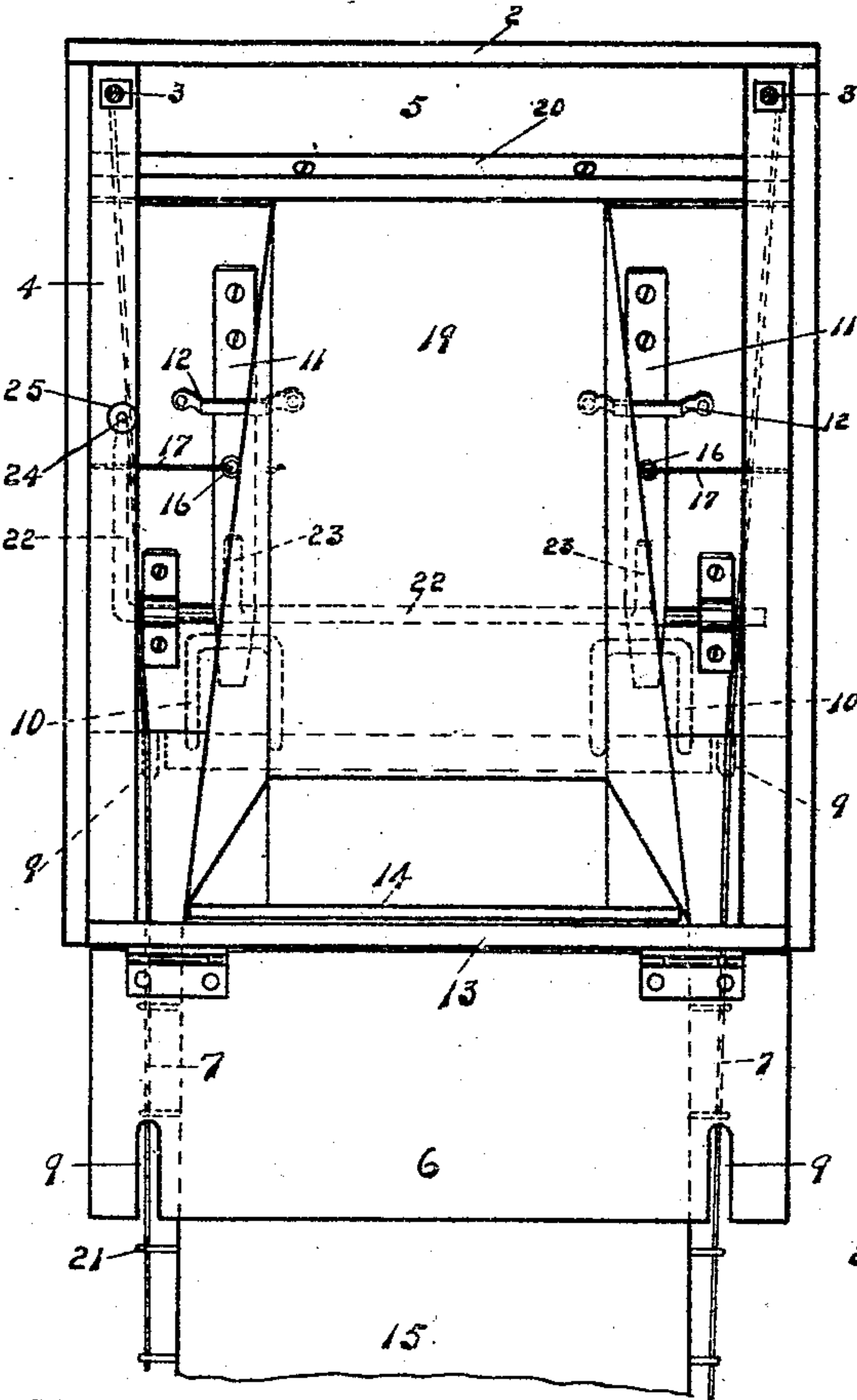
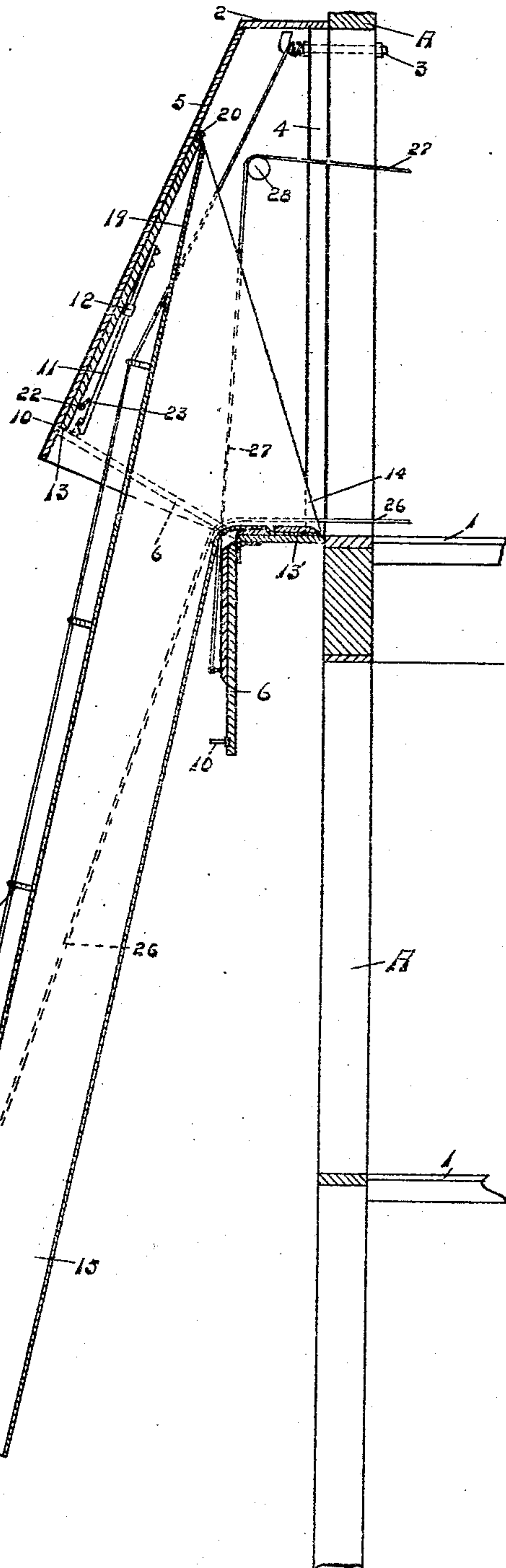


FIG. 2

FIG. 1



WITNESSES:

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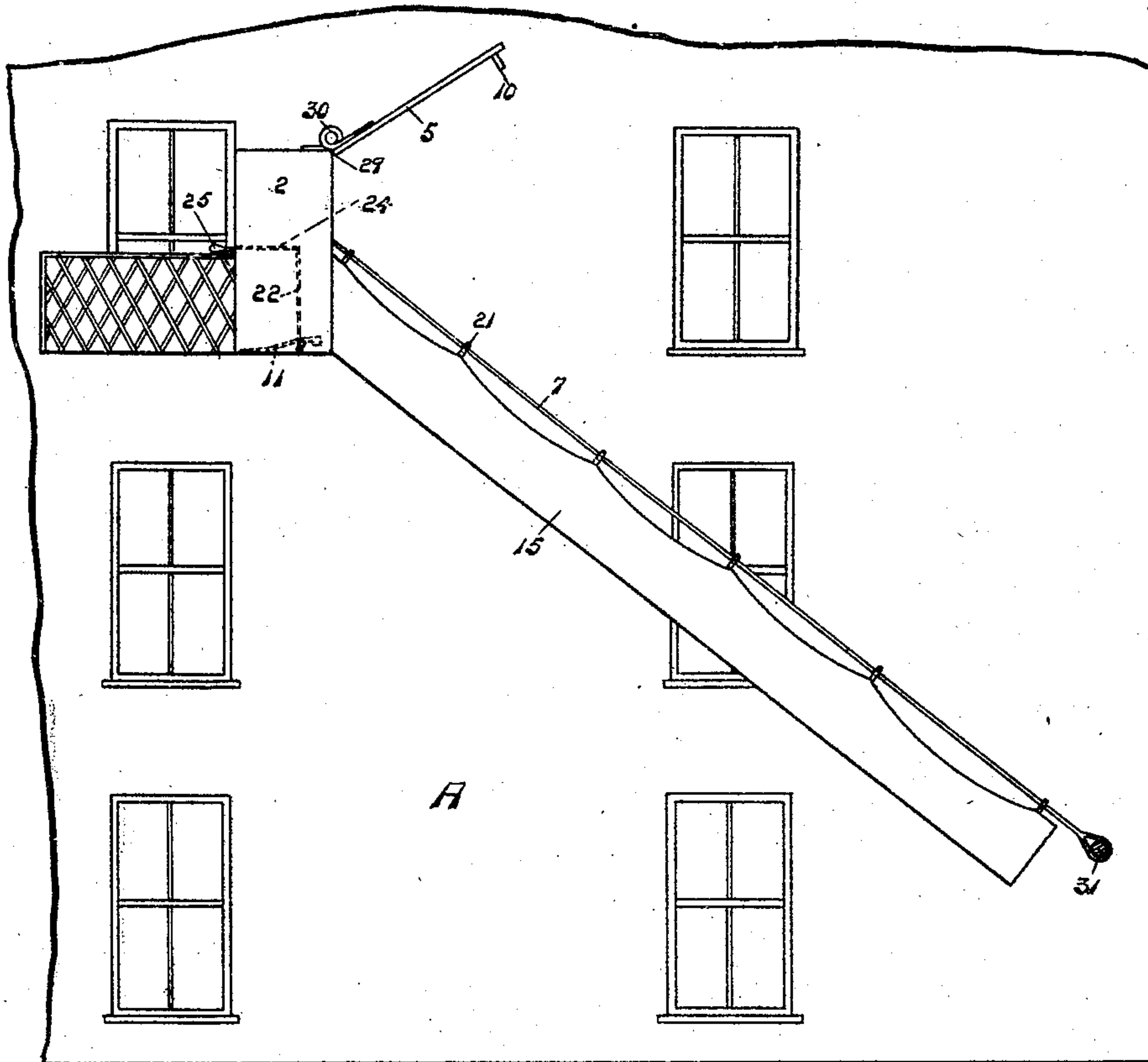


FIG. 3

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FIRE-ESCAPE.

945,065.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed May 6, 1909. Serial No. 494,403.

To all whom it may concern:

Be it known that I, CHARLES W. L. WARTENBERG, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to fire escapes and is more particularly directed to that class known as chute fire escapes, wherein a folding chute is provided which, when not in use, is stored in a receptacle located on one of the upper floors of the building and when in use, is supported, preferably on a pair of cables extending from such upper floor to suitable ground anchors.

One object of my invention is to provide an improved receptacle for chutes of this description.

Another object is the provision of improved means for releasing the chute from its stored or inoperative position. And still another object is the provision of improved means for securing the head of the chute in place.

To these and other ends, therefore, my invention consists in certain novel features and constructions such as will be more fully described hereinafter and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view of my invention, Fig. 2 is a front view thereof, and Fig. 3 is a view of a slight modification.

A indicates the wall of a building, and 1, 1, the floors. One of such floors, preferably a corridor or hall, leads to an opening communicating with a hood or receptacle 2. The opening between the corridor and receptacle is preferably about as large as a doorway and does indeed constitute a doorway, but it will be understood that the hood can be fastened to the outside face of the wall A, over and inclosing a window if desired. Any suitable fastening means as the stay bolts 3, 3, may be used to secure the hood in place.

The hood preferably comprises a frame 4, through which the stay bolts pass, such frame having an outwardly inclined front

wall 5 and sides, the lower edges of which are upwardly inclined as shown.

A trap door 6 hinged to the bottom of the frame is normally closed and forms the bottom of the hood. It will be observed that the lower edges of the front wall and sides depend some distance below the trap door when the latter is in its normal closed position to prevent accumulations of ice and snow from collecting at the joint and interfering with the instant operation of the trap door. The inclined front wall will operate to shunt the snow off of the hood.

Cables 7, 7, preferably of steel, extend from within the hood, to suitable anchors 8, 8 in the ground, the upper ends of the cables being conveniently secured to the stay bolts 3, 3, and in order to permit the door 6 to close and open, I provide such door with the slots 9, 9, through which the cables extend.

In order to maintain the door firmly, yet releasably in locked position, I provide the inner face of the door with the eyes 10, 10, adapted to be engaged by the hooked free ends of spring leaf latches 11, 11, secured to the inner face of the front wall 5 and passing under the straps 12, 12. The outer edge of the door engages a check stop 13 on the inner face of the front wall, whereby to limit the upward movement of the door.

A chute 15 of the required length is normally stored or contained within the hood. This chute is preferably of asbestos and rests upon and is supported by the trap door 6.

As one means for fastening the head of the chute in the hood in open position to receive persons desiring to escape from the building, I secure the bottom edge of the head of the chute between the threshold 13' of the frame and a bar 14. The side edges of the head of the chute are provided with rings 16 received on hooks 17 extending from the side walls of the hood. The upper edge of the head of the chute is provided with an extension 19, the edge of which is clamped by a bar 20 to the inner face of the front wall 5.

The chute is provided along its two upper corners with a series of gromets 21 strung on the cables 7, 7.

The free end of the chute will fall to the ground, guided by the cables which preferably incline outward from the building, as

soon as the trap door is released from the hooked springs and in order to effect such release in an extremely easy and efficient manner, I journal one arm of an angle lever 22 on the inner face of the front wall, such arm extending behind the leaf spring latches and having cams 23 thereon adapted to engage the latches. A rod 24 leads from the remaining arm of the lever across the hoods and through the wall A, the free end of such arm being provided with a pull 25 of any suitable description, a jerk of which will rotate the lever to cause the cams to engage and force the hooked free ends of the latches out of engagement with the eyes 10, 10 on the trap door. The moment this occurs, the weight of the chute on the door causes the latter to drop open, releasing the chute which slides down the cables and is in instant readiness to receive persons escaping from the building. Such persons may dive or slide down the chute, the incline of which is not so steep as to cause injury by a too rapid falling therethrough, it being possible to regulate one's speed of descent by frictionally engaging the chute more or less, by spreading the arms and legs.

The chute may be pulled back up the inclined cables by means of the ropes 26 secured to the lower end of the chute and to the hood respectively, and the trap door may be returned to latched position by means of the cords 27 and pulleys 28.

It is sometimes impossible to install the fire escape so that the cables 7, 7 extend out from the building, owing to insufficient space, as in city hotels and the like, where the permanent cables would obstruct traffic in the streets. In order to overcome this exigency, I may provide any ordinary balcony with a hood like that shown in Fig. 3, the side of the hood facing outward, and such hood may be provided with a trap door or the front wall may be hinged at its upper end as indicated at 29, so as to swing upwardly when released, a spring 30 causing such upward movement of the door. The cables 7, 7 are fastened at their lower ends to a stout arm 31 projecting from the wall of the building near the ground.

It is evident that changes might be made in the form and arrangement of the several parts described, without departing from the spirit and scope of my invention.

Having thus fully disclosed my invention, what I claim as new, is:—

1. A fire escape comprising a hood projecting from the wall of a building and closed to the weather, a chute normally stored in the hood, cables extending from within the hood, anchors to which the cables are secured, the chute running on the cables, a door in the hood against which the chute rests, the door provided with slots for the passage of the cables, means for releasably

holding the door in closed position, and means for releasing the door.

2. A fire escape comprising a hood, a chute normally contained within the hood, cables with which the chute has sliding engagement, a door closing an opening in the hood, the chute resting against the door, a latch carried by the hood, means on the door normally engaged by the latch to retain the door in closed position, a lever journaled within the hood, a cam on the lever adapted to engage the latch to release it from the door, and a rod connected to the lever for actuating the same.

3. A fire escape comprising a hood, a chute normally contained within the hood, cables with which the chute has sliding engagement, a door closing an opening in the hood, the chute resting against the door, eyes carried by the door, spring leaf latches mounted within the hood, the hooked free ends of the latches adapted to engage the eyes to normally maintain the door closed, an angle lever journaled within the hood behind the latches, cams on the lever adapted to engage the latches when the lever is actuated, to effect their release from the eyes, and means for actuating the lever.

4. A fire escape comprising a hood, permanent cables extending into the hood, a chute having a running engagement throughout its length with the cables and normally contained in the hood, means for releasing the chute, and means for retaining the mouth of the chute open at all times.

5. A fire escape comprising a hood, permanent cables extending into the hood, a chute having a running engagement throughout its length with the cables and normally contained in the hood, means for releasing the chute, a bar within the mouth of the chute for securing its lower edge to the hood, means for separating the sides of the mouth, and means for securing the upper edge of the mouth to the hood to retain the mouth of the chute constantly open.

6. A fire escape comprising a hood, permanent cables extending into the hood, a chute having a running engagement throughout its length with the cables and normally contained in the hood, means for releasing the chute, means for holding the sides of the mouth of the chute apart, an extension from the upper edge of the mouth, and chute-sustaining means for holding the extension and the lower edge of the mouth apart to maintain the mouth of the chute constantly open.

7. A fire escape comprising a hood, permanent cables extending into the hood, a chute having series of gromets extending throughout its length and having a running engagement with the cables, means for maintaining the mouth of the chute constantly open and for securing it to the hood, the

chute normally contained within the hood, a door against which the chute rests, means for tripping the door to release the chute, and means for returning the door to closed position.

5 8. A fire escape comprising a hood, cables extending into the hood, a chute having a running engagement with the cables and normally contained in the hood, a door
10 against which the chute rests, the walls of the hood depending below the outer face of

the door when the latter is in closed position, means for locking the door in closed position, and means for releasing the locking means.

In testimony whereof, I affix my signature in presence of two witnesses.

CHARLES W. L. WARTENBERG.

Witnesses:

GEORGE PETRE,
RALPH S. WARFIELD.