No. 864,405. PATENTED AUG. 27, 1907.

J. BOWEN.

FIRE ESCAPE.

APPLICATION FILED MAY 8, 1907.

3 SHEETS—SHEET 1.

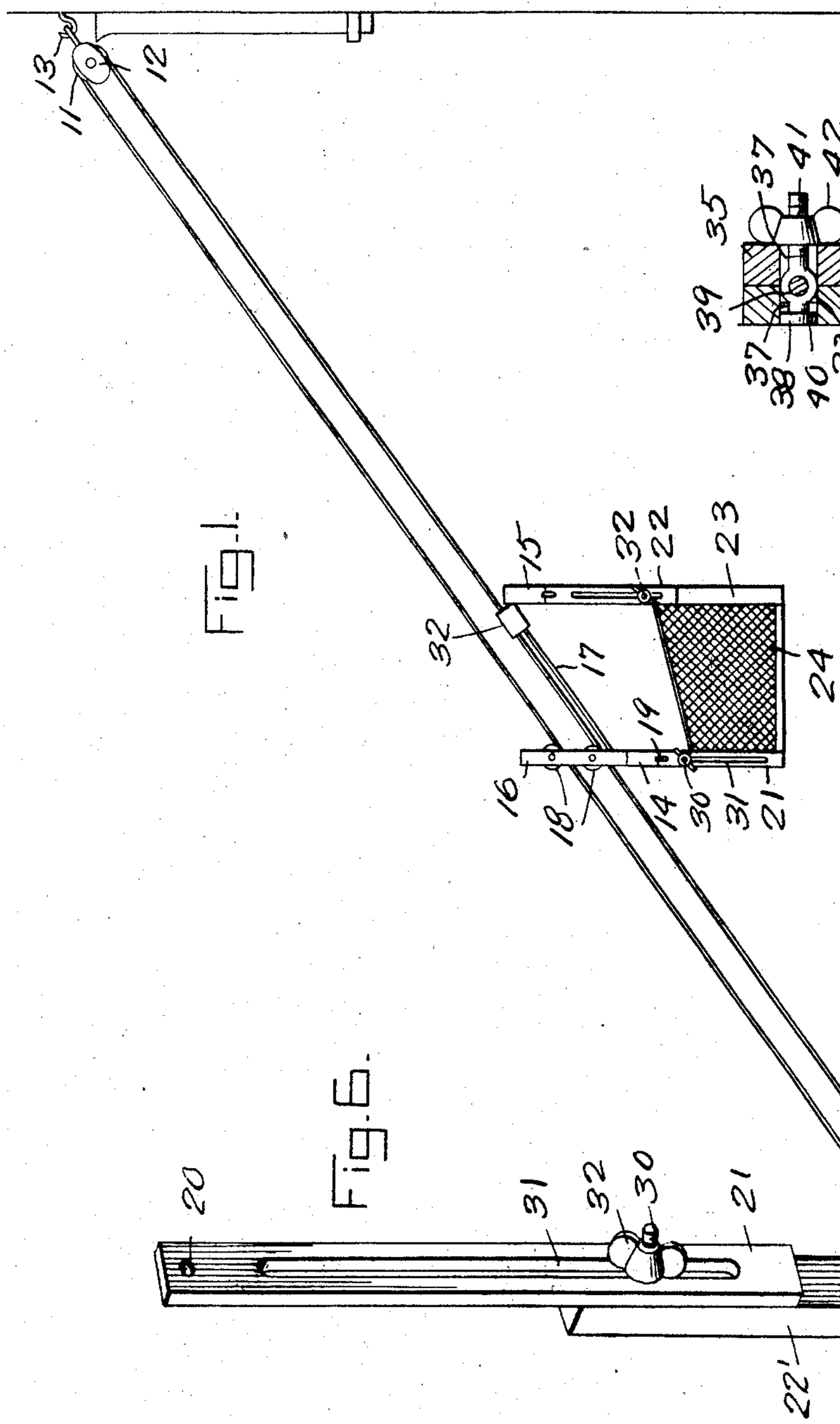

Fig. 1.

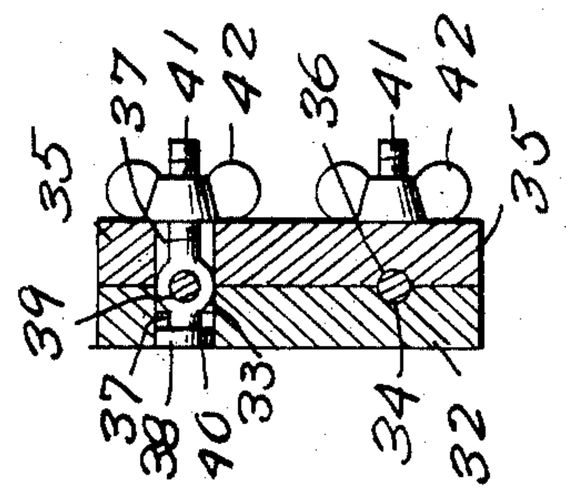

Fig. 7.

Fig. 6.

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8 SHEETS—SHEET 2.

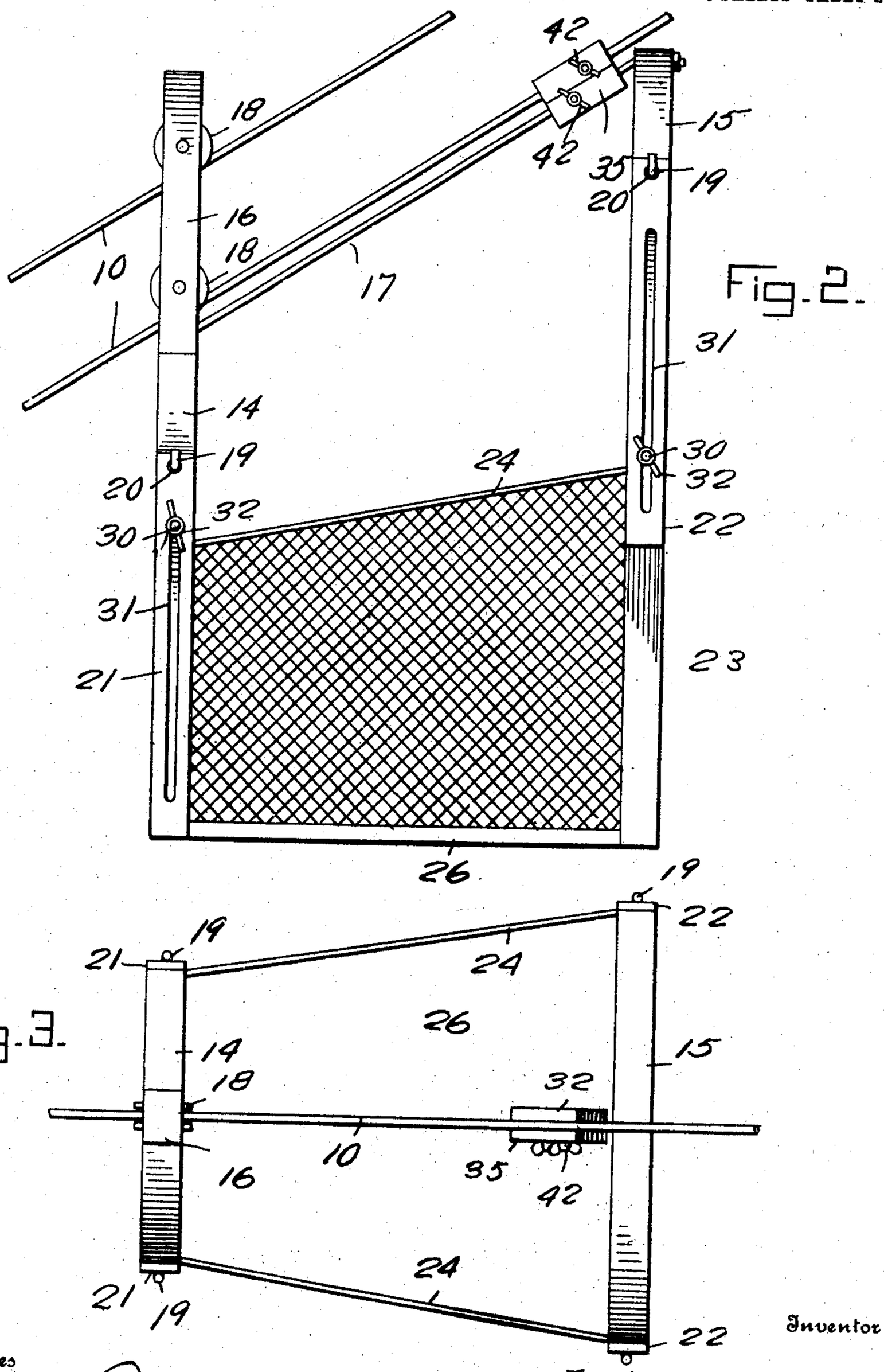

Fig. 2.

Fig. 3.

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3 SHEETS—SHEET 3.

Fig. 4.

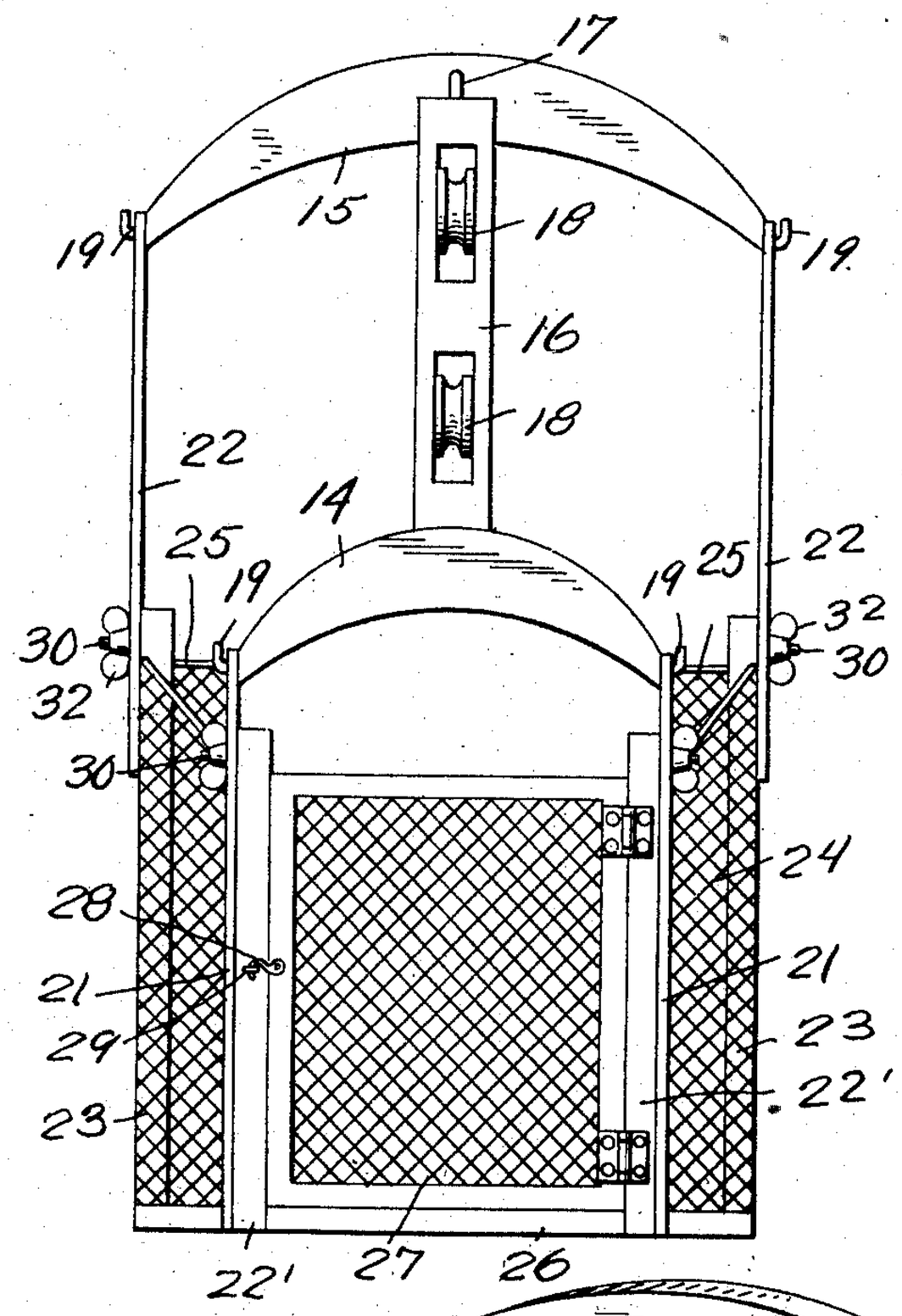
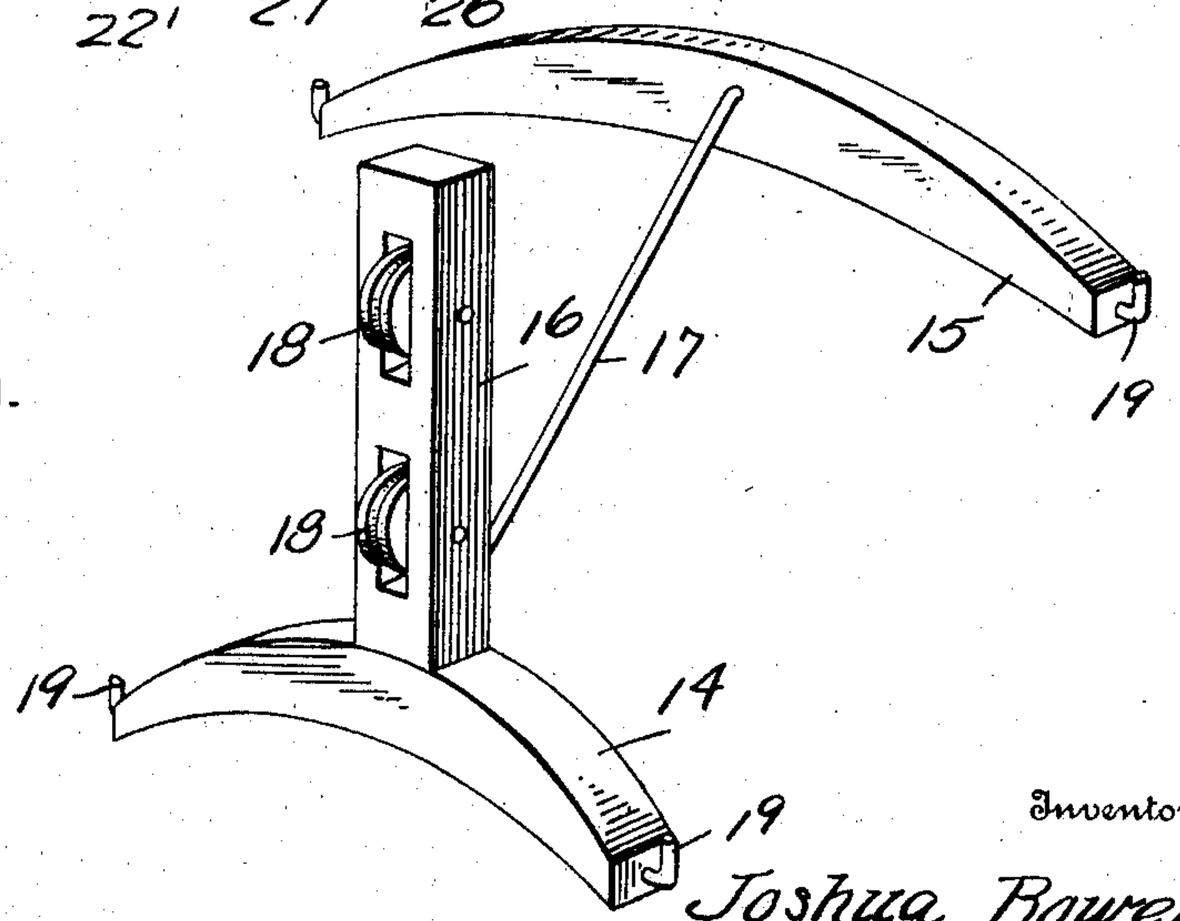


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSHUA BOWEN, OF SILVERTON, OREGON.

FIRE-ESCAPE.

No. 864,405. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed May 8, 1907. Serial No. 372,558.

To all whom it may concern:

Be it known that I, JOSHUA BOWEN, a citizen of the United States, residing at Silverton, in the county of Marion, State of Oregon, 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.

This invention relates to fire-escapes and has for its object to provide a device of this class which may be quickly set up and when properly placed will be adapted to carry more than one person from the burning structure at a time. The majority of such devices now in use are only adapted to carry one person at a time and hence very rapid work is essential if several persons are to be rescued.

Broadly stated, the invention is in the form of an aerial elevator, including a car which is supported upon a cable which is caused to travel by means of a windlass, to raise and lower the car from the ground to a window in the building and vice versa.

One of the novel features of the invention resides in the provision of means whereby the level of the car may be adjusted according to the elevation to which the cable is extended, and the car itself also embodies novel features which will be presently more specifically stated.

In the accompanying drawings, Figure 1 is a view in elevation showing the manner in which the escape is used, Fig. 2 is a detailed side elevation of the car itself, Fig. 3 is a top plan view thereof, Fig. 4 is a front elevation thereof, Fig. 5 is a detail perspective view of the suspension means for the car, Fig. 6 is a similar view of one of the adjustable standards for the car, and, Fig. 7 is a detail sectional view through one of the cable clamping devices.

As shown in the drawings, the escape embodying my invention consists of a windlass 7 which may be of any desired construction except that the drum 8 thereof is grooved as at 9 for the engagement of an endless cable 10, the cable being also passed over a pulley 11 in a block 12 which block is provided with a hook 13 whereby it may be attached to a window frame. The windlass is supported in any suitable manner as will be readily understood. A hanger is connected with one stretch of this cable and is also supported by the other stretch thereof and this hanger is designed to support a car in which persons may stand while being lowered from a burning building. The hanger will first be described. The hanger comprises a front and a rear arch, indicated respectively by the numerals 14 and 15, and extending upwardly from the front arch at its middle is an upright 16, there being a brace rod 17 connected at its forward end to the upright and at its rear end to the rear arch 15 at the middle thereof. The lower stretch of the cable 10 is secured to this brace rod at its rear end in a manner to be presently set forth, and journaled in the upright are pulleys 18 beneath which the two stretches of the cable are passed, it being understood that the pulleys are located one above the other. Each end of each hanger arch 14 and 15 is provided with a suspension hook 19 and these hooks are designed for engagement in openings 20 formed in the upper ends of members 21 and 22, there being a pair of each of such members. The function of these members will be apparent from a specific description of the car itself.

The car comprises two pairs of corner standards or posts the front pair being indicated by the numeral 22′ and the rear pair by the numeral 23. The standards 22′ are connected with the corresponding standards 23 by the sides 24 of the car and the standards 23 are connected with each other by the rear end 25 of the car. The car is also provided with a flooring 26 and a door 27 is hinged at one side to one of the standards 22′ and is provided with a latch 28 which is engageable with a keeper 29 carried by the other standard 22′, it being understood that exit may be had from the car by way of this door. The standards 22′ and 23 extend above the adjacent ends of the sides of the car and adjacent their upper ends they are provided with integral studs 30 which project through slots 31 formed in the corresponding members 21 and 22, there being a nut 32 engaged upon each of the studs for the purpose of holding the members 21 and 22 at various adjustments with respect to the corresponding standards 22′ and 23 whereby the level of the car may be adjusted to suit the elevation to which the upper end of the cable 10 is carried.

From the foregoing description of my invention, it will be seen that the windlass drum may be rotated to cause the car to ascend or descend according to the direction of rotation.

The connection between the brace rod of the car and the lower stretch of the cable 10 is in the form of a clamp comprising a member 32 which is provided in one of its faces with grooves 33 and 34 in which are received respectively the cable and the brace rod and other blocks 35 are disposed against the grooved face of the block 32 and are provided also with grooves 36 which coöperate with the grooves 33 and 34 to receive the brace rod and cable. Slots 37 are formed through each of the blocks in the channels therein and transversely of the said channels or grooves and engaged through each of the slots is a bolt 38 having a flattened apertured portion 39 through which either the brace rod or the cable passes and a guide head 40 which works in the slots and prevents rotation of the bolts. The bolt is threaded at its

end opposite to the head 40 as indicated at 41 for the engagement thereon of a thumb nut 42 which may be turned to tend to draw the bolt from its engagement with the slots and consequently to clamp the cable or brace rod between the blocks.

What is claimed is—

1. The combination with an endless cable supported for travel, of arch members, an upright extending vertically from the forward one of said arch members, pulleys journaled in the upright, the said pulleys being designed for the passage of the cable, a brace rod connecting the front and rear arch members, a clamp connecting the brace rod and also the lower stretch of the cable, a car suspended from the arch members, and a door hinged to the car at the front end thereof.

2. The combination with an endless cable supported for travel, of arch members, an upright extending vertically from the forward one of said arch members, pulleys journaled in the upright, the said pulleys being designed for the passage of the cable, a brace rod connecting the front and rear arch members, a clamp connecting the brace rod and also the lower stretch of the cable, a car including adjustable corner posts which are suspended from the corresponding ends of the arch members, and a door hinged to the car, the adjustable corner posts of the car serving as a means whereby the level of the car may be adjusted.

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

JOSHUA BOWEN.

Witnesses:
LOUIS E. RAUCH,
MARTIN J. ADAMS.