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I. S. SHUMAKER.

FIRE LADDER.

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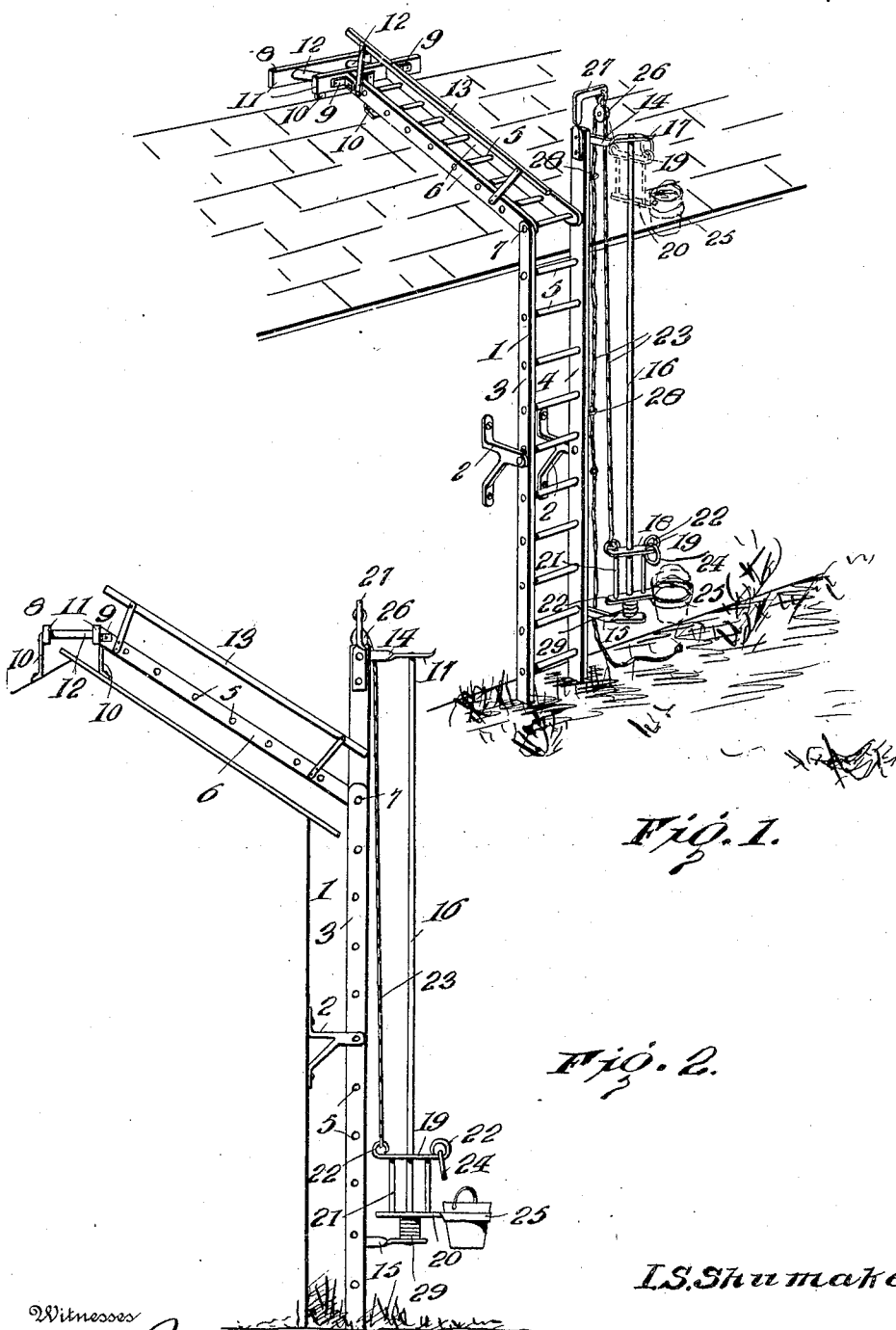


Fig. 1.

Fig. 2.

Inventor
I. S. Shumaker.

Witnesses

W. N. Woodson

By

R. A. Race, Attorneys

UNITED STATES PATENT OFFICE.

ISHAM S. SHUMAKER, OF ELLOREE, SOUTH CAROLINA.

FIRE-LADDER.

No. 836,785.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ISHAM S. SHUMAKER, a citizen of the United States, residing at Elloree, in the county of Orangeburg and State of South Carolina, have invented certain new and useful Improvements in Fire-Ladders, of which the following is a specification.

This invention has relation to means for protecting houses against fire, and more particularly to a combined ladder and hoisting mechanism which enables ready access to be had to the roof and water to be easily elevated thereto in case of an emergency. After a fire has originated the primary object is to obtain control over same before it has gained much headway, and in order to accomplish this result it is necessary that the operator have free access to the fire from an advantageous position.

The object of this invention is to provide means whereby a person at a moment's notice will be enabled to fight a fire on any side of the building from a station upon the roof.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view showing the application of the device. Fig. 2 is a side elevation of the ladder and hoisting mechanism.

Corresponding and like parts are referred to in the following description and indicated in both views of the drawings by the same reference characters.

The invention is shown as applied to a house of the ordinary construction, in which the roof is formed with two sides which slope in opposite directions from the ridge.

The numeral 1 designates a ladder, which is secured to the side of the house by means of suitable brackets 2 and comprises side pieces 3 and 4, which are connected by the usual rounds 5. This ladder 1 extends from the ground to the roof and has its upper end pivotally connected to a second ladder 6 by means of a pin 7. The second ladder 6 runs along the sloping side of the roof and is connected to a platform 8 by means of braces 9. The platform 8 is supported over the ridge of the roof by brackets 10 and may comprise side pieces 11, running parallel to the ridge and joined by cross-pieces 12. If desired, a hand-rail 13 may be secured to one of the

side pieces of the ladder 6, which runs along a side of the roof. One of the side pieces 4 of the ladder 1 extends above the roof and is provided at each end with outwardly-projecting brackets 14 and 15, which are connected by a rod 16, running longitudinally along the ladder. These brackets 14 and 15 are shown as formed of bar-iron, having one end secured to the side piece 4 and having their opposite ends twisted so as to be approximately horizontal, the lower bracket 15 being bent so as to throw the rod 16 away from the ladder, while the upper bracket 14 extends beyond its junction with the rod 16 to form a hook 17. An elevator 18 is slidably mounted upon the rod 16 and comprises spaced cross-bars 19 and 20, having their ends connected by rods 21 and provided at an intermediate point with openings through which the rod 16 is passed. The upper cross-bar 19 is provided with eyes 22 at both ends thereof, one of said eyes serving as a securing means for a cable 23, while a ring 24 is passed through the opposite eye and serves both as a handle by means of which a man can raise the elevator as he ascends the ladder and also as a catch when it is swung over the hook 17 to hold the elevator in a raised position. The lower cross-bar 20 of the elevator has a ring 25, formed integral with one end thereof and adapted to receive a bucket and hold same in an upright position during the ascent and descent thereof. A cable 23, which has one of its ends secured to one of the eyes 22 on the elevator, passes upward over a pulley 26, supported by means of a bracket 27, and then down to the ground through eyes or guide members 28, secured to the side piece 4 of the ladder 1. A coil-spring 29 may be placed around the lower end of the rod 16 to serve as a cushion and break the jar when the elevator 18 reaches the bottom.

In operation the device is secured in position, as has been described, so as to form a ladder leading from the ground to a platform and upon the roof and also an elevator for hoisting water thereto. In case of fire the operator places a bucket of water in the ring 25 on the elevator and thrusts his arm through the ring 24 as he ascends the ladder and then hooks the elevator in a raised position by throwing the ring 24 over the hook 17. He can then remove the bucket of water and mount the platform 8 where he can have ready access to a fire on any part of the building. By releasing the ring 24 from engage-

ment with the hook 17 the elevator 18 can be lowered and another bucket of water placed in position in the ring 25 and raised by pulling upon the cable 23. In this manner the individual upon the platform 8 can be provided with practically a continuous supply of water and will in most instances be enabled to obtain a control over the fire and extinguish same before it has gained enough headway to do much damage.

It must be understood that I do not limit myself to the precise construction of the ring 25 as illustrated and described, since it could readily be modified so as to enable several buckets to be elevated at the same time.

Having thus described the invention, what is claimed as new is—

1. The combination of a ladder, brackets projecting from the sides of the ladder, the upper bracket being formed with an extension, a rod connecting the two brackets, an elevator slidably mounted upon the rod and provided with means for supporting a bucket, and a ring loosely connected to the elevator by means of which an operator can raise the elevator as he ascends the ladder, said ring being also adapted to engage with the extension of the upper bracket to hold the elevator in a raised position.

2. The combination of a ladder, a guideway secured thereto and extending along one of the sides of the ladder, an elevator slidably mounted upon the guideway and comprising two spaced cross-bars, a ring for one of the cross-bars adapted to receive a bucket, and a handle connected to the opposite cross-bar by means of which the operator can raise the elevator as he ascends the ladder.

3. The combination of a ladder, a guide-rod secured thereto and extending along one of the sides thereof, an elevator slidably

mounted upon the guide-rod and comprising two spaced cross-bars through which the guide-rod passes, a ring for one of the cross-bars adapted to receive a bucket, a ring loosely connected to the opposite cross-bar for the purpose specified, and a hook projecting from the ladder and adapted to engage with the second-mentioned ring in order to hold the elevator in a raised position.

4. The combination of a ladder, a guide-rod secured thereto and extending along one of the sides thereof, an elevator slidably mounted upon the guide-rod and comprising spaced cross-bars through which the guide-rod passes, one of the cross-bars being provided with means for supporting a bucket, a ring loosely connected to the opposite cross-bar, and a hook projecting from the ladder and adapted to engage with the ring to hold the elevator in a raised position.

5. In a device of the character described the combination of a ladder, brackets projecting therefrom, a rod connecting said brackets and an elevator slidably mounted upon the rod, said elevator comprising spaced cross-pieces having openings through which the before-mentioned rod is passed, one of said cross-pieces having a ring made integral therewith for the reception of a bucket or similar receptacle, while the opposite cross-piece has a ring loosely connected thereto and which is adapted to hook upon the upper bracket to hold the elevator in a raised position.

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

ISHAM S. SHUMAKER. [L. s.]

Witnesses:

ROBERT LIDE,
E. W. O'CAIN.