

(No Model.)

2 Sheets—Sheet 1.

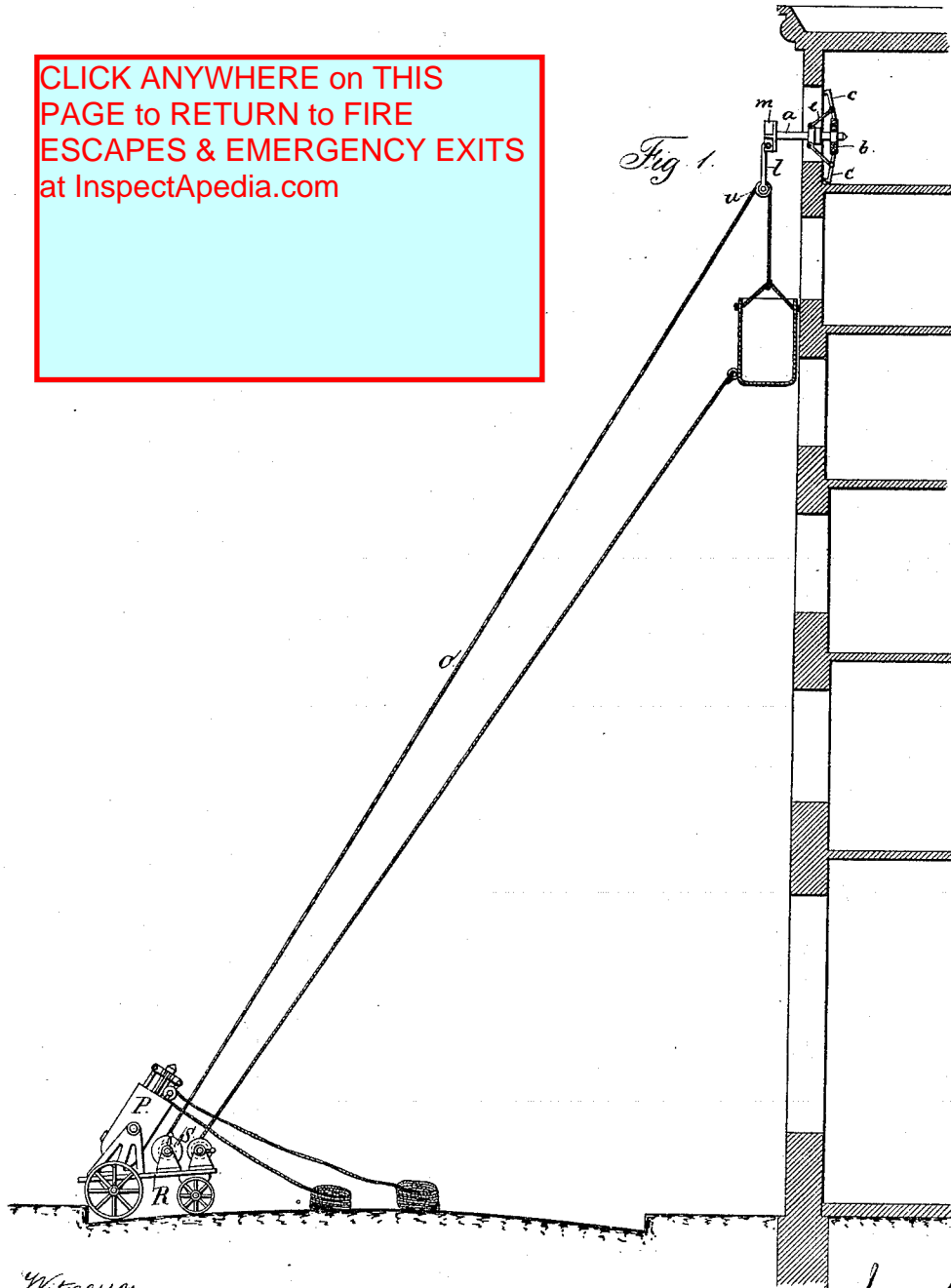
A. W. SPERRY.

FIRE ESCAPE.

No. 276,090.

Patented Apr. 17, 1883.

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J. Stair
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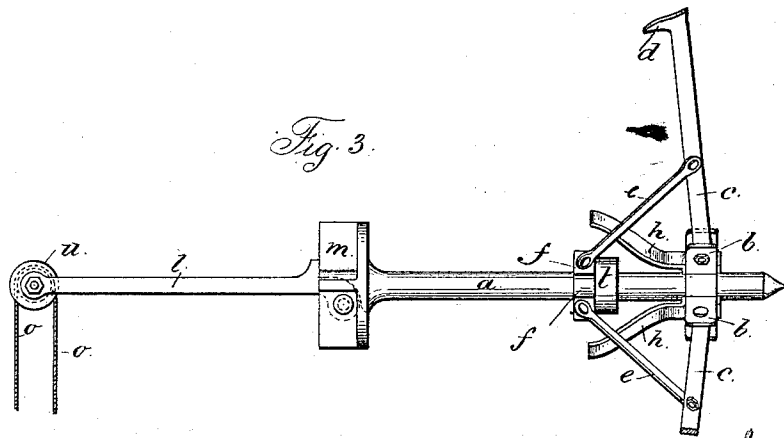
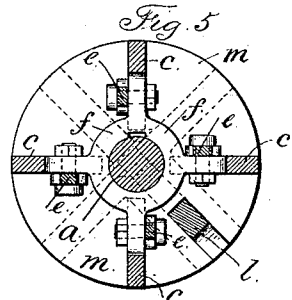
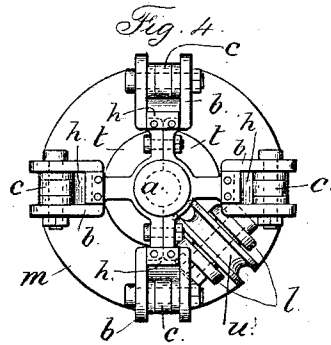
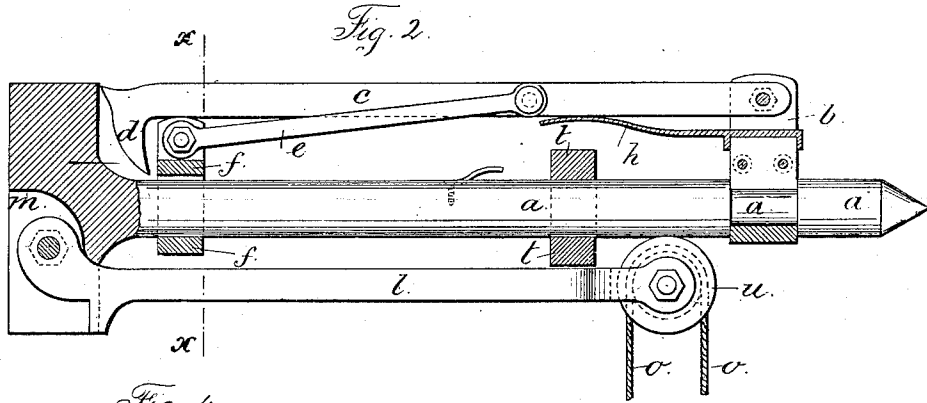
Inventor
Alfred W. Sperry.
per Lemuel W. Serrell atty.

A. W. SPERRY

FIRE ESCAPE.

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 per *Lemuel W. Lovell* atty

UNITED STATES PATENT OFFICE.

ALFRED W. SPERRY, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-THIRD TO THOMAS J. MONTGOMERY, OF BOSTON, MASSACHUSETTS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 276,090, dated April 17, 1883.

Application filed July 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALFRED W. SPERRY, of Hartford, in the State of Connecticut, have invented an Improvement in Fire-Escapes, of which the following is a specification.

Difficulty often attends the rescuing of individuals from the upper stories of buildings that are on fire.

My invention relates to means for throwing a fire-escape to the top of a building, or to the upper windows.

I employ a portable gun that is operated either by powder or other explosives, or by a spring of sufficient power, or by compressed air, said spring being drawn back by a windlass or other suitable mechanism, and discharged at the proper time by a trigger. This gun may sometimes be such that it could be held at the shoulder; but usually the end is planted upon the ground. Into this gun is placed an anchoring device in a closed condition, and a rope is fastened to it. This anchor is made similar to an umbrella, with hooks at the ends of the ribs, so as to open by the concussion of falling through a window upon the floor. This anchor is to be as light and strong as possible, and to the stem thereof a pulley is connected, and through the pulley there is a strong but small wire rope, which may either be sufficient to carry the weight of the fire-escape device or to draw through the pulley a stronger wire rope for the same purpose.

The apparatus is to be used as follows: After the powder has been introduced into the gun or the spring thereof compressed, the anchor is placed in the gun in a folded condition, and to the same is affixed the wire rope, passing through the sheave or pulley on the stem of the anchor. This anchor is now thrown by the gun to one of the highest windows of the building above the persons that are to be saved; or else it may be thrown upon the roof over a balustrade or coping. It is preferable to have the anchor capable of spreading out wider than a window, in order that after the same has been thrown into or through the window the same may open out and the hooked ends catch upon the sill or casing, or both, and hold the anchor firmly. The pulley

is preferably upon a rod or stem, so as to hang out of the window, and through it passes the small wire rope, and by it the larger wire rope will be drawn up, and with it a basket, in which a fireman may be sent to assist in rescuing the imperiled persons, who are to be lowered successively in the basket; or else a rope or other suitable ladder is drawn up.

If firemen are supplied with several of these anchors and appliances, the same can be thrown to different parts of the building in succession and the inmates saved. The anchors would have to remain in the building; but the ropes can be drawn out of the pulleys when no longer needed.

There will usually be a windlass for operating the hoisting and lowering rope, and the same may be operated by hand or by steam-power from the fire-engine boiler.

In the drawings, Figure 1 is a partial section of a building, representing the manner in which the fire-escape is to be used. Fig. 2 shows the expansive anchor as folded for being introduced into the gun. Fig. 3 shows the same in the form which it assumes as it is projected; and Fig. 4 is an end view of the anchor, and Fig. 5 is a section at the line *x x*, Fig. 2.

The stem *a* is provided with three or more joints, *b*, by which are hinged the arms *c*, at the ends of which are claws *d*, adapted to catch into window frames or casings; and *e* are stays extending from near the centers of the arms to the traveler *f* on the stem *a*. These stays prevent the arms opening too far. The springs *h* serve to partially open the anchor after it leaves the gun. There is a collar at *t*, around the stem *a* of the anchor, to form a stop for the traveler *f*, that determines the position of the parts when the anchor is open, as at Fig. 3. The springs *h* may be upon this collar *t*, with their outer moving ends acting upon the arms *c*, near the fulera *b*. The rod *l* is hinged at one end to the disk *m*, and folds forward into a slot in the disk and terminates with a pulley, *u*, through which passes the line *o*. As the anchor is fired from the gun *P* this rod *l* swings back and forms a tail or stem that draws up the line or rope *o*.

I prefer to place the gun *P* on a carriage, *R*,

having wheels, so that it can be rapidly moved from place to place. Upon this carriage, or upon an engine, and operated by hand or by steam, is the drum or hoisting-winch S, that is used with the rope or line *o* to draw up the ladder or a basket; and a second winch may be employed to draw the basket or the lower end of the rope ladder away from the lower part of the building that may be on fire.

10 I claim as my invention—

1. The combination, with an expansive anchor and means for throwing such anchor into a building, of a rope connected to such anchor, and a fire-escape apparatus that is drawn up
15 by such rope, substantially as set forth.

2. In combination with an expansive anchor, a gun adapted to receive the anchor to be thrown into a window or upon the roof, and a pulley and rope connected with that anchor, as set forth.

3. The expansive anchor having hinged arms and the hooks at the ends of the anchor-arms, and the pulley and rope upon such anchor, substantially as set forth.

Signed by me this 1st day of July, A. D. 1882.

ALFRED W. SPERRY.

Witnesses:

E. B. DILLINGHAM,

P. J. DARCY.