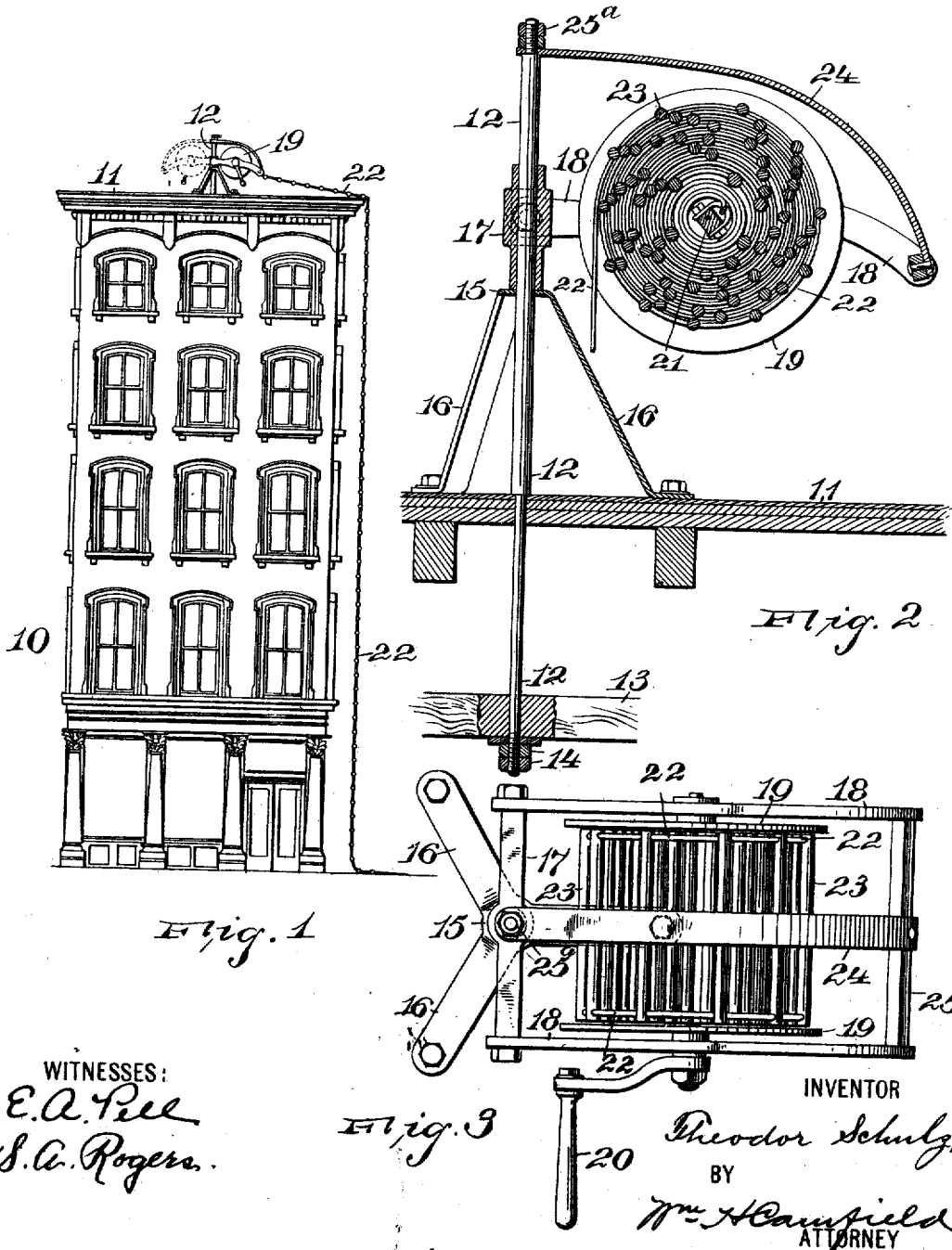


T. SCHULZ.
FIRE ESCAPE.
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950,246.

Patented Feb. 22, 1910.



WITNESSES:
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Fig. 3

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FIRE-ESCAPE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THEODOR SCHULZ, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, 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, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to a fire-escape, and is designed to provide a flexible ladder or rope or any other means of descent, and the arrangement of parts is such that the same fire-escape can be used on any side of a building.

The particular arrangement of apparatus consists in the flexible ladder or similar element being installed on the roof of a building, and arranged so that it can be let down from any side of the building and provide means for assembling the flexible ladder, or its equivalent, when it is not in use so that it does not depend from the building.

The invention further consists of a reel on which the ladder is coiled, and the reel is arranged to be moved preferably by rotation so that if one side of the building is so filled with flame or smoke that descent on that side is dangerous, the reel can be turned and the ladder let down on any of the four or more sides of the building, whereby descent from all floors on the ladder is insured, and on the side on which descent is safest.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is a front elevation of a building with the fire-escape in position to allow the occupants to escape. Fig. 2 is a section of the reel and the ladder, and Fig. 3 is a top view of the same.

The invention is installed on any building 10 and is arranged on the roof 11 thereof, and a spindle or stem 12 is set up on the roof extending through the beams 13 which are arranged in some buildings immediately beneath the roof and form a part thereof, the spindle, being secured by the nuts 14 which screw on the end thereof. The spindle is braced part way up by the brace 15 which has the legs 16 fastened to the roof. The brace also acts

to support the frame which holds up the reel on which the fire-escape is coiled. This frame rotates on the stem 12 and consists of a cross-arm 17 which rotates on the spindle 60 and has the parallel projecting arms 18, and between these arms 18 is journaled the reel 19 which is free to rotate, under normal conditions, and can be manually manipulated by means of a handle 20 secured to the spindle 65 of the reel.

Secured to the spindle 21 and coiled on the reel is the flexible ladder 22 which can either be arranged as shown with the rungs 23, or it can consist of a rope down which the occupants of the house may slide. The side frames 19 act to hold the ladder or other flexible escaping means in alinement, when it is coiled up, by the rotation of the handle 20. 75

A brace 24 extends from the cross-bar 25, on the outer end of the arms 18, and is secured preferably by the nuts 25^a to the top of the spindle or stem 12, whereby the reel is steadied and the whole structure is made 80 more solid.

One of the main objections heretofore made to fire-escapes, which have an escaping means adapted to unreel, has been that the persons escaping are excited and sometimes in a panic and are apt to load up the fire-escape while it is descending, and in consequence they descend nearly as hastily as if no escape were used, resulting sometimes in serious injury. Complicated brakes 85 have been placed in the reel to overcome this, but when subjected to the atmosphere and not lubricated, they are found wanting when called on. They also have the disadvantage of being expensive. In my structure however, by the location and design of the fire-escape the descent is not apt to be swift enough to cause injury to persons who mount the escape before it is completely unreeled. This is due to the friction on the edge of 100 the roof, since the reel being approximately central, causes the vertical depending portion to form an acute angle with approximately horizontal portion extending from the edge of the roof to the reel. To cause 105 this acute angle the reel is mounted close to the roof. In the case of a tall building, the friction can be further increased by winding the reel as in Fig. 1, so that the flexible escaping means is fixed around the bar 25, 110 causing another bend in the ladder or its equivalent.

I do not wish to be limited to the exact construction for supporting the reel, since slight changes might be necessary on account of the character and location of the building, or to suit individual tastes as to the best form of structure. It will be evident that when this rotating reel arranged in a rotatable frame is installed on the roof of a building, that the ladder or its equivalent can be uncoiled and let down on any side of the building, the occupants of course picking out that side on which the flames have made the least progress, or which is least filled with smoke.

Having thus described my invention, what I claim is:—

1. A fire escape, comprising in combination, a vertically disposed stem reduced at its lower end to form a shoulder, said shoulder adapted to rest upon the roof of a building, said reduced end passing through said roof and being further adapted to be secured to a beam thereunder, a brace comprising a plate perforated to receive said vertically disposed stem, depending legs carried by said plate, said legs adapted to rest upon and be secured to the roof of said building, a cross arm having bearings upon said vertically disposed stem and further resting upon the upper face of said plate, a pair of parallel projecting arms carried by said cross arm, a bar connecting the free ends of said arms, a third arm secured at the termination

of the upper portion of said vertically disposed stem, said third arm being curved, the free end of said third arm being secured to said bar, a reel mounted between said parallel projecting arms, and flexible escaping means carried by said reel.

2. In a fire escape, a stem adapted for vertical disposition, means to support said stem from the roof of a building, a cross arm mounted on the stem, a pair of parallel horizontally arranged arms carried by the cross arm, a bar connecting the free ends of the parallel arms, a reel mounted between the parallel arms, and a third arm supported at one end from the top end of the stem and having its opposite end connected to said bar which connects the parallel arms.

3. In a fire escape, a vertical stem adapted to be passed through the roof of a building and having a shoulder thereon adapted to seat on the roof, means to secure the inner end of the stem rigidly to the building, a brace secured to the roof and to the stem, and a rotatable reel carrier on the stem sustained against downward movement by engagement with the brace.

In testimony, that I claim the foregoing, I have hereunto set my hand this 19th day of February 1908.

THEODOR SCHULZ.

Witnesses:

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E. A. PELL.