(No Model.)

C. WOOD.

FIRE ESCAPE.

No. 302,459. Patented July 22, 1884.

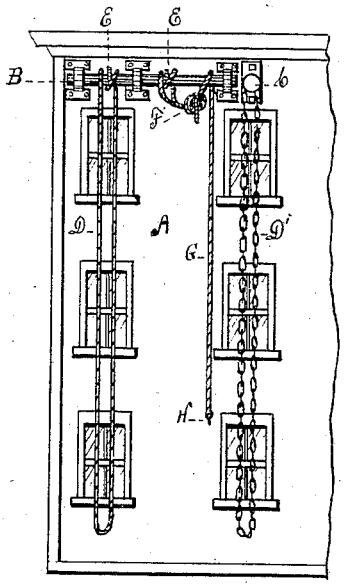

FIG. 1.

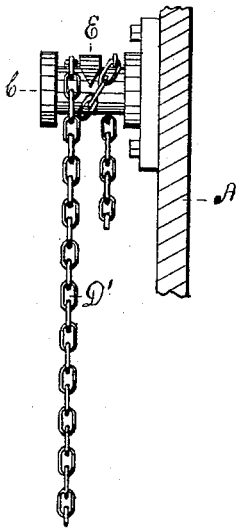

FIG. 2.

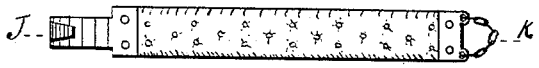

FIG. 3.

FIG. 4.

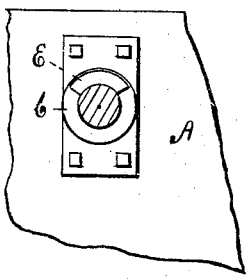

FIG. 6.

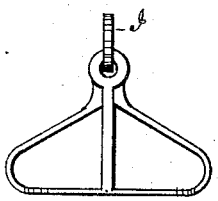

FIG. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES WOOD, OF WORCESTER, MASSACHUSETTS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 302,459, dated July 22, 1884.

Application filed February 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WOOD, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Fire-Escapes, of which the following is a specification.

My invention relates to a device designed to aid in the escape from burning buildings, and is fully set forth and described hereinafter, and illustrated in the accompanying drawings, in which—

Figure 1 represents the front of a building with my improveed "escape" attached. Fig. 2 shows an enlarged view of the sustaining-pin, with a portion of the rope or chain coiled thereon. Fig. 3 is the body strap or sling; Figs. 4 and 5, side and front views of the stirrup, and Fig. 6 a sectional view of the supporting-pin C.

Similar letters refer to similar parts in the several views.

I attach to the outer walls of a building, A, at some convenient point near the top, a rod, B, running parallel to and at a small distance from the building and supported by means of brackets or other suitable means of support; or, in lieu of the rod B, I attach a pin, C, extending out from the face of the building and at right angles thereto. These rods or pins should be placed over a line of doors or windows, for greater convenience of access. Around these rods or pins, as may be used, I pass an endless chain or rope of wire or cordage, as shown at D D′, Figs. 1 and 2, although a non-combustible material is preferable. This endless chain I pass around the supporting rods or pins in one or more turns, as may be required, in order to afford the requisite friction; and in order to prevent the coils of the rope or chain from overlapping each other, I place a blade or partition, E, on the rod or pin C, as shown in Fig. 2, in which D′ shows a portion only of the endless rope or chain, and illustrating the method of coiling the same about the pin C and of separating the coils by the use of the blade E, which should be placed upon the upper side of the supporting-pin, and should extend but a short distance about its periphery. The surface of the supporting pin or rod I make plain and smooth, except for the blade E, so as to enable the ascending side of the rope or chain to be held by firemen or others upon the ground, and allow them, by making the endless rope of sufficient length, to stand at some distance from a burning building, either in front or at the right or left hand of the descending line of rope, that portion coiled about the pin or rod slipping along readily on the pin and away from the blade E. I also attach the supporting pins or rods rigidly to the outer walls of the building, so as to maintain their axes in a plane at right angles to that of the walls and of the descending rope, and also to keep the side having the blade E uppermost. The rope or chain I make of sufficient length to reach to, or nearly to, the ground, as shown in Fig. 1. In order to withdraw the chain or rope, when not in use, from in front of the window, where it would obstruct the light and be unsightly, I gather it in coils and support it at the top of the building, as shown at F, Fig. 1, suspended by a hook attached to a cord, G, capable of being cut with an ordinary knife; and I carry the cord G over the supporting rod or pin and bring it down the side of the building contiguous to a row of windows, and fasten it at H at a point sufficiently high from the ground as to render it free from intermeddlers; and in case of fire the occupants of any of the several stories or the firemen upon the ground may sever the cord G and allow the escape to fall in front of a line of windows.

For the purpose of attaching persons to the rope or chain, I propose to use a stirrup, Figs. 4 and 5, and a strap or sling, Fig. 3, the stirrup to be provided with a hook, I, which may be attached to the endless chain; or, in case a rope or wire cable is used, the hook should be supplanted by any of the well-known clutching devices. The body strap or sling, Fig. 3, has a hook, J, at one end and a looped chain, K, at the other. The strap is to be put around the body beneath the arms, passing the hook J through the chain K, and attaching it to the endless chain. The stirrup is attached to the chain by the hook I to receive the feet of the user, who brings his weight upon the endless chain or rope, at the same time maintain-

ing himself in an erect attitude and regulating his speed of descent by holding on to the ascending line of chain with his hands, a slight force serving to entirely check his downward motion, owing to the friction of the rope or chain on the supporting rod or pin. I do not, however, confine myself to the use of the body strap or stirrup, as many other and equally efficient modes of attaching a person to the endless chain or rope will readily suggest themselves. My improved fire-escape, as above described, will also serve to hoist firemen or others from the ground to the upper stories of a building.

I am aware that fire-escapes have been constructed in which the frictional resistance of a chain or rope, coiled one or more times around a pin or spool, has been used to check the speed of the rope or chain, and thereby regulate the descent of persons from the upper stories of buildings; also, that ropes or chains have been passed one or more times around a series of rotating rolls or pulleys for the same purpose. These features I do not claim, broadly.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a fire-escape, the supporting rod or pin rigidly attached to the walls of a building, as described, and having a smooth face or surface, with one or more blades, E, on its upper side, in combination with an endless rope or chain coiled one or more times about the pin or rod, as and for the purpose set forth.

2. The combination, in a fire-escape, with a supporting rod or pin attached to the walls of a building, and an endless chain or rope wound one or more times around said rod or pin and extending to or near the ground, of a rope or cord having one end attached to the walls of the building at or near the lower story, and extending up the side of the building and passing over a pin or rod at the top of the building, and having the opposite end attached to the endless chain or rope arranged at the top of the building, substantially as described, so that the severing of the rope or cord will permit the endless chain or rope to fall, as and for the purpose set forth.

CHARLES WOOD.

Witnesses:
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