

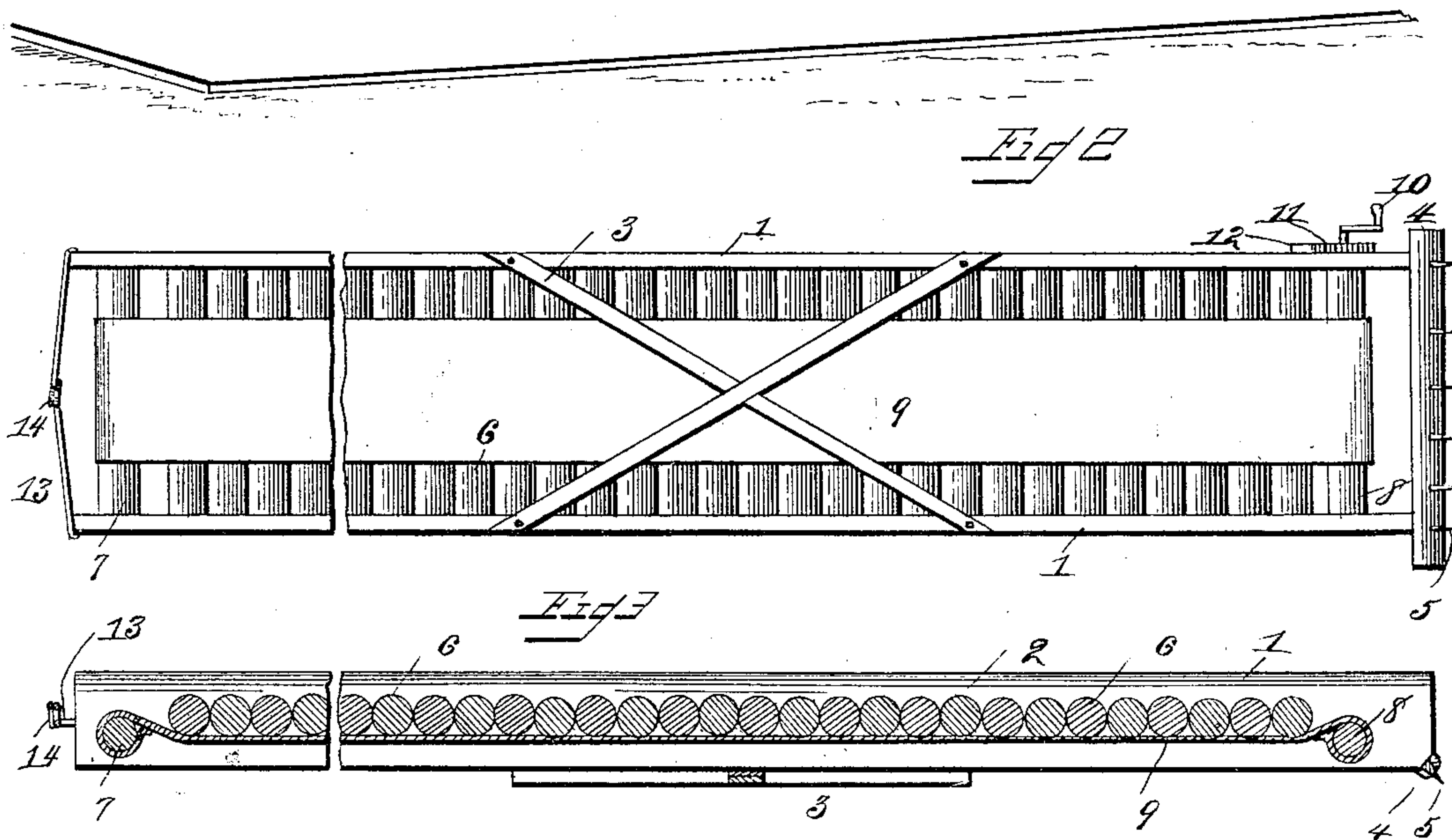
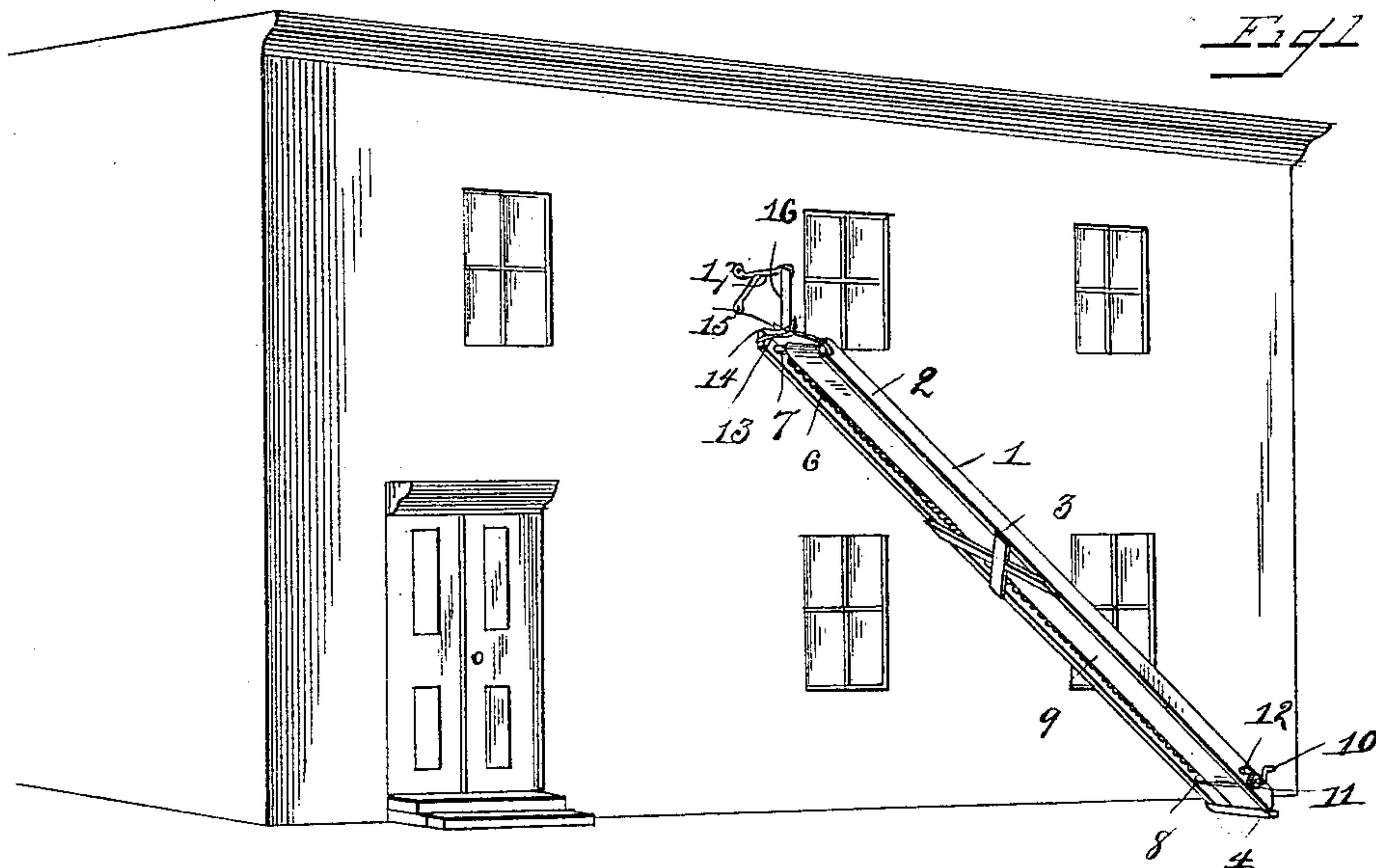
(No Model.)

W. H. HOWARD.

FIRE ESCAPE.

No. 388,279.

Patented Aug. 21, 1888.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 388,279, dated August 21, 1888.

Application filed March 16, 1888. Serial No. 267,368. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HOWARD, a citizen of the United States, and a resident of Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of a building, showing my improved fire-escape in operative position. Fig. 2 is a view of the rear side of the apparatus; and Fig. 3 is a longitudinal sectional view.

The same numerals of reference indicate the same or corresponding parts in all the figures.

My invention has relation to that class of fire-escapes consisting of a chute placed in an inclined position against a window or other aperture in the building on fire, in which the persons or articles to be transported to the ground from the building slide down the said chute; and it consists in the improved construction and combination of parts of such a chute fire-escape having transverse rollers in the bottom of the chute for reducing the friction between the bottom of the chute and the body sliding down the chute, and provided with means for regulating the revolutions of the anti-friction rollers, as hereinafter more fully described and claimed.

In the accompanying drawings, the numerals 1 indicate the side pieces of the chute, which side pieces may be made of either wood or iron, according to desire, and are formed with molded hand-rails 2 at their front edges, affording hold for the hands of the person sliding down the chute. The rear edges of the side pieces or side rails are connected at suitable distances by means of cross-braces 3, serving to keep them at their proper relative distance, and at the lower end the side rails are connected by means of a foot-rail, 4, having downwardly-projecting spikes 5, with which the lower end of the ladder or chute may be secured firmly in the ground.

Anti-friction rollers 6 are journaled transversely between the side rails, forming the

bottom of the chute, being journaled sufficiently close together to form an almost continuous bottom, and two rollers, 7 and 8, are journaled, respectively, at the top and bottom of the chute, having the ends of a brake-strap, 9, secured to them, the strap winding upon the lower roller, the shaft of which is provided with a crank or handle, 10, for revolving it, and with a ratchet-wheel, 11, engaged by a pawl, 12, so that the strap may be wound upon the lower roller and tightened against the rear sides of the anti-friction rollers, serving as a brake for them, the ratchet-wheel and pawl serving to hold the lower roller in position and to thus keep the strap in its adjusted tension. The upper ends of the side rails are connected by a bail or strap, 13, having a loop, 14, at its middle, and the chute may be supported by means of this loop from one of the prongs 15 of a swiveled hook, 16, pivoted in the outer end of an arm or bracket, 17, projecting from the building at the window or aperture from which the escape is to be operated.

It will now be seen that when the escape is adjusted in its inclined position, persons may slide down the same, the anti-friction rollers preventing any injury by friction against the bottom of the chute, and the person sliding down the chute may place the hands upon the hand-rails and thus guide the descent.

By adjusting the brake-strap the descent may be governed so as to prevent any too sudden descent, and the chute may be employed for articles of furniture as well as for saving persons, the hand-rails serving as guards for preventing the articles from falling off from the chute.

The chute may at all times remain in operative position, as it can only be used for descent, the rollers preventing ascending the chute; but for the purpose of still further insuring safety and preventing any attempts to tamper with the chute, or to ascend the same, any suitable alarm may be connected to the escape, which will be sounded when it is touched.

The escape may be made portable and in lengths, so that it may be employed at fires in buildings not provided with the escape; but it is preferably applied permanently to the building, so as to be accessible whenever required.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a fire-escape, the combination of a chute formed of two side rails and transversely-journaled anti-friction rollers forming the bottom of the chute, with a brake-strap bearing against the rear sides of the rollers and having means for tightening it against them, as shown, and for the purpose specified.

2. In a fire-escape, the combination of two side rails having hand-rails or moldings upon the forward edges, anti-friction rollers journaled transversely between the side rails, forming the bottom of the chute, rollers journaled transversely in the top and bottom of the chute, and a brake-strap secured with its ends to the rollers bearing against the rear sides of the anti-friction rollers and winding upon the lower roller, as shown, and for the purpose specified.

3. In a fire-escape, the combination of a chute having anti-friction rollers journaled transversely to form a bottom, and having a strap or bail at the upper end formed with a central loop, and a bracket or arm having a four-pronged swiveled hook in its outer end, as shown, and for the purpose specified.

4. In a fire-escape, the combination of an

arm or bracket having a four-pronged swiveled hook at its outer end, and a chute having a strap or bail at its upper end formed with a central loop engaging the prongs of the hook, and having a transverse foot-rail provided with spikes for entering the ground, as shown, and for the purpose specified.

5. In a chute fire-escape, the combination of side rails having the rear edges connected by cross-braces and having molded hand-rails upon the forward edges, anti-friction rollers journaled transversely between the rails to form the bottom of the chute, a roller journaled in the upper end of the chute, a roller journaled transversely in the lower end of the chute and having a ratchet-wheel and pawl and a crank, and a brake-strap secured to the rollers at the ends of the chute and bearing against the rear sides of the anti-friction rollers and winding adjustably upon the lower roller, as shown, and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM H. HOWARD.

Witnesses:

SAM H. BRASHEAR,
JOHN H. RUBY.