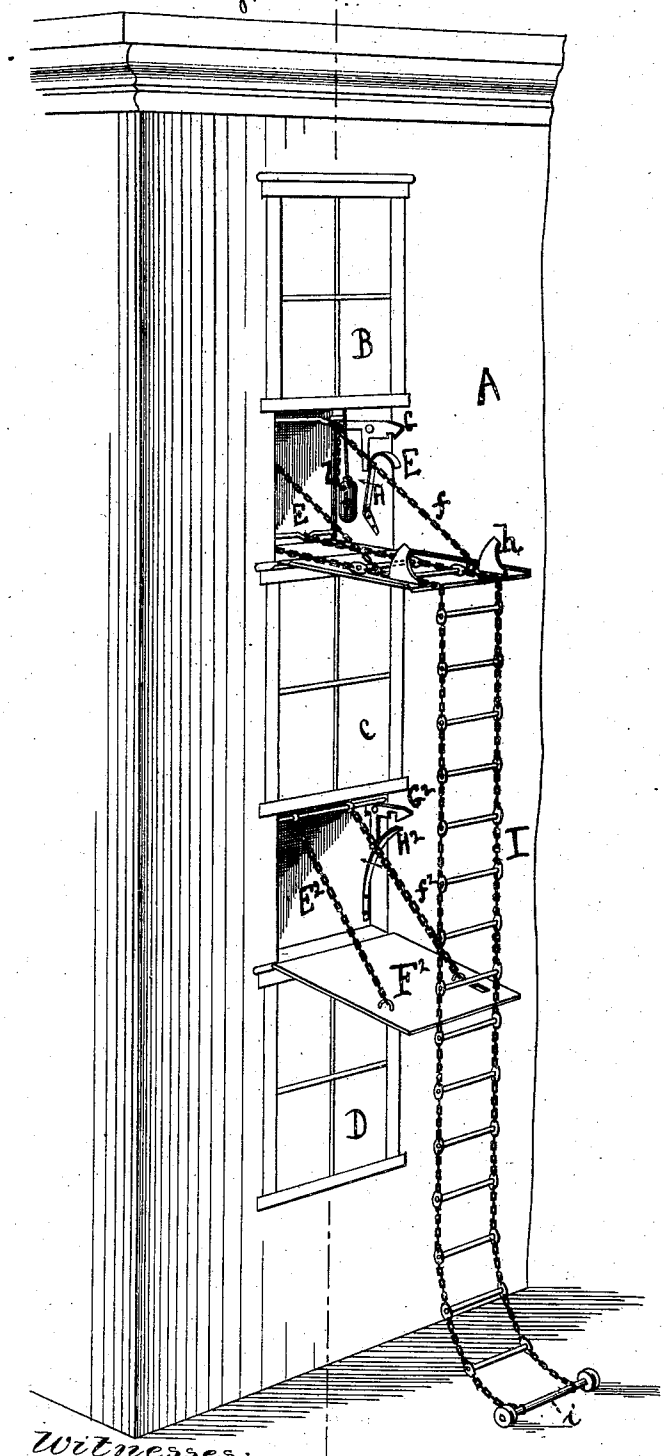
(No Model.) 2 Sheets—Sheet 1.

J. H. TOWNSEND & E. A. DUBEY.

FIRE ESCAPE.

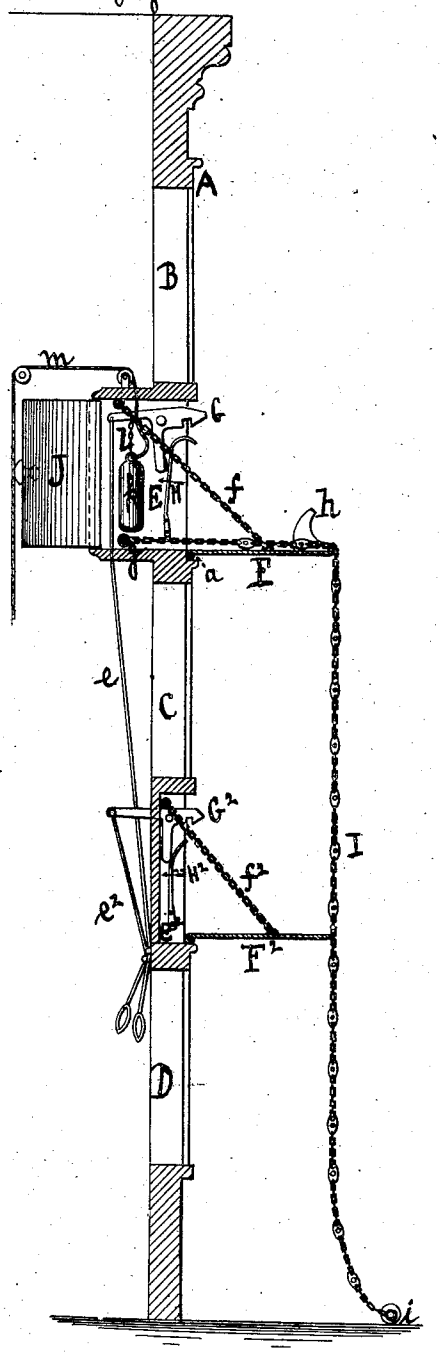
No. 260,627. Patented July 4, 1882.

Fig. 1.



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Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

J. H. TOWNSEND & E. A. DUBEY.

FIRE ESCAPE

No. 260,627. Patented July 4, 1882.

Fig. 3.

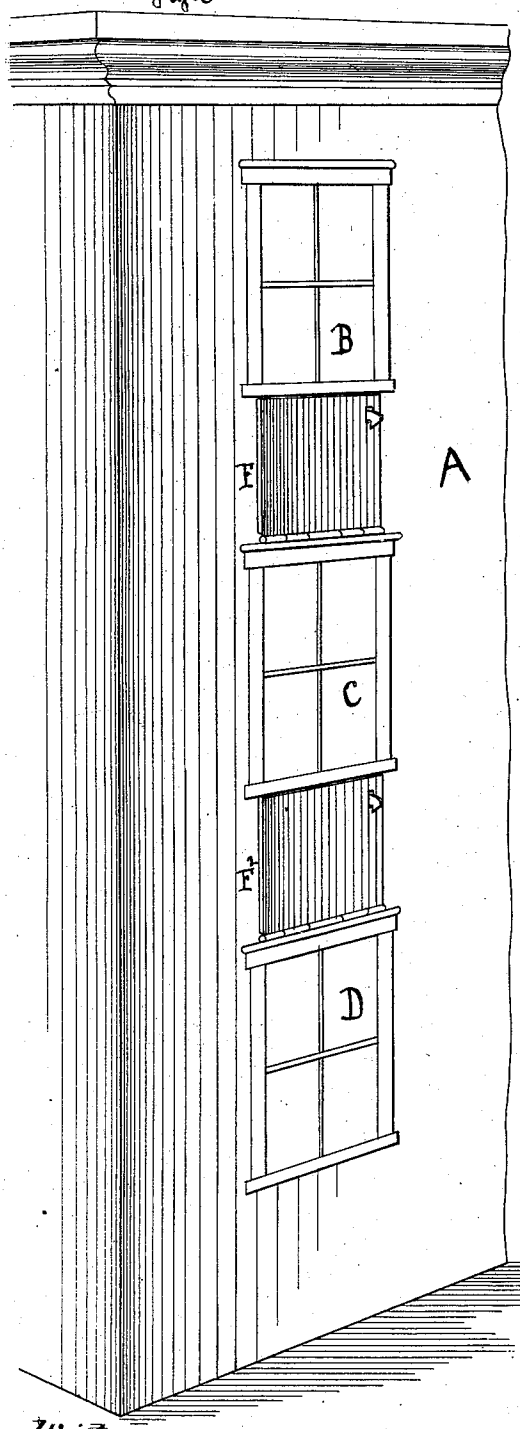


Fig. 4.

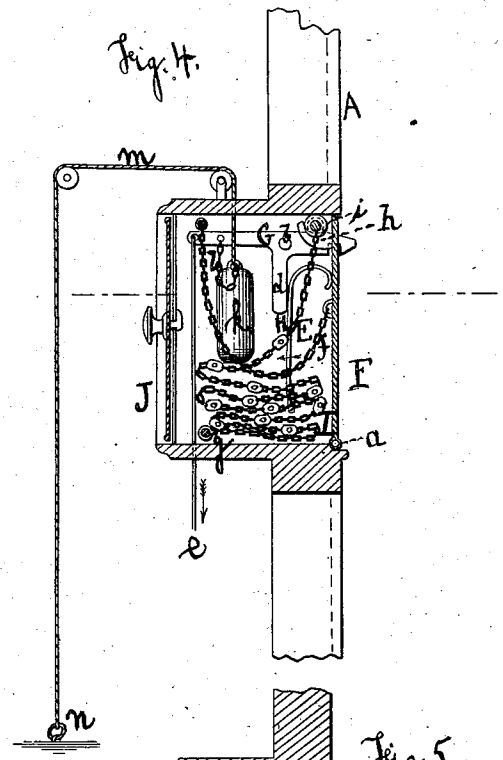
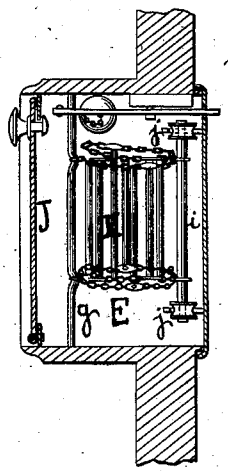


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH H. TOWNSEND AND EDWARD A. DUBEY, OF BROOKLYN, N. Y.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 260,627, dated July 4, 1882.

Application filed March 22, 1882. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH H. TOWNSEND and EDWARD A. DUBEY, both of Brooklyn, in the county of Kings and State of New York, have invented an Improved Fire-Escape, of which the following is a specification.

Figure 1 is a perspective view of our improved fire-escape, showing it in condition for use and applied to a building. Fig. 2 is a vertical cross-section of the wall of a building, showing the fire-escape applied thereto in position for use. Fig. 3 is a perspective view of a building, showing the fire-escape folded away. Fig. 4 is an enlarged vertical cross-section of the chamber into which the fire-escape is folded, and Fig. 5 a horizontal section of the same.

The object of this invention is to provide buildings in cities and other places with a fire-escape which may be started automatically, and which shall be easily accessible from the windows in the different stories of the building, and which can be reached in case of need by persons within the building, and also by the firemen from the outside, so that if the former should be ignorant of the manipulation, or should lose their self-control, the firemen will be able to assist them by bringing the escape into condition for immediate use.

The invention consists in the new combination of parts hereinafter more fully described.

In the drawings, the letter A represents the front wall of a house. B C D are windows in said wall, one vertically below the other. Below the highest window, B, is built into said wall a recess or chamber, E, which normally is closed by a door, F, as shown in Fig. 4, the said door being hinged to the wall or casing at its lower portion, as shown at *a*, and held in the vertical position by a pivoted catch, G, which hangs on a pin, *b*, within the recess or chamber E. A spring, H, bears against a toe, *d*, that projects from the catch-lever G and holds the outer end of the catch down, so as thereby to hold the door F locked or closed. At the same time the spring H also bears against the inner face of the door F, so that when, by pulling a rod, wire, or chain, *e*, that connects with the innermost end of the lever G, the catch part of the latter should be lifted, the spring H will exert its outward pressure sufficient to throw the door F out on its hinge into the horizontal position shown in Figs. 1 and 2, in which position the door is maintained by brace-chains *f*, or analogous braces or supports.

It is quite clear that instead of the braces, stones or beams built into the wall may be used to sustain the platform F horizontally; or rigid braces may be used instead. The door F, when thrown out into the horizontal position, constitutes a platform on which persons that escape through the window B can readily stand. The rope, chain, rod, or connecting-piece *e* is intended to extend down through all the stories of the building, so that in case of fire any person within the building, by merely pulling on the said rod or connection *e*, can tilt the lever G, unfasten the door F, and cause the latter to drop into its horizontal position; but should this not be done firemen from the outside can at all times reach the outer projecting end of the catch G, and by lifting or moving it slightly cause the door F to drop into its horizontal position. We therefore regard it as important that the catch-lever G, though concealed in the recess E, is nevertheless also accessible at its outer portion to the firemen, giving them control of the fire-escape.

Within the recess E is fastened a transverse rod, *g*, to which one end of the flexible ladder I is definitely fastened. When the door F is in its vertical position, which is shown in Fig. 4, the ladder I is folded away into the recess, as shown in the same figure, the outermost or free end of the ladder being in this position sustained by hook-shaped inward projections *h* on the upper part of the door F. For this purpose the said outer end of the chain I is fastened to a cross-rod, *i*, which rests on said hooks *h*, as shown in Fig. 4. When the door F is dropped into the horizontal position the rod *i* is carried outward and dropped off the hooks *h*, and, dropping to the street, carries the whole ladder I down with it, leaving, however, the upper end of the ladder fastened to the cross-bar *g*, and thus bringing the ladder into the position for use, as shown in Figs. 1 and 2. When the ladder, having been thus displayed, is to be brought back into the recess E, a door, J, on the inner side of said recess is opened, and a person from within the building

can then draw the chain easily into the recess, and when the lower end of the chain is brought up the ends of the rod *i*, bearing against the hooks *h* of the horizontal door F, will, as the chain is being pulled inward, cause the door F to be swung up into the vertical position and caught and locked, as shown in Fig. 4. In order to facilitate this almost automatic closing of the door F, the ends of the rod *i* should have little friction-rollers *j*, that bear against the hooks *h*, as shown in Fig. 5.

In order to have the chain automatically unfolded and dropped to the street in case of a fire that is not yet noticed by the occupants of the building or by any one outside of it—such as a fire that occurs at night, while said occupants are asleep—we have provided the following means: A weight, *k*, is connected by a chain or rope, *l*, with the inner portion of the lever G, and this weight *k* is held up, so as to leave the chain *l* slack, by a combustible cord, *m*, that enters the building, and is held by being fastened at its end, as shown at *n* in Fig. 4. The cord *m* should traverse such portions of the building as would most likely be reached by a fire and burned away, so that if the cord *m* is burned away at any part the weight *k* will drop and pull the inner portion of the lever G downward, thereby unfastening the door F, dropping it into the horizontal position, and unfolding the ladder I. In order to make this rope ladder I, which is thrown out below the uppermost story of the building, accessible to persons from lower stories, it may be desirable, though not necessarily so, to have doors F^2 hinged below each window of the lower stories and connected with catch-levers G^2 and actuating-springs H^2, that are built into recesses E^2, as shown in Figs. 1 and 2.

The lever G^2 should be connected with a pulling device, e^2, as shown, and the door F^2 should be connected with brace-chains f^2, so as to operate in every respect, in connection with the catch G^2, spring H^2, and braces f^2, the same as does the door F with respect to its catch G, braces *f*, and spring H.

If desired, the catch G^2 may also be connected with a weight and combustible cord for automatic disconnection from the door F^2, the same as the weight *k* and cord *m*, already described.

The chamber E, instead of being built into the wall, as shown, may be projected out of the wall—in other words, may be an extension in front or at the side of the wall; or it may be placed on the roof or in the cornice, or directly below the cornice, so as to be shielded thereby; and whenever we speak of a "chamber," E, in this specification, we desire to be understood that we are not limited to the recess in the wall.

For the purpose of arousing the occupants or neighbors of a burning structure, should they be asleep, a gong may be sounded by the descending ladder. Such a gong could, for example, be applied to the outside of the door F, with a clapper projecting into the path of the chain ladder, so that the gong would be rung by the descending chain ladder.

We claim—

1. In a fire-escape, the combination of the flexible ladder I with the swinging door F, having hooks *h*, chamber E, rod *g*, lever G, having toe *d*, spring H, and rod *e*, substantially as described.

2. The spring H, combined with the catch-lever G and with the door F, and arranged to bear on the catch-lever to hold the door closed and to throw the door open when the outer end of the catch is swung up, substantially as set forth.

3. The combination, in a fire-escape, of the door F, chain I, catch-lever G, weight *k*, which is connected with said catch-lever, and combustible cord *m*, substantially as and for the purpose specified.

4. The wall A, having recess E and rod *g*, combined with the door F, catch G, ladder I, and with the lower door, F^2, and catch G^2, substantially as herein shown and described.

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EDWARD A. DUBEY.

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