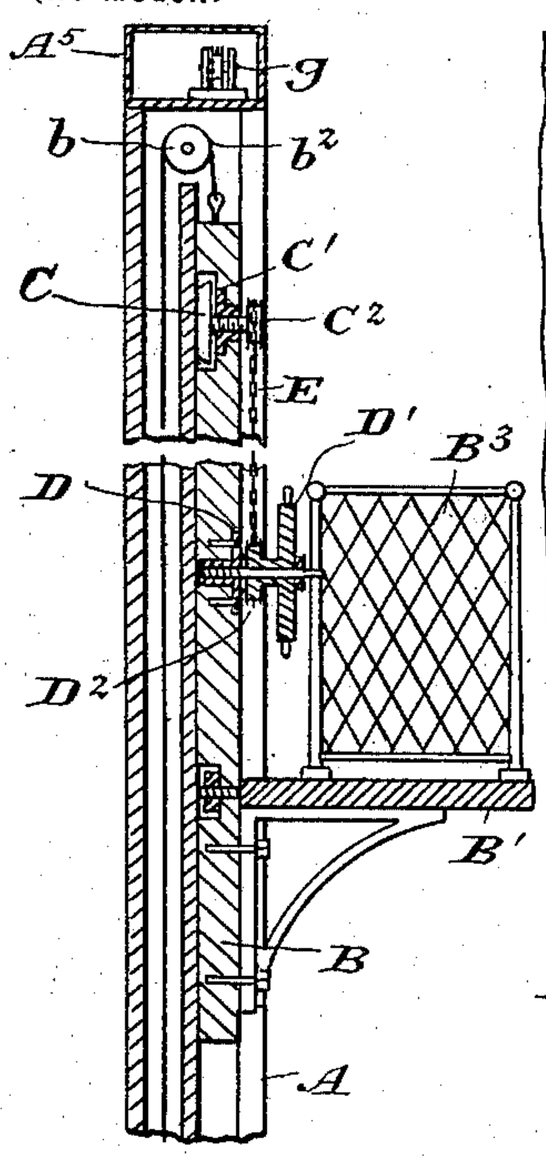
No. 663,680. Patented Dec. 11, 1900.

D. MAY & M. SELIG.

AUTOMATIC FIRE ESCAPE.

(Application filed July 2, 1900.)

(No Model.)



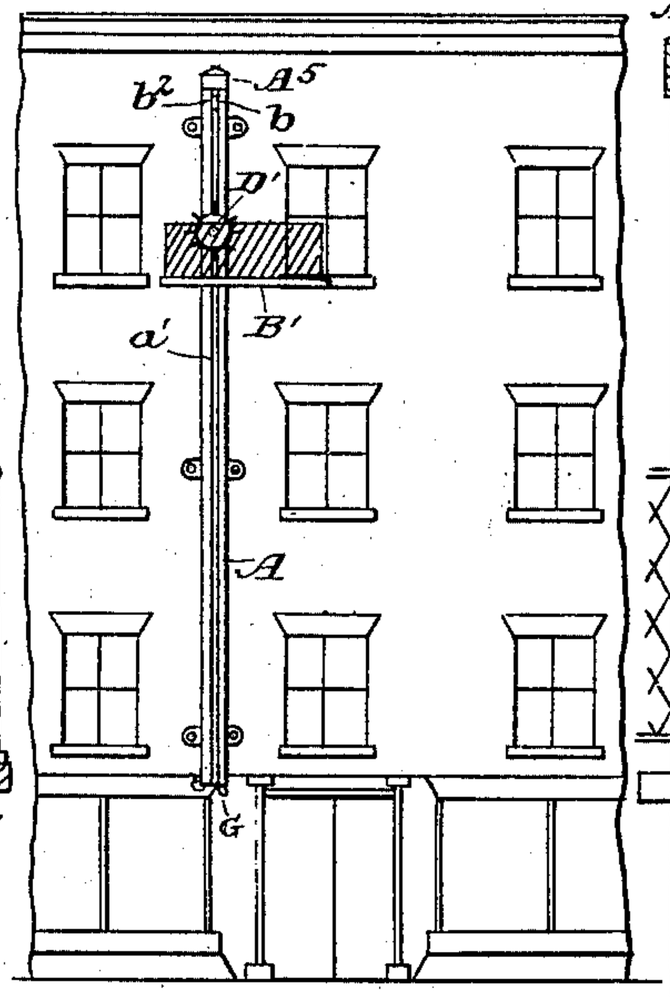


Fig. 1.

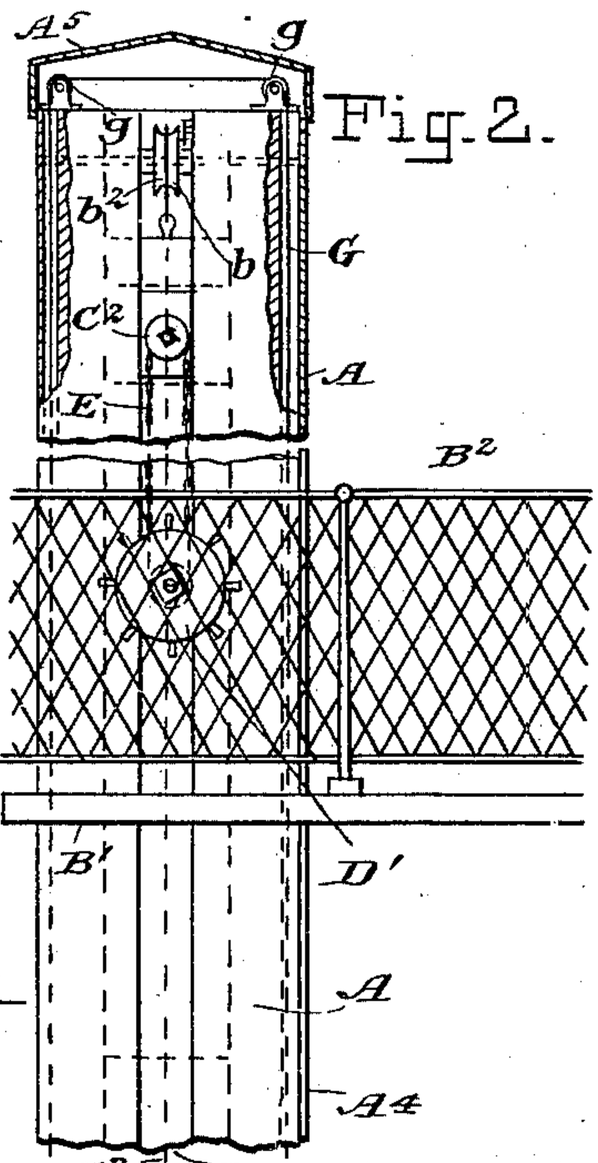


Fig. 2.

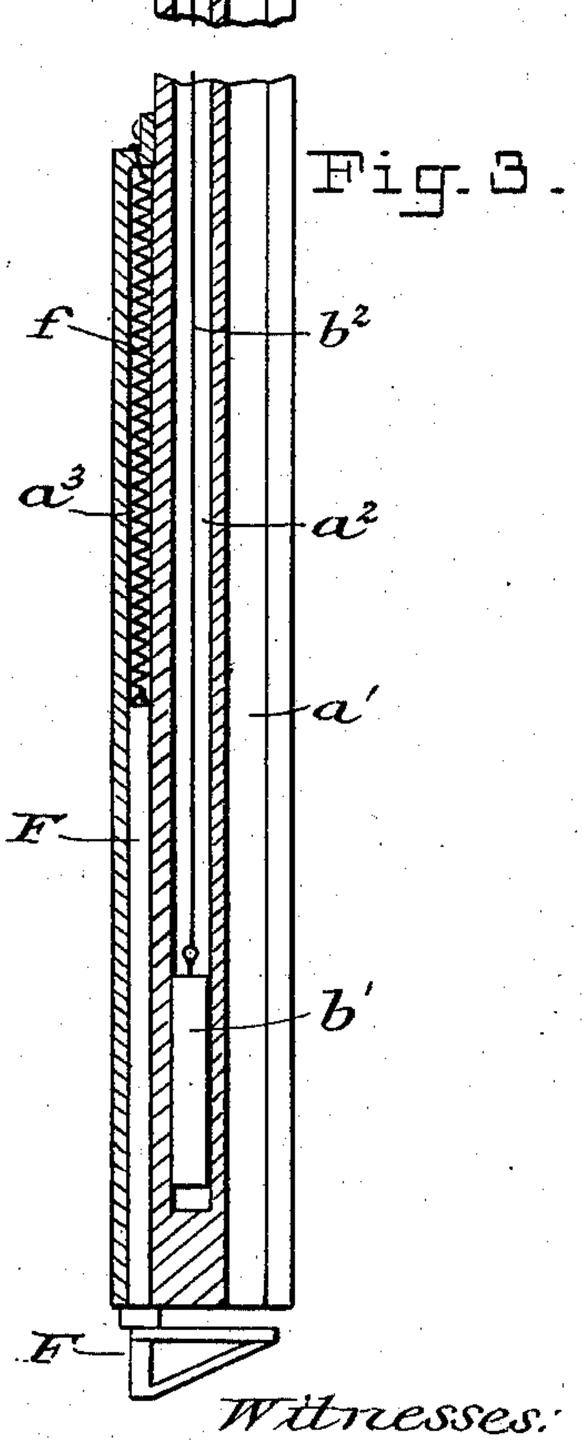


Fig. 3.

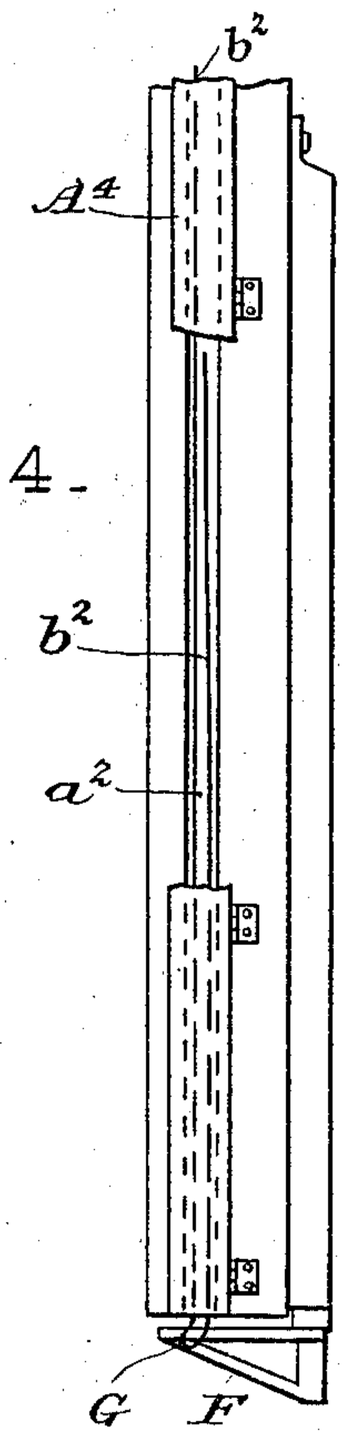
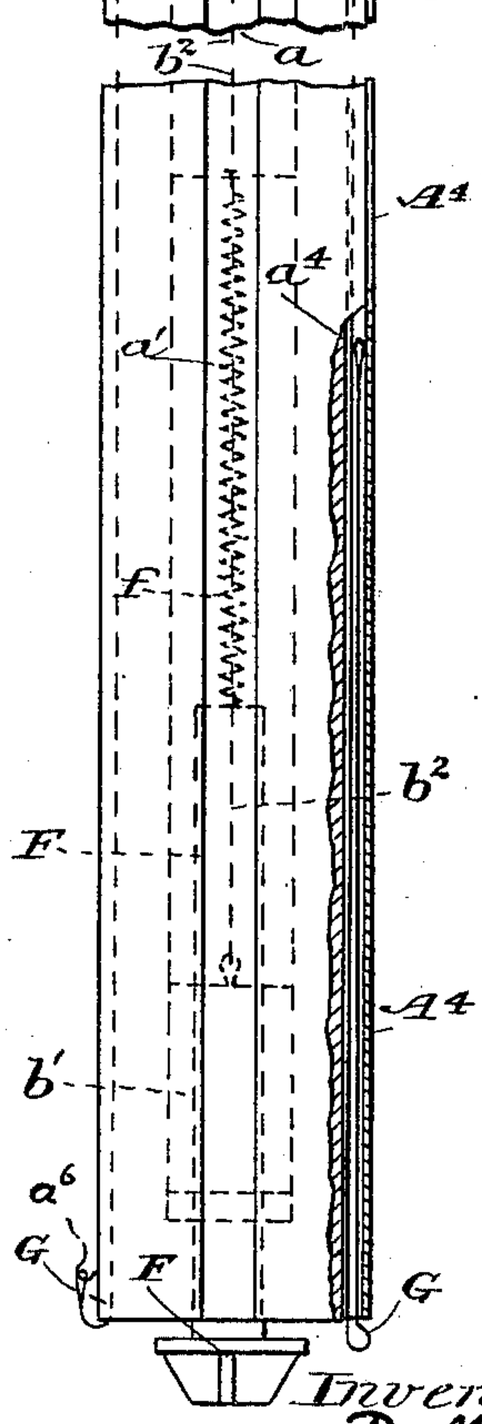


Fig. 4.



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UNITED STATES PATENT OFFICE.

DAVID MAY AND MICHAEL SELIG, OF NEW YORK, N. Y.

AUTOMATIC FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 663,680, dated December 11, 1900.

Application filed July 2, 1900. Serial No. 22,359. (No model.)

To all whom it may concern:

Be it known that we, DAVID MAY and MICHAEL SELIG, citizens of the United States, and residents of New York, in the county and State of New York, have invented a certain new and useful Automatic Fire-Escape, of which the following is a specification.

Our invention relates to an apparatus or structure designed to enable persons to escape from the upper windows of a building in case of fire and also to facilitate the work of firemen in extinguishing a conflagration; and it has for its object the provision of an apparatus of the kind set forth simple in construction, inexpensive to manufacture, and efficient in practical use.

To attain the desired end, this our invention consists in the construction, arrangement, and operation of parts herein set forth.

In order to enable our invention to be fully understood, we will proceed to explain the same by reference to the drawings which accompany and form a part of this specification, in which—

Figure 1 represents a front elevation of a building equipped with our automatic fire-escape and hose-elevating device. Fig. 2 is an enlarged view, partly in section, of the front of our apparatus. Fig. 3 is a vertical section of the same, and Fig. 4 is a side view of the lower portion of our device.

Like letters of reference indicate like parts in all the views.

Referring particularly to the drawings, A denotes the vertical frame or case of our fire-escape, provided with a guide a', having a slot a in the front face of the same, and also with additional interior vertical elongated channels a^2 and a^3.

B is a slide which works up and down within the guide a' and is counterbalanced by a weight b', hung on a preferably wire rope b^2, passing over a pulley b, and one end of which rope b^2 is secured to the top of the slide B. To the slide B is secured a horizontal balcony or landing B′, provided with a screen or railing B^2 B^3 on the front and inside end of the same. The weight b' is so adjusted that it will always hold the landing B′ in its highest position, or if the landing B′ is pulled downward the said weight will, when the parts are released, immediately pull the landing back to its normal position.

Located in a recess at the upper rear portion of the slide B is a shoe C, constructed and arranged to slide along against and make a friction contact with the rear of the guide a'. A thimble C′ is placed upon the front of said shoe, in the threaded interior of which works the screw-threaded shank of a sprocket C^2. A chain E connects the sprocket C^2 with the sprocket D^2, ordinarily located about ten or fifteen feet below the same, so that the two sprockets will move in unison. One end of the spindle which carries loosely the sprocket D^2 is fixed in a plate D, screwed to the slide B. To the other extremity of said spindle is rigidly secured the wheel D′, provided with handles upon its periphery.

From the above description it is manifest that upon the wheel D′ being turned in one direction—say to the right—the shoe C will be pushed against the rear of the guideway a', and by turning the said wheel in the other direction the reverse operation will take place.

In the channel a^3 we place a spring-controlled slide and support F, which consists of a long vertical shank or body and a horizontal projecting footpiece. The slide F is normally held in its upper position by the spring f or equivalent suitable sustaining means attached to the top of the same. At the extreme top of our frame or case A we place pulleys g g, over which is passed a rope G. The ends of said rope G are longer than the case A by some fifteen or twenty feet, and one of the said ends is turned back on one side so as to form a loop, and the said end is turned inward and then placed in an orifice a^4 in the side of said frame or case A, and the other end is provided with a loop to engage a hook a^6 at the bottom of said frame or casing A. A vertical groove is formed in each side of the frame or case A to hold the said rope G, which groove may on one side be screened by doors A^4, preferably provided with spring-hinges and spring hooks or catches, and on the other side the groove may be permanently covered.

The upper part of the frame or case A may be provided with a door A^5 for use when the device is inspected.

It is manifest that various omissions of some particulars could be made without materially affecting the essential features of our invention or the operation of the remaining parts, and we do not therefore wish to be limited to the specific structural details of the organization herein set forth. Obviously the elements of the structure described may be located at an angle to the plane in which they are shown. We accordingly use the words "horizontal," "vertical," and the like in a relative sense.

In operation in case of any conflagration occurring one or more persons have simply to step out of the window upon the platform, balcony, or landing B′, which will then commence to descend. In case it is going down too rapidly one has simply to turn the wheel D′ a little to the right, whereupon more friction will be created in the guideway a' by the shoe C and the descent will become slower. It will be noted that our frame or case A does not reach below the first story of the building. When the platform or landing B′ has reached that point, it will rest upon the foot of and be guided by the slide F. When near the sidewalk, the persons step off the platform and the same is forced rapidly upward with a powerful inpetus by means of the reaction of the spring *f*, whereupon another party may make the descent in safety without loss of time. During such descent by turning the wheel D′ to the right a sufficient distance the parts will become cramped and the platform or landing B′ will be held stationary at any point desired.

By catching a hook which is at the end of a fireman's pole in the loop of the rope G the loose extremity of the same may be pulled out, and when the two ends are free and one part of the rope has been pulled out from behind the spring-doors A^4 by attaching the nozzle of the hose to one extremity and pulling on the other end the said hose may be elevated to any height required for use either there in any story of that building to extinguish the fire, or the fireman may stand upon any of these landings or platforms and play the hose into the buildings on the opposite side of the way. Much valuable time and trouble may be saved by the use of this device instead of having to carry the hose up stairways, as is often the case.

If it should happen that the occupants of the building were children or others afraid of or ignorant how to use our apparatus, the same can be operated entirely by the firemen in the following manner: After the rope G is ready for use by being taken out of the case or frame A, as described, a fireman or, in fact, any heavy object may be hauled up until it rests upon the platform or landing B′, whereupon it will descend to the ground. Now by tying or otherwise securing the loop a^6 at the end of the rope to the said platform a fireman may be hoisted up to the window, and all the occupants of the building, even if they are entirely helpless, may thus be brought in safety to the ground in a very short time.

Our fire-escape is small, compact, and neat in appearance, and as the same does not extend down below the first story it is out of the way and cannot be disturbed or meddled with by persons on the sidewalk. Our balconies or platforms may be constructed so as to present an attractive appearance, and instead of disfiguring a building they may be made so as to add an ornamental effect to the same.

As it is evident that many changes in the construction, form, proportion, and relative arrangement of parts might be resorted to without departing from the spirit and scope of our invention, we would have it understood that we do not restrict ourselves to the particular construction and arrangement of parts shown and described, but that such changes and equivalents may be substituted therefor, and that

What we claim as our invention is—

1. In combination, a frame or casing secured to a building, and a counterbalanced movable platform constructed and arranged to be sustained thereby, the said casing ending a distance above the sidewalk, and a spring-controlled slide and support therefor, to coöperate with the same, constructed and arranged to descend with the said platform to the street.

2. In combination, a frame or casing secured to a building, and a counterbalanced movable platform constructed and arranged to be sustained thereby, and a spring-controlled slide and support therefor, separate from the said platform to coöperate with the same.

3. In combination, a frame or casing secured to a building, and a counterbalanced movable platform constructed and arranged to be sustained thereby, and a spring-controlled slide and support therefor, separate from the said platform to coöperate with the same, and means for regulating the downward movement of the said platform.

4. In combination, a frame or casing secured to a building, and a counterbalanced movable platform constructed and arranged to be sustained thereby, the said casing ending a distance above the sidewalk, and a slide and support therefor, to coöperate with the same, constructed and arranged to descend with the said platform to the street, and means for regulating the descent of said platform.

5. A frame or casing secured to a building and provided with a guideway, in combina-

tion with a slide constructed and arranged to work in said guideway, and a platform supported by said slide, a counterbalance for said slide, and means in said slide for regulating the downward movement of said platform, and operating means for said regulating means, situated a distance from it, and connected therewith so as to move in unison, and a spring-controlled slide and support for the platform, to coöperate with the same.

In testimony of the foregoing specification we do hereby sign the same, in the city of New York, county and State of New York, this 23d day of June, A. D. 1900.

DAVID MAY.
MICHAEL SELIG.

Witnesses:
JAMES D. FERRIS,
J. ODELL FOWLER, Jr.