2 Sheets—Sheet 1.

G. W. McKEE
Fire-Escape.

No. 198,649. **Patented Dec. 25, 1877.**

Fig. 1

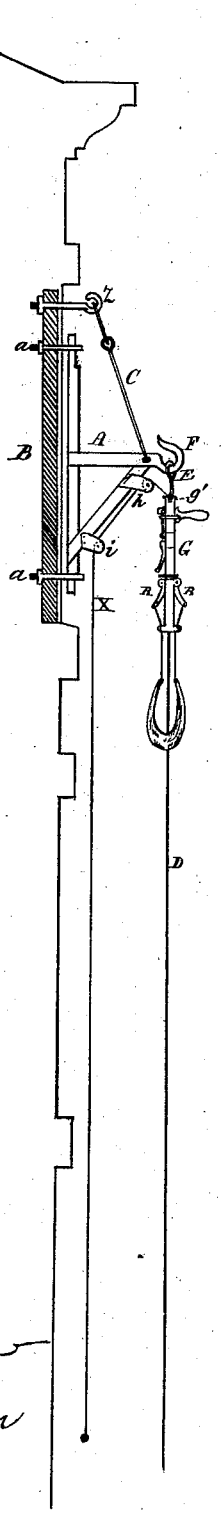
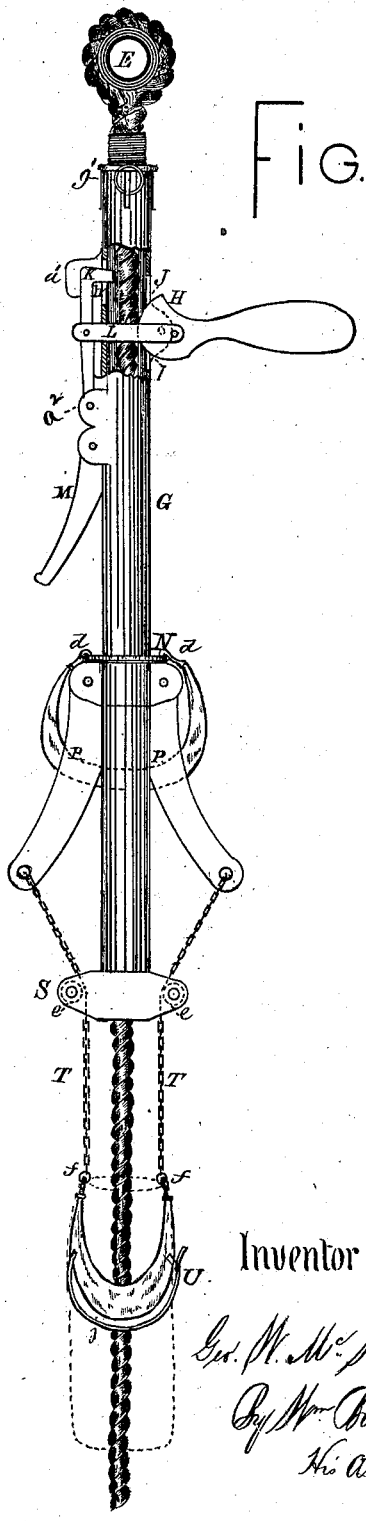


Fig. 2



Witnesses.

John Glasgow

A. Kingdon

Inventor

Geo. W. McKee

by Munn & Co

his attys.

2 Sheets—Sheet 2.

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Fig. 3.

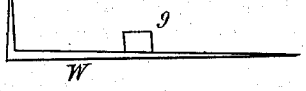
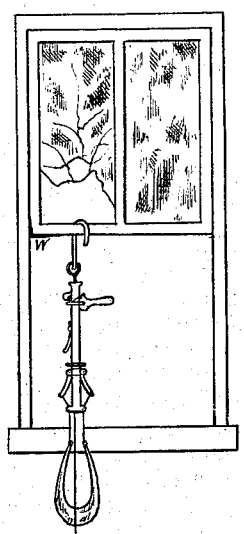


Fig. 4



Witnesses

John Glasgow
A. Kingdon

Inventor

Geo. W. McKee
By Wm. Bruce
His att'y

UNITED STATES PATENT OFFICE.

GEORGE W. McKEE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **198,649**, dated December 25, 1877; application filed September 14, 1877.

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON McKEE, of the city of Brooklyn, in the county of Kings, in the State of New York, United States of America, 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 construction and operation of the same.

The object of the invention is to afford a quick, easy, and safe device to escape from an upper window of a building in case of fire when there are no other means of escape.

The invention consists, first, of a small but strong iron bracket, secured to a window-frame in such a manner that it can remain a permanent fixture, or, if necessary, be made adjustable and attached to its fastenings in a window-frame in a few moments. The outer end of the horizontal bar of the bracket terminates in a strong hook, to which is hooked the end of a rope sufficiently strong to bear, say, from eight hundred to a thousand pounds weight.

The invention consists, secondly, in a small metallic tube, constructed to slide on the rope, and is provided with five brakes, two operated by the right hand and one operated by the left, while two are operated by the feet, or body, if sitting, while descending the rope. A loose ring surrounds the said tube, resting on the tops of the lower levers, to which may be secured with snap-hooks a belt for the purpose of surrounding the body of a person descending on the fire-escape; or the said belt may be secured to the ends of the levers P, as shown. A flexible seat of strong canvas or similar material is attached to chains or ropes projecting downward from the two lower levers. The rope upon which the fire-escape slides is provided with an eye, which is hooked on the bracket for support where the said bracket is permanently attached to a building. A sack may also be attached to the device, if required, to lower women and children.

By reference to the accompanying drawings, forming part of this specification, it will be seen that Figure 1 represents part of the front elevation of a building with the bracket attached permanently to a window-frame, the fire-escape being hooked thereon. Fig. 2 is an enlarged view of the fire-escape shown in detail. Fig. 3 represents a side view of the combined wedge and brace used to support the lower sash when thrown up. Fig. 4 represents a window with the lower sash wedged up and the fire-escape attached to the lower bars of the sashes, the device being ready for a person to descend upon it.

A represents the bracket, secured by screw-bolts *a a* to the window-frame B. The bracket may be either permanent or adjustable. If removable, it can be kept inside of the building, and in time of danger by fire it can be easily and quickly placed in position from the inside of the building. C is a rod, which acts as a brace to strengthen and support the bracket. D is a rope of suitable strength, provided with an eye, E, by which it can be readily hooked on the hook F of the bracket A. G is the metallic tube through which the said rope passes, and is provided with five brakes, as follows: H, an eccentric, with handle, pivoted to lugs I cast on the tube. J is an opening in the said tube for the eccentric to operate in, as will be more fully explained hereinafter. K is a vertical brake, pivoted to the lugs a^2 of the tube. The said brake is attached to the said eccentric by means of two metal links, L, on each side of the tube G, respectively. Its upper hooked part works through an opening, *b*, and is kept from a side movement by means of lugs a^1, one on each side of it, only one of which is seen in the drawing.

The inside face of the eccentric and the end of the hooked brake K are slightly grooved, to fit or conform to the shape of the rope.

When the handle of the eccentric H is turned perpendicularly, the rope is grasped so forcibly by it and the brake K that the tube G is locked and held so tight that it will remain stationary on the rope, even with the weight of one or two men on it. By moving the handle of the eccentric horizontally, as shown in the drawing, the tube will slide downward, but its velocity can be regulated by the handle of the eccentric being pressed downward, which then acts as a brake.

M is an eccentric lever, pivoted to the tube G immediately below the brake K, and its pressure upon the rope can be regulated by

the left hand of a person descending. It is for additional security in braking the device while descending.

N is a loose ring surrounding the tube G, for the purpose of allowing a belt, O, to be secured thereto by means of snap-hooks *d d*. This belt may be used by females, children, or timid persons, and affords additional security in descending the rope.

P P are two eccentric lever-brakes attached to the lower portion of the tube G, and are operated on the rope by the weight of the body on the seat.

S S are lugs, into which is secured a pulley, *e*, respectively.

T T are chains or ropes, which are attached to the lower ends of said lever-brakes P, and pass inwardly over the pulleys *e e*, and go down a short distance, each terminating in a hook or eye, *f f*, as shown.

U is a seat, of canvas, leather, or other similar material, attached by snap-hooks to the eyes or hooks *f f* of the ropes T T. It has a protection-belt attached.

For the additional security of lowering children or females, a sack may be attached, with rings, to the chains T T, as shown by dotted lines in Fig. 2, in which a number can be lowered at once.

When a number of persons wish to descend on the rope, a provision is made for drawing up the tube, after each one has descended, by means of a small line attached to the ring *g'* at the top of the tube G, and is made to pass over a small pulley, *h*, affixed to the bracket A, and thence through a similar one, *i*, secured to the lower part of the bracket, and thence into the room of a building. A ball may be affixed to the end of the said line, and dropped outside with the apparatus when in actual use in time of fire, as shown in Fig. 1.

The operation of the device is as follows: The rope with device attached thereon may be stowed away in any convenient place near the window to which the bracket is permanently or removably attached. If the latter, the sockets and bearing-irons will, of course, be permanently affixed to the window-frame, so that the bracket itself can be inserted into them instantly. The bracket is thus placed in position, the object of which is to secure the rope conveniently, and also to place it clear of the window-sills and the projections on a building, so that it may hang perpendicular and clear of all obstructions, which would not be the case if it were merely hanging out over the window-sill. When the rope is hooked on the bracket, and the person is about to descend, he grasps the handle of the eccentric H in his right hand, and his left hand around the tube G and over the lever-brake M, and sits on the seat U. If he wishes, he may buckle the belt around his body. The right hand governs the eccentric brake as to the rate of speed at which he wishes to slide down the rope. When he wishes to stop, for instance, before or opposite a window of a lower story to take another person on the fire-escape, he can do so by merely pushing the handle of the eccentric upward perpendicularly, and the device is effectually locked on the rope, and will not move farther downward until the said handle is moved horizontally, when it will begin to slide gently downward at a moderate rate of speed; but in no case will it go down the rope dangerously fast, as the other three brakes will prevent it.

Two persons could be let down at the same time, one sitting in the seat and holding on, while the other stands in the bag.

If a number of persons wish to descend, one man can arrange it for two to go down at once, after which the device may be pulled up the rope by means of a small cord; and, when at its proper height and position, two more can descend on it, and so on until the whole are safely landed on the ground below.

The device can be operated with equal advantage on the highest buildings, the only caution being to provide a rope of sufficient length.

It will be seen that the bracket A can be dispensed with, if thought necessary, and the rope hung on a permanent hook, Z, secured to the upper part of a window-frame, as shown in Fig. 1.

Having thus described my device, and disclaiming all other fire-escapes, what I claim as my invention, and desire to secure by Letters Patent, is—

1. A tube, G, of a fire-escape, provided with eccentric lever H, brake K, attached and operated conjointly with links L L, also one or more brakes, M, for braking and locking the device on the rope, as specified.

2. The combination, with the tube G, of the lugs S S, rollers *e e*, chains or cords T T, seat U with strap *j*, and bag Y, as specified.

3. The combination of the hooked bracket A, hook Z, tube G, with brakes H K M P P, belt O, seat U, chains T T, pulleys *e e*, cord X, pulleys *h' i'*, bag V, all constructed to form a fire-escape, as specified.

Dated at Hamilton, Ontario, this 11th day of September, 1877.

GEORGE W. McKEE.

In presence of—
WM. BRUCE,
B. DOHERTY.