No. 752,279. PATENTED FEB. 16, 1904.

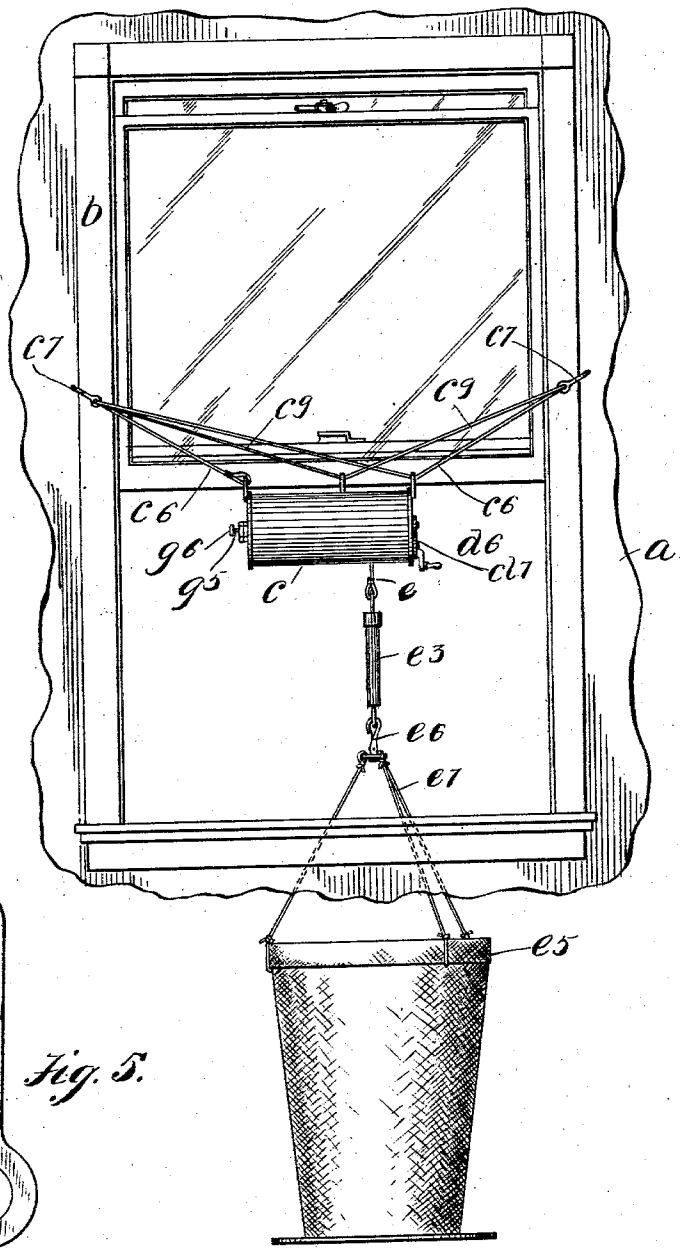
A. S. BACON.

FIRE ESCAPE.

APPLICATION FILED JULY 18, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



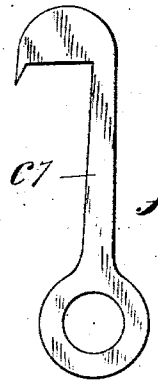


Fig. 5.

WITNESSES

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APPLICATION FILED JULY 18, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

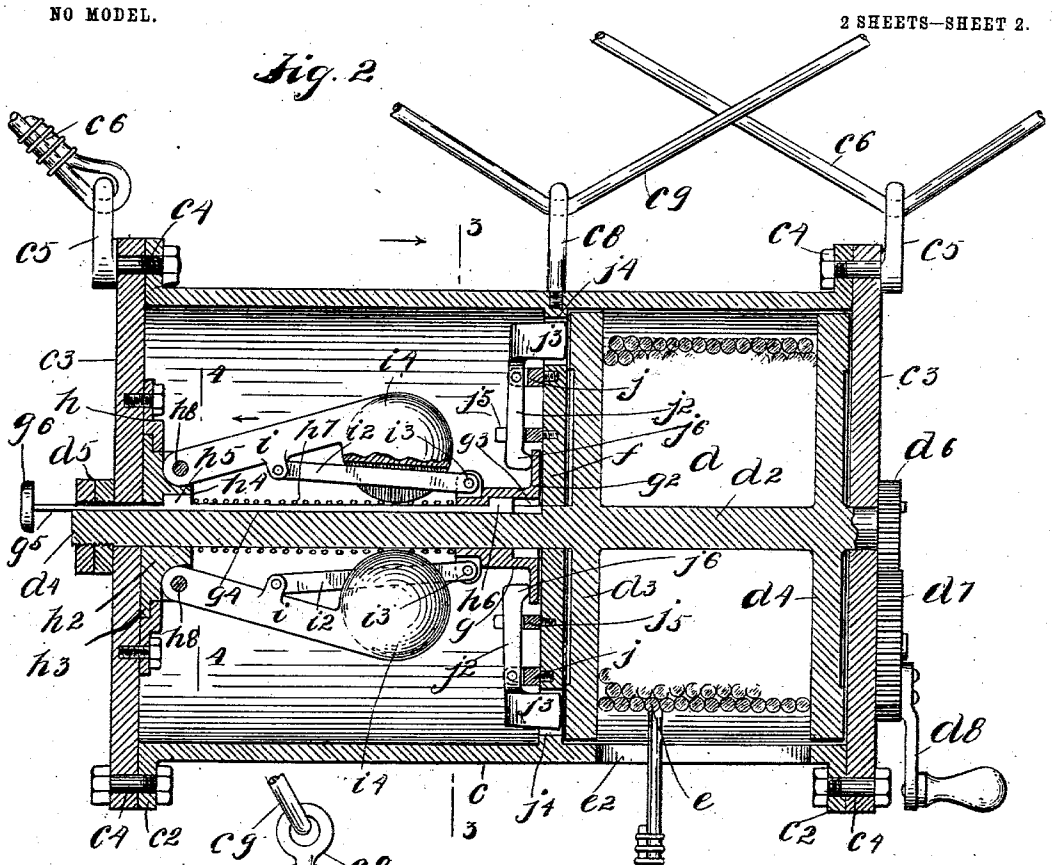


Fig. 3.

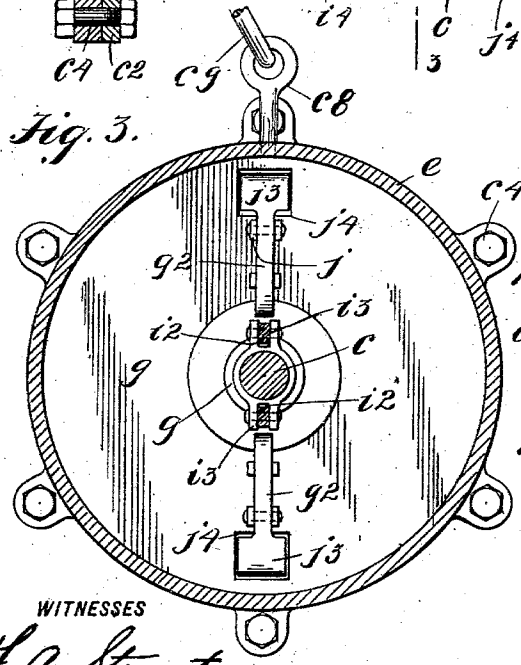
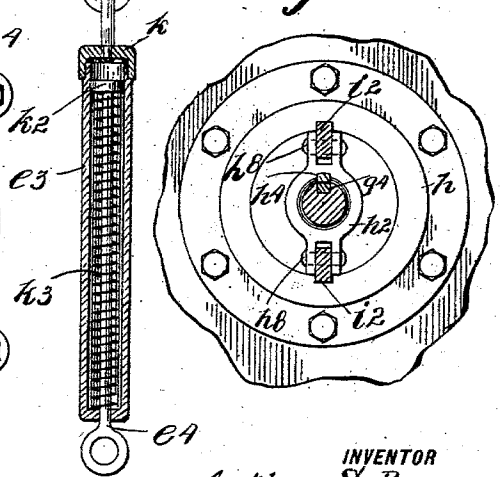


Fig. 4.



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No. 752,279. Patented February 16, 1904.

UNITED STATES PATENT OFFICE.

ARTHUR STANLEY BACON, OF GONZALES, TEXAS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 752,279, dated February 16, 1904.

Application filed July 18, 1903. Serial No. 166,154. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR STANLEY BACON, a citizen of the United States, residing at Gonzales, in the county of Gonzales and State of Texas, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved fire-escape which is simple in construction and operation and which may be attached to an ordinary window-frame whenever necessary and by means of which a person or persons may be able to escape from the window of a burning building without danger of falling or being otherwise injured.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a front view of a part of the wall of a building and showing a window with my improved fire-escape attached to the frame thereof; Fig. 2, a horizontal section of a part of the fire-escape apparatus and showing the operative mechanism thereof; Fig. 3, a section on the line 3 3 of Fig. 2; Fig. 4, a section on the line 4 4 of Fig. 2, and Fig. 5 a side view of one of the hooks by which the fire-escape apparatus is connected with and suspended from the window-frame.

In the drawings forming part of this specification I have shown at a a part of a wall of a building, and at b a window-frame, with the sides of which in practice my improved fire-escape apparatus is connected.

In the practice of my invention I provide an oblong cylindrical casing c, which is preferably provided with end flanges or rims c^2, as shown in Fig. 2, to which the end plates c^3 are bolted or otherwise secured, as shown at c^4, and connected with the ends of the casing c are ring or eye suspending devices c^5, through which are passed suspending-cords c^6, which are connected with hooks c^7, which are adapted to engage the sides of a window-frame b, as clearly shown in Fig. 1, and a supplemental ring or eye suspending device c^8 is also preferably connected with the casing c centrally thereof and through which a supplemental cord c^9 is passed, which is also connected with the hook c^7, as clearly shown, or a single cord may be employed, which is passed through the ring or eye suspending devices c^5 and c^8 and through eyes in the hooks c^7 in the manner of pulleys, and by means of this construction the cylindrical casing c may be suspended centrally of and in front of the window and in a horizontal position, as clearly shown in Fig. 1.

Within the casing c and at one end thereof is a reel d, on which is wound a strong cord or rope e, and the reel d consists of a central shaft d^2 and end disks or plates d^3 and d^4. In the form of construction shown the end disks or plates d^3 and d^4 are formed integrally with the shaft d^2; but said disks or plates may be formed independently of said shaft and be secured thereto, if desired. One end, d^4, of the shaft d^2 passes clear through the casing c and is screw-threaded and provided with nuts d^5, and the other end of said shaft also passes through the corresponding end of the casing c and is provided with a small gear-wheel d^6, and a larger gear-wheel d^7 is mounted on the end of the casing c adjacent to the gear-wheel d^6 and operates in connection therewith and is provided with a crank d^8, by which the reel d may be wound up or the cord e wound thereon.

The casing c is provided with a slot e^2, through which the cord or rope e passes, and connected with said cord or rope is a tubular casing e^3, through the lower end of which is loosely passed a rod e^4, with which in practice is connected a basket or similar device e^5, this connection being preferably made by means of a spring-hook e^6 and straps, cords, or similar devices e^7, connected with said hook and with the basket e^5.

The casing c is provided adjacent to the inner end of the reel d with a transverse partition f, which is vertically arranged when the said casing is in operative position, and mounted on the shaft d^2 or the extension d^4 thereof adjacent to the partition f and movable longitudinally on said shaft is a hub g, having a flange or rim g^2, and said hub is also

provided in the inner walls thereof with an annular groove or space g^3. The shaft d^2 or the extension d^4 thereof is provided with a longitudinal groove g^4, and movable longitudinally in the groove g^4 is a rod g^5, which extends outwardly through the end of the casing c opposite the reel d, and is provided with a knob or head g^6, by which it may be operated.

Secured to the inner side of the end wall c^3 of the casing c opposite the reel d is an annular keeper h, and mounted on the corresponding end of the extension d^4 of the shaft d^2 is a collar or hub h^2, provided with a flange or rim h^3, which is adapted to turn in the keeper h, and the collar h^2 is provided in the inner wall thereof with a recess h^4, adapted to receive a key h^5 on the rod g^5, and said rod g^5 is also provided at its inner end with a key h^6 which operates in the groove g^3 and is also adapted to lock the hub g to the shaft d^2, and between the hub g and the collar h^2 is placed a spiral spring h^7.

Pivoted to the collar h^2 at h^8 are brake-arms i, to which are pivoted links i^2, which are also pivoted to the hub g, as shown at i^3, and the arms i are provided with balls i^4, and these parts operate in the manner of an ordinary centrifugal governor to control the operation of the apparatus, as hereinafter described.

Secured to the partition-plate f radially of the shaft d^2 are keepers j, to which are pivoted brake-arms j^2, which are also arranged radially of the partition f and the outer ends of which are provided with brake-shoes j^3, which operate through openings j^4 in the partition-plate f and which bear on the end disk or plate d^3 of the reel d, and the inner ends of the arms j^2 pass through guides or supplemental keepers j^5 and are provided with heads j^6, which operate in connection with the flange or rim g^2 of the hub g.

The operation of the apparatus will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof. The device may be wound up, as shown in Figs. 1 and 2, if the shaft g^2 is not turned too rapidly with the parts in the position shown in Fig. 2; but ordinarily in winding the cord e on the reel d the shaft g^5 is pushed inwardly against the operation of the spring h^7, so as to release the keys h^4 and h^6 from the collar h^2 and the hub g, and it will be understood that the spring h^7 will automatically serve to return the rod g^5 to the position shown in Fig. 2, so that the collar h^2 and hub g will be locked to the shaft d^2 or the extension d^4 thereof.

The tubular casing e^3 by which the basket e^5 is suspended is provided at its upper end with a removable screw-threaded cap k and the rod e^4 passes upwardly into said casing and the upper end thereof is provided with a disk or head k^2, and in the lower end of the casing e^3 is placed a spiral spring k^3, through which the rod e^4 passes, and said basket is thus yieldingly supported. My invention, however, is not limited to any particular means for connecting the basket with the cord e, and any preferred form of carrier may be substituted for the basket e^3, and its connection with the cord e may be made in any desired manner.

A party desiring to escape from the building enters the basket e^5 through the lower part of the window, the lower sash being raised for this purpose, and the descent immediately begins. In this operation the governor, consisting of the parts i, i^2, and i^3, and the brake arms or levers j^2 operate to retard the unwinding of the reel d, and the descent is made gradually and safely. After one party has thus escaped from the window the apparatus may be wound up, as hereinbefore described, and another party may similarly descend. It will be observed that the partition f divides the interior of the casing c into two separate compartments, one of which is occupied by the reel d, the shaft of which extends through the other compartments, in which the brake mechanism is also mounted, and the entire apparatus or device is simple in construction and operation and also comparatively inexpensive, and changes in and modifications of the construction herein shown and described may be made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fire-escape apparatus, a cylindrical casing divided by a transverse partition into separate compartments, a reel mounted in one of said compartments and the shaft of which extends through the other compartment, brake-levers connected with said partition and provided with shoes which operate through openings formed in said partition and adapted to bear on the end of the reel, and centrifugal brake devices mounted on the said shaft and adapted to operate said brake-levers, and means for locking said brake devices to said shaft, substantially as shown and described.

2. In a fire-escape apparatus, a cylindrical casing divided by a transverse partition into separate compartments, a reel mounted in one of said compartments and the shaft of which extends through the other compartment, brake-levers connected with said partition and provided with shoes which operate through openings formed in said partition and adapted to bear on the end of the reel, and centrifugal brake devices mounted on the said shaft and adapted to operate said brake-levers, and means for locking said brake devices to said shaft, said casing being also provided in one side with a slot or opening and said reel with a cord which passes therethrough, substantially as shown and described.

3. In a fire-escape apparatus, a cylindrical casing, cords connected therewith and adapted to support said casing in a horizontal position, hooks connected with said cords and adapted to engage the sides of a window-frame, said casing being also provided with a transverse partition forming two separate compartments, a reel mounted in one of said compartments and the shaft of which passes through the other compartment and through both ends of said casing, a cord wound on said reel and passing through a slot in said casing, brake-levers secured to the side of said partition opposite the reel and provided with shoes which operate through said partition and in connection with said reel, and centrifugal brake devices mounted on said shaft and adapted to operate said levers, substantially as shown and described.

4. In a fire-escape apparatus, a cylindrical casing, cords connected therewith and adapted to support said casing in a horizontal position, hooks connected with said cords and adapted to engage the sides of the window-frame, said casing being also provided with a transverse partition forming two separate compartments, a reel mounted in one of said compartments and the shaft of which passes through the other compartment and through both ends of said casing, a cord wound on said reel and passing through a slot in said casing, brake-levers secured to the side of said partition opposite the reel and provided with shoes which operate through said partition and in connection with said reel, centrifugal brake devices mounted on said shaft and adapted to operate said levers, and means for locking said brake devices to said shaft, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 13th day of July, 1903.

ARTHUR STANLEY BACON.

Witnesses:
Y. W. HOLMES,
GEO. HOLMES.