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J. H. BROWN & C. FRANCISCUS.

FIRE ESCAPE.

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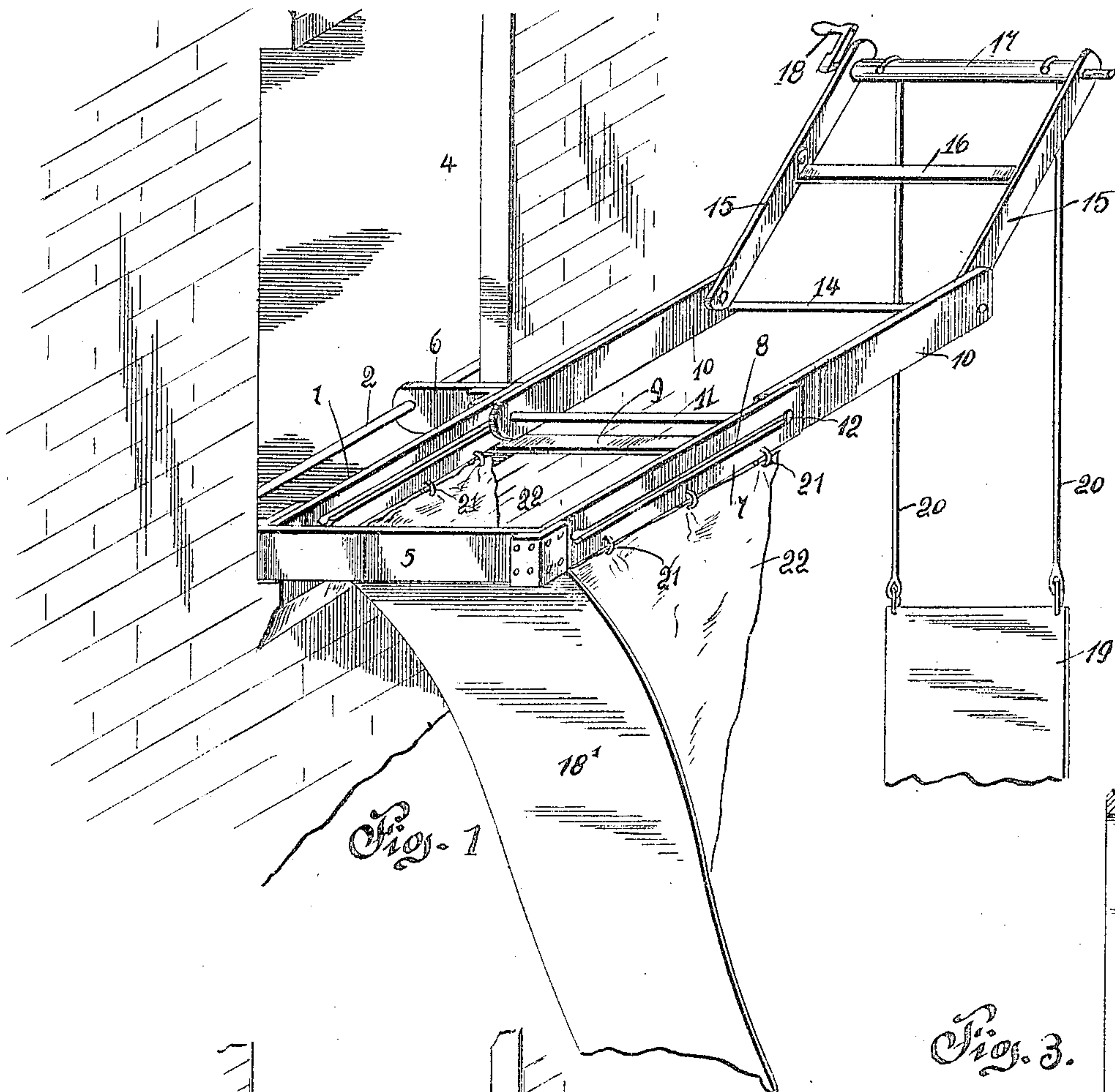


Fig. 1

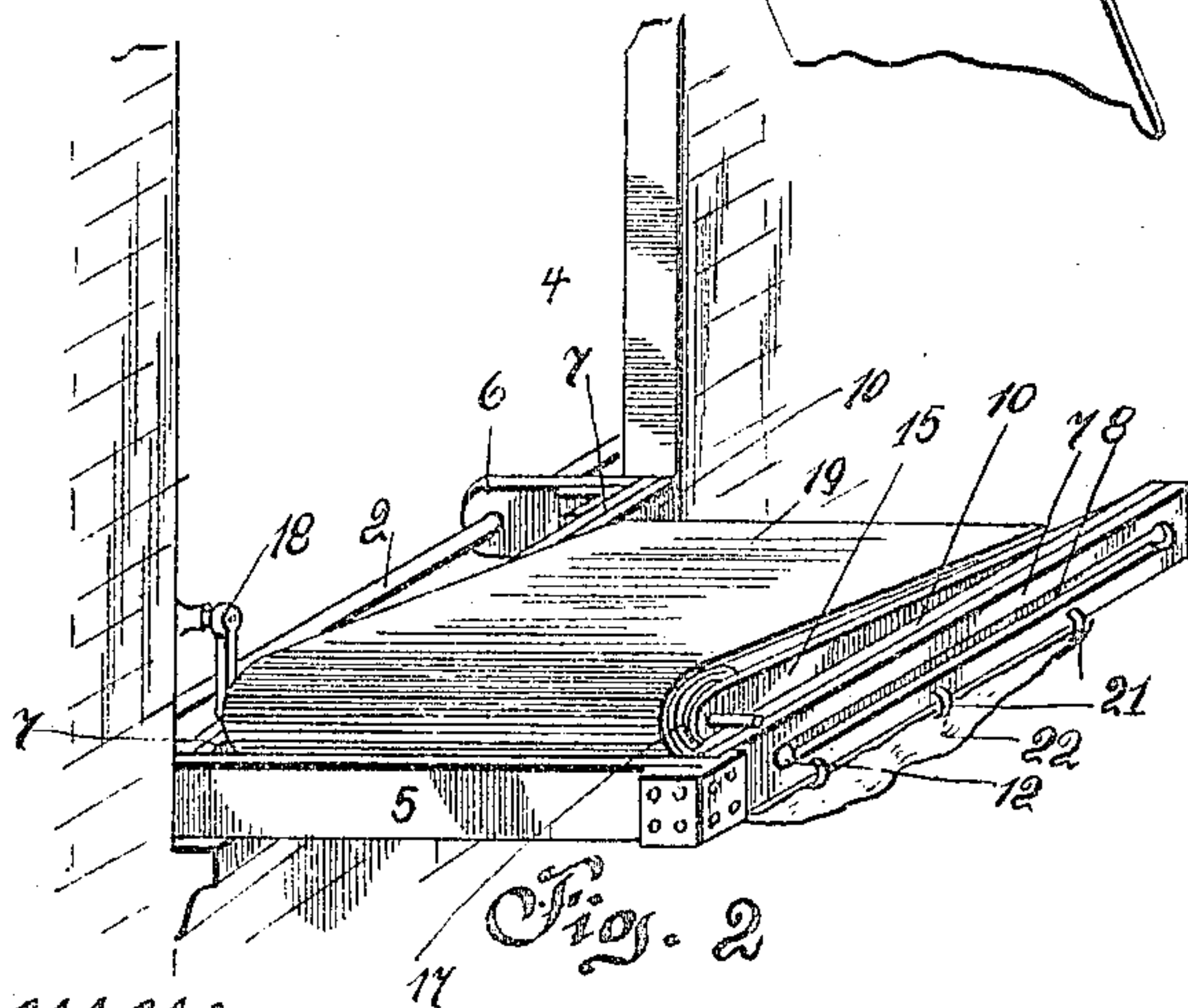
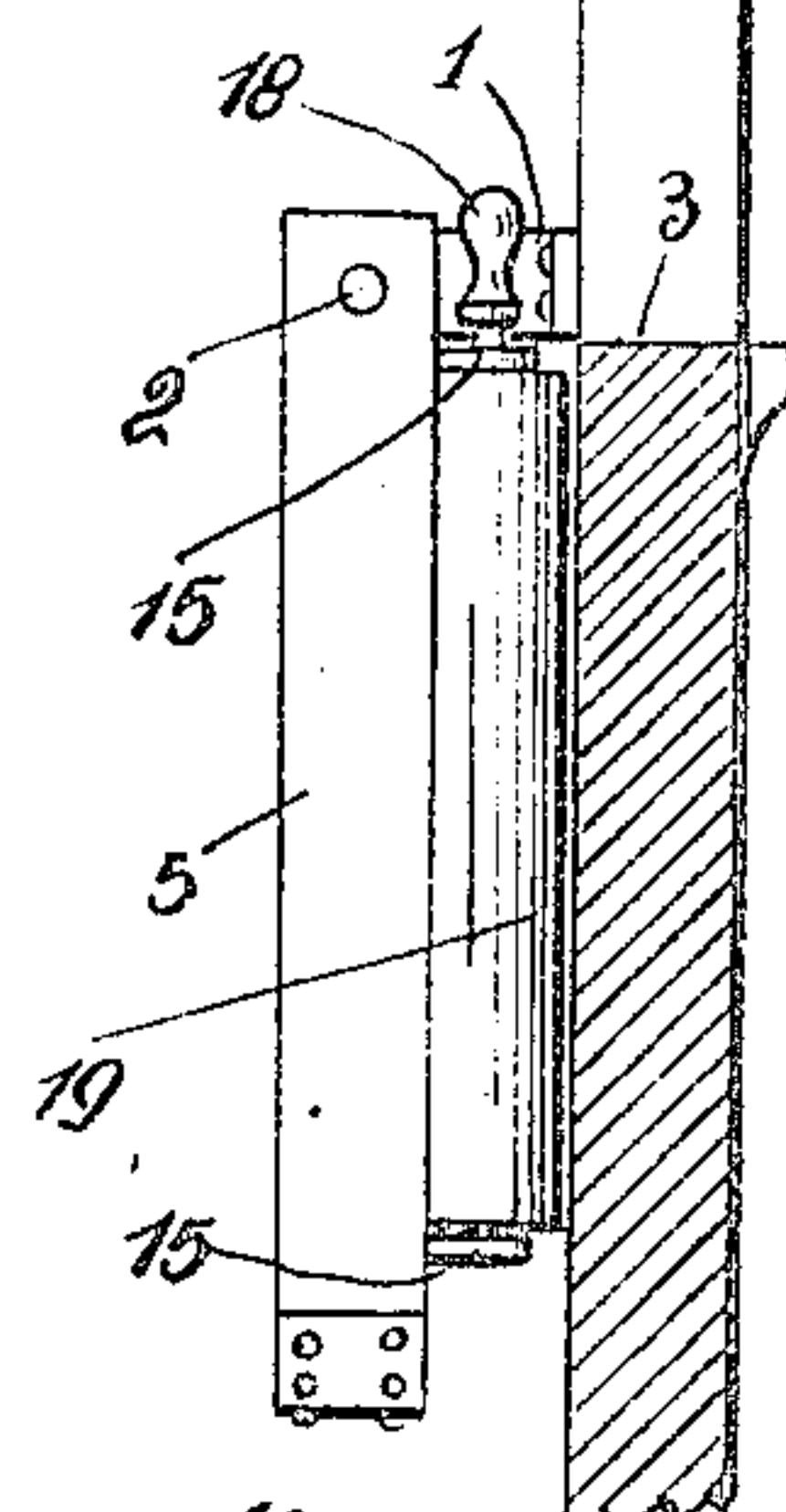


Fig. 2

Fig. 3.



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UNITED STATES PATENT OFFICE

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FIRE-ESCAPE.

No. 813,139.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed April 14, 1905. Serial No. 255,629.

To all whom it may concern:

Be it known that we, JOHN H. BROWN and CONSTANT FRANCISCUS, citizens of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in fire-escapes, and has for its object to provide a novel form of folding fire-escape which can be readily housed within the building in connection with which it is desired to use the same.

Another object of this invention is to provide a fire-escape so constructed as to be adjusted to different heights of buildings and one by which the occupants of a building can readily descend to the ground in a comparatively short time.

The invention aims to provide a fire-escape particularly adapted to be used in connection with the front windows of a building where it is desired not to disfigure the appearance of a building by the ordinary type of fire-escape. To this end we have provided a folding fire-escape which can be retained within the compartment of the building in connection with which it is to be used, and in case of fire it can be easily and quickly placed in position to be used by the occupant of the compartment.

With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts which will be hereinafter more fully described and then specifically pointed out in the claims, and, referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a perspective view of our improved fire-escape, partly broken away and illustrated in connection with the window of a building. Fig. 2 is a similar view illustrating our improved fire-escape in a folded position. Fig. 3 is a vertical sectional view of a window of a building, illustrating our improved fire-escape as positioned within the window.

To put our invention into practice, we provide the inner walls of the compartment adja-

cent to the window with which our fire-escape is to be used with brackets 1 1, in which is mounted a rod 2. This rod is mounted in a horizontal plane with the sill 3 of a window 4, and upon the rod our improved fire-escape is pivoted.

The fire-escape comprises a substantially U-shaped frame 5, carrying inwardly-extending lugs 6 6, which engage the rod 2. The side bars 7 7 of the U-shaped frame are slotted, as indicated at 8, and the outer ends of said bars are braced by a transverse plate 9. Slidably mounted between the side bars 7 7 are extension-rails 10 10, the ends of which are provided with a transverse rod 11, adapted to engage in the slots 8 8, as indicated at 12. The opposite ends of the rails 10 10 are braced by a transverse rod 14, and pivotally connected to said ends are rails 15 15. These rails are braced by a transverse plate 16, and in the outer ends of said rails is journaled a roller 17, operated by a crank-handle 18.

To the end of the U-shaped frame 5 is connected a strip of canvas 18' or the like flexible material. The opposite end 19 of the strip of material is connected to the roller 17 by cords or cables 20, and when the fire-escape is in a folded position, as will be presently described, the strip of material is adapted to be wound upon the roller 17.

The lower edges of the side bars 7 7 of the frame 5 are provided with a plurality of hooks 21, to which are connected the upper edges of shields 22 22, preferably made of the same material as the strip 18'.

In Figs. 2 and 3 of the drawings we have illustrated our improved fire-escape in a folded position, and when the same is not in use it is adapted to hang within the compartment which it is used in connection with. The rails 15 15 are adapted to be folded within the rails 10 10, and these rails are adapted to be moved inwardly into the frame 5. When the strip of material 18' is wound upon the roller 17, the framework of our improved fire-escape can be swung within the window 4 and suspended in the position illustrated in Fig. 3 of the drawings. We may employ a ratchet-wheel and pawl in connection with the roller 17, whereby the strip of material will always be retained in a taut condition upon the roller 17 when the fire-escape is in a folded position.

In case of fire the framework of our improved fire-escape is adapted to be swung outwardly to the position illustrated in Fig. 2 of the drawings, the sill of the window supporting the lugs 6 6 and retaining the U-shaped frame 5 in a horizontal plane with the window. The crank-handle 18 is then released and the strip of material 18' allowed to descend until it has approximately reached the ground. The rails 15 15 are then swung outwardly until they engage the transverse rod 14, which maintains them in a horizontal plane with the remainder of the fire-escape. The rails 10 10 are then moved outwardly to the position illustrated in Fig. 1 of the drawings, and these rails are retained in horizontal position by the transverse plate 9. The occupants of the room can then crawl out of the window upon the framework of the fire-escape and position themselves upon the flexible strip 18' and descend to the ground. The shields 22 22 protect the occupants of the room from falling prior to descending upon the strip of material 18'. By employing a strong and flexible strip of material the weight of the person descending our improved fire-escape will form a chute of the material, the edges of the strip partially folding about the person as they descend to the ground.

Each fire-escape is adapted to be equipped with a sufficient quantity of flexible material to permit of our improved fire-escapes being used upon either floor of the building, a sufficient quantity of material being fed out according to the height of the floor with which our improved fire-escape is used.

It will be noted that various changes may be made in the details of construction with-

out departing from the general spirit and scope of the invention.

What we claim, and desire to secure by Letters Patent, is—

1. A fire-escape comprising a pivotally-mounted frame, rails slidably mounted upon said frame, secondary rails pivotally connected to the first-named rails, a roll journaled in the secondary rails, a flexible strip of material carried by said frame and adapted to be wound upon said roll, means to rotate said roll, and means to mount said fire-escape adjacent to a window, substantially as described.

2. A fire-escape comprising a plurality of frames adapted to fold upon one another, a strip of flexible material carried by said frames, means to retain said frames in extended position, and means to pivotally mount said fire-escape adjacent to a window of a compartment, substantially as described.

3. In a fire-escape, the combination with a window of a building, of a frame pivotally mounted within said building and adapted to be swung without said building, extension-frames carried by the first-named frame, a strip of flexible material carried by said frames, shields carried by said frames, a roll journaled in one of said frames and adapted to carry said material, and means to support said frames in an extended position, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

JOHN H. BROWN.

CONSTANT FRANCISCUS.

Witnesses:

E. E. POTTER,
M. E. WHITE.