

No. 672,544.

Patented Apr. 23, 1901.

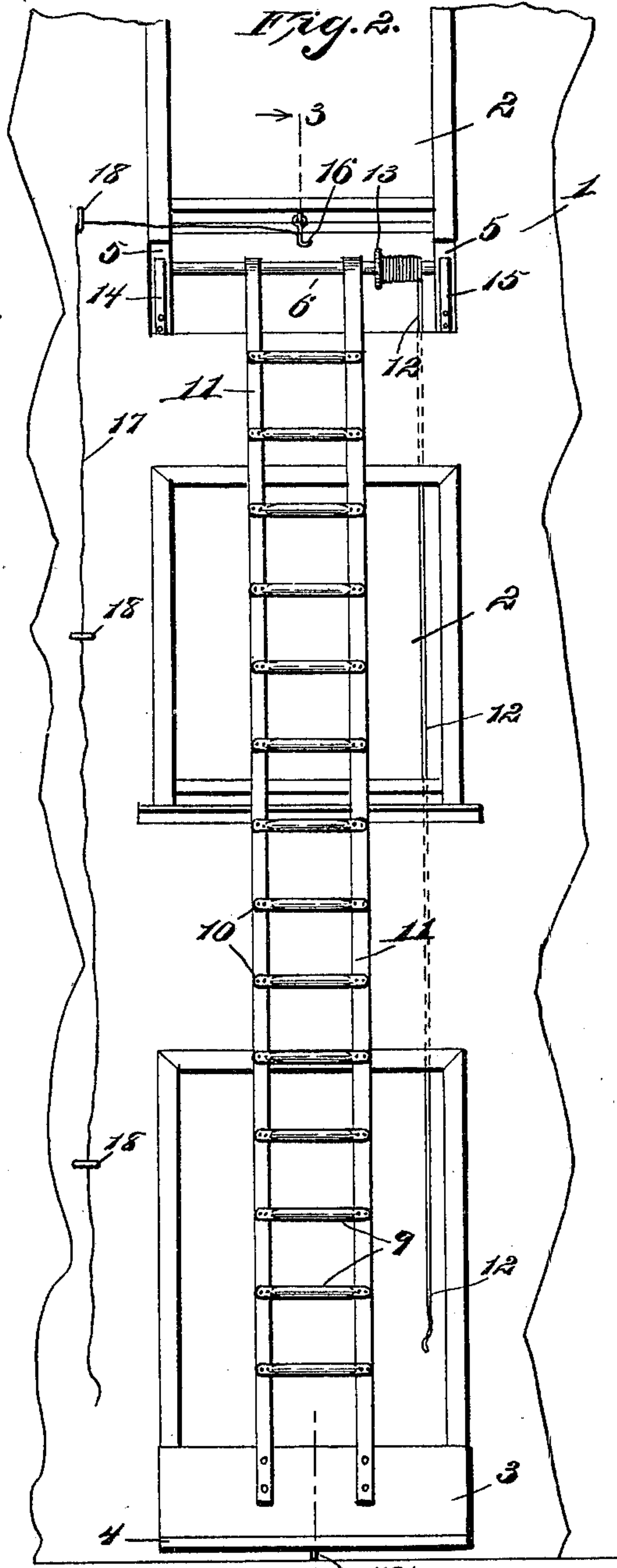
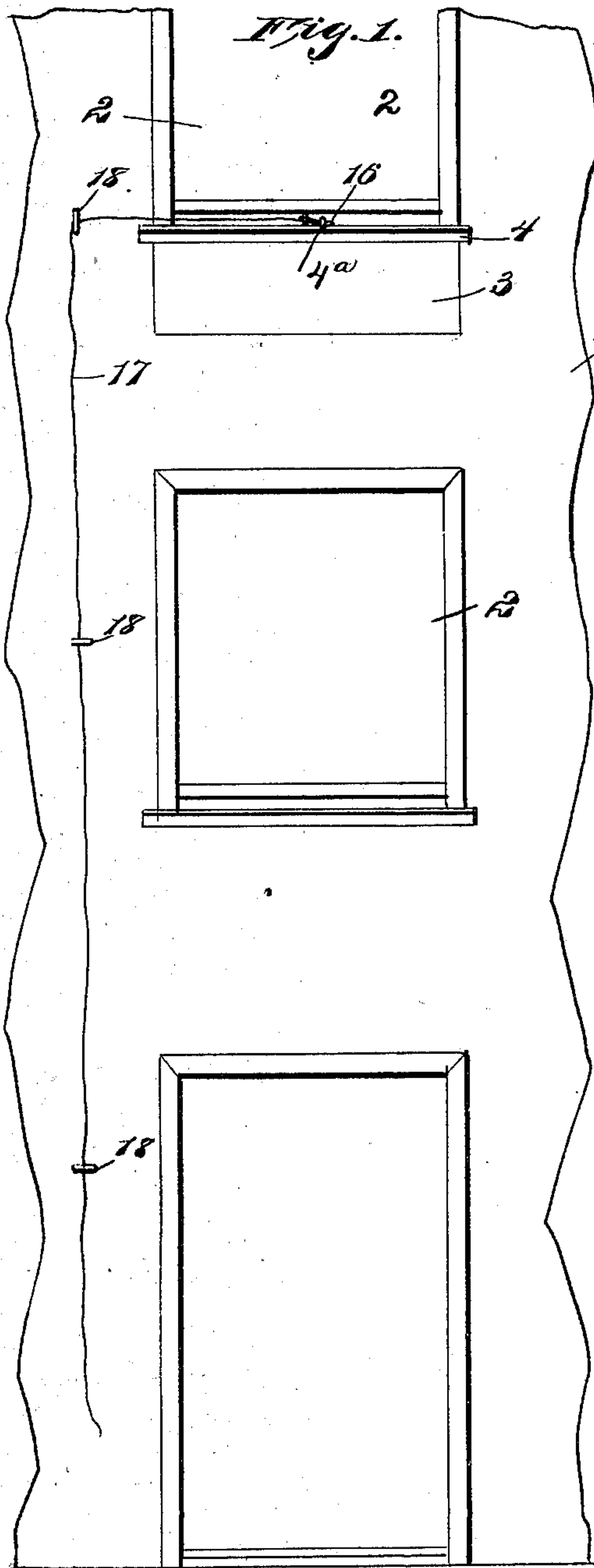
J. M. WOODRUFF.

FIRE ESCAPE.

(Application filed Aug. 12, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

Louis D. Heinrichs.
J. M. McElaney.

INVENTOR

John M. Woodruff

By Victor J. Evans
Attorney

No. 672,544.

J. M. WOODRUFF.

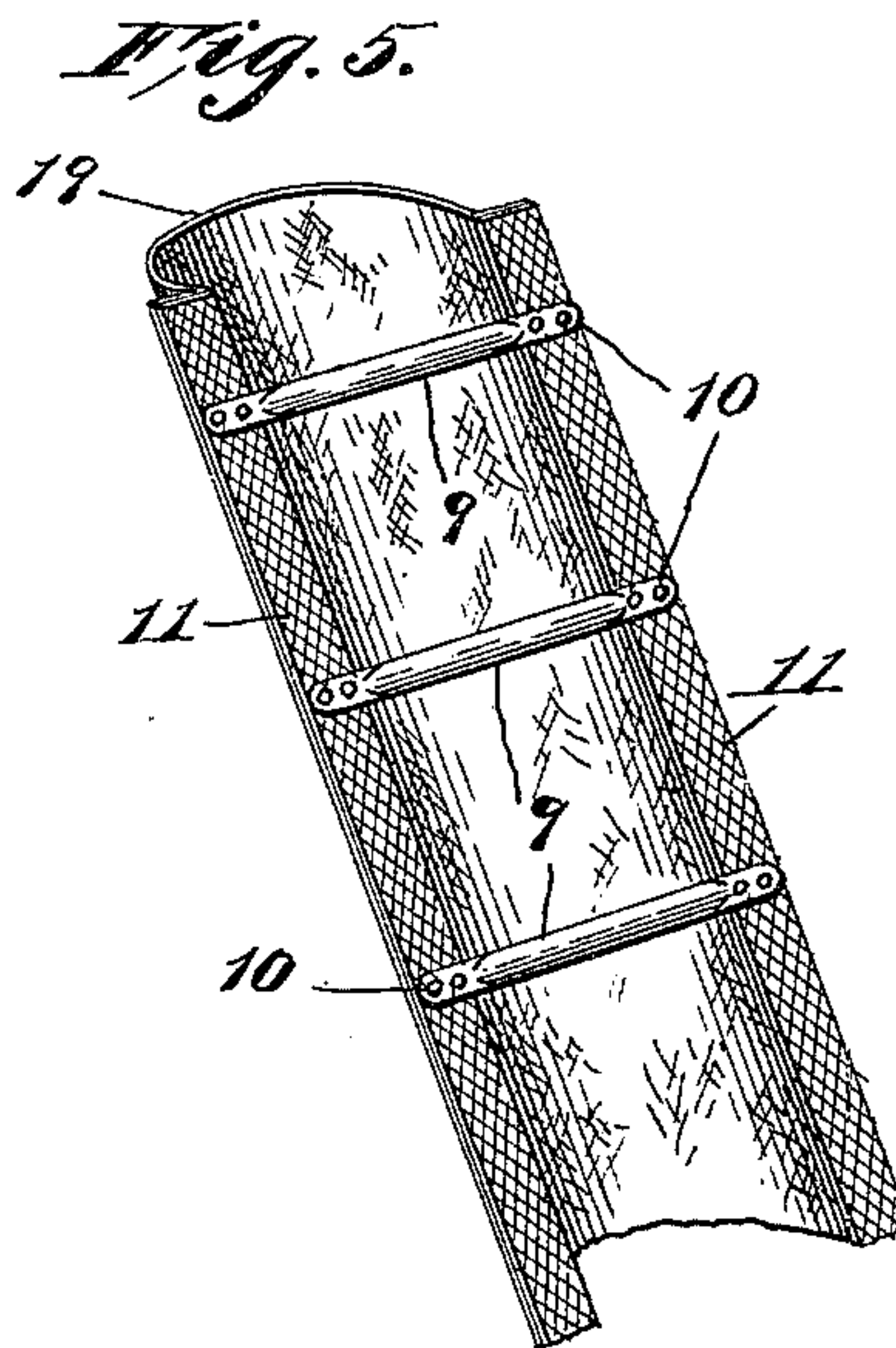
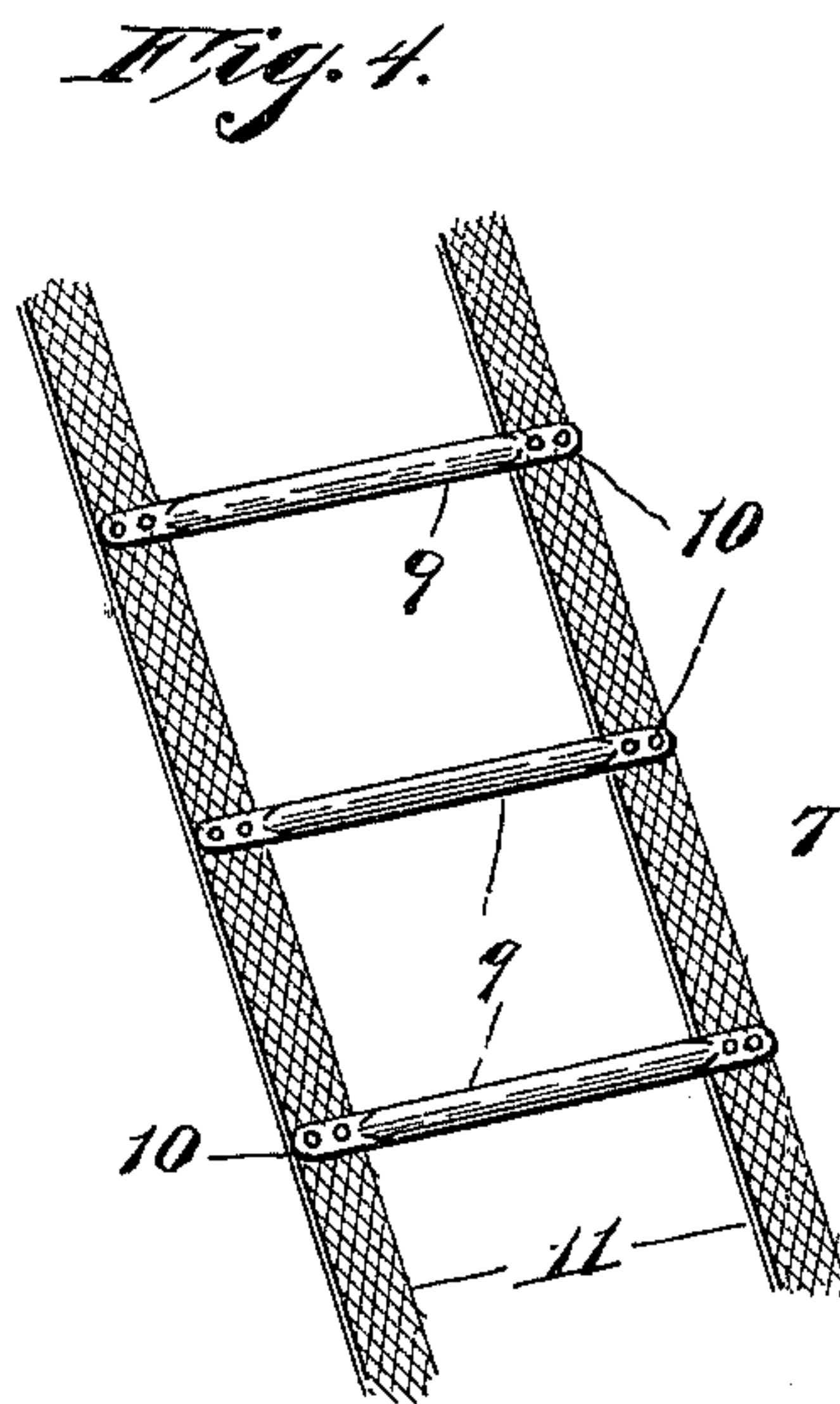
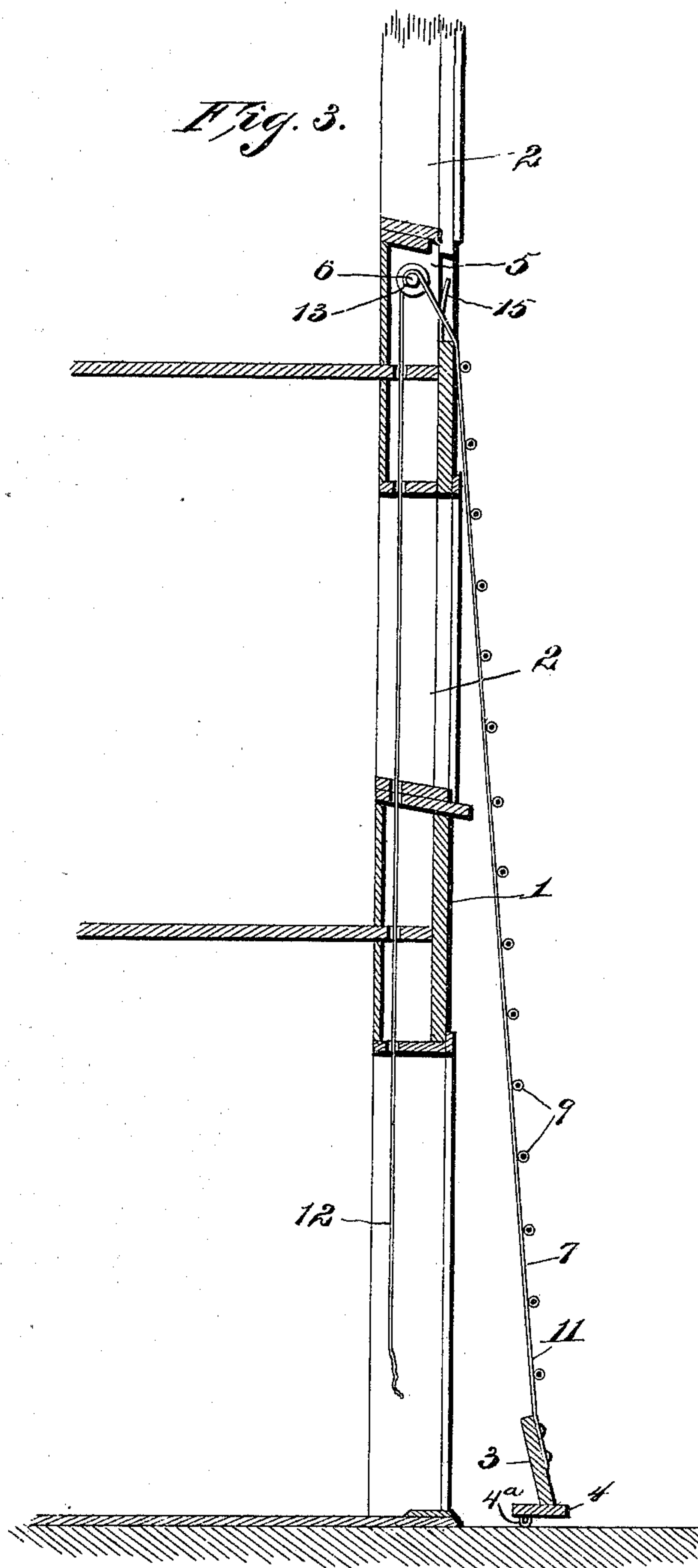
Patented Apr. 23, 1901.

FIRE ESCAPE.

(Application filed Aug. 12, 1899.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES

Louis D. Heinrichs.
Attorney

INVENTOR
John M. Woodruff
By *Victor J. Evans.*
Attorney

UNITED STATES PATENT OFFICE.

JOHN M. WOODRUFF, OF ELMGROVE, WEST VIRGINIA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 672,544, dated April 23, 1901.

Application filed August 12, 1899. Serial No. 727,048. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. WOODRUFF, a citizen of the United States, residing at Elmgrove, in the county of Ohio and State of West Virginia, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

My invention relates to fire-escapes; and its object is to provide a simple and effective apparatus which will be inexpensive and not liable to get out of working order and may be quickly utilized in case of fire.

The construction of the improvement and its novel features will be fully described hereinafter in connection with the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is an elevation of a portion of the front of a house with my improvement applied thereto. Fig. 2 is a similar view with the escape-ladder in position for use. Fig. 3 is a section on the line 3 3 of Fig. 2 looking in the direction of the arrows. Fig. 4 is a detail view showing the preferred construction of ladder, and Fig. 5 illustrates a modification of the ladder.

The reference-numeral 1 designates the front of a house, and 2 a window thereof. A panel 3 of the weather-boarding or front of the building is cut out, so as to be removable, and a section 4 of the window-sill is also made separate from the remainder of the sill, but secured to the panel 3 to be removed therewith, and thus render the panel top-heavy, so that it will quickly turn outward when released. Within the building, opposite the removable panel 3, is mounted in suitable bearings in the studding 5 a rotary shaft 6, to which is securely attached one end of a flexible ladder 7, the other end of which is secured to the removable panel 3 of the weather-boarding. This ladder is designed to roll around the shaft 6, and said ladder may be constructed of any suitable material. I prefer, however, to make the rounds 9 of small pipes or tubes flattened at their ends 10 and the flexible sides 11 of some stout durable fabric securely riveted to the flattened ends of the rounds and coated with some fireproof composition. To one end of the shaft 6 is attached a cord 12, which is wound around the shaft in the opposite direction to the ladder

and is designed as a means for raising or re-rolling the ladder after it has dropped down. This cord 12 is separated from the ladder by a disk 13 on the shaft.

14 and 15 designate flat springs secured at their lower ends to the studding 5 within the space occupied by the removable panel 3. The function of these springs is twofold. They serve to hold taut a hook 16, secured to the stationary part of the window-sill and engaging an eye 4^a on the removable part 4 of the sill and also operate when said hook 16 is released to force the panel 3 outward to insure its dropping to unroll the ladder. The hook 16 may be released by pushing it laterally from the window-sill where it is attached, or it may be released from a lower window by means of a cord 17, attached at one end to the hook and passed down through staples 18 or other suitable keepers to a point where it may be conveniently reached from below.

It will be clear from the above description that as soon as the hook 16 is released from its securing-eye on the movable window-sill panel 4 the latter and the section 3 will at once be forced outward and drop, thus unrolling the ladder, as indicated in Fig. 2. The ladder may be raised again, should it be so desired, by pulling upon the cord 12.

As a modification of the ladder I have shown it in Fig. 5 provided with a backing 19, made of netting or other flexible material, secured at its edges to the ladder. This backing is wider than the ladder to adapt it to sag at its center to form a chute through which persons may slide down from the windows, while the lower end of the ladder is held at an inclination by persons on the ground.

If desired, the chute may be provided with openings opposite different floors for the admission of persons thereto below the upper end of the chute.

I claim—

1. A fire-escape comprising a panel, located beneath a window-sill and provided with a hook-eye, shaft-bearings in rear of the panel beneath the window-sill, a shaft journaled in the shaft-bearings, a flexible ladder secured at its inner end to the shaft and at its outer end to the removable panel, a winding-cord secured at its inner end to the shaft, whereby the ladder is wound upon the shaft, springs

in rear of the panel and pressing thereon, a hook secured to the sill and adapted to engage the hook-eye; and a cord connected with the hook for releasing the latter.

- 5 2. A fire-escape comprising a panel, located beneath a window-sill, having a section of the window-sill secured thereto, and provided with a hook-eye, shaft-bearings in rear of the panel beneath the window-sill, a shaft jour-
10 naled in the shaft-bearings, a flexible ladder secured at its inner end to the shaft and at its outer end to the removable panel, a wind-

ing-cord secured at its inner end to the shaft, whereby the ladder is wound upon the shaft, springs in rear of the panel and pressing 15 thereon, a hook secured to the sill and adapted to engage the hook-eye; and a cord connected with the hook for releasing the latter.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN M. WOODRUFF.

Witnesses:

BIRCH WILLIAMS,

GEORGE MAKINSON.