

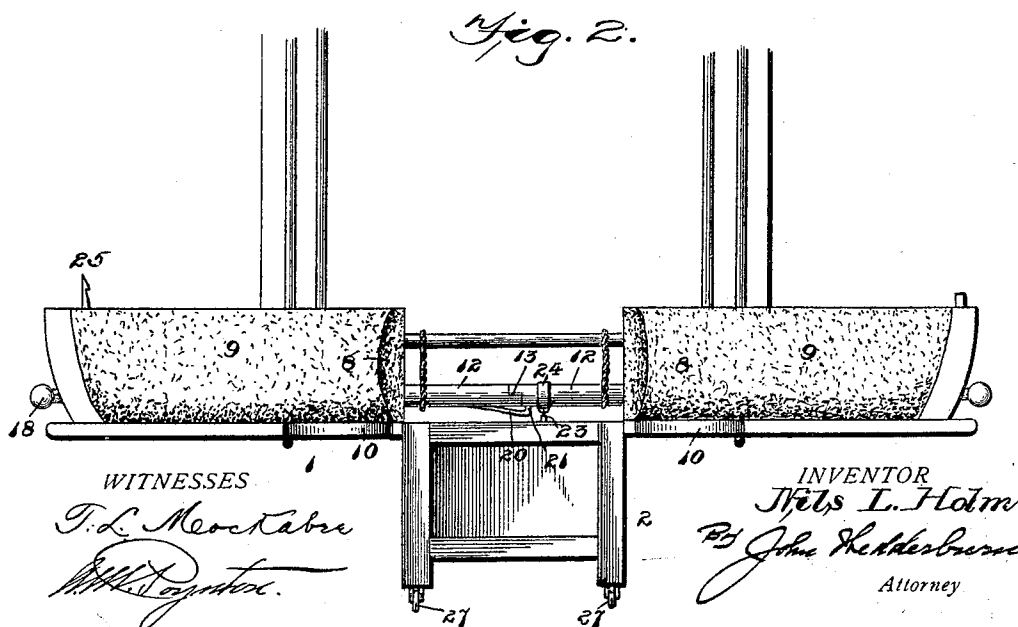
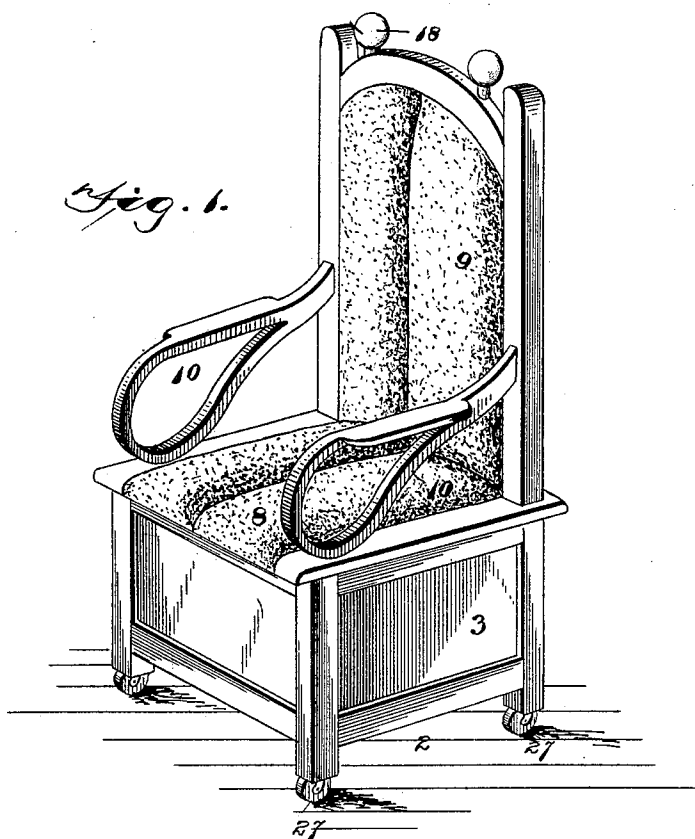
(No Model.)

2 Sheets—Sheet 1.

N. L. HOLM.
FIRE ESCAPE.

No. 583,230.

Patented May 25, 1897.



WITNESSES

T. L. Moore
W. H. Taylor

INVENTOR

N. L. Holm

By John Hetherington
Attorney

(No Model.)

2 Sheets—Sheet 2.

N. L. HOLM.
FIRE ESCAPE.

No. 583,230.

Patented May 25, 1897.

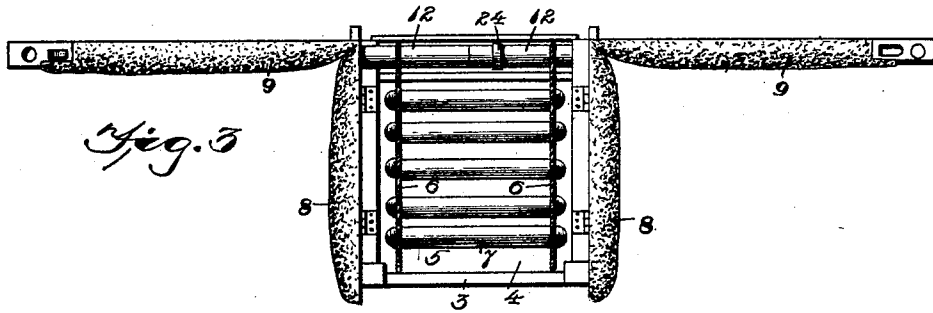


Fig. 3

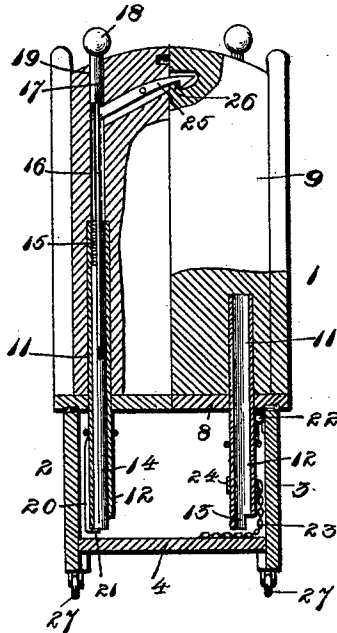
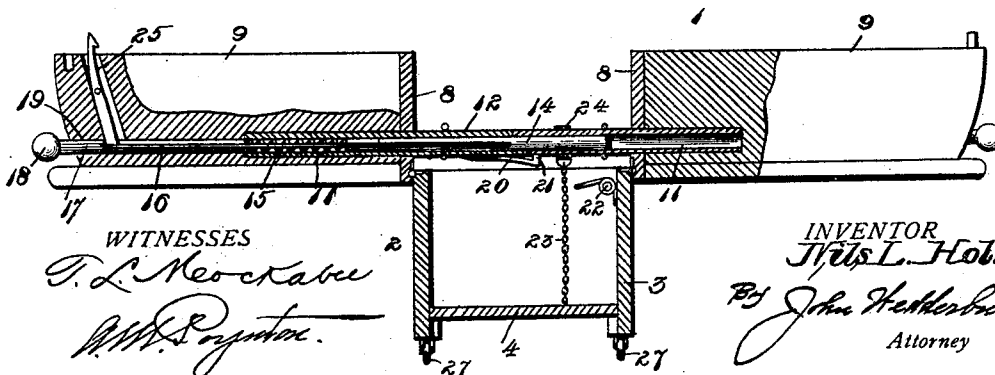


Fig. 4.

Fig. 5.



WITNESSES

G. L. Meekabee
W. M. D. Rye

INVENTOR

N. L. Holm

By John Hetherington
Attorney

UNITED STATES PATENT OFFICE.

NILS LEONARD HOLM, OF PESHTIGO, WISCONSIN.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 583,230, dated May 25, 1897.

Application filed January 25, 1897. Serial No. 620,594. (No model.)

To all whom it may concern:

Be it known that I, NILS LEONARD HOLM, a citizen of the United States, residing at Peshigo, in the county of Marinette and State of Wisconsin, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to fire-escapes, and has for its object to provide a simple and efficient article of the character referred to in the form of a flexible ladder, the same being contained and concealed within a piece of furniture which is movable or portable, whereby it may be carried from place to place and set inside of any desired window within a building, either in a room or hallway, the said article of furniture being sectional and folding, so that simultaneously with the opening of the article of furniture for getting access to the ladder the folding parts of the article will constitute braces for abutting against the opposite sides of the window-frame for the purpose of maintaining the piece of furniture in place, the ladder being anchored thereto in a manner hereinafter explained.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view showing the article of furniture as in the form of a chair, the ladder being concealed in the lower portion thereof, which constitutes a receptacle. Fig. 2 is a front elevation of the same shown against a window and in position for use. Fig. 3 is a plan view of the same. Fig. 4 is a vertical section taken through the back of the chair, showing the article adapted for use as a chair. Fig. 5 is a similar section showing the sections of the chair back and seat folded down in position for use as a fire-escape.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates a chair comprising a rectangular bottom portion 2, the same being inclosed by means of

sides 3 and a bottom 4, thereby forming a receptacle in which is placed a flexible ladder 5, consisting of parallel cables or ropes 6, connected at intervals by cross-rungs 7.

The chair-seat 8 and the chair-back 9 are divided centrally, the back being divided on a central vertical line and the seat on a central longitudinal line, as shown, and the chair-back sections are rigidly connected to the chair-seat sections and braced relatively thereto by means of arms 10. Extending longitudinally within each chair-back section is a tubular casing 11, said casings being projected below the bottom surface of the chair-seat, as indicated at 12, and notched at their lower ends, as indicated at 13, so as to overlap each other when moved in a horizontal position.

Within one of the casings 11 is mounted a sliding bolt 14, which is actuated toward the opposing casing when in a horizontal position by means of a spiral spring 15, arranged above the bolt and between said bolt and a suitable shoulder within the chair-back section. The bolt is preferably made tubular for the sake of lightness, and has connected to its upper or outer end parallel wires or cords 16, which extend to the top edge of the chair-back, where they connect with the shank 17 of a button 18, located at the top of the chair-back and movable in an opening 19, as shown. When the bolt is drawn back against the tension of the spring, it is held by means of a spring-catch 20, the free end or lip 21 of which is adapted to project across the end of the bolt and engage the same. The end of the spring-catch 20 is so arranged and projected sufficiently beyond the lower end of the tubular casing in which the bolt is mounted that said catch is adapted to come in contact with the corresponding end of the opposing casing when the parts assume a horizontal position, whereby the said catch is moved out of the path of the bolt and out of engagement therewith, thus allowing said bolt to be actuated by the spring and to be shot into the oppositely-located end of the casing of the other chair-back section, as clearly shown in the sectional view.

22 designates a spring located within the ladder-receptacle or bottom of the chair and secured to one side thereof, the said spring bearing against the tubular casing 11 of the

bolt-receiving section and acting when the chair-back sections are released from each other to throw its respective section into a horizontal position. The said section is sustained in a horizontal position by means of a stay-chain 23, which is interposed between the bottom of the chair and a collar 24, surrounding the casing 11 adjacent to its lower end. The flexible side bars or cables of the ladder have their ends looped around the casings 11, so that when the ladder is grasped and lifted from its receptacle and thrown out of the window it will be securely anchored to the chair. Within the chair-back section containing the sliding bolt and arranged near the top edge of the chair is a latch 25, pivoted intermediate its ends and projecting at one end beyond the meeting surface of its respective chair-back section, so as to engage with a shouldered notch or keeper 26 in the opposing section. The opposite or inner end of the latch projects into the opening 19 and lies in the path of the shank 17 of the push-button 18, so that by depressing said push-button the latch is vibrated out of engagement with its keeper, thus allowing the chair-back sections to be disengaged, so that they may move apart.

In operation the chair, which is preferably mounted upon casters 27, is pushed in front of a window or doorway, and the push-button 18 is then thrust downward, thereby disengaging the latch. The spring 22 now acts against the casing 11 and thrusts one of the chair-back sections into a horizontal position, where the same is held by means of the stay-chain 23. As the lower end of the casing 11 of that section moves upward, it comes in contact with the lower surface of the opposing chair-bottom section, thus lifting the latter and causing the remaining chair-back section to move into a horizontal position, it being understood that the chair-seat sections are hinged at their outer edges to the chair-bottom or receptacle 2. Upon the second chair-back section reaching a horizontal position the spring-catch is moved out of engagement with the sliding bolt, thus allowing the latter to enter the opposing casing 11, thereby securely locking the chair-back sections in their horizontal positions, in which they extend in opposite directions and serve as braces or stops for contacting with the side portions of the window-casing, thus forming an effective anchorage for the flexible ladder, which may now be lifted from its receptacle and dropped outside of the window for allowing persons to descend and ascend. An intermediate partition 27 is preferably arranged within the receptacle 2, so as to divide the space in which the ladder is placed from the space in which the lower ends of the tubular casings and their connections lie, so as to prevent the ladder becoming entangled therewith.

The construction above described is very simple and efficient and provides a portable

fire-escape which may be instantly removed to any desired window or door, and which, by simply pressing on a push-button, may be put in condition for use as a fire-escape.

It will be understood that the principle of the invention may be applied to other articles of furniture than a chair, in connection with which the improvement has been described above, and also that the device is susceptible of other changes in the form, proportion, and minor details of construction which may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. A chair having its back and seat divided to form opposing sections which are hinged to opposite sides of the chair-bottom and adapted to fold downward into a horizontal position, means for locking the said sections in their downward position, and a flexible ladder arranged under the seat and connected to the chair, substantially as described.

2. A chair having its back and seat centrally divided to form opposing sections, the same being hinged to opposite sides of the chair-back and adapted to fold in a horizontal position, in combination with means for holding and releasing said sections when in their upper positions, means for locking said sections in their downward or horizontal positions, and a flexible ladder adapted to be arranged beneath the seat and connected to the chair, substantially as described.

3. A chair having its back divided to form opposing sections, in combination with a bolt slidingly mounted in one section and adapted to automatically engage the opposing section for locking both sections in their horizontal positions, substantially as described.

4. A chair having its back divided to form opposing sections, the same being hinged to opposite sides of the chair so as to fold, in combination with tubular casings mounted in said sections and projecting below the plane of the chair-seat, a bolt slidingly arranged in one section and adapted to enter the opposing section of the casing, a catch for engaging said bolt, and a spring for actuating said bolt, the said catch being adapted to be tripped by the opposing section of the casing, substantially as described.

5. A chair having a divided back, the sections of which are hinged on opposite sides of the chair-bottom, in combination with a latch for holding said sections together a bolt slidingly mounted in one section and adapted to engage with the other section, means for setting said bolt, and a push-button for disengaging said latch, substantially as described.

6. A chair having its back divided and the sections thereof hinged to the chair-bottom at opposite sides, in combination with tubular casings arranged within said sections, a bolt sliding in one casing and adapted to enter

the other casing, a spring for actuating said bolt, and a catch for holding said bolt against the tension of the spring, means for releasing said catch, a spring for actuating one of the 5 chair-back sections, and a stay-chain for maintaining said section in a horizontal position, substantially as described.

7. A chair having its back divided and the sections thereof hinged to the chair-bottom 10 on opposite sides so as to fold in opposite directions, in combination with tubular casings arranged within said sections and extending below the plane of the chair-seat and having their ends notched or cut away so as to overlap each other, a spring-actuated bolt mount- 15 ed in one of said casings and adapted to en-

ter the opposing casing, a catch for engaging said bolt and adapted to be tripped by contact with the casing of the opposing section of the chair-back, a latch for holding the 20 chair-back sections together, a push-button coöperating with said latch for disengaging the same, and a connection between said push-button and bolt, all arranged for joint operation, substantially as described. 25

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

NILS LEONARD HOLM.

Witnesses:

JAS. F. SLIGHT,
N. P. PEHRSON.