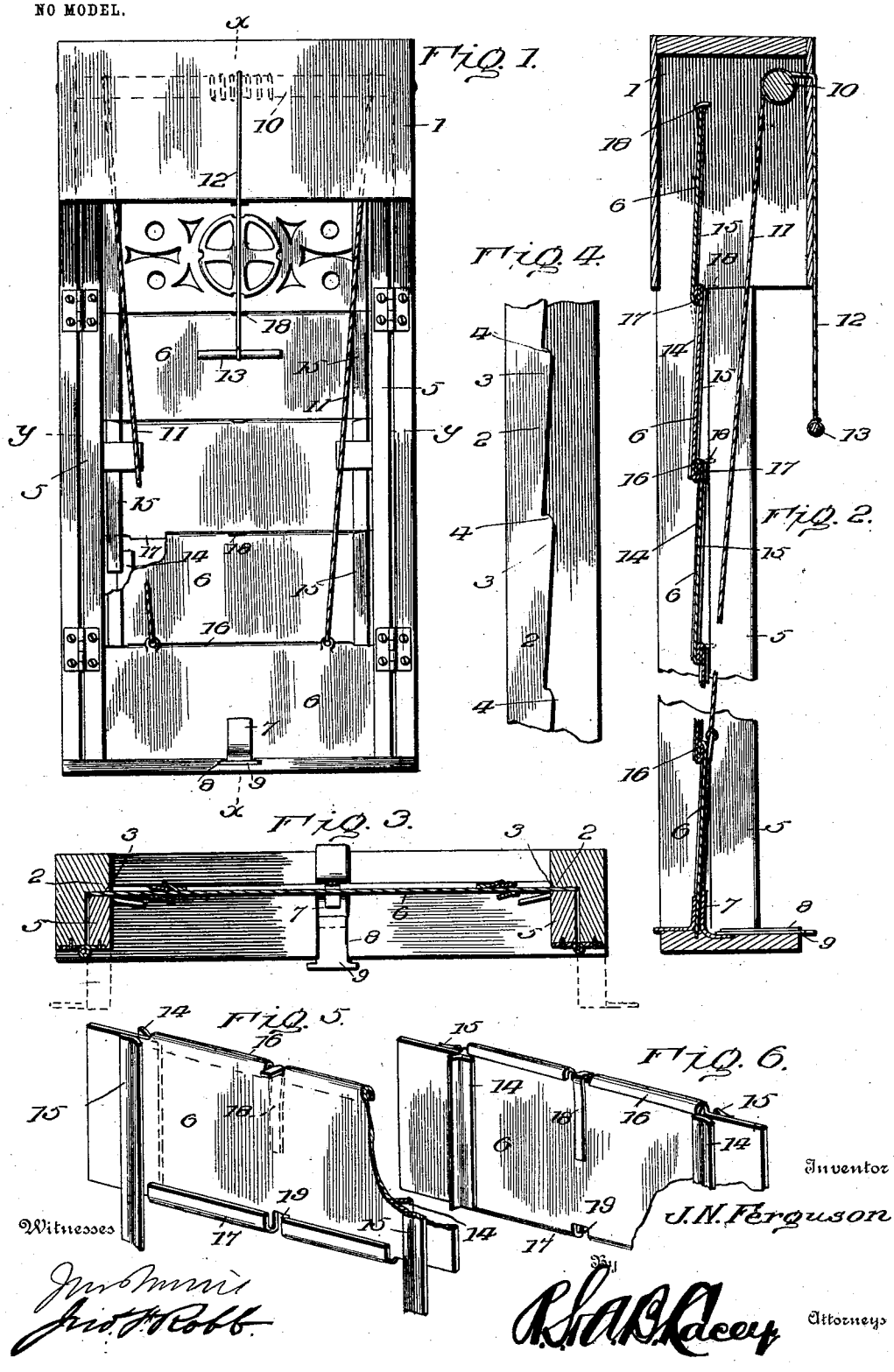
No. 720,124. PATENTED FEB. 10, 1903.

J. N. FERGUSON.

PROTECTOR FOR WINDOWS OR LIKE OPENINGS.

APPLICATION FILED MAR. 10, 1902.

NO MODEL.



Witnesses

Inventor

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JOHN N. FERGUSON, OF WOODLAKE, NEBRASKA.

PROTECTOR FOR WINDOWS OR LIKE OPENINGS.

SPECIFICATION forming part of Letters Patent No. 720,124, dated February 10, 1903.

Application filed March 10, 1902. Serial No. 97,649. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. FERGUSON, a citizen of the United States, residing at Woodlake, in the county of Cherry and State of Nebraska, have invented certain new and useful Improvements in Protectors for Windows or Like Openings; 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.

The present invention has for its object the protection of window and like openings in buildings and structures against dishonest persons and the spread of fire.

In its construction the protector comprises a sectional screen composed of slidable plates having interlocking means and coöperating guides to prevent the sections passing by one another and to insure close joints and proper direction in the movements of the parts one upon the other.

The invention also comprises novel means for operating the screen and holding the sections against both vertical and lateral displacement after the screen has been extended to protect and close the opening.

The invention also further consists of the novel features and structural details which hereinafter will be more particularly set forth, illustrated, and finally claimed.

In the drawings hereto attached, forming a part of the specification, Figure 1 is a front view of a protector or screen embodying the invention. Fig. 2 is a vertical section about on the line X X of Fig. 1. Fig. 3 is a horizontal section about on the line Y Y of Fig. 1, the dotted lines showing the hinged strips or bars extended. Fig. 4 is a detail view of a cut-away portion of the frame, showing more particularly the steps or shoulders provided upon the stops on the jambs or sides thereof. Fig. 5 is a detail view of one of the sections of the screen. Fig. 6 is a corresponding view showing the reverse side of one of the screen-sections.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The protector comprises a frame and a sectional screen, the frame being preferably of metal and of a size to snugly fit the casement of the window or other opening of a building or structure to be protected. A pocket 1 is provided at the upper end of the frame to receive the screen when elevated or contracted so as to expose the opening. Stops 2 are provided at the sides or jambs of the frame to support the screen against outward displacement, and the sides of these stops face the room and are stepped or shouldered, as shown at 3, to form supports for the sections of the screen when the latter is extended so as to close the frame. The portion of the stops between adjacent shoulders or steps is inclined, so as to admit of the sections of the screen occupying an approximately vertical position. The outer corners adjacent to the steps or shoulders are beveled, as shown at 4, to admit of the sections other than the one designed to be engaged by a step or shoulder readily passing by the same when drawing the screen down so as to close the opening. Strips or bars 5 are hinged to the jambs of the frame and are adapted to be folded inward, so as to confine the screen when extended, as shown by the full lines in Fig. 3, and to be turned outward, so as to release said sections to admit of drawing the screen upward, as indicated by the dotted lines in said Fig. 3.

The screen is composed of a number of sections or plates 6 of a length and width corresponding to the size of the opening and the required number of sections entering into the formation of the screen. These plates or sections 6 are of metal and may be plain and imperforate, so as to prevent the passage of flame or smoke thereby, and in which case the screen will serve in the capacity of a shield or guard against fire. When the screen is designed solely as a protection against the entrance of dishonest parties, the plates or sections may be of any open design so as to present an ornamental appearance. However, the precise formation of the plates or sections is immaterial within the purview of the invention and will depend largely upon the specific purpose and location of the protector. The plates or sections have interlocking connections to limit their vertical movements relative to one another, so as to prevent the passing by each other of adjacent sections either in the upward or the downward move-

ment thereof. The sections also are provided with coöperating guides to direct the same in their vertical movements. The lowermost section is provided with a finger-piece 7 to be grasped when it is required to draw the screen downward to close the opening, and said finger-piece is adapted to enter a groove 8 in the sill of the frame and be engaged by a slide 9, operating in said groove for locking the screen and preventing upward displacement thereof. Elevating means are provided for drawing the screen upward, and, as shown, they consist of a roller 10, cords or chains 11, attached at their lower ends to the lowermost plate or section and having their upper ends attached to the said roller so as to wind thereon, and a pull cord or chain 12, attached to the middle portion of the roller and adapted to wind thereon in a reverse direction to the cords or chains 11 and provided at its lower end with a button or grip 13. By drawing down upon the cord or chain 12 the roller 10 is rotated and winds up the cords or chains 11, thereby elevating the screen, which when folded or elevated lies within the pocket 1, the sections or plates 6 sliding one upon the other and lying side by side. A pull downward upon the lowermost section or plate 6 unwinds the cords or chains 11 from the roller and rewinds the pull cord or chain thereon, as will be readily comprehended. When the screen has been extended or drawn down, the several sections will have their lower edges resting upon the steps or shoulders 3, and after the strips or bars 5 have been folded inward against the jambs of the frame the screen will be clamped between the stops 2 and the strips 5, thereby preventing inward displacement of the screen by lateral pressure against the outer side. Upward movement of the screen is prevented by sliding the part 9 over the finger-piece 7.

Guides 14 are provided upon the inner faces of the plates or sections 6 near their ends and are adapted to coöperate with companion guides 15 upon the outer face or side of the said sections near the ends thereof. These guides 14 and 15 may form a part of the sections or be applied thereto in any substantial and convenient way and are adapted to direct the sections in their vertical movements and to hold them in proper relation, so as to prevent lateral separation. The upper edge of each plate or section 6 is folded outwardly, as shown at 16, and the lower edge is folded inwardly, as shown at 17, and these folded edge portions 16 and 17 interlock when the sections are drawn downward, so as to limit the movement of adjacent sections and prevent their separation when the screen is drawn down. Spring-strips 18 are provided at the upper edge of each plate or section 6 and project inward, so as to engage with the upper edge of the adjacent section to limit its upward movement when drawing the screen upward to expose the opening protected thereby. The lower edge of the plates or sections is notched, as shown at 19, directly opposite the bent end of the spring 18 to admit of said stop being pressed outward when it is required to slide a section upward to admit of its removal for any purpose.

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

1. In a protector for window and like openings, a screen comprising slidable sections, interlocking means between the sections to limit their vertical movement in each direction, and other interlocking means between the sections upon opposite sides thereof, to direct them in their sliding movements and to prevent lateral displacement at any point in the range of movement, both the aforementioned locking means located upon the said sections, substantially as set forth.

2. In a protector for window and like openings, a screen composed of sections slidably related, and vertical guides upon opposite faces or sides of the sections, those upon one side coöperating with the guides upon the opposite side of the adjacent section to direct them in their vertical movements and hold them from lateral displacement within the range of movement, substantially as set forth.

3. In a protector for window and like openings, a screen comprising sections slidably related, the upper edges of the section being folded outward and the lower edges folded inward, the said folded edges being adapted to interlock when the screen is extended, and spring-strips constituting stops disposed at the upper edges of the sections for engagement with the upper edges of adjacent sections, substantially as set forth.

4. In a window or like opening, a sectional screen, strips having steps or shoulders for supporting the respective sections, and hinged strips or bars adapted to be folded inward for clamping the sections, substantially as specified.

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

JOHN N. FERGUSON. [L. S.]

Witnesses:

W. A. PARKER,

A. L. JOHNSON.