

No. 612,860.

Patented Oct. 25, 1898.

J. S. MESSICK.

SASH LIFTER.

(Application filed May 11, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 3.

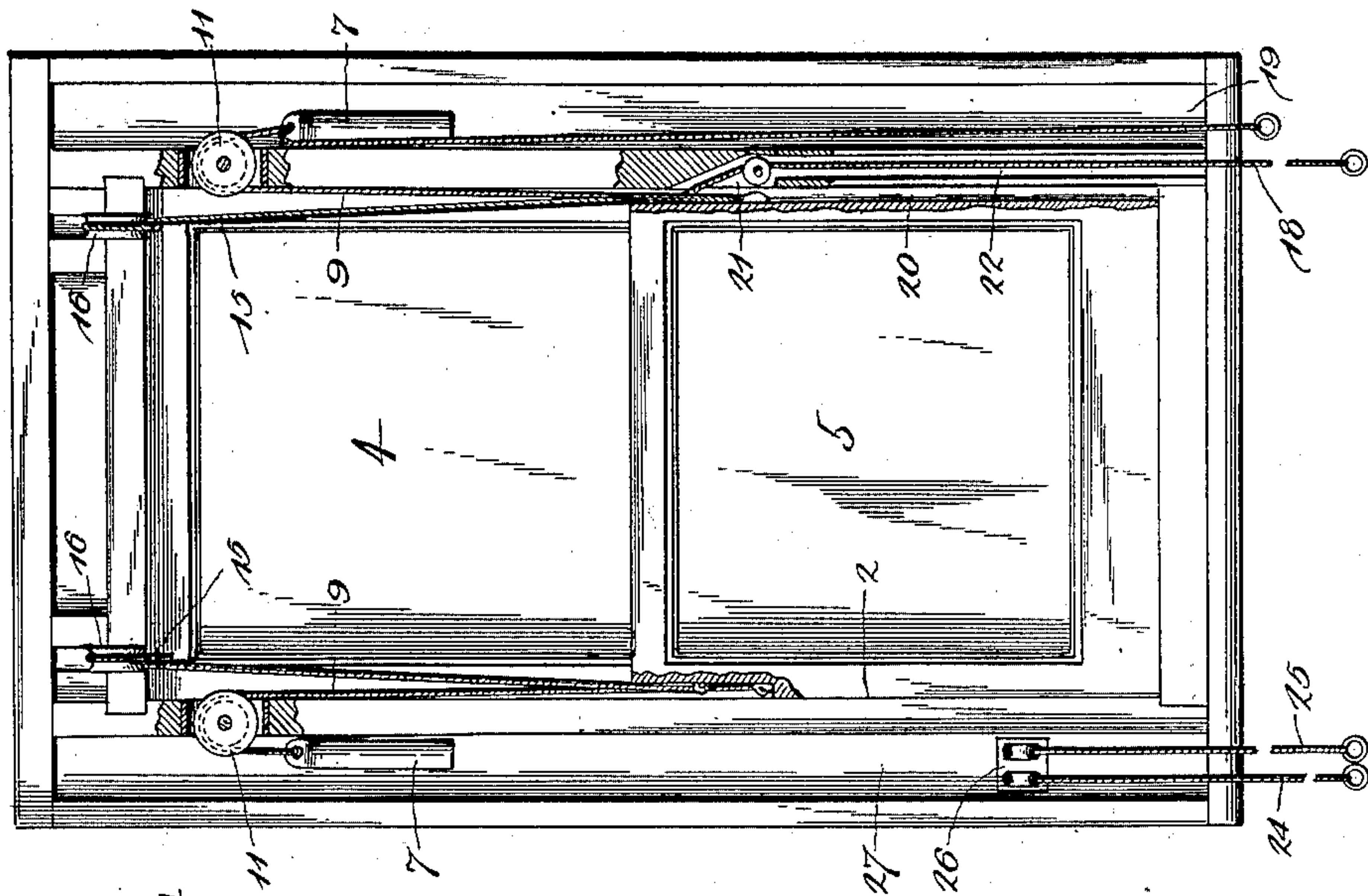


Fig. 2.

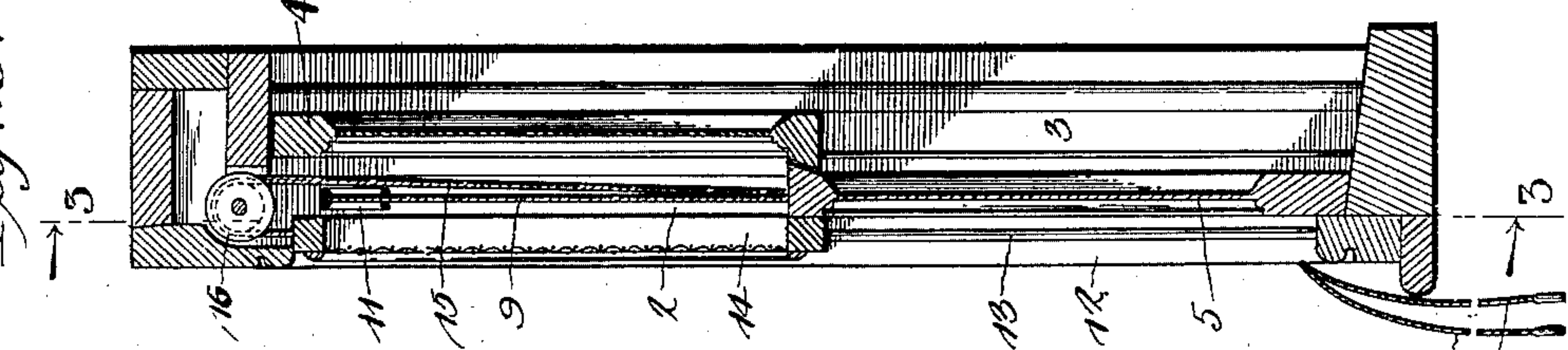
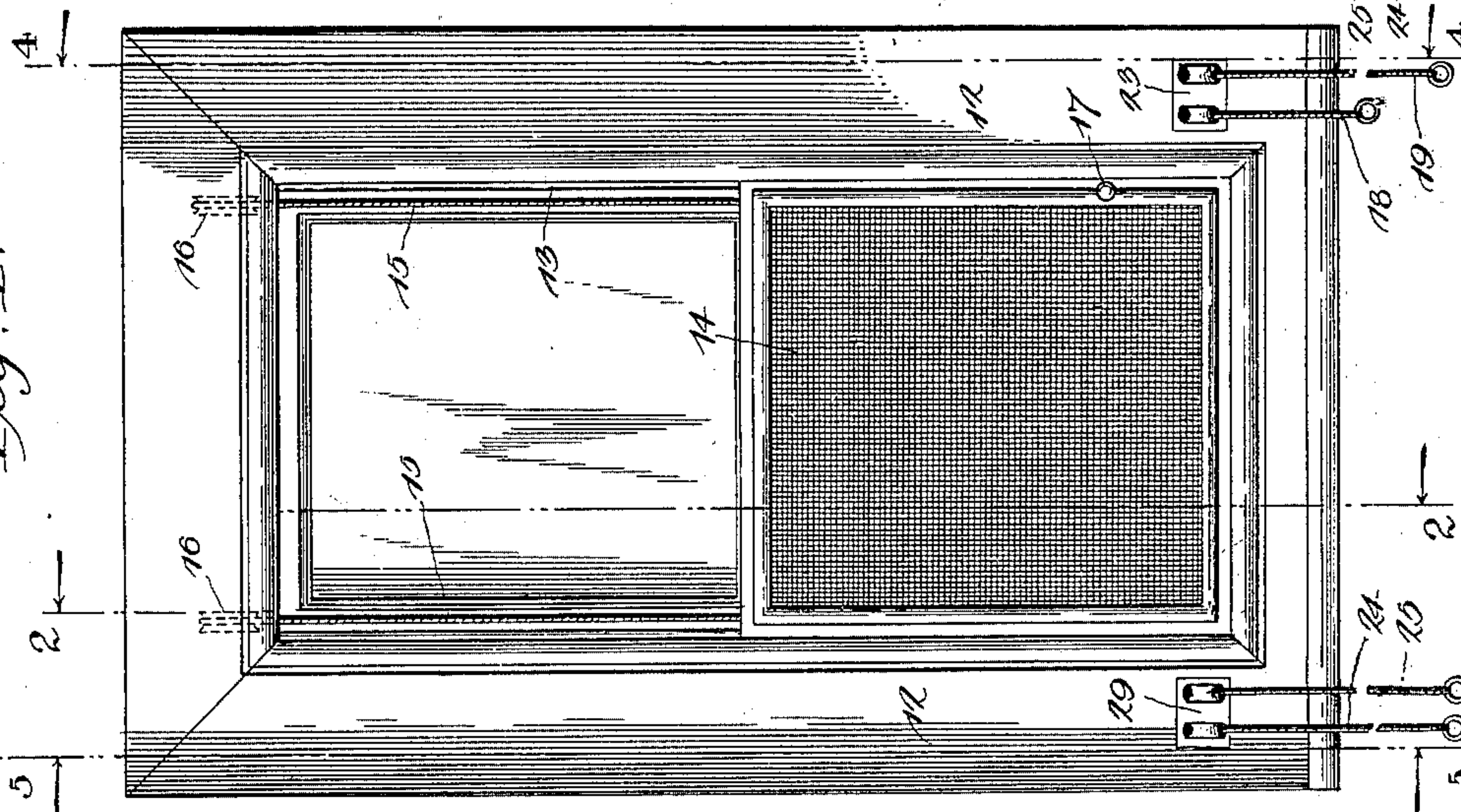


Fig. 1.



Witnesses

J. Grant Culverwell, By His Attorneys,

J. G. Riley

Joseph S. Messick, Inventor.

C. A. Snow & Co.

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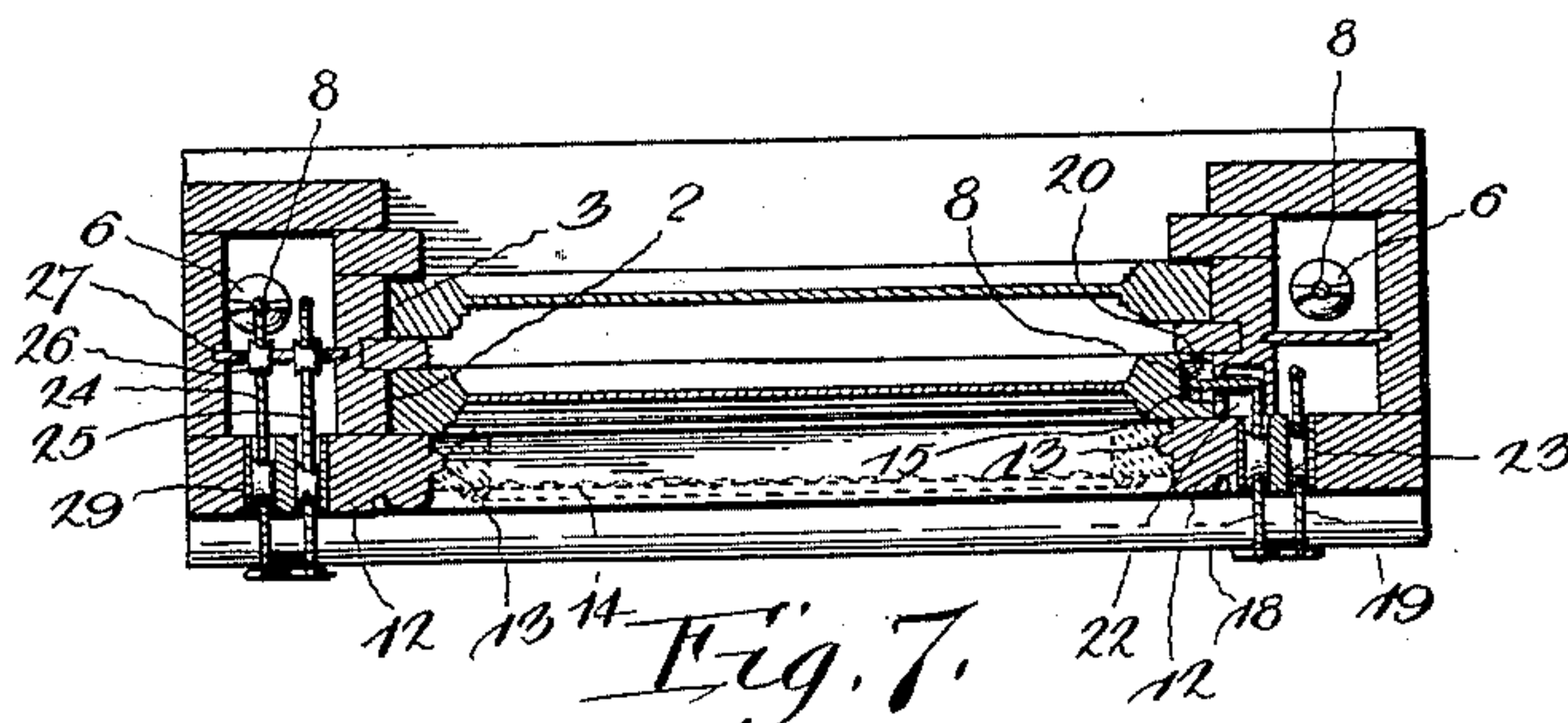
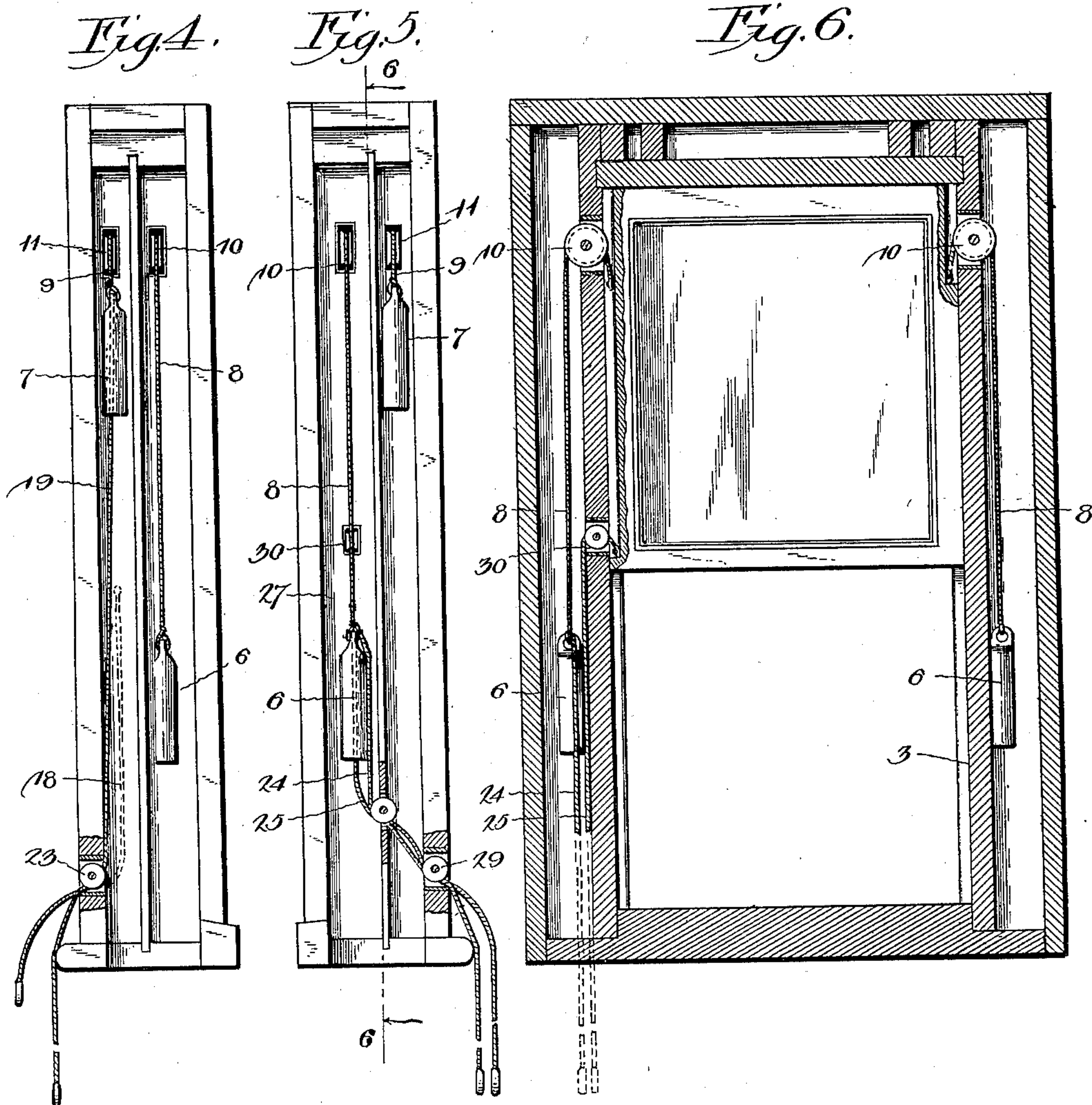
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2 Sheets—Sheet 2.



Witnesses

J. Kaufmannverw.

By *his*

Attorneys,

Joseph S. Messick, Inventor.

J. F. Riley

Chas. Snow & Co.

UNITED STATES PATENT OFFICE.

JOSEPH S. MESSICK, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
ROBERT H. T. WILSON, OF MILTON, DELAWARE.

SASH-LIFTER.

SPECIFICATION forming part of Letters Patent No. 612,860, dated October 25, 1898.

Application filed May 11, 1898. Serial No. 680,378. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. MESSICK, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Sash-Lifter, of which the following is a specification.

The invention relates to improvements in sash-lifters.

10 The objects of the present invention are to improve the construction of sash-lifters and to provide a simple and comparatively inexpensive device adapted to be readily applied to windows having their sashes balanced by 15 weights and capable of enabling the same to be readily raised and lowered and of operating a screen simultaneously with one of the sashes, so that the screen may be quickly arranged in operative position and thereby prevent 20 mosquitos and other insects from entering a room while putting a screen in a window.

A further object of the invention is to enable the sashes to be operated independently 25 of the screen when desired and to arrange the latter to provide the desired amount of ventilating-space at either the top or bottom of a window.

30 The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

35 In the drawings, Figure 1 is an elevation of a window provided with sash-operating mechanism constructed in accordance with this invention. Fig. 2 is a vertical sectional view on line 2 2 of Fig. 1. Fig. 3 is a vertical sectional view on line 3 3 of Fig. 2. Figs. 40 4 and 5 are vertical sectional views on lines 4 4 and 5 5 of Fig. 1. Fig. 6 is a vertical sectional view on line 6 6 of Fig. 5. Fig. 7 is a horizontal sectional view.

45 Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a window-frame provided at opposite sides with the usual vertical ways 2 and 3 for the reception of upper and lower 50 sashes 4 and 5, which are balanced in the

usual manner by sash-weights 6 and 7, located at opposite sides of the window-frame and connected with the sashes by cords 8 and 9. The sash-cords 8 and 9 pass over pulleys 10 and 11, mounted in the window-frame at opposite sides thereof in the usual manner, and the improvements are applicable to all windows having their sashes balanced in this manner. 55

The window-frame is provided at its front 60 with vertical strips 12, provided at their inner edges with longitudinal tongues 13, forming ways or guides for a vertically-movable screen 14, which is provided at its side edges with vertical grooves to receive the said 65 tongues. The screen, which is adapted to move simultaneously with the lower sash, is connected with the same by cords 15, located at opposite sides of the window, passing over upper pulleys 16, and secured at their ends 70 to the lower sash and to the screen in grooves or recesses of the side edges thereof. The pulleys 16 are housed within the window-frame and are concealed by the same, and when the lower sash is raised the screen is 75 lowered, and vice versa, the movement of one corresponding with the movement of the other, as will be readily understood. The screen is provided at one side with a catch 17, adapted to engage the window-frame when it 80 is desired to lock the screen in an elevated position for permitting the lower sash to move independently of the same.

The lower sash is operated to raise and lower by a pair of operating-cords 18 and 19, 85 located at one side of the end of the frame and connected, respectively, to the lower sash and to the adjacent weight 7. The operating-cord 18 is connected at its upper end to the lower sash, at one side thereof, a 90 short distance from the upper edge of the sash, to avoid exposing the cord, and the lower sash is provided at its adjacent edge with a vertical groove 20 to receive the cord 18, which passes through a slot 21 of the adjacent side 95 of the window-frame and enters a vertical groove or way 22 of the same. The vertical groove or way 22 is located at the lower half of the window-frame, and the cord 18 extends from the lower portion of the groove or way 100

22 through the adjacent vertical strip 12 of the window-frame to the exterior thereof, passing around one member of a double or twin guide-pulley 23, which is mounted in a suitable opening of the strip 12. The slot or opening 21 is located opposite the point of attachment of the upper end of the operating-cord 18 when the lower sash is at the bottom of the window-frame, and by this arrangement the said operating-cord is enabled to lower the sash 5 completely and correspondingly raise the screen. The operating-cord 19, which is connected with the weight 7, extends downward from the same and passes over the other member of the double or twin pulley 23 and is adapted when pulled to lift the sash and lower the screen. By this arrangement of operating-cords the lower sash and the screen may be readily raised and lowered.

The upper sash is controlled by a pair of operating-cords 24 and 25, connected, respectively, with the weight 6 and the sash and adapted to draw the sash downward or lower the weight and move the sash upward. The operating-cord 24 is connected at its upper end to the weight 6 at the top thereof, and it passes through an opening 26 of the vertical strip or piece 27, which separates the weights 6 and 7 and forms the intervening wall between the wells or spaces for the weights. The lower end of the operating-cord 24 passes over one member of a double or twin pulley 29, mounted on the adjacent front strip 12 and located near the bottom of the window-frame, similar to the other double pulley 23. The operating-cord 25, which lowers the upper sash, is arranged on the other member of the double or twin pulley 29 and passes through the said opening 26 and extends upward in the space or well which receives the weight 6. This operating-cord 25 then passes through a central perforation or opening 30 of the window-frame and extends into a vertical groove 31 of the upper sash, to which it is secured a short distance from the upper edge of the same to conceal the operating-cord.

Guide-pulleys are mounted in the slot or opening 21 and the slot or opening 30, and a double or twin pulley is arranged in the opening 26.

The screen is adapted, should it be desired, to be detachably secured to the cords 15 to enable it, during winter, when it is not required, to be entirely removed from the window-frame instead of securing it at the top thereof. To enable it to be removed, the cord 15 may be detachably secured to either the screen or the lower sash.

The invention has the following advantages: The operating mechanism, which is simple and comparatively inexpensive in construction, is applicable to all windows having their sashes balanced by weights, and it is capable of enabling a window-screen to be operated simultaneously with one of the

sashes, so that it may be instantly brought into position for use and thereby prevent any insects from entering the room while adjusting the screen. The screen may be arranged at the top or bottom of the window and the upper sash may be raised or lowered to vary the size of the exposed portion of the screen and regulate the ventilation. The parts may also be arranged to permit the sashes to be operated independently of the screen.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. In a device of the class described, the combination with a window having vertically-movable upper and lower sashes, of a vertically-movable screen connected with the adjacent sash and adapted to move simultaneously with the same in an opposite direction, the other sash being capable of adjustment independently of the screen and adapted to vary the exposed portion thereof at either the top or the bottom of the window, substantially as described.

2. In a device of the class described, the combination with a window, of a vertically-movable screen arranged at the inner face of the window-frame, pulleys arranged at the top of the window-frame, and cords passing over the pulleys and connected with the screen and the upper sash, said screen being adapted to be secured at the top of the window to permit the sashes to be adjusted independently of it, substantially as described.

3. In a device of the class described, the combination with a window having vertically-movable sashes, weights connected with the sashes, a vertically-movable screen mounted on the window, connections between the screen and the lower sash, a pair of operating-cords arranged at one side of the window-frame and connected respectively to the lower sash and the adjacent weight thereof, and another pair of operating-cords located at the other side of the window-frame and connected with the upper sash and the adjacent weight, substantially as described.

4. In a device of the class described, the combination of a window-frame provided at one side with a vertical way 22 and having openings at the top and bottom thereof, a sash provided at one edge with a vertical groove, a sash-cord provided with a weight and connected with the sash, the operating-cord 18 arranged in the way 22 and passing through the openings at the top and bottom thereof, the upper portion of the cord being arranged in the groove of the sash and attached to the same, and the operating-cord 19 connected to the said weight and extending downward therefrom to the exterior of the window-frame, substantially as described.

5. In a device of the class described, the combination of a window-frame, an upper sash provided at one of its edges with a ver-

tical groove, the sash-cord connected with the sash and provided with a weight, the operating rope or cord 24 extending from the exterior of the window-frame to the weight and connected to the same at the top thereof, and the
5 operating-cord 25 extending to the well or space in which the weight is arranged and passing through the window-frame near the center thereof into the way of the upper sash

and secured to the same in the groove at the lower end thereof, substantially as described. 10

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH S. MESSICK.

Witnesses:

C. FRANK LACEY,
WILLIAM H. LACEY.