

(No Model.)

2 Sheets—Sheet 1.

J. LUMSDEN.
WINDOW.

No. 585,771.

Patented July 6, 1897.

Fig. 1

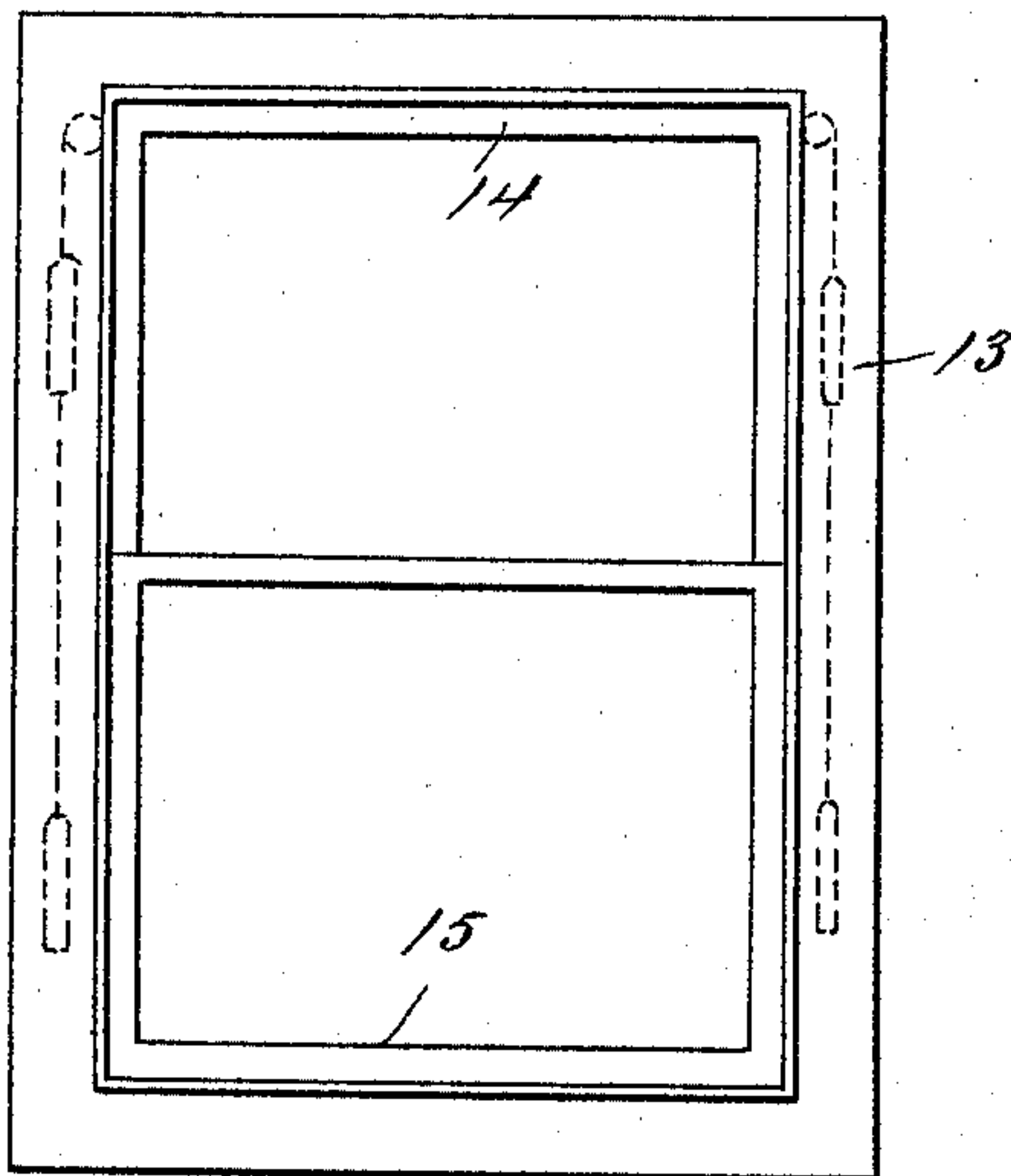


Fig. 2.

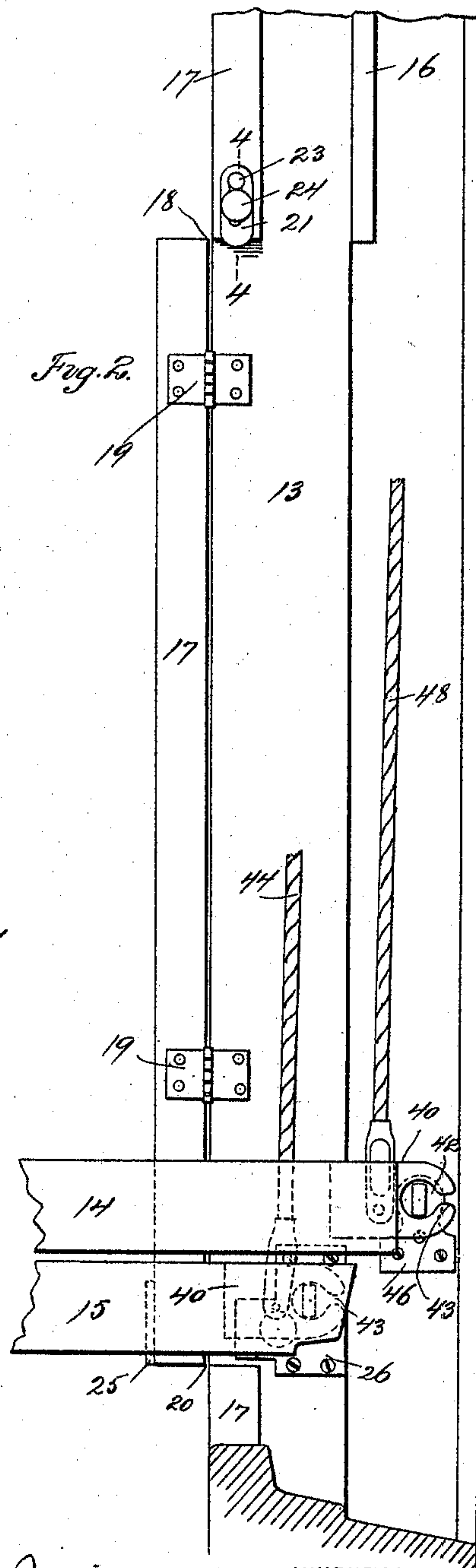


Fig. 3

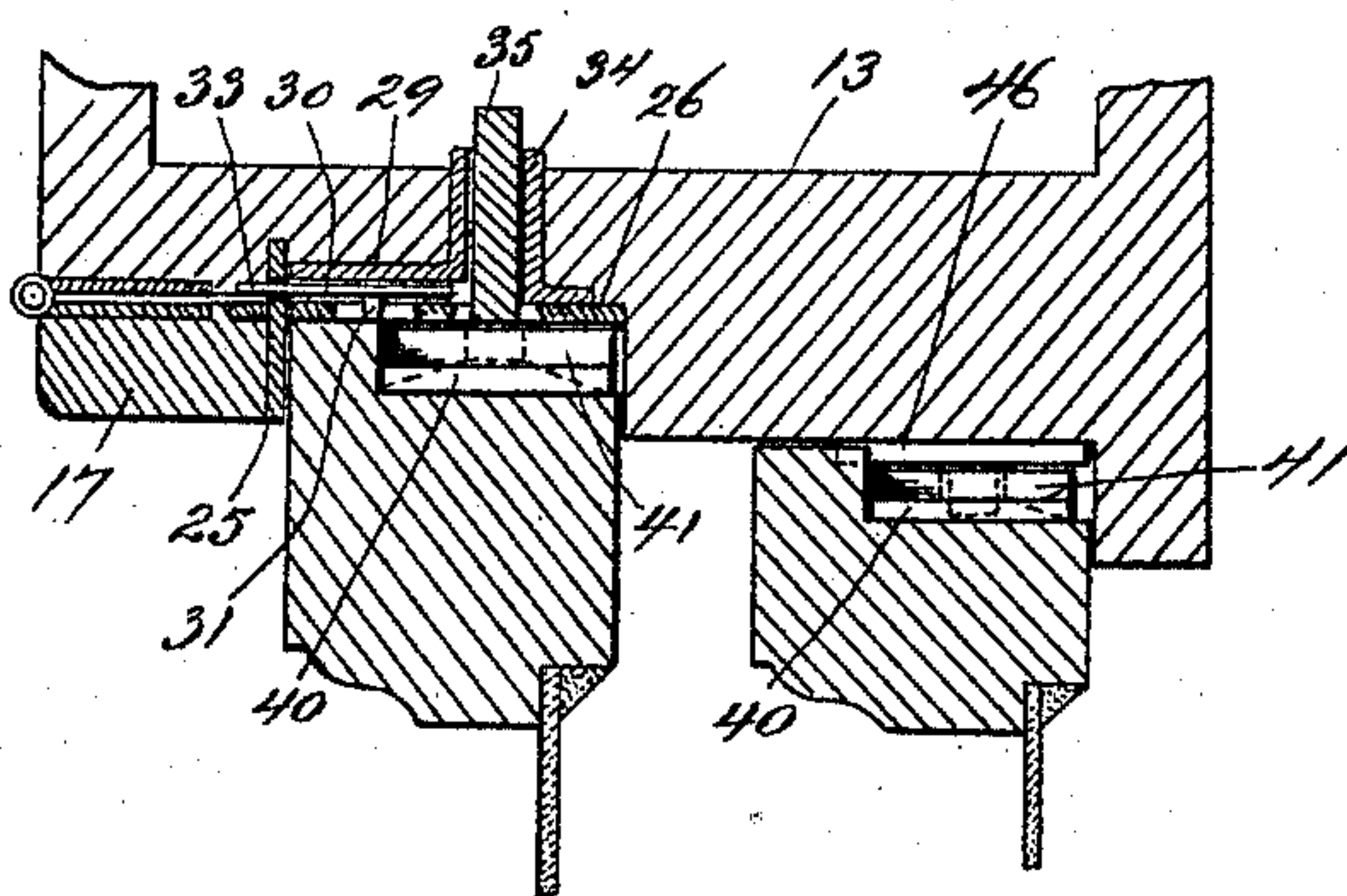
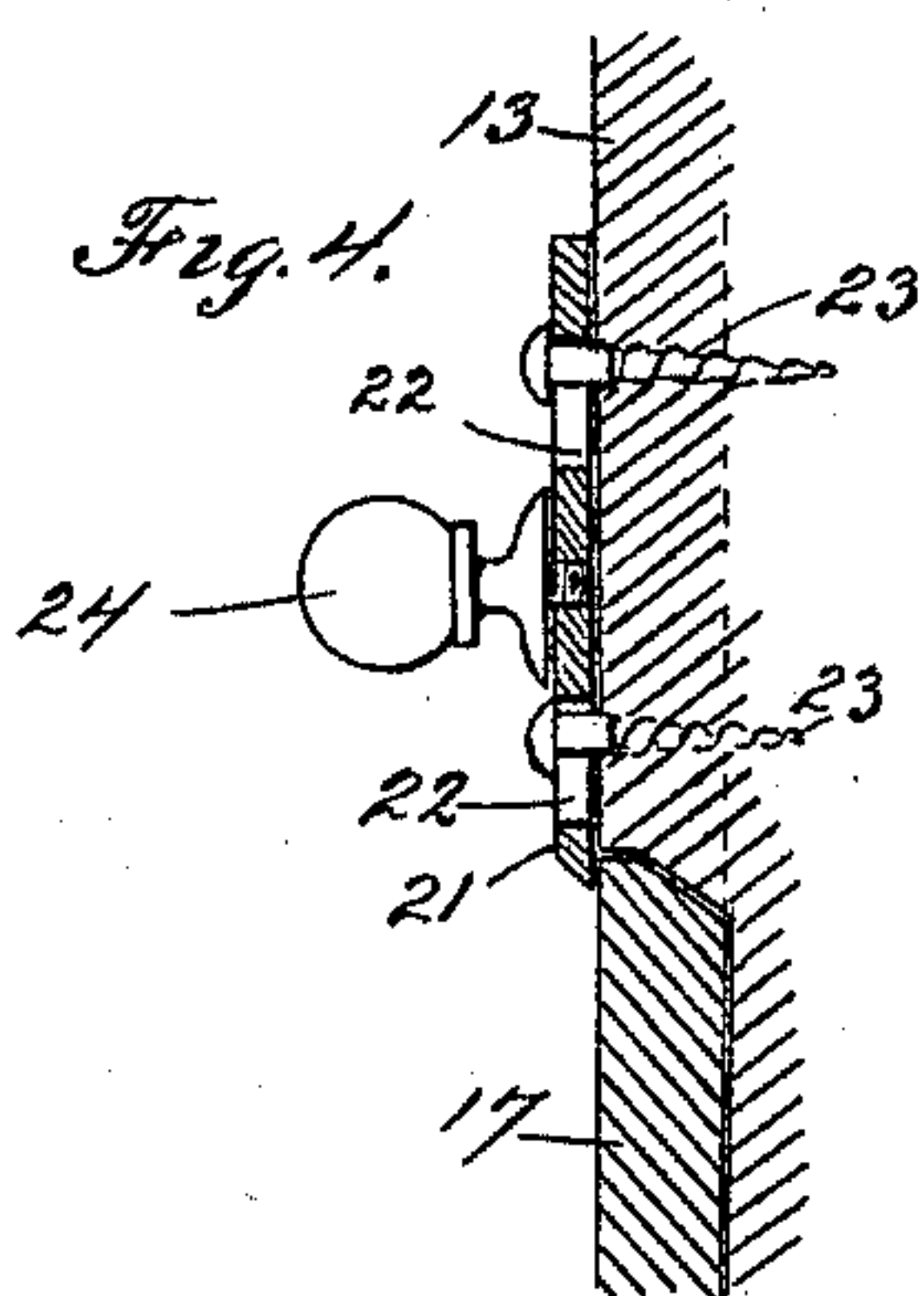


Fig. 4.



WITNESSES

C. Vordfor

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INVENTOR

James Lumsden
BY
Edgar Tate & Co
ATTORNEYS.

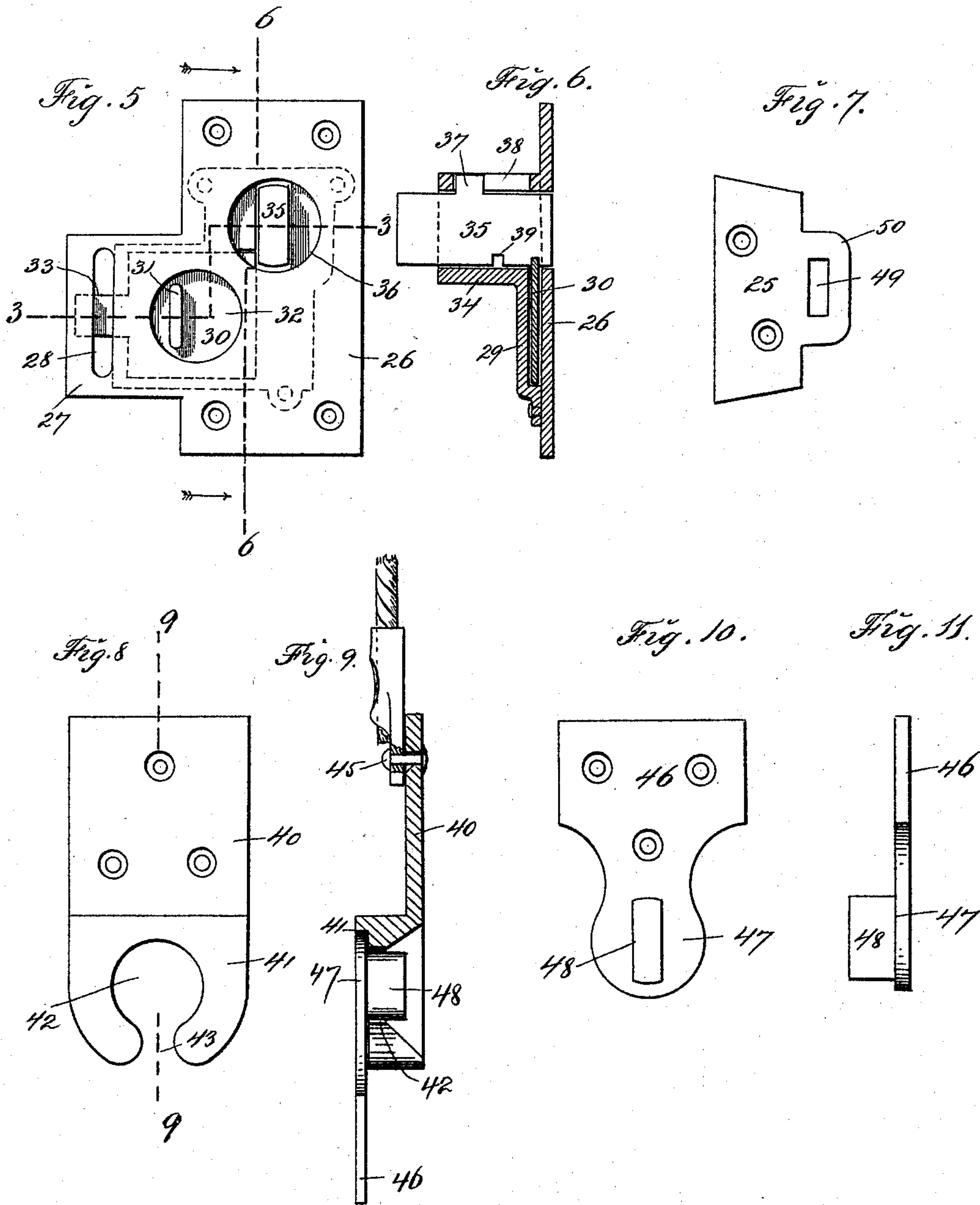
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2 Sheets—Sheet 2.

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WITNESSES

C. R. Rorison
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INVENTOR

James Lumsden
BY
Edgar Tate & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES LUMSDEN, OF ABERDEEN, SCOTLAND.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 585,771, dated July 6, 1897.

Application filed September 9, 1896. Serial No. 605,326. (No model.)

To all whom it may concern:

Be it known that I, JAMES LUMSDEN, a subject of the Queen of Great Britain, and a resident of Aberdeen, in the county of Aberdeen, Scotland, have invented certain new and useful Improvements in Windows, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts wherever found throughout the several views.

This invention relates to window-fittings, and particularly to means for supporting the sashes of a window in the frame thereof; and the object of the invention is to provide improved means for connecting the window-sashes of a window, which are supported by counterbalance-weights, with the frame of the window in such manner that both sashes when in their lowermost position may be connected with suitable pivotal supports and turned inwardly, so as to be able to clean both sides thereof, the cables or cords with which the counterbalance-weights are so connected with the sashes as to permit of this operation, a further object being to provide means whereby the upper sash, as well as the lower one, may be lowered to the bottom of the window-frame and then turned inwardly, as above described.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is an inside view of a window-frame provided with the usual sashes, which are supported by counterbalance-weights in the usual manner; Fig. 2, a side view of one side of the frame, showing both window-sashes in their lowermost position and turned inwardly; Fig. 3, a transverse section of a portion of the frame with both sashes in their lowermost position, said section being taken on the line 3 3 of Fig. 5, which represents one of the supports of the lower sash when in its lowermost position; Fig. 4, a section on the line 4 4 of Fig. 2; Fig. 5, an inside view of one of the locking devices or supports for the lower sash when in its lowermost position; Fig. 6, a section on the line 6 6 of Fig. 5; Fig. 7, a side view of a detail of the construction; Fig. 8, a similar view of another detail which is adapted to be secured to the lower

ends of the sashes and to operate in connection with locking devices or supports secured to the frame; Fig. 9, a section thereof on the line 9 9 thereof; Fig. 10, a side view of another detail of the construction which is adapted to be secured to the sides of the window-frame and to operate to support the upper sash when in its lowermost position, and Fig. 11 an edge view thereof.

In the drawings forming part of this specification I have shown in Fig. 1 an ordinary window-frame 13, in which are mounted the usual upper and lower sashes 14 and 15, and said sashes are supported by the usual counterbalance-weights, as shown in dotted lines.

The upper sash 14 when in its normal position is separated from the space occupied by the lower sash when in its raised position by the usual bead or strip 16, which extends downwardly only to or adjacent to the upper end of the lower sash, and the lower sash is held in place by the usual outer bead or strip 17, which is divided at 18, and the middle portion thereof is hinged to the frame, as shown at 19, and adapted to be turned outwardly, said hinged portion terminating at 20, as shown in Fig. 2.

In the normal position of the sashes that portion of the bead 17 on each side of the frame which is hinged thereto is turned inwardly into its proper place, where it holds the lower sash in position, and said hinged portion of the bead is held in place by a sliding plate 21, provided with a knob or head 24, and said plate 21 is also provided with two longitudinal slots 22, through which pass two set-screws 23, said set-screws holding plate 21 to the upper part of bead 17 and also allowing the said plate to be raised or lowered on the hinged portion of bead 17, as desired, and the lower part of said plate 21 is rounded, and secured to the inner side of the lower end of the hinged section of the bead 17 is a plate 25, which is shown in detail in Fig. 7 and the function of which will be hereinafter described.

I also provide a fastening device for the lower sash, one of which is secured to each side of the frame, and said fastening device is shown in Figs. 5 and 6, and consists of a plate 26, which is countersunk in the frame, as shown in Fig. 3, and said plate is provided

at its outer side with an extension 27, having a vertical slot 28, and at the back of said plate is secured a transverse bearing 29, in which is mounted a sliding plate 30, having a shoulder or projection 31, which projects outwardly through a circular opening 32 in the plate 26, and said sliding plate 30 is provided with an arm 33, and said transverse bearing 29 is provided with a backwardly-directed angular socket 34, in which is mounted a sliding bolt 35, which is adapted to be projected outwardly through a similar circular opening 36 in the plate 26, and said sliding bolt 35 is provided with an upwardly-directed shoulder or projection 37, which projects upwardly through a slot 38 in the upper side of the angular socket 34, and formed in the lower side of said bolt 35 is a notch or recess 39, which is adapted to receive the upper edge of the sliding plate 30. As hereinbefore stated, one of these fastening devices is secured to each side of the frame, near the lower corner thereof, and the lower window-sash 15 is also provided at its lower end and at each side thereof with a plate 40, which is countersunk therein and which is provided with an outwardly-directed head 41 at its lower end, in which is formed a circular opening 42, the lower side of which opens downwardly by means of a slot 43, through which the bolt 35 passes when the window-sash is in its lowermost position, when it is desired to turn said sash inwardly, as shown in Fig. 2.

The plate 40 is only shown in dotted lines in Fig. 2; but it will be understood that one of these plates is secured to each side of the lower sash, and the cables or cords 44, but one of which is shown and by which the lower sash is supported, are pivotally connected with the lower end of these plates, as shown at 45 in Fig. 9 and as indicated in dotted lines in Fig. 2, any suitable pivotal connection being provided for this purpose.

The upper sash 14 is also provided at each side of its lower end with one of the plates 40, which are countersunk therein, and in connection therewith I employ a plate 46, side and edge views of which are given in Figs. 10 and 11, and one of said plates is secured to each side of the frame in the window in the space occupied by the upper sash and at or near the lower end thereof, or just above the fastening devices for the lower sash, as shown in Fig. 2, and these plates are provided with circular heads 47, on which are formed outwardly-directed shoulders or projections 48, which are adapted to enter the slots 43 in the plates 40, which are secured to the upper sash, and the cables or cords 48, by which the upper sash is supported, are pivotally connected with the plates 40, which are secured to said sash in the same manner as the cables or cords 44 are secured to the lower sash 15.

In the normal position the upper sash is held in the upper part of the frame, as shown in Fig. 1, and the lower sash is also swung

into position, and said lower sash may be raised and said upper sash lowered whenever desired. In this position of the sashes the hinged sections of the beads 17 are swung into their proper position and are locked therein by the sliding plate 21 and by the plate 25, Fig. 7, at the lower end thereof, said plate 25 in this position passing through the slot 28 in the extension 27 of the plate 26, and the sliding plate 30 is manipulated by means of the shoulder or projection 31, so as to force the arm 33 thereof outwardly across said slot and through a slot 49, formed in a projection 50 on said plate 25. In this position of the parts the bolt 35 is also in its backward position, as shown in Fig. 6, and in order to turn in the lower sash 15, as shown in Fig. 2, the said sash is first slightly raised. The bolt 35 is then pulled outwardly at each side of the frame by catching hold of the end thereof, (shown in Fig. 5,) and said bolt is locked in the projected position by moving the plate 30 outwardly, so that the upper edge thereof will enter the notch or recess 39, and the said moving of the plate 30 also unlocks the plate 25. The plate 21 is then moved upwardly and the hinged section or sections of the bead 17 are turned outwardly, as shown in Fig. 2. When these parts are in this position, the lower sash is pulled outwardly and the projecting ends of the bolts 35 pass through the slots 43 in the heads 41 of the plates 40, which are secured to the sides of the sash, and into the circular openings 42, after which the sash will be turned inwardly into the position shown in Fig. 2, the pivotal connection of the cables or cords 44 not interfering with this operation, after which the upper sash 14 may be pulled down in the same manner, and in this operation the shoulders or projections 48 on the plates 46 will pass through slots 43 in the circular openings 42 in the lower end of the plates 40, which are secured to the lower end of the said sash, at the sides thereof, and said upper sash may also be swung inwardly in the same manner, as shown in Fig. 2.

To restore the sashes to their normal position, the upper sash is raised to an upright position and can then be pushed upwardly into its place. The lower sash is then also lifted to an upright position and pushed slightly upward, and in this position of the sashes the hinged sections of the beads 17 are swung into their proper position, the sliding plates 21 closing automatically on them at the top, and the plate 30 is then moved inwardly from the notch or recess 39, thus unlocking the bolt 35 and by the same operation locking plate 25 at the bottom of the hinged section of bead 17. The sliding bolts 35 are then pushed backwardly into the angular sockets 34. The sashes can then be respectively raised or lowered in the usual manner, as desired.

I may also provide suitable brackets, chains, or other devices for supporting the outer ends

of the sashes, and said chains, brackets, or other devices may be connected with the sides of the frame; but this feature forms no part of this invention and is not shown and described herein, and it will also be understood that the cables or cords 44 and 48 may be connected with the lower and upper sashes, respectively, in any desired manner, the only object being to make this connection adjacent to the pivotal point of the supports of said sashes when in their lowermost position and to make it in such manner that the cables or cords will not interfere with the operation of the sashes, as herein described.

My improved window-fittings are simple in construction and operation and perfectly adapted to accomplish the result for which they are intended, and it is evident that changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with the frame of a window, and with a sash mounted therein, and provided with a counterbalance-weight, of fastening devices or supports consisting of plates which are mounted in the frame at each side of the lower end thereof, said plates being provided with transversely-movable bolts, and corresponding plates secured to the sides of the lower end of the sash, and provided with transverse circular openings which open downwardly by means of slots, through which said bolts are adapted to pass, substantially as shown and described.

2. The combination with the frame of a window, and with a sash mounted therein, and provided with a counterbalance-weight, of fastening devices or supports consisting of

plates which are mounted in the frame at each side of the lower end thereof, said plates being provided with transversely-movable bolts, and corresponding plates secured to the sides of the lower end of the sash, and provided with transverse circular openings which open downwardly by means of slots, through which said bolts are adapted to pass, said plates which are secured to the sashes being also provided with pivotal connections for the cables or cords with which the counterbalance-weights are connected, substantially as shown and described.

3. The combination with the frame of a window, and with a sash mounted therein, and provided with a counterbalance-weight, of fastening devices or supports consisting of plates which are mounted in the frame at each side of the lower end thereof, said plates being provided with transversely-movable bolts, and corresponding plates secured to the sides of the lower end of the sash, and provided with transverse circular openings which open downwardly by means of slots, through which said bolts are adapted to pass, said plates which are secured to the sashes being also provided with pivotal connections for the cables or cords with which the counterbalance-weights are connected, and said locking-bolts being provided with means whereby they may be locked in a projected position, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 24th day of August, 1896.

JAMES LUMSDEN.

Witnesses:

CHARLES SMITH,
JOHN SIMPSON.