

(No Model.)

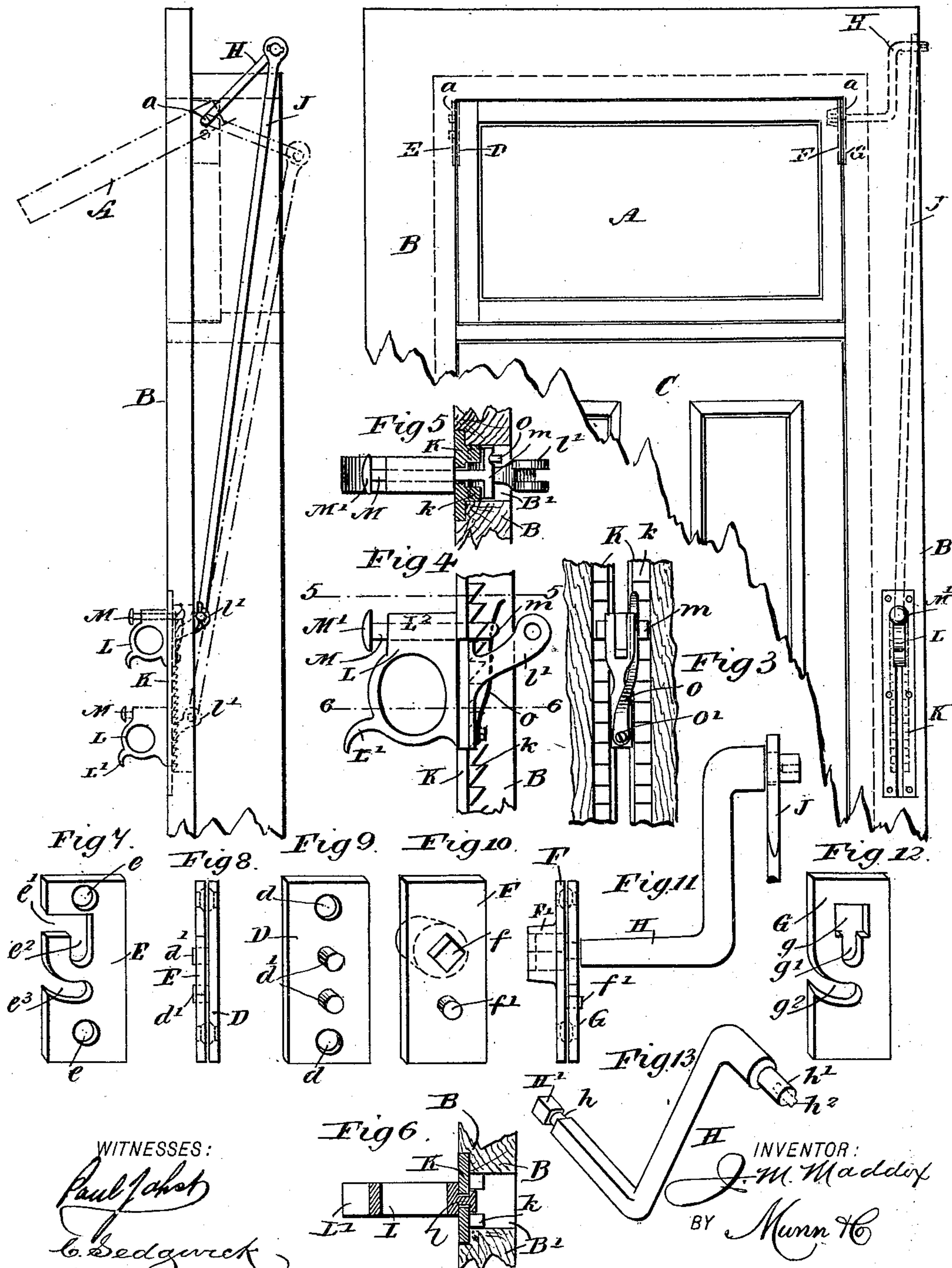
J. M. MADDOX.
TRANSOM LIFTER.

No. 479,567.

Patented July 26, 1892.

Fig 2.

Fig 1.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES M. MADDOX, OF BIRMINGHAM, ALABAMA.

TRANSOM-LIFTER.

SPECIFICATION forming part of Letters Patent No. 479,567, dated July 26, 1892.

Application filed August 5, 1891. Serial No. 401,743. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. MADDOX, of Birmingham, in the county of Jefferson and State of Alabama, have invented a new and Improved Transom-Lifter, of which the following is a full, clear, and exact description.

My invention relates to improvements in transom-lifters; and the object of my invention is to produce a transom-lifter by means of which a person standing on the floor may easily raise and lower the transom and fasten it at any desired height.

To this end my invention consists in a transom-lifter constructed substantially as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a broken front elevation showing a transom provided with the lifter embodying my invention. Fig. 2 is a broken side elevation of the same. Fig. 3 is a broken rear elevation of the rack, the hand-hold arm, and spring for holding the hand-hold pawl in engagement with the rack. Fig. 4 is a broken side elevation showing the hand-hold in position upon the rack. Fig. 5 is a broken horizontal section on the line 5 5 of Fig. 4. Fig. 6 is a broken horizontal section on the line 6 6 of Fig. 4. Fig. 7 is a detail perspective view of one of the end plates in which the transom is pivoted. Fig. 8 is a detail side elevation showing the above plate and a plate on the transom in engagement therewith. Fig. 9 is a detail front perspective view of one of the plates which is secured to the end of the transom. Fig. 10 is a detail front perspective view of a plate which is secured to the opposite end of the transom. Fig. 11 is a broken detail side elevation showing a transom-plate and a plate to which it is pivoted placed with their faces together and showing, also, the crank connection with the transom-plate. Fig. 12 is a front perspective view of a plate which is secured opposite the crank end of the transom, and Fig. 13 is a detail perspective view of the transom-crank.

The transom A is mounted in the frame B, above a door C and is of the ordinary construction, although my invention may be attached to any form of transom. The transom

is not pivoted at the center, but is pivoted at the upper corners, as shown at *a* in Figs. 1 and 2, although it may be pivoted at other points, and on one end of the transom at the point where it is pivoted is a plate D, which is let into the transom so as to be flush with the edge of the same, said plate having screw-holes *d* at opposite ends to provide for its attachment to the transom and having near the central part thereof projecting pintles *d'*, which are alike and which are arranged one above the other, so as to vertically align.

A plate E, of the same general shape as the plate D and of the same size, is secured in the frame B opposite the plate D, the plate E having screw-holes *e* at the ends to facilitate its attachment to the frame, and the plate has a slot *e'*, opening horizontally from one side and terminating near the center of the plate in a vertical slot *e''*, which is rounded at its lower end and in which the upper of the pintles *d'* on the plate D is intended to rest. Beneath the slot *e'* is another slot *e'''*, which also opens from the edge of the plate and is curved inward, and in this slot the lower pintle *d'* swings. It will thus be seen that the upper transom-pintle *d'* may rest and turn in the slot *e''*, and as the lower pintle swings in the slot *e'''* it will serve to guide the transom and cause it to swing evenly on its pivot. On the opposite or crank end of the transom is a plate F of the same size as the plates D and E, which plate is let into the edge of the transom, as described above, and the plate has a thickened portion *F'*, which projects into the transom and in which is a squared opening *f* to receive the squared end of the crank, and below the opening is a projecting pintle *f'*, which projects into the curved slot in the plate G opposite the plate F and guides the transom in the same way that the pintle *d'* and slot *e'''* serve to guide the opposite end of the transom. The plate G corresponds in size and shape to the plate F and is secured in the frame B opposite the plate F, and in the upper portion of the plate is a squared opening *g*, through which the squared end of the crank may be thrust, and opening from the lower edge of the squared opening is a vertical slot *g'*, which is rounded at its lower end and in which the round or bearing portion of the crank turns.

Beneath the slot g' is a curved slot g^2 , extending from the side of the plate G inward and which receives and guides the pintle f' in the manner already described. The crank
 5 H has a squared end H' , which is adapted to be passed through an opening in the frame B and through the opening g of the plate G and which fits the opening f of the plate F, so that when the crank is turned the transom
 10 will be also turned and swung out or in, as the case may be.

The crank is provided with a round portion h next the squared end H' , which portion corresponds in length to the thickness of the
 15 plate G and turns in the slot g' of said plate. The outer end of the crank is reduced, as shown at h' , and is provided with a key h^2 to hold the connecting-rod J upon the crank. The rod J is enlarged at its upper end and
 20 pivoted on the outer end of the crank, and from thence the rod extends downward inside the casing and is connected with the operating mechanism described below.

A rack K, which has a slot extending vertically throughout its entire length, is secured in the door-frame B at one side of the door C, the front face of the rack being smooth, and the rack is let into the door-frame, so that its
 25 front surface will be flush with the surface of the frame. The rack has ratchet-teeth k on its back and on each side of the slot, said teeth ranging upward, and a hand-hold L is mounted to move vertically in the slot of the
 30 rack, the hand-hold being dovetailed to the rack, as best shown at l in Fig. 6.

The hand-hold L has a flat inner surface, so that it may slide easily on the rack, a central perforation to receive the fingers, a projecting curved horn L' on its outer lower
 40 portion, against which a finger or thumb may be placed to easily operate the hand-hold, and the upper portion of the hand-hold is elongated, as shown at L^2 , to provide a bearing for the bolt M. The inner portion of
 45 the hand-hold is provided with an upwardly-curved arm l' , to which is pivoted the lower end of the connecting-rod J, so that when the hand-hold is moved vertically the rod J and
 50 crank H will be also moved, thus swinging the transom.

The bolt M extends through the elongated portion L^2 of the hand-hold L and through the slot in the rack K into a slot B' in the frame B, and the bolt is provided at its outer
 55 end with a button M' , and its inner end is formed into a pawl m , which extends across the slot in the rack and is adapted to engage the teeth on each side of the slot. The bolt M is pressed outward and the pawl m
 60 held in engagement with the ratchet-teeth k by means of a spring O, which is secured

at its lower end to the inner side of the hand-hold, and its free end presses upon the pawl.

To open the transom, the button M' is pushed inward, thus pushing in the bolt M
 65 and releasing the pawl m from the rack-teeth, and the hand-hold is then pushed downward. This moves the connecting-rod J and turns the crank H, and, as the squared end of the crank is held in the plate F of the transom,
 70 the transom will be swung outward, as indicated by dotted lines in Fig. 2.

To close the transom, the operation is reversed and it is not necessary that the bolt M be pressed inward, as the pawl may be
 75 pushed upward over the ratchet-teeth. It will be seen, however, that the transom cannot be opened without pressing inward on the bolt, as the pawl will be in engagement with the teeth on the rack, and therefore the
 80 transom cannot be operated except from the side of the door on which the hand-hold is located, and the transom may thus be opened slightly, so as to give suitable ventilation to a room without fear of sneak-thieves opening
 85 it, and thus forcing an entrance to the room.

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

1. In a transom-lifter, the combination, with
 90 a pivoted transom, of guide-pins projecting from the ends of the transom and working in ways in the frame in which the transom is pivoted, substantially as described.

2. The combination, with a transom and
 95 the frame in which it is hung, of plates secured in the frame and provided with vertical slots and with curved slots below the vertical slots and plates secured to the ends of the transom, said plates being pivoted in the
 100 vertical slots and having projecting pintles extending into the curved slots, substantially as described.

3. In a transom-lifter, the combination, with
 105 a transom having one end pivoted, as described, and having the opposite end provided with a plate with a squared opening therein and a projecting pintle thereon, of a plate secured in the door-frame opposite the transom-plate, said plate having a squared
 110 opening in its upper end with a vertical slot beneath the opening, and a curved slot to receive the pintle of the transom-plate, a crank mounted in the vertical slot of the frame-plate and having a squared end extending
 115 into the opening of the transom-plate, and means for turning the crank, substantially as described.

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Witnesses:

J. J. DREW,
 SIDNEY M. ULLMAN.