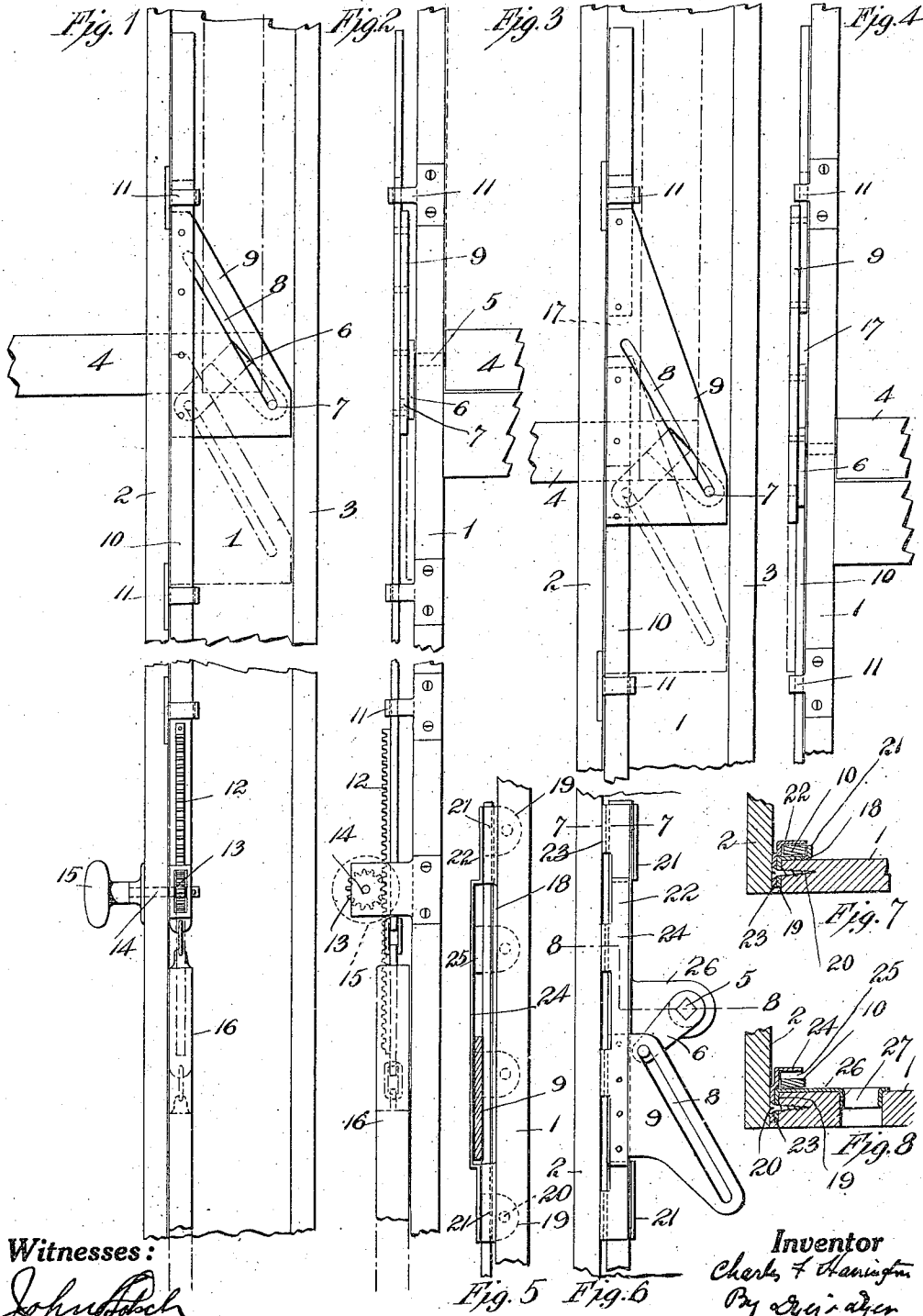


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TRANSOM OPERATOR.
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TRANSON LIFT COMPANY, OF MONTCLAIR, NEW JERSEY, A CORPORATION OF NEW
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TRANSON-OPERATOR.

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To all whom it may concern:

Be it known that I, CHARLES F. HANINGTON, a citizen of the United States, and a resident of Roselle Park, in the county of Union and State of New Jersey, have invented a new and useful Transom-Operator, (Case C,) of which the following is a specification.

This invention relates to an improvement in means for operating transoms, and has for its object the production of a device which may be concealed within the trim, which will occupy a minimum amount of space with a very few parts, be cheap to construct, which will open and keep the transom in any position left without the need of catches, latches or other additional devices. These and further objects will appear from the following specification and accompanying drawings considered together or separately.

In the drawings: Figure 1 is a front view of the operative portions of the device embody my invention. Fig. 2 is a side view of the same. Fig. 3 is a front view of a portion of the device illustrated in Fig. 1, but slightly modified. Fig. 4 is a side view of the same. Fig. 5 is a side view of a portion of the device still further modified. Fig. 6 is a front view of the same. Fig. 7 is a sectional view of the same taken on the line 7-7 of Fig. 6, and Fig. 8 is a section view of the same taken on the line 8-8 of Fig. 6.

In all the views like parts are designated by the same reference characters.

In carrying out my invention, I provide the jamb 1, the front trim 2, and the rear trim 3. The transom frame 4 is pivoted so that the transom may be opened and closed. As shown in certain figures of the drawing, the transom is pivoted adjacent to its lower edge, but it is within the scope of the invention to pivot it at any place. In the form of device shown in Figs. 1 and 2, the support of the transom includes a shaft 5, such shaft passing through the jamb and is supported within a bearing therein. On the shaft is a crank 6 and on the crank is a pin 7. This pin engages within the cam slot 8 carried by the plate 9. This plate 9 is riveted or otherwise secured to a bar or rod 10. This rod is mounted within guides 11, 11, so that it may be moved up or down, moving with it the cam plate 9; and, through the engagement of the pin 7 with the cam slot, the

transom will be opened or closed. The guides 11, 11 are secured to the front trim 2. For the purpose of moving the rod up or down, the latter is provided with a rack 12 which is engaged by a pinion 13. This pinion is carried upon a shaft 14, mounted in a bearing in the front trim 2. A knob or handle 15 serves to rotate the shaft 14. By rotating the shaft 14 through the agency of the pinion 13 and rack 12, the rod 10 may be moved up or down and the transom opened or closed. For the purpose of counterbalancing the weight of the transom a counterweight or weights 16, 16 are attached to the lower end of the rod 10. The movement and size of the counterweights may be adjusted to accommodate situations in which transoms of different weights are present.

According to a modification of my invention, the rod 10 may be caused to lie closer to the jamb, thus reducing the width of the space occupied by the device. This modification is shown in Figs. 3 and 4. The guides 11, 11 are at less height than those in connection with the device illustrated in Figs. 1 and 2. As so made the rod will be in the way of the crank 6, hence the latter must swing inside the plane of movement of the rod, therefore the latter must be interrupted at 17 to provide a space for the crank. The plate 9 will therefore serve as a means for connecting the upper and lower ends of the rod where it is interrupted. When moved to the dotted line position shown in Fig. 3, the crank will lie within the interrupted portions of the rod.

Fig. 5 to 8 inclusive, illustrate a modification in which a more rigid mounting for the rod and plate is secured and, therefore, the latter may be made of lighter material than is possible by the structure previously illustrated. In lieu of the guides 11, 11, a box is provided formed, in the embodiment chosen for illustration, of a plate 18 and a plate 22, the former having a number of ears 19, secured by screws 20 to the edge of the jamb 1. This plate 18 has a flange 21 adjacent to its top and another flange 21 adjacent to its bottom. The depth of these flanges is substantially the same as the thickness of the rod 10. This rod 10 bears upon the plate 18 and is held in position by the flanges 21, 21. The top of the box is formed by a plate 22. This plate 22 has a number of ears 23 equal in number and lo-

cated in the same position as the ears 19. These ears are longer than the ears 19, as shown, so as to produce a space between the top and bottom of the box, to accommodate the rod 10. These ears 23 are secured in place by the same screws 20 which secure the ears 19. The plate 22 is offset at 24 forming an opening 25 through which the cam plate 9 will play. For the purpose of preventing the stresses exerted by the action of the cam 9 and the pin 7 from separating the metal plate from the wood work, I provide the following devices: The plate 18 is provided with an extension 26 having a sleeve 27 which forms a bearing for the shaft 5. This forms a structure in which the bearing is a part of the plate 18. It will be apparent that the stresses set up by the action of the cam 8 against the crank pin will be taken up by the plate 18 independently of the wood, and that there will be no tendency to rip or pull out the fastenings of the plate 18, as would be the case if the sleeve 27 and plate 18 were not connected. This device produces a very simple, cheap and strong device.

In accordance with the provisions of the patent statutes, I have described the principle of my invention, together with the apparatus which I now consider to represent the best embodiment thereof; but I desire to have it understood that the apparatus shown is merely illustrative and that the invention can be carried out in other ways. Having now described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A transom operator, having a crank, connected with the transom to turn the latter, said crank being located on the other side of the jamb, from which the transom is located; in combination with a cam, located on the same side of the jamb as is the crank, such cam engaging with the crank to turn the latter; and means for moving the cam.

2. A transom operator, having a crank, connected with the transom to turn the latter, said crank being located on the other side of the jamb from which the transom is located; in combination with a cam, located on the same side of the jamb as is the crank, such cam engaging with the crank to turn the latter; means for moving the cam; and means to confine the movement of the cam in a vertical path.

3. A transom operator, having a shaft; a transom, on the shaft and turning with it; a crank turning the shaft; a plate; a cam, on the plate; said cam engaging the crank; and means for moving the plate in a vertical direction.

4. A transom operator, having a shaft for the transom; a crank, within the trim, and connected to the shaft; guides, within the trim; and a vertically movable rod, within the guides; a plate on the rod, the said plate having a cam, said cam engaging with the crank; and means for moving the rod in a vertical direction.

5. A transom operator, having a crank for the transom; a rod in front of the plane of the transom; guides for the rod; a plate, on the rod, said plate having a cam which engages with the crank; and means for moving the rod in a vertical direction.

6. A transom operator, having a shaft for the transom; and a crank on the shaft; in combination, with a vertically movable plate; a cam, on the plate, engaging with the crank; bearings for the plate; a bearing for the shaft; said plate bearings and shaft bearings being secured together and resisting stresses.

7. A transom operator, having a shaft for the transom; a crank on the shaft; a vertically movable plate; a cam on the plate, engaging with the crank; a bearing for the shaft; a fixed plate; and a guide carried by said fixed plate, said fixed plate also carrying the bearing.

8. A transom operator, having a shaft for the transom; a crank on the shaft, said crank lying within the trim; a vertically movable rod; a plate on the rod, said plate having a cam, said cam engaging with the crank; guides for the rod, secured to the trim; and a plate, connected to the trim and to the rod bearing, said plate carrying the bearing of the shaft.

9. A transom operator, having a vertically movable rod; a cam plate thereon; a box, within the trim, for guiding the rod, and also for guiding the cam plate; in combination, with a transom; a crank thereon, engaging the cam plate, the connection between the crank and rod permitting the rod to move vertically.

10. A transom operator, having a vertically movable rod, within the trim; guides for confining the movement of the rod to a vertical plane; a cam plate on the rod; a counterweight; and means, for moving the rod in a vertical direction; in combination with a transom; and a crank secured to the transom, said crank carrying a pin, for engagement with the cam.

This specification signed and witnessed this 12th day of May, 1909.

CHARLES F. HANINGTON.

Witnesses:

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