E. P. HARRIS.

TRANSOM LIFTER.

APPLICATION FILED FEB. 3, 1916.

1,201,581. Patented Oct. 17, 1916.

Fig. 1

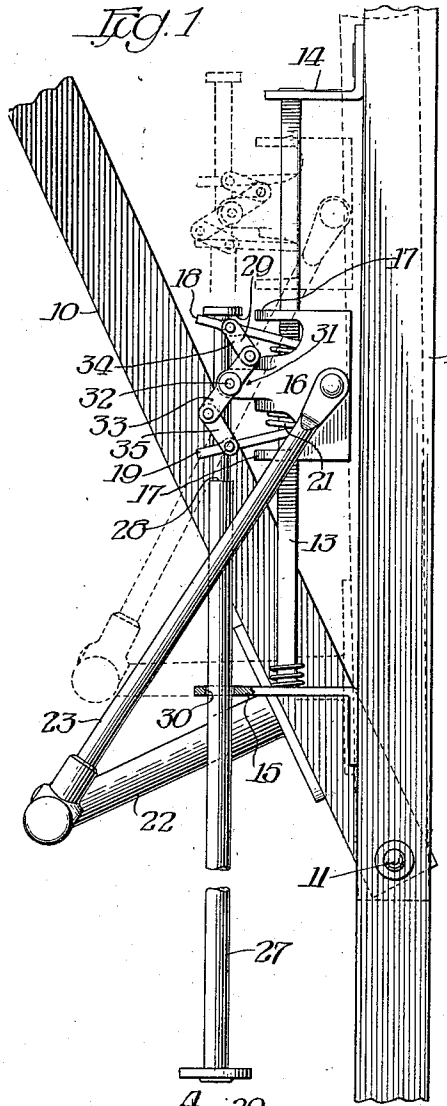


Fig. 2

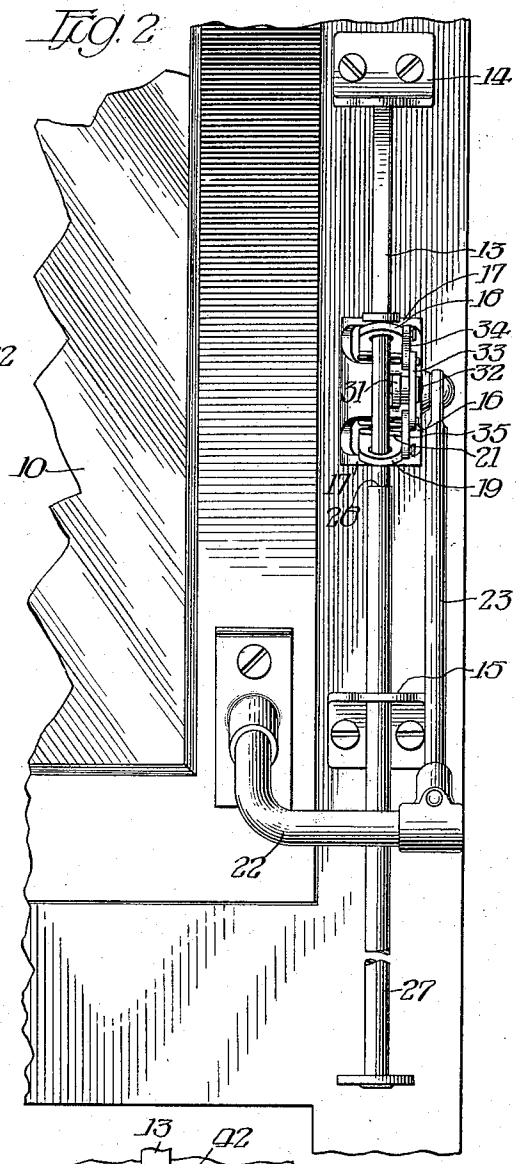


Fig. 3

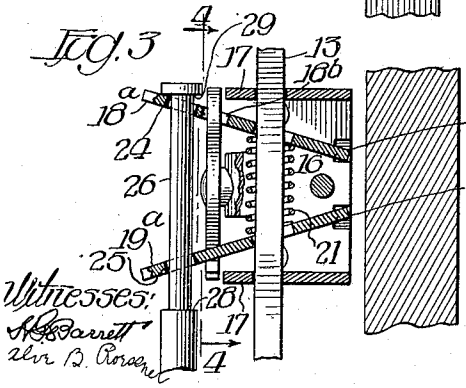
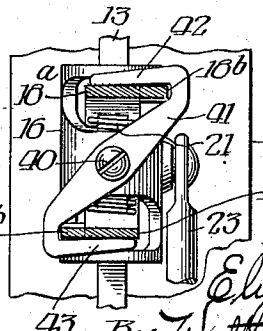


Fig. 4



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UNITED STATES PATENT OFFICE.

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TRANSOM-LIFTER.

1,201,581. Specification of Letters Patent. Patented Oct. 17, 1916.

Application filed February 3, 1916. Serial No. 75,890.

To all whom it may concern:

Be it known that I, ELIJAH P. HARRIS, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Transom-Lifters, of which the following is a specification.

It has heretofore been proposed, as for example in United States Patent No. 1,066,435, transom lifter, July 1, 1913, to construct an appliance of this general character with a pair of spring-actuated clamping-levers mounted on a rod-clamp and adapted by engagement with a fixed rod to lock or hold the transom or other actuated part in adjusted position. In such devices a lift-rod is provided in coöperative relation with both of the clamping-levers so that when the rod is pulled down it will release the grip of one of the levers on the fixed rod, permitting the rod-clamp to slide down on the fixed rod, and the transom to open, and when the lift-rod is pushed up, it releases the other clamp-lever, permitting the rod-clamp to slide upwardly upon the fixed rod, closing the transom. In a device of this kind where only one of the clamping-levers is positively released, there is a tendency for the other lever, when it slides on the fixed rod, to cause an objectionable chattering or vibration.

One of the leading objects of the present invention is to so construct an appliance of this general character that both clamping-levers will be released at the same time and the rod-clamp permitted to slide on the rod upon actuation of the lifting-rod in either direction. In this way, the undesirable noise is overcome and a freer actuation of the appliance made possible.

In order that those skilled in this art may understand the principles of this invention, I have illustrated a preferred embodiment of the same in the accompanying drawings, throughout the various views of which like reference characters refer to the same parts.

In these drawings: Figure 1 illustrates in elevation one embodiment of the invention and shows the parts with which it is associated fragmentarily; Fig. 2 is a face view of the structure shown in Fig. 1; Fig. 3 is a section illustrating another embodiment of the invention, and Fig. 4 is a face view of the appliance of Fig. 3.

In these drawings, the novel and improved device is shown as applied to a hinged transom, although its employment is not limited to the actuation of devices of this particular character.

Referring to Figs. 1 and 2, it will be observed that the transom 10 is illustrated as being hinged at 11 to the frame, wall, or casing, 12 on a portion of which the transom-lifter is mounted. The appliance includes a fixed rod 13 desirably square in cross-section and supported at its opposite ends in brackets 14 and 15, both of which are mounted in any approved manner on the support 12. On such rod a clamp is slidingly mounted, the clamp comprising a casing or shell 16, the opposite end-walls 17, 17, of which are apertured in alinement, as shown in Fig. 3, for the reception of rod 13. This casing or housing has within it two clamp levers 18 and 19 fulcrumed within the housing at 20, 20, in any desirable manner. These levers or rocking arms are apertured for the accommodation of the rod 13, which they are adapted to grip in the well known manner. A spring 21 surrounds the rod 13 between the levers and tends to rock them in opposite directions, that is, it tends to force them into rod-gripping positions, it being understood that one of these levers 18, for instance, prevents the clamp as a whole from moving downwardly on the rod, the clamp 19 preventing it from moving upwardly.

The transom has an arm 22 secured thereto, its end being connected to the rod-clamp housing 16 by a link 23. Obviously, therefore, the rod-clamp controls the actuation or opening and closing of the transom. As is illustrated, those portions of the two clamp-levers 18 and 19 projecting out of the casing 16 are apertured in alinement (at 24 and 25 in the embodiment shown in Fig. 3), the perforations receiving the part 26 of a lifting-rod 27, which is somewhat reduced in diameter, providing a shoulder 28 beneath the clamp lever 19, another shoulder 29 on the rod being present above the clamp-lever 18. In order to assist in the proper support and guiding of the lifting-rod 27, it extends down through an aperture 30 in bracket 15.

So far as the device has now been described, it is old in the prior art, the im-

provement of this invention comprising the means now about to be described, which operate as will be readily understood, in combination with the other elements of the structure.

On a portion 31 of the casing 16, located mid-way between the clamp-levers 18 and 19, I pivot at its middle point 32 a rocking lever 33, the opposite ends of which are connected to the two clamp-levers by means of links 34 and 35. Clearly then, if either clamp-lever is rocked against the action of spring 21 into rod-releasing position, the companion clamp-lever will necessarily be rocked in the opposite direction, also freeing itself from the fixed rod.

The appliance works as follows: Assuming that the parts are in the positions illustrated in full lines in Figs. 1 and 2, and that it is desired to open the transom farther, the operator grasps the rod 27 and pulls downwardly. Shoulder 29 engages the top face of clamp-lever 18 and swings the latter downwardly against the action of spring 21, in this way releasing the grip or grasp of the lever on the fixed rod 13. Such movement of the lever 18, through the action of link 34, swings the lever 33 in a clockwise direction as the parts are viewed in Fig. 1, causing an upward rocking of clamp-lever 19, which likewise frees its grip upon rod 13. The part 16 and the elements associated therewith are now quite free to slide down on the rod, and such movement is caused by the continued downward pull on the rod 27. When the transom has been brought to the proper degree of opening, the operator releases rod 27, whereupon spring 21 by expanding causes both of the levers 18 and 19 to grip the rod 13 and locks the transom in the required position.

In case it is desired to close the transom either wholly, or in part, the operator, by pushing up on rod 27, similarly releases both clamping-levers, forcing the rod-clamp as a whole upwardly to the required position, and, upon releasing his hold on the part 27, the clamp-levers immediately grasp the fixed rod and lock the transom, as will be readily understood.

Another type of structure is shown in Figs. 3 and 4, and all parts of the appliance are the same as in the device of Figs. 1 and 2, with the exception that the clamp levers 18 and 19 are replaced by others 18^a 19^a, the former of which on one side has an enlargement 18^b, the latter on the opposite side having an enlargement 19^b, and with the further exception that in place of the equalizing elements 31, 33, 34, and 35, a somewhat different structure is employed. On the outer face of the housing or casing 16 and beneath the lift-rod 27, a lever 41, having hook-shaped ends 42 and 43, is pivoted at 40, the lever and such ends being of substantially Z-shape, as shown in Fig. 4. The hook part 42 engages the top face of clamp lever 18^a and the hook portion 43 bears against the under face of clamp lever 19^a, the wider ears or extensions 18^b or 19^b being accommodated in the spaces at the bases of the hooks, as is clearly illustrated and will be readily understood. This modified structure operates practically as follows: When the rod 27 is pulled down, clamping lever 18^a goes with it, releasing its grip upon the rod 13, and as the lever 18^a swings its ear 18^b acts on the top edge of lever 41 so as to swing the latter in a clockwise direction, such movement of the lever causing the hook 43 to swing the clamp lever 19^b upwardly, releasing its grasp on the rod 13. Continued downward movement of the rod 27, of course, shifts the rod-clamp as a whole and opens the transom. If the rod 27 is pushed upwardly, lever 19^a swings up, its ear 19^b by engagement with the lower edge of the lever 41, swinging the latter in a clockwise direction, causing finger 42 to pull down lever 18^a. In this way, both clamp levers are released and upward movement of the rod 27 shifts the rod-clamp and closes the transom. In both instances, release of the part 27 permits the two clamp-levers 18^a and 19^a, under the action of their spring, to again grip the rod 13 and lock the transom in position.

The invention as defined in the appended claims is, of course, capable of a variety of embodiments, and those presented are merely examples of how the invention may be worked into practicable form. Clearly, many minor mechanical changes may be made in the structures depicted without departure from the substance of the invention and without the sacrifice of any of its substantial benefits and advantages.

I claim:

1. In a device of the character described, the combination of a fixed rod, a rod-clamp slidable thereon and supplied with a pair of rod-gripping means adapted to lock the rod-clamp on the fixed rod, means adapted to connect said rod-clamp to an adjustable sash, and means adapted to release both of said gripping-means simultaneously and adjust the rod-clamp on the rod including a single means adapted to be grasped and moved by the hand to effect such release and adjustment, substantially as described.

2. In a device of the character described, the combination of a fixed rod, a rod-clamp adjustably mounted thereon including a pair of clamping levers apertured for the accommodation of and adapted to grip said rod and lock the rod-clamp against movement thereon and means tending to move said levers in opposite directions, means adapted to connect said rod-clamp to an adjustable sash, and operating means adapted to release the grip of both of said clamp levers on said

rod simultaneously and adjust the rod-clamp on the rod including a single depending rod adapted to be grasped and moved by the hand to effect said release and adjustment, substantially as described.

3. In a device of the character described, the combination of a fixed rod, a rod-clamp slidable on said rod and provided with a pair of rod-gripping levers fulcrumed thereon and apertured for the accommodation of said rod, spring-means tending to rock said levers into rod-gripping position, means connecting said levers causing an opposite movement of either lever when the other is moved, means adapted to connect said rod-clamp to an adjustable sash, and means adapted to act on one of said levers, release both of said levers, and move the clamp in one direction on the rod and act on the other of said levers, release both of said levers, and move the clamp in the opposite direction on said rod, substantially as described.

4. In a device of the character described, the combination of a fixed rod, a rod-clamp slidable on said rod and provided with a pair of rod-gripping levers fulcrumed thereon and apertured for the accommodation of said fixed rod, spring-means tending to rock said levers into rod-gripping position, means pivoted on said rod-clamp and connecting said levers causing an opposite movement of either lever when the other is actuated, means adapted to connect said rod-clamp to an adjustable sash, and means adapted to act on one of said levers, release both of said levers, and move the clamp in one direction on the rod, and act on the other of said levers, release both of said levers, and move the clamp in the opposite direction on said rod, substantially as described.

ELIJAH P. HARRIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."

Correction in Letters Patent No. 1,201,581

It is hereby certified that Letters Patent No. 1,201,581, granted October 17, 1916, upon the application of Elijah P. Harris, of Chicago, Illinois, for an improvement in "Transom-Lifters," were erroneously issued to the inventor, said Harris, whereas said Letters Patent should have been issued to *The Payson Manufacturing Company of Chicago, of Chicago, Illinois, a Corporation of Illinois*, said corporation being owner of the *entire interest* in said invention, as shown by the records of assignments in this office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 21st day of November, A. D., 1916.

[SEAL.]

F. W. H. CLAY,
Acting Commissioner of Patents.

Cl. 16—28.