(No Model.)

J. P. KETTERINGHAM.

TRANSOM LIFTER.

No. 489,311. Patented Jan. 3, 1893.

Fig. 1.

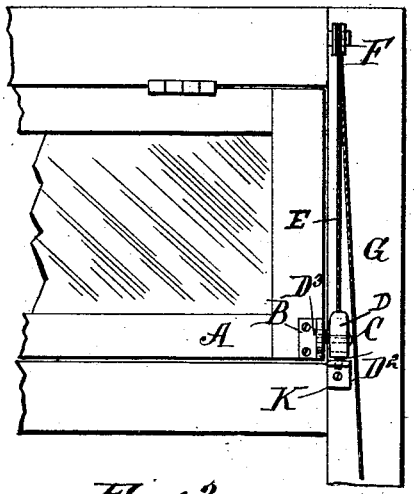


Fig. 2.

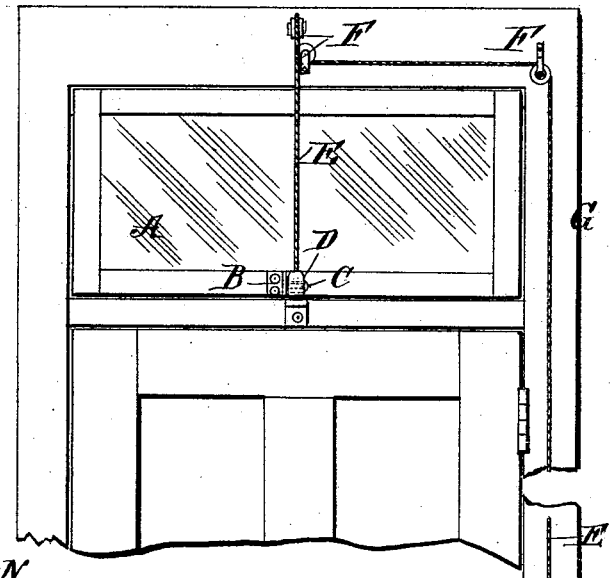
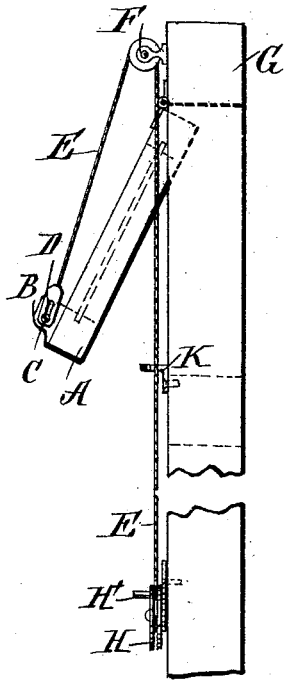


Fig. 3.



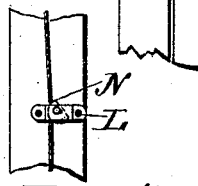


Fig. 4.

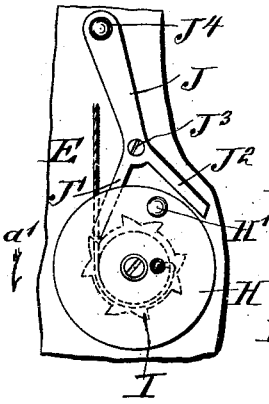


Fig. 5.

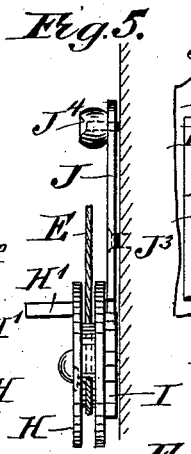


Fig. 6.

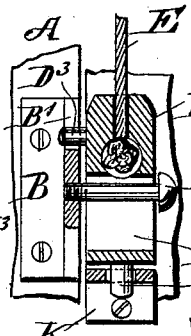


Fig. 7.

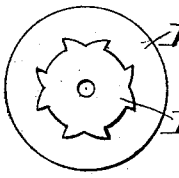


Fig. 8.

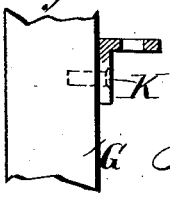
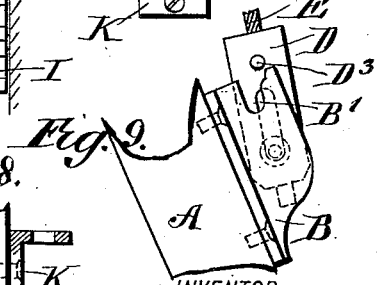


Fig. 9.



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UNITED STATES PATENT OFFICE.

JOHN P. KETTERINGHAM, OF NATCHEZ, MISSISSIPPI, ASSIGNOR TO FRANK O'BRIEN AND SAMUEL J. PERRAULT, OF SAME PLACE.

TRANSOM-LIFTER.

SPECIFICATION forming part of Letters Patent No. 489,311, dated January 3, 1893.

Application filed August 26, 1892. Serial No. 444,187. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. KETTERINGHAM, of Natchez, in the county of Adams and State of Mississippi, have invented a new and Improved Lifting Device for Transoms, Windows, Drop-Doors, &c., of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved lifting device, which is simple and durable in construction, very effective in operation and designed for conveniently lifting transoms, windows, drop doors, &c., holding the same in a desired open position, or securely locking the same when closed.

The invention consists of a drum carrying a rope connected with a block pivotally connected with a bracket held on the device to be lifted, the said block serving to lock the transom when closed.

The invention also consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

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 front view of the improvement as applied on one side of a transom; Fig. 2 is a similar view of the same as applied in the middle of a transom; Fig. 3 is a side elevation of the same; Fig. 4 is an enlarged face view of the drum and ratchet mechanism; Fig. 5 is a side elevation of the same; Fig. 6 is an enlarged sectional front view of the bracket and block; Fig. 7 is a face view of the drum ratchet; Fig. 8 is a sectional side elevation of the keeper for the bolt locking pin; and Fig. 9 is an enlarged side elevation of the block and bracket with the transom in an inclined position.

The transom A or other device to be lifted, is provided with a bracket B, either at one end or at the middle, which carries a sidewise projecting pivot pin C, engaging a vertically arranged slot D′ formed in a block D, connected with one end of a rope E extending upwardly and passing over a pulley or pulleys F, held on the frame or casing of the window the said rope extending downward on one side of the casing to wind on a suitably-constructed drum H. On the face of the drum H is arranged a suitable handle H′ for conveniently turning the said drum, so as to wind up or unwind the rope E. When winding up the rope a pull is exerted on the block D so that the latter pulls on the bracket B by the pivot C and consequently causes an upward swinging of the transom A, so that the latter is opened. By unwinding the rope from the drum H, the pressure or pull on the transom is removed and the latter swings shut by its own weight.

In order to hold the transom in an open position and at any desired angle, a locking device is provided for the drum H which locking device comprises a double ratchet wheel I formed or secured on the rear face of the said drum and adapted to be eagaged by the arms J′ and J^2 of a pawl J pivoted on the door casing at J^3, directly above the drum H. On the upper end of the pawl J is a weighted handle J^4 which serves to hold the pawl either in a right hand or left hand position and also serves for conveniently moving the said pawl in and out of contact by its respective arm J′ or J^2 with the teeth of the double ratchet wheel I.

On the under side of the block D is formed or secured a pin or bolt D^2 adapted to engage a keeper K secured on the door casing G directly below the block D when the latter is in its normal position at the time the transom A is closed. On the side of the block D next to the bracket B is secured a pin D^3 adapted to pass into a vertically-arranged slot B′ formed in the upper edge of the bracket B, the said slot serving as a guide for the pin D^3 so as to hold the block D in the proper position for its bolt D^2 to enter the apertured keeper K at the time the transom A closes and the block D is free to slide downward.

For very heavy doors, transoms, windows and the like I provide an additional automatic locking device for the rope E, the said locking device being secured on the door casing and comprising a bracket L through which passes the rope, and which contains a gravity cam or pawl N adapted to clamp the rope in the said bracket, as soon as the weight of the transom window, door, &c. exerts a pull on the rope from above.

The operation is as follows: When the transom A is closed as shown in Figs. 1 and 2, then the transom is locked by the bolt D^2 of the block D engaging the keeper K. Now, when it is desired to open the transom, the operator first unlocks the drum H by moving the pawl L into the position shown in Fig. 4, so that the drum can be turned in the direction of the arrow a' to wind up the rope E. The winding up of the rope causes the rope to exert a pull on the block D which is then in its lowermost position, as shown in Fig. 6. The block D thus slides upward so that the bolt D^2 disengages the keeper K and the transom becomes unlocked it being understood that this movement of the block is possible, as the pivot C connecting the block with the bracket B, passes through the vertically-arranged slot D'. A further pull on the rope E on continuing the winding up of the rope causes the transom A to swing upward into an inclined position as illustrated in Fig. 3.

It is understood that when the transom has been opened to the desired position, the arm J' of the pawl J will engage a corresponding tooth in the ratchet I so as to lock the drum H in place thereby holding the transom in the desired inclined position. When it is desired to close the transom, the operator swings the pawl J to the right so as to permit of revolving the drum H in the inverse direction of the arrow a'. When the transom is opened as above described and the block D is drawn upward until the bottom of the slot D' comes in contact with the pivot C then the pin D^3 passes out of the guiding slot B', so that the block D is free to swing on its pivot C as the angle of the transom A changes in swinging upward. When the transom A is closed as above mentioned, then the block D gradually swings back into its former position so that when the transom is finally closed, the block stands vertically and on a further release of pressure on the rope E the block is free to slide downward by its own weight so that the pin D^3 passes into the guiding slot B' whereby the bolt D^2 is caused to engage the aperture in the keeper K to lock the transom in place.

It will be seen that this device is very simple and durable in construction, can be readily applied and easily manipulated to hold the transom, window or door in the desired position.

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

1. A transom lifter and lock, comprising an attaching plate or bracket, a bolt, a slot and pivot connection between the bolt and bracket to permit the bolt to slide as well as turn at its axis, and a keeper or strike for the lower end or nose of the bolt, substantially as set forth.

2. In a device of the class described, the combination with a drum, of a rope adapted to be wound on the said drum, a block secured on the said rope, a bracket adapted to be fastened to the device to be lifted and pivotally connected with the said block, and a keeper adapted to be secured on the casing and adapted to be engaged by a bolt on the said block, substantially as shown and described.

3. In a device of the class described, the combination with a drum, of a rope adapted to be wound on the said drum, a block secured on the said rope, a bracket adapted to be fastened to the device to be lifted and pivotally connected with the said block, a keeper adapted to be secured on the casing and adapted to be engaged by a bolt on the said block, and a pin held on the said block and adapted to engage a guiding slot formed in the said bracket, substantially as shown and described.

4. A transom lifter and lock, comprising a bracket having a lateral pivot and a vertical slot thereabove, a bolt sliding and swinging on said pivot and provided with a lateral pin to enter said slot; the upper end of the bolt having means for attaching the operating cord, and a keeper or strike for the lower end or nose of the bolt, substantially as set forth.

5. In a device of the class described, the combination with a bracket adapted to be secured to the device to be lifted and provided with a pivot pin, of a block adapted to be raised and lowered and provided with a vertically-arranged slot for engagement with the said pivot pin, a bolt projecting from the said block, and a keeper adapted to be secured on the casing and adapted to be engaged by the said bolt, substantially as shown and described.

6. In a device of the class described, the combination with a bracket adapted to be secured to the device to be lifted and provided with a pivot pin, of a block adapted to be raised and lowered and provided with a vertically-arranged slot for engagement with the said pivot pin, a bolt projecting from the said block, a keeper adapted to be secured on the casing and adapted to be engaged by the said bolt, and a pin projecting from the said block and adapted to engage a guiding slot in the said bracket, substantially as shown and described.

7. In a device of the class described, the combination with a rope adapted to pass over pulleys arranged on the casing, of a block held on one end of the said rope and pivotally-connected with the device to be lifted, a drum connected with the other end of the said rope and arranged on the casing, and a locking device for the said drum and comprising a double ratchet wheel, and a pawl having two arms adapted to engage the said double ratchet wheel, substantially as shown and described.

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Witnesses:
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THOS. J. REED.