

C. T. ROGERS.
TRANSOM MOVER.
APPLICATION FILED MAR. 4, 1911.

1,005,315.

Patented Oct. 10, 1911.

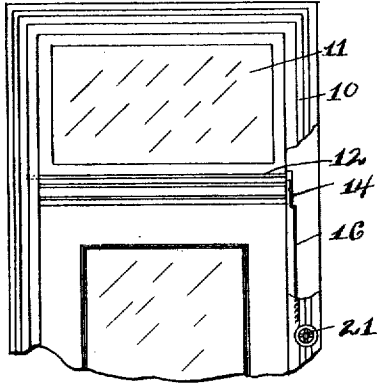


Fig: 1,

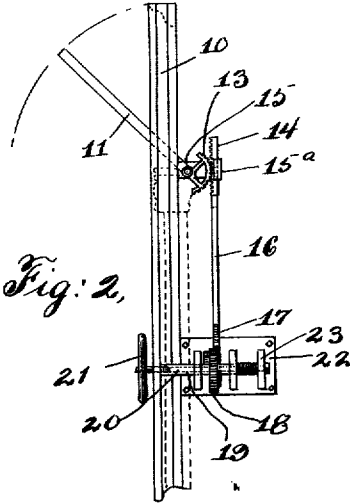


Fig: 2,

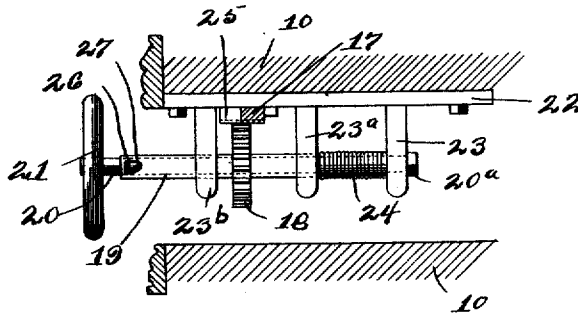


Fig: 3,

Witnesses:
Arthur L. Dammell,
Thomas F. Sully.

Clarence T. Rogers, Inventor,

By his Attorney
W. B. Hutchinson.

UNITED STATES PATENT OFFICE.

CLARENCE T. ROGERS, OF NEW YORK, N. Y.

TRANSM-MOVER.

1,005,315.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CLARENCE T. ROGERS, of the city, county, and State of New York, have invented a new and useful Improvement in Transom-Movers, of which the following is a full, clear, and exact description.

My invention relates to improvements in transom movers and devices for opening and closing transoms or ventilators, and is especially intended to provide a device which is contained within the casing of a door so that no part of the mechanism is visible except the wheel or handle which operates the device.

Another object of my invention is to produce an opener for transoms which will be self-locking in its operation, so that when a transom or ventilator is opened it will automatically lock so that it will be impossible to move or close the transom by force or pressure applied directly thereto.

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

Figure 1 is a view of my device as applied to a door frame. Fig. 2 is a side view of the same within the door frame, and Fig. 3 is a top view of the lower part of the device showing the self-locking arrangement.

It is intended that my device shall be supported within a door frame so that no part of it will be visible except the handle operating the same. In the drawings I have illustrated it as supported in a door frame 10 and intended to open the transom 11. The transom 11 is illustrated in the drawings as pivotally supported on the rod 12. It is understood, however, that the transom can be swung also when supported in the middle or at the top. In order to rotate the rod 12 and open the transom, I provide a pinion or segment of a pinion 13 which is adapted to engage a rack 14, this rack being supported and held in position by the arm 15 which is secured to the door frame, and is bent around and in as shown at 15^a to form a guide for the rack 14.

Secured to the lower end of the rack 14 is a rod 16 which carries at its lower end another rack 17 which engages in turn a pinion 18. This pinion 18 is rigidly secured to a sleeve 19 which is supported on the door frame by the bracket 22 having arms 23^a and 23^b. The sleeve is so support-

ed in these arms 23^a and 23^b that it can rotate, and can also be moved longitudinally. Within the sleeve I provide a shaft 20 adapted to rotate therein and also be moved longitudinally therethrough. This shaft 20 extends through the sleeve and is supported at its inner end by the arm 23, and is held in place against lateral movement by the nut 20^a. The rod 20 carries a spring 24 between the arms 23 and 23^a, and this spring 24 abuts at one end against the arm 23 and at the other end against the end of the sleeve 19.

In order that the device may be self locking, I provide a fixed rack 25 which is adjacent to the movable rack 17, and adapted to engage the pinion 18. In order that the pinion 18 may be moved in and out of engagement with the rack 25, I provide an opening in the sleeve 19 near its outer end, which opening has on its sides cam surfaces which are adapted to engage the screw carried upon the shaft 20. It is apparent, therefore, that when the shaft 20 is rotated by means of the wheel handle 21, the screw or pin 27 will, by reason of the cam surfaces of the opening 26, move the sleeve 19 in, throwing the pinion 18 out of contact with the rack 25, and allow of an up and down movement in the movable rack 17, thereby operating upon the segment 13 and opening or closing the transom. On the other hand, when the rotating pressure is removed from the wheel 21, the spring 24 pressing against the sleeve 19 will move the sleeve 19 and the pinion 18 with it out, so that the pinion 18 will lock on the fixed rack 25, thereby locking the transom in whatever position it may be, and making it impossible to either open or close it without turning the wheel handle 21.

I claim:—

1. A transom mover comprising a bracket secured to a door frame, a spring pressed sleeve having cam surfaces thereon supported on the bracket, a pinion rigidly secured to the sleeve, a fixed and a movable rack normally engaged by the pinion, a shaft movably supported in the sleeve, means for rotating the shaft, a pin secured to the shaft and cooperating with the cam surfaces on the sleeve, whereby when the shaft is rotated the sleeve will move longitudinally to carry the pinion out of engagement with the fixed rack and will then rotate with the shaft, and a second movable rack connected to the first movable rack and engaging a

gear segment rigidly supported on a transom to swing the same when turned.

2. A transom mover comprising the gear segment secured to a transom to swing the same when turned, a movable rack engaging the gear segment, a bracket secured to a door frame, a second movable rack connected to the first movable rack, a fixed rack supported on the bracket, a pinion normally engaging the second movable rack and the fixed rack and adapted to move in and out of engagement with the fixed rack, and means for moving the pinion out of engagement with the fixed rack and adapted to rotate the same.

3. In a transom mover a spring pressed sleeve supported on a door frame, a pinion rigidly supported on said sleeve, a fixed and a movable rack normally engaged by the pinion, means for moving the sleeve to move the pinion out of engagement with the fixed rack said means being also adapted to rotate said pinion, and operative connection between the movable rack and a transom.

4. In a transom mover, a rotatable sleeve supported on a door frame and movable longitudinally, a pinion rigidly supported on the sleeve, a shaft supported within the sleeve, means for rotating the shaft, a fixed

and a movable rack normally engaged by the pinion, means on the shaft engaging the sleeve to rotate said sleeve and move it longitudinally in relation to the shaft when the latter is rotated, and operative connection between the movable rack and a transom.

5. In a transom mover, a spring pressed sleeve supported so that it will rotate and move longitudinally in its bearings, a pinion rigidly supported on the sleeve, a fixed and a movable rack normally engaged by the pinion, means supported in the sleeve to rotate the sleeve and move it longitudinally, and operative connection between the movable rack and a transom.

6. A transom mover comprising a sliding rack supported on a door frame, a fixed rack adjacent to the sliding rack, a rotatable pinion movable longitudinally on its axis to engage the sliding rack and the fixed rack, a handle operatively connected with the pinion, and operative connection between the sliding rack and a transom.

CLARENCE T. ROGERS.

Witnesses:

WARREN B. HUTCHINSON,
THOMAS T. SEELYE.

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