(No Model.)

J. D. CARMODY.

TRANSOM LIFTER.

No. 489,846. Patented Jan. 10, 1893.

Fig. 1.

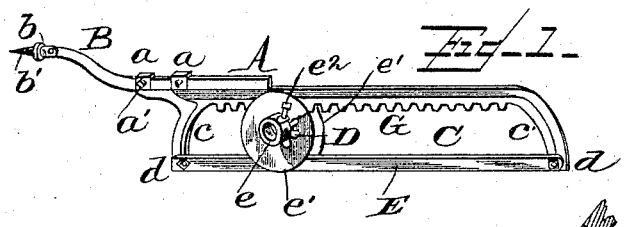


Fig. 3.

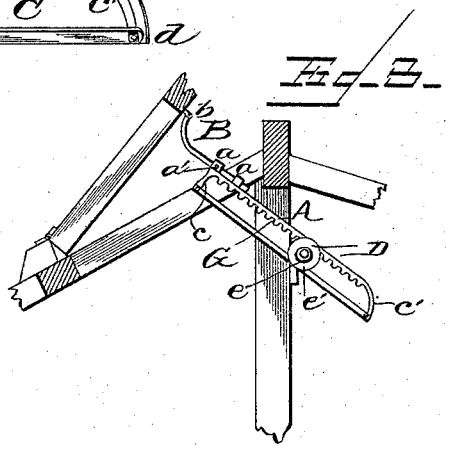


Fig. 2.

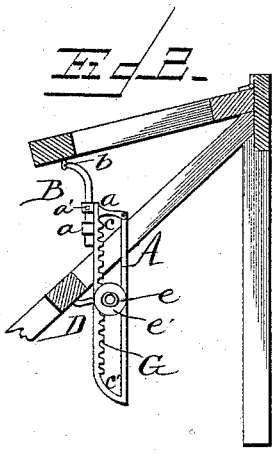
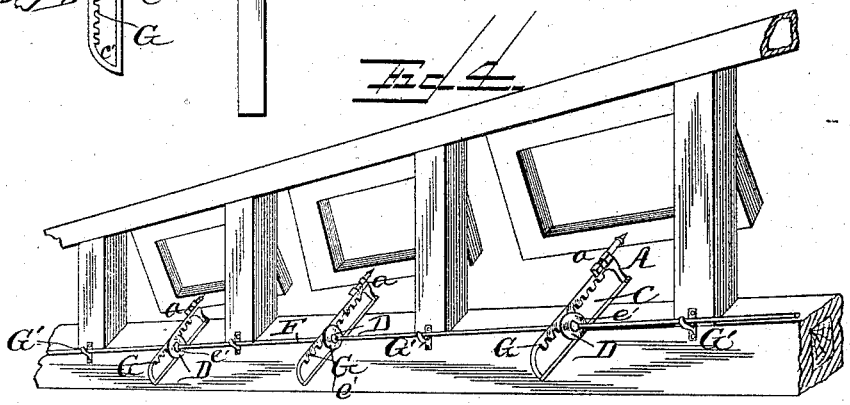


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES D. CARMODY, OF EVANSVILLE, INDIANA.

TRANSOM-LIFTER.

SPECIFICATION forming part of Letters Patent No. 489,846, dated January 10, 1893.

Application filed August 20, 1892. Serial No. 443,583. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. CARMODY, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Sash-Lifters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has relation to certain new and useful improvements in sash-lifters for greenhouses, and the object is to provide a device that is cheap, simple and reliable and at the same time requires a minimum of power to operate it, and to these ends the novelty consists in the construction, combination and arrangement of the parts of the same as will be hereinafter more fully described and particularly pointed out in the claims.

In the accompanying drawings the same letters of reference indicate like parts of the invention.

Figure 1 is a side view of the toothed lifting lever, showing the flanged pinion for operating the same. Fig. 2 shows the manner of attaching said lever to a ventilating sash when the latter is hinged at the bottom. Fig. 3 is a similar view showing the manner of attaching the lever to the sash when said sash is hinged at the top, and Fig. 4 is a view in perspective showing a series of the levers operated by a common rod and connected to a series of ventilating sashes so as to raise and lower them simultaneously.

In the accompanying drawings the same letters of reference indicate the same parts of the invention.

A is the lever proper, and its forward end is provided with sockets, *a a*, having set-screws, one of which is shown at *a'*. These sockets receive and adjustably retain by means of said set-screw, a bent extension or arm, B, the forward end of which is fulcrumed in a stud, *b*, provided with a rigid wood screw, *b'*, by means of which the lever, arm and stud are secured to the sash frame at its free end. The upper inner face of said lever is provided with an integral rack, C, in which meshes a pinion, D, arranged to travel the length of the rack, C, from the arm, *c*, to the arm, *c'*, and said pinion is confined within said space and in mesh with the rack above referred to by means of a guiding rail, E, the ends of which are secured by bolts, *d d*, to the arms, *c* and *c'*. The pinion, D, is provided with a hub, *e*, and flanges, *e' e'*, which project on each side of the rack and rail and prevent the lateral displacement of said pinion. A set-screw, e^2, serves to rigidly secure the pinion to the shaft, F, after the lever has been properly adjusted to the sash; this shaft, F, is mounted in suitable brackets such as G', and when a series of the pinions with their corresponding levers is operated, the attached sashes will be raised or lowered accordingly as the shaft itself is rotated to the right or left, and said shaft may be operated in any convenient manner, as, for instance, by a sprocket-wheel and chain or a worm and screw.

Having thus fully described my invention, what I claim as new and useful and desire to secure by Letters Patent of the United States is:

1. The ventilating sash lever, A, provided with adjustable arm, B, rack, C, and guiding rail, E, in combination with the pinion, D, meshing in said rack and provided with flanges, *e' e'*, and set-screw, e^2, as and for the purpose set forth.

2. The lever, A, provided with toothed rack, C, and integral arms, *c* and *c'*, to which is secured the guiding rail, E, in combination with the pinion, D, having integral side flanges, *e' e'*, and hub, *e*, provided with set-screw, e^2, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES D. CARMODY.

Witnesses:

H. J. ENNIS,

L. P. SPINNER.