(No Model.)

# A. R. BRAND.

## TRANSOM LIFTER.

No. 309,599. Patented Dec. 23, 1884.

Fig. 1.

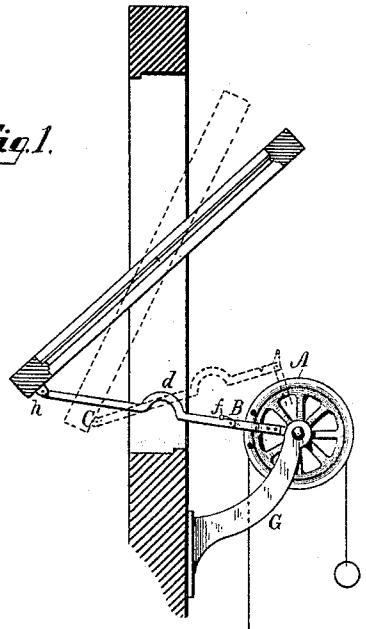



Fig. 2.

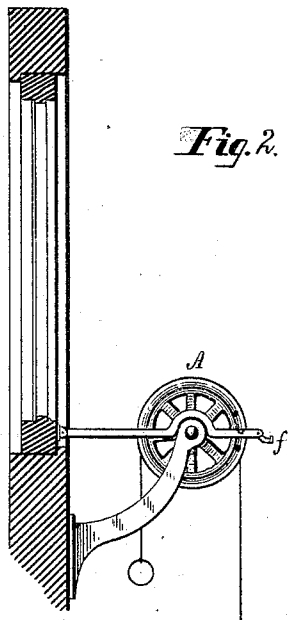



Fig. 3.

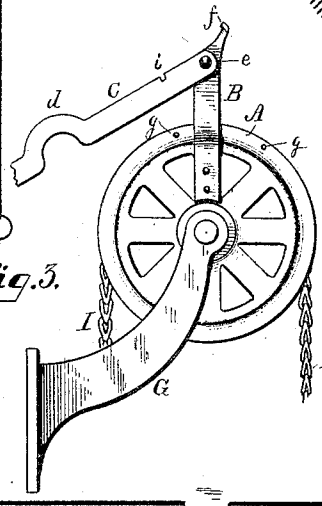



Fig. 5.

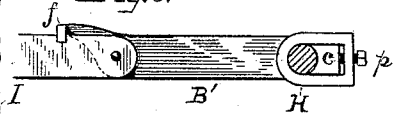



Fig. 6.

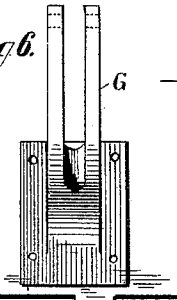
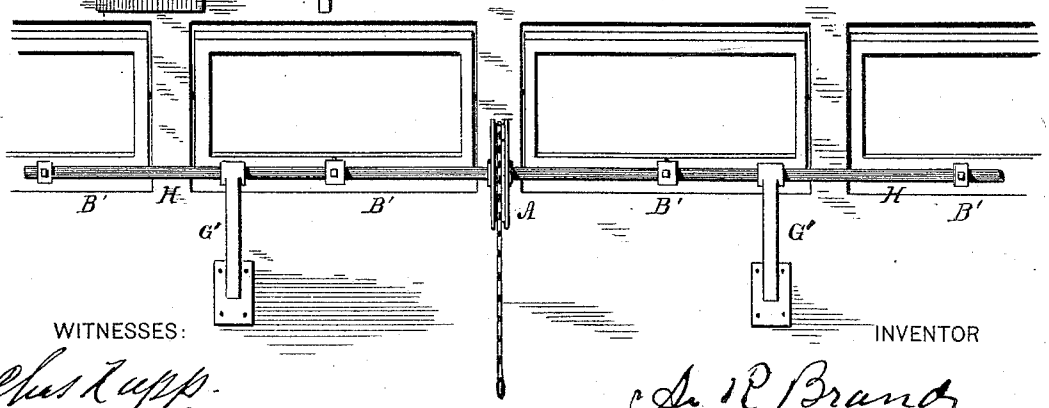



Fig. 4.




WITNESSES:

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INVENTOR

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# UNITED STATES PATENT OFFICE.

AUGUSTUS R. BRAND, OF PHILADELPHIA, PENNSYLVANIA.

## TRANSOM-LIFTER.

SPECIFICATION forming part of Letters Patent No. 309,599, dated December 23, 1884.

Application filed August 13, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUSTUS R. BRAND, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful machine or device for opening, closing, and effectually self-locking sash transoms and valves; and I do hereby declare the following to be a full, clear, and exact description thereof.

The machine or device comprises the following elements, to wit: A drum or grooved wheel fastened on or to an axle or shaft and supported by a bracket or brackets attached to the wall or casing. An arm or lever is firmly fixed or fastened either to the drum or wheel, or directly to the axle or shaft. A second arm or lever is joined at one end by means of a pivot-joint to the projecting end of the wheel-arm or shaft-lever, and at the other end by means of a pivot or hinge-joint to the sash, transom, or valve to be operated. The arm or lever attached to the sash is provided at about midway in its length with an offset arranged to fit around the axle or shaft when the sash is closed. The particular advantage derived from this feature of my invention is the effectual automatic locking of the sash, transom, or valve. The offset allows the arm or lever to rest (when the sash is closed) in such a position that the extreme ends of the sash arm or lever are from each other in a direct line across or through the axle or shaft, so that no amount of pulling or prying at the sash would raise the lever and relieve the sash; and, further, the offset acts as a hook or catch around the axle or shaft, and thus secures the sash even more firmly. A projection or stop is provided on the side and at the extreme end of the wheel-arm or shaft-lever beyond the pivotal point with the sash-arm or lever to prevent the dropping of the joint when the arms or levers are extended and the sash open. This projection or stop projects from the side and lower edge of the wheel-arm or shaft-lever in such a position that when the arms are extended the projection or stop of the wheel-arm or shaft-lever projects over and rests upon the upper edge of the sash-arm or lever in a notch provided in the said arm for the purpose, and thus prevents the dropping of the joint and firmly secures the arms or levers in their extended position. This combination of the drum or wheel and arms or levers, in connection with the axle or shaft and brackets, is such that when the sash is closed it is securely and effectually locked and cannot be opened from the outside, and when opened the levers or arms are extended in a direct line from the axle or shaft and hold the sash firmly in that position, preventing it from being shaken or closed by the elements.

The machine or device is operated by chains or cords, so that the sash, transom, or valve can be quickly operated from any distance below. The chain or cord passes over and around the circumference of the drum or wheel in a groove, and is so fastened or fixed thereto as to prevent it from slipping on the drum or wheel and failing to operate.

The machine or device can be applied to and used to operate either single sash, transoms, or valves, or a series of them, the latter by means of an extended shaft provided with the drum or wheel, and as many sets or combinations of arms or levers as there may be sash to be operated.

In the single machine or device a double bracket is used, as shown in Figs. 1, 2, 3, and in the sectional view, Fig. 6; but in the machine or device to operate a series of sash single brackets are employed, as in Fig. 4.

In the accompanying drawings, Figure 1 is a detailed and partially-sectional view representing the device fastened to and in combination with a sash or transom in an open position. Fig. 2 represents the same combination with the sash closed and self-locked. Fig. 3 shows particularly the levers or arms in their connection with each other and their relation to the drum or wheel. It shows in detail the offset and the projection or stop on the wheel-arm, also the connection and fastenings *g g* of the chains or cords with the wheel or drum. Fig. 4 represents the device applied to a series of sash or transoms with the arm or lever B modified, as in Fig. 5, B', so as to fasten directly to the shaft or axle H, instead of to the drum or wheel, as in Fig. 3, with the set or combination of arms or levers multiplied as many times as there are sash to be operated. Fig. 5 represents the shaft arm or lever attached directly to the shaft H, as used when a series of sash, transoms, or valves are to be operated, as in

Fig. 4. Fig. 6 represents a sectional view of the double bracket employed in the single machine or device.

Similar letters refer to similar parts throughout the several views.

A is a grooved wheel or drum, supported by the bracket G or G′, fastened to the wall or casing, as represented. The arm or lever B is fastened to the wheel or drum A, to rotate with it, or directly to the shaft H, as in Fig. 5, B′, when a series of sashes are to be operated. The arm or lever C is joined at one end by a pivot-joint, *e*, to the arm B or B′, and at the other end is fastened by a hinge or joint, *h*, to the sash to be operated.

*d* is the offset, provided about midway in the length of the arm C, to fit over and around the shaft or axle when the sash is closed, and thus to effectually self-lock it in that position, as shown in Fig. 2. A projection or stop, *f*, is provided at the extreme end of the arm or lever B and B′, to prevent the joint *e* from dropping when the arms are extended, as in Fig. 1, and to firmly secure the joint when in that position. The niche *i* is provided in the arm or lever C to receive the stop *f*, to more firmly secure the joint *e* when the arms are extended.

H is the shaft or axle, supported by the brackets G′ G′, fastened to the wall or casing, and provided with the drum or wheel A about its center, and with as many sets or combinations of arms or levers B′ C as there are sashes to be operated.

The arm or lever B′, Fig. 5, is provided with a slot, an end screw, *p*, and wedge *c*, by means of which it is firmly and securely fastened and affixed to the shaft H.

In Fig. 3, *g g* represent the pins or fastenings of the chains or cords I I, to prevent the same from slipping in the groove of the drum or wheel A.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination consisting of the drum or wheel A, arm or lever B, arm or lever B′, projection or stop *f*, arm or lever C, offset *d*, niche *i* in arm or lever C, pins *g g*, for fastening the chains or cords, in combination with the brackets G and G′ G′, and the shaft or axle, constructed and arranged to operate substantially as herein shown and described.

In witness whereof I have hereunto set my hand this 2d day of August, A. D. 1884.

AUGUSTUS R. BRAND.

Witnesses:

W. B. GODDARD,

CHAS. NAPP.