

(No Model.)

R. K. MARSHALL.
SASH FASTENER.

No. 540,176.

Patented May 28, 1895.

Fig. 1.

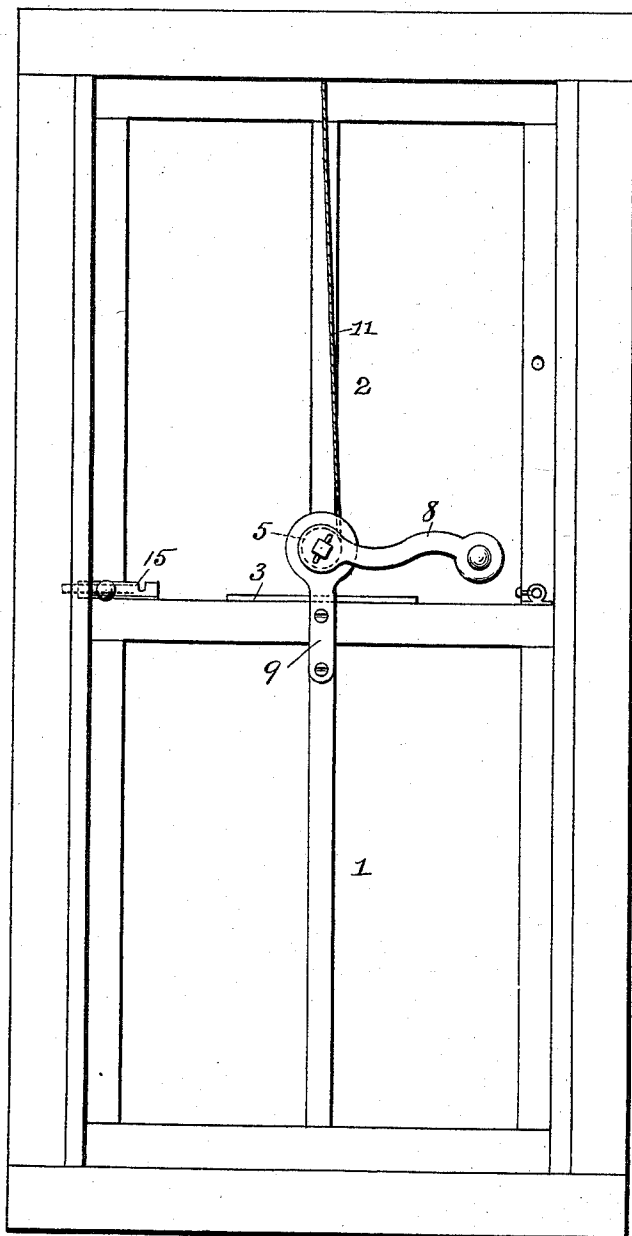
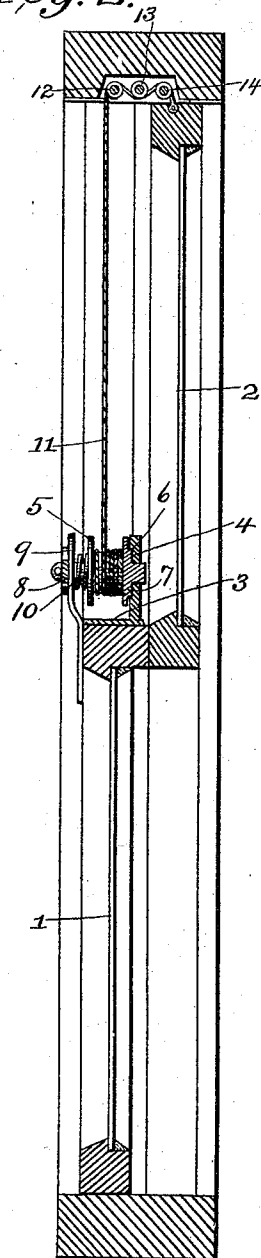


Fig. 2.



Witnesses:

John Blackwood
James H. Palk.

Fig. 3.

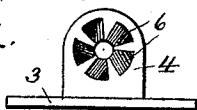


Fig. 4.

Inventor.

Richard K. Marshall
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UNITED STATES PATENT OFFICE.

RICHARD K. MARSHALL, OF MOUNT AIRY, NORTH CAROLINA.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 540,176, dated May 28, 1895.

Application filed March 21, 1895. Serial No. 542,690. (No model.)

To all whom it may concern:

Be it known that I, RICHARD K. MARSHALL, a citizen of the United States, residing at Mount Airy, in the county of Surry and State of North Carolina, have invented certain new and useful Improvements in Sash-Lifters, of which the following is a specification.

My invention relates to devices for raising and lowering sashes of windows, and has for its object to provide an improved construction whereby both sashes of a window can be readily raised or lowered or retained in place at any desired adjustment. These objects I accomplish by providing the top of the inside sash with a spring pressed winding drum to which is attached a winding cord running therefrom over suitable pulleys in the top of the window frame and from thence down to the top of the outside sash. By winding or unwinding this drum the adjustment of the sashes can be readily controlled, while the spring on said drum by means of intermediate mechanism affords a means for retaining the sashes in their adjusted position.

In the accompanying drawings, Figure 1 is a front elevation of a window provided with my invention. Fig. 2 is a vertical sectional view of a double sash and frame, showing my improved device in position, part of the lower sash and frame being broken away. Fig. 3 is a detail front elevation of the serrated bearing-plate against which the winding-drum bears; and Fig. 4 is an end view of the winding-drum, showing the teeth thereon for engaging with the serrated plate.

In the said drawings the numeral 2 denotes the inner sash of a window, and 1 the outer sash. Attached to the top of said inner sash is a plate 3 having a vertical bearing plate 4 thereon centrally apertured to receive the shaft of the winding drum 5 to form a bearing therefor. This bearing plate is provided on its side adjacent to the drum 5 with a series of serrations 6 adapted to normally engage with corresponding teeth 7 on the adjoining end of the drum. Said drum is provided at its other end with a crank 8, and has for its other bearing the plate 9 also attached to the sash. The said drum is capable of a limited longitudinal movement in its bearings, and is kept normally into engagement

with the serrated plate 4 by means of a spring 10 interposed between the bearing plate 9 and the end of the drum adjacent thereto. Running upward from said drum is the cord 11 adapted to be wound thereon and passing from thence over a pulley 12 under pulley 13 and over pulley 14 located in the top of the window frame, and from thence downward to the top of the outer sash to which it is attached in any suitable manner.

The operation of my device is as follows: When the two sashes are in their normal positions, the outer sash up and the inner sash down, and the cord 11 wound taut between them, the spring pressed down by the engagement of its toothed end with the serrated plate 4 will prevent the unwinding of said cord and thus retain the outer sash in its adjusted position. When it is desired to lower said outer sash the crank 8 is drawn toward the operator, thus moving the drum longitudinally against the pressure of the spring 10 sufficiently to disengage the teeth 7 from the serrations 6, thus permitting the drum to turn freely and the cord to unwind to lower the sash. When the sash has been lowered the desired distance, by simply releasing the crank the teeth 7 will at once engage the serrations 6 and lock the device. When the outer sash is up the raising of the inner sash is accomplished by winding the cord on the drum. In all positions of adjustment the releasing of the crank 8 securely locks the sashes.

I have shown the serrations 6 and teeth 7 with vertical and inclined faces so arranged as to permit the winding of the cord without longitudinally moving the drum, the teeth slipping past the serrations as the drum is turned in that direction, but if desired they may be so constructed without the inclined faces as to require the longitudinal movement of the drum before movement can be had in either direction.

A suitable bolt 15 may be applied to the inner sash adapted to engage the window frame to prevent any possible movement of the inner sash while the outer sash is being raised or lowered.

I employ the intermediate pulley 13 in the top of the window frame, and under which the cord 11 passes, to act as a frictional de-

vice and prevent a too rapid movement of the outer sash when it is being lowered.

Instead of using the single cord 11 in the center of the sashes, I may if desired employ
5 two cords, one on each side of the sashes and running to the common winding drum located in the center of the inner sash.

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

In a sash lifter, the combination with the two sashes of a window, a cord connecting the tops of said sashes, and an intermediate carrier in the top of the window frame over

which said cord passes, of a winding device 15 for said cord on one of the sashes and consisting of a longitudinally movable drum having a series of teeth on one end, a serrated bearing plate with which said teeth normally engage, a spring to normally press said 20 drum against said plate, and a crank on said drum to move said drum away from the serrated plate and to wind or unwind the drum, substantially as shown and described.

RICHARD K. MARSHALL.

Witnesses:

JAMES R. LEWELLYN,
H. H. LOWRY.

It is hereby certified that in Letters Patent No. 540,176, granted May 28, 1895, upon the application of Richard K. Marshall, of Mount Airy, North Carolina, for an improvement in "Sash-Fasteners," errors appear in the printed specification requiring correction, as follows: On page 1, in line 37, the reference-numeral "2" should be 1, and in line 38, same page, the reference-numeral "1" should be 2; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 4th day of June, A. D. 1895.

[SEAL.]

Countersigned:

JOHN S. SEYMOUR,
Commissioner of Patents.

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.