H. V. LAWRENCE.
MEANS FOR RAISING AND LOWERING WINDOW SASHES.
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Inventor.
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By Applicant

Fig. 1.

Fig. 2.

Fig. 3.
To all whom it may concern:

Be it known that I, HARRY V. LAWRENCE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Means for Raising and Lowering Window-Sashes, of which the following is a specification.

This invention relates to means for raising and lowering window sashes of the usual balanced type, which is adapted for operation from a distant point. Many devices of this sort have been patented, but, on account of not satisfying the conditions, or for some other reason, are not in general use. A device for this purpose must be simple, easy to operate, and not liable to get out of order, and capable of being easily and quickly detached from and attached to the sash, so that it may be arranged for operation when desired, and at other times may be put away.

In view of the fact that it is sometimes desirable to slide both sashes into open and closed position, and at other times to slide one sash only into open and closed position, as for instance, either the upper or the lower sash, my invention involves a structure comprising a pair of operating cords adapted to be extended from the window to a bedside or other distant point, and means associated with said operating cords and connected with the sashes, whereby pulling upon one of the operating cords both sashes will be moved into open position, and pulling upon the other operating cord both sashes will be moved into closed position; yet the connections of the operating cords with the sashes may be shifted and the arrangement easily and quickly changed, so that said cords may be employed to raise and lower either the upper or the lower sash.

Figure 1 is a front elevation of the opening and closing means for both sashes embodying this invention. Fig. 2 is a similar view of the opening and closing means arranged in connection with the upper sash. Fig. 3 is a similar view of the opening and closing means arranged in connection with the lower sash.

The window casing 1, with its sill 2, and the upper sash 3, and the lower sash 4, are all of any well-known or suitable construction.

Referring to Fig. 1, 5 represents a long flexible cord having a snap-hook 6, at one end by which it is detachably connected with a screw-eye 7, secured to the top rail of the upper sash and which is extended downward over a pulley 8, supported by the window frame, or casing, or other means at the bottom of the window, and having its other end located at a distant point and provided with a snap-hook 9, for engagement with a ring 10, loosely arranged on a loop-formed strap 12, adapted to be arranged upon a bedstead, or in lieu thereof other anchoring-means may be provided for said remotely disposed end. A pull upon this operating cord will act to lower the upper sash.

15 represents an intermediate flexible cord connecting the upper and lower sashes, it having snap-hooks 16 and 17 at its ends for detachably connecting the screw-eyes 18 and 19, one of said eyes being secured to the bottom rail of the upper sash, and the other secured to the top rail of the lower sash, said cord passing over a pulley 20, loosely supported upon the window frame, or casing, or other means at the top of the window. This connecting element between the two sashes is provided for the purpose of causing either sash to be moved by or upon movement of the other. Hence, as the operating cord 5 is pulled, and the upper sash lowered, the lower sash will be raised by means of said intermediate connection.

25 represents another flexible operating cord, similar to the operating cord 5, which has at one end a snap-hook 26, adapted to be detachably connected with the top rail of the lower sash, as for instance, with the screw-eye 19, and said cord passes over a pulley 27, on the window frame, or casing, or other means at the bottom of the window, and its other end is extended for any suitable distance, and has a snap-hook 28 for detachably connecting it with any suitable anchoring-means, as for instance, with a ring 10 on the loop-formed strap 12. By pulling upon the operating-cord 25, the lower sash will be lowered, and through the intermediate connecting cord 15, the upper sash will be raised. Thus it will be seen that both sashes may be moved into open or closed position by pulling upon the proper operating cord.

In case it is desired to move the upper sash only into open and closed positions, the intermediate connecting cord 15 will be disconnected from one or both of the sashes, see Fig. 2, and the snap-hook of the operating cord 25, will be disconnected from the screw-
eye 19, and connected with the screw-eye 18, and also extended over the pulley 20, and when the parts are so arranged a pull upon the operating-cord 5 will lower the upper sash and a pull upon the operating-cord 25 will raise the upper sash.

In case it is desired to move the lower sash only into open and closed positions the intermediate cord 16 is disconnected as abovesaid; the snap-hook 6, at the end of the operating-cord 5, is disconnected from the screw-eye 7, and connected with the screw-eye 19, and said cord is also passed over the pulley 20; and then a pull upon the operating-cord 25 will raise the lower sash, and a pull upon the operating-cord 5 will lower the lower sash. Handles 30 may be attached to the operating-cords, if desired.

I claim:

1. The herein described means for moving the upper and lower sashes of a window into open and closed positions consisting of an operating-cord connected to the top rail of the upper sash, an operating-cord connected to the top rail of the lower sash, said operating-cords being extended over pulleys to a distant point, and an intermediate cord extended over a pulley and connected at its ends, respectively, to the bottom rail of the upper sash, and to the top rail of the lower sash.

2. The herein described means for moving window sashes into open and closed positions consisting of an operating-cord detachably connected to the top rail of an upper sash, and an operating-cord detachably connected to the top rail of the lower sash, said operating-cords being extended over pulleys to a distant point, and an intermediate cord having snap-hooks at its ends, and screw-eyes secured, respectively, to the bottom rail of the upper sash and to the top rail of the lower sash to which the ends of said cord are detachably connected, and a pulley over which said cord passes.

3. The herein described means for moving window sashes into open and closed positions, comprising two operating cords having end connections, and connections on the upper and lower sashes adapting said cords to be detachably connected therewith, and an intermediate cord having end connections at both ends, and connections on the upper and lower sashes adapting said intermediate cord to be detachably connected with both sashes, the several connections on the sashes being arranged to admit of a shifting of the cords to provide for moving either sash alone.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HARRY V. LAWRENCE.

Witnesses:
B. J. NOYES,
H. B. DAVIS.

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