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VENTILATING CLOSURE FOR WINDOW OPENINGS AND THE LIKE.

APPLICATION FILED SEPT. 17, 1917.

1,268,228. Patented June 4, 1918.

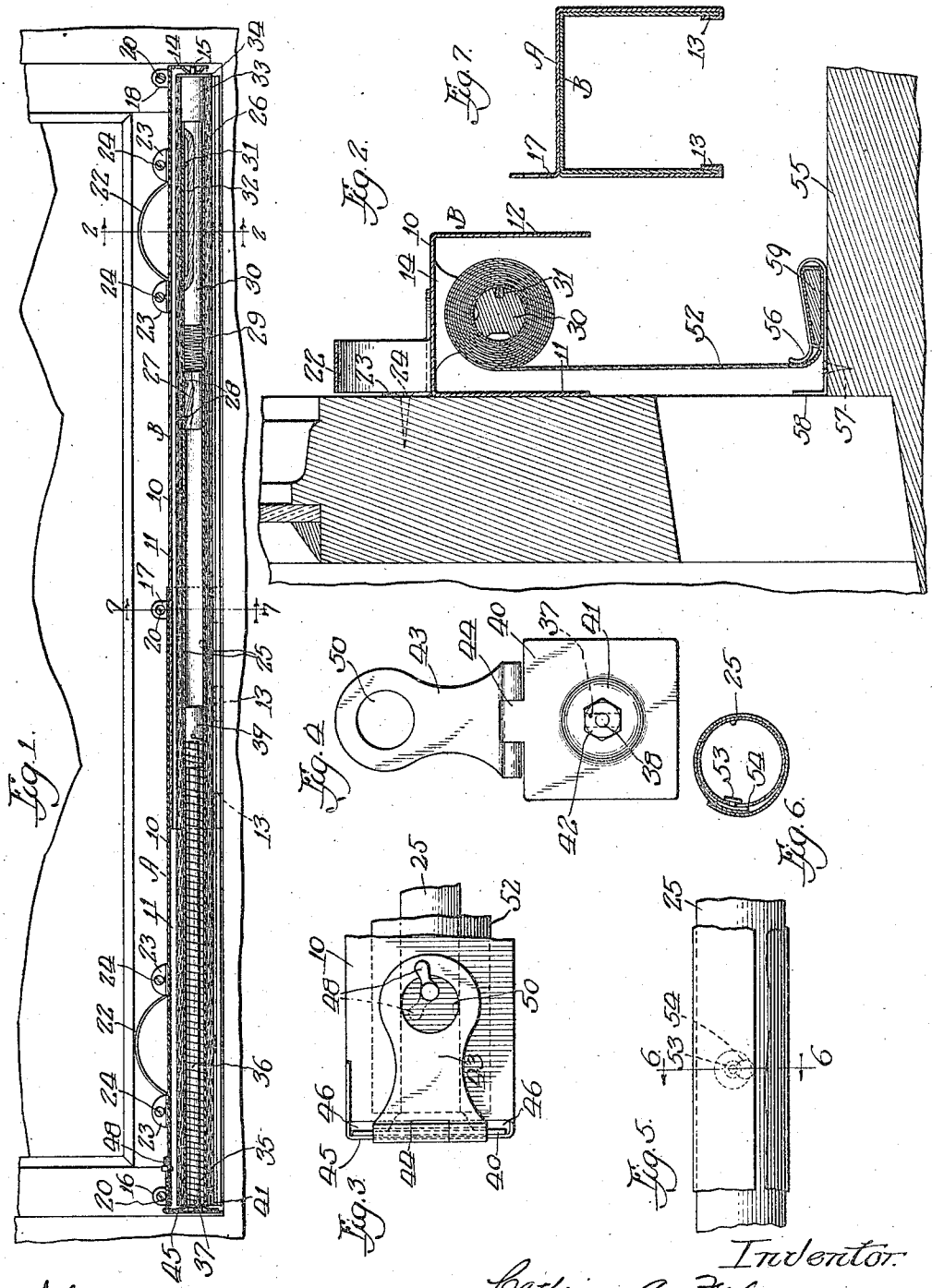


Fig. 1.

Fig. 2.

Fig. 7.

Fig. 4.

Fig. 6.

Fig. 3.

Fig. 5.

Witness:

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VENTILATING-CLOSURE FOR WINDOW-OPENINGS AND THE LIKE.

1,268,228. Specification of Letters Patent. Patented June 4, 1918.

Application filed September 17, 1917. Serial No. 191,854.

To all whom it may concern:

Be it known that I, CATHERINE A. FOX, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have made certain new and useful Improvements in Ventilating-Closures for Window-Openings and the like, of which the following is a specification.

My invention relates to ventilating closures for window openings and the like. In my co-pending application, Serial No. 155,720, filed March 19, 1917, (since issued as Patent No. 1,249,369 of December 11, 1917,) I have shown a device for the same general purpose as that herein disclosed, wherein the screen-containing roller is located in a recess in the lower sash rail of the window. That device is peculiarly important and advantageous in new construction work. The present improvements have for their principal objects the provision of simple and easily operable means for closing a window opening or the like against the entrance of dust, insects, objectionable drafts, etc., while admitting the desired quantity of air for ventilating purposes, which means may readily be applied to windows in completed buildings; to provide a device of this kind which may readily be adjusted to various window widths; which will maintain the roller and screen thereon in security and out of sight when the window is closed; which shall occupy but little space and present a neat and finished appearance; a device in which the roller and screen may be readily removed from and replaced in operative position, and means which may be cheaply manufactured and easily installed. Other objects and advantages will appear hereinafter.

In the accompanying drawings, which form a part of this specification I have illustrated these improvements in an advantageous and simple form, but I contemplate such various changes and modifications from what is specifically shown as are included in the scope of the appended claims.

In these drawings Figure 1 is a medial longitudinal vertical section of the new device as applied to the lower sash rail of a window;

Fig. 2 is an enlarged transverse vertical section on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged top view of the left-hand end portion of the device of Fig. 1;

Fig. 4 is a face view of the tensioning and roller holding means at the left-hand end of Fig. 1;

Fig. 5 shows a fragment of a roller and screen and the means for securing the screen to the roller;

Fig. 6 is a cross section on the line 6—6 of Fig. 5; and

Fig. 7 is an enlarged cross section of the device of Fig. 1 on the line 7—7 thereof.

The illustrated device comprises first two trough-like casing members A and B having respectively a top wall 10, an inner side wall 11 and an outer side wall 12 formed of light-weight sheet metal, the contour being well illustrated in Figs. 2 and 7. The section B is sufficiently smaller than the section A whereby the two interfit telescopically, as shown in Figs. 1 and 7. A plurality of lips or guides 13 are upturned from the section A (Fig. 7) whereby the section B is securely maintained slidably within the section A. The two sections A and B thus constitute a casing which is longitudinally extensible or adjustable so as to be properly applicable to windows of various widths. At the end of section B the metal of the top wall 10 is turned downward to form the relatively fixed roller support 14 having an opening for the roller pintle 15. An end cleat 16 and an intermediate cleat 17 are upturned from the rear wall 11 of section A and a similar end cleat 18 is upturned from the rear wall 11 of section B. In these cleats holes are provided to accommodate ordinary wood screws 20. To the top wall 10 of each section is secured a lifting bail or handle 22, the handles having cleats 23 respectively apertured to receive the wood screws 24. The lifting bails 22 take the place of the handles ordinarily provided on the windows, which handles must almost always be removed to accommodate the present device. By means of the several screws 20 and 24 the casing is secured rigidly to the lower sash rail.

The roller 25 is shown as a metal tube extending from the left-hand end of Fig. 1 to the point marked 26. A block 27 is secured within the tube, as by crimping the tube upon it as at 28, which block 27 provides an anchor for the expansion spring 29. A piece 30, suitably of wood, slidingly fits within the tube and is caused to rotate with the tube by means of the projection 31 formed in the tube 25 interfitting with the slot 32 formed in the piece 30. The head

33 on the piece 30 is of the diameter of the outside of the tube 25, and in this head 33 the pintle 15 is secured, there preferably being a metallic plate or collar 34 at the end of the head 33 adapted to guide and confine the screen upon the roller. The spring 29 operates to force the piece 30 outward, thus making the roller extensible or adjustable longitudinally, and rendering it automatically so adjustable and maintaining the pintle 15 in engagement with the end support 14.

Spring means are provided for rotating the roller in one direction, the same comprising the coiled spring 35 secured to the rod 36 at the left-hand end of Fig. 1 and to the rigid block or anchor 39 secured to the casing 25 as by crimping the casing upon it. The rod 36 is pivotally mounted in the block 39 whereby the roller 25 is rotatable relative to the rod 36, and the rod 36 is rotatable relative to the roller 25. The rod 36 is provided with a rectangular projection 37 terminating in a threaded stud 38 (Fig. 4), and upon this rectangular projection 37 is secured the plate 40 dish-shaped at 41, and the parts are secured together by a nut 42. To the plate 40 is secured a second plate 43 by means of a hinge connection 44. The casing 10 is provided with an end wall 45 and a slot-like opening 46 is provided in the top wall 10 adjacent to the wall 45 (Fig. 3). A latch 48 is pivotally secured upon the top wall 10 of the casing in such position as to engage the plate 43 through the finger hole 50 thereof, as shown in Fig. 3, and to release the plate 43 when the latch 48 is in its dotted line position.

Upon the roller 25 and the end piece 33 there is the flexible screen, shade or the like 52, readily removably secured to the roller as by means of a plurality of buttons 53 adapted to enter openings 54 in the roller, the necks of the buttons passing into constricted portions of the openings, as shown in Fig. 5. The free end of the screen 52 is formed in tubular shape and contains the tapering stick 59, according to well known construction. For holding the free end of the screen 52 upon the window sill 55 I provide two spring clips, as 56, secured to the sill as by a wood screw 57 in each. The clip 56 is provided with an upward extension 58 adapted to interfere with the casual withdrawal of the stick 59 from the clip device, as by the wind.

The entire device thus illustrated and described is a unitary structure which may be purchased in department stores and the like, taken to the home, hospital, or other place of intended use and readily applied for use. In such application it is only necesary to close the window, rest the device on the sill 55, insert the screws 20 and 24 with the device resting upon the sill, having extended the casing as necessary to fit the same between the window stiles. Upon raising the window with the device so secured two of the spring clips 56 may be positioned as shown in side view in Fig. 2, and the stick 59 holding the free end of the screen 52 may then be inserted within the arms of the spring clips, whereupon upon raising the window to any extent desired the screen 52 pays off the roller, covering the window opening the while. With the sash raised, the stick 59 may be released from the spring clips whereupon the screen will be wound upon the roller and the window opening will be uncovered.

When it is desired to remove the roller, as for replacing a shade or screen, which is desirable from time to time owing to the fact that it catches a great deal of dust and requires cleansing, the latch 48 is turned into its dotted line position in Fig. 3 whereupon the plate 43 can be turned upon the hinge 44, passed downward through the slot-like opening 46, thus freeing the left-hand end of the roller as seen in Fig. 1, whereupon the roller may simply be withdrawn from engagement with the support 14 at the right hand end of the figure. Having made the desired change or substitution of screen, and having rolled the same upon the roller, the finger of the operator is placed in the hole 50 of the plate 43 and with a few turns the spring 35 is placed under some tension, whereupon the pintle 15 is made to engage the bracket or support 14, the plate 43 is passed upward through the opening 46 and laid over upon the top wall 10, whereupon by turning the latch 48 the plate 43 is held securely and the device is again ready for use.

While the rear wall 11 of the casing might be dispensed with, it is pointed out that its inclusion provides a casing which effectually protects the screen on the roller from the drippings of water used for washing the window, and it also adds materially to the strength of a casing in jointed form.

I claim:

1. In combination, a relatively long and narrow casing having an opening in the bottom thereof for the insertion and removal of a roller and an opening in a wall thereof adjacent to one end of the roller, a roller pivotally mounted at one end in said casing, and means for holding the other end thereof pivotally mounted in the other end of the casing, said means including a two-part arm having the parts thereof hinged together and having one part secured to the roller with a bearing connection by which the roller may rotate when the arm is relatively fixed, said arm extending loosely through said wall opening and the free part of the arm laid over upon the wall to hold the roller in its operative position, and means

on the casing coacting with the arm to hold the free part thereof readily removably upon the casing.

2. The combination of a relatively long and narrow casing having an opening in the bottom thereof for the insertion and removal of a roller, and having an opening in the top thereof adjacent to one end for a roller-holding lever, a roller pivotally mounted in said casing at the end thereof opposite the end having said top opening, a spring carried by said roller for rotating the same, a roller holding lever secured to the other end of said roller from the end pivotally mounted in the casing, the lever being connected to said spring and mounted to rotate at the end of the roller whereby the rotation of said lever puts the spring under tension when the roller is out of said casing, said lever being adapted to project through said top opening when the device is in its operative position, and means for holding said lever readily removably on said casing, whereby removing the lever removes the roller.

3. In combination, a pair of substantially trough-shaped casing members adapted to interfit with each other telescopically whereby the casing is adjustable as to its length, means for holding said casing in fixed relation to a window part, a roller adjustable as to its length pivotally mounted in one end of said casing, spring means in said roller for rotating the roller in one direction, a lever at the opposite end of said roller connected to said spring means for holding the roller upon the casing and for putting the spring means under tension, means on the casing for holding said lever in readily releasable relation thereto, whereby releasing the lever releases the roller from the casing, and a screen or the like upon said roller.

CATHERINE A. FOX.

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