

A. AITCHISON.
CASEMENT WINDOW OPERATING DEVICE.
APPLICATION FILED NOV. 24, 1917.

1,262,157.

Patented Apr. 9, 1918.
2 SHEETS—SHEET 1.

Fig. 1.

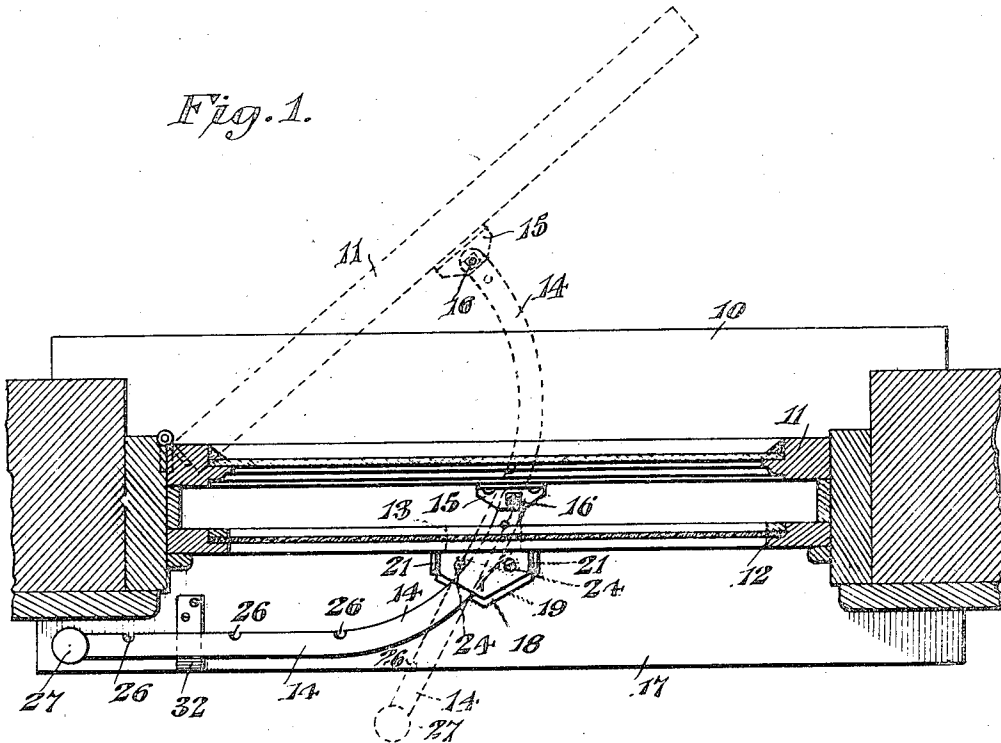
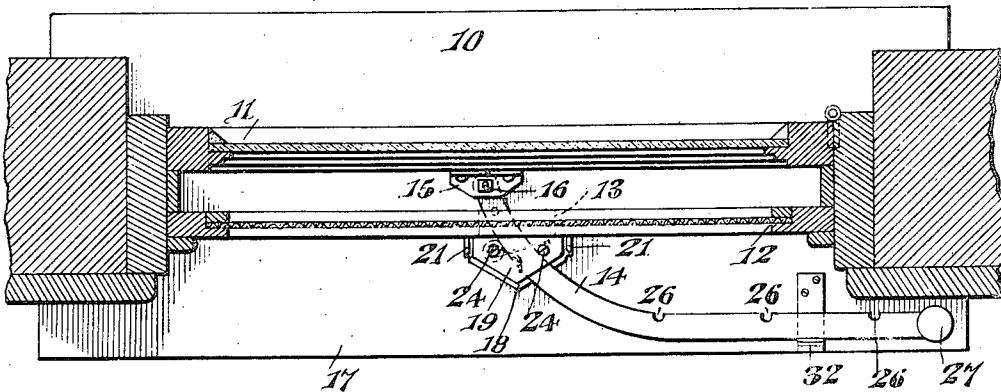


Fig. 2.



Archie Aitchison, INVENTOR

WITNESSES

Jas. E. McWhorter
J. C. Barker

BY

E. G. Figgis

ATTORNEY

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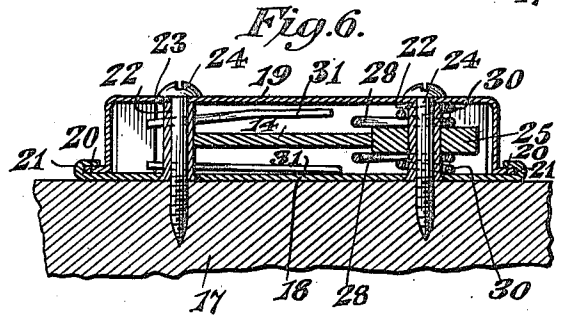
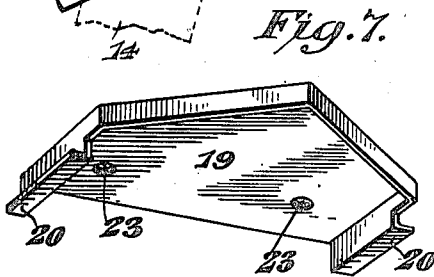
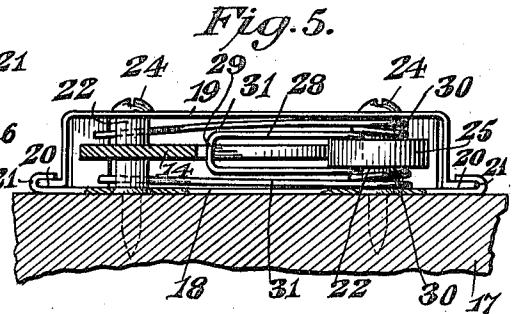
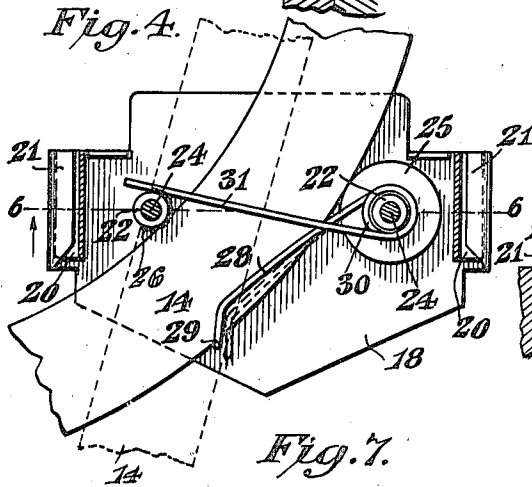
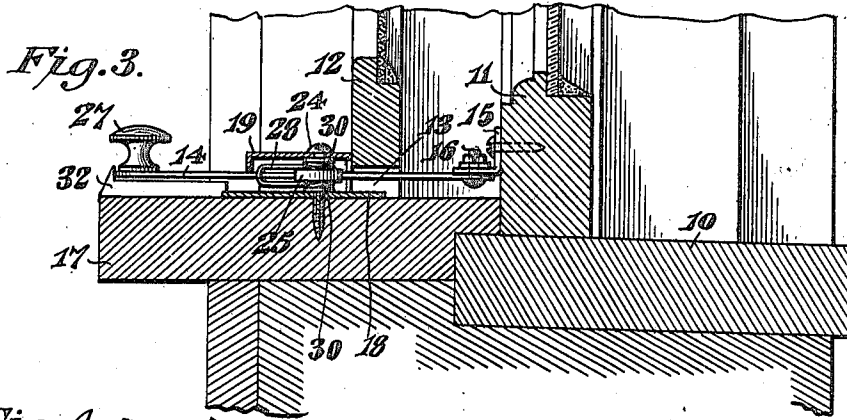
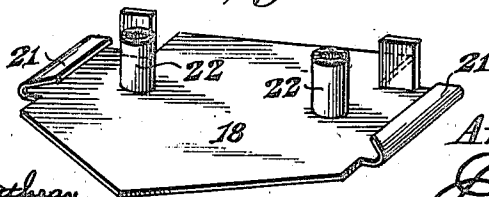


Fig. 8.



WITNESSES

Jas H. McArthur
H. O. Parker

BY

INVENTOR
Archie Aitchison,

E. J. Figg

ATTORNEY

UNITED STATES PATENT OFFICE.

ARCHIE AITCHISON, OF ST. PETERSBURG, FLORIDA.

CASEMENT-WINDOW-OPERATING DEVICE.

1,262,157.

Specification of Letters Patent.

Patented Apr. 9, 1918.

Application filed November 24, 1917. Serial No. 203,798.

To all whom it may concern:

Be it known that I, ARCHIE AITCHISON, a citizen of the United States, residing at St. Petersburg, in the county of Pinellas and State of Florida, have invented a new and useful Casement-Window-Operating Device, of which the following is a specification.

The invention relates to casement window operating devices, and more especially to that type forming the subject matter of Letters Patent No. 1,179,640, issued to S. T. McClarren, dated April 18, 1916.

In the manufacture of the device covered by the above-named patent, it is necessary to arrange the parts at the time of the assemblage of the same at the factory, for the use of the device when received by a customer, as a right or left hand sash opener, and it is also essential that the members for fastening the device to a window accompany the same, as they must serve as a keeper for the lever, a journal for its guide roller, and a support for the spring which tensions said lever. These parts being permanently confined within a casing, but loose therein, great care and accurate adjustment thereof is necessary when fastening the device in position for use.

Therefore, to meet these requirements, it is the primary object of the present invention to provide a device of this character, wherein the lever, spring and roller can be reversed when the device has been received by a customer or user to permit, at his option, the working of the same as a right and left hand window opener. The casing, being of novel form, allows the interchanging of the parts with despatch and without the aid of the fasteners for securing the device to a window, thus providing a single article convertible by a user to a dual purpose.

The invention will be particularly explained in the following description.

Reference is to be had in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

In the accompanying drawing:

Figure 1 is a horizontal sectional view through a window sash and casement showing the operating device constructed in accordance with the invention; by full lines the window sash is shown closed, and by dotted lines in open position.

Fig. 2 is a similar view of the sash closed with the operating lever and adjunct parts reversed.

Fig. 3 is an enlarged detail sectional view.

Fig. 4 is an enlarged detail horizontal sectional view showing by full lines the lever in released position and by dotted lines in latched position.

Fig. 5 is a transverse sectional view.

Fig. 6 is a sectional view on the line 6—6 of Fig. 4, looking in the direction of the arrow.

Fig. 7 is a perspective view of the top or cover section of the casing.

Fig. 8 is a perspective view of the base or bottom section of said casing.

In the practical embodiment of the invention, in accordance with the illustrated example, a portion of a casement 10 and a sash 11 of a window are shown. The sash is shown in Fig. 1 as hinged to the jamb at the left hand side, and in Fig. 2 at the right hand side of said jamb of the casement in the usual manner. The casement has fitted therein in front of the outwardly swinging sash 11 a screen 12. The screen is provided in its lower end with a slot 13 through which the sash operating device works and freely actuates, as will be hereinafter fully described.

The sash operating device comprises an operating lever 14 preferably made from a strip or bar of metal curved edgewise at one end to form an angularly disposed terminal portion for pivotal attachment to the window sash 11. Mounted on the lower end of the sash at an intermediate point thereof is an angle or L-shaped bracket or ear 15, the laterally extending portion of which carries a pivot bolt 16 swingingly connecting the curved terminal portion of the lever 14 to the bracket or ear 15. The other end portion of the lever 14 is adapted to slide through the slot 13 in the screen 12 and works within a casing mounted upon the casement sill 17 as hereinafter fully described.

The casing comprises a base or bottom section 18, and a separable top or cover section 19, which is formed at opposite ends with laterally extending flanges 20 for slidable detachable engagement in interlocking tongues 21 formed and bent from the ends of the base or bottom section 18 of the casing. The casing may be of any suitable or

desirable shape, and the top or cover section 19 at its front and back is open to constitute a way for slidably receiving the lever 14 which works within said casing. The casing is disposed on the casement sill 17 in front of the screen 12, and the open rear portion of the top or cover section 19 registers with the slot 13 in said screen for the free passage of the lever 14 when swinging the sash to open or closed position.

Riveted or otherwise secured in the base or bottom section 18 are vertically disposed hollow posts or studs 22, which open through said base or bottom 18 and are of a length corresponding to the distance between the base or bottom section and the top or cover section of the casing. The top or cover section 19 is formed at properly located points with openings or holes 23, registering with the passages through the hollow posts or studs 22 for accommodating fasteners to secure the casing to the sill of the window casement. The fasteners in this instance are in the form of screws 24, which are passed through the openings or holes 23 in the top or cover section 19 when interlocked with the base or bottom section 18, and also passed through the hollow posts or studs 22 and engaged in the sill 17 of the window casing for the fastening of the casing in place.

Adapted to be journaled in the casing upon either of the hollow posts or studs 22 is an anti-friction guide roller 25, against which works the lever 14 in its movements. The lever 14 in the free end portion thereof is formed at intervals with notches 26 for engagement with one of the hollow posts or studs 22 which serves as a keeper for the lever to hold the same in adjusted position when the sash 11 has been swung from closed position to the required open position. The lever 14 carries at its free end a hand knob 27 to provide for the ready gripping and operation of said lever.

Within the casing between the base or bottom section 18 and the top or cover section 19 thereof, is adapted to be confined a tension spring which is made from a single length of wire bent on itself to form a resilient loop jaw 28 to straddle one edge of the lever 14, with an offset end 29 which constitutes a stirrup for said lever. Intermediate spaced registering coils or convolutions 30 are adapted to engage upon either of the hollow posts or studs 22 to lie above and below the guide roller 25, which is positioned between the coils or convolutions of said spring, while the remaining end portions 31 of the spring lie crosswise above and below the lever 14 and are engaged against the other hollow post or stud 22, so that the spring will be tensioned for the jaw 28 to be active upon the lever for maintaining it constantly in position for the

positive locking engagement thereof with one of the hollow posts or studs 22, when said lever is positioned as shown in Figs. 1 and 2 of the drawings. The notches 26 in the lever 14 are designed to receive the hollow post or stud 22 and serve as the keeper for the lever when the sash is swung open to the desired adjusted position.

When the lever 14 is to be reversed for the right hand or left hand operation thereof, the top or cover section 19 of the casing is removed from its base or bottom section 18, the spring constituting the jaw 28 and the roller 25 are detached from one of the hollow posts or studs 22 and engaged on the other hollow post or stud either at the right or left hand end of the casing, according to the desired use of the lever 14 for the right or left hand opening of the sash of the window.

When the parts have been assembled, the top of cover section 19 is engaged with the base or bottom section 18, whereupon the fasteners 24 are passed through the openings or holes 23 in said top or cover section and the hollow posts or studs 22 on the base or bottom section of the casing, and engage in the sill 17 of the window casement for the fastening of the device in place. It is of course understood that in reversing the lever the same is detached from the sash and thereafter properly engaged therewith.

A catch 32 is mounted on the window sill 17 and is designed to engage and securely lock the lever 14 when the sash 11 is in closed position, as shown in either Fig. 1 or Fig. 2 of the drawings, whereby the sash is firmly held closed. The catch 32 may be of any approved form for engaging and holding the lever 14.

In the operation of the device, when the window is in closed position as shown in either Fig. 1 or Fig. 2 of the drawings, and it is desired to open it, the knob 27 on the lever 14 is grasped by the operator and the said lever moved laterally outwardly against the tension of the spring constituting the jaw 28, which causes the rear edge of said lever to come in contact with the roller 25. This engagement, together with the force exerted by the operator on the knob 27, will forcibly push the sash 11 into open position, as shown by dotted lines in Fig. 1 of the drawings, and when it has been disposed at the desired angle, one of the notches 26 in said lever will be engaged with the adjacent hollow post or stud 22, and the spring bearing upon said lever will hold it in locked engagement therewith, thereby firmly holding the sash in adjusted position where it will remain until the lever 14 is manually released.

It will be clearly obvious that the device when received by a customer or user can be

readily and conveniently adjusted at the option of the customer or user for its use either as a right or left hand window sash opener.

The parts of the device are of such construction as to permit the easy assemblage thereof by the user and the application to a window, the roller and the spring for co-action with the lever being interchangeable to either of the hollow posts or studs 22 on the base or bottom section 18 of the casing upon the removal of the cover or top section 19 thereof for reversing the operation of the device to adapt it for opening a right or left hand swinging sash.

The fasteners for securing the casing in place do not serve as a keeper for the lever nor a journal for the roller and support for the spring, these being the functions of the hollow posts or studs as hereinbefore set forth.

The fasteners 24 secure the sections of the casing together and also fasten the casing in place upon a window, as will be obvious.

It is to be understood that changes, variations and modifications may be resorted to, such as come properly within the scope of the appended claims without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed is:

1. A casement window operating device comprising a casing formed in two sections separably interlocked with each other, vertical hollow posts permanently engaged in the lowermost section of the casing, a lever movable through the casing between the hollow posts and adapted for locking engagement with one of the same and also adapted for pivotal connection with the sash of the window for the right or left hand opening thereof, a guide roller removably journaled upon either of the hollow posts for the engagement of the lever therewith, and a spring straddling the lever and having coils for engagement with either of the hollow posts on opposite sides of the roller and active upon the lever for the forcible engagement thereof with one of the hollow posts.

2. A casement window operating device comprising a casing formed in two sections separably interlocked with each other, vertical hollow posts permanently engaged in the lowermost section of the casing, a lever movable through the casing between the hollow posts and adapted for locking engagement with one of the same and also adapted for pivotal connection with the sash of the window for the right or left hand opening thereof, a guide roller removably journaled upon either of the hollow posts for the engagement of the lever therewith, and a spring straddling the lever and having coils for engagement with either of the hollow

posts on opposite sides of the roller and active upon the lever for the forcible engagement thereof with one of the hollow posts, the spring being formed with a loop jaw receiving one edge of the lever and also having a terminal offset forming a stirrup for the lever.

3. A casement window operating device comprising a casing formed in two sections separably interlocked with each other, vertical hollow posts permanently engaged in the lowermost section of the casing, a lever movable through the casing between the hollow posts and adapted for locking engagement with one of the same and also adapted for pivotal connection with the sash of the window for the right or left hand opening thereof, a guide roller removably journaled upon either of the hollow posts for the engagement of the lever therewith, a spring straddling the lever and having coils for engagement with either of the hollow posts on opposite sides of the roller and active upon the lever for the forcible engagement thereof with one of the hollow posts, laterally extending flanges at opposite ends of one section of the casing, and interlocking tongues on the other section of the casing for slidably receiving the flanges to separably secure said sections together.

4. A casement window operating device comprising a casing formed in two sections separably interlocked with each other, vertical hollow posts permanently engaged in the lowermost section of the casing, a lever movable through the casing between the hollow posts and adapted for locking engagement with one of the same and also adapted for pivotal connection with the sash of the window for the right or left hand opening thereof, a guide roller removably journaled upon either of the hollow posts for the engagement of the lever therewith, a spring straddling the lever and having coils for engagement with either of the hollow posts for the forcible engagement thereof with one of the hollow posts, laterally extending flanges at opposite ends of one section of the casing, interlocking tongues on the other section of the casing for slidably receiving the flanges to separably secure said sections together, and fastening means adapted to be passed through the hollow posts and the sections of the casing for securing the latter in place upon the window.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ARCHIE AITCHISON.

Witnesses:

MERTICE WENER,
P. H. BATHART.