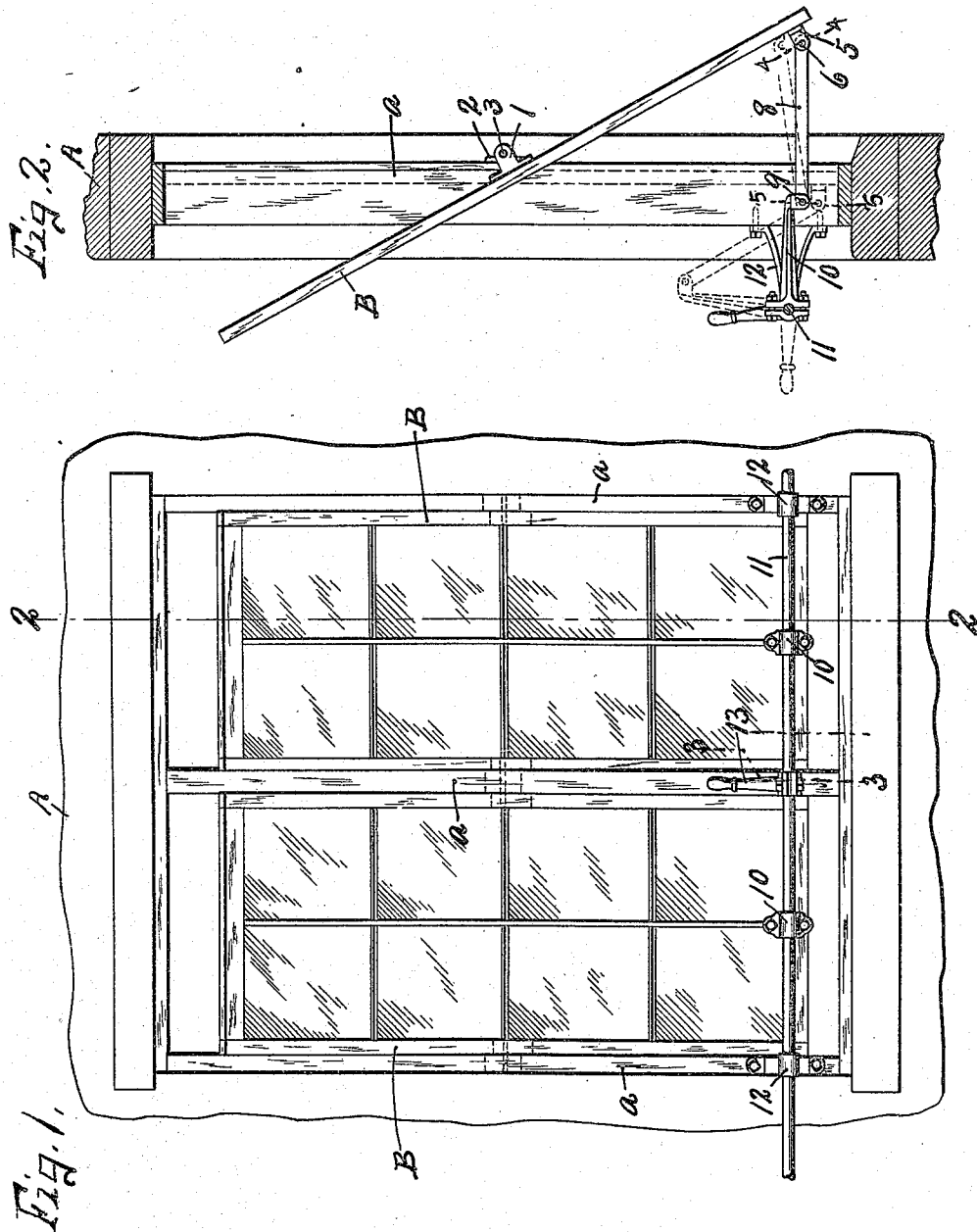


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 MECHANISM FOR OPERATING SWINGING WINDOWS.
 APPLICATION FILED SEPT. 17, 1908.

939,412.

Patented Nov. 9, 1909.

2 SHEETS—SHEET 1.



Witnesses.
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Fig. 3.

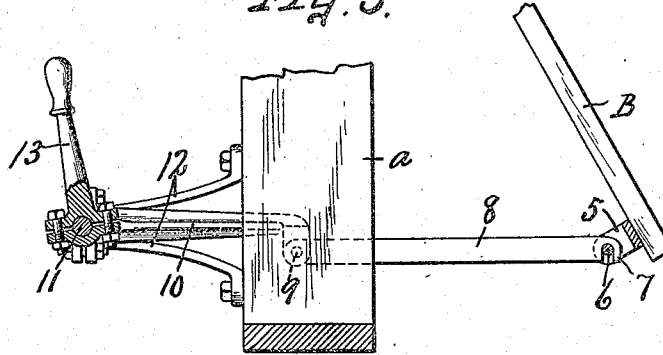


Fig. 4.

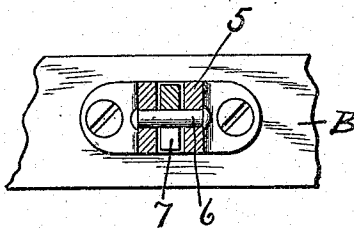
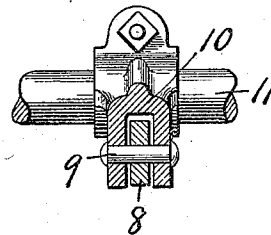


Fig. 5.



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UNITED STATES PATENT OFFICE.

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MECHANISM FOR OPERATING SWINGING WINDOWS.

939,412.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed September 17, 1908. Serial No. 453,484.

To all whom it may concern:

Be it known that I, JOHN S. GOURLAY, of Eastwood, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Mechanism for Operating Swinging Windows, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in mechanism for operating swinging windows, and is especially useful in connection with factory and foundry windows which are usually placed side by side in close proximity and in practically the same plane.

The primary object is to provide a simple and efficient means for simultaneously opening or closing a plurality of windows, either consecutively or certain selected windows, which it may be desired to open or close simultaneously.

Another object is to provide means whereby the connection in one window and its operating mechanism may be readily detached so that such window may be lifted in its open or closed position, irrespective of the operation of the other windows.

Other objects and uses will appear in the following description.

In the drawings, Figure 1 is an elevation of a portion of a building, showing a plurality of, in this instance, two swinging windows and my improved mechanism therefor. Figs. 2 and 3 are sectional views taken respectively on line 2—2 Fig. 1 and 3—3 Fig. 1, Fig. 3 being enlarged. Figs. 4 and 5 are enlarged sectional views taken respectively on lines 4—4 and 5—5, Fig. 2.

A represents a portion of a building such, for example, as a foundry or factory building having a series of windows B supported side by side in suitable openings in close proximity to each other and separated by upright stiles *a*. These windows are supported in their respective openings substantially midway between their lower and upper edges by hinge connections 1 and 2, consisting of separate metal plates which are secured by suitable fastenings, as screws, to the sash of the windows B and to the intervening stile *a*. As previously intimated, these hinge sections are connected to the sashes and to the stiles —*a*— substantially midway between their lower and upper ends and, therefore, the sashes are sub-

stantially balanced and may be readily rocked to their open or closed position.

Secured to the lower end of each sash is a furcated connection —5—, having a pin —6— extending between the arms of its forked end, adapted to receive the hook extremity —7— of a vertical swinging link —8—, the opposite end of said link being suitably connected by pin —9— to a rock arm —10—. Each window is adapted to be operated by one of these connections consisting of a link —8— and rock arm —10—, and in order that a plurality of consecutive or selected windows may be operated simultaneously, these rock arms —10— are secured to a rock shaft —11—, which is journaled in single brackets —12—, the latter being secured to the frame or stiles —*a*— of the windows at suitable intervals to support the shaft —11— parallel with and some distance from the inner face of the wall in which the windows are located. This shaft, therefore, is common to all of the windows to which it is connected and may be rocked or partially rotated by any suitable means as, for example, a handle or lever —13—, as best seen in Figs. 1, 2 and 3. Any number of these handles may be secured at intervals to the shaft —11— to permit the windows to be operated from different parts of the building, the operation of anyone of which will effectively open or close all of the windows which may be in connection with the rock shaft.

The rock arms —10— are located wholly at the inner side of their respective sashes when the latter are in their closed position, as clearly shown in Fig. 2, which indicates the sash in its closed position by dotted lines.

The object in making the outer extremity of the link —8— hook shape is to permit it to be readily attached to or detached from the stud or pin —6— on the lower end of the sash, so that by unhooking or disengaging the link —8— from the stud —6— of anyone of the sashes, such sash may be left in its open or closed position, while the remaining sashes may be operated independently thereof.

It is believed that the foregoing description taken in connection with the drawings is sufficiently clear and exact to enable anyone skilled in the art to construct and operate this device.

What I claim is:

In combination with a plurality of swing-
ing windows arranged in sequence side by
side, and each provided with a pin, a rock
shaft extending transversely across the
5 several windows, a hand lever secured to the
shaft to rock the same, crank arms secured
to the shaft, one for each sash, separately
movable links hinged at one end to their re-
spective crank arms and having their oppo-
10 site ends formed with hooks movable into

and out of interlocking engagement with
their respective pins on the sashes for the
purpose described.

In witness whereof I have hereunto set
my hand this 14th day of September 1908. 15

JOHN S. GOURLAY.

Witnesses:

H. E. CHASE,

CAROLINE M. McCORMACK.