

No. 782,743.

PATENTED FEB. 14, 1905.

I. FISCHER.
WINDOW.

APPLICATION FILED JUNE 30, 1904.

Fig. 1.

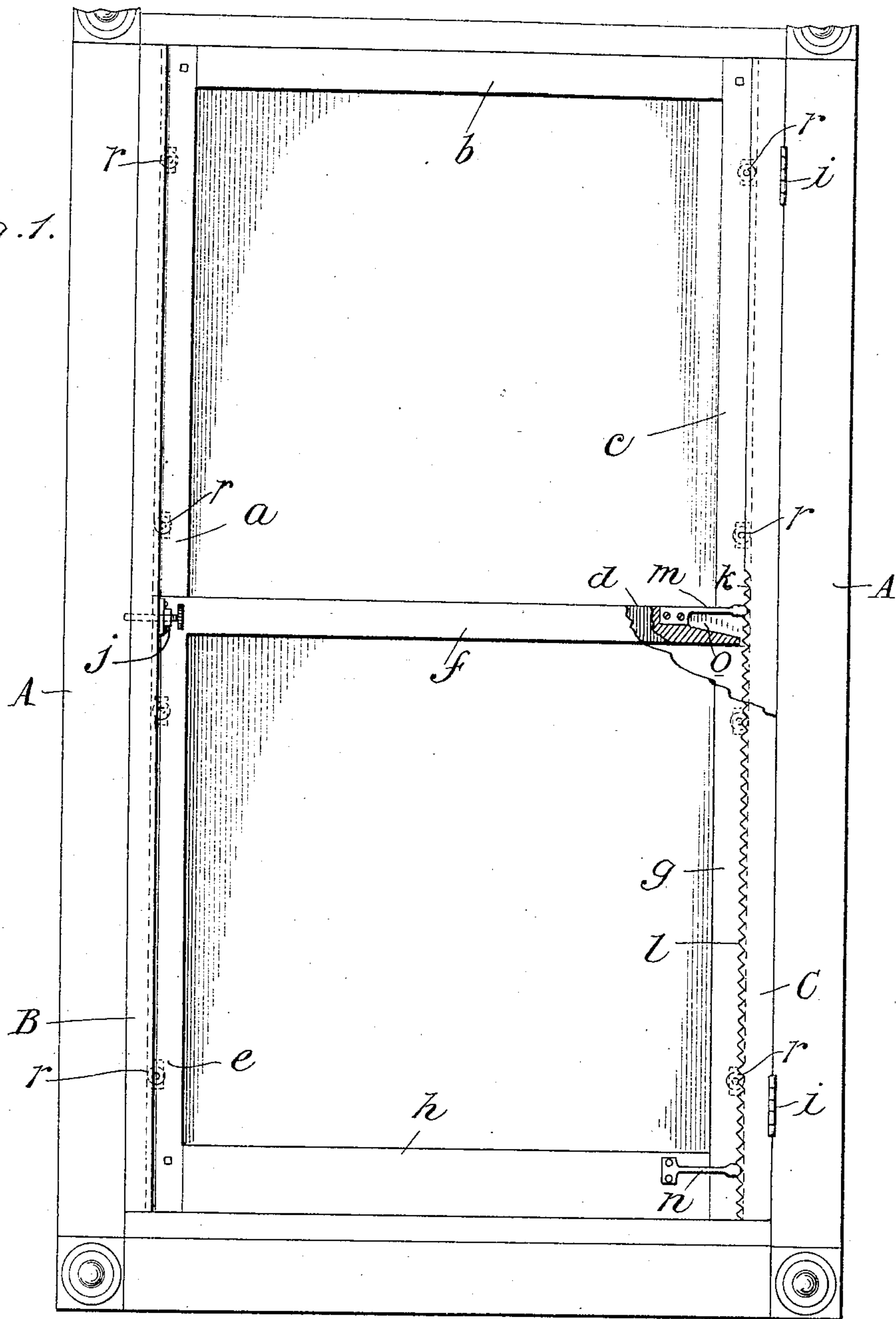
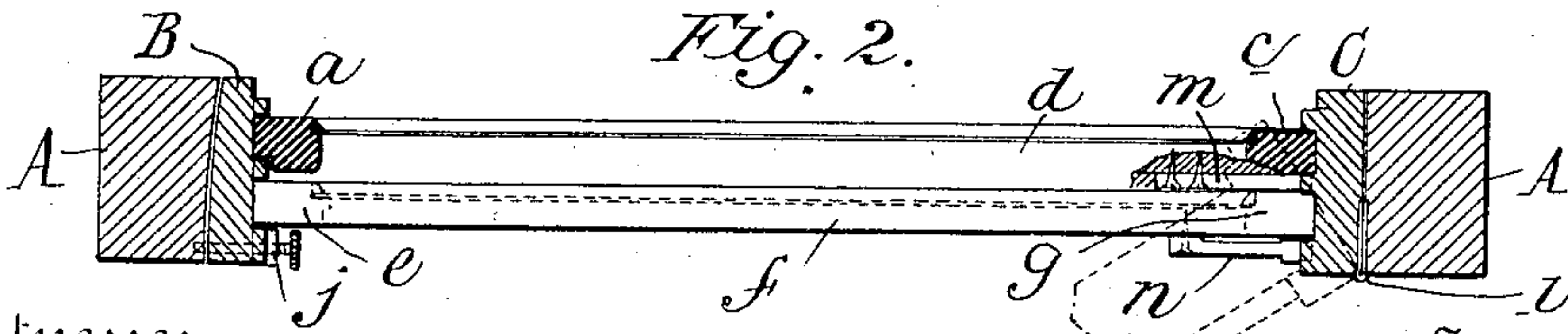


Fig. 2.



Witnesses
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WINDOW.

SPECIFICATION forming part of Letters Patent No. 782,743, dated February 14, 1905.

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To all whom it may concern:

Be it known that I, ISI FISCHER, a citizen of the United States, residing in the borough of Manhattan, in the city, county, and State of New York, have invented new and useful Improvements in Windows, of which the following is a specification.

This invention relates to windows; and it refers particularly to means for opening windows, either partly or fully, and means for holding the sliding sashes in their adjusted positions without the aid of weights and pulleys.

To these ends my improvements consist of a window one of whose sash-runways is provided with hinges whereby it is pivotally connected to the adjacent jamb and the window thus adapted to be swung open bodily. By this means the outer surface of the glass panes may be conveniently cleaned from within the room, thus avoiding the danger incurred by the operator of sitting or standing upon the window-sill outside the window in doing this work.

Realizing that hinged windows for many purposes are not so convenient as the upper and lower sliding sashes commonly used, I also equip my said hinged window with sliding sashes; but because it is not practicable to employ weights and pulleys in a window of this character I provide a rack adjacent to a runway for each sash and attach to each sash a spring-pawl adapted to tensionally engage with said racks and to thereby support the weight of its sash in any desired position.

In the drawings accompanying this application, Figure 1 is an elevation of my improved window, and Fig. 2 is a cross-section taken on the line X X of Fig. 1 looking in the direction of the arrows.

In said figures the letter A indicates the jamb-strips within which the window is fitted, *a b c d* the strips composing the frame of the upper sash, and *e f g h* the strips composing the frame of the lower sash.

B C, respectively, indicate the opposite runway-strips for the sashes.

The strip C is provided with hinges, as *i i*, which are also secured to the jamb A, enabling

the window comprising both sashes and runways to be swung open thereon.

The strip B is provided with a latch or catch, as *j*, adapted to engage with the runway-strip B when closed, as indicated.

Placed adjacent to the runways in strip C and bordering the usual grooves therein are racks *k l*, in which, respectively, spring tongues or pawls *m n*, which are secured, respectively, to the upper and lower sashes, are adapted to engage.

As will be noted in Fig. 1, a portion of the lower sash is shown broken away the better to expose the manner of applying the pawl *m* thereto. A recess *o* is seen to be provided in the inner surface of the lower bar of said sash-frame, said recess receiving the pawl *m*, which is secured therein and afforded space for its movement in yielding. By this means the pawl *m* does not obstruct the movement of the upper sash past the lower sash, and vice versa.

The pawl *n* may be secured upon the surface of the lower sash, as seen.

The pawls *m n* are of such spring-like character that as extended into their respective racks *k l* they are of sufficient rigidity to support the weight of the sashes as elevated; but upon the application of a moderate degree of force, such as would be exercised by a person in raising or lowering the sashes, said spring-pawls will yield sufficiently to permit the sashes to be moved in either direction, as required, the pawls in such action clicking past the notches in the racks.

As will be perfectly obvious, the racks and pawls to engage therein may, if desired, be provided at both sides of the sashes.

Although I have shown a single-acting hinge in the drawings, I may use a double-acting hinge where desired, enabling the window to be swung open in both directions.

The spring-pawl for the upper sash may, if desired, be placed exteriorly of said sash, thus avoiding the necessity of recessing the sash.

As is obvious, ball or roller bearings may be interposed between the sashes and their runways to facilitate their vertical movement. Rollers, as *r*, are indicated in dotted lines as

pivoted in the window-sashes at suitable points and adapted to bear against the runways to reduce the friction that would otherwise militate against the vertical movement of the
5 sashes.

Having now described my invention, I declare that what I claim is—

10 In a window, a pair of runway-strips having parallel grooves within which upper and lower window-sashes are respectively slidably fitted, a rack bordering each of the grooves upon one of the strips, a spring-tongue secured to each of said sashes and entered with-

in the respective racks to support the sashes, said spring-tongues, when flexed in either direction permitting their sashes to be moved accordingly, and antifriction devices between said sashes and grooves; together with hinges uniting one of the runway-strips to an adjacent jamb, whereby the entire window may
20 be swung open or closed.

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Witnesses:

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