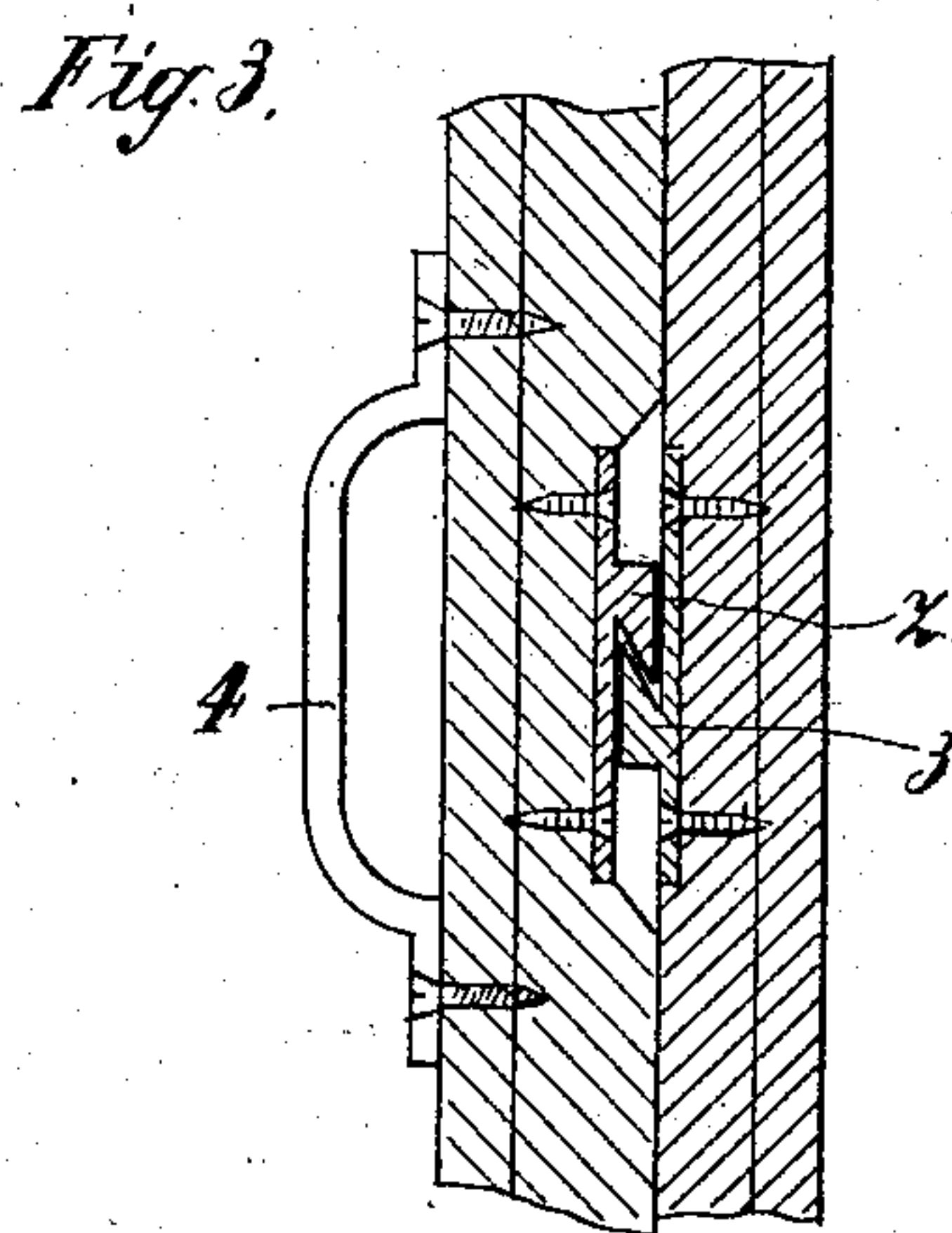
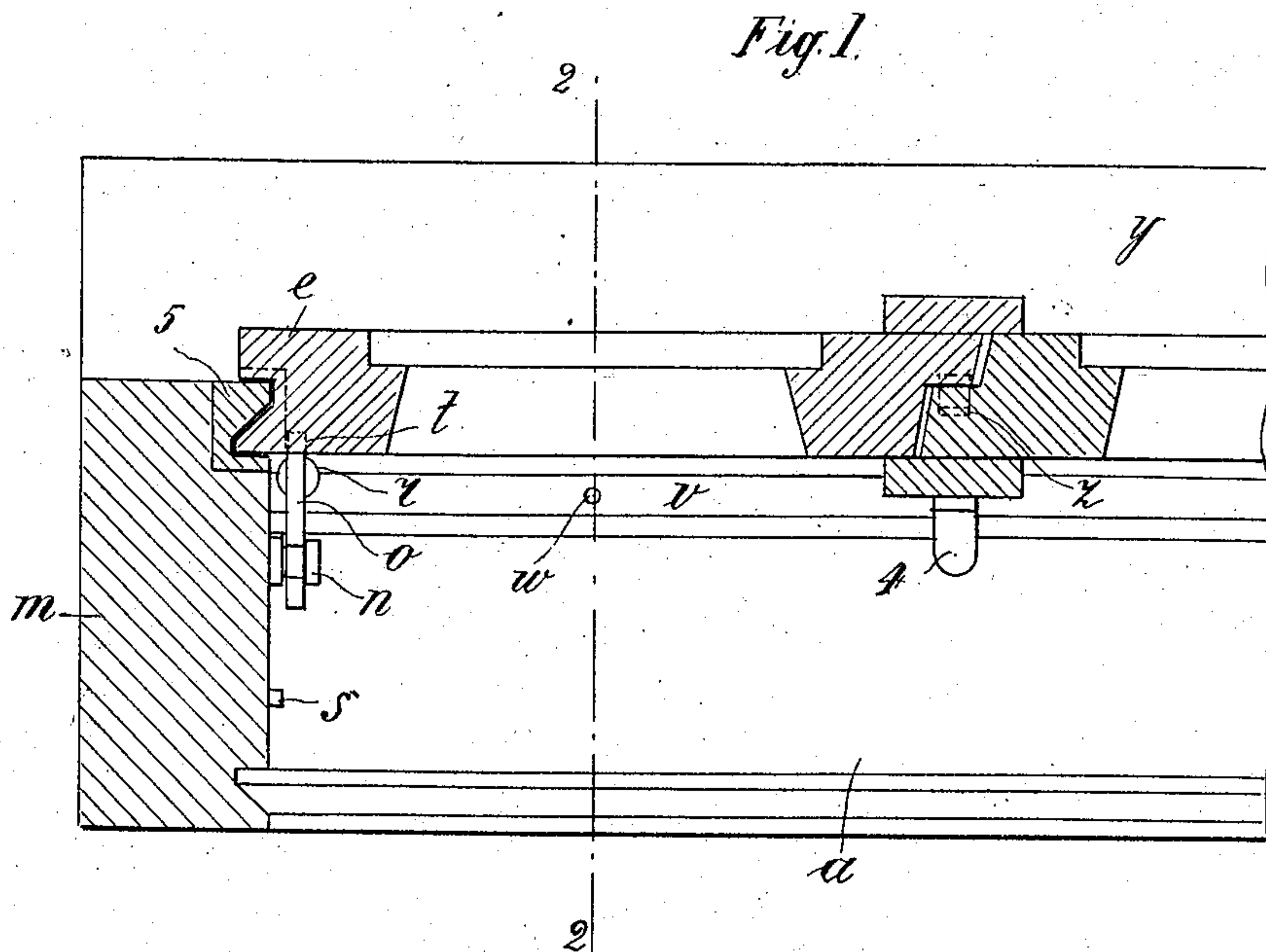


No. 780,696.

PATENTED JAN. 24, 1905.

I. WRÓBLEWSKI.
CASEMENT WINDOW.
APPLICATION FILED FEB. 3, 1903.

2 SHEETS—SHEET 1.



Witnesses

W. K. Buelin

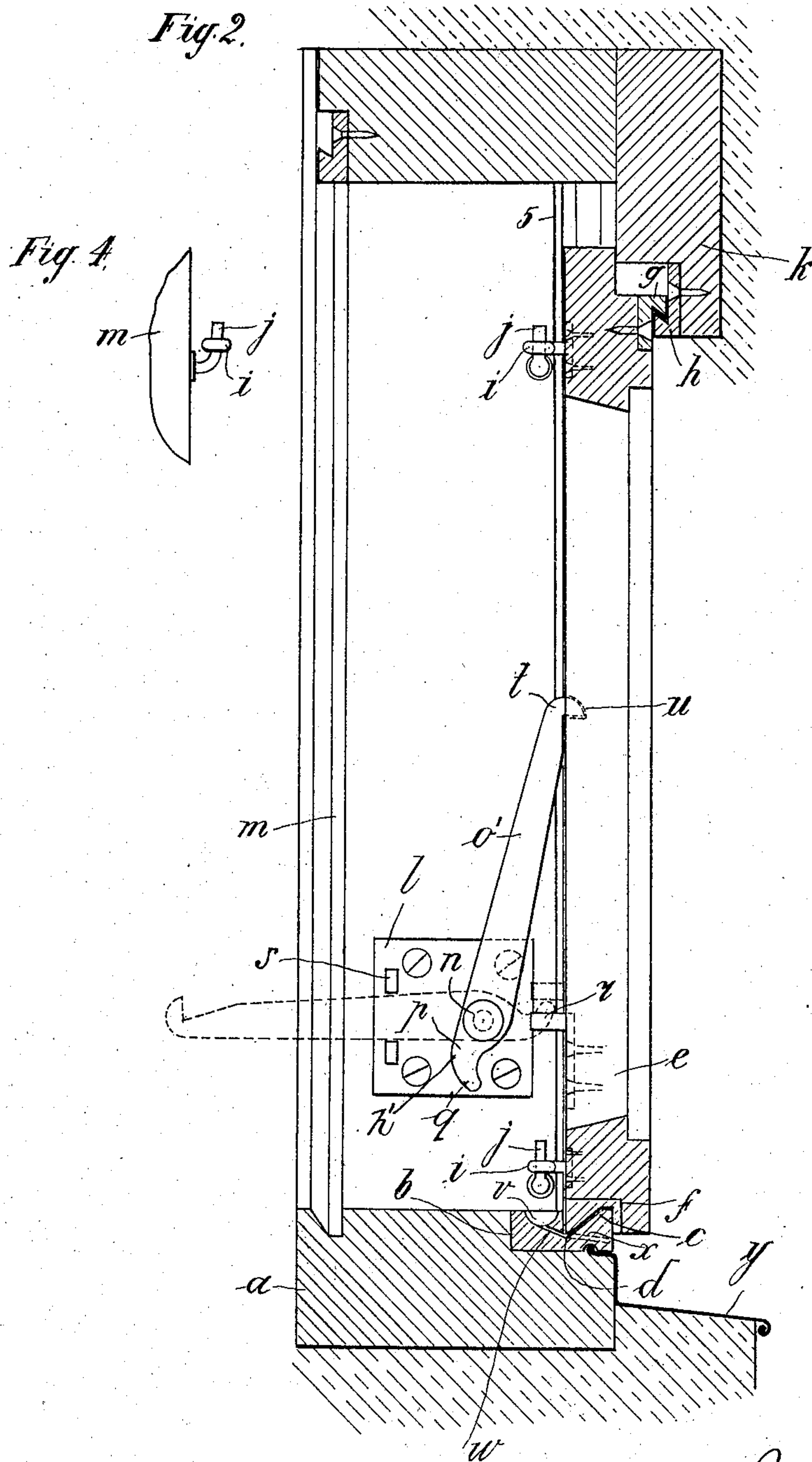
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Inventor:-

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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

IGNACY WRÓBLEWSKI, OF WARSAW, RUSSIA.

CASEMENT-WINDOW.

SPECIFICATION forming part of Letters Patent No. 780,696, dated January 24, 1905.

Application filed February 3, 1903. Serial No. 141,635.

REISSUED

To all whom it may concern:

Be it known that I, IGNACY WRÓBLEWSKI, residing at Warsaw, Russia, have invented certain new and useful Improvements in Case-ment-Windows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to improvements in casement-windows opening inwardly; and it consists in a device for rendering such windows completely tight, so that neither water nor dust can pass through the joints. Of the windows hitherto in use only those which opened outwardly answered this purpose. Such outwardly-opening windows, however, have, as is known, many disadvantages, more particularly in upper stories in which the cleaning thereof is dangerous. For this reason outwardly-opening windows are prohibited by the authorities in some towns.

The principle of this invention consists in the employment of trough-like bars arranged on the cross-beams and side parts of the window-frame and serving to engage correspondingly-shaped sash-frame parts and the arrangement of a lever-fastening device and the accessories shown in the annexed drawings.

In the drawings, Figure 1 is a horizontal section of the improved window, and Fig. 2 a vertical section on line 2 2 of Fig. 1; Fig. 3, a vertical section through the connection of the window-frames at the center. Fig. 4 illustrates the method of suspending the sash-frames.

To the lower cross-piece *a* of the window-frame is secured a metal bar *b*, preferably of zinc, which extends over the entire length or width, Fig. 2. This bar is provided with an upwardly and outwardly inclined flange *c*, so that a longitudinal groove *d* is formed. The lower edge of the sash-frame *e* is provided with a corresponding metal bar *f*, the flange of which enters the aforesaid groove, so that the inclined surfaces of the two flanges are in contact with each other. The shape and size of the said flanges and grooves can of course be selected to suit any circumstances. A simi-

lar tightening arrangement is provided at the top of the window-frame and consists of two strips *g* and *h* of suitable metal, one fastened to the sash-frame and the other to the upper cross-bar *k* of the window-frame. These strips *g* and *h* engage each other hook fashion, sufficient space being left at the top to allow of lifting the sash-frame. At the side part *m* of the window-frame, Fig. 1, a bar *5* is provided similar to the lower bar *b* referred to. In this bar, the sash is adapted to move upward and downward, being provided with a similarly-shaped metal bar. The sash is suspended from the lateral parts of the frame by means of hinges formed by apertured lugs *i*, placed over pivots or pins *j*, secured to the frame. The length of the pivots corresponds to the distance which the sash-frames can be lifted, and the pivots diverge somewhat from the side frame *m* (see Fig. 4) in order to move the sash farther away from the frame when the window is opened. By reason of the divergence of the pivots the window-sash in descending on being closed is, under the action of its own weight, caused to press against the sides of the window-frame, as will be described hereinafter. It is obvious that the window is closed when the window-frame is in its lower position, Fig. 2, and that it can be opened when the sash has been raised. This is done by means of the following device: A lever *o*, with arms *o'* *h'* of unequal length, is pivoted at *n* on a plate *p*, fastened to the side frame *m*, Figs. 1 and 2. The shorter arm *h'* of this lever is provided with a hook or catch *q*, adapted to extend underneath a projection *r* on the sash, preferably in the same plane as the hinges *i* and *j*. To open the window inwardly, the longer arm *o* of the lever must be depressed. By this means the sash is lifted and held fast in the raised position by means of a pawl or catch *s*, which engages said longer arm *o'*. The elevated position is indicated by dotted lines in Fig. 2. To prevent the opening of the window from outside, the longer lever-arm is provided with a hook or catch *t*, which engages a notch or recess *u* in the sash when the window is closed.

When there is a large difference between the temperatures inside and outside the room,

a deposit is always formed on the window. For conducting this away a trough *v* is formed in the lower cross piece or bar *b* of the frame. This trough is connected by a channel *w* with
 5 the longitudinal groove or trough before mentioned, from which the water flows outside through another suitable channel *x*, the latter not being in line with the channel *w* in order to provide less passage for air.

10 The outer window plate or sill *y* extends below the lower bar *b* and may be fixed to the latter.

In order that with very high windows, such as balcony-windows and the like, the central
 15 closing-surfaces are not apart, both closing-surfaces can be provided at the center with hooks or hook-shaped bars *Z* and *3*, Fig. 3, which overlap and engage each other, and thus insure a tight joint. The surface which
 20 overlaps the other inside the room may be provided with a bow 4.

An important advantage of the construction of window described is that each wing can be opened by itself, while the other remains closed.
 25 This is very important for good ventilation. The improved arrangement also dispenses with the use of slides and rods, which are liable to get out of order and are very inconvenient, and is suitable for one, two, or more part win-
 30 dows and for balconies. Double windows (winter-windows) can be constructed in the same manner, for which purpose the embrasure is suitably constructed.

I would state that the sash (and the frames
 35 also, if desired) of my window may be made either of metal or wood.

I claim—

1. In a casement-window, the combination with a window-frame, of a window-sash piv-

otally connected to the window-frame, and 40 adapted for vertical movement, an interlocking connection between a rail of the window-frame and the adjacent rail of the sash and adapted to prevent swinging movement of the sash until the latter has been raised, and a le- 45 ver having arms of unequal length pivoted to the window-frame, and a projection on the sash adapted to be engaged by the shorter arm of the lever for the purpose set forth.

2. In a casement-window, the combination 50 with a window-frame, of a sash pivotally connected thereto, and adapted for vertical movement, an interlocking connection between the upper and lower rails of the window-frame and the corresponding rails of the sash, a le- 55 ver having arms of unequal length pivoted to the window-frame, a projection on the sash adapted to be engaged by the shorter arm of the lever, and a projection adapted to be engaged by the longer arm of the lever to hold 60 the same in a position with the sash raised.

3. In a casement-window, the combination with a window-frame, of a sash pivotally connected thereto and adapted for vertical move- 65 ment, a strip secured to the lower rail of the window-frame, a strip secured to the lower rail of the sash, the said strips being constructed on their opposing faces to provide an interlocking connection for the window frame and sash, the strip on the rail of the window- 70 frame having a trough and channels leading therefrom to the outside as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

IGNACY WRÓBLEWSKI.

Witnesses:

JOSEPH RYNKIVITCH,
 ALEXANDER MOROZCOWICZ.