

W. H. MILLIS.

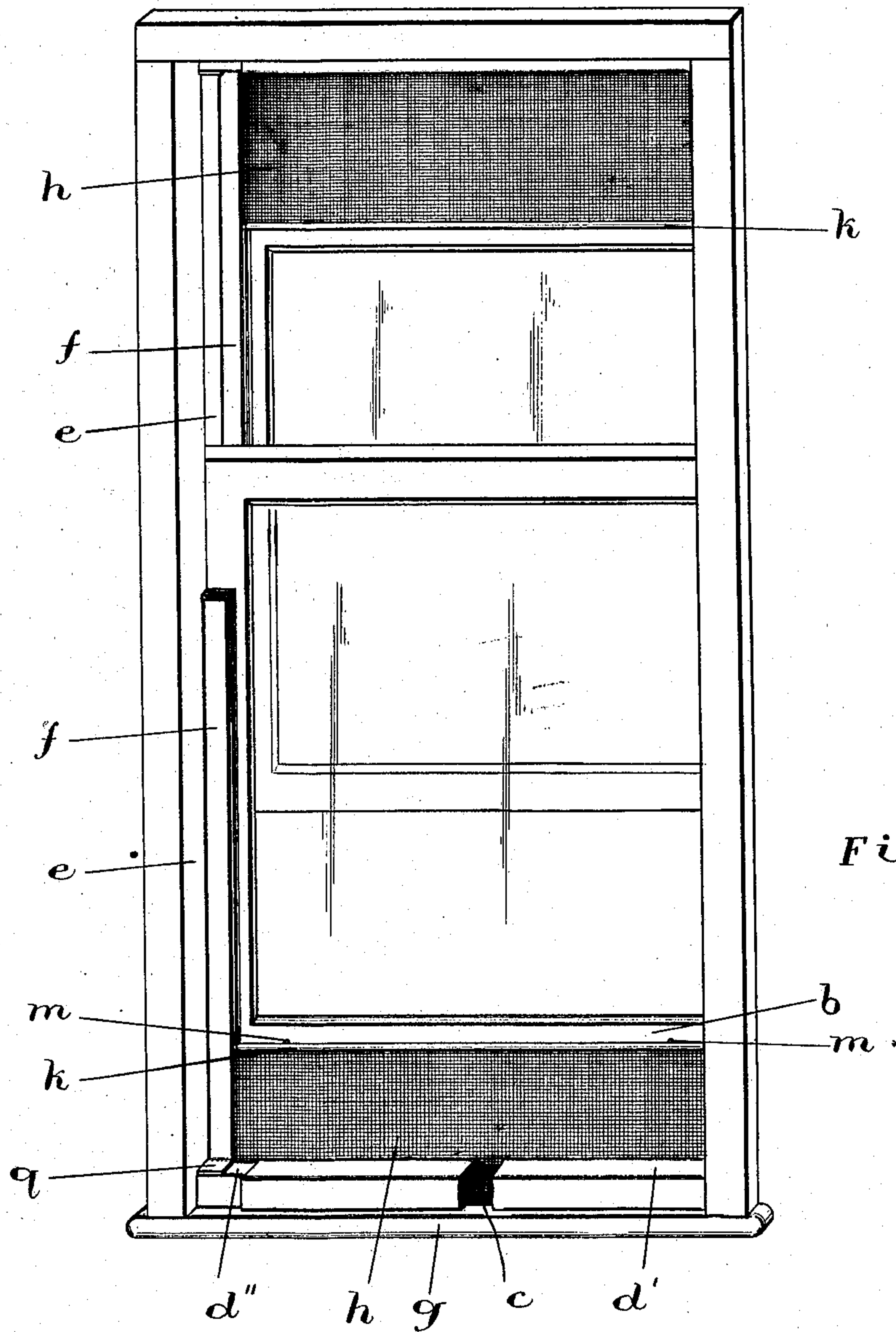
WINDOW SCREEN.

APPLICATION FILED OCT. 27, 1908.

924,258.

Patented June 8, 1909.

2 SHEETS—SHEET 1.



Witnesses.

H. L. Trimble.
Oliver Bateman

Inventor.

William Henry Millis
by Charles H. Riches
Attorney

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2 SHEETS—SHEET 2.

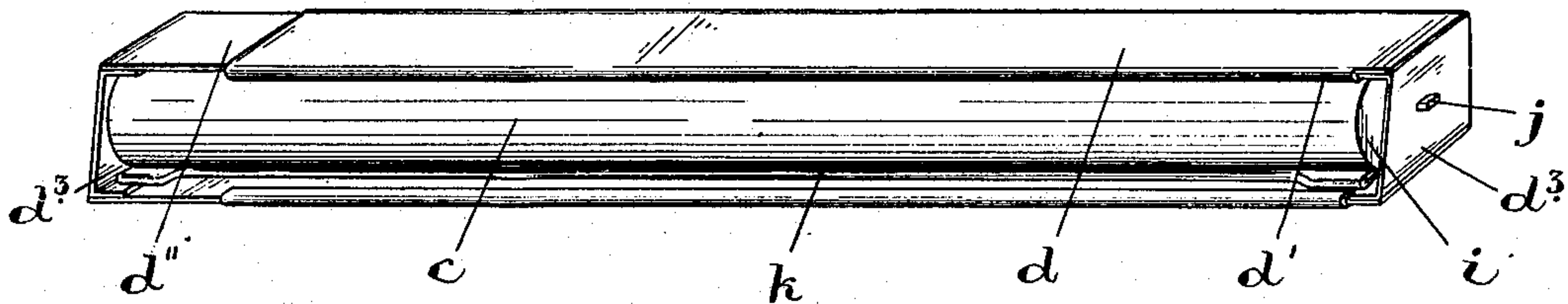


Fig. 2.

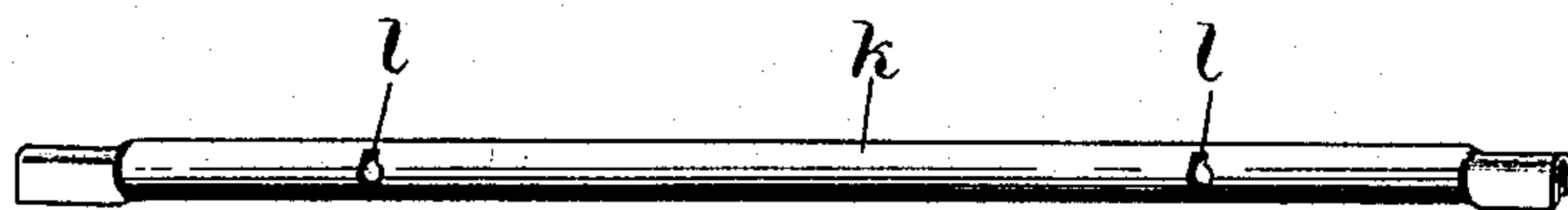
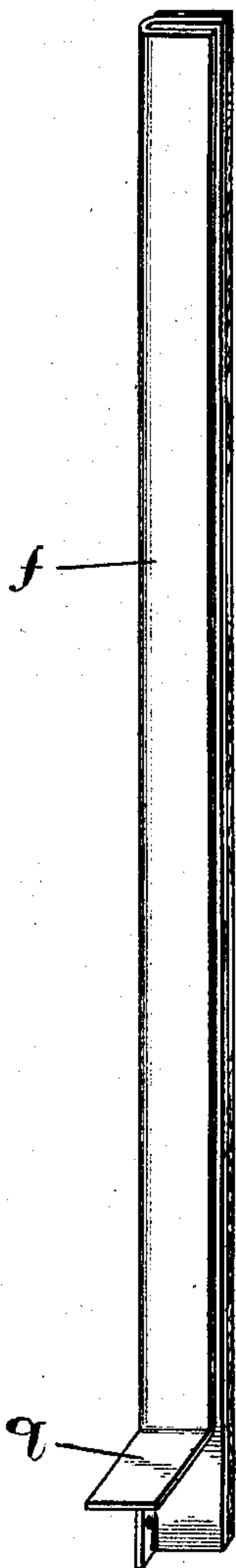


Fig. 4.

Fig. 3.

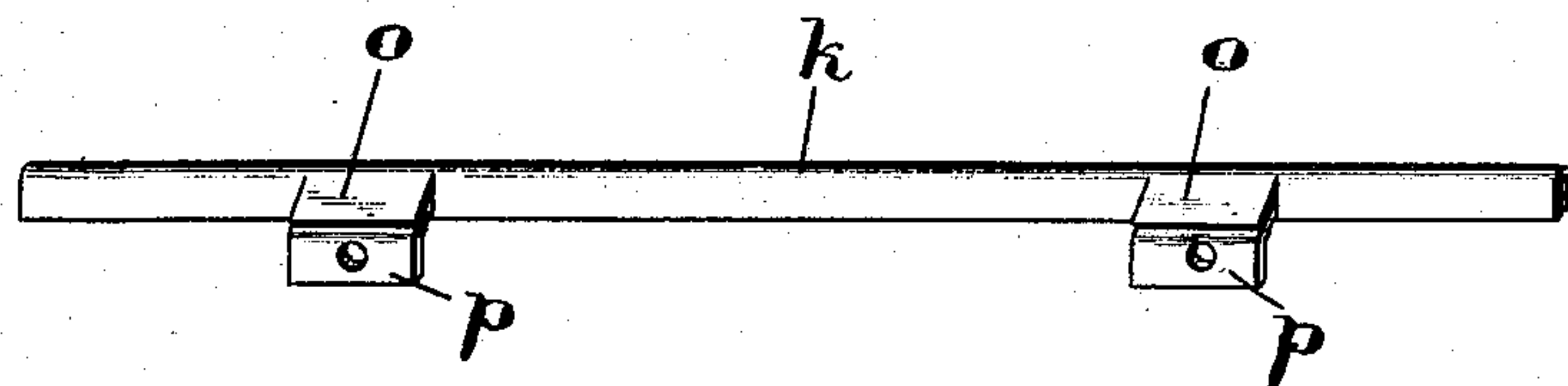


Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY MILLIS, OF CANASTOTA, NEW YORK.

WINDOW-SCREEN.

No. 924,258.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed October 27, 1908. Serial No. 459,683.

To all whom it may concern:

Be it known that I, WILLIAM HENRY MILLIS, of Canastota, in the county of Madison, in the State of New York, one of the United States of America, have invented certain new and useful Improvements in Window-Screens; and I hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to a window screen wound upon a spring actuated roller mounted in a window screen housing, and it relates particularly to the housing for the window screen roller and to the guides attached to the window frame to embrace the side edges of the window screen, so that the window screen may be permanently or detachably connected to the window.

For an understanding of the invention reference is to be had to the following description and to the accompanying drawings in which:—

Figure 1, is a perspective view of a window showing the general arrangement and construction of the parts of the window screen with the window screen housing partly broken away. Fig. 2, is a perspective view of the housing for one of the window screen rollers. Fig. 3, is a perspective view of one of the guides for the side edges of the window screen. Fig. 4, is a view of the window screen bar and fastener. Fig. 5, is a view of a modification of the construction shown in Fig. 4.

Like characters of reference refer to like parts throughout the specification and drawings.

As the general construction of the window frame and window sashes has not been altered, it will not be necessary to describe these parts except when it is necessary to mention them in connection with the essential features of the invention.

At the bottom of the inner surface of the lower window sash *b* is a spring actuated roller *c* the ends of which are journaled in the housing *d*. The housing *d* is of a substantially box shape and consists of two separable parts *d'* *d''*, of which the part *d''* slides into the adjacent end of the part *d'* so that the housing can be extended and contracted lengthwise. The housing *d* is preferably made of sheet metal formed to the required shape, with one or both edges of the part *d'* folded within the housing to form a guide for one or more of the edges of the part *d''* when

the part *d''* is being adjusted to the part *d'*. By making the housing *d* of two parts *d'* *d''* it is possible to adjust the parts lengthwise of the housing, so that the housing will accurately fit between the inner surfaces of the window stops *e* without making any alterations to the window frame or without having to perform any work upon the housing when fitting it between the window stops *e*. Secured to the window stops *e*, at the sides of the window sash, are guides *f* which extend from the window sill *g* to the top of the lower window sash. The guides *f* are of a substantially U-shape to receive and embrace the edges of the window screen *h*. The window screen *h* is wound upon a spring actuated roller *i* the journals *j* of which are mounted in the ends *d³* of the housing *d*. Connected to the free end of the window screen *h* is a bar *k* adapted to be connected to the window sash. The connection between the bar and the window sash may be either of a permanent or detachable character. It is preferable however to make it detachable so that the window may be opened for cleaning and other purposes.

As shown in Fig. 4, the bar *k* is formed with a bayonet joint slot *l* to receive the head of the fastening pin *m* and as shown in Fig. 5, it is formed with a pocket *o* to receive the catch *p*. The guides *f* may be covered with felt or other fabric to engage with the window sash and serve as a weather strip, or they may be employed merely for the purpose of embracing the edges of the window screen. The guides *f* are provided with lugs *q* to engage the adjacent surface of the housing *d* to prevent the vertical movement of the housing during the revolution of the window screen roller. The upper sash is provided with a window screen, a window screen roller, housing, guides, lugs and bar similar to those described in connection with the lower sash.

In the use of the invention the housing is accurately fitted between the window stops and the roller and screen are cut to the requisite size, and the journals of the roller are mounted in the ends of the housing. The guides are fastened to the window stops, and the bar *k* is attached to the window sash with its ends contained in the grooves of the guides.

During the opening movement of the window, the window sash *k* carries the bar with it and unwinds the window screen from the roller. The ends of the bar move in the

grooves of the guides and as the width of the window screen corresponds to the length of the bar the edges of the window screen move in the grooves in the guides during the movement of the window sash, so that the window guides will maintain the window screen in its correct position and prevent the formation of an opening between the edges of the window screen and window frame. When the window screen is attached to the window frame and sash, it is possible to quickly detach it from and reattach it to the window when it is necessary to do so.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:—

The hereinbefore described device comprising two vertical guide members, secured to the opposite sides of the window frame, each having in its inner side a guideway for

the window screen, a horizontal lug extending forwardly from each guide member and located slightly above the lower end thereof, a housing for the window screen unattached to any part of the window, consisting of two parts telescopically united lengthwise of the housing and substantially rectangular in cross section to provide a bearing on the bottom of the window frame and a second bearing against the horizontal lugs, a window screen roller mounted to revolve in the housing, a window screen wound thereon, and a bar attached to the window screen to stretch it laterally and by which it can be attached to the window sash.

Syracuse October 22nd 1908.

WILLIAM HENRY MILLIS.

Signed in the presence of—

GEORGE H. C. WALLACE,
CLARENCE W. AUSTIN.