P. BARNUM.

WINDOW SASH ATTACHMENT.

APPLICATION FILED JULY 22, 1912.

1,100,342.

Patented June 16, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

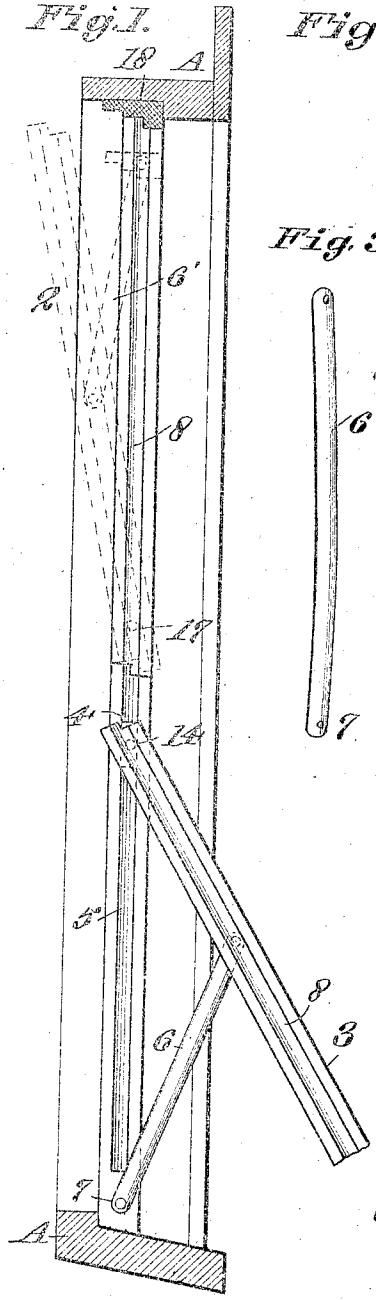


Fig. 2.

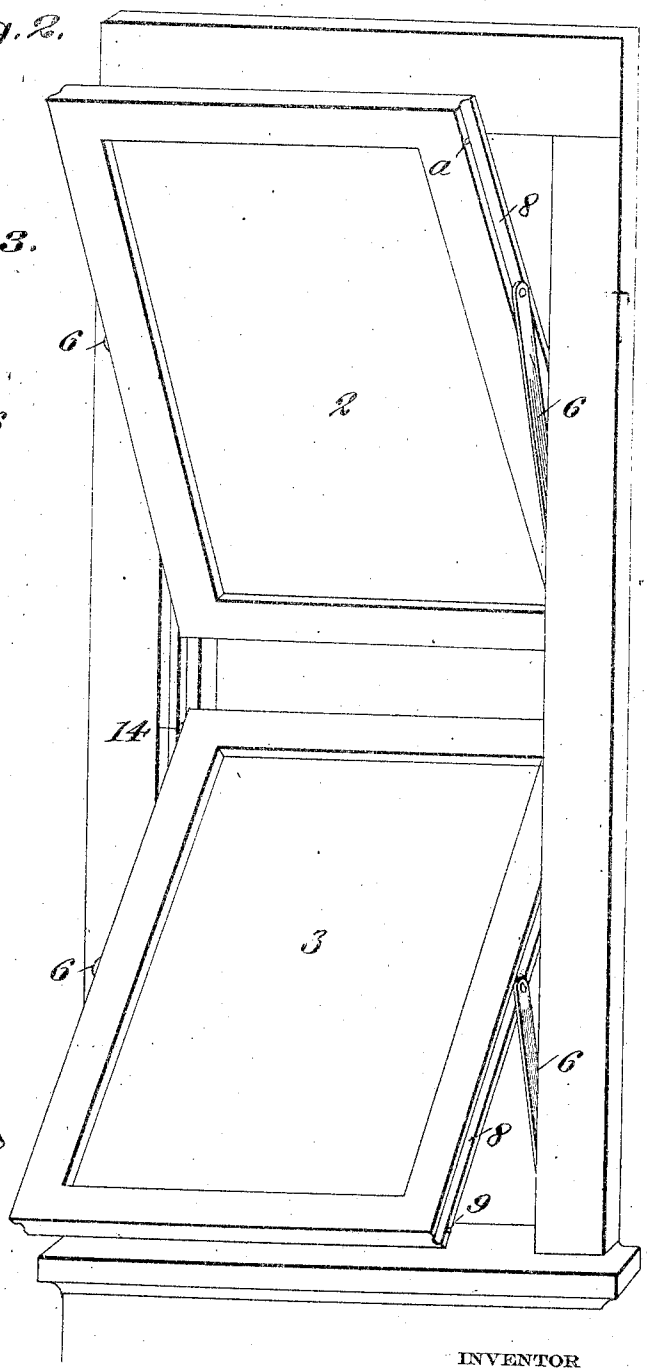


Fig. 3.

WITNESSES:

Charles Pickles

Thos. Eastberg

INVENTOR

Paul Barnum

BY G. H. Strong.

ATTORNEY

P. BARNUM.

WINDOW SASH ATTACHMENT.

APPLICATION FILED JULY 22, 1912.

1,100,342.

Patented June 16, 1914.

2 SHEETS—SHEET 2.

Fig. 4.

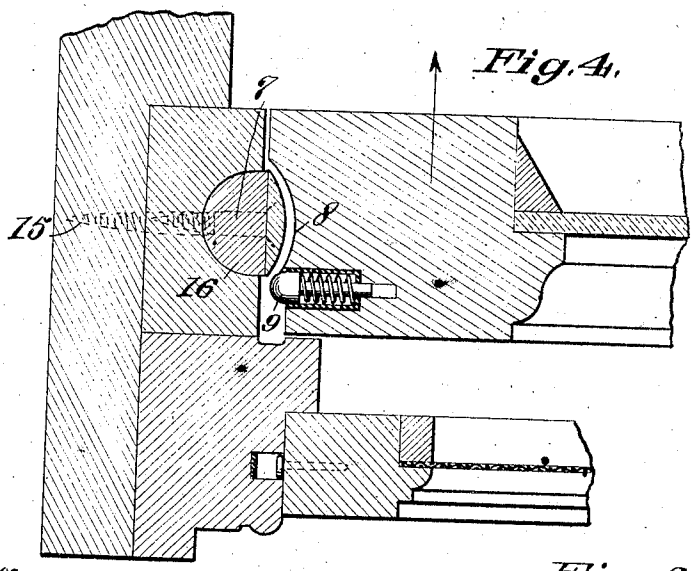


Fig. 5.

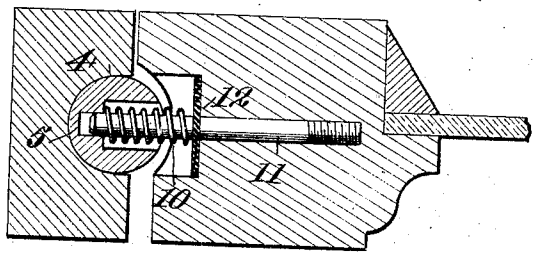


Fig. 6.

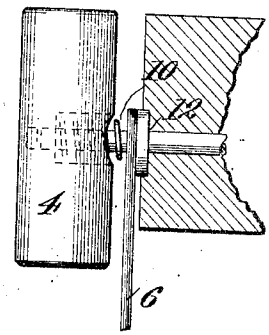
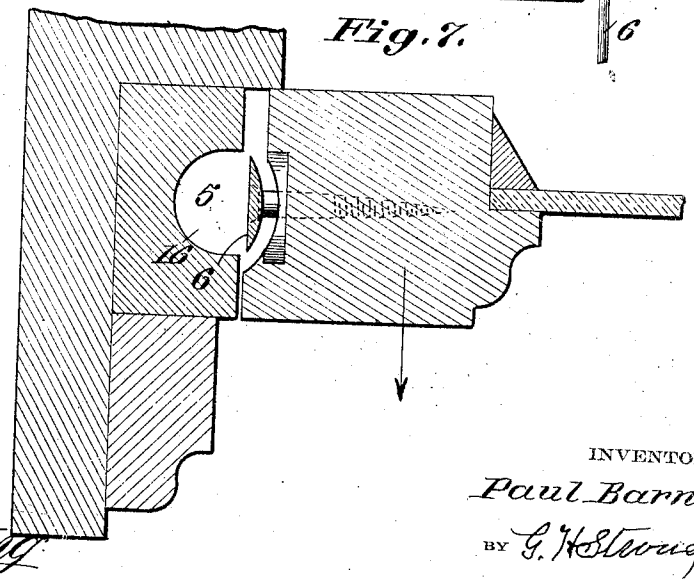


Fig. 7.



WITNESSES:

Charles Pickles

Thos. Eastbey

INVENTOR

Paul Barnum

BY G. H. Strong

ATTORNEY

UNITED STATES PATENT OFFICE.

PAUL BARNUM, OF SAN FRANCISCO, CALIFORNIA.

WINDOW-SASH ATTACHMENT.

1,100,342. Specification of Letters Patent. Patented June 16, 1914.

Application filed July 28, 1913. Serial No. 780,375

To all whom it may concern:

Be it known that I, PAUL BARNUM, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Window-Sash Attachments, of which the following is a specification.

This invention relates to window sash attachments, applied for the purpose of adjusting and controlling the position of same.

The object of the present invention is to construct a simple, substantial and inexpensive window provided with a secondary or intermediate window frame adapted to carry one sash, or a series of same, so mounted in the frame that they may be tilted, when opened, either outwardly from the room or inwardly into same.

Another object of the invention is to construct the sashes and connected operating mechanism, so that it will be possible to entirely assemble and fit the sashes in the intermediate frame before this leaves the factory, making it possible, when the window arrives at the building, to install same by simply fastening or securing the seondary frame in the permanent window frame of the building.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a vertical section showing the lower sash tilted outwardly and the upper sash closed. Fig. 2 is a persepctive view of the window installed. Fig. 3 is an edge view of one of the sash-carrying arms. Fig. 4 is a cross section showing the sash and secondary frame permanently installed. Fig. 5 is a cross section of a friction shoe. Fig. 6 is a side elevation of same. Fig. 7 is a cross section showing the sash mounted for inward tilting movement.

The main object of the present invention is to provide an intermediate window frame, adapted to carry a sash, or a series of same, so mounted in the intermediate frame that they may be entirely assembled and fitted before leaving the factory. With the object in view, I have shown, as in Figs. 1 and 2, a frame A, in which is hung a pair of sashes 2 and 3. These are hung in such a manner that they may be tilted, when opened, either outwardly from the room or inwardly into same. The window sash is shown as pivoted to a pair of friction shoes 4, slidably mounted and guided in semi-circular grooves 5 formed in the sides of the frame A for this purpose. The center or lower portion of the window sash is shown as pivotally connected to a pair of arms 6 secured at one end to the window sash and at the other end to the frame A, as at 7; the pivot 7 making a fulcrum point about which the sash-carrying arms 6 swing, when tilting the sash into an open position, whether this be outwardly from the room or inwardly. The upper end of the sash is guided and secured to the friction shoes 4. The sash stiles are shown as provided with concaved grooves 8 extending the whole length of the stile, and which grooves are adapted to receive the sash-carrying arms when the sashes are closed; the sash-carrying arms being shown as half round in cross section so that they may fit snugly into the concaved grooves 8 on the sides of the window sashes, filling these and producing a weather-proof joint between the frame and the window sash. For the purpose of holding the sash in a closed position, it is proven desirable to form the sash-carrying arms with a slight bow or bend, as shown in Fig. 3, toward the convex sides of the arms just enough to make them snap into the concaved grooves 8 in the sides of the sash.

It can be seen that, when a window is closed and the arms are forced or snapped into the concaved grooves on the sides of the window sash, it will be necessary to exert considerable pressure before it will be possible to open the window. For the purpose of still further guarding against the accidental opening of the sash, which might happen by a person leaning against it, I have provided on each side of the sash frame a spring-pressed latch 9, as shown in Fig. 4, which will have to be depressed before it will be possible to open the window, as the latch will have to swing clear of the sash-carrying arms.

For the purpose of holding the sash in any position to which it may have been opened, I have provided the friction shoes 4, which are pressed into frictional contact in the circular grooves by the pressure of springs 10 which surround the pivot bolts 11 connecting the friction shoes with the sash.

The bolt 11 is also provided with a washer or collar 12, between which and the shoe the spring pressure is exerted.

Fig. 6 is a side elevation of a friction shoe, showing that this has considerable bearing surface in the circular groove, and by placing a sufficiently strong spring, as 10, between the shoe and the collar 12, sufficient friction and tension is created to hold the window sash in any position. It is obvious that the friction shoes may be connected to the lower portion of the sash, so that the upper portion of the sash may be tilted in or out, or, as shown at 14, the upper portion of the sash may be connected to the friction shoes.

Fig. 7 shows the method of mounting the frame A when it is desired to tilt the window frame inwardly.

It has been customary heretofore to install sashes of a similar design into the window frame direct, without the use of an intermediate frame. By the employment of the intermediate frame, all work of attaching the sash-carrying arms, pivots, etc., is done in the factory, and the sashes and shoes are dressed down to a uniform thickness and inserted in the frame. After the intermediate frame is installed in the building, pivot 7 is taken out and a longer one, as 15, is inserted, thereby fastening the whole securely in the permanent building frame. The circular channels in the sides of the intermediate frame may be plugged, as at 16, to form suitable bearings for the pivots 7.

In Fig. 1 is shown a slight modification of the construction and mounting of the upper sash 2. This construction is particularly adapted for transoms and like places or to produce the so-called "burglar-proof" window. The lower portion of the sash is secured to the pivots 17 in the sides of the frame, while the upper portion of the sash is free to swing into the room, being hung or carried by arms 6′ secured to a sliding member 18, which in turn is supported in friction shoes. This member extends across the window frame and is mounted to slide up or down, as the window is opened or closed about its pivots 17, and forms a cross bar over the window opening which will prevent the entrance of undesirable persons. It will also be understood that a sash, as 3, shown in Fig. 2, may be completely reversed in the window frame by rocking the sash into the horizontal position and then depressing the end which is connected to the friction shoes until the sash is reversed. This makes it possible to reverse the window, which is very desirable and convenient when it is desired to wash the window.

The window is neat in appearance, prompt and reliable in its actions, and takes no more space than the ordinary window. The materials and finish of the several parts of the window are such as experience and judgment of the manufacturer may dictate.

I wish it understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims and that I do not wish to limit myself to the specific design and construction here shown.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. The combination with a window frame, of a sash pivotally mounted and carried at one end by a pair of friction shoes slidably mounted in semicircular grooves formed in the sides of the frame, grooves on the sash stiles, and arms pivotally connected at their lower ends to the side frames, and at their upper ends to the sash, which are adapted to fold into the grooves in the sash stiles when the sash is closed.

2. The combination with a window frame, of a sash pivotally mounted and carried at one end by a pair of friction shoes slidably mounted in semicircular grooves formed in the sides of the frame, semicircular grooves formed in the sash stile, and bowed semicircular spring arms pivotally connected at their lower ends to the side frames, and at their upper ends to the sash, which are adapted to snap into the semicircular grooves in the sash stiles when the sash is closed to retain the window in a closed position.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PAUL BARNUM.

Witnesses:
W. W. Healey,
G. M. Page.