June 28, 1927. A. ZEHMANN 1,633,968

SLIDING WINDOW

Filed Aug. 27, 1926

Fig. 1

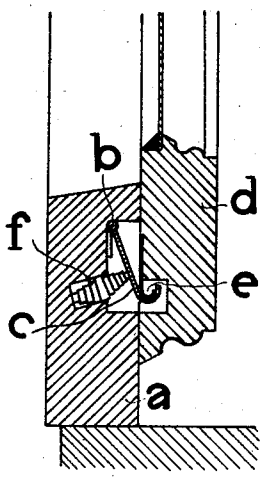


Fig. 2

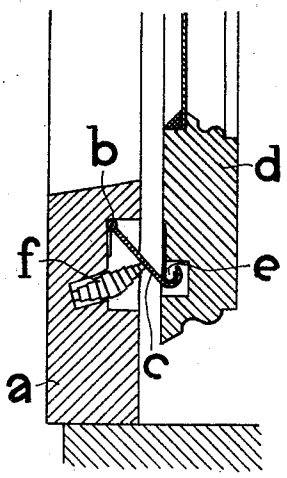


Fig. 3

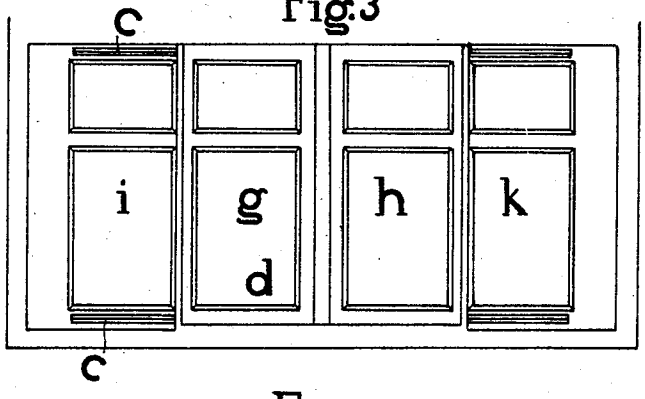
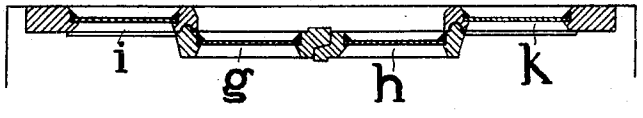


Fig. 4



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UNITED STATES PATENT OFFICE.

ARTHUR ZEHMANN, OF ROSSBERG-BEUTHEN, GERMANY.

SLIDING WINDOW.

Application filed August 27, 1926, Serial No. 131,839, and in Germany July 16, 1925.

This invention relates to laterally sliding windows, which are suspended on horizontal bars, and in which the window sashes are caused to approach or recede from the frame by reason of the oscillatory motion of hinged arms.

In the case of windows of this type the horizontal bars offer a great disadvantage, since the window is liable to become wedged or jammed upon the displacement, whilst the springs hitherto in use readily tend to break upon the closing of the window, as the action of the spring is required to be overcome and the sash moved downwardly and pressed against the window frame.

Now according to the invention the horizontal bars are substituted by interengaging channels. Channels provided on the sliding frame engage in channels provided on the fixed window frame, the latter channels being acted upon by springs and constructed to form hinged arms, this arrangement ensuring a correct guiding of the channels one within the other. An advantage of this arrangement also resides in the fact that the guide channels arranged on both sides are caused to act as gullies for retaining water running down the window, particularly in winter when the window freezes and again thaws. The springs acting upon the hinged guide channels are constructed as double coil springs for the purpose of diminishing risk of breakage.

The invention is illustrated by way of example in the accompanying drawing, in which

Fig. 1 is the lower part of a window in section, the window being closed.

Fig. 2 is a similar view to Fig. 1, showing the position when the window is open.

Fig. 3 is a front view of a four-sash window, and

Fig. 4 a section.

In the upper and lower frame portion *a* are arranged the channel portions *c*, which are hinged on at *b*, and which serve for lateral displacement of the middle sashes at the top and bottom, as shown in Fig. 3. The sashes *d* are suspended by means of channel portions *e* in the guide channels *c*. By reason of the curvature of the guideway it is quite impossible for the middle sashes to wedge or jam upon being displaced. The channel members *c* are acted upon by double coil springs *f*, which are provided in any desired number in the fixed ledge *a*. In order to be able to close the window perfectly tight the frame portions of the sliding sashes *g* and *h* engage with a rabbet over the side portions of the frames of the two fixed windows *i* and *k*. The sashes *g* and *h* may also be made to slide into lateral cavities in the wall. The window may be locked by means of a suitable locking device on the movable parts *g* and *h*, and if necessary locking devices or catches may also be furnished for locking the sliding sashes with the fixed sashes. Between the sliding sashes *g* and *h* may also be provided a locking pin or the like, so that when these two sashes are locked together a sliding motion is then impossible. Each sash is movable alone.

Naturally, the window may also be constructed to include any other additions or modifications.

What I claim as new and desire to secure by Letters Patent is:

In a sliding window of the type made to slide laterally on horizontal supports, movable sashes made to slide against fixed sashes, channel members hinged on to the fixed sashes, channel members secured to the said sliding sashes and adapted to slide along in the said first channel members, springs acting on the said first channel members, means for locking the said sliding sashes together, and means for preventing the said sliding sashes from moving when the same are locked together.

In testimony whereof I have affixed my signature.

ARTHUR ZEHMANN.