

April 1, 1924.

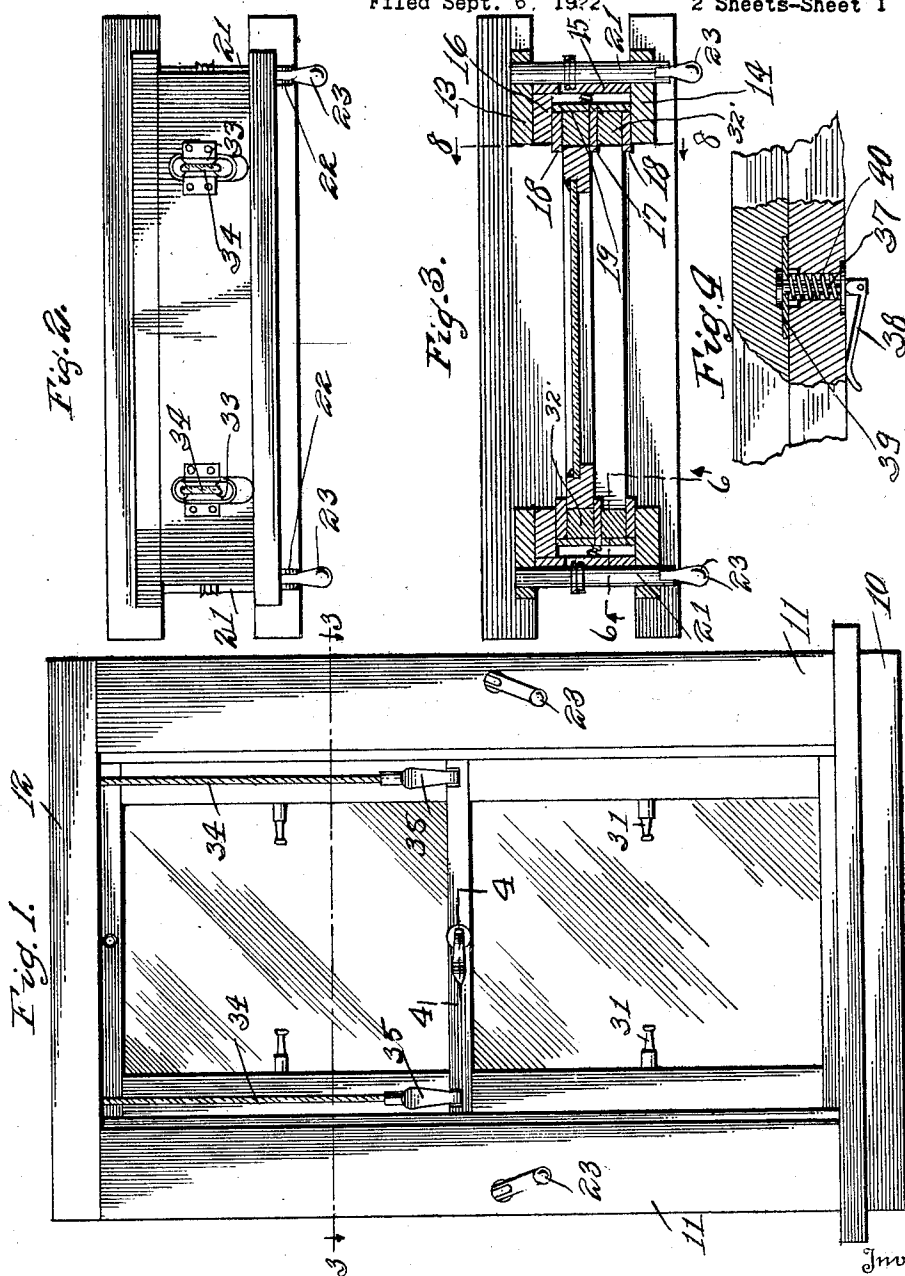
1,489,018

M. E. SHULTZ

WINDOW FRAME

Filed Sept. 6, 1922

2 Sheets-Sheet 1



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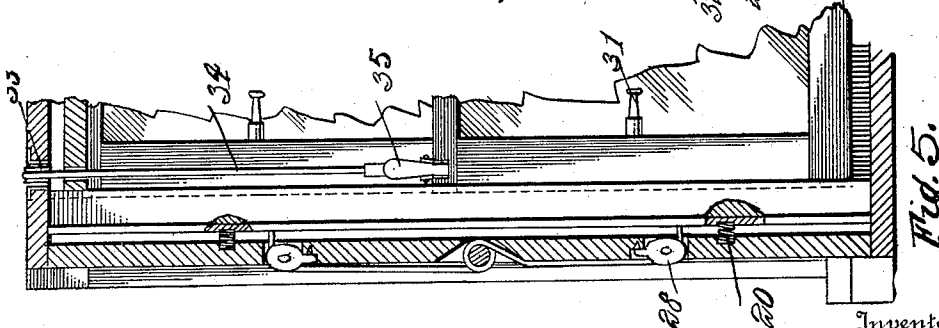
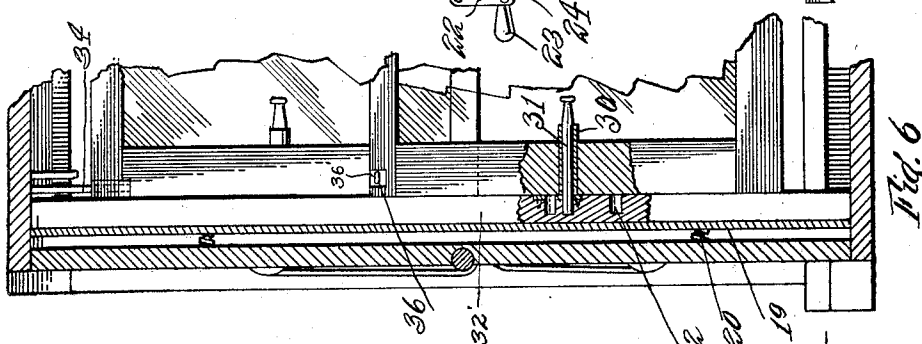
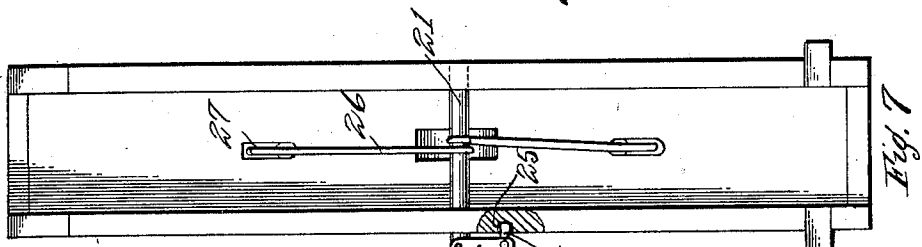
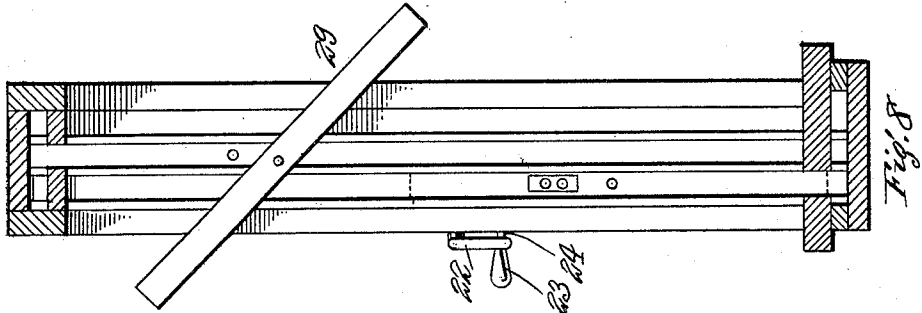
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WINDOW FRAME

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

MICHAEL E. SHULTZ, OF JACKSON, MICHIGAN.

WINDOW FRAME.

Application filed September 6, 1922. Serial No. 586,443.

To all whom it may concern:

Be it known that I, MICHAEL E. SHULTZ, a citizen of Lithuanian Region, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Window Frames, of which the following is a specification.

This invention relates to windows and frames therefor.

More particularly the invention relates to a window frame and sash wherein these parts are arranged so that the sash may be tilted in the window frame for ventilation or cleaning purposes.

One important object of the invention is to provide an improved general arrangement of devices of this character.

A second important object of the invention is to provide an improved window frame having retractile parting and guide beads.

A third important object of the invention is to provide improved means for retracting such beads.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:—

Figure 1 is an interior face view of a window frame with its sash as constructed in accordance with this invention.

Figure 2 is a top plan view thereof.

Figure 3 is a section taken transversely through such frame and sash, the view being on the line 3—3 of Figure 1 but certain parts being omitted.

Figure 4 is an enlarged detail section on the line 4—4 of Figure 1.

Figure 5 is a detail face view partly in section to show the means for simultaneously retracting both ends of the beads.

Figure 6 is a detail view partly in section on the line 6—6 of Figure 3.

Figure 7 is a side view of the frame.

Figure 8 is a detail section on the line 8—8 of Figure 3.

In the embodiment of this invention herein disclosed there is provided a window frame which includes the bottom, or sill members 10, side members 11 and top 12.

Each of these side members is built up of an outer member 13, an inner member 14, and a transverse member 15. A spacing member 16 is also employed adjacent the outer member 13 and in the channel formed by the members 14, 15, and 16, there are provided certain movable bead members consisting of a parting bead 17 and guide beads 18 connected at their backs to a vertical member 19. These beads are ordinarily urged forward by springs 20 but provision is made whereby they can be retracted entirely within the side casing. Stationary bars 32' extend between beads 17 and 18 and are connected in any suitable manner to the bottom 10 and top 12. In order to retract the beads a shaft 21 is journaled in the members 13 and 14 and on the inner end of this shaft is a swinging crank arm 22 which has pivoted to its free end a crank handle 23 having a projecting end 24 adapted to enter a socket 25 countersunk into the face of the respective member 14. By this means the crank is prevented from rotating except when the projection 24 is drawn out of this socket. Secured to the shaft 21 is a pair of strips or cords 26 each of which passes through an opening 27 in the member 15, one of these openings being located above and the other below the shaft 21 and for the purpose of rendering the motion through these openings smooth pulleys 28 are provided therein. The ends of the cords 26 are secured to the backing strip 19 of the beads adjacent the springs 20. By this means rotation of the crank 22 will effect rotation of the shaft 21 and draw both ends of the beads backward against the pressure of the springs 20, the projection 24 being inserted in its socket when it is desired to hold these beads in the backwardly drawn position. Sliding between the beads are the sash 29 and extending through the side rails of each sash is a sleeve 30 wherein is a movable pin 31 engageable in one or the other of a series of openings 32 in the bars 32'. At the top of the frame are pulleys 33 over which extend the sash cords 34, these sash cords being detachably connected to the tops of the sash by means of clips 35 engageable with pins 36' in pockets 36 in the top rail of each sash. Thus it is evident that the sashes are counterbalanced by each other. Extending through the top rail of the lower sash is the locking pin 37 which may be released, by the action of a

cam lever 38, from a socket plate 39 in the bottom rail of the upper sash. A spring 40 normally urges the pin 37 into socket plate 39 and it is obvious that only when it is desired to lock the two sash from all movements is this device used.

In operation, when it is desired to tilt the windows either for the purpose for ventilation or for cleaning, the lever 38 is manipulated to free the two sash for relative movement. The cranks are then rotated to draw the guide and parting beads backward, thus freeing the sash. Previous to this the sash has been adjusted and the pins inserted in one of the openings 32 so that when the parting beads are drawn back the sash may swing on these pins and in order to permit this swinging movement the clips 35 are disengaged from pins 36' thereby relieving the sash from the influence of the sash weights. It will be noted that after the sash have been swung to the proper position the parting beads may be released and the springs will force them against the edges of the sash and thereby frictionally hold the said sash in adjusted position.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without departing from the material spirit thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described but it is desired to include all such as properly come within the scope claimed.

Having thus described the invention what is claimed as new, is:—

1. In window construction, a window frame having side rails, retractile guide and parting beads carried by said side rails, springs urging said beads into normal protracted position, backing strips each having the beads of one side connected thereto and against which said springs bear, and means at each side of the frame to retract both ends of the respective strip and beads in unison, and comprising a shaft extending across the respective side rail, ropes connected to said shaft and leading upwardly and downwardly therefrom respectively and each having its free end connected to a corresponding portion of the backing strip, pulleys over which the ropes pass to guide portions of the same at right angles to the strip, crank means for said shaft, and releasable locking means for the crank means.

2. In window construction, a window frame having side rails, retractile guide and parting beads carried by said side rails; springs urging said beads into normal protracted positions, backing strips each having the beads of one side connected thereto and against which said springs bear, and

means at each side of the frame to retract both ends of the respective strip and beads in unison and comprising a shaft extending across the respective side rail, ropes connected to said shaft and leading upwardly and downwardly therefrom respectively and each having its free end connected to a corresponding portion of the backing strip, pulleys over which the ropes pass to guide portions of the same at right angles to the strip, a crank arm pivoted to one end of the shaft, and a crank handle carried by the free end of said arm and having a projection thereon at right angles to the arm, said frame provided with sockets for receiving the projections.

3. In window construction, a window frame having side rails, retractile guide and parting beads carried by said side rails, springs urging said beads into normal protracted position and means to retract all of the beads on a respective side of the frame simultaneously; in combination with a sash, means for suspending said sash in said frame and releasable from the sash, and pivot means carried by the sash and engageable releasably with the frame sides.

4. In window construction, a window frame having side rails, retractile guide and parting beads carried by said side rails, springs urging said beads into normal protracted position, backing strips each having the beads of one side connected thereto and against which said springs bear, and means at each side of the frame to retract both ends of the respective strip and beads in unison; in combination with a sash, means for suspending said sash in said frame and releasable from the sash, and pivot means carried by the sash and engageable releasably with the frame sides.

5. In window construction, a window frame having side rails, retractile guide and parting beads carried by said side rails, springs urging said beads into normal protracted position, backing strips each having the beads of one side connected thereto and against which said springs bear, and means at each side of the frame to retract both ends of the respective strip and beads in unison, and comprising a shaft extending across the respective side rail, ropes connected to said shaft and leading upwardly and downwardly therefrom respectively and each having its free end connected to a corresponding portion of the backing strip, pulleys over which the ropes pass to guide portions of the same at right angles to the strip, crank means for said shaft, and releasable locking means for the crank means; in combination with a sash, means for suspending said sash in said frame and releasable from the sash, and pivot means carried by the sash and engageable with the frame sides.

6. In window construction, a window

frame having side rails, retractile guide and
parting beams carried by said side rails,
springs urging said beads into normal pro-
tracted position, backing strips each having
5 the beads of one side connected thereto and
against which said springs bear, and means
at each side of the frame to retract both
ends of the respective strip and beads in uni-
son and comprising a shaft extending across
10 the respective side rail, ropes connected to
said shaft and leading upwardly and down-
wardly therefrom respectively and each hav-
ing its free end connected to a correspond-
ing portion of the backing strip, pulleys

over which the ropes pass to guide portions 15
of the same at right angles to the strips, a
crank arm pivoted to one end of the shaft,
and a crank handle carried by the free end
of said arm and having a projection there-
on at right angles to the arm, said frame 20
provided with sockets for receiving the pro-
jections.

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

MICHEAL E. SHULTZ.

Witnesses:

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ANGELA McCANES.