Nov. 6, 1928. 1,690,386

A. S. TUÑEZ

WINDOW

Filed Nov. 25, 1927 2 Sheets-Sheet 1

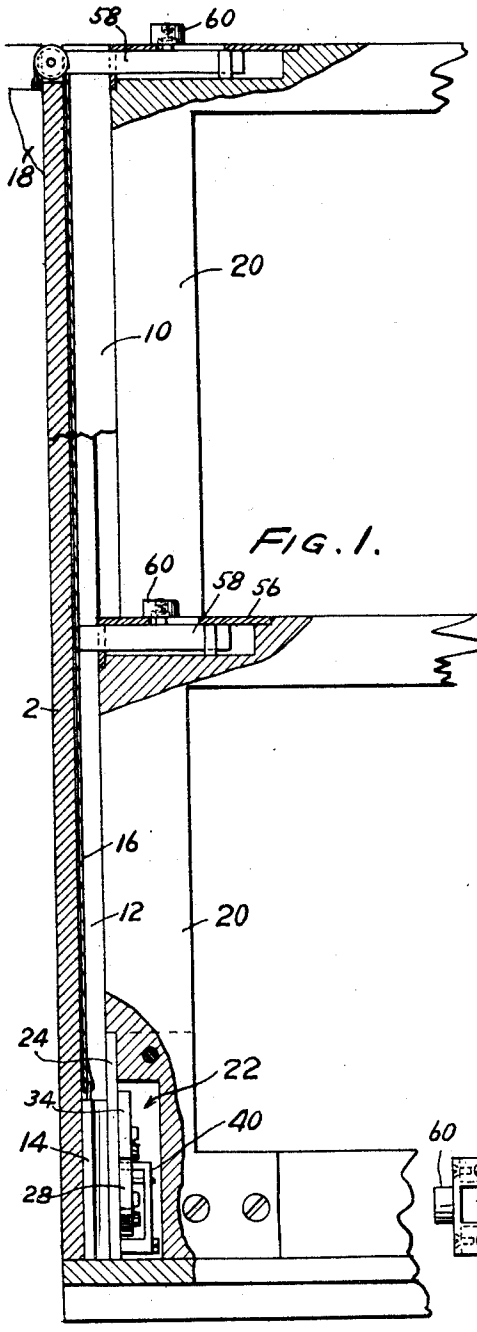


FIG. 1.

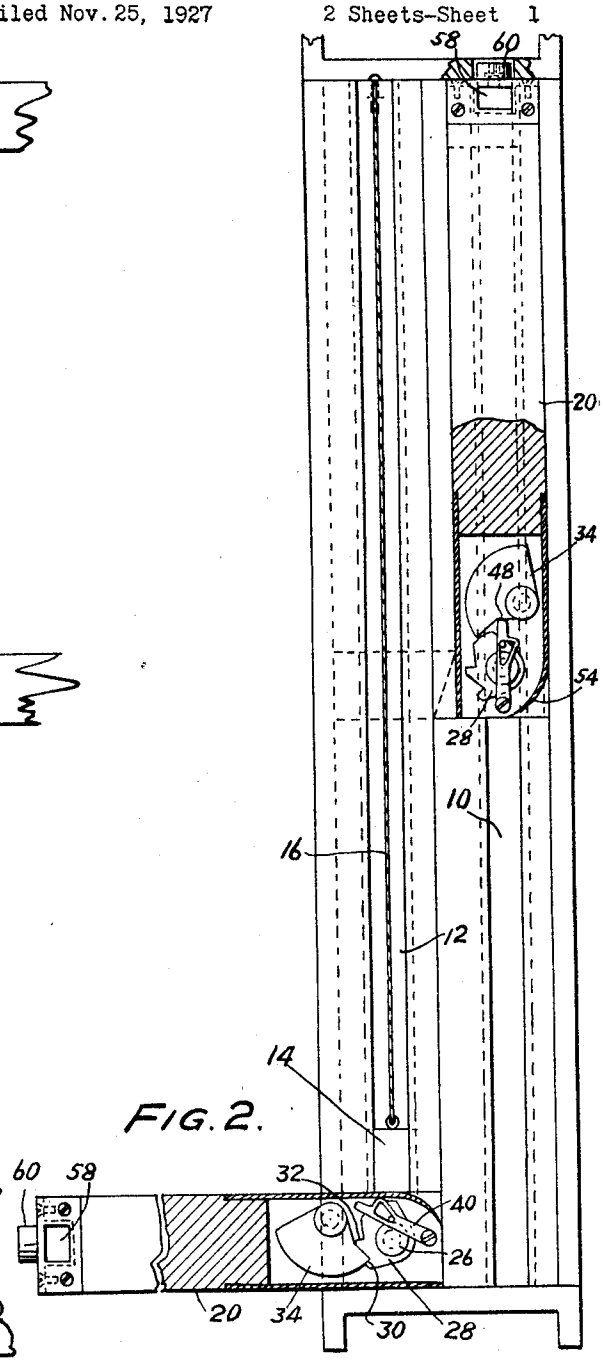


FIG. 2.

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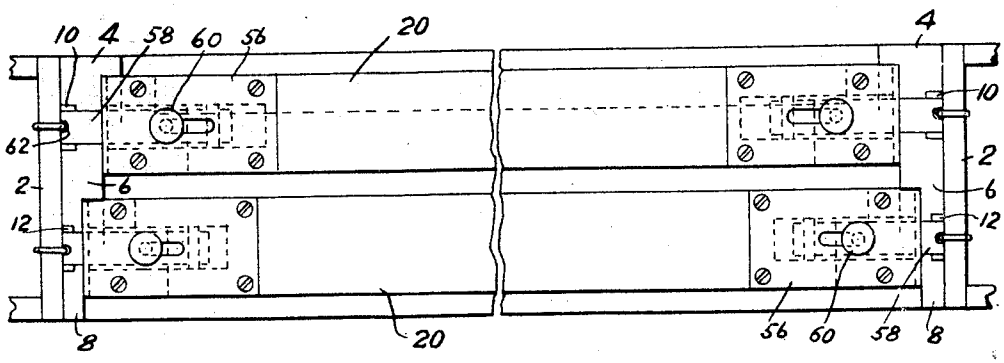


FIG. 3.

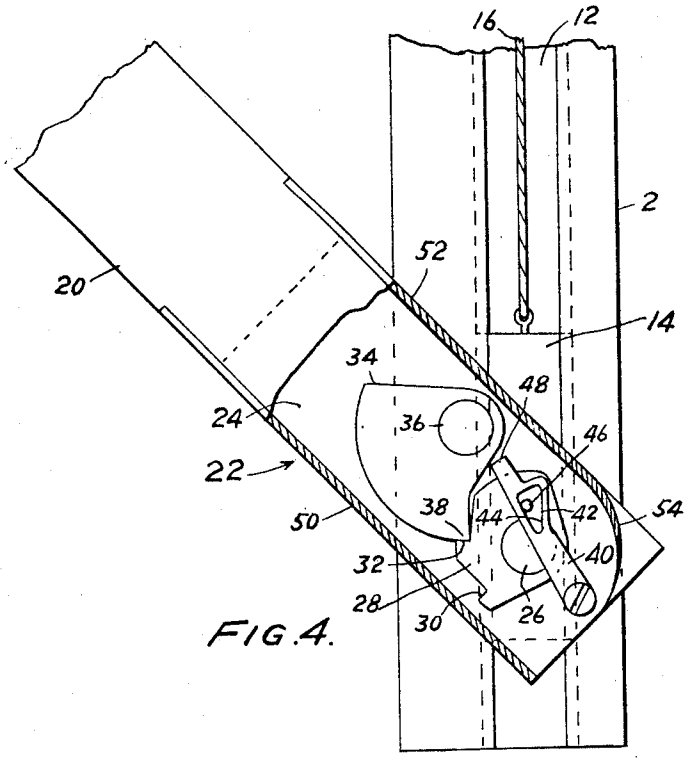


FIG. 4.

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WITNESS:

Robt. R. Kitchel.

Patented Nov. 6, 1928. 1,690,385

UNITED STATES PATENT OFFICE.

AMABLE S. TUÑEZ, OF EASTON, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO MORRIS LEVIN, OF PHILADELPHIA, PENNSYLVANIA; ONE-FOURTH TO HARRY GORDON, OF BEVERLY, NEW JERSEY; ONE-FOURTH TO CHARLES RISER, OF PHILADELPHIA, PENNSYLVANIA; AND ONE-FOURTH TO HIMSELF.

WINDOW.

Application filed November 25, 1927. Serial No. 235,424.

This invention relates to a window construction in which a sash is mounted not only for vertical sliding movement in a frame but also for pivotal movement about a horizontal axis to various selective positions.

One object of this invention is the provision of an improved means for slidably mounting a sash of the character described for vertical movement in a frame.

Another object is the provision of a simple means for releasably holding a sash on a plurality of angular positions about a horizontal axis.

In the drawings:

Fig. 1 is an elevation partly in section, of the improved window construction;

Fig. 2 is a sectional view looking towards the left in Fig. 1;

Fig. 3 is a plan view; and

Fig. 4 is an enlarged sectional view showing a sash in a sloping position.

The frame of the window is shown as consisting of a plurality of upright members 2 to which are secured upwardly extending strips 4, 6 and 8. The adjacent sides of which are shaped to form channels 10 and 12 of T-shaped cross-section. It will be obvious, of course, that these channels might be formed otherwise than as shown on the drawings, for example, by being cut in blocks of wood or metal. The upper sash assembly slides in guideway 10 while the lower sash assembly slides on guideway 12. Since the sashes are of similar construction, and each is symmetrical about its vertical center, only one-half of one of the sashes need be described in detail, for example the left hand portion of the lower sash which is viewed from the inside of the window in Fig. 1.

A block 14 of T shaped cross-section slides on guideway 12 and is secured by a cord 16, passing over a suitable pulley at the top of the frame, to a counter-balancing weight 18 of the ordinary type.

In the lower corners of each sash 20 there is located a sash holding assembly 22. It will be clear that only one of these need be provided for each sash, although two are preferably used to prevent excessive strains on one. Each assembly consists of a plate 24 pivoted on a stud 26 extending outwardly from block 14. The plate 24 is rigidly secured to the sash and accordingly stud 26 acts as a pivot for the sash. A plate 28 is fixedly secured to the portion of stud 26 extending through plate 24, so that plate 28 remains stationary relatively to block 14. Plate 28 has a surface extending about stud 26 which is notched, as shown, to provide stops 30 and 32, arranged for engagement by pawl 34 pivoted at 36 to plate 24 and provided with a stop engaging nose 38. Pawl 34 is made of enlarged dimensions, as shown, so that it is maintained normally by its own weight with its nose contacting with plate 28. If a more positive engagement is desired, it may be kept in position by a suitable spring.

A lever 40 is pivotally secured at its lower end, as shown, to plate 24 and is provided with an internal opening forming two arm pieces 42 and 44 respectively arranged to contact with pin 46 carried by plate 28. Its upper end is turned at 48 to form an arm engageable with the lower face of pawl 34.

To illustrate the operation of the mechanism described above reference may be made to the upper sash in Fig. 2 in which the parts are shown in the positions they occupy when the sash is closed. In this position nose 38 is out of contact with the circumferential surface of plate 28. If the sash is now swung downward contact between arm 48 and pawl 34 is maintained by friction until nose 38 clears stop 32. As soon as stop 32 is cleared, the further movement of the sash causes arm face 42 to engage stationary pin 46, arresting further movement of arm 48 with the pawl and permitting the pawl to drop into contact with plate 28 and engage stop 30. Stop 30 is so positioned that when the parts, following the above described movement, are in the positions shown on the bottom sash in Fig. 2, the sash is in a horizontal position. However, it will be clear that the stop may be so positioned that the sash is sloping.

If the sash is now raised, nose 38 rides up the sloping face of the notch above stop 30 and drops above stop 32. If the sash is then allowed to move slightly downwardly it will be maintained in the position shown in Fig. 4. During such raising of the sash lever 40 is maintained out of contact with the pawl by pin 46, or, after pin 46 allows the lever

to swing against the pawl, the pawl itself pushes arm 48 to the right preventing its movement below the pawl to a position in which it would maintain the nose of the pawl out of contact with plate 28.

When the sash is raised from the position shown in Fig. 4, movement of lever 40 is arrested by engagement of arm face 44 with pin 46, and pawl 34, then rides over arm 48 to the position shown in the upper sash in Fig. 2.

While only one intermediate position of the sash is obtainable in the structure described, it will be obvious that a plurality of stops 32 may be provided which will be adapted to engage the sash during its upward movement.

The assembly 22 may be suitably located in a recess in the window covered by plates 24, 50, and 52, the lower end 54 of which last plate may be curved for clearance. The assembly is desirably located on the sash but obviously it may be located in block 14, stud 26 being secured to the sash.

To hold the sash in vertical position, a latching means may be provided at its upper corner. This may consist of a recess in the sash covered by a plate 56 slidably housing latch 58 carrying a knurled knob 60 engageable by the fingers and projecting through a slot in plate 56. Latch 58 may be spring pressed if desired into engagement within one of guideways 10 or 12 and is suitably notched at 62 for the passage of cord 16.

What is claimed is:

1. A window structure comprising a frame having upwardly extending guideways, blocks slidable in said guideways, a sash pivoted to said blocks, the sash and one block forming relatively movable members arranged to be releasably held in a plurality of predetermined relative positions and means for so holding said members, including a pawl on one member and a plurality of stops on the other member selectively engageable with said pawl.

2. A window structure comprising a frame having upwardly extending guideways, blocks slidable in said guideways, a sash pivoted to said blocks, the sash and one block forming relatively movable members arranged to be releasably held in a plurality of predetermined relative positions, and means for so holding said members including a pawl on one member, a plurality of stops on the other member selectively engageable with said pawl, and means for preventing engagement of said pawl and one of said stops when the members are relatively moved in one direction but permitting engagement of said pawl and stop when the members are relatively moved in the opposite direction.

In testimony of which invention, I have hereunto set my hand, at Philadelphia, Penna., on this 22nd day of November, 1927.

AMABLE S. TUÑEZ. [L. S.]