Nov. 13, 1928. 1,691,868

A. G. DAWSON

FRAME AND SASH CONSTRUCTION

Filed April 26, 1927

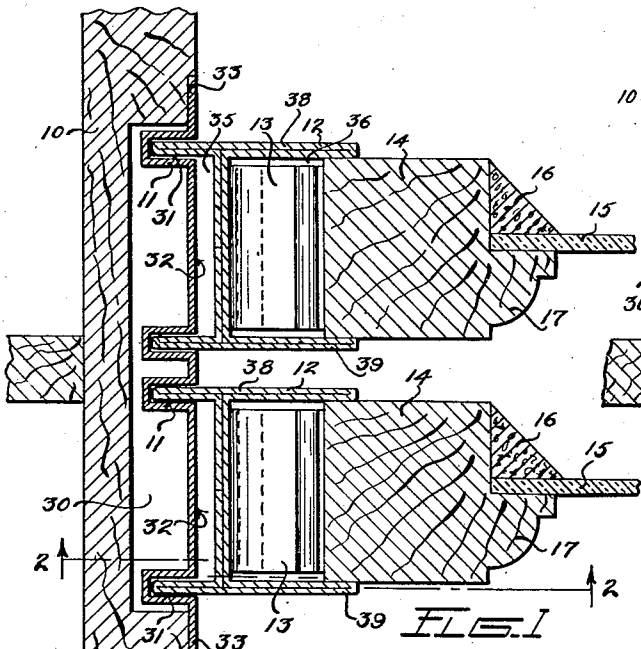


FIG. 1

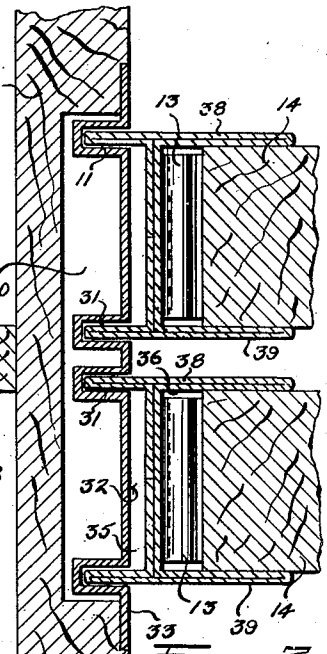


FIG. 3

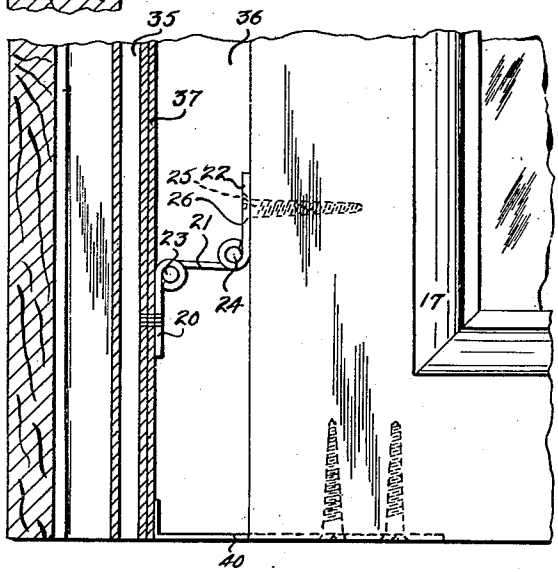


FIG. 2

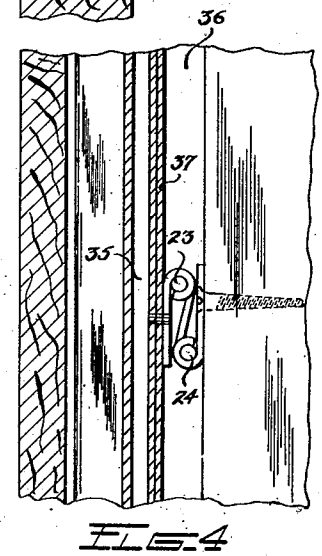


FIG. 4

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UNITED STATES PATENT OFFICE.

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FRAME AND SASH CONSTRUCTION.

Application filed April 26, 1927. Serial No. 186,764.

This invention relates to an improvement in frame and sash construction, and more particularly to the means for positioning and retaining a sash within a frame.

An object of this invention is to provide a simple device whereby a window sash may be removably secured within its frame.

Another object of this invention is to provide a device which will facilitate positioning or removing a window sash with relation to its frame, and eliminate the commonly used guide strips.

A further object of this invention is to provide a device properly positioned between a window sash and its adjoining frame whereby a sash slightly over or under the required width may be utilized due to the take-up member located between its edge and the frame.

Further objects of this invention will appear from a consideration of the following specification taken in connection with the drawings, in which

Fig. 1 is a sectional view of a sash and frame construction showing one embodiment of this invention in plan view;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view similar to Fig. 1 and shows the take-up member in its collapsed or folded position; and

Fig. 4 is a side elevation of the take-up member in its collapsed position.

Referring to the drawing and particularly to Fig. 1, 10 represents a frame having a channel guide member 11 located therein. A sleeve 12 is properly positioned in relation to the guide member 11, said sleeve having a take-up member 13 located therein and also the outer face of a window sash 14 which sash abuts the member 13 within the guide member 11. The sash 14 has a pane of glass 15 secured thereto in the usual manner by putty 16 which holds it against the shoulder 17 of the sash.

The take-up member 13 consists of three elements, 20, 21 and 22 pivotally secured at 23 and 24. The element 20 is secured to 21 by means of the pin 23 and the element 22 is likewise secured to 21 by the pin 24. This member 13 is secured to the sash 14 by a screw 25 or other suitable means. The element 22 of the member 13 has an opening 26 therethrough. The screw 25 being positioned in the opening 26 of the element 22 and threadably engaging the sash 14 secures the element 22 in fixed relation with said sash. The element 20 of the member 13 is secured against the inner wall of the sleeve 12 in any suitable manner, preferably and as shown in this drawing, by welding. It may be seen that the member 13 being fixed with relation to the sash 14 and the sleeve 12, said member may be collapsed to bring the sash 14 in closer relation to the inner wall of the sleeve 12.

The frame 10 is of the usual construction used in supporting window sashes and has a longitudinal channel 30 cut therein. The member 11 is formed from sheet metal and is shaped to create pockets 31. Between the pockets 31, the face 32 of the member 11 is continuous and at the outer edge of the end pockets extends a flange 33, said flange being in the same plane with the face 32. Small recesses or notches are cut into the frame 10 adjoining the channel 30 and into which the flanges 33 of the member 11 are positioned in order that the member 11 when secured to the frame 10 may extend into said frame, the outer face 32 and the flanges 33 being flush with the inner face of the frame.

The sleeve 12 is made of sheet metal and is so shaped that two pockets 35 and 36 are formed, said pockets having a common inner wall 37 and common outer walls 38 and 39. That portion of the walls 38 and 39 which form the pocket 35 are adapted to slidably engage and be positioned within the pockets 31 of the member 11. The length of the walls of the pockets 35 is greater than the depth of the pockets 31 and as a result of this difference the face 32 of the member 11 and the inner wall 37 of the pocket 35 do not touch each other. It may be seen that the only contact of the member 12 with the member 11 is by means of the walls 38 and 39 engaging the pockets 31. The pocket 36 adjoins the pocket 35 and is formed by the walls 38 and 39 and the inner wall 37. Within the pocket 36 is positioned the take-up member 13, the element 20 of which being welded or otherwise properly secured to the wall 37. The sash 14 is adapted to snugly fit within the pocket 36 between the walls 38 and 39 and against the element 22 of the member 13. The sash 14, while being firmly engaged by the walls 38 and 39, is not so rigidly held but what under certain conditions a lateral movement of the sash will force it further within the pocket 36 by collapsing or folding the member 13.

In assembling this device, the member 11 is secured along its flanges 33 to the inner face of the frame 10 in any suitable manner. The sash 14 with the sleeve 12 and the take-up

member 13 properly positioned there-between is ready to be fitted into the frame 11. The walls 38 and 39 are inserted within the pockets 31, on one side of the frame and the sash member 14 is forced laterally toward the frame to collapse the member 13 and further engage the sash 14 with the pocket 36. The relative position of the parts at this point of assembling the device may be seen by referring to Figs. 3 and 4 of the drawing. Since the sash 14 now engages the pocket 36 more than is required when it is in operable position, the opposite and parallel wall of the sash with its engaging sleeve 12 and take-up member 13 may now be inserted within a guide member similar to the member 11. If, having compressed the member 13 and moved the sash laterally, sufficient space is not acquired whereby the opposite wall of the sash may be positioned, the member 12 on said opposite wall may be pressed laterally toward the sash and the sleeve may then be inserted within its corresponding guide member. As soon as the sleeves 12 are positioned within the pockets 31 on both sides of the sash, said sash may be adjusted to a position whereby the sleeve 12 engaging the sash 14 will be equaled or balanced on each side.

The window sash, having been positioned within the frame, must now be so secured that there can be no lateral movement between the sash 14 and the sleeve member 12. This is accomplished by fastening a metal strip 40 to the top and bottom faces of the sash and allowing the ends of said strips to extend beyond said sash and into the pocket 36 sufficiently so that its flanged end will abut the inner wall 37 of said pocket. This metal strip prevents the member 13 from collapsing and moving the sash to a position out of alignment with the frame and also acts to seal the pockets 36 from dirt or any other substance that would interfere with the operation of the take-up member 13. If at any time it is desired to remove the window sash from the frame the metal strips are removed, the sash forced laterally and further into engagement with the sleeve 12 on one side and then may be pulled free from the other side of the frame and removed completely.

This construction eliminates a number of objectionable features which have hitherto been found necessary in making a frame and window sash, and further has greatly facilitated the ease with which a window sash may be inserted or removed from its frame.

Although applicant has shown and described only one modification of this invention, it is apparent that other modifications and adaptations may be made and used without departing from the spirit and scope of this invention as set forth in the following claims.

Having thus set forth my invention, what I claim as new and for which I desire protection by Letters Patent is:

1. The combination with a frame having a plate secured thereto, said plate being provided with a plurality of recesses; of a sash provided with adjustable sleeves and take up members, said sleeves being each provided with two oppositely faced longitudinal pockets formed from continuous flanges, the edge of said sash being slidably engaged within one of said pockets in said sleeve, said continuous flanges removably engaging certain of said recesses in said plate and said take up member operably secured within said sash receiving pocket between said sleeve and said sash, whereby said sleeve may be shifted longitudinally of said sash and said sash caused to reciprocate in said pocket.

2. The combination with a frame having a plate secured thereto, said plate being provided with a plurality of recesses; of a sash provided with adjustable sleeves and take up members, said sleeves being each provided with two oppositely faced longitudinal pockets formed from continuous flanges, the edge of said sash being slidably engaged within one of said pockets in said sleeve, said continuous flanges removably engaging certain of said recesses in said plate and said take up member operably secured within said sash receiving pocket between said sleeve and said sash, and comprising plates secured to said sleeve and said sash and a plate pivotally joined to and connecting said first named plates whereby said sleeve may be shifted longitudinally of said sash, and said sash caused to reciprocate in said pocket.

In testimony whereof I have affixed my signature.

AXEL G. DAWSON.