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2,996,767

ADJUSTABLE PANEL MOUNTING SASH

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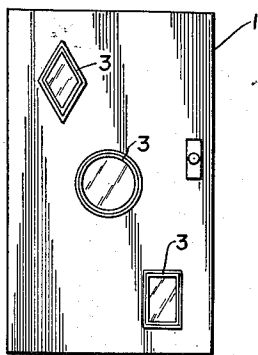


Fig. 1.

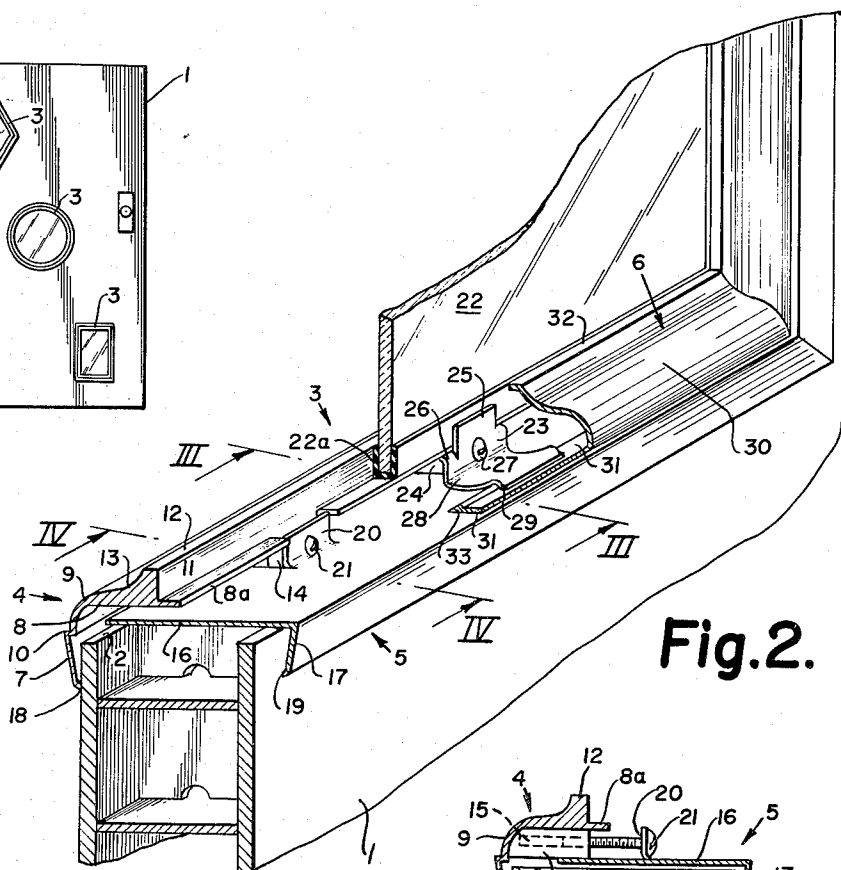


Fig. 2.

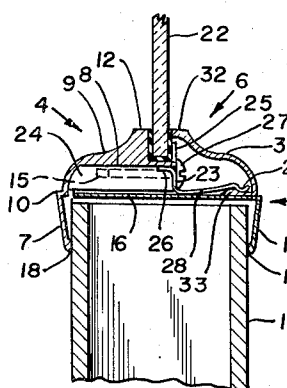


Fig. 3.

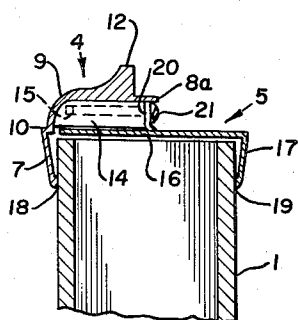


Fig. 4.

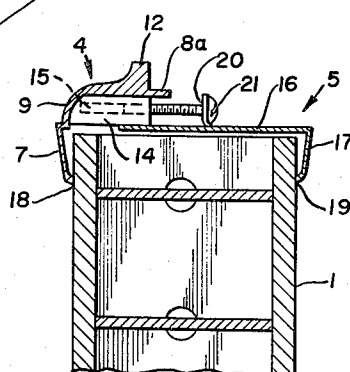


Fig. 5.

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ADJUSTABLE PANEL MOUNTING SASH

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2 Claims. (Cl. 20—56.4)

This invention relates generally to sash for mounting panels, both transparent and non-transparent, in doors, partitions and other types of wall surface. More specifically, the sash in addition to being of the adjustable type provides for clamping engagement upon the door or partition within which it is mounted and is adaptable for use with a plurality of different thicknesses of partition. Such a sash when installed has all fastening members concealed and is provided with a readily detachable member securing the panel in place independently of the adjustable mounting of the sash within a selected partition opening.

The sash of the invention is preferably made of metal but, obviously, may also be made of any substantially rigid material such as wood, molded plastics, etc.

The sash of the invention may be mounted in doors and partitions of any form of construction whether of wood, metal or other materials. The sash may be mounted by skilled or unskilled labor and by reason of the flange construction used, the opening in the wall partition or door need not be precisely formed in order to receive the sash since the sash flanges overlap the opening and thereby conceal any inaccuracies in forming the opening. The various members forming the sash may be integral or sectional and may be of any desired form of construction such as rolled, extruded, molded, etc. The panel mounted in the sash may be of any suitable material to serve as a decorative panel or as a transparent panel to admit light. Due to the fact of the panel being detachably mounted within the sash, it is readily conceivable that a solid transparent panel may be used for some seasons of the year and a screen panel substituted for other seasons of the year.

One object of the invention is the provision of a sectional sash which may be readily mounted in a suitable opening in a wall or partition for receiving the sash.

Another object of the invention is to provide a sash of the character described which is adjustable so as to accommodate a plurality of different thicknesses of the panel wall or door within which the sash is mounted.

A further object of the invention is to provide a sash of the character described which is clamped into position within a suitable partition opening and then detachably receives a panel which may be mounted from one side of the sash.

These and other objects and advantages of the invention will become apparent from the following description and the drawing forming a part thereof wherein:

FIG. 1 shows in elevation a door or other form of partition having sash of various contour mounted therein;

FIG. 2 shows a fragmentary perspective view of a door or other supporting wall structure and the sash mounted in the opening thereof;

FIG. 3 shows a transverse section taken on lines III—III of FIG. 2 illustrating the manner of securing the panel within the sash;

FIG. 4 shows a transverse section taken on lines IV—IV of FIG. 2 illustrating the manner of clamping the sash members in position upon the door or other supporting structure; and

FIG. 5 shows a view similar to that of FIG. 4 wherein the sash is adjusted outwardly to accommodate a greater thickness of door or other support for the sash.

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Referring now in detail to the drawings, reference character 1 indicates generally a door, partition wall or other surface having an opening 2 therein for reception of the sash indicated generally by the reference character 3. The sash 3 is comprised of the members indicated generally 4, 5 and 6. The member 4 is comprised of a substantially vertical flange 7, horizontally disposed flange 8 and a suitable connection between the flanges 7 and 8. As shown in the drawings, the member 4 has a decorative outer face comprised of the arcuate portion 9 and ledge 10. These, of course, may be varied to suit the tastes of the designer. Extending upwardly from the flange 8 of the member 4 is a substantially vertically disposed portion 11 terminating in a horizontal portion 12 merging with the flange 8 by means of the arcuate portion 13. The particular shapes of the portions 12 and 13 are again a matter of design rather than function. The extension 8a of the flange 8 beyond the portion 11 has associated therewith one or more embossments 14 provided with a threaded aperture 15. These embossments 14 depend below the plane of the flange extension 8a for a purpose hereinafter discussed. The flange extension 8a is preferably interrupted at the embossments 14 but need not necessarily be so interrupted. The embossments 14 preferably depend below the plane of the flange extension 8a for bearing engagement upon the adjacent sash member 5, but may be terminated short of such plane of engagement.

Sash member 5 is comprised of a horizontal flange 16 and a substantially vertically disposed flange 17 which are suitably connected. Preferably both sash vertical flanges 7 and 17 are provided with short laterally offset flanges 18 and 19. These latter flanges provide a gripping surface for the sash upon the adjacent panel or wall surface. The sash members 4 and 5 as described extend about the entire periphery of the partition or door opening 2 and the members 4 and 5 may be made in sections but are preferably integrally formed. Extending upwardly from the flange 16 of the sash member 5 are one or more tongues 20 coinciding with and overlapping the abutments 14 of the member 4. Each tongue portion is suitably apertured to receive a threaded fastening member 21 which is received in the threaded aperture 15 of the abutment member 14. The flange extension 8a and adjacent portion 11 provides support for any suitable panel 22 to be mounted in the sash. These panels 22 are retained in place by a plurality of clip members 23. These clip members are associated with suitable embossments 24 depending below the plane of the flange 8 of the sash member 4. Clips 23 comprise an upright portion 25, the upper portion of which overlaps the panel 22 and the bottom portion having a bearing engagement with the flange 16 of the sash member 5, and include laterally extending flange portions 26 which preferably underlie the flange extension 8a. A suitable aperture in the extension 25 registers with a threaded aperture 26 in the abutment 24 to receive a screw-threaded fastener member 27 for securing the clip 23 in place. The bottom portion of the clip 23 is comprised of a laterally extending flange 28 which preferably terminates in a downwardly turned flange 29. The clip 23 is preferably made of spring-tempered material so that the flange portion 29 resiliently engages the flange 16 of the sash member 5.

For completing the sash, a trim member 6 is provided comprising a top face 30 having a bottom flange 31 and a top flange 32 suitably connected to the face 30. On the inner face of the flange 31 is provided an embossment 33 extending above the flange 31. The trim member 6 is snapped into place in the sash with the flange 31 engaging the sash flange 16 and the embossment 33

resiliently engaging beneath the flange 29 of the member 23 so as to retain the member 6 in position.

When mounting the sash 3, a suitable opening 2 is formed in the door, partition or other wall surface to receive the sash. The sash portion 5 is inserted into the opening 2 from one side of the partition and the sash portion 4 is inserted into the opening 2 from the opposite side of the partition and in overlapping relation to the sash portion 5. The screw-threaded members 21 are then inserted into the suitable apertures in tongues 20 and tightened into the screw-threaded openings 15 in the abutments 14 of the sash member 3 securing the two sash members 4 and 5 together. When the screw-threaded members 21 are suitably tightened, the flange portions 18 and 19 of the assembled sash grip the adjacent surfaces of the partition, on opposite sides of the opening, and secure the sash in place. Preferably a lock washer, not shown, is mounted on the shank of the member 21 beneath the head thereof to restrain loosening of the member 21. Since the opening 2 in the partition may not be of the exact size, or the interior construction of the partition may not provide suitable support for the flange 16 of the sash member 5, the assembled sash may be positioned within the opening 2 before final tightening of the members 21. The panel 22 is then inserted in the sash so as to have support upon the flange extension 8a of the sash portion 4 and the clips 23 are then positioned and similarly secured in place by the screw-threaded fasteners 27. The sash trim section 6 is then snapped in place with the flange 31 disposed adjacent the flange 16 of the sash member 5 and engaged beneath the flange 28 of the clip 23 with the down-turned portion 29 of the flange 28 overlapping the embossment 33 to retain the trim member 6 in position.

As previously stated, when the panel 22 is made of glass, the customary mounting channel 22a is placed about the periphery of the panel 22 and is engaged by the projection 25 of the clip 23.

The cross-section through the assembled sash, as shown in FIG. 4, illustrates a condition where the sash is mounted upon a minimum thickness of partition and, as will be observed, the flange 16 of the sash portion 5 overlaps substantially the entire thickness of the partition 1. In FIG. 5 of the drawings is shown a cross-section, similar to FIG. 4, wherein the sash portions 4 and 5 are mounted upon a partition of greater thickness and the adjustability of the width of sash is illustrated wherein the lug 20 of flange 16 of sash portion 5 does not abut the embossment 14 of the sash portion 4 as shown in FIG. 4 of the drawings. In such cases a suitable length of shank on the fastener 21 serves to connect the two sash portions 4 and 5 and again secure the gripping engagement between the portions 18 and 19 thereof with the adjacent sides of the partition 1. The outward adjustment of sash 5 relative to sash portion 4 does not affect the positioning of the panel fastening clips 23.

As clearly shown in FIGS. 2 and 3 of the drawings, the clip extension 25 still normally abuts the embossment 24 on the sash portion 4 and overlaps the panel 22. The flange portions 26 underlying the sash flange 8 restrain upward movement of the clip 23 when the trim molding 6 is inserted. Likewise should a greater thickness of panel 22 be used so that the portion 25 of the clip 23 may not engage the embossment 24, the portion 25 will overlap the enlarged thickness of panel and retain it in position within the sash. Here again the projection of the portions 26 beneath the flange 8 and its flange extension 8a will properly retain the clip in position and maintain the tension in the flange 28 thereof to retain the trim molding in place. Obviously with a thinner width of partition the sash members 5 and 4 will overlap as shown in FIG. 3 but the trim section 26 is of such size as to still be within the limits of a vertical plane through the flange 16 of the sash member 5. However, when the sash portions 4 and 5 are extended as in FIG. 5 of the drawings

the outer peripheral edge of the trim molding 6 will be disposed inwardly of the outer peripheral edge of the sash portion 5.

The sash portions 4 and 5 have been illustrated in the drawings and described as being integral members enclosing all four sides of the opening 2 in the partition 1. Obviously by mitering the adjacent ends of the sash portions 4 and 5, these sash portions may be formed of a plurality of parts each part overlying a vertical or horizontal portion of the partition opening. There is no advantage in this. Likewise the trim portion 6 of the sash may be integrally formed so as to extend continuously around the four sides of the sash opening but again this can be made in four parts by mitering the adjacent ends of the parts so as to fit in place.

An adjustable sash of the character described has a number of advantages in both the manufacture of the sash and the use thereof. By making an integral four-sided member out of each of the sash sections 4, 5 and 6, they can be economically manufactured and readily assembled by any home owner. Likewise by reason of their adjustable nature they can be used with a plurality of widths of partitions thereby reducing the number of sashes needed to be stocked by the storekeeper. By reason of the generous width of the flange portions 7 and 17 on the sash members 4 and 5, a home owner need not provide finished sides on the opening through the partition or require that the opening in the partition be of an exact size to receive the sash portions. The assembly of the sash portions by means of the threaded fasteners 21 and 27 is readily accomplished with an ordinary screw driver and not requiring special tools. Likewise the manufacturing cost of the sashes are reduced by the deletion of any slotted openings to permit adjustable relationship between the sash portions 4 and 5.

It will be understood that the details of construction illustrated in the drawings are intended for the purpose of illustration and not limitation, since it is recognized that many changes and modifications can be made in the decorative outer contours of the sashes without departing from the invention.

We claim:

1. An adjustable sash for mounting panels within openings formed in partitions, doors and other wall surfaces, comprising a member having a flange disposed within said opening and extending over the periphery thereof and a laterally extending flange overlapping the adjacent wall surface about one side of said opening, a second member having a flange portion disposed within said opening in overlapping spaced relation to said first member flange and extending over the periphery of said opening and a laterally extending flange overlapping the adjacent wall surface about the opposite side of said opening, said second member flange within said opening having an abutment extending from the outer face of said flange in inward spaced relation to the inner edge of the flange providing a seat for the peripheral edges of a panel and a plurality of abutments depending from the inner face of the flange thereof and spaced about the periphery of the said flange for engagement with the first member flange, said first member flange within said opening having a plurality of spaced lugs extending upwardly therefrom about the periphery thereof and in transverse alignment with said second member depending abutment, said member depending abutments and said member lugs being provided with registering openings therein for reception of screw-threaded members connecting said sash members together in clamping engagement with the opposite wall surfaces, a plurality of abutments depending from the inner face of said second member flange within said opening and spaced about the periphery thereof, panel retaining clips detachably secured to said latter abutments within said opening, each said clip having an up-standing flange overlapping said panel and a laterally extending flange engaging the adjacent flange of the first-

named member, said clip laterally extending flange terminating in an edge portion inclined upwardly from the adjacent member flange, and a trim member supported in said opening upon said first member flange, said trim member having an inclined upper flange overlying said clip and engaging said panel, and a bottom flange engaged beneath said clip laterally extending flanges.

2. The adjustable sash as defined in claim 1 wherein the first said abutments depending from said second

member flange are spaced inwardly from the inner free edge of the flange.

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