Feb. 25, 1936. O. R. HANKINS 2,032,126

WINDOW CONSTRUCTION

Filed June 8, 1935

Fig. 1.

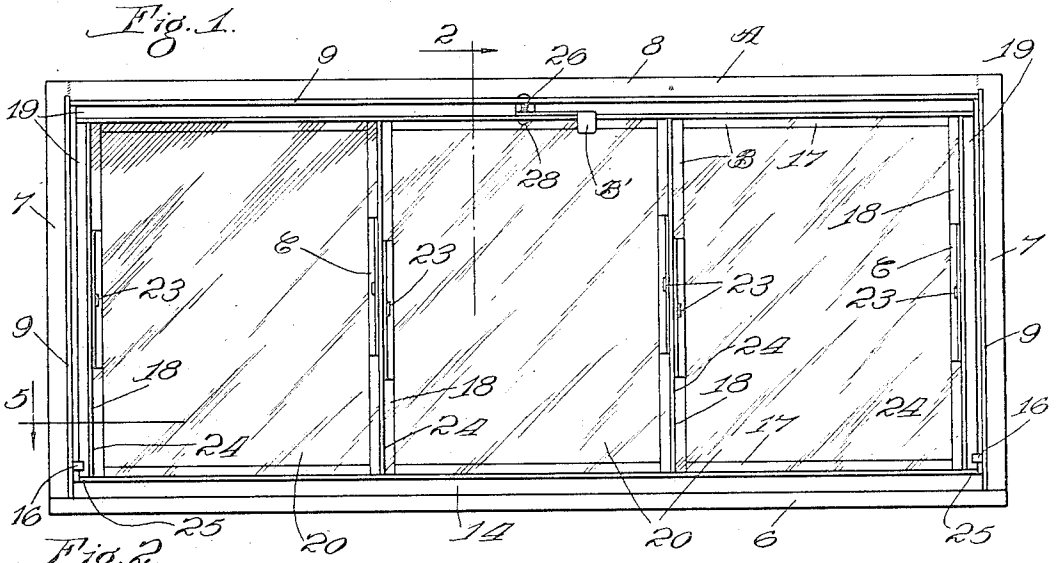


Fig. 2.

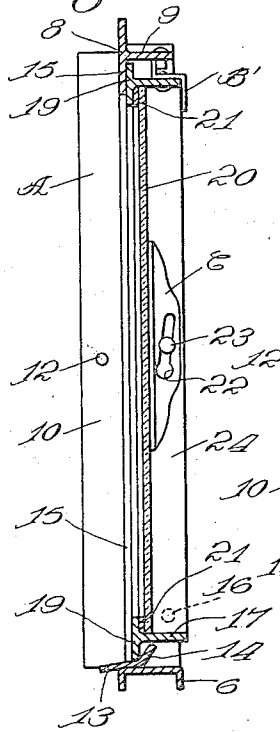


Fig. 3.

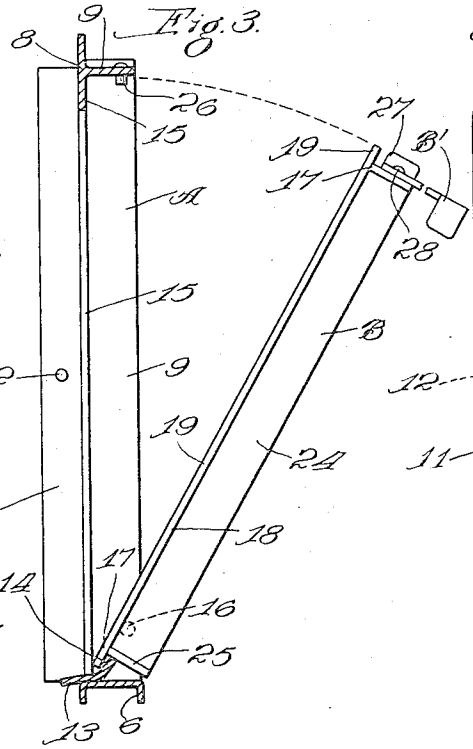


Fig. 4.

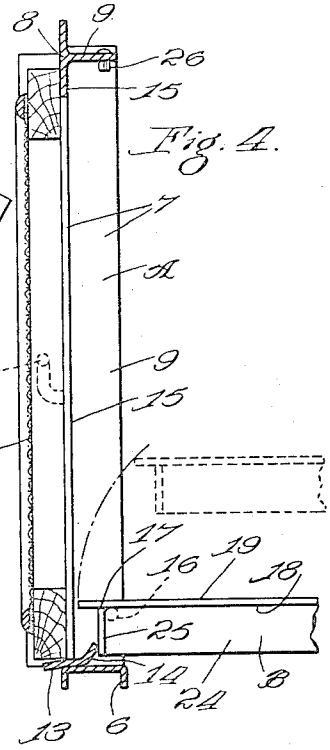
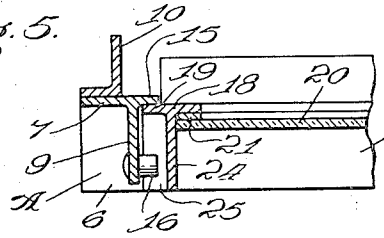


Fig. 5.



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WINDOW CONSTRUCTION

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7 Claims. (Cl. 189—69)

This invention relates to window constructions and more particularly to a metal window frame provided with a metal swinging sash.

The primary object of the invention is to provide an improved window construction which is easy and inexpensive to fabricate, and is well adapted for use as a basement window, factory window or the like.

A further object of the invention is to provide a novel seat for the sash which will serve to guide the sash into snug engagement with the frame when the sash is swung to closed position, and will also serve to prevent water from running inwardly beneath the sash.

Another object of the invention is to provide a simple mounting for the sash on the frame such as inwardly projecting studs, whereby the sash may be held in partially opened position, in fully opened position, or removed bodily from the frame, as desired.

The invention is illustrated, in a preferred embodiment, in the accompanying drawing, in which—

Figure 1 is a rear elevational view of a window structure embodying the invention; Fig. 2, a vertical sectional view taken as indicated at line 2 of Fig. 1; Fig. 3, a vertical sectional view showing the sash tilted to a partially opened position; Fig. 4, a similar view showing the sash in fully opened position, with dotted lines indicating how the sash may be removed bodily; and Fig. 5, a sectional view taken as indicated at line 5 of Fig. 1.

In the embodiment illustrated, A designates a window frame; B, a metal sash equipped with a locking device B'; and C, a device for holding panes of glass in the sash B.

The frame A may be of any desired construction, but preferably has a downwardly open channel member 6 upon which is mounted a pair of upwardly extending T-shaped structural members 7 which are rigidly connected at their top portions by a similar structural member 8. The flat faces of the T-shaped members are presented forwardly, and the rearwardly extending legs 9 form a casing for the sash B. As shown in Figs. 1–5, the frame is further provided with a pair of rigidly connected forwardly extending angle members 10 adapted to hold a screen or storm window 11 by means of engagement with inwardly projecting studs 12. The base member 6 is provided with a rigidly connected sill member 13 which is inclined forwardly and downwardly and has a rear upwardly extending flange 14 which serves as a guide and stop for the sill as will be explained below. The member 13 extends across the plane of the inwardly directed flanges 15 of the structural members 7 and 8. A pair of inwardly directed studs 16 are rigidly connected to the legs 9 in rear of and slightly above the sill 13. These studs greatly facilitate the manufacture of the three-position window and enable the sash to be removed bodily without employment of any movable parts other than the sash itself.

The metal sash comprises a perimetral frame formed of top and bottom T-shaped structural members 17 which are joined by vertical uprights 18 of similar construction. Like the frame members, the flat faces of the T-shaped structural members are presented forwardly to provide a smooth face having an outwardly extending flange 19 adapted to fit within the frame and bear against the inwardly directed flange 15 of the frame A. If desired, panes of glass 20 may be pressed snugly against cork gaskets 21 by means of clips C provided with slots 22 slidably mounted on studs 23 which are fixedly secured to the rear legs 24 of the uprights 18. The rearwardly extending legs of the members 17 extend across the full width of the sash and thereby provide lips 25 extending beyond the legs 24 of the uprights 18. The frame A may be provided at its top portion with a fixed stud 26 to be engaged by a projection 27 of the locking device B' which is pivotally connected to the sash B at 28.

In order to open the window from the position shown in Figs. 1 and 2, the device B' is unlatched and the sash B is permitted to swing rearwardly to the position shown in Fig. 3. In this partially opened position, the lower edge of the outwardly directed flange 19 will bear forwardly against the inwardly directed flange 15 of the frame and rearwardly against the studs 16.

If it is desired to further open the window to the position shown in Fig. 4, the sash B may be raised until the lips 25 engage the studs 16 and thereupon the sash may swing down to the position shown in full in Fig. 4, where the lips 25 bear forwardly against the sill member 13 and rearwardly against the studs 16. The weight of the sash will hold it securely in this position. If desired, the sash may be removed entirely by lifting the sash bodily from the position shown in Fig. 4 as indicated by the dotted lines. This feature is very desirable in basement windows, for example, when it is desired to pass coal or other bulky objects through the frame.

The parts may all be joined by welding, if de-

sired, and the structure is rigid and durable. By mounting the studs 16 on the frame and having the flanges of the sash cooperate therewith, the use of tracks, links and other costly parts is entirely avoided.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

I claim:

1. A window construction comprising: a frame comprising inwardly directed top and side flanges and rearwardly directed side flanges; and a sash having an outwardly directed perimetral flange adapted to fit snugly within said frame; and bear against said inwardly directed frame flanges, said rearwardly directed side flanges being unobstructed except for a pair of inwardly directed studs fixedly mounted thereon to engage the sash flange and partially support the sash when tilted to open position.

2. A structure as specified in claim 1, in which the base portion of the frame is provided with guide means adapted to receive the lower portion of the sash perimetral flange and guide the sash into snug engagement with the inwardly directed frame flanges when the sash is tilted to closed position.

3. A window structure comprising: a frame having at its top and side portions an inwardly directed flange and a rearwardly directed flange, and said frame having at its bottom portion a forwardly and downwardly inclined sill member; a sash having an outwardly directed perimetral flange adapted to fit within the rear flange of said frame and rest on said sill member, and said sash having a rearwardly extending base flange; and a pair of inwardly extending studs fixedly mounted on the side portions of said frame so as to engage the perimetral sash flange when the sash is tilted to partially open position, and engage the base flange of the sash when the sash is tilted to fully open position.

4. A window structure comprising: a frame having at its top and side portions an inwardly directed front flange and a pair of inwardly extending fixed studs in rear of said front flange; a sash adapted to fit snugly against the front flange of the frame when in closed position; and flange-means on said sash whereby the sash may be held in partially opened position by engagement with the front flange of the frame and the studs, combined with means whereby the sash may be lifted slightly and held in fully opened position or bodily removed from the frame.

5. A structure as specified in claim 4, in which the last mentioned means comprises a sill member at the base of the frame having a rearwardly and upwardly extending flange adapted to be engaged by the flange means of the sash when in fully opened position.

6. A window structure comprising: a metal frame having a downwardly open channel member base provided on its upper side with a forwardly and downwardly extending sill member, and top and side members of T-shaped structural members mounted on said base with their flat faces forward; a pair of inwardly extending studs fixedly mounted on the rear legs of the side structural members near said base; and a metal sash adapted to fit in said frame comprising top and bottom T-shaped structural members joined by vertical uprights of like material so that the flat faces form a front perimetral frame, said perimetral frame and rear legs of the sash being adapted to cooperate with the studs and frame to hold the sash in a desired position.

7. A window construction comprising: a frame having rearwardly directed side flanges; a forwardly and downwardly directed sill flange mounted on the base of said frame and having a rearwardly and upwardly extending guide flange adapted to form a seat for a sash flange; a sash adapted to fit within said frame and having an outwardly directed flange adapted to rest on said guide flange; and an inwardly directed stud fixedly mounted on one of the side flanges of the frame so as to engage the sash flange and partially support the sash when tilted to open position.

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