United States Patent [19]

Anderberg et al.

[11] **3,722,142**

[45] **Mar. 27, 1973**

[54] **MOUNTING BRACKET FOR OVERHEAD WINDOW**

[75] Inventors: **Axel W. Anderberg,** Los Angeles; **George A. Taylor,** LaCrescenta, both of Calif.

[73] Assignee: **A. W. Anderberg Manufacturing Co.,** Los Angeles, Calif.

[22] Filed: **June 16, 1971**

[21] Appl. No.: **153,517**

[52] **U.S. Cl.**.....**49/248,** 49/252

[51] **Int. Cl.**.....**E05d 15/28**

[58] **Field of Search**.....49/246–252; 16/163

[56] **References Cited**

UNITED STATES PATENTS

1,193,101	8/1916	Wilson	49/249
1,106,791	8/1914	Eklund	49/248
2,825,939	3/1958	Teggelaar	49/249

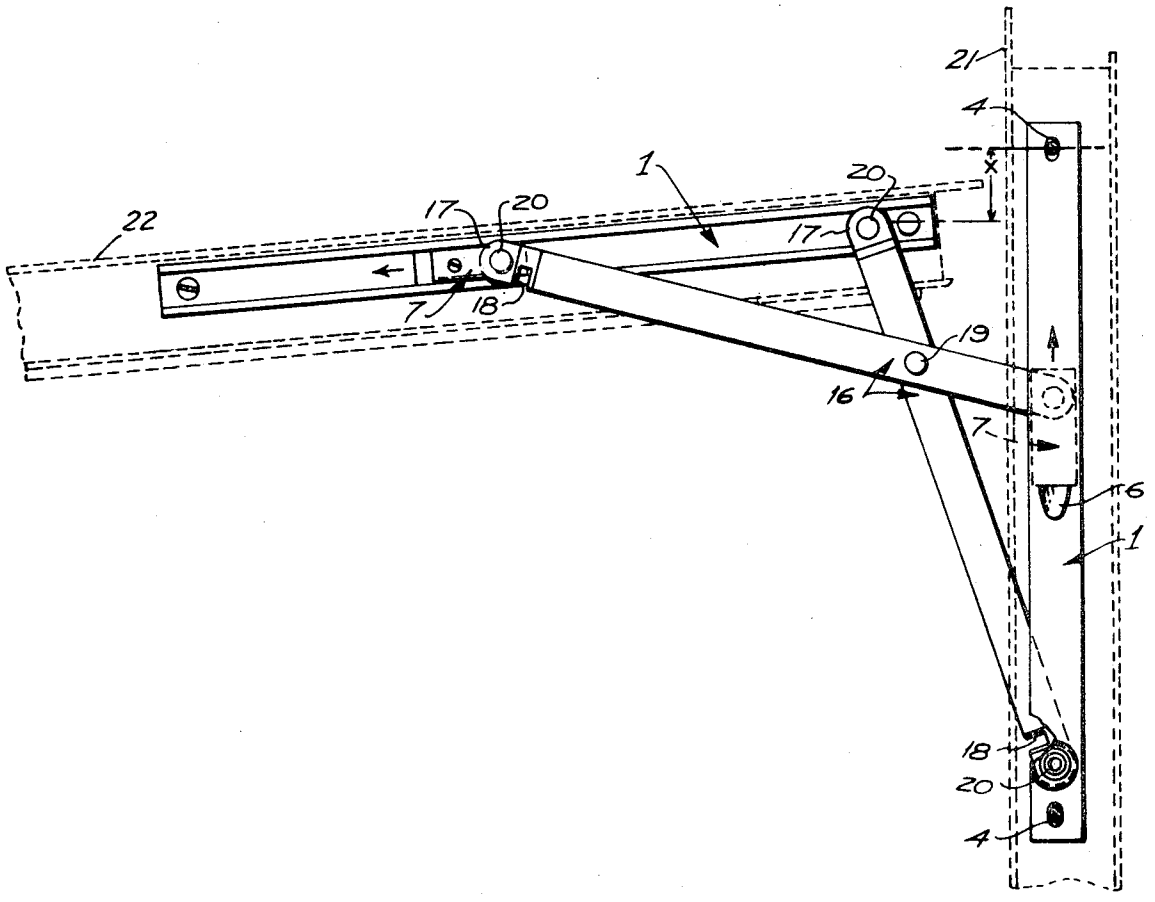
Primary Examiner—Kenneth Downey

Attorney—Lyon & Lyon

[57] **ABSTRACT**

A mounting bracket for overhead windows wherein both the window frame and window have guide members. A pair of brace members are pivotally connected intermediate their ends to form four pivoting extremities, two of which are pivotally connected at a fixed axis to the two guide members, and two are pivotally connected to friction slides movable along the slide bars.

8 Claims, 9 Drawing Figures



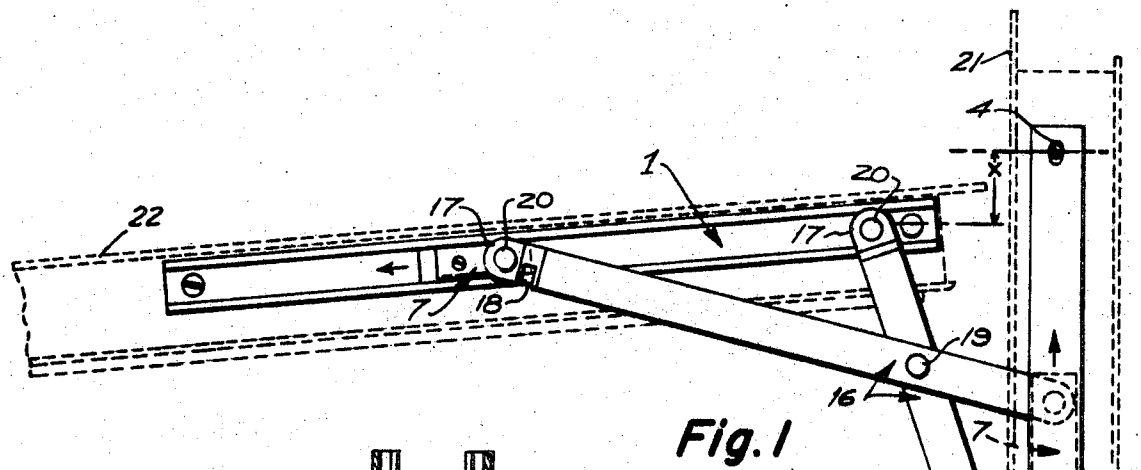


Fig. 1

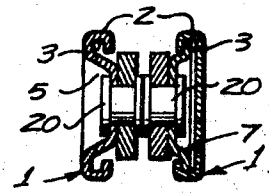


Fig. 5

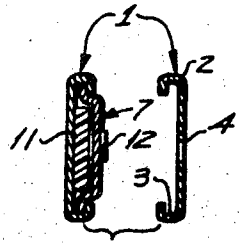


Fig. 6

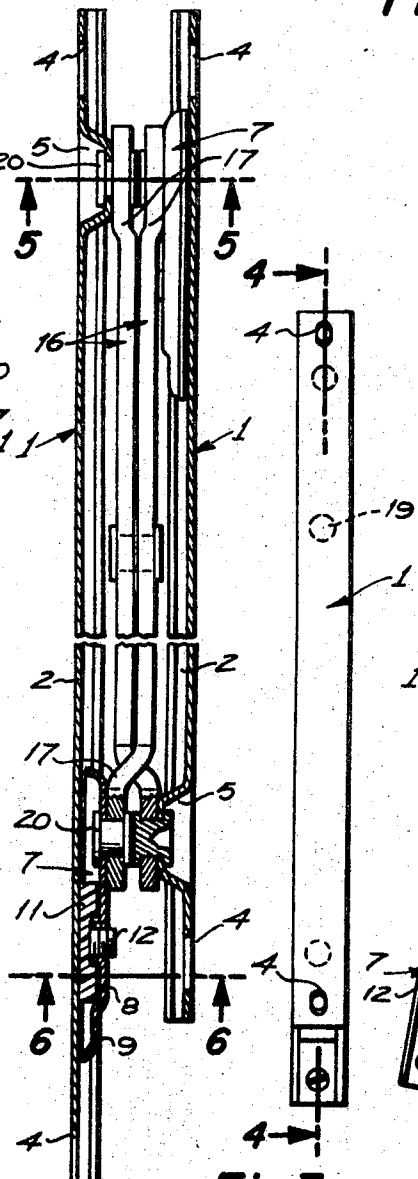


Fig. 4

Fig. 3

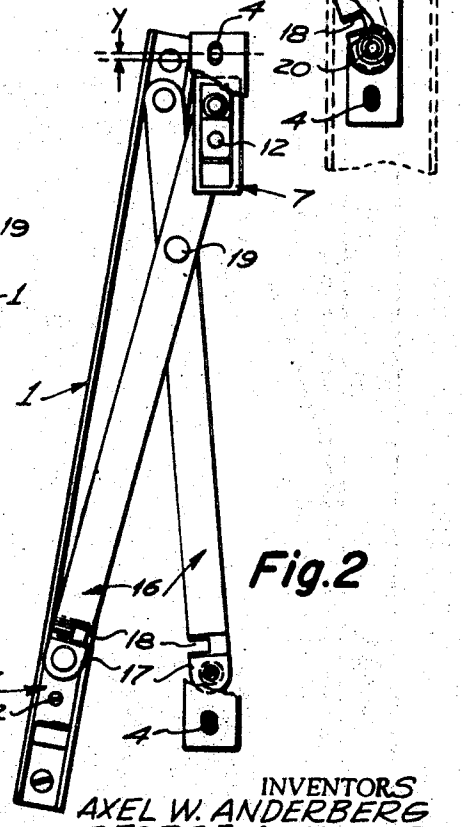


Fig. 2

INVENTORS
AXEL W. ANDERBERG
GEORGE A. TAYLOR
BY
Lyon & Lyon
ATTORNEYS

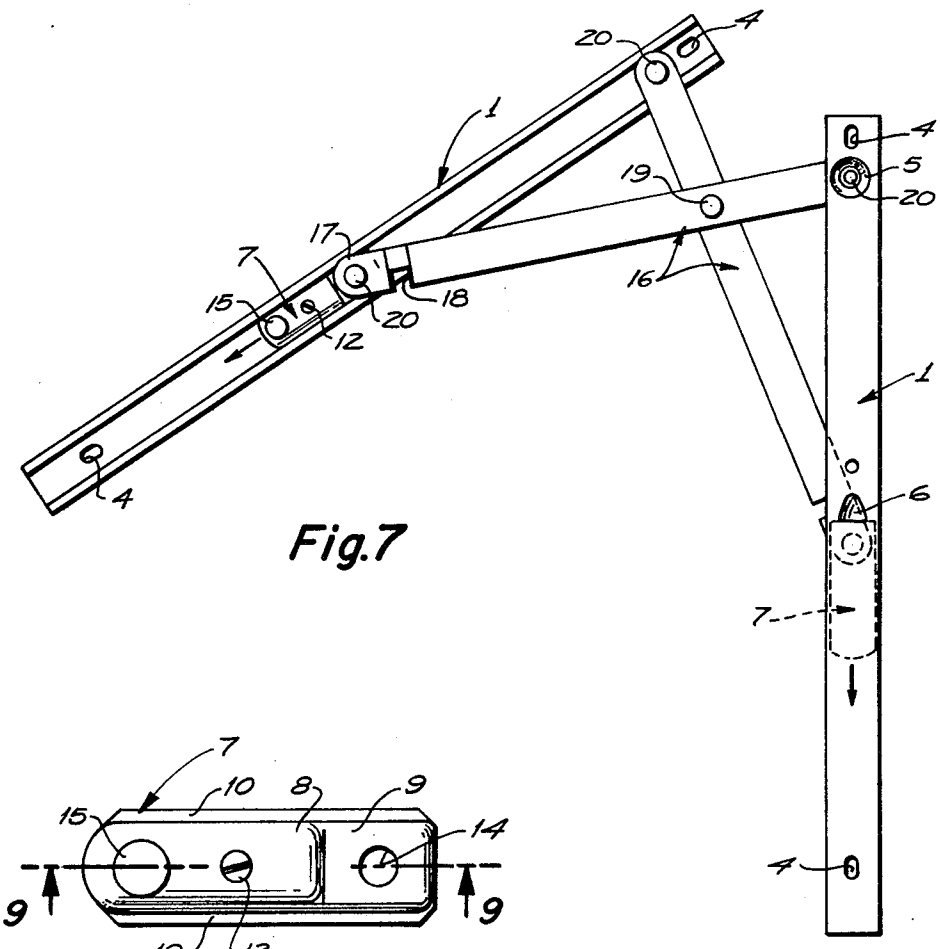


Fig.7

Fig.8

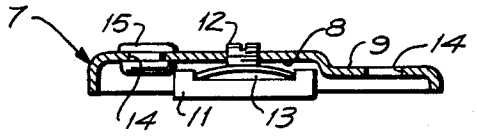


Fig.9

INVENTORS
AXEL W. ANDERBERG
GEORGE A. TAYLOR
BY
Lyon Lyon
ATTORNEYS

MOUNTING BRACKET FOR OVERHEAD WINDOW

BACKGROUND OF THE INVENTION

Because of the inherently unbalanced condition of overhead windows; that is, windows horizontally pivoted at or near their upper end, it has been preferred to pivot windows about a vertical axis at or near one side. Typical of mounting brackets for vertically pivoted windows are those shown in our previous U.S. Pat., Nos. 2,784,459 and 3,345,777. Usually, horizontally pivoted windows, when used, open through a small arc, such as 30°, or less. While such windows are satisfactory for ventilation, they are not suitable if the window might be needed for escape in the event of fire. They would not do, for example, as school or hospital windows. If such windows are arranged to open wider, for example, to a horizontal or near horizontal position, difficulty is encountered to provide enough dependable friction within the limited space normally available.

SUMMARY OF THE INVENTION

The present invention is directed to a mounting bracket for horizontally pivoted windows which overcomes most of the difficulties present in brackets for this purpose, and is summarized in the accompanying objects:

First, to provide a mounting bracket intended to be used in pairs for mounting and supporting pivoted windows, wherein a guide track and friction slides are provided an both the window frame and the window, thereby providing four friction slides acting in concert to hold the window in any selected position, the friction slides being adjustable to frictionally support windows of different size.

Second, to provide a mounting bracket, of the type indicated in the preceding object, which involves a minimum number of parts, many of which are in identical pairs or nearly so, thereby minimizing the tooling required to make the parts.

Third, to provide a mounting bracket, of the type indicated in the preceding objects, wherein the friction slides are moved to positions accessible for adjustment when the window is opened only a slight amount.

Fourth, to provide a mounting bracket for windows, wherein the bars of a pair of brace bars are pivotally connected to each other intermediate their ends, one extremity of each brace bar being pivotally joined at a fixed axis to a guide track, and the other end being pivotally connected to a friction slide, slidable along a corresponding guide bar, all of the parts being foldable into a compact bundle between the slide bars.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of the mounting bracket for overhead windows, the bracket being shown in its extended position, and the window and its frame being indicated fragmentarily and by broken lines.

FIG. 2 is a side view, similar to FIG. 1, showing the mounting bracket near its closed position.

FIG. 3 is a side view, corresponding to FIGS. 1 and 2, showing the mounting bracket in its completely closed position.

FIG. 4 is an enlarged fragmentary longitudinal sectional view of the mounting bracket, taken through 4—4 of FIG. 3.

FIGS. 5 and 6 are transverse sectional views, taken through 5—5 and 6—6 respectively, of FIG. 4.

FIG. 7 is a side view, similar to FIG. 1, showing the parts of the mounting bracket assembled in a different manner than that shown in FIG. 1.

FIG. 8 is an enlarged side view of a friction slide employed in the mounting bracket.

FIG. 9 is a longitudinal sectional view thereof, taken through 9—9 of FIG. 8.

The mounting bracket includes a pair of guide tracks 1, which may be identical. Each guide track includes folded side margins 2, forming guide channels or tracks 3. Near each extremity, each guide track is provided with a mounting hole 4 to receive a screw for attachment to the window or its frame. Near one end, each guide track is provided with a raised or hollow boss 5 extending to a height slightly above the folded side margins 2. Intermediate its ends, each guide track is provided with a stop shoulder 6, formed by pressing a portion of the guide track inwardly between the guide channels 3.

A pair of friction slides 7 is provided; these may be similar to the friction slides as shown in the aforementioned patents. Each friction slide includes a raised central portion 8, and at one end, a step 9 of lesser height. Bordering the central portion and the step are side flanges 10, which are slidably received in the guide channels or tracks 3. Disposed within the central portion 8 is a friction shoe 11, formed of plastic material, and an adjustment screw 12 is screwthreaded through the central portion for engagement with the friction shoe. If desired, a leaf spring 13 may be interposed between the shoe and the set screw, as indicated in FIG. 9.

As the friction slide 7 may be used in different ways, it is preferred to provide two bearing holes 14, formed near an end of the central portion 8, and in the step 9. If the bearing hole in the step 9 is used, a stop rivet or blank rivet 15 may close the other hole so as to retain the friction shoe 11, as indicated in FIG. 9.

A pair of brace bars 16 are provided, which may also be identical. Each brace bar is provided with an offset portion 17 at either or both ends, and which are provided with mating notches 18 so that the brace bars may be moved into superposed relation.

The brace bars are joined intermediate their ends by a journal rivet 19. The journal rivet is preferably located about one-third the distance from corresponding ends of the brace bars, these ends being the upper ends of the brace bars when the mounting bracket is assembled. The ends of the brace bars receive journal rivets 20 for connection to the hollow bosses 5 or the friction slides 7.

The interconnections between the brace bars, guide tracks and friction slides may vary. Referring to FIGS. 1 and 2 particularly, the pair of friction slides 7 may be joined to one of the brace bars, in which case both ends of the other brace bar are pivotally connected to the hollow bosses 5. With this arrangement, one guide track is mounted on the window frame 21 in such a manner that its boss 5 is located at the lower end. Whereas, the other guide track, mounted on the side of the window 22, is located adjacent the upper end of the window. As indicated in FIG. 2, when the mounting bracket is in its closed or near closed position, one friction slide is near the upper end of the frame guide track

and the other friction slide is near the lower end of the window guide track.

By so arranging the parts of the window bracket, the upper margin of the window moves downwardly with respect to the window frame a short distance, indicated by X in FIG. 1. When the window is moved from its open position, shown in FIG. 1, toward its closed position, as indicated in FIG. 2, the upper end or margin of the window moves upwardly with respect to the window frame, and in so moving, also moves laterally toward the window frame so as to effectively engage an intervening seal, not shown. That is, the mounting shown in FIGS. 1 and 2 particularly enables the window to move in such a manner as to obtain a good seal between the window and its frame when the window is closed.

Some types of windows do not require this movement in order to effect a seal. In such case, a friction slide 7 may be provided at the lower end of each brace bar 16, as shown in FIG. 7, and the guide tracks 1 from both the frame 21 and the window 22 may be disposed with their hollow pivot bosses 5 adjacent their upper ends.

In both arrangements illustrated, the friction slides 7 are so disposed that when the window is opened, partially or fully, the friction slides project beyond the brace bars so that the set screws 12 are accessible for the purpose of adjusting the friction provided by the shoe 11. By reason of the fact that four friction shoes 11 are provided in a pair of the mounting brackets, no one or one pair of friction slides need carry the entire friction load; that is, because the friction load is distributed, the frictional force provided by each slide is reduced, yet the total force is adequate for holding the window in any extended position, even its fully extended position, wherein the friction loads are maximum in order to hold the window open.

While particular embodiments of this invention have been shown and described, it is not intended to limit the same to the details of the constructions set forth, but instead, the invention embraces such changes, modifications and equivalents of the various parts and their relationships as come within the purview of the appended claims.

We claim:

1. A window mounting bracket, comprising:
   a. a pair of guide tracks adapted for mounting in confronting relation on a window frame and a window fitted therein respectively;
   b. a friction slide movable along each guide track;
   c. a pair of brace bars pivotally connected together intermediate their ends to form four extended ends, two of the ends being pivotally connected to the friction slides, and the remaining two ends being pivotally connected directly to respective guide tracks.

2. A window mounting bracket, as defined in claim 1, wherein:
   a. both of the friction slides are joined to one of the brace bars at respectively opposite ends thereof.

3. A window mounting bracket, as defined in claim 1, wherein:
   a. the friction slides are joined one to each of the brace bars.

4. A window mounting bracket assembly intended for use in pairs to support a window in its frame for movement about a horizontal axis near the top of the window between a closed position and an outwardly extended position, each bracket assembly comprising:
   a. a pair of similar guide tracks;
   b. a pair of similar friction slides one being received in each of the guide tracks and having adjustment means to vary the frictional force exerted by the slides;
   c. a pair of brace bars pivotally connected intermediate their ends;
   d. pivotal connections between selected ends of the brace bars and selected ends of the respective guide tracks;
   e. pivotal connections between the remaining ends of the brace bars and the respective friction slides;
   f. the pivotal connections being so located as to permit movement of the guide tracks between a confronting relation with the brace bars disposed between the guide tracks and an extended position wherein the guide tracks are disposed in angular relation.

5. A window mounting bracket assembly, as defined in claim 4, wherein:
   a. the pivotal connections between the friction slides and the brace bar ends being so located as to expose the friction slides for access to the adjustment means when the guide tracks are angularly disposed.

6. A window mounting bracket assembly, as defined in claim 4, wherein:
   a. both of the friction slides are joined to one of the brace bars at respectively opposite ends thereof.

7. A window mounting bracket assembly, as defined in claim 4, wherein:
   a. the friction slides are joined one to each of the brace bars.

8. A window mounting bracket assembly, as defined in claim 4, wherein:
   a. the connections between the guide tracks, friction slides and brace bars being so located that, when a pair of bracket assemblies are joined to a window and its frame, movement of the window toward the open position causes a downward movement of its upper side away from the upper side of the frame, and movement of the window toward the closed position causes upward movement of its upper side toward the upper side of the frame.

* * * * *