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Shaner

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[54] **ROOM AIR CONDITIONER MOUNTING ARRANGEMENT**

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[51] **Int. Cl.** **E06b 9/06,** F24f 5/00

[58] **Field of Search** ..... 98/99.4, 87, 99.5, 99.6, 98/99 A, 99.7, 94; 160/231, 84 V, 225; 62/262

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[57] **ABSTRACT**

A room air conditioner window mounting arrangement provided with an extendable frame carrying a member of accordian configuration having frame engaging latching means for holding the frame in a selected extended position.

2 Claims, 2 Drawing Figures

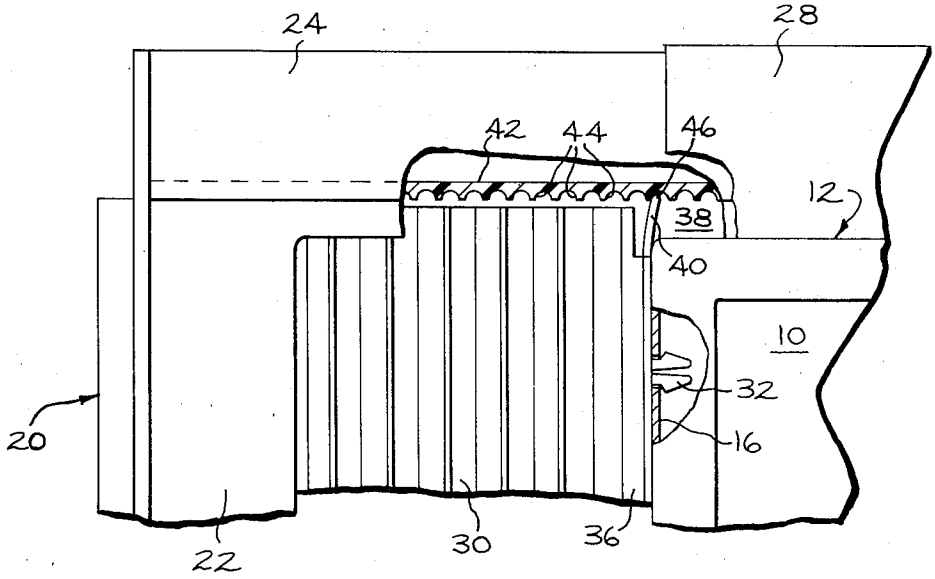


FIG. 1

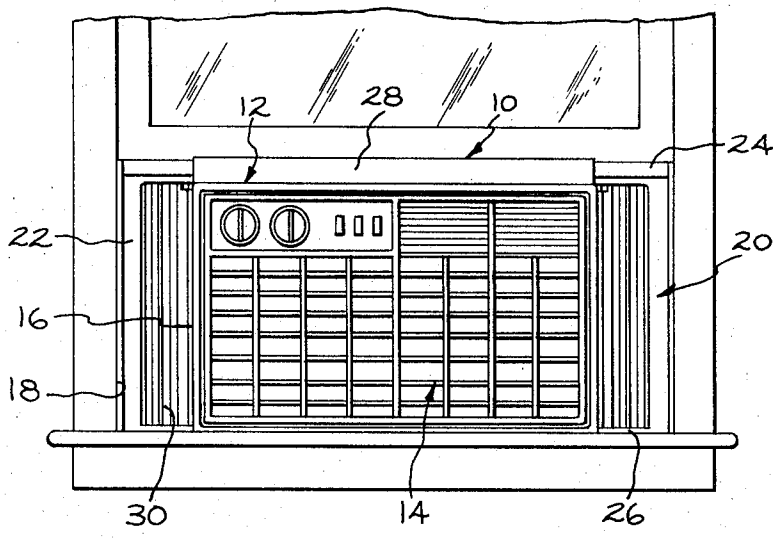
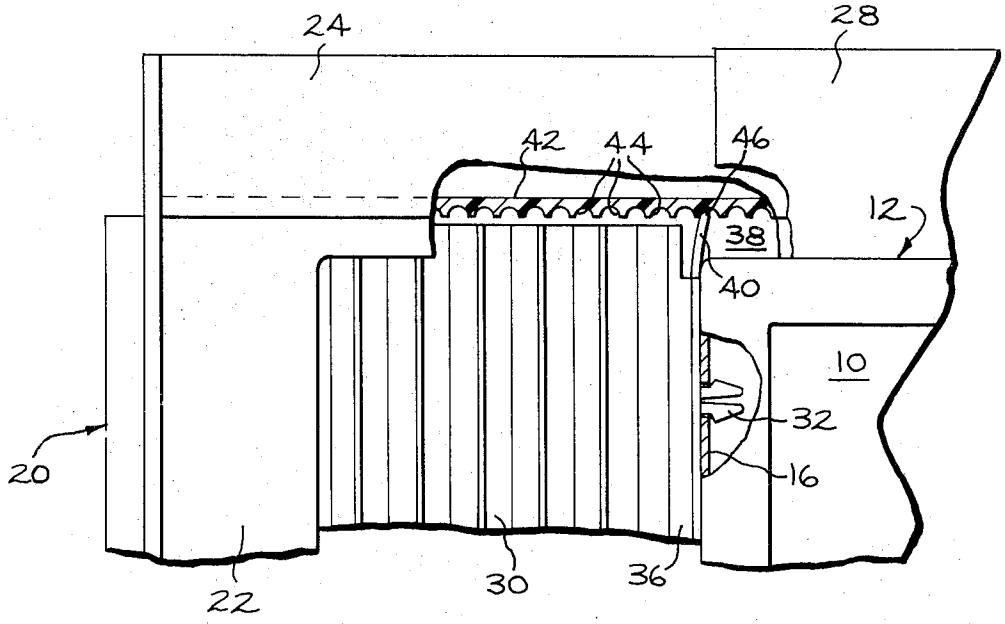

12
28
10
24
22
20
16
18
30
14
26

FIG. 2


24
28
42
44
46
12
38
40
10
32
16
20
22
30
36

ROOM AIR CONDITIONER MOUNTING ARRANGEMENT

BACKGROUND OF THE INVENTION

1. Field of Invention

Since room air conditioner are usually of a cross-sectional area less than the area of the window opening in which they are mounted, it has been common practice to provide, either as a separate item or integral with the room air conditioner casing, adjustable mounting means for bridging or blocking the space between the room air conditioner casing and the adjacent sides of the window opening. Many of these mounting arrangements include a C-shaped frame member movable relative to the air conditioner and including an end member for engaging the window side or jamb and parallel upper and lower leg members. A particularly useful material for blocking or filling the open space within the frame is an extensible member of pleated or accordian configuration.

2. Description of Prior Art

As taught in U.S. Pat. No. 3,111,076 — Martin, Jr. et al., the extensible member is found to be normally in its retracted position and is carried in the frame member with its upper and lower ends received in trackways formed in the leg members. One end of the extendable member is secured to the air conditioner casing and the other end is secured to the end member. As the frame member is moved relative to the casing, the extendable member stretches or tends to straighten out to bridge or close the frame opening. In many mounting arrangements, and particularly in lightweight mounts, the tendency of the pleated material is to return to its normal or retracted form, that is, the spring force exerted in its extended form, is so great that the self-folding action of the extensible member can pull the frame member away from the jamb and towards the air conditioner case so that it is necessary to provide fastening means for preventing this action. For fastening purposes, the aforementioned Martin et al patent teaches the use of a resilient clip which secures the movable frame relative to its guide track. However, the use of such fastening means is an inconvenience and makes it particularly difficult for an individual to install a room air conditioner in a window opening. Specifically, in a one-man operation, one hand is required to balance the air conditioner within the window opening and the other hand is used to extend the C-shaped frame member into engagement with the window jamb. Thus, a third hand is required to set the resilient clip as this must be done while the frame is held in engagement with the jamb against the biasing force of the self-folding sheet material.

The present invention has as its primary object the provision of an improved locking means which operates automatically to lock the frame member in a selected extended position relative to the air conditioner.

SUMMARY OF THE INVENTION

In accordance with the illustrated embodiment of the present invention, there is provided a room air conditioner window mount for blocking the space between the side of a window mounted air conditioner and the adjacent side of a window frame or jamb, the mount comprising a C-shaped frame movable relative to the air conditioner with the end thereof engaging the window jamb having parallel upper and lower leg members. An extensible member of accordian configuration has one of its ends secured to the air conditioner and the other end secured to the end engaging the window. A resilient tab means on said extensible member adjacent the air conditioner engages notches in at least one of the parallel legs to maintain the frame in its selected extended position.

BRIEF DESCRIPTION OF THE DRAWINGS

With reference to the accompanying drawings:

FIG. **1** is a front elevational view of a window opening with an air conditioner including the mounting means of the present invention mounted therein; and

FIG. **2** is an enlarged fragmentary elevational view with parts broken away to show the locking means of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With particular reference to FIG. **1** of the drawing there is shown a room air conditioner **10** comprising a generally rectangular casing **12** adapted to be mounted within a window opening. The casing **12,** of course, contains the usual components of an air conditioning apparatus for treating room air circulated through the casing by way of a grill **14** forming the front wall of the air conditioner. In mounting such an air conditioner in a window opening, the side walls **16** of the casing are usually spaced from the vertical side walls **18** of the window frame so that means must be provided for blocking such space or spaces. Such mounting arrangements are normally adjustable in order to accommodate or be applicable to window openings of various widths.

The illustrated mounting arrangement comprises a C-shaped frame member **20** including a vertical end member **22,** an upper leg **24** and a lower leg **26** respectively slidably received in an upper guide **28,** which may be secured to the top wall of the casing, and a lower guide (not shown) similarly provided on the bottom or lower side of the casing generally within the plane of the window frame. The opening or space defined by the C-shaped frame and the adjacent side wall **16** of the air conditioner casing is blocked or covered by a curtain **30** of pleated or accordian configuration. The curtain is made from a resilient plastic material such as polypropylene and is set prior to its installation in the frame **20** in the folded or retracted position. This folded or retracted position is therefore the normal position for the curtain **30** and, due to the characteristics of the material, it will tend to return to its retracted position when it is extended.

With reference now to FIG. **2,** one end of curtain **30** is provided with a relatively stiff vertical member **36** which is suitably secured, as by means such as spring clamps **32,** to the air conditioner casing side wall **16** while the opposite end thereof is secured to the vertical end member **22** of the frame member **20.** The upper and lower end or edge portions of the curtain **30** are received in trackways **38** which are defined by the U-shaped configuration of the legs **24** and **26.**

During shipping of a room air conditioner of this type, in which the mounting means is part of the air conditioner the C-shaped members **20** are completely retracted into engagement with the respective side walls **16** of the casing. After positioning the room air

conditioner in a window opening, these members are extended into engagement with the adjacent sides **18** of the window frame. As they are thus extended, the normally pleated sheet is extended and tends to straighten out during the relative movement of the C-shaped frame members **20.** Usually, during such installation, it is only necessary to balance the casing on the window sill within the window opening with one hand and use the remaining hand to extend first one and then the other frame member into engagement with the adjacent window frame sides. However, the self-storing characteristic of the pleated curtain **30** has a force such that unless the extended C-shaped member **20** is at the same time secured to either the window frame or the window sash, this member tends to retract once it is released.

The present invention is directed particularly to an improved locking or latching means by which the window mount may be locked or latched automatically in the open position when the frame member is extended to engage the side walls **18.**

To this end there is formed on the vertical member **36** a resilient latching tab or holding member **40.** The tab **40** is formed integral with the vertical member **36** and projects to a position above the upper ends of curtain **30.** Formed in the base wall **42** of the U-shaped leg **24** are a plurality of parallel receiving grooves or notches **44** which receive the upper or free end **46** of the resilient tab **40.** The holding member **40,** and more specifically the end **46,** is in constant engagement with the notches **44.** Any movement of the frame **20** by the built-in force of the curtain to retract is prevented by the engagement of the tab **40** with the grooves **44,** and the frame is held in the extended position it may be placed in with relation to the casing **12.** In effect, the resistance of the tab **40** with respect to a cooperating notch **44** is sufficient to prevent movement of the frame **20** relative to the casing **12.** When it is desired to extend the frame **20** into engagement with the wall **18,** the holding action of tab **40** with notch **44** is easily overcome by a moderate amount of force and the end **46** of tab **40** merely detents across the notches **44** until the appropriate extended position of frame **20** is attained. At this time the end **46** of tab **40** is effective in its engagement with cooperating notch **44** to automatically hold frame **20** and more specifically member **22** in contact with side wall **18.**

When it is desired to remove the room air conditioner **10** from the window, all that is required for a release of the holding member **40** from the receiving groove **44** is movement of the frame member **20** to its retracted position. The self-folding characteristic of the curtain material will generally assist in retracting the frame member **20** toward the casing **12** and, as the frame member is manually pushed to a completely closed position, the frame member **20** is automatically held in its retracted position by the engagement of end **46** of tab **40** with a cooperating notch in the same manner it was held in its extended position.

It should be apparent from the above description of the present embodiment of the present invention that the resilient tab **40** is effective in holding the frame member **20** automatically in any selected extended position relative to the casing **12.** While the latching means, notches **44** and resilient tab **40** has been shown cooperating with the upper leg **24** of frame member **20,** the latching means could be associated with the lower leg **26** or both legs depending on the design requirements of a particular product.

While there has been shown and described a specific embodiment of the invention, it will be understood that it is not limited thereto and it is intended by the appended claims to cover all such modifications as fall within the true spirit and scope of the invention.

I claim:

1. In an adjustable air conditioner window mount of the type having a C-shaped frame with parallel leg members straddling the air conditioner in sliding relationship, and an extensible curtain fixed within the C-shaped frame and tending to exert a restoring force as the frame is extended outwardly from the air conditioner, the improvement comprising:

a notched surface on at least one of said leg members facing the air conditioner; and

a resilient tab fixed adjacent the air conditioner and extending into engagement with the notched surface thereby resisting the restoring force and retaining the frame in a selected extended position relative to said air conditioner.

2. The invention of claim **1** wherein the curtain has a first end portion secured to the air conditioner and the other end secured to the C-shaped member and said resilient tab is formed on and projects from said first end portion.

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