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M. D. ULICH

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ROOM AIR CONDITIONER FRONT

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FIG. 1.

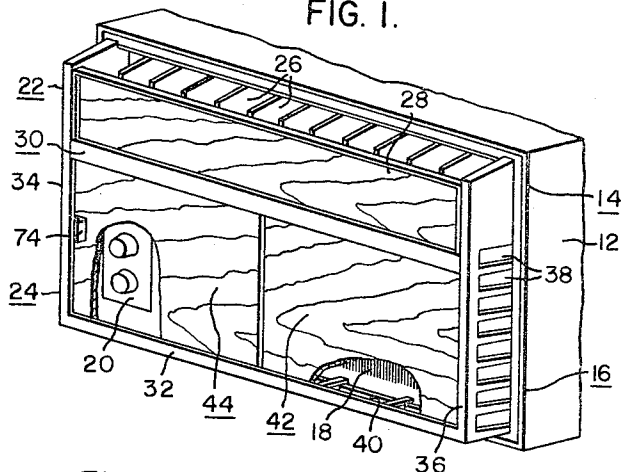


FIG. 5.

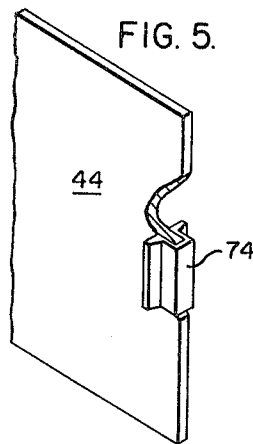


FIG. 2.

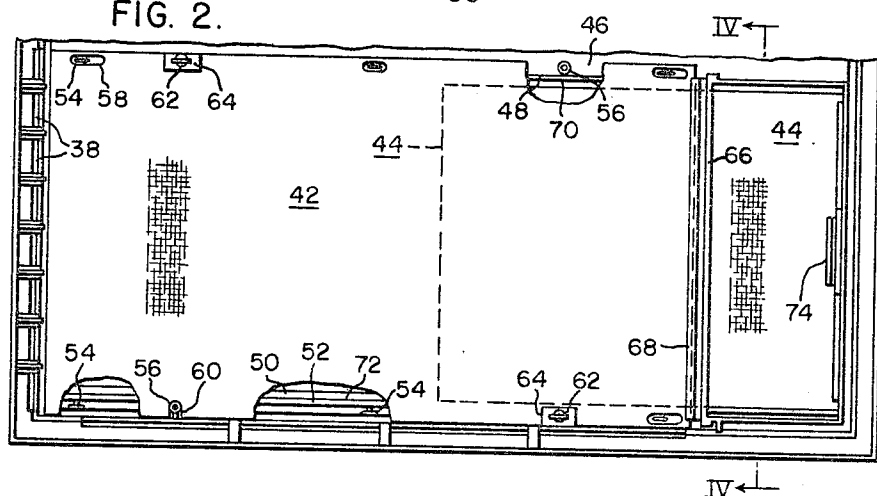


FIG. 4.

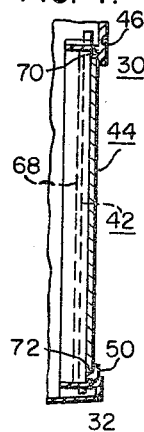
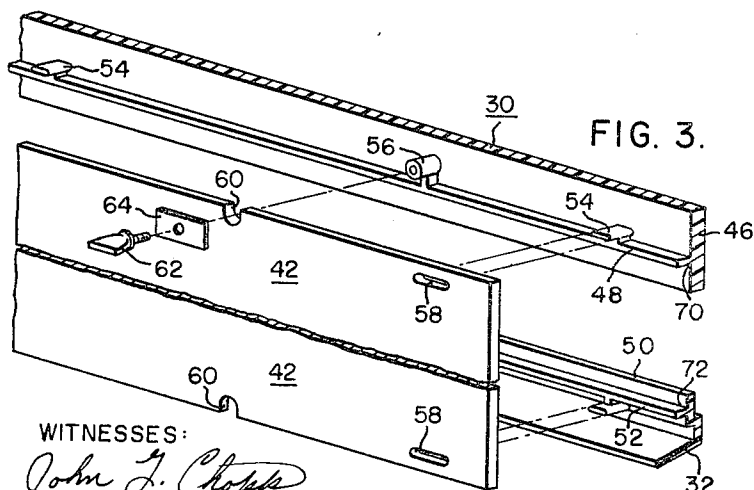


FIG. 3.



WITNESSES:

*John L. Chopp*  
*James T. Young*

INVENTOR

Michael D. Ulich

BY *Edward C. Gray*  
ATTORNEY

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## ROOM AIR CONDITIONER FRONT

Michael D. Ulich, Columbus, Ohio, assignor to Westinghouse Electric Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

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7 Claims. (Cl. 62-262)

This invention relates to a front structure for a room air conditioner.

One type of currently favored front arrangement for a room air conditioner includes one or more solid panels presenting finished decorative faces. The panelled appearance is considered to be more compatible with the decor of the room in which the air conditioner is installed than a front having a substantial louvered area. This invention is concerned with a front structure of this general character.

One object of the invention is the provision of a front structure including releasably-mounted and reversible-face panels arranged in a way that the panels contribute to the structural strength of the front, and in which the reversal of the faces of the panels is relatively simply and easily accomplished.

In accordance with the invention, the front assembly includes an open-face peripheral frame spaced forwardly of the bottom portion of the room air conditioner face and provided with a first decorative panel releasably mounted on the peripheral frame, and an overlapping second panel carried for horizontal sliding movement by track means formed in the upper and lower horizontal members of the frame. As currently preferred, the stationary panel is dimensionally generally coextensive in area with the room air inlet face of the evaporator spaced behind the fixed panel. The sliding panel is movable from a closure position hiding the air conditioner controls at the side of the bottom portion room inlet to an open position giving access to the controls. However, under normal operating conditions the panels will be in a position entirely hiding the room air inlet and the adjacent controls at the front face of the air conditioner casing. One face of both panels has a decorative pattern of one selected character, while the opposite face of back panels has a different decorative pattern. By removing the individual panels and reversing their faces, an alternate decorative scheme is made available.

The invention will be described in greater detail in connection with the accompanying drawing incorporating one embodiment thereof by way of example, and wherein:

FIGURE 1 is an isometric view of the room air conditioner front according to the invention;

FIG. 2 is a fragmentary, partly broken elevational view of the rear face of the front assembly;

FIG. 3 is an exploded, partly broken, isometric view of a part of the rear face of the front showing the manner in which the stationary panel is secured to the upper and lower peripheral frame members;

FIG. 4 is a vertical section corresponding to one taken along the line IV-IV of FIG. 2; and

FIG. 5 is a fragmentary isometric view of the sliding panel.

Referring to FIG. 1, the casing 12 of the room air conditioner has the conventional rectangular box shape. The front structure is mounted upon the room-side face of the casing. This room-side face of the casing is generally split along a horizontal line into a top portion 14 through which conditioned air is discharged into the room and a bottom portion 16 of somewhat larger area and into which room air to be conditioned is admitted. The bottom portion 16 has most of its area occupied by an

evaporator 18 with most of the remainder of the area taken up by the controls escutcheon 20 at the side of the evaporator.

The front assembly according to the invention is correspondingly divided by the member 30 into an upper portion 22 and a lower portion generally designated 24. The upper portion includes a series of horizontally adjustable vanes 26 for controlling the horizontal pattern of the air being discharged therethrough, and a tiltable deflector 28 which may be swung from the vertical position illustrated in FIG. 1 to a horizontal position underlying the vanes 26. The deflector carries a panel insert (also designated 28) which preferably has opposite faces carrying decorative patterns which correspond with the decorative patterns of the panels of the lower portion and may be reversed for obtaining a visual match. The arrangement of the upper portion of the front assembly is dealt with in copending Wegman patent application Serial No. 474,615 and Schwartz patent application Serial No. 474,614, both assigned to the same assignee as this invention.

The bottom portion 24 of the front assembly includes means forming a generally rectangular, open-face, peripheral frame defined at the top and bottom by the horizontal members 30 and 32, and at the sides by vertically extending left and right members 34 and 36, respectively. The assembly has appreciable depth so that the panel supporting part of the frame is spaced in front of the casing enough to permit the required air flow into the casing without undue resistance. To accommodate this air flow the right member 36 includes a number of vertically-spaced openings 38 generally corresponding to the height of the evaporator, and the bottom wall includes similar openings 40 for the width of the evaporator. These openings admit room air to be conditioned into the space in front of the evaporator and permit the use of the imperforate decorator front panels 42 and 44 carried by the peripheral frame.

These panels 42 and 44 are carried in overlapping relation by the peripheral frame and together cover a rectangular area which is generally dimensionally coextensive with the rectangular area of the bottom portion 16 of the casing front face. The stationary panel 42 is rectangular and is secured in a vertical plane slightly rearwardly of the vertical plane through which the overlapping sliding panel is movable. The panel 44 may be moved to the right from its position shown in FIG. 1 to give access to the controls 20.

Turning to FIGS. 2-4 for details of the structure, it will be seen in FIG. 3 that the top horizontal member 30 is T-shaped in cross section and includes a vertical bar 46 and horizontal stem or flange 48. The bottom horizontal member 32 also includes a generally T-shaped upper part comprising vertical bar 50 and horizontal stem or flange 52. The stationary panel 42 is seated with its top and bottom margins against the rear edge of the horizontal flanges 48 and 52. Both the top and bottom horizontal members 30 and 32 of the peripheral frame are provided with rearwardly projecting locating pins 54 of a somewhat flattened character in cross-section, and alternating locating and securing posts 56. The flattened locating pins 54 are received by the horizontal slots 58 provided along the top and bottom margins of the panel 42 in locations to register with the locating pins 54 regardless of whether one face or the opposite face of the panel 42 is presented to the room. Likewise, openings 60 register with the securing posts 56. Thumb screws 62 and rectangular washers 64 are provided to secure the panel 42 against the generally rear face of the peripheral frame by simply turning the screws into the posts.

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Referring now particularly to FIG. 2, the upright divider 66 which is molded as an integral part of the frame is located to register with the dividing line between the side-by-side room air inlet 18 and the control escutcheon 20. The divider includes a rearwardly-offset lip 68 which projects toward the evaporator side to overlap the one vertical edge of the stationary panel 42. The upright divider 66 not only secures the one vertical edge of panel 42 and stiffens the frame, but also serves as a stop for the sliding panel (as will later be explained), and hidden when the sliding panel 44 is in installed position so as to not detract from the appearance of the front.

The upper track means for the sliding panel 44 is formed by the inside corner 70 below stem 48. The bottom track means is formed by inside corner 72 above stem 52. The cross sectional shape of the frame members forming these tracks extend for substantially the full width of the front assembly. Thus, since the fixed panel 42 seats against the rear edge of the horizontal flanges 48 and 52, clearance for the sliding panel 44 is available along the front of the fixed panel.

To facilitate sliding the panel 44, the left edge of the panel (as viewed in FIG. 1) is provided with a grip 74 (FIGS. 1 and 5) having oppositely projecting flanges thereon. The forwardly projecting flange may be grasped by the air conditioner user to slide the panel to the side. The then rearwardly projecting flange serves as a stop which abuts the upright divider 66 limiting the opening of the panel 44 to a position only permitting access to the control panel.

In accordance with the invention, both panels 42 and 44 have one face provided with one selected decorative pattern, such as a wood grain pattern, while the opposite face of each of these panels has a different selected decorative pattern, such as a fabric (as indicated in FIG. 2), or a different type of wood grain pattern. Thus, if the user of the air conditioner desires the one pattern rather than the other, the faces of both panels may be reversed. In the case of the fixed panel, the reversal is accomplished by simply removing the thumb screws 62 (after the front assembly as a whole is removed from its normally operative position on the front face of the room air conditioner casing), and turning the panel end for end, or top for bottom and turning these screws back in. The sliding panel 44 is removed by simply lifting it upwardly so that its bottom edge clears the bottom track, as is a conventional arrangement with most sliding doors, and then turning it top for bottom.

It will be apparent from FIGURE 2 that by arranging the securing posts and locating pins in a symmetrical array, and the cutouts and openings accordingly in the top and bottom margins of the fixed panel, the desired registry of these elements is obtained in the face reversals.

When the fixed panel is in place, it contributes substantial rigidity to the front assembly as a whole, and this permits the front assembly to be fabricated of a relatively lightweight molded plastic member.

I claim as my invention:

1. A room air conditioner including:

a casing with a room side face including a lower portion mounting evaporator means and control means; a peripheral frame spaced forwardly from said bottom portion and generally coextensive in area with said bottom portion;

a pair of decorator panels carried by said frame;

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means stationarily securing one of said panels generally forwardly of said evaporator means; and track means on said frame for carrying the other of said panels for horizontal sliding movement to selectively cover and uncover said control means.

2. A room air conditioner according to claim 1 wherein:

said stationary one of said panels is dimensionally coextensive in an area with the inlet face area of said evaporator and is secured in a plane rearwardly of the plane through which said sliding panel is movable.

3. An air conditioner according to claim 1 wherein: both of said panels include one face having one selected decorative pattern and the opposite face of each panel has another selected decorative pattern.

4. An air conditioner according to claim 1 wherein: said peripheral frame includes rearwardly-projecting locating pins symmetrically arranged along its top and bottom members; and

said stationary panel includes registering cutout portions along its upper and lower marginal edges receiving said pins irrespective of which face of said stationary panel abuts said frame.

5. In a room air conditioner:

a casing having a room-side face including a lower portion presenting, in side-by-side relation, an air conditioner control panel and an evaporator inlet face occupying, respectively, minor and major parts of said lower portion area;

a front assembly for said room-side face, said front assembly including means forming an open-face peripheral frame dimensionally generally coextensive with said lower portion and spaced forwardly therefrom;

a first panel dimensionally generally coextensive in area with the area of said evaporator inlet face;

means stationarily securing said first panel to said peripheral frame forwardly of said evaporator inlet face;

said peripheral frame including top and bottom members having horizontal-extending track means formed therein; and

a second panel supported by said track means, said second panel being horizontally slidable from a closure position blocking a view of said control panel, to an open position permitting access to control panel.

6. An air conditioner according to claim 5 including: both said first and said second panels include one selected pattern on one face thereof, and a different selected pattern on their opposite faces.

7. An air conditioner according to claim 6 wherein: said securing means for said first panel includes rearwardly-projecting, symmetrically-arranged, locating pins on the top and bottom members of said frame; and

said first panel includes correspondingly arrayed cutouts along the top and bottom margins thereof for receiving said pins irrespective of which face if forwardly presented.

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WILLIAM J. WYE, *Primary Examiner*.