Nov. 29, 1960 J. B. FEDERICO 2,961,846

AIR CONDITIONING ASSEMBLY

Filed July 1, 1957

2 Sheets-Sheet 1

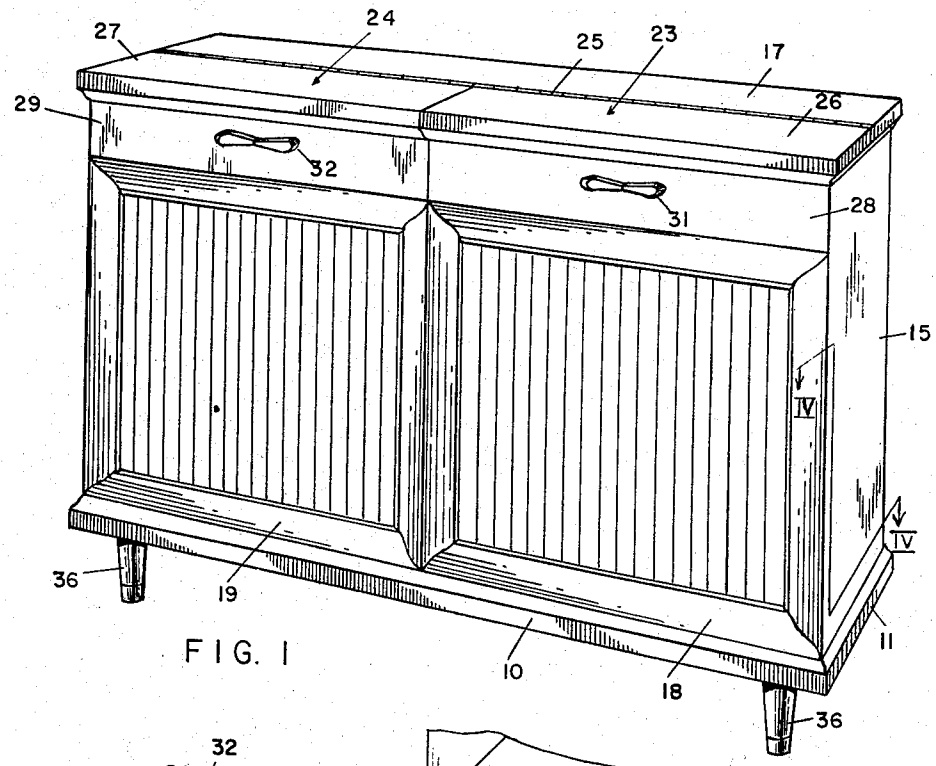


FIG. 1

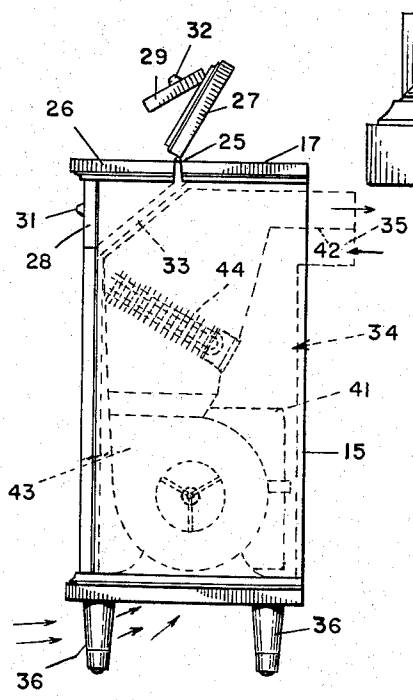


FIG. 2

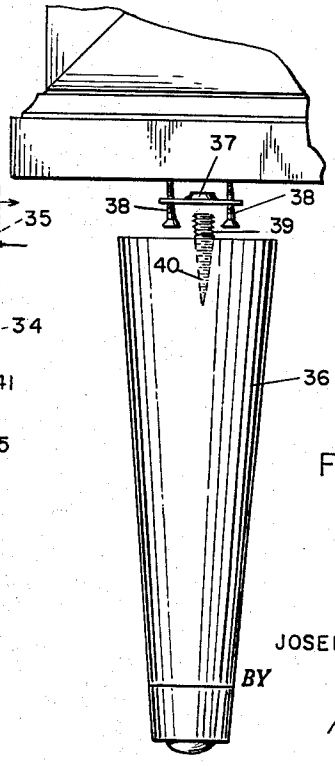


FIG. 5

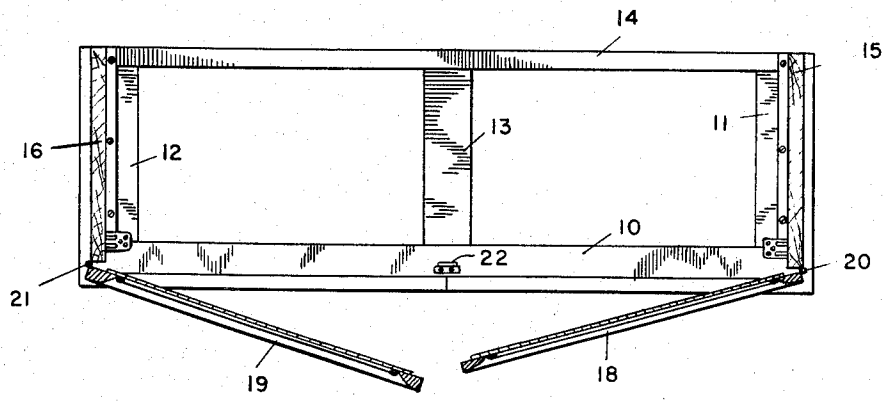
INVENTOR.
JOSEPH B. FEDERICO.
BY
Herman Seid
ATTORNEY.

Nov. 29, 1960 J. B. FEDERICO 2,961,846

AIR CONDITIONING ASSEMBLY

Filed July 1, 1957 2 Sheets-Sheet 2

FIG. 4



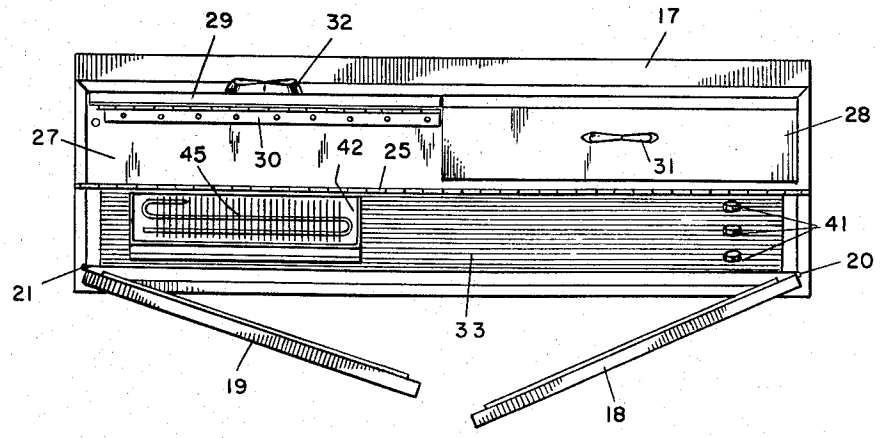


FIG. 3

INVENTOR.
JOSEPH B. FEDERICO.
BY Herman Seid
ATTORNEY.

United States Patent Office 2,961,846
Patented Nov. 29, 1960

2,961,846

AIR CONDITIONING ASSEMBLY

Joseph B. Federico, Buffalo, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed July 1, 1957, Ser. No. 669,000

3 Claims. (Cl. 62—261)

This invention relates to air conditioning equipment and more particularly to a decorative cabinet structure for housing a room air conditioning unit.

It is presently the practice to install room air conditioners with their sheet metal casings exposed to the room in which they are placed. While this is perfectly adequate for most types of installations, there are certain types of installations, such as executive offices, in which it is desirable that the air conditioner be housed in a cabinet which is of a style in keeping with that of the remainder of the furniture of the room. It is for such use that the cabinet of the present invention is contemplated.

It is therefore the main object of this invention to provide a cabinet which may be placed over an installed air conditioner to make the appearance of the latter consistent with the decor of the room in which the air conditioner is used.

Another object of the present invention is to provide a decorative cabinet for an air conditioner which acts as a support for the air conditioner in addition to accomplishing the above object.

It is still another object of the present invention to provide an air conditioner cabinet which, in addition to accomplishing the foregoing objects, will permit access to the working parts of the air conditioner without necessitating the removal of the cabinet from its installed position. Other objects and attendant advantages of the present invention will be readily perceived hereafter.

The present invention relates to a cabinet which is adapted to be installed over a room air conditioner for the purpose of making the style and appearance of the air conditioner consistent with the furnishings of the room in which it is placed. The cabinet is of generally rectangular parallelepiped configuration and is adapted to be positioned over an installed air conditioner. In addition to giving the desired appearance, the cabinet also assists in supporting the air conditioner. This invention will be more readily understood when the following portions of the specification are read in conjunction with the accompanying drawings wherein:

Figure 1 is a perspective view of the cabinet of the present invention;

Figure 2 is a side view of the cabinet of Figure 1, showing the relationship between the cabinet and a console type of air conditioner;

Figure 3 is a plan view of the cabinet of Figure 1, showing various doors thereof in different positions;

Figure 4 is a plan view partly in section taken along line IV—IV of Figure 1; and

Figure 5 is an enlarged detail view of the leg structure of the cabinet.

The cabinet of Figure 1 is of generally rectangular parallelepiped shape. This cabinet is preferably made of wood, but it can be made of any other suitable material. Elements **10** and **14** are connected by struts **11**, **12** and **13** (Figure 4) to define a base or frame member. The foregoing base elements are rigidly secured to each other as shown in Figure 4 by any suitable fastening means

(not shown). Affixed to base elements **11** and **12** are side panels **15** and **16**, respectively. Rigidly secured to the tops of side panels **15** and **16** is rear top panel **17**.

Hinged to the front edges of side panels **15** and **16** by hinges **20** and **21** are normally closed doors **18** and **19**, respectively. Doors **18** and **19** are held in their normally closed position by a bullet-latch mechanism **22**, mounted on base element **10**, which co-acts with suitable recesses (not shown) in the bottoms of doors **18** and **19**. These doors are opened only whenever it is necessary to gain access to the internal structure of the air conditioner which is housed within the cabinet.

Doors **23** and **24** (Figure 1) are hinged by hinge **25** to the front edge of rear top panel **17**. Doors **23** and **24** consist of top panels **26** and **27**, respectively, having depending front portions **28** and **29**, respectively, hinged thereto. As can be seen from Figure 3, hinge **30** joins panels **27** and **29**. A similar hinge (not shown) joins panels **26** and **28**. As can be seen from Figures 2 and 3, either door **23** or **24** may be selectively placed in an open position by merely grasping handle **31** or **32** and lifting upwardly. This will cause panel **26** or **27** to rotate about hinge **25** which attaches it to top rear panel **17** until the top surface of panel **26** rests on the top surface of panel **17**. Depending front panel **28** swings about the hinge coupling it to panel **26** until such time that panel **28** lies on panel **26** in surface-to-surface relationship. It will be appreciated that door **24** operates independently of door **23** in the same manner described above relative to door **23**. When doors **23** and **24** are in the open position they expose panel **33** which is rigidly secured in any suitable manner to side panels **15** and **16** and to top rear panel **17**.

A console type of air conditioner is adapted to fit within the above described housing. This air conditioner is mounted on the wall of a room by suitable wall brackets (not shown) so that the base of the air conditioner is spaced above the floor. The air conditioner contains a compressor **41** (Figure 2). Insofar as pertinent here, the air conditioner has a condenser air duct **35** which is adapted to project through a window or opening in the wall of a room in a manner which is well-known in the art. Duct **35** is divided into two sections by partition **42**. As can be seen from Figure 2, condenser cooling air is induced through the lower portion of duct **35**, into the eye of scroll fan **43**, thence through the condenser coil **44**, back through the upper portion of duct **35** to the out-of-doors. Room air is induced through a suitable aperture (not shown) in the bottom of the air conditioner, and then blown by a suitable fan (not shown) through evaporator coil **45** (Figure 3) into the room to be conditioned. A suitable partition (not shown) is provided between the condenser and evaporator chambers of the air conditioner in a manner which is well known in the art. The above-described console type of air conditioner is of the general type shown in U.S. Patent No. 2,324,313.

It is to be again noted at this point that the air conditioning unit **34** is a complete entity in that it contains its own sheet metal casing so that it may function in an operative manner completely independently of the cabinet of the present invention. However, as discussed above, in certain types of installations, such as executive offices, it is desirable that the air conditioner have an appearance which is consistent with the decor of the room in which it is installed. For this purpose the cabinet of the present invention is adapted to be placed over the already installed air conditioner **34**. As can be seen from Figure 4, there is no rear wall to the cabinet. Thus the cabinet may be slid over the installed air conditioner **34** so as to present an appearance that a cabinet is positioned in the room, rather than an air conditioner. Legs **36** are secured to base elements **11** and **12** as shown in

the drawings. Legs 36 are adjustable in the following manner: A tapped, metallic bracket 37 is adapted to be secured to base elements 11 or 12 by means of screws 38. A stud 39 is suitably affixed to leg 36 as by a wood screw portion extension 40, and is adapted to thread into the tapped portion of bracket 37. Legs 36 may be adjusted in height to accommodate air conditioner 34. This can be accomplished by removing legs 36 from the remainder of the cabinet and sawing them to the desired length. Studs 39 are then reinserted into legs 36, and the legs are again mounted on the base.

When the cabinet is installed in its operative position relative to the air conditioning unit 34, the base of the air conditioner rests on base elements 11, 10, 12, 13 and 14. Thus the cabinet structure, in addition to being decorative, provides an actual support for the air conditioning unit so as to relieve the strain which the air conditioning unit 34 places on the wall to which it is attached.

In the particular type of air conditioning unit 34 under consideration, room air which is to be cooled and then discharged back into the room is drawn into the unit from the bottom of the air conditioner, as shown by the arrows in Figure 2. It will be seen that base elements 10, 11, 12, 13 and 14 do not interfere with the inducing of air into the unit since air is drawn through the apertures defined by these elements (Figure 4).

When the air conditioning unit is not in operation, the doors 23 and 24 are in the position shown in Figure 1. However, if it is desired to place the air conditioner in operation, doors 23 and 24 are opened so as to expose panel 33. The air conditioner's controls (not shown) project through apertures 41 and panel 33. Furthermore, an aperture 42 is provided in panel 33, this aperture being in communication with the air discharge grille of the air conditioner 34 to permit cooled air which is discharged from the air conditioner to be projected through aperture 42 into the room which is to be conditioned. While the air conditioner is in operation, door 24 must remain open and door 23 may remain open or closed as desired.

Doors 18 and 19 provide access to the air conditioning unit 34 in the event it is necessary to repair the latter or in the event it is necessary to replace the air filter of the unit. Normally, however, they always remain in the closed position. If for any reason it is required to get into the air conditioner unit 34, doors 18 and 19 are opened as shown in Figures 3 and 4, and a front panel (not shown) on the air conditioning unit 34 is removed to permit access to the internal mechanism of the air conditioner. It can readily be seen that it is not necessary to remove the cabinet in the event that repairs to the air conditioner are required. It is especially undesirable to remove the cabinet because the air conditioning unit 34 is supported by the base structure of the cabinet as explained above.

While I have described a preferred embodiment of my invention, I desire it to be understood that it may be otherwise embodied within the scope of the following claims.

I claim:

1. An air conditioning assembly including an air conditioner having a casing housing air conditioning equipment, the casing including an inlet therein adjacent its bottom and an outlet therein adjacent its top, and a cabinet structure adapted to be installed over the air conditioner, said cabinet structure comprising a base member for supporting said air conditioner, upstanding panels secured to said base member, a top member secured to said upstanding panels, first door means hingedly connected to said panels for permitting access to said air conditioner without removal of said cabinet, a second member secured to the upstanding panels and to the top member having a first aperture therein in communication with the cooled air outlet of said air conditioner, second door means in said cabinet for selectively opening and closing said first aperture, said base member having an aperture therein in communication with the inlet of said air conditioner for permitting room air to be cooled to be induced into said air conditioner.

2. An air conditioning assembly comprising an air conditioner having a casing housing a compressor, condenser and evaporator, a condenser air duct in said air conditioner for supplying condenser cooling air to said condenser and rejecting heated condenser cooling air to the atmosphere, said casing having an inlet therein adjacent its bottom and an outlet therein adjacent its top, a cabinet structure adapted to be installed over said air conditioner, said cabinet structure comprising a base member for supporting said air conditioner, upstanding panels secured to said base member, a top member secured to said upstanding panels, first door means hingedly connected to said panels for permitting access to said air conditioner without removal of said cabinet, a second member secured to the upstanding panels and to the top member having an aperture therein in communication with the cooled air outlet of said air conditioner, second door means in said cabinet for selectively opening and closing said aperture, the base member having a second aperture therein in communication with the inlet of said air conditioner for permitting room air to be cooled to be induced into said air conditioner.

3. An air conditioning assembly including an air conditioner having a casing housing air conditioning equipment, the casing including an inlet therein adjacent its bottom and an outlet therein adjacent its top, and a cabinet structure adapted to be installed over the air conditioner, said cabinet structure comprising a front member, a rear member and struts connecting said members to form a base member to support the air conditioner, side panels attached to said struts, a rear top panel attached to said side panels, first door members hingedly connected to said side panels to permit access to the air conditioner without removal of the cabinet, a member secured to the side panels adjacent the tops thereof and to the front of the top panel having an opening therein in communication with the cooled air outlet of the air conditioner, second door members for selectively opening and closing said opening, said base member having a second opening therein in communication with the air inlet of the air conditioner to permit room air to be cooled to be induced into the air conditioner.

References Cited in the file of this patent

UNITED STATES PATENTS

2,022,523	Roessler	Nov. 26, 1935
2,058,973	Goosmann	Oct. 27, 1936
2,085,703	Locke	June 29, 1937
2,112,870	Weiland et al.	Apr. 5, 1938
2,230,862	Carroll	Feb. 4, 1941
2,287,657	Wisckel	June 23, 1942
2,363,974	Kirkpatrick	Nov. 28, 1944
2,401,526	Ullman	June 4, 1946
2,775,500	Etherington	Dec. 25, 1956