

[54] **MOUNT FOR AIR CONDITIONER COMPONENTS**
[75] Inventor: **Martin LaRocca**, Staten Island, N.Y.
[73] Assignee: **The Singer Company**, New York, N.Y.
[22] Filed: **Oct. 11, 1973**
[21] Appl. No.: **405,362**

3,215,253	11/1965	Grantham	248/23 X
3,230,733	1/1966	Rutishauser et al.	62/448 X
3,323,625	6/1967	Webster	62/448 X
3,350,042	10/1967	Stewart et al.	248/22
3,631,325	12/1971	Wenz	312/341 NR X
3,712,078	1/1973	Maynard et al.	62/448

Primary Examiner—J. Franklin Foss
Attorney, Agent, or Firm—Marshall J. Breen; Chester A. Williams, Jr.; William V. Ebs

[52] **U.S. Cl.**..... **248/23, 62/448**
[51] **Int. Cl.**..... **F16m 11/04, F16m 3/00**
[58] **Field of Search**..... **248/22, 23; 62/448, 295, 62/330, 382; 312/253, 341 NR**

[56] **References Cited**
UNITED STATES PATENTS
2,257,374 9/1941 Fritz..... 62/448 X
2,259,214 10/1941 Rosenzweig 248/22
2,893,722 7/1959 Beck 248/22 X
2,937,765 5/1960 Shank..... 312/341 NR UX
3,210,957 10/1965 Rutishauser et al. 62/448 X

[57] **ABSTRACT**
A mounting pad supports a compressor, motor, motor-compressor or other unit of an air conditioner on guide rails in an air conditioner housing. The mounting pad is securable in a retracted position wherein the unit is located well within the housing and is movable along the rails to an outer position where the unit is readily accessible and can be easily replaced or repaired.

4 Claims, 6 Drawing Figures

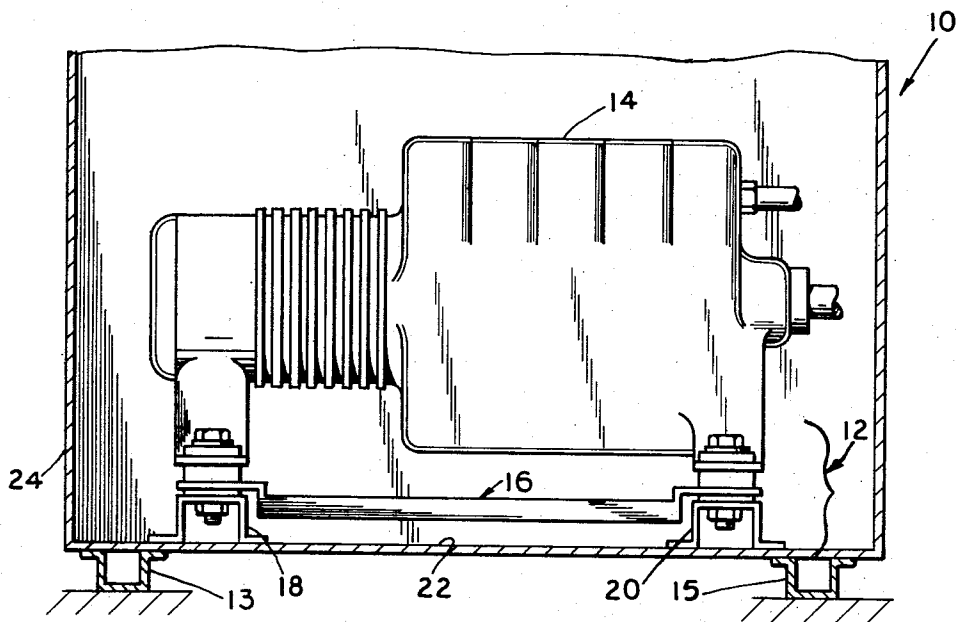


FIG. 1

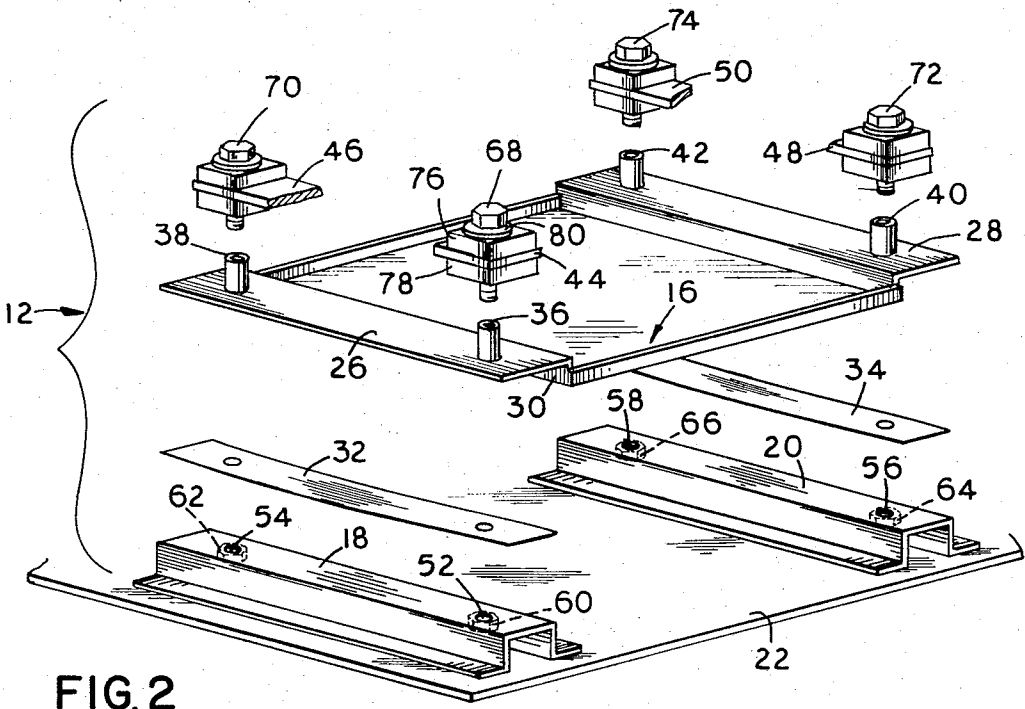
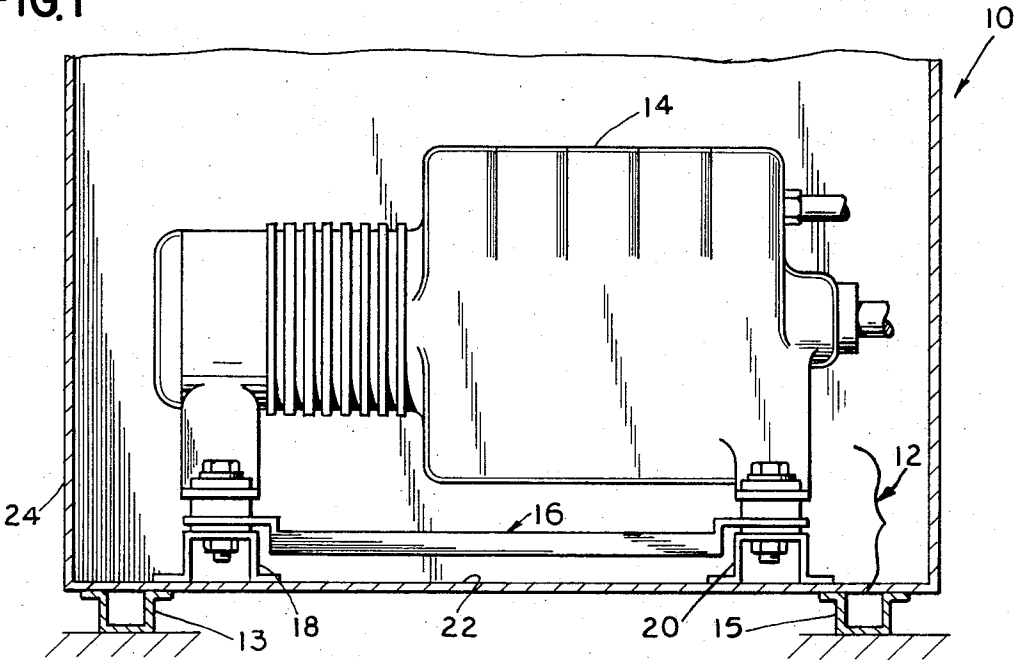


FIG.3

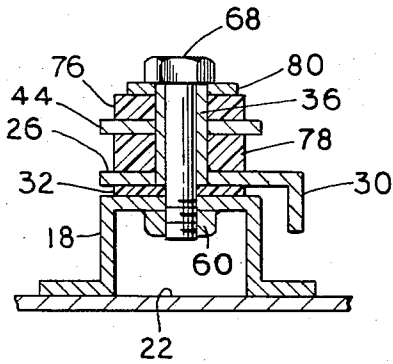


FIG.4

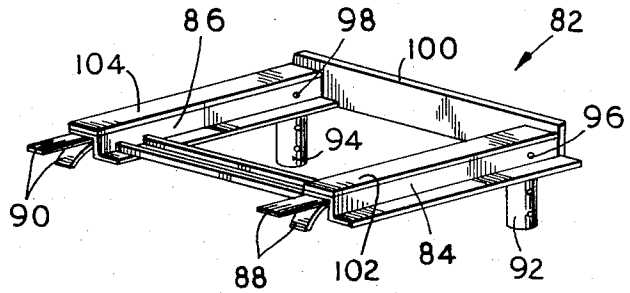


FIG.5

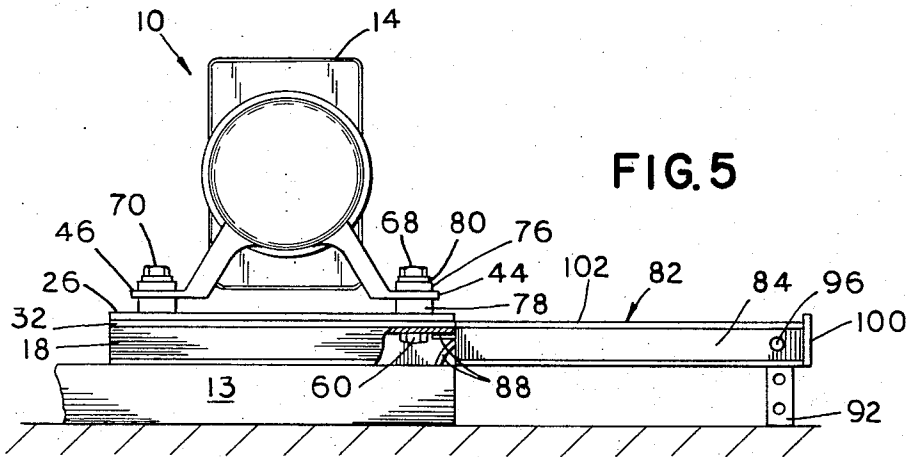
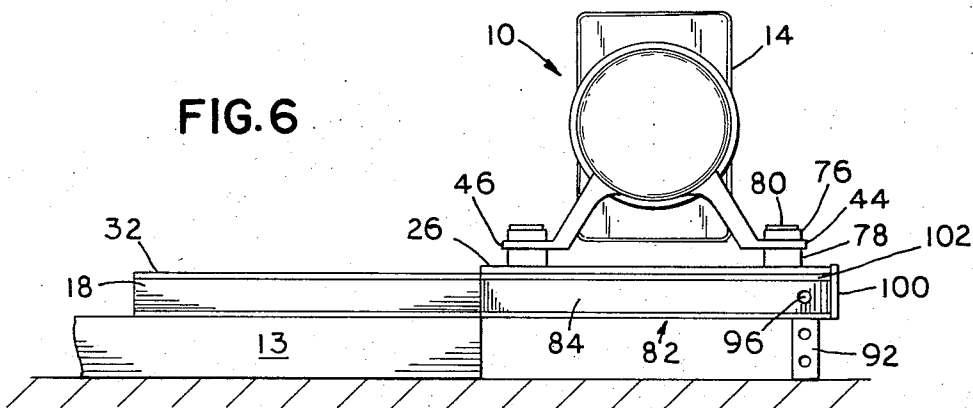


FIG.6



MOUNT FOR AIR CONDITIONER COMPONENTS

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to a mount for one or more components of an air conditioner and more particularly is directed to a mount which includes a support on which an air conditioning component can be moved between a position well within the air conditioner housing and a more readily accessible location.

2. Description of the Prior Art

It is known to mount a motor, compressor and other components of a temperature controlling unit on a slidable support, as for example in the manner of U.S. Pat. Nos. 2,462,115, 2,257,374, 2,454,727 and 3,323,625, that is, so as to permit such components to be easily moved into and out of the unit. In accordance with my invention there is provided an improved mount which is simple and inexpensive to construct and which permits easy withdrawal of said components from the housing of an air conditioner.

One object of the invention is to provide an air conditioner unit with an improved mount for an operable component of the unit including a mounting pad on which said component can be moved into and out of the unit but which can be positively fixed within the air conditioner housing to locate and maintain the component in a definite position from which it can not be accidentally displaced.

Another object of the invention is to provide an air conditioner unit with an improved mount for an operable component of the unit including means for predetermining the compression of vibration dampening cushions between which the component may be secured to the mounting pad and structure for slidably supporting the mounting pad.

Other objects and advantages of the invention will become apparent hereinafter.

SUMMARY OF THE INVENTION

A mount for an air conditioner component according to the invention includes a pair of guide rails affixed to the floor of the housing of the air conditioner, a gull-shaped mounting pad for said component supported on the rails and movable on the rails when not secured thereto whereby the component may be moved into and out of the air conditioner housing, sleeves on the mounting pad, and means for securing the mounting pad and air conditioner component within the housing including removable fastening elements extending through the sleeves, component and guide rails. Preferably the sleeves on the mounting pad are provided with vibration dampening cushions between which structure of said component may be secured and which may be subjected to a predetermined degree of compression by the fastening elements. It is also preferable that a low friction material be provided between the mounting pad and guide rails to enable easy sliding of the mounting pad on the rails.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary front elevational view taken at one end of the housing of an air conditioner and showing a compressor mounted therein in accordance with the invention;

FIG. 2 is an exploded view of the mount of the invention;

FIG. 3 is a vertical sectional view taken through a sleeve on the mount;

FIG. 4 is a perspective view of a portable support for use in connection with the mount of the invention;

FIG. 5 is a side elevational view showing the portable support of FIG. 4 positioned for use; and

FIG. 6 is a view similar to FIG. 5 showing a compressor moved out onto the mount.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, reference character 10 designates a roof top air conditioner which includes a mount 12 according to the invention for a compressor 14. As shown, the air conditioner is supported on structural members 13 and 15. The mount 12 includes a mounting pad 16 for the compressor and guide rails 18 and 20 which are affixed as by welding or in any other suitable manner to the bottom wall 22 of the housing 24 of air conditioner 10. The guide rails 18 and 20 serve as slidable supports for the mounting pad 16 and as a structure to which the mounting pad and compressor 14 may be affixed when in a retracted position within the air conditioner housing.

As shown the mounting pad 16 is gull-shaped and includes wing-like portions 26 and 28 on opposite sides of a depending portion 30. The wing like portions 26 and 28 are supported by the guide rails 18 and 20, respectively, with the depending portion 30 extending therebetween and in contact with side surfaces of the guide rails. Preferably a low friction surface which may be of "Teflon" or any other suitable material is provided between the wing-like portions of the mounting pad and guide rails to permit easy sliding of the mounting pad on the guide rails when not secured to them. It is convenient for this purpose to use low friction plastic tapes 32 and 34 having a pressure sensitive adhesive on one side only and to attach such tapes to the rails.

Sleeves 36, 38, 40 and 42 are welded to the wing-like portions of the pad and extending therethrough project through flanges 44, 46, 48 and 50 which are part of the structure of the compressor. The sleeves may be aligned with holes 52, 54, 56 and 58, respectively, in the guide rails (also with corresponding holes provided in the tapes), and with nuts 60, 62, 64 and 66 which are welded to the underside of the guide rails and register with the holes therein. The compressor 14 is secured in a retracted position within housing 24 by aligning the sleeves of the mounting pad 16 with the holes in the guide rails and threading bolts 68, 70, 72 and 74 into the nuts 60, 62, 64 and 66, respectively. The bolts extend through washer-like vibration dampening cushions of rubber or other resilient material (one being provided on each side of each of the compressor flanges as shown at 76 and 78) (FIG. 3), and a metal washer 80 is provided just under the bolt heads for the purpose of imparting compressive force to the cushions as the bolts are tightened. The upper cushions such as cushion 76 extend beyond the sleeves before the bolts are tightened and the sleeves limit the compressive force which may be applied, the maximum compressive stress which may be applied being reached when the bolts are tightened to the point where the bolt heads engage the sleeves.

When it is desired to replace or repair the compressor, bolts 68, 70, 72 and 74 are removed and the compressor mounting pad 16 is slid along guide rails 18 and

20 to move the compressor from its retracted position to a position where it is more accessible. It is convenient to provide a portable support 82 having guide rails 84 and 86 which may be brought into alignment with the guide rails 18 and 20, respectively, to serve as extensions thereof and along which the mounting pad 16 may be slid until the compressor is located well beyond the housing structure. As shown, such portable support 82 includes extending parts 88 and 90 which may be inserted between guide rails 18 and 20 of the mount 12 and air conditioner housing wall 22. The portable support also includes foldable legs 92 and 94 pivotally mounted at 96 and 98 for use in supporting the outward end of the rails 84 and 86 at the level of the guide rails 18 and 20. Transverse member 100 serves as a stop for the mounting pad 16. Preferably low friction surfaces as shown at 102 and 104 are provided on the guide rails 84 and 86 respectively.

While the invention has been described in its preferred form, it is to be understood that the words which have been used are words of description rather than of limitation and that changes within the purview of the appended claims may be made without departing from the true scope and spirit of the invention.

What is claimed is:

1. Means for supporting a compressor, motor, motor-compressor, or other unit of an air conditioner in an air conditioner housing, said means comprising parallel guide rails affixed to the housing, a mounting pad for

said unit including a pair of flanges supported on the rails and depending structure between the flanges to engage inside surfaces of the guide rails whereby movement of the mounting pad is restricted to directions parallel to the directions in which the guide rails extend, a slide between each rail and associated flange of the mounting pad permitting the mounting pad to be easily moved on the rails, a plurality of sleeves on the mounting pad, removable fastening elements extendable through the unit, sleeves, slides and rails for defining a retracted position for the mounting pad and unit in said housing, means engageable with said fastening elements for securing the mounting pad and unit in said retracted position but disengageable therefrom to permit the mounting pad and unit thereon to be moved outwardly from said retracted position, and cushions on each of said sleeves compressible by the fastening elements for resiliently supporting the unit.

2. The combination of claim 1 wherein the removable fastening elements are bolts and the means engageable with the bolts are nuts.

3. The combination of claim 2 wherein the nuts are affixed to the guide rails.

4. The combination of claim 2 including cushions in said sleeves for resiliently supporting the mounting pad and unit, the cushions being compressible by the bolt and nut fastening only to a limited degree as defined by said sleeves.

* * * * *

30

35

40

45

50

55

60

65