

Feb. 10, 1953

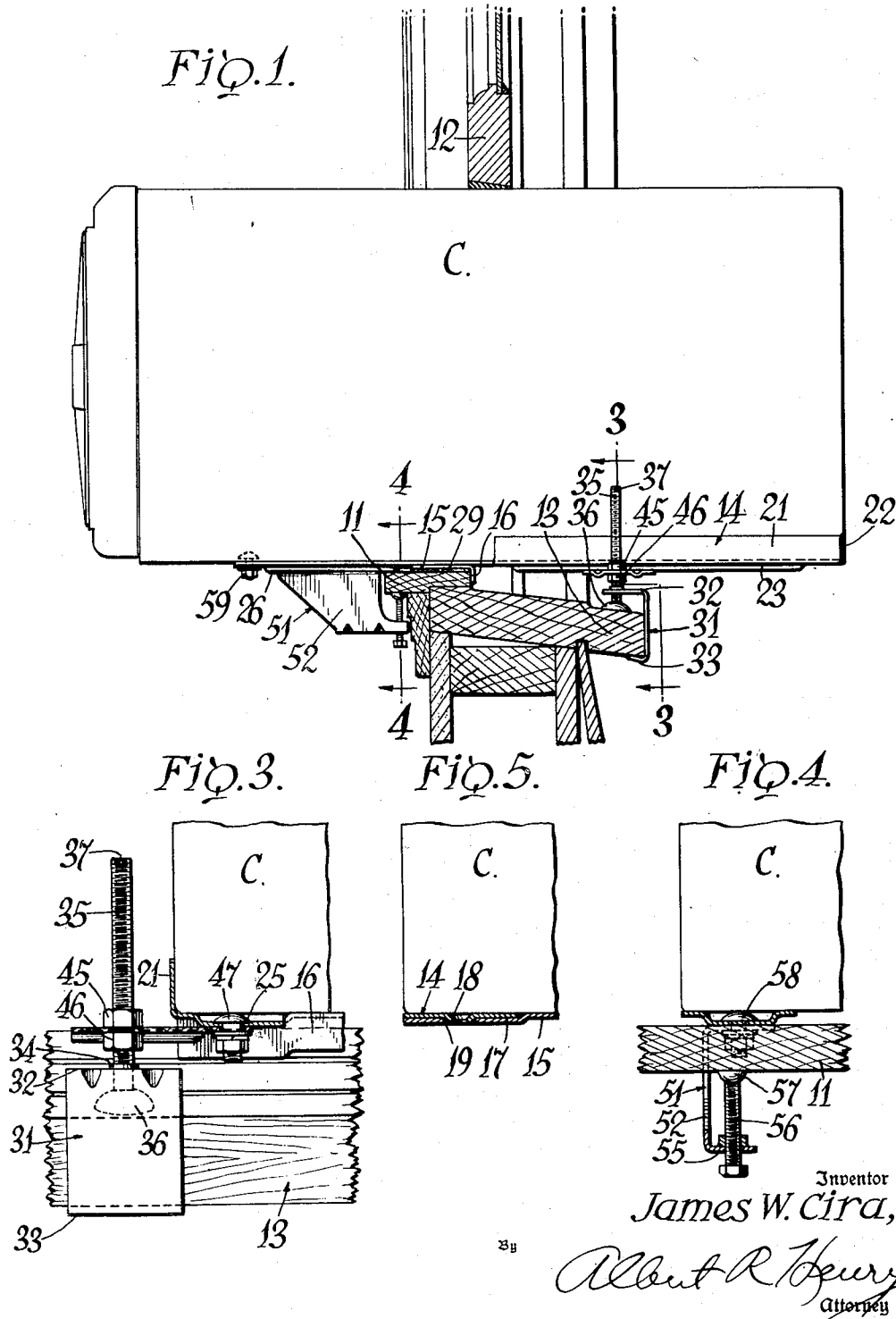
J. W. CIRA

2,628,052

SUPPORTING PLATFORM FOR WINDOW TYPE ROOM AIR CONDITIONERS

Filed July 7, 1951

2 SHEETS—SHEET 1



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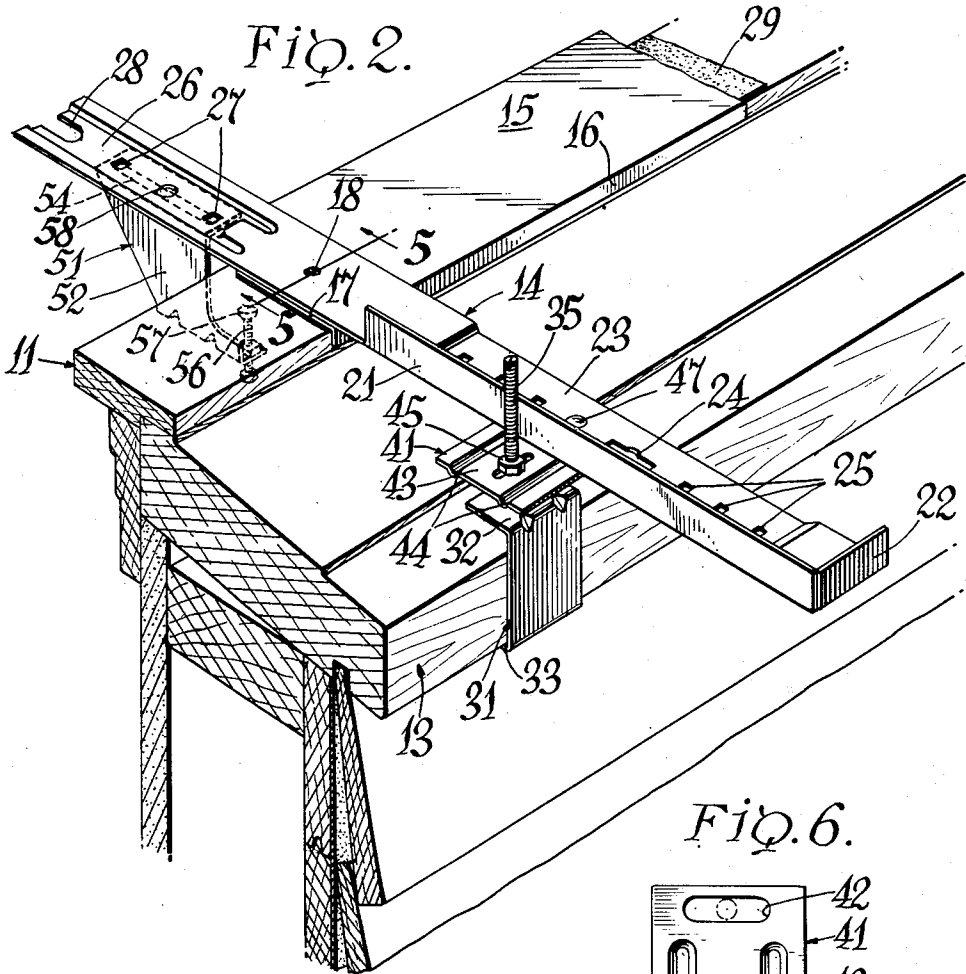
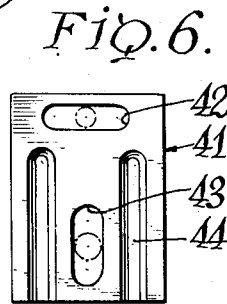
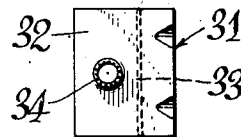
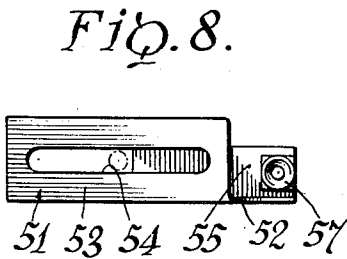
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2 SHEETS--SHEET 2

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SUPPORTING PLATFORM FOR WINDOW
TYPE ROOM AIR CONDITIONERSJames W. Cira, Sloan, N. Y., assignor to Fedders-
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2 Claims. (Cl. 248—236)

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This invention relates to a supporting platform for air cooling and conditioning apparatus of the type adapted to be installed in a window of a room, and it has particular reference to the provision of a supporting structure which may be detachably connected to a window sill to receive and retain the room cooler.

One type of room air conditioner consists basically of a refrigeration machine of such size that it may be placed in the opening of a window frame, and over the sill, with the evaporator located in the room, and the compressor and condenser projecting out of the window. Reference may be made here to the Morgan et al. Patent No. 2,526,391, October 17, 1950, as illustrative of one form of such apparatus. It has heretofore been the general practice to secure the machine to the window sill and ledge by means of screws and bolts, and, when masonry construction is encountered, considerable labor must be expended to drill the necessary holes. In other instances, the owner of the machine will decide to change its location to another window, and, when this is done, he is confronted with the problem of refinishing the interior sill to eliminate the unsightliness caused by sinking screws into it.

According to the present invention, a simple and sturdy frame is provided which may be positioned across the window opening, and detachably clamped to both the inner sill and outer ledge, to constitute a platform on which the room cooler may be positioned. The frame components are so constructed that the platform is adaptable to windows of varying dimensions and materials of construction, and it may be quickly and easily installed and removed without marring the woodwork. Other advantages and features of the invention will be pointed out in the following portions of this description, to be read in connection with the accompanying drawing, wherein:

Fig. 1 is a section through a conventional double hung sash window, showing the platform mounted thereon, and with a room cooler positioned on the platform;

Fig. 2 is a perspective showing one half of the platform positioned in the window, and the other half being symmetrical;

Figs. 3 and 4 are enlarged sections taken on the correspondingly numbered lines of Fig. 1;

Fig. 5 is an enlarged section taken on the line 5—5 of Fig. 2;

Fig. 6 is a plan of an adapter beam incorporated in the outer mounting;

Fig. 7 is a plan of an outer clamp with the bolt removed; and

Fig. 8 is a plan of an inside clamp.

The casing C of a window type room cooler is shown in outline in Fig. 1, and as being posi-

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tioned in the opening of a window between the inside sill 11 and the lower sash 12, with the left hand portion projecting into the room, and the right hand portion extending through the window and overhanging the outside sill or ledge 13. The components of the room cooler form no part of the present invention, and therefore will not be described. It will suffice to recall that room air is circulated through the inner portion of the casing C to cool and otherwise condition it, while outside air is circulated through the right hand casing section to cool the compressor and condenser, as is well understood in the art.

The casing C and its contents are mounted in the window opening by the platform of the present invention, which includes similar parallel left and right hand rails 14 interconnected by a transverse normally disposed plate 15, thereby forming a generally H-shaped frame. The plate 15 is formed with a depending angle portion 16 adapted to abut the outer edge of the sill 11, and thereby locate the platform and room cooler transversely of the window. As best shown in Fig. 2, the portion of the plate 15 between the rails 14 is relatively wide to provide adequate bearing area for the casing C, and is also of such width as to overlap sills of the type usually encountered. As is also shown in Fig. 5, the ends 17 of the plate 15 are slightly depressed to underlie the rails 14 and withal provide a flush upper surface. Each rail 14 may be formed with a depressed and pierced boss 18 adapted to seat in a hole 19 in each end 17, which provides a means for rapidly locating the parts during assembly and welding, and which also provides an opening through which a screw may be inserted when a fixed installation is desired.

Each rail 14 is formed with a right or left hand upstanding angle flange 21 along the side of its exterior portion, and with an upstanding end flange 22 at its outer end, which serve to locate the casing C on the platform, and restrain it from sideways and extended outward movement. These rails are also formed with exterior depressed portions 23, between the flanges 16 and 22, in which are formed a number of spaced bolt receiving apertures 24, 25. The inner extremities of the rails 14 are also formed with depressed portions 26 in which are bolt holes 27, and an open-ended slot 28. The depth of the depressions is such that when a suitable bolt is placed in the bolt hole, its head will not project above the flush surfaces of the rails.

The H-shaped frame just described is laid upon the window sill 11 as shown in Figs. 1 and 2, and preferably on a resilient pad 29 which cushions the load, aids in sealing, and also diminishes the transmission of vibrations to the window frame. Clamp members 31 are first

connected to the window ledge 13 to provide a means for supporting and securing the frame at its outer end. Each member 31 comprises a relatively short channel piece having a horizontal upper flange 32 and a lower inwardly inclined flange 33 disposed at an angle conforming to the usual inclination of a window ledge. The upper flange 32 is pierced to form a short flange or boss 34 which is tapped to receive a screw 35 provided with a swivel cup 36 on its inner end and a screw driver slot 37 on its upper and outer end. It will be seen that the lower flange 33 can be hooked underneath the ledge 13, and when the screw 35 is turned down, the cup 36 will engage the upper surface of the ledge, adapting itself through its swivel connection to the angularity of the ledge, and securing the clamp in place. The width of the channels 31 between the flanges 32 and 33 is such, of course, as to render them applicable to ledges of various thicknesses.

The clamps 31 are connected to the outer ends of the rails 14 by adapter plates 41, formed with transverse and axial bolt receiving slots 42 and 43, and reinforcing ribs 44. The screws 35 pass through the slots 43 and are locked to the plates 41 by nuts 45 and 46, which are taken up on either side of the plates in the course of final assembly. The plates 41 extend laterally to underlie the depressed portions 23 of the rails 14. Bolt and nut pairs 47 connect the rails to the plates 41, through the slots 42 and whatever hole 24 or 25 is in registry. It will be seen that the frame may therefore be adapted to windows having ledges of widely varying widths, and the plates 41 constitute beams anchored on each end, which restrain movement of the frame in any direction.

The inner ends of the rails 14 are also anchored to the inner sill 11 by means of clamping members or brackets 51, shown in assembly in Figs. 1 and 2, and in detail in Figs. 4 and 3. Each member 51 comprises a web 52 and a horizontal flange 53 formed with an elongated slot 54, and with a forwardly projecting lower flange 55 which is tapped to receive a bolt 56, to the inner end of which is affixed a swivel cup 57. The members 51 are connected, by means of bolt and nut pairs 58, to the under side of the depressed portions 26 of the rails 14, and through the slot 54 and whatever hole 27 is indicated. It will be seen that the members 51 may be adjustably connected to bring the swivel cups 57 underneath the sill 11, and the bolts 56 may then be taken up to clamp the frame rigidly to the sill inside the room.

The entire platform is thus built up on the window opening, and it may be installed and leveled easily to receive the casing C, which is simply slid into position against the end flanges 22. The casing may be provided with a screw 59 to enter the open slot 23, so that the casing may be held against accidental displacement. Not only does the platform provide an inexpensive and sturdy support for the room cooler, but it will be seen that, if it should be desired to disconnect the installation, the window construction is left intact, and without unsightly holes or markings.

While the invention has been described with respect to a preferred embodiment, it will be understood that it is intended to encompass all modifications and variations which fall within the scope of the following claims.

I claim:

1. A supporting platform for mounting a room cooler in a window opening comprising an H-shaped frame having spaced parallel side rails interconnected by a transverse plate, a depending flange on the plate adapted to abut the edge of a window sill, and thereby position said rails with portions extending inwardly and outwardly of the window, depressed portions formed on said rails along the inner and outer ends thereof, said depressed portions being formed with a plurality of bolt holes, side and end flanges on the outer portions of the rails to provide positioning and retaining means for a room cooler, laterally extending adapter beams having slotted portions positioned under the outer depressed portions of the rails, bolts extending through said slotted portions and one of said bolt holes to connect said beams and rails, clamping members adapted to be positioned around the outer portion of a window ledge and having threaded posts adapted to engage the ledge at one end and to project upwardly therefrom, additional bolt receiving apertures formed in the adapter beams and adapted to encircle the posts, nuts on the posts adapted to engage opposite faces of the beams, and additional clamping members adapted to be connected to and under the inner depressed portions of the rails, said additional clamping members including adjustable screws adapted to engage the under surface of a window sill.

2. A supporting member for mounting a room cooler in a window opening comprising a pair of spaced parallel side rails interconnected between their ends by a transverse plate, a depending flange on the plate adapted to abut the edge of a window sill and thereby position the rails with portions extending on each side of a window opening, channel shaped clamping members each having a web adapted to be positioned against the edge of a window ledge and having a lower inclined flange adapted to engage under said ledge and an upper horizontal flange adapted to be located above the ledge, a threaded opening formed in the horizontal flange and a bolt extending through the opening, said bolt having a swivel cup connected to its inner end adapted to engage the upper surface of the ledge to retain the clamping member in position, an adapter beam formed with a slot encircling the post above the horizontal flange, nuts on the post engaging the beam to interconnect the beam and post, depressed portions formed in the outer ends of the rails and having a plurality of bolt holes therein, said adapter beams extending laterally from said posts to underlie said depressed portions, slots formed in the underlying portions of the beams, and bolt and nut connections through said slots and one of said bolt holes to interconnect the clamping members, beams, and rails.

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