Nov. 26, 1963 P. H. SHERRON 3,111,720

TELEPHONE BOOTHS WITH PULL OUT CEILING STRUCTURES

Filed Dec. 3, 1957 2 Sheets-Sheet 1

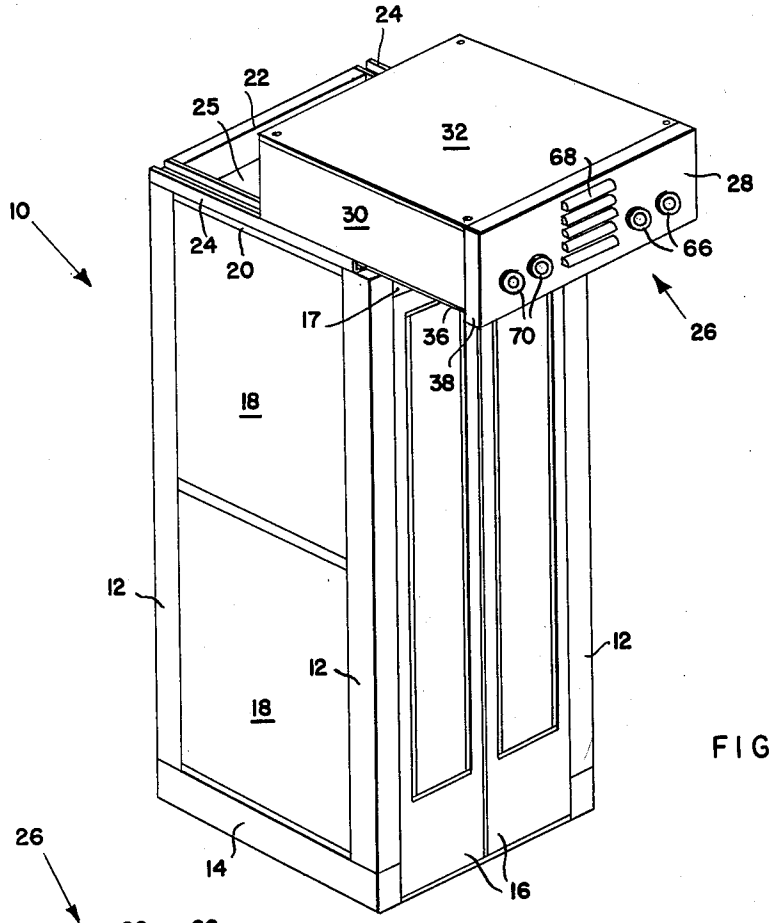

FIG. 1.

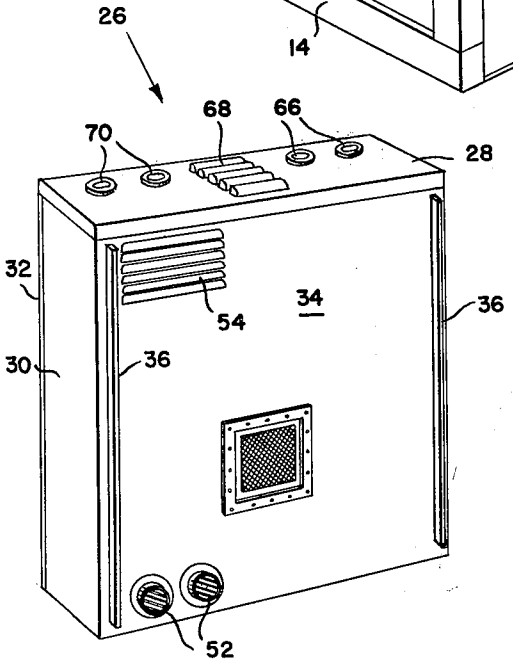

FIG. 2.

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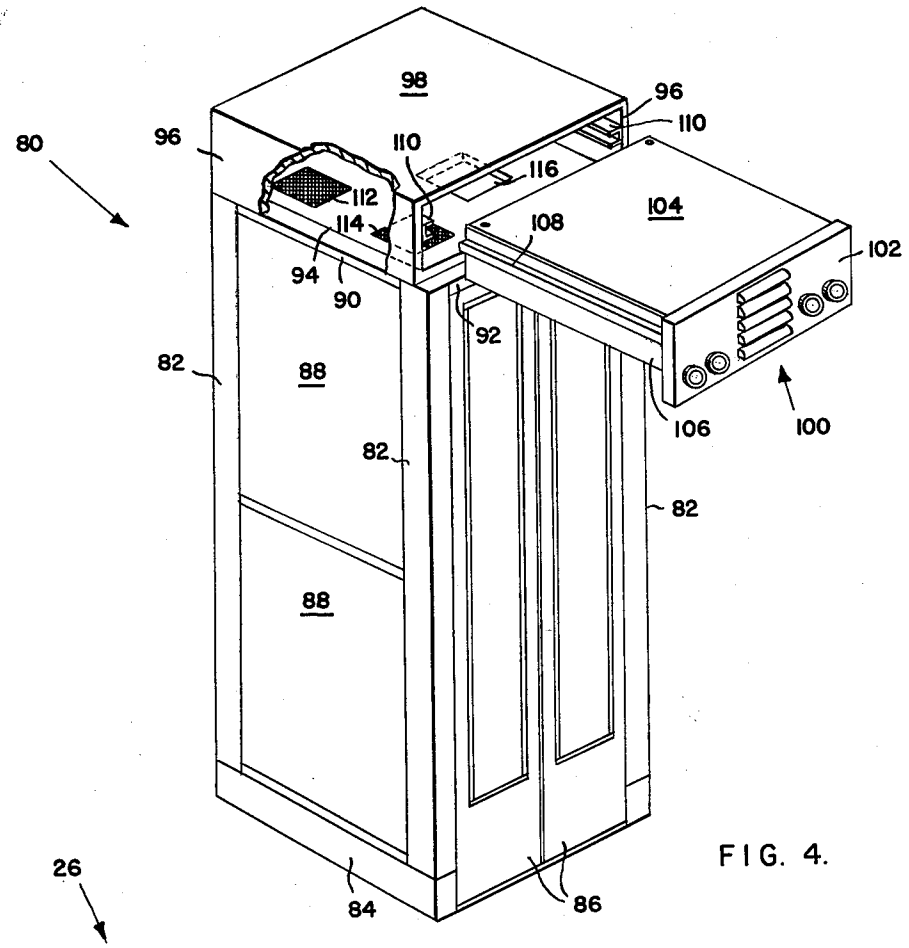

FIG. 4.

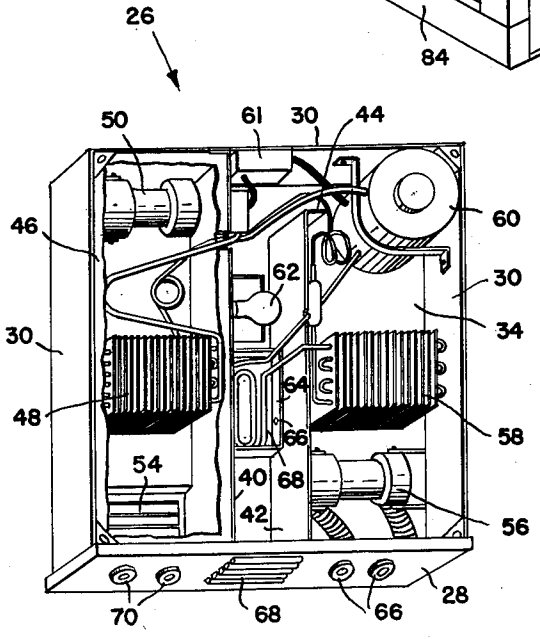

FIG. 3.

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TELEPHONE BOOTHS WITH PULL OUT CEILING STRUCTURES

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This invention relates to telephone booths having pull out or removable ceiling structures within which there may be contained booth lighting, ventilating, air conditioning and other equipment.

It is common practice in telephone booth construction to provide four walls and a front door assembly forming a booth enclosure. Above this enclosure there is provided structure forming a ceiling chamber within which there is mounted booth illuminating means, booth ventilating means and various other possible apparatus including air conditioning equipment and lighting control equipment. Heretofore access has been provided to the interior of the ceiling chamber either by means of a removable panel positioned on top of the telephone booth assembly or by means of a removable panel on the underside of the ceiling chamber forming structure within the telephone booth enclosure.

When the apparatus inside the booth ceiling chamber includes only relatively simply illuminating means and a blower fan for ventilating the booth either of the customary arrangements of booth ceiling structure, as noted above, is generally satisfactory. However, when more complex structures are employed such as, for example, air conditioning apparatus or other types of apparatus more complex than a simple fan and electric lamp assembly, the problem of providing booth maintenance becomes acute. If the booth is a recessed installation the only access to the ceiling structure is through the underside of the ceiling chamber and this access is inadequate for maintenance of relatively complex apparatus such as air conditioning equipment. Furthermore, in view of the fact that the labor costs of skilled service men capable of maintaining such apparatus is high, the time required for such personnel to get to and from the telephone booth installation site and the time required for such personnel to work on apparatus inconveniently located within a telephone booth structure renders the maintenance of such booth apparatus extremely expensive.

Accordingly, it is the principal object of this invention to provide a telephone booth having a removable ceiling within which there may be mounted various electrical and mechanical apparatus. This removability permits the replacement of all of the apparatus contained in the booth ceiling structure in a minimum of time thus affording a minimum of interruption to the booth service. Furthermore, the removal and replacement of a replaceable ceiling structure can be accomplished by relatively unskilled labor while the actual maintenance of the apparatus can be accomplished at a location remote from the booth at which skilled mechanics having suitable test apparatus may make any necessary repairs at a minimum of cost.

These and other objects of the invention relating particularly to the construction thereof will become evident from the following description when read in conjunction with the accompanying drawings in which:

FIGURE 1 is a perspective showing of the exterior of a telephone booth constructed in accordance with the present invention and showing the removable ceiling structure partly displaced from the remainder of the booth structure;

FIGURE 2 is a perspective view of the removable ceiling structure shown in FIGURE 1 as viewed from the underside thereof;

FIGURE 3 is a perspective showing of the removable ceiling structure shown in FIGURE 1 with the top panel thereof removed therefrom; and

FIGURE 4 is a perspective view of a telephone booth showing an alternative embodiment of the invention and showing the removable ceiling structure displaced from the booth.

In FIGURE 1 there is indicated generally at 10 a telephone booth structure providing a booth enclosure. This structure includes corner posts 12 mounted on a base structure 14. Between the front corner posts there is provided a door assembly 16 and between the side and rear corner posts are mounted side panels 18. This construction is well known in the telephone art.

A member 20 extending between the front and rear corner posts is positioned at the top of each of the booth sides. A member 17 extends between the front corner posts above the doors 16. A member 22 extending between the rear corner posts is positioned at the top of the rear of the booth. Track forming members 24 are positioned on top of the side members 20. The rear member 22 has its upper edge disposed substantially flush with the upper edges of the track forming members 24.

In FIGURES 1, 2 and 3 there is indicated generally at 26 the pull out ceiling structure associated with the booth shown in FIGURE 1. This pull out ceiling structure includes a front panel 28, side and rear panels 30, a removable top panel 32 and a bottom panel 34.

A pair of rails 36 are affixed to the bottom panel 34 and positioned to slide in the tracks 24. The front panel 28 is flush with the top and side panels but extends downwardly below the bottom panel 34 to a level substantially flush with the lower edges of the tracks 24. Thus, the lower edge of the front panel 28, when the pull out ceiling structure is completely in place on top of the telephone booth, lies immediately above and flush with the front faces of the corner posts 12 and the transversely extending member 17. The rear side panel 30 of the pull out ceiling structure and the bottom panel thereof come together immediately above the uppermost edge of the member 22 extending transversely across the rear of the booth. Thus, when the pull out ceiling structure is in position on top of the booth there is provided a substantially complete seal between the pull out structure and the booth. As will be hereinafter made evident the top of the booth enclosure may be provided with a cover plate independently of the pull out ceiling structure, if desired.

As previously noted, telephone booth ceiling structures conventionally mount booth lighting and ventilating means. Some booth ceiling structures also provide for mounting of automatic illumination control means and other more complex apparatus. The pull out ceiling structure which will now be described mounts booth air conditioning apparatus. The ceiling structure includes a pair of partition plates 40 and 42 which extend across the interior of the ceiling structure from the front toward the rear thereof. The partition plate 42 terminates at 44 a distance from the rear panel 30. The two partition plates serve to divide the structure into compartments forming two passages.

The first of these passages is formed between partition plate 40 and the left side panel 30 as viewed in FIGURE 3. The ends of this passage are closed by the front and rear panels 28 and 30, respectively, and the interior of the passage is lined with a suitable heat insulating material as indicated at 46. Within this compartment is mounted a refrigerated coil 48 and a motor and blower assembly 50. The refrigerated coil is provided with cold refrigerant from apparatus in the adjacent passages which will be hereinafter described and the

blower assembly 50 serves to draw warm air from the booth through the louvered openings 52 mounted in the bottom panel 34 and blow this air through the refrigerated coil and through the louvers 54 in the bottom panel back into the telephone booth.

The adjacent passages are provided between the partitions 40 and 42 and between the partition 42 and the right-hand panel 30 as viewed in FIGURE 3. In the passages thus formed there are mounted a blower assembly 56, a condenser coil 58, a compressor unit 60, a booth illuminating lamp 62, and a condensate receiving pan 64 for receiving condensate from the exterior of the condenser coils 58 from a collector not shown and through a tube 66. A few coils 68 forming a portion of the condenser line serve to heat and thus cause evaporation of condensate which has accumulated in the pan 64. The blower assembly 56 serves to draw in air from the exterior of the booth through louvered inlet ports 66 and blow the air through condenser coil 58, over the compressor unit 60 to provide for cooling of these units. The air then flows past the lamp 62 where it is further heated in cooling the lamp 62, and the heated air thereafter flows over the tray 64 evaporating condensate which has collected therein. The hot air laden with moisture is discharged through the opening 68 in the front panel 28. False openings are provided at 70 in the front panel 26 in order to provide a balanced appearance of the front of the booth. These openings have no function except visual and do not actually penetrate the front panel 28. The air conditioning system described is substantially identical to that disclosed in my prior Patent No. 2,788,648 issued April 16, 1957.

It will be evident that the invention embodied in the apparatus shown in FIGURES 1–3 may be variously modified. One such modification is indicated generally at **80** in FIGURE 4. This embodiment involves the use of a telephone booth enclosure forming structure comprising corner posts 82 mounted on a base 84 having front doors 86 mounted between front corner posts and having panels 88 mounted between side and rear corner posts. Horizontally extending members 90 are positioned between adjacent side and rear corner posts above the side panels and a horizontally extending member 92 is positioned between the front corner posts above the door assembly. A top cover plate 94 is positioned over the upper ends of the corner posts and the members 90 and 92. This plate covers the booth enclosure provided within the side panels and the corner posts.

In this embodiment of the invention the cover plate 94 forms the bottom of a box structure having side walls 96 and a top plate 98. The front of the box structure is open and is adapted to receive a pull out ceiling structure indicated generally at 100.

The pull out ceiling structure includes a front panel 102, a removable top panel 104 and side panels 106 forming an enclosure for apparatus identical to that described in connection with FIGURE 3

A rail 108 is mounted to each side of the ceiling structure and is adapted to enter a receiving track 110 affixed to the adjacent panel 96 affixed to the top of the booth. In the embodiment shown in FIGURE 4 the front panel 102 extends outwardly from the panels 106 and 104 so as to overlie the front edges of the panels 98, 94 and 96 forming the receiving box structure at the top of the booth. Thus, when the pull out structure indicated generally at 100 is positioned on top of the booth the front panel 102 thereof is flush with the front of the front corner posts and the front doors of the booth.

The top panel 94 covering the top of the booth enclosure is provided with openings 112 and 114 covered with a suitable grill or louvers for conducting the required flow of air to and from the air conditioning unit. The panel 94 is also provided with an opening having a glass insert panel as indicated at 116 positioned below the illuminating lamp contained within the pull out ceiling structure providing for illumination of the interior of the booth. In this form of the invention it is unnecessary to provide a bottom panel in the ceiling pull out structure. Thus, the panel, such as that indicated at 34 in FIGURE 3, is not necessarily employed.

It will also be evident that if a panel such as the panel 34 shown in FIGURE 3 is employed under the ceiling structure indicated generally at 100 then the panel 94 shown in FIGURE 4 need not necessarily be employed. The panel 94 may be provided with a hinged panel portion such as, for example, that shown in my copending patent application, Serial No. 699,983 filed December 2, 1957, now Patent No. 3,046,615, issued July 31, 1962, in order to provide access to the illuminating lamp contained within the ceiling structure when the bottom panel 34 is omitted therefrom. Electrical connection means providing for telephone lines may be mounted in the member 22 extending across the rear portion of the booth and electrical power for the apparatus contained within the removable ceiling chamber may be connected thereto by means of a conventional electrical plug connection mounted on the rear panel 30 of the ceiling structure in a suitable position such as is indicated at 61 in FIGURE 3. It will be evident that these and other modifications may be made to the embodiment of the invention disclosed herein without departing from the scope of the invention as set forth in the following claim.

What is claimed is:

A telephone booth comprising side walls forming a booth enclosure, housing means surmounting said booth side walls and including side panels, a top panel and at least one partition panel, said side and top panels defining a compartment, booth lighting and ventilation means mounted on said panels within said compartment, said housing means extending horizontally across said booth to enclose the top thereof, a roof structure mounted on said booth side walls and including a top cover extending horizontally across the top of said booth above the top panel of said housing means and upright side walls extending from the front to the rear of the booth, said roof structure defining a chamber adapted to receive said housing means, means mounted on said roof structure providing tracks extending from the front to the rear of said booth, guide means mounted on said housing means for slidably engaging said tracks, said housing means being horizontally movable a distance sufficient for disengagement of said guide means from said tracks whereby said housing means is removable from said booth, and a ceiling mounted on said booth side walls enclosing the top of said booth and being positioned in spaced opposed relation beneath the top panel of said housing means, said ceiling having openings therein for the passage of air and light directly between said booth and said compartment of said housing means.

References Cited in the file of this patent

UNITED STATES PATENTS

2,247,028	Kuntz	June 24, 1941
2,285,075	Ashley	June 2, 1942
2,484,786	Fall	Oct. 11, 1949
2,514,246	Knox	July 4, 1950
2,609,268	Nye	Sept. 2, 1952
2,788,648	Sherron	Apr. 16, 1957
2,789,024	Heisler	Apr. 16, 1957
2,856,450	Padgett	Oct. 14, 1958