PORTABLE PORCH UNIT FOR MOBILE HOMES

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References Cited

UNITED STATES PATENTS

3,608,951 9/1972 Jackson 52/64 X
3,593,821 7/1972 Lister 182/115
3,578,110 5/1971 Seagraves 52/182 X
2,621,084 12/1952 McLain et al. 182/129
3,693,754 9/1972 Butler 182/115 X
2,741,195 4/1956 Hartman 52/66

3,612,589 10/1971 Locher 52/66 X
3,593,471 7/1971 Fields 52/66
2,861,731 11/1958 Robinson 182/106
3,092,383 6/1963 Dunn 182/115
3,529,695 9/1970 Rowley 182/115

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ABSTRACT

A portable porch unit for mobile homes comprising a step assembly including hand rails at opposite sides of a plurality of ascending steps, a porch supporting substructure assembly forming a rectangular enclosure and having a hinged door providing access to the interior of the enclosure and positioned at, and forming a portion of, one side of the porch, and a canopy assembly adjustably supported above said porch for vertical adjustment with respect thereto.

1 Claim, 5 Drawing Figures
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PORTABLE PORCH UNIT FOR MOBILE HOMES

BACKGROUND OF THE INVENTION

1. Field of the Invention
This invention relates to steps and porches for use with mobile homes and house trailers, and particularly, demountable and portable porches and steps which can be quickly and easily assembled, and which are dimensionally adjustable to some degree to facilitate use with mobile homes having variations in the vertical dimensions of such homes.

2. Brief Description of the Prior Art
It has heretofore been proposed to provide lightweight portable steps and porches which permit easy access to the doors formed in one side of mobile homes and house trailers. Such structures have featured various characteristics, such as adjustability of the steps and adjustability of the height to which the floor platform can be set so as to accommodate trailers in which the door sills vary in their height above the ground.

BRIEF DESCRIPTION OF THE PRESENT INVENTION

The present invention comprises a portable porch unit for mobile homes which includes a porch, substructure means for supporting the porch at the level of the door sill of the mobile home; an enclosure assembly protectively surrounding the porch on two sides thereof; steps detachably connected to the substructure, and a canopy supported on the enclosure assembly and vertically adjustable with respect to the enclosure assembly. The substructure which supports the porch is provided with a door pivotally mounted thereon for providing access to the space within the substructure and beneath the porch.

An object of the invention is to provide an aesthetic, portable porch unit for mobile homes.

A further object of the invention is to provide a relatively lightweight, mechanically strong, portable porch unit for mobile homes, which porch unit can be disassembled into several parts, including steps, canopy and porch.

An additional object of the invention is to provide a portable porch unit for mobile homes, which porch unit includes therewith, a readily accessible storage space beneath the porch.

Additional objects and advantages of the invention will become apparent as the following detailed description of preferred embodiments of the invention is read in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevation view of the portable porch unit of the invention and illustrating in dashed lines, a mobile home with which the portable porch unit is used. The figure also illustrates an alternate operating position of a door which forms a portion of the porch unit, and is pivotally mounted on the substructure which supports the porch.

FIG. 2 is a side elevation view of the portable porch unit illustrated in FIG. 1, and showing in dashed lines another hinged door associated with the porch unit.

FIG. 3 is a perspective view of the frame utilized in the portable porch unit of the invention as it appears when the siding and trim are removed from the frame.

FIG. 4 is a sectional view taken along line 4—4 of FIG. 1.
FIG. 5 is a front elevation view of an alternate embodiment of the invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

Referring initially to FIG. 1, the portable porch unit of the invention includes a porch (not visible in FIG. 1), a substructure assembly 10 for supporting the porch at a vertical distance above the ground, an enclosure assembly 12 which protectively surrounds the porch on two sides thereof, a step assembly 14 which is detachably connected to the substructure assembly 10 and a canopy assembly 16 which is adjustably supported on the enclosure assembly. The portable porch unit is illustrated in the position it occupies with respect to a mobile home 18. The mobile home is characterized in having a door 20 mounted in one side thereof in accordance with conventional construction.

The details of construction of the portable porch unit of the invention can be better ascertained by referring to FIGS. 1–3 of the drawings. In FIG. 3 of the drawings, it will be perceived that the framework of the porch unit is constructed of a plurality of welded metal members which are preferably angle iron members, or one inch square tubing, or both. The supporting substructure 10 which supports the deck of the porch is of generally right parallelepiped configuration, and includes a rectangular shaped base frame made up, in the illustrated embodiment, of angle iron members 24, 26, 28 and 30. Projecting upwardly from the base of the framework as thus constituted, are four upright members or stanchions 32, 34, 36 and 38. These members are angle iron members in the illustrated construction. It may here be pointed out that in the embodiment of the invention under discussion, the stanchions 32–38 form elements which are common to the porch supporting substructure 10 and to the enclosure assembly 12 which protectively surrounds the porch on two sides thereof.

Extending parallel to the members 24–30 which make up the base frame are four additional floor decking supporting members 40, 42, 44 and 46. These angle iron members are each arranged so that one flange thereof is in a horizontal plane in a position to support and receive fastening members extended through floor decking 47 secured to the upper side thereof. The members 40–46 are interconnected by cross braces 48 and 50. Vertical braces 52, 54, and 56 extend between the decking supporting members 42, 44 and 46 and the respective base frame members 28, 26 and 24 which are located therelow. It will be perceived in referring to the drawings that the decking 47 of the floor is laid in a parallel plane atop the decking supporting members 40–46, and is secured to these members, and that the porch supporting substructure assembly 10 beneath the floor decking defines an enclosure when trim or siding panels 60 are secured thereto.

The step assembly 14 forming a portion of the portable porch unit of the invention includes a substantially rectangular base frame made up by the angle iron structural members 62, 64, 66 and 68. The risers of the step assembly 14 are formed in part by four upright members 70a, 70b, 70c and 70d disposed on one side of the step assembly and projecting upwardly from the frame member 64, and a parallel corresponding group
of upright members 72a, 72b, 72c and 72d disposed on the opposite side of the step assembly. Extending between the members 70a and 72a at the forward side of the step assembly is an angle iron cross member 74 which has one of its flanges disposed in a horizontal plane occupying the same plane as the flanges of step supporting members 76 and 78 which function to support the first step of the step assembly 14. In generally similar fashion, a horizontal cross member 80 having one flange thereof extending in the same horizontal plane as that last described is extended between, and secured to, a central portion of the upright members 70b and 72b, and functions to support the first step of the step assembly 14 cooperatively with the cross member 74.

Secured between the upper ends of the upright members 70b and 72b is an angle iron cross member 82 positioned across the step assembly 14 for supporting a second step. The cross member 82 has an upper flange oriented in co-planar alignment with the step supporting members 84 and 86 which extend between the upper ends of the upright members 70b and 70c and the central portions of the upright members 72b and 72c. Extending across the step assembly 14 between the central portions of the upright members 70c and 72c is a cross member 88.

For the purpose of supporting the top step of the step assembly, cross members 90 and 92 are provided, along with step supporting members 94 and 96. The cross member 92 has one flange thereof extending downwardly in a vertical plane to facilitate the bolting of this cross member to a cross brace 98 secured between the upright members or stanchions 32 and 38. In the same way, the base frame member 66 of the base frame of the step assembly 12 can be bolted to the abutting parallel flange of the base frame member 30 of the base frame of the substructure assembly 10. As shown in FIG. 4, the several cross members and step supporting members of the step assembly 14 support horizontally extending steps 100 which are preferably made of an aesthetic wood, such as redwood. Also, as shown in FIG. 1 of the drawings, the sides of the step assembly 14 are closed by means of panels 102 which are preferably constructed of the same material and are secured to the base frame member 64 and the upright members 70a-70d and 72a-72d. A banister or hand rail subassembly 103 is secured to the opposite ends of two of the steps 100 at opposite sides of the step assembly 14. In the illustrated embodiment of the invention, a door 104 is formed by one of the siding panels provided on one side of the step assembly 12 at the high end thereof, and is hingedly connected to permit the door to be opened and access to be had to the under side of the step assembly. In some constructions of the invention, it will be preferable to provide a partition along one side of the substructure assembly 10, or at the back of the step assembly 14, to completely enclose the interior of the step assembly except for the access which may be had thereto through the hinged door 104. In this way, a dog or other pet can be housed beneath the step assembly.

In similar manner, the panels 60 of redwood or other aesthetic finishing material are secured around the sides of the substructure assembly 10 to form an enclosure with the floor decking 47. Access to the enclosure beneath the floor decking and within the panels is then provided through a door 106 which is hinged along a horizontal line of pivotation and can be pivoted upwardly in the manner suggested by the dashed line view of the door appearing in FIG. 1 of the drawings.

The enclosure assembly 12 forming a portion of the portable porch unit of the invention includes, in addition to the upper end portions of the upright members or stanchions 32-38, horizontally extending rails 110 and 112 which extend between the upper ends of the stanchions 32 and 34, and the upper ends of the stanchions 34 and 36, respectively. There is also provided, an upright member 114 having its lower end secured to the decking supporting member 46 and its upper end joined to a short rail 116 which extends from the stanchion 114 to the stanchion 38. Trim or siding panels 118 are extended between the rails 110, 112 and 116 and the underlying respective decking supporting members 42-46. The porch is thus enclosed on two of the exposed or weather sides in the manner best illustrated in FIGS. 1 and 2.

Adjustably supported above the enclosure assembly 12 is a canopy assembly 16. The canopy assembly 16 includes four vertically extending supporting posts 122, 124, 126 and 128 which are adjustably secured at their lower ends to the upper end portions of the stanchions 32, 34, 36 and 38, respectively. The adjustability of the supporting posts 122-128 on the stanchions 32-38 is achieved by providing a plurality of vertically aligned bolt holes 130 in the lower end portions of the supporting posts which are spaced to register with one or more similar bolt holes (not visible) formed in the upper end portion of each of the stanchions 32-38. Suitable bolts 132 or fastening devices are then passed through selected ones of the bolt holes 130 in the posts 122-128 and through the registering bolt holes in the respective stanchions 32-38. Diagonal brace members 134 having bent lower ends 134a and bent upper ends 134b extend between the several supporting posts 122-128 and the respective horizontally extending rails 110, 112 and 114. The upper ends have bolt apertures therethrough which register with multiple aligned apertures 135 in the posts 122-128.

Supported at the upper ends of the supporting posts 122-128 is a roof frame designated generally by reference numeral 136. The roof frame 136 has an open configuration and is preferably constructed of one inch square hollow metallic tubing. The roof frame 136 includes longitudinal frame members 138 and 140 which are interconnected at their opposite ends by transverse members 142 and 144. Transverse cross braces 146, 148 and 150 interconnect the longitudinal members 138 and 140, and are spaced between the end transverse members 142 and 144. A plurality of aligned longitudinally extending brace elements 152, 154, 156 and 158 complete the roof frame. It will be noted that the roof frame 136 extends out over the step assembly 14 and also provides overhanging protection over the hinged door 106.

Mounted upon the roof frame 136 is a roof structure which includes a pair of transverse side boards 160 and a longitudinally extending front board 164. The side boards 160 and front board 164 are secured to the transverse members 142 and 144, and to the longitudinal member 138, respectively. Corrugated roofing panels 170 are secured across the side boards 160 and front board 164 over the top of the roof frame 136.

In the use of the mobile porch unit of the invention, the several assemblies making up the unit are generally
transported separately, and their separability and portability facilitates storage for transport and until assembly for usage. At the situs where the porch unit is to be erected and placed in use, the substructure 10 and the porch supported thereby, along with the enclosure assembly 12, are first placed in position opposite the door 20 of the mobile home 18. The step assembly 14 is then moved up into position and is bolted or otherwise suitably secured to the supporting substructure assembly 10. When the step assembly 14, supporting substructure assembly 10 and enclosure assembly 12 are thus positioned, the canopy assembly 16 is then placed in the general position illustrated, but the bolts used for securing of the canopy assembly 16 to the enclosure assembly 12 are not emplaced at this time. Prior to such securing, the canopy assembly 16 is adjusted vertically until the canopy frame 136 and the roofing panels 170 carried thereby are located at a vertical level above the door 20 as may be desired. When this level is attained, the bolts or fastening devices are then passed through the apertures 130 and 135 in the supporting posts 122–128, and the registering apertures in the stanchions 32–38 to secure the canopy assembly in position.

It will be perceived that the porch unit of the invention provides an aesthetic structure which can be dismanted into several relatively compact integral units which fit quickly and easily together, and can be assembled by one having relatively little mechanical skill. Moreover, the adjustability of the canopy assembly 16 with respect to the remainder of the structure permits the canopy assembly to be positioned at any desired level in accordance with differences in door sizes and mobile home heights which may be encountered in varying usages. The portable porch unit of the invention is constructed in such a way that dry storage space may be easily provided beneath the decking 47 of the porch and within the enclosure formed by the substructure assembly 10. Another enclosure which may be used for housing pets is formed within the step assembly 14.

An alternate embodiment of the invention is depicted in FIG. 5 of the drawings. As here shown, the alternate embodiment includes a vertically adjustable canopy assembly 170, a supporting substructure assembly 172 and an enclosure assembly 174. In this embodiment of the invention, a step assembly 176 is positioned circumscripted the front side of the portable porch unit and is designed to register with an opening formed through one side of the enclosure assembly 174. In other respects, the portable porch unit depicted in FIG. 5 is constructed substantially identically to the portable porch unit illustrated in FIGS. 1–4 and hereinafter described.

Although certain preferred embodiments of the invention have been herein illustrated and described, it will be perceived that various changes and innovations can be effected in the described structure without departure from the basic principles of the invention. Changes and innovations of this type are therefore deemed to be circumscribed by the spirit and scope of the invention except as the same may be necessarily limited by the appended claims or reasonable equivalents thereof.

What is claimed is:

1. A portable porch unit for mobile homes comprising:
   a supporting substructure assembly including:
     a rectangular metallic base frame;
     a plurality of iron member stanchions extending upwardly from said base frame and each having at least one aperture in the upper portion thereof;
     a plurality of metallic members interconnecting said iron member stanchions at points above said base frame and extending substantially parallel to said base frame;
     aesthetic wooden siding panels secured to said base frame and metallic interconnecting members to form an enclosure; and
     a hinged door hingedly connected to said siding panels and forming an opening to said enclosure;
   a step assembly detachably connected to said substructure assembly at one side thereof and including:
     a rectangular base frame of metallic members;
     a plurality of steps supported above said base frame of said step assembly;
     metallic members extending from said step assembly base frame to said steps and supporting said steps;
     wooden panels connected to said base frame of said step assembly and projecting upwardly therefrom to said steps to form an enclosure under said steps; and
   a door opening into said enclosure under said steps;
   a step assembly chairlike extending across and secured to the metallic members of said supporting substructure assembly and collectively forming a porch;
   an enclosure assembly partially around said porch and projecting upwardly from said substructure assembly, said enclosure assembly comprising:
     a plurality of horizontally extending members interconnecting the top of said iron member stanchions; and
     wooden siding panels secured between said last mentioned horizontally extending members and said metallic members of said substructure assembly; and
   a canopy assembly adjustably connected to said enclosure assembly for selective vertical adjustment above said porch, said canopy assembly including a plurality of vertically extending aperture supporting posts oriented to slidingly nest within said stanchions and including apertures registering with apertures in said stanchions for selective adjustment of the vertical height of said canopy over said porch.

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