United States Patent [19]

Lindsay

[11] **3,716,267**

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[54] **UNIFIED FLOOR-FRAME ASSEMBLY WITH SKIRT FOR A MOBILE BUILDING**

[76] Inventor: **Frederick H. Lindsay**, Rt. 1, Dunkirk, Ind. 47336

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[21] Appl. No.: **196,597**

[52] **U.S. Cl.** .....**296/23 R,** 52/143

[51] **Int. Cl.** **B60p 3/32**

[58] **Field of Search**.....296/23 R; 52/143

[56] **References Cited**

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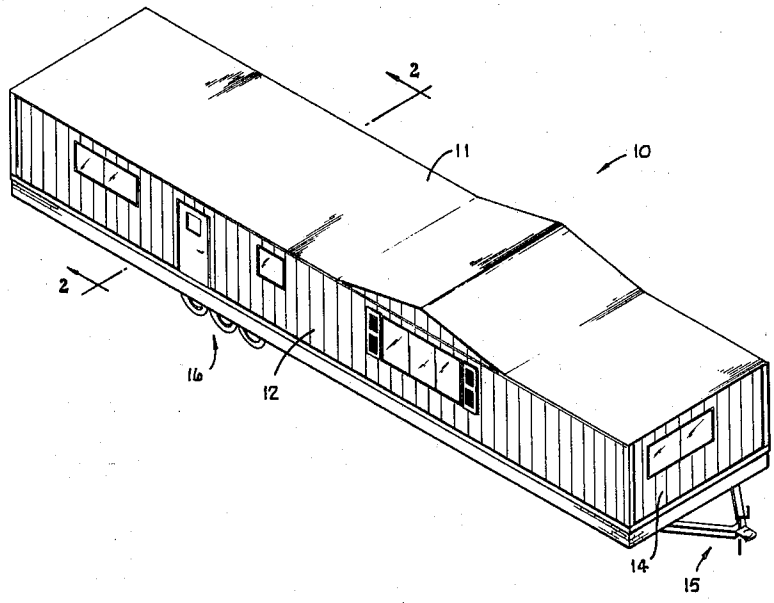
3,234,696	2/1966	Spencer	296/23 R
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Primary Examiner—Philip Goodman
Attorney—Harold R. Woodard

[57] **ABSTRACT**

A unified floor and frame assembly with a skirt for a mobile building. The floor and frame assembly has a pair of parallel I-beams which extend the length of the building being mounted atop a plurality of parallel beams extending the width of the building. A plurality of parallel members aligned with the lower beams are mounted atop the pair of beams and are supported by vertical legs. Floor sheets are mounted atop a plurality of ribs which extend the length of the building being recessed in the members. The lower beams form ledges which receive and support the building side walls. A wheeled carriage is removably connected to tubes mounted beneath the floor-frame assembly for transportation of the building. Skirts are fastened to the building side walls and extend to the bottom end of the unified floor-frame assembly.

6 Claims, 4 Drawing Figures



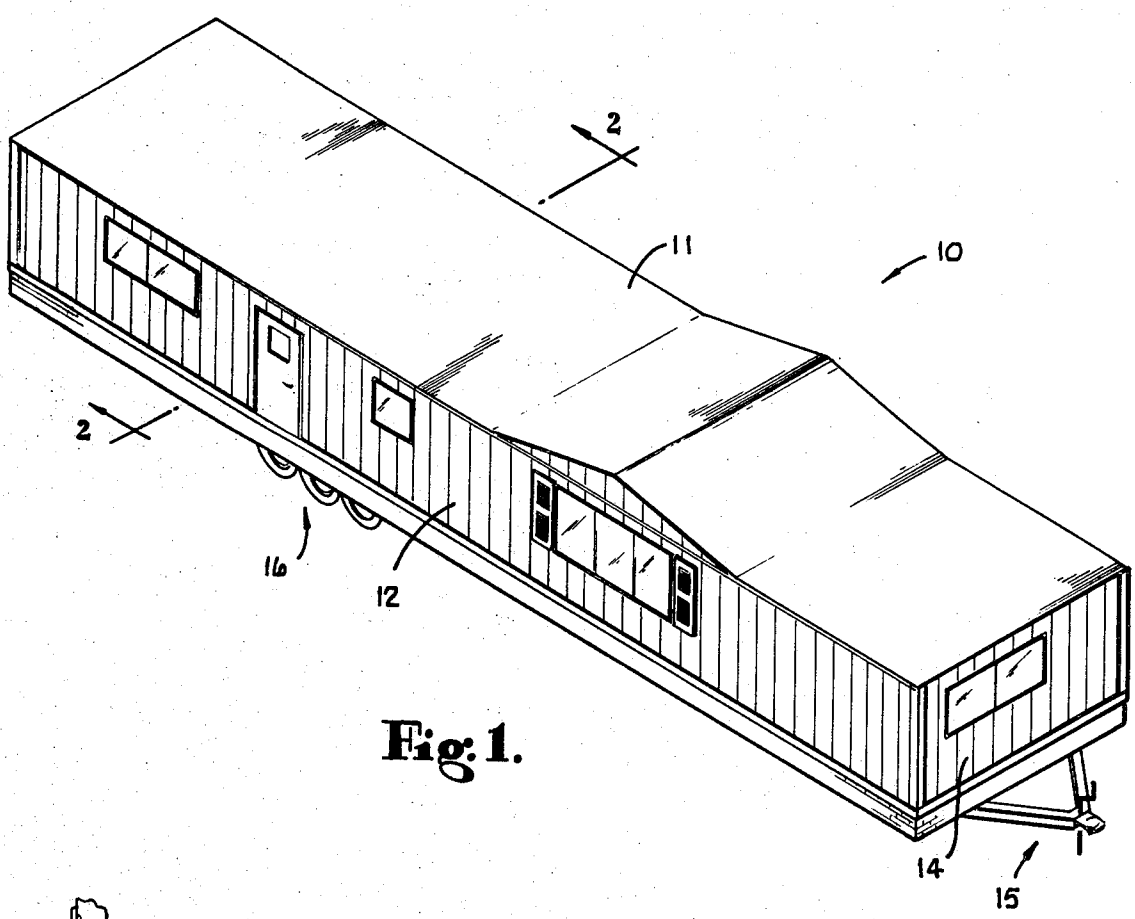

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Fig. 1.

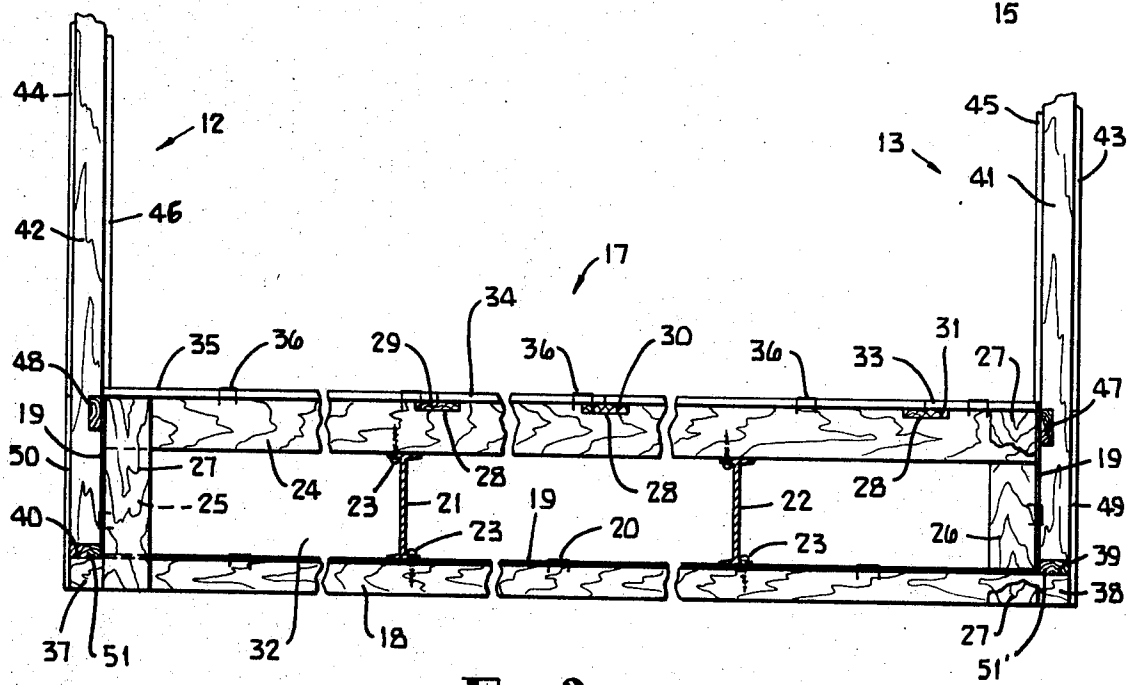

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Fig. 2.

Fig. 4.

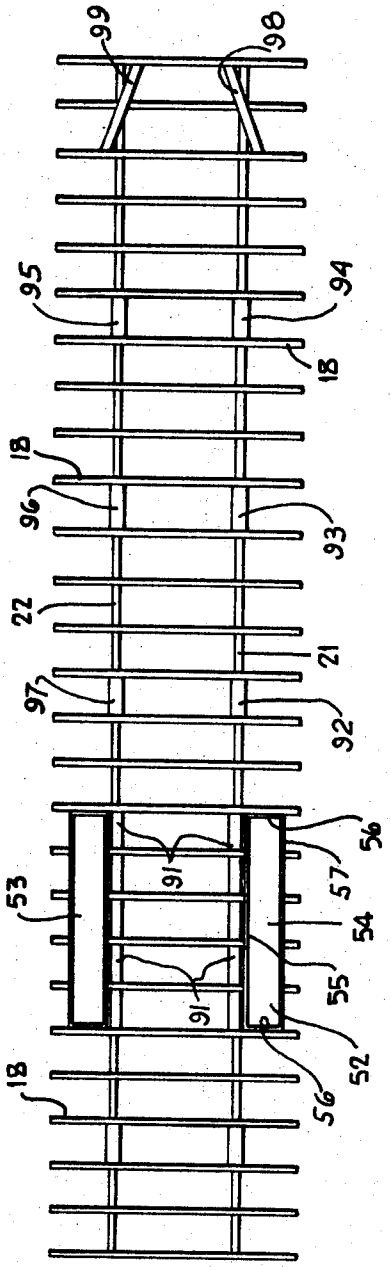
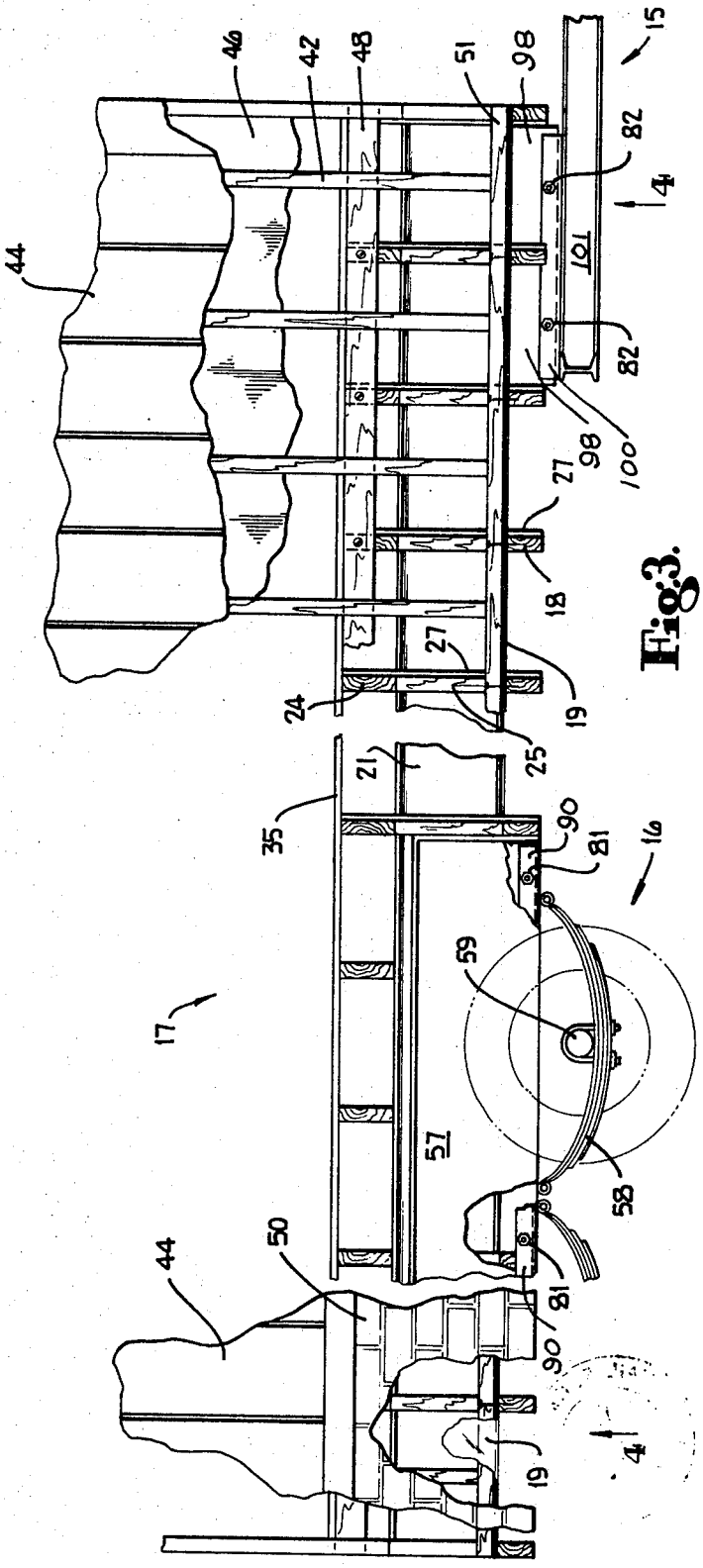

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Fig. 3.


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UNIFIED FLOOR-FRAME ASSEMBLY WITH SKIRT FOR A MOBILE BUILDING

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention is in the field of building construction.

2. Description of the Prior Art

Mobile homes are generally transported to a site for remaining at the site for a fairly lengthy period of time. The wheels beneath the mobile home as well as plumbing, and ducts provide for an unattractive appearance. It is therefore desirable to provide a skirt or other covering for concealing the various items beneath the mobile home. Disclosed herein is such a skirt which is permanently mounted to the mobile home therefore not requiring installation at the time of positioning the mobile home on the site. The U. S. Pat. No. 2,755,517 issued to Sickel and the U. S. Pat. No. 3,407,548 issued to Russell disclose construction of interest.

In the prior art mobile buildings, it has been the custom to mount the floor atop a frame, therefore requiring two different assemblies. Disclosed herein is a building having a unified floor-frame assembly providing for a much stronger and relatively lower cost construction. The U. S. Pat. No. 3,564,786 issued to Baker discloses a floor-frame assembly; however, the Baker patent does not disclose a floor-frame assembly which is constructed in the manner disclosed herein. The Baker patent discloses construction designed for modular segments and not a mobile building.

SUMMARY OF THE INVENTION

One embodiment of the present invention is a mobile building positionable on a surface comprising a unified floor-frame assembly having a top wall and a bottom end, side walls mounted to the assembly, a wheeled carriage removably mounted to the assembly, means mounted to the bottom end operable to support the mobile home on the surface when the wheeled carriage is removed and, a skirt mounted externally to the side walls and extending to the bottom end, the skirt extending to the surface when the means supports the mobile home on the surface.

It is an object of the present invention to provide a new and improved mobile building having a unified floor-frame assembly.

In addition to the above object, it is an object of the present invention to provide a mobile building having a skirt which conceals the means for supporting the building as well as the plumbing and the heating ducts beneath the building.

Related objects and advantages of the present invention will be apparent from the following description.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of a mobile building incorporating the present invention.

FIG. 2 is an enlarged fragmentary cross sectional view taken along the line 2—2 of FIG. 1 and viewed in the direction of the arrows.

FIG. 3 is a fragmentary side view of the mobile building of FIG. 1.

FIG. 4 is a bottom plan view looking in the direction of arrows 4—4 of FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENT

For the purposes of promoting an understanding of the principles of the invention, reference will now be made to the embodiment illustrated in the drawings and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended, such alternations and further modifications in the illustrated device, and such further applications of the principles of the invention as illustrated therein being contemplated as would normally occur to one skilled in the art to which the invention relates.

Referring now more particularly to the drawings, there is shown a mobile building **10** having a roof **11** and side walls **12** and **13** (FIG. 2) and end wall **14**. Building **10** has a conventional hitch **15** for attachment to a vehicle for pulling the building to a site. A wheeled carriage **16** depends from the building to allow for the transportation of the building.

Building **10** is provided with a unified floor-frame assembly **17** which has a plurality of lower parallel beams **18** extending across the width of the building. In one embodiment, beams **18** were produced from wood and had a rectangular cross section two inches by four inches. After beams **18** are arranged in a parallel configuration, a sheet of plastic **19** is then positioned atop beams **18** so as to extend the length and width of the building. Sheet **19** should have a minimum thickness of 0.004 inches and is provided to insulate the interior of the building from weather, mice, insects, etc. A plurality of staples **20** secure sheet **19** to beams **18**. Next, a pair of parallel junior I-beams **21** and **22** are mounted atop beams **18** and are secured thereto by conventional fastening devices **23**. Beams **21** and **22** extend the length of the building and are metal as compared to the remaining wooden components of the floor-frame assembly. A plurality of inverted U-shaped joists are then mounted to each lower beam **18**. Each joist has a horizontally extending member **24** and a pair of downwardly extending legs **25** and **26** mounted to the opposite ends of members **24**. Legs **25** and **26** extend downwardly from member **24** and are secured to beam **18** inwardly of ends **37** and **38** of beam **18**. Each leg **25** and **26** extend from the lower surfaces of members **24** to the upper surfaces of beams **18**. The legs are secured to members **24** and beams **18** by plywood strips **27** which are secured to the members, legs and beams by adhesives. The plywood strips extend from the upper surfaces of members **24** to the lower surfaces of beams **18** with one strip being fragmented in FIG. 2 to illustrate the positioning of leg **26**. Standard fastening devices **23** secure beams **21** and **22** to members **24**. Recesses **28** are provided in members **24** for receiving ribs **29**, **30** and **31** which extend the length of the building. Glue is then spread on the top surfaces of members **24** and the top surfaces of ribs **29**, **30** and **33**. A plurality of panels **33**, **34** and **35** are then layed in rows atop the members and ribs. The panels are then secured to members **24** by staples **36**. In addition, screws are used to secure the ends of the panels to members **24**. Spacing **32** between beams **18** and members **24** receives the necessary plumbing, heating ducts and other similar hardware.

Side walls 12 and 13 each have a plurality of parallel upstanding posts 41 and 42 which rest atop beams 51 and 51' which are secured atop ledges 40 and 39 formed by ends 37 and 38 of beams 18. Inner walls 45 and 46 are mounted respectively to posts 41 and 42 as are outer walls 43 and 44. The outer walls extend from the roof of the building down to a position adjacent to the panels 33, 34 and 35. Skirts 49 and 50 extend from the lower edge of outer walls 43 and 44 to a position immediately adjacent the lower ends of beams 18. The skirts are also mounted to posts 41 and 42. The skirts are thereby permanently mounted externally to the side walls and extend to the bottom end thereof. Sheet 19 extends upwardly between leg 26 and post 41 and between leg 25 and post 42. Ribs 47 and 48 are seated in recesses formed in posts 41 and 42 and extend the length of the building being secured respectively to legs 26 and 25.

Two wheel wells 52 and 53 are provided in the floor-frame assembly for receiving the wheels of wheel carriage 16. Each wheel well is identical having an upper wall 54 secured to members 24 and end walls 56 secured to members 18. The side walls 55 and 57 of each wheel well extend through members 18. Wheel axles 59 extend from one wheel well to the other wheel well rotatably mounting the wheels to leaf springs 58. The leaf springs are mounted to metal beams 90 which in turn are pinned by standard fasteners 81 to tubing 91 secured to the bottom of I-beams 21 and 22. Additional tubing 92–97 is mounted to I-beams 21 and 22 being parallel therewith and extending beneath beams 18. Tubing 91–97 supports the building above a surface when the wheel carriage is removed. The tubing is welded to the I-beams.

Hitch 15 has a metal beam 101 with a conventional trailer hitch ball coupling (not shown) thereon for connecting to the towing vehicle. Beam 101 is welded to and beneath metal channels 100 which fit onto metal beams 98 and 99 secured to the bottom of I-beams 21 and 22. Channels 100 and beams 101 are not shown in FIG. 4 for sake of clarity.

By pinning the wheeled carriage to the tubing, the carriage may be quickly and easily removed and returned to the manufacturer for the transportation of another mobile building. The tubing secured to the I-beams alleviate the necessity for mounting the mobile building atop cement blocks since the building may be set immediately atop a slab being supported by the tubes. When the wheeled carriage is removed from the mobile home, the skirts extend down to the slab concealing the plumbing, etc., beneath the building.

While the invention has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the spirit of the invention are desired to be protected.

The invention claimed is:

1. A mobile building positionable on a surface comprising:
a unified floor-frame assembly having a top wall and a bottom end;
side walls mounted to said assembly;
a wheeled carriage removably mounted to said assembly;
means mounted to said bottom end operable to support said mobile home on said surface when said wheeled carriage is removed; and,
a skirt permanently mounted externally to said side walls and extending to said bottom end, said skirt extending to said surface when said means support said mobile home on said surface.

2. The building of claim 1 wherein:
said unified floor-frame assembly includes a plurality of lower parallel beams extending across the building width, a pair of parallel beams mounted to and atop said lower parallel beams and extending the building length, a plurality of upper parallel joists mounted atop and to said lower beams and said pair of beams, a floor sheet mounted atop said joist.

3. The building of claim 2 wherein:
said joists each have a horizontally extending member with opposite ends and a pair of downwardly extending legs mounted to said opposite ends and to one of said lower parallel beams.

4. The building of claim 3 wherein:
said assembly includes a plurality of floor sheets mounted to said joists, ribs mounted between and to said floor sheets and said members and being recessed in said members, and vertical strips mounted to said legs and securing said members to said lower beams.

5. The building of claim 3 wherein:
said lower beams extend outwardly of said downwardly extending legs forming ledges and have spaces mounted atop said ledges extending the length of said building; and,
said side walls have vertically extending posts resting atop said spaces and secured to said downwardly extending legs; and further comprising:
a plastic sheet extending the length and width of said building and positioned between said lower beams and said pair of beams and between said posts and said downwardly extending legs.

6. The building of claim 1 wherein:
said means includes a plurality of tubes mounted to and parallel with said pair of lengthwise beams and extending beneath said lower beams; and wherein:
said carriage is mounted to some of said tubes.

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