May 27, 1941. W. J. CRITES 2,243,373

PREFABRICATED PORTABLE HOUSE STRUCTURE

Filed June 10, 1938 3 Sheets-Sheet 1

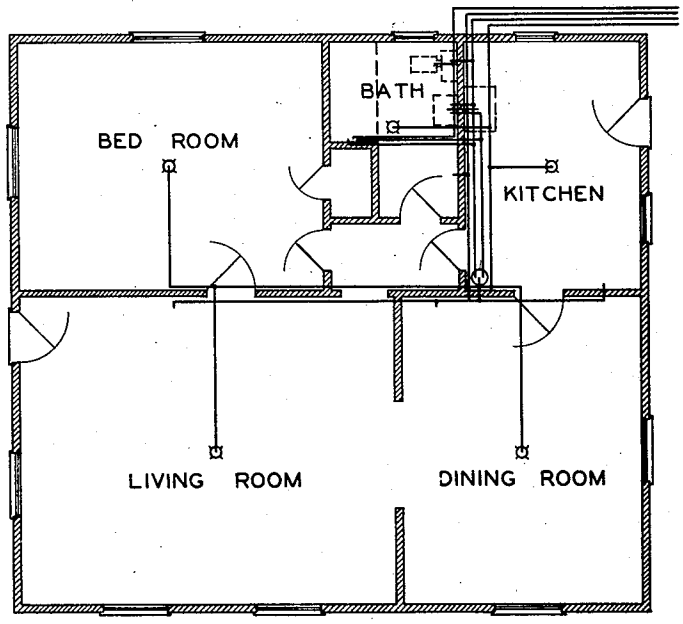

FIG. 2

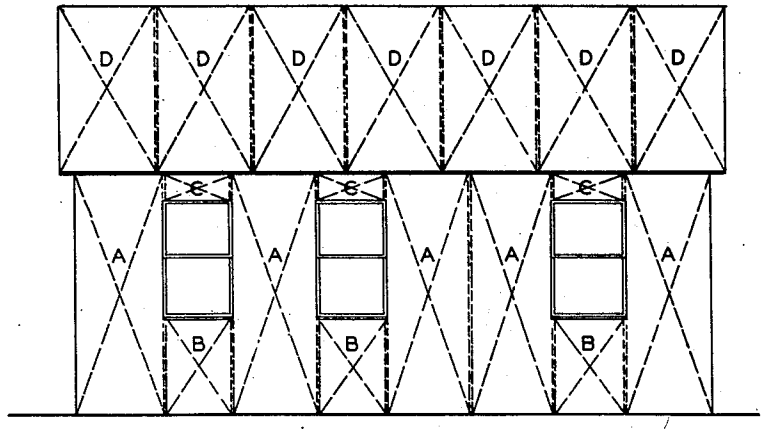

FIG. 1

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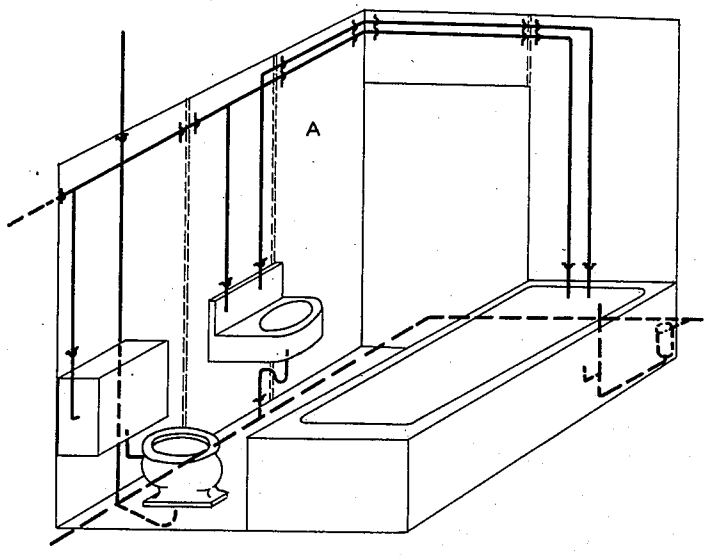

FIG. 4

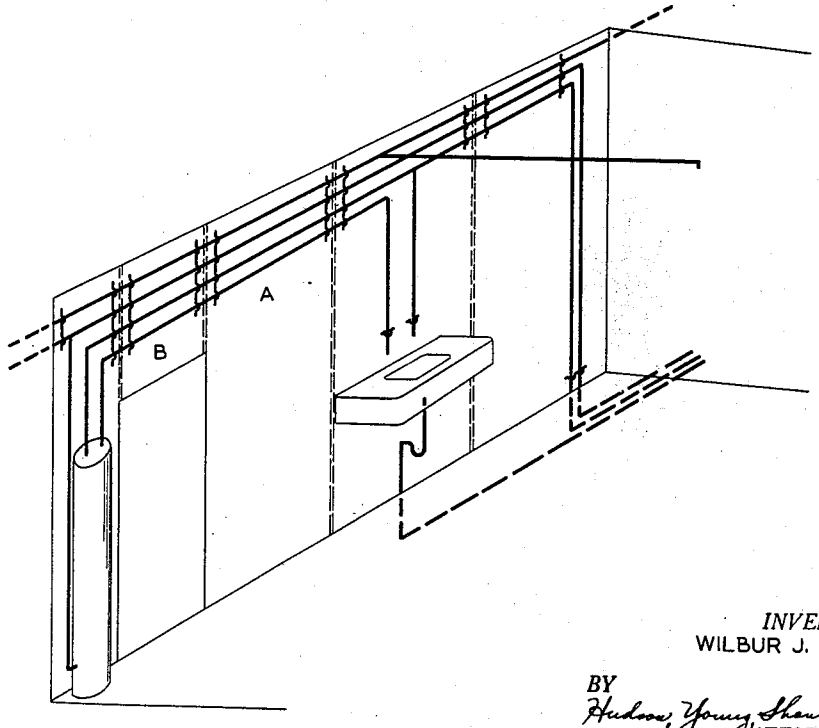

FIG. 3

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PREFABRICATED PORTABLE HOUSE STRUCTURE

Filed June 10, 1938 3 Sheets-Sheet 3

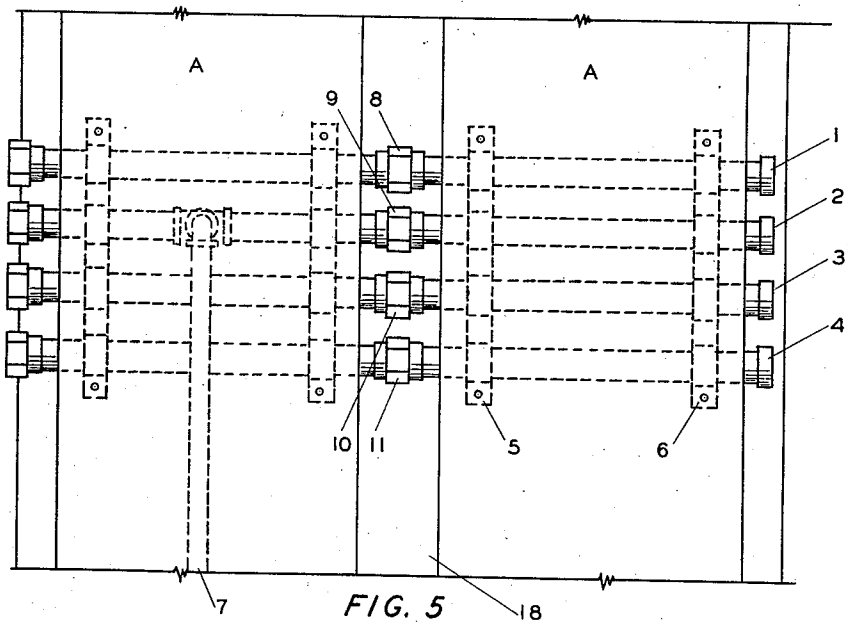

FIG. 5

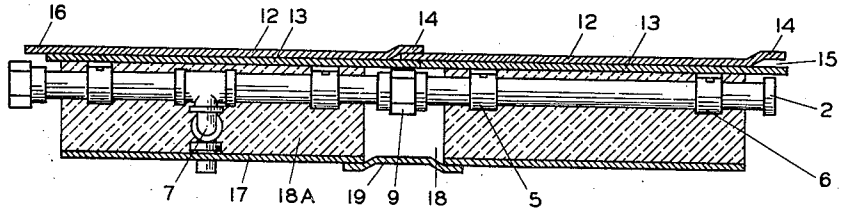

FIG. 6

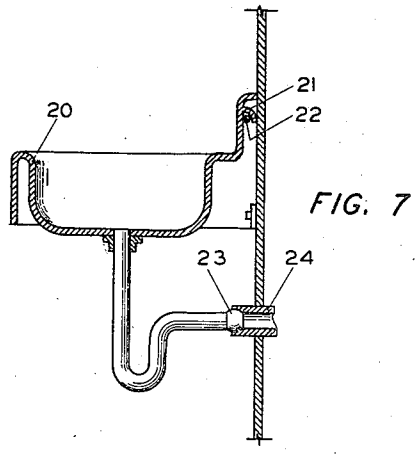

FIG. 7

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UNITED STATES PATENT OFFICE

2,243,373

PREFABRICATED PORTABLE HOUSE STRUCTURE

Wilbur J. Crites, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application June 10, 1938, Serial No 213,050

3 Claims. (Cl. 189—34)

This invention relates to the manufacture of prefabricated units and assembling the same so as to make an inhabitable dwelling structure which may be quickly assembled or dismantled so as to make the dwelling entirely portable. Further, it relates to means for the installation of utilities in a manner to provide a building ready for occupancy after assembling the outer sections.

In the oil industry at the present time, it is common practice for the companies to supply dwelling structures for their employees who work on the lease. These structures have generally been made of wood and the rental assessed has been just enough to amortize the cost of construction. The rental to be charged has always presented a problem to both company and employee for the reason that no definite estimate can be made as to how long the particular oil field will produce. After the oil field reservoir has become depleted, the company no longer has any use for the employee on the lease and the salvage value of the wooden structure is practically nil. This is due generally to the oil field being located in some highly inaccessible place where no need for the house exists other than for the oil field workers. Companies do not always find it practical to build houses around their different enterprises in which case they force their employees to depend for their housing needs on what the communities have to offer. This invariably results in a higher rental than when company houses are furnished and in an effort to make salaries of employees doing the same type of work uniform, adjustments are made for the higher rentals. This results in employees in one area being paid more money for the same type of work than is being paid in another area. This situation encourages unrest among the employees and it was to alleviate this condition that the dwelling herein disclosed was conceived.

It is an object of the present invention to provide a steel building suitable for living quarters which can be easily and quickly assembled.

It is a further object of this invention to provide a steel building which can be easily and quickly dismantled, moved to a new location and reassembled with a minimum of effort.

It is a still further object of this invention to provide a steel building at a complete cost equal to or less than that for a similar type frame building and have a fireproof structure.

It is a still further object of this invention to provide a steel building that can be erected and completed, including the installation of all utilities, by unskilled labor.

It is a still further object of this invention to provide a sectional structure which sections are prefabricated in the factory having all conduits and fixtures installed in the section.

It is a still further object of this invention to provide a simple and expedient coupling means for the conduits and fixtures when assembled and a simple coupling means for the sections.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Figure 1 is a perspective view of a portable dwelling house embodying the invention and merely illustrative of a simple form of construction;

Figure 2 is a horizontal sectional view of the house showing the layout of the rooms;

Figure 3 is a perspective view showing a skeleton and some of the interior of the kitchen;

Figure 4 is a perspective view showing a skeleton and some of the interior of the bath room;

Figure 5 is an elevation of two wall sections in abutting relation also showing the couplings for the utilities;

Figure 6 is a transverse sectional view of one of the sections shown in Figure 5;

Figure 7 is a view in vertical section showing the sink attached to the wall and connected into the waste pipe.

In the embodiment disclosed the portable house is shown fully assembled in Figure 1 and Figure 2 shows a typical floor plan for a four-room house. The house illustrated in Figure 1 clearly shows the side walls made in sections with the windows framed between the sections but if preferred the windows can be mounted right in one of the sections. The house is constructed of steel sections which have been prefabricated at the factory and include all conduits and fixtures, with each section insulated and painted. The size of the sections will be multiples of the dimensions depending upon the size of the house and floor plan selected. Just as an example, the sections A in Figure 1 are four feet in width while the panels B and C are multiples of three feet, varying in height from the

panels A. The panels D are shown as forming a gable roof but it is to be understood a flat roof can be used just as well and in many instances is more practical.

Figure 2 illustrating the layout of the floor plan shows the living room and dining room on one side of the house with a bed room, bath and kitchen on the other side. It is to be noted that the kitchen and bath are adjoining so that the wall between the two can serve to hold most of the utilities and fixtures and in this manner conserve on the number of sections in which these fixtures must be placed. Figures 3 and 4 show skeleton views of typical kitchen and bath room layouts with the common wall between both bath and kitchen. It is to be understood that these layout views are only typical illustrations of how the present invention may be put to use and applicant makes no claim of invention for making a portable house or the particular arrangement or layout of any rooms but is interested only in making a prefabricated section for use in making a portable structure.

Figure 5 shows two sections A—A of the side wall or partition members of the structure in abutting relation and the utility pipes or fixtures 1, 2, 3, and 4 which may be for gas, water, sewerage, and conduits for electricity held in the sections by brackets 5 and 6. The pipe 7 shows a drop connection going down to the floor to connect to some utility member. Couplings 8, 9, 10 and 11 are shown connecting the fixtures 1, 2, 3 and 4 together between sections.

Figure 6 shows a transverse sectional view of Figure 5. The outside wall of the section A is made of two sheet metal plates 12 and 13 with the outer plate 12 being outwardly extending at 14 to form a pocket or socket 15 between the two plates. The plate 12 at the other end is extended beyond the plate 13 to form a projection which fits tightly into the socket 15 when two sections are assembled to form a seal tight joint between the two sections. The inner wall 17 is cut short of the outer wall members so as to leave a space 18 between the two sections when the same are assembled. The space 18 allows space for a workman to attach the coupling members 8, 9, 10 and 11 to the pipes 1, 2, 3 and 4. The space 18A between the walls 13 and 17 of the section A is filled with any suitable insulating material when the section is prefabricated at the factory. The space 18 is left open to allow for making the couplings and filled with an insulating medium after the couplings have been made. Any suitable coupling means 19 may be employed to hold rigidly the sections together when the couplings have been made and the insulation put in place. The member 19 may have a sliding fit with the sections or any convenient clamp means may be used to hold the sections assembled, however, the means employed must be readily dismantable and not permanent in any way.

Figure 7 shows one example of the mode of assembly contemplated for the sink, wash bowl, bath tub and toilet. The sink 20 has a hook portion 21 which is hooked over a bail 22. The drain pipe for the sink has a synthetic rubber gasket 23 mounted on the end thereof and makes a sliding fit with the drain pipe 24. The weight of the sink is sufficient to keep the gasket in tight engagement with the drain pipe 24 without any additional coupling means.

In constructing the house, a concrete floor with composition flooring is contemplated. All utilities are brought up to the house ready for connection. The sections which are prefabricated at the factory are brought to the site and construction starts. The sections are assembled with suitable supporting means between the floor and the sections and the tops of the sections and the roof. As the sections are assembled, the necessary fixture couplings are made before the sections are finally attached. When the house is completed, the utilities such as water, gas, sewerage, and electricity are connected and the house is ready for occupancy.

It is apparent from this construction that no plumbers, electricians, or other skilled labor will be required to install utility conduits and fixtures after the house is erected. These items being built into the wall, floor or ceiling sections at the factory are connected and ready for use as each section is assembled when the house is being erected.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim is:

1. In prefabricated side wall sections for portable dwelling structures, the combination comprising an outer wall including a pair of substantially coplanar members, a tongue on one member and a groove on the other member, said tongue and groove cooperating to form an adequate joint; an inner wall spaced from the outer wall and including a pair of substantially coplanar members spaced to form an opening therebetween and removable means for connecting the inner wall members; utility conduits between each outer wall member and the corresponding inner wall member; and coupling means for connecting corresponding utility conduits into a continuous pipe, said coupling means being accessible through the opening between the inner wall members.

2. In prefabricated side wall sections for portable dwelling structures, the combination comprising an outer wall including a pair of substantially coplanar metal plate members, a tongue on one member and a groove on the other member, said tongue and groove cooperating to form an adequate joint; an inner wall spaced from the outer wall and including a pair of substantially coplanar metal plate members spaced from each other to form an opening therebetween and removable means for connecting the inner wall members; utility conduits between each outer wall member and the corresponding inner wall member; insulating material between each outer wall member and the opposite inner wall member and surrounding the utility conduits, said insulating material stopping short of the ends of the conduits so as to leave a space when sections are connected; and coupling means for connecting corresponding utility conduits into a continuous pipe, said coupling means being accessible through the opening between the inner wall members.

3. In prefabricated side wall sections for portable dwelling structures, the combination comprising an outer wall including a pair of substantially coplanar metal plate members, a tongue on one member and a groove on the other member, said tongue and groove cooperating to

form a fluid seal joint; an inner wall spaced from the outer wall and including a pair of substantially coplanar metal plate members spaced from each other to form an opening therebetween and means for coupling the members of the inner wall and for covering the opening between said members; utility conduits between each outer wall member and the corresponding inner wall member; insulating material between each outer wall member and the opposite inner wall member and surrounding the utility conduits, said insulating material stopping short of the ends of the conduits so as to leave a space when the sections are connected; and coupling means for connecting corresponding utility conduits into a continuous pipe, said conduit coupling means being accessible through the opening between the inner wall members when the means for coupling the inner wall members is removed.

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