Oct. 29, 1929. F. L. PURDY 1,733,169

FRAME FOR BUILDINGS

Filed Dec. 8, 1926

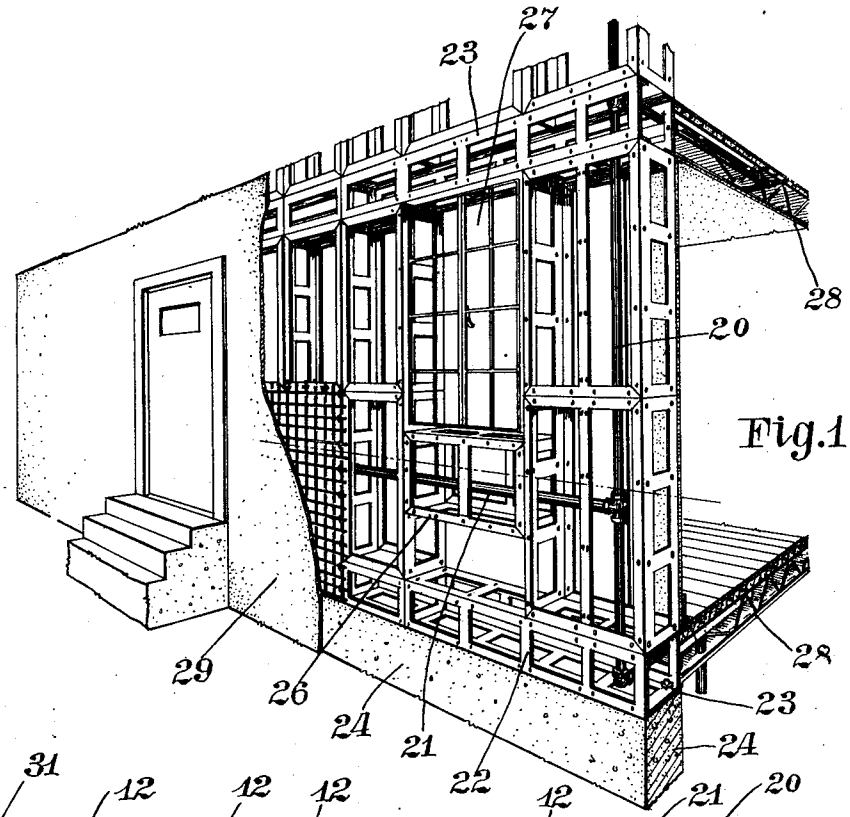


Fig.1.

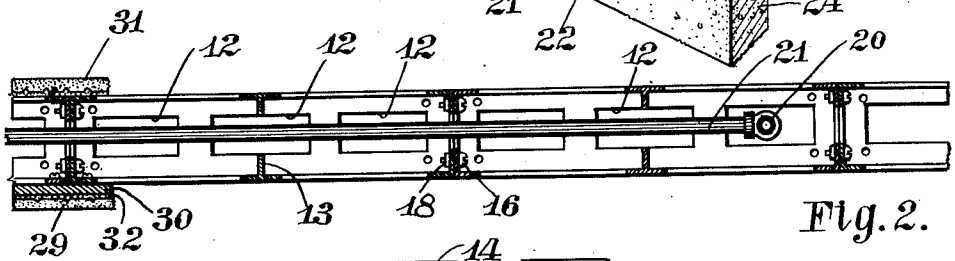


Fig.2.

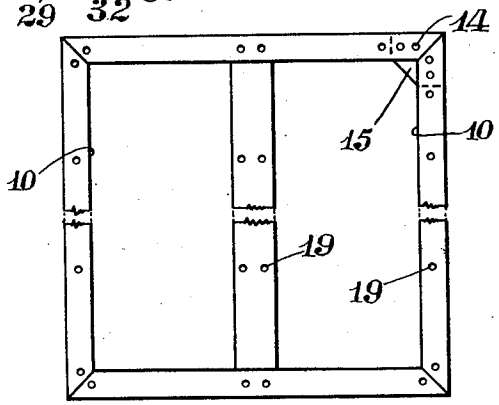


Fig.3.

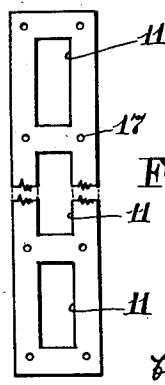


Fig.4.

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1,733,169

UNITED STATES PATENT OFFICE

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FRAME FOR BUILDINGS

Application filed December 8, 1926. Serial No. 153,351.

This invention relates to the construction of buildings and particularly of dwellings and such as are designed to have their frames or skeletons of steel or iron, and the invention has for its object more especially to provide improvements in details whereby the skeleton is quickly erected, made stronger, perhaps more economically and provision made for concealing the pipes or conductors for water, gas, electricity or other commodities or services.

Owing to the high cost of lumber and skilled labor it has been proposed to effect economies by erecting a skeleton for a building made up of small metallic members or frames of standard material and varied dimensions that can be united by bolts or other simple fastenings not requiring skilled labor and upon this skeleton to apply the weather-excluding and other covering materials. However, as far as I am aware such proposals did not, except in the patent of the United States issued to me October 26, 1926, No. 1,604,605, include any or adequate provision for concealing the conductors of domestic commodities aforesaid. My present improvement, therefore, aims principally to provide preformed standardized frames or units that when assembled and secured together form at once both the interior and exterior surfaces for applying the wall coverings, said frames being also of such construction that passages and room for the concealing of the conductors are at the same time provided. Other objects and advantages of the invention will be apparent from the disclosure herein.

The invention is embodied in the example herein shown and described the features of novelty being finally claimed.

In the accompanying drawing—

Figure 1 is a perspective view of a frame of a dwelling according to my invention showing several forms of the component frames and how they can be assembled and united to form the skeleton.

Fig. 2 is a horizontal section on an enlarged scale through two whole and two fractions of the units showing in clearer detail how the frames are united and the interior and exterior coverings are applied.

Fig. 3 is a view in face elevation, broken out horizontally, showing one of the frames such as shown in Fig. 2.

Fig. 4 is an edge view of the frame as shown in Fig. 3.

In the views, and referring first to Figs. 2, 3 and 4, the frame unit or member is of open rectangular parallelopiped form having its opposite large faces provided with openings 10, 10, and its vertical ends with openings such as 11, 11, and its top and bottom with openings such as seen at 12, 12. All the corners of the frames are like angle bars with their backs outermost. If the frame be of considerable width, there are provided at each face of the unit an intermediate vertical stiffener of T-bar form, as shown at 13. The ends and tops and bottoms of these frames can be made of rolled plate of U-form shown and then cut to form the openings and joints and united at the corners by welding or by rivets 14 with corner pieces 15, the intermediate T-stiffeners being added. The frames as thus formed can be united along their vertical ends and top to the bottom by bolts with nuts, the bolts 16 being passed through holes such as shown at 17 as fastened with nuts 18 as shown in Fig. 2. The face webs of the frames can be perforated as seen at 19 to receive fastenings for holding the plaster lath or other materials for receiving the plaster or other coverings. It will be observed that the openings 10, 10, effect a saving of material while the openings 11, 11, and 12, 12, save material and also provide for vertical and horizontal extension respectively of conductors for the commodities referred to, such pipes being shown at 20 and 21 respectively. It will also be noted that when these unit frames are connected in vertical tiers the ends thereof form vertical columns of great strength and rigidity.

The unit frames described can be made of different form and size. For example they can be made long and of square cross section, as shown at 22, to form "plates" to be anchored at 23 to the top of the foundation wall 24 and similarly at 23 to constitute the second floor plate. They can also be made short as

at 26 to fit between vertical tiers to form a window opening as shown at 27.

The floor beams 28 in such structures can be of the type known as bar joists, the ends of which are supported on suitable shelf angles.

In Fig. 2 the exterior wall covering is shown as having stucco 29 on insulating boards 30 and metal lath 32, while the interior covering is plaster 31 on lath or insulating base wired or otherwise fastened to the frame.

The term wall used in the claims is intended to include partitions and other wall-like constructions.

The frames and other parts can be manufactured in a factory and transported to the place where the building is to be erected for assembling. It will be observed that when the frames are united the surfaces to receive the exterior and interior coverings are both formed at the same time; and because the frames are open at their faces ample access for the workmen to apply the securing devices and make the necessary connections in conductors is provided.

The forms of the parts can be changed without departing from the gist of the invention as claimed.

What I claim is:

A member for constructing a skeleton for the wall of a building, said member consisting of an open frame having rims formed of four integral metallic plates of horizontally extended U-shape in cross section united at their ends with their backs outward and forming a structure of parallelopiped form, said plates provided with openings permitting the passage of conductors vertically and horizontally through said member, and the rims thereof adapted to be united directly to other similar rims to form the skeleton, and the faces of said member when in the skeleton adapted to receive internal and external wall coverings.

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