July 14, 1931. A. WINGET 1,814,202

WALL CONSTRUCTION

Filed March 29, 1929 2 Sheets-Sheet 1

Fig. 1.

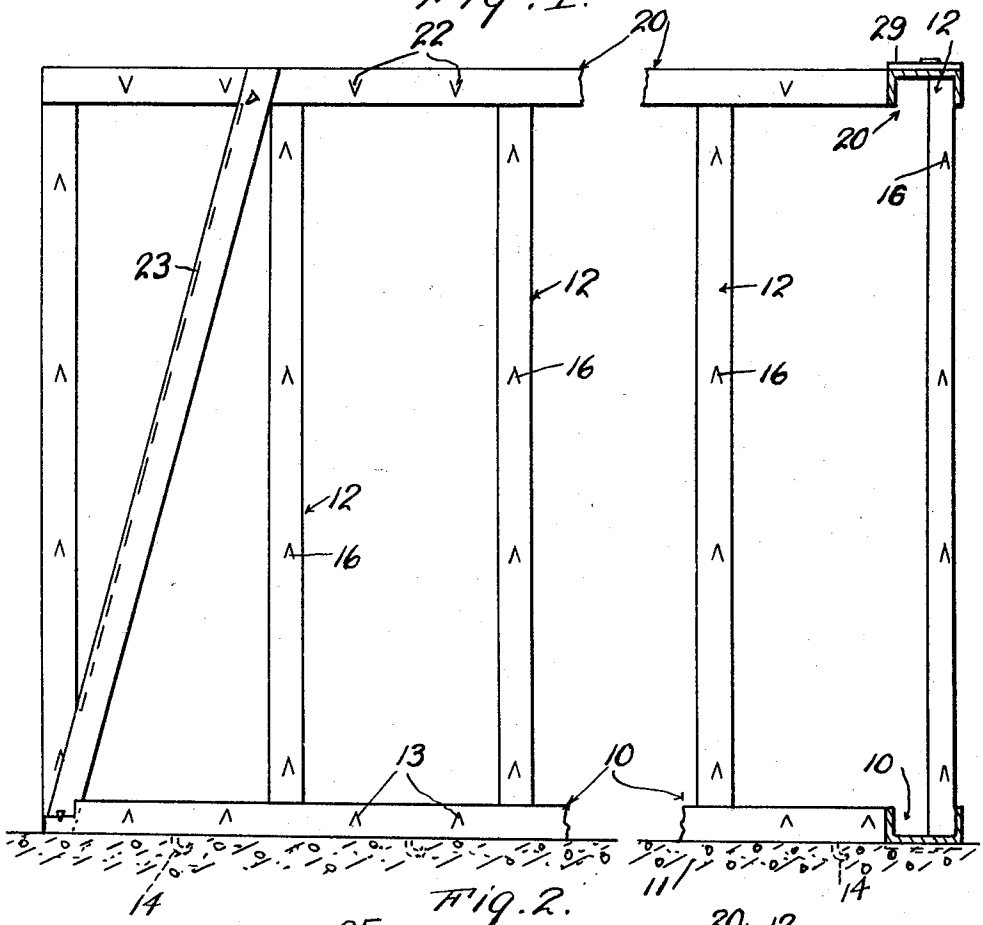
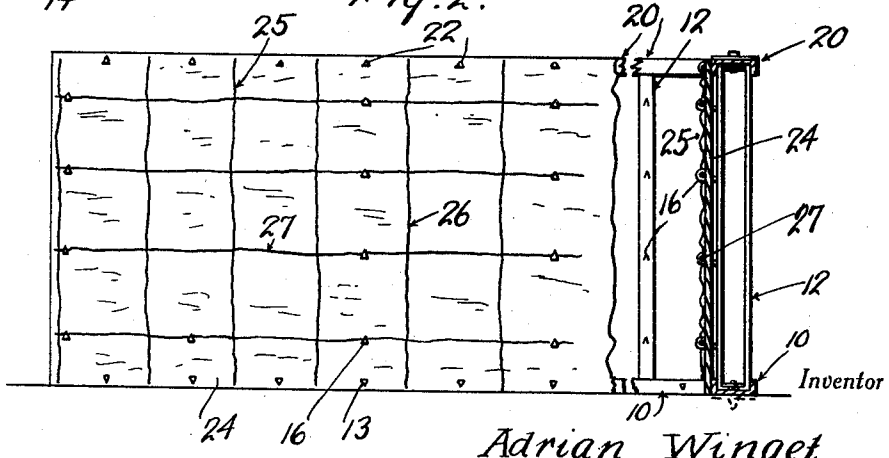


Fig. 2.



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Fig. 3.

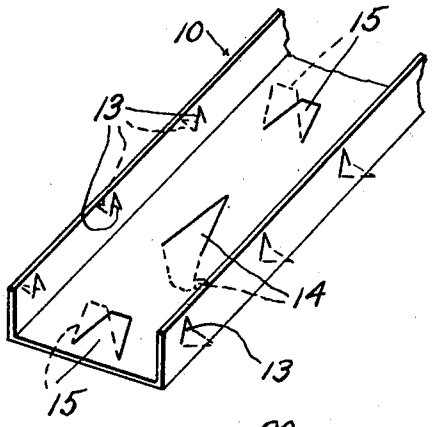


Fig. 5.

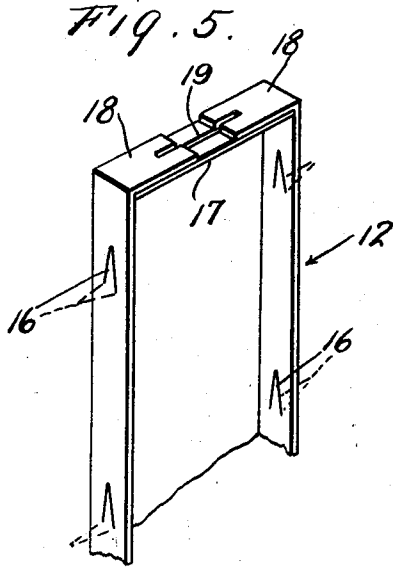


Fig. 4.

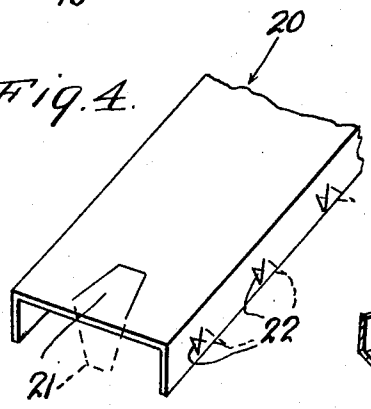


Fig. 6.

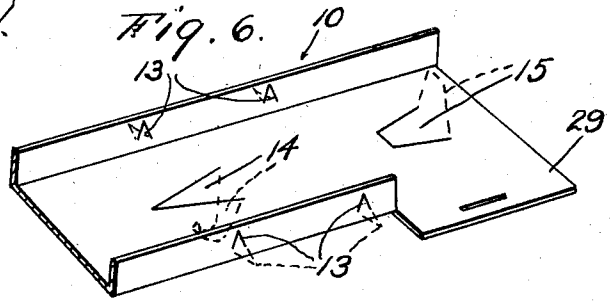


Fig. 7.

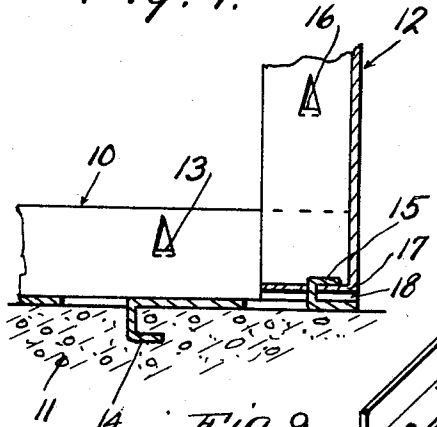


Fig. 8.

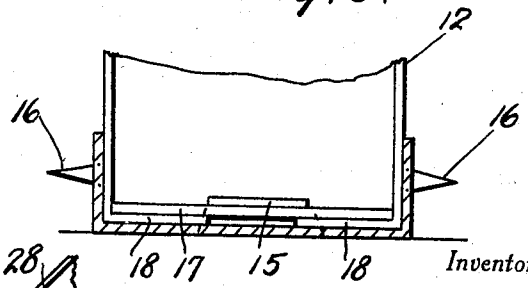
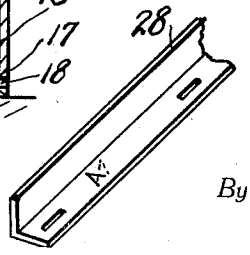


Fig. 9.



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UNITED STATES PATENT OFFICE

ADRIAN WINGET, OF WAPAKONETA, OHIO

WALL CONSTRUCTION

Application filed March 29, 1929. Serial No. 350,892.

This invention relates to an improved wall construction for general building and structural work, and it has more particular reference to improved frame work especially adaptable for both inside and outside wall formation.

More specifically stated, the principal novelty is predicated upon an unusual structural organization of suitable metallic elements and features so co-related and fastened together to provide an open frame work assembly for practical use in the construction of outside walls and inside partitions.

In carrying out the invention I construct a metal frame work support embodying a horizontal base or sill member, a top or head beam arranged horizontally above the sill member, and longitudinally spaced vertically disposed struts or studs interposed between and having interlocking connection with the base and head members.

The particular feature in this improved structural assembly is found in the fact that both the vertical and horizontal members are provided with pointed bendable spurs which are especially useful and efficient in facilitating the mounting of backing and anchoring means for plastic coating material, such as plaster, stucco and the like.

The particular features and their intimate arrangement and association will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is a view in section and elevation of a wall frame assembled in accordance with the present invention.

Figure 2 is a sectional and elevational view on a slightly reduced scale, disclosing the manner in which the plastic backing and wire anchoring means is mounted on the frame.

Figure 3 is a fragmentary perspective view of one end portion of the base member.

Figure 4 is a similar view of an end portion of the head member.

Figure 5 is a fragmentary perspective view of the upper end portion of one of the vertical struts.

Figure 6 is a perspective view showing a slightly modified form of base member, used at one end of the complete frame assembly.

Figure 7 is a fragmentary sectional view showing the method of anchoring the base member in the concrete floor and the interlocking connection between a complemental vertical strut.

Figure 8 is a view at right angles to Figure 7, showing the interlocking connection between the base member and struts.

Figure 9 is a fragmentary perspective view of an angle iron sometimes substituted for the head member in Figure 4.

Referring first to Figure 1 it will be seen that the base member is generally designated by the reference character 10. As better shown in Figure 3, this comprises a channel iron adapted for horizontal disposition and constructed for anchorage to the concrete floor 11, and further constructed to accommodate the complemental vertical struts or studding members 12. In carrying out this idea, the vertical flanges or side walls have pointed tongues 13 formed at longitudinally spaced points and these are adapted to be bent out at right angles to the dotted line position seen in Figure 3. In the bottom or webbed portion of this member are pointed tongues 14, adapted to be bent down to form anchoring hooks to be embedded in the concrete as represented in Figure 7. Certain of these tongues, designated by the reference character 15 are adapted to be bent up to form hooks and to provide an interlocking connection with the vertical struts 12.

The vertical struts are also of channel shaped cross section. The side walls are formed with pointed tongues 16 adapted to be bent out at right angles to serve a purpose to be hereinafter described. At the top and bottom (see Figures 5 and 8) the end portions of the metal are bent into overlapping relation as seen at 15 and 18. In other words the web portion 17 is bent in and the edges of the flanges are bent over it and both of these pieces 17 and 18 are formed with registering openings forming an elongated slot 19 to which the interconnecting tongues 15 are bent as seen in Figures 7 and 8. This

affords a rigid connection between the base member and struts.

The preferred form of head plate or member is designated by the reference character 20 in Figure 4. This is of open ended channel shaped cross section and the web portion is provided with tongues 21 for connection to the slots 19 in the upper ends of the struts. Thus the connection between the struts at the upper and lower ends is substantially the same. In the head plate, however, there need be no anchoring tongues or hooks 14. The depending side flanges however are formed with outwardly bent tongues 22. The reference character 23, in Figure 1, merely designates a diagonal brace suitably attached in place.

When these several members are thus interlocked together and assembled in the spaced relation seen in Figure 1, a frame work support is provided to accommodate the plastic coating means whether it be the inside wall plaster or the outside stucco surface. In this connection the tongues 13 and 16 and 22 come into play. For example as seen in Figure 1, the reference character 24 designates a sheet of backing material. This may be cardboard whose surface is broken to facilitate adhesion of the plastic material thereto. The sheet of material is placed against the frame and the pointed tongues forced through it at points as represented. Then the wire anchoring and reinforcing means 25 is put in place. This comprises vertical and horizontal wires 26 and 27 and the horizontal wires are held in place by certain of the tongues just mentioned. In other words, the tongues are sufficiently long to pass through the coardboard backing sheet 24 and then bent around the horizontal wires as seen at the right in Figure 2. These backing and anchoring members 24 and 25 may be disposed on both sides of the frame work and when in the position represented in Figure 2, it is obvious that the plastic material may be placed on with a trowel or other plastering implement or tool.

Incidentally the tongues 15, 16 and 22 are also referred to as spurs, inasmuch as they are of pointed configuration and adapted to penetrate the backing sheet 24. In some instances, instead of employing a single head plate 20 I find it convenient to provide a pair of spaced parallel angle irons 28 as seen in Figure 9. In other words, the pair of angle irons may be substituted for the plate where it is desired to have a ventilating opening at the top of the frame work. Also, as seen in Figure 6, certain of the base members 10 are formed at one end with an extension 29, constructed to facilitate connection thereto of a complemental base member which is adapted to be placed at right angles thereto. This extension is necessary at the end of the frame work, where it becomes necessary to construct a partition extending in a direction at right angles as represented for instance in Figures 1 and 2.

The construction of the details, as well as the method of assembly and the utilization in wall formation seem quite clear after considering the foregoing description in conjunction with the drawings. Therefore a more lengthy description is regarded unnecessary.

Minor changes in the shape, size and rearrangement of details coming within the field of invention claimed may be resorted to, in actual practice if desired.

I claim:

1. A wall supporting structure of the character described comprising a horizontally disposed base including a web and integral upturned side flanges, an integral hook struck up from one end portion of the web, a vertical strut mounted on said end portion of the base between the flanges and including a web having an inturned lower end portion and integral side flanges having inturned lower end portions extending under the inturned portion of the strut web and adapted for rest on the base, said inturned web and flange portions having registering slots for the reception of the hook.

2. A wall supporting structure of the character described comprising a horizontal base including a web and integral upturned flanges on its longitudinal sides, one of said flanges terminating in spaced relation to one end of the web, an integral extension projecting laterally from the unflanged side portion of the web in the horizontal plane of said web and having a slot therein, said extension constituting means for connection with another base member, an integral hook struck up from the web adjacent the extension, a strut mounted vertically on the end portion of the base and including a web having an inturned lower end portion and integral side flanges having inturned lower end portions extending under the inturned portion of the strut web and adapted for rest on the base, said inturned web and flange portions having registering slots for the reception of the hook.

In testimony whereof I affix my signature.

ADRIAN WINGET.