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BUILDING WALL CONSTRUCTION

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This invention relates to wall construction for buildings, having particular reference to walls of the type composed of a plurality of factory fabricated panel units of definite dimensions and configuration, the general object of the invention being to provide improved means for facilitating the assembly and uniting of such panel units in wall producing order, whereby to produce an exterior or interior building wall at low constructional costs, one possessing substantial mechanical strength and of improved external appearance.

Another object of the invention resides in the provision of an improved external wall structure for frame type buildings, wherein the wall structure is composed of a plurality of preformed panels or siding units arranged in superposed vertical order, and wherein improved securing means are provided between the adjoining longitudinal edges of each pair of such units for the purpose of quickly uniting such units in secured association with an inwardly disposed building frame, the fastening means being of such character as to enable the panel or siding units to be disassembled when desired without injury and perfectly intact for further use.

Still another object of the invention rests in the provision of an exterior building wall composed of prefabricated units which, when in assembled order, provide effective protection for the interior of a building against the transmission therethrough of moisture and heat or cold.

This application is related to applicant's co-pending Patent No. 2,309,453, granted January 26, 1943, on application Serial No. 405,238, filed August 2, 1941.

For a further understanding of the invention, reference is to be had to the following description and the accompanying drawing, wherein:

Fig. 1 is a vertical longitudinal sectional view taken through a building wall assembled in accordance with the present invention.

Fig. 2 is a horizontal sectional view taken on the line II—II of Fig. 1;

Fig. 3 is a front view of a pair of stud members disclosing the manner of associating therewith one of the wall panel securing clips;

Fig. 4 is a detail perspective view of one of said clips.

Referring more particularly to the drawing, there has been indicated at 1 a building frame member which, in this instance, comprises a pair of vertically disposed, parallel, transversely spaced studs 2—2, which are held in adjoining and desired relationship by means of spacer

blocks 3 to which the studs are secured. The inner opposed faces 4 of the studs are provided with vertically extending saw cuts or slits 5, which are relatively narrow in width and of appropriate depth.

Adapted to be secured to the frame member 1 are horizontally extending superimposed siding members 6. Each of these siding members is of prefabricated construction having standardized dimensions and other structural features. In the form of the invention illustrated, each siding member comprises an outer panel 7, to the back of which is secured a body of insulating material 8. Below the body 8, each panel has its back side provided with a longitudinally extending, positioning and reinforcing chest 9. The bottom of each cleat is longitudinally grooved as at 10 to receive the upper edge portions 11 of the panel of the next lower siding member 6, permitting the panels of said siding members to relatively overlap each other, as shown in Fig. 1, and to enable the siding members to be positioned one on the other in wall forming order for convenience and economy in assembly, avoiding the use of nails or other conventional securing elements.

To retain the siding members in their operative positions, engaging closely with the front vertical surfaces of the studs 2, use is made of metallic fastening clips 12 of the form disclosed in Fig. 4. Each of these clips comprises a substantially rectangular vertically disposed plate 13, the latter having rounded corner edges and may be reinforced by means of spaced parallel ribs 14. Extending from the bottom of the plate and integrally formed therewith is a horizontally extending tongue 15, the outer end of which terminates in a hook-shaped lip 16, which is grooved to receive the upper edge portions of the siding panel 7, gripping said panels to restrain the same against outward lateral movement from the stud members. As shown in Fig. 3, the length of the plate 13 of each clip is such as to permit the plate to be inserted in the space formed between the inner surfaces 4 of the studs 2, with the plate having its major length disposed vertically. The plate may then be turned, approximately 90 degrees, so that the side edges thereof will be positioned in the slits or grooves 5 and adjusted vertically by sliding movement in said grooves until the hook-shaped lips 16 are positioned over the upper edges of the panel 7, as shown in Fig. 1. This construction enables the siding members to be quickly and readily assembled in connection with the frame studding and fastened to such studding in a positive and secured manner

without involving the use of nails, screws or other conventional fastening elements.

During the assembling and fastening of the wall or siding panels, nothing is done to mar or disfigure the same, so that in event the wall structure is subsequently dismantled, each part thereof remains in a completely intact condition and may be usefully employed for similar capacities.

The wall formed by the present invention possesses adequate mechanical strength for the various uses to which it is placed and, in addition, presents a pleasing external configuration which adds to its desirability in residences or other types of building construction. It is obvious that the construction here described permits a building wall to be erected or assembled by unskilled artisans in a short space of time, thus providing an economy in building construction which is quite marked over conventional types and methods of constructing external building walls.

While a preferred form of invention has been set forth in detail, it will be apparent to those skilled in the art that the same is subject to considerable variation or modification both in choice of materials and in the functional design of the associated parts and, therefore, we reserve the right to employ all modifications and variations of the invention falling within the scope of the following claims.

We claim:

1. In building construction, a pair of vertically extending stud members having relatively spaced inner side faces, the latter being provided with vertically extending complemental grooves, horizontally extending siding members arranged in parallel superposed order at the fronts of said stud members, a metallic plate positioned between the inner side faces of said stud members, the joist ends of said plate being slidably and removably received within said grooves, and securing tongues formed with and projecting forwardly from said plates, the outer ends of said tongues being terminated in hook-shaped lips disposed for engagement with the upper edges of said siding members, whereby to retain the latter against lateral movement in connection with said stud members.

2. In building construction, a pair of vertically extending stud members having relatively spaced inner side faces, the latter being provided with vertically extending complementary slits, horizontally disposed siding members arranged in parallel superimposed order adjacent to the front faces of said stud members, a metallic plate of a length spanning the space formed between the inner faces of said stud members and entering said slits, the width of said plate being such that when the plate is turned to disengage the opposite longitudinal edges thereof from said slits, the plate may be inserted or removed from engagement with said stud members through the space formed therebetween, and a tongue extension formed with said plate, the outer end of said extension being channeled for the re-

ception of the edge portion of one of said siding members, whereby to hold the latter in connection with said stud members.

3. In building wall construction, a plurality of relatively spaced vertically extending stationary studs, each of said studs having the front thereof provided with a longitudinally extending inwardly disposed recess, the side walls of each recess being formed with oppositely disposed registering longitudinally extending grooves, a plurality of horizontally extending siding members arranged one above the other in superposed overlapping relationship and arranged adjacent to the fronts of said studs, each of said siding members having the rear surface thereof provided with a shouldered bar, and a plurality of relatively independent metallic fastening clips for securing said siding members to said studs, each of said clips being formed with a substantially rectangular base portion having the ends thereof slidably received in the grooves of said studs and being further formed with a forwardly and outwardly directed lip arranged for engagement with the shouldered portions of the siding bars.

4. In building wall construction, a plurality of relatively spaced stationarily supported vertically extending studs, each of said studs consisting of a pair of transversely spaced side strips and uniting filler members interposed between said strips, said members being of less width than said strips to form longitudinally extending recesses at the front of said studs, the side walls of said recesses being provided with registering oppositely disposed longitudinally extending grooves, a plurality of superposed siding members arranged in front of said studs, and a plurality of metallic fastening clips for securing said siding members to said studs, each of said clips having a relatively widened base portion, the ends of which are removably and slidably positioned in the grooves of said stud recesses, said clips being further formed with forwardly directed lip portions arranged for fastening engagement with the inner portions of said siding members.

5. In building wall construction, a plurality of spaced vertical stud members, each of which consists of a pair of spaced side strips joined by filler blocks arranged to provide a longitudinal recess at the front of the stud, the side walls of said recesses having opposed registering slits formed therein, a plurality of superposed siding members arranged in front of said studs, said siding members having overlapping shouldered edges, clip means for securing said siding members to said studs, each of said clips having a sheet-like body disposed in parallel relationship with said siding members, the edges of said clip bodies being positioned in said slits, web means projecting forwardly from said clip bodies, and shoulders formed on the outer portions of said web means, said web shoulders being engaged with the shouldered edges of said siding members to prevent separation of the latter from said studs.

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