June 26, 1934. E. F. TECHMER 1,964,304

GROUND CONSTRUCTION

Filed Sept. 25, 1930 3 Sheets-Sheet 1

Fig. 1.

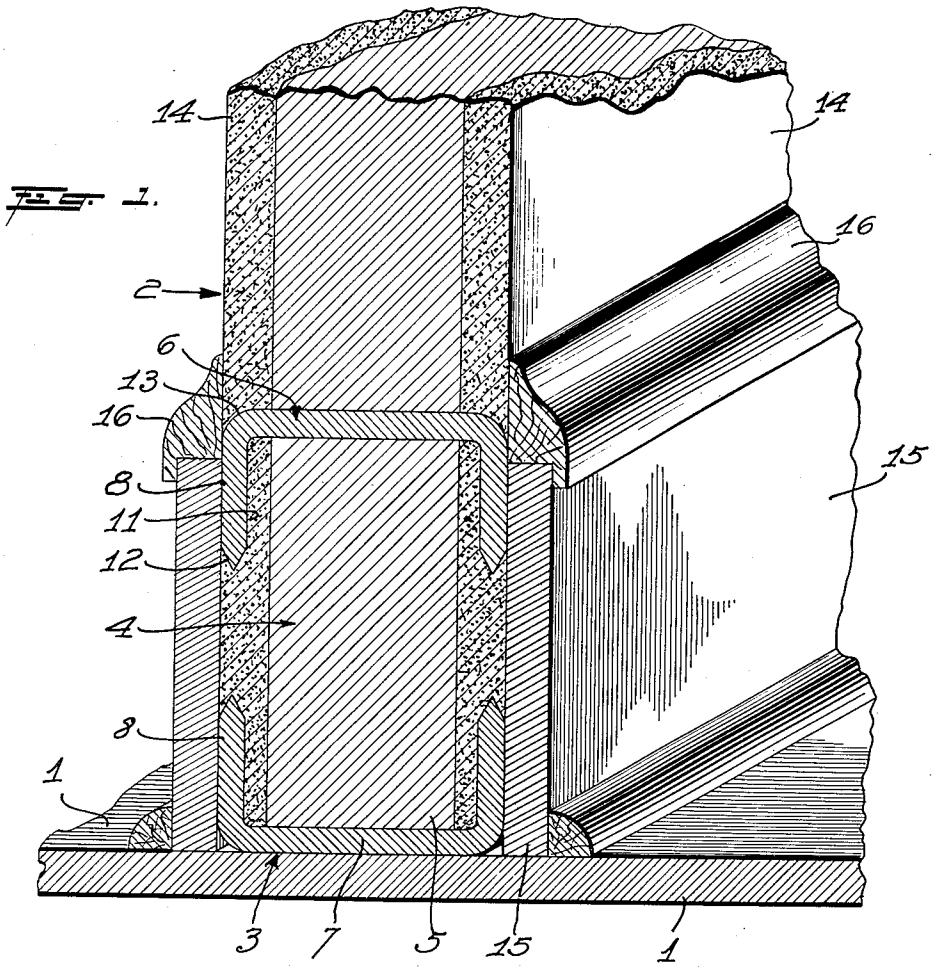
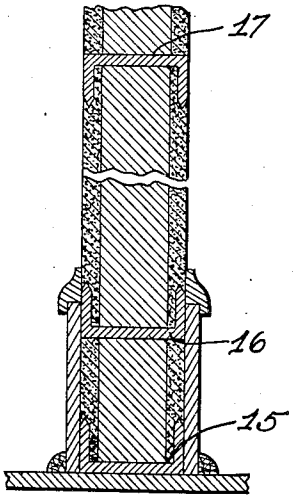


Fig. 2.



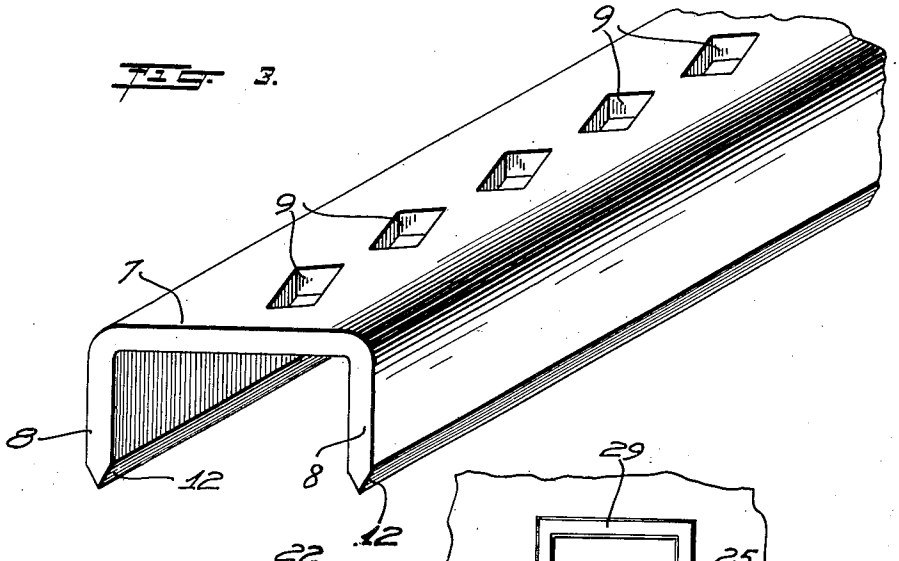
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June 26, 1934. E. F. TECHMER 1,964,304

GROUND CONSTRUCTION

Filed Sept. 25, 1930 3 Sheets-Sheet 2

FIG. 3.



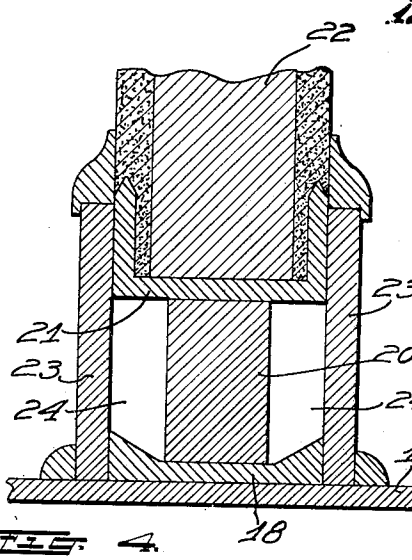


FIG. 4.

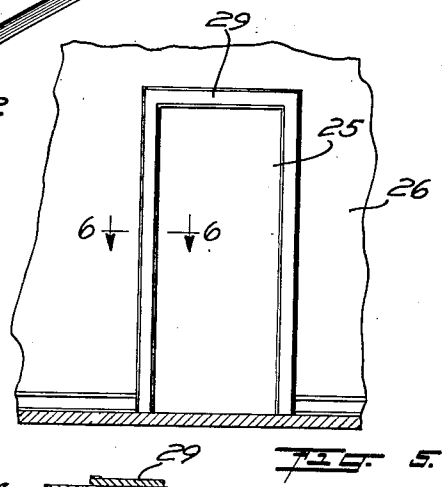


FIG. 5.

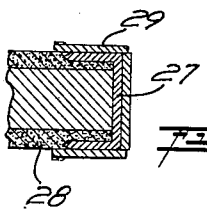
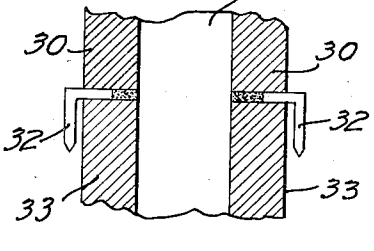


FIG. 6.

FIG. 7.



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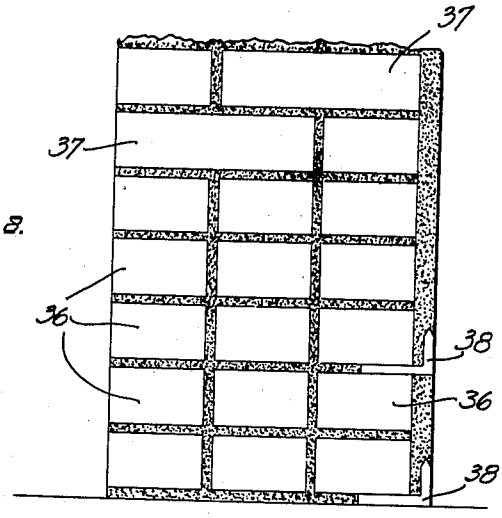
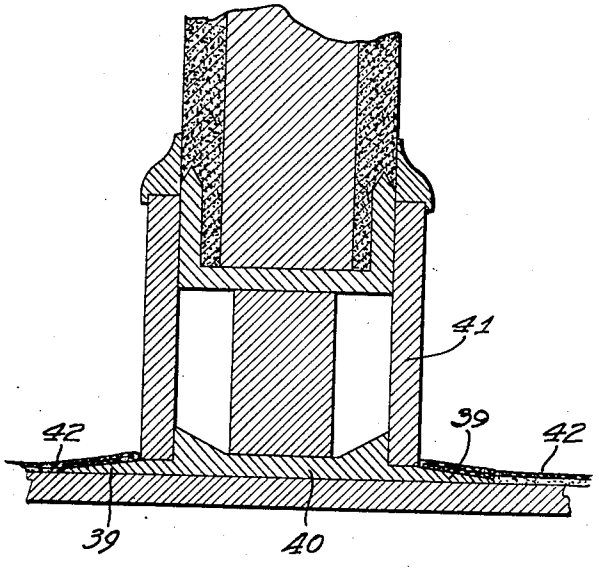


Fig. 8.

Fig. 9.



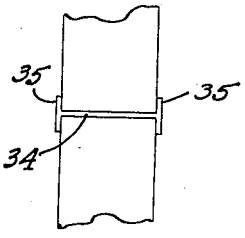


Fig. 10.

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Patented June 26, 1934 1,964,304

UNITED STATES PATENT OFFICE

1,964,304

GROUND CONSTRUCTION

Ewald Frank Techmer, Chicago, Ill., assignor, by direct and mesne assignments, of one-half to Elfrieda C. Techmer and one-half to George Dubelston, both of Chicago, Ill.

Application September 25, 1930, Serial No. 484,392

27 Claims. (Cl. 72—0.5)

My invention relates to improvements in ground constructions, and it consists in the combinations, constructions, and arrangements herein described and claimed.

It is customary at the present time to construct building walls, particularly partitions in apartment, office buildings, and the like, from tile, brick, or some other core material. The interior walls or partitions are customarily built after the outer structure of the building is completed. The partitions ordinarily rest directly upon the floor. The wall surface is plastered after the completion of the partition. It is necessary in such structures to provide means which may serve as a ground for the plaster and for securing baseboards and the like to the wall.

An object of the present invention is to provide a ground construction which may be incorporated in the base structure of a wall constructed from brick, tile, or other suitable wall core materials as a means to which baseboards and the like may be effectively secured by means of nails, screws, etc. and which serves an additional function as a guide element in plastering and as a ground for plastering.

A further object is the provision of a ground construction which is moulded from a plastic cementitious material having high heat resisting properties and which may be cut by edged tools, saws, etc., thereby providing a construction applicable to various types of wall structures and easily cut to satisfy the variable conditions incidental to the installation of building walls.

A further object is to provide a ground structure formed from a cementitious material composed principally of magnesium chloride, magnesium oxide, and a suitable filler thereby constructing a ground of a type adapted to receive nails, screws, and the like as when securing baseboards, moulding, frames, casing, pictures, and the like thereto.

A further object is to provide a ground construction of a given dimension and constructed in such a manner that the ground may be easily broken apart when used in connection with walls of special construction and which may be placed in various parts of the wall for anchoring purposes.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which

Figure 1 is a perspective view of a portion of a wall embodying my invention,

Figure 2 is a sectional view of a wall embodying the invention and also suggesting an alternative function of my ground construction,

Figure 3 is a perspective view of a portion of a ground construction in accordance with my invention,

Figure 4 is a sectional view of a portion of a wall embodying a slightly different structure and a view suggesting an alternative function of the structure shown in Figures 1 to 3, inclusive,

Figure 5 is a diagrammatic view of a door embodying my invention,

Figure 6 is a sectional view taken along the line 6—6 of Figure 5,

Figure 7 is another form showing the variable adaptability of my invention,

Figure 8 is a view of a brick wall showing my ground associated therewith,

Figure 9 is a sectional view of a wall or partition showing the ground provided with a carpet strip, and

Figure 10 is a diagrammatic view of a different form of ground construction.

In carrying out my invention, I make use of a floor 1 upon which a wall or partition 2 is built. A ground 3 is placed upon the floor for receiving a portion 4 of the partition 2. The partitions ordinarily consist of a wall core 5 of tile, blocks, and similar material. A second ground 6 is positioned upon the portion 4. The grounds 3 and 6 in the present instance are identical in construction. Each ground comprises a body portion 7 having integral flange portions 8. It will be seen by referring to Figure 1 that the grounds are substantially U-shaped in cross section.

The ground is constructed of magnesium oxychloride and a suitable filler. The magnesium oxychloride is formed by combining magnesium chloride and magnesium oxide with the necessary amount of water. The formula by volume for making the ground may be stated as follows:

	Percent
Asbestos	10
Magnesium oxide	approx. 25
Magnesium chloride	approx. 15
Wood or other filler	50

Various types of fillers may be employed such as wood, cork, straw, and other similar and suitable materials.

Figure 3 is a detail of the ground employed in

connection with the structure shown in Figure 1. The portion 7 of the ground is provided with a plurality of openings 9 aligned centrally. The openings may be of various shapes and spaced apart in such a manner that the ground may be easily broken along a central line. The purpose of this construction will be explained later.

The ground possesses properties whereby nails, screws, and the like may be embedded therein. The ground 3 shown in Figure 1 may be nailed to the floor 1 if desired. The upper portion of the wall core 5 rests upon the ground 6. The partition core is slightly narrower than the width of the ground so that a space 11 is provided between the flanges 8 and the core. The edges of the flanges may be tapered as indicated at 12 while the corners of the ground may be rounded as at 13. This construction is of course optional. After the partition core has been built, a coating of plaster 14 is provided upon one or both sides of the core. The plaster fills the space between the flanges 8 and the core so that a rigid construction is attained. The tapered edges of the flanges tend to permit plaster to be easily moved into the spaces. When once the spaces have been filled, the plaster is of course effectively anchored. The grounds 3 and 6 provide advantageous guiding elements during the plastering process.

The outer surfaces of the plastered coatings 14 are flush with the outer faces of the flanges 8. Baseboards 15 are placed adjacent the flanges and may be secured thereto by nails or screws. A cap 16 may be placed upon the baseboards and secured thereto by nailing, etc. The nails may be passed through the caps, the baseboards, and into the ground 6. The bottom edge of the baseboard may be secured to the ground 3. The baseboards, together with cap construction 16 and its other associated structure, is old in the art and forms no part of the present invention.

In Figure 2 I have shown a wall construction embodying my invention and in which the grounds 15 and 16 are identical in construction with the grounds 3 and 6. The ground 6 is reversed with respect to the ground 3, while in Figure 2 the ground 16 is positioned with the flanges projecting upwardly. This ground as well as the ground 6 may be reversed for accommodating the ground to baseboards of different widths. It will thus be seen that it is a relatively easy matter to adapt my ground construction to various conditions. A third ground 17 is disclosed in Figure 2. This ground may be placed in the wall at any height depending upon its function. The ground may be employed as a means for hanging pictures upon the wall or for supporting any necessary structure.

It is desirable in modern building constructions to provide means for accommodating plumbing, electrical wiring conduits, etc. In Figure 4 I have shown the manner in which my invention may be employed to satisfy this need. A ground 18 is placed upon the floor 19. A narrow piece of tile 20 is placed upon the ground 18 and supports a ground 21 which in turn supports the core proper of the wall which I have indicated at 22. Baseboards 23 may be secured to the grounds at which time a space 24 is provided upon each side of the wall. Such spaces may be used for plumbing and electrical wiring conduits, etc. such as that mentioned above. Otherwise the wall construction may be similar to that described in connection with Figure 1.

The ground 18 is slightly different in construction from that shown in Figure 3. The specific construction of the ground 18 permits a maximum amount of space for accommodating the plumbing or other conduits incorporated in the wall. It will be understood however that a ground such as that shown in Figure 3 may be substituted in lieu of the ground 18.

One of the important features in connection with the ground shown in Figure 3 is its applicability to various types of construction. In Figures 5 and 6 I have shown the ground as being employed as a rough door buck. A door 25 is provided in a wall 26. The opening in the wall, see Figure 6, is aligned with a ground 27 which in the present instance is identical in construction to that disclosed in Figure 3. The wall is plastered as at 28. The plastering is effectively anchored by reason of the ground and the latter provides a convenient guiding element. More important than this however is the fact that the ground provides means whereby a door casing 29 may be rigidly fastened within the opening.

A further application of my ground is illustrated in Figure 7. In this view I have shown a pair of wall cores 30 which are built in spaced-apart relation. This construction may be desirable for providing an air space 31 or for other reasons. The ground is broken centrally as previously explained. The halves may be incorporated in the wall as indicated at 32. The sides 33 of the two cores may be plastered flush with the flanges of the ground 32.

The structure shown in Figure 8 shows the manner in which the ground detailed in Figure 3 may be incorporated in a brick wall. Such walls ordinarily comprise a series of stretchers 36 and headers 37 positioned between series of the stretchers. The ground is broken centrally and the pieces are embedded between certain of the brick and in the mortar therebetween. The grounds are shown at 38.

Figure 9 shows the manner in which carpet strips 39 may be associated with a ground 40. This ground is similar to that shown in Figure 4 but the ground may be identical in construction with that disclosed in Figure 3 plus the carpet strips. The carpet strips project beyond the baseboards 41 and are arranged in such a manner that the edges of a carpet 42 may be tacked to the strips.

In Figure 10 I have shown a further modification in the construction of my ground. In this form a web 34 is provided with laterally projecting flanges 35. The cross sectional construction simulates an I-beam. This ground construction may be advantageously employed at places where partitions may be separated.

While I have given a specific formula to the composition of matter forming my ground, it will be understood however that various other compositions may be employed. Pressed fibrous material is a suggested alternative. Various changes in the specific construction set forth are of course contemplated as within the scope of the present invention.

I claim:

1. Strip material for building construction, comprising a channel for incorporation in a wall, said channel having a web extending from one face of the wall to the other, and flanges flush with the surface of the wall, said flanges being of material adapted to receive nails, whereby trim such as baseboards may be attached thereto.

2. Strip material for building construction,

comprising a channel for incorporation in a wall, said channel having a web extending from one face of the wall to the other, and flanges flush with the surface of the wall, said web and said flanges being of material adapted to receive nails, whereby trim such as baseboards and doorbucks may be attached thereto.

3. A ground for building construction, comprising a ground for incorporation in a wall, said ground having a web extending from one face of the wall to the other, and flanges flush with the surface of the wall, said web and said flanges being of material adapted to receive nails, whereby trim such as baseboards and doorbucks may be attached thereto.

4. A ground adapted for incorporation in a wall, said wall comprising a core having plastered surfaces, said ground having a web extending from one face of the core to the other, and flanges flush with the plastered surface, said web and said flanges being of material adapted to receive nails, whereby trim such as baseboards and doorbucks may be attached thereto.

5. A ground adapted for incorporation in a wall, said wall comprising a core having plastered surfaces, said ground having a web extending from one face of the core to the other, and flanges flush with the plastered surface, said web and said flanges being of material adapted to receive nails, whereby trim such as baseboards and doorbucks may be attached thereto, said ground being severable along a predetermined line by a bending action.

6. A ground for building construction, comprising a strip for incorporation in a wall having a core and plastered surfaces, said strip having a web extending from one face of the wall to the other, and flanges flush with the surface of the wall, said flanges being spaced from said core whereby plaster may be anchored in the spaces between the flanges and said core, said web and the flanges being of material adapted to receive nails, whereby trim such as baseboards and doorbucks may be attached thereto.

7. The combination with a wall structure built up of core units and covered with plaster, of a plurality of strips of material, each strip having a web imbedded in said wall and extending from one face of the wall to the other, and flanges flush with the surface of the plaster on both sides of the wall, said strips being of material adapted to receive and hold nails, said strips being distributed in the wall in the position covered by trim such as baseboards, moulding, and doorbucks.

8. The combination with a wall structure built up of core material and covered with plaster, of a strip of material, said strip having a web imbedded in said wall and extending from one face of the wall to the other, and flanges flush with the surface of the plaster on both sides of said walls, said flanges being spaced from the core material to provide an anchoring space for plaster, said strip being of material adapted to receive and hold nails, whereby trim such as baseboards, moulding, and doorbucks may be secured thereto.

9. In a wall structure, a plurality of core units, and a plaster facing completing the wall structure proper, a channel-shaped strip of nailable material with the web extending from one face of the wall to the other at the bottom of the wall and its flanges extending upwardly flush with the plaster, and a second duplicate channel-shaped strip imbedded in said wall above said first strip, said strips being spaced apart to position them in alinement with the lower and upper edges of baseboards.

10. In a wall structure, a plurality of core units, a plaster facing completing the wall structure proper, a channel-shaped strip of nailable material with its web extending from one face of the wall to the other at the bottom of the wall and its flanges flush with the plaster, said strip being positioned in alinement with a baseboard.

11. In a wall structure, a plurality of core units, a plaster facing completing the wall structure proper, a ground member of nailable material with its web extending from one face of the wall to the other at the bottom of the wall, and having shoulders aligning with the surface of the plaster for supporting trim, and carpet strips formed integrally with said web and the shoulders and projecting beyond the trim, whereby a carpet may be nailed thereto.

12. In a wall structure having a core, a plaster facing completing the wall structure proper, a ground of nailable material having a web extending from one face of the core to the other, and having shoulders aligning the surface of said plaster to which baseboards may be nailed, and carpet strips formed integrally with the shoulders and extending beyond the baseboards.

13. In a wall structure, a plurality of core units, a plaster facing completing the wall structure proper, a channel-shaped strip of nailable material with its web extending from one face of the wall to the other at the bottom of the wall and its flanges extending upwardly flush with the plaster, and a second channel-shaped strip imbedded in said wall above said first strip, said strips being spaced apart to position them in alignment with the lower and upper edge of a baseboard, and carpet strips formed integrally with the first mentioned channel-shaped strip extending beyond the baseboards.

14. In a wall structure, a plurality of core units, a plaster facing completing the wall structure proper, a channel-shaped strip of nailable material with its web extending from one face of the wall to the other at the bottom of the wall and its flanges extending upwardly flush with the plaster, and a second channel-shaped strip imbedded in said wall above said first strip, said strips being spaced apart to position them in alignment with the lower and upper edge of a baseboard, and carpet strips formed integrally with the first mentioned channel-shaped strip extending beyond the baseboards, the edges of said flanges tapering in the direction of their respective webs.

15. A ground adapted to be incorporated in a wall having a core and plastered surfaces, said ground having a web extending from one side of the core to the other, and flanges flush with the surface of the plaster, said ground being adapted to be incorporated in the wall near the floor supporting the wall, whereby baseboards may be secured thereto, said ground being adapted to line a door opening in the wall, whereby door bucks may be secured thereto.

16. In a building structure, a composition ground U-shaped in cross section for incorporation in a wall, said ground having a web extending from one face of the wall to the other, and flanges flush with the surface of the wall, said ground being of material adapted to receive nails, the edges of said flanges being tapered in cross-section.

17. In a building structure, a composition

ground molded from initially plastic material having nail receiving properties when cured, said ground being U-shaped in cross-section and extending from one side of the wall to the other, the flanges of said ground being flush with the surface of the finished wall, each of said flanges having its edge tapered outwardly in the direction of said web from the median line of the edge.

18. In a wall structure having a core and plastered surfaces, a ground formed of initially plastic material having nail receiving properties, said ground being U-shaped in cross-section and incorporated in the wall with its web extending transversely through said wall core, the flanges of said web being spaced from said core, the spaces between the flanges and the wall core providing anchorage for the plaster, the edges of said flanges being tapered to facilitate movement of plaster into said spaces.

19. In a wall structure comprising a core having plastered surfaces, a pair of U-shaped grounds incorporated in the wall, said grounds being formed of initially plastic material having nail receiving properties when cured, said grounds being positioned in the wall with their webs extending transversely therethrough and the flanges spaced from the wall core to provide anchorage for plaster, one of said grounds supporting the bottom edge of the wall and having its flanges extending upwardly, the other ground being positioned in the wall above said first mentioned ground and arranged to cooperate with the latter for supporting baseboards or the like, said upper ground being reversible for accommodating baseboards of varying width.

20. The combination of a supporting structure, a building wall erected thereon, said wall comprising a core having plastered surfaces, said core comprising two portions, one above the other, a first ground positioned between said supporting structure and the bottom core portion, and a second ground separating said core portions, each of said grounds having portions spaced from said core portions for providing anchorage for plaster, said grounds being molded of initially plastic material having nail receiving properties, and trim nailed to said grounds.

21. The combination of a supporting structure, a building wall erected thereon, said wall comprising a core having plastered surfaces, said core comprising two portions, one above the other, a first ground positioned between said supporting structure and the bottom core portion, and a second ground separating said core portions, each of said grounds having flanges spaced from the wall core to provide anchorage for plaster, the lower ground having its flanges extending upwardly and the upper ground having its flanges extending downwardly, the upper ground being reversible for increasing the distance between its flanges and the flanges of the lower ground for accommodating trim of varying dimensions without changing the altitude of that portion of the ground separating said two core portions, and trim nailed to said flanges.

22. A wall comprising two cores arranged in spaced-apart relation, a ground associated with each core, said grounds comprising portions arranged for incorporation in said cores and flanges for supporting trim such as baseboards and molding, and plaster coats upon the outer surfaces of said cores.

23. A wall structure comprising a first core, a ground supporting said first core, a second ground positioned upon said first core, a second core positioned upon said second ground, baseboards fastened to said first and second grounds and spaced from said first core to provide conduits, and plaster coats upon the outer surfaces of said second core.

24. A wall structure comprising a first ground having baseboard supporting surfaces, a first core positioned upon said first ground, a second ground positioned upon said first core and having baseboard supporting surfaces, a second core positioned upon said second ground, baseboards secured to said surfaces and spaced from said first core to provide conduits, said upper ground having portions spaced from the upper core to provide anchorage for the plaster coats, and carpet strips projecting from the first ground beyond the baseboards.

25. In a wall structure, a ground having a baseboard supporting surface, and a carpet strip formed integrally with the ground and arranged to project beyond a baseboard fastened to said supporting surface.

26. In a wall structure, a ground having a web for incorporation in a wall core, a flange carried by said ground and spaced from the wall core to provide anchorage for plaster upon the same, said flange having an inclined surface arranged to facilitate movement of plaster into said space, and a second inclined surface arranged to permit trowelling of an effective juncture between the plaster and said surface.

27. In a building structure, a wall having a ground incorporated therein, said ground comprising a web extending through the wall, and integral trim supporting surfaces extending above and below said web in parallelism with the sides of the wall, the juncture between said web and the wall portion adjacent thereto being solid, said ground having nail-receiving properties.

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