

Jan. 31, 1967

A. J. DONAHUE
WALL CONSTRUCTION

3,300,933

Filed March 11, 1964

2 Sheets-Sheet 1

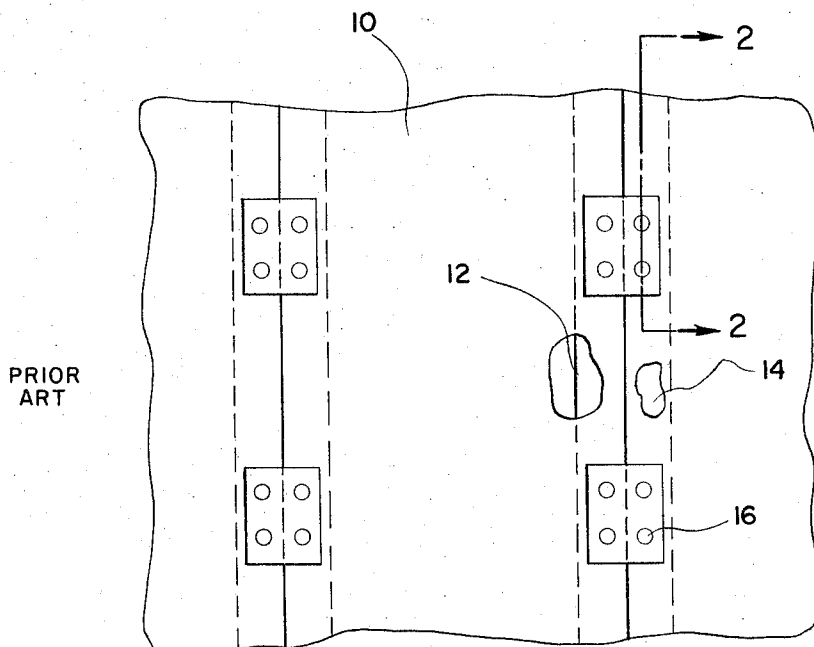


FIG. -1-

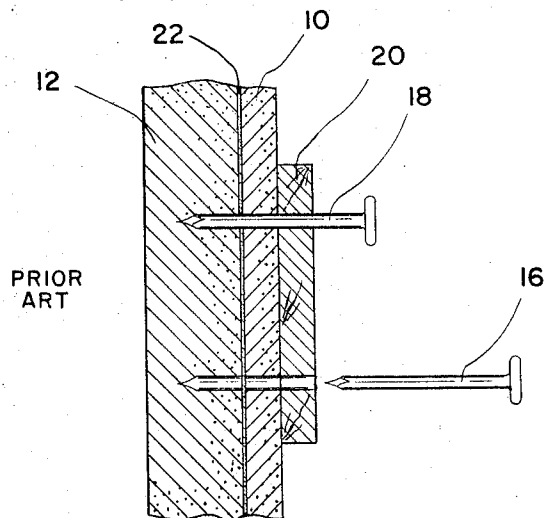


FIG. -2-

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2 Sheets-Sheet 2

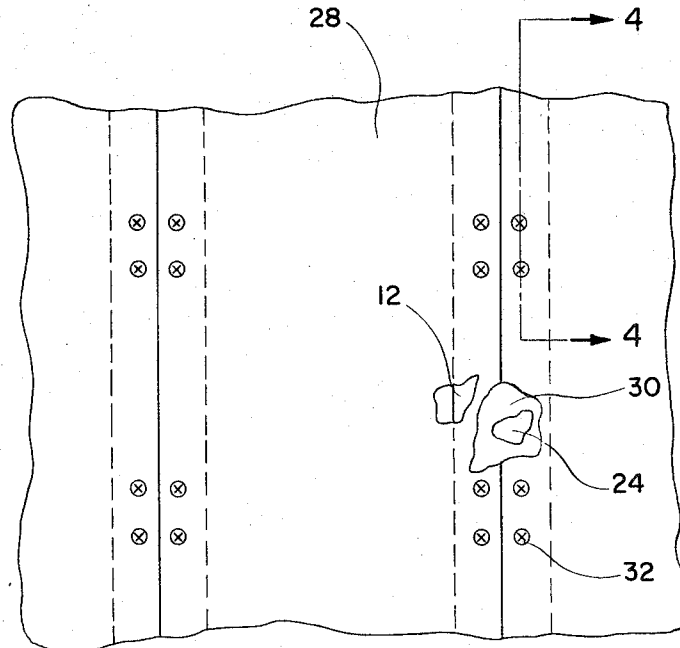


FIG. - 3-

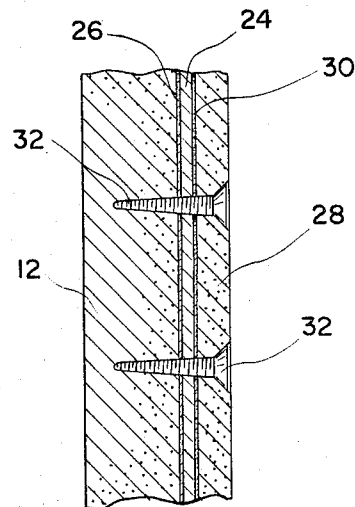


FIG. - 4-

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3,300,933

WALL CONSTRUCTION

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1 Claim. (Cl. 52—368)

My invention relates to a new and improved core studding for use in the construction of walls and partitions.

More particularly, the invention relates to a core studding made of plaster, gypsum or other composition instead of wood.

It is increasingly the practice to substitute plaster, or similar core studs for the conventional wooden studs and then to cement the facing which may be of sheet rock, or similar material, to the core studs. Because of the weight of the facing sheet, it is necessary to support it in position while the adhesive dries or sets. Conventionally, this has been done by placing a number of blocks of wood or pieces of gypsum scrap over the facing sheet and driving nails through the sustaining block and the facing sheet and into the core stud, care being taken not to drive the nails all the way so that they can be pulled out without damaging the facing sheet. A facing sheet 3' x 5' or 4' x 6' will require a relatively large number of blocks to hold it up.

Since the sustaining blocks are on the visible or finish-receiving side of the facing sheet, they must be removed and the nail holes left in the facing sheet must be filled at considerable time and expense. To avoid the necessity of filling the nail holes, it has been proposed to dispense with the sustaining blocks and to nail the facing sheet directly to the core stud, with the nails driven all the way in. This practice failed because of the tendency of the nails to pull out, sooner or later, with damage to the wall paper or other finish which may have been applied to the facing sheets.

The object of this invention is to produce an improved core studding whereby the labor and expense incurred in nailing the facing sheet sustaining blocks and removing them and filling up the nail holes are entirely eliminated, whereby the danger of the nails pulling out through the finished surface is eliminated, and whereby a stronger and more economical studding is produced.

Broadly stated, my invention consists in producing a core studding made of plaster, or the like, to which the facing sheet can be permanently secured without the use of nails or of sustaining blocks.

The full nature of the invention may well be understood from the following specification and the accompanying drawing in which:

FIG. 1 is a front elevational view of wall or partition showing the facing sheet secured to the core, by conventional holding blocks.

FIG. 2 is a sectional view looking in the direction of line 2—2 on FIG. 1.

FIG. 3 is similar to FIG. 1 but showing my improvement.

FIG. 4 is a sectional view looking in the direction of line 4—4 on FIG. 1.

According to the conventional practice as illustrated in FIG. 1, the facing sheets 10 are cemented to studs 12 and 14, as at 22 and sustained in position while the cement dries, or sets, by means of nails 16 and 18 which pass through blocks 20, which may be made of wood or

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of other material having the necessary tensile strength to hold the sheet against the studding while the adhesive 22 dries or sets. In practice, discarded scraps of gypsum board which are usually available where construction is going on are used.

As can be seen from FIG. 2, it is necessary that the nails be only partially driven in, as shown by nail 18, so that they may be pulled out easily and without damage. Withdrawal of a nail, as shown by nail 16, leaves a hole which must be filled before the facing sheet can be papered, plastered, or otherwise finished.

According to my invention, as illustrated in FIGS. 3 and 4, I cement sheets 24 of metal, of plastic, or plywood or other material, to the room side of the core studs 10, 12 as at 26. This is preferably done at the factory so that the thus reinforced core studs can be delivered to the job in the desired sizes. On the job, facing sheets 28 are cemented to the reinforcing sheets 24, as at 30 and are held in position, while the adhesive sets, by screws 32 which are driven through the facing sheets 28, through reinforcing sheets 24 and into the core studding. The heads of the screws can be flush with the surface of the facing sheets or they may be very slightly counter sunk, depending on the finish to be applied to the facing sheets.

Since the fastening screws need not be removed, the cost of driving and pulling the nails out and filling the nail holes is eliminated. Nor do screws loosen and pull out as nails do. Also, the engagement of the screws with reinforcing sheets 24 greatly strengthens the construction. The screws are preferably of the self-threading type.

It will be seen that, for an 8' ceiling, 8' studs are erected; the facing sheets are cemented in place and the self-threading screws are driven through the facing sheets, through the reinforcing sheet 24 and through the core studs and the job is done.

Sheets 24 are preferably as light and thin as possible, the thickness varying with the type of material. For example, for steel, $\frac{1}{8}$ of an inch will do. For synthetic sheets a slightly greater thickness, such as $\frac{1}{16}$ " is preferred. For plywood it may be necessary, or desirable to use sheets $\frac{1}{8}$ " thick.

What I claim is:

A stud and facing panel for use in walls and partitions, said stud including a central core formed of friable material and having a relatively large cross section, a sheet of metal cemented to said core, said facing panel formed of friable material and having a relatively small cross section, an adhesive cement securing said facing panel to said metal sheet, holes formed in said facing panel receiving screws driven into said metal sheet and said core, holding said core, said metal sheet, and said facing together while the cement is setting, the outer ends of said holes being counter-sunk to receive the heads of the screws flush with the outer side of said facing panel.

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