Nov. 24, 1925. 1,562,839

J. F. MAKOWSKI

WALL CONSTRUCTION

Filed Dec. 8, 1923

Fig. 1

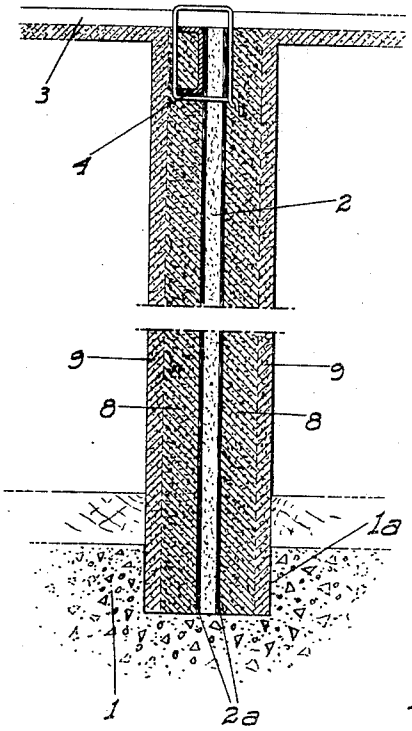


Fig. 2

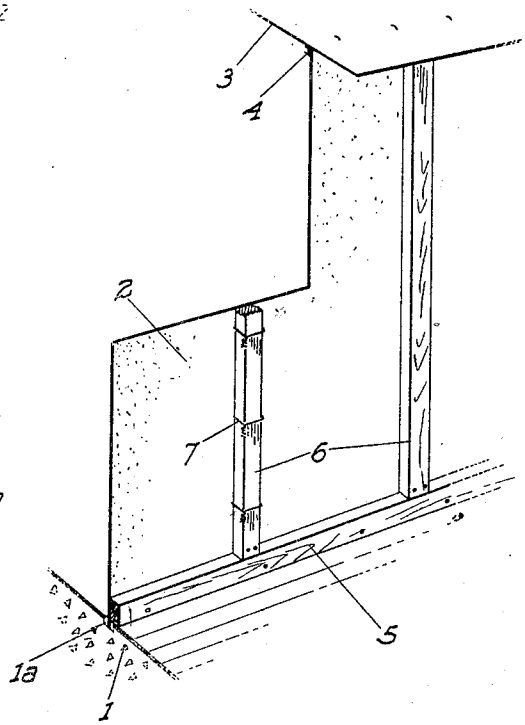
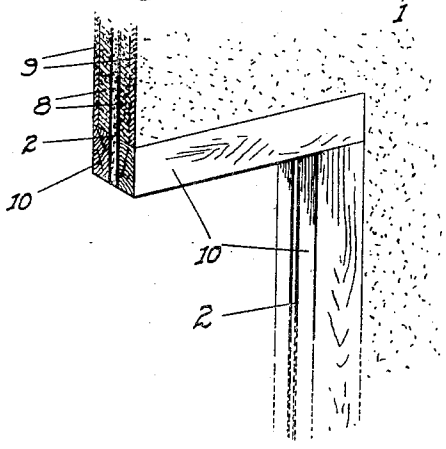


Fig. 3



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UNITED STATES PATENT OFFICE.

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WALL CONSTRUCTION.

Application filed December 8, 1923. Serial No. 679,323.

To all whom it may concern:

Be it known that I, JOHN F. MAKOWSKI, a citizen of the United States, residing at Stockton, county of San Joaquin, State of California, have invented certain new and useful Improvements in Wall Construction; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in the building art, and particularly to wall construction.

For various reasons, chief among which is the desire to conserve floor space, particularly in buildings where rental values are figured on the floor area, there has risen a great demand for very thin walls. In constructing such walls, however, it is also necessary that there be no sacrifice of strength, durability, appearance, or resistance to fire and moisture. Also in the construction of such a wall the cost, ease of installation and other commercial elements must be taken into consideration.

Heretofore there has been considerable effort to produce thin walls by working plastic material, metal lath, or similar elements supported by thin rigid channel irons or similar construction. This has been more or less unsatisfactory for the reason that the labor involved is too great, the results obtained are not entirely satisfactory, and furthermore in case of fire the metal would bulge towards the fire and the plastic material would then drop off, with the result that the fire could then pass through. It will also be apparent that such a wall construction is not moisture proof.

After many years of careful study of the situation and experiment, I have discovered that it is possible to build a thin studless wall of the type required (which must be about two inches thick) with the use of a thin imperforate plaster board constructed substantially as set forth in my co-pending application for patent, Serial No. 641,964, wherein the plaster composition is hardened and set and adhered permanently between two paper sheets.

By the use of such a board as a center core for the wall, the wall may be built without any studding or other supporting elements whatsoever.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Fig. 1 designates a section of wall construction in accordance with my improved method.

Fig. 2 is a perspective view showing the initial elements used in the commencement of the building of the wall.

Fig. 3 is a perspective view showing how I permanently build in the bucks for door and window casings.

Referring now more particularly to the characters of reference on the drawings, the numeral 1^a designates an initial groove cut or formed in the floor of the building wherever my improved partition wall is to be erected. Since my improved wall is particularly intended for class A buildings the floor 1 is usually of concrete and the groove 1^a is made of a width not to exceed the desired thickness of the wall.

Centrally in this groove I place the lower end of the wall board 2, preferably of the type shown in the above mentioned application, which board is relatively thin and inflexible, and preferably imperforate or solid.

The wall board, usually in unbroken, vertical strips, extends to the ceiling 3, also of wall board or metal lath, laid previous to forming the partition walls. If desired, a metal channel 4 of light but rigid construction may be tied or secured to the ceiling and to the wall board in any suitable manner, to form a backing for the upper end of the latter, although this is not necessary as the plaster will bond the wall securely to the ceiling.

The wall board is then ready to be plastered as hereinafter set forth, but before doing so it is usually found desirable to provide a temporary backing or reinforcing for one side thereof, to prevent deflection of the thin wall board during the plastering operations.

This backing or staging preferably consists of a horizontal wooden sill 5, temporarily secured on the floor against the wall board, and uprights 6 similarly secured on the sill and extending to the ceiling. Wherever there is a joint between the strips of wall board, said joint is overlapped by an

upright which is preferably tied to both boards by wires 7. When the uprights are afterwards removed, the wires are cut to allow the uprights to be withdrawn, and are then again tied together, thus forming reinforcing ties or binders for the plaster across the board joints.

The staging being set, the opposite side of the wall board is then plastered with a relatively thick coat of suitable plastic material 8, burying the channel 4. When this plaster is sufficiently set to form of itself a rigid backing for the wall board, the staging is removed, and a similar base coat of plaster is applied to the face of the board against which the staging was set.

Both sides are then coated with a finish surface of plaster 9 (which is also applied to the ceiling), so that the total thickness of the finished wall is approximately two inches.

The groove 1ª in the floor is of a width sufficient to receive some if not all of the thickness of the plaster, thereby tying the wall board into the floor.

By means of this construction it will be seen that the wall board forms a central inflexible and imperforate core for the wall which is impervious to moisture, fireproof, and yet of sufficient rigidity to make a firm, nonbreakable wall.

My improved wall board core lends itself very nicely to the installation of permanent bucks for door and window casings, and in this respect I form the bucks of pieces of wood 10 of suitable size, and of a width equal to that of the finished wall, nailed permanently to the wall board 2 on both sides, around the door and window openings as shown in Fig. 3. These boards also form a stop and gage for the plaster.

When it is considered that the wall board itself is only approximately three-eighths of an inch thick, and is made up very cheaply, and that the base coat and finishing coat of plastic materials 4 and 5 may be quickly and cheaply surfaced thereover, and that the finished wall stands without studding or other supporting elements, it will be apparent that my improved wall construction will be very inexpensive and easily placed, while at the same time affording all of the advantages required.

The two surface sheets of paper 2ª on the center core lend great tensile strength to the wall.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. A wall construction including a single continuous imperforate fire proof sheet of material extending from a floor to a ceiling and being supported only at its ends, and plaster adhered to the core.

2. A wall construction including a center core comprising a single continuous sheet of plaster wall board extending from a floor to a ceiling and supported only at its ends, and plaster adhered to the core.

In testimony whereof I affix my signature.

JOHN F. MAKOWSKI.