Sept. 22, 1931. H. W. REEL 1,823,987

ROOF AND FLOOR CONSTRUCTION

Filed June 10, 1929

Fig. 1

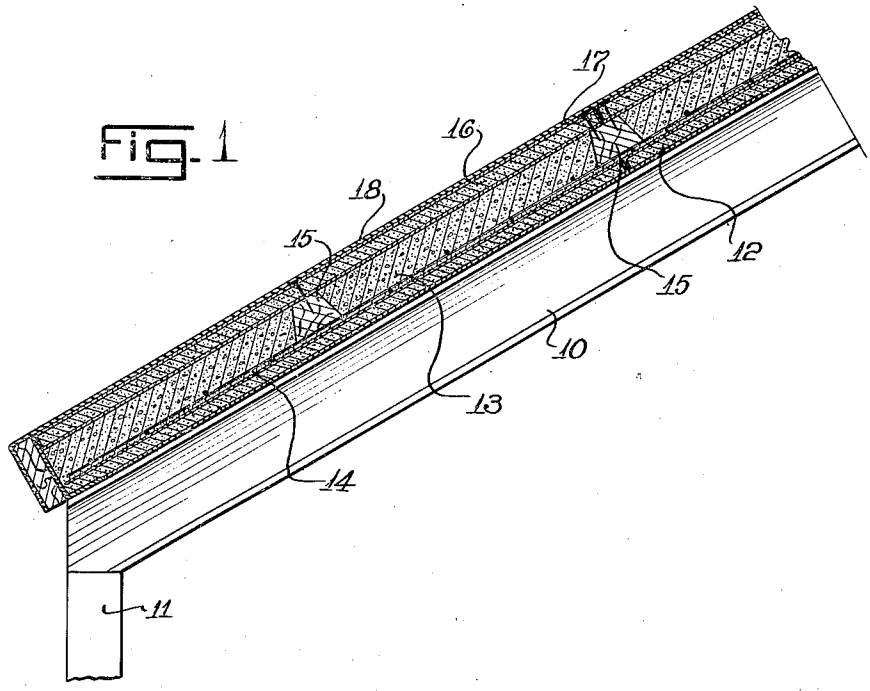
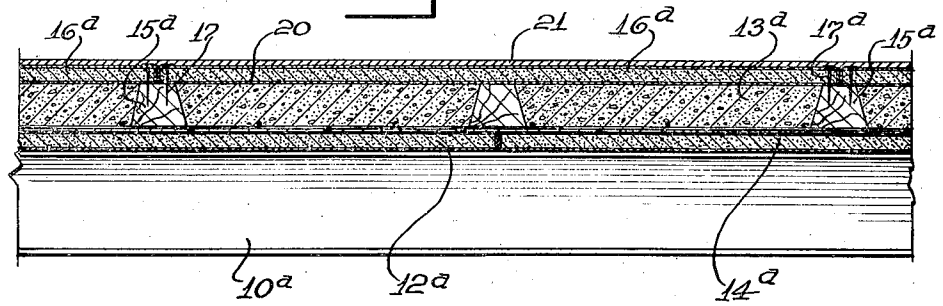


Fig. 2



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UNITED STATES PATENT OFFICE

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ROOF AND FLOOR CONSTRUCTION

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This invention relates to building constructions and has reference more particularly to roof and floor construction of the poured in place type, together with the method of making same.

In the construction of roofs composed of poured gypsum, it is often found necessary to pour the gypsum stucco for roofs in cool weather when the excess moisture not used in the setting reaction freezes and is a long time in drying out. It is desirable that a waterproof coating such as an asphaltum or pitch compound be placed over the gypsum slab to make same waterproof. However, such a compound will not adhere to wet cast gypsum and it is therefore necessary to leave the poured roof slab uncovered for several weeks until it has dried out. In the meantime, the poured gypsum is exposed to the weather and the roof is not water-tight. Also in the construction of floors of poured gypsum, it is generally desirable to pour the gypsum floor early in the construction of the building and after the floor is poured, tradesmen come in and work over the floor to complete the interior of the building and mar and disintegrate the surface of the gypsum slab.

An object of this invention, therefore, is to provide a construction for poured in place gypsum roofs and floors in which a supplementary kiln dried gypsum board or slab is placed over the poured slab before the poured slab has completely set so that a natural bond takes place between the poured slab and the kiln dried slab, or to be applied after slab has set and heavy work of other trades has been completed; also to improve roof and floor constructions in other respects hereinafter sepecified and claimed.

Reference is to be had in the accompanying drawings forming a part of this specification, in which

Fig. 1 is a sectional elevation of a portion of a roof constructed according to my new method, and

Fig. 2 is a sectional elevation of a portion of my improved floor construction.

In the construction of roofs according to my improved method, the usual purlins are supported upon vertical columns or other members 11, and plasterboards or other precast, kiln-dried slabs 12, are laid across from purlin to purlin so as to form a support for the gypsum stucco 13, to be poured in place on top of the plasterboard. Before pouring the stucco, reinforcing wire mesh 14 may be laid across the plasterboards 12, and nailing strips 15 are laid on top of the wire mesh 14 so as to make it possible to securely attach plasterboards 16 on top of the cast slab 13 by means of nails 17, or other securing devices.

The plasterboards 16 are usually applied to the poured slabs 13 before said poured slab has set completely so that a natural bond is formed between the poured slab and the plasterboards 16. As the plasterboards 16 on top of the poured slab 13 are kiln-dried at the factory, a coating of waterproofing material 18, such as pitch, asphaltum or the like may be immediately applied to the top surface of said plasterboard 16, thus producing at once a temporary waterproof and weatherproof roof over the building. Drying takes place in the roof slab through the bottom plasterboards 12.

In the construction of a floor, a similar procedure is followed in that plasterboards 12*a*, are laid on top of floor beam 10—A and the gypsum slab 13*a* is then poured in place. As in the roof construction, reinforcing wire mesh 14*a* and nailing strips 15*a* are provided. However, in the case of the floor, the top plasterboard 16*a* is not applied to the poured slab 13*a* until after the tradesmen have completed their work on top of said poured slab. The slab will then be found to be scratched up and marred on its upper surface, and a thin layer of gypsum stucco 20 is then applied to said upper surface of the poured slab 13*a* screeded off level with the top surface of the strips 15*a* so as to fill completely the scratches and mars on top of said slab and to also form a bond between the plasterboard 16*a* and poured slab 13*a*, said plasterboard being applied before the stucco layer 20 has completely set. The plasterboards 16*a* thus form a perfect foundation for a layer of linoleum or other desired floor

surfacing, and a smooth and economical construction will be produced.

In the claims to follow, the term "board" will designate any type of sheet material such as fibrous boards, gypsum boards, plaster slabs, plasterboards having a gypsum core and paper cover sheets, sheet metal or other sheet-like material, the essential characteristics being that it is preformed and ready for application as a unit to the poured slab.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not wish to limit myself precisely to these details, since manifestly, the same may be considerably varied without departing from the spirit of the invention as defined in the appended claims.

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

1. The method of constructing roofs which comprises supporting boards upon roof purlins, pouring gypsum stucco on said boards to form a poured slab, applying a precast, dried board to the upper surface of said poured slab before the setting of the latter takes place so that a bond between the poured slab and the upper board is formed, and applying a bituminous waterproof coating to the upper surface of the upper board.

2. The method of forming a roof which comprises pouring a slab of gypsum stucco upon a supporting surface, applying a dry board to said poured slab before the setting of the latter so that a bond is caused between the poured slab and the boards, and applying a bituminous weather and waterproof coating to the upper surface of said board.

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