E. SOBEL, W. GOLD & J. STRETCH.

MONOLITHIC CONSTRUCTION.

APPLICATION FILED FEB. 24, 1909.

969,213. Patented Sept. 6, 1910.

Fig 1.

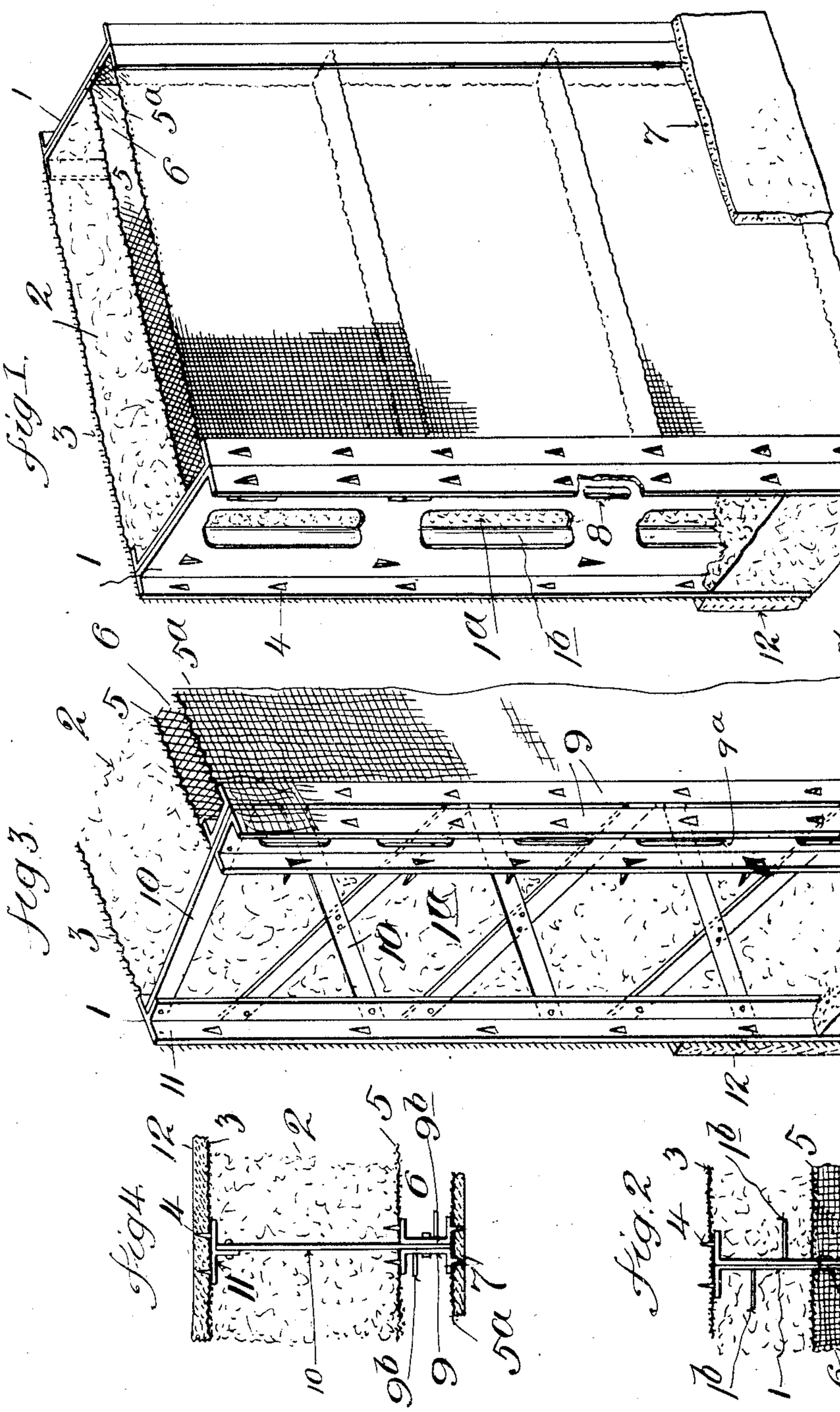
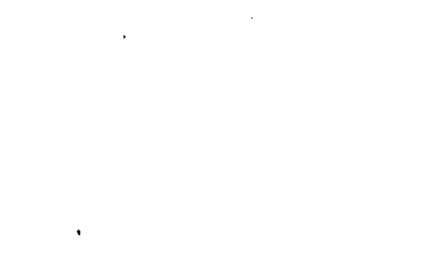


Fig 3.

Fig 4.

Fig 2.



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UNITED STATES PATENT OFFICE.

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MONOLITHIC CONSTRUCTION.

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To all whom it may concern:

Be it known that we, ELI SOBEL, WILLIAM GOLD, and JOSEPH STRETCH, citizens of the United States, and residents of New York city, county and State of New York, Woodhaven, Queens county, New York, and Freeport, Nassau county, New York, respectively, have invented certain new and useful Improvements in Monolithic Constructions, of which the following is a specification.

The object of our invention is to provide an improved construction of monolithic wall, partition or the like, wherein studs are used for building up and strengthening the wall, and the concrete filled into the space between the studs is united through the studs, whereby a continuous concrete wall is provided in which the studs are embedded.

Another object is to provide improved means for applying the foraminous material of the walls, such as wire netting, expanded metal and the like, whereby an air space is provided at the side of the concrete portion of the wall.

Our invention comprises the novel arrangements of parts more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming part hereof, wherein, Figure 1 is a perspective view of a portion of a wall or partition embodying our invention; Fig. 2 is a partial plan view thereof; Fig. 3 is a detail perspective view of a modification and Fig. 4 is a plan view of Fig. 3.

Similar numerals of reference indicate corresponding parts in the several views.

In the drawings the numeral 1 indicates studs which are set on end and spaced apart to receive concrete between them. The studs are provided with openings 1^a through them whereby the concrete 2 passes through the studs and is thus united in monolithic form substantially throughout. In Figs. 1 and 2 the studs are shown of channel irons secured together, and the openings 1^a are provided by pressing out the material 1^b of the studs in opposite directions, forming wings which become embedded in the concrete. Along corresponding edges of studs 1 foraminous material, such as metal lath, expanded metal or the like 3, is secured by any suitable means, such as by tongues 4 stamped out of the metal of the studs and passed through the netting. In said figures the inner foraminous material of double layers 5, 5^a, is placed between the corresponding studs and forms an air space 6, the concrete 2 being filled in between the foraminous material 3 and 5. In this construction we form the double walls 5, 5^a by means of box-like members suitably made as of netting expanded metal, or the like, and fit them one upon the other in the space between the studs. This forms a cheap and convenient means of producing the air space 6, as the box-like foraminous members may be placed in position successively one upon the other as the work of filling in the concrete progresses. Upon the exterior of the wall 5^a thus formed is a finishing layer of plaster, concrete or the like, indicated at 7, which adheres to the outer foraminous wall portion 5^a and also incloses the outer edges of the studs 1. To provide a continuous air space throughout the length of the wall the studs have openings at 8 in line with the box-like members of foraminous material, whereby the air may circulate through the studs in the spaces 6, thereby making said space continuous from stud to stud.

In Figs. 3 and 4 the studs 1 are built up as follows: Channel irons 9 are secured together and braces 10 are secured between the channel irons 9, and at the opposite ends said braces are secured to T-irons 11. To the edges of the irons 9 sheets of foraminous material 5, 5^a are secured, or foraminous box members as in Fig. 1 may be placed in position between the parts 9. The parts 9 are shown provided with openings 9^a through which openings air may circulate for the space 6, as described with respect to Figs. 1 and 2. The foraminous material 3 is also secured to the outer surface of the irons 11 of studs 1, as by the tongues 4. Upon the outer surface of the material 3 a finishing layer 12 may be applied in accordance with the structures shown in the various figures, and as illustrated in Fig. 4, which will adhere to material 3 and to the concrete 2, and on the outer surface of netting 5^a in Figs. 3 and 4, a finishing layer 7 is applied. The air space 6 is thus formed between the concrete 2 and the layer 7.

Changes may be made in the arrangements shown and described within the scope of the appended claims without departing from the spirit of our invention.

Having now described our invention what we claim is:

1. The combination of a plurality of studs spaced apart to form a skeleton of a wall, foraminous material secured to said studs, box-like members formed of foraminous material interposed between the studs and superimposed, the first named foraminous material being spaced away from the box-like members, fireproof material filled in the space between the first mentioned foraminous material and said members and entering the interstices of said material, and a finishing later applied upon the exterior of the first named foraminous material and upon the exterior of said members providing an air space at one side of said fireproof material.

2. The combination of a plurality of vertically disposed studs spaced apart and provided with openings, sheets of foraminous material attached to said studs and spaced apart providing spaces between the studs communicating through the openings in the studs, fireproof material filled in said spaces and passing in monolithic form through the openings in and embedding the studs, and entering the interstices of said foraminous material, foraminous material at a distance from one of the first named sheets of foraminous material providing an air space at the side of said fireproof material, and a finishing layer on the second named foraminous material.

3. The combination of a plurality of studs spaced apart to form a wall, concrete filled in the space between and embedding portions of said studs, double walls of foraminous material at one side of the concrete, and a layer of plaster attached to the outer foraminous material providing an air space between said layer and the concrete, said studs having openings communicating with said air space.

Signed at New York city, in the county of New York and State of New York, this 20th day of February A. D. 1909.

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