April 5, 1927. 1,623,094

F. S. COOLEY ET AL

BLOCK WALL AND METHOD FOR CONSTRUCTING SAME

Filed Aug. 26, 1925

Fig. 1.

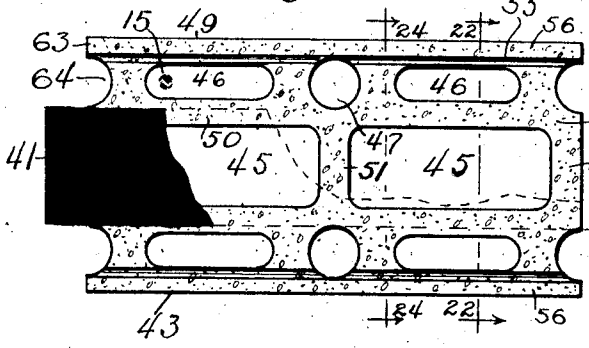


Fig. 2.

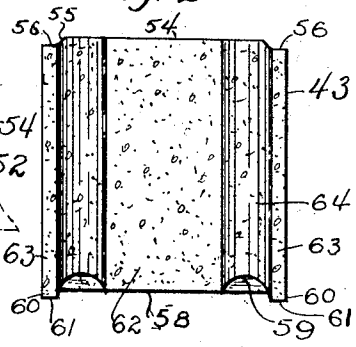


Fig. 3.

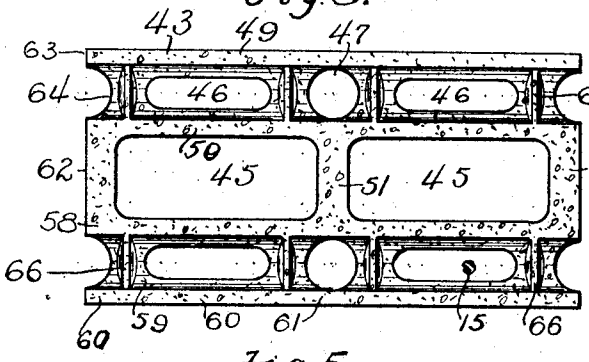


Fig. 4.

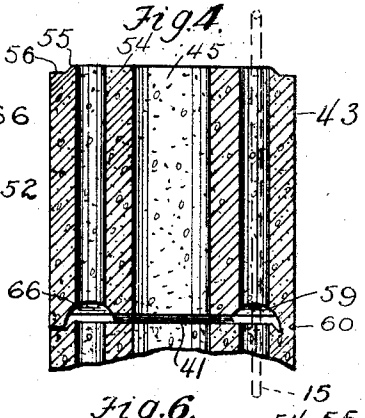


Fig. 5.

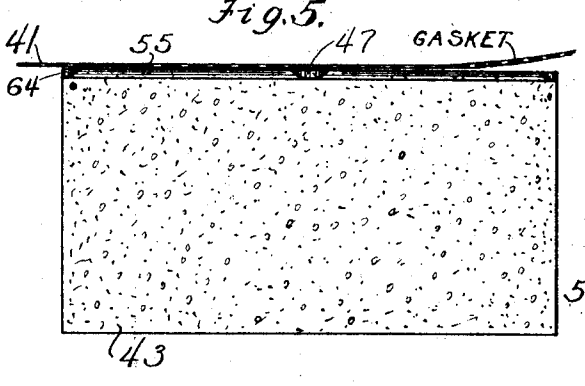
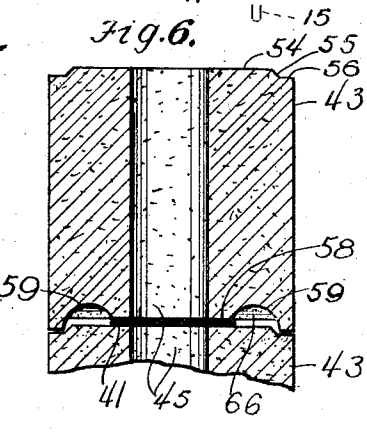


Fig. 6.



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UNITED STATES PATENT OFFICE.

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BLOCK WALL AND METHOD FOR CONSTRUCTING SAME.

Application filed August 26, 1925. Serial No. 52,570.

This invention relates to materials for constructing walls and especially adapted for use in the construction of buildings.

The main objects of this invention are to provide an improved form of building block which may be composed of cement, concrete or the like, and formed with appropriate apertures in such manner that when a wall has been laid up as high as desired, mortar or similar binder can be poured in the openings which are provided in the blocks, one opening above the other in mutual registry to seal and bind them together; to provide molded blocks of improved form adapted for light and economical construction and having suitably arranged cavities, apertures and perforatory openings for the admission of interlocking means, binders, and reinforcing elements, and for air filled heat insulating spaces, as may be variously required in accordance with specific needs.

An illustrative embodiment of this invention is shown in the accompanying drawings in which:—

Figure 1 is a plan view of a block adapted to accommodate the use of a thin strip of water-proof insulating material between successive courses to cover the air cavities and keep out surplus binder.

Fig. 2 is an end view of the block shown in Fig. 1.

Fig. 3 is a bottom plan of the block shown in Fig. 1.

Fig. 4 is a vertical section through a wall taken on the line 22—22 of Fig. 1 and showing a protective strip between courses.

Fig. 5 is a side elevation of a block such as shown in Fig. 1.

Fig. 6 is a section on the line 24—24 of Fig. 1.

In the first place, when the foundation is laid it must be perfectly level. Then the blocks are laid one above the other, with appropriate apertures, in substantially perfect alinement. The mortar for binding the blocks together is mixed to a thin, soupy consistency. The holes into which the mortar is poured all connect up evenly with each other, and the mortar serves to bond them firmly and evenly together. The wall may be built as high as desired before pouring in the concrete.

As compared with ordinary concrete constructions for walls and buildings, these blocks have certain very desirable advantages, including mainly that they eliminate the need of a skilled mason; they have at least as good or better durability than any other building cementitious block; they can be moulded very readily and rapidly, as, for instance, three blocks can be made in one minute in a stripper power machine; there are numerous, for instance, eight, rivet-like binders going down through the entire height of the wall; the wall is thoroughly tight and has a double seal, inner and outer, whereby the wall is tight and heat insulated, as well as substantially sound proof.

These blocks are intended to be used principally in cases where stucco is used on the outside, as it is cheaper to make this block in the rough than it is to put a smooth or fancy face on it.

In the construction shown in the drawings, a block 43 formed preferably by a molding process with apertures 46 and 47 adapted to receive means for locking the blocks together when in place and with a series of rectangular air chambers 45 which are open at the top and bottom for rendering the block light in weight. The apertures 46 and 47 are also adapted to receive reinforcing means such as metal bars 15 if desired. Vertical end grooves 64 are provided in which binder is poured when the blocks are set up end to end. The bottom face is flat and is bordered by lateral semicircular grooves 59 and depending side flanges 60 and the bearing faces 61.

Lateral branches of binder extending lengthwise of the block are provided for by forming grooves 59 extending from opposite sides of holes 47, on the under side of the blocks, said grooves being broken midway between the holes by cross walls 66 which are of less height than the depth of the grooves 59. The cross walls prevent the binder from flowing across to the next adjacent hole. The top face 54 is flat and bordered by inclined shoulders 55 and edge bearing faces 56.

The ends are formed with alined middle faces 62 and edge faces 63 separated by the grooves 64 for binder. The middle face portions 54 and 58 are spaced apart sufficiently to accommodate a shield strip 41 without taking more than nominal pressure, the edge faces 56 and 61 being relied upon to carry the load and maintain wall stability.

In order to show the details clearly, the blocks are spaced apart slightly in Figs. 4 and 6.

In laying up the wall, as soon as a course of blocks is set in place, a strip 41 is laid thereon to cover all of the holes 45, care being taken that it does not overlap any of the binder holes 46 and 47. The shield 41 may be of felt-like material so as to yield somewhat and assure a tight gasket-like fit. This feature enhances heat insulation by closing off air cavity 45. Such a wall is warm in winter and cool in summer.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claim.

We claim:

A building block formed to provide an air space to minimize the weight thereof, a row of vertical apertures near one face of the block for the purpose of receiving a filler, and a longitudinally extending groove connecting said vertical apertures, said longitudinally extending groove being bridged by cross walls of less height than the depth of the groove.

Signed at Chicago this 13th day of August, 1925.

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