Jan. 24, 1939. E. G. MILLER 2,145,187

BUILDING BLOCK FOR HOLLOW WALLS

Filed April 5, 1938 2 Sheets-Sheet 1

FIG. 1

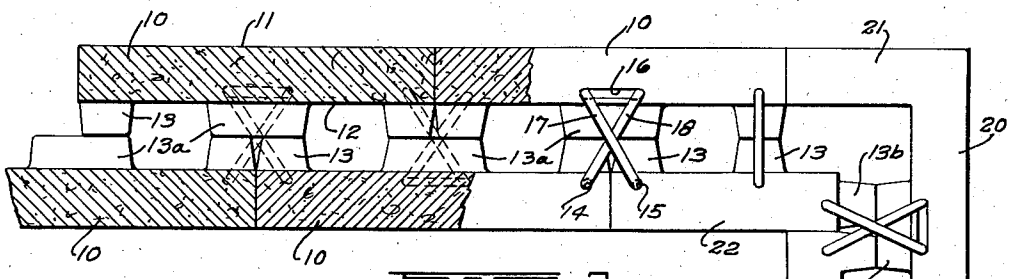



FIG. 2

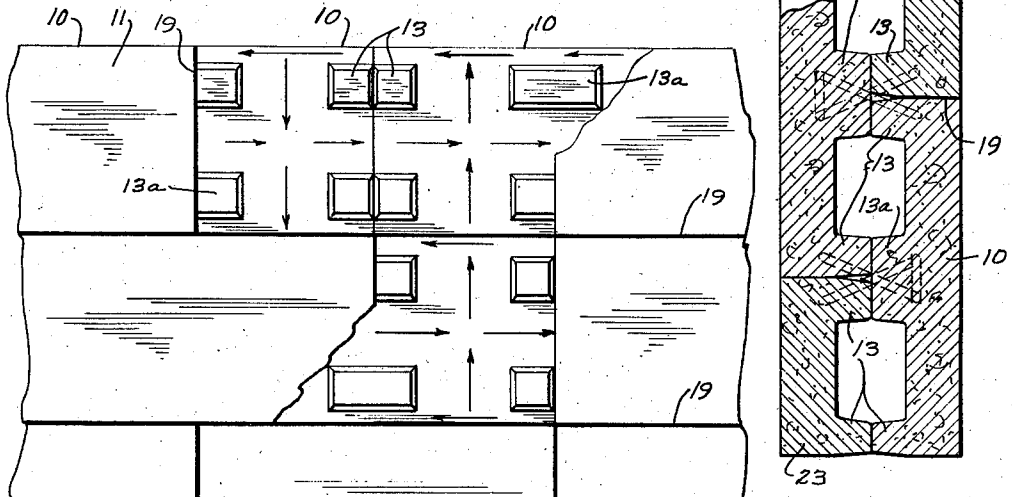



FIG. 3

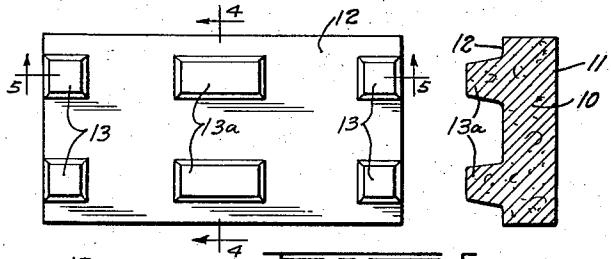



FIG. 4




FIG. 5

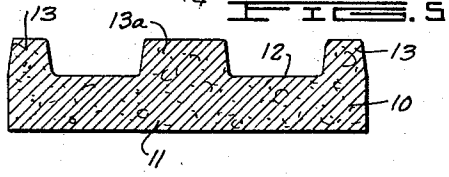
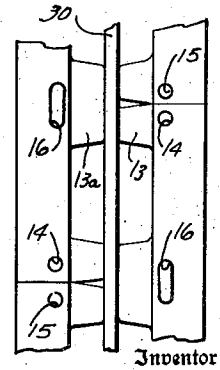



FIG. 6




Inventor
EDWARD G. MILLER

By John A. Bimmerlett

Attorney

Jan. 24, 1939. E. G. MILLER 2,145,187

BUILDING BLOCK FOR HOLLOW WALLS

Filed April 5, 1938 2 Sheets-Sheet 2

FIG. 7

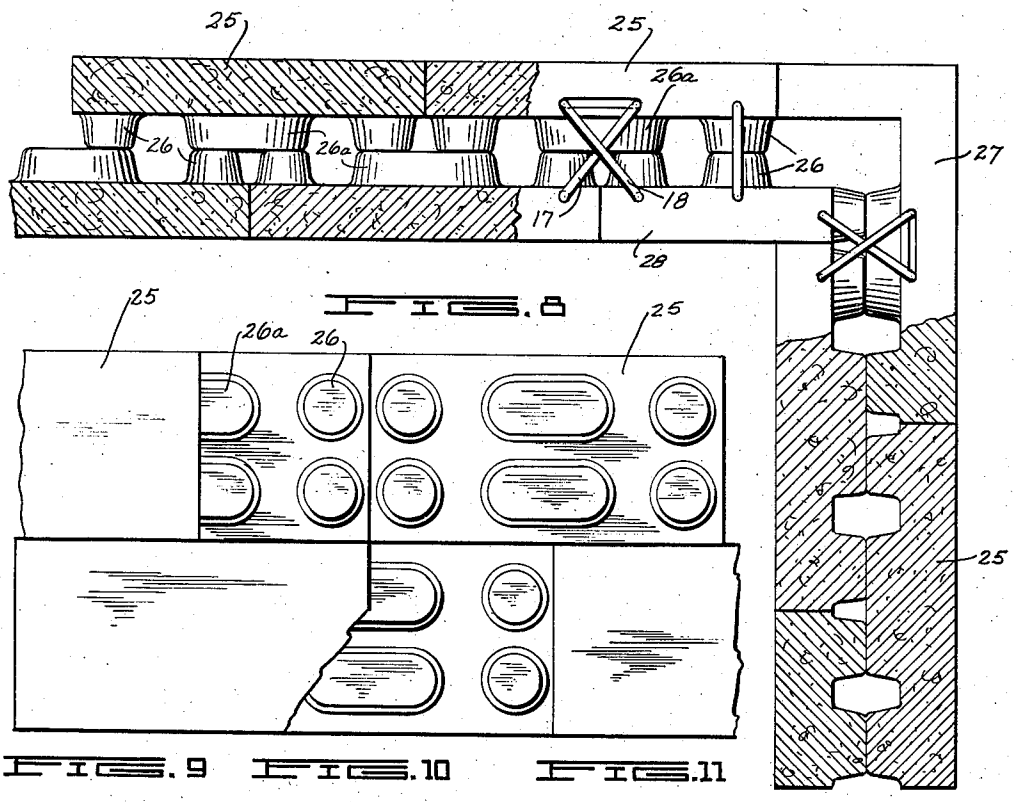



FIG. 8




FIG. 9

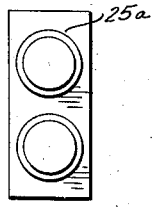



FIG. 10

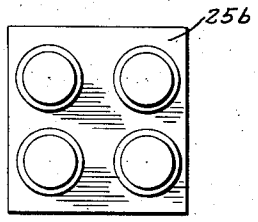



FIG. 11

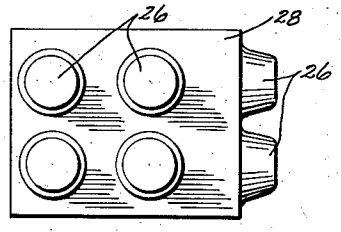
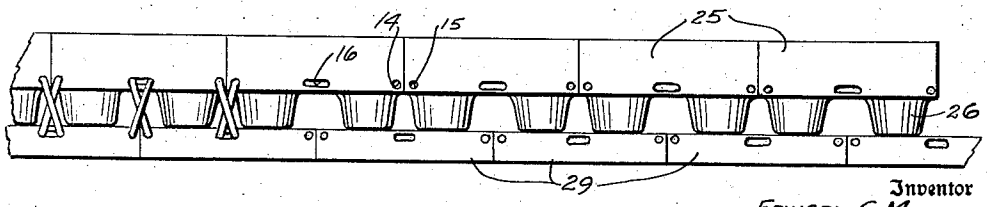



FIG. 12




Inventor
EDWARD G. MILLER

By John A. Bommhardt

Attorney

Patented Jan. 24, 1939

2,145,187

# UNITED STATES PATENT OFFICE

2,145,187

## BUILDING BLOCKS FOR HOLLOW WALLS

Edward G. Miller, Cleveland, Ohio

Application April 5, 1938, Serial No. 200,102

2 Claims. (Cl. 72—39)

My invention relates to improvements in the construction of walls of blocks and slabs of cement or the like which when laid in mortar one above the other in both inner and outer walls form continuous air passages, therebetween, both horizontal and vertical.

One object is to provide a construction whereby continuous air passages are maintained between the inner and outer walls to prevent the sweating action which is prevalent in the present cement and brick construction with the variable outside temperatures.

Another object is to provide a means whereby outside moisture is prevented from penetrating through the inner wall, the air passages providing a means whereby the excess moisture is dried before it can penetrate the inner wall.

These and other objects may be noted from the following specification and its accompanying illustrations in which:

Fig. 1 is a top plan view partly in section of an inner and outer wall made of blocks of the square and oblong boss type, showing the tying or binding means and the corner construction.

Fig. 2 is a side elevation partly broken away to show the continuous vertical and horizontal air passages.

Fig. 3 is an elevation of the block showing the projecting bosses.

Fig. 4 is a section on line 4—4 of Fig. 3.

Fig. 5 is a section on line 5—5 of Fig. 3.

Fig. 6 is a fragmentary plan view of the block and partition construction forming double continuous air passages.

Fig. 7 is a view similar to Fig. 1, of the round and oval boss type of block.

Fig. 8 is a view of this type similar to Fig. 2 of the square and oblong boss type.

Fig. 9 is an elevation of a quarter unit.

Fig. 10 is an elevation of a half unit.

Fig. 11 is an elevation of an inner corner unit.

Fig. 12 is a plan view of the block and slab construction showing the method of tying or binding.

Referring again to the illustrations, a block 10, of a material such as cement or the like substantially rectangular in shape and of such thickness as may be required in the construction work wherein it is intended to be used, has one flat face 11, the opposite face 12 having a plurality of bosses 13 and 13*a* of substantially square and oblong shapes respectively projecting outwardly therefrom.

The square bosses 13 are adjacent the outer edges of the block at the top and bottom, while the rectangular bosses 13*a* are in line with and at an equal distance from the said square bosses 13, being spaced centrally at the top and bottom of the block 10.

Apertures 14 and 15 and slots 16 in the top and bottom surfaces of the block have metal ties 17 and 18 engaged therein to bind the inner and outer blocks together when they are laid in the mortar 19.

When forming a corner an L shaped block 20 is used, having no boss on the short end 21 of said L but having a pair of square bosses 13 and oblong bosses 13*a* respectively on the long end.

The inner corner block 22 is shorter than the standard block 10 and has four square bosses 13 and a pair of end bosses 13*b*. In some instances a half block 23, having four square bosses 13, may be used.

In building construction the blocks 10, 21, 22 and 23 are laid in the mortar 19 to form inner and outer walls, the bosses 13 and 13*a* being laid in such manner as to form a contact and register each with the other as illustrated in Fig. 1, the ties 17 and 18 being then mounted within the apertures 14 and 15 and slots 16 as shown.

This method of construction forms a series of continuous air passages both horizontal and vertical as indicated by the arrows in Fig. 2; these passages are continuous from the bottom to the top of the structure and entirely around the walls from the point of beginning.

The addition of a partition 30, of any desired material (shown in Fig. 6) inserted between the bosses 13 and 13*a* of the blocks 10 of the inner and outer walls, form double air spaces between said walls.

A modified block 25 is illustrated in Figs. 7 through 11 wherein round and oval bosses 26 and 26*a* are used in place of the square and oblong bosses 13 and 13*a* respectively.

The same method of construction is used and the continuous air passages are substantially the same. Quarter and half size blocks 25*a* and 25*b* as well as the L 27 and inner corner block 28 may be used.

A slightly different construction is illustrated by Fig. 12, wherein flat slabs 29 are used in place of the inner blocks as illustrated in Figs. 1 and 7.

The method of laying and tying being the same, but the air passage area is decreased as well as the thickness of the wall.

It is understood that the application is not confined to the exact structure shown and described herein above but will permit variations within the scope of the invention.

I claim:

1. A hollow wall comprising inner and outer blocks each having a plurality of horizontally and vertically spaced bosses on the inner surface thereof, and a partition in the wall separate from the blocks, between and in contact on opposite sides with the inner ends of the bosses of the respective blocks.

2. A hollow wall comprising inner and outer blocks, each block having on the inner surface thereof a pair of short bosses near each end thereof and a pair of long bosses at the middle, the blocks being laid with each long boss in contact with two short bosses of opposite blocks, the bosses being spaced from each other and from the horizontal and vertical meeting edges of the blocks, whereby a plurality of vertical and horizontal air passages are formed in each course of the wall, said passages communicating with each other throughout the horizontal and vertical extent of the wall and some of said passages communicating with the joints between the blocks.

EDWARD G. MILLER.