Oct. 21, 1930. J. F. MAKOWSKI 1,779,007

BUILDING FORM CONSTRUCTION

Filed April 11, 1928 3 Sheets-Sheet 1

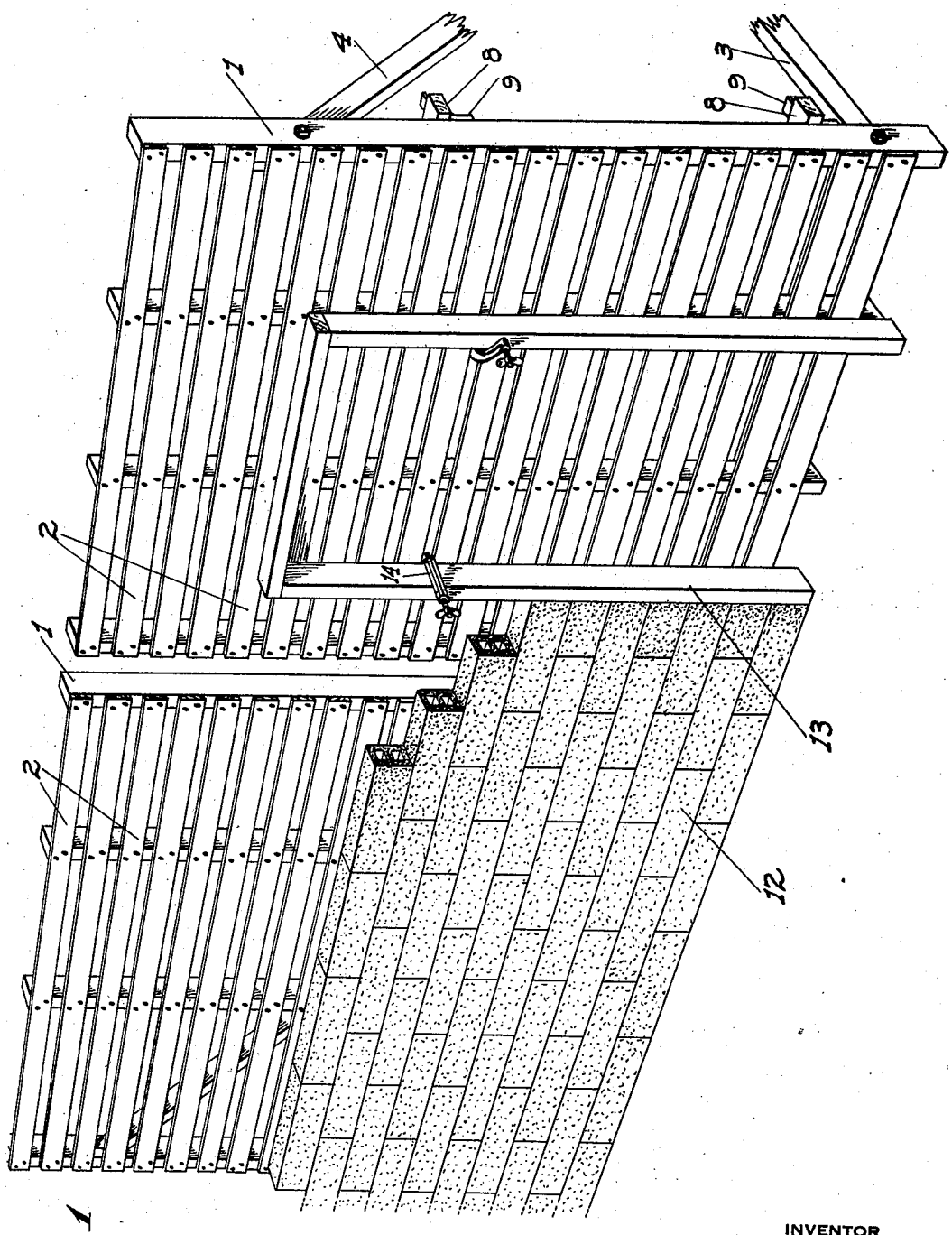


Fig. 1

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Fig. 2

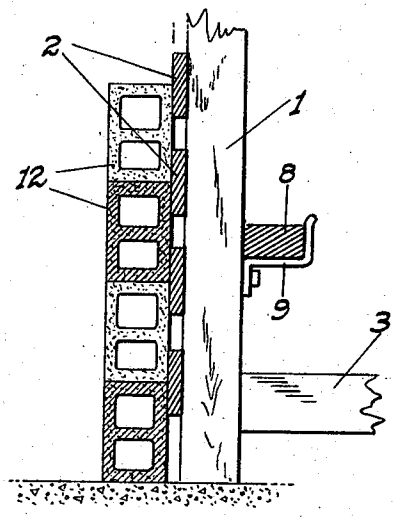
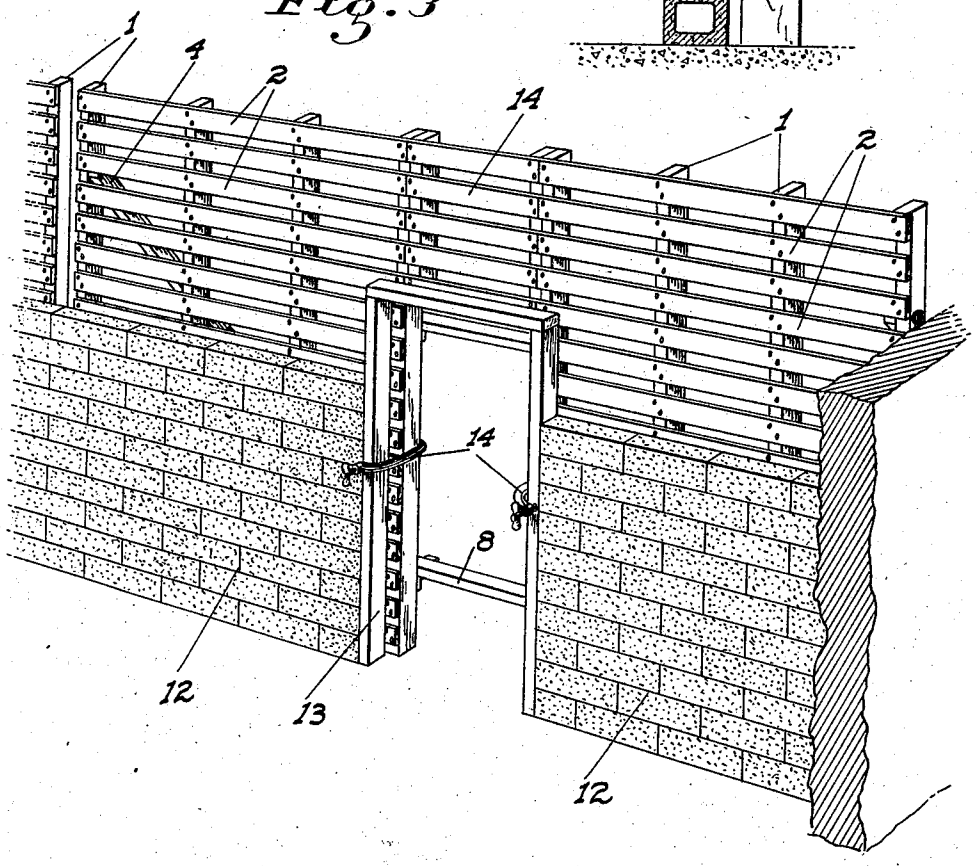


Fig. 3



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Fig. 5

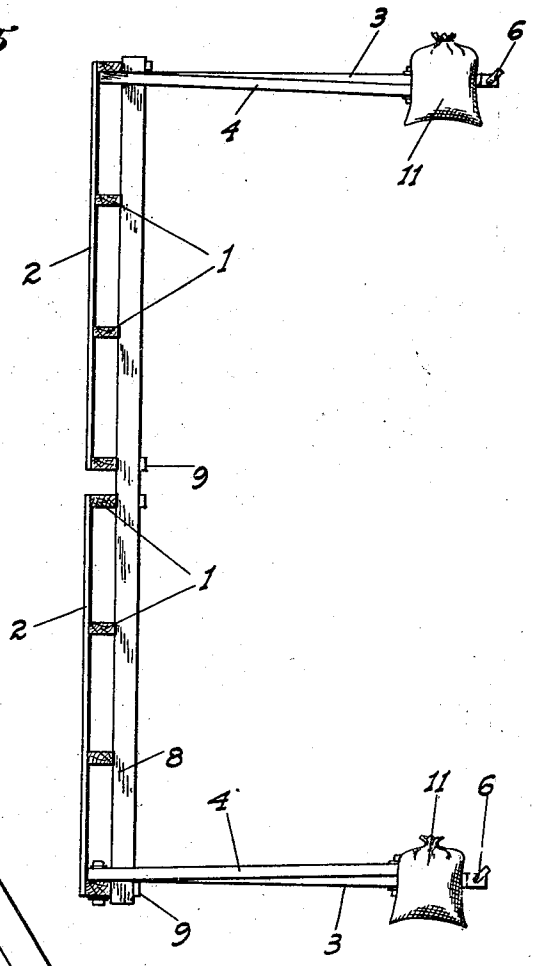


Fig. 4

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Patented Oct. 21, 1930 1,779,007

UNITED STATES PATENT OFFICE

JOHN F. MAKOWSKI, OF STOCKTON, CALIFORNIA, ASSIGNOR TO FIRE PROOF WALL COMPANY, OF RENO, NEVADA, A CORPORATION

BUILDING-FORM CONSTRUCTION

Application filed April 11, 1923. Serial No. 269,081.

This invention relates to improvements in means and methods of erecting walls from blocks or tile.

The principal objects of my invention are to provide a form arrangement of permanent character to be used in erecting the wall and especially a partition wall, and of such a nature that the wall may be quickly and easily erected without the necessity of expert brick layers or other skilled employees being needed, while insuring that the erected wall will be properly plumb; constructing the forms so that they may be easily mounted in place and trued up without having to nail or otherwise attach them to the building; which are removable from the finished wall and which may then be withdrawn through an ordinary doorway without dismantling; providing for the necessary support of a door buck in its proper place while the wall is being erected; providing tile for the wall of such dimensions that the forms do not have to be close together or close to the walls between which a partition wall is to extend; and to arrange for the erection of the wall itself in such a manner that forms on one side thereof are sufficient to prevent any outward sagging of the wall relative to the forms before such wall is thoroughly set.

A further object is to provide a form construction such that a person may pass from one side of the wall being erected to the other through a door opening, while the wall is being erected and the form is still in place, without having to go around the form or climb over the same.

A further object of the invention is to produce a simple and inexpensive device and method and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

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

Fig. 1 is a perspective view of my improved form structure showing wall partly erected.

Fig. 2 is a fragmentary transverse section of a form and wall.

Fig. 3 is a perspective view showing a wall and form construction, the latter being of a type to leave the doorway open.

Fig. 4 is an end view of a form.

Fig. 5 is a top plan view of a pair of forms showing the method employed for temporarily coupling the same together.

Referring now more particularly to the characters of reference on the drawings, the forms of which there may be any necessary number, each comprises a number of uprights 1 spaced apart horizontally and connected by vertically spaced slats 2. Each form is a permanent rectangular structure whose height approaches that of the wall to be erected and whose width is somewhat less than the height of an ordinary doorway. Each form is provided at one end with a horizontal beam 3 extending away from the slat covered side of the uprights, said beam being preferably pivoted onto the end upright of the form near the bottom. This beam is held rigid with the form by a vertical diagonally extending beam 4 which is pivoted onto the form upright and onto said horizontal beam. The pivotal bolt 5 between the base and the beam 3 is removable at any time, so that said beams may be folded against the form when it is desired to remove or transport the same. Various means may be used to plumb the form. In the present instance I have shown such means to comprise a vertical screw 6 threaded through plates 7 mounted on the outer end of the beam 3, said screw being adapted to engage the floor. It will therefore be seen that by adjusting the screw up or down the form may be easily and accurately adjusted so as to be set in a properly plumb position.

The brace and supporting means may be mounted at both ends of the form, but it is only necessary to place the same at opposite ends of a pair of forms, if horizontal beams 8 are used to extend between and bear against the beams 1 of the separated forms. To locate these beams removably in place the up-

rights of the forms are provided with vertically spaced cradles 9 to support the beams 8 so that one edge bears against the uprights, as shown in Fig. 4.

These beams and their locating means also serve to properly line up the two forms relative to each other, as will be evident. To possibly prevent the form from tipping forward or away from the supporting structure, sand bags 11 or the like may be laid across the beams 3 toward their outer ends—an arrangement which I have found ample to counterbalance and offset the weight of the form and any topheaviness which it might possibly inherently possess.

In erecting the wall I preferably use tile or block 12 which are of considerable length relative to their height and thickness, since this enables the forms to be spaced some distance apart from each other as shown in Fig. 1, without the danger of the wall as erected becoming misalined. Before starting to erect the wall the door buck 13 if used is placed against the form and temporarily fastened thereto in any suitable manner as by the use of C-clamps 14. The tile are laid closely against the form in horizontal courses and in staggered relation as usual, and the slats 2 of the form are so spaced that the horizontal lines of separation between the different courses of the tile will always be horizontally alined with said slats as shown in Fig. 2. This feature is advantageous in holding the wall steady while it is being erected and while it is setting, especially if somewhat green tile is used. This is because in erecting the wall, the bottom of each tile is dipped in a thin grout or other cementitious material and then pressed into place with a longitudinal movement against the tile of the course below. This pressure causes some of the grout to be squeezed from between the tile on the side thereof facing the form, and such grout will adhere to the slats of the form. This forms a temporary bond between the wall and form preventing the latter from any tendency to sag outwardly.

The form therefore provides a guide and back stop for the wall so that the latter may be erected as quickly as it is possible to handle the tile without having to stop and line up each course to maintain the wall plumb, and without danger of the erected wall sagging outwardly before it is thoroughly set. Solid facing for the form could of course be used instead of the spaced slats, but the increase in weight would be considerable without any accompanying advantages being obtained. When the wall is erected the beams 8 are removed from association with the forms, and the supporting beams 3 and 4 of the latter are folded thereagainst; the forms then tilted sideways and passed through the doorway without any dismantling of the forms being necessary.

In the form arrangement shown in Fig. 1 the form extends across the doorway so that it would be impossible for a workman to pass through the door until a form is taken down. In the arrangement in Fig. 3 I avoid this by separating the main forms at the door buck sufficiently to enable a person to pass through; the space between said forms above the buck being filled in by an auxiliary small form 14 of the same general nature as the main forms.

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 method of erecting a wall with tile consisting in erecting a vertical form, and building up the tile in rows abutted against the form, the lower faces of the tile being dipped in a plastic cementitious material, and causing some of the material, when the tile are placed, to exude from between the tile on the face thereof nearest the form so as to temporarily adhere to the form.

2. A method of erecting a wall with tile consisting in placing a vertical form behind the wall to be erected, building up the tile with a plastic cementitious material therebetween in the form of superimposed rows abutted against the form, and causing some of the material to temporarily adhere to the form.

3. In combination, a pair of separate vertical wall-forms to rest on a floor, horizontal members projecting from one side of the forms at their opposite ends, and rigid therewith, a horizontal beam extending between the forms at the back thereof and resting on said members, and means fixed on the members for removably locating said beam in place.

4. A form for erecting a tile wall comprising supports, horizontal vertically spaced slats on the supports, the spacing of the slats being such that as the tile are laid in courses against the form all the slats will extend across the horizontal meeting edges of the tile whereby cementitious material exuding from between the tile may adhere to the faces of the slats.

In testimony whereof I affix my signature.

JOHN F. MAKOWSKI.