Feb. 7, 1928. 1,658,738

G. PETERSON

FORM FOR POURING AND METHOD FOR FACING

Filed Feb. 21, 1927 2 Sheets-Sheet 1

Fig. 1.

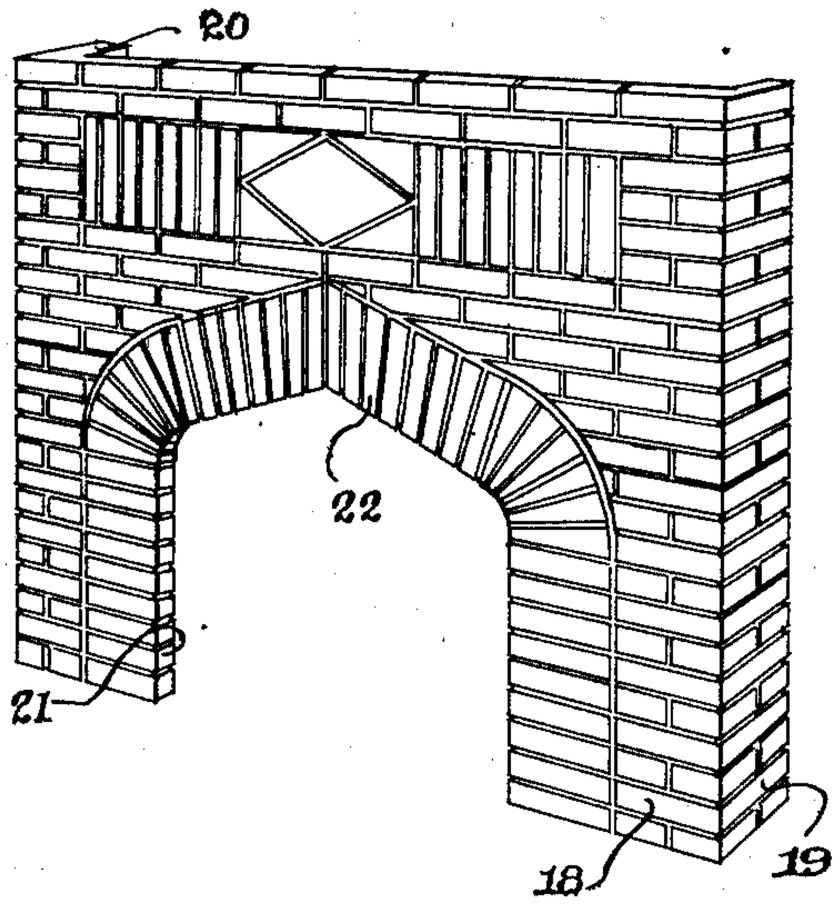

Fig. 2.

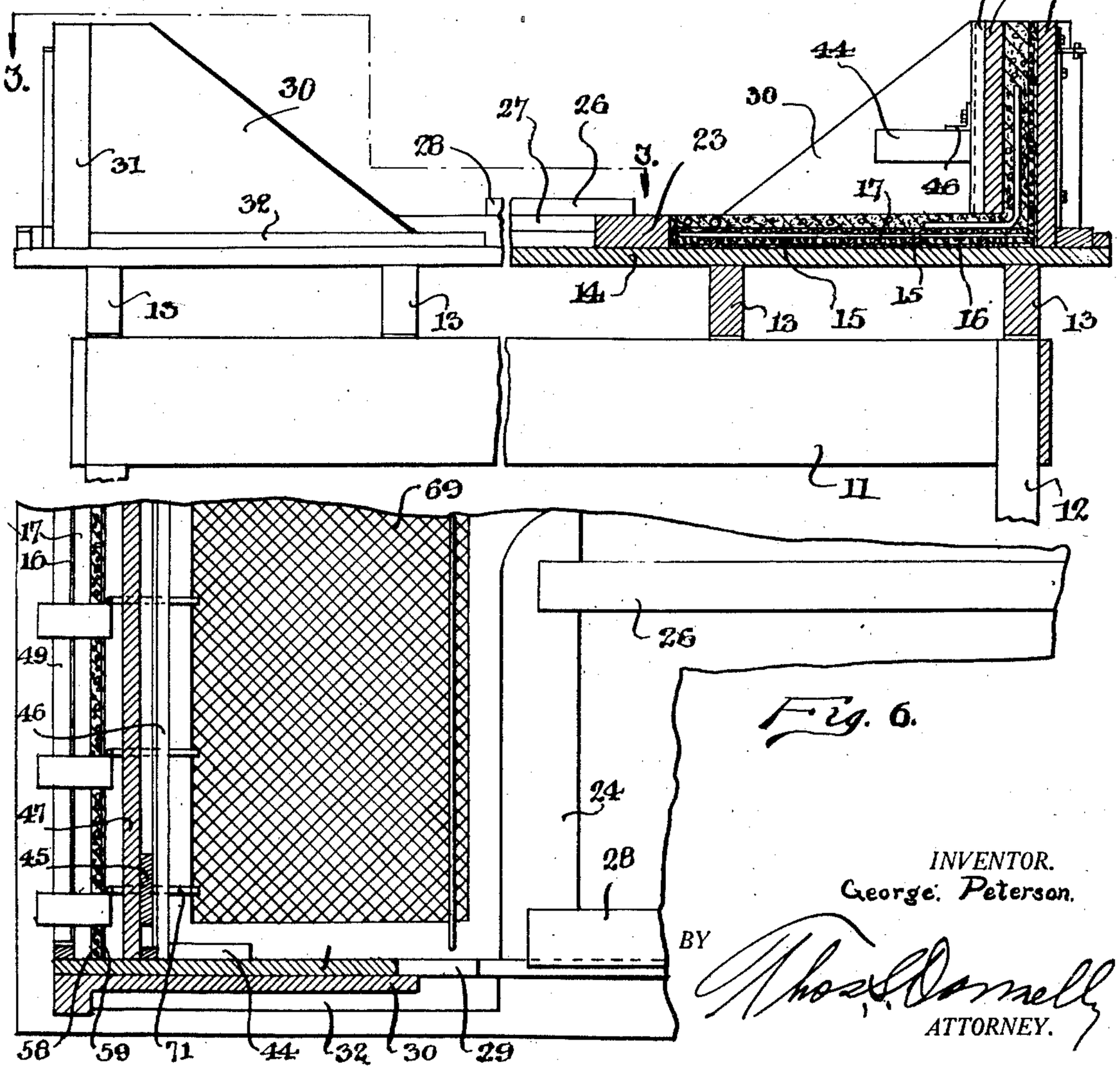

Fig. 6.

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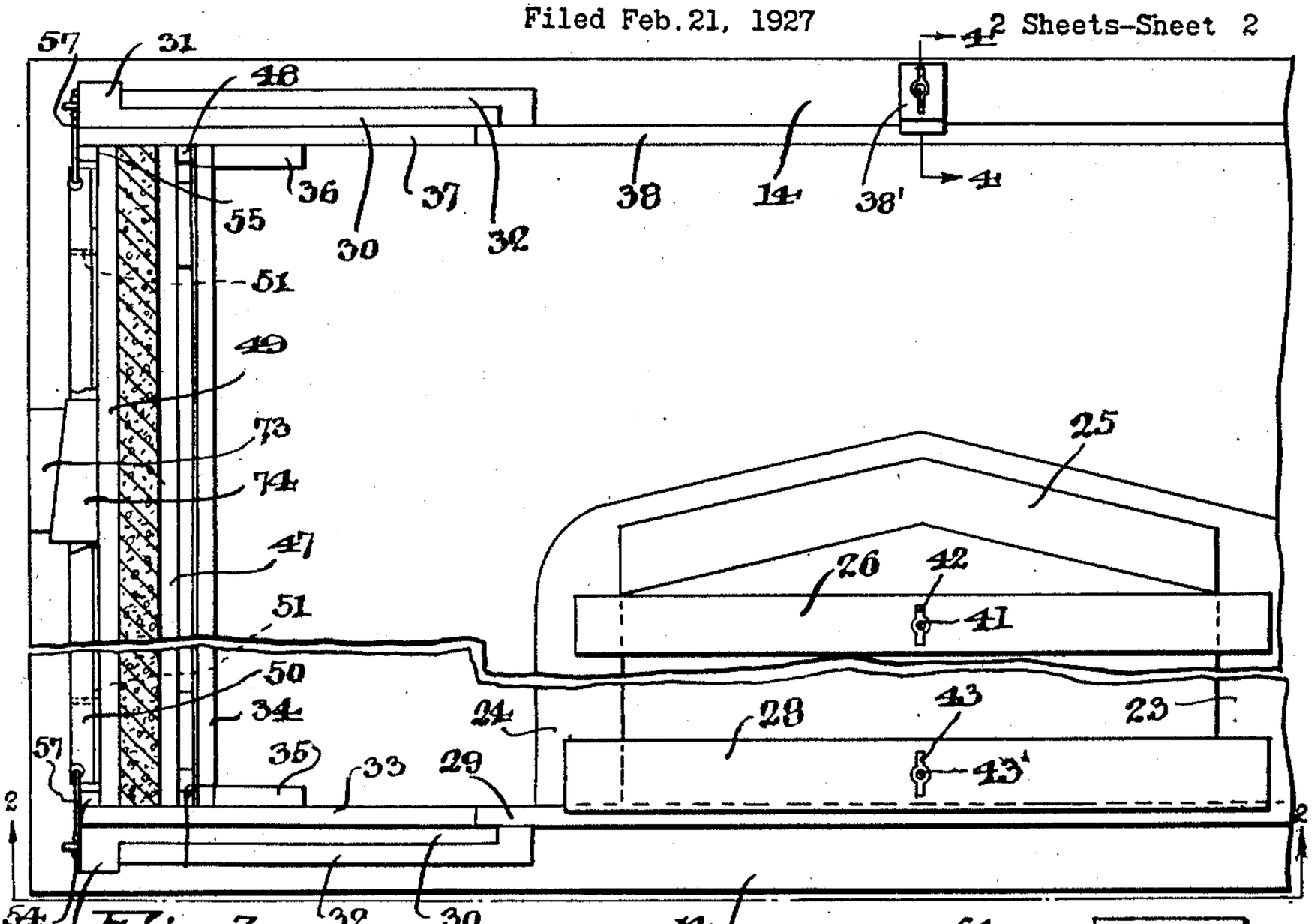


Fig. 3.

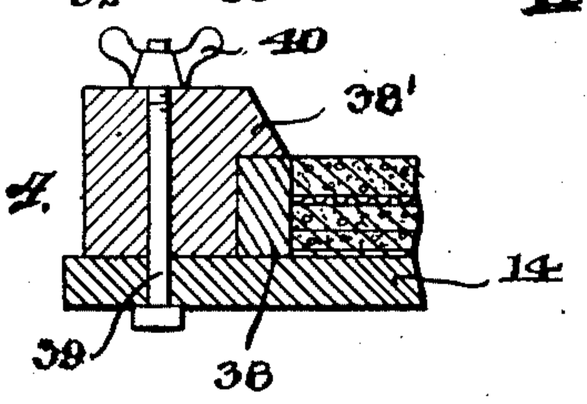


Fig. 4.

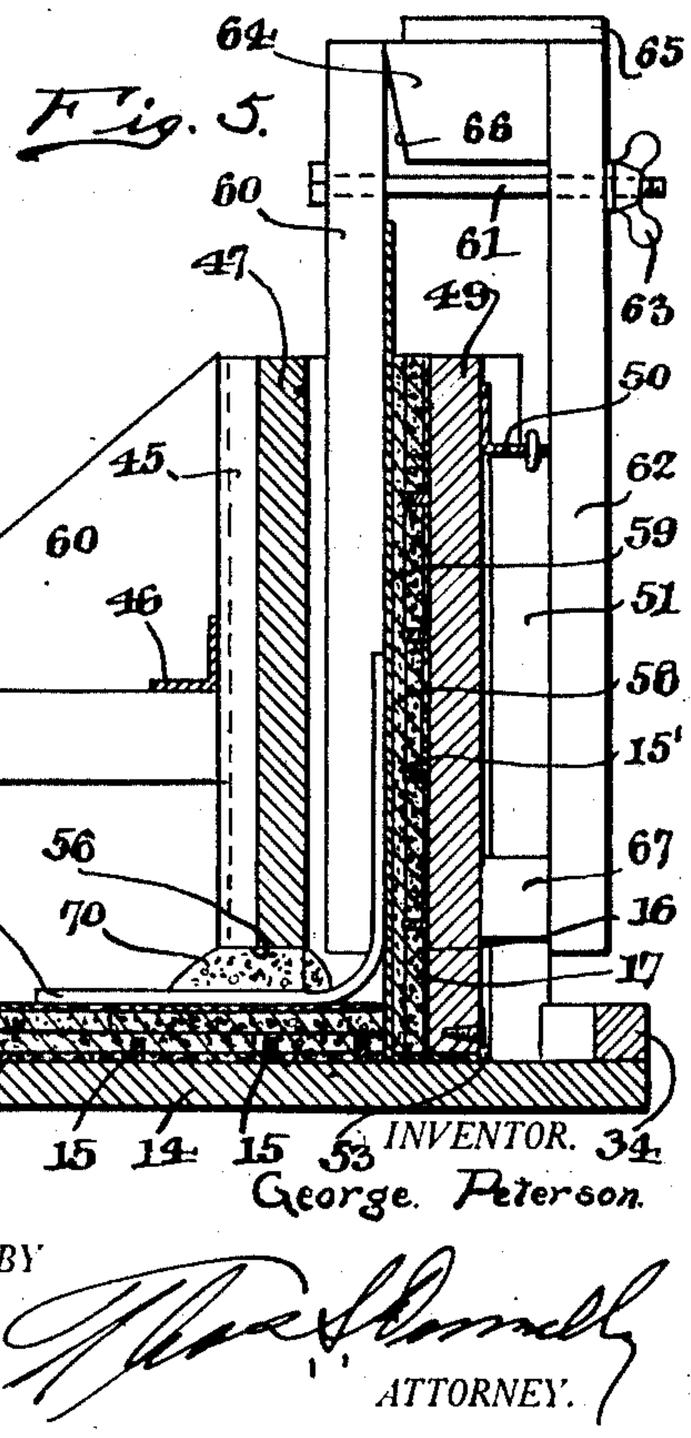
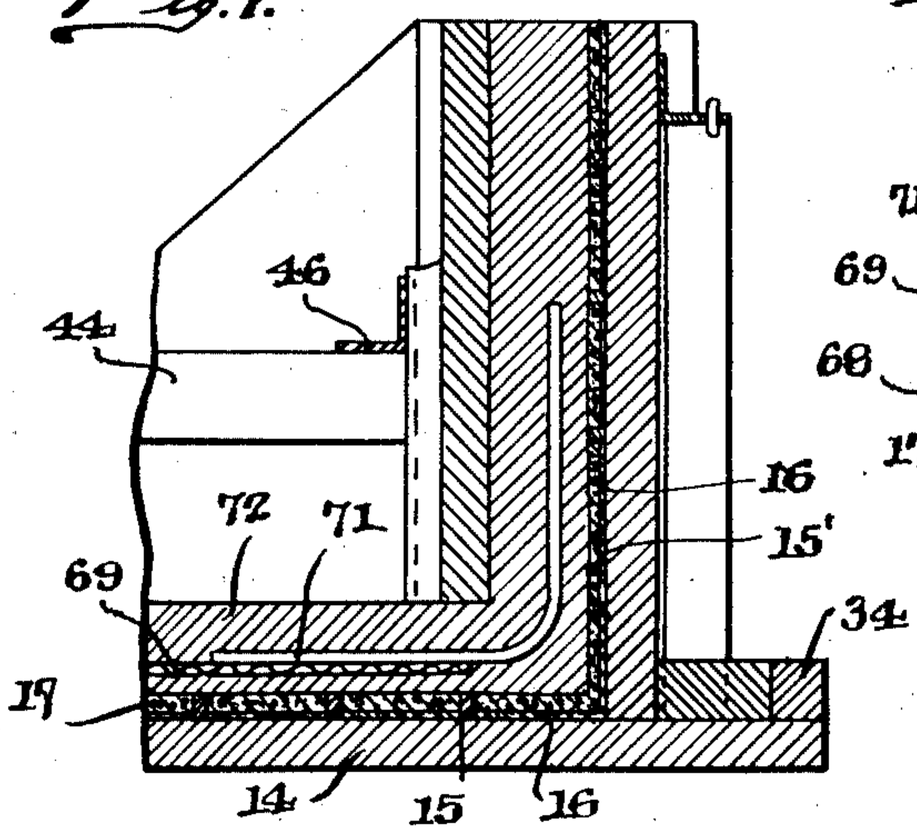


Fig. 5.

Fig. 7.



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Patented Feb. 7, 1928. 1,658,738

UNITED STATES PATENT OFFICE.

GEORGE PETERSON, OF DETROIT, MICHIGAN.

FORM FOR POURING AND METHOD FOR FACING.

Application filed February 21, 1927. Serial No. 169,766.

My invention relates to a new and useful improvement in a form for pouring and a method for facing concrete structures, and is adapted particularly for use in the fabrication of portable fire places. These portable fire places which are now becoming quite well-known commercially are generally formed from concrete with a facing having a special design formed therein generally to simulate laid brick and the like. In constructing these fire places the front face is generally provided with an artistic finish, either in color or in inlaid material, such as crushed granite, and the like. The side faces, however, which are also exposed to view when the fire place is mounted in a room are not finished because of the impracticability of placing a finished surface on the side faces.

The present invention provides a method for facing not only the front face of the structure but the side faces as well, so that all sides of the structure which are exposed to view present a finished appearance.

It is another object of the invention to provide a form whereby this finishing of the side faces, as well as the front face, may be effected.

Another object of the invention is the provision of a form whereby the side faces may be poured in section, and these sections amalgamated with the front face to provide a unitary structure having all of the faces finished.

Another object of the invention is the provision of a form consisting of the essentials of the detail of structure shown.

Other objects will appear hereinafter.

The present invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings which form a part of this specification, and in which

Fig. 1 is a perspective view of the finished structure.

Fig. 2 is a sectional view taken on substantially line 2—2 of Fig. 3, with parts broken away.

Fig. 3 is a fragmentary top plan view of the form used in the invention.

Fig. 4 is a sectional view taken on substantially line 4—4 of Fig. 3.

Fig. 5 is an enlarged view of the end section shown in Fig. 2.

Fig. 6 is a fragmentary top plan view with parts shown in section.

Fig. 7 is a view similar to Fig. 5 showing the final operation.

As shown in the drawings I provide a frame 11 supported by legs 12, and positioned across the frame 11 are supports 13 upon which a table bed 14 is positioned. This table bed has a plurality of rails 15 projecting upwardly therefrom, these rails being so arranged as to form on the concrete which is poured thereagainst the design of the fire place, as shown in Fig. 1. When pouring the structure, a layer of sand 16 is first poured on the bed 14, this layer of sand 16 being covered with a layer 17 of crushed stone, colored mortar, or the like, depending upon the nature of the facing which it is desired to give to the finished structure. As shown in Fig. 1, the fire place, when completed, comprises a front wall 18, and side walls 19 and 20, the front wall being provided with the hearth opening 21 and having the arch 22 formed therein.

To form the arch I have provided end rails 23 and 24 which connect to the truss or arch support 25. Placed over the end rails 24 and 25, and spanning the arch, is a spacing rail 26, projecting downwardly from the inner surface of which is a rail 27 engaging the inner edges of the end rails 23 and 24. A wing nut 41 is threaded on a bolt 42 which projects upwardly from the bed 14 so as to clamp the rail 26 in engagement with the members 23 and 24. A similar spacing member 28 is clamped in the rails 23 and 24 adjacent their ends by means of the wing nut 43 which is threaded on the bolt 43′ which projects upwardly from the bed 14. Secured to the bed 14 is a base forming board 29, the member 33 forming a continuance thereof, so as to provide with the end members 35 and the rails 37 and 38 a frame for determining the size of the front wall 18. An abutment block 35 is mounted on the member 33 and an abutment block 36 is mounted on the member 37. The member 38 is held in position by means of a clamping block 38′ through which extends the bolt 39 provided with a wing nut 40, the arrangement being such that this clamping block 38′ may be tightened to hold the rails 38 in position. Mounted fixedly upon the bed 14 and projecting upwardly therefrom at the four corners of the bed are end boards 30, and pro-

jecting outwardly from one side thereof is an extension 31 serving to engage a reinforcing rail 32 which engages the outer side of the end board 30. Mounted on the inner face of each of these end boards 30 is a supporting block 44 upon which rests the ends of an angle iron 46 which is secured to spacing blocks 45 mounted upon the inner end gate 47. The inner end gate is adapted to engage between spacing blocks 48 which are carried by the members 33 and 37. (See Fig. 2 and Fig. 3.) An outer end gate 49 is provided which carries a transversely extending angle iron 50, a plurality of vertically extending angle irons 51 being also mounted on the outer side of the outer end gate. Mounted on the lower edge of the outer end gate 49 is an L-shaped strip of metal 53 which extends the full length of the frame, this strip being secured to the end gate by means of a screw or in any other suitable manner. (See Fig. 5.) This outer end gate is adapted for engaging between blocks 54 and 55 which are mounted on the inner surface of the members 33 and 37. Hooks 57 are mounted on the extensions 31 and serve to engage in openings formed in the angle iron 50 so as to securely lock the corner plates 30 in engagement with the edges of the end gate 49. This outer end gate 49 is provided with the upwardly extending ribs 15′ which serve to outline the pattern on the finished end face.

In operation the end gate 49 would be laid in horizontal position, and a layer of sand 16 poured thereon, this layer of sand 16 being a thin one, as shown in Fig. 5, so that the pattern forming ribs 15′ will project thereabove. The layer of sand is then covered by a layer 17 of facing material, such as crushed rock or the like, and this is in turn followed by a layer 58 of concrete. There is then placed over the concrete a binding plate 59. This plate, together with the outer end gate 49 serves to clamp the plastic material contained between them in position so that when the end gate, together with the plate 59, are raised to vertical position, a flowing of the plastic material would be prevented. In order to effect this clamping of the end gate and the plate 59, I have provided a clamp comprising a leg 60 through which is projected a bolt 61. A cooperating leg 62 is provided through which the bolt 61 projects, a wing nut 63 being threaded on the bolt 61. A spacing block 64 is mounted on the upper end of the leg 62 and provided with an overlapping board 65 which engages the upper end of the leg 62. It will be noted that the end of the block 64 which engages the leg 62 is provided with a bevelled surface 66, the leg 60 engaging at only one portion of the block 64. Provided on the lower end of the leg 62 is a filler block 67 of such size that when the leg 62 engages the angle iron 50, the block 67 will also gage the upper face of the outer end gate When these clamping members which m be used in any desired numbers dependi upon the size of the structure to be pou are placed in position, as shown in Fig. the wing nut 63 is threaded to effect a clan ing of the parts between the legs 60 and On account of the shape of the block 6 secure clamping of the legs throughout th length is effected. After the clamping l been completed, the outer end gate 49 raised into vertical position, and moun between the corner plates, as shown in F 3. The inner end gate 47 is then placed position, and it will be noted that the in end gate 47 is supported by the angle iron in such a manner as to terminate above bed 14, leaving the space 56 formed there The layer of sand 16 is then poured over bed 14, followed by the layer of facing m terial 17. A layer of concrete 68 is tl poured over the facing layer 17, after wh a wire screen 69 is positioned on the la of concrete 68, this layer of concrete be reinforced or not, as desired. The space lying between the lower end of the inner gate 47 and the screen 69 is then filled w a strip 70 of concrete possessing a high p centage of cement so that it will quickly gin to set, and serve as a filler to prevent plastic material poured into the space tween the inner surface of the inner gate 47 and the plate 59 from passing o wardly below the lower edge of the end g 47. After the cement layer 58 has set t certain degree the space between the in surface of the inner end gate 47 and plate 59 is filled with concrete, L-shaped inforcing rods 71 being first placed alo the ends 19 and 20, as shown in Fig. 5, number of these reinforcing rods being s stantially the same as the number of clamping members 60, and lying in enga ment therewith, so that the legs 60 serve support the members 71 in upright positi When this concrete has set sufficiently to tain the layer 58 in its position, the clampi legs 60 and 62 are removed, as is likew the plate 59 and the L-shaped member so that the layer 58 will amalgamate w the rest of the concrete forming the s members. A layer 72 of concrete is tl poured over the wire mesh 69 and this la 72 will amalgamate with the filler 70, pouring being sufficiently close together permit the amalgamation of the vari pourings, so that a unitary structure will provided. An abutment block 73 is mou ed on the bed 55 to engage a wedge 74 wh is driven into engagement with the ou end gates to retain them in position. (Fig. 3 and Fig. 2.) After the concrete l set so as to retain the form indicated end gates are removed, after which the c

crete fire place may be removed from the form.

It is believed evident that a finishing of the end faces as well as the front face becomes possible in this manner without in any manner weakening the structure. The layer 72 of concrete may be suitably reinforced with reinforcing wires, if desired.

In this way, I have provided a fire place formed from concrete having all exposed faces finished with the desired finishing material.

While I have illustrated and described the preferred form of construction, I do not wish to limit myself to the precise form of structure shown, but desire to avail myself of such variations and modifications as may come within the scope of the appended claims.

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

1. The method of pouring a fireplace formed from plastic material with facing on a plurality of sides thereof consisting in pouring the sides separately with the facing thereon and mounting the sides in co-operative relation and causing the plastic material of the abutting edges of the sides to amalgamate.

2. The method of forming a structure of plastic material having a plurality of sides provided with a facing consisting in forming the sides separately and abutting the sides together while the plastic material is in a plastic state and permitting the material to harden while said edges are in abutment, the edges to amalgamate together to form a unitary structure.

3. The method of forming a structure from plastic material having a plurality of sides provided with a facing consisting in pouring a portion of said sides with the facing thereon while in a horizontal plane and abutting the sides together in co-operative relation while the said portion is in a plastic state, and then pouring the remainder of said sides and permitting the amalgamation of the plastic material of the abutting edges of said sides.

4. The method of forming a structure from plastic material having a plurality of sides provided with a facing consisting in pouring a portion of said sides with the facing thereon abutting the joining edges of said sides together and finishing the pouring of the same permitting the plastic material of adjacent edges to amalgamate and retaining the facing in position until said plastic material sets.

5. The method of forming a structure from plastic material adapted to set and harden, the side faces of said structure having a facing thereon consisting in: pouring a portion of said sides with the facing thereon, clamping said pouring in a form to retain said facing in position; abutting the edges of the forms together, pouring the remainder of said sides and removing said clamping means and permitting said abutting edges to amalgamate and set as a unitary structure.

6. A form for providing a facing on a plastic structure comprising a side wall; an intermediate clamping wall; means for clamping said intermediate wall in position; a second end wall; means for clamping said second end wall in position; and means for releasing said intermediate wall and permitting its removal therefrom without disturbing plastic material poured between said end walls.

In testimony whereof I have signed the foregoing.

GEORGE PETERSON.