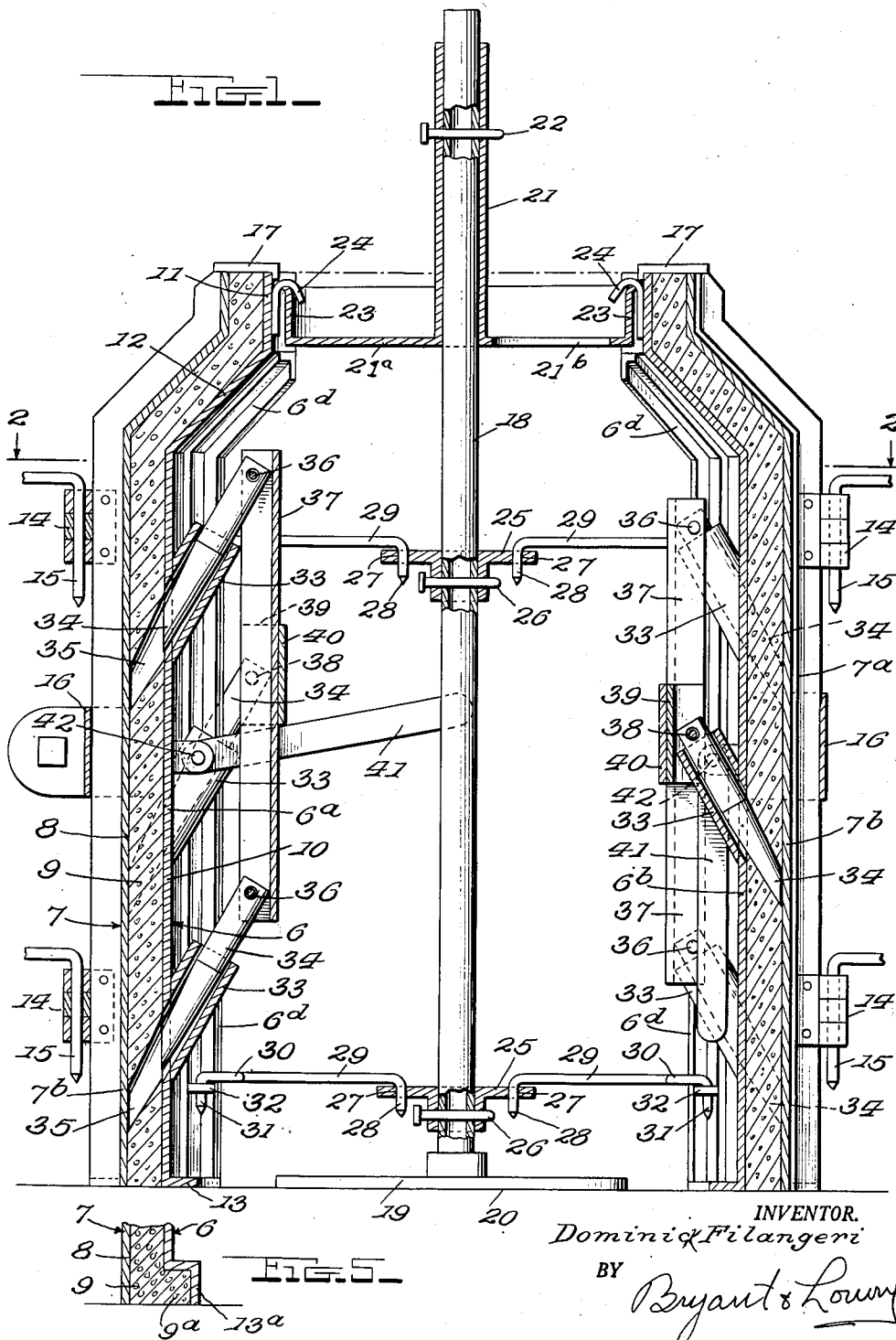


D. FILANGERI
CESSPOOL MOLD

2,680,276

Filed Feb. 7, 1952

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

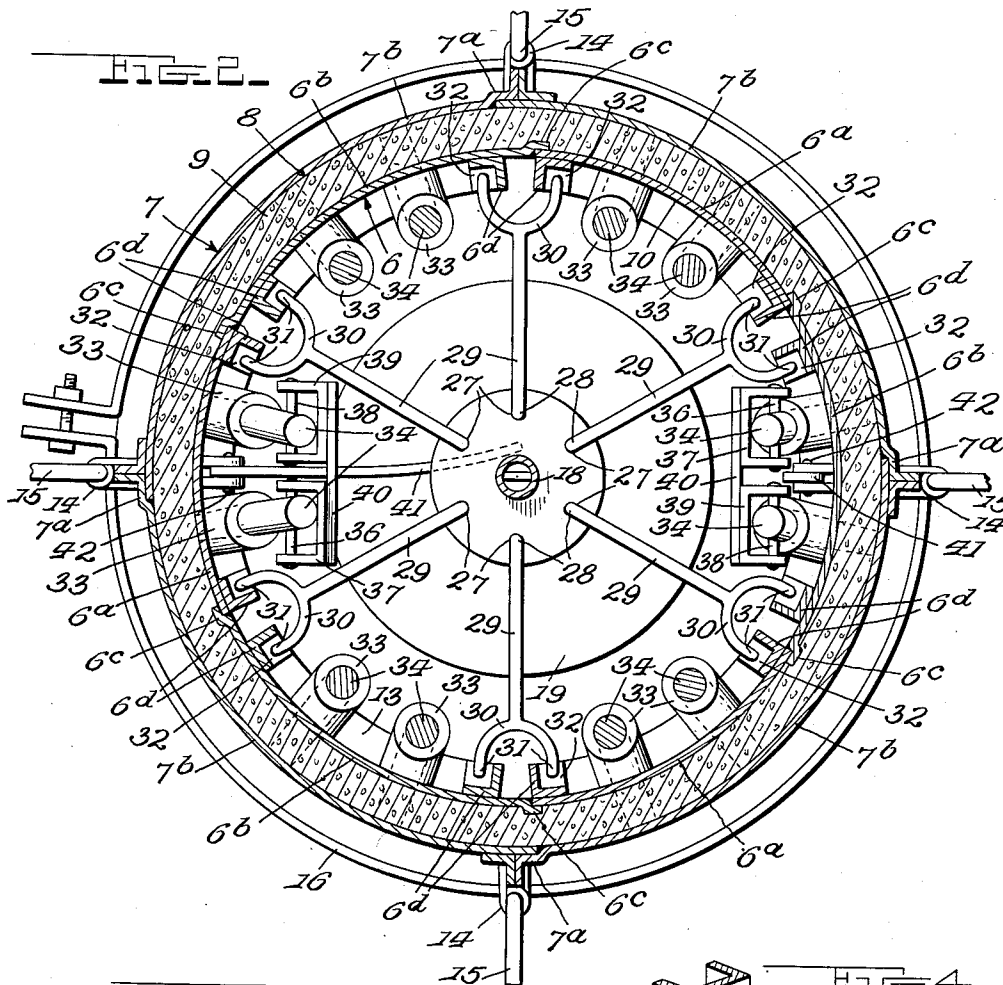


FIG. 3

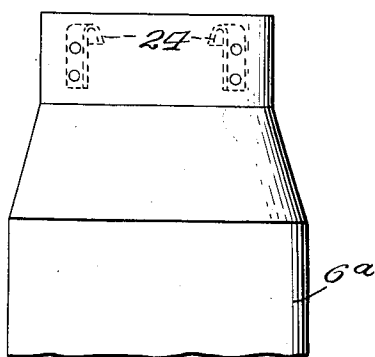
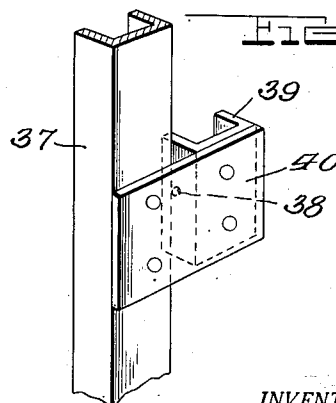


FIG. 4



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CESSPOOL MOLD

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7 Claims. (Cl. 25—124)

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This invention relates to moulds or forms for use in the manufacture of concrete articles, and is intended primarily for moulding the bodies or walls of cesspools or catch basins for rural plumbing installations and the like.

One object of the invention is to provide a simple and effective mould construction which may be quickly and easily assembled for use and may be readily disassembled for removal from the moulded cesspool after the concrete has set.

The mould includes inner and outer sectional walls spaced apart to provide a moulding space, and a further object is to make novel provision for holding the mould sections in assembled relation.

A still further object is to provide a mould including a central base-supported post, and novel means for detachably connecting the inner wall sections with said post.

Another object is to provide one of the spaced mould walls with a plurality of core pins projectable across the moulding space to form drainage openings in the molded concrete cesspool, said core pins being readily retractible after the concrete has set.

Yet another object is to provide novel and easily operable means for retracting the mould pins.

Still another object is to make novel provision whereby one operation of one lever will retract a plurality of the core pins.

A still further object is to provide a relatively simple mould construction which may be expeditiously manufactured and profitably marketed at a reasonable price.

With the above and other objects in view, as will be presently apparent, the invention consists in general of the novel form, combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and particularly claimed.

In the drawings, like characters of reference indicate like parts in the several views, and

Figure 1 is a vertical sectional view of the mould in use, showing the core pins at the right projected and at the left retracted, elements which would appear in the background being omitted to avoid confusion;

Figure 2 is a horizontal sectional view substantially on the plane of line 2—2 of Figure 1 although some of the core pins are shown in section below

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that plane, and the operating means for these pins are omitted to avoid unnecessary duplication;

Figure 3 is a fragmentary outer side elevation showing the upper end portion of one of the inner wall sections and its hooks;

Figure 4 is a fragmentary perspective view showing a portion of one of the core pin connecting members; and

Figure 5 is a detail vertical section disclosing a slight modification at the lower end of the inner mould wall.

An inner wall 6 and an outer wall 7 are provided, said walls being spaced apart to provide a moulding space 8 into which to pour the concrete 9. The inner wall 6 comprises a cylindrical main portion 10, a cylindrical upper end portion 11 of much smaller diameter, and a frusto-conical portion 12 permanently connecting said main and upper end portions. The outer wall 7 also is of this same shape. The lower end of the inner wall 6 is simply flanged inwardly at 13 in Figure 1 but is provided in Figure 5 with an inward offset 13a to form a thickened lower end 9a on the moulded cesspool wall.

Both the inner and outer walls 6 and 7 are formed from segmental sections extending from end to end thereof. These sections may be of any desired number, say six or eight for the inner and three or four for the outer wall. The alternate sections of the inner wall 6 are designated at 6a and the intervening sections at 6b. The vertical edges of the sections 6b lap onto the outer sides of the edge portions of said sections 6a as shown at 6c in Figure 2. Angle iron bars 6d are provided to reinforce the sections 6a and 6b, and those of the sections 6b are spaced inwardly from the edges of these sections sufficiently to prevent them from interfering with inward swinging of the sections 6a when disassembling the mould.

Lap joints 7a are provided for the outer wall sections 7b and these sections are detachably connected by hinges 14. The hinge pins 15 of these hinges are readily removable from the usual knuckles to allow separation of the sections 7b when they are to be taken off from the moulded cesspool. The edges of the sections 7b are suitably reinforced, and to prevent outward bulging of these sections, they are preferably surrounded by at least one clamp band 16. The upper ends

of these sections 7b are provided with permanently attached hooks 17 which engage the upper end of the inner wall 6 and hold the two walls in correctly spaced relation.

A central post 18 is disposed within the confines of the inner wall 6 and is secured to a base 19 which rests on the pallet or the like 29 upon which the cesspool is to be moulded at the factory or elsewhere. The base 19 is sufficiently small to allow upward passage through the reduced upper end 11 of the wall 6 when disassembling the mould.

A sleeve 21 slidably surrounds the upper portion of the post 18 and is normally held against descent thereon by a pin 22. The lower end of this sleeve 21 carries a disk 21a having a peripheral upwardly projecting flange 23 within the upper end portion 11 of the inner wall 6. The sections 6a and 6b of this wall have permanently attached hooks 24 which are hooked over the flange 23 when assembling said sections, thereby initially connecting these sections with the post 18.

Below the disk 21a, the post 18 carries flanges 25 held in place by pins 26. By removing the pin of the upper flange, the latter may be dropped to give more room for a man working inside the mould when disassembling it. A manhole 21b in the disk 21a permits this workman to enter. Each flange 25 has circumferentially spaced openings 27 equal in number to the inner wall sections 6a and 6b, and these openings receive downwardly directed hooks 28 on radial tie rods 29. The outer ends of these tie rods are bifurcated at 30 to straddle the adjacent angle bars 6d, and the furcations have downwardly directed hooks 31 engaging apertured lugs 32 on said angle bars. Thus, the tie rods 29 hold the inner wall solidly in place but may be readily removed when the mould is to be disassembled.

The inner wall sections 6a and 6b are provided with tubular core pin guides 33 uniformly inclined inwardly. These guides slidably and removably receive core pins 34 which may be tubular if desired. These core pins are projectable across the moulding space 8 to form drainage openings 35 in the cesspool wall and are retractible from these openings when the mould is to be disassembled. Three of the core pins 34 are shown for each inner wall section 6a and 6b, two of these pins being widely spaced apart on a vertical line while the third is circumferentially spaced from said line and disposed at an elevation between said two pins. These two pins are loosely connected at 36 with a vertical connecting bar 37 which is preferably a metal channel. The third core pin is loosely connected at 38 with a short bar 39 spaced laterally from bar 37. The two bars 37 and 39 are rigidly connected by a plate 40 and constitute a unitary connecting member for the three core pins. A lever 41 is fulcrumed at 42 to swing upwardly against the lower edge of the plate 40 as shown at the left of Figure 1, thus permitting the workman within the mould to upwardly force the bars 37 and 39 to retract the core pins after the concrete has set. Then the various bars 37 and 39 with the attached core pins can be passed out of the mould to another workman, leaving the inner wall sections 6a and 6b free from encumbrance when releasing these sections and passing them out. The release of these sections entails removal of the tie rods 29 and dropping of the disk 21a from the hooks 24. The sections 6a can then be swung inwardly and passed to the workman outside,

after which the sections 6b may be handled in the same manner.

The outer wall sections 7b are readily removable by removing the clamping band 16 and some or all of the hinge pins 15.

In assembling the mould, the sleeve 21 is properly positioned on the post 18 and held by the pin 22. The inner wall sections 6a and 6b are then hooked onto the flange 23 of the disk 21a. A workman then enters through the manhole 21b and connects the tie rods 29 with the flanges 25 and the lugs 32. The groups of core pins 34 and their connecting bars are then passed in to the workman and he engages said pins with the guides 33. Gravity insures that the pins shall project beyond the periphery of the inner wall. The workman now leaves through the manhole 21b and the outer wall sections may now be assembled and secured in place. If desired, these outer wall operations may be performed by a workman outside while the workman within is performing his duties, or may even be performed before the workman enters the mould.

From the foregoing it will be seen that novel and advantageous construction has been provided for attaining the desired results, but it is to be understood that variations may be made without departing from the spirit and scope of the invention as claimed.

I claim:

1. In a mould of the class described, a pair of spaced parallel inner and outer walls each divided from top to bottom into sections engaging edge to edge along vertical seams, the sections of the two walls being equal in number, each wall having a lower cylindrical portion, an upper cylindrical portion of smaller diameter and a frusto-conical portion connecting the lower and upper portions, means external to the outer wall releasably connecting its sections along its seams, a manhole provided releasable closure forming means fitted in the top of the upper section of the inner wall, a central vertical post within the inner wall, bracing means extending from the post to the inner wall sections and releasably securing adjacent edge portions of said inner wall sections in assembled relation, a triad of core pins supported on each section of the inner wall in spaced relation to its edges, and means acting to protract and retract the pins of each triad simultaneously.

2. In a mould of the class described, a pair of spaced parallel inner and outer walls each divided from top to bottom into sections engaging edge to edge along vertical seams, the sections of the two walls being equal in number, each wall having a lower cylindrical portion, an upper cylindrical portion of smaller diameter and a frusto-conical portion connecting the lower and upper portions, means external to the outer wall releasably connecting its sections along its seams, a manhole provided releasable closure forming means fitted in the top of the upper section of the inner wall, a central vertical post within the inner wall, bracing means extending from the post to the inner wall sections and releasably securing adjacent edge portions of said inner wall sections in assembled relation, a triad of core pins supported on each section of the inner wall in spaced relation to its edges, and means acting to protract and retract the pins of each triad simultaneously, said closure forming means including a sleeve slidable on said post, a disk on the lower end of said sleeve, an upstanding peripheral flange on said disk and means securing

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said sleeve in adjusted relation on the post, said inner wall sections being provided with downwardly opening hooks engaging over the upper edge of said flange and positioning the closure centrally of the inner wall.

3. In a mould of the class described, a pair of spaced parallel inner and outer walls each divided from top to bottom into sections engaging edge to edge along vertical seams, the sections of the two walls being equal in number, each wall having a lower cylindrical portion, an upper cylindrical portion of smaller diameter, and a frusto-conical portion connecting the lower and upper portions, means external to the outer wall releasably connecting its sections along its seams, a manhole provided releasable closure forming means fitted in the top of the upper section of the inner wall, a central vertical post within the inner wall, bracing means extending from the post to the inner wall sections and releasably securing adjacent edge portions of said inner wall sections in assembled relation, said bracing means including pairs of eyes disposed on the meeting portions of the inner wall sections in laterally spaced relation, a disk mounted on said post and having openings spaced around its peripheral portion, bars each having a forked end provided with downwardly extending fingers engaging a respective pair of eyes, said bars each having a straight portion provided with a downwardly extending finger engaging a respective disk opening, a triad of core pins supported on each section of the inner wall in spaced relation to its edges, and means acting to protract and retract the pins of each triad simultaneously.

4. In a mould of the class described, a pair of spaced parallel inner and outer walls each divided from top to bottom into sections engaging edge to edge along vertical seams, the sections of the two walls being equal in number, each wall having a lower cylindrical portion, an upper cylindrical portion of smaller diameter, and a frusto-conical portion connecting the lower and upper portions, means external to the outer wall releasably connecting its sections along its seams, a manhole provided releasable closure forming means fitted in the top of the upper section of the inner wall, a central vertical post within the inner wall, bracing means extending from the post to the inner wall sections and releasably securing adjacent edge portions of said inner wall sections in assembled relation, said bracing means including pairs of eyes disposed on the meeting portions of the inner wall sections in laterally spaced relation, a disk mounted on said post and having openings spaced around its peripheral portion, bars each having a forked end provided with downwardly extending fingers engaging a respective pair of eyes, said bars each having a straight portion provided with a downwardly extending finger engaging a respective disk opening, a triad of core pins supported on each section of the inner wall in spaced relation to its edges, and means acting to protract and retract the pins of each triad simultaneously, said closure forming means including a sleeve slidable on said post, a disk on the lower end of said sleeve, an upstanding peripheral flange on said disk, and means securing said sleeve in adjusted relation on the post, said inner wall sections being provided with downwardly opening hooks engaging over the upper edge of said flange and positioning the closure centrally of the inner wall.

5. In a mould of the class described, a pair

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of spaced parallel inner and outer walls each divided from top to bottom into sections engaging edge to edge along vertical seams, the sections of the two walls being equal in number, each wall having a lower cylindrical portion, an upper cylindrical portion of smaller diameter and a frusto-conical portion connecting the lower and upper portions, means external to the outer wall releasably connecting its sections along its seams, a manhole provided releasable closure forming means fitted in the top of the upper section of the inner wall, a central vertical post within the inner wall, bracing means extending from the post to the inner wall sections and releasably securing adjacent edge portions of said inner wall sections in assembled relation, a triad of tubular guides extending inwardly and upwardly from the interior of each section of each inner wall section, a core pin slidably mounted in each guide for protraction and retraction into the space between the said inner and outer walls, and a vertical member for each of said triads and having the inner ends of said pins pivoted thereto.

6. In a mould of the class described, a pair of spaced parallel inner and outer walls each divided from top to bottom into sections engaging edge to edge along vertical seams, the sections of the two walls being equal in number, each wall having a lower cylindrical portion, an upper cylindrical portion of smaller diameter and a frusto-conical portion connecting the lower and upper portions, means external to the outer wall releasably connecting its sections along its seams, a manhole provided releasable closure forming means fitted in the top of the upper section of the inner wall, a central vertical post within the inner wall, bracing means extending from the post to the inner wall sections and releasably securing adjacent edge portions of said inner wall sections in assembled relation, a triad of tubular guides extending inwardly and upwardly from the interior of each section of each inner wall section, a core pin slidably mounted in each guide for protraction and retraction into the space between the said inner and outer walls, and a vertical member for each of said triads and having the inner ends of said pins pivoted thereto, said closure forming means including a sleeve slidable on said post, a disk on the lower end of said sleeve, an upstanding peripheral flange on said disk and means securing said sleeve in adjusted relation on the post, said inner wall sections being provided with downwardly opening hooks engaging over the upper edge of said flange and positioning the closure centrally of the inner wall.

7. In a mould of the class described, a pair of spaced parallel inner and outer walls each divided from top to bottom into sections engaging edge to edge along vertical seams, the sections of the two walls being equal in number, each wall having a lower cylindrical portion, an upper cylindrical portion of smaller diameter, and a frusto-conical portion connecting the lower and upper portions, means external to the outer wall releasably connecting its sections along its seams, a manhole provided releasable closure forming means fitted in the top of the upper section of the inner wall, a central vertical post within the inner wall, bracing means extending from the post to the inner wall sections and releasably securing adjacent edge portions of said inner wall sections in assembled relation, a triad of tubular guides extending in-

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wardly and upwardly from the interior of each section of each inner wall section, a core pin slidably mounted in each guide for protraction and retraction into the space between the said inner and outer walls, and a vertical member for each of said triads and having the inner ends of said pins pivoted thereto.

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