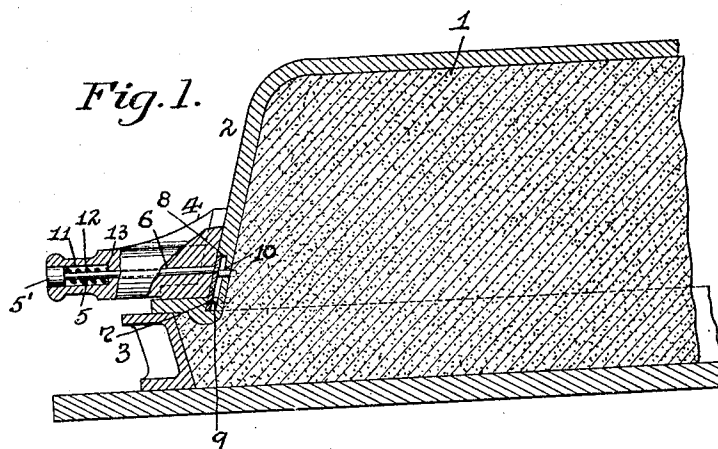
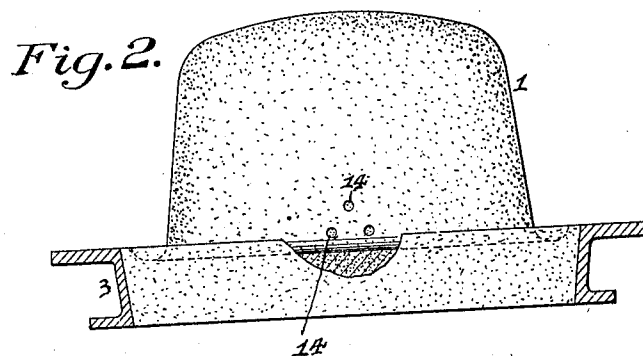
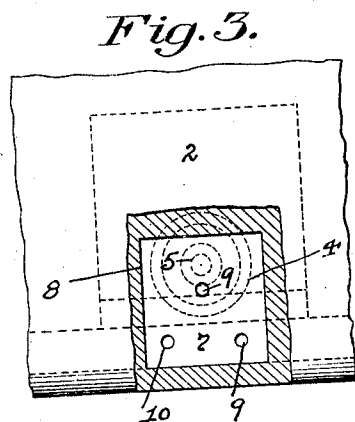
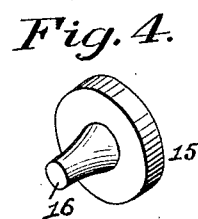


W. H. LOSE.
 APPARATUS FOR FORMING CORED OPENINGS.
 APPLICATION FILED AUG. 5, 1908.

Patented Apr. 13, 1909.

918,342.



WITNESSES

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APPARATUS FOR FORMING CORED OPENINGS.

No. 918,342.

Specification of Letters Patent.

Patented April 13, 1909.

Application filed August 5, 1908. Serial No. 447,054.

To all whom it may concern:

Be it known that I, WILLIAM H. LOSE, a resident of Zeliénople, in the county of Butler and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Forming Cored Openings; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to an apparatus for positioning cores in the walls of cast hollow-ware, and has special reference to the cores for forming the openings for the overflow and water-service in the rear of cast bath-tubs.

The object of my invention is to provide a cheap, simple and efficient apparatus for this purpose and one which will enable the cores to be positioned so as to form these openings accurately and easily, as well as one in which their positions can be indicated and made quickly and conveniently.

My invention consists, generally stated, in the novel arrangement, construction and combination of parts, as hereinafter more specifically set forth and described and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved apparatus for positioning cores, I will describe the same more fully, referring to the accompanying drawing, in which—

Figure 1 is a sectional view showing an end portion of a mold having my invention applied thereto. Fig. 2 is an end view of the mold so formed and showing one of the flask portions in section. Fig. 3 is a detail view of a portion of the pattern employed and showing a portion of the same broken away. Fig. 4 is a perspective view of one of the cores employed.

Like symbols of reference herein indicate like parts in each of the figures of the drawing.

As illustrated in the drawing, the mold 1 is formed by the hollow pattern 2 and the flask 3 in the ordinary manner, and within the pattern 2 and one of the trunnions 4 of the same is the core marking or positioning device. This device consists of a movable rod 5 loosely mounted within a hole 6 in trunnion 4 and provided with a plate 7 at the inner end of the same which is adapted to move within a seat 8 for the same in the end wall of the pattern 2, and studs or pins 9 are secured on

the inner face of said plate for being projected into the mold 1 through holes 10 for the same in said pattern wall. The outer end of the rod 5 is provided with a head 5' thereon which travels within a seat 11 in the outer end of the trunnion 4 and forms an extension of the hole 6, while a spiral spring 12 is placed around said rod and between said head and the shoulder 13 formed by said seat and at the inner end of the same.

After the formation of the mold 1 within the pattern 2 and flask 3, the operator by pressing on the head 5' will move the rod 5 and plate 7 toward said mold so that the pins 9 on said plate will be projected through the end wall of the pattern 2 and enter said mold to form the holes or indentations 14 in the end wall of said mold, as shown in Fig. 2. Upon the pressure being released upon the head 5' the rod 5 and said head together with the plate 7 carrying the pins 9 will be thrown back by the spring 12, so that the plate will be seated in its seat 11 in the pattern 2, and the pins 9 confined within their respective holes 10 in the wall of said pattern. After the holes 14 have been thus formed in the end wall of the mold 1, as shown in Fig. 2, the pattern 2 is removed from around the same, as shown in said figure, and then the cores 15, which have pins 16 thereon, and formed of chilled metal and of the required diameter and thickness, are placed upon the mold 1 by inserting and forcing the pins 16 of the same within said holes, so that the inner faces of said cores will come in contact with the face of said mold and will then be in position upon the mold wall for the usual casting operation to be followed thereafter. It will thus be seen that by such apparatus the coring of the openings in the tub is accomplished in much less time and at less expense than by the devices heretofore used and enables the production of much more perfect openings, while any one not skilled in the art may as easily and quickly operate the device. The device being carried on the pattern will not be liable to become lost or mislaid, will not be liable to get out of order and is always ready for instant operation.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a molding apparatus for forming cored openings in cast hollow-ware, the combination of a pattern for forming the mold,

and means carried by and exteriorly of said pattern for marking the positions on the face of said mold for the cores.

2. In a molding apparatus for forming
5 cored openings in cast hollow-ware, the combination of a pattern for forming the mold, and movable means carried by and exteriorly of said pattern for marking the positions on the face of said mold for the cores.

10 3. In a molding apparatus for forming cored openings in cast hollow-ware, the combination of a pattern for forming the mold, and a spring operated means carried by and exteriorly of said pattern for marking the
15 positions on the face of said mold for the cores.

4. In a molding apparatus for forming cored openings in cast hollow-ware, the combination of a pattern for forming the mold,
20 a spring operated rod carried by and exteriorly of said pattern, and means on said rod for marking the positions on the face of said mold for the cores.

5. In a molding apparatus for forming
25 cored openings in cast hollow-ware, the combination of a pattern for forming the mold, a spring operated rod carried by and exteriorly of said pattern, and pins carried by said rod for engaging with the face of said mold
30 to mark the positions thereon for the cores.

6. In a molding apparatus for forming cored openings in cast hollow-ware, the combination of a pattern for forming the mold, a spring operated rod carried by and exteriorly of said pattern, a plate on said rod,
35 and pins on said plate for engaging with the face of said mold to mark the positions thereon for the cores.

7. In a molding apparatus for forming
40 cored openings in cast hollow-ware, the combination of a pattern for forming the mold, a spring operated rod carried by and exteriorly of said pattern, a plate on said rod and moving in a seat in said pattern, and
45 pins on said plate and adapted to pass through holes in said pattern for engaging with the face of said mold to mark the positions thereon for the cores.

8. In a molding apparatus for forming
50 cored openings in cast hollow-ware, the combination of a pattern for forming the mold and provided with trunnions thereon, and means carried by one of said trunnions for marking the positions on the face of said mold for the
55 cores.

9. In a molding apparatus for forming

cored openings in cast hollow-ware, the combination of a pattern for forming the mold and provided with trunnions thereon, and movable means carried by one of said trunnions for marking the positions on the face
60 of said mold for the cores.

10. In a molding apparatus for forming cored openings in cast hollow-ware, the combination of a pattern for forming the mold
65 and provided with trunnions thereon, and spring operated means carried by one of said trunnions for marking the positions on the face of said mold for the cores.

11. In a molding apparatus for forming
70 cored openings in cast hollow-ware, the combination of a pattern for forming the mold and provided with trunnions thereon, a spring operated rod carried by one of said trunnions, and means on said rod for marking
75 the positions on the face of said mold for the cores.

12. In a molding apparatus for forming cored openings in cast hollow-ware, the combination of a pattern for forming the mold
80 and provided with trunnions thereon, a spring operated rod carried by one of said trunnions, and pins carried by said rod for marking the positions on the face of said mold for the cores.
85

13. In a molding apparatus for forming cored openings in cast hollow-ware, the combination of a pattern for forming the mold and provided with trunnions thereon, a spring operated rod carried by one of said
90 trunnions, a plate on said rod, and pins on said plate for engaging with the face of the mold to mark the positions thereon for the cores.

14. In a molding apparatus for forming
95 cored openings in cast hollow-ware, the combination of a pattern for forming the mold and provided with trunnions thereon, a spring operated rod carried by one of said trunnions, a plate on said rod and moving in
100 a seat in said pattern, and pins on said plate and adapted to pass through holes in said pattern for engaging with the face of said mold to mark the positions thereon for the
105 cores.

In testimony whereof, I, the said WILLIAM H. LOSE, have hereunto set my hand.

WILLIAM H. LOSE.

Witnesses:

CHAS. S. PASSAVANT, Jr.

W. H. SHAFFER.