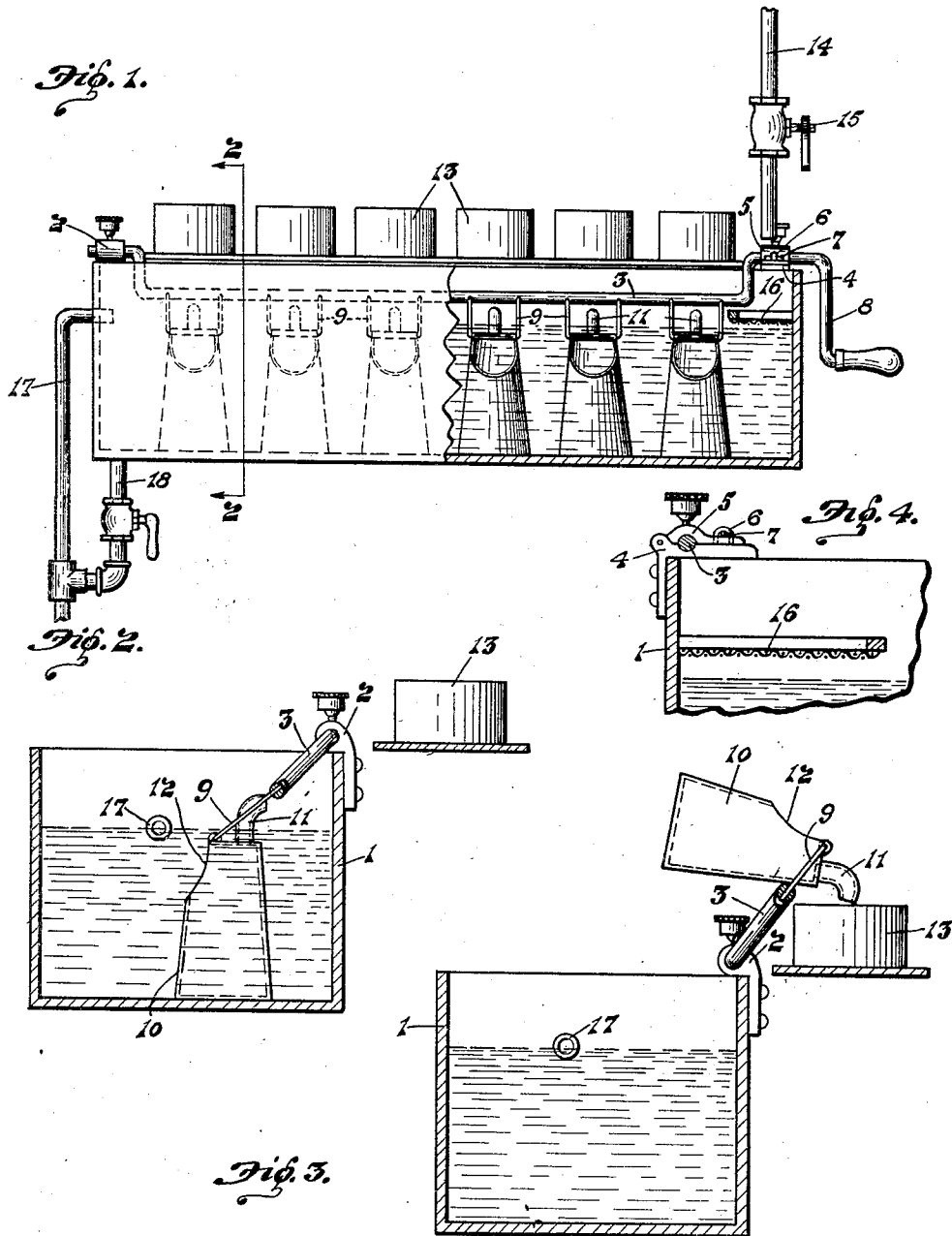


F. A. SEBRING AND F. STROBL.
FILLING DEVICE.
APPLICATION FILED NOV. 5, 1917.

1,350,673.

Patented Aug. 24, 1920.



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FRANK A. SEBRING AND FRANK STROBL, OF SEBRING, OHIO.

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To all whom it may concern:

Be it known that we, FRANK A. SEBRING and FRANK STROBL, both citizens of the United States, residing at Sebring, in the county of Mahoning and State of Ohio, have invented new and useful Filling Devices, of which the following is a specification.

This invention relates to filling devices and more particularly to devices of this character used in connection with the filling of molds for manufacturing pottery, by what is known as the "slip" process, and has for its object to provide a means for simultaneously filling the plurality of molds.

Another object is to provide a device of this kind that will pour into each of the molds filled at the one operation, exactly the same amount of material.

A still further object is to provide a device of this kind that can be readily disassembled for the purpose of cleaning the several parts.

With these objects in view the invention consists in the novel construction and arrangement of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that various changes in the form, proportions, size and minor details of construction may be made within the scope of the appended claim, without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:

Figure 1 is a front elevation of our filling device with a part of the trough, for holding the liquid, broken away.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a section similar to Fig. 2 with the filling can shown in emptying position.

Fig. 4 is a fragmentary view showing the construction of the hinged bearing.

Similar numerals of reference indicate corresponding parts throughout the several figures of the drawing.

To those skilled in the art of manufacture of pottery, a process known as the "slip" method is used. This process consists of pouring a semi-liquid composition composed of porcelain clay, silicate of soda and various other ingredients, into molds and allowing the mixture to remain in the mold until a sufficient amount of the suspended material

in the mixture has been deposited upon the interior of the mold to form a piece of ware of the desired thickness. Because of the peculiar nature of the mixture or "slip" which is used, it is a difficult matter to fill a number of molds simultaneously by methods now known and used in the art of pottery manufacture. It is common practice in potteries to have a tank with a number of spigots or spouts corresponding with the number of molds to be filled at one filling and means for turning all of the spigots or spouts on simultaneously, but since the "slip" is of a rather heavy consistency, all of the spigots will not allow a flow of the "slip" of the same volume, the result being that some of the molds will be filled more quickly than others, in which case all of the spigots must be turned off and the unfilled molds then filled by hand from another receptacle. This, of course, entails a loss of time and additional labor and also results in unevenness in the forming of the ware, since the time elapsing between the filling of the most rapidly filled mold and the filling of the last one which was filled by hand will cause the thickness of the deposit in the mold to vary.

Our device consists of a trough 1 at one end of which is secured a bearing 2. One end of a crank shaft 3 is inserted in the bearing 2. A bearing block 4 is mounted upon the opposite end of the trough in alignment with the bearing 2 and a hinged portion 5 as shown in Fig. 4 is adapted to fit over the crank shaft 3 and form the second bearing for the said shaft. A staple 6 formed upon the bearing block 4 and extending upwardly and through a slot in the portion 5 is adapted to have a pin 7 inserted therethrough to lock the bearing when the crank shaft is in place. A crank 8 with a handle thereon is formed integral with the crank shaft and is arranged to be rotated by the operator of the filling device. Suitable grease cups are arranged on each of the bearings to lubricate the crank shaft. Upon the off-set portion of the crank shaft which extends within the trough 1, is a series of supporting brackets 9 and hingedly supported upon each of said brackets is a filling can 10 having a spout 11 which is arranged to empty the filling can when it is tilted into the proper position. The upper portion of each filling can is cut away as shown at 12 to allow the can to be quickly

filled with the "slip" when the said can is submerged in the trough. The molds 13 are brought to a predetermined point in front of the trough in any well known manner. In the drawings we have shown six molds and six filling cans, but it will be understood, of course, that any number of molds and corresponding number of cans can be used.

- 10 A supply pipe 14 coming from a reservoir containing the "slip" is arranged above the trough and a cut-off valve 15 is located within convenient reach of the operator. A screen 16 is placed beneath the outlet to the pipe 14 to prevent any foreign matter or undissolved lumps in the "slip" from getting into the trough. At the opposite end of the trough is an over-flow pipe 17 to regulate the level of the "slip" within the trough and a drain pipe 18 with a cut-off valve therein is located in the bottom of the tank to draw off any remaining slip when the day's work is finished. The pipe 17 leads to a mixing tank which is generally located beneath the level of the floor of the molding room.

- 25 In the operation of our device the crank shaft is positioned to seat each of the filling cans upon the bottom of the trough as shown in Figs. 1 and 2. The shelf carrying the molds is then moved to bring the molds into position to be filled. The cut-off valve 15 is then opened allowing the trough to be filled with slip to the level of the over-flow pipe 17 and the filling cans being submerged in the trough are each filled with the "slip". The crank 8 is then rotated, lifting the cans out of the trough and carrying them upwardly, each can describing an arc until it reaches the point where it contacts with the crank 3 when it will begin to tilt, the continued rotation of the crank 8 bringing the cans into the position shown in Fig. 3 when the slip will be poured from each can into its respective mold. Should one can empty more rapidly than others no harm will result since each can carries the exact amount of slip to fill a mold and it is only necessary to leave the cans in the position shown in Fig. 3 until all of them have been emptied when the crank 8 is then reversed, submerging the cans in the trough for the filling of the next shelf of molds, the first shelf being then moved out of the way and the operation being repeated for the next shelf, etc. When the workman is through for the day the cut-off valve in the drain pipe 18 is opened and any slip remaining in the trough

is drained therefrom. Since a coating of the slip remains on the cans, crank shaft, etc., and would harden thereon during the night it is necessary to wash the cans and crank shaft thoroughly in clean water, while the coating of the "slip" is still in liquid form and for this reason we make one of the bearings with the hinged portion 5 as described above. The workman having finished for the day and drained the trough removes the pin 7 from the staple 6, allowing the portion 5 to be swung upwardly releasing the crank shaft which can then be lifted from the bearing block 4 and the other end withdrawn from the bearing 2, the whole crank shaft and the attached filling cups can then be immersed in a tub of water and rinsed.

Although the drawings and above specification disclose the best mode in which we have contemplated embodying our invention we desire to be not limited to the details of such disclosure, for in the further practical application of our invention, many changes in form and construction may be made, as circumstances require or experience suggests, without departing from the spirit of the invention, within the scope of the appended claim.

Having fully described our invention what we claim as new and desire to secure by Letters Patent, is:

In a filling device of the character described, the combination of a trough adapted to hold a quantity of liquid, a crank shaft removably journaled upon said trough and arranged to normally extend within the trough, a plurality of U-shaped brackets carried by the crank shaft, a filling receptacle pivotally mounted upon each of said brackets and provided with forwardly disposed spouts at their upper ends, the rear portion of each receptacle being cut away at its upper end to permit their being filled with the liquid in the tank while submerged therein, the crank shaft adapted to be rotated to lift the receptacles filled with liquid from the trough and to carry them to a point above the trough and tilt them into position to empty the liquid therefrom through said spouts, the forward faces of said receptacles resting upon the crank shaft when in the emptying position.

In testimony that we claim the above, we have hereunto subscribed our names.

FRANK A. SEBRING.
FRANK STROBL.