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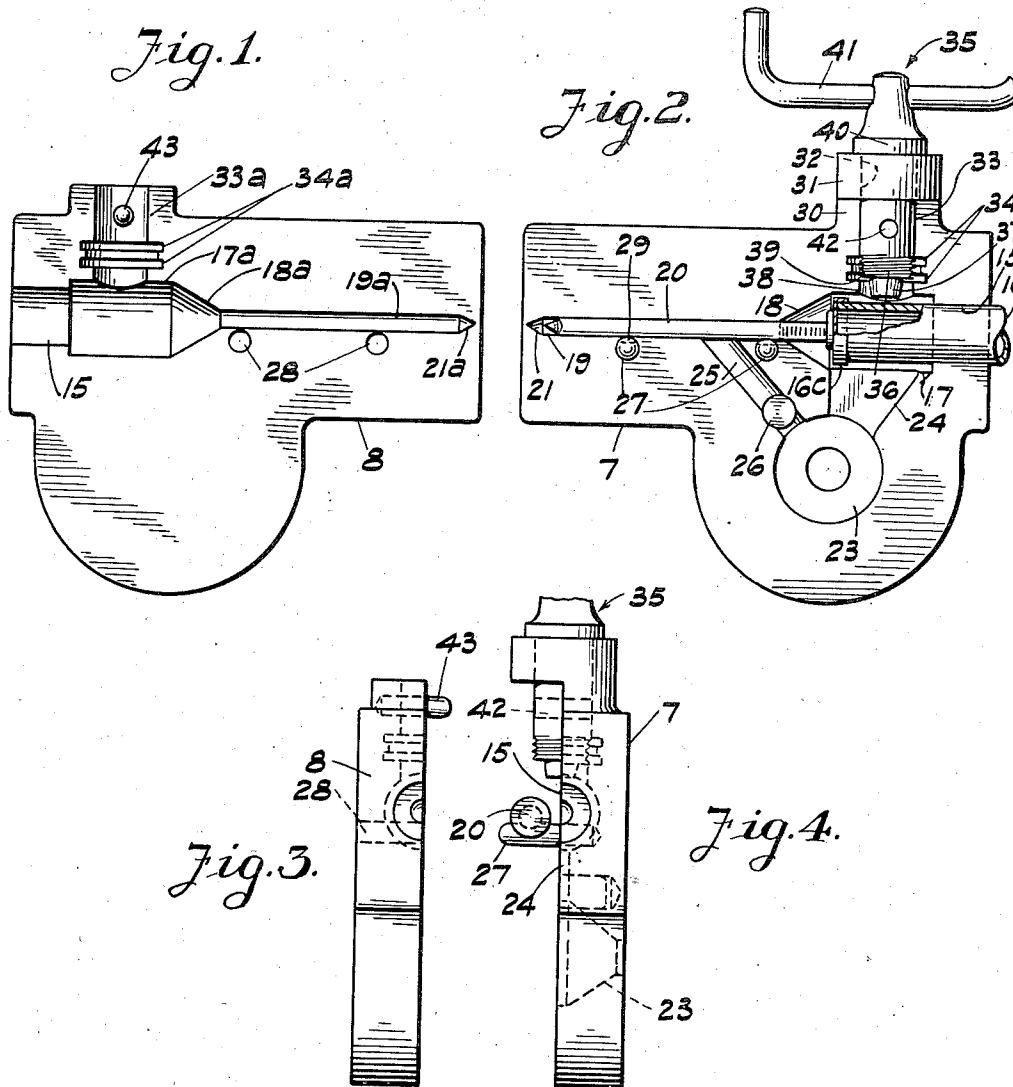
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GARDEN SHOWER AND METHOD OF MAKING

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2 Sheets-Sheet 1



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Fig. 5.

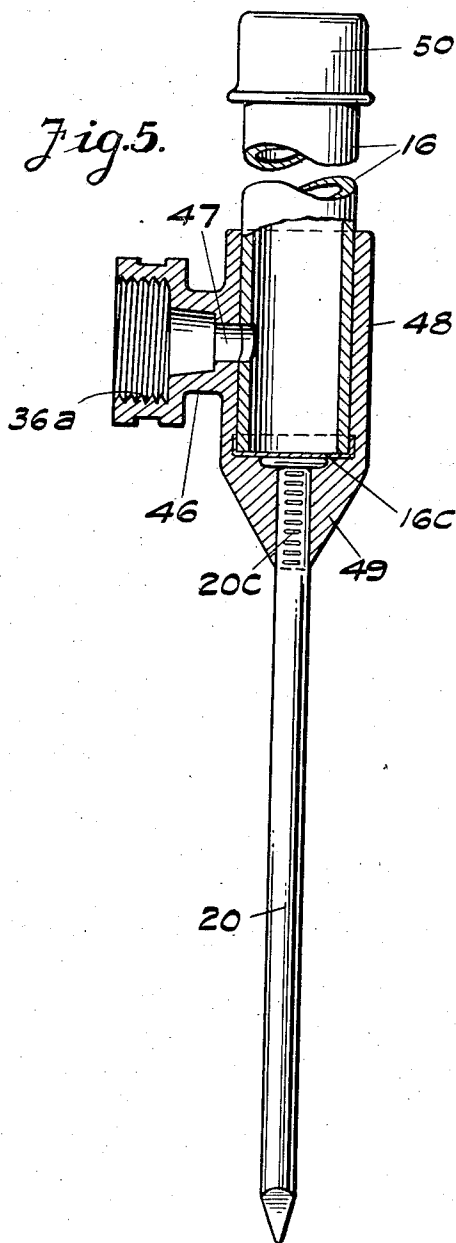
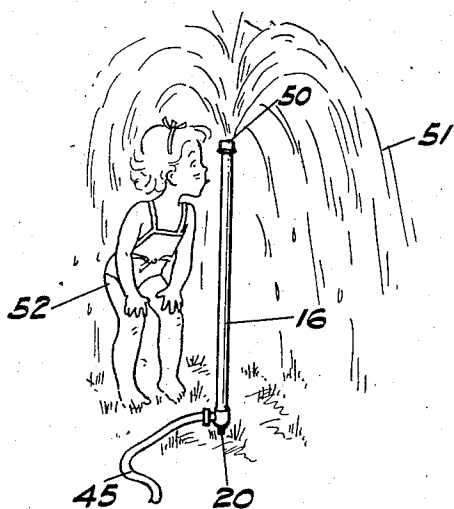


Fig. 6.



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GARDEN SHOWER AND METHOD OF MAKING

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5 Claims. (Cl. 285—209)

My invention relates to improvements in garden showers and particularly to a method of making the same.

It is one of the important objects of the invention, in addition to providing a new article of manufacture, to introduce a new method of assembling and mechanically uniting by die casting the parts comprising the shower.

It is one of the important objects of the invention to provide a children's shower which may be placed in the garden and under which children may play and to furnish a healthful as well as a recreational device for amusement during the hot summer days.

It is also one of the objects of the invention to provide a garden shower wherein the water intake is spaced sufficiently far from the end opposite the shower to form a sump to collect gravel and sand thereby keeping the nozzle from clogging and decreasing the amount of spray.

Furthermore it is one of the objects of the invention to provide a garden shower which is simple and cheap to manufacture yet sturdy and strong for the purpose for which it is intended.

Still other objects of an important character will be obvious to those skilled in the art when the disclosure is read.

The invention consists in certain novel combinations and arrangements of mechanical elements whereby the parts are more rigidly joined together and are rendered less likely to break under strain.

In the accompanying drawings I have illustrated the device per se and also the means by which the parts are metallicly joined together and thus produced in the form now being sold. It should be understood however that the present disclosure is for the purpose of illustration only and that the invention includes all modifications and equivalents falling within the scope of the subject matter claimed.

In the drawings—

Fig. 1 is a side elevation looking toward the inside of the left hand half of a die in which my improved shower is assembled.

Fig. 2 is a side elevation looking toward the inside of the right hand half of a die in which my improved shower is assembled.

Fig. 3 is a vertical left hand end view of the part shown in Fig. 1.

Fig. 4 is a vertical right hand end view of the part shown in Fig. 2, parts being omitted or broken away.

Fig. 5 is a broken vertical longitudinally extending view of the completed article partly shown in section to disclose interior construction.

Fig. 6 is a view showing a practical adaptation of the invention.

Referring in detail to the drawings, the in-

vention, in its method aspect, pertains to a main die casting member 7 with which cooperates an auxiliary die casting member 8.

The main die casting member 7, as viewed in Figs. 2 and 4, has formed upon or within its inside face, a semi-circular recess 15 of the right diameter to receive with a close fit a pipe section 16 furnished with a cap 16c. Said recess is diametrically enlarged at 17, and at the left end of said enlargement, as viewed in Fig. 2, is furnished with a half-conical axial extension 18 which in turn is continued axially as a half bore 19 of the proper size to have fitted thereinto the spike 20, said half bore preferably terminating in a half conical recess 21. These recess halves 17, 18, 19, and 21 respectively have their counterparts 17a, 18a, 19a, and 21a in the auxiliary die member 8. Hence when these two die members operatively engage each other an elongated circular recess is produced, the diameter of which varies at different parts of its length, as has been stated, into which molten metal, under say 300 lbs. per square inch pressure, will be forced.

In the main die member 7 there is provided an inwardly flaring or frusto conical inlet passage or recess 23 to receive the molten die casting metal. Said recess 23 communicates at its inner end with a broad relatively thin or shallow-metal conducting passage 24 which is widest where it communicates with the annular chamber, indicated at 17 in Fig. 2, which surrounds the inserted pipe section 16. Said recess 23 and passage 24 are shown as being formed in the main casting member only.

In addition to the metal conducting passages which have been described, a supplemental passage 25, desirably formed in the main die member only, is provided, this passage leading diagonally from the inlet recess 23 to the passage 19 and communicating with the latter passage at a point in spaced relation to its ends. When the spike 20 is made use of, as indicated in Figs. 2 and 4, a closure plug 26 is provided of slightly greater diameter than the passage 25 and is inserted to obstruct said passage near the inlet end thereof. When this plug is removed and the spike is not used, the molten metal will pass freely into the passage which would otherwise be occupied by said spike and, in place of the spike, a pointed elongated extension of the casting will be formed.

A pair of dowel pins 27 are provided which project from the inner face of the main die member, said pins cooperating with holes 28 in the auxiliary die member. Each of said dowel pins has a seat 29 formed on its upper side, these seats being positioned to receive and support the spike 20 adjacent to and parallel with the groove 19 formed in the main die. As the two halves of the die approach their contacting position the auxiliary die

member will move the spike laterally into its seated position and in said groove 19.

In order to provide in the cast article an inlet extension for connection with a base coupling or other source of water supply, the main die member 7 is furnished with a projection 30 terminating in a circular head 31 having therethru a bore 32. Semi-circular recesses 33 and 33a formed respectively in the die members 7 and 8 cooperate, in operation, to form a circular chamber, the inner portion of which is expanded at 34, 34a to add an ornamental feature to the completed casting. Within the chamber formed as just stated, there is inserted, before the metal is poured, a rotatable thread forming member 35, having an externally screw threaded inner end portion 36 around which an annular space is provided between the juxtaposed die parts. Said member 35 is shown having, beyond its screw threads, a frusto conical end portion 37. In Fig. 2 there is indicated at 38 an annular passage and at 39 an annular clearance whereby the molten metal is admitted to surround the screw threaded portion 36 of the member whereby the screw threads 36a (see Fig. 5) are formed in the completed article. The thread forming member 35 has at its outer end a head 40 the inner side of which cooperates with the casting head to form stop means to limit properly the extent to which said member can be inserted. Said head 40 may be furnished with a cross bar 41 to facilitate the manual rotation thereof. A diametrical hole 42 thru the member 35 is positioned to cooperate with a dowel pin 43 of the auxiliary die member to insure exact positioning of the member 35.

In Fig. 5 the completed article is shown separately, and Fig. 6 illustrates the use thereof of the spike 20, which serves as an impaling member that is embedded in the ground, a hose 45 being coupled on to the extension 46 having a progressively stepped liquid supply opening. When the article is removed from the casting die it is complete except that it is necessary to break off the excrescences produced during casting and to drill a hole 47 axially from the extension 46 laterally thru the cast wall 48 and into the interior of the capped end portion of the pipe 16 in order to supply an inlet passage. It will be seen that a secure metal bond is formed around the headed portion of the spike by means of the conical metallic body 49.

The conventional ribbed areas 20c adjacent to the head of the spike afford an excellent foot hold for the cast metal and add to the security with which the spike is bonded to the cap 16c of the pipe. The head of the spike broadens its contacting surface and thus aids in stabilizing the spike in its relation to the pipe. As the metal body 49 hardens it draws the head of the spike into a very firm contact with the cap 16c.

The article is completed by attaching to the upper end of the pipe 16, a conventional spraying head 50 whereby a copious spray 51 may be showered upon a juvenile or other bather 52.

The assembling, die casting and completing operations are as follows:

The cooperating die casting members 7 and 8 having been mounted upon a die casting machine (not shown), the thread forming member 35 is fully inserted until its head 40 rests upon the die head 31, gravity being temporarily relied upon to keep said member in this position, care being taken to position the hole 42 thru member 35 in alignment with the dowel pin 43 of the aux-

iliary die member in order that said pin may function to prevent the entrance of the molten metal from ejecting said member 35.

The spike 20 may next be placed upon the seats 29 of the dowel pins 27 with its head directed towards the right as viewed in Fig. 2. Thereupon the capped end portion of pipe 16 is manually held in the approximate position illustrated in Fig. 2 while the die casting machine is operated, thus advancing the auxiliary die 8 towards main die 7 until a complete contact between these die forming members is secured.

During the final portion of the movement of the die casting members towards each other the spike is carried to its seat in the die, and at the same time the pipe 16 is manually shifted farther inward until its capped end abuts firmly against the head of the spike.

When the two halves of the die have been brought into the fully contacting relation, the molten metal is admitted to the die under pressure thru the mouth of the inlet passage 23. Immediately after the introduction of the molten member the screw thread forming member 35 is rotated in a direction to unscrew the same, thus leaving a set of female screw threads in the metal surrounding its screw threaded portion, for connection with a conventional hose coupling. After the casting has been completed the superfluous extraneous metal opposite to the intake and elsewhere, is removed in any desired way and the exterior of the casting is smoothed off as may be necessary.

Finally, the hole 47 will be drilled through the hose coupling extension and adjacent layer of cast metal into the pipe 16 near its cap 16c.

Whenever it may be desired to dispense with the spike 20 and to substitute for it an impaling extension made of cast metal, the obstructing plug 26 will be withdrawn from the mouth portion of the passage 25, thus freely admitting the molten metal to the part of the die chamber previously occupied by the spike.

What is claimed is:

1. As an article of manufacture of the class described, a pipe having a cap closing an end thereof, a conventional spike positioned axially of said pipe with its head abutting externally against said cap, and a body of cast metal enveloping said cap together with the head of said spike and the adjacent end portion of said pipe, there being liquid supply and liquid delivery openings communicating with said pipe.

2. The subject matter of claim 1 and, said body of cast metal having an extension constituting a hose connection, one of said openings leading thru said extension.

3. A pipe having a closed end, an impaling member positioned axially of said pipe with one of its ends abutting externally the closed end thereof, and a body of cast metal enveloping the closed end portion of said pipe together with the adjacent end portion of said impaling member, there being a liquid supply opening and a liquid delivery opening communicating with said pipe.

4. As an article of manufacture of the class described, a pipe having a cap closing an end thereof, a spike nail having ribbed areas adjacent its head positioned axially of said pipe with the flat portion of said head abutting externally against said cap, and a body of cast metal enveloping said cap together with said head, its adjacent ribbed areas, and the adjacent end portion of said pipe, there being liquid supply and

liquid delivery openings communicating with said pipe.

5 5. As an article of manufacture of the class described, a length of pipe having a cap closing one end and a spray head attached to the other end, a conventional spike nail provided with ribbed areas on the body portion thereof adjacent its head positioned axially of said pipe with said head abutting externally against said cap; and a
10 body of cast metal enveloping said cap, together with said head, the adjacent body portion pro-

vided with said ribbed areas, and the adjacent end portion of said pipe; said ribbed areas providing a clinch whereby the cast metal is keyed to the body portion of said nail, there being a progressively stepped liquid supply opening extending through said body of cast metal and the wall of said pipe which is included therein, said opening being situated at a point which is in a spaced relation to the closed end of said pipe. 5

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