

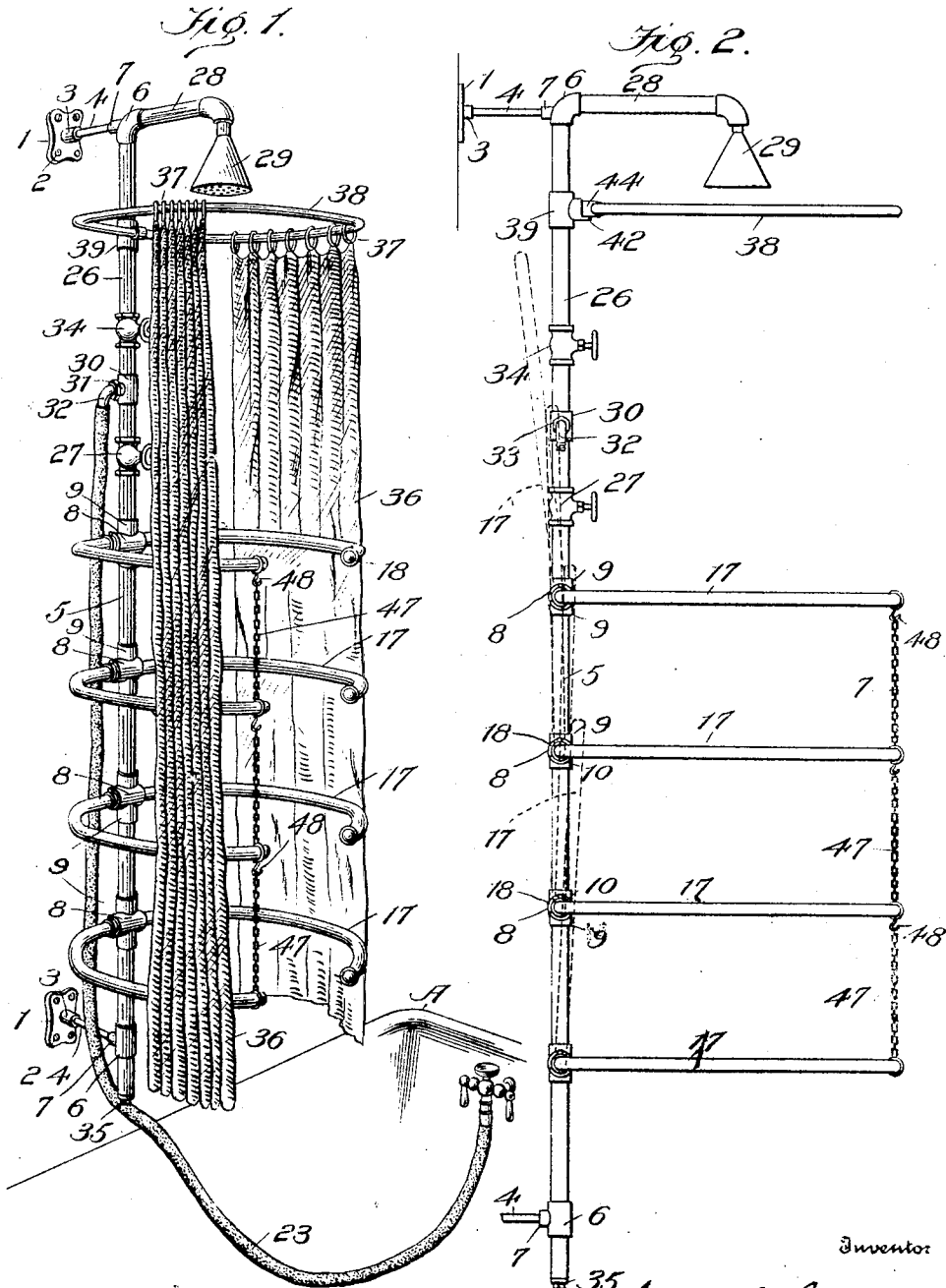
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PATENTED NOV. 7, 1905.

S. J. JACKSON.
NEEDLE BATH APPARATUS.

APPLICATION FILED OCT. 26, 1904.

2 SHEETS—SHEET 1.

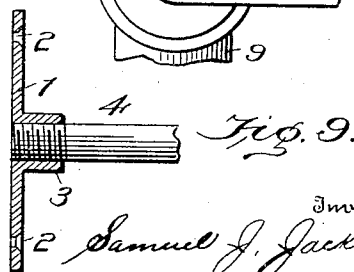
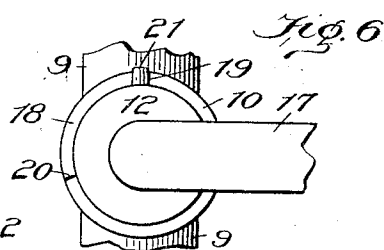
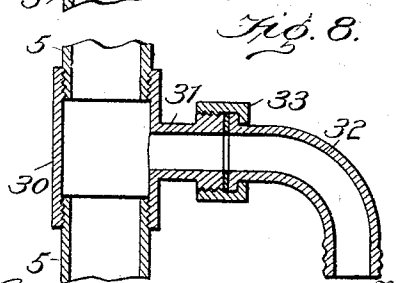
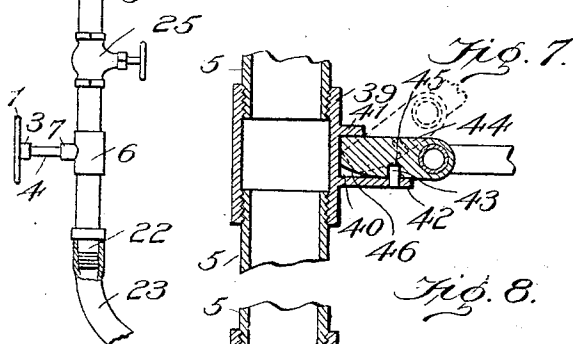
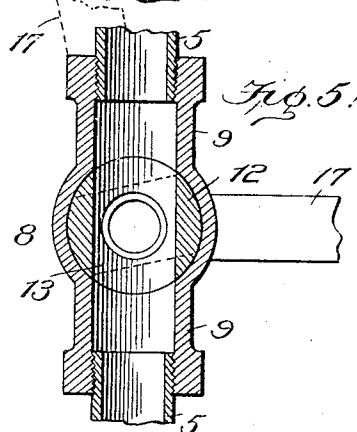
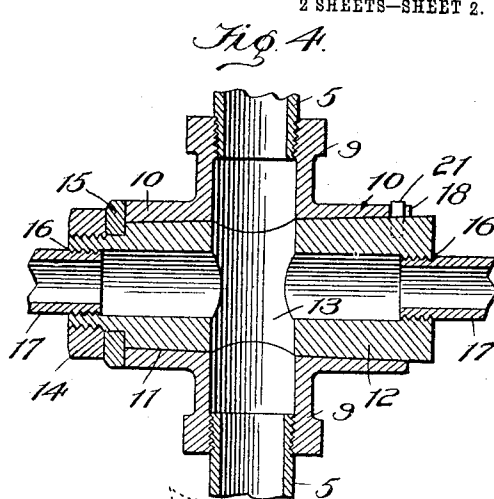
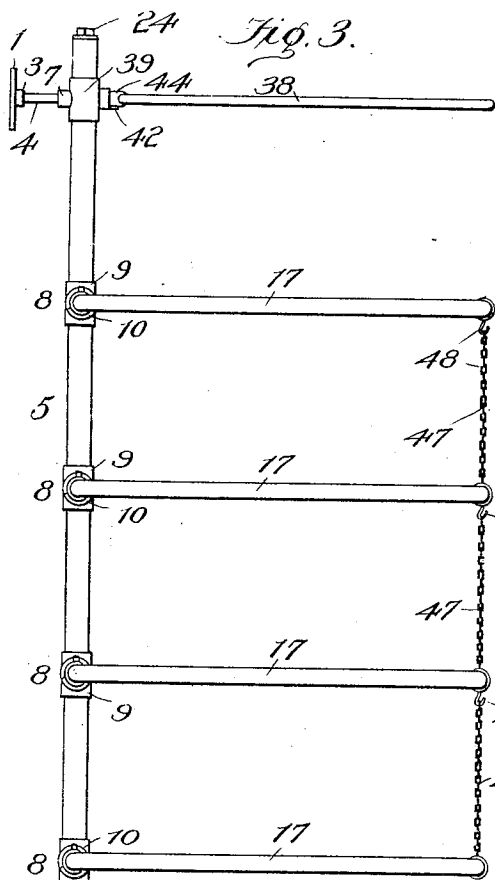


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NEEDLE-BATH APPARATUS.

No. 803,598.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed October 26, 1904. Serial No. 230,111.

To all whom it may concern:

Be it known that I, SAMUEL J. JACKSON, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented new and useful Improvements in Needle-Bath Apparatus, of which the following is a specification.

My invention has relation to new and useful improvements in needle-bath apparatus of that general character or type in which is employed a plurality of spraying conduits or sections arranged to envelop and surround the body of the bather.

The primary object of the invention is to produce an apparatus of the character mentioned which is extremely simple in construction, inexpensive of manufacture, and effective in use, and which may be made from elements and devices now existing and well known in the plumbing and fitting trade.

A further and important object of the invention is to provide an apparatus which forms no part of the permanent plumbing of a house, but which is capable of use in connection with all forms of pipe systems without altering the structure or arrangement of the latter, and which is readily and conveniently portable in its entirety.

A further object is to provide, in connection with the needle-spraying apparatus, a shower-bath attachment which is capable of conjoint use with said apparatus, the arrangement also being such as to permit either the apparatus or the attachment to be used independently of each other.

A further object is to provide an apparatus of the character set forth in which the spraying-conduits are arranged at different heights in spaced relation to each other and are so mounted as to be vertically movable on a horizontal journal, so as to permit them to be moved into horizontal position for use or to be swung backwardly to assume a position out of the way when not in use.

A further object is to so construct the movable conduits as to render them independently movable with relation to each other and in connection therewith provide means whereby the movements of the conduits into operative or inoperative positions serves to establish or cut off the flow of water through that conduit.

Other objects and the manner of accomplishing the same will become apparent in the following specification describing the invention.

Broadly and generally, the invention embodies in its preferred form a plurality of

spraying-sections arranged one above the other in vertical spaced relation and movably mounted on horizontal journals to permit them to be swung into horizontal position to spray the water or to be swung vertically backward out of operative position and valves associated with each of the conduits constructed to be affected by the swinging movement of the latter to control the flow of water.

The invention also consists in providing a supply-pipe common to all of the spraying-sections and providing means for attaching a shower thereto adapted for use in conjunction with or independently of the needle-spray, controlling devices necessary to control the flow of water through the combined apparatus or the parts thereof mentioned being provided.

In the drawings to be taken as a part of this specification I have fully and clearly illustrated an apparatus embodying my invention and which efficiently accomplishes the objects mentioned.

In said drawings, Figure 1 is a perspective view of the complete apparatus embodying the needle-spray and the shower, shown as being arranged in proximity to a bath-tub and connected to the spigots thereof, the spraying-arms being in position for bathing purposes. Fig. 2 is a view in side elevation, showing in full lines the arms in position for use and in dotted lines as swung back out of operative position. Fig. 3 is a view in side elevation, of the spraying apparatus alone, the shower being detached therefrom. Fig. 4 is a vertical longitudinal section through the coupling uniting the spraying-arms and the supply-pipe and also illustrating the controlling-valve operated by the swinging movement of the arms to control the flow of water therethrough. Fig. 5 is a vertical longitudinal section taken on a line at right angles to that of the section in Fig. 4 and the position of the valve when operated by the arm to cut off the supply of water. Fig. 6 is a view in side elevation of the coupling uniting the spraying-arm and the supply-pipe, and showing the devices for limiting the swinging movement of the arm and supporting it in the positions to which it is moved. Fig. 7 is a vertical section through the coupling device for uniting the curtain-supporting ring to the supply-pipe. Fig. 8 is a vertical section through the coupling and nipple by means of which the flexible pipe is secured to the supply; and Fig. 9 is a view in side eleva-

tion, partly in section, of the supporting-bracket for the apparatus.

Referring to the drawings, 1 1 designates the upper and lower supporting-plates, adapted to be secured to a wall or other vertical surface, preferably closely adjacent a bath-tub A, in connection with which the apparatus is intended to be used, said plates being formed with suitable apertures 2 for the reception of fastening devices of any form. These plates 1 1 are arranged in vertical alinement, spaced apart the required distance, and each plate is formed on its front face with an interiorly-threaded socket 3, into which is screwed one end of a bracket-arm 4, the outer ends of said bracket-arms serving to support the upper and lower ends of a vertically-disposed supply-pipe 5, the connection between said arms and pipe being of any desirable form. I have shown these connections as consisting of collars or pipe-coupling 6, surrounding the pipe 5 and each formed with a socket-piece 7, which receives the outer end of the bracket-arm and is rigidly secured thereto. The pipe 5 just referred to is of such length as to have its lower end terminate closely adjacent the rim of the tub and its upper end extending to the proper height called for by the uses to which the apparatus is put.

The supply-pipe 5 comprises a plurality of sections 7, which are coupled together in longitudinal alinement by means of a plurality of cross-couplings 8, corresponding in number to the number of swinging spray-sections to be employed, the meeting ends of two adjacent sections being threaded into opposite nipples 9 of said coupling in a well-known manner.

The transverse or horizontal nipples 10 of the cross-coupling are formed with a conical passage 11, in which is mounted a hollow turning-plug 12, formed with a transverse way 13, which when the plug is in one position alines with the passage through the vertical branches or nipples 9 to establish communication between the pipe-sections and the interior of the valve-plug. This plug is ground to coincide with the taper of the conical passage 11 and has on its reduced end an interiorly-threaded extension 13, adapted to receive a securing-nut 14, between which and the end of the nipple branch 12 is interposed a packing-washer 15, the nut serving when screwed up against the washer to form a tight joint and draw the conical plug-valve into proper position within the casing.

Each end of the turn-plug 12 is interiorly screw-threaded, as at 16, and seated in each end of said plug is one end of a curved pipe member 17, there being two oppositely-curved members to each coupling 8, said members lying in the same plane and terminating at their free ends a distance from each other sufficient to permit the bather to step into and out of the space bounded by said members.

The free ends of these pipe members are plugged or closed in any suitable manner, as at 18.

The curved pipe members 17 being rigidly connected to the turning-plugs 12, it will be seen that said plugs constitute horizontally-arranged journals which will permit the members 17 to be swung vertically, and these members are so arranged with relation to the way 13 in the turning-plug 12 that when brought into horizontal position, as shown in Figs. 1, 2, and 3, the plug will be rotated to bring the way into registration with the passage in the pipe 5, as shown in Fig. 4, to permit the water to flow into the spraying-pipes. The arrangement is also such that when the spraying-pipes are raised vertically on their journals the plug constituting the journal will be moved to throw the way 13 out of registration with the passage in the supply-pipe and cut off the water.

It will be seen from the above that the construction set forth embodies a plurality of independently-movable spraying-sections, each of which is provided with a controlling device affected by the vertically-swinging movement of said sections to establish or cut off the flow of water through said sections.

In order to limit the swinging movement of the spraying-sections and insure them assuming the proper horizontality when lowered for use and also to limit their backward movement, I cut away one end of each of the nipples 10, as at 18, to provide spaced shoulders 19 20, and in one side of each of the plugs 12 is placed a laterally-projecting pin 21, extending into said cut-away portion 18 and so placed that when the spraying-sections are lowered said pin will abut the shoulder 19, whereby the downward movement of the section is limited and said section supported in proper position. Similarly, when the spray-sections are thrown backwardly the pin 21 engages the shoulder 20 and further backward movement of the section prevented. It will be noted that, as shown in the drawings, the supply-pipe 5 is supported at a distance from the wall to which it is secured, and the shoulder 20 is dropped slightly below the transverse center of the valve-casing in order that the upper spraying-arm when swung backwardly will be caused to assume an oblique position in rear of the supply-pipe 5, the space between the ends of the arms permitting them to swing past the pipe 5. The other spraying arms or sections when in inoperative position will assume a substantially vertical position, as shown in dotted lines in Fig. 2. This feature of swinging the spraying-section to a substantially vertical position will be of considerable advantage, inasmuch as an economy of space is afforded and the sections are removed entirely out of position over the tub, which is thereby left totally unobstructed for bathing purposes.

In order to provide for a simultaneous movement of the needle-spraying sections, I connect the outer ends of one set of the spraying members on one side of the apparatus to the next adjacent members by means of chains 47, the connections being preferably detachable in order that the members may be separated for independent movement should it be desired. The manner of connecting the ends of the chains to the sections is immaterial; but for the purpose of this application I have shown them connected by a simple ring-and-hook device, as at 48. The connections 47 need not necessarily be chain, as other means might be employed to advantage to accomplish the same purpose.

The arrangement and operation of the spraying-arms is the same whether the apparatus is used with or without the shower; but the lower end of the pipe 5 has secured thereto a detachable nipple 22, adapted to receive one end of a flexible pipe 23, the other end of which is secured to the spout of the tub-faucet, and the upper end of the said pipe 5 is closed by a suitable plug 24, as shown in Fig. 3.

A valve 25 of any suitable construction may or may not be employed, as desired, for controlling the flow of water through the pipe 5, said valve being located adjacent the lower bracket for supporting said pipe.

I will now proceed to describe the shower-bath attachment in its relation to the needle-spray, the operation and manner of using the same.

When the shower is to be employed in connection with the apparatus, the plug 24 is removed from the upper end of the pipe 5 and a vertically-extending pipe-section 26 is secured to said end by means of a valved coupling 27, the valve of which is operated by hand. The upper end of the pipe-section 26 extends a suitable distance vertically, where it terminates in an overhanging pipe-arm 28, carrying at its free end a depending shower-nozzle 29, which is arranged and discharges at a point centrally of the space bounded by the curved members comprising the needle-spray sections. At a short distance above the valve 27 is arranged in the pipe 26 a coupling-section 30, from which extends an exteriorly-threaded nipple 31, to which is connected a downwardly-curved coupling-nipple 32 by means of a coupling-collar 33, all in a well-known manner. Above the coupling-section 30 is disposed in the pipe 26 a second valve 34, the function of which and also that of the valve 27 will be stated presently.

In order to employ the above-described attachments, the flexible pipe 23 is detached from the nipple 22 and is secured to the coupling-nipple 32 and the nipple 22 on the lower end of the pipe 5 is closed by a plug 35, all as shown in Fig. 1 of the drawings.

At such times as it is desired to employ the combined apparatus the tub-faucet is opened

to permit the water to flow into the pipe 26, and both the valves 27 and 34 being opened it will be seen that the water will flow upward through the pipe 26 to the shower-nozzle and will also flow down through the pipe 5 to the needle-spraying sections, the latter having been lowered to open the individual controlling-valves therefor. Should it only be desired to use the shower, the valve 27 is closed to cut off the flow from the pipe 5 and the valve 34 opened, when the water will have access only to the pipe 26 and the shower-nozzle. In order to employ the needle-spray independently of the shower, the valve 27 is opened and the valve 34 closed, when the water, it will be readily seen, will flow only from the needle-spraying sections.

The usual circular waterproof curtain 36 is employed to surround the apparatus when in use to confine the water to the bath-tub, said curtain being hung from suitable rings 37, mounted on a circular frame 38, which is removably supported by the supply-pipe in a novel manner, which will now be described. Upon the supply-pipe adjacent its upper end is secured a collar 39, carrying a projection having a rectangular socket 40, having a short top wall 41 and a relatively longer bottom wall 42, upon which is placed a vertical locking-pin 43. Rigidly secured to the circular frame 38 is a laterally-projecting arm 44, having a notch or recess 45 in its lower edge, which edge is inclined from said recess upwardly toward the end of said arms, as at 46. When the circular frame is to be attached to the apparatus, it is held in position so as to have the arm 44 inclined downwardly, and said arm is then inserted in the socket 40, when the frame is lowered, which permits the recess 45 to set over the pin 43, and, the frame being placed in horizontal position, the upper edge of the arm 44 engages the under face of the wall 41, the parts coacting to maintain the ring in position for use, the pin 43 serving to prevent displacement of the frame by a movement in a horizontal direction.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A needle-bath apparatus comprising a plurality of oppositely-bowed, vertically-swinging spraying-arms journaled one above the other, said arms being movable to assume a horizontal position for use whereby to provide an open cage-like structure in which a bather may stand and to assume a substantially vertical position when not in use, and a supply-pipe with which said spraying-arms communicate.

2. A needle-bath apparatus comprising a plurality of spraying-sections journaled one above the other, each section consisting of a vertically-swinging arm having spraying-apertures throughout substantially its length, said arms being movable to assume a hori-

zontal position for use whereby to provide an open cage-like structure in which a bather may stand and to assume a substantially vertical position when not in use, and a supply-pipe with which said spraying-arms communicate.

3. In a portable needle-bath apparatus of the character described, a plurality of horizontally-journaled vertically-swinging spraying members arranged one above the other and adapted when in position for use to assume a substantially horizontal position whereby to provide a cage-like structure in which a bather may stand and when not in use to be swung vertically to cause the sections to assume a substantially vertical position, and means for detachably connecting the apparatus to a suitable support.

4. A needle-bath apparatus comprising a vertically-arranged pipe, a plurality of vertically-swinging spraying-sections journaled one above the other and movable to a horizontal position for use, and to a substantially vertical position when not in use, each section comprising oppositely-disposed arms, said sections forming when lowered into horizontal position a cage-like structure to receive a bather.

5. A needle-bath apparatus comprising a vertical pipe, a plurality of vertically-swinging spraying-sections journaled one above the other on said pipe and movable downwardly to assume a position in a horizontal plane and means to limit the downward movement of said sections.

6. In an apparatus of the character described, a vertical pipe, a plurality of oppositely-bowed vertically-swinging spraying-arms journaled one above the other on said pipe and adapted to assume a horizontal position for use whereby to provide an open cage-like structure in which a bather may stand and to assume a substantially vertical position when not in use, a shower attachment connected to the upper end of said vertical pipe and disposed above the center of said cage-like structure, and separate valves for controlling the flow of water to said spraying-arms and said shower.

7. A needle-bath apparatus, comprising a vertical pipe, a plurality of horizontally-arranged journals arranged one above the other on said pipe, a vertically-swinging spraying-section carried by each journal, said section comprising two pipe members, curved toward each other in the same plane and each member having one end secured to an end of said journal.

8. A needle-bath apparatus, embodying in its construction a supply-pipe, and a vertically-swinging spraying-section journaled on said pipe, said spraying-section comprising oppositely-bowed arms each having spraying-apertures throughout substantially its length,

and said section being movable to assume a horizontal position for use and a substantially vertical position when not in use.

9. A needle-bath apparatus comprising a vertical pipe, a plurality of spraying-sections journaled one above the other on said pipe, each section comprising oppositely-arranged spraying-arms, each having one end secured to the journal and the opposite ends spaced apart from each other, the journal being so disposed as to permit the sections to be swung into a horizontal plane for use.

10. In a needle-bath apparatus, the combination of a vertical pipe, a plurality of vertically-swinging spraying-sections journaled on said pipe one above the other and means for connecting said sections whereby they may be moved simultaneously.

11. In a needle-bath apparatus, the combination of a vertical pipe, a plurality of vertically-swinging spraying-sections journaled on said pipe one above the other and flexible connections connecting said sections whereby they may be swung simultaneously.

12. In a needle-bath apparatus, the combination of a plurality of vertically-swinging spraying-sections comprising pipe members and flexible connections connecting said members whereby the sections may be swung in a vertical direction simultaneously.

13. In an apparatus of the character described, a supply-pipe, a horizontally-arranged turning plug journaled in said pipe, and a spraying-arm extending outward from each end of the said plug and movable therewith, said arms being bowed in opposite directions and each having spraying-apertures throughout substantially its entire length, the arrangement of said arms being such that they may be moved to and supported in a horizontal position for use and also caused to assume a substantially vertical position when not in use.

14. In a needle-bath apparatus, the combination of a vertical pipe, a plurality of vertically-swinging spraying-sections journaled one above the other on the pipe and arranged to be swung into a horizontal position for use and means to support said sections when in horizontal position, whereby to provide a cage-like structure in which a bather may stand.

15. In a needle-bath apparatus, a vertical pipe, horizontally-disposed turning plugs disposed in said pipe and arranged one above the other and a curved spraying-arm secured to the opposite ends of each plug, said arms being movable to a horizontal position to form a cage-like structure to receive a bather.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SAMUEL J. JACKSON.

Witnesses:

CHARLES D. OLIVER,
PERCY W. GAYLOR.