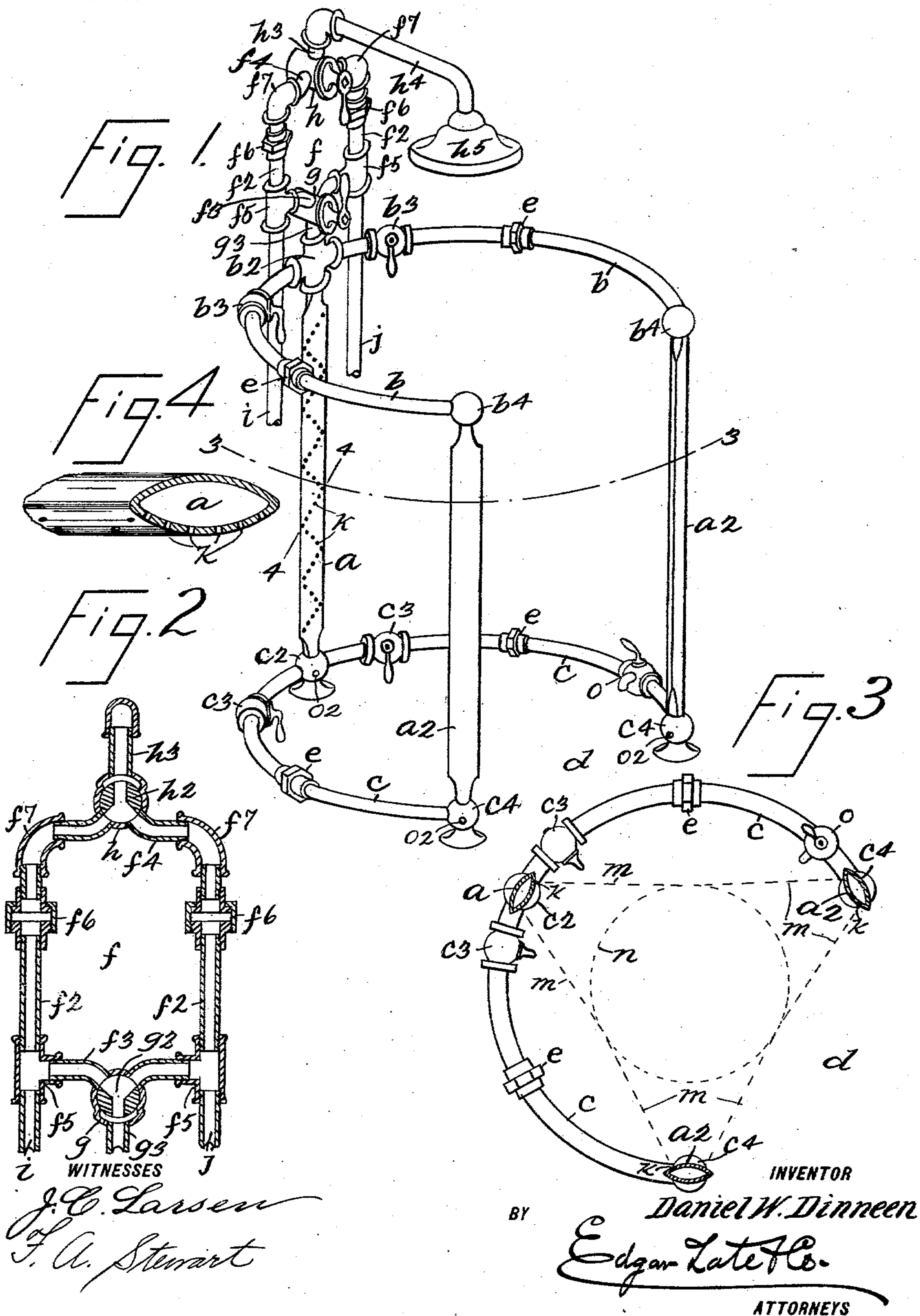


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NEEDLE AND SHOWER BATH APPARATUS.

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NO MODEL.



UNITED STATES PATENT OFFICE.

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NEEDLE AND SHOWER BATH APPARATUS.

SPECIFICATION forming part of Letters Patent No. 743,623, dated November 10, 1903.

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To all whom it may concern:

Be it known that I, DANIEL W. DINNEEN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Needle and Shower Bath Apparatus, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved needle and shower bath apparatus which is simple in construction and comparatively inexpensive and the operation of which is substantially different from other apparatus of this class whereby improved results are accomplished; and with this and other objects in view the invention consists in a bath apparatus of the class specified constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a perspective view of my improved bath apparatus complete; Fig. 2, a sectional front view of that part thereof whereby the water is supplied; Fig. 3, a cross-section on the line 3 3 of Fig. 1 and showing diagrammatically the operation of the needle-bath part of the apparatus, and Fig. 4 a section on the line 4 4 of Fig. 1.

In the practice of my invention I provide an apparatus of the class specified which in the form of construction shown comprises three vertically-arranged tubes, one of which is designated by the reference character a and the other two by the reference character a^2 , and for the purpose of this description the pipe a will be called the "back" pipe and the pipes a^2 the "front" pipes, and the back pipe a and the front pipes a^2 are connected at the top by segmental tubes b and at the bottom by segmental tubes c , and this arrangement leaves a vertical open space d at the front of the apparatus, and the general form of the apparatus in cross-section is that of a circle.

The back pipe a is provided at the top with a four-way coupling b^2 , and adjacent thereto each of the tubes b is provided with a valve b^3 .

At the bottom of the pipe a is a three-way coupling or connection c^2 , adjacent to which each of the tubes c is provided with a valve c^3 , and at the top and bottom of the vertically-arranged front pipes a^2 are two-way couplings or connections b^4 and c^4 , respectively, and these couplings b^2 , c^2 , b^4 , and c^4 may be made in any desired manner.

The tubes b and c are composed of two members connected by double-ended or oppositely-threaded couplings e , and by means of this construction the separate parts of the apparatus may be conveniently put together or taken apart whenever necessary, it being understood that in putting the parts together one part of the tubes b is screwed into the coupling b^2 and the other part into the couplings or connections b^4 , after which said parts of the tubes b are connected by the couplings e , and this also applied to the tubes c , as will be readily understood.

Connected with the coupling b^2 and arranged thereover and over the back pipe a is a water-supply device f , which comprises two side tubes f^2 , a transverse bottom tube f^3 , and a transverse top tube f^4 , and the tubes f^2 and f^3 are connected by couplings f^5 , while the tubes f^2 and f^4 are connected by couplings f^6 , and the tube f^4 is also preferably provided with elbow end members f^7 .

The bottom transverse tube f^3 is provided with a three-way-valve casing g , in which is placed a three-way valve g^2 , and with the valve-casing g is connected a tube g^3 , which is screwed into the coupling b^2 , and the transverse tube f^4 is provided with a three-way-valve casing h , in which is placed a three-way valve h^2 , and said valve-casing h is also provided with a tube h^3 , with which is connected a supplemental tube h^4 , which extends radially across the needle-bath part of the apparatus and which supports a shower-bath attachment h^5 directly over the central portion of the needle-bath part of the apparatus.

Connected with the couplings f^5 at the bottom of the water-supply part f of the apparatus are tubes i and j , which are connected

with any suitable source of water-supply and which are intended to supply hot and cold water, and by means of the valve g^2 hot or cold water, or both, may be supplied to the
 5 needle-bath part of the apparatus, consisting of the pipes a and a^2 and tubes b and c , and by means of the valve h^2 hot or cold water, or both, may be supplied to the shower-bath device h^5 , and it will be understood that
 10 the supply of hot or cold water, or both, may be regulated as desired by these valves. My invention, however, is not limited to the use of the three-way valves g^2 and h^2 , and any suitable arrangement of valves in the water-supply device f or the parts thereof may be
 15 employed to accomplish the desired result.

The vertically-arranged pipes a and a^2 , which constitute the operative part of the needle-bath part of the apparatus, are substantially elliptical in cross-section, as shown in Fig. 4, and the inner sides of these pipes are provided with fine perforations k , which are preferably arranged in zigzag lines, as shown in Fig. 1, and these perforations k are
 25 so arranged or formed in said pipes that the water as it escapes therefrom is driven inwardly in a thin stream, as indicated at m in Fig. 3. In this figure of the drawings the circle n represents the position in which a
 30 party desiring to take a bath stands, and the perforations k in the pipes a and a^2 are so formed that a person standing in this position will be completely covered by the sprays of water from said pipes, and all or substantially all of the water escaping from said
 35 pipes will be discharged upon said person.

By making the pipes a and a^2 elliptical in cross-section, as shown in Fig. 4, I am enabled to use a much smaller pipe than would
 40 otherwise be possible, and by drilling all the holes k radially of the center thereof I am enabled to spread the sprays or jets, as shown in Fig. 3, which would otherwise require a much larger pipe, and the form of these pipes
 45 and the method of drilling the holes so as to direct the sprays or jets of water, as shown in Fig. 3, constitute one of the chief features of this invention.

The arrangement of the perforations k in zigzag lines also serves to produce an exciting and exhilarating effect; but my invention is not limited to any particular arrangement of these perforations, and it will be apparent that the pipes a and a^2 may be given other
 50 shapes in cross-section, if desired.

The pipes a and a^2 are cylindrical in cross-section at their ends where they connect with the couplings or connections b^2 , b^4 , and c^4 in order that they may be conveniently screwed
 60 into said couplings or connections, and in practice any suitable means or devices may be provided in the bottom portion of the needle-bath part of the apparatus for draining out water left therein, and said means or devices
 65 may consist of valves placed in the tubes c at o or the couplings or connections

c^2 and c^4 may be provided with small perforations or openings at o^2 .

If so desired, the back pipe a may be used alone for the purpose of giving a needle-bath,
 70 and in order to do this all that is necessary is to close the valves b^3 in the tubes b , and it will be apparent that the bottom tubes c are not absolutely essential in the use of the apparatus, as the water would be supplied to
 75 the pipes a and a^2 by means of the connecting-tubes b at the top thereof.

In the accompanying drawings I have shown the couplings or connections c^2 and c^4 at the bottom of the apparatus as provided
 80 with feet p , which may be sunk into a marble slab or other flooring and secured therein; but my improved bath apparatus may be supported in any desired or preferred manner.

Having fully described my invention, what
 85 I claim as new, and desire to secure by Letters Patent, is—

1. A needle-bath apparatus comprising a plurality of vertically-arranged pipes, said pipes being arranged in a circle and connected
 90 by other pipes, said vertically-arranged pipes being also elliptical in cross-section, and the inner sides thereof being perforated radially to the center thereof, and means for supplying water to said pipes, substantially
 95 as shown and described.

2. A needle and shower bath apparatus comprising a plurality of vertically-arranged pipes, said pipes being arranged in a circle and connected by other pipes, said vertically-
 100 arranged pipes being also elliptical in cross-section, and the inner sides thereof being perforated radially to the center thereof, and a water-supply device connected with the top of one of the vertically-arranged pipes and
 105 provided with hot and cold water supply pipes and a shower-bath attachment, substantially as shown and described.

3. A needle and shower bath apparatus, comprising a back vertically-arranged pipe
 110 and two front vertically-arranged pipes, said pipes being arranged in a circle and connected at their upper and lower ends by segmental pipes, the segmental pipes being provided at each side of the back pipe with valves,
 115 and a water-supply device connected with the top of the back pipe and provided with hot and cold water supply pipes, and a shower-bath attachment connected with the water-supply device, substantially as shown and
 120 described.

4. A needle and shower bath apparatus, comprising a back vertically-arranged pipe and two front vertically-arranged pipes, said pipes being arranged in a circle and connected
 125 at their upper and lower ends by segmental pipes, the segmental pipes being provided at each side of the back pipe with valves, a water-supply device connected with the top of the back pipe and provided with hot and
 130 cold water supply pipes, and a shower-bath attachment connected with the water-supply

device, the said vertically-arranged pipes being also elliptical in cross-section and the inner sides thereof being perforated radially of the center thereof, substantially as shown and described.

5 5. A needle and shower bath apparatus, comprising a back vertically-arranged pipe and two front vertically-arranged pipes, said pipes being arranged in a circle and connected at their upper and lower ends by segmental pipes, the segmental pipes being provided at each side of the back pipe with valves, a water-supply device connected with the top of the back pipe and provided with hot and cold water supply pipes, and a shower-bath attachment connected with the water-supply device, the said vertically-arranged pipes being also elliptical in cross-section and the inner sides thereof being perforated radially of the center thereof, and the segmental pipes which connect the vertically-arranged pipes at the top and bottom being composed of separate detachably-connected sections, substantially as shown and described.

6. A needle and shower bath apparatus 25 comprising a back vertically-arranged pipe and two front vertically-arranged pipes, said pipes being arranged in a circle and connected by other pipes, said vertically-arranged pipes being also elliptical in cross-section and the inner sides thereof being perforated radially to the center thereof, and a water-supply device connected with the top of the back pipe and provided with hot and cold water supply pipes and a shower-bath attachment, 35 the pipes by which the vertically-arranged pipes are connected, being also provided adjacent to the back pipes with valves, substantially as shown and described.

In testimony that I claim the foregoing as 40 my invention I have signed my name, in presence of the subscribing witnesses, this 28th day of April, 1903.

DANIEL W. DINNEEN.

Witnesses:

F. A. STEWART,
J. C. LARSEN.