W. C. BOOTH.

SHOWER BATH APPARATUS.

APPLICATION FILED MAR. 27, 1919.

1,339,593. **Patented May 11, 1920.**

3 SHEETS—SHEET 1.

Fig. 1

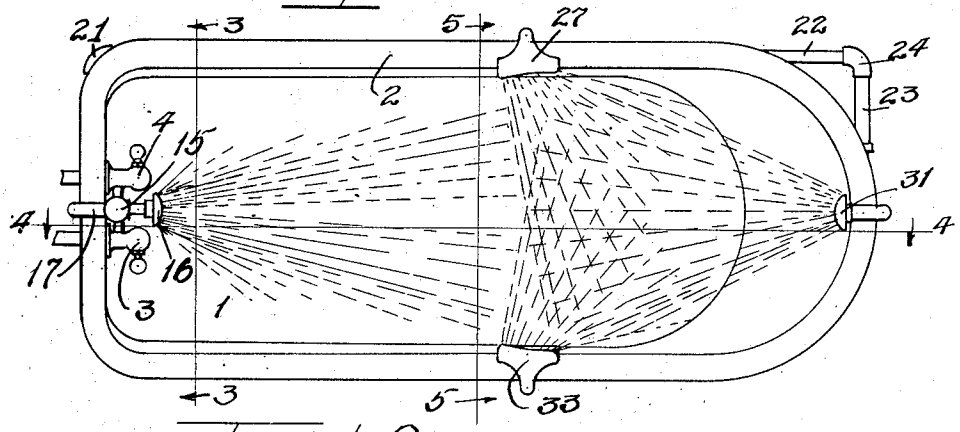


Fig. 2

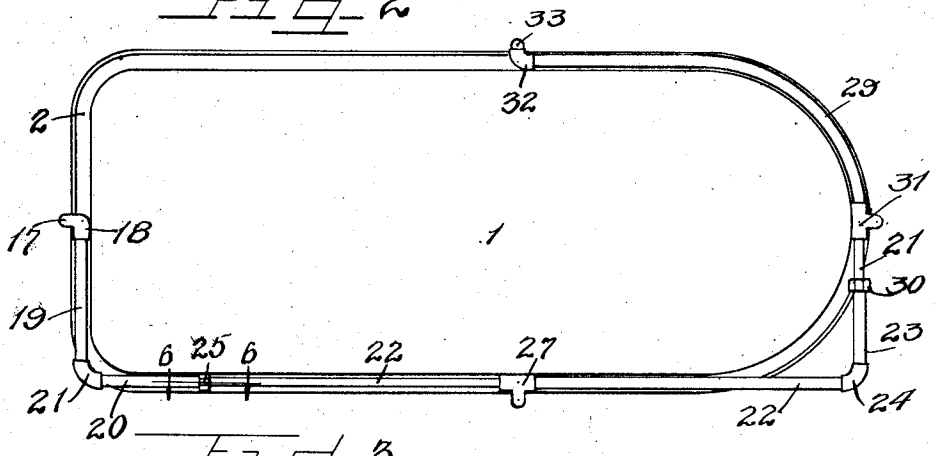
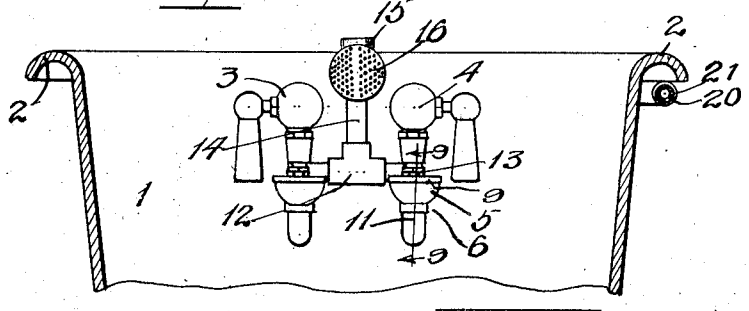


Fig. 3



Witnesses

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3 SHEETS—SHEET 2.

Fig. 4

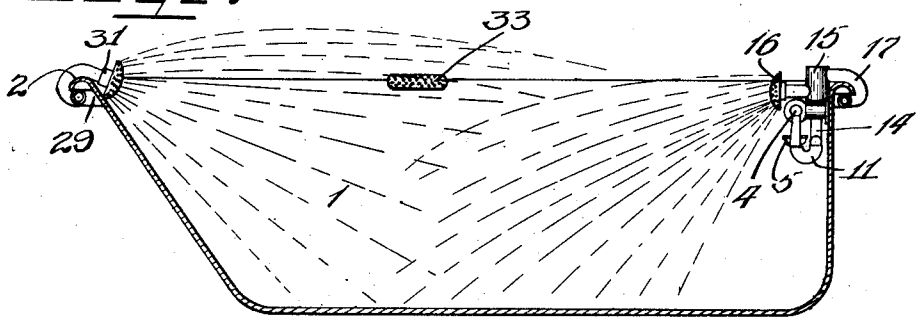


Fig. 5

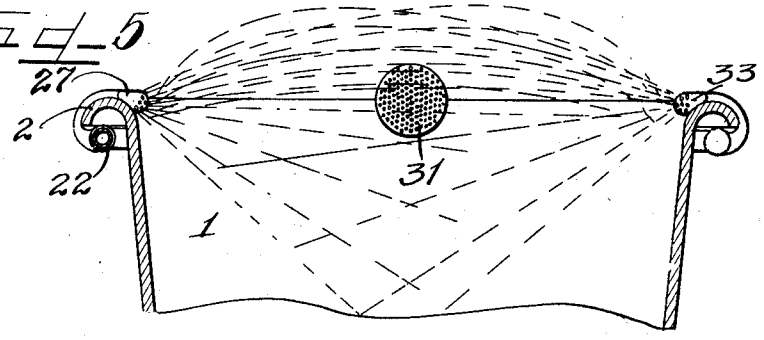


Fig. 6

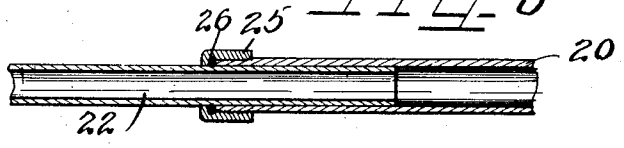


Fig. 7

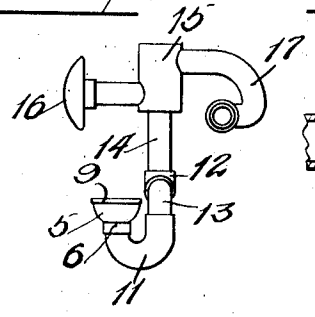
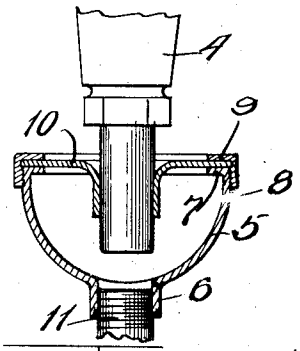


Fig. 8



Fig. 9



Witnesses

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APPLICATION FILED MAR. 27, 1919.

1,339,593. **Patented May 11, 1920.**

3 SHEETS—SHEET 3.

Fig. 10

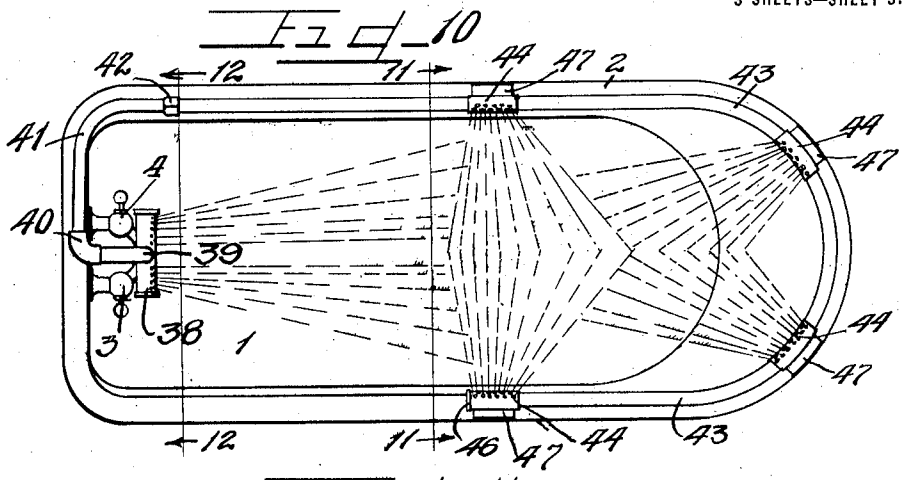


Fig. 11

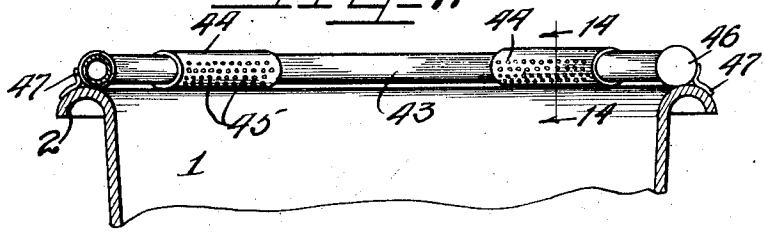


Fig. 12

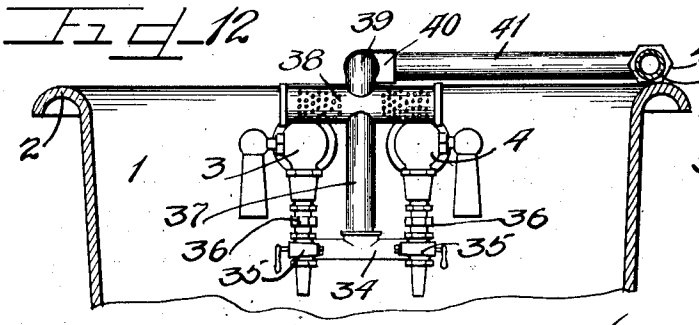


Fig. 15

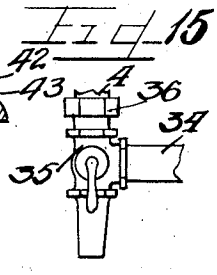


Fig. 13

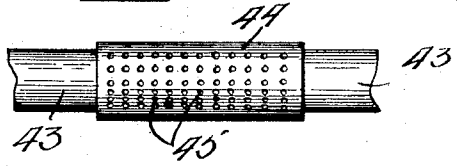
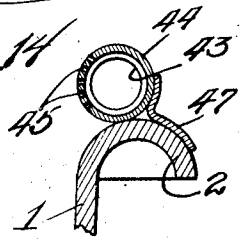


Fig. 14



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM C. BOOTH, OF CHICAGO, ILLINOIS.

SHOWER-BATH APPARATUS.

1,339,593. Specification of Letters Patent. Patented May 11, 1920.

Application filed March 27, 1919. Serial No. 285,580.

To all whom it may concern:

Be it known that I, WILLIAM C. BOOTH, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Shower-Bath Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

Shower baths being considered more sanitary than tub baths, have gradually been becoming more popular, but on account of the unadaptability in the average house of the ordinary type of shower bath apparatus employing a downwardly directed spray nozzle, the use of shower bath apparatus has been denied to the majority of the people.

This invention relates to an improved form of shower bath apparatus adapted to be readily attached to the faucets and rim of an ordinary bath tub and provided with a plurality of spray nozzles conveniently spaced to direct sprays of water downwardly in different directions into the tub.

It is an object of this invention to construct a shower bath apparatus adapted to be readily attached around the rim of an ordinary bath tub.

It is also an object of this invention to construct a shower bath apparatus attachable to a bath tub and adapted to direct sprays of water into the tub from different directions.

It is furthermore an obejct of this invention to construct a shower bath apparatus comprising a piping connected to the faucets of a tub and conforming to the contour of the bath tub and having a number of spray pipe nozzles associated therewith disposed at the sides and ends of the tub for directing sprays of water into the tub toward the center thereof.

It is finally an object of this invention to construct a shower bath apparatus attachable to the faucets of a bath tub and adapted to spray water into the tub from the sides and ends thereof.

The invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

On the drawings:—

Figure 1, is a top plan view of a bath tub equipped with a shower bath apparatus embodying the principles of my invention.

Fig. 2, is a bottom plan view thereof looking upward.

Fig. 3, is a slightly enlarged section taken on line 3—3, of Fig. 1, with the lower portion of the tub broken away.

Fig. 4, is a longitudinal central vertical section taken on line 4—4, of Fig. 1, with parts shown in elevation.

Fig. 5, is a slightly enlarged transverse vertical section taken on line 5—5, of Fig. 1, with the lower part of the tub broken away.

Fig. 6, is an enlarged section of one of the pipe connections taken on line 6—6, of Fig. 2.

Fig. 7, is a side view in elevation of the portion of the shower bath apparatus attachable to the faucets of the tub.

Fig. 8, is a horizontal fragmentary detail section of one of the side spray nozzles.

Fig. 9, is an enlarged section partly in elevation taken on line 9—9, of Fig. 3, with parts omitted.

Fig. 10, is a top plan view of a bath tub equipped with a modified form of my device.

Fig. 11, is a slightly enlarged section taken on line 11—11, of Fig. 10, with part of the tub broken away.

Fig. 12, is section taken on line 12—12, of Fig. 10, with part of the tub broken away.

Fig. 13, is an enlarged view of the perforated side of one of the spray nozzles connected to the supply pipe.

Fig. 14, is a slightly enlarged section taken on line 14—14, of Fig. 11.

Fig. 15, is a fragmentary side view of one of the three way valve faucets, with the piping broken away.

As shown in the drawings:—

The reference numeral 1, designates as a whole an ordinary bath tub having an outwardly curved ledge on rim 2, integrally formed around the periphery thereof, and equipped at one end in the ordinary manner with a hot water faucet 3, and a cold water faucet 4. Removably attached to the faucets 3 and 4, and to the rim 2, of the tub is a shower bath apparatus embodying the principles of my invention and comprising attaching pieces or connector cups 5, semi-spherical in shape and each having an inwardly threaded outwardly projecting integral collar or neck piece 6, formed centrally on the curved outer portion of the

cup, affording a passage for communication with the interior of the cup. The rim of each cup is bent inwardly at right angles or has integrally formed thereon a circumferential inner flange 7, while the outer portion of each cup around the side of the rim thereof is threaded as indicated by the numeral 8, and is adapted to have removably threaded thereon an internally threaded ring 9, of angular cross section adapted to removably clamp a centrally apertured rubber diaphragm or disk 10, in position to permit the spout or mouth piece of the faucets 3 and 4, to tightly fit through the aperture therein for attaching the connector cups 5, to the faucets, as clearly shown in Figs. 3 and 9.

Threaded into the neck 6, of each of the cups 5, is a U-shaped pipe 11, directed rearwardly to permit the same to be rigidly connected with the two ends of a three way or T-pipe connector 12, by means of L-joints 13. Connected to the central connection of the connector 12, by means of a vertical pipe 14, is a cylindrical casing 15, having a round spray nozzle 16, connected to the lower end of the front thereof and projecting into the tub 1. Rigidly connected to the upper end on the rear of the casing 15, is a pipe neck 17, curved downwardly and inwardly to fit around the rim 2, of the tub, and having its end bent at a right angle, as denoted by the reference numeral 18, and disposed below the rim 2, of the tub.

Rigidly connected to the end 18, of the pipe neck 17, and extending around one corner of the tub below the rim thereof, is a short L-shaped feed or supply pipe section comprising pipes 19 and 20, disposed at right angles to one another and connected together by means of a pipe sleeve or elbow 21. A long L-shaped feed or supply pipe section, comprising a long pipe 22, and a short pipe 23, disposed at right angles thereto and connected therewith by a pipe sleeve or elbow 24, is adjustably connected to the pipe 20, by means of a lock nut 25. Said long pipe 22, projects into the pipe 20, and is clamped securely in position by the nut 25, which is threaded onto the end of the pipe 20, and forms a water tight joint by means of packing 26, as shown in Fig. 6. Connected in the pipe 22, near the middle thereof is a spray nozzle 27, bent upwardly around the rim 2, with the perforated portion thereof directed to throw a spray of water into the tub.

A curved pipe section comprising a short pipe 28, and a curved pipe 29, conforming to the curvature of the curved end of the tub 1, is adjustably connected to the pipe 23, by means of a lock nut 30, in a manner similar to that already described and shown in Fig. 6. Between the short pipe 28, and the curved pipe 29, another round end spray nozzle 31, is rigidly secured and is bent upwardly and inwardly around the rim 2, with the perforated portion thereof directed to throw a spray of water into the tub, toward the nozzle 16, which is positioned opposite the nozzle 31. The curved pipe 29, extends around the tub to a point about midway between the ends of the tub and has secured at the end thereof a pipe sleeve or elbow 32, to which is connected a side spray nozzle 33, also bent upwardly and inwardly around the rim 2, having its perforated portion directed to discharge a spray of water into the tub. Said nozzle 33, as shown in Fig. 1, is disposed opposite the nozzle 27.

In the modified form of the invention as shown in Figs. 10 to 15, inclusive, the shower bath apparatus is mounted upon the top of the rim 2, of the tub 1, and consists of a three arm attaching bracket 34, having rigidly mounted on the ends of each (of the horizontal or end) arms thereof, a three way auxiliary valve faucet 35, removably secured to the spouts of the faucets 3 and 4, by means of lock nuts 36. The handles of the faucets 35, are adapted to be turned to permit water to flow from the faucets 3 and 4, through the valve faucets 35, and into the bracket 34, to the shower bath apparatus, or said handles may be turned into another position permitting water to flow only out of the spouts of the auxiliary valve faucets 35, closing off the entrance into the three way bracket 34, thus permitting the use of either the shower bath apparatus or the faucets 35, independently of one another. Secured to the central arm of the bracket 34, is a vertical pipe 37, on the upper end of which is rigidly connected a double spray nozzle 38, the upper part thereof being on a line with the rim 2, and having the perforated portions thereof disposed to direct sprays of water into the tub. Rigidly attached to the upper central portion of the nozzle 38, above the vertical pipe 37, is an outwardly directed elbow pipe 39, to which is connected by means of an elbow 40, a feed or supply pipe 41, curved to conform to the shape of the corner of the bath tub and extending for a short distance along the side of the tub adjacent the wall of the bath room. Adjustably secured to the end of the pipe 41, by means of a lock nut 42, is a long feed or supply pipe 43, having one end projecting into the pipe 41, to permit the adjustment of the shower bath apparatus when the lock nut is loosened. Said pipe 43, is bent to conform to the shape of the tub, and is of a length sufficient to extend around the end of the tub opposite the faucets to a point about in the middle of the side of the tub farthest away from the wall, as shown in Fig. 10, thus leaving half of the rim 2, of the tub on the room side free from the shower bath apparatus.

A plurality of spray nozzles 44, are connected in the pipe 43, one being positioned in the middle of the wall side of the tub, another opposite thereto at the end of the pipe 43 and one in each quadrant of the curved end of the tub. Said nozzles 44, are each provided with a number of spray apertures 45, on the inner side thereof properly drilled to direct sprays of water inwardly and downwardly toward the center of the tub. To close the end of the pipe 43, a cap 46, is threaded or secured by other suitable means on the end of the end nozzle 44. To prevent lateral movement of the shower bath apparatus and to hold the same properly positioned on the rim 2, of the tub, brackets, plates, or supports 47, each having its upper portion curved to conform to the curvature of the nozzles 44, and its lower portion curved to conform to the curvature of the rim 2, as shown in Fig. 14, has its upper portion soldered or rigidly secured by other suitable means to the outer side of one of the spray nozzles 44, with the lower curved portion resting on the outer portion of the bath tub rim. If deemed necessary the lower curved portions of the plates 47, may be made longer and curved to hook underneath the rim 2, of the tub.

The operation is as follows:—

In the form of the device shown in Figs. 1 to 9, inclusive, the attaching cups 5 are fitted over the spouts of the faucets 3 and 4, with the rubber disks forming water tight connections with said spouts. Due to the adjustable arrangement between the supply pipes 20 and 22, and 23 and 28, the various sections of the supply piping are fitted to the tub and held in supported position below the rim 2, by the curved or bracket spray nozzles which engages around said rim and act as hangers or clamping means for the apparatus. After the pipe sections have been properly adjusted to fit the tub the lock nuts 25 and 30, are threaded into locked positions thus clamping the telescoping pipes together to form water tight connections by means of the packing 26.

The spray apertures of the various nozzles being properly drilled, sprays of water are directed into the tub from the sides and ends of the tub as shown in Fig. 1, by simply turning on the hot and cold water faucets, or either one thereof, the water of course being forced through the feed or supply piping and out through the various nozzles.

In the modified form of the shower bath apparatus as shown in Figs. 10 to 15, inclusive of the drawings the shower bath apparatus is adapted to be permanently attached to the faucets 3 and 4, by means of the three arm bracket 34, and the auxiliary three way valve faucets 35, to permit the use of either the shower bath apparatus or the faucets 35, independently of one another by operating the handles of the faucets 35. The remainder of the construction is similar to that already described, the only difference being that the feed pipes are disposed upon the rim 2, of the tub and held there by means of the curved plates 47. By the use of the lock nut 42, the piping may be adjusted to fit tubs of different lengths by simply sliding the pipe 43, in or out of the pipe 41, as the case may demand, and then locking the pipes together by means of the lock nut.

It will, of course, be understood that a fewer or a greater number of spray nozzles may be connected in the feed pipes, and that the nozzles may be of any suitable design to conveniently fit around or on the rim of a tub, and that the shower apparatus may be connected to the faucets of the tub by other suitable attaching means than that described and shown.

I am also aware that various other details of construction may be varied through a wide range without departing from the principles of this invention and I therefore do not purpose limiting the patent granted otherwise than necessitated by the prior art.

I claim as my invention:—

1. In a shower-bath apparatus of the class described, a feed pipe comprising substantially parallel longitudinal portions, a transverse connecting portion, means for adjusting the distance between the longitudinal portions, like means for adjusting the effective length of the longitudinal portions, and water-tight means for locking said longitudinal and transverse portions in adjusted position.

2. A shower-bath apparatus of the class described comprising a telescoping feed pipe extending around the outside rim of a bath tub, water-tight means for rigidly locking the feed pipe in adjustment, a plurality of spray nozzles connected in the feed pipe and resting on the rim of the tub to support the feed pipe and direct sprays of water into the tub, a pipe for connecting the feed pipe with a source of water supply, and a spray nozzle in the connecting pipe.

3. In a device of the class described a shower bath apparatus comprising a feed pipe, a plurality of spray nozzles connected therein for directing sprays of water into a bath tub, means for connecting said feed pipe with a source of water supply, and a spray nozzle connected in said connecting means.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

WILLIAM C. BOOTH.

Witnesses:

CHARLES W. HILLS, Jr.,

LAWRENCE REIBSTEIN.