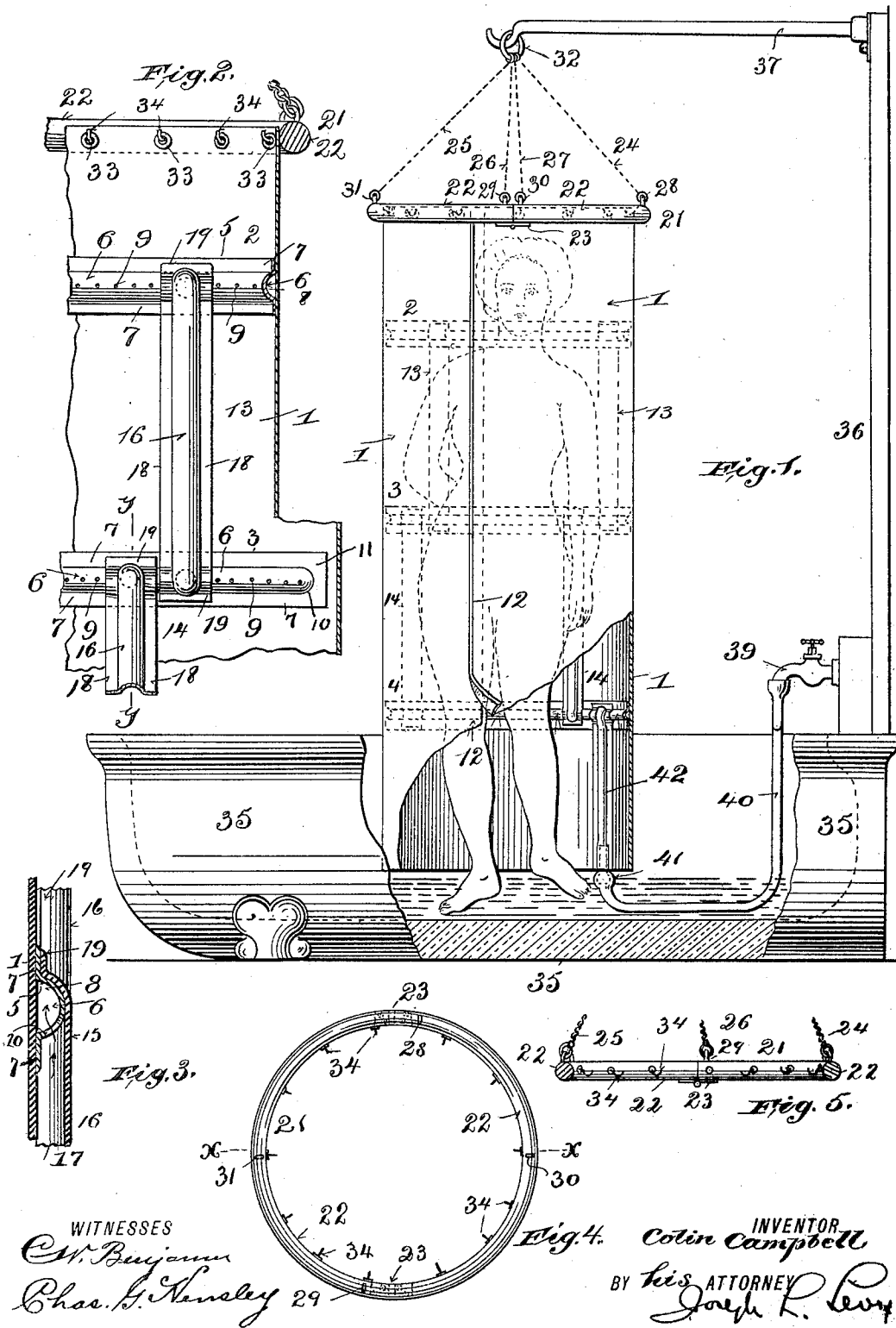


C. CAMPBELL.
BATH APPLIANCE.

(Application filed Sept. 10, 1901.)

(No Model.)



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BATH APPLIANCE.

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Application filed September 10, 1901. Serial No. 74,920. (No model.)

To all whom it may concern:

Be it known that I, COLIN CAMPBELL, a citizen of the United States, residing at the city of Yonkers, county of Westchester, and State of New York, have invented certain new and useful Improvements in Bath Appliances, of which the following is a specification.

My invention has reference to appliances for use in bath-rooms and the like; and it relates more specifically to a simple construction of needle-bath whereby economy in manufacture, storage, transportation, expedition in setting up, removing, and dismantling are prime considerations.

The bath appliance known in the plumbers' art as a "needle-bath" has almost invariably consisted of a device intended to form a fixture of the bath-room, and it has almost universally consisted of a number of joined pipes and masonry or tiling inclosures, all of which are very expensive to manufacture and install. In no case, so far as my knowledge extends, has any of these needle baths or sprays been so constructed that they can be used both as a temporary and a permanent fixture for the bath-room, and none of them have been so constructed that they can readily be collapsed and placed in a very small space or compass for storage or transportation.

My invention therefore has for its main object to overcome the necessity of employing a conventional needle-bath and to produce one which may either be a permanent fixture to the bath-room or be used temporarily, may be readily packed in a small compass for storage or transportation, and in which the cost of construction and maintenance is very much smaller than that of the conventional needle spray or bath.

My invention therefore consists in the construction and combination of parts hereinafter described and finally pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a side elevation, partly in section, of a device embodying my improvements and diagrammatically illustrating the method of use. Fig. 2 is an enlarged fragmentary view, partly in section, of the inclosing shield, the spray ducts or channels, and a portion of the suspending-ring. Fig. 3 is a sectional elevation substantially on the

line *yy*, Fig. 2. Fig. 4 is a plan view of the suspending-ring. Fig. 5 is a sectional view of the ring substantially on the line *xx*, Fig. 4.

The drawings illustrate an embodiment of my invention.

At 1 is the shield or inclosing cloth, which may be made of the conventional rubber cloth or of any other waterproof or water-repellent material. It is thin and flexible, so that it may be readily collapsed. Upon the inner surface of the shield are formed ducts or channels 2 3 4, which extend transversely of the shield when the same is laid out flat and which are concentric when it is in use, as shown, which ducts may be of desired number, size, and location relative to the length of the shield of which the shield is made. To carry out the scheme of my invention, I prefer that these ducts be formed in such a way as not to hamper the flexibility of the shield. To this end I prefer to employ strips of material of the same character of the shield for forming the ducts. To do this, I provide a strip of material 5, the center of which is preferably bent outwardly to form a head 6, leaving outwardly-extending longitudinal flanges 7, which are hermetically secured, as by rubber cement, to the fabric of the shield, thereby forming a duct or channel 8, the projecting portion of the strip or bead being provided with apertures 9 of suitable size and convenient extension to form the needle-spray, the bead terminating at the end of the strip to close the duct, as at 10, Fig. 2, the flanges 7 being laterally connected at the end by the end flanges 11, which are likewise firmly secured to the sheet 1. Instead of closing the ends of the strips in this way they may be single strips of material with the ends cemented down on the sheet 1. However, for the sake of uniformity of construction with the longitudinal ducts, to be described, the ends may be constructed as above described.

In use, as illustrated in Fig. 1, it is intended that the longitudinal edges 12 of the shield shall overlap, the inseting of the ends of the lateral ducts, as shown in Fig. 2, permitting this without hindrance. These lateral ducts are connected by longitudinal and parallel ducts 13 14, formed by a strip of material 15, constructed substantially the same as the ducts 2 3 4, having a bead 16, provided with

a longitudinal duct or channel 17, with the side and end flanges 18 19, and having the end bead 6 and flanges 7, as shown in Figs. 2 and 3, the lateral ducts having an enlarged opening 20 connecting the channel or duct 17 within the bead of the longitudinal duct with the channel 8 of the lateral ducts. If desired, the longitudinal ducts may be apertured to provide a spray.

In order not to increase the thickness of the material where the longitudinal ducts merge into the lateral ducts, the respective ends of the longitudinal ducts are not connected together, and they are shown staggered with relation to each other, as illustrated in Fig. 2. However, they may be constructed in one piece, so as to form one continuous channel from one end to the other of their ends, and connected to the sheet 1 and lateral ducts in the same way. A shield thus formed will provide all of the essentials for a perfect needle-spray, the lateral ducts providing sufficient lateral resistance against spreading the shield out under pressure of the water, at the same time providing sufficient flexibility to enable it to be rolled or to be collapsed in the direction of its length for transportation or storage. The ducts preferably are constructed of material no heavier than and of the same texture as the shield itself, and even lighter material may be used, if sufficiently strong, while comparatively little resistance by the ducts to the rolling or folding or collapsing of the shield will be present. It is apparent that my invention in this regard may be carried out by either forming the ducts integrally with the shield or by applying tubing in any desired way to the surface of the shield.

When the strips 5 15 are secured to the shield by proper cement, they are of course in a sense integral therewith, and I desire to have it understood that in the broad aspect of my invention I consider them as integral fixtures of the shield; but as I conceive it possible that these ducts may be formed in one piece with the body of the shield I desire to have it understood that such a method of construction is included in my invention.

At 21 is the supporting-ring, which, following my general scheme of portability, is made of two segments 22 22, hinged together by the hinge 23, each of the segments being connected by a number of separate chains or cords 24 25 26 27, some of which, 26 27, are secured to the ring by eyes 28 29, fixed adjacent the hinge, the others, 24 25, to the eyes 30 31, diametrically disposed, the cords being secured together at their upper ends by a ring 32, or in any other desired way, so as to unite them. The hinging together of the sections of the ring permits its diameter to be reduced one-half, so as to pack away readily.

The upper edges of the shield are provided with eyelet holes or gromets 33, Fig. 2, to

receive hooks 34, extending from the inside of the ring-section to allow of the shield being readily attached and disposed in circular form to form an inclosure or detached from the ring. The suspension of the ring from above and the weight of the shield tend to make a firm joint at the hinge-sections of the ring, which is below the section, as shown.

One way of employing my invention would be as illustrated in Fig. 1, wherein 35 is a bath-tub; 36, a suitable upright supporting an outwardly-extending bracket 37, having at the end a hook 38, engaging with the ring 32 at the upper end of the suspending cord or chains. At 39 is a single or duplex valve for either hot or cold water, and at 40 is a flexible tube connecting this fixture at one end and having at the other end a bulb 41, adapted to be passed over the end of a short tube (shown in dotted lines) extending from the end of a lower longitudinal duct and supplemental 42, (like the others,) thereby suspending the ring and shield and placing the ducts in communication with the source of water-supply.

Having described my invention, I claim—

1. As an article of manufacture, a flexible sheet having secured thereto a strip of flexible material having central projecting bead, and outwardly-extending flanges secured to the sheet, and perforations in said bead, as and for the purposes set forth.
2. As an article of manufacture, a flexible sheet having lateral ducts formed on its upper surface by beaded strips having edges cemented to the sheet, perforations in the bead of said strip, and other strips likewise formed, extending between the lateral strips, and a passage from the channel of one strip to that of the other, as and for the purposes specified.
3. The combination in an article of the class described, of a flexible and waterproof or water-repellent sheet, the parallel ducts, and the parallel longitudinal ducts connecting the lateral ducts, substantially as described.
4. The combination in an article of the class described, of the flexible waterproof or water-repellent sheet, the lateral and parallel and perforated ducts, and the longitudinal ducts connecting two of the lateral ducts, the adjacent ends of the longitudinal ducts being staggered relative to each other, substantially as described.
5. The combination in an article of the class described, of the sheet 1, the strip 5 secured thereto having the bead 6 and projecting flanges 7, an aperture 20 in the bead, another strip 15 having the flanges 18 and end flange 19, the flanges 18, 19, being secured upon the flanges 7, as and for the purposes described.
6. In an article of the class described, the combination with the sectional ring, the sections being hinged together, a shield having component spray-ducts, the hinge being below the sections, suspending cords or chains

secured at their lower ends, one adjacent
each of the section ends, and others at a point
removed from the hinge, and a suspending-
ring uniting the outer ends of the chains to-
5 gether.

7. In a bath-shield-suspending ring, the
combination with the segmental sections
hinged at their ends together by longitudi-
nally - disposed pivots, shields suspending
10 hooks extending inwardly from the inside of
each of the sections, suspending chains or

15 cords extending from the ring-section, and a
ring at the other end of the chains or cords,
uniting them together, substantially as de-
scribed.

Signed in the city, county, and State of
New York this 5th day of September, 1901.

COLIN CAMPBELL.

Witnesses:

CHAS. G. HENSLEY,
SOPHIE SEKOSKY.