

## **Specification of Arthur Hill : shower baths.**

### **Contributors**

Hill, Arthur.

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A.D. 1843 . . . . . N<sup>o</sup> 9747.

**S P E C I F I C A T I O N**

OF

**ARTHUR HILL.**

**SHOWER BATHS.**

**L O N D O N :**

**PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,**

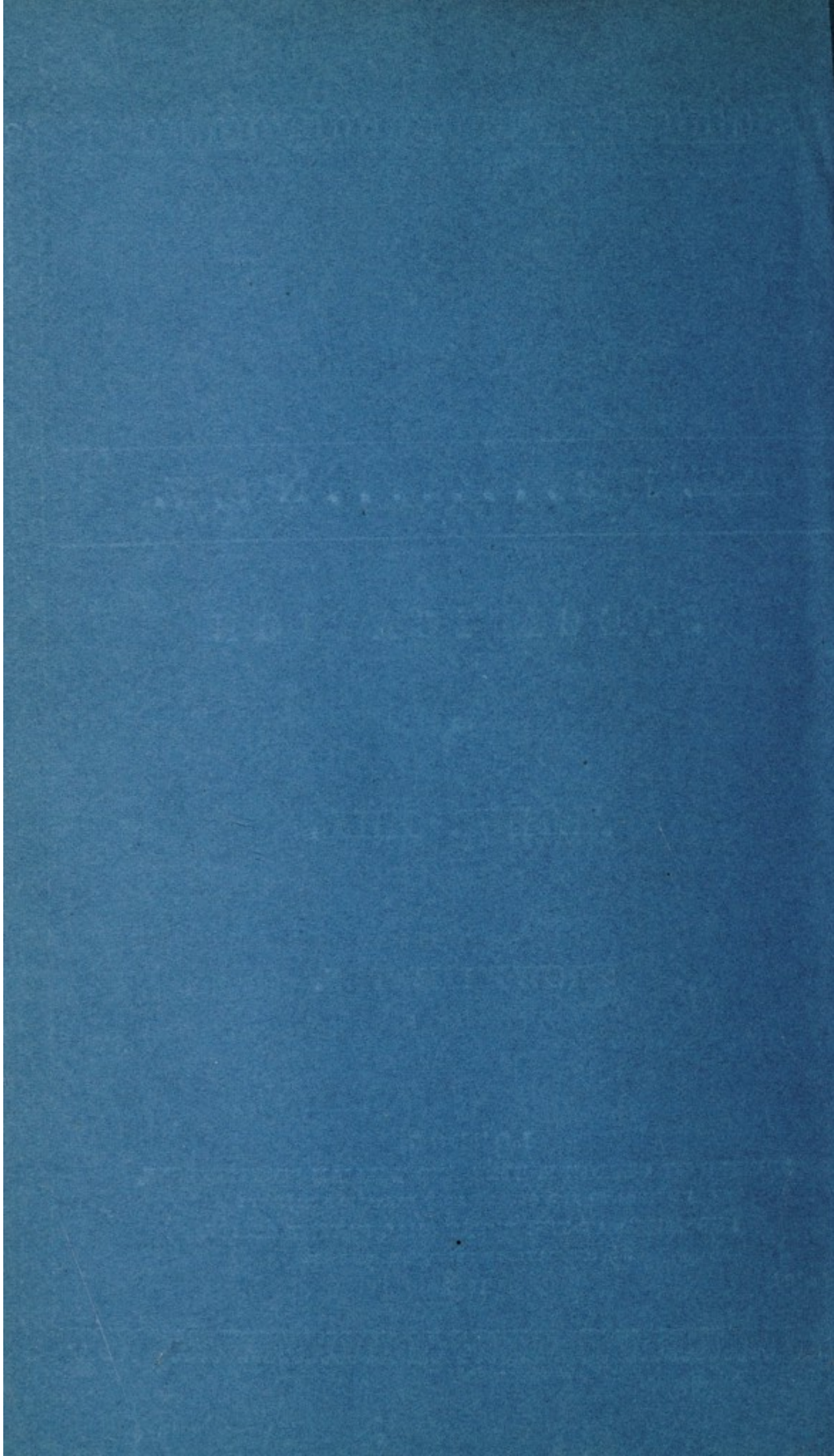
**PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :**

**PUBLISHED AT THE GREAT SEAL PATENT OFFICE,**

**25, SOUTHAMPTON BUILDINGS, HOLBOEN.**

*e 10d.*

1856.





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A.D. 1843 . . . . . N° 9747.

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Shower Baths.

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HILL'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, ARTHUR HILL, of the Slad Parsonage, near Stroud, in the County of Gloucester, Clerk, send greeting.

WHEREAS Her present most Excellent Majesty Queen Victoria, by Her  
5 Letters Patent under the Great Seal of Great Britain, bearing date at West-  
minster, the Twenty-seventh day of May (One thousand eight hundred and  
forty-three), in the sixth year of Her reign, did, for Herself, Her heirs and  
successors, give and grant unto me, the said Arthur Hill, my eñors, adñors,  
and assigns, Her especial licence, full power, sole privilege and authority,  
0 that I, the said Arthur Hill, my eñors, adñors, and assigns, and such others  
as I, the said Arthur Hill, my eñors, adñors, and assigns, should at any time  
agree with, and no others, from time to time and at all times thereafter during  
the term of years therein mentioned, should and lawfully might make, use,  
exercise, and vend, within that part of the United Kingdom of Great  
5 Britain and Ireland called England, Her Dominion of Wales, and Town of  
Berwick-upon-Tweed, my Invention of "AN IMPROVED SHOWER BATH;" in  
which said Letters Patent is contained a proviso obliging me, the said  
Arthur Hill, to particularly describe and ascertain the nature of my said  
Invention, and in what manner the same is to be performed, by an instrumen  
20 in writing under my hand and seal, and to cause the same to be inrolled in  
Her said Majesty's High Court of Chancery within two calendar months next  
and immediately after the date of the said in part recited Letters Patent, as in

*Hill's Improved Shower Bath.*

and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said Arthur Hill, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, are particularly described and ascertained 5 in and by the following statement thereof, and by the Drawings therein referred to and hereunto annexed, that is to say:—

My Invention relates to an improved shower bath, and consists in a novel and peculiar combination and arrangement of certain parts, and in the application of an ordinary force pump, whereby the bather is enabled to produce by 10 pressure the effect which, in ordinary shower baths, is obtained by height, and also to regulate the force of the shower; the parts constituting the improved bath are likewise so arranged, combined, and acted upon as to cause continuous circulation of the water, and requires but a small quantity for that purpose; unlike the ordinary shower bath, whose reservoir, though necessarily 15 large, consequently cumbrous and importable, contains but a limited supply, which is speedily exhausted, and to refill which the bather must relinquish his bath, or wait until the reservoir is replenished. I would here remark, that I am aware of shower baths having been constructed upon the principle of pressure, the water being raised by means of an air pump, to work which the 20 bather must relinquish his bath. And, further, I am aware of forcing pumps being employed in shower baths generally; but such pumps have only been employed for the purpose of filling and refilling a reservoir with water. The baths so constructed are likewise importable, and consequently very objectionable. In order, therefore, to obviate these objections, and to explain my said 25 improvements as completely as possible, and likewise to point out in what respect they differ from the ordinary shower bath, I will proceed to describe the arrangement of parts which I consider well calculated for carrying out my said Invention, and which will be found to answer extremely well.

## DESCRIPTION OF THE DRAWING. 30

Figure 1 represents an elevation of the shower bath as out of use, the curtain being removed. Figure 2, a vertical section of the same as in use, shewing internal arrangement of the parts. Figure 3, a plan view of a footstool. Figure 4, a vertical section of a box for containing a supply of water. Figure 5, a plan view of the same. Figure 6, a perspective view of box and 35 sliding case. Figure 7, a detached view (in section) of another arrangement for producing a more uninterrupted stream of water. Figures 8, 9, and 10, an arrangement for regulating the force of the shower; Figure 8 being a plan

*Hill's Improved Shower Bath.*

view of a perforated plate or rose ; Figure 9, a plan view of a fan ; Figure 10, a vertical section taken through the rose. Figure 11 is a modification of Figures 8, 9, and 10. Figure 12, a detached view of curtain ring. In Figure 2, A, A, represents an ordinary washing tub, with the apparatus

5 therein, which is put together in the following manner:—B, a footstool or platform, of wood or other suitable material, constructed in such a manner that the feet will sprawl out or shut up (as shewn at Figures 1 and 3); at any convenient part of this stool a casting C, having a valve therein, is secured by a thumb nut D. This casting has a screw cut therein for receiving the lower

10 end of the pump barrel E, which has a corresponding screw cut around it for that purpose ; (the action and construction of forcing pumps being well known, it is unnecessary to enter into any explanation thereof). The pump, together with its pistons and valves, being thus secured to the footstool (the curve which branches from the top of the pump barrel being turned outwards), the tube F,

15 which is constructed with a cock *a* for letting off the water contained in the tubes, is connected thereto at  $\times$ , by screwing the parts together as shewn, a washer of leather or other suitable material being interposed so as to make a tight joint. The tube G is next connected thereto in a similar manner to the foregoing ; and finally the syphon-shaped tube H, at the extremity of the

20 shorter leg of which the perforated convex plate or rose I is attached by screwing in manner as before, care being taken that the rose be turned in the direction of the centre of the platform. The curtain ring K, which is constructed with a view to portability in the following manner, is attached to the apparatus as shewn at Figures 1 and 2 :—In the detached Figure 12, K

25 represents the curtain ring, which is constructed of four parts or segments, three of which, *b, c, d*, are connected together by hinge joints at \* \*, the fourth or detached segment *e, e*, being constructed with screwed nuts *f, f*, which pass over the screwed ends of the segments *b, d*, at the points *f, f*; the oiled curtain L, L, being put thereon by loops and buttons, or other convenient

30 manner. The apparatus is ready for use, and its action as follows:—The bather having provided himself with a washing tub, foot bath, or other similar vessel, and placed the apparatus therein, proceeds to pour into the tub or other vessel three, four, or five jugs of water. He then mounts the platform or stool, and, drawing the curtain round him, closes the same by buttoning; the curtain

35 being so cut as that the bottom of the curtain when buttoned shall be about one half the diameter of the top so as to concentrate the falling water, and to prevent it splashing over the edge of the tub or vessel. The bather has now to impart motion to the piston of the pump, which is peculiarly arranged, as shown at detached Figure 1\*, being constructed with one piston rod sliding

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within the other, the inner rod *g* having holes \* across it at certain distances, and into either of which a set screw *h* can be inserted, thus avoiding the necessity for stooping while working the pump, and also of adapting the bath to persons varying in height. When used for children the tube *G* may be removed if necessary. It will obviously occur that so long as the bather continues to work the pump (which requires little exertion), a continuous shower may be kept up. Moreover, by an arrangement shown at detached Figures 8, 9, 10, the bather is enabled to regulate the force of the shower, or vary the size of the drops of water by constructing the rose in the following manner:—

The bottom of the rose is divided into eight equal parts, four of which, 1, 2, 3, 4, are perforated with large holes, and the other four, 5, 6, 7, 8, with small holes; immediately above and in close contact with this perforated plate is a metal fan *N* (see detached Figure 9) consisting of four equal parts. This fan has a projecting pin *i* at its centre, which passes through the perforated plate *I*, and is furnished with a button *k* at its lower extremity, by turning which the bather can, by covering the large or small holes, produce a fine or heavy shower at pleasure, or, by covering half of each, produce a mixture of both (a modification of the foregoing is shewn at detached Figure 11, in which the rose is constructed with two bottoms, the outer one *l*, which moves on a hinge somewhat similar to a watchcase, having fine holes, and the inner one *m* large holes therein). Should a wider spread shower be required the same may be obtained by making the bottom of the rose more convex. At detached Figure 7 another arrangement is shewn affording a more uninterrupted stream, which is effected by the application of a hollow sphere *n*, connected to the syphon-shaped tube *H*, and immediately above the rose a stopcock *o* being situated at the lower part of the sphere for discharging or stopping the contents thereof.

In Figure 4 an arrangement is shewn wherein the bath, though more costly and less portable, differs from the foregoing, inasmuch as the box containing the apparatus is substituted in the place of the tub, being arranged and constructed in the following manner:—*O, O*, a japanned box or vessel of any suitable material, about twenty-four inches long, thirteen or fourteen inches wide, and six and a half inches deep, serving the double purpose of a foot bath and case for the other parts of the apparatus, the same being constructed with an internal reservoir *P*, and likewise a bottomless case *Q*, which slides inside the box when out of use, and, when required, is adjusted thereto by placing the metal pieces *p, p*, upon the sides of the box, by which the water is prevented from splashing over the sides of the vessel between the reservoir *P* and one side of the box; and to the bottom thereof a casting *R*, having a valve in its

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centre and several small openings at its base, is made fast; into this casting the pump barrel is screwed as in the former apparatus shewn at Figures 1 and 2; in other respects the apparatus is similarly arranged.

Having now described the nature of my said Invention, and in what  
5 manner the same is to be and may be performed, I wish it to be understood that I do not claim the exclusive use of any of the separate parts herein-before mentioned and referred to, except so far as the same may be employed for the purposes of my said Invention, which I declare to consist  
10 in, and I claim, the application of a forcing pump when used in combination with certain other parts forming a portable shower bath, as herein-before particularly described and represented by the annexed Drawing.

In witness whereof, I, the said Arthur Hill, have hereunto set my hand and seal, this Twenty-sixth day of July, in the year of our Lord One thousand eight hundred and forty-three.

5 ARTHUR (L.S.) HILL.

Signed, sealed, and delivered, by the within-named Arthur Hill, in the presence of

R. WINTERBOTHAM,  
Sol<sup>r</sup>, Cheltenham.

20 GEORGE N. COLT,  
his Clerk.

AND BE IT REMEMBERED, that on the Twenty-sixth of July, in the year of our Lord 1843, the aforesaid Arthur Hill came before our said  
25 Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

Enrolled the Twenty-seventh day of July, in the year of our Lord One thousand eight hundred and forty-three.

WINTERBOTHAM, Extra.

LONDON:

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Printers to the Queen's most Excellent Majesty. 1856.



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FIG. 2.

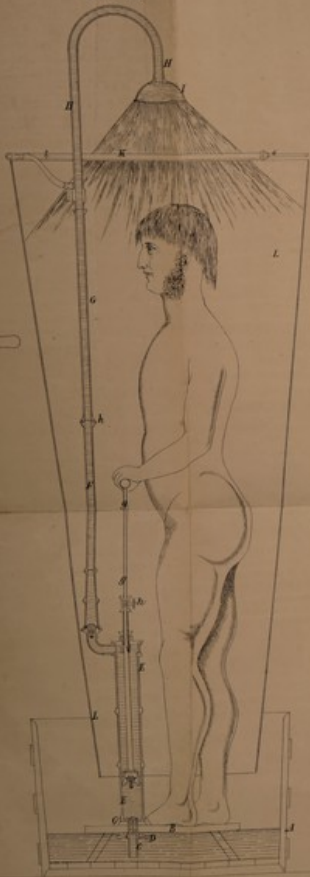


FIG. 1.

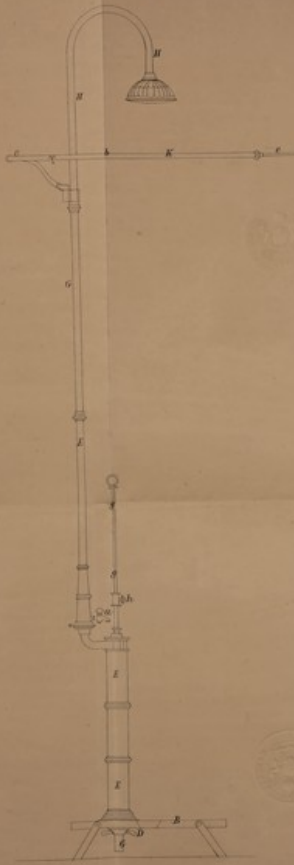


FIG. 7.



FIG. 8.



FIG. 9.



FIG. 10.

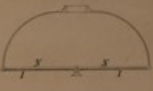


FIG. 11.

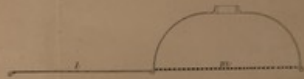


FIG. 12.

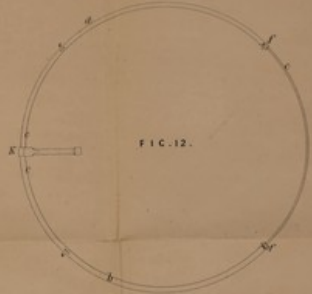


FIG. 4.

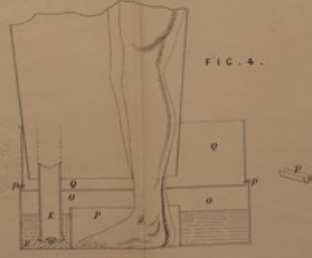


FIG. 5.

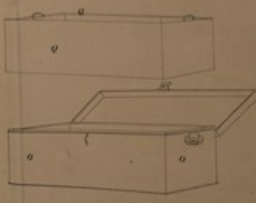


FIG. 3.



FIG. 5.



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