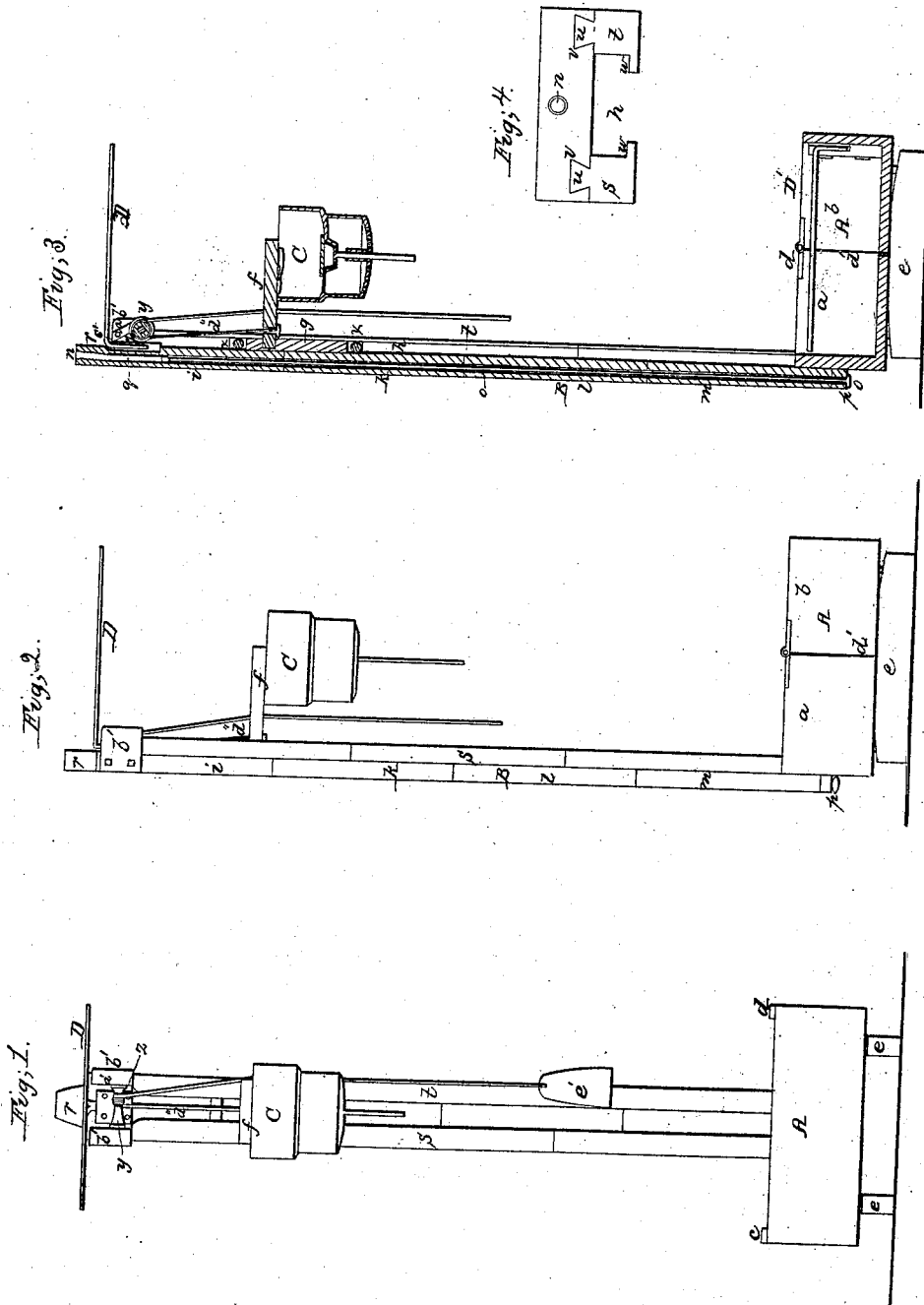


J. C. Smith, Shower Bath.

N^o 4,067.

Patented June 2, 1845.



UNITED STATES PATENT OFFICE.

J. CUTTS SMITH, OF CHELSEA, MASSACHUSETTS.

PORTABLE SHOWER-BATH.

Specification of Letters Patent No. 4,067, dated June 2, 1845.

To all whom it may concern:

Be it known that I, JOHN CUTTS SMITH, of Chelsea, in the county of Suffolk and State of Massachusetts, have made a new and useful invention of certain improvements in portable baths, by which I am enabled not only to pack the parts of my improved bath in a small compass for convenience of transportation, but to adapt it to many useful purposes connected with shower, sponge, steam, or medicated-vapor bathing; and I do hereby declare that the nature of my invention and its manner of construction and operation are fully set forth and described in the following specification, accompanying drawings, and figures, letters, and references marked thereon.

Figure 1 of the drawings aforesaid represents a front vertical elevation of my improved bath, with the exception of the curtain surrounding and generally making part of the same. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical and central section of it taken through the upright column to be hereinafter described.

My improved bathing apparatus in many respects is similar to what has been heretofore in common use, that is to say, so far as it contains a box or reservoir to hold water and a showering apparatus or fountain made to rise and fall or be elevated and depressed above the same, it does not differ substantially therefrom. The difference however is to be found in the application to the same of certain improvements by which the bath is rendered more convenient, portable and easy of operation. It is intended that the box or reservoir (A, Figs. 1, 2, 3) shall be of a size sufficient when folded up to hold and contain all the remainder of the apparatus, which is to be capable of being taken apart and packed therein. For this purpose I make the said box in two parts or compose the said reservoir of two boxes (*a*, and *b*), each of which is made of a bottom, two ends and but one side and without a top; and those parts of the two boxes where the sides are wanting I bring into apposition with one another as seen in the drawings, and unite them together upon their top edges by two hinges *c*, *d*, see Figs. 2, 3. Between the edges in contact of the two boxes I interpose a strip of elastic cloth, gum, leather or other suitable material, which, when the boxes are forced together will fill up the space between them and thus create, as it were, a

water tight joint, or in other words prevent the escape of any water which may be poured into the box. The strip of cloth or other suitable material so prepared I nail or otherwise properly secure to the edge or edges of the bottom and two ends of one of the boxes *a* or *b*, the same being shown at *d'*.

To the undersides of the bottoms of the two boxes, I apply at right angles to the bottom edges in contact one or more strips or battens of board *e* whose upper edges or those in apposition with the bottoms of the boxes are slightly beveled off from their central parts each way toward their ends or in other words while the lower edge of each batten is straight the upper edge is made somewhat crowning, the batten being made a little thicker in its central part than it is at its ends. By passing screws through each batten on each side of its center and into the bottoms of the boxes, in order to screw the battens thereto, the said screws will thereby act also, in such manner as to draw the boxes together and compress the rubber or elastic cloth between them. On removal of the cleats or battens the boxes may be folded over upon each other so as to constitute a deep box for receiving the other parts of the apparatus.

From the rear side or any other convenient part of the reservoir a column or post B, extends upward vertically and serves to sustain the showering apparatus or pan C, and the upper curtain ring or frame D. The said showering pan is fastened to the underside of an arm or seat *f* projecting from a vertical slide *g*, which is sustained and moves freely up and down in a kind of dove-tailed groove *h*, formed in the front side of the post from top to bottom thereof. For the sake of portability, and being folded within the packing box or bottom A, the said column is made of four or any other suitable number of long and narrow pieces of wood *i*, *k*, *l*, *m*, through the center of which and from end to end of each of which a hole *n* is bored so that when the said pieces are arranged in line with each other and their adjacent ends are placed in contact, there will be one common passage through them (the pieces) through which a chain or strong rope *o* is to be passed, the same having a knot or button or head *p*, affixed upon its lower end and a screw *q* and nut *r*, upon its upper end. By turning up the nut the parts *i*, *k*, *l*, *m*, will be drawn together. The cord

when slackened also serves as a hinge or hinges to turn or fold the parts upon.

Besides the sections *i*, *k*, *l*, *m* there are others *s* *t*, *s* *t*, &c., each of which has a dove-tailed tenon *u*, formed upon its rear side as seen in section in Fig. 4, which represents a horizontal section of the post B. The said tenon is made to fit into a corresponding groove *v* cut vertically in the front side of the post. Two of said grooves are cut in the front side of the post and parallel to each other and the parts *s*, *t* have their tenons run into them in such manner as to confine them to the post. The several parts *s*, *t* should be of such lengths as to break joints or extend over the ends of the sections *i*, *k*, *l*, *m*. The said pieces *s*, *t*, have each a lip *w*, formed in or projecting from its inner edge so as to extend over the slide which runs between them and keep it in place. The slide may have a friction roller *x*, arranged in each end of it as seen in the drawing and so as to bear and move against the front of the piece *i* *k* *l* *m*, when the slide is raised and depressed. At the head of the post B, and directly in front of the same, I arrange what may be termed a double cone barrel or windlass *y*, having a small cog wheel *z* placed and fixed upon its axis so as to turn with the windlass.

A small spring click or pawl *a'* turns upon a screw or fulcrum *c'* inserted in the post or one of the bearings *b'*, *b'* of the windlass and at its other end rests in contact with the cogged or toothed wheel. The said double cone windlass may be said to consist of two frustra of cones having their smallest ends in contact. The rope or cord *d''* (by which the showering apparatus is raised) after being wound several times around the windlass has one end connected to the showering apparatus or slide *g* and the other to a weight *e'* which shall be just about sufficient to create a friction of the line over the windlass necessary to balance the showering apparatus when empty or not filled with water. The weight draws upon the cord so as to cause the coils thereof upon the double cone windlass to press laterally against one another and as they always rest upon one of the cones of the windlass the said cone assists in promoting or creating the pressure. The friction thus created by the pressure of the coils against one another and around the windlass is sufficient when the windlass is kept from revolving to prevent the showering apparatus from descending by the force of gravity alone, when filled with water and elevated toward the top of the post. The click or pawl and toothed wheel of the windlass should be so arranged that any tendency of the slide *g* and its showering apparatus to turn the windlass shall be counteracted by the pawl, also, so that when the bather applies his hand to the

weight appended to the cord and pulls the same downward, the windlass shall readily revolve and the pawl or click slip over the teeth of the wheel.

The object of the above manner of making the windlass is to prevent fleeting of the coils of the rope and enable the bather to depress the showering pan (after its contents have been discharged) without acting against a series of weights sufficient to counterbalance the showering pan when filled. In bathing apparatus of this kind as heretofore made, the showering apparatus when filled with water has been counterbalanced by a series of weights hung to cords passing over pulleys, and about thirty pounds have been required to overbalance the showering pan when filled.

It will therefore be seen that whenever a bather attempts to depress an empty showering apparatus so connected with such heavy weights, he or she is obliged to pull against a weight equal to the amount of water previously discharged therefrom. This, to females or persons in ill health or weak in point of bodily strength is a serious inconvenience, and often subjects them to a severe strain of the muscles of the arms and chest. In my improved bath, in order to cause the showering apparatus to descend it is only necessary to take hold of the light weight *e'* and lift and raise the same up. While this is being done the rope or cord will instantly and freely slip from one cone toward and upon the other and around the same and readily permit the descent of the showering apparatus, the windlass being stationary all the while. After the showering fountain is filled with water it may be easily drawn up by taking hold of and pulling upon the weight and cord.

The arm or seat *f* which extends from the slide should not wholly but only partially project over the showering fountain in order to form a seat for the bather to sit upon when the showering apparatus is lowered down into its lowest position, and as the said seat projects only partially over the top of the fountain the bather has free access to the fountain so as to be able to dip a sponge therein for bathing or washing and using the fountain as a bidet. The seat will also be found very convenient to a person taking a steam or medicated vapor bath within the curtain of the apparatus. Instead of forming the arm as a seat I intend generally to affix or hinge a small seat thereupon to extend partially over the fountain for the above mentioned purpose. The curtain which surrounds the bather is to be hung and attached to bent wires or frames D, D'.

I claim—

1. The combination of the upright column or post B by which the showering apparatus is sustained while being elevated or de-

- pressed with the portable box as described; the said column consisting of the sections or pieces *i*, *k*, *l*, *m* having two dovetailed grooves in the front side of each the sectional parts *s t*, *s t* &c. and each having a dovetailed tenon made to fit the dovetailed groove as above set forth, and having a flexible cord or chain with a screw and nut at one extremity and a head at the other for drawing the parts together; the whole being constructed for the purpose of portability and being packed within the bottom or reservoir and operating substantially as above set forth.
2. I also claim the folding box constructed as herein set forth, that is to say, the two halves of said box, constructed with the side where they are hinged removable and their

edges that come together when open covered with india rubber as herein set forth or with other suitable substance so that when they are opened and the cambering cleats screwed on to the bottom they shall form a water tight joint the reservoir being without any extension or partition across its central part such as must exist if two boxes having two sides were employed and which would interfere with the feet of the bather.

In testimony whereof, I have hereto set my signature, this twenty sixth day of 30 April, A. D. 1845.

J. CUTTS SMITH.

Witnesses:

R. H. EDDY,
GEO. H. BAILEY.