(No Model.)

J. H. STEVENS, Jr.

DETACHABLE SPRINKLER FOR BATHS.

No. 519,879. Patented May 15, 1894.

Fig. 1.

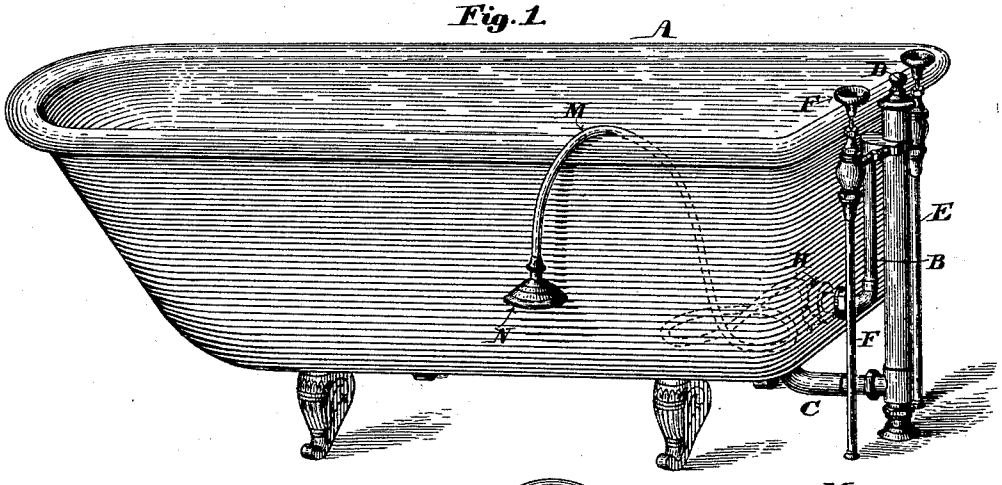


Fig. 3.

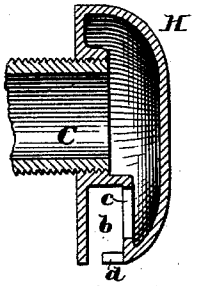
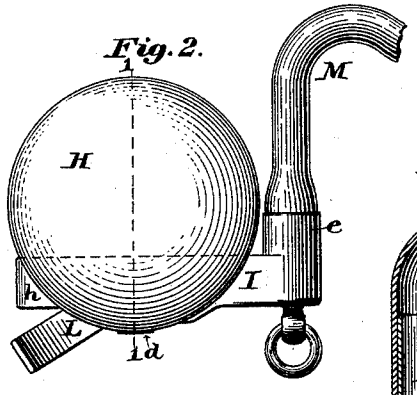


Fig. 2.



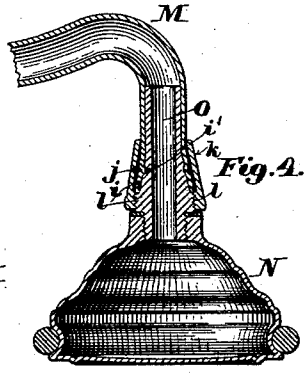


Fig. 4.

Fig. 10.

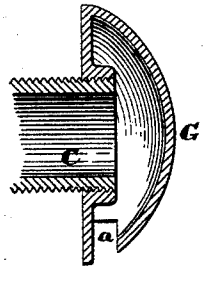


Fig. 6.

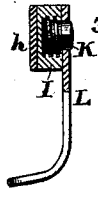


Fig. 5.

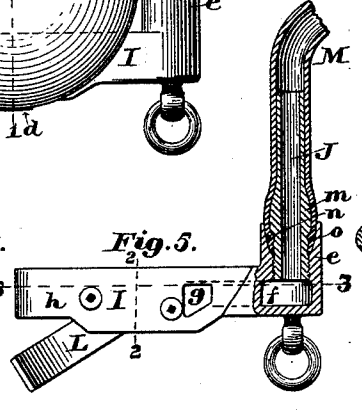


Fig. 8.

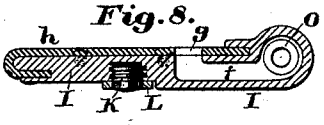
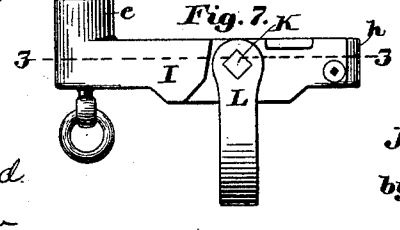


Fig. 9.

Fig. 7.



Witnesses:
Walter E. Lombard
H. Thurlow Fletcher

Inventor:
John H. Stevens, Jr.,
by N. P. Lombard
Attorney.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. STEVENS, JR., OF CAMBRIDGE, MASSACHUSETTS.

DETACHABLE SPRINKLER FOR BATHS.

SPECIFICATION forming part of Letters Patent No. 519,879, dated May 15, 1894.

Application filed January 2, 1894. Serial No. 495,330. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. STEVENS, Jr., of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Detachable Sprinklers for Baths, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to detachable sprinklers for baths and it consists in certain novel features of construction, arrangement and combination of parts which will be readily understood by reference to the description of the accompanying drawings and to the claims hereto appended and in which my invention is clearly pointed out.

Figure 1 of the drawings is a perspective view of a bath tub with my invention applied thereto. Fig. 2 is an elevation of the supply bell with my detachable sprinkler device connected thereto. Fig. 3 is a section of said supply bell on line 1, 1, on Fig. 2 with the sprinkling device removed. Fig. 4 is a central section of the rose sprinkler and a portion of the pipe to which it is connected. Fig. 5 is a sectional elevation of the coupling bar, for connecting the sprinkler to the supply bell, and a portion of the pipe to which said coupling bar is attached. Fig. 6 is a transverse section on line 2, 2, on Fig. 5. Fig. 7 is an elevation of the side of said coupling bar opposite to that shown in Fig. 5. Fig. 8 is a section on line 3, 3, on Figs. 5 and 7. Fig. 9 is an elevation of the clamping ring for securing the flexible pipe to the metal coupling, and Fig. 10 is a sectional elevation of the supply bell as heretofore constructed.

In the drawings A is a bath tub which may be of any suitable form or construction.

B is the water supply pipe, C the discharge pipe, D the discharge valve operating stem, E the cold water inlet valve casing and F the hot water inlet valve casing of a well known construction.

Heretofore, in the best class of work, it has been the practice to admit the supply water to the bath-tub near its bottom so that the bulk of the water will enter the tub below the surface of the water therein, thus very materially reducing the amount of steam that will be discharged into the room and the noise that will be created by the inflowing water and also prevents very much of the spattering of the water. In such work as above described the supply pipe usually has secured to its inner end the supply bell or cap G constructed as shown in Fig. 10 so arranged that the discharge opening *a* shall direct the water downward as it is delivered into the tub. If it was desired to provide a hand spray that could be directed toward any part of the person, said hand spraying device was supplied with water from a separate pipe from the main inlet pipe and the spraying device was usually permanently attached to the apparatus.

The object of my present invention is to provide a convenient and effective hand spray, or sprinkling device, without the expense of the branch supply pipe and a valve for controlling the same, and to this end I modify the construction of the supply bell to adapt it to receive a suitable coupling bar by which the sprinkler may be readily and easily connected thereto, or detached therefrom, as will now be described.

H is the supply bell or button-like terminal for the water supply pipe B, and has formed therein the rectangular slot *b* extending through one side thereof and having metal walls on three sides thereof through one of which is a discharge opening *c* through which water is supplied to the tub when the sprinkler is detached, or to the sprinkling device, when coupled to said bell, as will be described. An ear or lip *d* extends partly across the outer portion of the slot *b* between which and the opposite wall of said slot the coupling bar I is fitted as shown in Fig. 2. The coupling bar I is provided at one end with the cylindrical boss *e* bored out and tapped to receive the threaded end of the tubular bushing J the bore of which communicates at its lower end with one end of the chamber *f*, formed in said bar I, with the opposite end of which chamber the port *g*, formed through one of the sides of said bar, communicates at one side, and with the discharge opening from the bell or button H at its other side. The side of the bar I in which is formed the port or passage *g* may be fitted to the wall of the slot *b* in which is formed the discharge opening *c* by grinding so as to make a water tight joint when said surfaces are pressed together, or said bar may have secured thereto the packing *h*, preferably of leather, as shown in Figs. 5, 6, and 8.

K is a short screw fitted to a threaded hole

in the bar I with its axis at right angles to the surface against which said bar is to be pressed, and with its outer end in position to abut against a fixed part of the bell H, when said screw is turned outward, to press said bar to its seat. The screw K has secured thereon the lever L by which it may be turned to clamp or unclamp said bar.

Various modifications of the clamping device may be used in place of that shown without departing from the essential features of my invention, all of which will include in some form the wedge or inclined plane principle, and therefore I do not wish to be limited to the precise clamping device shown and described.

M is a flexible pipe coupled to the bar I at one end and to the sprinkler rose N at its other end as shown in Figs. 2 and 3.

The sprinkler N has screwed therein the coupling bushing O having a conical surface *i* in which is formed a circumferential groove *i'* over which the flexible tube M is drawn and has placed around it, just over said groove, the cut wire ring *j* made preferably of round wire and pressed into firm bearing upon said flexible pipe by the frusto conical sleeve *k* which screws upon a threaded portion *l* of the bushing O as shown in Fig. 4. The flexible pipe M is connected to the coupling bar I in a similar manner but slightly modified, in that the bushing J is provided with an enlargement *m* tapered in opposite directions the lower section of which is provided with the circumferential groove *n* into which the flexible pipe, after being drawn over said enlargement, is forced by the cut wire ring *o* when the flaring outer portion of the hole through the boss *e* is drawn thereon by screwing the bushing J into the threaded lower portion of said boss, as shown in Fig. 5.

In some cases I may use a metal pipe in place of the flexible pipe M and a different sprinkler than that shown while the means of attaching and detaching said sprinkler would remain the same as shown and described.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a bathing apparatus the combination of a bell supply, through which water is admitted to the receptacle, provided with a rectangular slot cut through one side of said bell and having metallic walls or bearing surfaces on three sides, with a discharge opening through one of said sides; a chambered coupling bar provided with a port or inlet passage constructed and arranged to register with the discharge opening in the supply bell; a pipe communicating at one end with said coupling bar; a sprinkler or spraying device connected to the opposite end of said pipe; and means having provision for clamping said coupling bar to the supply bell.

2. In a bathing apparatus, the combination with the water supply pipe, of the bell H, provided with the walled slot *b* and the discharge opening *c;* the hollow coupling bar I, provided with the port *g;* the packing *h*, secured to the port side of said bar; means having provision for forcing said bar and packing into firm contact with the wall of the slot *b* in which is formed the opening *c;* and a pipe connected at one end with the interior of said coupling bar and with a sprinkler or spray discharge at its other end.

3. The combination of the supply pipe B; the bell H provided with the walled slot *b* and the discharge opening *c;* the hollow coupling bar I provided with the port *g* and fitted to form a tight joint around the opening *c;* the clamping screw K fitted to a threaded bearing in the bar I; the lever L secured upon and adapted to operate said screw; and a pipe communicating at one end with the chamber in said coupling-bar and at its other end with a series of small discharge orifices.

4. In combination with the supply pipe of a bathing apparatus, a bell cap secured to the inner end of said pipe and provided with a walled slot formed in one edge thereof and having a discharge opening through one wall of said slot and an ear or lug projecting partly across said slot at the periphery of said bell; a coupling bar provided with a chamber and a port communicating with one end of said chamber and constructed and arranged to register with the discharge opening in said bell; means having provision for clamping said bar to said bell; a flexible pipe coupled to said coupling bar at one end and communicating with the chamber therein; and a rose sprinkler coupled to the other end of said flexible pipe.

5. The combination of the bell H provided with the walled slot *b* and discharge opening *c;* the chambered coupling bar I provided with the port *g* and tubular boss *e* having the upper portion of its inner periphery made flaring or frusto conical and its lower portion provided with a female thread; means having provision for clamping said bar and bell together; the flexible pipe M; a tubular bushing fitted within said pipe and having a tapered or frusto conical enlargement between its two ends; a circumferential groove formed in said conical enlargement; a cut ring surrounding said flexible pipe and pressing it into said groove; and a screw connection between said bushing and boss *e* whereby said tapered interior of the boss *e* will act upon said cut ring to clamp it more firmly upon the pipe as the bushing is screwed into said boss.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 27th day of December, A. D. 1893.

JOHN H. STEVENS, JR.

Witnesses:
N. C. LOMBARD,
WALTER E. LOMBARD.