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L. C. KELLOGG ET AL
SHOWER BATH BRUSH CONNECTION

1,748,774

Filed Aug. 21, 1926

FIG. 1

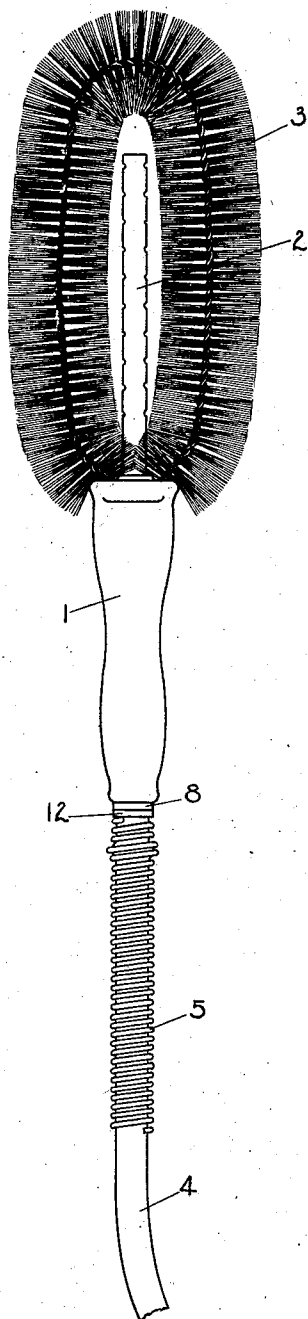


FIG. 2

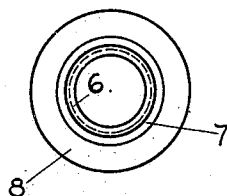


FIG. 3

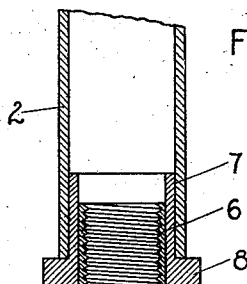
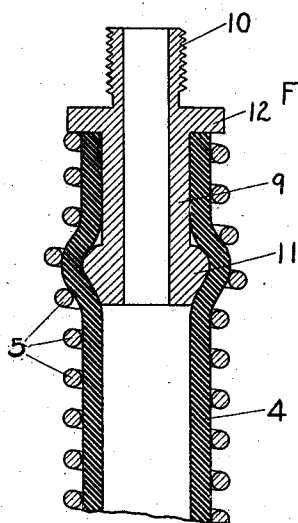


FIG. 4



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SHOWER-BATH-BRUSH CONNECTION

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Our invention relates to improvements in shower-bath brushes, and more particularly to couplings or connections between the rigid discharge tube and the flexible supply tube with which such brushes are provided, or which may be said to form parts of such brushes, and consists essentially of a peculiarly constructed bushing permanently affixed to the inlet terminal of the discharge tube of such a brush, and a nipple capable of being attached to the discharge terminal of a supply tube of such a brush, said bushing and nipple being adapted for screw-threaded engagement with each other, together with such other parts and members as may be necessary or desirable in order to render the connection complete and serviceable in every respect, all as hereinafter set forth.

Heretofore it has been customary to attach a nipple permanently to one end of the rigid discharge pipe of a shower-bath brush, and to force one terminal of the flexible supply tube, of said brush, onto and into engagement with such nipple, and the reenforcing and protecting spring at one terminal over and onto the portion of said inlet tube which embraces the nipple. This construction and arrangement make it very inconvenient to disconnect the supply tube from the discharge tube and again connect it therewith, operations which are required more or less frequently; and such construction and arrangement also are responsible for injury to and wear of the terminal portion of the inlet tube which is attached to the nipple, in proportion to the frequency of the connecting and disconnecting operations. The primary object of our invention is, therefore, to overcome the above-noted objections and difficulties, which we do by providing the shower-bath brush with a connection of such a character that is capable of being easily and quickly disengaged, the one part from the other, and as easily and quickly engaged or coupled together, the one part to the other. Our connection necessarily renders the brush very much more convenient, and prolongs the life of the supply tube.

The discharge tube, of a brush of this character, is usually made of material which

is affected to a considerable extent by changes in temperature, and is fragile, such as celluloid, and another object of our invention is to provide reenforcing and strengthening means for the inlet terminal of such tube. It is at the inlet end of the discharge tube that the strain comes from the inlet tube which is attached to or connected with such end. The strengthening and reenforcing means for the inlet end of the outlet tube consists of an exterior flange bushing of material such as celluloid, and an interior bushing of material such as metal, the two bushings being permanently united, and said inner bushing being internally screw-threaded to receive an externally screw-threaded part of an associated nipple. The combination bushing thus formed is inserted in the inlet end of the outlet tube, with the flange of said bushing covering the edge portion of said inlet end, and permanently secured to said tube.

Other objects and advantages will appear in the course of the following description.

We attain the objects and secure the advantages of our invention by the means illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a shower-bath brush which embodies a practical form of our invention, that is to say, of the connection between the inlet and outlet tubes of the brush; Fig. 2, an enlarged, top plan of the combination bushing of said connection; Fig. 3, an enlarged, vertical section through said combination bushing and a portion of the outlet tube in which and to which said bushing is permanently attached, and, Fig. 4, an enlarged, vertical section through the nipple of said connection and attached portions of the supply tube and reenforcing spring.

Similar reference characters designate similar parts throughout the several views.

The shower-bath brush, illustrated in connection herewith, comprises a handle 1, a perforated discharge tube 2, a brush 3, an inlet tube 4, and a supporting and reenforcing spring 5. The brush 3, which is of loop formation, is secured to the handle 1 and projects above or beyond the same. The tube 2 is open at the bottom or inner end, is affixed

to the handle 1 and extends through said handle into the opening in the loop of the brush 3, and has perforations in the sides of that portion of said tube which is in said opening. Only a portion of the supply tube 4 is shown. This tube is adapted to have one end connected with a faucet or other water-supply fixture, and the spring 5, which is of the spiral type, encircles said tube adjacent to the other end thereof, and is for the customary purpose of preventing the tube from making too sharp a bend at and adjacent its point of connection with the tube 2, and thus supports, reenforces, and prolongs the life of said first-named tube. Both structurally and functionally all of these parts and members are old and well known.

The inner-end portion of the tube 2 is provided with a reenforcing, strengthening, and protecting, and coupling, combination bushing, which consists of an inner bushing 6, preferably of metal, and an outer bushing 7 of celluloid or more or less similar material, said inner and outer bushings being permanently united to make up said combination bushing. The combination bushing or the bushing 7 thereof fits the inside of the tube 2, and is rigidly and permanently attached to said tube. At the exposed terminal of the bushing 7 is an integral flange 8 that is in contact with the contiguous end-edge portion of the tube 2.

Thus it is seen that the combination bushing reenforces and strengthens the end of the tube 2 where said tube is subjected to strain from the tube 4, and at the same time affords a convenient coupling member which does not change its shape with changes in temperature. It is to be understood that the bushings 6 and 7 are cemented or otherwise securely and permanently united, and that said bushing 7 is cemented or otherwise permanently and securely united with the tube 2.

A longitudinally bored nipple 9 is provided for the tube 4, said nipple having at one end a screw-threaded projection 10 adapted to fit into the screw-threaded bushing 6, and at the other terminal a shouldered part 11 to be received in said tube at the terminal opposite that which is adapted to be attached to the faucet or other fixture. The nipple 9 also has a flange 12, between the main part of said nipple and the projection 10, to abut the flange 8 when said projection is screwed into the bushing 6, and assist in making or insuring a tight joint between the nipple and the combination bushing, and, therefore, between the tubes 4 and 2.

With the spring 5 located on the tube 4 some distance from the end of said tube which is to receive the nipple 9, the shouldered part 11 of said nipple is inserted in said tube end and the nipple is forced inwardly until said tube end encounters the flange 12. The spring 5 is now forced toward the end

of the tube 4 in which the nipple 9 is received, and over the portion thereof that embraces said nipple until the flange 12 is encountered. As a matter of fact, the tube 4 and spring 5 and the nipple 9 are connected with each other in very much the same way as formerly, but in the present case said nipple is to all intents and purposes permanently attached to said tube.

When it is desired to connect the tube 4 with the tube 2, it is simply necessary to screw the projection 10 into the bushing 6 as far as the flange 12 permits. The brush is then ready for use for shower purposes. When it is desired to disconnect the tube 4 from the tube 2, as in the event the brush is to be used for other than shower purposes, or independently and separately from said tube, the nipple projection 10 is unscrewed from the bushing 6. The coupling and uncoupling of the tubular parts and members are thus accomplished in an easy, convenient, and expeditious manner, and without stretching and wearing the tube 4 at the terminal where connection is made with the tube 2.

Although we prefer to make the bushing 6 of metal, it might be made of hard-rubber or other material which is stable under temperature changes, and not liable to shrink or expand to an appreciable extent.

It is conceivable that minor changes in the shape, size, construction, and arrangement of some or all of the parts of this connection may be made, without departing from the spirit of our invention or exceeding the scope of what is claimed.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination, in a connection of the class described, of a discharge tube of comparatively fragile material, a bushing of comparatively fragile material extending a short distance into said tube at one end, said bushing having a wall of uniform thickness in said tube, a clear passage therethrough from end to end, and an exterior flange covering the contiguous end of said tube, and being cemented to the tube, and a thin interiorly screw-threaded bushing, of material that is comparatively stable under temperature changes, in said first-named bushing and cemented thereto, and in part within the confines of said tube, said second-named bushing having clear passage therethrough from end to end, whereby the terminal of said tube which is thus provided with the two bushings is reenforced and strengthened, the tube passage is somewhat constricted, and said tube is provided with means for attaching and detaching a nipple to and from the same.

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