June 10, 1930. D. P. MacKENZIE 1,762,518

SPRINKLER WITH SOAP HOLDING ATTACHMENT

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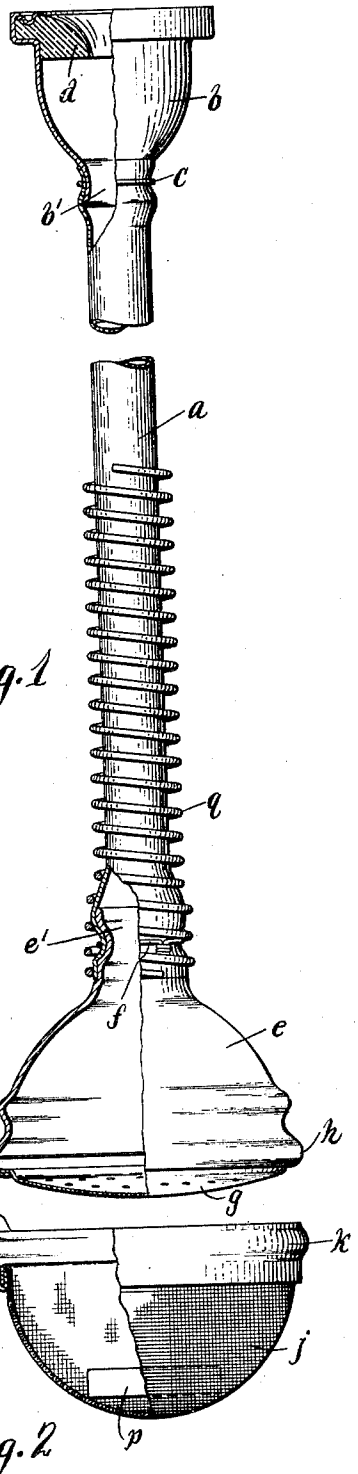


Fig. 1

Fig. 2

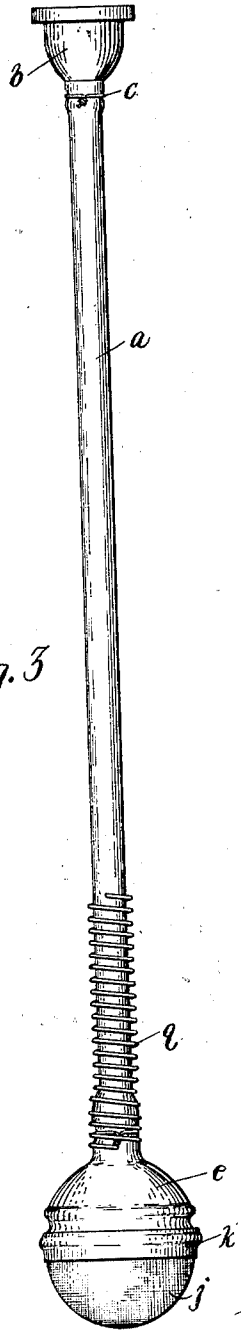


Fig. 3

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UNITED STATES PATENT OFFICE

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SPRINKLER WITH SOAP-HOLDING ATTACHMENT

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The present invention relates to means for spraying or sprinkling water and at the same time making a soap solution of the water delivered by the spray means. My object has been to provide an appliance for domestic use primarily, and also for any other use to which it may be adapted, of a simple character, by which water containing soap in solution may be delivered; such appliance being readily convertible so as to deliver clear water unmixed with soap.

I am aware that it has been proposed heretofore to introduce a soap container in the path of water flowing to a delivery point, whereby suds are delivered. But in all such means, so far as I am aware, the soap container is located between the source of water and the delivery point, where it is difficult of access for replenishment of the soap supply, and from which it cannot be removed without equal difficulty. My invention is an improvement over those which have been heretofore proposed both in respect to the ease with which the soap supply may be replenished and the soap removed from the water stream when the user desires to deliver clear water only; and also in the lower cost at which it may be made and sold.

In carrying this invention into effect, I have provided a flexible hose adapted for attachment to water taps or the like sources of water supply and having a sprinkler head, and an external soap container detachably mounted on the sprinkler head across the paths in which the streams therefrom pass and having numerous perforations through which the water and dissolved soap mixed therewith may flow.

In the drawings,—

Fig. 1 is an elevation, partly broken away and shown in section of a hose pipe with coupling member and spray head;

Fig. 2 is a partial elevation and partial section of my new soap holder adapted to be attached to the spray head of Fig. 1 in making the complete combination of this invention; and

Fig. 3 is an elevation showing the spray head, hose and soap holder of the invention assembled in combination with one another.

Like reference characters designate the same parts wherever they occur in all the figures.

a represents a flexible rubber hose and typifies any sort of a conduit for water whether flexible, rigid, or rigid and articulated. To one end of the hose is connected a coupling *b* which, in this embodiment, has a contracted end *b'* passed within the flexible hose and secured by an external binder *c*, and an opposite enlarged end fitted with an annular internal packing ring *d* of rubber or other suitable flexible and resilient water-impervious material or structure adapted to be passed over the end of a water tap. This coupling in itself is not new and is typical of any coupling suitable for connecting the hose with a source of water.

To the opposite end of the hose is connected a spray head *e* having a contracted end *e'* contained within the end of the hose and secured by a binder *f*. The end of the spray head is formed by a wall *g* containing numerous perforations through which the water issues in fine streams. Externally it is formed near the end with a rounded bead or shoulder *h*. This spray head is likewise not new in itself, and typifies any article or device which may be used in this combination for delivery of the water, whether in distinct streams or a single stream or as a spray, etc. and otherwise adapted for mounting and securing a soap holder.

The soap holder or container is of open foraminous construction, conveniently made mainly of woven wire fabric *j* and having a rim *k*, of sheet metal or other suitable material, to which the wire fabric part of the container is secured. The joint between these parts is shown at *l* in Fig. 2 and is operatively made by bending over and interlocking flanges on the adjacent edges of the mesh fabric and the band, pressing the turned up flange of the band closely against the adjacent part of the band with pressure enough to secure the wire fabric. The rim *o* of the band is somewhat contracted and made with an internal diameter slightly less than the diameter of the bead *h*; but at the same time large enough and of sufficient capacity for stretch-

ing to permit of its being passed over the bead and then to interlock with the bead by resilient contraction and friction sufficiently to secure the soap container to the spray head. The rim or edge *o* may be reinforced by being curled over or by an attached wire ring, around which the edge may be curled over, according to principles well understood by those skilled in the manufacture of sheet metal articles.

Other forms, constructions, and modes of attachment may, however, be adopted for the soap container without departing from the spirit of the invention, the important characteristics of which are that the soap holder permits free flow and discharge of water, is applied externally of the spray head or equivalent discharge member, and is easily applied and removed. The specific construction, however, is preferred to some of the others which may be used on account of its simplicity and low cost of manufacture and the fact that it can be applied and removed by simple pressure in snapping its rim over the bead of the sprinkler head, requiring no manipulation of separate fastening means.

The device of this invention, when the soap container is adequately supplied with soap and hot water is delivered through it, furnishes a sufficiently concentrated solution of soap for washing purposes. It is well adapted therefore for such uses as dish washing, the bath, washing the hair, etc. The fact that it applies soap in the form of a solution to the thing being washed is of conspicuous advantage and avoids liability of particles, or a film, of soap being left on dishes or remaining in the hair, etc. After being used for washing with soap, the soap container may be removed and the device then used for rinsing with either hot or cold water.

A helical wire guard *g* is shown as applied to surround the hose adjacent to the sprinkler head, for the double purpose of protecting the hand of the user grasping it from the heat of the hot water passing through, and preventing the hose from being so sharply bent as to obstruct its passage.

It will be understood that the mention of certain uses above is illustrative rather than limiting and that the protection which I claim includes the combined article herein described, and all substantial equivalents thereof, in any use to which the same may be put.

What I claim and desire to secure by Letters Patent is:

1. A washing apparatus comprising a sprinkler head adapted to be connected with a source of water and having a perforated wall through which water may issue in streams, combined with a soap holder detachably connectible with said sprinkler head in a position wherein it embraces said perforated wall and extends across the paths of streams issuing therefrom, having foraminous walls and being formed to provide a pocket adapted to hold soap between said foraminous walls and the before named perforated wall.

2. The combination of a hose, a sprinkler head secured to said hose and a soap holder detachably mounted externally on said head to embrace the outlet thereof, said soap container being of hollow formation to contain soap in the path of water issuing from the head, and having openings for escape of such water and the soap dissolved thereby.

3. A water conduit and a sprinkler head secured to the end thereof, combined with a hollow foraminous soap container having a rim shaped and proportioned to slip over the end of the head and make detachable connection therewith.

In testimony whereof I have affixed my signature.

DANIEL P. MacKENZIE.