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DEVICE FOR ADMIXING A CLEANSING
AGENT WITH A STREAM OF FLUID
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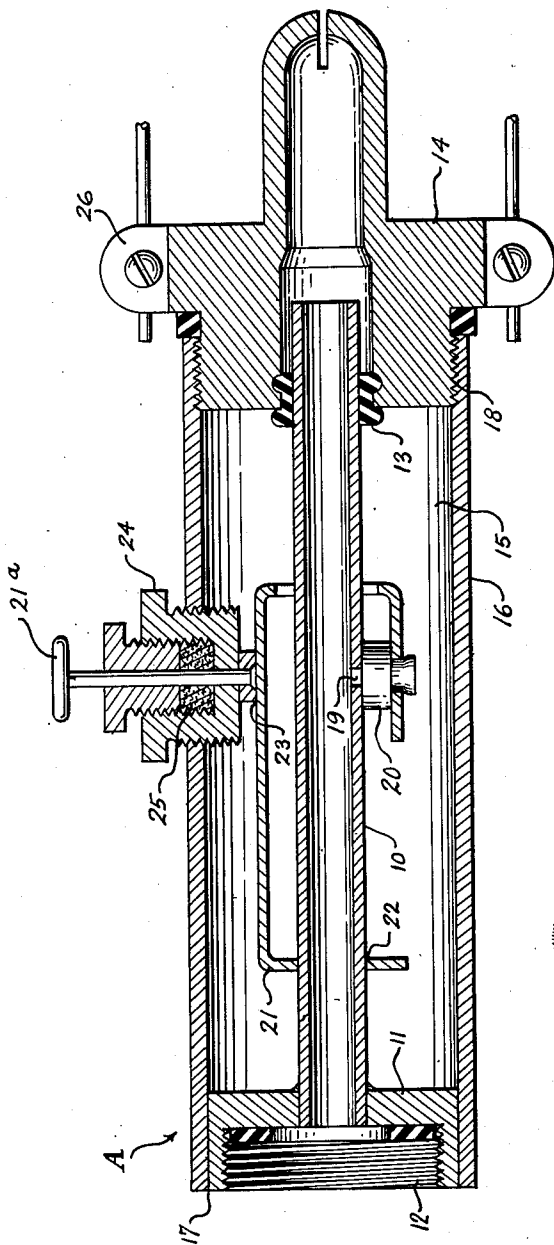


Fig. 1

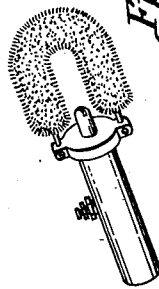


Fig. 2

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DEVICE FOR ADMIXING A CLEANSING
AGENT WITH A STREAM OF FLUIDGeorge F. McGregor, Toronto, Ontario, Canada,
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4 Claims. (Cl. 299—83)

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This invention relates to a device for admixing a cleansing agent with a stream of fluid such as water as it emerges from a hose.

Various devices have been invented in the past for the purpose of admixing soap and other cleansing agents with a moving stream of water. They have, to my mind, been quite complicated and costly to manufacture. I have devised an extremely simple device for effecting this function which is rugged, simple in construction, and cheap to manufacture.

It is then an object of this invention to provide a simple, rugged, cheap to manufacture device which will function in a reliable way to admix desired quantities of a cleansing agent with a stream of water or the like.

With this and other objects in view, a device for admixing a cleansing agent with a stream of water from a hose according to my invention comprises a water conduit formed at one end for connection with a hose and at the other end for connection with a nozzle, a cleansing agent jacket communicating with said water conduit, valve means for blocking said water conduit from communication with said jacket when closed, and manually operable means for opening and closing said valve means. The invention will be clearly understood after reference to the following detailed specification read in conjunction with the drawings.

Figure 1 is a cross sectional view of a device according to the present invention.

Figure 2 is a perspective view of a device according to the invention showing a scrubbing brush attached.

Referring to the drawings, the letter A generally indicates a device according to the present invention for admixing a cleansing agent with a stream of water or the like. It includes a conduit 10, one end of which carries a plug 11 that is internally threaded as at 12 for connection with a water hose, and the other end of which mates with the rubber gasket 13 that is carried by the nozzle 14 to form a seal. A cleansing agent jacket 15 formed by the tubular member 16 which extends between the shoulders of plug 11 and of the nozzle 14 surrounds the conduit 10.

The tubular member 16 is a push fit with the plug 11 as at 17 and is internally threaded for engagement with the nozzle 14 as at 18.

The conduit 10, according to the invention, is formed with a hole as at 19 through which the interior of the conduit 10 communicates with the jacket 15. A valve 20, urged to a closed posi-

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tion by the spring means 21, normally blocks communication between the conduit 10 and the jacket 15. The valve 20 though, can be unseated by manually depressing the plunger 21a against the pressure of spring 21.

I have found that the device works very well when hole 19 is $\frac{1}{8}$ of an inch in diameter. Sizes smaller or larger than this are also practical though.

The construction of the spring for holding the valve in a closed position will, it is thought, be evident from the drawings without further detailed reference other than to say the spring means 21 is securely anchored to the conduit as at 22. The plunger 21a which bears against the spring means as at 23 reciprocates within the housing 24 which is of conventional construction. The numeral 25 indicates packing for the purpose of sealing the chamber 15 at the plunger 21a.

The nozzle 14 is preferably formed as at 26 to receive the ends of a wire scrubbing brush or the like.

In use the nozzle 14 is unscrewed from the cylinder 16 and a quantity of soap or other cleansing agent is placed in the cleansing agent jacket 15, the nozzle is replaced and the water hose is threadedly connected to the plug 11. As the water flows through the hose it will pass through the conduit 10 and out the nozzle 14. When it is desired to admix soap or other cleaning fluid contained within cleansing agent chamber 15 with the stream as it emerges from the nozzle 14, it is merely necessary to depress the plunger 21. This unseats the valve 20 from its seat over the passage 19 and permits communication between the chamber 15 and the conduit 10. Under these latter conditions a soapy solution from the chamber 15 will mingle with the stream as it passes through the conduit 10. The brush secured to the nozzle can be used to scrub as the soapy water is emitted.

Embodiments of the invention other than the one shown will be apparent to those skilled in the art and uses other than the one indicated will be apparent to many. I do not then, intend that the foregoing should be read in a limiting sense in any way.

What I claim as my invention is:

1. A device for admixing a cleansing agent with a liquid from a hose comprising a conduit, one end of said conduit being connectable to the free end of a hose, the opposite end of said conduit terminating in a nozzle, a sealed cleansing agent jacket surrounding at least a portion of said con-

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duit, said conduit being formed with a hole whereby the interior of said jacket communicates with the interior of said conduit, a valve for said hole in said conduit, and manually operable valve operating means operable from the exterior of said jacket for opening and closing said valve over said hole.

2. A device as claimed in claim 1 in which said hole formed in said conduit has a diameter of about $\frac{1}{8}$ of an inch.

3. A device for admixing a cleansing agent in a liquid stream comprising a conduit, a plug at one end of the conduit designed to connect said conduit with a fluid hose, a nozzle at the other free end of the conduit, a sealed cleansing agent jacket surrounding said conduit and extending between shoulders formed on said first mentioned and second mentioned plugs, said conduit being formed with a hole whereby the interior of said jacket communicates with the interior of said

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conduit, a valve, spring means normally seating said valve over said hole to block communication between said jacket and the interior of said conduit, and manually operable valve operating means on the exterior of said jacket for unseating said valve from said hole.

4. A device for admixing a cleansing agent in a fluid stream as claimed in claim 3 in which said hole is $\frac{1}{8}$ of an inch in diameter.

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