

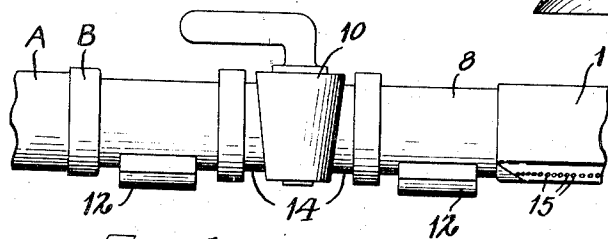
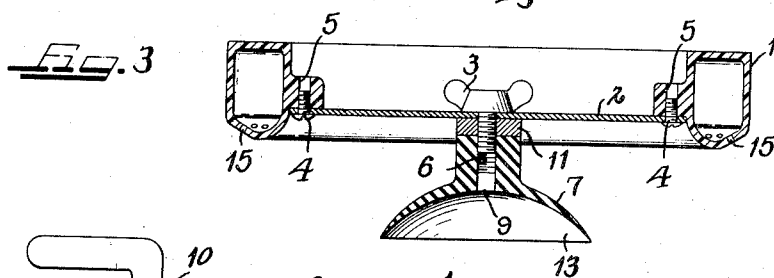
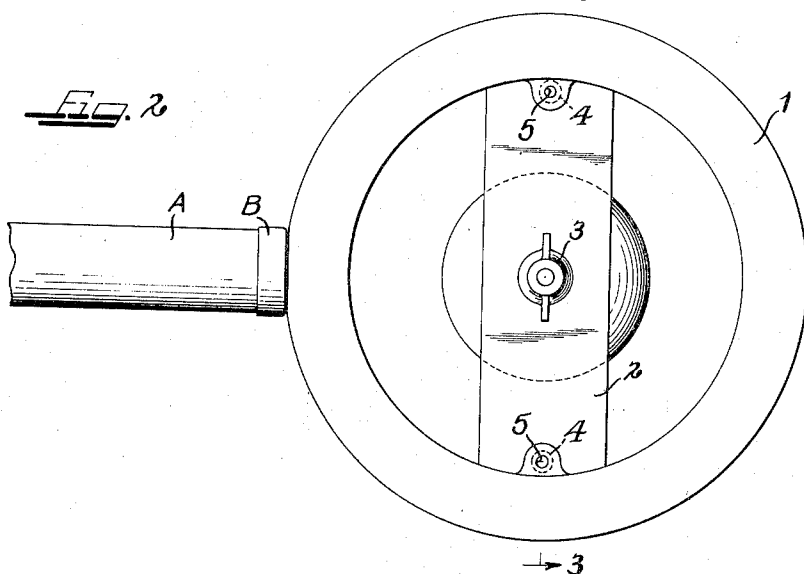
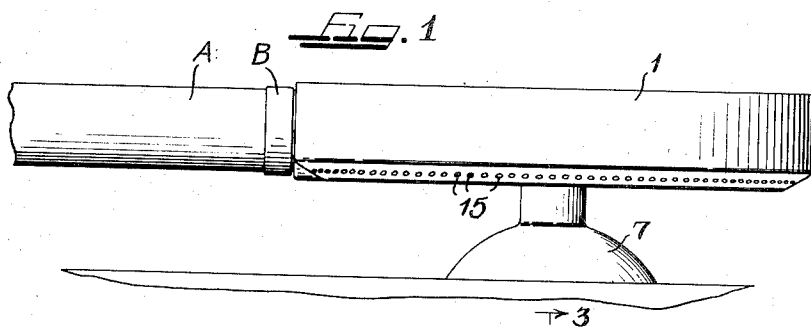
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SHOWER DEVICE

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SHOWER DEVICE

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1 Claim. (Cl. 299—75)

This invention relates to a shower device useful in washing vehicles and other objects having a substantial flat surface, and more particularly to devices suitable for carrying liquid under pressure from a source conduit, such as a rubber hose, and discharging the liquid over an area of the flat surface to be washed.

The use of liquid dispensing devices assisting in the washing of vehicles and other objects having a substantial flat surface has become increasingly popular, and has created a growing need for a device which is capable of discharging the liquid over the area to be washed while allowing the person using the device to have his hands free to work on other areas of the surface of the object being washed. In particular, known devices, such as brushes, sponges or mops, with a liquid source connected therethrough, have been found to be inadequate especially because the person using such a device must hold the device in one hand away from the surface of the object being washed while he is loosening dirt from the surface, or polishing the surface after the dirt has been removed. Also, as an alternative, the person using such known devices may put down the device, far enough away from the object being washed so that the liquid flowing through the device will not splatter on the object being washed, or he may return to the water or other liquid source and shut off the flow; these alternatives cost the person using such devices time, and make the use of such known devices even more inconvenient.

It is the intention of the present invention to provide a shower device which will leave both hands of the person washing the vehicle or other object free; which will allow such a person to leave the device in position attached to the surface to be washed; and which provides mechanism at the work end of a hose, closely adjacent the device, for shutting off the flow of liquid before it enters the device.

It is a primary object of this invention to provide a shower device for washing vehicles and other substantially flat surfaces which allows a smooth, steady stream of liquid to flow over the exterior surface of the object being washed, while at the same time leaving both hands of the person washing the object free to loosen dirt from said exterior surface, or work on other areas of said object.

Another object of the present invention is to provide a shower device attachable to a source of liquid under pressure which is efficient in operation and inexpensive in manufacture, and which will distribute the liquid over a desired area of the exterior surface of the object being washed, discharging the liquid from the device so as to cover an area on said exterior surface as large as or larger than the area defined by the surface of the device.

A further object of the present invention is to provide a shower device which is easily attached to the source of liquid under pressure and to the exterior of the object being washed, and which is readily movable to other areas of said exterior surface, said device being rigidly connected to said exterior surface while it is in washing position with the liquid source open.

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Another object of the present invention is to provide a shower device which can be slid over the wet surface of said object, after the water source has been opened, without disturbing the close engagement of the device to said exterior surface.

Still another object of the present invention is to provide a shower device which permits the liquid flow to be cut off at the end of the liquid-carrying conduit where the device is connected, rather than at a point closer to the liquid source.

These objects and advantages of my invention, together with other inherent advantages, will become more apparent from the following description of a preferred embodiment, wherein:

Figure 1 is an elevational view of the preferred embodiment of my invention, with hose attached and broken away, in washing position.

Figure 2 is a top plan view of the device as shown in Figure 1.

Figure 3 is a cross-sectional view of the preferred embodiment of my invention, along the line 3—3 of Figure 2.

Figure 4 is an elevational view of a pipe and valve structure attached to the sprinkler housing as shown in Figure 1, said sprinkler housing being broken away.

Referring now more particularly to the drawings, a hose A is attached to a hollow sprinkler housing 1, by means of a hose head B, which may be threadably engaged, plugged into, or otherwise secured to the hose A and the hollow sprinkler housing 1. Said hollow sprinkler housing 1 is of annular form and made from stamped metal in the preferred embodiment, although it may take any other channel or tubular form suitable for carrying liquid under pressure, and it may be made from any other suitable material.

Supporting bracket means 2 is mounted on said hollow sprinkler housing 1 by two screws 4, one at each end of the supporting bracket. The screws 4 are threaded into complementary screw holes 5 in the hollow sprinkler housing, and said screws penetrate through said supporting bracket, leaving the heads of said screws exposed on the underside of said supporting bracket. It is apparent that said supporting bracket may be otherwise mounted to said hollow sprinkler housing than shown in the preferred embodiment, as by being clipped into place, molded or integral with said housing, soldered to said housing, or otherwise connected, without departing from the spirit of my invention.

The supporting bracket 2 is perforated as to allow a winghead bolt 6 to project through said supporting bracket and anchor into the center hole 9 of a suction cup 7. A washer 11 is inserted between the top of said suction cup and said winghead bolt 6, immediately beneath the supporting bracket 2.

Perforations forming a plurality of spray apertures 15 are positioned along the bottom of said hollow sprinkler housing 1; and said spray apertures are outwardly inclined from said hollow sprinkler housing at about thirty to ninety degrees to the surface being washed, so that liquid spraying therethrough will cover an area as large or larger than the circumference of said hollow sprinkler housing.

A conduit or pipe 8, adaptable to fit into said hollow sprinkler housing 1 and the hose head B, may be inserted between the hose head and the hollow sprinkler housing. Said conduit is provided with a tapered valve 10 which is capable of cutting off the flow of liquid into said hollow sprinkler housing. The conduit is provided with resilient feet 12 on the underside of said conduit, said feet being adaptable to rest on the surface of the object being washed and thereby prevent scratching or otherwise marring of said surface.

Each and all of the members of the combination com-

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prising my invention set forth above may be made as integral parts, as by plastic molding or the like, without departing from the spirit of my invention.

When the device is in operation, with the liquid source open, the liquid will rush through the hose A into the hollow sprinkler housing 1, and it will be carried through the interior channel of said hollow sprinkler housing and forced out of said hollow sprinkler housing under pressure through said spray apertures 15. The suction cup 7 is mounted on the exterior surface of the object being washed at the desired position, and it is held in that position by pressure differential adherence. After the device has been properly positioned in the manner set forth, and the liquid source opened, the liquid will discharge from said spray apertures on to the desired surface of the object being washed.

When the person using the device wishes to move the device to another area of said surface, the device is lifted or pushed and placed back into the proper position by exerting pressure on said suction cup 7. If the surface is wet, the suction cup 7 will slide over said surface. If the surface of the object is dry, or has a low slidable friction coefficient so that the suction cup tends to firmly grasp said surface, the wing-head 3 of the bolt 6 may be turned in a conventional manner as to allow air to run into the bell 13 of the suction cup 7 through the center hole 9, thereby reducing the pressure differential between the air inside the bell and the air outside the suction cup, and releasing the hold of the suction cup to the surface of the object being washed.

The conduit 8 lends stability to the device when it is in operation by preventing the unequal pressures of the liquid running through the conduit to the hollow sprinkler housing from disrupting the equilibrium of the device, and spinning it around or causing the suction cup to loosen its grasp to the surface of the object to which it is attached. The conduit also acts as a carrying and positioning handle for the device since it is a convenient grasping member.

The valve 10 permits liquid flowing into the hollow sprinkler housing 1 to be cut off prior to its entry therein. Such a valve is of standard construction, and it can be inserted in the center of the conduit as a single unit, as

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shown at reference number 14 in the preferred embodiment, at either end of the conduit, or as a part of the hollow sprinkler housing itself, either at the liquid inlet or by a member adaptable to closing the spray apertures 15.

The principles of the present invention may be utilized in various ways, numerous modifications and alterations being contemplated, substitution of parts and changes in construction being resorted to as desired, it being understood that the embodiment shown in the drawings and described above is set forth merely for purposes of explanation and illustration, without intending to limit the scope of the claim as to specific details disclosed.

What I claim as new and desire to obtain by Letters Patent of the United States of America is the following:

In a spraying device for washing vehicles and the like, the combination comprising: a hollow housing of generally annular form defining a plenum chamber, said housing having an inlet adapted to receive liquid under pressure from a flexible supply hose and having a plurality of peripherally spaced discharge apertures, a rigid pipe member fixedly coupled to said housing at said pressure fluid inlet and adapted to conduct fluid flow from a flexible hose to said housing, whereby movement of said housing at said inlet due to line pressure variations is prevented, and suction cup means connected to said housing centrally thereof for detachably mounting said housing in spaced relation above a surface to be sprayed, said discharge apertures being oriented so as to direct said liquid in an outwardly divergent pattern from said casing directly against the surface to be sprayed.

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