Nov. 16, 1954 J. C. GOODE 2,694,546

WASHING DEVICE

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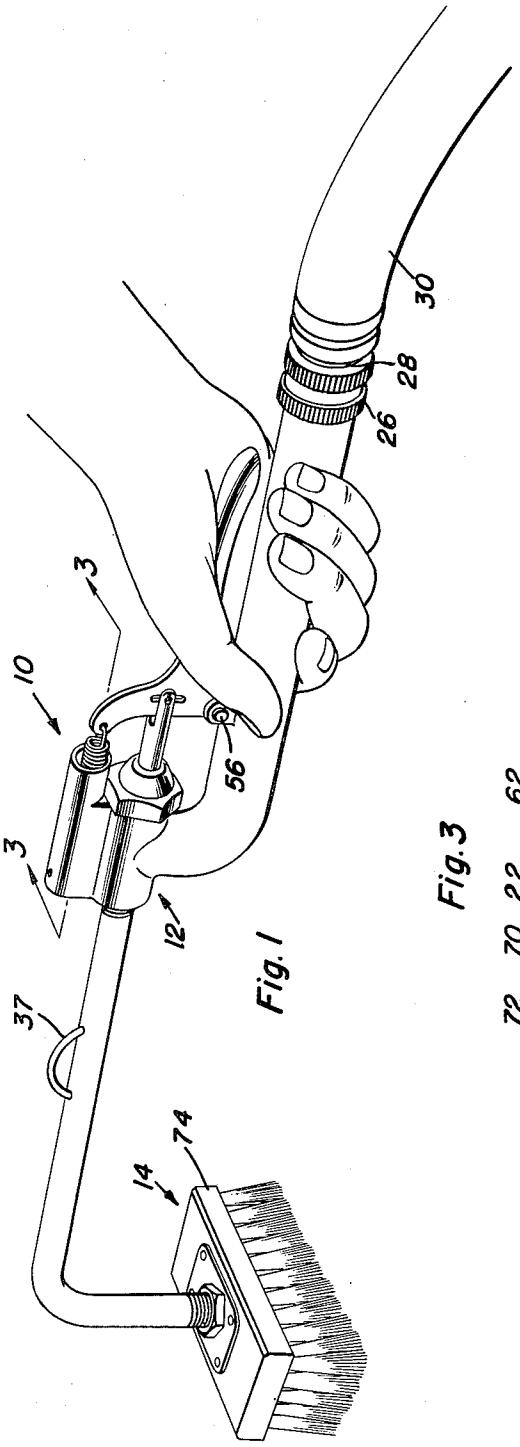


Fig. 1

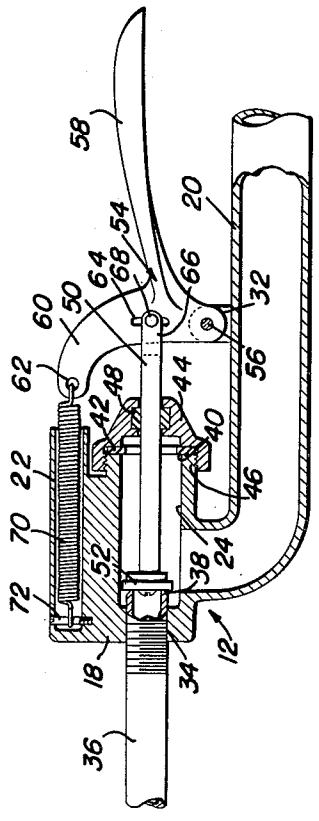


Fig. 3

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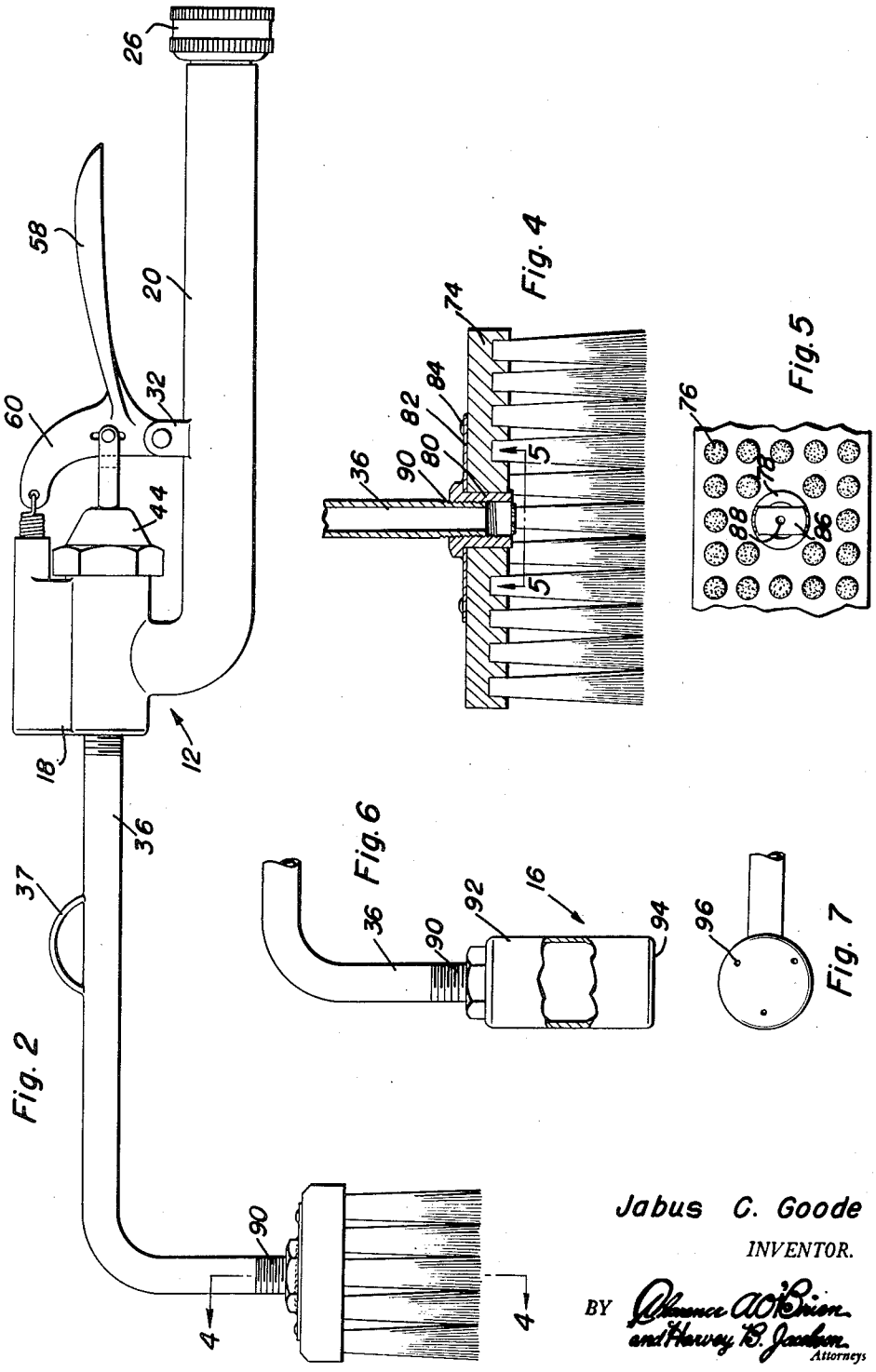
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WASHING DEVICE

Filed July 2, 1951 2 Sheets-Sheet 2



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2,694,546

WASHING DEVICE

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1 Claim. (Cl. 251—243)

The present invention relates to improvements in cleaning apparati and more particularly to an attachment for hoses, including a brushing means and a valve means for controlling the flow of fluid to the brush in preselected amounts.

An object of the present invention resides in the provision of an attachment for hoses which includes a fluid control means providing a handle for the cleaning apparatus and also a means for controlling the flow of fluid to a brush attached thereto whereby the operation of washing can be effectively accomplished by the scrubbing action of the brush accompanied by the spraying of fluid into the bristles of the brush.

Another object of the present invention resides in the novel arrangement of the valve means for controlling the flow of fluid through the brush, the valve means including a valve casing having a reciprocating valve provided therein and the valve casing having an inlet extension integrally formed therewith with its axis parallel to that of the valve casing and a handle controlling the reciprocating valve disposed in juxtaposed relation to the inlet extension and valve operating handle can be employed as a hand grip as well as a flow control means.

Another object of the present invention resides in the novel construction of the valve casing wherein a pair of cylindrical recesses are provided, one of the recesses providing a valve chamber in which a reciprocating valve is disposed and the other recess forming a spring chamber wherein a spring is disposed, a valve crank being provided for controlling the movement of the reciprocating valve and being in the form of a valve crank whereby the outer end of one of the arms of the valve crank can be attached to the spring for normally maintaining the valve in its closed position.

Various other objects and advantages will become apparent from the detailed description to follow. The best forms in which I have contemplated applying my invention are clearly illustrated in the accompanying drawings, wherein:

Figure 1 is a detail perspective view of the entire apparatus shown with a hose connected thereto with the operator gripping the inlet extension and valve controlled valve crank for performing a washing operation;

Figure 2 is a side elevational view of the device of Figure 1;

Figure 3 is a vertical longitudinal sectional view taken substantially along the plane of line 3—3 of Figure 1;

Figure 4 is a vertical transverse sectional view taken substantially along the plane of line 4—4 of Figure 2;

Figure 5 is a horizontal sectional view taken substantially along the plane of line 5—5 of Figure 4;

Figure 6 is a detail side elevational view of a spray attachment which can be employed in conjunction with the apparatus of the present invention; and

Figure 7 is a bottom plan view of the spray attachment of Figure 6.

Referring more particularly to the drawings, wherein like numerals designate like parts throughout, the numeral 10 designates generally the washing device of the present invention which is comprised of a valve control means 12 and attachments 14 and 16 for the outlet pipe of the valve means 12.

In Figures 1 through 3, the valve means 12 is seen to comprise a valve casing 18 having an inlet extension 20 substantially in parallel relation to the axis of the valve casing 18. The casing 18 has a pair of recesses, or bores, 22 and 24 formed therein and in parallel relation to each other, one of the recesses 24 providing a valve chamber while the other recess 22 provides a spring chamber. The inlet extension 20 is in open communication with the valve chamber 24 and has its open end formed with a connector 26 whereby the same can be connected to the threaded end 28 of a conventional hose 30. Intermediate the ends of the inlet extension 20 is provided a pair of upstanding bearing ears 32.

The valve casing 18 has a threaded opening 34 coaxial with the valve chamber 24 whereby the outlet pipe 36 can be threadably engaged therein, the inner end of the pipe 36 projecting into the recess 24 and providing a valve seat at 38, said outlet pipe 36 being smaller than said recess 24 so that said seat 38 clears the wall of the recess 24.

The opposing end of the valve chamber 24 is open at 40 and has a gasket 42 encircling the same. A bonnet 44 is threadably engaged on the valve casing at 46 and has a stuffing 48 provided therein. The valve stem 50 is reciprocably sealingly received through the opening in the bonnet 44 and stuffing 48 and has its inner end formed with a valve head 52 larger than the valve seat 38 which is adapted to engage the valve seat 38.

An operating handle in the form of a valve crank 54 is pivotally carried by means of the pin 56 extending through the ears 32, one arm portion 58 providing a handle in substantially parallel relation to the inlet extension 20, while the other arm portion 60 has an outer end apertured at 62. An intermediate portion of the arm 60 is formed with an elongated slot 64 whereby the bifurcated portion 66 of the valve stem 50 can be disposed on opposite sides thereof with the pin 68 extending through the bifurcated end 66 and the elongated slot 64, thereby providing a loose connection between the bellcrank 54 and the valve stem 50.

A tension spring 70 is disposed in the spring chamber 22 and has its inner end carried by the screw 72 extending transversely of the spring chamber 22. The outer end of the spring 70 is engaged in the aperture 62 for resiliently maintaining the valve crank 54 in a position shown in Figure 3 whereby the valve head 52 will be engaged against the valve seat 38.

It will thus be seen that with a supply of fluid from the hose 30 filling the valve chamber 24, flow out to the outlet pipe 36 can be controlled by manipulating the handle 58 in the manner shown in Figure 1 and in opposition to the tension spring 70.

The details of the attachment 14 are best seen in Figures 1, 4 and 5, wherein the attachment 14 is disposed as a brush having a bristle holding member 74 with a multiplicity of groups of bristles 76 mounted therein. The bristle holding member 74 is centrally apertured at 78 for receiving the bushing 80 therein. A plate 82, integrally secured to the bushing 80, is secured to the bristle holding member 74 by means of the screws 84. The bushing 80 has a plate 86 extending across the opening in the bottom thereof, the plate being formed with an aperture at 88.

The outer pipe 36 for the valve control means 12 is of elongated and angulated form and has a handle 37 integrally secured thereto to provide a hand grip. The free ends of the pipe 36 are externally threaded at 90 for threaded engagement in the internally threaded bushing 80 whereby a supply of fluid can be dispensed from the opening in the bottom of the bushing 80, the plate 86 acting as a deflector for a fluid so that a fluid will become disbursed among the bristle 76.

A second form of attachment 16 is disclosed in Figures 6 and 7 as including a cylindrical element 92 which is threadably engaged on the threaded end 90 of the pipe 36 and has its bottom wall 94 formed with a plurality of minute apertures 96 whereby a fine spray can be produced for washing the undersides of fenders.

In view of the foregoing description, taken in conjunction with the drawings, it is believed that a cleaning device has been provided which will accomplish all of the objects hereinabove set forth.

Having described my invention, what is claimed as new is:

A cleaning attachment for hoses comprising an elongated tube having a hose attaching means at one end, the

other end portion of said tube being upturned and having a valve housing mounted thereon in longitudinally offset parallel relation to the axis of the tube and having front and rear ends, said valve housing having an axial valve bore extending therethrough, said other end portion of said tube opening into said valve bore intermediate the ends of said valve bore, an outlet pipe in the front end of said housing having an inner end projecting into said bore and smaller than said bore and forming a valve seat spaced from said front end and clearing said bore, a valve stem reciprocably disposed in said bore and having at one end a valve head larger than said seat for closing said outlet pipe, the free end of said valve stem projecting rearwardly in overlying relation to said tube, a bell crank pivotally carried on said tube intermediate the ends thereof, the free end of said valve stem being connected to one arm of said bell crank intermediate the ends of said one arm, the other arm of said bell crank overlying said tube and serving as a handle to pivot the bell crank and withdraw the valve stem closing means from the outlet pipe, said valve

housing having a second bore above and parallel to said valve bore and having a blind front end, said second bore opening at the rear of said housing, a crosspin in the blind end of the second bore, a coil spring disposed in said second bore and connected to the free end of said one arm of said bell crank and to said crosspin to continuously urge said valve head into closing engagement with said valve seat to close said outlet pipe.

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