March 12, 1957 A. G. WHALEY 2,784,432

HOSE WASHER

Filed Jan. 22, 1954 3 Sheets-Sheet 1

FIG. 6.

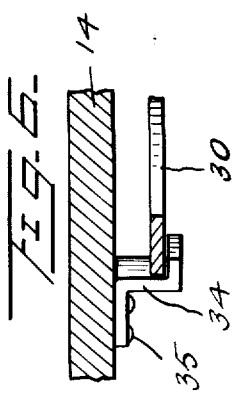


FIG. 1.

INVENTOR

Arthur G. Whaley

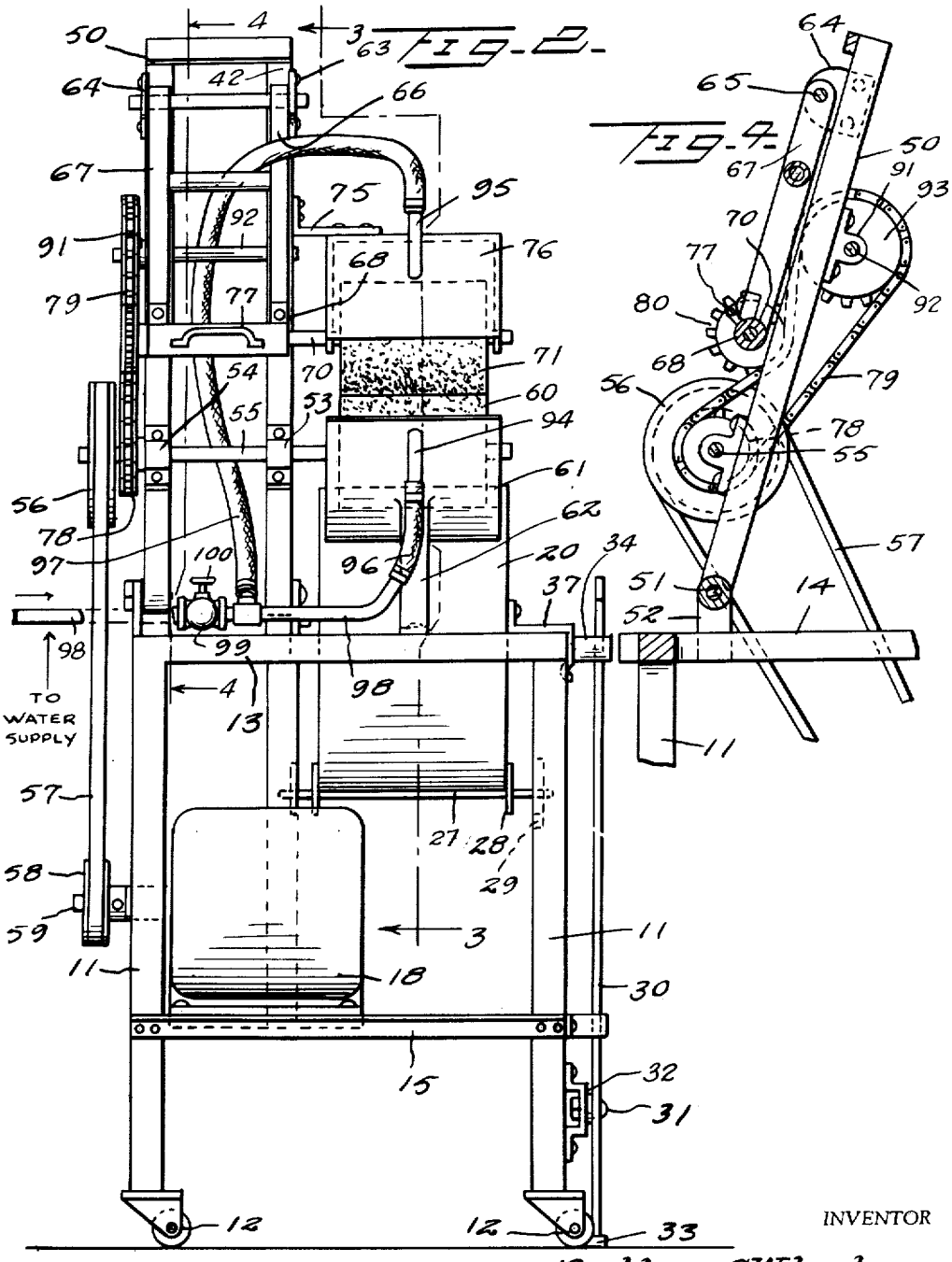
BY Kimmel & Crowell

ATTORNEYS

March 12, 1957 A. G. WHALEY 2,784,432

HOSE WASHER

Filed Jan. 22, 1954 3 Sheets-Sheet 2



INVENTOR

Arthur G. Whaley

BY Kimmel & Crowell

ATTORNEYS

March 12, 1957 A. G. WHALEY 2,784,432

HOSE WASHER

Filed Jan. 22, 1954 3 Sheets-Sheet 3

FIG. 5.

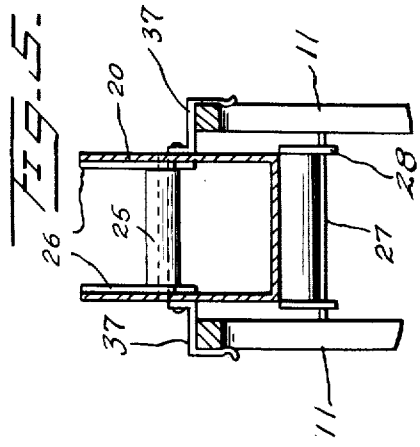


FIG. 3.

INVENTOR

Arthur G. Whaley

BY Kimmel & Crowell

ATTORNEYS

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2,784,432

HOSE WASHER

Arthur George Whaley, Oak Harbor, Ohio

Application January 22, 1954, Serial No. 405,634

3 Claims. (Cl. 15—40)

This invention relates to a hose washer or hose cleaning device, and has as its primary object the provision of a device for washing hose, particularly of the canvas type such as is used in fire engine houses, or the like.

An additional object of the invention is the provision of a device of this character wherein a section of hose of any desired length may be run through the apparatus and thoroughly cleaned with a minimum of effort and difficulty.

Still another important object of the invention is the provision of a device of this character provided with cleaning or scrubbing brushes, and having means whereby one of said brushes may be swung outwardly about a pivot to facilitate the passage of coupling sections of the hose between the brushes.

Still another object of the invention is the provision of a device of this nature which is sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture, assemble, and utilize.

Still other objects will in part be obvious, and in part be pointed out as the description of the invention proceeds, and shown in the accompanying drawings wherein there are disclosed preferred embodiments of this inventive concept.

In the drawings:

Figure 1 is a side elevational view of one form of device embodying features of the instant invention, an alternative position thereof being indicated in dotted lines.

Figure 2 is an enlarged rear elevational view of the construction of Figure 1.

Figure 3 is a sectional view taken substantially along the line 3—3 of Figure 2 as viewed in the direction indicated by the arrows.

Figure 4 is a sectional view taken substantially along the line 4—4 of Figure 2 as viewed in the direction indicated by the arrows.

Figure 5 is a detailed sectional view taken substantially along the line 5—5 of Figure 1 as viewed in the direction indicated by the arrows.

Figure 6 is an enlarged sectional view taken substantially along the line 6—6 of Figure 1 as viewed in the direction indicated by the arrows.

Similar reference characters refer to the similar parts throughout the several views of the drawings.

Having reference now to the drawings in detail, there is generally indicated at 10 a main supporting frame which includes uprights 11 supported on castors 12 for movement thereof, and further includes end horizontal bar members 13 and side bars 14 at the top thereof. Longitudinally transversely extending bars 15 extend intermediately between the uprights 11 at a midpoint thereof, as do longitudinally extending bars 16, the bars 16 supporting a base plate 17 which carries a motor 18, of any desired conventional type.

The main frame carries a tank 20 adapted for the reception of a detergent or similar cleaning fluid, which tank incorporates a roller 21 carried by bearings 22 at

the inlet end thereof, and a second roller 23 carried by brackets 24 at the outlet end thereof, rollers 21 and 23 serve to guide and support the hose through the tank 20, and are locked at the upper extremities of the opposite ends thereof.

An intermediate roller 25 is supported by depending bearing members 26 forwardly of the center of the tank for guiding the hose therethrough. The tank 20 is rockably supported on a removable shaft 27 extending through bracket bearings 28 and 29 carried by the tank and frame respectively. The tank 20 is locked in horizontal position by means of resilient clips 37 fixed to the sides of the tank and engageable over the upper frame bars 14.

From the foregoing description it will now be seen that the hose to be cleaned or washed is passed through the tank, and thoroughly soaked with the detergent and substantially scrubbed, in a manner to be more fully described hereinafter.

In order to preclude movement of the tank 20 and its associated mechanism when in use, there is provided a locking bar 30 which is pivotally secured as by a pivot 31 mounted in a bracket 32 adjacent the lower extremity of one of the uprights or legs 11, bar 30 being provided with a serrated foot portion 33 for engagement with the floor or similar surface on which the frame mechanism is adapted to rest. The upper extremity of the pivotally connected bar 30 may be engaged in a clip like member 34 which is mounted on the adjacent longitudinally extending bar member 14, being secured thereto as by means of bolts or rivets 35.

A bracket 40 serves pivotally to support, as on a pivot 41, an upright member 42, which in turn carries an intermediate pivot 43 to which is secured a rod or link 44 provided at its lower extremity with a plurality of spaced apertures 45 any one of which may be connected as by means of a bolt 46 to a suitable aperture in the adjacent longitudinally extending member 14 for securing the upright 42 in desired angular relation relative to the tank 20.

A second upright 50 is mounted on the opposite longitudinally extending bar 14 as by a pivot 51, carried by a bracket 52, and extends in parallel relation to the upright 42. Uprights 42 and 50 carry, respectively, a pair of journals 53 and 54 within which is rotatably mounted a shaft 55, which carries at its outer extremity a pulley 56, which is adapted to be rotated by means of a belt 57 extending from a corresponding pulley 58 carried by the motor shaft 59 of motor 18. The opposite end of shaft 55 carries a scrubbing brush 60 which is protected by a guard member 61 fixedly supported on a bracket 62 carried by the adjacent member 13.

Brackets 63 and 64 are carried by the upper extremities of uprights 42 and 50 respectively, and carry rotatably a pivot 65 which serves to support a pair of depending bars 66 and 67 respectively, which carry adjacent their lower extremity a bearing bracket 68 which carries an axle 70, on one end of which is mounted a rotatable brush 71, the latter being positioned in parallel relation with brush 60 and adapted to be rotated concurrently therewith, in a manner to be more fully described hereinafter.

Depending bar 66 carries a supporting bracket 75 which in turn supports a hood 76 and a handle 77 is secured to bearing bracket 68. The hood 76 prevents splashing of water or other fluid therefrom.

The brushes are obviously rotatable, and the drive thereof is effected by a sprocket 78 carried by the shaft 55 which in turn drives a chain 79 which drives a sprocket 80 carried respectively by the members 66 and 67, the sprocket 80 being mounted exteriorly of the chain so that the brush 71 may be pivotally swung about the pivot 65 outwardly of the uprights 42 and 50 by means of the

handle member **77** along with its associated guard or shield **76** to permit the passage of a hose coupling, in the event that several sections of hose are connected together between the brushes.

The upright members **42** and **50** carry respectively, brackets **90** and **91** which in turn support a stub shaft or axle **92**, which carries a sprocket **93** about which the upper extremity of the chain **79** passes for securing the same in related assembly about the associated sprocket **78**.

Water is discharged onto the hose behind the brushes **60** and **71** by means of lower and upper water jets **94** and **95** respectively, which in turn are provided with water through flexible hose connections **96** and **97** respectively, the jets per se being secured respectively in the hood members **61** and **76**. The water discharged from the jets **94** and **95** serves to rinse the dirt or loose material on the outer surface of the hose.

As best shown in Figure 2 the flexible hose connections **96** and **97** are provided with water from a common supply line **98**, and the flow of fluid is controlled by a valve **99** having an operating handle **100** therefor.

From the foregoing, the operation of this apparatus should now be readily understandable. Hose to be cleaned is first fed into tank **20** over roller **21** and passes over rollers **21** and **23**, and under roller **25**, between brushes **60** and **71**, which are rotated at relatively high speed through the previously described chain and sprocket connections.

Simultaneously, clean water is supplied through jets **94** and **95** to remove all of the soap, detergent, and/or similar material with which the hose has been covered in tank **20**. A thorough scrubbing is simultaneously effected by means of the brushes **60** and **71**, and the hose emerges from the exit end of the apparatus in thoroughly cleaned condition.

Obviously when a hose connection is reached, the brush **71** is swung outwardly to the dotted line position in Figure 1, until the connection is passed, at which time it is biased back into position by means of a spring **101** connected as by hooks or clips **102** and **103** respectively connected to link **44** and depending bar **66**.

From the foregoing, it will now be seen that there is

herein provided a device which accomplishes all of the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made of the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

What is claimed is:

1. A machine for cleaning flexible hose, comprising a supporting frame, an elongated reservoir mounted in the framework for confining a liquid cleaning agent, means for directing said flexible hose through the liquid in the reservoir to revolvably mounted brushes mounted exteriorly of one end of the reservoir, said brushes each being mounted in a horizontal plane one above the other, one of said brushes being pivotally mounted and spring urged into contact with the other of said revolving brushes, manual means for urging said spring urged brush out of contact with the other brush, and water jets mounted exteriorly of the reservoir for directing a rinsing stream of water on the hose after a section of the hose has passed through the reservooir and the pair of revolving brushes, whereby water from the discharge jets does not enter the reservoir to adulterate the cleaning agent contained therein.

2. The structure according to claim 1 wherein the water discharging jets and brushes are hooded.

3. The structure according to claim 1, in which the brushes and the reservoir are pivotally mounted on the supporting framework.

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