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(54) **BROOM SPRAYER APPARATUS**

(57)

ABSTRACT

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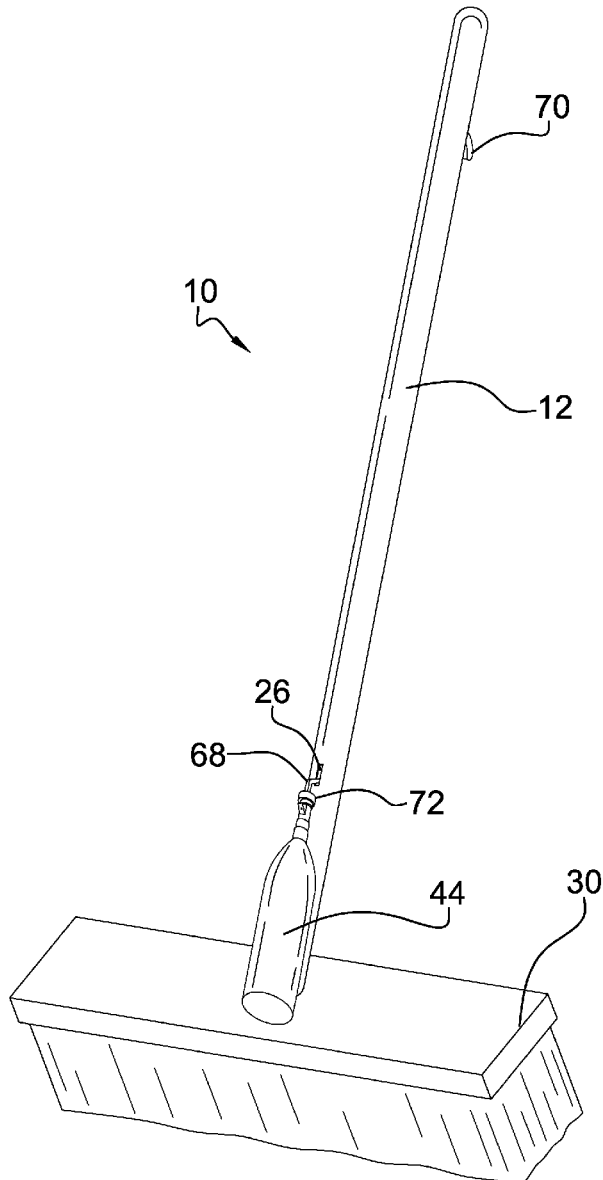
(51) **Int. Cl.**

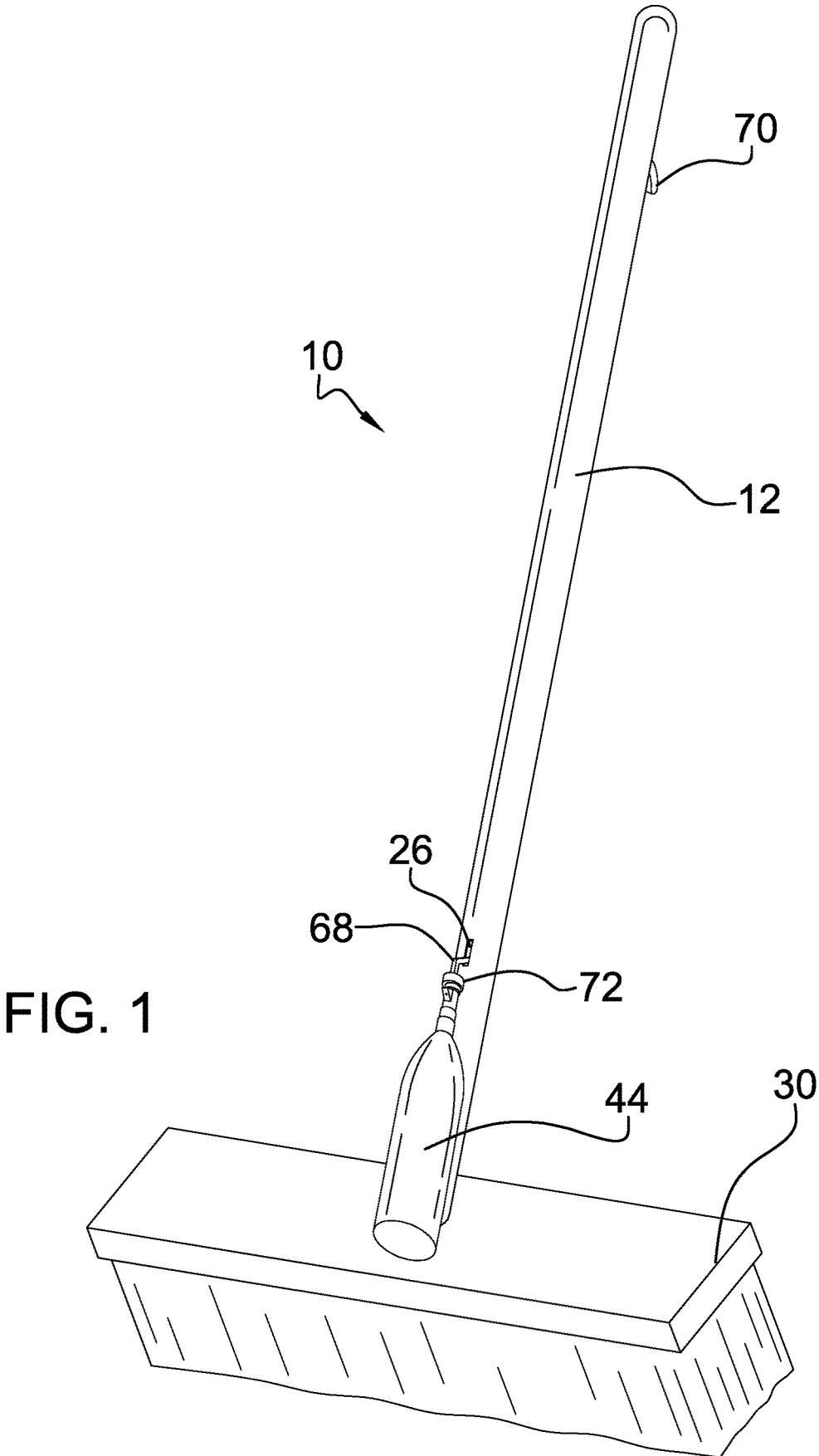
A46B 11/00 (2006.01)

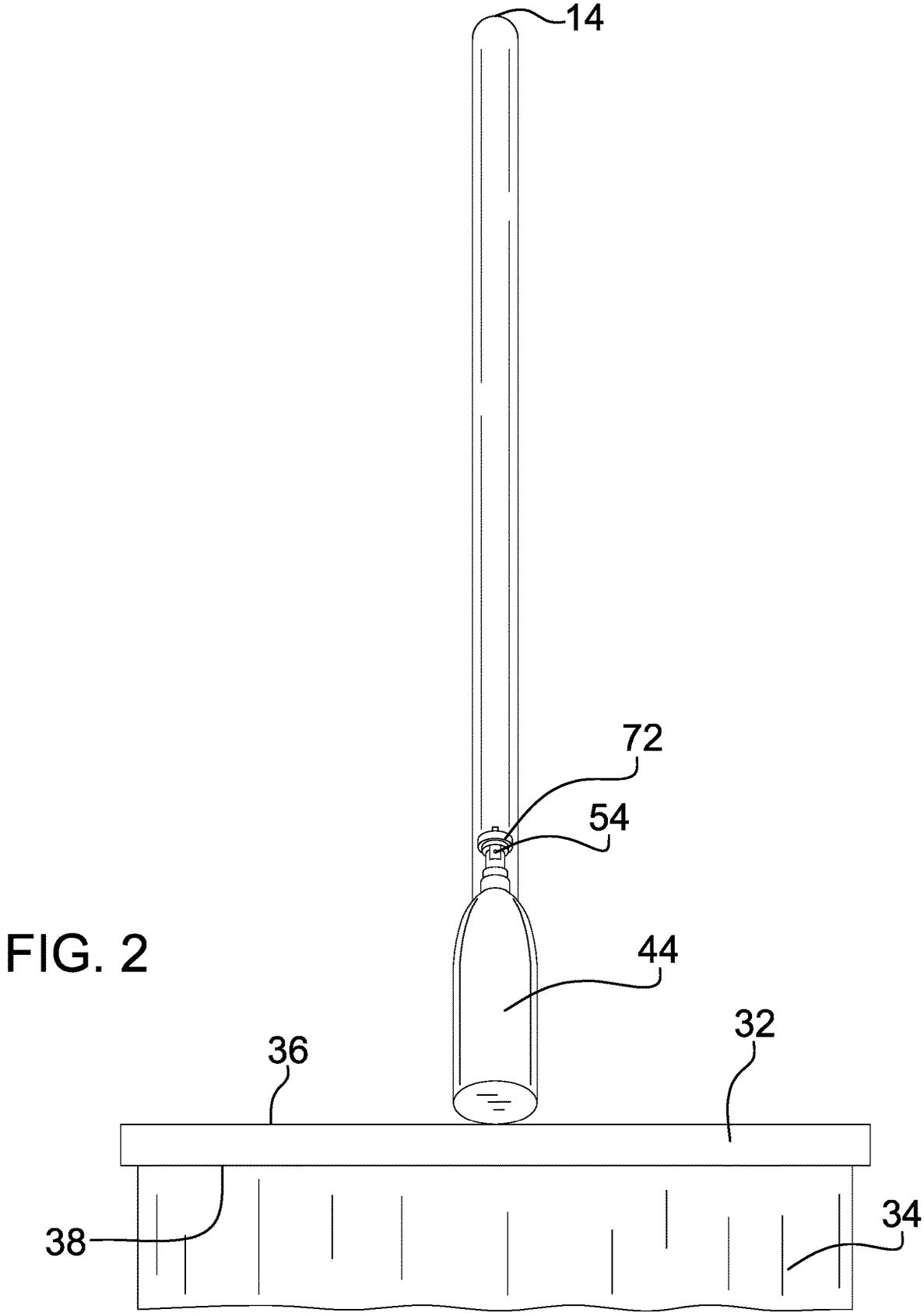
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CPC *A46B 11/0055* (2013.01); *A47L 13/26*
(2013.01); *A46B 11/0062* (2013.01)

A broom sprayer apparatus for wet sweeping includes a handle and a broom head. A bottle mount is selectively engageable with the handle. A spray assembly is coupled to the bottle mount. The spray assembly comprises a reservoir bottle and a spray mechanism. The reservoir bottle is coupled to the bottle mount and the spray mechanism is coupled to, and in fluid communication with, the reservoir bottle. The spray assembly is configured to spray a liquid in front of the broom head when activated. A trigger assembly is coupled to the spray mechanism and comprises a push rod coupled to the spray mechanism and a pull trigger coupled to the push rod. The pull trigger has a rest position and a pulled position. The pull trigger activates the spray assembly when moved from the rest position to the pull position.







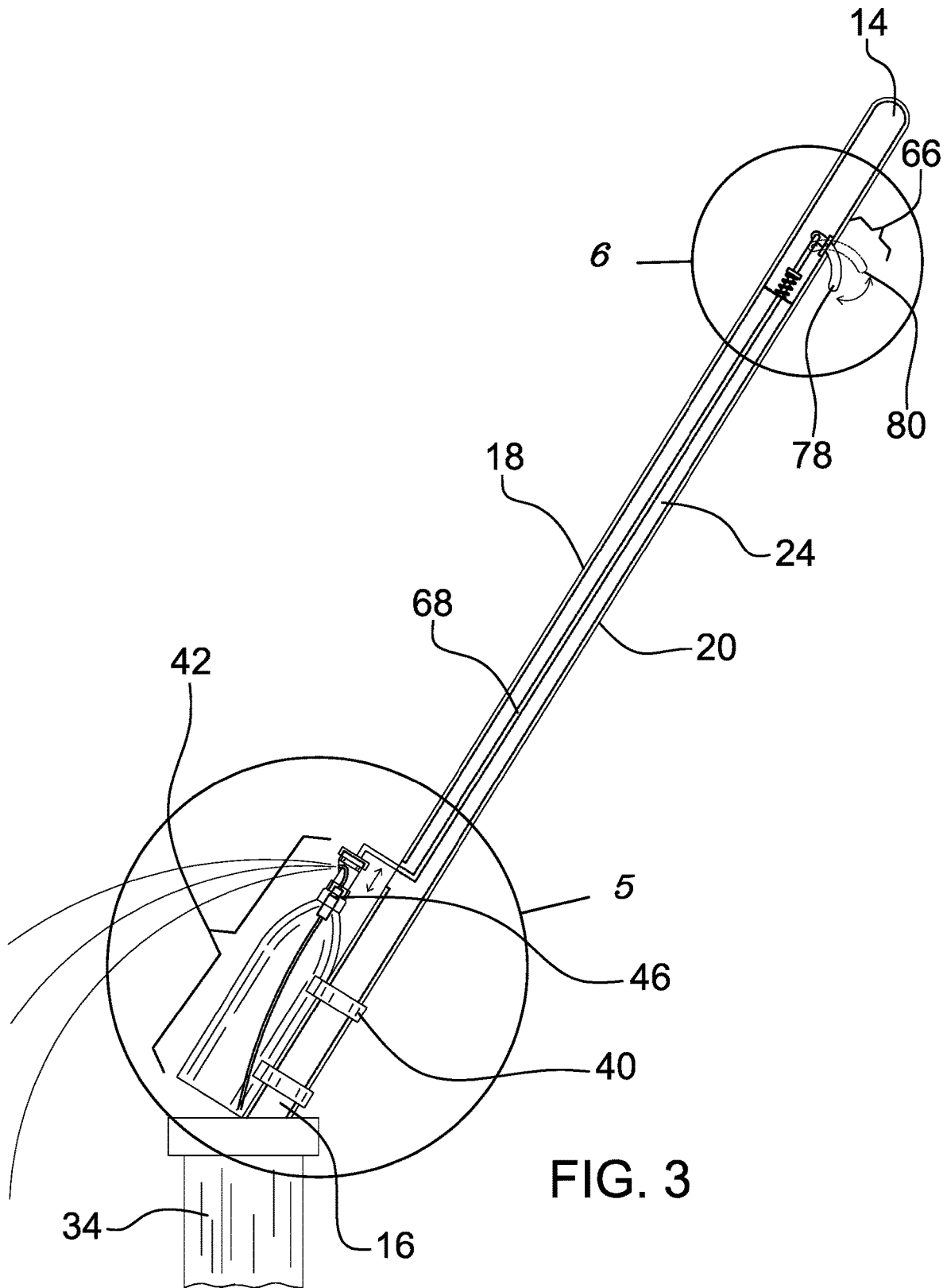


FIG. 3

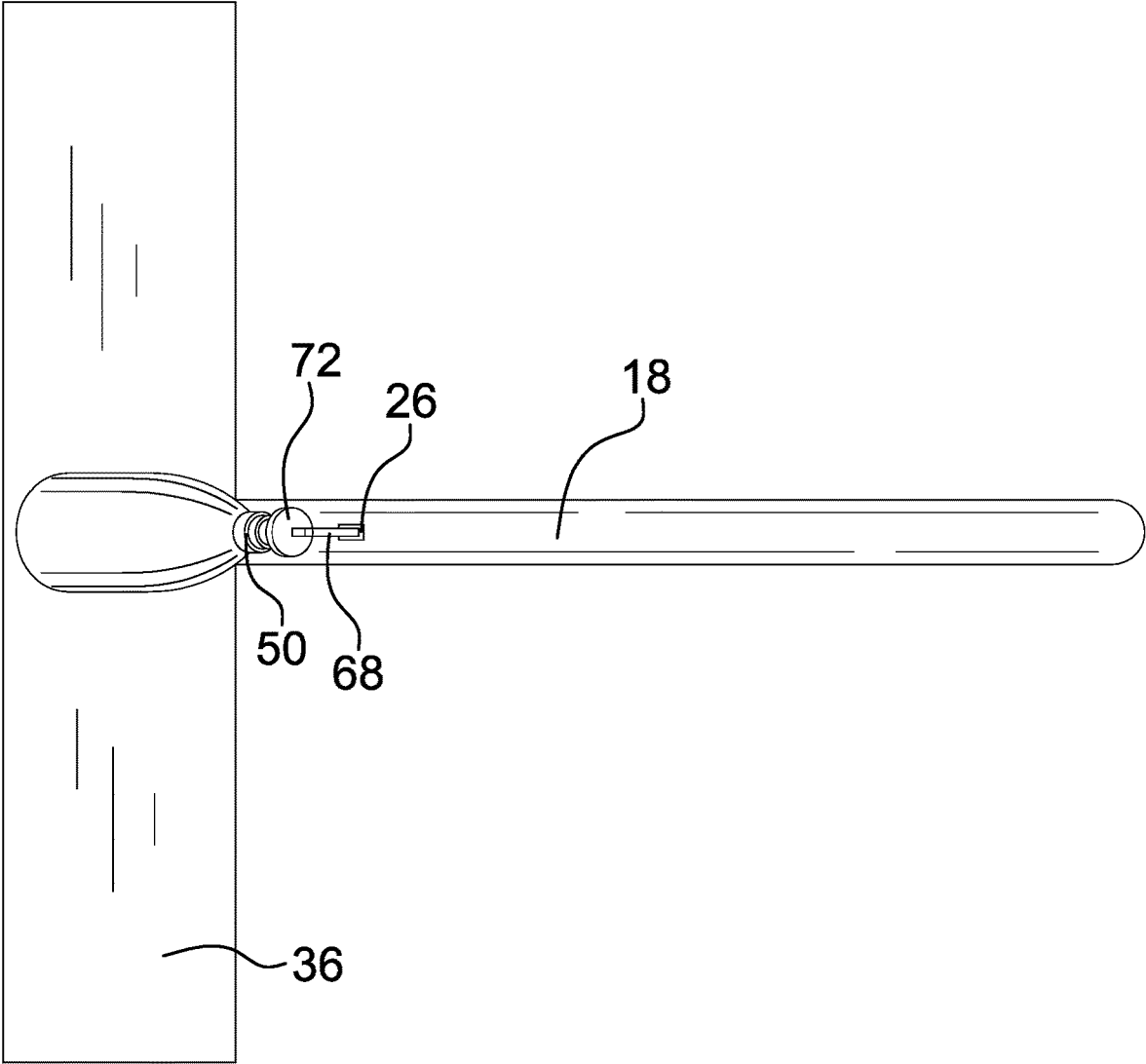


FIG. 4

BROOM SPRAYER APPARATUSCROSS-REFERENCE TO RELATED
APPLICATIONS**[0001]** Not ApplicableSTATEMENT REGARDING FEDERALLY
SPONSORED RESEARCH OR DEVELOPMENT**[0002]** Not ApplicableTHE NAMES OF THE PARTIES TO A JOINT
RESEARCH AGREEMENT**[0003]** Not ApplicableINCORPORATION-BY-REFERENCE OF
MATERIAL SUBMITTED ON A COMPACT
DISC OR AS A TEXT FILE VIA THE OFFICE
ELECTRONIC FILING SYSTEM.**[0004]** Not ApplicableSTATEMENT REGARDING PRIOR
DISCLOSURES BY THE INVENTOR OR JOINT
INVENTOR**[0005]** Not Applicable

BACKGROUND OF THE INVENTION

(1) Field of the Invention.

(2) Description of Related Art including
information disclosed under 37 CFR 1.97 and 1.98.**[0006]** The disclosure and prior art relates to brooms and
more particularly pertains to a new broom for wet sweeping.

BRIEF SUMMARY OF THE INVENTION

[0007] An embodiment of the disclosure meets the needs
presented above by generally comprising a handle having a
proximal end and a distal end. A broom head has a base and
a plurality of bristles. The base has a top side coupled to the
distal end of the handle and an underside coupled to the
plurality of bristles. A bottle mount is selectively engageable
with the handle proximal the distal end. A spray assembly is
coupled to the bottle mount. The spray assembly comprises
a reservoir bottle, a bottle mount, and a spray mechanism.
The reservoir bottle is coupled to the bottle mount and the
spray mechanism is coupled to, and in fluid communication
with, the reservoir. The spray assembly is configured to
spray a liquid in front of the broom head when activated. A
trigger assembly is coupled to the spray mechanism and
comprises a push rod coupled to the spray mechanism and
a pull trigger coupled to the push rod. The pull trigger has
a rest position and a pulled position. The pull trigger
activates the spray assembly when moved from the rest
position to the pulled position.**[0008]** There has thus been outlined, rather broadly, the
more important features of the disclosure in order that the
detailed description thereof that follows may be better
understood, and in order that the present contribution to the
art may be better appreciated. There are additional features
of the disclosure that will be described hereinafter and which
will form the subject matter of the claims appended hereto.**[0009]** The objects of the disclosure, along with the vari-
ous features of novelty which characterize the disclosure, are
pointed out with particularity in the claims annexed to and
forming a part of this disclosure.BRIEF DESCRIPTION OF SEVERAL VIEWS OF
THE DRAWING(S)**[0010]** The disclosure will be better understood and
objects other than those set forth above will become appar-
ent when consideration is given to the following detailed
description thereof. Such description makes reference to the
annexed drawings wherein:**[0011]** FIG. 1 is an isometric view of a broom sprayer
apparatus according to an embodiment of the disclosure.**[0012]** FIG. 2 is a front elevation view of an embodiment
of the disclosure.**[0013]** FIG. 3 is a side elevation view of an embodiment
of the disclosure.**[0014]** FIG. 4 is a top plan view of an embodiment of the
disclosure.**[0015]** FIG. 5 is a detail view of an embodiment of the
disclosure of area 5 of FIG. 3.**[0016]** FIG. 6 is a detail view of an embodiment of the
disclosure of area 6 of FIG. 3.DETAILED DESCRIPTION OF THE
INVENTION**[0017]** With reference now to the drawings, and in par-
ticular to FIGS. 1 through 6 thereof, a new broom embody-
ing the principles and concepts of an embodiment of the
disclosure and generally designated by the reference
numeral 10 will be described.**[0018]** As best illustrated in FIGS. 1 through 6, the broom
sprayer apparatus 10 generally comprises a handle 12 having
a proximal end 14, a distal end 16, a dorsal side 18, and a
ventral side 20. The handle 12 may be hollow and have an
inner cavity 24. The dorsal side 18 has a push rod aperture
26 extending through to the inner cavity 24 and the ventral
side 20 has a trigger aperture 28 extending through to the
inner cavity 24 proximal the proximal end 14. A broom head
30 is coupled to the handle 12 and has a base 32 and a
plurality of bristles 34. The base 32 has a top side 36 coupled
to the distal end 16 of the handle and an underside 38
coupled to the plurality of bristles 34. A bottle mount 40 is
selectively engageable with the handle 12 proximal the
distal end 16.**[0019]** A spray assembly 42 is coupled to the bottle mount
40 and comprises a reservoir bottle 44 and a spray mecha-
nism 46. The reservoir bottle 44 is coupled to the bottle
mount 40 and the spray mechanism 46 is coupled to, and in
fluid communication with, the reservoir bottle 44. The spray
assembly 42 is configured to spray a liquid in front of the
broom head 30 when activated. The liquid may be water or
a cleaning agent to help loosen dirt and debris for the broom
head to sweep. The spray mechanism 46 may comprise a
head 48, a cap 50, and a pump 52. The head 48 has a nozzle
54 coupled within an angled nozzle extension 56. The cap 50
is selectively engageable with the reservoir bottle 44 in order
to refill the liquid. The head 48 is coupled to the cap 50 and
depresses within it. The pump 52 has a body 58 coupled to
the cap 50 and a plunger 60 coupled to the body 58 and to
the head 48. The plunger 60 moves within the body 58 as the
head 48 is depressed to create suction. An exit tube 62 is

coupled to the plunger 60 and to the nozzle 54 and a pick-up tube 64 is coupled to the body 58 and extends into the reservoir bottle 44. When the head 48 is depressed the pump 52 takes the liquid from the reservoir bottle 44 through the pick-up tube 64, into the body 58, and out the exit tube 62 to be sprayed through the nozzle 54 of the head.

[0020] A trigger assembly 66 is coupled to the spray mechanism 46. The trigger assembly 66 may comprise a push rod 68 coupled to a pull trigger 70. The push rod 68 has a foot 72 having a recess 74 that is selectively engageable with the head 48 of the spray mechanism. The pull trigger 70 has a pivot 76 coupled within the trigger aperture 28 and has a rest position 78 and a pulled position 80. The push rod 68 is coupled to the pull trigger 70 within the inner cavity 24 of the handle and extends through the push rod aperture 26. The pull trigger 70 activates the spray assembly 42 when moved from the rest position 78 to the pulled position 80. A first spring keep 82 may be coupled within the inner cavity 24 proximal the trigger aperture 28. A second spring keep 84 may be coupled to the push rod 68 proximal the pull trigger 70. A return spring 86 may be coupled around the push rod 68 between the first spring keep 82 and the second spring keep 84 to return the pull trigger 70 from the pull position 80 to the rest position 78.

[0021] In use, the pull trigger 70 is pulled from the rest position 78 to the pulled position 80 to activate the pump 52 and spray the liquid from the reservoir bottle 44 through the nozzle 54 in front of the broom head 30 onto a surface to be cleaned. The broom head 30 is then used to sweep the surface.

[0022] With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of an embodiment enabled by the disclosure, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by an embodiment of the disclosure.

[0023] Therefore, the foregoing is considered as illustrative only of the principles of the disclosure. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the disclosure to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the disclosure. In this patent document, the word “comprising” is used in its non-limiting sense to mean that items following the word are included, but items not specifically mentioned are not excluded. A reference to an element by the indefinite article “a” does not exclude the possibility that more than one of the element is present, unless the context clearly requires that there be only one of the elements.

1. A broom sprayer apparatus comprising:
 - a handle having a proximal end and a distal end;
 - a broom head coupled to the handle, the broom head having a base and a plurality of bristles, the base having a top side and an underside, the top side being coupled to the distal end of the handle, the plurality of bristles being coupled to the underside;
 - a bottle mount coupled to the handle, the bottle mount being selectively engageable with the handle proximal the distal end;

- a spray assembly coupled to the bottle mount, the spray assembly comprising a reservoir bottle, and a spray mechanism, the reservoir bottle being coupled to the bottle mount positioning the spray mechanism above the reservoir bottle, the spray mechanism being coupled to, and in fluid communication with, the reservoir bottle, the spray assembly being configured to spray a liquid in front of the broom head when activated;

- a trigger assembly coupled to the spray mechanism, the trigger assembly comprising a push rod coupled to the spray mechanism and a pull trigger coupled to the push rod, the pull trigger having a rest position and a pulled position, the pull trigger activating the spray assembly when moved from the rest position to the pull position; and

the spray mechanism comprising

- a head having a nozzle,

- a cap coupled to the reservoir bottle, the head being depressably coupled to the cap, and

- a pump coupled to the cap, the pump having a body coupled to the cap, a plunger coupled to the body and to the head, the plunger moving within the body as the head is depressed, an exit tube coupled to the plunger and to the nozzle, and a pick-up tube coupled to the body and extending into the reservoir bottle, the pump taking the liquid from the reservoir bottle through the pick-up tube, into the body, and out the exit tube to be sprayed through the nozzle of the head when the head is depressed.

2. (canceled)

3. The broom sprayer apparatus of claim 1 further comprising the handle having a dorsal side and a ventral side, the handle being hollow and having an inner cavity, the dorsal side having a push rod aperture extending through to the inner cavity proximal the spray assembly, the ventral side having a trigger aperture extending through to the inner cavity proximal the proximal end.

4. The broom sprayer apparatus of claim 1 further comprising the handle having a dorsal side and a ventral side, the handle being hollow and having an inner cavity, the dorsal side having a push rod aperture extending through to the inner cavity proximal the spray assembly, the ventral side having a trigger aperture extending through to the inner cavity proximal the proximal end.

5. The broom sprayer apparatus of claim 4 further comprising the pull trigger having a pivot coupled within the trigger aperture, the push rod being coupled to the pull trigger within the cavity of the handle and extending through the push rod aperture.

6. The broom sprayer apparatus of claim 5 further comprising the push rod having a foot, the foot having a recess that is selectively engageable with the head of the spray mechanism.

7. The broom sprayer apparatus of claim 1 further comprising the head having an angled nozzle extension, the nozzle being coupled within the angled nozzle extension.

8. The broom sprayer apparatus of claim 5 further comprising a first spring keep coupled to the handle, the first spring keep being coupled within the inner cavity proximal the trigger aperture, a second spring keep coupled to the push rod proximal the pull trigger, and a return spring coupled around the push rod between the first spring keep

and the second spring keep, the return spring returning the pull trigger from the pull position to the rest position.

9. A broom sprayer apparatus comprising:

a handle having a proximal end, a distal end, a dorsal side, and a ventral side, the handle being hollow and having an inner cavity, the dorsal side having a push rod aperture extending through to the inner cavity, the ventral side having a trigger aperture extending through to the inner cavity proximal the proximal end;

a broom head coupled to the handle, the broom head having a base and a plurality of bristles, the base having a top side and an underside, the top side being coupled to the distal end of the handle, the plurality of bristles being coupled to the underside;

a bottle mount coupled to the handle, the bottle mount being selectively engageable with the handle proximal the distal end;

a spray assembly coupled to the bottle mount, the spray assembly comprising a reservoir bottle, and a spray mechanism, the reservoir bottle being coupled to the bottle mount positioning the spray mechanism above the reservoir bottle, the spray mechanism being coupled to, and in fluid communication with, the reservoir bottle, the spray assembly being configured to spray a liquid in front of the broom head when activated;

wherein the spray mechanism comprises:

a head having a nozzle and an angled nozzle extension, the nozzle being coupled within the angled nozzle extension;

a cap coupled to the reservoir bottle, the head being depressably coupled to the cap; and

a pump coupled to the cap, the pump having a body coupled to the cap, a plunger coupled to the body and to the head, the plunger moving within the body as the head is depressed, an exit tube coupled to the plunger and to the nozzle, and a pick-up tube coupled to the body and extending into the reservoir bottle, the pump taking the liquid from the reservoir bottle through the pick-up tube, into the body, and out the exit tube to be sprayed through the nozzle of the head when the head is depressed;

a trigger assembly coupled to the spray mechanism, the trigger assembly comprising a push rod coupled to the spray mechanism and a pull trigger, the push rod having a foot, the foot having a recess that is selectively engageable with the head of the spray mechanism, the pull trigger having a rest position and a pulled position, the pull trigger having a pivot coupled within the trigger aperture, the push rod being coupled to the pull trigger within the cavity of the handle and extending through the push rod aperture, the pull trigger activating the spray assembly when moved from the rest position to the pull position;

a first spring keep being coupled within the inner cavity proximal the trigger aperture;

a second spring keep coupled to the push rod proximal the pull trigger; and

a return spring coupled around the push rod between the first spring keep and the second spring keep, the return spring returning the pull trigger from the pull position to the rest position.

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