

P. W. MORRIS.
WIDOW'S CRUSE TANK DEVICE.
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933,484.

Patented Sept. 7, 1909.

Fig. 1.

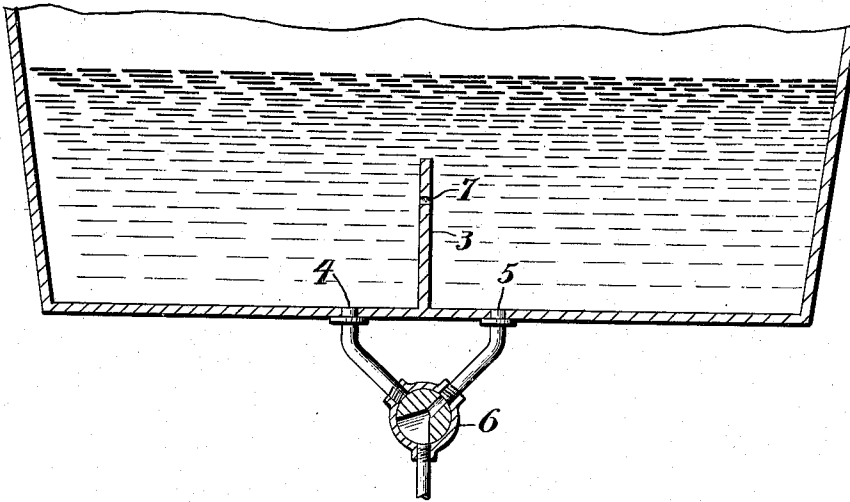
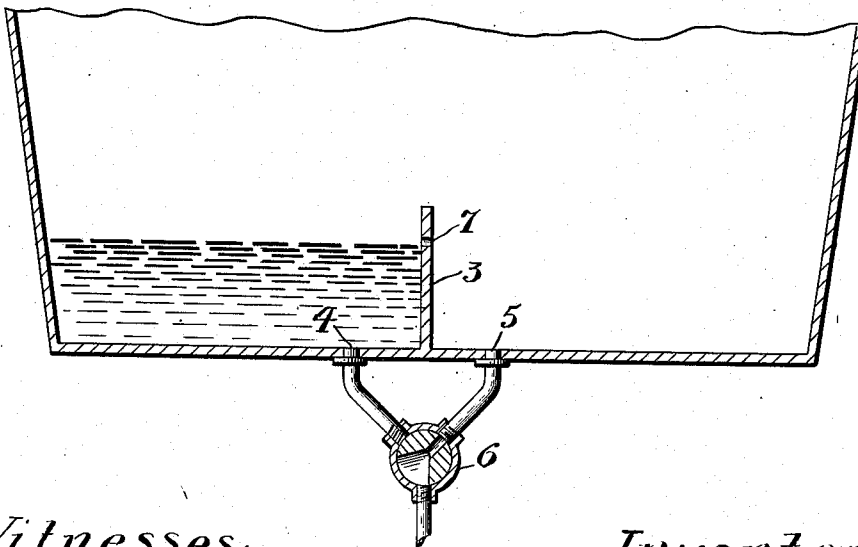


Fig. 2.



Witnesses:

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Inventor.

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UNITED STATES PATENT OFFICE.

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WIDOW'S-CRUSE TANK DEVICE.

933,484.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PAUL WINTERS MORRIS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Widow's-Cruse Tank Devices.

In tanks so fitted it is impossible to draw off or use up all the contents without previous warning. The words "contents" "supply" etc. as herein used relate to liquids—not gases. I attain this result by the assembling and use of parts illustrated in the accompanying drawings.

Figure 1. is a vertical section of part of a tank of any size or shape, filled with liquid, and showing my device or combination of parts, also in section, attached thereto. Fig. 2. is the same vertical section as Fig. 1. after the major part of the liquid has been drawn off or used up.

Similar figures refer to similar parts in both drawings

3 in both drawings is a partition wall of any height, pierced with one or more small holes 7, running across the bottom of the tank and made tight to the tank at both its ends and lower edge.

4 and 5 are outlets, connected to valve 6; one outlet on each side of partition 3. Numerals 4 and 5 are also used to designate which side of partition 3 is referred to.

6 is a valve the functions of which are 1st. to open one outlet until all the contents possible has run or been drawn off through that outlet. 2nd. to open the other outlet, (at the same time closing the first outlet). This valve is so made that it cannot open both outlets 4 and 5 at the same time.

To illustrate working: Fig. 1 shows tank full of liquid with valve 6 open say into outlet 5. Now let all the contents possible run off or be forced through outlet 5 and the conditions will then be as shown in Fig. 2. The flow through outlet 5 is exhausted, but the reservoir on side 4 of partition wall 3 is still full of liquid. This stopping of flow through outlet 5 constitutes the warning which my device is intended to give. The reservoir on side 4 of partition wall 3, still being full of liquid, constitutes

the reserve supply which my invention provides when the warning above referred to is given. This reserve supply can be used by simply turning the valve 6 so that the port opens outlet 4. At the same time that the valve 6 opens outlet 4 it closes outlet 5. The advantage of closing outlet 5 at this time and perforce (there being no choice) is, that it precludes any chance of negligence *i. e.* such as might occur if two separate valves were used, in which case both outlets might be left open—thus preventing a repetition of reserve supply formation. The port of valve 6 is left open into outlet 4. The tank is refilled and when next needed the action will repeat itself in reverse *i. e.* the reserve reservoir will form on side 5 of partition wall 3, without further thought or care on the part of the operator.

My invention is not intended to take the place of a gage for showing the varying supply of the contents of a tank; but as a safe-guard against the entire consumption of the contents without a positive warning.

To illustrate one of its practical uses: take the case of an automobile, motor boat or other moving vehicle using liquid fuel for motive power or power generator. While the operator of such vehicle does not intend to run short of fuel on the road, yet there are occasions when, through negligence, the fuel entirely gives out at an inopportune and inconvenient time and place. This could not happen where my invention is in use. When all but the reserve supply had been used the engine would have stopped running, the operator would have been warned and could have used the reserve supply to run to the nearest port or station.

I claim:

In a tank, the combination of a division wall dividing the tank into a plurality of compartments, an outlet-pipe from each compartment, and a switch valve connecting said outlet pipes severally to a discharge pipe.

PAUL WINTERS MORRIS.

Witnesses:

WILLIAM T. HINCKS,
KENNETH E. WEEKS.