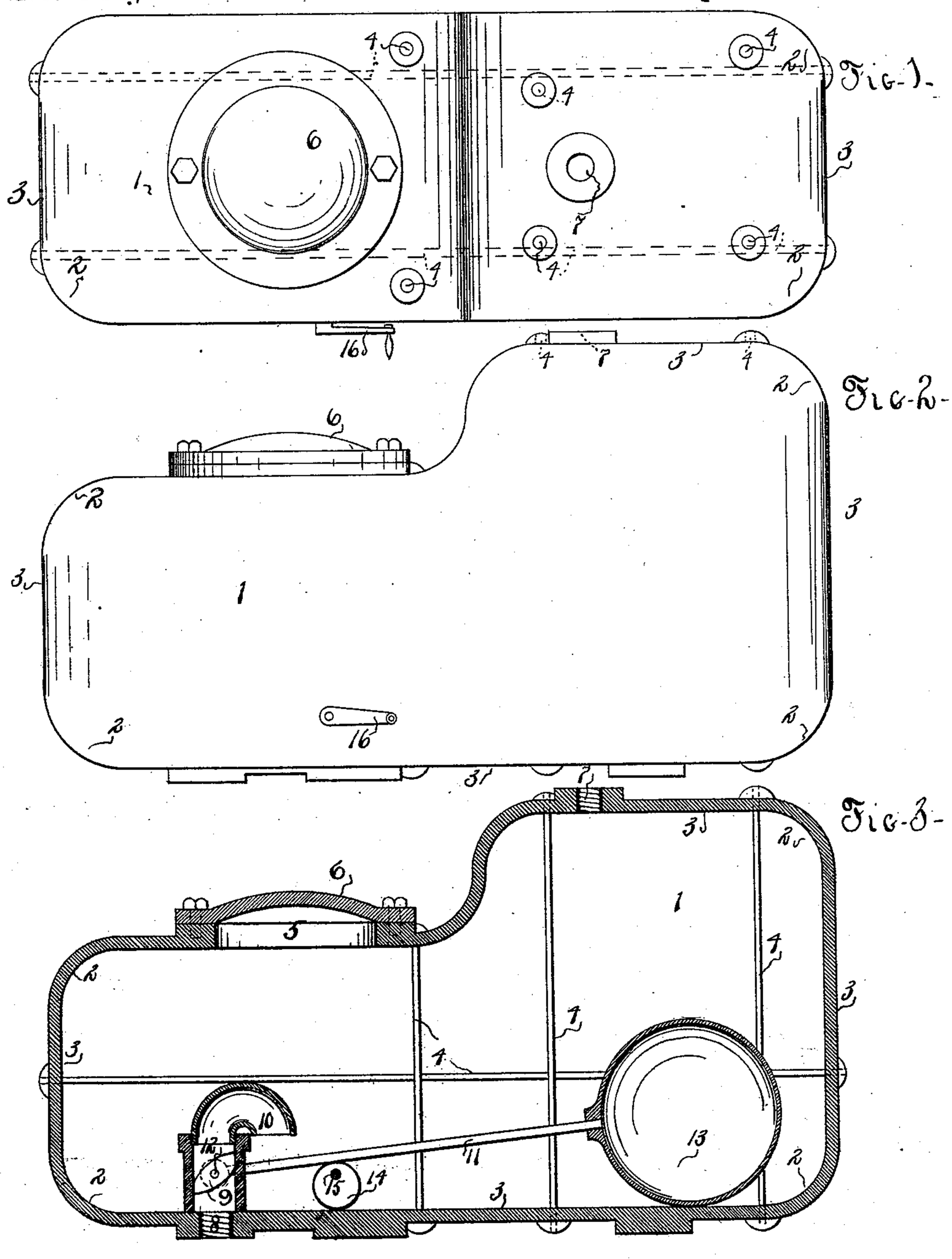
(No Model.)

J. E. KELLY.

TRAP.

No. 546,616. Patented Sept. 17. 1895.



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TRAP.

SPECIFICATION forming part of Letters Patent No. 546,616, dated September 17, 1895.

Application filed January 2, 1895. Serial No. 533,683. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. KELLY, a citizen of the United States, residing at Johnsonburg, in the county of Elk and State of Pennsylvania, have invented certain new and useful Improvements in Traps; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to traps for emptying water or other liquid from pipes and vessels containing aeriform fluids without permitting such aeriform fluids to escape therefrom, and has for its object the simplicity of construction, durability, and strength, with small expenditure of material and facility of access to the internal parts for the purposes of inspection and repair.

To this end the invention consists in a case formed integrally of metal with curved surfaces at the angles and internal bracings upon inner flat surfaces and provided with a manhole permitting access to the interior, a balanced exit-valve and siphon located within a space leading to said exit balanced valve, a float-lever arranged to operate said balanced exit-valve, and an eccentric by means of which the float can be raised by force applied externally to the case.

The construction and operation thereof is hereinafter fully and particularly described, reference being had to the accompanying drawings, in which—

Figure 1 shows a plan view, Fig. 2, a side elevation, and Fig. 3 a longitudinal section of a trap embodying this invention.

1 represents the case, curved at the parts marked 2 and with flat surfaces, (marked 3,) braced by side rods 4.

5 is a hand-hole aperture. 6 is a plate closing said aperture.

7 is an inlet by which the trap is connected tubularly to the vessel to be drained.

8 is an outlet-aperture through which the liquid escapes.

9 is a balanced valve of the pivoted throttle or butterfly form.

10 is a siphon leading to the balanced valve.

11 is a lever attached to the arbor 12 of the valve 9.

13 is a float attached to the extremity of the lever 11.

14 is an eccentric having an arbor 15, projecting through the case 1 and provided exteriorly to the case with a handle 16 or other means of turning it. When liquids enter the case 1 above the level of the bend of the siphon 10, any solid foreign matter lighter than the liquid floats and does not enter the siphon, and heavier bodies sink to the bottom of the case, thus protecting the valve 9 against obstruction from foreign matter, the float 13 rises, operating the lever 11 and opening the valve 9, and liquid entering from beneath the open end of the siphon 10 passes through the valve 9 and escapes. When the level of the liquid falls in the case 1, then the float descends and closes the valve 9. When it is desired to empty the case 1 of liquid and to hold the trap continuously open, the eccentric 15 is turned with its longer radius upward, and so holds the float 13 up and the valve 9 open.

The internal parts—to wit, the lever 13, the valve 9, the siphon 10, eccentric 14, and float 13—are made separable, so that they are all easily introduced through the hand-hole 5 into the case and assembled therein, and as easily removed therefrom. The return-bend 10 being removably attached to the upper end of the body of the valve 9 and directly under the hand-hole 5, the valve can be inspected, cleaned, and the parts replaced with best facility.

Having described this invention and the operation thereof, what I claim is—

The case 1 formed as described with a hand hole opening and cover thereon above the discharging orifice, a balanced pivotally supported discharging valve attached to said discharging orifice and a siphon removably attached to said discharging valve body in combination with the float 13 and lever 11 constructed and arranged to operate the discharging valve substantially as set forth and described.

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