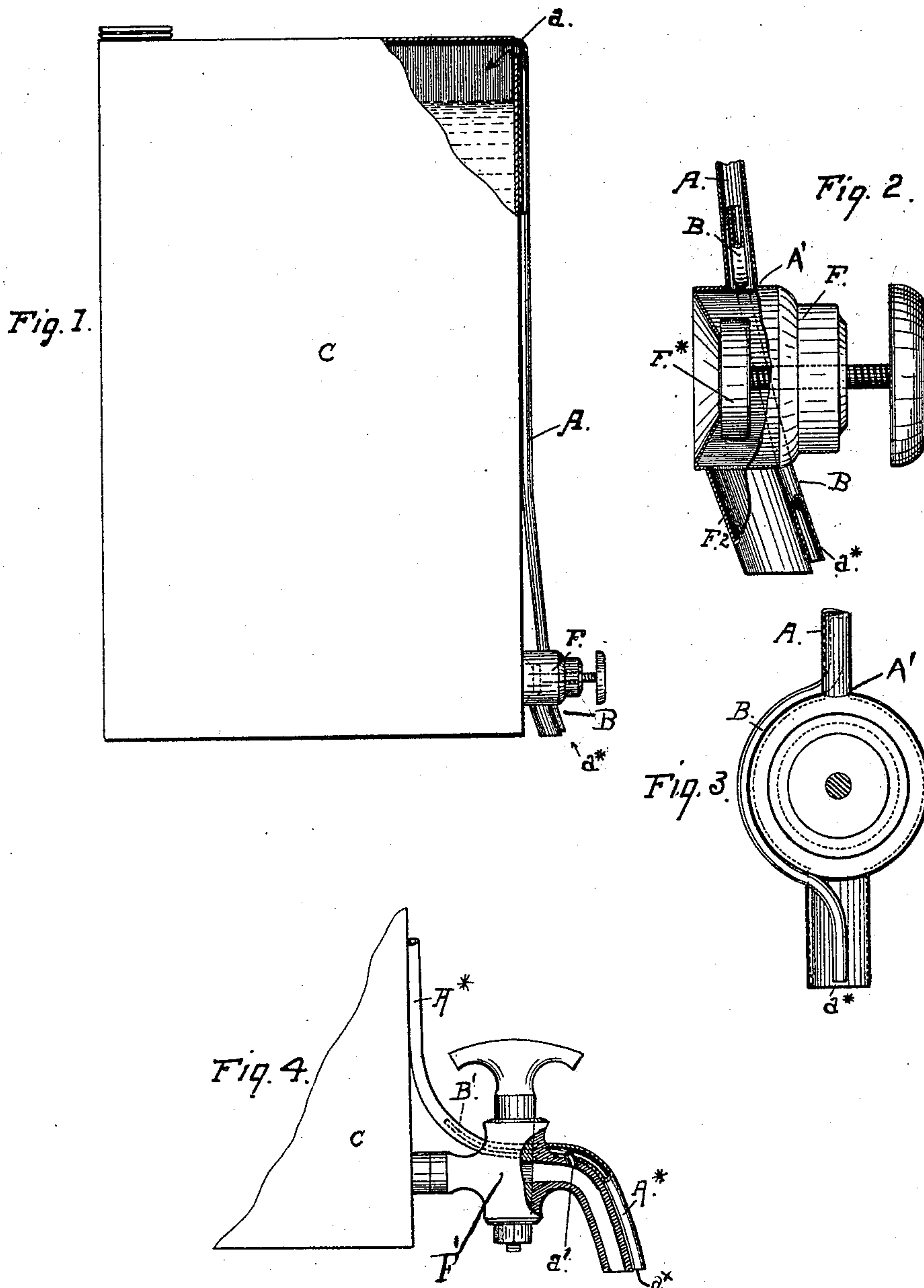


(No Model.)

G. W. ARPER.
FAUCET FOR OIL CANS.

No. 497,399.

Patented May 16, 1893.



Witnesses:

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William Franklin

INVENTOR:

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UNITED STATES PATENT OFFICE.

GEORGE W. ARPER, OF OAKLAND, CALIFORNIA.

FAUCET FOR OIL-CANS.

SPECIFICATION forming part of Letters Patent No. 497,399, dated May 16, 1893.

Application filed June 17, 1892. Serial No. 437,086. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. ARPER, a citizen of the United States, residing in Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Faucets for Oil-Cans, of which the following is a specification.

My invention has for its object mainly to provide an automatic cut-off for faucets of coal-oil cans and other similar packages from which liquids are drawn from time to time into smaller vessels whereby the flow of liquid from the faucet is arrested or cut off automatically as soon as the vessel is filled and the danger of over-flow in the operation of filling lamps and other vessels is avoided.

To such end and object my invention consists in certain novel construction and combination of faucet and vent-tube passageway as hereinafter fully set forth.

The following description explains the manner of constructing and applying the said improvement for operation on a coal-oil can, the accompanying drawings that form part of this specification being referred to therein.

Figure 1 represents in side elevation partly in section an ordinary coal-oil can having my improvement arranged to operate with a compression faucet of the kind now most commonly used on these cans. Fig. 2 is a side elevation on an enlarged scale showing the faucet closed and the body of the faucet and the lower part of the vent-tube broken away and in section. Fig. 3 is a front view of the faucet and tube. Fig. 4 represents the improvement applied to a plug-faucet. In this figure the nose of the faucet and a portion of the vent-tube are shown in section.

C indicates a can containing coal-oil or other liquid and F a compression faucet at the bottom for drawing off the liquid in required quantities from time to time to fill smaller vessels.

A is a tube fixed to or formed on the front of the can and connecting the space within the can above the liquid with the atmosphere outside. The upper end of this tube communicates with the interior of the can through an aperture a , and the lower end is carried down either direct or through the instrumentality of another tube to the end of the spout or nose of the faucet so that there is formed

a continuous vent-passageway from the space above the liquid down to the discharge-end of the faucet. The lower end of this passage terminates at a point a^x close to the end of the faucet, or a short distance above it, and it is carried either through the faucet-body or down upon the outside of the body and along the spout or nose. When properly arranged this passageway is open to the atmosphere when the valve or plug of the faucet is turned to draw liquid, and will remain open as long as the lower end of the passageway is uncovered; but as soon as the liquid in the vessel being filled is allowed to cover the lower end of the passageway the admission of air into the can through this passageway is stopped and consequently the liquid will cease to flow while the end of the passageway is covered. Therefore, in the operation of drawing a quantity of liquid from the can the vessel to be filled is held under the faucet in such position that the level of the liquid in the vessel will cover the end a^x of the faucet and the end of the vent-passageway as soon as the vessel is filled to the desired height. When that point is reached in the smaller vessel the liquid ceases to flow from the can and the faucet is shut at that moment before the filled vessel is removed from the end of the faucet. In this arrangement however it becomes necessary to discharge the small quantity of liquid which is drawn up into the lower end of the vent-passageway during the filling operation, and which will be retained in the end of the passageway by atmospheric pressure when the faucet is closed unless the passage way is opened to the atmosphere at some point above this part of the tube which becomes gorged. To clear this lower part of the passageway after each operation, therefore, I provide an air-inlet in the passage way through the faucet constructed in such manner that it is controlled by the faucet, and when the faucet is opened to draw the liquid the inlet is closed to produce a continuous vent-passage way, or when the faucet is closed the inlet is opened and the vent-passage way is broken. Figs. 1 and 2 show a construction by which this is accomplished with a compression-faucet, and Fig. 4 shows a construction adapted for a plug-faucet.

For operation with a compression-faucet the tube A is carried into the top of the faucet-body at a point a' in front of the valve F^x , and a short tube B of smaller diameter on the outside than the interior diameter of the tube A is carried into the side of the vent-tube above the faucet and extends thence around outside the faucet-body and down along the spout. The lower end of this short tube terminates at the end of the spout F^2 and forms the inlet a and the upper end which is carried into the side of the tube A is bent upward as shown in Fig. 2; the two tubes here constituting the passageway above referred to. The difference in the diameter of the two tubes leaves a free space or passage all around the upper end of the short tube, just above the point a' and in consequence of this the air is free to enter the lower end of the tube A when the faucet valve F^x is shut against its seat. But when the faucet is opened this air-passage through the faucet-body is closed to the air by the liquid flowing through the faucet and the air then enters only at the inlet end a^x .

In the operation of drawing the liquid the tubes B and A form a continuous vent-passageway from the end of the faucet upward into the can above the liquid, but as soon as the faucet is closed and the filled vessel is taken away the air is free to pass up through the faucet-spout F^2 into the vent-passage above the gorged portion of the vent-tube, and the tube B is thoroughly cleared of the liquid and is ready for the next operation. In the application of the same feature to the plug-faucet F' shown in Fig. 4 the vent-tube A^x forms a continuous passageway and is carried down along the nose of the faucet, and an air-inlet a' is made through the top of the body of the nose above its bend from which a short tube B' is carried upward into tube A^x and extends therein a short distance above the aperture a' and above the faucet-valve.

In both constructions the air is admitted into the passageway above the point to which the liquid will rise in the vent-tube when the

faucet is closed; but as soon as the faucet is opened this inlet is closed by the liquid flowing through the faucet and a continuous vent-passage is maintained from the top of the can down to the spout or nose of the faucet while liquid is being drawn.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a can or liquid-holder, and a faucet for drawing off the contents thereof: of a clear passageway leading from the can above its liquid to and past the faucet and opening adjacent the mouth of the faucet-spout or nose, an opening from said spout between its valve and mouth into the passageway, and a small tube leading from within the passageway above said opening thereinto, down to a point beyond the faucet valve, as and for the purpose set forth.

2. The combination with a can or liquid-holder, and a faucet for drawing off the contents thereof: of a vent tube or passage connecting the can above its liquid with the faucet body at A' in front of its valve, and a smaller tube B opening adjacent the mouth of the faucet-spout or nose, and leading thence into said vent-tube above the faucet-body, as and for the purpose set forth.

3. The combination with a can or liquid-holder, and a faucet for drawing off the contents thereof: of a vent-tube or passage connecting the can above its liquid with the faucet-body at A' in front of its valve, and a smaller tube B opening adjacent the mouth of the faucet-spout or nose, and leading thence up said spout, around the faucet-body, into said vent-tube above the faucet-body, and extending up a short distance therein, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

GEORGE W. ARPER. [L. S.]

Witnesses:

C. W. M. SMITH,
E. M. MORGAN.