

(No Model.)

C. H. SHAFFER.

CAN.

No. 336,072.

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Fig. 2.

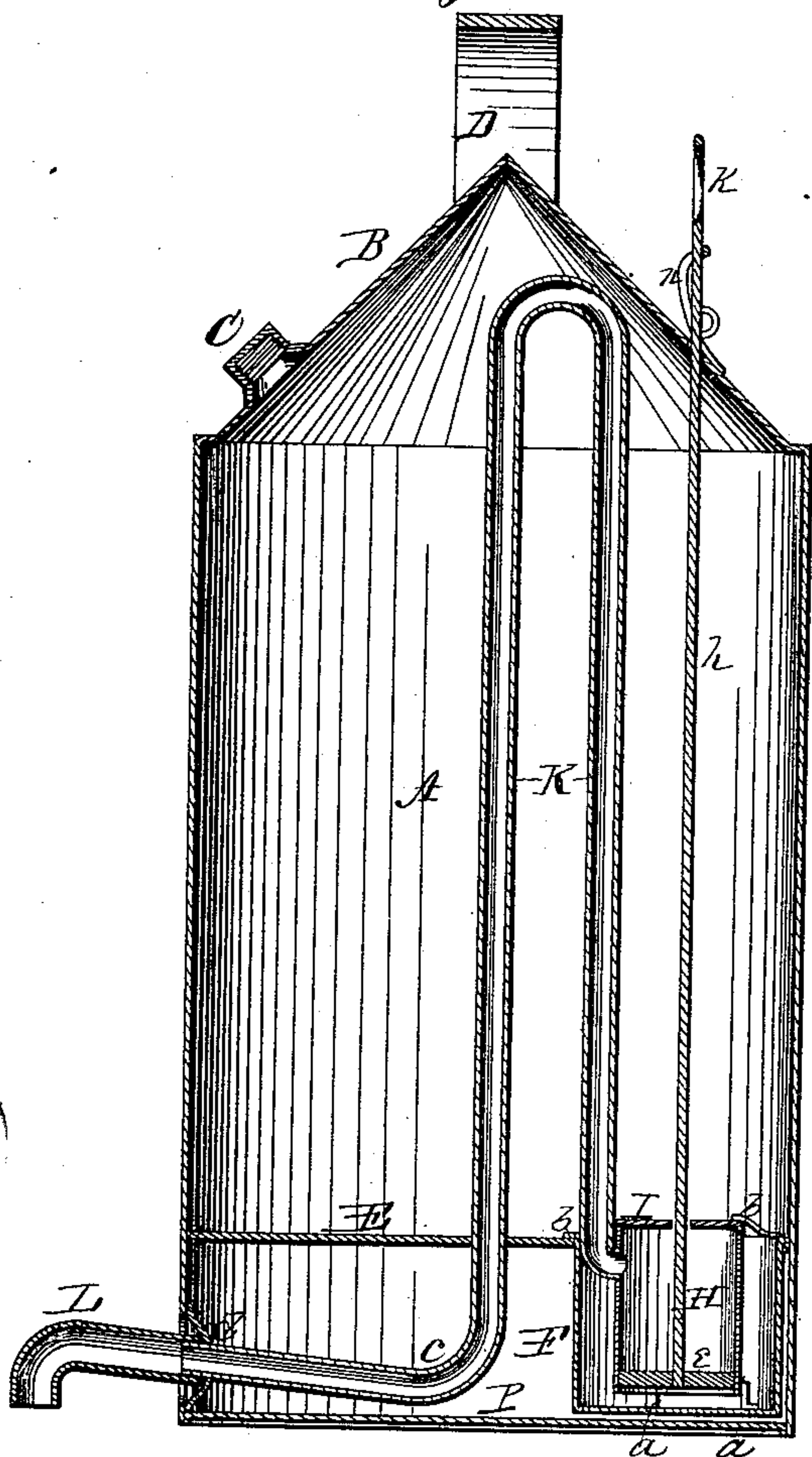
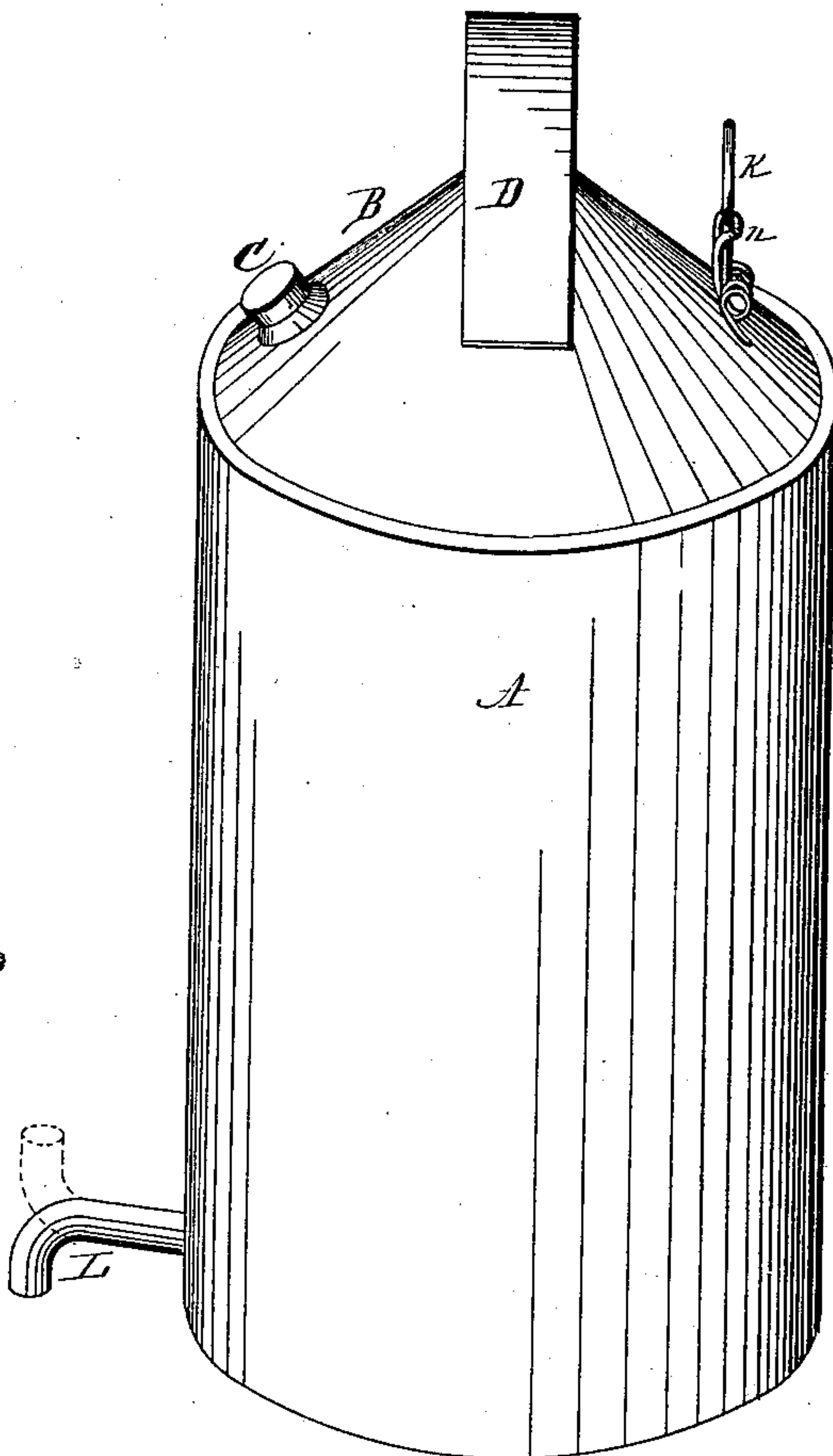


Fig. 1.



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UNITED STATES PATENT OFFICE.

CHARLES H. SHAFFER, OF ROCKFORD, ILLINOIS, ASSIGNOR OF ONE-HALF
TO JONES, WOODRUFF & CO., OF SAME PLACE.

CAN.

SPECIFICATION forming part of Letters Patent No. 336,072, dated February 9, 1886.

Application filed June 19, 1885. Serial No. 199,218. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. SHAFFER, a citizen of the United States, residing in the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Cans, of which the following is a specification.

This invention relates to cans or vessels designed to contain liquids.

10 Its object is to provide such vessel with a siphon-discharge and means for charging and discharging the siphon.

It consists, essentially, of a well in the bottom of the vessel, an open-end cylinder of less diameter than the well, with one closed end 15 suspended in the well, a siphon connecting with the upper closed end portion of the cylinder, and rising within the vessel above the liquid-line, and having a discharge-opening 20 below the bottom of the vessel, a piston within the cylinder capable of a free endwise movement therein, and a piston-rod connecting the piston and extending through the head of the cylinder, rising through the top of the can, to 25 be operated by an attendant, all of which, as illustrated in the accompanying drawings, will be hereinafter more fully described.

In the drawings, Figure 1 is an isometrical perspective representation of a can embodying 30 my invention. Fig. 2 is a vertical central section showing all the parts in central section.

The vessel, A, represented in the figures is one of the usual forms, cylindrical in section, with conical top B, having a screw-cap inlet-opening, C, and a handle, D, spanning 35 its apex. The bottom proper of this can (represented at E) is placed within the can some distance above its foot-rim, and a well, F, preferably cylindrical in form, is fixed in the bottom E, depending therefrom. A vessel, H, 40 preferably cylindrical in form, of less diameter than the well, closed at one end by a head, I, is placed in the well, open end down, and extends nearly to the bottom of the well, in which position it is supported by means of feet a or 45 arms b, or both feet and arms, connecting it with the bottom or sides of the can or well, or both, or in any other suitable manner to support it in a proper position in the well. A tube, 50 K, is joined to the upper end portion of the open-

end vessel, communicating internally therewith, and from its connection with the open-end vessel it rises within the can above the liquid-line therein and returns, opening through the side thereof at a point near or below the 55 bottom, to deliver the contents of the can preferably on a level with or below the bottom of the well. In this instance the return-branch of the tube K, forming the discharge-branch of the siphon, descends through the bottom of 60 the can to about the level of the bottom of the well, at which point it is curved, as at c, and in its passage to the point d, at which it is passed through the side wall of the foot portion of the can, is slightly inclined above the 65 plane of its lower curved portion, forming a trap to contain the liquid adhering to the inner surface of the return-branch of the tube in discharging the siphon. The projecting end of the siphon is provided with a detachable 70 discharge-nozzle, L, fitted to slip into or onto the outlet end of the siphon, and its outer discharge end is curved downward to discharge the contents of the can, preferably on a lower plane than the bottom of the well. The discharge-nozzle L is made detachable to permit 75 its removal in handling the can.

In use, when the siphon is discharged, its discharge-outlet may be turned up, as shown in the dotted lines at Fig. 1, to conduct the 80 drippings to the trap. The open-end vessel is provided with a piston, e, capable of a free reciprocating movement endwise therein, and a piston-rod, h, is fixed to the center of its upper surface and rises freely through a center 85 opening in the head I of the vessel and through the conical top of the can. Its upper end is fitted at r in ring, loop, or other convenient form, to receive the hand of an attendant to operate the piston. A spring, n, is fitted to the 90 conical top, to engage the piston-rod to hold the piston in its elevated or depressed position. When required, a second bottom, P, may be fixed in the can, to protect the parts below the bottom E of the can. In cans pro- 95 vided with a jacket for protection the second bottom, P, may be a portion of the jacket.

To afford an inlet for the liquid to the vessel H, a small space is left around the piston-rod in the head I. It is obvious, however, 100

that other inlets may be provided—for example, a series of holes (not shown) near the bottom edge of the vessel H, so that when the piston-head *e* is below them the liquid will enter the vessel. By this latter construction it is not necessary that the space or opening surrounding the piston-rod *h* in the head H should be provided.

In the use of my improved can, constructed as shown, a quick upward movement of the piston will force the liquid contained in the open-end vessel into the tube connected therewith, and will charge the siphon, and cause the liquid contained in the can to flow through it and be discharged from the nozzle, and, if permitted, will exhaust the liquid from the can to the bottom of the open-end vessel in the well. The downward movement of the piston will discharge the siphon, causing the liquid contained therein to flow back into the open-end vessel.

From the foregoing it will be seen that the upward movement of the piston or plunger will charge the siphon and cause the liquid contents of the can to flow through it, and the downward movement thereof will stop the flow, and this operation can be repeated indefinitely until the liquid is exhausted from the can.

By this construction and arrangement of the parts I produce a siphon-faucet capable of use in connection with a variety of vessels to extract or discharge the liquids contained therein without leakage or waste, without the em-

ployment of valves, spigots, stop or way cocks, screw-plugs, packings, or other of the many devices known and used for like purposes.

In the foregoing I have shown my improvement in connection with a can of a well-known variety employed in handling liquids of various kinds, especially such as the many varieties produced from petroleum, but do not wish to confine myself to such application.

I claim as my invention—

1. The combination of the liquid-containing vessel having its bottom proper located at a distance above the lower end of the vessel, a well fitted in said bottom and extending below the same, and a siphon-tube located entirely within the vessel and connected at its shorter side with a charging and discharging cylinder located in said well, substantially as described, the discharging end leading to the exterior of the vessel, as set forth.

2. The combination of the liquid-containing vessel having its bottom located at a distance above the lower end of the vessel, a well fitted in said bottom and extending below the same, and a siphon-tube connected at its shorter side with a charging and discharging cylinder located in said well, the longer side leading to the exterior of the vessel and provided with a curved movable discharging-nozzle, substantially as and for the purpose set forth.

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Witnesses:

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