W. McCARTHY.
LAMP.

No. 193,015. Patented July 10, 1877.

Fig. 1.

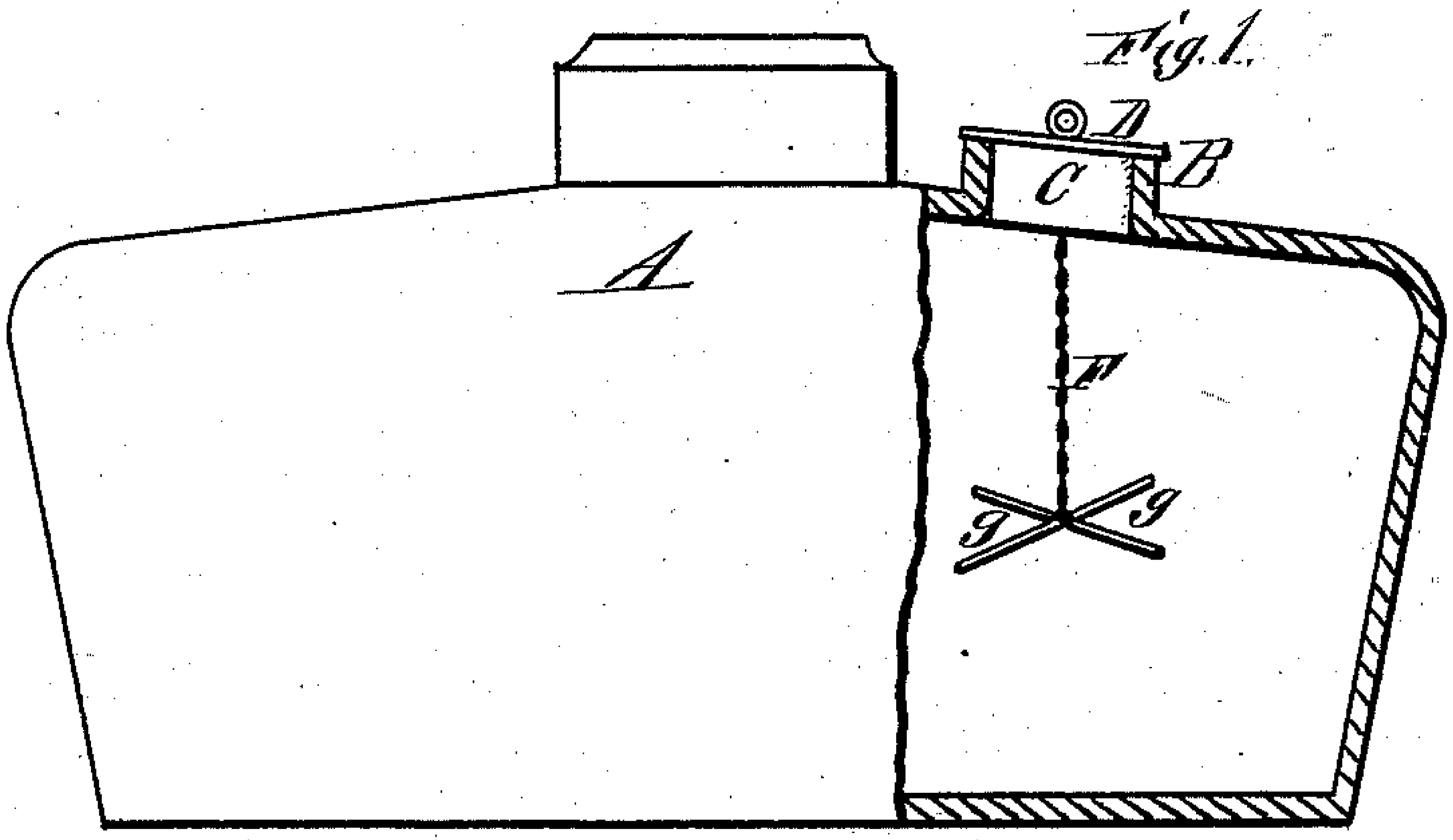
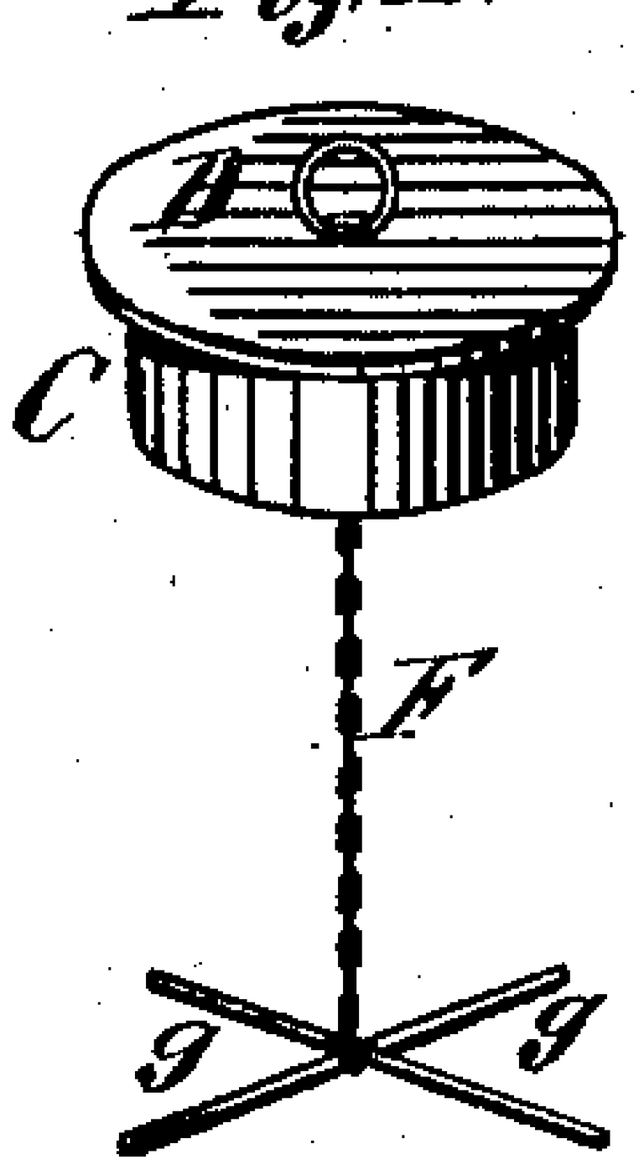


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM McCARTHY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM M. FLOOD, OF SAME PLACE.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **193,015**, dated July 10, 1877; application filed April 24, 1877.

To all whom it may concern:

Be it known that I, WILLIAM MCCARTHY, of Philadelphia, county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a partial section and elevation of a lamp-bowl having my improved safety-valve applied thereto. Fig. 2 is a perspective view of the valve as it appears when detached from the lamp-bowl.

Like letters in all the figures refer to corresponding parts.

The object of my invention is to improve upon the safety-valves used in connection with kerosene or other fluid-burning lamps, rendering the said valve cheap and easy to be applied to those lamps already provided with a filling-orifice at one side of the burner-supporting collar; and to accomplish this it (the invention) consists in certain details of construction and combinations of parts, as will be hereinafter fully described, and then pointed out in the claim.

A is the reservoir or bowl of a lamp, having a raised neck, B, similar to the filling-orifice provided in certain styles of lamps, and upon which a screw-cap is ordinarily placed.

The valve should be sufficiently extensive in area to afford room for the spout of the filling-can, and, more especially, to afford ample room for the escape of gases from within the lamps, so that the bowl may be immediately relieved of as much pressure as will obviate the breakage commonly following an explosion—say, three-fourths of a square inch. It is desirable also that the valve be anchored so that it may not become detached, and in such manner that, in the event of an explosion, it shall completely uncover the mouth of the vent-tube B, and at the same time be so confined as that it will not break the lamp-chimney by striking against it.

The valve C is preferably made of cork, and should fit the neck B smoothly, and at the same time tightly enough to prevent its dropping out, or the splashing or slopping over of the oil as the lamp is being carried about. It is anchored within the bowl of the lamp by means of a flexible anchor, *g*, attached to a chain, F, which is long enough to permit its removal when desired, but not so long as to admit of its striking against the chimney when blown out. This chain permits of the valve to be blown entirely away from over the gas-vent in the event of an explosion, thus affording a free and unobstructed passage for the escaping gases; and it also permits the valve to be turned upwardly to give room for the insertion of the spout of the filling-can.

The object of making the anchor flexible is that it may be readily inserted into the filling-orifice, and thus obviate any alteration in the construction of the lamp-bowl. When made as shown, all that is necessary, in order to attach the valve to the bowl, is to bend the anchor *g* slightly, pass it through the orifice B, and then straighten out the anchor by the finger inserted through the burner-supporting neck or wick-orifice.

Under the construction and arrangement shown it will be observed that the device is extremely simple and cheap; that it may be applied to any form of lamp having a side orifice without necessitating any change therein; and that it affords a very safe and reliable safety-valve, which operates at the same time as a cover for the filling-orifice.

The cork is covered by a metallic cap, D, to prevent its being forced too far within the lamp, and to serve as a means of withdrawing the valve, in order to fill the bowl.

I am aware of patent granted to F. Kampfe, October 7, 1873, wherein the gas-passage is covered by a valve held directly in the line of the escaping gases in cases of an explosion. This construction, moreover, involves a rim or band about the vent, and it has no cork to prevent slopping over of the oil. The vent shown in the said patent is not practically available as a filling-orifice, inasmuch as the valve would have to be held in an elevated position by the fingers during the process of filling.

I do not claim anything therein shown; but

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

The herein-described safety attachment for lamps, consisting of the valve C having a metallic top, the same being anchored to the lamp-bowl by means of a flexible anchor, *g*, attached to a chain, F, and depending within said bowl, as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

WILLIAM McCARTHY.

Witnesses:
CHAS. R. SEARLE,
GEO. F. GRAHAM.