

M. CHASE & A. W. CRAM.

Safety-Cans for Oils, &c.

No. 153,702.

Patented Aug. 4, 1874.

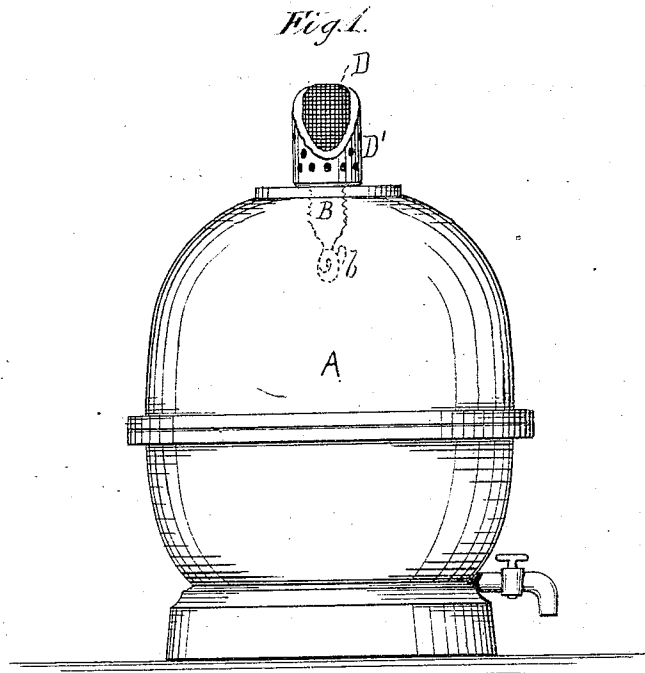
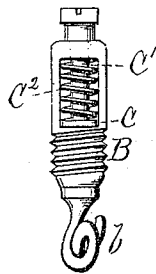


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

MILTON CHASE, OF HAVERHILL, MASSACHUSETTS, AND ALONZO W. CRAM,
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IMPROVEMENT IN SAFETY-CANS FOR OILS, &c.

Specification forming part of Letters Patent No. **153,702**, dated August 4, 1874; application filed
July 9, 1874.

To all whom it may concern:

Be it known that we, MILTON CHASE, of Haverhill, in the county of Essex and State of Massachusetts, and ALONZO W. CRAM, of Litchfield, in the county of Montgomery and State of Illinois, have invented certain Improvement in Safety-Cans, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a side view of the can. Fig. 2 is a side view of the safety-valve and its operating mechanism.

Our invention has reference to safety cans or tanks for holding or transporting explosive compounds or oils.

The nature of our invention consists in constructing the tube which forms the seat for the safety-valve so as to extend down into the can or tank, and so bent that no matter in what position the can or tank may be placed the liquid or compound contained in the same cannot displace all the gas or air in the tube, and, coming in contact with the valve, cause it to stick and be rendered inoperative.

The construction and operation of our invention are as follows:

A is the can or tank for receiving the explosive liquid or compound, which may be made of any suitable material and in any desired form. In an opening in the top of this can is screwed or otherwise secured a tube, B, which extends down into the can, and is so curved at that section which is inside the can, as shown at *b*, that, no matter in what position the can may be placed, all the gas or air cannot be expelled, so as to allow the liquid or compound contained in the can to reach the safety-valve, clogging it, and thus rendering the same inoperative. C is the safety-valve, which is attached to the rod C¹, and has its seat upon the top of the tube B. Around this rod C¹ is a coiled spring, C², one end of which rests upon the valve C. The tension of this spring is constantly exerted to keep the valve C in its seat and thus close the tube B. The other end of this spring rests against a screw-cap secured in the cross-connection of

two uprights, which are the continuation of two sides of the tube B. D is a gage-cap, constructed of metal or other suitable material, which fits over the coiled spring and safety-valve, its bottom resting on the can. D' is a perforated cap, also constructed of metal or other suitable material, which fits over the gauze cap D.

The object of these caps (either one or both of which may be used) is twofold: First, to prevent fire from entering and exploding the can when all the non-combustible gases are thrown off. In such case, after the can has been heated sufficiently and the non-combustible gases have escaped, the explosive compound would open the safety-valve and burn while being passed through the fine meshes of the gauze cap or the holes of the perforated cap, the fire not entering the can. The other object of these caps is, that, when the can or tank is used to store materials charged with non-combustible gases, they will act as a fire-extinguisher, since, as soon as the can becomes heated sufficiently to expand the gases, they will open the safety-valve and force themselves through the small openings or meshes of the caps, sending small jets in all directions. In this case we charge the can containing the explosive compound with carbonic-acid gas, or any other non-explosive or non-combustible gas, using a sufficient quantity of the gas to render the explosive compound perfectly safe to handle.

The can or tank A may be covered with a lagging of any non-conducting material so as to make it more secure and less liable to be affected by an increased heat, should the same contain explosive materials.

A soft-metal ring may be either attached to the valve or its seat, so that it can be made tight by tapping it on top with a hammer. Should the can or tank contain materials which are thick or slow to draw, it may be charged with a pressure of air or gas to force them out.

What we claim as new, and desire to secure by Letters Patent of the United States, is—

1. The can or tank A, provided with a safety-valve, C, the gauze cap D or perforated cap D', or both, and tube B, curved at its lower

section, the whole being combined and arranged substantially as described.

2. The can or tank A, provided with a safety-valve, C, and tube B, said tube being curved at its lower section, substantially as shown and described.

In testimony whereof we have signed our

names to this specification in the presence of two subscribing witnesses.

MILTON CHASE.

ALONZO W. CRAM.

Witnesses:

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