No. 858,900. PATENTED JULY 2, 1907.

W. H. McNUTT.

SAFETY AIR VENT.

APPLICATION FILED MAR. 6, 1907.

FIG 1

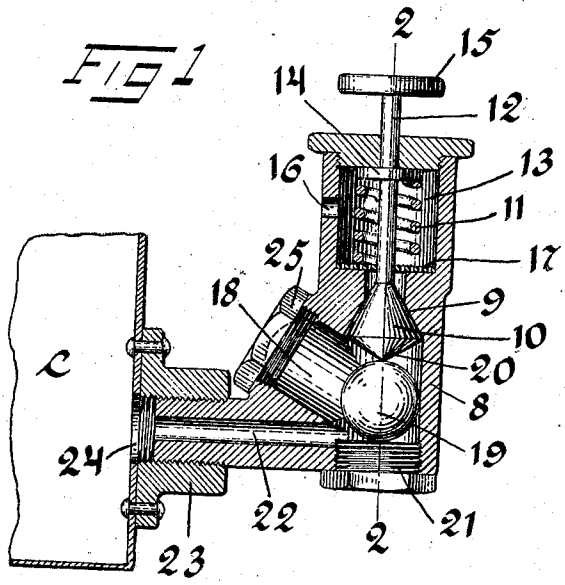


FIG 2

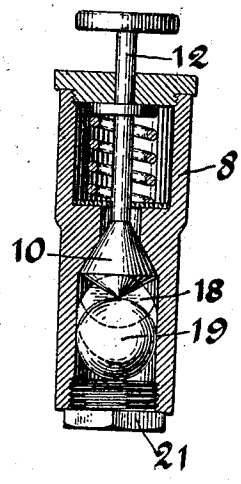


FIG 3

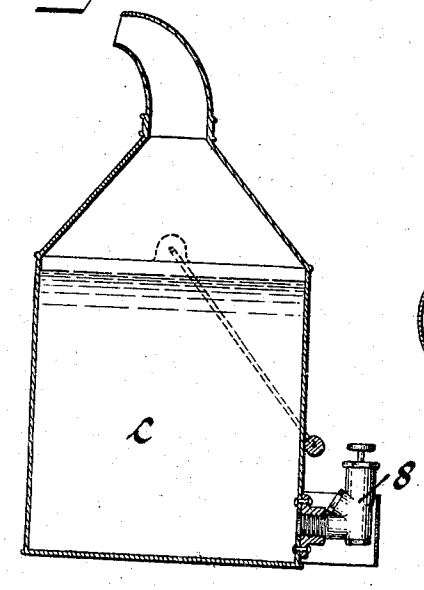
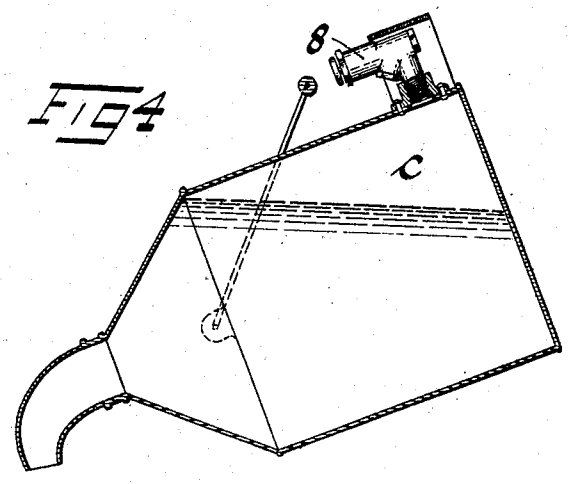


FIG 4



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM H. McNUTT, OF NEW YORK, N. Y., ASSIGNOR TO THE NON-EXPLOSIVE SAFETY NAPHTHA CONTAINER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF SOUTH DAKOTA.

SAFETY AIR-VENT.

No. 858,900. Specification of Letters Patent. Patented July 2, 1907.

Application filed March 6, 1907. Serial No. 360,942.

To all whom it may concern:

Be it known that I, WILLIAM H. McNUTT, a citizen of the United States, residing in New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Safety Air-Vents, of which the following is a specification.

This invention relates to safety means for providing an air inlet into the lower part of a can in order that it may be tipped over and its contents poured out when in an inverted position, whereby air is admitted to the now upper end to facilitate the flowing out of the contents of the can.

The object of the invention is to provide such an inlet that will be normally closed in the upright position of the can and which is locked in closed position whereby it is impossible to open the closing member till the can has been sufficiently inverted to bring the level of the contents of the can below the inlet member.

A further object of the invention is to provide in such a device a valve that is normally closed to prevent admission of air, and to provide a gravity device that will serve to lock the valve closed and prevent its being opened until the can is inverted.

In the accompanying drawings illustrating one embodiment of my invention, Figure 1 represents the device in vertical section as applied to a can. Fig. 2 is a vertical section on the line 2—2 indicated in Fig. 1. Fig. 3 shows the entire can in section with the valve member attached, the latter being partly in elevation; and Fig. 4 is a view similar to Fig. 1 with the can partly inverted.

The can C shown in the nature of a pouring can has the present invention attached at its lower portion, as shown connected to the side of the can near the bottom, and on the side opposite to the outlet of the spout top of the can whereby when the can is inverted, this member will be at the uppermost portion of the can. The member comprises a valve closing a vent opening retained closed by a spring, the valve having a stem projecting outside whereby it can be opened by pressure thereon as by the thumb of the user. But the opening of the valve is normally prevented by the interposition of a gravity member normally lying between the valve and an opposing member, whereby pressure to open the valve would be prevented by the member. But when the can is turned over or inverted, the gravity member will move away from this position and permit the valve to be opened by pressure thereon. In the construction illustrated, the valve member comprises a chambered frame 8 having a valve seat 9 in its bore. A valve 10 is pressed against this seat by a coil spring 11 around the stem 12 of the valve located in an enlarged chamber 13 in the frame. The spring presses between a washer 14 fast on this valve stem and the lower wall of the chamber 13, to keep the valve normally seated. The valve can be opened by pressure applied on a head 15 on its stem, whereby air can be admitted through an aperture 16 in the chamber 11. Preferably a perforated disk 17 is placed in the chamber 11 around the valve stem, whereby flame is prevented from passing in to the chamber 13 and through the valve seat when the valve is opened.

A gravity member is provided that will tightly fit between the valve 9 and the opposite portion of the frame member 8, which member is normally retained in this position by gravity when the can is in its usual upright position but when the can is inverted, the member will shift into a chambered portion 18 thereby elevating the valve to be moved by pressure on its head 15. But upon righting the can, the gravity member will return to its normal position and lock the valve in closed position. In the construction shown, the gravity member is a ball 19 located in contact with the pointed lower end 20 of the valve 9 and its position to retain the valve closed is adjusted by means of a plug 21 screwed in a bore in the lower part of the frame. The ball will roll into the chamber or bore 18 when the can is turned to bring the valve member uppermost, and the valve is then free to be opened. But as soon as the can is inverted, the ball will roll down the bore 18 and engage beneath the valve to lock it in closed position. The frame 8 of the valve member is shown as having its lower tubular portion 22 screwed into a flange bushing 23 that may be riveted on the can around an opening 24 therein. The bore 18 in which the ball rolls may be continued to the outside and closed by a suitable plug 25.

Having thus described my invention, I claim:

1. The combination with a receptacle having an air vent, a valve controlling said vent, and a gravity member, the member being movable in a passage and organized to engage the valve in the normal upright position of the can to prevent its being opened, but to shift in said passage away from the valve upon the can being inverted to permit the valve to be opened.

2. The combination with a receptacle having an air vent, a valve controlling said vent, and a gravity member, the member being movable in a passage and organized to engage the valve in the normal upright position of the can to prevent its being opened, but to shift in said passage away from the valve upon the can being inverted to permit the valve to be opened, and yieldable means for normally retaining the valve closed.

3. The combination of a receptacle provided with an air vent portion, a valve arranged to close the air vent, the valve member having a passage therein, and a ball slidable in said passage, said members being organized whereby in the normally upright position of the receptacle the ball will engage the valve to lock it in closed position, and when the can is inverted the ball will roll in the passage away from the valve to permit its opening.

4. The combination of a receptacle provided with an air vent portion, a valve arranged to close the air vent, the valve member having a passage therein, and a ball slidable in said passage, said members being organized whereby in the normally upright position of the receptacle the ball will engage the valve to lock it in closed position, and when the can is inverted the ball will roll in the passage away from the valve to permit its opening, and a spring member yieldably retaining the valve in closed position.

5. The combination of a valve frame having a valve seat therein, a valve engaging said seat, a spring for retaining the valve closed, a passage in the valve member adjacent the valve, a ball arranged to roll in said passage to engage the valve in closed position and retain it closed in one position of the valve frame, the passage being arranged in the frame whereby upon shifting the position of the frame the ball will roll by gravity away from the valve and permit it to be opened.

6. The combination of a valve frame having a valve seat therein, a valve engaging said seat, a spring for retaining the valve closed, a passage in the valve member adjacent the valve, a ball arranged to roll in said passage to engage the valve in closed position and retain it closed in one position of the valve frame, the passage being arranged in the frame whereby upon shifting the position of the frame the ball will roll by gravity away from the valve and permit it to be opened, and a plate having minute openings arranged between the valve and the outlet in the valve frame.

Signed at Nos. 9–15 Murray street, New York city, N. Y., on this 5th day of March, 1907.

WILLIAM H. McNUTT.

Witnesses:

WILLIAM H. REID,

FRED. J. DOLE.