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Patented Dec. 26, 1899.

J. J. RHINELANDER & C. MOYER.

NON-EXPLOSIVE OIL CAN.

(Application filed Aug. 23, 1899.)

(No Model.)

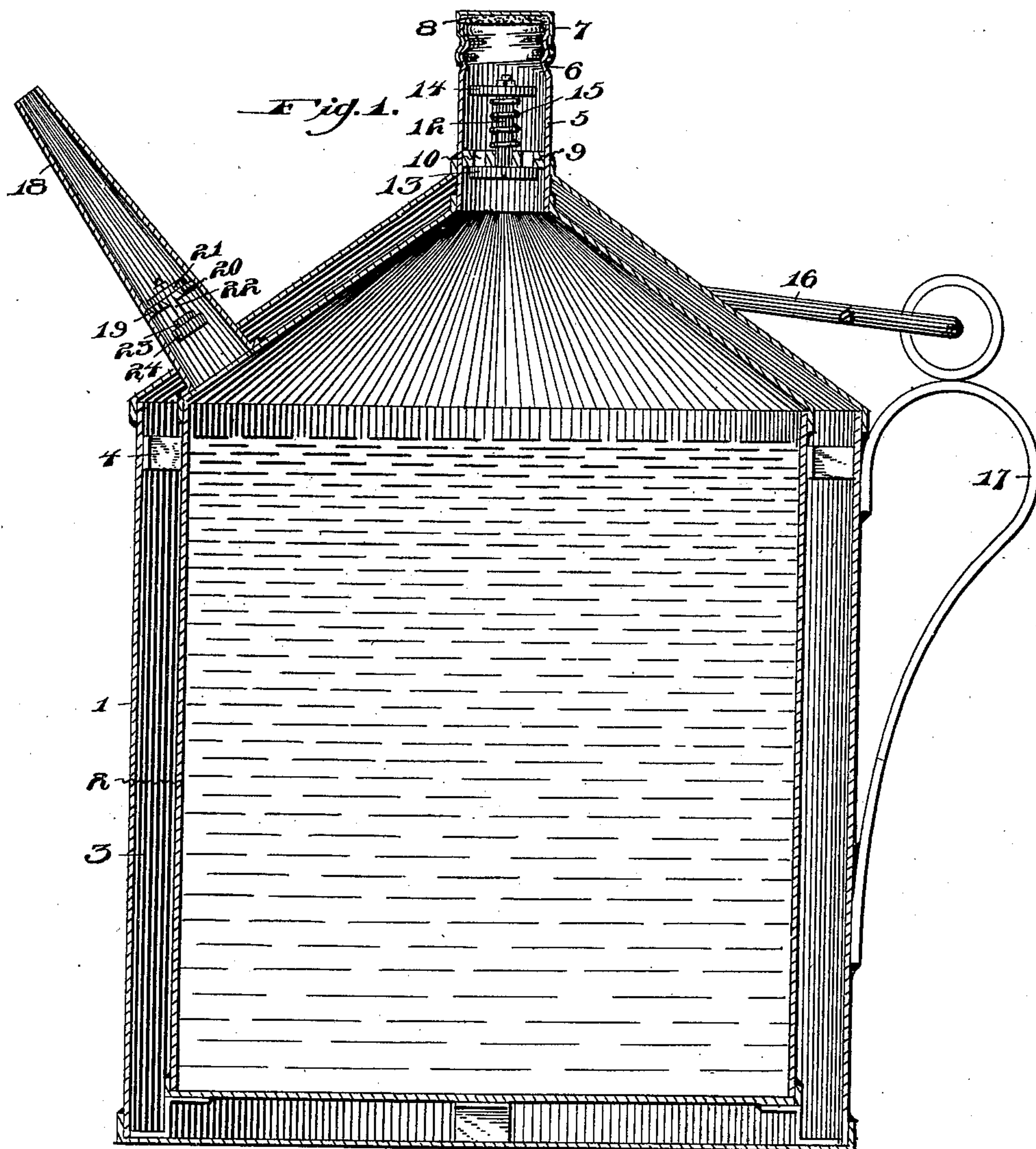


Fig. 2.

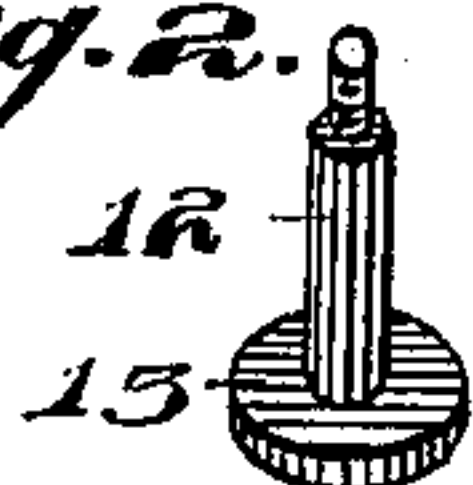


Fig. 3.



Fig. 4.



Fig. 5.



WITNESSES:

J. P. Appleman,  
C. M. Schiffhauer.

INVENTORS  
J. J. Rhinelanders  
Charles Moyer

BY  
H. C. Everett & Co.  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JAMES J. RHINELANDER AND CHARLES MOYER, OF HARMONY,  
PENNSYLVANIA.

## NON-EXPLOSIVE OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 639,936, dated December 26, 1899.

Application filed August 23, 1899. Serial No. 728,163. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES J. RHINELANDER and CHARLES MOYER, citizens of the United States of America, residing at Harmony, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Non-Explosive Oil-Cans, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in oil-cans, and more particularly to that class known as "non-explosive" oil-cans.

The invention has for its object to provide novel means in both the discharge-spout and the filling-tube whereby the flame will be effectually prevented from entering either source and igniting with the gases formed in the upper portion of the can, which usually causes an explosion.

The invention has for its further object to construct a can of this class that will be extremely simple, strong, durable, and comparatively inexpensive to manufacture; furthermore, one that will not contain any complicated parts or mechanism that are apt to get out of order.

The invention briefly described consists of a gravity check-valve arranged in the spout in conjunction with a spring-pressed valve arranged in the filling-tube, serving as a vent for the can.

The invention still further consists in the double vessel forming an air-space between the inner and outer walls, thereby preventing the contents of the can from becoming heated to such a degree that would otherwise cause an explosion.

With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claim.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is a vertical sectional view of our improved oil-can, showing all parts in position. Fig. 2 is a perspective view of a portion of the spring-pressed check-valve arranged in the filling-tube. Fig. 3 is a perspective view of the washer of said valve. Fig. 4 is a perspective view of the valve-seat in the filling-tube. Fig. 5 is a perspective view of the valve and valve-stem proper.

Referring to the drawings by reference-numerals, 1 represents the outer casing of the can, and 2 represents the inner casing, said inner and outer casings forming between them an air-space 3, which is suitably braced equidistantly apart by means of braces 4. The said inner casing is provided at its upper extremity with the ordinary and well-known filling-tube 5, said filling-tube being preferably screw-threaded at its upper portion, as shown at 6, for the reception of the screw-threaded cap 7, having secured upon its under face a gasket 8. The said filling-tube 5 has suitably secured therein the concentric disk 9, forming a valve-seat, said disk being provided with a series of openings 10 and a central aperture 11, adapted to receive the valve-stem 12, carrying on its lower end a valve 13 and at its upper end a head 14, said valve-stem being encircled by a spiral spring 15, operating against the upper face of the valve-seat 9 and the under face of the valve-head 14.

The reference-numeral 16 indicates the ordinary bail attached to the can, and 17 represents the handle. The discharge-spout is indicated by the reference-numeral 18, which has secured therein the disk 19, forming a valve-seat, and which is provided with openings 20.

The reference-numeral 21 indicates a gravity-valve, and 22 a valve-stem operating through said valve-seat.

The reference-numeral 23 represents a washer which is of less diameter than the valve 21, and 24 indicates a weighted lower portion of the said valve.

The operation of our improved oil-can is as follows: When it is desired to fill the can, the top cap is removed from the filling-tube and a funnel inserted in the latter. By depressing the head 14 of the spring-pressed valve the same will open sufficiently to allow the



oil to fill the can and will again return to its normal position when the pressure is relieved from the head. When it is desired to empty the can, the same is tilted to the desired angle or degree, thereby opening the gravity-valve and allowing the oil to freely be discharged through the spout. The washer 23 being of less diameter than the valve 21 will allow the contents to permeate through the openings 20 and discharge through the spout in the ordinary manner. As soon as the can is again tilted toward the upright position the gravity check-valve will automatically close the discharge-spout and prevent the flame from entering the interior of the can. In order to give vent to the can, the spring-actuated valve is slightly depressed.

It will be readily apparent that by the use of our improved oil-can an explosion will become practically impossible, and it will also be noted that various changes may be made in the details of construction without departing from the general spirit of our invention.

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

An oil-can, consisting of an outer casing provided with a dome, an inner casing provided with a dome, means for suitably securing and supporting the said inner casing within the outer casing forming an air-chamber entirely surrounding said inner casing, a dis-

charge-spout secured to the dome of said inner casing and extending through said air-space and dome of the outer casing, a concentric disk forming a valve-seat suitably secured in said spout and provided with a series of openings, a valve-stem operating through the said disk, a valve secured to the outer end of the said stem and adapted to close the said openings, a weight secured to the opposite end of the said valve for normally retaining the same in engagement with the said disk for closing the said openings, means mounted upon the said stem for preventing the closing of the said opening by the said weight, a filling-tube connected to the dome of said inner casing at the apex thereof and extending through the said air-space and dome of the outer casing in a vertical manner, a disk forming a valve-seat secured in the said tube and provided with a series of openings, a spring-actuated valve adapted to normally engage the lower face of said disk and close the said openings, and means for closing the said tube, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

JAMES J. RHINELANDER.  
CHARLES MOYER.

Witnesses:

JOHN NOLAND,  
E. W. ARTHUR.