

H. L. CATHEY.
SAFETY VENT FOR OIL CONTAINERS.
APPLICATION FILED OCT. 5, 1916.

1,287,223.

Patented Dec. 10, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

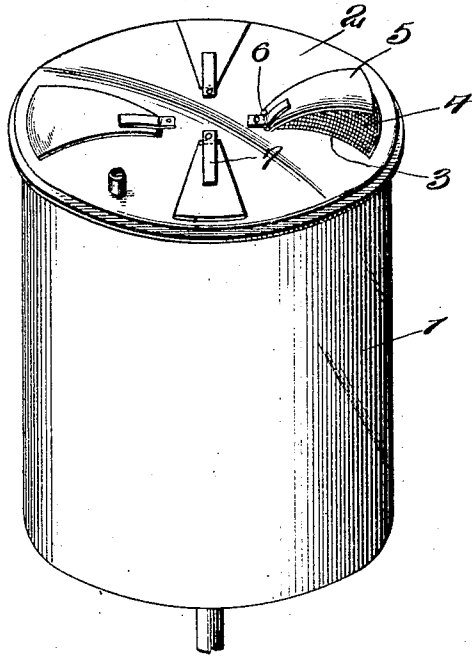
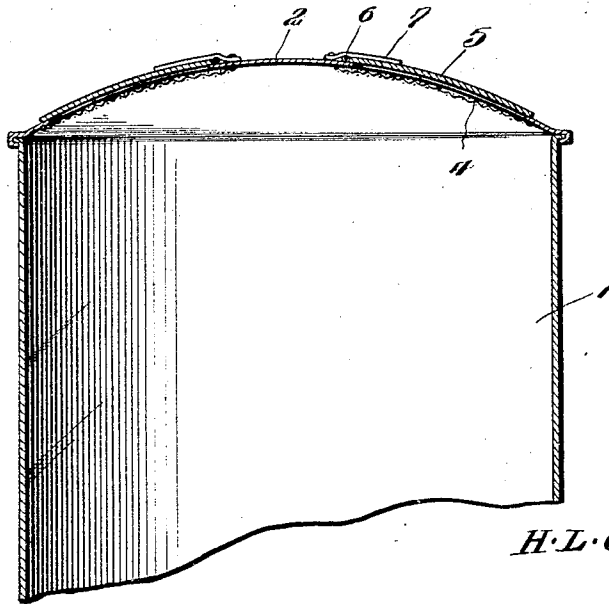


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

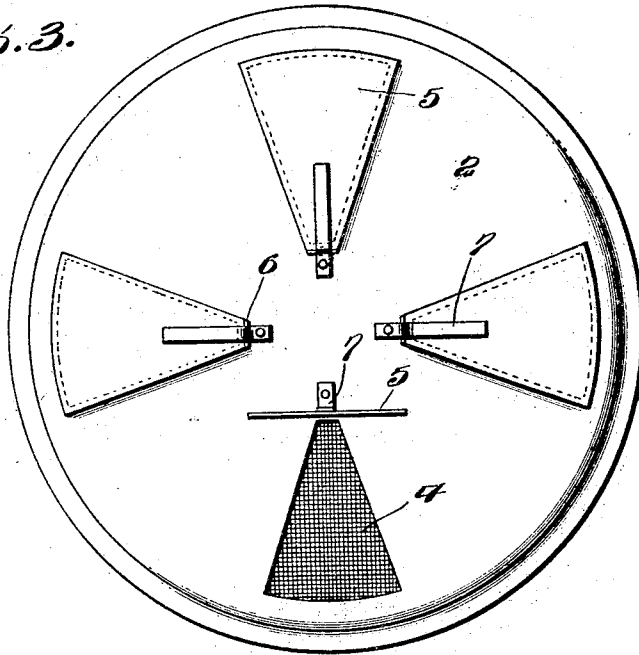
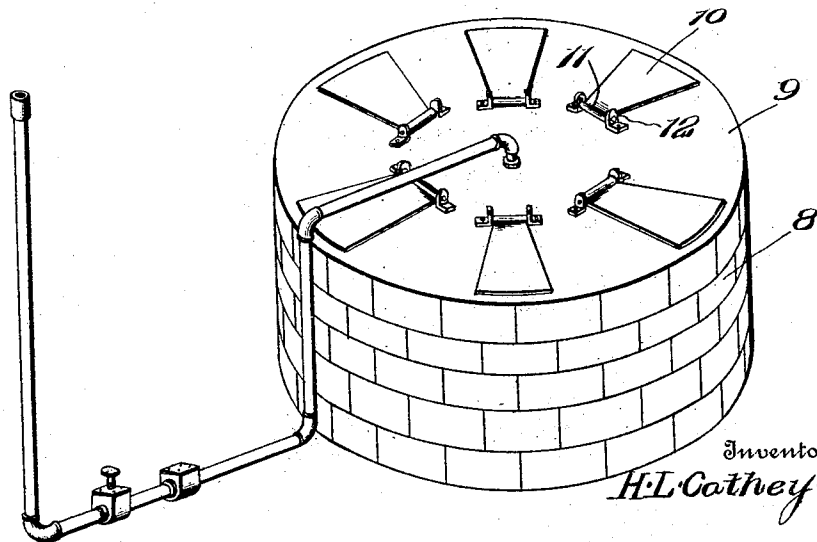


Fig. 4.



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UNITED STATES PATENT OFFICE.

HARDY L. CATHEY, OF TULSA, OKLAHOMA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF THREE-TENTHS TO T. W. PATTERSON, OF CLINTON, OKLAHOMA, FORTY ONE-HUNDREDTHS TO W. J. ENOCHS, B. F. ENOCHS, WILL ENOCHS, AND PERRY ENOCHS, AND ONE-TENTH TO JOHN PATTERSON, OF CLINTON, OKLAHOMA.

SAFETY-VENT FOR OIL-CONTAINERS.

1,287,223.

Specification of Letters Patent.

Patented Dec. 10, 1918.

Application filed October 5, 1916. Serial No. 123,965.

To all whom it may concern:

Be it known that I, HARDY L. CATHEY, a citizen of the United States, residing at Tulsa, in the county of Tulsa and State of Oklahoma, have invented certain new and useful Improvements in Safety-Vents for Oil-Containers, of which the following is a specification.

This invention relates to safety vents for oil containers and has for its object to provide a vent which will prevent loss of oil and destruction of the container in the event of fire and which will, in fact, automatically extinguish the flames in the event of ignition of the oil.

The invention also aims to provide a device of this class which will, in the event of the gases above the level of the oil within the container becoming ignited, permit of the sudden escape of the gases at the time of their explosion and immediately automatically smother the flame.

In the accompanying drawings:—

Figure 1 is a perspective view of an oil container such as employed in connection with oil or gasoline stoves, the container being equipped with the safety device embodying the present invention;

Fig. 2 is a vertical transverse sectional view through the upper portion of the container and the safety devices;

Fig. 3 is a top plan view of the said container and the devices;

Fig. 4 is a perspective view illustrating the application of the invention to an oil storage tank of large capacity.

The principles of the present invention may be embodied, as above indicated, in an oil container of any type and in the drawings the numeral 1 indicates the body of a container and the numeral 2 indicates the top of said container. The top is provided with one or more openings, indicated by the numeral 3, and these openings may be of any desired outline although here illustrated as of segmental outline, the broader ends of the openings being located near the periphery of the top and the narrower or minor ends being located a greater or less distance from the center of the top. Stretched over each of the openings 3 is a sheet 4 of wire mesh or other suitable for-

aminous material which, of course, will prevent flame passing to the interior of the container in the event that the gases rising from the oil become ignited exteriorly of the container.

In order that the openings 3 may be kept normally closed each opening is provided with a valve plate of segmental outline, indicated by the numeral 5, the said plates being hinged at their inner or minor ends, as indicated by the numeral 6, to the upper side of the top 2. The closure plates 5 may rest by gravity in position closing the respective openings 3 or the said plates may be yieldably held in closed position by means of springs, as shown in the drawings. The numeral 7 indicates leaf springs which are secured at their inner ends to the upper side of the top 2 of the tank and which extend above the hinges 6 and at their free end portions bear frictionally upon the upper sides of the respective closure plates 5.

When the principles of the present invention are embodied in an oil storage tank, such as employed in the oil fields and of considerable capacity, the closure plates will be of such size and weight that they may rest solely by gravity in position closing the openings in the top of the tank. For example, in Fig. 4 the numeral 8 indicates an oil storage tank of the type above referred to and the numeral 9 indicates the top of the said tank, the numeral 10 indicating the closure plates which correspond to the plates 5 heretofore referred to. In the present instance each plate 10 is provided at its inner end with a transverse pintle rod indicated by the numeral 11 and the ends of these rods are pivotally mounted in spaced upstanding brackets 12 upon the top 9 of the tank.

From the foregoing description of the invention, it will be understood that in the event of flame reaching the contents of the tank the flame will be smothered by reason of the fact that the plates 5 close the vent openings 3. Furthermore, it will be understood that should lightning strike the tank or should the gases above the oil within the tank in any manner become ignited and explode, the sudden outrush of gases from the tank will result in a lifting of the valve plates 5, which plates, however, will, imme-

diately following the explosion, automatically return to closed position thereby preventing entrance of air and flame into the tank.

5 As will be apparent from an inspection of the drawings the plates are so proportioned with respect to the distance between the openings that when they are simultaneously swung to raised position they will
10 abut against each other to prevent their being thrown back against the top of the container, with possible injury to the springs and hinges.

Having thus described the invention,
15 what is claimed as new is:

A container having a top provided with a plurality of circumferentially spaced radially disposed vent openings the side walls of which converge in the direction of the

center of the top of said container, correspondingly shaped closure plates hinged upon the top and normally resting over and closing the vent openings, leaf springs secured to the top and frictionally engaging the narrow ends of the closure plates and urging said plates to closed position, and screens secured to the inner wall of the top of the container and extending across the adjacent vent openings, the closure plates being so proportioned with respect to the distance between the openings that in raised position of the plates they will abut against each other to prevent said plates being thrown back against the top with possible injury to the springs.

In testimony whereof I affix my signature.

HARDY L. CATHEY. [L. S.]

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."