

No. 689,890.

Patented Dec. 31, 1901.

A. L. KULL.

VENT FOR GASOLENE TANKS OF AUTOMOBILES.

(Application filed May 4, 1901.)

(No Model.)

Fig. 1.

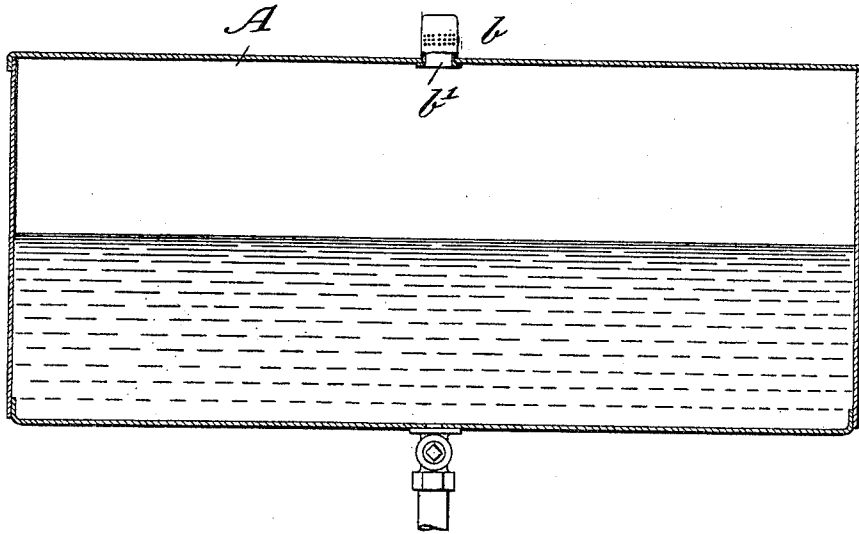


Fig. 2.

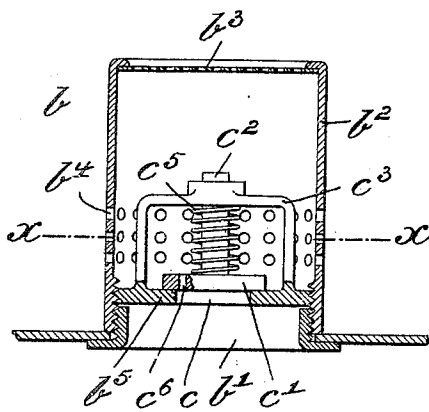


Fig. 3.

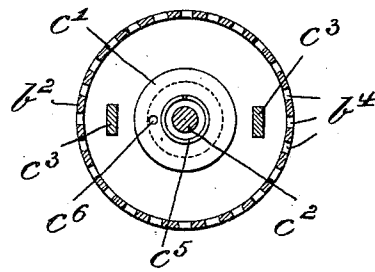
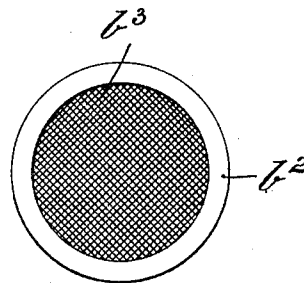


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

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VENT FOR GASOLENE-TANKS OF AUTOMOBILES.

SPECIFICATION forming part of Letters Patent No. 689,890, dated December 31, 1901.

Application filed May 4, 1901. Serial No. 58,719. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. KULL, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Vents for Gasolene-Tanks of Automobiles, of which the following is a specification.

My invention has relation in an automobile or similar motor-vehicle to the construction and arrangement of a vent for gasolene or similar oil-containing tanks employed in automobiles or similar motor-vehicles whereby noxious vapors may be permitted to readily escape from the tank or receptacle without danger of explosion within the tank or receptacle.

The principal object of my invention is to provide an automobile or similar motor-vehicle adapted to be driven by an engine of an explosive type with a tank or oil-receptacle having a vent of peculiar construction whereby the noxious vapors are permitted to readily escape from the tank or receptacle to the open air without danger of explosion within the tank or receptacle.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is an enlarged central sectional view of a tank or receptacle removed from the vehicle with a vent and safety-valve of my invention applied thereto. Fig. 2 is a vertical sectional view of the said vent and safety-valve for the tank or receptacle. Fig. 3 is a horizontal sectional view on the line $x-x$ of Fig. 2, and Fig. 4 is a top or plan view of the vent.

Referring to the drawings, A is a tank or receptacle adapted to contain oil or other fluid. When hydrocarbon oils of a volatile nature, such as gasolene, are used, the tank or receptacle A should be provided with a vent b . The construction and arrangement of such an outlet or vent for the confined vapors in the tank or receptacle A are illustrated in detail in enlarged views in Figs. 2, 3, and 4.

To a nipple-like opening b' in the top or

other portion of the tank above the fluid-level is removably secured a tube or cap b^2 , having an opening closed by a gauze disk b^3 to prevent any flame from reaching the gas generated and that may accumulate within the cap, thereby providing a safeguard against explosions arising therefrom. The periphery of the cap or tube b^2 is also perforated, as at b^4 .

Within the cap or tube b^2 is arranged a plate b^5 , preferably threaded to and removable from the interior of the cap b^2 . This plate is centrally perforated, and the opening c thus formed is normally closed by a valve c' , having a stem c^2 , guided in a yoke or bracket c^3 , projecting from the plate b^5 . A spring c^5 normally tends to close the valve c' down upon the plate b^5 . The valve c' has a perforation c^6 extending through it and forming an opening for permitting vapors to escape under normal pressure from the tank or receptacle to the cap b^2 and then through the perforated wall or periphery into the open air. When the pressure of the vapors in the tank A becomes too great for safety, the relief-valve c' can be raised against the tension of its spring c^5 and the vapors permitted to escape in volume from the tank or receptacle into the open air. If for any cause the valve c^2 works irregularly or refuses to operate, it may be regulated or repaired by simply removing the cap b^2 from the tank or receptacle A and taking the plate b^5 and valve connections out of the cap.

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

1. A tank or receptacle adapted to contain a volatile oil or fluid and provided with a vent having a perforated cap, a perforated plate removably secured within said cap, and a valve adapted to normally seat under spring tension upon said perforated plate, said valve having a perforation communicating with the opening in the plate and forming a constant outlet for the vapors from the tank into the perforated cap, substantially as and for the purposes described.

2. A tank or receptacle adapted to contain a volatile oil or fluid and provided with a vent having a perforated cap with an opening in

the top, a gauze disk mounted in said opening, a perforated plate secured within said cap and provided with a yoke or bracket, a valve provided with a stem which is guided
5 in said yoke or bracket, and a spring normally tending to close said valve, substantially as and for the purposes described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

ALBERT L. KULL.

Witnesses:

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