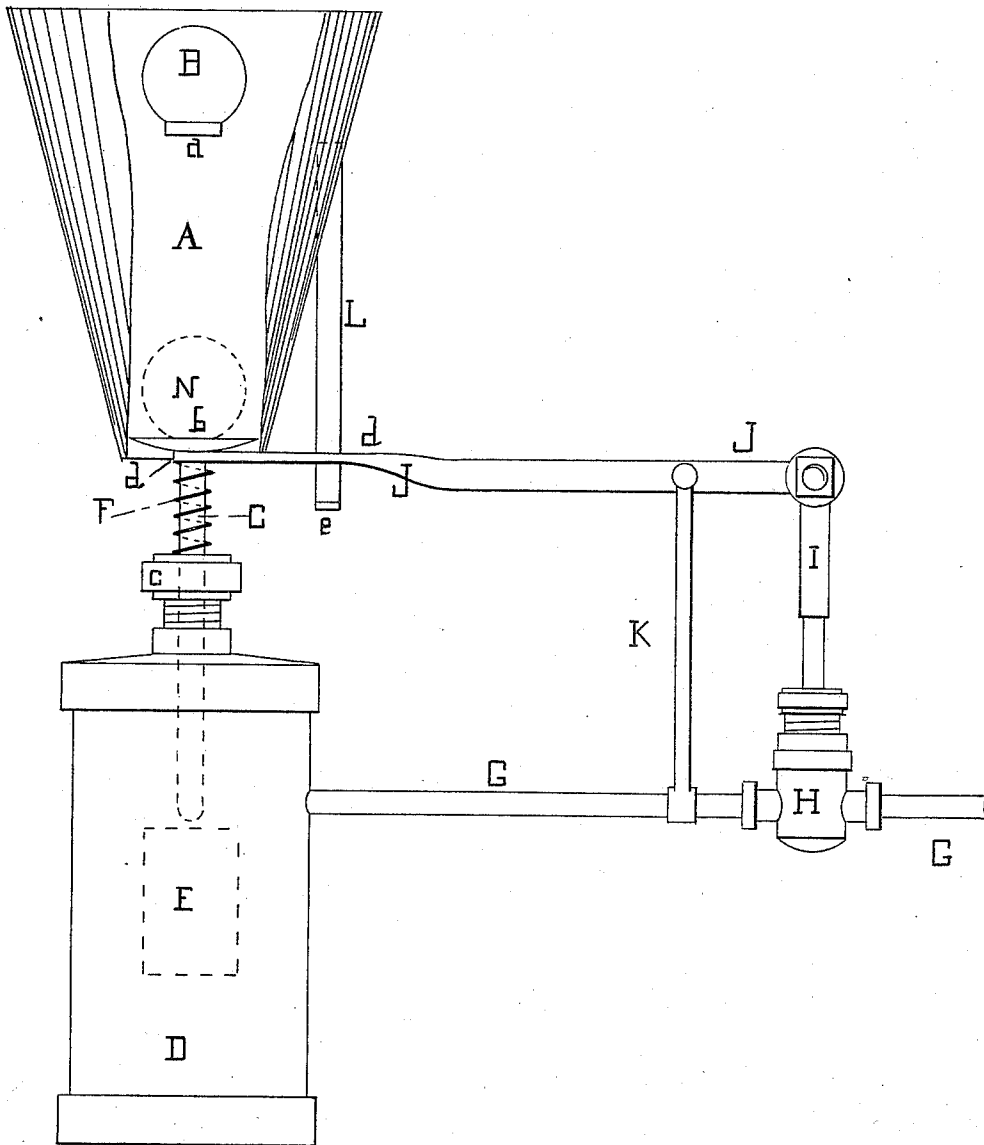


(No Model.)

J. D. BERRY.
FIRE EXTINGUISHER.

No. 449,195.

Patented Mar. 31, 1891.



WITNESSES

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UNITED STATES PATENT OFFICE.

JACOB D. BERRY, OF CAMDEN, NEW JERSEY.

FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 449,195, dated March 31, 1891.

Application filed November 25, 1890. Serial No. 372,581. (No model.)

To all whom it may concern:

Be it known that I, JACOB D. BERRY, a citizen of the United States, and a resident of the city and county of Camden, and State of New Jersey, have invented a new and useful Improvement in Fire-Extinguishers, of which the following is a specification.

My invention relates to a fire-extinguisher that is applied to a railroad-car stove for extinguishing its fire when the car is the subject of an accident that might cause the stove to fire it. A hopper has a spring-bolt that extends from its bottom end to the interior of the cylinder of a fire-extinguisher. A pipe leads from the extinguisher-cylinder to a shut-off cock that has the upper end of its stem jointed with that end of a lever whose opposite end is in connection with the top of the spring-bolt. Should an accident happen to the car and disturb its vertical position, a percussion-ball at the top of the hopper will drop upon the spring-bolt and drive it against the acid-bottle of the extinguisher with sufficient force to break it, and thus generate gas. The descent of the spring-bolt vibrates the connecting-lever. Its opposite end is of consequence raised, and the cock thereby opened, the result of which is an uninterrupted flow of gas into the stove, which smothers the fire. The accompanying drawing is a side elevation of my invention, in which the hopper is shown front-sectioned and the interior of the extinguisher in dotted lines.

A is a hopper.

B is a percussion-weight on a support *a* at its top.

C is a spring-bolt, the top end of which is within the bottom of the hopper and has a head or flange *b*, while the bottom end passes through a stuffing-box *c* into the cylinder D of the fire-extinguisher, adjacent to the acid-bottle E, which is shown in dotted lines. A return-spring F embraces the spring-bolt C between the head *b* and the stuffing-box *c* of the cylinder E.

G is a pipe leading from the extinguisher-cylinder D to a stop-cock H, that has the upper end of its valve-stem I jointed with the end of a lever J, the other end *d* of which is

forked and embraces the upper end of the spring-bolt C.

K is the fulcrum-rod of the levers J, which for convenience is secured to the pipe G.

L is a spring-catch for holding down the lever J when the spring bolt is depressed.

The operation of my invention is as follows: When by a collision or otherwise the car in which the extinguisher is placed becomes toppled or upset, the ball B will drop from its support *a* upon the top *b* of the bolt C, as shown in dotted lines at N, which it forcibly drives against the bottle E. The breaking liberates its acid, which mixes with the water and carbonate of soda in the cylinder D and forms carbonic-acid gas. The descent of the spring-bolt C carries with it that end of the lever J which causes it to turn on its fulcrum K, raise the spindle I, and open the cock H, thus allowing the gas of the cylinder D to escape through the pipes G to the car-stove and smothering its fire immediately. To hold open the cock H while the gas is flowing from the cylinder D to the stove, the lever J, when at the bottom of its descent, is caught by a spring-catch L, which yields to the motion of the lever until its bottom end *e* takes over the top of it. When the pressure of the spring L is taken from the lever J, the spring F reacts and lifts its rod C, which causes the rod J to turn on its fulcrum K and depress the spindle I, thereby closing the valve of the cock H for stopping the flow of gas from the extinguisher D.

I have illustrated and described my invention as applied to a fire-extinguisher in which the acid is contained in a glass vessel. I wish it distinctly understood that I do not confine myself to one of any particular construction, knowing that there are many different patterns. Neither do I confine myself strictly to the mechanism herein shown and described for operating the fire-extinguisher.

I claim—

1. In a fire-extinguisher, the combination of a cylinder; an acid-receptacle in the cylinder; a hopper arranged above the cylinder, a bolt adapted to move vertically in the hopper and cylinder, a ball supported in the hopper and

adapted to fall on the upper end of the bolt to drive the same against the acid-receptacle in the cylinder, and a coiled spring to return the bolt to its normal position, substantially as and for the purpose described.

5 2. In a fire-extinguisher, the combination, with a bolt arranged to move vertically in a cylinder and a ball supported above the bolt and adapted to drop thereon to drive the same
10 against and break an acid-receptacle in the cylinder, of a pipe connected with the cylinder, a valve in said pipe, and a lever connected to the bolt and the valve-stem and arranged to operate the valve when the bolt is
15 depressed to allow the gas generated in the cylinder to escape, substantially as shown and described.

3. In a fire-extinguisher, the combination of a hopper, a cylinder containing an acid-re-

ceptacle, a bolt adapted to be driven against
20 said acid-receptacle, a retracting-spring for elevating the bolt, a pipe provided with a stop-cock and connected with the cylinder, a lever having its fulcrum supported on said
25 pipe and connected at its ends to the bolt and the valve-stem, whereby the valve is opened when the bolt is driven against the acid-receptacle in the cylinder and the gas generated in said cylinder is permitted to escape,
30 and a spring-catch secured to the hopper and arranged to engage with the lever when depressed to hold the valve open, substantially as shown and described.

JACOB D. BERRY.

Witnesses:

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