

(No Model.)

C. R. MACOMBER.
CHEMICAL FIRE PAIL.

No. 563,977.

Patented July 14, 1896.

Fig. 1.

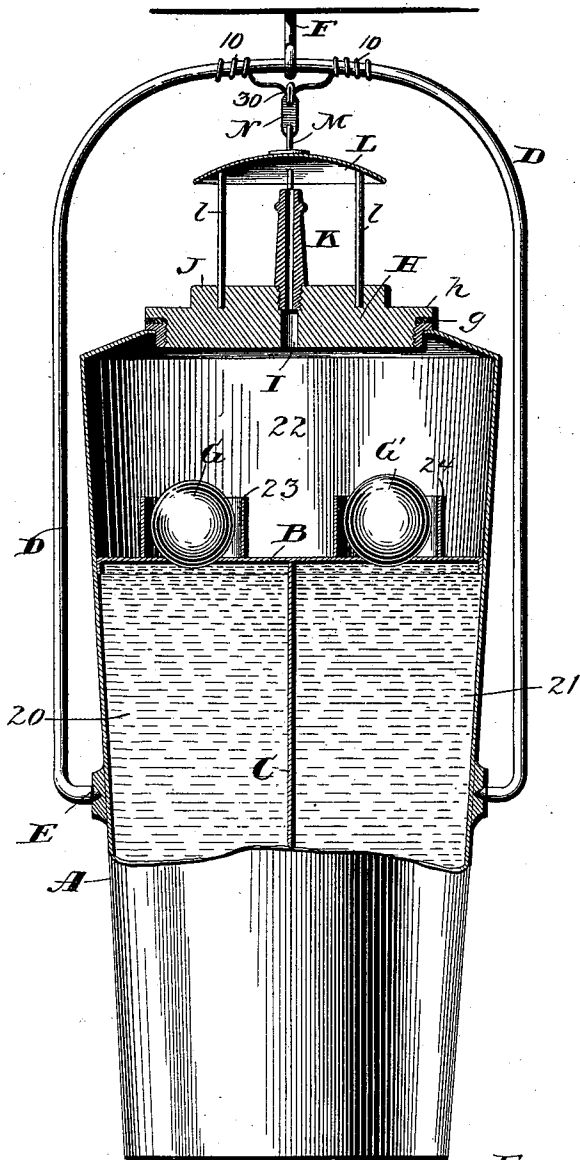


Fig. 3.

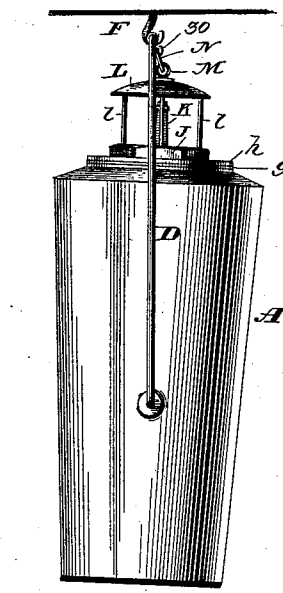


Fig. 4.

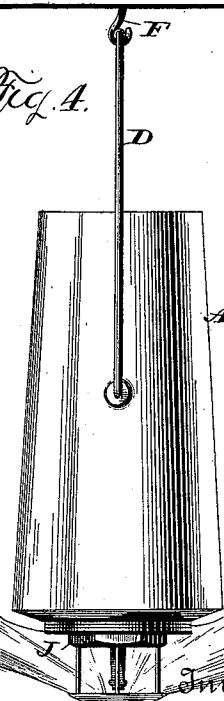
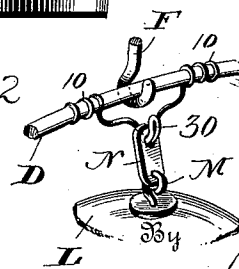


Fig. 2.



Witnesses

G. Williamson.
L. A. Williamson.

Inventor
Clarence R. Macomber.
By *his Attorney*
Louis W. Southgate.

UNITED STATES PATENT OFFICE.

CLARENCE R. MACOMBER, OF WORCESTER, MASSACHUSETTS.

CHEMICAL FIRE-PAIL.

SPECIFICATION forming part of Letters Patent No. 563,977, dated July 14, 1896.

Application filed May 25, 1892. Renewed June 8, 1896. Serial No. 594,800. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE R. MACOMBER, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Chemical Fire-Pails, of which the following is a specification.

The object of this invention is to produce a new and improved fire-pail which will direct a chemicalized stream to the seat of the fire, and the especial object of this invention is to provide a fire-pail which will act automatically.

To these ends the invention consists of the combinations and features of construction as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a sectional elevation of a fire-pail constructed after my invention. Fig. 2 is a separate view of the fusible link or connection used to hold the pail in one position. Fig. 3 is a side elevation at right angles to Fig. 1 on a reduced scale, showing the pail as the same normally stands. Fig. 4 is a view similar to Fig. 3, showing the pail in operation.

Referring to the drawings and in detail, A represents a pail of any suitable construction preferably made of strong sheet metal. The same is divided transversely by a suitable partition B, and by a vertical partition C, extending from the transverse partition B to the bottom of the pail into two compartments 20 and 21 and a mixing-chamber 22.

The partition B has two holes cut therein to form valve-seats connecting with each of the compartments 20 and 21, and surrounding these valve-seats are the guards 23 and 24, in which are mounted the valves G and G', which may be glass balls, as shown.

Screwing into the top of the pail is a suitable cap H, which has a flange h, and, if desired, under this flange may be placed a rubber gasket g, so that a tight joint may be formed between the cap H and the top of the pail. The cap H has formed thereon a hexagonal nut J, by means of which the cap H may be firmly secured to the same. The cap H has a small hole I bored through the same, and screwed into this hole I is the nozzle K. A

suitable deflector or sprayer L is mounted as shown, and may be connected by four small rods l to the cap H.

The pail is hung by a suitable bail D and the bail is connected to the pail below its center of gravity, and, if desired, the bail may be pointed at its ends, as at E, to form nice joints with the pail, whereby the pail may turn easily in the bail, as hereinafter described.

The pail is shown as suspended from a suitable hook F.

The pail is kept normally from turning over by a fusible or combustible connection. This connection, as shown, specifically consists of a small wire hook M, connected to the top of the deflector L, and a small hook 30, which is bent, as shown in Fig. 2, and is twisted around the top of the bail, as at 10 10. The hook F is caught on to the bail between the portions 10 10, whereby the hook 30 will be prevented from sliding in either direction along the bail. The hooks M and 30 are connected by a suitable fusible link N, which governs the operation of the device.

The operation of my device is apparent and as follows: The pail is normally suspended from the ceiling of the room or over any place where it is desired to protect from fire, as shown in Fig. 3, and as there is a slight give in the connection between the top of the pail and the bail the pail will swing slightly, as indicated, so that there will be a slight pull exerted on the connection. The compartments 20 and 21 are filled with suitable solutions, preferably one an acid solution and the other an alkali solution. If now fire should break out or the pail be exposed to abnormal temperature, the link N will melt. This will allow the parts to turn over within the bail or to the position shown in Fig. 4. The two solutions in the compartments 20 and 21 will now both run into the mixing-chamber 22 and will there instantly unite to generate carbonic-acid gas and place the solution under heavy pressure, whereby a powerful stream will be forced out of the nozzle K against the deflector L, so that the same will be sprayed to cover a large area.

Thus it will be seen that I have invented a device which is extremely efficient, and which is automatic in operation, and which can be

placed in any desired locality without piping, and which will throw a chemicalized stream onto the fire.

A fire-pail thus organized constitutes one of the most efficient automatic fire-extinguishers with which I am acquainted.

The details of construction herein shown and described may be greatly varied by a skilled mechanic without departing from the broad scope of my invention as expressed in the claims.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an article of manufacture, a fire-pail comprising a pail or receptacle, a horizontal partition dividing the pail into chemical and mixing compartments, a nozzle leading from the mixing-compartment, a valve-seat formed in said partition, and a glass ball engaging said valve-seat and forming a valve to separate said compartments, substantially as described.

2. A fire-pail divided by partitions into two chemical-chambers below one partition, and a mixing-chamber above said partition, passages through said partition connecting each chemical-chamber with the mixing-chamber, valves as glass balls controlling said passages, and a suitable nozzle leading from the mixing-chamber, the whole so arranged that two chemicals may be placed in the compartments, and be ordinarily held from uniting, but so that if the pail is inverted, the chemicals will unite in the mixing-chambers, and throw a chemicalized liquid from the nozzle, substantially as described.

3. A fire-pail divided by suitable partitions into two compartments, and a mixing-chamber above said compartments, holes through one partition connecting said compartments with the mixing-chamber, valves as glass balls fitted to said holes, guides adapted to guide said glass balls into proper position, and a suitable nozzle leading from the mixing-chamber, substantially as described.

4. As an article of manufacture, an automatic chemical fire-pail comprising a receptacle or pail, horizontal and vertical partitions dividing the receptacle into three departments, two chemical-chambers being located below the horizontal partition, and a mixing-chamber being located above the horizontal partition, a nozzle leading from the mixing-

chamber, a fusible connection, and a bail for normally supporting the pail below its center of gravity, the bail being so arranged that when the pail turns from its normal position, the chemicals will gradually flow into the mixing-chamber to generate a gas and force a chemicalized stream from the nozzle, substantially as described.

5. The automatic fire-pail consisting of a suitable receptacle divided by partitions into compartments containing chemicals that are adapted to unite, and generate a gas, a suitable cap as H screwed into the top of the pail, a nozzle as K arranged in said cap, a deflector as L also connected to said cap, a bail arranged to suspend the pail below its center of gravity, and a fusible connection between the deflector L and the bail, whereby the pail will be held with its center of gravity normally above its line of suspension, substantially as described.

6. The automatic fire-pail consisting of a suitable receptacle divided by partitions into compartments containing chemicals that are adapted to unite to generate a gas, a suitable cap as H screwed into the top of the pail, a nozzle as K arranged in said cap, a deflector as L also connected to said cap, means for suspending the pail below its center of gravity and a fusible connection adapted to normally hold the pail with its center of gravity above the point of suspension, substantially as described.

7. An automatic fire-pail consisting of a suitable receptacle or pail divided by a horizontal and by a vertical partition into three chambers, two chambers adapted to receive chemicals below the horizontal partition, and a mixing-chamber above the horizontal partition, passages connecting each chemical-chamber with the mixing-chamber, valves as the glass balls G G' normally closing these passages, means for suspending the pail below its center of gravity, and a fusible connection adapted to support the pail in this position, substantially as described.

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

CLARENCE R. MACOMBER.

Witnesses:

LOUIS W. SOUTHGATE,
A. FRED WHITE.