

T. FLAGLER.
FIRE-EXTINGUISHERS.

No. 195,708.

Patented Oct. 2, 1877.

Fig 1.

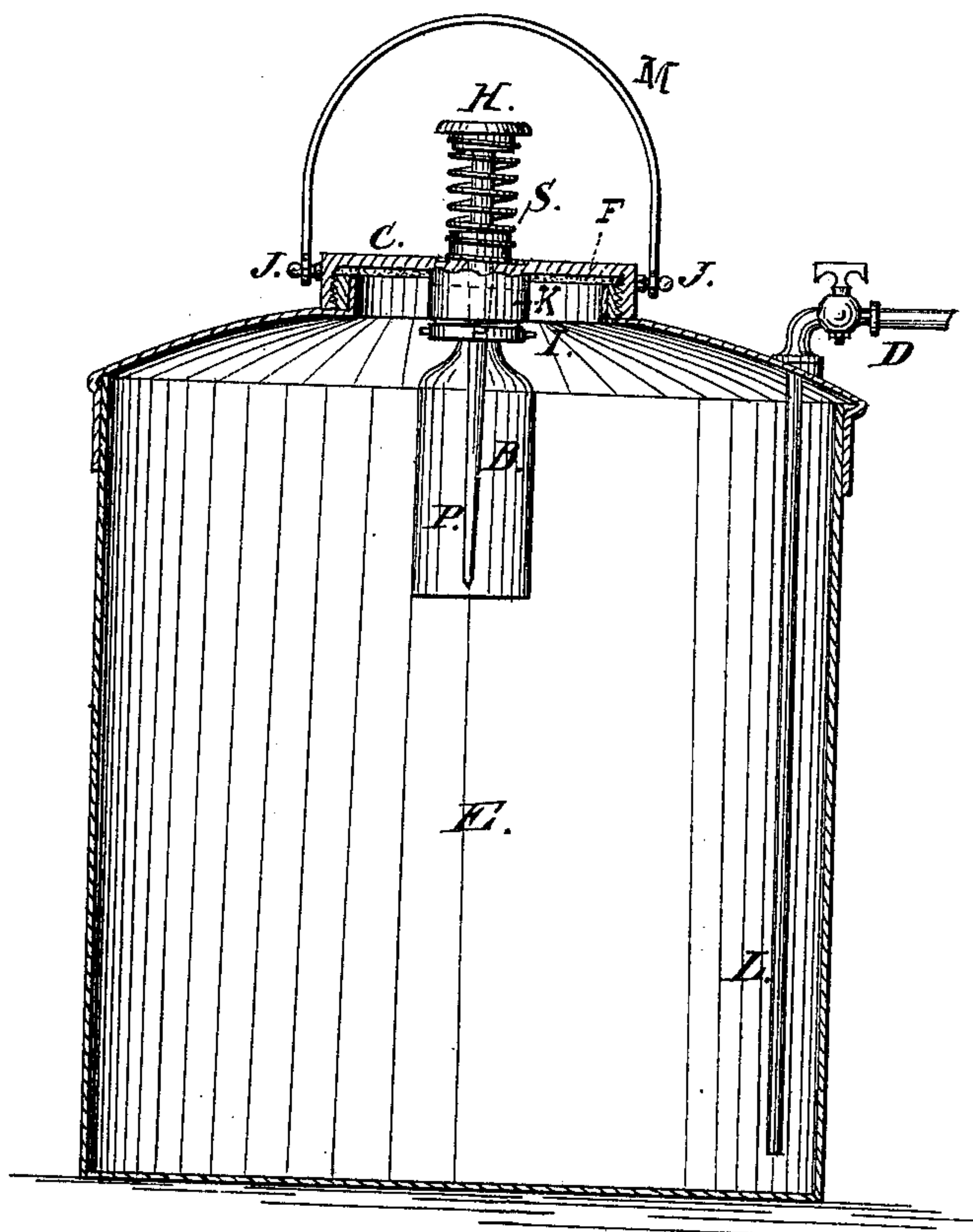
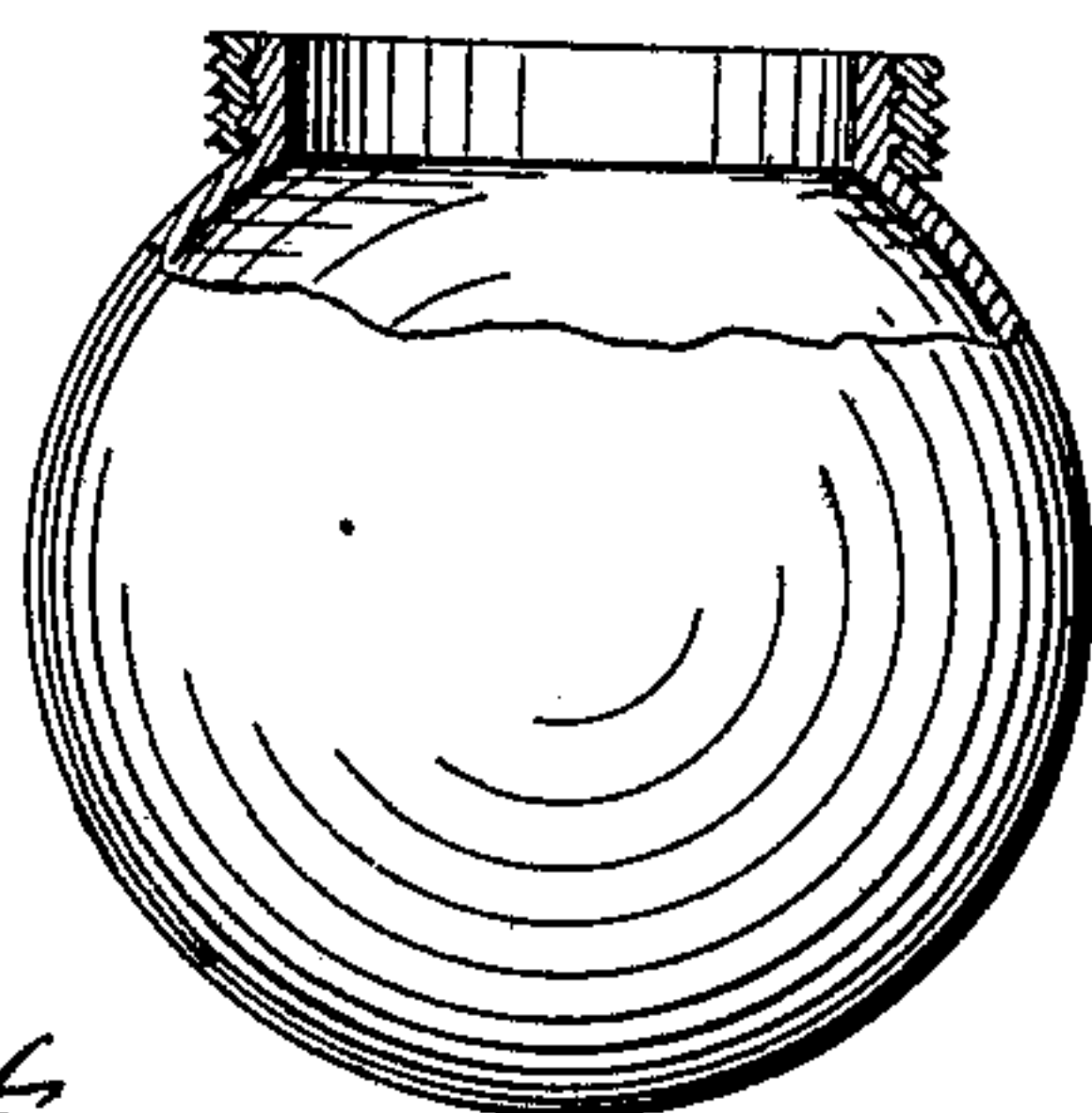


Fig 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **195,708**, dated October 2, 1877; application filed September 16, 1874.

To all whom it may concern:

Be it known that I, THOMAS FLAGLER, of the city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Portable Fire-Extinguishers; and I hereby declare the same to be fully described as follows:

The invention relates to that class of fire-extinguishers in which a stream of mingled water and carbonic-acid gas is the agent used for effecting the extinction of the fire; and it consists in a construction and adaptation of parts, as hereinafter fully set forth and claimed.

In the drawings, Figure 1 represents a vertical sectional view of my device. Fig. 2 is a modified form of the main chamber.

E represents the main chamber, which is charged, in the usual way, with a solution of sodic bicarbonate, (NaHCO_3). B represents the acid-bottle for containing the sulphuric acid; and L the pipe for the egress of the stream of mingled water and carbonic-acid gas.

The top of the main chamber is furnished with a screw-thread for the attachment of the lid C, which is lined with a suitable packing, F. Through the center of the lid passes the plunger P, which is supported by the spring S. K is a ring upon the under side of the lid, having a screw-thread upon its interior.

I represents another ring, made in two pieces, which may be hinged together, and having a thread upon their outer surfaces to engage with that within the ring K.

Upon fitting the ring I upon the neck of an ordinary bottle, and screwing it into the ring K, the bottle is securely held and drawn up tight against suitable leaden packing on the lid.

J J are knobs upon the lid C for the attachment of a bail by which the extinguisher is carried.

In the extinguishers of this class in use many different methods of breaking the acid-bottle, or otherwise discharging its contents, are shown; but nearly all are open to some grave objection. In some a specially-constructed bottle is necessary; in others the bottle is broken at the bottom of the vessel, in

which case the acid, being specifically nearly twice as heavy as the water or soda solution, sinks instantly to the bottom, and is discharged before it has had time to fully act upon the soda.

By my device an ordinary bottle can be used, and by the peculiar manner of breaking it the acid is somewhat scattered upon the soda solution, and before it can sink to the bottom is fully neutralized.

The bottle is broken by a blow of the hand upon the cap H, which causes the plunger to strike the bottom of the bottle, cracking it in all directions.

The plunger may be made of any suitable material; but in case it is of a material which is attacked by sulphuric acid it should be coated with lead.

The special advantage attained by having the acid-bottle suspended instead of supported on its bottom is seen in the manner in which it breaks when suspended. The plunger in this case causes the bottom to crack and splinter in all directions, scattering the acid more uniformly over the surface of the soda solution.

The exit-pipe of my extinguisher is formed as shown, having its exit-orifice above the level of the liquid in the main chamber, and its lower end near the bottom of the chamber.

The object of this construction is to prevent loss of the contents of the vessel in case the exit-cock becomes accidentally turned, which loss, of course, would take place were the exit of the pipe near the bottom, as is usual.

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

1. The combination of the cap C, having the ring K, with the segmental ring I, adapted to clasp the neck of the bottle, as set forth.

2. The combination, with a fire-extinguisher, of a clamp, I, adapted to grasp an ordinary bottle, and obviate the necessity for specially-constructed acid-receivers, as set forth.

THOMAS FLAGLER.

Witnesses:

WM. A. BERTRAM,
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