R. DITTRICH.

Extinguisher for Oil-Tanks.

No: 165,078. Patented June 29, 1875.

Fig. 3.

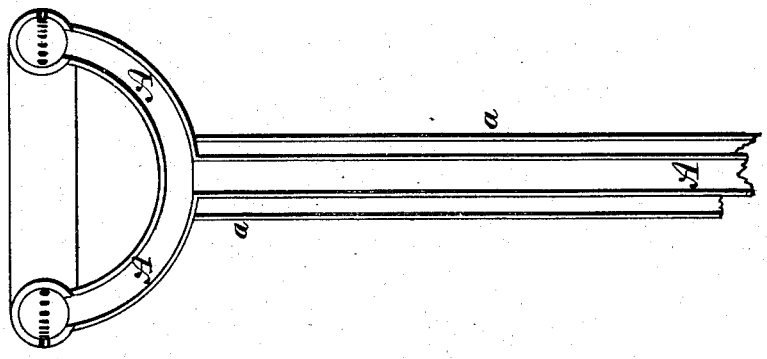



Fig. 2.

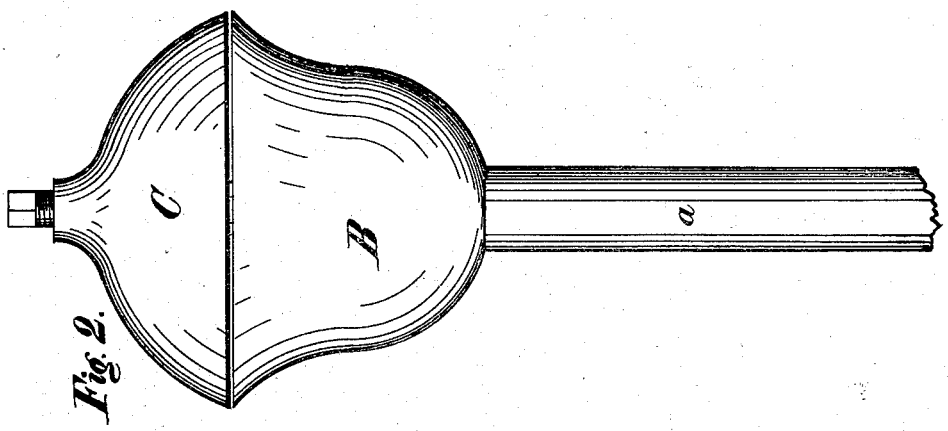
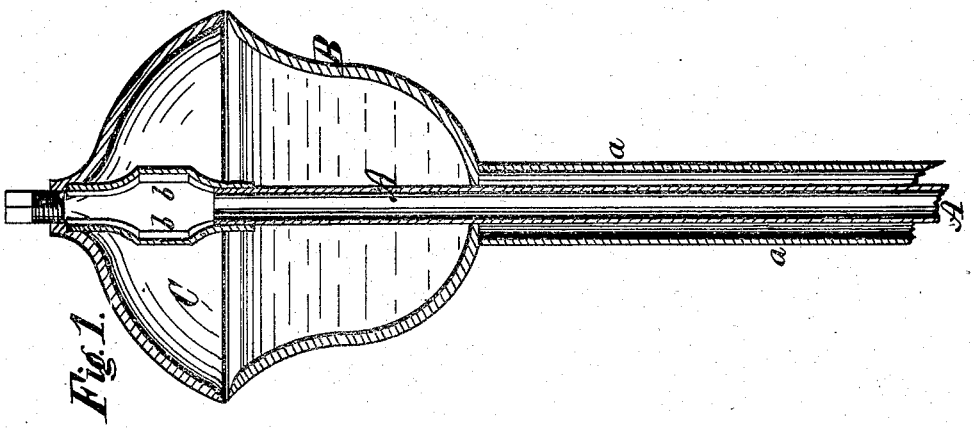



Fig. 1.




Witnesses

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# UNITED STATES PATENT OFFICE.

ROBERT DITTRICH, OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN EXTINGUISHERS FOR OIL-TANKS.

Specification forming part of Letters Patent No. **165,078**, dated June 29, 1875; application filed April 28, 1875.

*To all whom it may concern:*

Be it known that I, ROBERT DITTRICH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Extinguishers for Oil-Tanks, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a vertical section of the apparatus. Fig. 2 is an elevation of the same. Fig. 3 is a modification, consisting of a perforated annular pipe, to spread the steam.

This invention relates to fire-extinguishers for oil-tanks and kindred purposes; and consists simply in introducing live steam through a double cup or ring, perforated, as hereinafter described, and thereby spreading the live steam in all directions, and preventing the combustion of the oil or other material by excluding the atmospheric air from the flames.

For the attainment of this object my construction is as follows, reference being had to the accompanying drawings: From any portion of the outside of the tank I pass a steam-pipe, A, through its walls, and surround this pipe with a larger one, *a*, to prevent condensation of the steam. If brought through the bottom or sides, this pipe terminates vertically at a point above the highest level of oil required in the tank, terminating inside a metallic cup, B, which is kept supplied with water, so that the fire will not destroy it. This cup has flaring edges, and is surmounted by another inverted cup, C, of the same size at its mouth, the edges of the two cups nearly, but not quite, meeting. The upper cup also has provision for a steam-connection, if needed. The two cups are maintained in position by means of the forks *b b*.

The form of the cups is not essential, as even an annular cup or ring of pipe perforated peripherally will answer; but I prefer the flaring-edge cups.

If only one steam-connection be used, the other may be plugged.

The *modus operandi* is as follows: Suppose the extinguisher is in place in a tank containing oil, and the oil catches fire. Steam is at once turned on into the pipe A from the boiler, passes out into the cup B, is checked by cup C, and forced out rapidly through the annular orifice between the edges of the cup. It is spread all around equally, and a few seconds generally suffice to extinguish the flames in the largest tank.

The apparatus is to be permanently located in every tank, or, if size require it, there may be several in one tank.

The best effect is produced when the upper cup is slightly larger than the lower, and overhangs it sufficiently to give a slightly downward tendency to the steam-ejector through the orifice.

Having fully described my invention, what I claim in Letters Patent is—

The apparatus for extinguishing fires in tanks by the introduction of steam, consisting of the pipes A *a* and cups B C, the former adapted to contain water, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of April, 1875.

ROBERT DITTRICH.

Witnesses:
JOHN A. WILLOCK,
T. J. MCTIGHE.