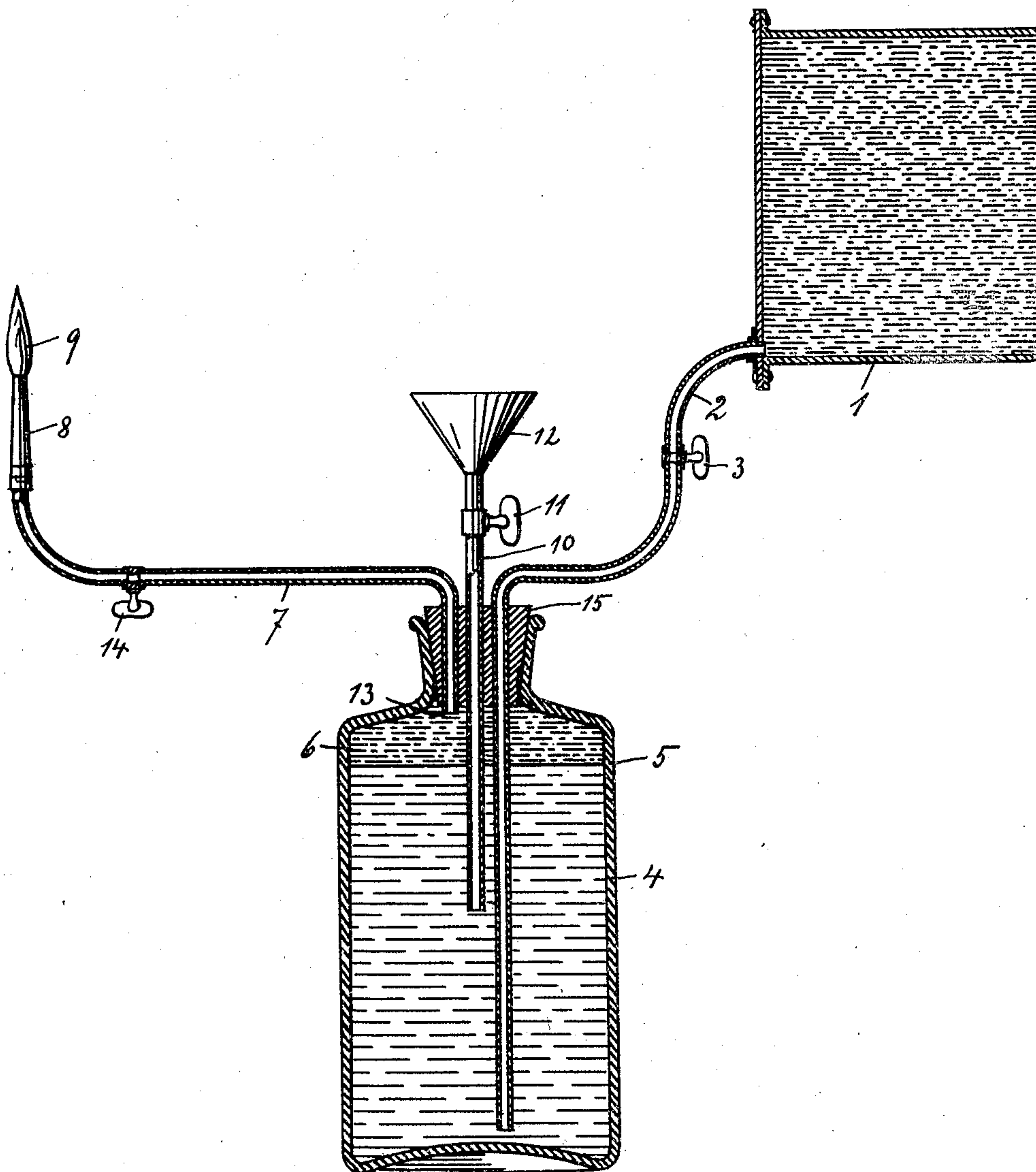


No. 793,443.

PATENTED JUNE 27, 1905.

C. D. HOFFMAN.
COMBUSTIBLE ARRESTER.
APPLICATION FILED MAY 16, 1903.



WITNESSES
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COMBUSTIBLE-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 793,443, dated June 27, 1905.

Application filed May 16, 1903. Serial No. 157,369.

To all whom it may concern:

Be it known that I, CHARLES D. HOFFMAN, a citizen of the United States, residing at Whitestown, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Combustible-Arresters, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to an explosion-arrester in burners; and it consists in the mechanism hereinafter more fully described and claimed.

The object of my invention is to provide a water seal between the supply-pipe and the burner.

My invention may be used with oil, naphtha, gasoline, benzin, kerosene, gas, and other burners, where the combustible material is supplied to the burner through a pipe or pipes, and can only be used where the burning substance has a less specific gravity than water.

Having in general terms described the purpose and object of my invention, I will now proceed to describe it in reference to the figure illustrated in the drawing.

The figure illustrates a vertical section of my machine, broken lines indicating parts removed.

Having described my invention with reference to the figure in the drawing, I will now proceed to describe the same in detail, in which similar numerals refer to corresponding parts throughout.

The best method I have provided for the use of my invention is illustrated in the figure set out in the drawing.

I provide vertical receptacle 1, which may contain combustible oil or other burning substance of less specific gravity than water. I connect receptacle 1 with supply-pipe 2, controlled by the cock 3, which pipe discharges to the water-receptacle 4, which is filled up to line 5, or nearly so, with water, and as the combustible material of less specific gravity discharged into the water-receptacle 4 at or near the bottom of the receptacle it rises above line 5 and fills the space 6 above the water-

line and passes into burner-pipe 7 through burner 8 and produces flame 9.

For maintaining the water in water-receptacle 4 at the proper height I provide water-supply pipe 10, controlled by cock 11, so that by turning water into funnel 12, the stop-cock being in proper position, water may be placed in water-receptacle 4, so as to maintain it at proper height. The burner-pipe 7 opens at 13 just below top of oil or combustible fluid, so that by operating stop-cock 3 the oil or other combustible fluid may be fed into receptacle 4 sufficiently fast to supply the oil through burner-pipe 7, which is controlled by stop-cock 14. By this arrangement in case of an explosion taking place at the burning-point the flames cannot be communicated to the supply-tank, the two parts being at all times sealed with a column of water which is of greater specific gravity than the burning fluids or compounds.

Water-receptacle 4 is preferably made of glass, so that the water and oil or combustible fluid can always be seen by the operator at a glance, the invention being to maintain above the water-line as small an amount of combustible fluid as is consistent with the proper operation of the burner, whether it be a single flame or a series of flames.

For preventing the necessity of breaking the lines of connections I provide in the neck of water-receptacle 4 a cork 15, through which all three of the pipes pass, which of course must be made tight.

My invention may be used with any combustible fluid or material where the specific gravity of the burning fluid is less than the specific gravity of water, so that the fluid will always find its level above the water-line, thereby maintaining at all times a water seal in the line of communication between the fluid-supply pipes and the burner-pipes, so that if an explosion takes place it cannot be communicated to the source of supply of the burning fluid.

Variations in the method of construction may be indefinitely made without departing from the spirit of my invention where a wa-

ter seal is between the sources of supply and the burner.

What I claim as new, and desire to secure by Letters Patent, is—

- 5 1. In a device of the character described, the combination of a burner, a water-receptacle and a receptacle for combustible fluid, each being distinct from the others, the said burner and combustible-fluid receptacle being
10 each independently connected with the water-receptacle, and means of supplying the water-receptacle located independent of each of the other connecting means, the construction and arrangement of said parts being such as
15 to permit the removal of the water-receptacle from connection with the other parts, substantially as described.

2. In a device of the character described, a

receptacle provided with water and a space for combustible material, a supply-reservoir for the combustible material, a burner, a conduit from the supply-reservoir to the water, a conduit from the water without the water-chamber and a conduit from the space in the water-chamber to the burner, the said conduits being each independent of the other and each passing through a common mounting removably seated in the water-chamber, in combination, substantially as shown.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES D. HOFFMAN.

Witnesses:

RICH. A. GEORGE,
E. T. DE GIORGI.