H. BAKER.

Improvement in Apparatus for Extinguishing Fires.

No. 124,875.

Patented March 26, 1872.

Fig. 2.

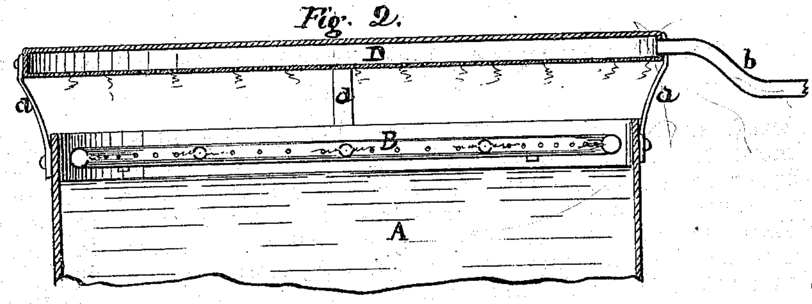


Fig 1.

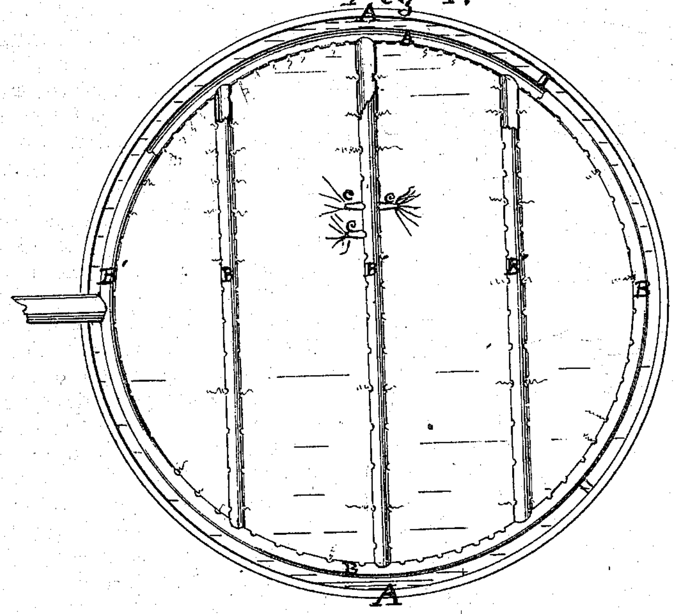
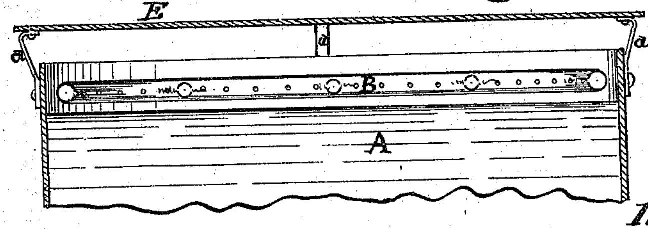


Fig 3.



Witnesses

A. Livingston Mills

Wm C. Reddy

Inventor

Homer Baker

UNITED STATES PATENT OFFICE.

HOMER BAKER, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND ABNER H. ANGELL, OF NEW YORK CITY.

IMPROVEMENT IN APPARATUS FOR EXTINGUISHING FIRES IN INFLAMMABLE LIQUIDS.

Specification forming part of Letters Patent No. 124,875, dated March 26, 1872.

To all whom it may concern:

Be it known that I, HOMER BAKER, of the city of Chicago, State of Illinois, have invented a new and useful Improvement in Apparatus for Extinguishing Fire in Inflammable Fluids, of which the following is a specification, having reference to the accompanying drawing forming part thereof:

Figure 1 is a top view of a tank for holding inflammable fluid, such as petroleum oil, naphtha, &c., combined with perforated gas-pipes for conducting and distributing carbonic-acid gas over and upon the fluid in the tank. Fig. 2 is a central sectional view of the upper portion of a similar tank, combined with another form of my gas-distributer. Fig. 3 is a similar sectional view of a tank, combined with one or both of the said gas-distributers, and a cover to retain the gas upon the fluid.

The same letters refer to similar parts.

My invention relates to the employment of carbonic-acid gas for the extinguishing of fire; and consists in the distribution or spreading a sheet or mass of the gas over and upon the fluid, when on fire within a containing-vessel or tank, by means of a pipe or other form of a conductor of the gas, so arranged and perforated with a number of small apertures that the gas will flow out therefrom and spread itself over the burning fluid, thereby covering or enveloping the surface and displacing the atmospheric air.

A is a tank for holding inflammable fluid, which may be made of any desired shape and materials, preferably of iron, and round, in the form of a tub. B is a pipe arranged around the inner surface of the tank, near the top, and designed to be connected with either a portable fire-extinguisher, which may be that known as Babcock's fire-extinguisher, for which Letters Patent of the United States have been issued, or with any other apparatus designed to supply carbonic-acid gas, either alone or in water. This tube B is perforated on the inner side with a large number of small apertures, from which jets of gas may be discharged radially inward toward the center of the tank. In addition to this circular tube there may be one or more tubes connected with the circular tube, and extended across the tank, as seen at B′, which are to be perforated also along their sides. Instead of placing these pipes at the top of the tank they may be placed in any position desired; or, if preferred, may be laid upon its bottom. I purpose, also, when deemed preferable, to insert into the tubes or conductors short tubes *c*, similar to gas-burners, thus permitting me, by a peculiar conformation of the aperture in the outer ends, to discharge the gas in a thin horizontal sheet from each tube, similar to that which is known as the "fan-tail gas-burner," effecting thereby a more perfect and immediate spreading of the gas out over the surface of the fluid in the tank.

I do not intend to limit myself to any special arrangement or construction of the tube, or tubes or conductors, whereby the gas is conveyed to and spread over and upon the surface of inflammable fluids contained within tanks; the design being to displace the atmospheric air by carbonic-acid gas so completely that when on fire the flames will be immediately extinguished, and effecting this discharge of the gas without causing such a disturbance or agitation of the fluid as to prevent the gas from producing its proper effect in extinguishing the flames. In place of the tubes the gas may be distributed over and upon the fluid in the tank by means of the distributer D, which consists of two plates of metal of the form and size, or a little larger than, the top of the tank, placed one over the other, some one or two inches apart, and united at the edges gas-tight, the under plate being perforated with a number of suitable apertures to admit of the discharge of gas from the interior of the distributer down upon the tank. This distributer is supported upon brackets or rods *a*, three, four, or more in number, or in some other suitable manner, a short distance, say three to six inches above the top of the tank, not sufficiently near to retain the evaporation from the fluid, so as to cause an explosion upon taking fire. A conducting-pipe, *b*, leads from this distributer to the gas-holder or other source of the carbonic-acid gas. This distributer D may either be made a fixture over the tank, or it may be suspended by chains, or hung upon hinges, so as to be elevated and lowered, or raised up or shut down at pleasure, E is a plain metal cover suspended or fixed over the tank for the purpose of retaining over upon

the fluid in the tank, in some measure, the carbonic-acid gas that may be discharged from the pipes A.

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

1. The combination, with the tank A and the tubes B, of the cover E, substantially as and for the purpose specified.

2. The combination, with a tank, A, for containing inflammable fluids, of a perforated gas-conductor, so constructed and arranged as to discharge gas quickly over the entire surface of fluid contained in the tank, substantially as and for the purpose described.

HOMER BAKER.

Witnesses:
WM. C. REDDY,
A. LIVINGSTON MILLS.