

UNITED STATES PATENT OFFICE.

DANIEL PARHAM, OF TYNGSBOROUGH, MASSACHUSETTS.

CHEMICAL FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 266,877, dated October 31, 1882.

Application filed July 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, DANIEL PARHAM, of Tyngsborough, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Fire-Extinguishers, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, forming part of this specification.

This invention consists of a gas supply and distributing apparatus in which weights suspended or supported by cords of combustible material are adapted, when the cords are burned, to fall and act upon certain parts of the apparatus to generate and distribute the gas to the locality of the fire for the purpose of extinguishing the fire, as hereinafter described.

The drawing is an elevation of apparatus showing different arrangements of the combustible cords and contrivances for generating and distributing gas for extinguishing fires.

d represents a tank in which gas is to be generated by the mixture of sulphuric acid with bicarbonate of soda in water or other elements, the mixture to take place when the weight *e* is let fall by the burning of the cord *f* on the rod *g*, which has a funnel-shaped lower end, *h*, to strike the top of the bottle *i*, and crush the bottle on the point *j* of the bottom of the tank.

The gas thus quickly formed, being highly compressed by confinement in the tank, will flow along the pipe *k* to the room where the cord *f* was burned off and escape into the room through a cock, *l*, opened by a weight, *M*, or a spring, *n*, or a safety-valve, *p*, let free by the burning of the cords *J*, connected therewith.

Other means of opening pipe *k* may be employed. For instance, a cock, *q*, may be con-

nected to a weight, *r*, by a wire, to be pulled out by said weight when it falls by the burning of its cord *J*; or a plug, *t*, may be tied in its hole by a cord, allowing the pressure of the gas to force the plug out when the cord burns off.

The weight *e* may also be connected to an alarm apparatus by a cord, *N*, to set the same in motion when the said weight falls; or it may release the lever *u* of an escape mechanism, *w*, said lever having a hammer, *x*, to strike the bell *y*.

The cord *f* holds up the weight *e* by a bell-crank, *z*, which has a hook, *I'*, holding a drop-shelf, *J'*, with weights *L*, to be connected with alarm apparatus.

The tank *d* has a vertical tubular extension, *a'*, in which weight *e* slides for a guide, and through which the tank *d* may be charged, a suitable stop, having a stuffing-box for the rod *g*, being used to stop the opening into the tube *a'* at the top of the tank.

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

1. The combination of combustible cord *f*, bell-crank *z*, weight *e*, and gas-generator *g h i j*, substantially as shown and described.

2. The combustible cord *f*, bell-crank *z*, weight *e*, generator *g h i j*, gas-pipe *k*, having cocks *l*, and weights or springs connected thereto by the cords *J*, substantially as shown and described.

DANIEL PARHAM.

Witnesses:

CHAS. M. WILLIAMS,
F. N. CHASE.