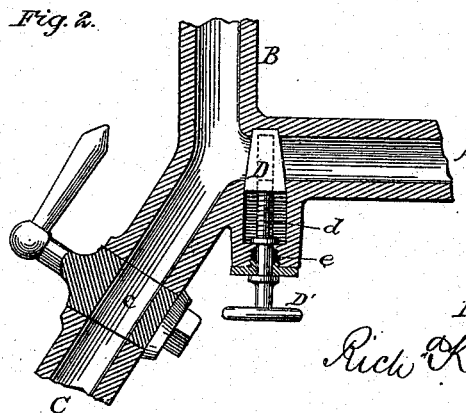
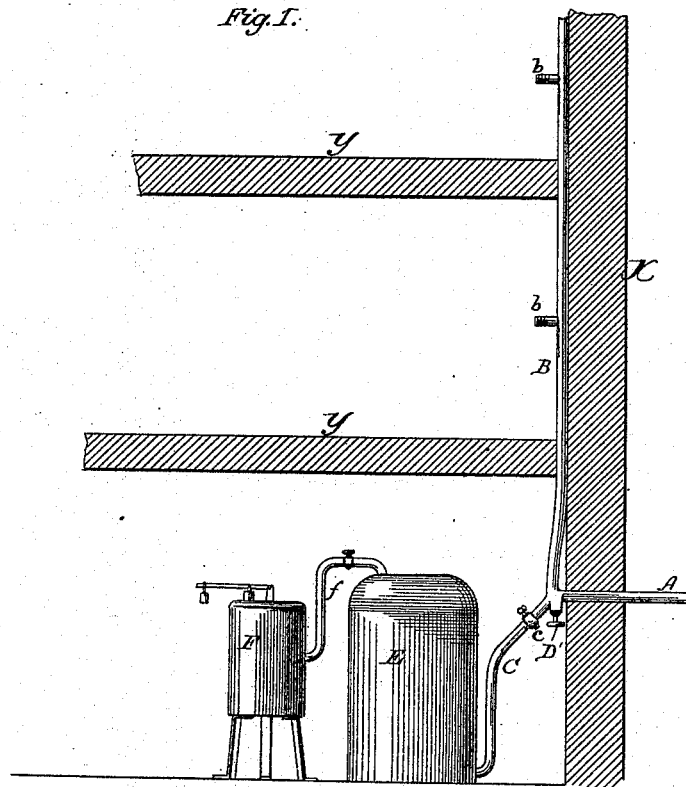


R. K. EVANS.
Fire-Extinguishing Apparatus.

No. 209,242.

Patented Oct. 22, 1878.



Attest:
Clarence Pool
A. H. Evans

Inventor:
Rich. K. Evans

UNITED STATES PATENT OFFICE.

RICHARD K. EVANS, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN FIRE-EXTINGUISHING APPARATUS.

Specification forming part of Letters Patent No. **209,242**, dated October 22, 1878; application filed October 16, 1878.

To all whom it may concern:

Be it known that I, RICHARD K. EVANS, of Washington, District of Columbia, have invented certain Improvements in Fire-Extinguishing Apparatus; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 shows a sectional view of a building with the apparatus applied. Fig. 2 is a detail to be referred to.

My invention is nearly related to the invention patented by C. M. Martin on the 12th day of June, 1877, and has for its object to enable the invention of said Martin to be applied to buildings in a cheap and convenient manner.

In the apparatus patented by said Martin, it is contemplated to have special fixed pipes or hose (in the building) leading from the fixed chemical fire-extinguisher, to conduct the chemical extinguishing-liquid from the tank which holds it to all parts of the building. The laying of these pipes necessitates the tearing up of the floors, plastering, &c., to the great discomfort of the occupants of the buildings, as well as requiring a large expenditure of money. To apply this apparatus and similar machines to buildings, and avoid the difficulties and expense named, is the object of my invention.

My invention consists in combining with a permanent chemical fire-extinguishing apparatus the water-service pipes of a building, with a suitable connection and proper cut-off, whereby I am enabled to utilize the water-service pipe already laid in the building, for the purpose of conducting the chemical extinguishing-liquid to any part of the building when necessity may require it.

In order that those skilled in the art may make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the said drawings, X represents the wall of a building, and Y Y the floors in section. Passing through the walls from the street in the ordinary way is a water-service pipe, A, and thence passing up along the walls, as seen at B, and provided with hose-connections *b b* at suitable points.

At the angle where the service-pipe starts up into the house I insert a connection, C,

which leads into the tank E containing the chemical compound to be thrown, and provide a plug-valve, D, so as to cut off the water-supply from the street at will.

On the connection C, I place an ordinary stop cock or valve, *e*, to cut off the tank E from connection with pipe B at will.

The gas-generator F, as described in the Martin patent, is located in a proper relation to tank E.

In making the joint between connection C and service-pipe A B, the angle should be as slight as possible, so that, after the fire is extinguished and the pressure is taken off from E, by cutting off the generator F substantially all of the extinguishing compound remaining in the house-pipes, and which is valuable, will run back into tank E, thereby saving it.

The operation is as follows: On an alarm of fire being raised the cut-off valve D is closed and cock *e* is opened. The generator F is put in operation and the pressure induced in E forces the fire-extinguishing liquid through pipe B to all the hose-connections in the house. Upon the extinguishment of the fire the pressure is taken off of tank E, and substantially all the liquid remaining unused in the pipes throughout the house will run back into the receiver E. Cock C is then closed, valve D opened, and the spigots throughout the house opened for a few minutes to flush the pipes and cleanse them of the extinguishing-liquid.

The valve D is constructed like any good plug-valve, and packed to resist the pressure of the generator.

By actual experiment I have demonstrated that a short flushing of the service-pipes through the building by opening the cold-water faucets—say from ten to fifteen minutes—will so far eradicate any effects of the chemical extinguishing compound as to allow the water to be safely and comfortably used.

If desired, a device may be placed where the supply-pipe enters the heating device, to heat the water for the hot-water supply of the building, so as to prevent the extinguishing compound entering the warm-water pipes, the cut-off at the hot-water device being controllable at or near cut-off D.

When the pressure in the generator is kept below the pressure per square inch of the water-head, the cut-off D may be partially opened to

allow a proportion of water from the main to enter the service-pipe and mingle with the chemical compound as it passes to the hose-connections throughout the building. Indicators may be attached to cut-offs *c* and *D*, bearing such a relation to each other as will direct the amount of water and amount of chemical compound to enter the house-pipes under such circumstances.

It is evident that my invention can be applied to the Babcock or any other system of fixed chemical fire-extinguishers without departing from the spirit of my invention.

Having thus described my invention, what

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

A chemical fire-extinguisher, in combination with the water-service pipe of a building, a connection, *C*, and cut-off *D c*, for the purposes described.

In witness whereof I hereunto fix my hand and seal this the 10th day of October, A. D. 1878.

RICHD. K. EVANS. [L. s.]

Witnesses:

JAMES H. MANDEVILLE,
PENNINGTON HALSTED.