

UNITED STATES PATENT OFFICE.

WALTER B. GUILD, OF NORWOOD, MASSACHUSETTS.

FIRE-EXTINGUISHING APPARATUS AND CARTRIDGE THEREFOR.

SPECIFICATION forming part of Letters Patent No. 552,123, dated December 31, 1895.

Application filed February 18, 1895, Serial No. 538,858. (No model.)

To all whom it may concern:

Be it known that I, WALTER B. GUILD, of Norwood, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Fire-Extinguishing Apparatus and Cartridges Therefor, of which the following is a specification.

It is the purpose of this invention to provide a hose connection with a stand-pipe or other water-supply of a fire-extinguishing apparatus with means whereby it can be readily charged and recharged with a chemical cartridge so constructed and arranged that the ingredients of the cartridge may co-act with the water passing through the hose when the latter is in use to effect the extinguishment of a fire.

To these ends the invention consists of a cartridge for use in chemical fire-extinguishing apparatus of novel construction adapted to be separately made and sold as an article of manufacture and to be used so as to readily recharge a fire-extinguishing apparatus with chemicals for the purpose aforesaid.

The invention also consists of an apparatus connected with a stand-pipe or other suitable water-supply or hose connection, which apparatus is adapted to have my improved cartridge employed in connection therewith.

The invention will first be described in detail, and then pointed out with particularity in the appended claims.

Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a side elevation, partially in section, of a hose connection with a stand-pipe equipped with my invention. Fig. 2 is a similar view of a slightly different embodiment of the invention. Fig. 3 is a sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is a perspective view of one form of my improved chemical cartridge. Fig. 5 represents a sectional view of another form of cartridge. Fig. 6 is a cross-sectional view of still another modification.

In the drawings, Figs. 1 and 2, *a* designates a stand-pipe connected with a source of water-supply.

b is a branch provided with a valve *c* and

with a coupling *b'* adapted to secure a pipe *d* to said branch. The pipe *d* is provided with a cartridge-receiver *e*, which is a chamber, preferably of cylindrical form, communicating with the pipe *d*, which serves as an inlet of the receiver. The receiver is also provided with an outlet, which, as shown in Figs. 1 and 3, is a nipple *m* secured to one side of the receiver and adapted to act as one member of a coupling by which the hose *o* may be secured to the receiver, while in Fig. 2 said outlet is shown as a nipple *m'* formed on one end of the receiver *e* and also adapted to serve as a member of a coupling.

f is the cartridge, made to substantially fit the interior of the receiver and containing chemical ingredients, such as acid and soda in dry or granular form, whose reaction when brought into contact in the presence of water releases a gas and increases the efficiency of the water for fire-extinguishing purposes. The cartridge is constructed to hold the chemicals separated from each other so long as water is excluded therefrom, and to permit free access to the chemicals of water admitted to the receiver *e*, the construction of the cartridge being such that the water can pass freely through it from the inlet to the outlet of the reservoir. The cartridge is or may be composed of a cylindrical foraminous external shell, which may be composed of cloth the meshes of which are sufficiently open to permit the passage of water through them without permitting the escape of the undissolved chemicals, and suitable heads or end pieces, which may be of the same or any suitable foraminous material, such as wire-cloth. The external shell shown in Figs. 1, 3, and 4 may be supposed to be of foraminous material, such as cloth, although I have not attempted to represent such material in the said figures. The cartridge is shown in Figs. 1, 3, and 4 as provided with a longitudinal central tube *f'* of wire-cloth forming a passage through the cartridge from end to end, the walls of said tube supporting the chemicals which are placed in the annular space between the tube and the body or shell of the cartridge.

I prefer to employ a foraminous external shell when the outlet is arranged in one side of the reservoir, as shown in Figs. 1 and 3,

first, a fixed supply-pipe; secondly, a cartridge receiver having an inlet port communicating with the supply-pipe, an outlet port provided with a coupling member and a removable end or head; and thirdly, a chemical-containing cartridge having a central foraminous tube or passage communicating with the inlet port, as set forth.

4. In a fire-extinguishing apparatus, the combination of the following parts, namely, first, a fixed supply-pipe; secondly, a cartridge receiver having an inlet port communicating with the supply-pipe, an outlet port located in one side of the tube provided with a coupling member and a removable end or head; and thirdly, a chemical-containing cartridge having a central foraminous tube or passage communicating with the inlet port, and a foraminous covering through which the chemically

charged water passes to the outlet port, as set forth.

5. A cartridge for fire-extinguishing purposes, the same comprising a shell having partitions dividing its interior into compartments for containing different kinds of chemicals; and a foraminous tube in the shell and bounding the compartments at their inner sides,—the said cartridge adapted to be incorporated into a water system with the foraminous tube in communication with the water-passage.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of December, A. D. 1894.

WALTER B. GUILD.

Witnesses:

F. P. DAVIS,

E. BATCHELDER.



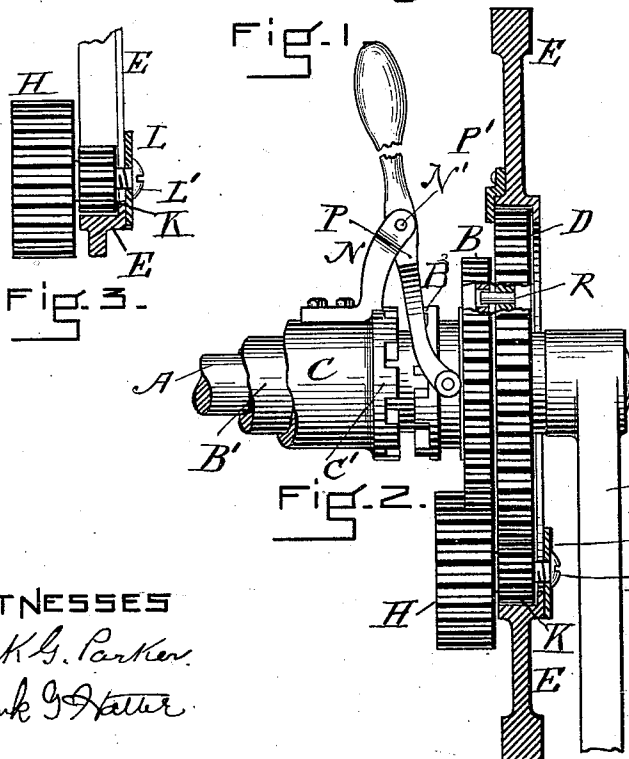
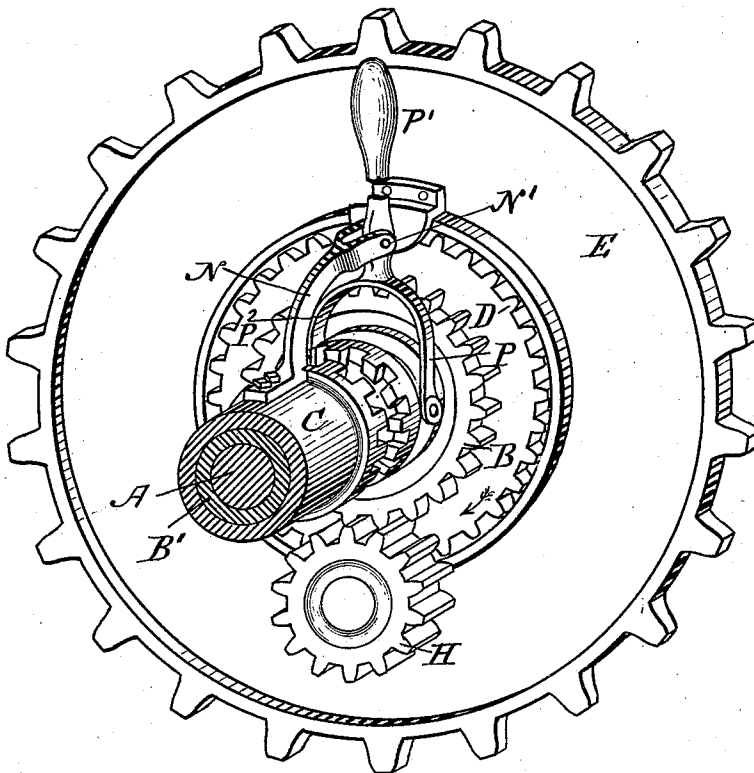
(No Model.)

2 Sheets—Sheet 1.

J. T. HAMBAY.
SPEED CHANGING GEAR.

No. 552,124.

Patented Dec. 31, 1895.



WITNESSES
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