C. E. GRAY.

Fire-Plug.

No. 166,357. Patented Aug. 3, 1875.

FIG. 1.

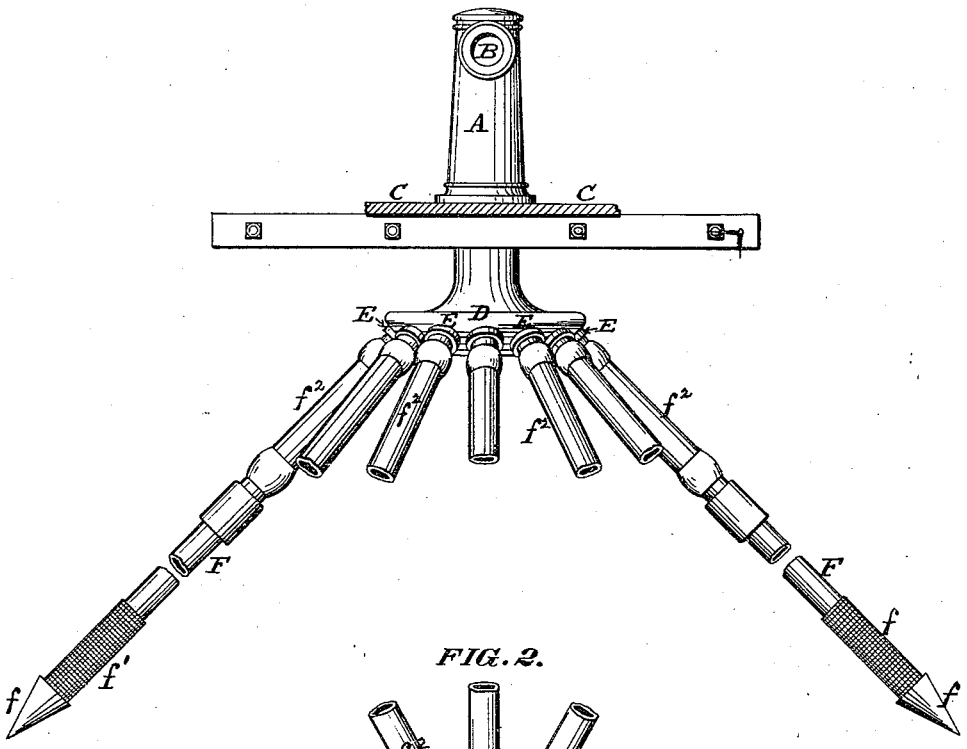
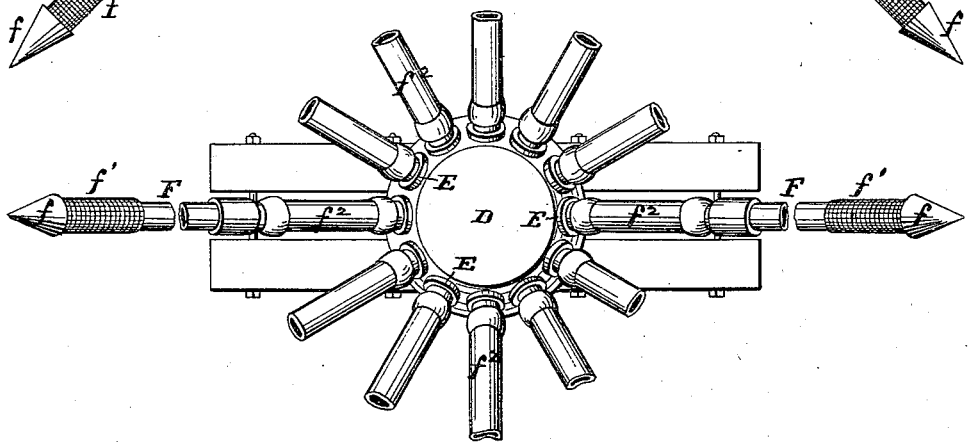


FIG. 2.



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UNITED STATES PATENT OFFICE.

CARROLL E. GRAY, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN FIRE-PLUGS.

Specification forming part of Letters Patent No. **166,357**, dated August 3, 1875; application filed April 12, 1875.

To all whom it may concern:

Be it known that I, CARROLL E. GRAY, of St. Louis, St. Louis county, State of Missouri, have invented a certain Improved Fire-Plug, of which the following is a specification:

My improvement consists in a number of tubes driven into the ground in an inclined direction, and converging to one point, where they are connected to the bottom of the fire-plug casting, to which the suction-pipe of a fire-engine or other pump is connected, so as to draw the water from all the tubes.

In the drawings, Figure 1 is an elevation. Fig. 2 is a bottom plan.

A is the fire-plug proper or head, having a nozzle, B, for the attachment of the suction-pipe of the pump. The pavement or sidewalk is shown at C, and beneath this is a supporting-frame formed of two timbers or scantlings bolted together upon the neck of the fire-plug casting. The bottom or foot D of the casting has a chamber, into which all of the well-pipes discharge, the said pipes being connected to nipples E, projecting from said foot at the same inclination as the pipes. The pipes F are intended to be driven into the ground in the ordinary manner of "driven-well" pipes, and radiate from the foot D in all directions. These pipes are made of the requisite size, length, and number, according to circumstances, the object being to enable the drawing of water in sufficient quantity, and to accomplish this result it is necessary to draw it from a considerable area. The pipes F may be of any suitable construction, in the form shown. f is the point; f^1, the perforated part through which the water enters, and f^2 a coupling-section of lead pipe connected to the nipple E and pipe F by plumber-joints. Any other means of coupling may be used; but this I deem the most suitable, as the lengths of the different coupling-pieces would be likely to vary more or less, as the pipes F might be driven into the ground to different depths at different angles, according to circumstances, it being difficult or not feasible in all cases to drive them to the exact depth intended, owing to obstructing rocks. The flexibility of the lead pipes allows the pipes F, lying in any direction, to be easily connected to the head.

It will be observed that by my improvement much less piping is required than where horizontal pipes are employed between the plug and the well-tubes.

In carrying out my invention the tubes may be driven from the bottom of an excavation made to receive the lower end of the plug; but I prefer to bore for them and then to insert them in the bores. The connection between the upper ends and the plug is made by a flexible connection, as described—lead pipe appearing most suitable—and the joints may be union-couplings, screw-sleeves, or plumber-joints. This arrangement makes it immaterial whether the tubes may be any exact distance from, or in line with, the nipples projecting from the plug for connection with said diverging pipes, or may, as the lead sections can, be made of any length, and can be bent as required.

I claim as my invention—

1. The combination of fire-plug head or casting A, and well-tubes F communicating therewith, and extending radially and downwardly therefrom, substantially as set forth.

2. In combination with the head A, and well-pipes F, the flexible connections f^2, substantially as and for the purpose set forth.

CARROLL E. GRAY.

Witnesses:

SAML. KNIGHT,

ROBERT BURNS.