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E. G. GAY.
AUTOMATIC FIRE EXTINGUISHER.

APPLICATION FILED OCT. 4, 1901.

NO MODEL.

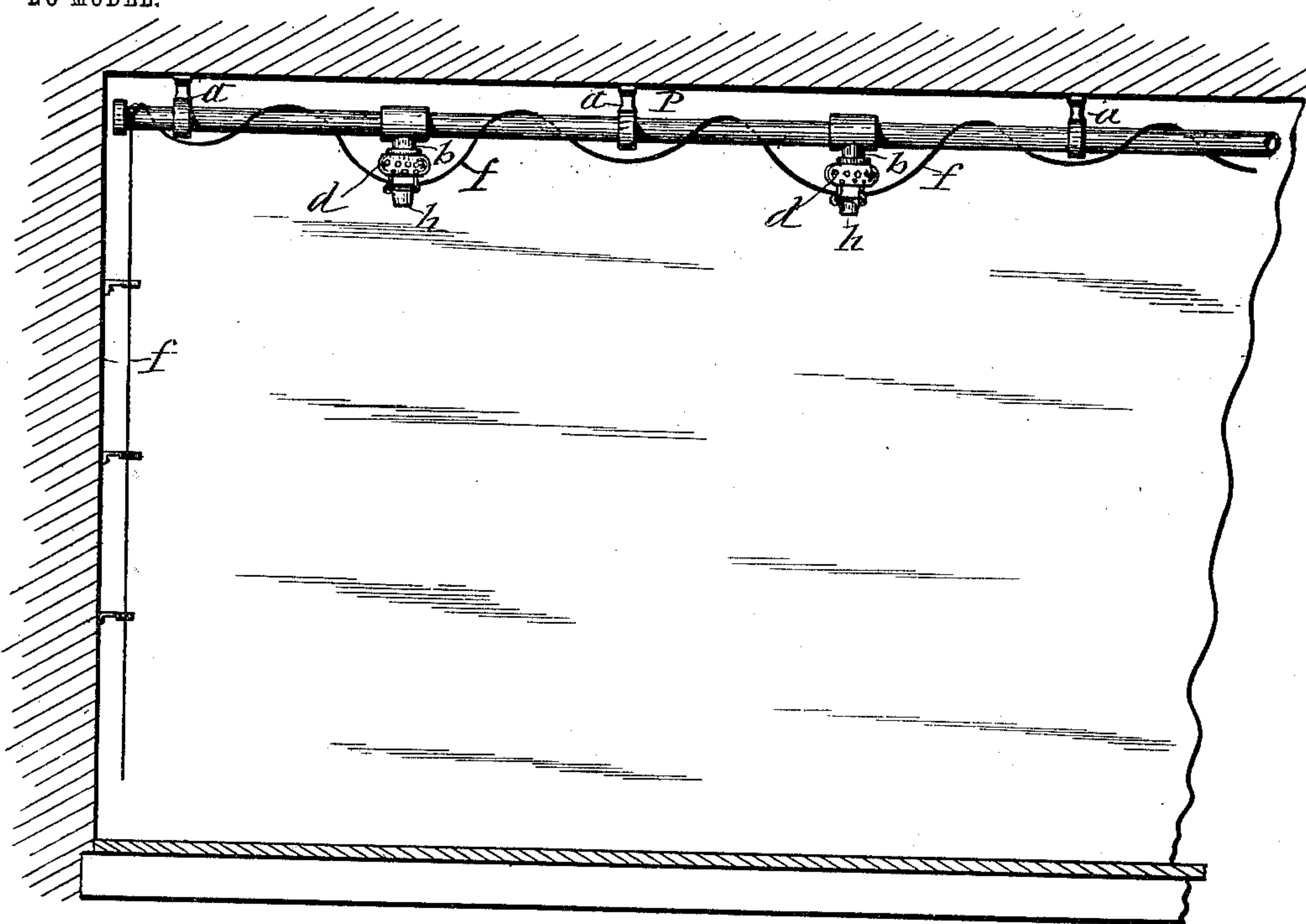


Fig. 1

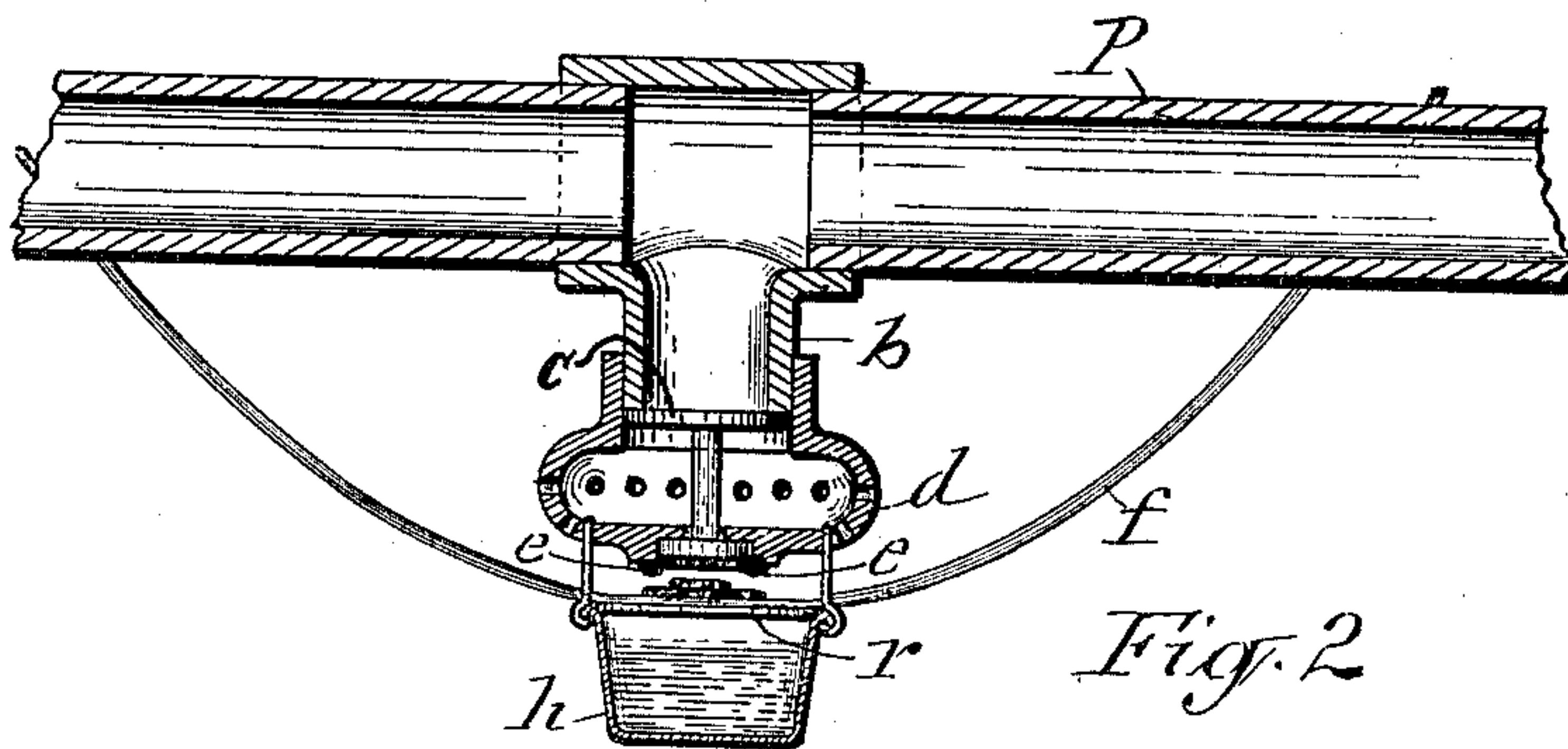


Fig. 2

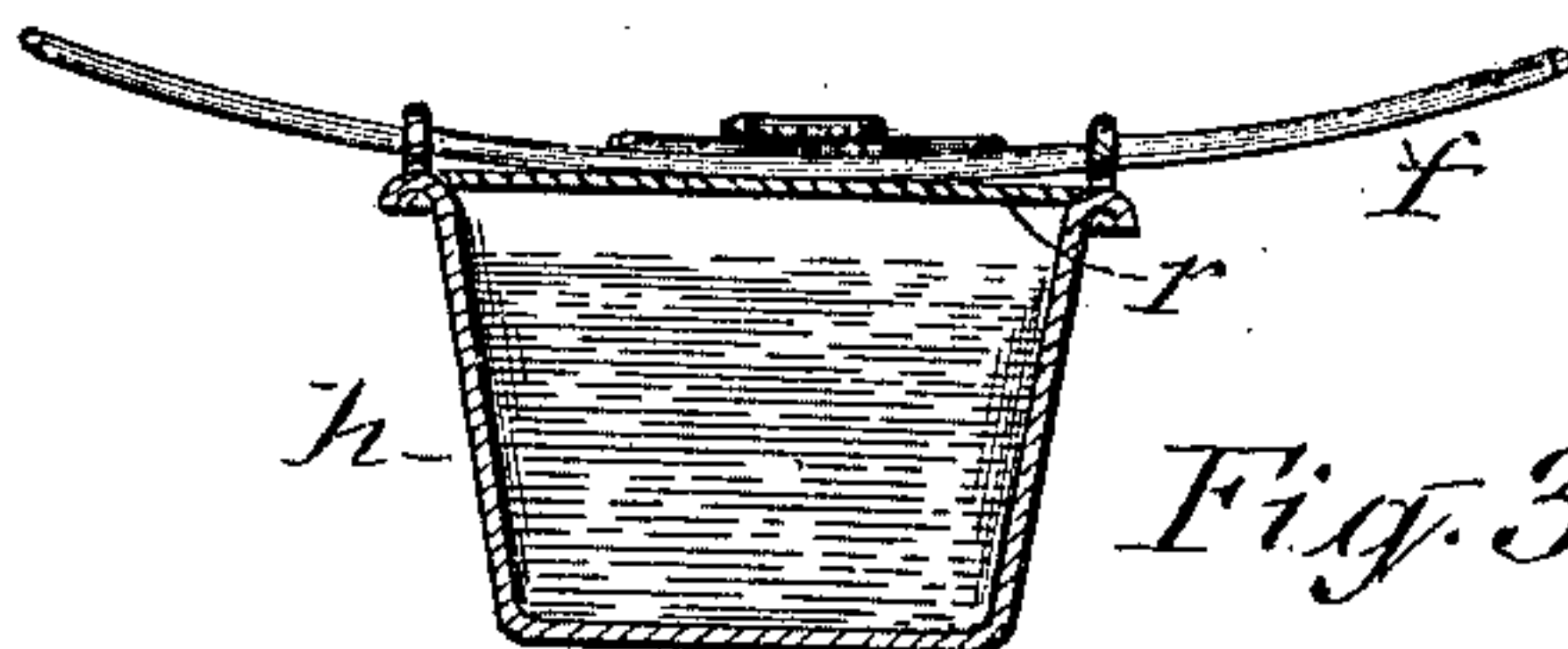


Fig. 3

WITNESSES:
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ELISHA G. GAY, OF ONEIDA, NEW YORK.

AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 736,514, dated August 18, 1903.

Application filed October 4, 1901. Serial No. 77,579. (No model.)

To all whom it may concern:

Be it known that I, ELISHA G. GAY, a citizen of the United States, and a resident of Oneida, in the county of Madison, in the State of New York, have invented new and useful Improvements in Automatic Fire-Extinguishers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of automatic fire-extinguishing systems in which the water-supply pipe is extended along the ceiling or upper part of the compartment of a building and a plurality of water-distributing nozzles are connected to said pipe at different parts of the length thereof, which nozzles are held normally closed by valves sustained by fusible locks. One of the objectionable features of said systems is the excessive delay in releasing the aforesaid valves until the fire in the building has become sufficiently spread and intense to produce the necessary heat to fuse the valve-locking material, in consequence of which the fire is permitted to gain dangerous and damaging progress.

The object of this invention is to obviate the aforesaid defects by safe, effective, and inexpensive means; and to that end the invention consists, essentially, in the combination, with the water-distributor and a valve closing the outlet of water from said distributor and locked in operative position by means of a fusible seal, of a cup disposed with its top directly under said seal and formed with closed sides and bottom to confine therein ignited heating material and a fuse extending from said cup and communicating with said heating material; and the invention also consists in novel features of the details of said heater, as hereinafter more fully described, and set forth in the claim.

In the accompanying drawings, Figure 1 illustrates one of the numerous arrangements of my invention in an apartment of a building to be protected from fire. Fig. 2 is an enlarged longitudinal sectional view illustrating the application of the heater to the sealed water-distributing nozzle, and Fig. 3 is a further enlarged vertical section of one of the forms of the heater.

Similar letters of reference indicate corresponding parts.

P represents the water-supply pipe, which is charged with water under pressure in the usual and well-known manner. A plurality of such pipes is usually arranged parallel suitable distance apart and supported by suitable hangers *a a*, secured to the ceiling of the apartment of the building to be protected from conflagration. Said supply-pipe is provided with discharge-nozzles *b* at different points of its length, which nozzles are held normally closed by suitable valves *c*, retained in their closed position by suitable material (indicated at *e*) which is fusible at a moderate temperature of about 180° Fahrenheit. Each of said nozzles is equipped with means for distributing the water issuing from the nozzle when relieved from the water-confining valve *c*.

My invention is not limited to any specific construction and arrangement of the valve *c* and the means for distributing the water issuing from the supply-pipe P, except that said valve must be retained in its closed position by means of a suitable fusible lock or seal.

The essential feature of my invention is the quick transmission of the requisite fusing heat from different localities in the compartment, and thus guard against the spreading of the fire in the compartment, which spreading has heretofore been necessary to allow the fire to approach the water-distributors sufficiently to subject the fusible valve-confining material to the requisite heat to release the valve.

To attain the object of my invention, I employ at each water-distributor *d* a suitable heater, preferably of the form of a cup or analogous receptacle *h*, formed with a closed bottom and closed sides to enable it to carry therein highly-inflammable material without danger of allowing it to drop out of the cup, which is supported by any suitable means and disposed with its top directly under the fusible seal *e*, so as to cause the flame rising from the cup to effectually impinge and quickly fuse said seal. The inflammable material may consist of either kerosene, or naphtha, or alcohol, or other suitable substance

which is easily ignited and securely confined in the cup. To the said heater I connect suitable fuses or fire-conductors *f*, which are extended to different parts of the compartment, and preferably toward the floor sufficiently to cause the conductor to be ignited by a fire which may originate at or near the floor. The conductors *f* may be of any suitable inflammable material, as lamp-wicking, or strings of paper, or cloth, or fiber prepared in any suitable way to rapidly ignite and conduct the fire to the aforesaid cup *h* and ignite the contents thereof. The flame or heat rising from the cup fuses the valve-retaining material *e*, and thus releases the valve *c* and allows the water to issue from the nozzle *b* and become dispersed in the apartment by the distributor *d*. When the heater is arranged under the valve, as represented in the annexed drawings, the flame of the heater becomes extinguished by the water escaping from the nozzle. To prevent evaporation and diffusion of odor from the contents of the cup of the heater, I preferably apply to said cup an air-tight cover *r*, of suitable inflammable material, as waxed or oiled paper or a thin

sheet of celluloid or other sheet adapted for the purpose. The conductor *f* may be either laid upon said cover, as shown in Figs. 2 and 3 of the drawings, or pass through the cover and communicate directly with the inflammable material in the cup *h*. When laid upon the cover, as aforesaid, the fire emitted from the conductor will ignite the cover and allow the conductor to drop into the inflammable substance in the cup.

What I claim is—

The combination with a fire-extinguishing water-distributor, a valve normally excluding the water from said distributor, and a fusible lock sustaining said valve in its normal position, of a receptacle containing inflammable material and supported in position to fuse said lock by the flame of said material, a cover of inflammable material closing said receptacle, and a fuse extending from said cover to ignite the same by fire conducted by said fuse as set forth.

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Witnesses:

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