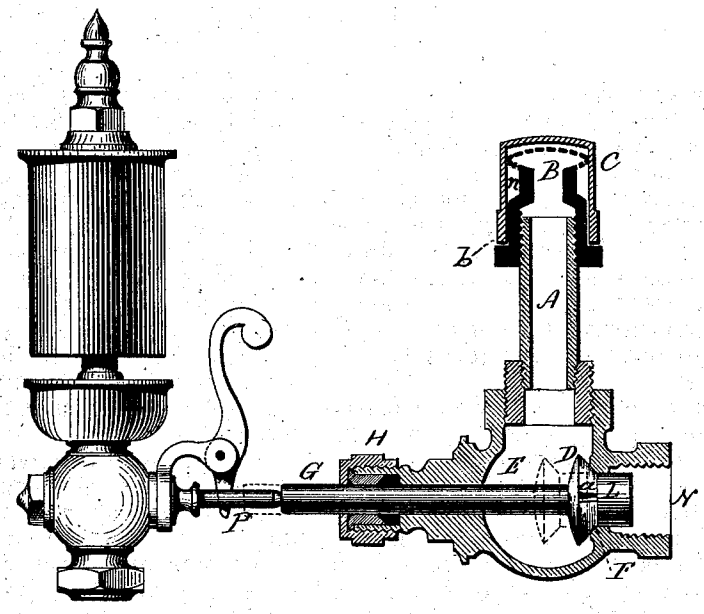
H. S. PARMELEE.

Fire-Extinguishers.

No. 156,374. Patented Oct. 27, 1874.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY S. PARMELEE, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **156,374**, dated October 27, 1874; application filed September 30, 1874.

To all whom it may concern:

Be it known that I, HENRY S. PARMELEE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Fire-Extinguisher; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent a sectional side view.

This invention relates to an improvement in a fire-extinguisher, of which Letters Patent were granted to me August 11, 1874, parts of which are applicable to other purposes; and the invention consists, first, in constructing the distributer with a recess or neck between it and its base, combined with a hard metal cap, set over and closely fitting the distributer, and extending down to the base, so as to inclose both distributer and neck, and attached to the base by a material fusible at a low degree, so that, when the cap shall become heated, the securing material will fuse and free the cap, the neck preventing contact of water with the fusible joint until after the cap is free, all as more fully hereinafter described; secondly, in constructing the valve which actuates the alarm with a cylindrical projection below the seat, which nearly fills the opening through the seat, and so as not to allow a full flow of water until the cylindrical projection has passed above the valve-seat, whereby an increased movement is given to the valve to act upon the alarm, as more fully hereinafter described.

A is the pipe or tube, to which the perforated distributer B is attached; over the distributer the cap C is loosely fitted, and is secured thereon by a metal or material fusible at a low degree—say, 120°—but so as to make a tight joint, and prevent the escape of water, gas, or whatever it may be.

In order to prevent the water from flowing freely upon the fusible material, I construct the distributer with a recess or neck, *n*, between the distributer and the base *b*, where the cap is attached, and the cap to fit closely the periphery of the distributer; hence, but very little water can reach the joint or fusible material until the cap has passed beyond or entirely from the distributer; therefore the quantity of water which can reach the fusible material will be so very small as not to materially affect its fusibility.

So soon as this cap shall have become heated to the previously-determined degree, the material which secures it in place will fuse, thus freeing the cap from its connection, and the pressure within the pipes will force the cap off the distributer, and thereby allow the water to flow freely through the said distributer. This completes the first part of my invention.

D is the valve, arranged within the chamber E to fit upon the seat F, in substantially the usual manner, with the spindle G running out through the stuffing-box; also, in the usual manner, upon the under side of the valve is a cylindrical projection, L, which nearly fills the opening through the valve-seat. N is the inlet, through which the water, or whatever it may be, is to flow to the distributer, and in order to hold the valve at rest upon its seat—that is, to balance the valve—a slight opening, *a*, is made through the valve, which will allow the water to flow through and fill the chamber E on the back side of the valve; hence, so long as the distributer is closed, the valve must also remain closed; but so soon as the cap is thrown off the pressure upon the back of the valve will be removed, and the valve will open to allow the free flow of the water.

To sound the alarm (here represented as a steam-whistle actuated through the valve-stem P) a considerable motion of the valve-spindle G is necessary, more than would naturally be given by the opening of the valve. By the addition of the cylinder L of the valve the passage cannot be fully open until this part L of the valve has passed back or above the seat; hence there must be given to the valve an additional movement, according to the length of the part L, and this is sufficient to give the required movement for the alarm. This completes the second part of my invention, and this is applicable to other purposes than for a fire-extinguisher where it is desirable to sound an alarm.

I do not, broadly, claim a cap secured over

the distributer, to be loosened or removed by heat, as such I am aware is not new.

I claim—

1. In combination with the distributer B, constructed with the neck *n* and base *b*, the cap C, attached to the said base by a fusible material, substantially as and for the purpose set forth.

2. In combination with the valve E, and its seat F, the projection L on the valve through the valve-seat, substantially as and for the purpose described.

HENRY S. PARMELEE.

Witnesses:

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