

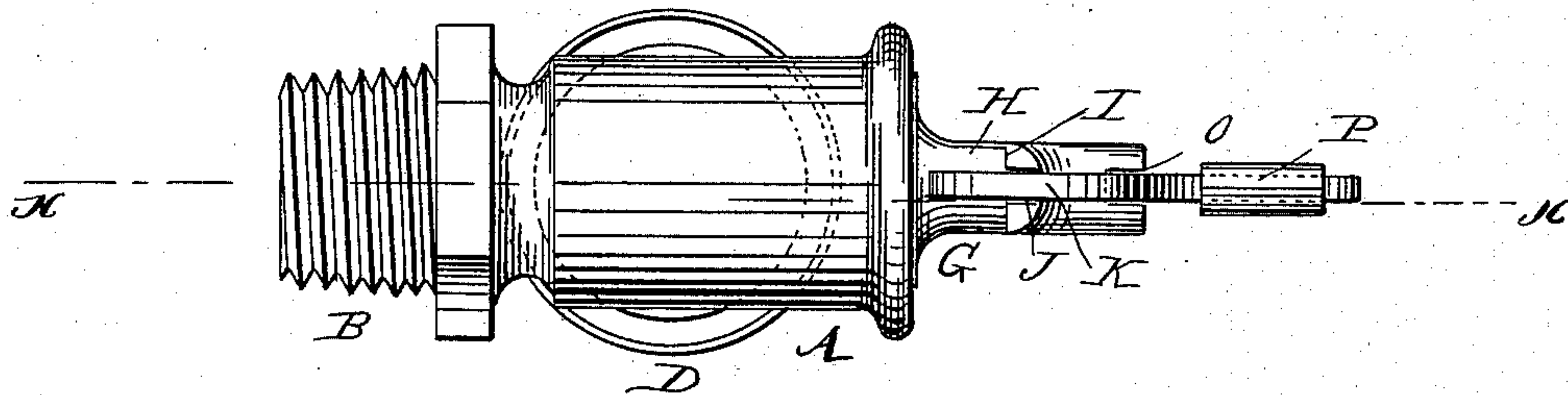
(No Model.)

V. A. HARDER.  
FIRE EXTINGUISHER.

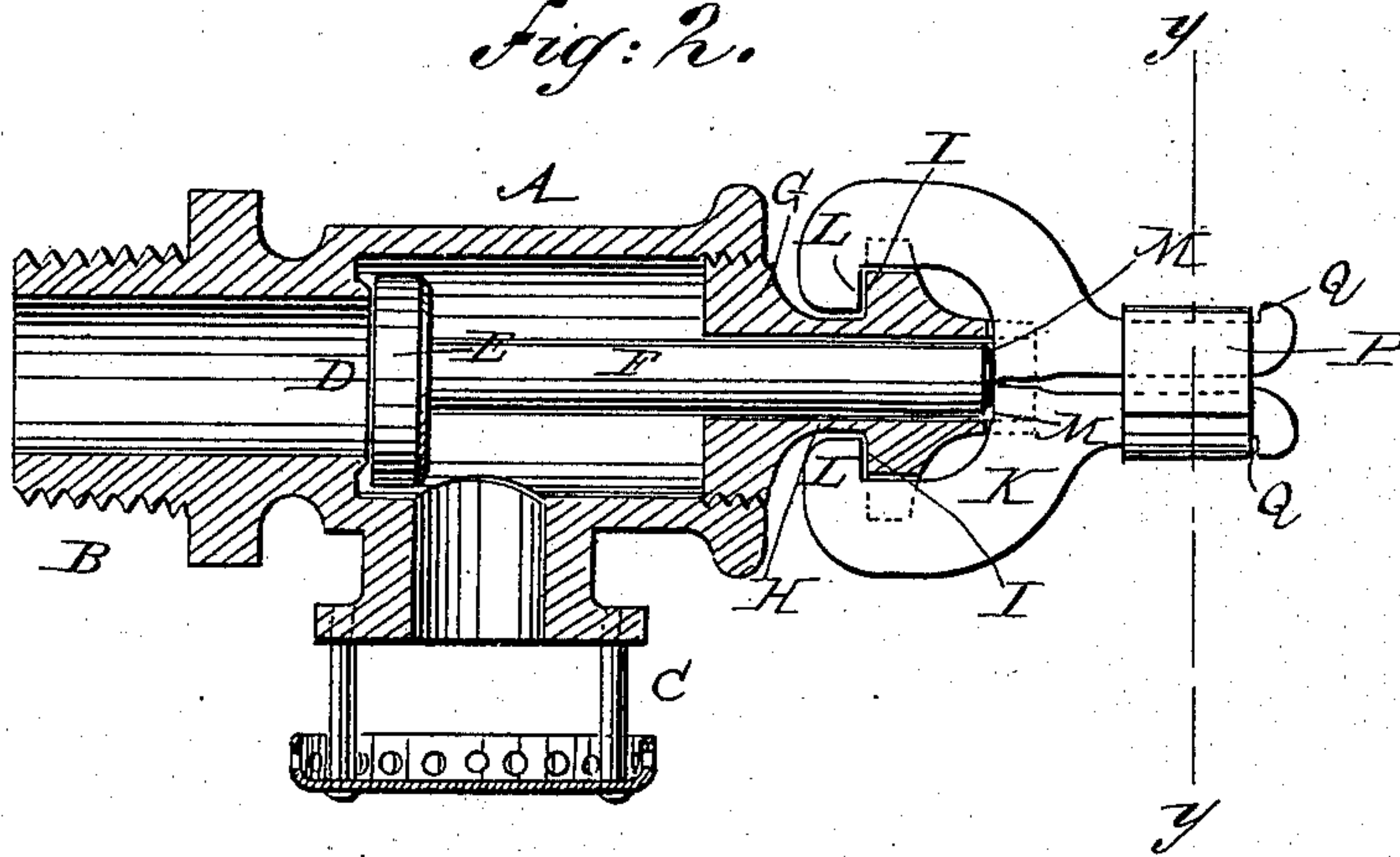
No. 416,838.

Patented Dec. 10, 1889.

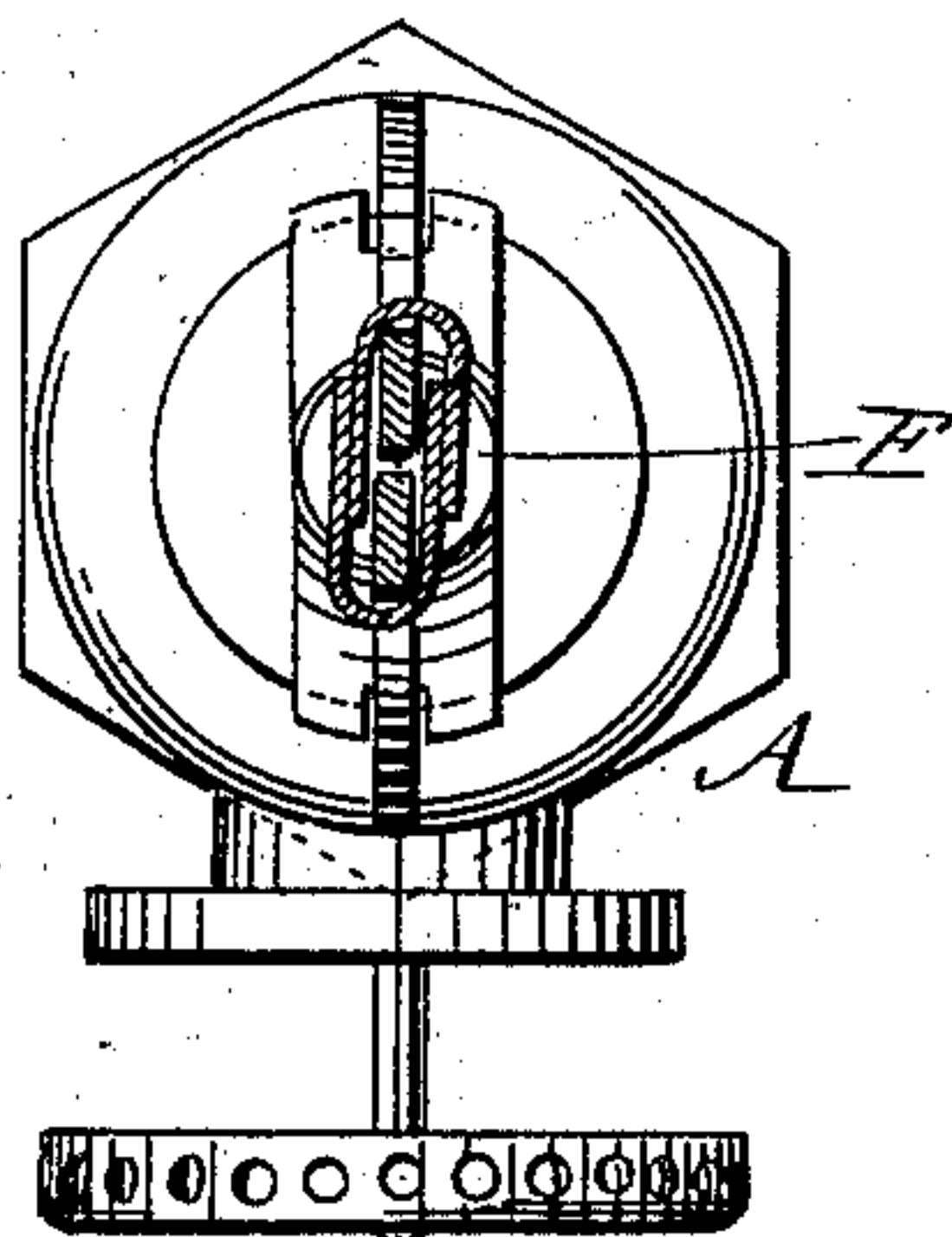
*Fig: 1.*



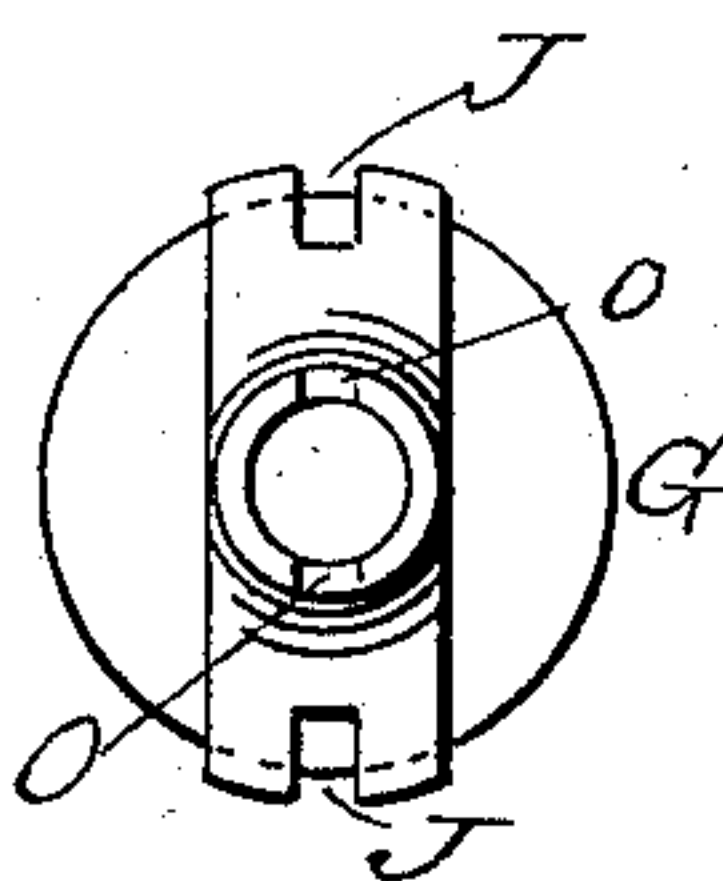
*Fig: 2.*



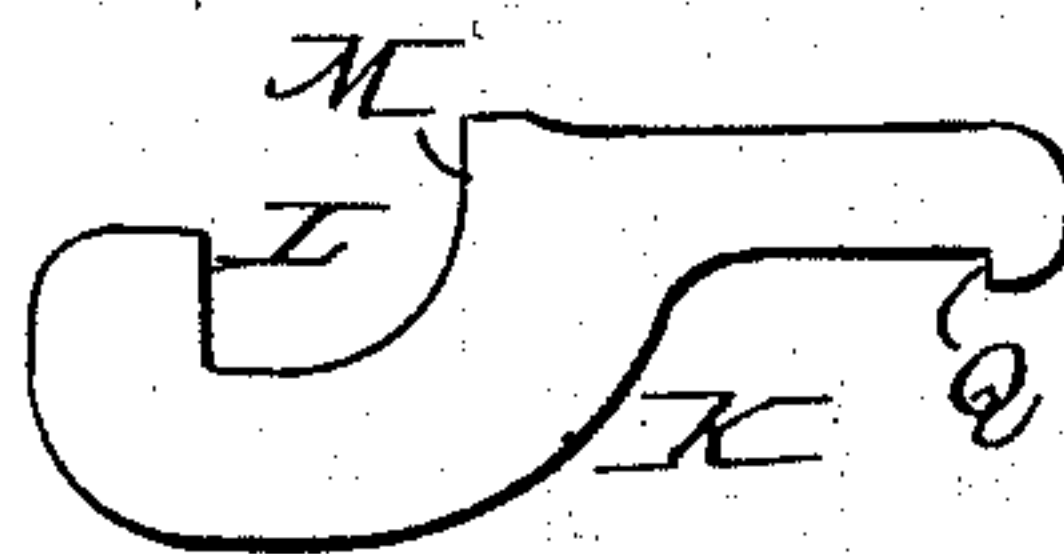
*Fig: 3.*



*Fig: 4.*



*Fig: 5.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 416,838, dated December 10, 1889.

Application filed April 10, 1889. Serial No. 306,691. (No model.)

*To all whom it may concern:*

Be it known that I, VICTOR A. HARDER, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Automatic Fire-Extinguishers, of which the following is a specification.

This invention relates more particularly to automatic fire-extinguishers, in which the water-restraining valve is held to its seat in the valve-casing by a movable arm or arms bearing upon an outer part or stem of the valve, and secured with respect to the casing by an easily-fusible fastening, so that on melting of the fastening the valve-restraining arm or arms will yield to the pressure upon the valve and permit the water to be ejected.

The objects of my invention are to secure the certain and entire separation of the valve-restraining arms from the casing and the consequent total release of the valve on melting of the fusible fastening and to prevent the fusible fastening from being released except on fusion.

In order that my invention may be fully understood, I shall first describe in detail the mode in which the same may be carried into effect, and then point out its distinctive features in the claim.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a sprinkler-head of an automatic fire-extinguisher embodying my invention. Fig. 2 is a longitudinal sectional view of the said sprinkler-head on the line X X, Fig. 1. Fig. 3 is a sectional end view of the same on the line Y Y, Fig. 2. Figs. 4 and 5 are detail views of parts hereinafter referred to.

Like letters of reference designate corresponding parts in the different figures of the drawings.

The sprinkler-head thus illustrated as embodying my improvement is formed with a water-connection B, a common water-distributor C, and between the two with a valve-seat D, which is normally closed by a valve E, having a stem F. The valve-stem F projects outward through and is adapted to slide lengthwise, as in a sleeve, in a nut G, which is adjustable in the casing A, containing the

valve E. The outer part of the adjustable nut G is contracted to form a neck H, and beyond the neck H enlarged to form oppositely-projecting ledges I, and opposite slots J are formed therein extending at a right angle from the ledges, in which slots are held loosely-curved arms K, having inward-projecting hook-shoulders L, which are caught upon the opposite ledges I. The arms K are also formed with inward-projecting outer shoulders M, which are passed through opposite slots O in the outer end of the nut G over and bear upon the outer end of the valve-stem F, so that when the extensions of the arms K are fastened together by the easily fusible surrounding band-tie P the valve E will be held securely closed and can be adjusted more or less tightly against its seat D by turning the nut G in a well-known manner. The outer ends of the arms K are formed with outwardly and oppositely projecting shoulders Q, by which the fusible tie is prevented from slipping off the ends of the arms K.

When the tie P is melted by heat, the pressure upon the valve E will tend to throw the arms K apart, and, owing to the novel hook construction employed, the same will be entirely detached and separated from the nut G, which acts as a part of the casing, and the valve E thus left entirely free to open.

This improvement is as well applicable to sprinkler-heads in which the distributor is differently situated from that here shown, and also to those in which only one movable arm is used to restrain the valve.

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

In an automatic fire-extinguisher, the combination of a valve-casing having a fixed sleeve and a laterally and outward projecting ledge, a valve having a stem projecting and adapted to work lengthwise through the sleeve, valve-restraining arms, one of which has an inward-projecting shoulder hooked on the said outward-projecting ledge, and another shoulder hooked on the projecting end of the valve-stem, and an easily fusible tie uniting said arms, substantially as described.

VICTOR A. HARDER.

Witnesses:

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