

(No Model.)

C. W. KERSTETER.  
AUTOMATIC SPRINKLER.

No. 383,890.

Patented June 5, 1888.

Fig. 1.

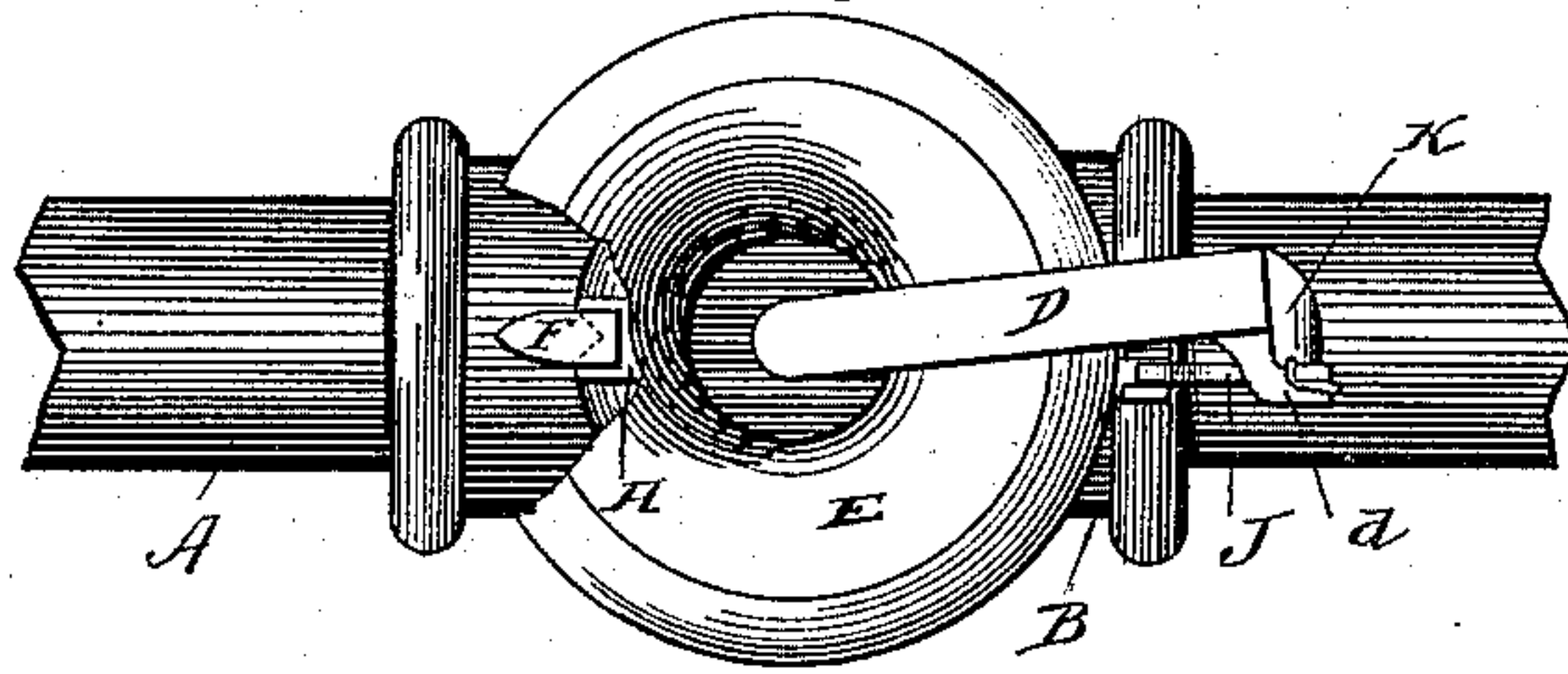


Fig. 2.

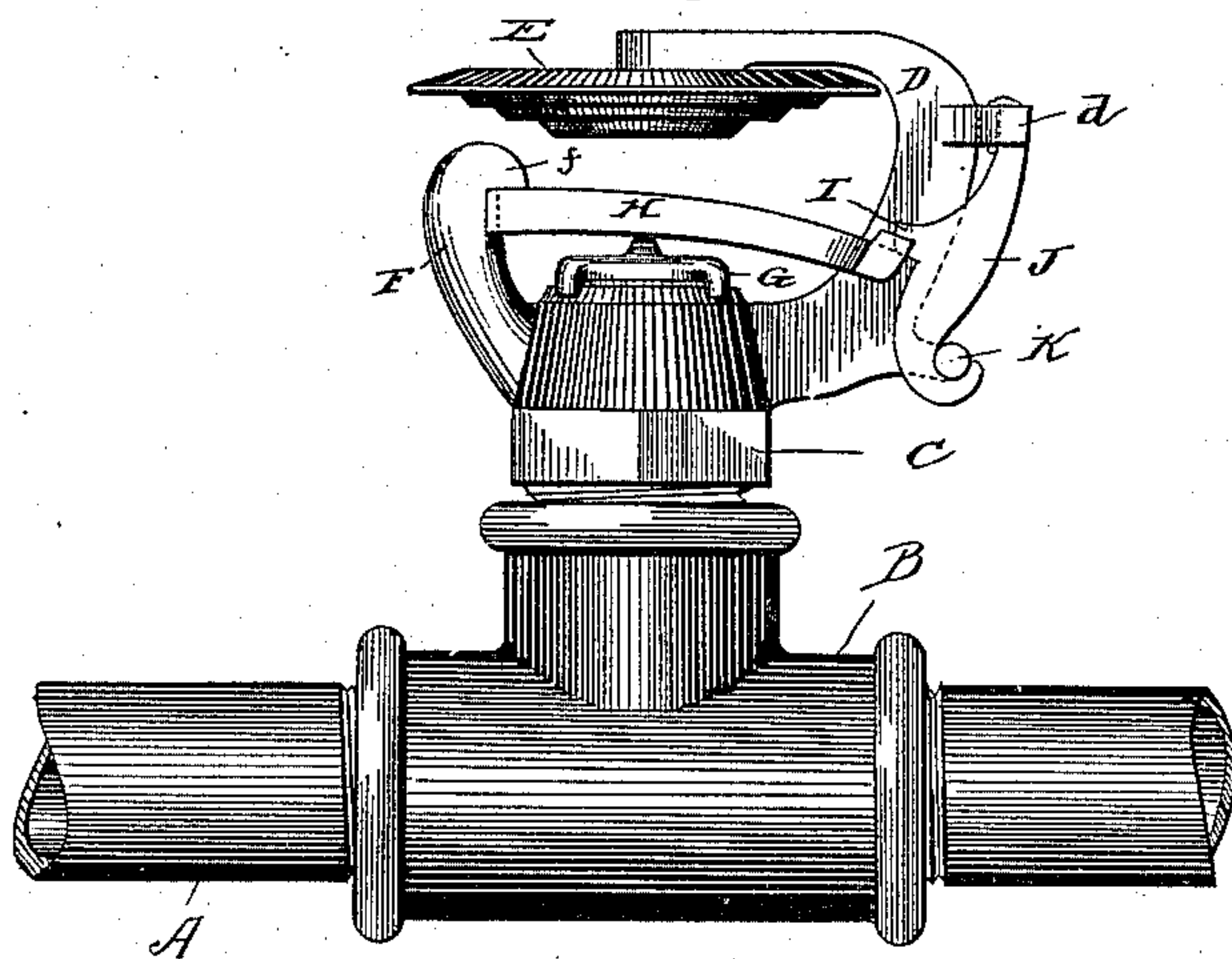
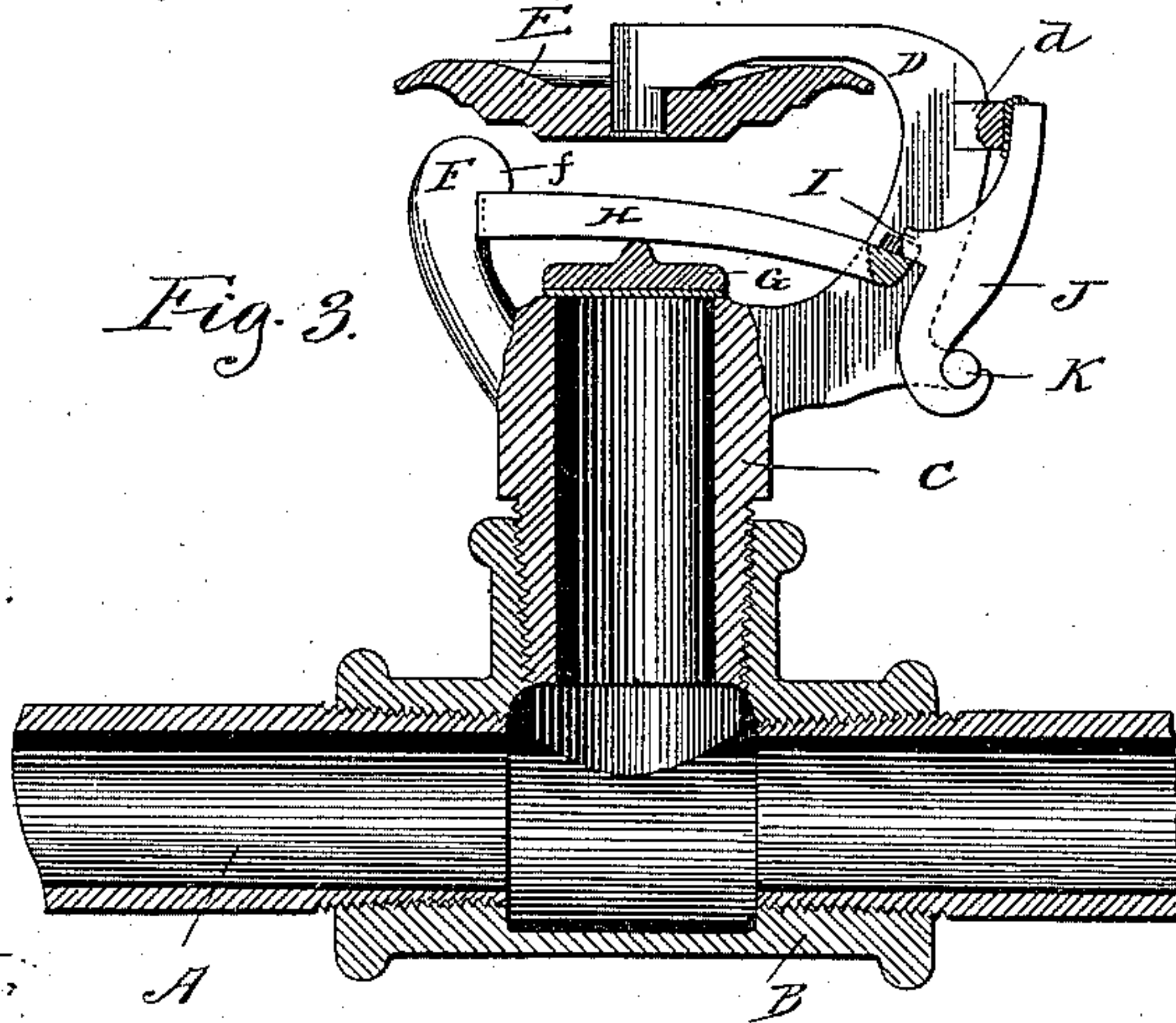


Fig. 3.



Witnesses:  
J. F. Mann,  
Frederick Goodwin.

Inventor,  
Charles W. Kersteter.  
By, *Oppfield and Sonle*, Attys.



# UNITED STATES PATENT OFFICE.

CHARLES W. KERSTETER, OF CHICAGO, ILLINOIS.

## AUTOMATIC SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 383,890, dated June 5, 1888.

Application filed April 2, 1888. Serial No. 269,320. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. KERSTETER, of Chicago, Illinois, have invented certain new and useful Improvements in Automatic Sprinklers, of which the following is a specification.

My invention relates to that class of fire-extinguishers in which a fixed nozzle is provided with a valve which normally closes the opening of the nozzle, but which is released by the action of heat.

The object of my invention is to improve the construction of the devices which retain this valve normally on its seat and permit it to be released therefrom when occasion requires. The essential requirements in these structures are, first, that the fastening for the valve shall exert a greater strain than the water-pressure through the nozzle until the fastening is acted upon by heat sufficient in intensity to fuse a solder-joint; and, second, that water released by a partial or slight opening of the valve shall not interfere with the complete release thereof by striking and cooling the melting solder. In my improved structure I have provided efficient means to meet these requirements.

In the drawings, Figure 1 is a plan view of the sprinkler, a portion of the deflector being broken away. Fig. 2 is a side elevation of the sprinkler applied to a line of pipe. Fig. 3 is a view in elevation, the levers for controlling the valve being shown entire, and the deflector, cap, nozzle, and pipes being shown in vertical section.

In the drawings, A is the supply-pipe, which may be provided with the coupling B, into which is screwed the nozzle C of the sprinkler. Said nozzle carries a curved arm or bracket, D, which terminates above the vent of the nozzle and carries the deflector E. An arm, F, projects from the side of nozzle C, opposite the bracket D, and terminates at a point above the cap G. This arm F has a shoulder, *f*, which receives the end of a lever, H, the latter resting upon the cap G, and having its other end secured under a shoulder, I, of an arm, J, the latter being pivoted at one end to a pintle, K, carried by the bracket D. The opposite end of arm J is secured to a lug, *d*, on the bracket D by means of solder. If preferred, the lug *d* may be omitted and the end of arm J may be secured directly to the bracket D by the solder, or said lug may be mortised to receive the end of the arm J, and

the solder-joint may be made on one or more sides of the arm in this mortise. I prefer to employ the lug, or some equivalent device, in order to prevent the water striking the solder after it has fused sufficiently to permit the water to commence to flow.

It will be apparent from the foregoing description and an inspection of the drawings that a powerful leverage upon the cap G is secured through the medium of the arm H, and that consequently a weak solder-joint will be sufficient to retain the cap in place against the pressure of the water in the pipes, and also that the solder-joint is located so far to one side of the water-outlet and is so protected from the direct action of the water that its fusing is not arrested by the water first escaping from the nozzle.

Of course my device is capable of use where compressed air is used to force the cap or valve from its seat.

I claim—

1. In an automatic fire-extinguisher, the combination, with a nozzle having a removable cap or valve for the opening of said nozzle, of rigid bracket projecting upwardly from one side of the nozzle and provided with a deflector located above the nozzle-opening and provided with fixed lugs, an arm loosely engaged by one of said lugs and soldered to the other of said lugs, and a lever secured to bear upon said cap at a point intermediate its ends, one of its ends engaging the fixed stop and the other engaging said arm, whereby when the solder is fused and said arm is thereby released the pressure of the water in the pipes may raise the cap, substantially as described.

2. In an automatic fire-extinguisher, the combination of the nozzle C, the bracket D, carrying the deflector E, the arm F, projecting from the bracket C on its side opposite the bracket D and provided with a shoulder, *f*, a lever, H, one end of which bears upon the shoulder *f*, said lever extending across and bearing upon the cap G, and the arm J, having the shoulder I, to receive the end of lever H, said arm being pivotally secured at one end to the bracket D and having its other end connected to a fixed part of the bracket by solder, substantially as described.

CHARLES W. KERSTETER.

Witnesses:

C. C. LINTHICUM,  
DEL BUTLER.