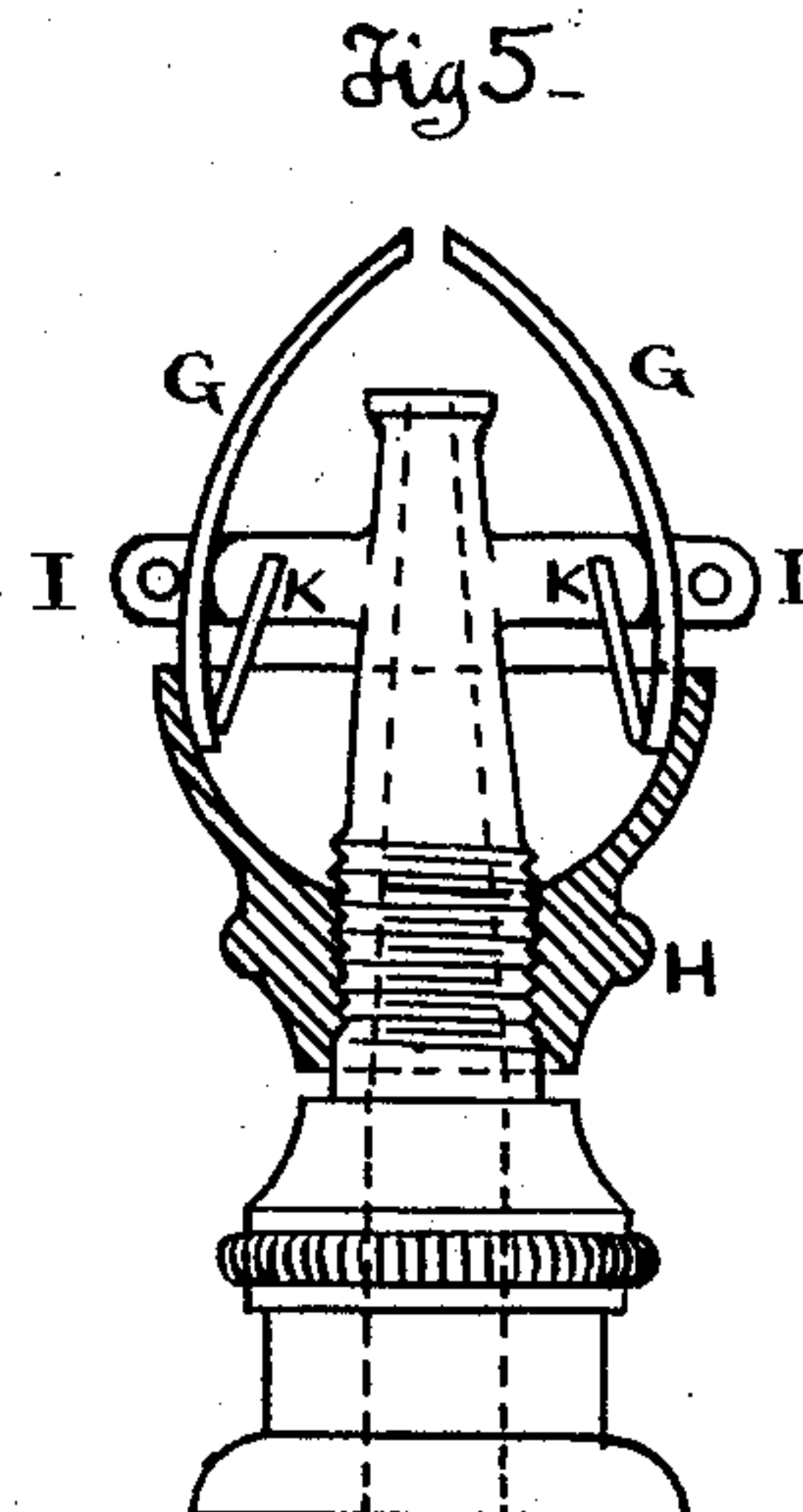
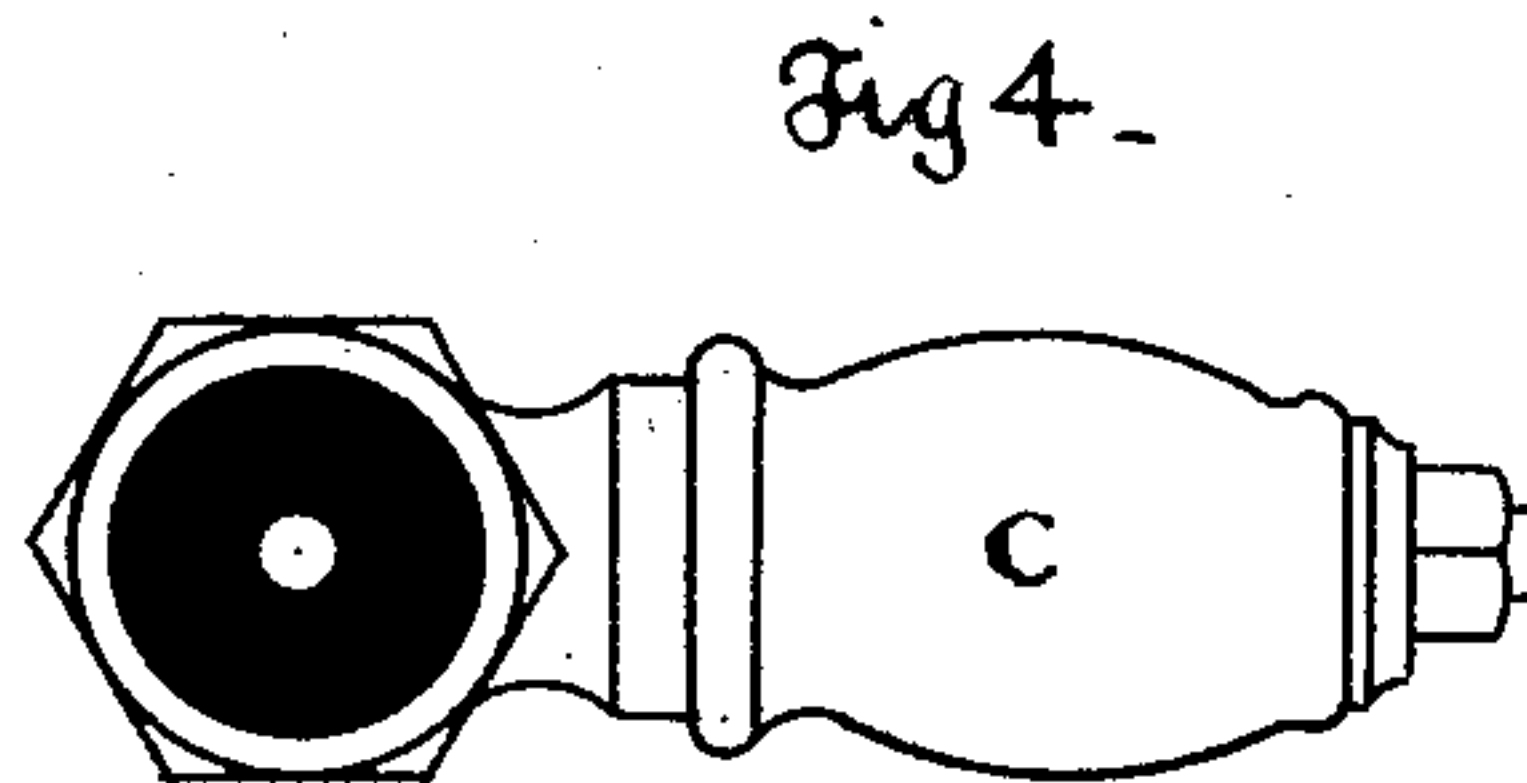
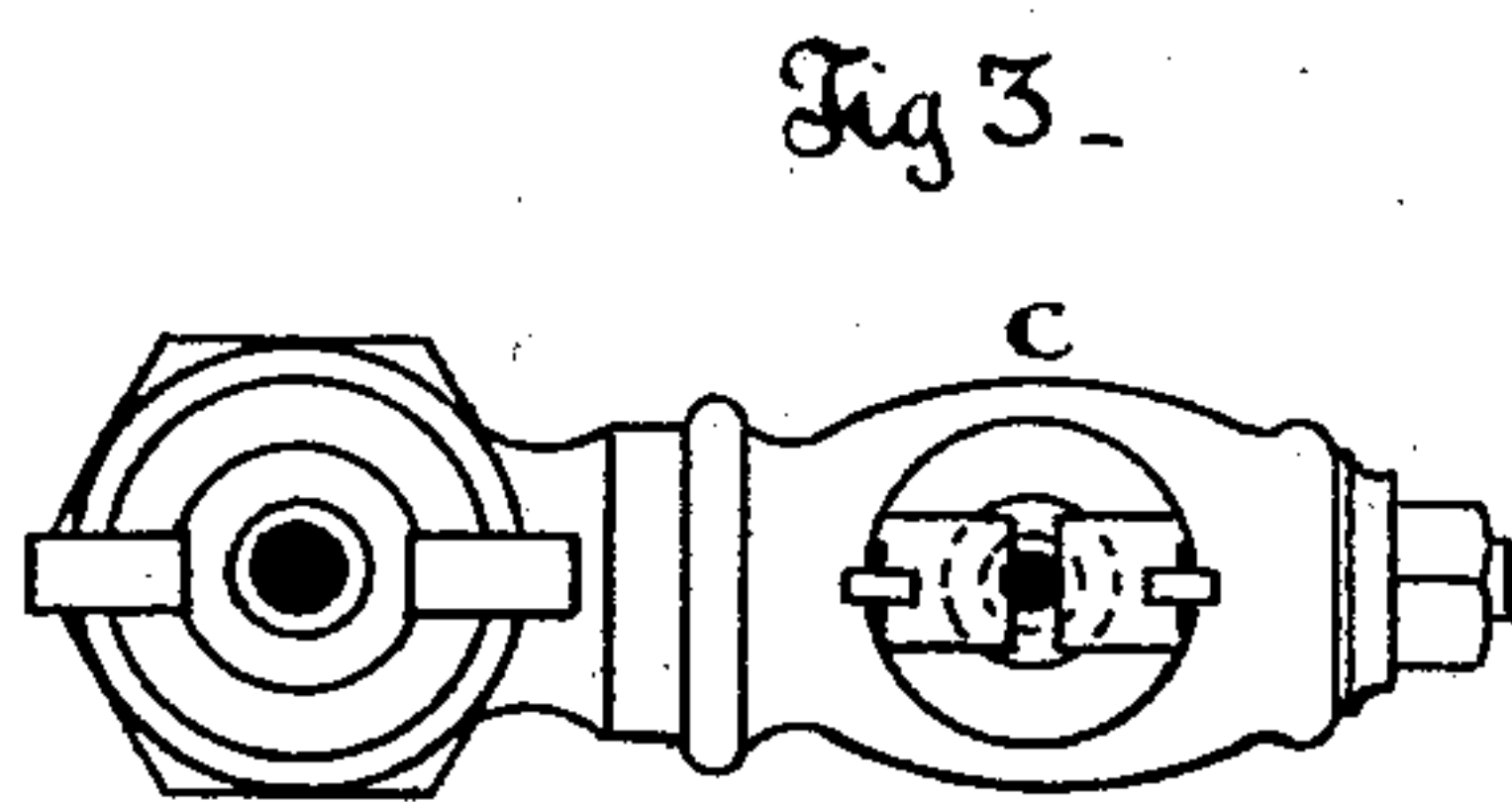
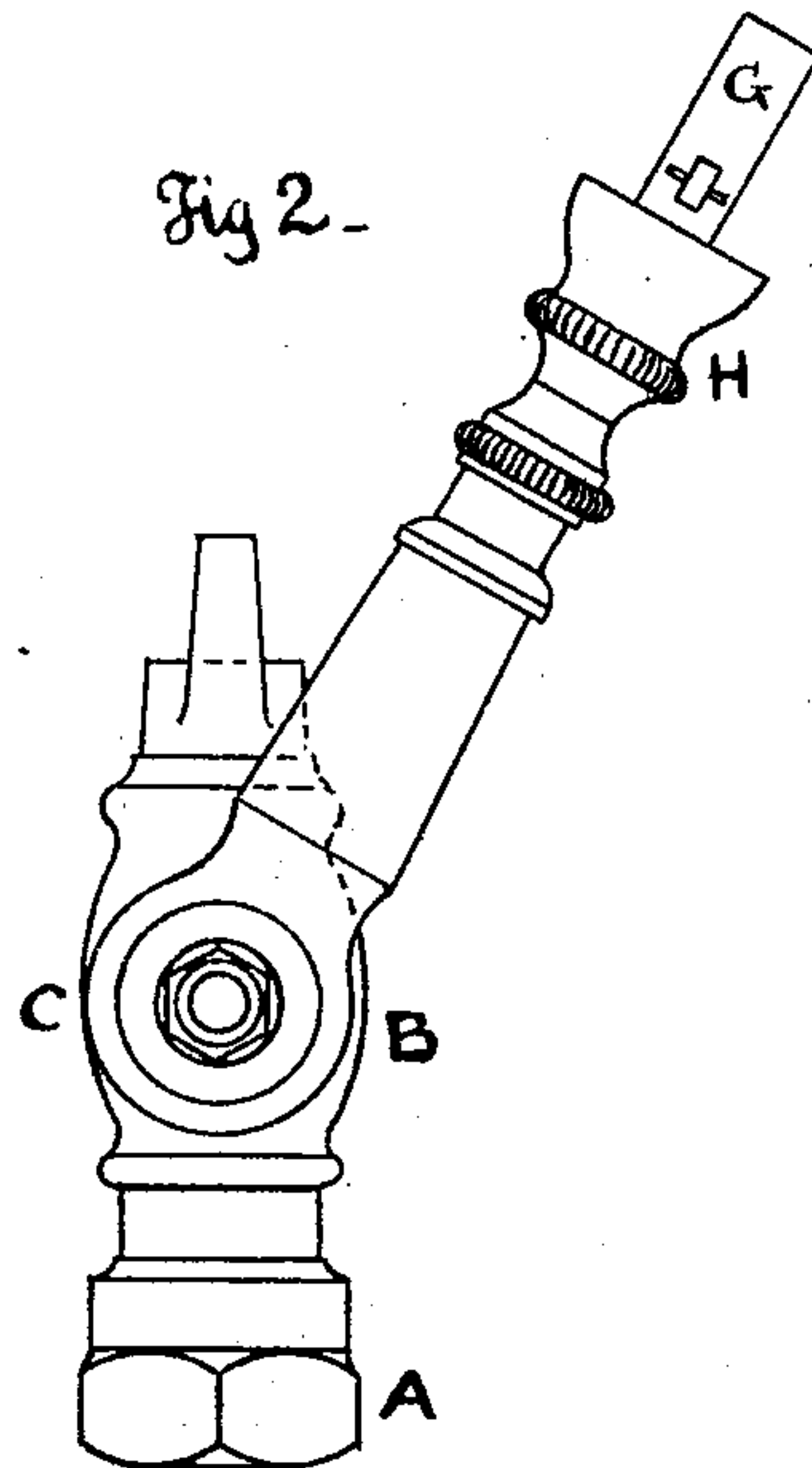
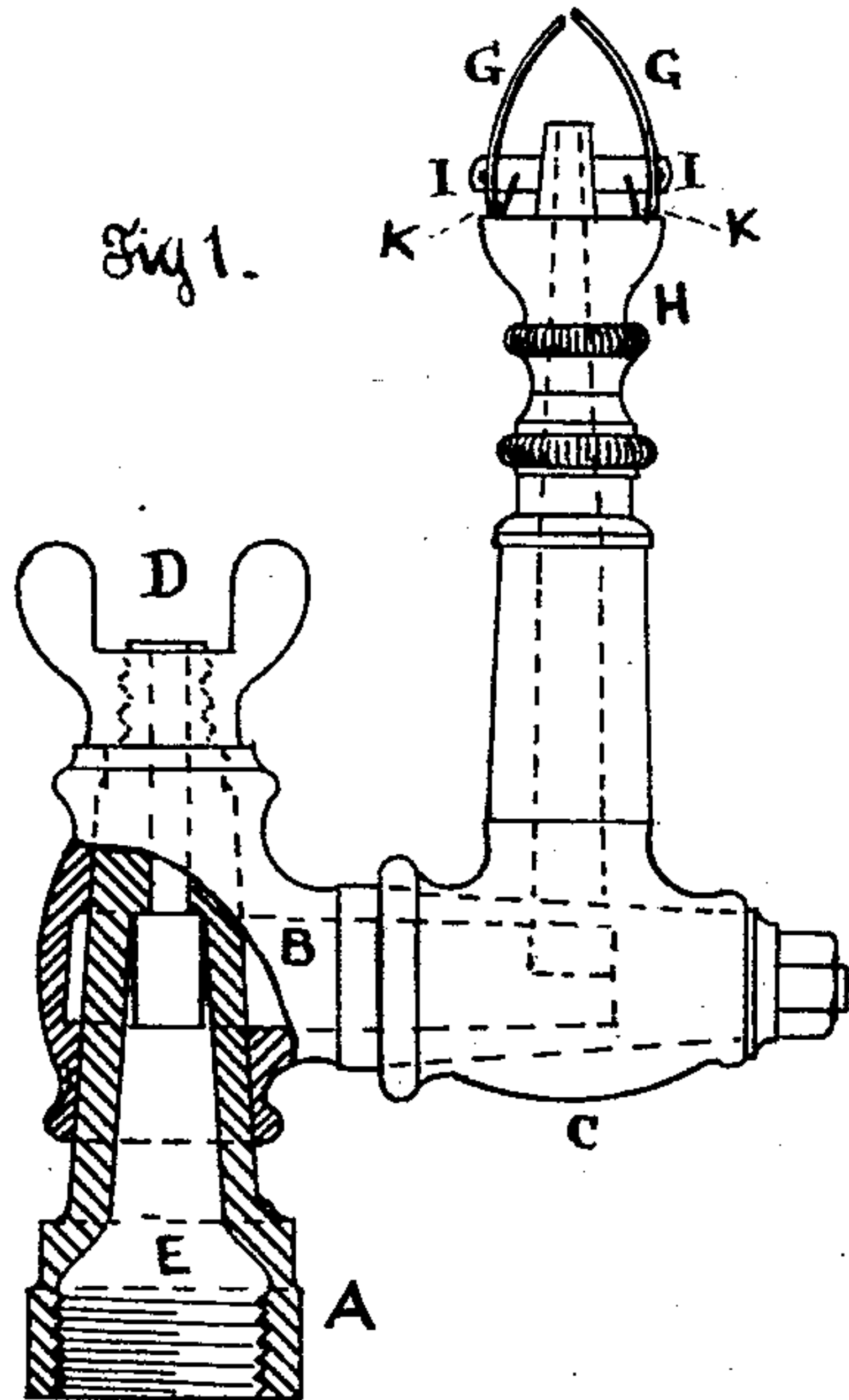


F. J. SHAFER.

Standing Irrigators and Revolving Fountains.

No. 157,353.

Patented Dec. 1, 1874.



Witnesses:  
H. Elloriverde.  
J. B. Lu Gar

Inventor  
Frank J. Shafer.  
By his attorney  
L. M. Smith.

# UNITED STATES PATENT OFFICE.

FRANK J. SHAFER, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN STANDING IRRIGATORS AND REVOLVING FOUNTAINS.

Specification forming part of Letters Patent No. **157,353**, dated December 1, 1874; application filed October 6, 1874.

*To all whom it may concern:*

Be it known that I, FRANK J. SHAFER, of San Francisco, in the county of San Francisco and State of California, have invented an Improved Standing Irrigator and Revolving Fountain-Jet for Gardens, Lawns, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, which will enable those skilled in the art or science to which it most nearly appertains to make and use the said invention without further invention or experiment, reference being had to the accompanying drawings and to the letters marked thereon.

The nature of my invention is to provide a standing irrigator to be employed without hose. It is composed of joints, pipes, and an adjustable spray-nozzle, so that it can be made to revolve by the force of the water from the induction-pipe, and throw a stream or spray around a common center, from which center is projected upward a stream of water, all of which will more fully appear hereinafter.

Referring to the drawings, Figure 1 represents a side elevation, partly in section; Fig. 2, a front elevation; Fig. 3, a top view; Fig. 4, a bottom view; Fig. 5, an enlarged view of the spraying-nozzle, partly in section.

A is a coupling, which is to be connected to a standing water-pipe. Around this coupling is a sleeve, B, to which, at right angles, is connected the cock C, which carries the adjustable nozzle. The coupling-pipe A is bored from end to end, and a set-nut, D, holds the sleeve stationary, or, by loosening it, permits the pipe or cock C to revolve around the stem when water is admitted through the port E. The cock C is provided with three ports, so that water can be admitted to the nozzle when

standing in position from a perpendicular to a horizontal, or at an angle a little below the horizontal; but when depressed below this line, the water is entirely shut off.

The nozzle is bored for a round or straight stream; but this stream is flattened, so as to become a thin spray, by means of the curved arms G G, the ends of which are caused to approach each other, or recede, by means of the screw-thimble H. These arms operate upon the lugs I I and springs K K. By this means a standing irrigator is had without the necessity of using hose; or it may be converted into an artificial fountain by loosening the set-nut D, and placing the nozzle at an upward angle, so that the force of the water will cause the nozzle to revolve around the coupling or vertical pipe, which will throw a basin-shaped spray around the central stream with beautiful effect.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A jointed nozzle or pipe adjustably mounted upon the arm or plug C, having a sleeve, B, which revolves around the vertical induction-pipe and jet, as shown and specified.

2. The means for converting a straight or round stream to a flattened stream or thin spray, consisting of the curved arms G G and threaded thimble H, as shown and specified.

In witness whereof I have hereunto set my hand and seal.

F. J. SHAFER. [L. S.]

Witnesses:

C. W. M. SMITH,  
PHILIP MAHLER.