

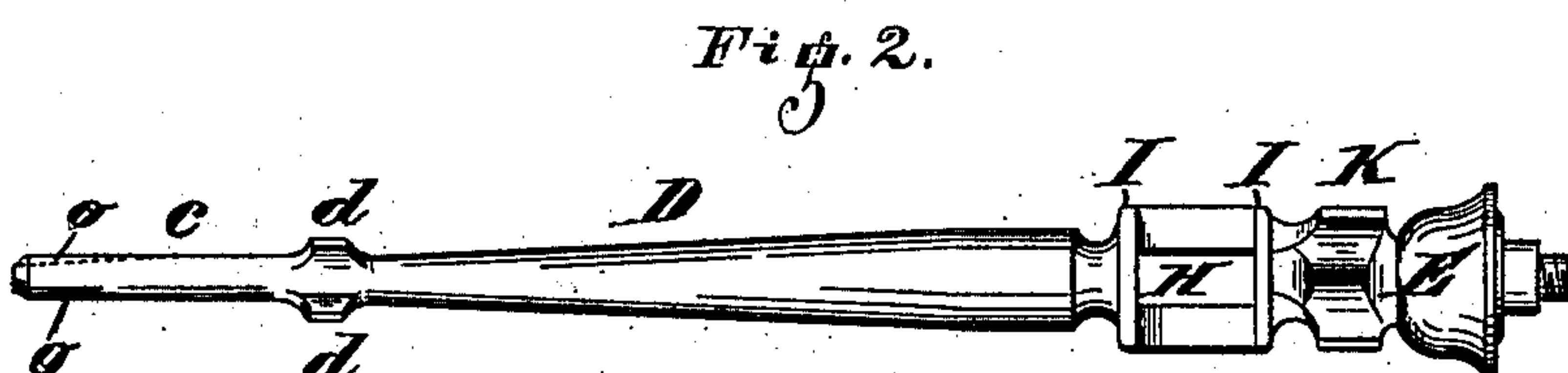
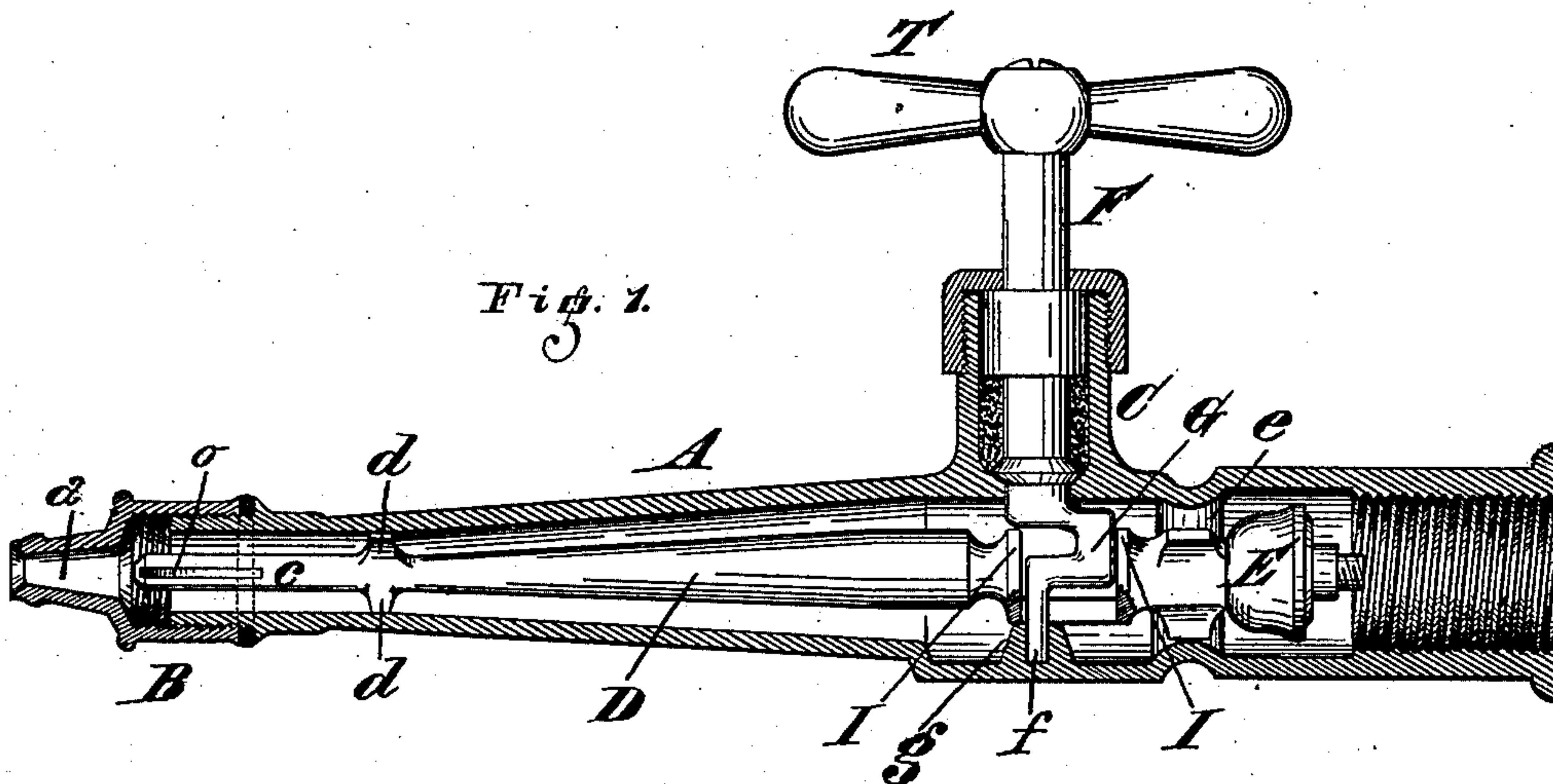
(No Model.)

J. RICHTER.

HOSE NOZZLE.)

No. 294,675.

Patented Mar. 4, 1884.



Attest:

Mr. E. Jones
A. Gluckowsky

Inventor.
Joseph Richter,
by Wood & Boyd
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UNITED STATES PATENT OFFICE.

JOSEPH RICHTER, OF CINCINNATI, OHIO.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 294,675, dated March 4, 1884.

Application filed September 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH RICHTER, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Hose-Nozzles, of which the following is a specification.

This invention relates to improvements in hose-nozzles, and has for its object to provide novel and efficient means whereby a solid or a spray stream can be thrown; to which and other ends the invention consists in the construction and combination of devices hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal central section of my improvement. Fig. 2 is an elevation of the piston and cut-off valve removed from the nozzle.

A represents the barrel of the nozzle; B, a detachable nozzle; C, a packing-box for the valve-stem; D, a piston. The forward end, *e*, of this piston is used as a throttling-stem for the orifice *a* in the nozzle B.

d represents wings formed on piston D, to act as guides to hold point *e* centrally in relation to orifice *a*, the bore in the forward end of barrel A being straight or cylindrical backward as far as the guides *d* are made to travel.

E represents the cut-off valve, which is formed on the rear end of piston D, so as to seat with the pressure against seat *e*.

F represents a valve-stem, which is journaled in packing-box C, and the lower end has a stem, *f*, which journals in ledge *g*.

G represents a crank on the valve-stem F.

H represents a slot or mortise pierced centrally through piston D.

I I represent flanges projecting up from the top face of slot H, which is sufficiently cut down from the top of piston D to allow of the free movement of crank G. The bottom of the ribs each side of slot H are planed off, and rest on ledge *f* and vertically support the rear of piston D.

K represents wings on piston D, which form guides to prevent lateral movement of the rear end of piston D.

Fig. 1 represents the piston D retracted and the nozzle open for throwing a solid stream of water. When it is desired to adjust the nozzle and piston for throwing water in the form

of spray, handle T of valve-stem F is turned till crank G comes in contact with the forward ledge, I, when it moves piston D forward until its point *e* is carried into orifice *a* a sufficient distance to break the solid stream. To more effectually accomplish this, small grooves *o* are cut in the forward end of point *e*. To cut off the water, the handle T is turned till crank G has carried piston D forward to the farthest extent, when valve E will rest on its seat *e* and close off all of the water. The crank and piston are so adjusted that the crank is in a longitudinal plane with the piston when the valve E is opened or closed, its position being the reverse of that shown in Fig. 1 when the valve is closed and the water shut off.

I am aware that a hose-nozzle has heretofore been made in which a valve-stem is reciprocated by a crank-pin on a handle journaled in the barrel, said stem having at its rear end a cut-off valve, guides for centering it in the barrel, and at its forward end an enlarged piston, the periphery of which is grooved spirally, and such therefore I disclaim.

I claim—

1. The combination of the barrel A, the nozzle B at the outer end thereof, having the orifice *a*, the piston D, having a stem, *e*, at one end, for entering the orifice in the nozzle at the outer end of the barrel to convert the solid stream of water into a spray, a cut-off valve at the other end of the piston, and means for shifting the piston longitudinally.

2. The combination, with the barrel A, its valve-seat *e*, and the nozzle B at the outer end of the barrel, having the orifice *a* for throwing a solid stream, of the piston D, having at one end the stem *e*, for entering the orifice of the nozzle at the outer end of the barrel to convert the solid stream into a spray, said piston having at its other end the cut-off valve E and the slot H, and a crank journaled in the barrel and extending through the slot, said crank having a stem, *f*, at its lower end, seated in a part of the barrel, substantially as described.

3. The combination, with the barrel A, having the valve-seat *e*, of the piston D, having guide-wings *d*, and provided at one end with the stem *e*, and at its other end with a cut-off valve, E, a slot, H, and guides K, and a crank journaled in the barrel and extending through the slot, said crank having a stem, *f*, at its

lower end, seated in a ledge of the barrel, which ledge vertically supports the piston, substantially as described.

4. The combination, with the barrel A and
5 the nozzle B, having the orifice *a* for throwing a solid stream, of the piston D, having at one end the stem for entering the orifice in the nozzle and converting the solid stream into a spray, a cut-off valve at the other end of the
10 piston, and a crank for moving the latter, said

piston having between its stem *c* and the crank the lateral guide-wings *d d*, to hold the said stem centrally in relation to the orifice of the nozzle, substantially as described.

In testimony whereof I have hereunto set 15 my hand.

JOSEPH RICHTER.

Witnesses:

J. H. CHAS. SMITH,

A. GLUCHOWSKY.