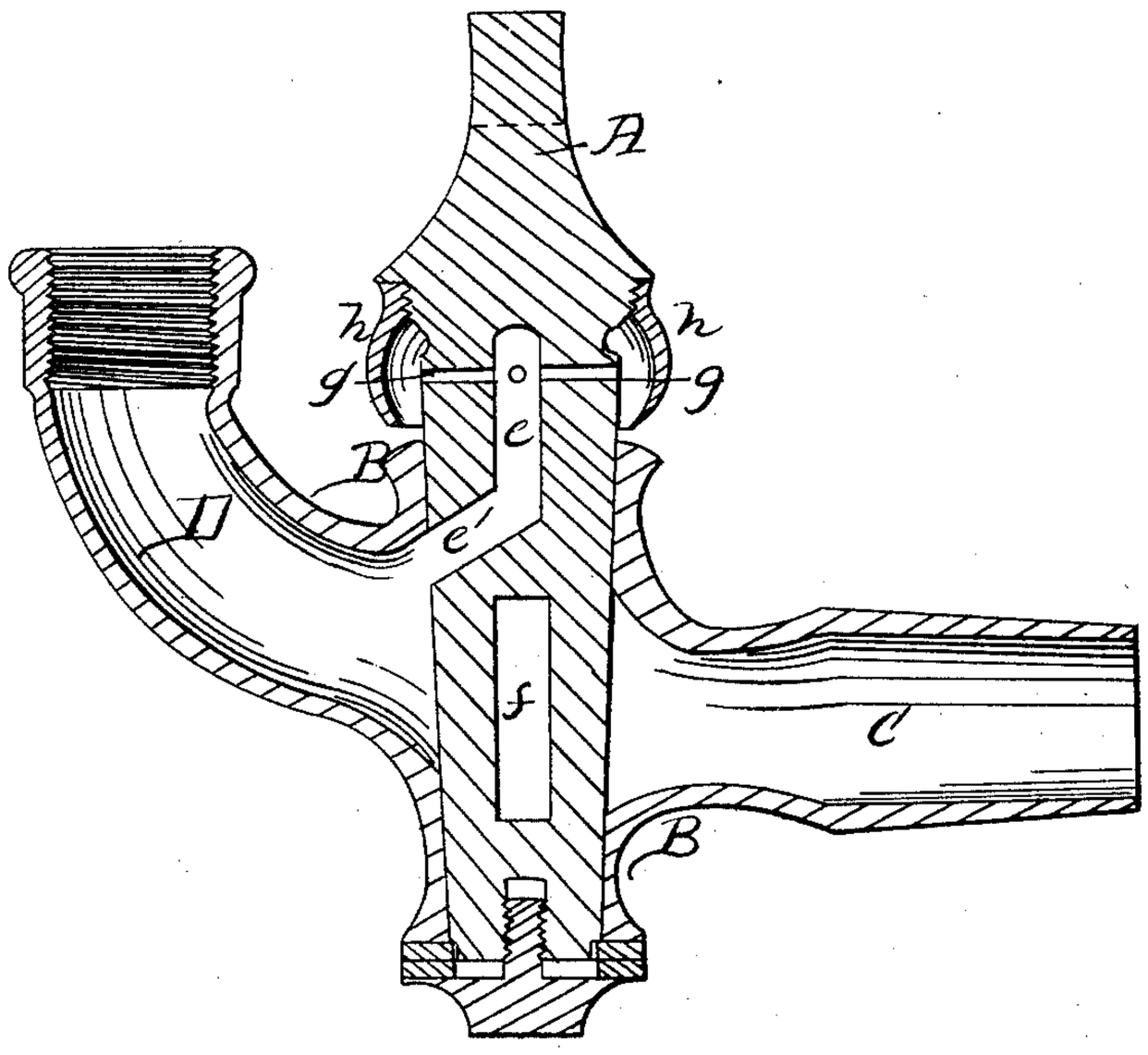
G. W. Robertson,

Waste Cock,

No. 26,785, Patented Jan. 10, 1860.



Witnesses.

Jno. Thomson

Jno. A. Robertson

Inventor.

George W. Robertson

UNITED STATES PATENT OFFICE.

GEORGE W. ROBERTSON, OF PHILADELPHIA, PENNSYLVANIA.

WASTE-COCK FOR HYDRANTS.

Specification of Letters Patent No. 26,785, dated January 10, 1860.

To all whom it may concern:

Be it known that I, GEORGE W. ROBERTSON, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Waste-Cocks for Hydrants, Pave-Washers, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing and to the letters of reference marked thereon.

The nature of my invention consists in providing for the discharge of what is called the "waste-water" of a hydrant, or pave-washer, by constructing the cock so that the said waste-water, as it is discharged, shall be caused to wash the joint which is formed at the place of junction of the plug with the upper end of the barrel of the same; whereby, the dust, fine sand, or dirt which generally accumulates about this part of the cock, and which, from the frequent alternate rotary motion of the plug, enters the joint, causing the rapid wear and early leaking to which this important part of a hydrant, or pave washer especially, has heretofore been subject.

In the drawing, before mentioned, a central longitudinal vertical section of the said improved waste cock, is represented—A, being the plug; B, the barrel; C, the supply-pipe tube, and D, the discharge-pipe tube thereof.

The general form and construction of the barrel (B) and its communicating tubes C, and D, is the same as appears in those in common use, with the exception that the discharge tube (D) is made to intersect the barrel (B) at a point a little higher up the latter, than does the supply tube (C), for the purpose of affording a better communication between it and the waste way *e*, of the plug. The waste-way (*e*) is made a little larger than usual, in its diameter, and extends longitudinally, in the center of the plug (A), from a short distance above the usual water way, *f*, thereof, to about three quarters of an inch, more or less, above the barrel (B)—, a like sized lateral opening, *e'*, being made to communicate with the lower end of the same, through one side of the plug, so as to form a direct communication with the outlet tube (D) when the said plug is turned around into the position which shuts off the flow of water from the tube (C) to the tube (D)—as shown in the drawing—and consequently, so that when the said plug is turned back into the position which allows the water to flow from C, to D, the lateral opening (*e'*) will be closed by the side of the barrel (B). Four—more or less—small openings *g*—*g*, are made, radially, through the plug, at a short distance above the barrel (B), so as to form waste ways branching from the upper end of the way (*e*) to the outside of the plug; and a deflector *h*, is fixed to the plug so as to extend down, and around, the same to within a short distance of the upper end of the barrel (B), the said deflector being curved on its inner side—substantially as shown in the drawing, or so as to cause the waste-water—when forced through the ways (*g*—*g*) to be deflected around upon the joint formed by the junction of the plug (A) with the upper end of the barrel (B), before specified.

In the operation of this waste-cock, when the same is connected with a hydrant, or wash-pave, it will be evident that when the water way (*f*) of this plug is brought into juxtaposition with the two tubes C and D, the waste way (*e'*) will be closed by the barrel (B), as heretofore, but when the said water-way (*f*) is brought to a right angle with the water-way tubes C and D, as shown in the drawing, the flow of water from C to D, will cease, and the water in the outlet pipe—which will be a continuation of the tube D—will be forced, with a velocity proportionate to its height, against the deflector (*h*) and, by the latter, deflected against the outside surfaces of the plug and the upper end of the barrel, from whence it will, by gravitation, pass down, carrying with it any dust, sand or dirt which may be about this part of the cock, through the usual perforated bottom of the case, into the ground. It will also be evident that the deflector (*h*) may consist of one continuous cap or thimble, as shown—or, of several, distinct, downward curved strips or plates of metal arranged opposite the ways (*g*—*g*) so that each plate may serve as a deflector for its respective jet of waste water; and that, in place of such deflector or deflectors, each of the said waste ways (*g*—*g*) may have a small bent tube attached which will direct the waste-water upon the joint required to be washed.

Having thus fully described and illustrated what I consider to be the best mode of causing the waste-water to wash the said

joint, I wish it to be understood that I do not confine my invention to either of the particular modes described for producing the said effect, as varrious analogous modes may be readily devised for the purpose; but

What I claim as my invention and desire to secure by Letters Patent is—

Causing the waste-water of a hydrant, pave washer, or other similar hydraulic apparatus, to wash the joint produced at the junction of the plug with the upper part of the barrel of the waste-cock thereof, substantially in the manner and for the purpose set forth and described.

GEORGE W. ROBERTSON.

Witnesses:

BENJ. MORISON,

JNO. K. ROBERTSON.