

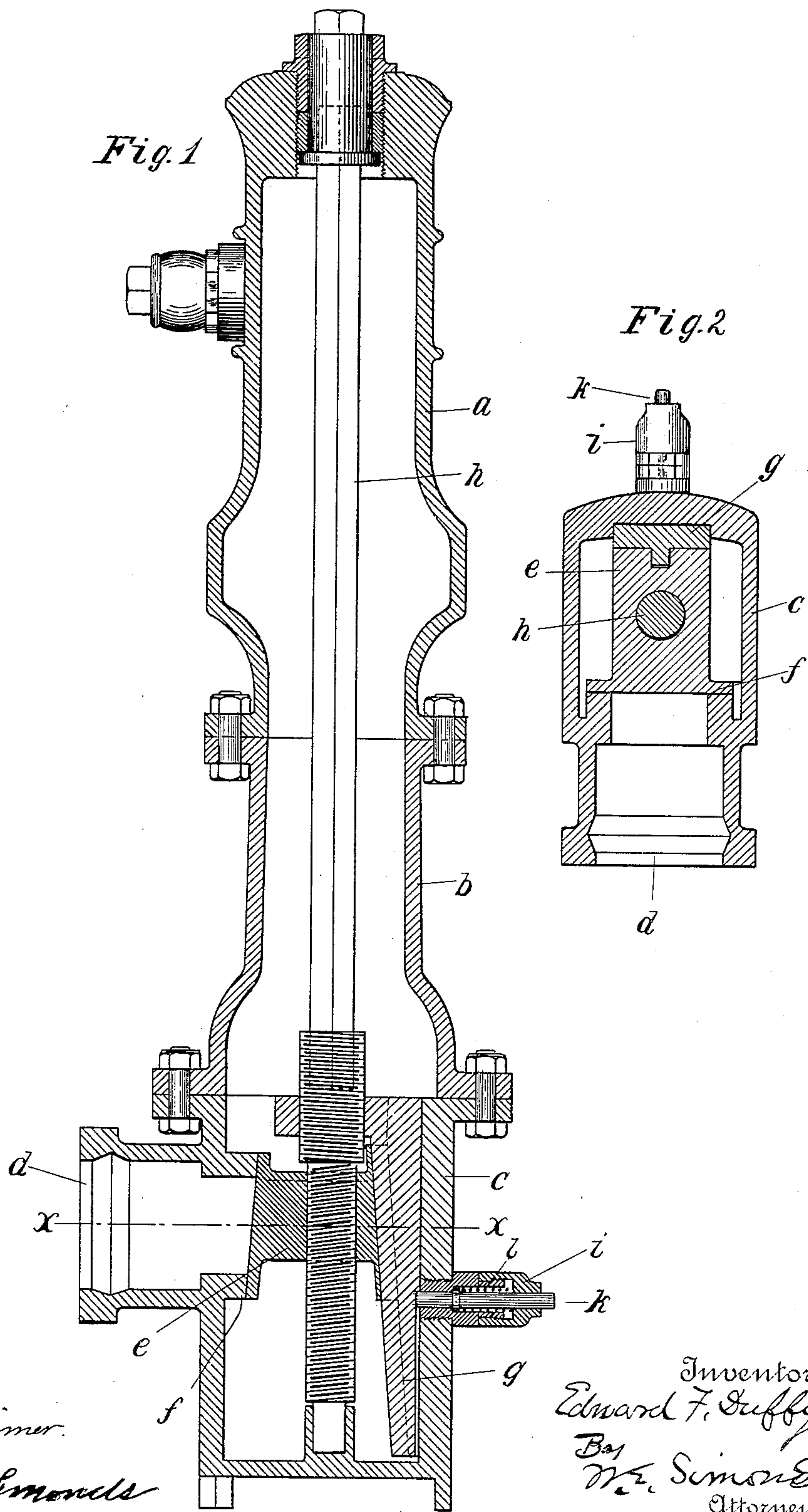
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Patented Jan. 24, 1899.

E. F. DUFFY.
HYDRANT.

(Application filed June 22, 1898.)

(No Model.)



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HYDRANT.

SPECIFICATION forming part of Letters Patent No. 618,169, dated January 24, 1899.

Application filed June 22, 1898. Serial No. 684,131. (No model.)

To all whom it may concern:

Be it known that I, EDWARD F. DUFFY, a citizen of the United States of America, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a certain new and useful Improvement in Hydrants, of which the following is a description, reference being had to the accompanying drawings, wherein—

Figure 1 is a view in central vertical longitudinal section with the main valve of the hydrant closed. Fig. 2 is a view in horizontal cross-section on the plane denoted by the dotted line *xx* appurtenant to Fig. 1.

The improvements herein described and claimed appertain to hydrants.

In the accompanying drawings the letters *a*, *b*, and *c*, respectively, denote sections of the hydrant-case, which is made up of these parts collectively. Through the lower section *c* there is an inlet-orifice *d* for admitting water to the hydrant from the street-main. The letter *e* denotes the valve appurtenant to that inlet-orifice. Its face or front is on an incline, and the valve-seat *f* is correspondingly inclined. The rear side of the valve *e* is also inclined, so that the valve as a whole is wedge-shaped. The letter *g* denotes a shoe correspondingly inclined upon its face, and thereby adapted to cooperate with the rear side of the valve.

The letter *h* denotes the "valve-rod," by which expression is meant the rod by which the valve is operated. Near its lower part it has two different screw-threads, one of them running in one direction and the other running in an opposite direction. The lower of these two screw-threads upon the valve takes into and through valve *e*. The upper of these two screw-threads takes into and through the lateral part of the shoe *g*. Obviously it results from this construction that the valve *e* and shoe *g* are both supported by and on the valve-rod *h*. It is by rotation of this valve-rod that the valve *e* is moved to close and unclo-

se the inlet-orifice *d*. By reason of the wedge shape of the valve *e* and the corresponding inclines of the valve-seat *f* and the shoe *g*, the valve is pressed the more snugly to its seat the farther it is moved upward. By having the valve and the shoe hung upon the two different screw-threads, this closing action of the valve is accelerated.

The valve-rod is adapted to be operated by a wrench at the top of the hydrant-case. Near the top of the hydrant-case the valve-rod is held from longitudinal motion, but permitted to rotate.

The hydrant is provided with a drip-valve which is closed by a spring of sufficient force whenever the main valve of the hydrant is open, but which is opened in order to empty the hydrant-case of water whenever the main valve is closed. The letter *i* denotes this drip-valve borne on the pintle *k* and pressed to its seat normally by the spring *l*. When the main valve of the hydrant *e* is closed, the shoe *g* bears against the valve-pintle *k*, holding the drip-valve open and permitting the water which would otherwise be confined within the hydrant-case to escape but when the main valve *e* of the hydrant is open the shoe *g* fails to press upon the valve-pintle *k*, with the result that at such times the drip-valve remains shut.

I claim as my improvement—

In combination, the hydrant-case, the inlet-orifice, the wedge-shaped valve, the inclined valve-seat, the shoe at the rear of the valve with inclined face, and the screw-rod taking on it the valve by a screw-thread running in one direction, and also taking said shoe upon it by a screw-thread running in the opposite direction, all substantially as described and for the purposes set forth.

EDWARD F. DUFFY.

Witnesses:

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