(No Model.)

W. H. FROMM.

HYDRANT.

No. 270,782. Patented Jan. 16, 1883.

Fig: 1.

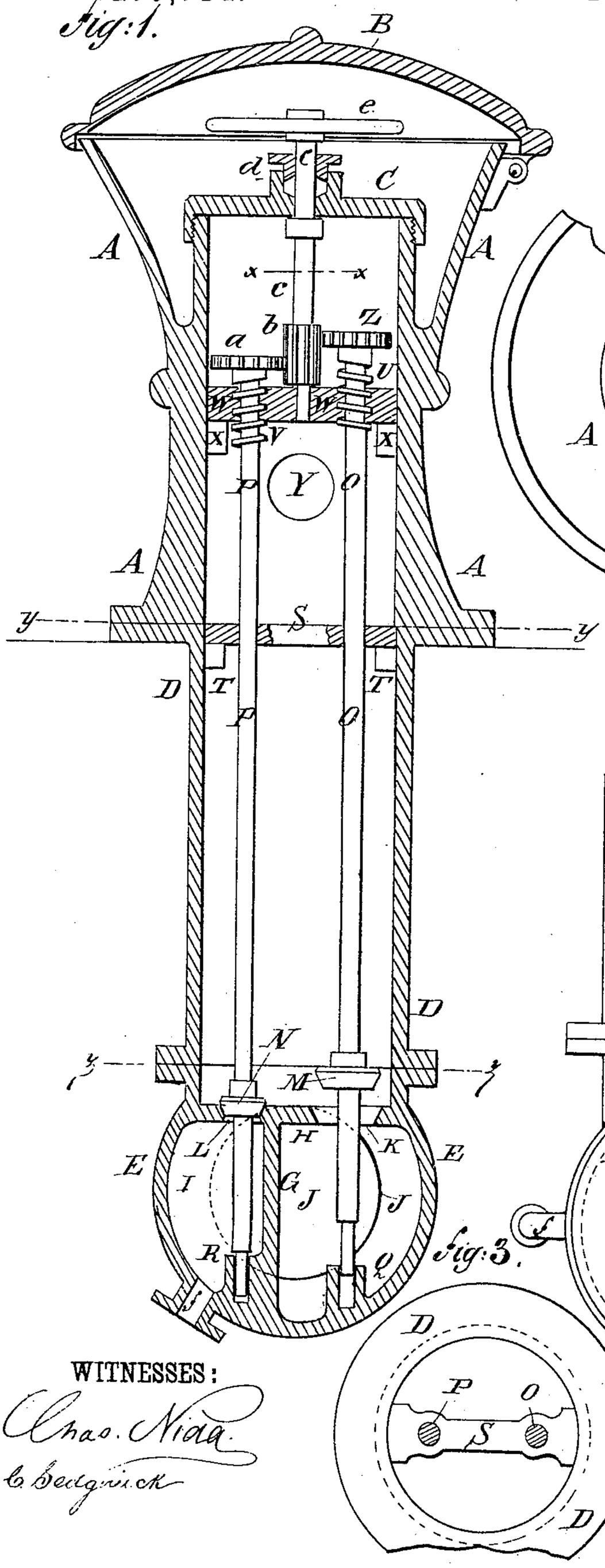

Fig: 2.

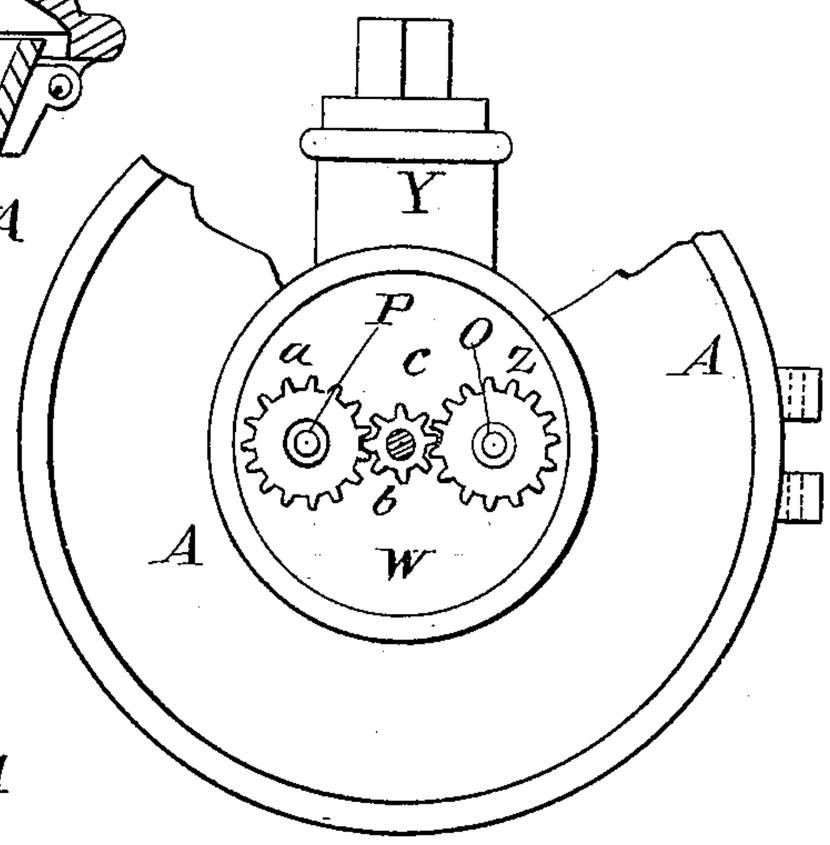

Fig: 4.

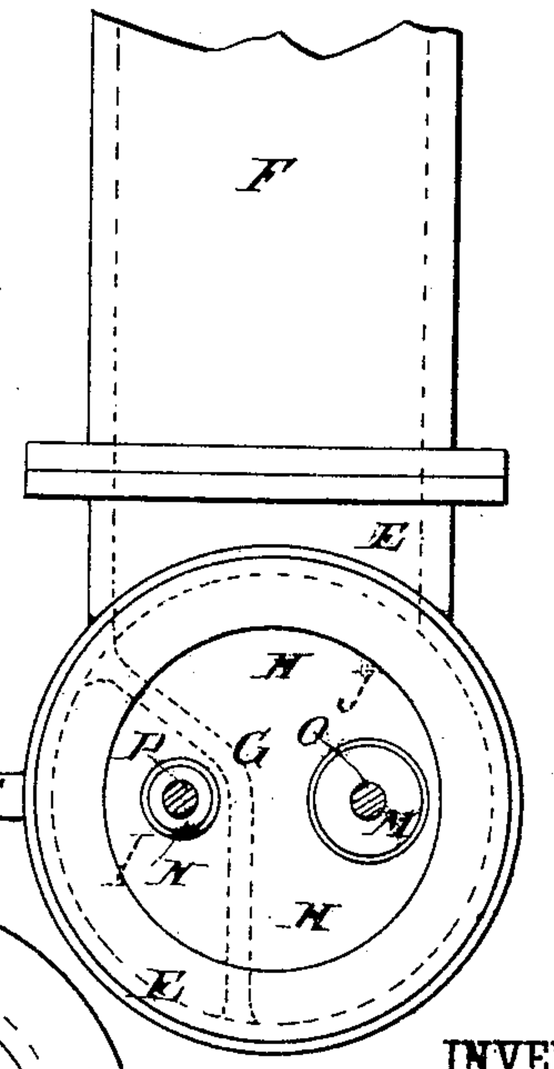

Fig: 3.

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UNITED STATES PATENT OFFICE.

WILLIAM H. FROMM, OF ELIZABETHPORT, NEW JERSEY.

HYDRANT.

SPECIFICATION forming part of Letters Patent No. 270,782, dated January 16, 1883.

Application filed November 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. FROMM, of Elizabethport, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Hydrants, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of my improvement. Fig. 2 is a plan view of the same, shown with the covers removed, part broken away and partly in section through the line *x x*, Fig. 1. Fig. 3 is a sectional plan view of the same, taken through the line *y y*, Fig. 1. Fig. 4 is a sectional plan view of the same, taken through the line *z z*, Fig. 1.

The object of this invention is to prevent the "freezing up" of hydrants.

The invention consists in a hydrant constructed with an elbow-coupling divided into two unequal compartments by two partitions, and provided with two valve-openings and an outlet-opening, the two valves having gear-wheels and left and right screw-threads upon their stems, and the intermediate gear-wheel having a hand-wheel attached to its shaft, whereby by the same movement that closes the inlet-valve another valve will be opened to discharge the water left in the hydrant, as will be hereinafter fully described.

A represents an ordinary hydrant-case, which is provided with an outer hinged cover, B, and an inner screw-cover, C, in the usual manner.

With the lower end of the hydrant A is connected the upper end of a pipe, D, the lower end of which is connected with the upper end of an elbow-coupling, E. The lower end of the coupling E is connected by a pipe, F, with a water-main. The elbow-coupling E is divided by the vertical partition G and the horizontal partition H into two unequal compartments, I J, the larger, J, of which opens into the inlet-arm of the said coupling. In the horizontal partition H are formed two unequal valve-openings, K L, the larger one, K, of which opens into the larger compartment, J, and the smaller one, L, opens into the smaller compartment, I. The edges of the openings K L are beveled to adapt them to serve as seats for the valves M N, which are attached to the valve-stems O P. The lower ends of the valve-stems O P revolve in socket-bearings Q R, formed in the lower part of the coupling E. The valve-stems O P pass up through guide-holes in a bar, S, the ends of which are secured to lugs T, formed upon the inner surface of the upper part of the pipe D. The upper end of the valve-stem O has a left-hand screw-thread, U, formed upon it, and the upper end of the valve-stem P has a right-hand screw-thread, V, formed upon it, which screw-threads work in screw-holes in the partition W, secured to lugs X, formed upon the inner surface of the hydrant A a little above the discharge-nozzle Y of the said hydrant.

To the upper ends of the valve-stems O P, above the partition W, are attached small equal-sized gear-wheels, Z *a*, into the teeth of which mesh the teeth of an intermediate gear-wheel, *b*, attached to the shaft *c*, so that by turning the shaft *c* the gear-wheels Z *a* and the valve-stems O P will be turned, and the screw-threads U V will cause one of the said valve-stems O P to move upward and the other downward, opening one of the valves M N and closing the other. The shaft *c* passes up through a stuffing-box, *d*, in the center of the inner cover, C, and has a hand-wheel, *e*, attached to its upper end between the inner and outer covers, C B, so that the shaft *c* can be readily operated to adjust the valves M N. With this construction, when water is to be drawn from the hydrant the hand-wheel *e* is turned to the left, which opens the valve M to admit water and closes the valve N to prevent water from escaping through the opening L. When the hand-wheel *e* is turned to the right the valve M is closed to shut off the water and the valve N is opened to allow the water in the hydrant to flow through the opening L into the chamber I, from which it escapes through the opening *f* in the side of the coupling E, which opening is designed to be provided with a pipe (not shown in the drawings) to conduct the said water into a sewer.

With this improvement it will be impossible for the hydrant to freeze up, as the water cannot be shut off without opening the passage for the escape of the water left in the said hydrant.

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

1. The hydrant constructed, substantially as herein shown and described, with the elbow-coupling E, having two partitions, G H, dividing it into two compartments, and provided with valve-openings K L and an outlet-opening, *f*, in combination with the valves M N, with their stems O P, provided with right and left screws U V and pinions *a* Z, with which engages the pinioned shaft *b c*, having an operating wheel or lever, substantially as and for the purpose set forth.

2. In a hydrant, the elbow-coupling E, made, substantially as herein shown and described, with two partitions, G H, dividing it into two compartments, and provided with two valve-openings, K L, and an outlet-opening, *f*, substantially as herein shown and described.

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Witnesses:
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