

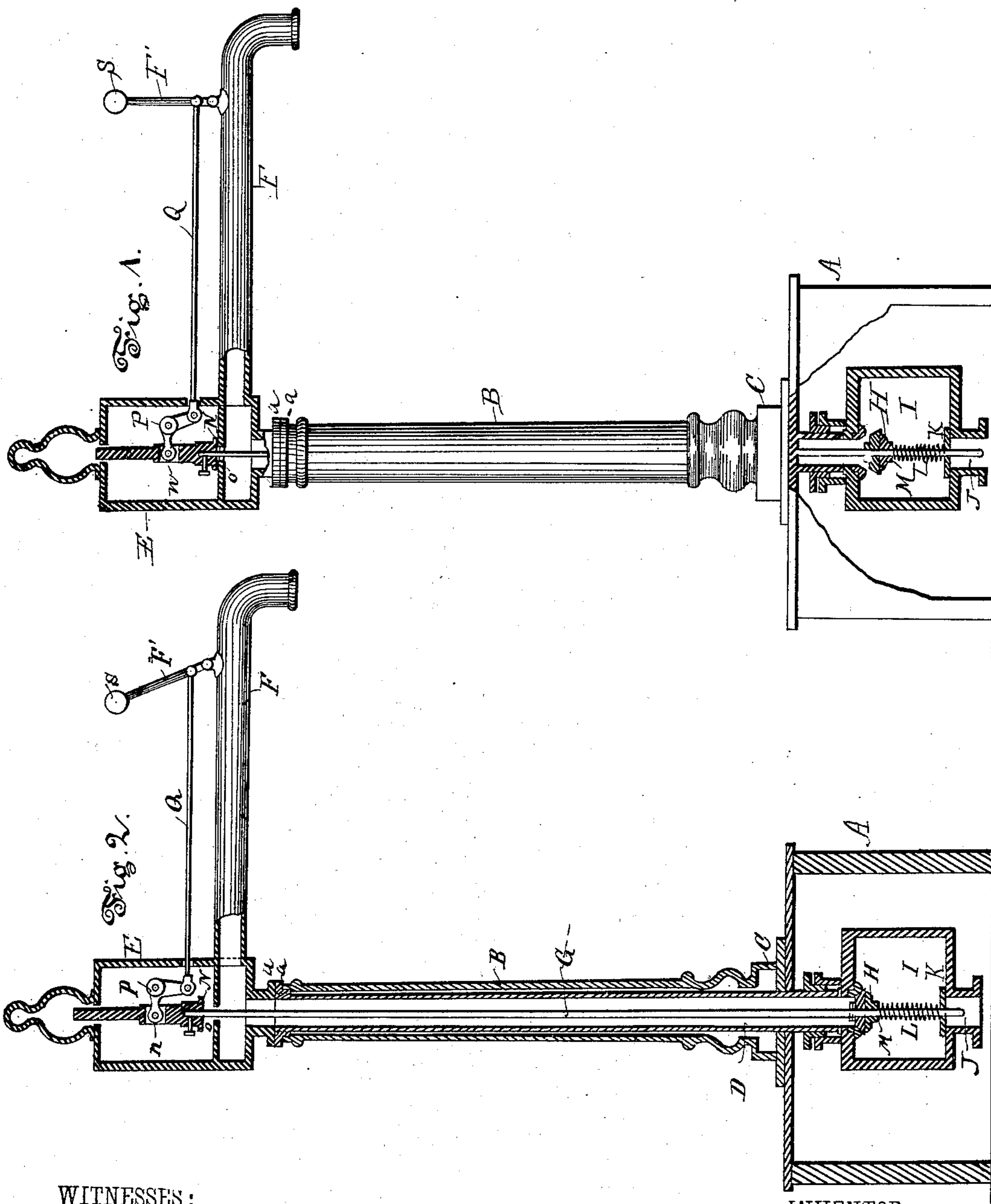
(No Model.)

H. S. CUBBERLEY & D. MANN.

WATER CRANE.

No. 280,140.

Patented June 26, 1883.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY S. CUBBERLEY AND DAVID MANN, OF BLOOMINGTON, ILLINOIS.

WATER-CRANE.

SPECIFICATION forming part of Letters Patent No. 280,140, dated June 26, 1883.

Application filed March 6, 1883. (No model.)

To all whom it may concern:

Be it known that we, HENRY S. CUBBERLEY and DAVID MANN, of Bloomington, in the county of McLean, and in the State of Illinois, have invented certain new and useful Improvements in Water-Cranes; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, and in which—

Figures 1 and 2 are vertical sections through a crane, showing the different positions of the valves and operating mechanism, as will be hereinafter explained.

This invention relates to certain new and useful improvements in cranes used at stations for supplying locomotive-tenders with water for their boilers at a distance from the water tank or reservoir, and connected with the same by means of a pipe laid under the ground, and more particularly to improvements upon patent granted to us August 26, 1873, and numbered 142,150, the objects of our present invention being to dispense with the stuffing-box formerly used to prevent the flow of water under head of crane, thereby preventing freezing, and also to simplify the construction of the operating mechanism, so as to save time to trains in taking water, with less liability to get out of order; and to this end the present invention consists in novel features of construction and combination and arrangement of parts, all as will be hereinafter fully described, and set forth in the claims hereto annexed.

In the drawings, A is a frost-proof pit underneath the surface of the ground, upon the top of which the crane is supported.

B is the supporting-column, the base C of which is attached to the pit.

D is the interior tube, to which the movable head E and discharge-pipe F are attached by means of their flanges *a a*, secured together in any suitable manner, so that the tube and head D E can be turned to deliver the water at any point.

G is the valve-rod.

H is the valve.

I is the valve-chamber within the pit. The

seat of the valve is on the under side of the valve-chamber.

J is the water-opening to the valve-chamber. Across this opening is a bridge-tree, K, and around the valve-rod (below the valve) is a spiral spring, L, which rests on the bridge-tree and bears upward with a constant pressure against the nut M and holds the valve to its seat.

Near the upper part of the valve-rod is connected a rubber or other suitable valve, N, within the head E, which valve has its seat upon the upper side of the partition inside of the head E, and the valve-rod is provided near its upper end with a slot, *n*, within which rests one end of a pivoted bell-crank lever, P, having its other end pivoted or fulcrumed to the inner end of an arm, Q, which extends outward to near the outer end of the discharge-spout F, and is pivotally connected to a lever, F', for operating the valve-rod G, fulcrumed to said spout F, and provided with a ball or weight, S, at its upper or free end for holding the valve H in an open position when it has been opened through the medium of the operating-lever F', all as clearly shown in Fig. 1.

The operation of our present invention is readily shown in the drawings. When the lower valve, H, is opened by pulling the lever F' to the position shown in Fig. 1, to permit the flow of water through the crane, the upper valve, N, is closed, preventing water flowing into the head E, and thereby obviating freezing of the same, dispensing with the usual stuffing-box, while the operating mechanism is greatly simplified, and a movement of the operating-lever to the position shown in Fig. 2 closing lower valve and opening upper valve, thereby preventing flow of water through the crane.

Having thus fully described our present invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a railroad water-crane, the combination, with the valve-chamber I, head E, and intermediate connecting-tube, D, of the valve-rod provided with the upper and lower valves, and mechanism for operating said valve-rod and valves, substantially in the manner as

and for the purpose herein shown and described.

2. A railroad water-crane consisting of the column B, interior tube, D, valve-chamber I, head E, valve-rod G, provided with the valves H N, pivoted bell-crank lever P, arm Q, and lever F', all constructed and arranged to operate substantially as specified.

In testimony that we claim the foregoing we have hereunto set our hands this 25th day of 10 January, 1883.

HENRY S. CUBBERLEY.

DAVID MANN.

Witnesses:

THOS. SLADE,

IRVING UNDERHILL.