



# UNITED STATES PATENT OFFICE.

THOMAS J. RAYNER, OF LONDON, ENGLAND, ASSIGNOR OF ONE-HALF TO  
EDWARD BONAR CAIRD, OF SAME PLACE.

## FLOAT-VALVE.

SPECIFICATION forming part of Letters Patent No. 527,346, dated October 9, 1894.

Application filed March 7, 1894. Serial No. 502,748. (No model.) Patented in England February 21, 1894, No. 3,781; in France February 28, 1894, No. 236,644, and in Italy March 27, 1894, LXX, 247.

To all whom it may concern:

Be it known that I, THOMAS JAMES RAYNER, a citizen of England, residing at 777 Commercial Road, Limehouse, in the city of London, England, have invented certain new and useful Improvements in Float-Valves, (for which I have obtained Letters Patent in Great Britain, dated February 21, 1894, No. 3,781; in France, dated February 28, 1894, No. 236,644, and in Italy, dated March 27, 1894, Vol. LXX, No. 247,) of which the following is a specification.

My invention relates to a construction of float valves as I shall describe referring to the accompanying drawings.

Figure 1 is a longitudinal section, Fig. 2 is a transverse section, and Fig. 3 is a sectional plan of a float valve arrangement according to my invention.

The float lever A is fixed on a rocking spindle B which is journaled in the valve-casing and extends along a tube C and terminates in a short arm D. Above the arm D are located the valve-seats within and upon which work the valves E and F, so that when the float descends the arm D raises the valves, allowing liquid to pass into the tube C and thence by an opening G into the vessel containing the float.

I have shown two valves E and F of different sizes, the stem of E being somewhat longer than the stem of F, so that the smaller valve E is first lifted by the action of the float lever, the pressure on the larger valve F being thus to a certain extent relieved, and its opening being thereby facilitated. The two valves may be of equal area, and, in cases where there is no great pressure of the supply, a single valve may be employed. When the

pressure of the supply is great, more than two valves may be arranged to be opened successively.

Having thus described the nature of my invention and the best means I know for carrying the same into practical effect, I claim—

1. In a float valve, the combination with a float, of a rocking spindle connected therewith and provided with a lateral arm, a plurality of valve-seats of different diameters located above said arm, and a plurality of valves working in said seats and having stems of different lengths, said stems being acted upon successively by the arm, substantially as described.

2. In a float-valve, the combination with the valve casing having a plurality of valve-seats therein, of a rocking spindle journaled in said casing below the valve-seats and provided with a lateral arm, an arm carrying a float connected to said spindle and a plurality of valves working in said valve-seats and having stems of varying lengths, said stems being acted upon successively by the lateral arm, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 23d day of February, A. D. 1894.

THOMAS J. RAYNER.

Witnesses:

OLIVER IMRAY,  
*Chartered Patent Agent, 28 Southampton Buildings, London, W. C.*

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