No. 704,230. Patented July 8, 1902.

S. J. ASBELL.

TANK VALVE.

(Application filed Feb. 7, 1902.)

(No Model.)

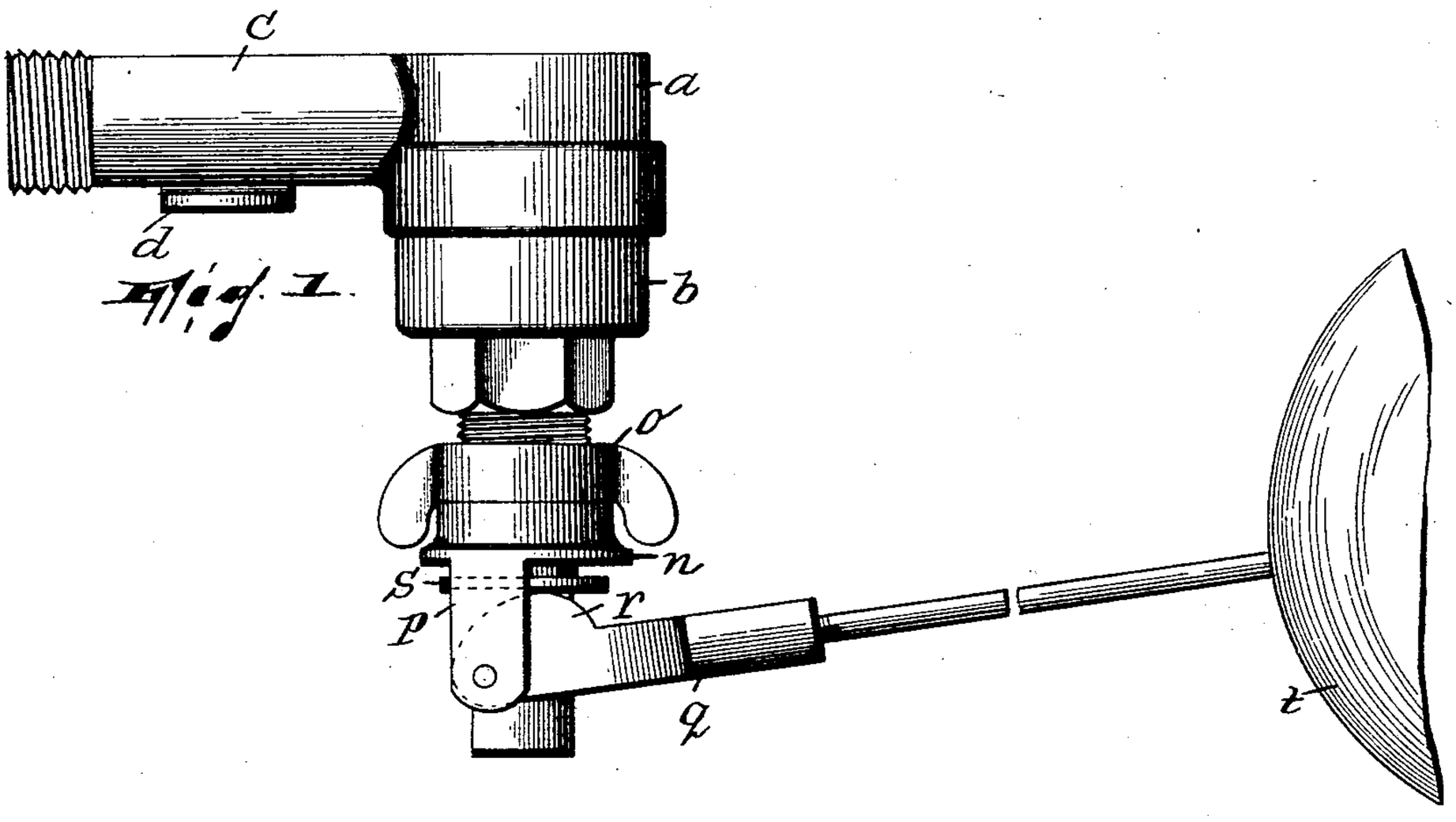

Fig. 1.

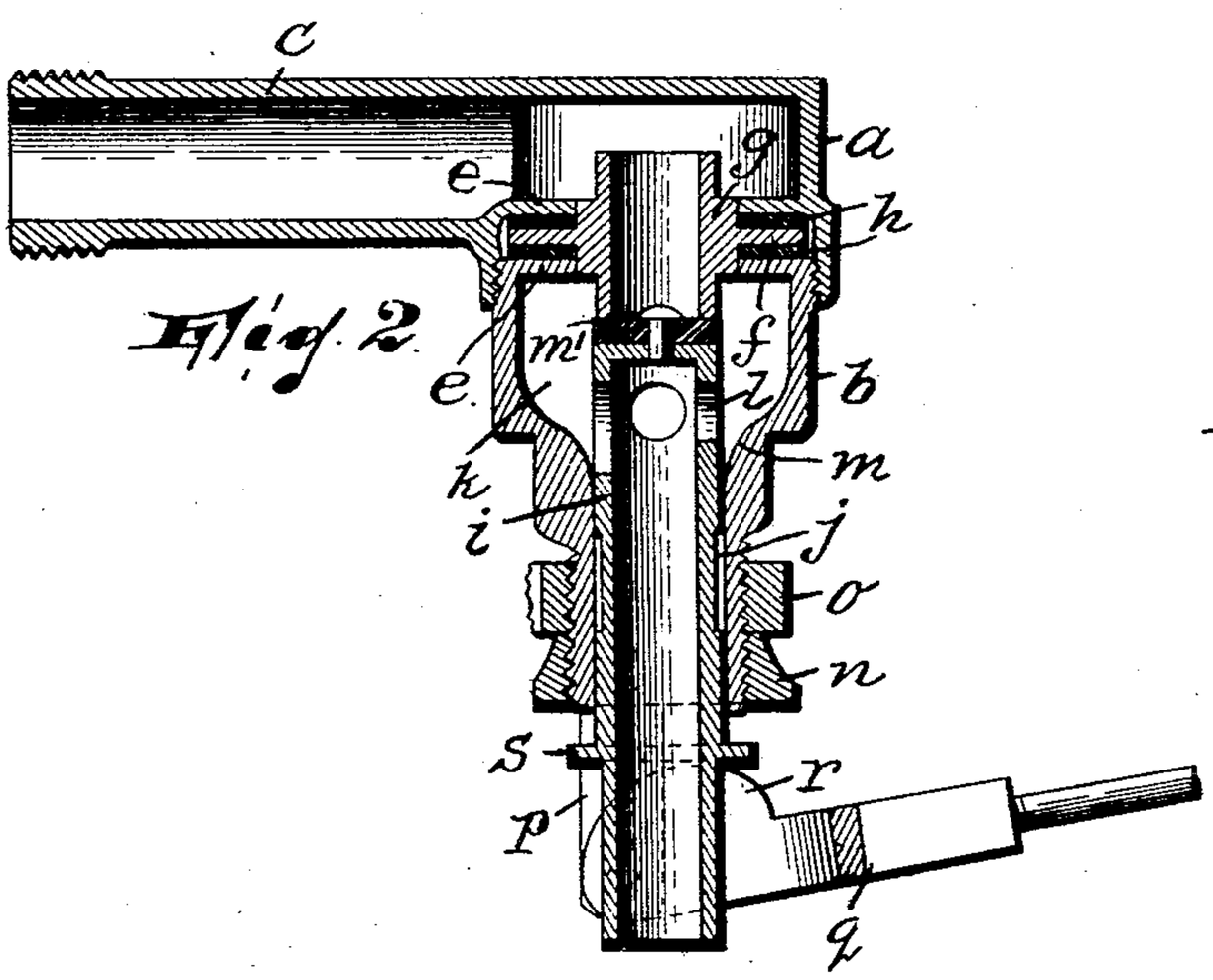

Fig. 2.

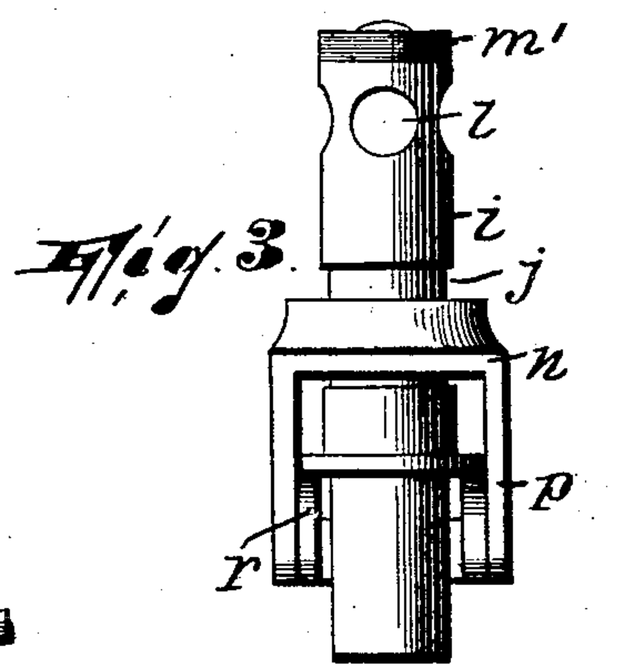

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

SYLVESTER J. ASBELL, OF PATERSON, NEW JERSEY.

TANK-VALVE.

SPECIFICATION forming part of Letters Patent No. 704,230, dated July 8, 1902.

Application filed February 7, 1902. Serial No. 93,067. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER J. ASBELL, a citizen of the United States, residing in Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Tank-Valves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to tank-valves or valve-cocks; and it has for its object the production of a valve of this nature which shall be simple and compact in construction, capable of being readily applied to the tank, and have its parts so arranged that the pounding usually attendant on valves of this nature will be avoided.

My invention will be found fully illustrated in the accompanying drawings, wherein corresponding reference characters indicate like parts, and wherein—

Figure 1 is a view in side elevation thereof. Fig. 2 is a vertical sectional view, and Fig. 3 a view in elevation of a detail.

In said drawings, *a* is a hollow cap closed at the top, and *b* a valve-casing, onto the upper end of which said cap is screwed. The cap forms an integral part of a tube *c*, which is adapted to be screwed or otherwise connected with the source of water-supply. The tube *c* is formed with a rest *d*, whereby the whole structure may be secured to the top of the tank or other suitable support.

The valve-casing and cap are provided each with an internal flange *e*, and between these flanges is adapted to be clamped the flange *f* of a tubular valve-seat *g*, washers *h*, of leather or other suitable material, being interposed between each flange *e* and flange *f*. It should be remarked that the valve-seat *g* is substantially alike on both sides, so that if one side becomes worn or abraded by grit, dirt, &c., the other side may be used.

i is a tubular valve which fits into and works vertically in the lower portion of the valve-casing *b*. In order to reduce friction to the minimum, this valve has a wide surrounding channel *j* formed in it. Where the valve projects up into the chamber *k* of the valve-casing *b*, it has ducts *l*, one or more of which is so enlarged that when the valve is in its upper or seating position its extreme lower portion is at least as low as the lower portion of said chamber, so that a perfect drain of the chamber will be always insured. To the same end the lower portion of the chamber converges downwardly, as seen at *m* in Fig. 2. To the upper end of said valve is secured a disk of leather, rubber, or other similar material, which takes against the valve-seat *g*.

n is a stirrup which is screwed onto the lower end of the valve-casing *b*. By virtue of its threaded engagement with said valve-casing this stirrup is made adjustable vertically on the valve-casing. It is adapted to be firmly secured where adjusted by a lock-nut *o*.

In the bifurcated portion *p* of the stirrup is fulcrumed a fork *q*, having its fulcrumed end formed as a pair of cams *r*. These cams take against the under side of a flange *s*, which is formed integrally with the lower end portion of the tubular valve *i*. The fork *q* carries the spindle of the ball-float *t*.

It being believed that the operation of the mechanism will be clearly understood without description, it is only necessary to call attention to the fact that by providing the cams *r* and arranging the stirrup so that it may be adjusted vertically the apparatus may be arranged at any level found most convenient without reference to the water-levels.

Since the cap *a* is a hollow body, and since, as will be observed upon a view to Fig. 2, the tubular extension *c* thereof (which extends laterally therefrom) has the top portion of its bore-surface in a plane coincident with that of the inside top surface of said cap, and since, furthermore, the exit for the water from the cap by way of the valve-seat *g* is substantially central, the production of the gurgling sound which often accompanies valves of this nature is overcome. This is because the construction permits the water to act, in effect, to first fill the portion of the valve-chamber which the hollow cap affords

before flowing out of the same rather than to have an action in the nature of a more or less deviated and interrupted stream.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, with a valve-casing, of a cap for said casing forming therewith a valve-chamber and screwed onto the same, the contiguous portions of said cap and casing being provided with internal annular flanges, a tubular valve-seat having a surrounding flange clamped between said casing and cap flanges, said valve-seat having its tubular or body portion thus spaced from the surrounding casing and cap walls, and a tubular part disposed in said casing below said valve-seat, having its upper end formed as a valve, and also having ducts opening laterally into said casing, substantially as described.

2. The combination, with a valve-casing and a cap surmounting the same and forming therewith a valve-chamber, of a valve-seat arranged in said chamber, a vertically-movable valve also arranged in said chamber and adapted to take against said valve-seat, and a tubular portion extending substantially horizontally from said chamber and communicating therewith, the tops of said chamber and the tubular portion being flush with each other, substantially as described.

3. The combination, with a valve-casing open at the top, of a hollow cap closed at the top and surmounting said casing to form therewith a valve-chamber, a tubular portion extending laterally from, and communicating with, said hollow cap and having the top portion of its bore-surface in a plane coincident with that of the inside top surface of said cap, a tubular valve-seat disposed substantially centrally in said valve-chamber and having its tubular portion appreciably spaced from the surrounding casing and cap walls, and a tubular part disposed in said casing below said valve-seat, having its upper end formed as a valve, and also having ducts opening laterally into said casing, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of February, 1902.

SYLVESTER J. ASBELL.

Witnesses:

ALFRED GARTNER,

ROBERT J. POLLETT,