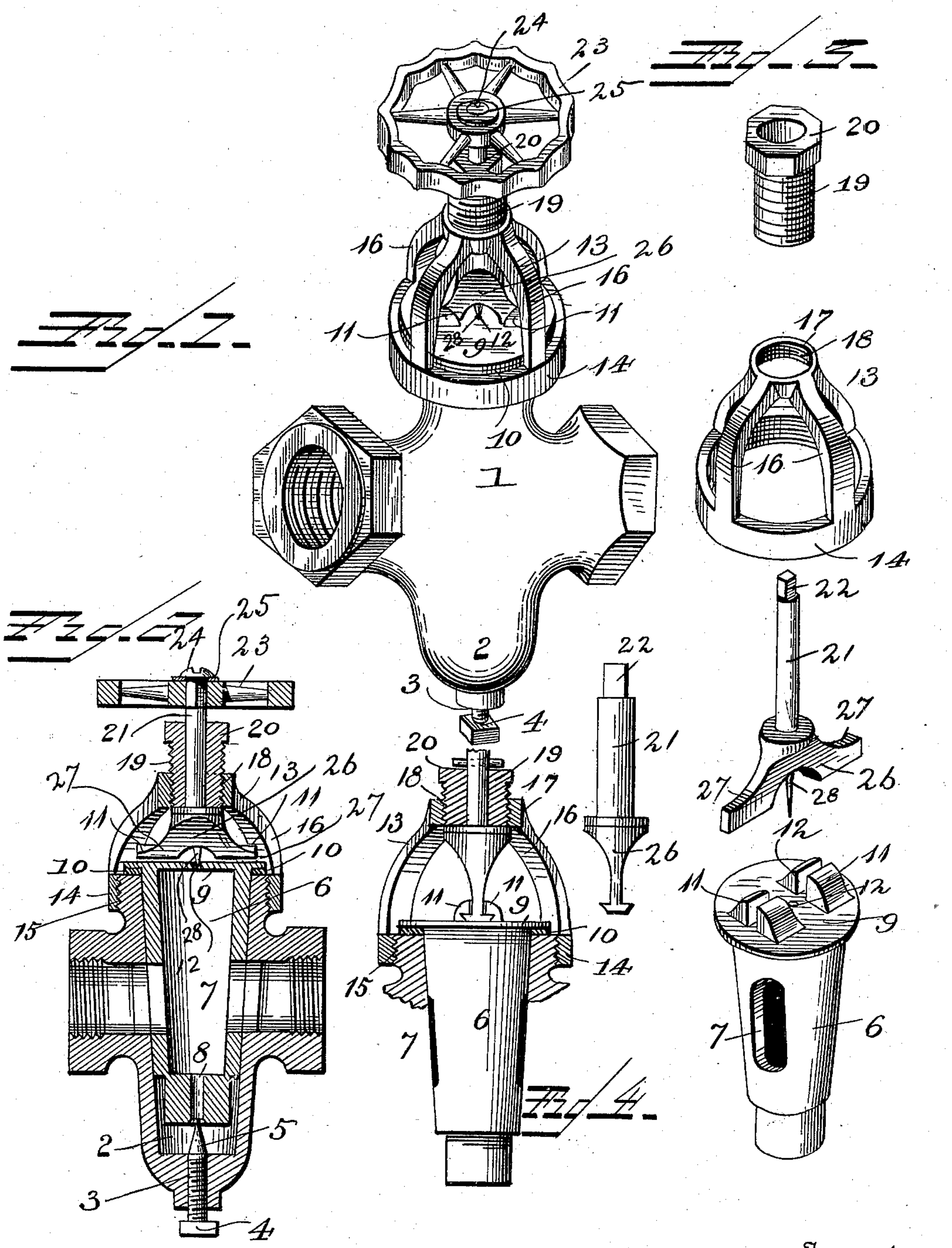
(No Model.)

O. J. BALDWIN.

VALVE.

No. 558,708. Patented Apr. 21, 1896.



Witnesses

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UNITED STATES PATENT OFFICE.

OZRO J. BALDWIN, OF YOUNGSVILLE, PENNSYLVANIA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 558,708, dated April 21, 1896.

Application filed July 31, 1895. Serial No. 557,768. (No model.)

To all whom it may concern:

Be it known that I, OZRO J. BALDWIN, a citizen of the United States, residing at Youngsville, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Valves; and I do 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.

My invention relates to valves, and more particularly to the turning-plug type.

The object of the invention is to provide a valve with simple means for adjusting the plug to compensate for wear, and also to provide means for draining the water from the waterway of the plug when the valve is cut off, thereby preventing bursting or binding in freezing weather.

With these objects in view the invention consists of certain features of construction and combinations of parts which will be hereinafter set forth.

In the accompanying drawings, Figure 1 is a perspective view of my improved valve. Fig. 2 is a longitudinal vertical sectional view through the same. Fig. 3 is a detailed perspective view of the valve, plug, cage, valve-stem, bushing, and the plug-operating wheel, showing the parts separated; and Fig. 4 is a modification.

In the drawings, 1 denotes the valve-casing, which may be of any well-known or improved construction, which is provided at its lower end with a drain-chamber 2, having a screw-thread opening 3 in its bottom, which opening is closed by screw-valve 4, formed at its upper end with a conical seat 5.

6 denotes the valve-plug, having a hollow body and provided with the usual waterway 7. The lower end of this valve-plug is provided with an opening 8, the lower end of the wall of which is flared to receive the tapering or conical seat 5. The upper end of the plug is provided or formed with a cap-plate 9, which rests upon a washer 10, supported at the upper end of the valve-casing. This washer may be made of lead, asbestos, or any other suitable material, the wearing quality or life of which is designed to be less than that of the plug and the valve-casing, for the purpose presently to appear. Lugs 11, arranged in sets of two, project upward from the cap and are spaced apart, as also are the sets. Between these sets of lugs is a bearing-socket 12.

13 denotes a cage which comprises a ring 14, having interior screw-threads to engage the screw-threads 15 at the upper end of the valve-casing, and provided with upwardly-extending arms 16, connected with the collar 17, having an interior screw-thread 18. Into this collar is screwed a bushing 19, having a polygonal head 20, by means of which it is operated.

21 denotes the valve-stem, which projects upward through the bushing and is provided at its upper end with a squared portion 22, upon which is placed a hand-wheel 23, which is held thereon by screw 24 and washer 25. The lower end of the valve-stem is provided with a head 26, composed of laterally-extending arms 27, which are adapted to rest between the lugs of each set. Projecting down from this head is a pin 28, which engages the bearing-socket 12.

29 denotes a washer which is arranged between the lower end of the bushing and collar 30, formed on the valve-stem above its head. This washer may be made of asbestos, lead, or any other suitable material.

In use, by turning the hand-wheel the plug may be opened or closed, and owing to the fact that the head has a rocking engagement with the lugs, by reason of the pin of the head being seated in the socket, any irregularities in casting either the plug or the casing will not cause the plug to bind. When the valve is closed, it is oftentimes desirable to drain the water from the water-passage of the plug to prevent the water from freezing, which very often bursts the casing. I drain the water from the chamber at the lower end of the valve by removing the screw, so that when closed there will be no water whatever either in the plug or the valve-casing. As the valve becomes worn I compensate for such wear by screwing the bushing down, which will cause the plug to be forced against its seat in the valve-casing. In this connection it will be noticed that the washer interposed between the cap of the plug and the upper end of the valve-casing will, owing to the material of which it is composed, wear

much faster than the plug or casing, so that it will not interfere with the adjustment of the plug to compensate for the wear.

As shown in Fig. 4, I provide the inner sides of the lugs with dovetailed grooves, and have provided the head of the spindle with dovetailed ribs, which take into said grooves. This construction enables me to lift the turn-plug from its casing in the act of removing the cage.

By inserting a pin 31 transversely through the spindle above the bushing I am enabled to lift the plug from its seat, should it bind, simply by moving the bushing upward against the pin.

Having thus described my invention, I desire to claim by Letters Patent of the United States—

1. The combination with a valve-casing provided at its lower end with a drain-chamber, and having its upper end screw-threaded, of a washer supported upon its upper end, a plug located within said valve-casing and provided with a cap-plate seated upon said washer, lugs extending upward from said plate, a recess formed between said lugs, said plug formed with an aperture which leads from the waterway in said plug to the drain-chamber, a cage secured to the valve-casing and provided with an interiorly-screw-threaded collar, a bushing having exterior screw-threads to engage with said collar, a valve-stem journaled in said bushing and provided at its lower end with a head to engage the lugs, and above its lower end with a shoulder to be engaged by the bushing, whereby the plug may be adjusted to compensate for wear.

2. The combination of the valve-casing having its upper end screw-threaded, a washer supported upon its upper end, a plug located within said valve-casing and provided with a cap-plate seated upon said washer, lugs extending upward from the plate, a recess formed between said lugs, a cage secured to the valve-casing provided with an interiorly-screw-threaded collar, a bushing having exterior screw-threads to engage with said collar, a valve-stem journaled in said bushing and provided at its lower end with a head to engage the lugs, and above its lower end with a shoulder to be engaged by the bushing, whereby the plug may be adjusted to compensate for wear.

3. The combination with a valve-casing, and a plug fitted therein and provided with lugs at its upper end, said lugs having dovetail transverse grooves, of a cage secured to said casing and provided with an interiorly-screw-threaded collar, a bushing having a screw-threaded engagement with said collar, and a valve-spindle having at its lower end a head provided with transverse dovetail ribs to fit into said grooves.

In testimony whereof I affix my signature in presence of two witnesses.

OZRO J. BALDWIN.

Witnesses:
SAML. A. DRURY,
A. B. SUIT.