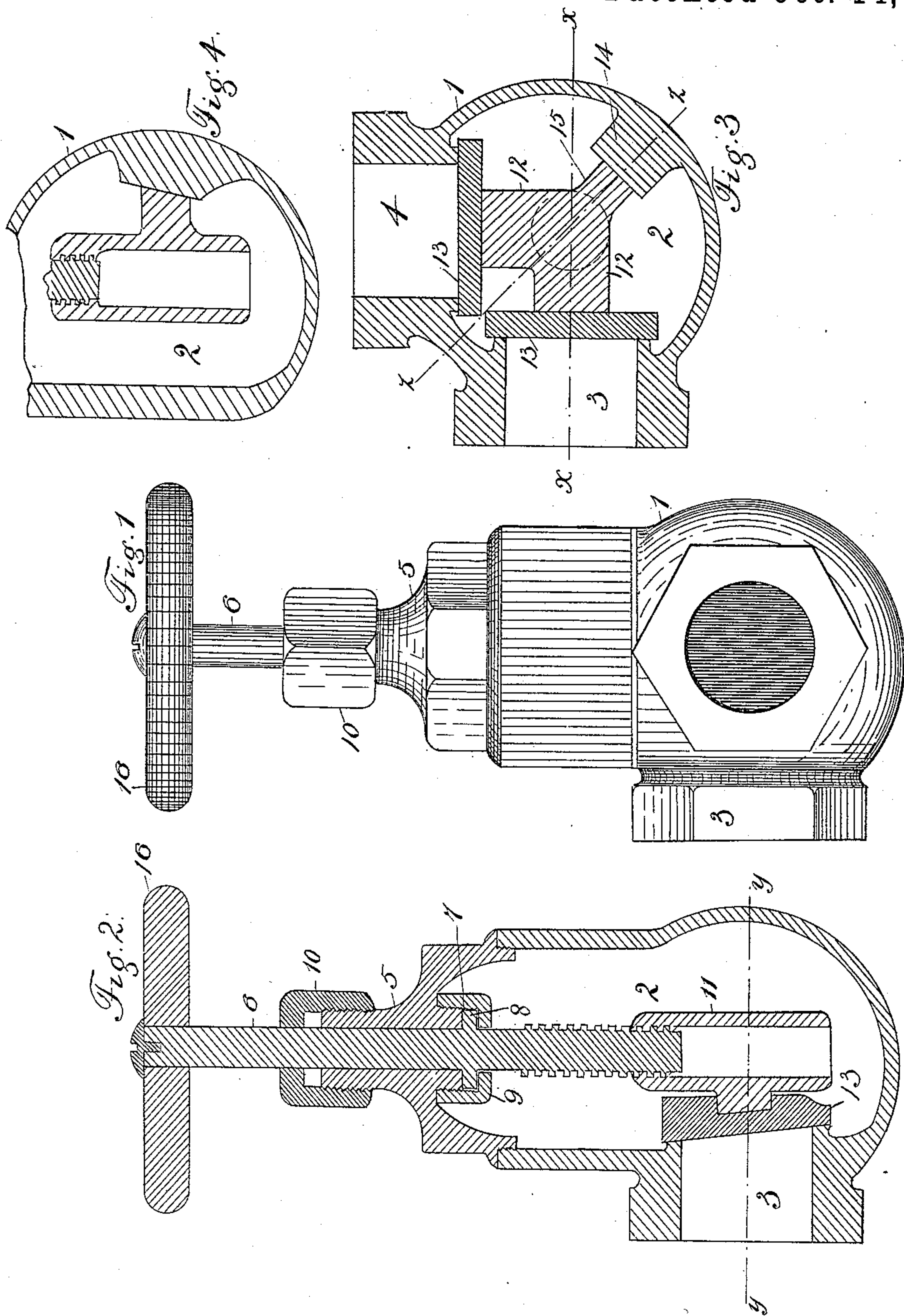


(No Model.)

C. E. VAN AUKEN.
VALVE FOR STEAM RADIATORS.

No. 438,332.

Patented Oct. 14, 1890.



WITNESSES:

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CLARENCE E. VAN AUKEN, OF DENVER, COLORADO.

VALVE FOR STEAM-RADIATORS.

SPECIFICATION forming part of Letters Patent No. 438,332, dated October 14, 1890.

Application filed December 27, 1889. Serial No. 335,156. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE E. VAN AUKEN, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Valves for Steam-Radiators; 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in valves for the radiators of steam-heating systems; and the object of my improvements is to provide a corner slide-valve whereby two apertures in the same level—one for the inlet and the other for the outlet of steam—may be opened or closed at the same time and by the same action by the use of sliding disks or gates, said slides or gates occupying positions at right angles to each other to correspond with the inlet and outlet apertures of the valve-chamber, said device to be comparatively simple in construction, durable, easily operated, efficient, and reliable; to which ends my invention consists of the features, arrangements, and combinations hereinafter described and claimed.

In the drawings is illustrated an embodiment of my invention, in which drawings—

Figure 1 is an elevation of my improved valve. Fig. 2 is a vertical longitudinal section taken on the line *x x*, Fig. 3. Fig. 3 is a cross-section taken on the line *y y*, Fig. 2. Fig. 4 is a vertical longitudinal section taken on the line *z z*, Fig. 3.

In the views let the reference-numeral 1 indicate a suitable shell inclosing the valve-chamber 2, provided with the openings 3 and 4, one forming the entrance for the steam to the chamber from the pipes and the other forming the exit for the steam from the chamber into the radiator. It will be observed that these openings are on the same level, and that if horizontal lines be drawn through their centers and produced within the chamber they will form right angles at their intersection.

To the top of shell 1 is screwed or otherwise suitably secured the cap 5, provided with a central aperture through which passes the valve-stem 6.

Upon the interior of the central portion of cap 5, surrounding the stem, is formed a shoulder 7, which engages the upper surface of flange or rim 8, formed upon the stem.

9 is a screw-cap having its threaded portion screwed to the interior of the downwardly-projecting part of cap 5, the lower portion of said screw-cap being turned inwardly close to the stem and so as to engage the under surface of the flange 8, which is permitted to turn freely within the recess formed by the engaging parts.

Surrounding the stem and screwed or otherwise suitably secured to the cap 5 is another screw-cap 10.

To the upper extremity of stem 6 is rigidly secured the hand-wheel 16, by means of which the valve is operated.

The lower portion of stem 6 is threaded and enters a short tube 11, the upper portion of which is threaded for its reception. Tube 11 is provided with two lugs 12 12—one opposite each of the openings 3 4. Each of these lugs enters a recess in the back of a disk or slide 13. These slides are connected with the lugs in any suitable manner. They are somewhat wedge-shaped and adapted to close tightly the openings 3 and 4 when the tube 11 occupies its lowest position within the chamber 2, being the position shown in Fig. 2 of the drawings.

The interior of the lower portion of shell 1 is provided with a lug 14, beveled, as shown, and adapted to engage a corresponding projection 15, secured to tube 11. The object of lug 14 and projection 15 is to cause the slides 13 to close openings 3 and 4 tightly as tube 11 descends, lug 14 acting as a guide for said slides and preventing the stem 6 and tube 11 from being deflected toward lug 14 and away from openings 3 4 as the tube 11 descends in closing the valve.

In describing the operation of my improved device I will suppose the parts to occupy the relative positions shown in Fig. 2. As stem 6 is turned, tube 11 rises on the stem and draws the slides 13 with it into the upper part of

chamber 2, thus opening the apertures 3 4. It will be observed that stem 6 has a rotary movement, but no vertical movement in either direction; also that as stem 6 is rotated tube 11 is drawn upward on the threaded lower portion of stem 6. In closing the valves 13 the action of stem 6 is reversed and tube 11 with the valves is forced downward into the position shown in Fig. 2, projections 15 engaging lug 14, the whole mechanism wedging tightly into the lower portion of chamber 2, closing the openings 3 4.

Having thus described my invention, what I claim is—

1. In a valve for steam-radiators, the combination, with a shell 1, inclosing the valve-chamber 2, provided with openings 3 and 4 on the same level, of a valve-stem 6, having its lower portion threaded, a tube 11, threaded to receive the lower portion of the stem, said tube being provided with a projection 15, a lug 14, formed on the interior of the shell and adapted to engage part 15, slides 13 13, at-

tached to tube 11 at right angles to each other and adapted to close openings 3 and 4, substantially as described.

2. In a valve for steam-radiators, the combination, with a shell 1, inclosing the valve-chamber 2, provided with openings 3 and 4 on the same level, of a valve-stem 6, having its lower portion threaded, a tube 11, threaded to receive its lower portion, said tube being provided with a beveled projection 15, a lug 14, formed on the interior of the shell, oppositely beveled and adapted to engage part 15, wedge-shaped sides 13 13, suitably attached to tube 11 and located at right angles or approximately at right angles to each other, said slides being adapted to close openings 3 and 4, substantially as described.

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

CLARENCE E. VAN AUKEN.

Witnesses:

WM. McCONNELL,
G. J. ROLLANDET.