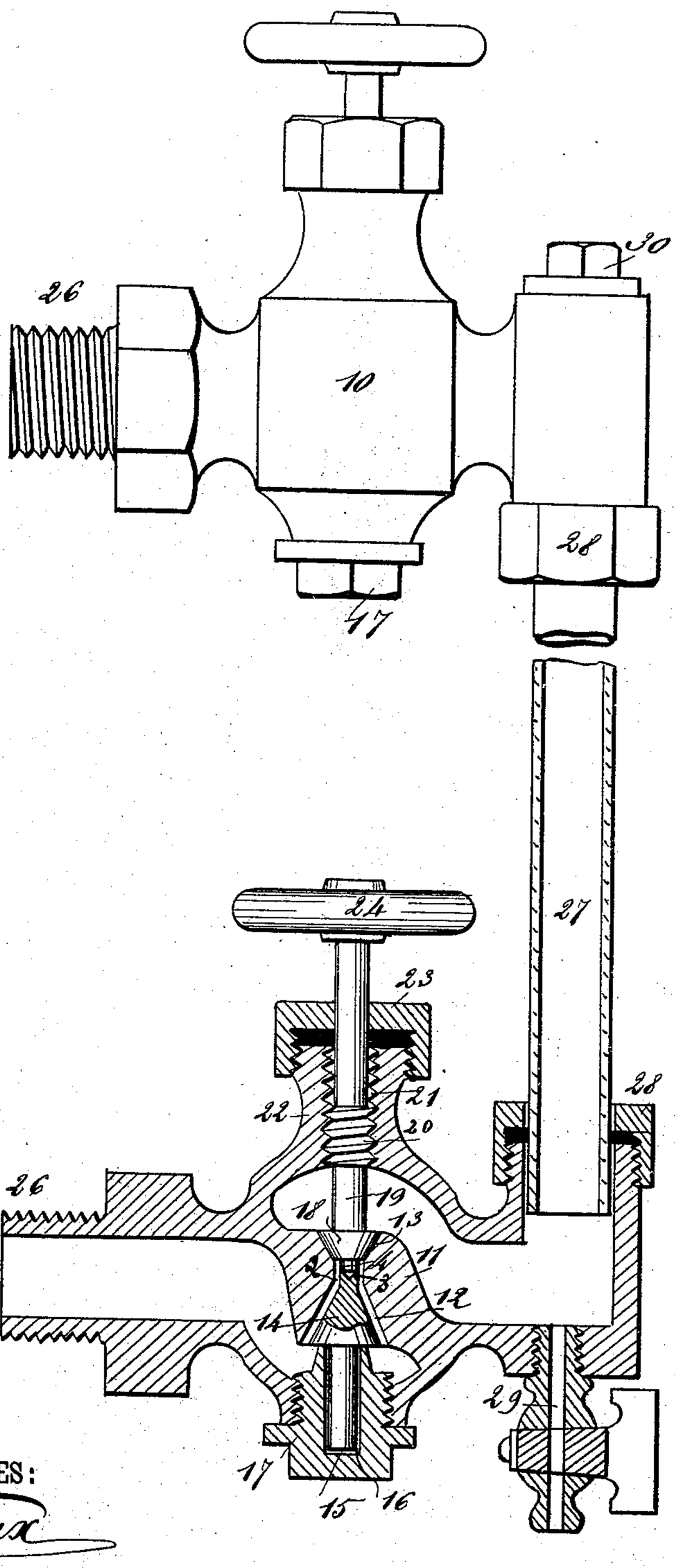
(No Model.)

P. BARCLAY.

SAFETY WATER GAGE VALVE.

No. 375,409. Patented Dec. 27, 1887.



WITNESSES:

C. Neveux

C. Sedgwick

INVENTOR:

P. Barclay

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER BARCLAY, OF EAST BOSTON, MASSACHUSETTS.

SAFETY WATER-GAGE VALVE.

SPECIFICATION forming part of Letters Patent No. 375,409, dated December 27, 1887.

Application filed April 19, 1887. Serial No. 235,355. (No model.)

To all whom it may concern:

Be it known that I, PETER BARCLAY, of East Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Divided and Double-Seated Valve, of which the following is a full, clear, and exact description.

This invention relates to valves of the class especially applicable for use in connection with water-gages, the object of the invention being to provide a valve one section of which will be automatically seated in case the glass should become broken, and in which the other section may be turned down upon its seat, thus releasing the section which is closed, all as will be hereinafter described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which there is represented a water-gage provided with my improved form of valve, the lower valve and a portion of the tube being shown in central vertical section.

In the drawing above referred to, 10 represents a valve body or barrel, which is provided with a central diagonally-arranged partition, 11, in which there is a lower valve-seat, 12, and an upper valve-seat, 13. A conical valve, 14, is arranged in connection with the seat 12, and this valve is formed with a stem, 15, which fits in a central aperture, 16, that is formed in a plug, 17, said plug being threaded to engage with a threaded aperture that is formed in the bottom of the valve body or barrel 10. It will be noticed that the angle of the valve 14 is quite acute, and that from the apex of the valve there extends a short stem, 2, in the upper end of which there is formed a conical or other properly-shaped recess, 3.

In connection with the valve-seat 13, I arrange an obtuse conical valve, 18, that is provided with a downwardly-extending projection, 4, the point of which fits in the recess 3 of the valve 14, and with an upwardly-extending stem, 19, said stem 19 being formed with a screw-thread, 20, which engages with a threaded socket, 21, that is formed in the upwardly-extending portion 22 of the valve body or barrel, the stem 19 extending outward through a packing-box, 23, arranged as illustrated, and to the end of the stem there is secured a hand-wheel, 24.

The valve-body is arranged for direct connection with the boiler, being formed with a threaded projection, 26; or any other means for connecting the valve-body with the boiler might be employed, and the opposite end of the valve-body is arranged to receive a tube, 27, said tube entering the valve-body and being held in place by a packing-box, 28, as in the ordinary form of gage-valve. Beneath the tube 27, I connect a petcock, 29.

The valve described is arranged to support the lower end of the tube 27, the valve arranged in connection with the upper end of said tube being the same as the one described, except that the tube enters the valve-body from the under side instead of from the upper side, and the petcock is replaced by a plug, 30.

The gage provided with my improved form of valve having been connected to the boiler, the parts will operate as follows: In order that the water and steam may pass from the boiler to the tube 27, the stem 19 is turned downward, so that the projection 4 of the valve 18 will bear against the stem 2 of the valve 14, thus forcing said valve downward from its seat, when, if the stem 19 be turned so as to be raised gradually from the valve 14, the pressure of the water and steam being the same upon the upper and lower surface of the valve 14, said valve will remain in the position in which it is shown in the drawing; but if the tube 27 should be broken from any cause whatever the pressure upon the upper face of the valve would be removed and the valve would be forced to its seat 12, there to be held as long as the pressure continues. If at this time it was desired to positively close the passage leading to the tube, the valve 18 could be turned down and seated, the parts then moving to the position in which they are shown in the lower portion of the drawing.

Although I have illustrated my invention in connection with a water-gage, it will of course be understood that it might be used in many other ways.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A valve body or barrel formed with two valve-seats, in combination with a lower valve having a guiding-stem extending downward from its under face and an upwardly-extending projection, and an upper valve having a threaded operating-stem and a downwardly-extending projection, substantially as described.

2. The combination, with a valve body or barrel having two seats, of a lower valve having a downwardly-extending guiding-stem and an upwardly-extending and recessed stem, an upper valve having a downwardly-extending projection, and a threaded stem which engages with the valve body or barrel and carries a hand-wheel or manipulating attachment, substantially as described.

3. The combination, with a gage-tube, of valve bodies or barrels in which the tube is held, said valve-bodies being formed with double valve-seats, lower valves having guiding-stems and upwardly-extending stems, upper valves, the main stems of which are threaded to engage with the valve bodies or barrels, said valves being formed with downwardly-extending projections that are arranged to bear against the upwardly-extending projections of the lower valve, substantially as described.

PETER BARCLAY.

Witnesses:
ALBERT B. DUNHAM,
JOHN F. LANG.