

No. 704,654.

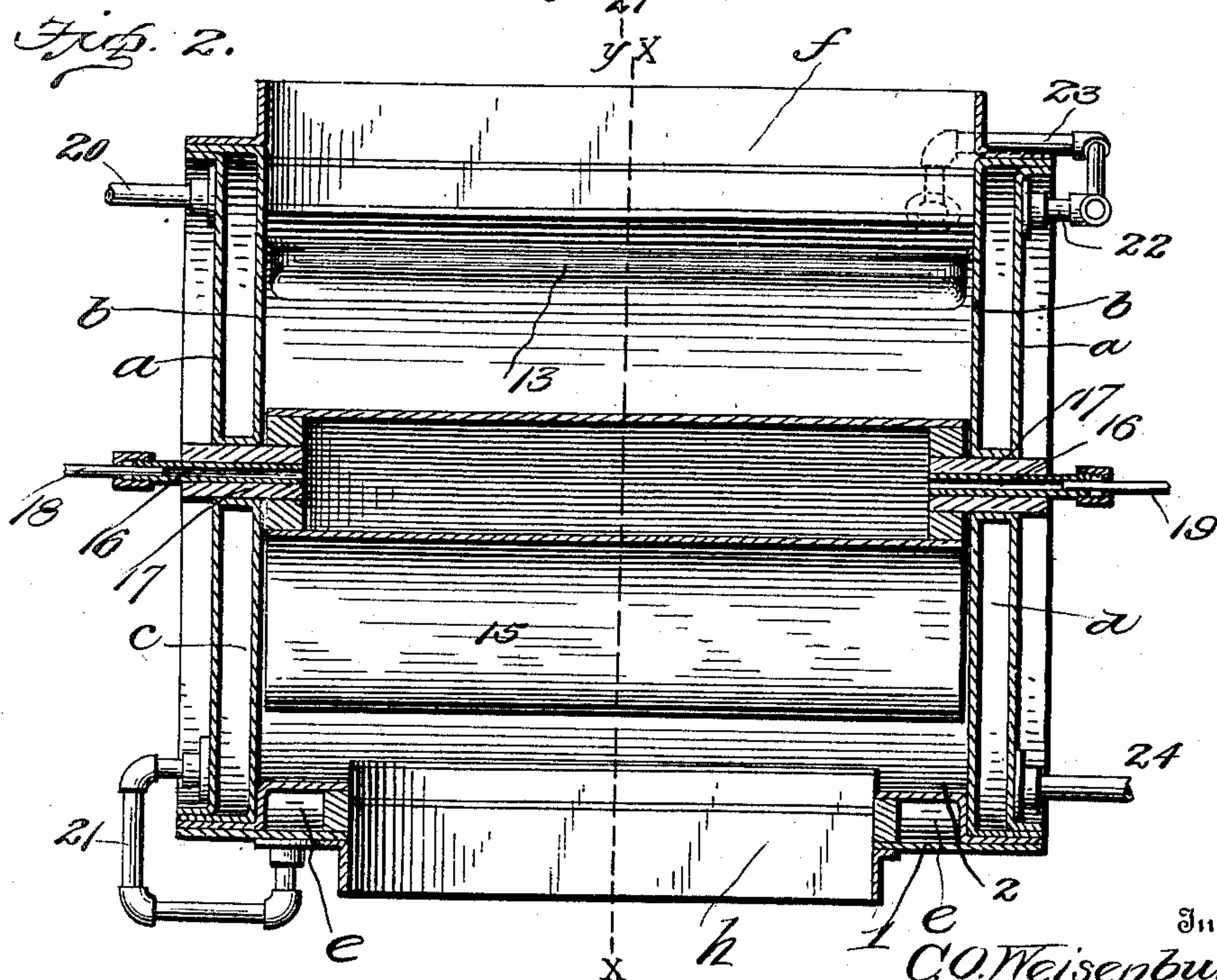
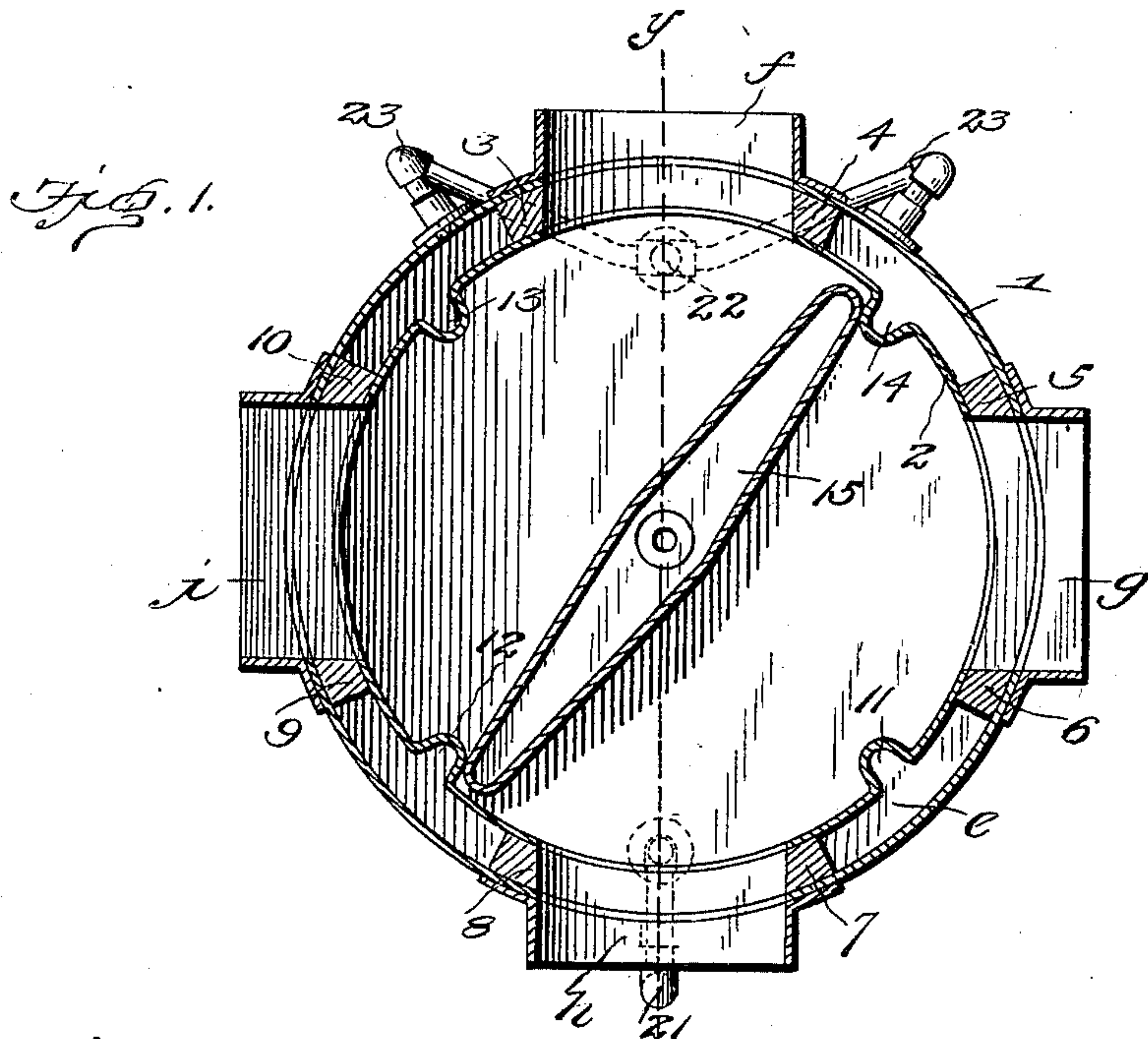
Patented July 15, 1902.

S. B. MOFFITT & C. O. WEISENBURGER.

VALVE.

(Application filed Apr. 24, 1902.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL B. MOFFITT AND CHARLES O. WEISENBURGER, OF SHARON,
PENNSYLVANIA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 704,654, dated July 15, 1902.

Application filed April 24, 1902. Serial No. 104,553. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL B. MOFFITT and CHARLES O. WEISENBURGER, citizens of the United States, residing at Sharon, in the
5 county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Valves; and we 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.

The invention relates to valves whose locations subject them to intense heat; and the object in view is to provide a water-jacket
15 for such valves, whereby the high temperature to which they are subjected may be lowered and the life of the valve materially prolonged.

With this and other objects in view the invention consists in certain features of construction and combination of parts, which will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a vertical cross-sectional view on line *x x*, Fig. 2; and Fig. 2 is a longitudinal vertical sectional view on line *y y* of Fig. 1.

The valve-casing comprises concentric shells or castings 1 and 2, preferably cylindrical in form, the former being provided
30 with heads *a a* and the latter with heads *b b*. The sides and heads of the shells are spaced apart to form water-chambers *c, d*, and *e*, the first two being between the heads of the shells and the last one between the sides of the
35 shell.

The letters *f, g, h*, and *i* denote valve-ports communicating with the interior of the valve-casing, and 3, 4, 5, 6, 7, 8, 9, and 10 transverse partitions, which are located between
40 the shells and extend across the annular water-chamber coextensive with the width of the said ports and contiguous thereto and have a water-tight connection with said shells for obvious reasons.

11, 12, 13, and 14 denote stops or abutments arranged transversely across the inner shell of the casing and preferably hollow.

15 denotes the hollow valve-gate, having hollow trunnions 16, journaled in bearings 17,
50 secured in the heads of the casing and adapted to be swung into contact with the stops

12 14 to direct the course of flow of fluid through *i f* and *g h* or adapted to be swung into engagement with the stops 11 13 and direct the course of flow through ports *f g* and
55 ports *h i*. One end of the hollow trunnion is connected to a cold-water-inlet pipe 18 and the other end to an outlet-pipe 19, which may lead to a sewer or other suitable place of discharge. A constant flow of cold water through
60 the valve-gate will check the rise in temperature, and thus prevent it becoming burned out.

20 denotes a cold-water-inlet pipe leading into the chamber *c* at its upper end. 65

21 denotes a bent pipe establishing communication between the lower end of the chamber *c* and the annular chamber *e*.

22 denotes a pipe communicating with the upper end of the chamber *d* and having
70 branches 23, communicating with the valve-casing at points on the opposite sides of the port *f* and at the end of the casing opposite to that at which the cold water is first introduced, and 24 denotes an outlet or waste pipe
75 leading to a sewer or other suitable place of discharge.

The flow of the water through the valve-casing is as follows: From the pipe 20 into the chamber *c*, from the lowermost point in the
80 chamber *c* to the lowermost point in the annular chamber *e*, thence from the chamber *e* through the branch pipes 23 into the pipe 22, thence from the pipe 22 into the upper end of the chamber *d*, and thence through the lower
85 end of the chamber *d* through the waste or escape-pipe 24. It will thus be seen that the entire valve-casing is protected by a water-jacket, which entirely surrounds the sides and ends thereof, and as the flow of water through
90 this jacket and through the valve-gate is continuous the parts will not be heated to such a temperature as to damage them.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is— 95

A valve-casing, comprising concentric shells spaced apart to form an annular water-chamber and having a series of ports and transverse partitions located between said shells
100 and forming a water-tight joint at the ports, and coextensive with the length of the ports,

heads secured to said shells and spaced apart
to form water-chambers at the ends of the
valve-casing, a pipe communicating with the
upper portion of the water-chamber at one
5 end of the valve-casing, a pipe communicat-
ing with the lower portion of the water-cham-
ber at the same end of the valve-casing and
with the lower portion of the annular water-
chamber, a pipe communicating with the up-
10 per portion of the annular water-chamber at
the opposite end of the valve-casing and with
the upper portion of the water-chamber at

the same end of the valve-casing, and an es-
cape-pipe leading from the lower portion of
the last-named water-chamber, substantially 15
as set forth.

In testimony whereof we have hereunto set
our hands in presence of two subscribing wit-
nesses.

SAMUEL B. MOFFITT.

CHARLES O. WEISENBURGER.

Witnesses:

J. H. ELLIOTT,

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