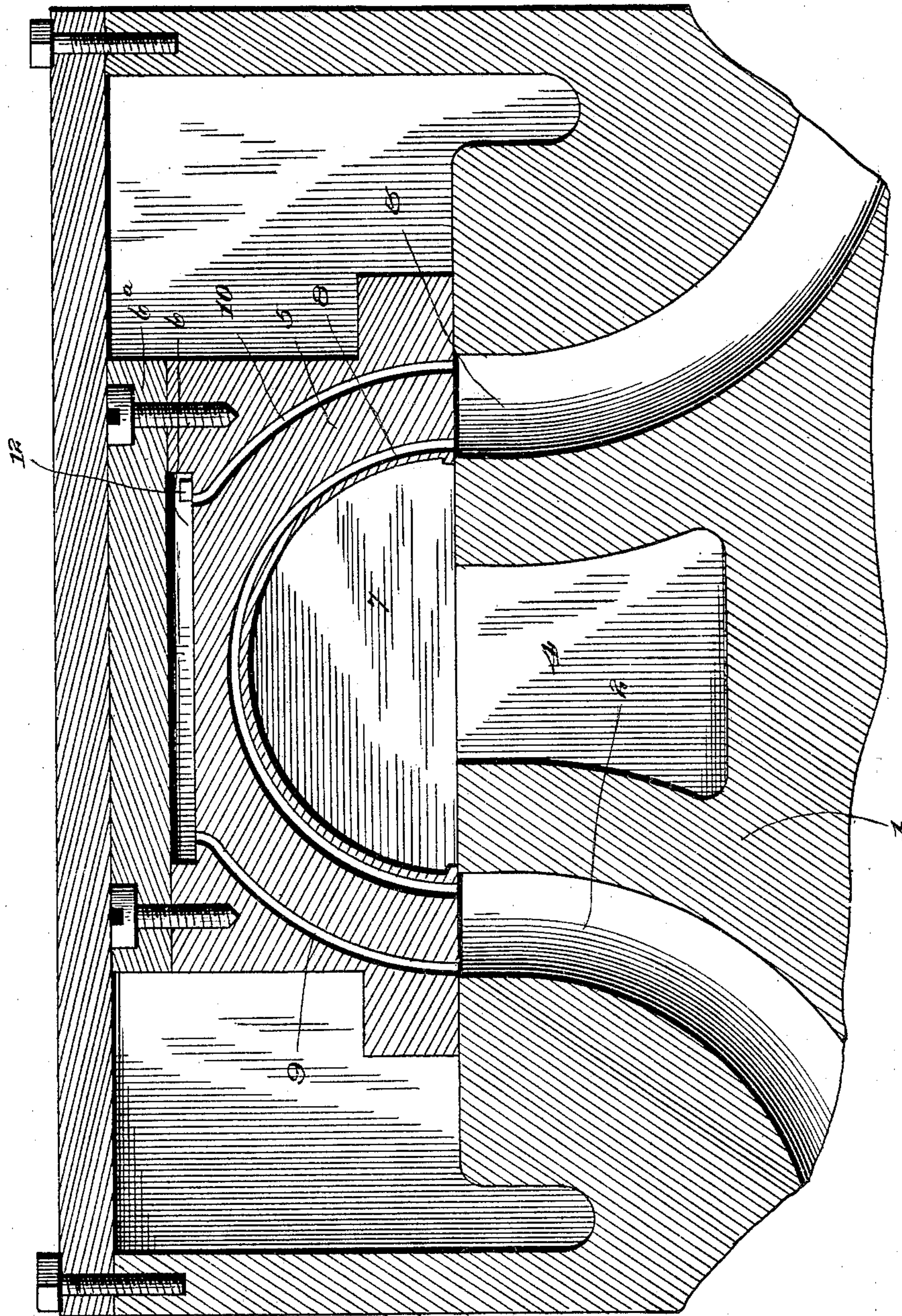


No. 725,255.

PATENTED APR. 14, 1903.

G. A. JANICKE.
BALANCED SLIDE VALVE.
APPLICATION FILED AUG. 11, 1902.

NO MODEL.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

GUSTAVUS A. JANICKE, OF LOUISVILLE, KENTUCKY.

BALANCED SLIDE-VALVE.

SPECIFICATION forming part of Letters Patent No. 725,255, dated April 14, 1903.

Application filed August 11, 1902. Serial No. 119,270. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVUS A. JANICKE, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Balanced Slide-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.

This invention relates to balanced slide-valves, the object being to construct such a valve by the use of which considerable amount of waste steam may be reused before being exhausted, which will result in a saving of fuel.

With the above and other objects in view the invention consists in the construction of such a valve, as will be hereinafter more fully described and claimed, and illustrated in the accompanying drawing, in which is shown in vertical section the valve and a portion of the steam-chest.

In the drawing, 1 denotes a portion of the steam-chest, having the usual steam-ports 2 and 3 and the exhaust-port 4.

5 denotes a slide-valve provided at its top with a steam-cavity 6, having a top or cover 6^a, and 7 denotes the usual exhaust-space. In the valve 5 is formed a small channel or port 8, connecting each side of the valve, thereby allowing direct communication between the steam-ports 2 and 3.

9 denotes a channel or port, also formed in the slide-valve, connecting the port 2 with the cavity 6 on one side, and 10 denotes a similar port connecting the port 3 with the cavity 6 on the opposite side of the valve. The flow of steam through the ports 9 and 10 and the cavity may be controlled by means of a plate 12, which is adapted to slide in the cavity 6 and cover that end of either of said ports, thereby allowing steam to flow through the remaining port only.

In operation when the valve has reached the position shown in the figure of the draw-

ing, cutting off steam and allowing it to expand before release takes place, said steam passes through the ports 8, 9, and 10 from port 2 into port 3. The valve 5 at this time being in its central position, the steam from port 2 side fills the empty port 3 before live steam is allowed to enter the same. When the valve stands centrally upon its seat, the pressure will be equal on both sides of the piston, and as soon as release takes place on port 2 side compression will take place in port 3 side.

From the foregoing description, taken in connection with the accompanying drawing, it is thought that the construction, operation, and advantages of my improved slide-valve will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

In combination with a steam-chest having steam-ports and an intermediate exhaust-port, a slide-valve adapted to alternately open and close the steam-ports to close both of them at one period of its stroke, said valve having a recess in its upper portion, channels communicating with said recess and also adapted to communicate with both the steam-ports while the latter are closed by the valve, and said valve being further provided with a port 8 communicating with both of the steam-ports while the latter are closed by the valve, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GUSTAVUS A. JANICKE.

Witnesses:

CLARENCE SALE,
HENRY P. JANICKE.