

No. 767,285.

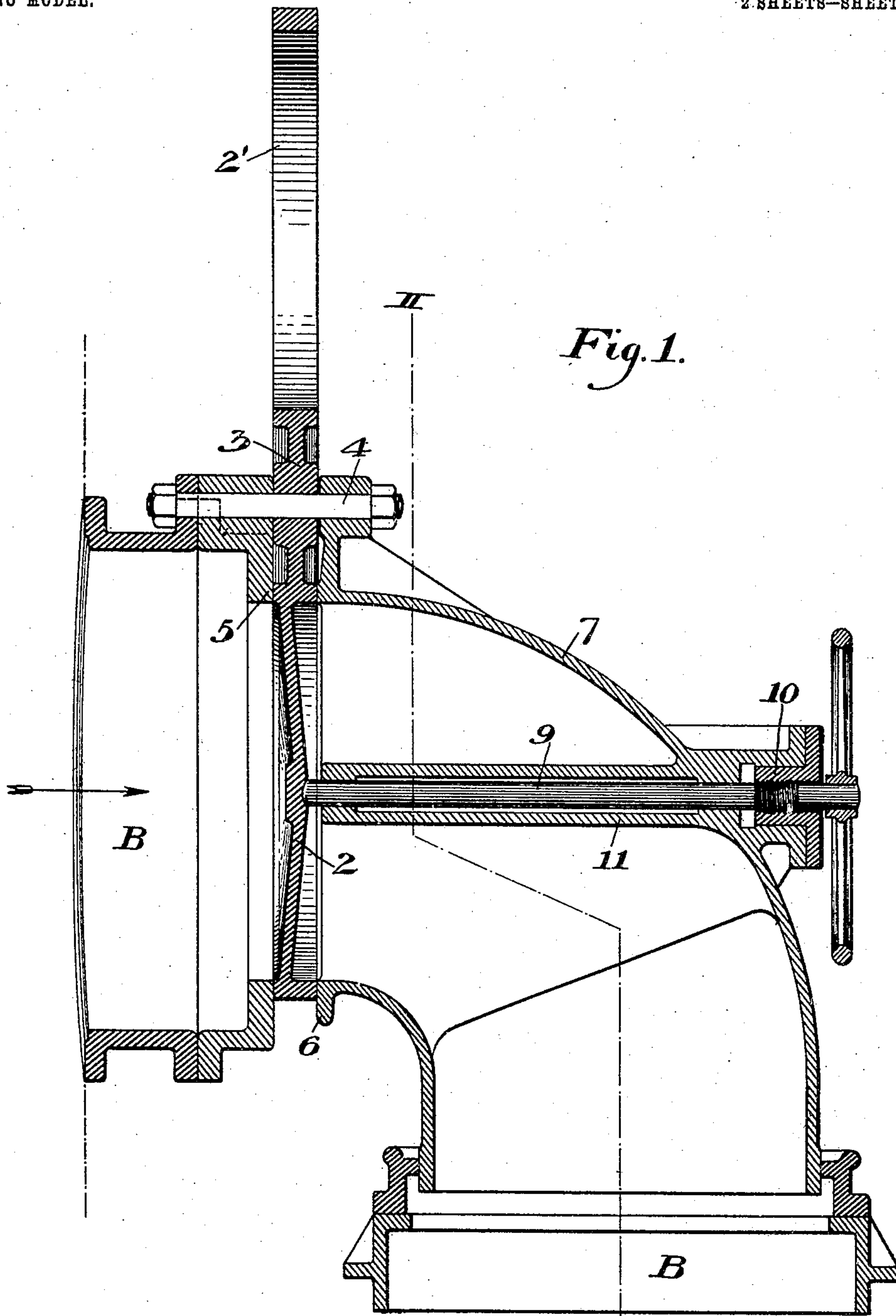
PATENTED AUG. 9, 1904.

J. KENNEDY.  
FURNACE VALVE.

APPLICATION FILED AUG. 6, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES

*H. M. Conner*  
*E. B. Blum*

INVENTOR

*Julian Kennedy*

No. 767,285.

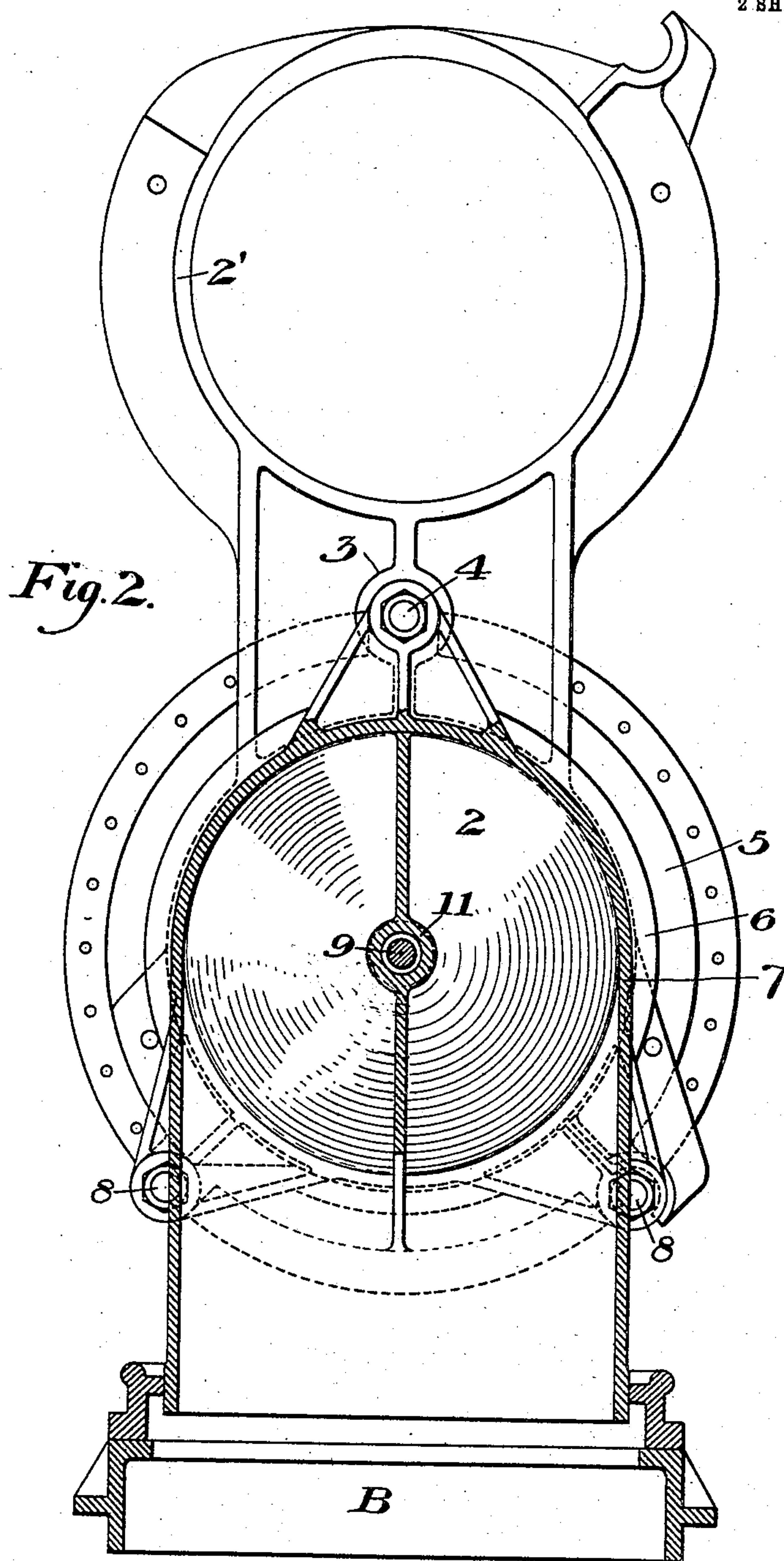
PATENTED AUG. 9, 1904.

J. KENNEDY.  
FURNACE VALVE.

APPLICATION FILED AUG. 5, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



WITNESSES  
*W. M. Corwin*  
*G. B. Blum*

INVENTOR  
*Julian Kennedy*



# UNITED STATES PATENT OFFICE.

JULIAN KENNEDY, OF PITTSBURG, PENNSYLVANIA.

## FURNACE-VALVE.

SPECIFICATION forming part of Letters Patent No. 767,285, dated August 9, 1904.

Application filed August 5, 1903. Serial No. 168,293. (No model.)

*To all whom it may concern:*

Be it known that I, JULIAN KENNEDY, of Pittsburgh, Allegheny county, Pennsylvania, have invented a new and useful Furnace-Valve, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of a chimney-valve embodying my invention. Fig. 2 is a vertical section on the line II II of Fig. 1.

When spectacle-valves and like edgewise-moving valves have been used on the chimney-flues of hot-blast stoves or furnaces, it has been the practice to clamp the periphery of the valve to its seat by bolts. Such constructions are unsatisfactory, because it has been found impossible to prevent the valve when so held from warping out of contact from the seat and leaking. The conditions of use prevent the successful packing of the valve, and the difficulty above mentioned is therefore serious.

My invention is designed to provide a valve which is readily movable and which when seated can be held to its seat with great security.

In the drawings, B B represent the flue leading from a hot-blast stove or furnace through which the gases pass in the direction of the arrow.

2 2' represent a spectacle-valve, the portion 2 being a disk adapted to close the port when brought in contact with the seat and the portion 2' being annular. These portions are connected by a bridge-piece 3, pivoted on a bolt 4 at the side of the annular valve-seat 5, which in conjunction with a parallel flange 6 on the flue-casing 7 affords a transverse slot or opening for the edgewise motion of the valve, which can be rotated on the pivot 4 to bring either the disk portion 2 or the annular portion 2' opposite to the seat, the valve-port in the one case being closed and in the other case opened. The flue-casing is held to the valve-seat by bolts 8.

9 is a clamping-stem which is independent of the valve and extends through a threaded socket 10 in the flue-casing and preferably through a sleeve 11, which extends inwardly therefrom and shields the stem from the hot

gases when the valve is open. The end of the stem is directed toward the middle of the valve-port, so that when the valve 2 is brought to its seat the stem may be screwed inwardly, so as to bear at the end against the middle of the valve and to clamp it to its seat. Being thus held at the middle, the valve is not subject to injurious warping and will fit tightly around its entire periphery, rendering it unnecessary to rely upon the bolts 4 and 8 for this purpose.

The valve-disk 2 is preferably dished or convex, the convexity being toward the stem 9, so that the clamping-pressure will be more evenly distributed to the margin of the valve.

Within the scope of my invention as defined in the claims the parts of the structure may be modified, and the valve may be constructed to slide in right lines instead of being moved rotatively.

Instead of using a spectacle-valve the annular portion 2' may be omitted, although it is preferable because of its balancing action. The clamping device may also be modified.

I claim—

1. A valve for furnace-flues comprising a gas-flue, a disk member adapted to move edgewise in the flue into closing position, and a movable clamp aligned with the middle of the valve-seat and adapted to bear upon the disk member to hold it to its seat; substantially as described.

2. A valve for furnace-flues comprising a gas-flue casing, a convex disk member pivoted on said casing eccentrically of the flue-opening, and adapted to move edgewise into closing position, and a movable clamp extending into the flue and adapted to bear upon the middle of the disk member to hold it against its seat; substantially as described.

3. A spectacle-valve for furnace-flues comprising a gas-flue casing, a movable member having a disk portion and an annular portion, each adapted to move edgewise into alignment with the flue, and a sleeve-protected movable clamp extending into the flue and adapted to bear upon the middle of the said disk portion in its closed position to hold it against its seat; substantially as described.

4. In combination with a furnace-flue casing,

a conical valve-disk movably secured to said casing and a clamp, independent of the valve, adapted to bear upon the middle of the valve-disk to clamp said disk to its seat or to be released therefrom to permit independent motion of the valve-disk; substantially as described.

5 5. In combination with a gas-flue casing, a valve-disk movably secured to said casing, and a clamping-stem, independent of the disk, extending into the flue and adapted to both clamp the valve-disk to its seat and to release it to permit independent motion of the disk; substantially as described.

10 6. In combination with a gas-flue casing, a valve movably secured to said casing, a clamping-stem, independent of the valve, extending into the flue and adapted to both clamp

the valve to its seat and to release it to permit independent motion of the valve, and a protecting-sleeve through which said stem extends; substantially as described.

7. In a gas-valve for furnace-flues, in combination, a flue-casing, a convex valve-disk pivoted to said casing and adapted to move edgewise into closing position, and a movable clamp adapted to bear upon the middle of the valve-disk to hold said disk against its seat; substantially as described.

In testimony whereof I have hereunto set my hand.

JULIAN KENNEDY.

Witnesses:

G. B. BLEMING,  
H. M. CORWIN.