

No. 752,850.

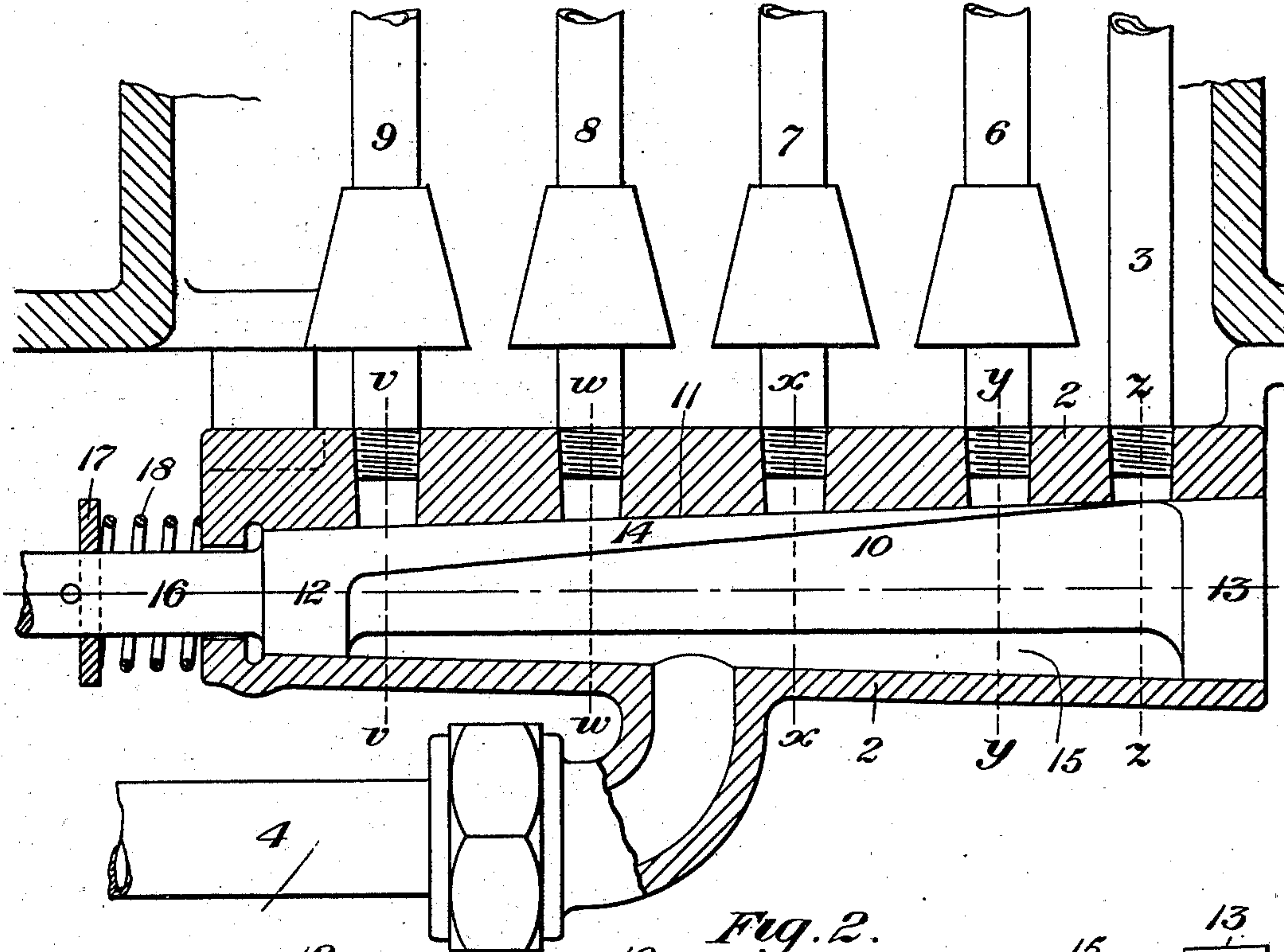
PATENTED FEB. 23, 1904.

O. S. McCURDY.  
VALVE.

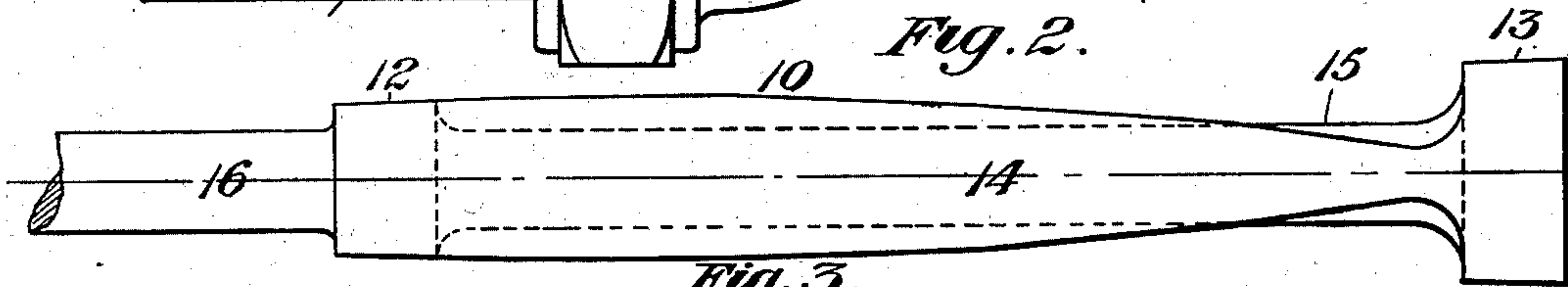
APPLICATION FILED MAR. 25, 1903.

NO MODEL.

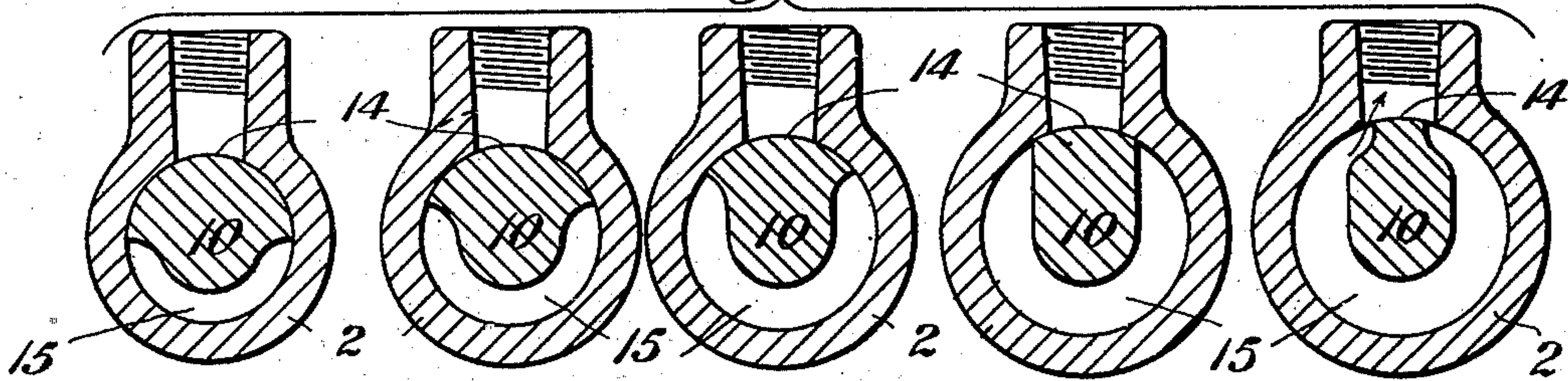
*Fig. 1.*



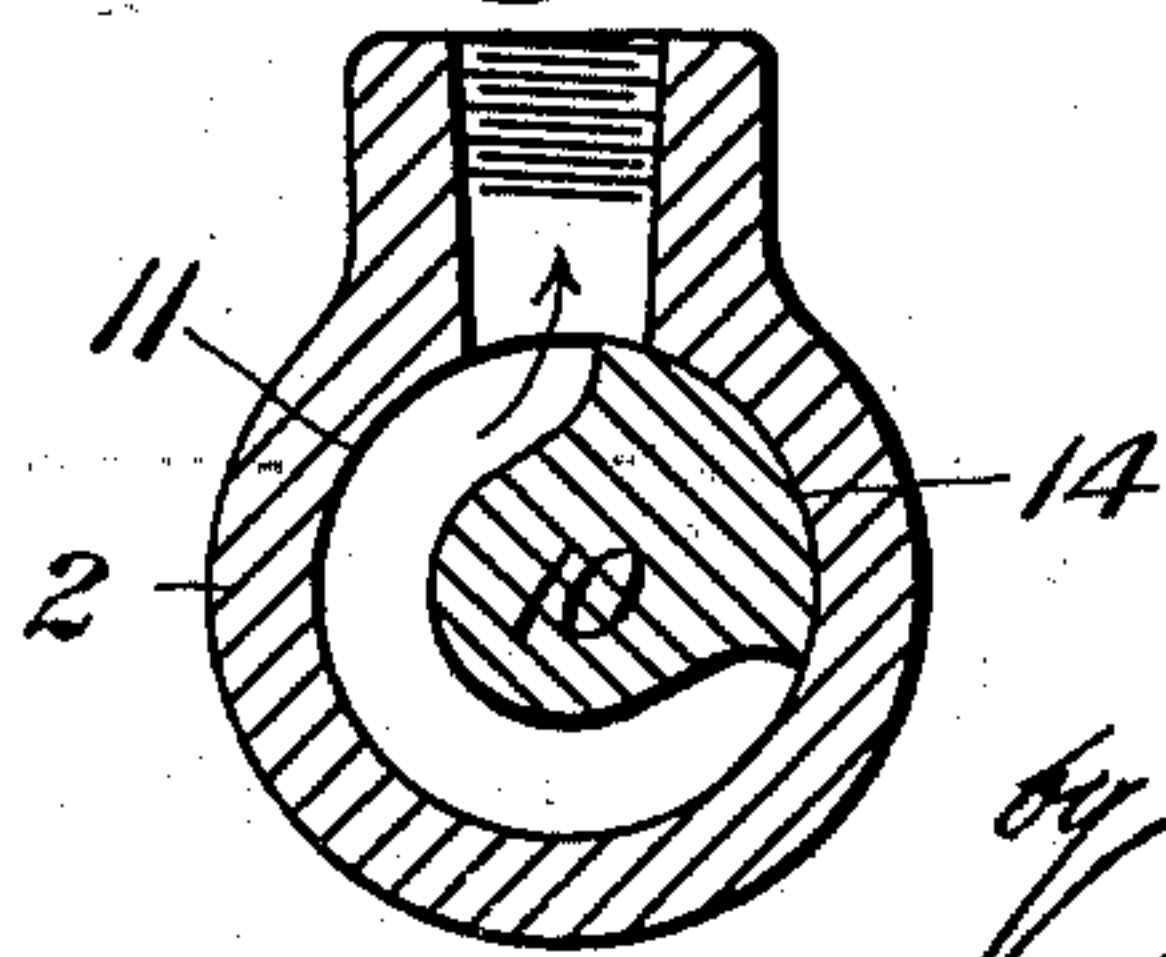
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*

*Clyde Shaw.*

*Chas. S. Pepley.*

*Inventor:*

*Oscar S. McCurdy*  
*by C. M. Clarke*  
*his attorney.*



# UNITED STATES PATENT OFFICE.

OSCAR S. McCURDY, OF WILKINSBURG, PENNSYLVANIA.

## VALVE.

SPECIFICATION forming part of Letters Patent No. 752,850, dated February 23, 1904.

Application filed March 25 1903. Serial No. 149 489. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR S. McCURDY, a citizen of the United States, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Valves, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical sectional view of my improved progressive feed-valve for gas-burners. Fig. 2 is a plan view of the valve-plug provided with the tapered seat. Fig. 3 shows cross-sections through the valve in closed positions indicated by the line *vv*, *ww*, *xx*, *yy*, and *zz* of Fig. 1. Fig. 4 is a similar cross-sectional view indicated by the line *xx* of Fig. 1, but showing the valve partially opened at that point.

My invention relates to improvements in valves for burners, wherein the object is to successively furnish and maintain a supply of gas to a plurality of burner-pipes, whereby a relatively small or large amount of gas may be furnished to a plurality of burners by movement of a single valve.

Referring to the drawings, 2 represents the valve-casing, with which is connected a constantly-burning pilot-light by pipe 3 during the time when the main supply of gas is opened to the valve through a pipe 4, connecting with the hollow interior of the case.

6, 7, 8, and 9 represent pipes connecting with the valve-casing 2, preferably equidistantly apart and adapted to supply and maintain gas to a burner or burners successively, according to the degree to which the valve is turned.

10 is the valve proper, of coniform construction, inserted in a corresponding coniform seat 11 in the case 2. The valve is provided at each end with solid conical portions 12 and 13, adapted to make tight-fitting contact with the interior of the case and at its upper portion with a continuous correspondingly-tapered sealing-face 14, comparatively wide at one end and tapering toward the other to a width somewhat less than the cross area of one of the openings leading to the pilot-burner pipe.

This narrow portion is located opposite to the opening leading to the pilot-burner pipe 3 at one end, so that a constant supply of gas will be maintained thereto at whatever position the valve may assume. Beyond said point the tapering seat 14 is gradually wider, so as to cover each next succeeding opening and to overlap said opening on each side a successively-greater distance, as clearly shown by the cross-sectional views of Fig. 3. Below the seat 14 and for the full length of the valve between the portions 12 and 13 its body portion is hollowed out or recessed, as shown at 15, giving full capacity and circulating-space for the gas. At its smaller end the valve is provided with a stem 16, having a collar 17, between which and the valve-case is interposed a coiled spring 18, surrounding the stem and adapted to constantly maintain a binding pressure on the valve to hold it to its seat. The stem 16 may be provided with any suitable turning means, as a handle or lever of any usual form.

The operation of the valve is obvious from the foregoing description, and it is adapted to be very delicately adjusted to supply a minimum or maximum amount of gas to the burner. It is especially designed to be used in combination with a heating apparatus, for which I have filed a companion case bearing the same date of application.

I do not desire to be limited to the specific form of construction shown or to the number of connections, as it is obvious that these may be changed according to the varying requirements and also that other changes and variations may be made by the skilled mechanic, and all such are to be considered as within the scope of the following claims.

What I claim is—

1. A gas-controlling device consisting of a casing having an interior longitudinal valve-seat, circular in cross-section, a pilot-light opening, and one or more burner-pipes arranged longitudinally through the casing; and a valve having a longitudinally-tapered round sealing-face on a portion of its periphery and a relatively recessed portion, substantially as set forth.

2. A gas-controlling device consisting of a casing having an interior longitudinal valve-



seat circular in cross-section, a pilot-light opening, and one or more burner-pipes arranged longitudinally through the casing, and a valve having a tapered rounded sealing-face slightly less than the pilot-light opening at one end and increasing in width in the direction of the burner-pipes, substantially as set forth.

3. A controlling device consisting of a casing having an interior coniform valve-bearing, a plurality of gas-openings longitudinally arranged through the casing, and a coniform valve seated in the casing provided with a tapered rounded sealing-face on a portion of its periphery and a continuous longitudinal exteriorly-recessed body portion adapted to provide communication to each of the gas-openings, substantially as set forth.

4. A controlling device consisting of a casing having an interior coniform bearing for the valve, a plurality of gas-openings longitudinally arranged through the casing, a coniform valve seated in the casing provided with an exteriorly-tapered sealing-face and a recessed portion extending from end to end and adapted to communicate with all of the gas-openings, and a turning-stem, with means for exerting a binding pressure on the valve, substantially as set forth.

5. A gas-controlling device consisting of a casing having an interior tapered longitudinal

valve-seat circular in cross-section, a pilot-light opening, a plurality of burner-pipes arranged longitudinally and communicating through the casing, and a valve having a tapered sealing-face slightly less than the pilot-light opening at one end and of gradually-increased width so as to close all of the burner-pipe openings in normal position, and having its body portion recessed or hollowed out from one end to the other so as to permit free circulation of the gas to one or all of the burner-pipe openings when the valve is turned, substantially as set forth.

6. A gas-controlling device consisting of a casing having an interior longitudinal valve-seat circular in cross-section, a pilot-light opening and one or more burner-pipes arranged longitudinally through the casing, and a valve having a longitudinally-tapered rounded sealing-face forming a portion of its periphery, and a reduced portion extending longitudinally of the valve and providing a circulating-chamber for the gas, substantially as set forth.

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

OSCAR S. McCURDY.

Witnesses:

JAMES McC. MILLER,  
C. M. CLARKE.