

No. 886,357.

PATENTED MAY 5, 1908.

J. H. DICKINSON.
PUPPET VALVE.
APPLICATION FILED OCT. 10, 1907.

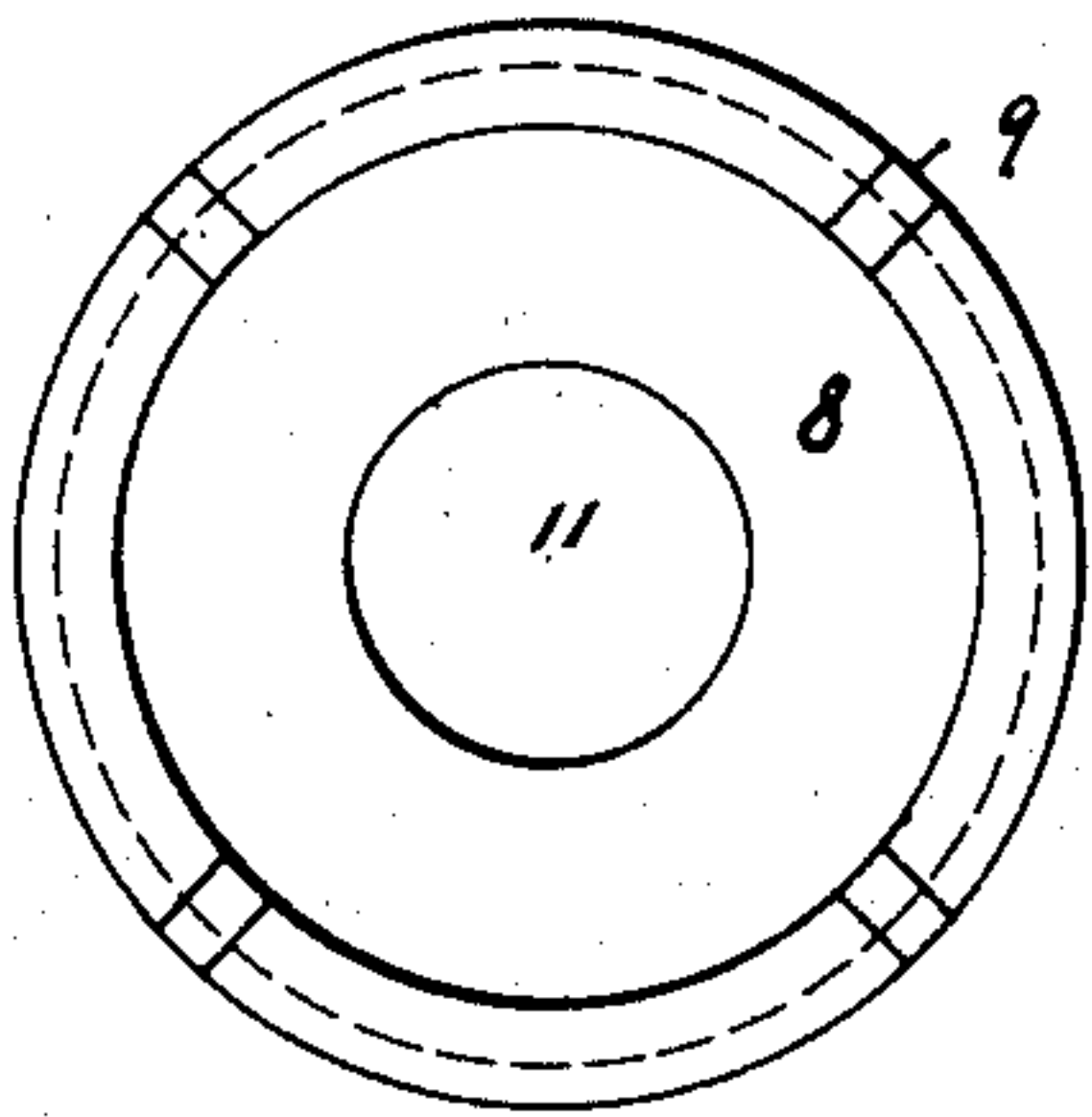


Fig. 2.

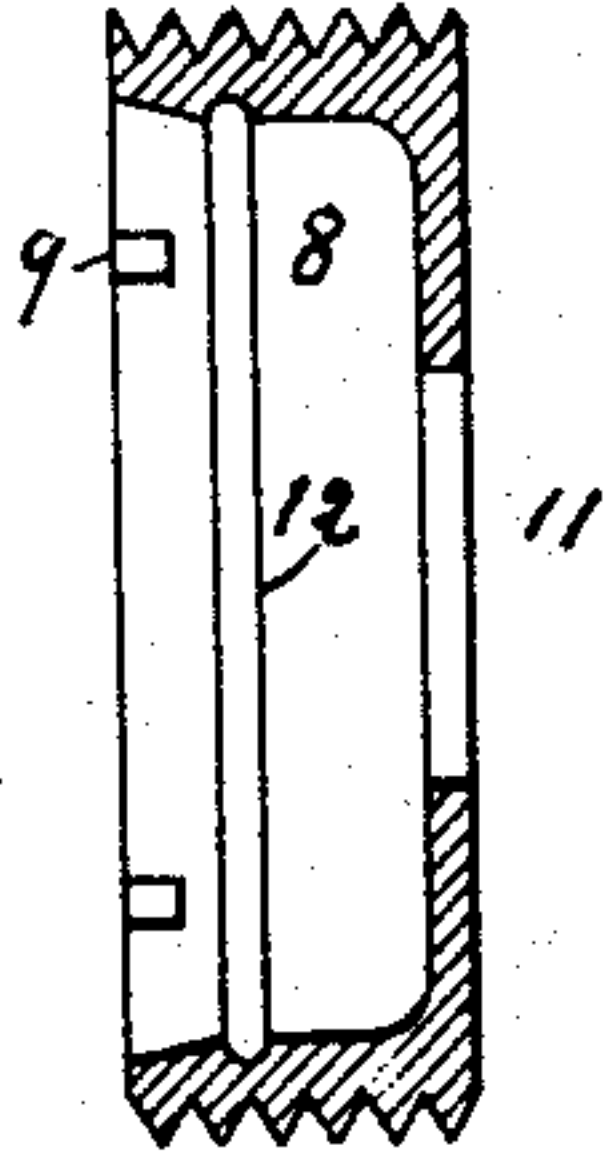


Fig. 3.

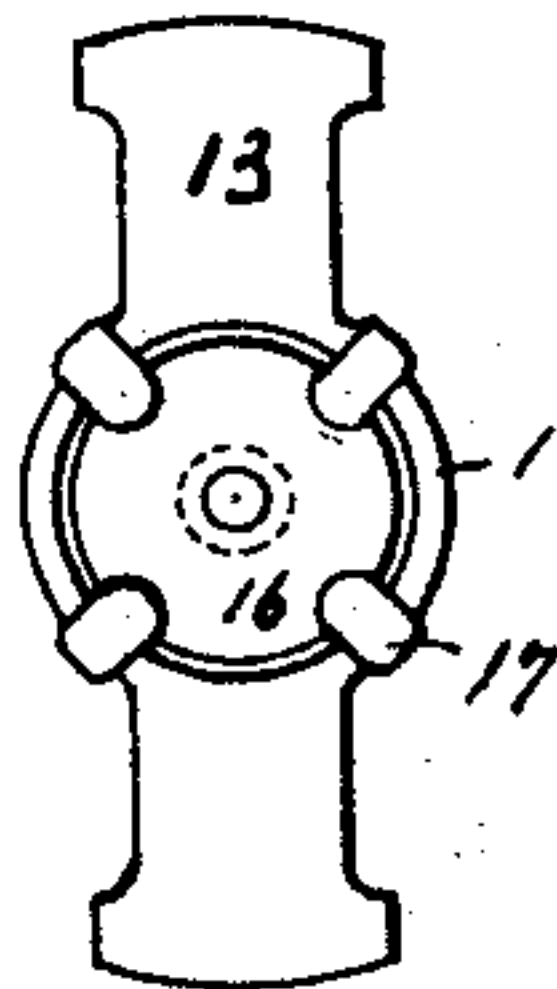


Fig. 4.

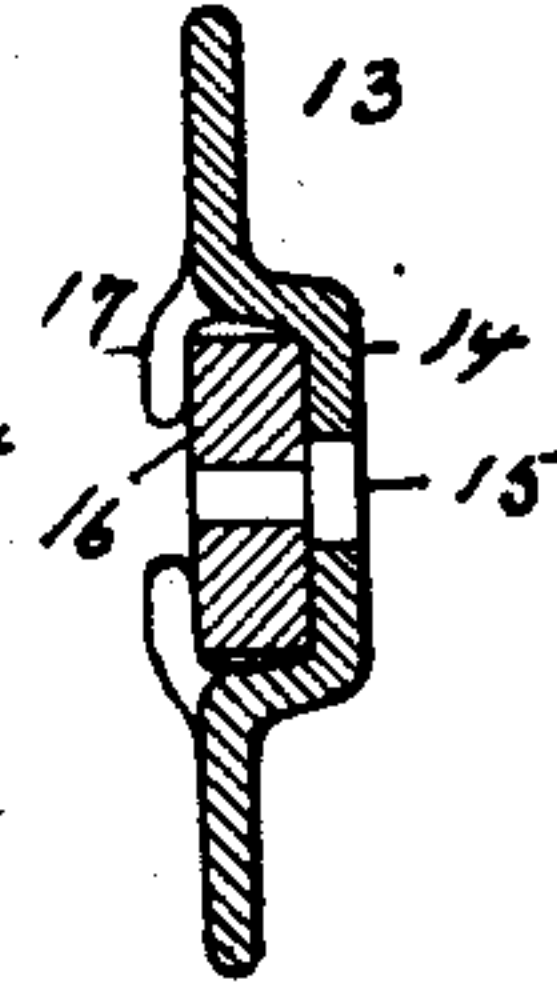


Fig. 5.

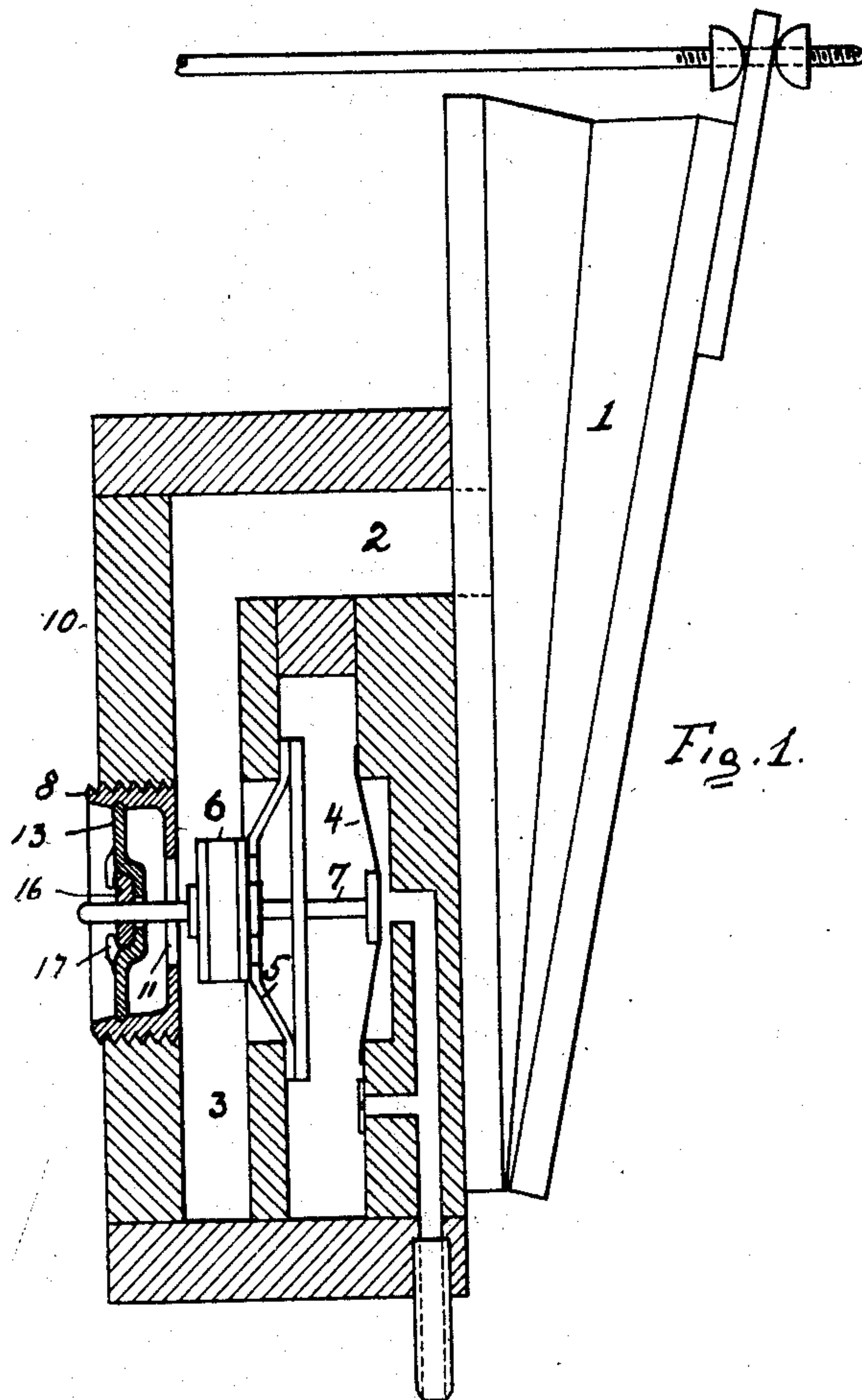


Fig. 1.

WITNESSES:

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JOSEPH H. DICKINSON, OF CRANFORD, NEW JERSEY, ASSIGNOR TO AEOLIAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF CONNECTICUT.

PUPPET-VALVE.

No. 886,357.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed October 10, 1907. Serial No. 396,796.

To all whom it may concern:

Be it known that I, JOSEPH H. DICKINSON, a citizen of the United States, and a resident of Cranford, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Puppet-Valves, of which the following is a specification.

This invention relates to improvements in puppet valves and more particularly to the puppet valves such as are used for controlling the passage of air into and out of the motor pneumatics, such as are used in pneumatic players for musical instruments.

The object of my invention is to simplify the construction of the puppet valve and to facilitate the adjustment of the same and also to insure the greater reliability and durability of the valve.

In the accompanying drawing Figure 1 represents a motor pneumatic with its controlling puppet valve, embodying my invention. Fig. 2 is a plan view of the screw cup. Fig. 3 is a vertical transverse sectional view of the same. Fig. 4 is a plan view of the cross piece and the washer held in the same, Fig. 5 is a vertical transverse sectional view of the cross piece.

The motor pneumatic or bellows 1, the air passages 2, 3 and the diaphragm 4, and the lower valve seat 5 are all of conventional construction. The puppet valve 6 is also made of conventional construction and preferably consists of a disk of metal with felt washers at the top and bottom, said valve being secured on a stem 7 which moves up and down under the action of the air of different pressure acting on the diaphragm 4. A screw cup 8, preferably made of metal, is provided in its upper edge with notches 9 for inserting an implement by means of which the screw cup 8 can be screwed up or down in a threaded opening in the valve casing or box 10 for a purpose that will appear hereinafter. The screw cup 8 is provided with a bottom opening 11 and with a flat under surface against which the top of the valve 6 can seat for the purpose of closing or opening the opening 11 formed in the bottom of the screw cup and by means of which opening the communication between the pneumatic bellows 1 and the outer air is established. A recess or groove 12 is cut in the inner surface of the screw cup at or about half the height of the same. A

cross piece 13 made of thin brass has its ends so shaped that they can fit into this groove and this member or cross piece 13 has sufficient elasticity as to permit of its being bent and sprung into the notch or groove in the screw cup, that is to say, the ends of the cross piece or member 13 are sprung into the notch or groove 12 so as to hold the cross piece securely within the cup. The cross piece is provided with a central depression or dished part 14 having a central opening through which the stem 7 can pass. A felt washer 16 having an opening of proper size for properly guiding the stem 7 is placed into the recess or depression 14 and confined within the same by means of tongues which are struck up integral with the cross piece 13 and then are folded over the washer 16 so as to hold the same in place. By means of a wrench or other tool applied in the notches 9 the screw cup can easily be adjusted vertically so that the top of the puppet valve will seat properly on the underside of the cup 8 when this valve is forced upward by air acting on the diaphragm 4.

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

1. The combination with a puppet valve and stem, and means for operating the valve, of a cup having internal recesses, a cross piece sprung into said recesses and forming a guide for the upper end of the valve stem, substantially as set forth.

2. The combination with a puppet valve, a stem, and means for operating the valve, of a cup having internal recesses, a cross piece sprung into the recesses and having a central portion and a washer secured in said central portion, substantially as set forth.

3. The combination with a puppet valve and stem, and means for operating the valve, of a cup having internal recesses, a cross piece sprung into said recess and having a dished central portion and prongs, a washer placed in said dished portion, the prongs being bent over the washer to hold the same in place, substantially as set forth.

4. The combination with a puppet valve and stem and means for moving the puppet valve, of a cup forming the seat for the top of the valve, a cross piece on said cup which cross piece is provided with prongs, a washer on said cross piece, the prongs being bent

over the washer to hold the same in place, substantially as set forth.

5 The combination with a puppet valve and stem, means for operating the valve, of a screw cup forming a seat for the top of the valve, which cup has notches in its upper edge for applying an implement for turning the cup, a cross piece held on said cup and provided with prongs, and a washer held on
10 the cross piece by said prongs and forming a

guide for the valve stem, substantially as set forth.

Signed at New York city in the county of New York and State of New York this 17th day of September, A. D. 1907.

JOSEPH H. DICKINSON.

Witnesses:

A. W. SPENCER,
F. H. HUGHES.