

P. ANDERSON.
VALVE SEAT.
APPLICATION FILED MAY 17, 1911.

1,041,945.

Patented Oct. 22, 1912.

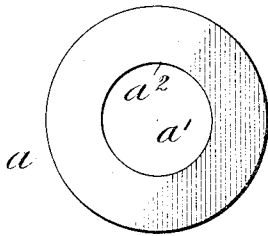


Fig. 1.

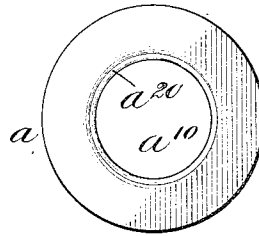


Fig. 3.

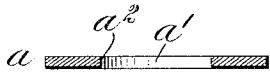


Fig. 2.



Fig. 4.

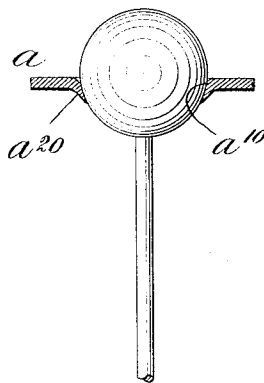


Fig. 5.

WITNESSES:

M. E. Flaherty
J. J. Fennelly

INVENTOR:

Pahr Anderson
J. Brant Stages
his attorney

UNITED STATES PATENT OFFICE.

PAHR ANDERSON, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR TO DOVER STAMPING & MANUFACTURING COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

VALVE-SEAT.

1,041,945.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed May 17, 1911. Serial No. 627,849.

To all whom it may concern:

Be it known that I, PAHR ANDERSON, of Cambridge, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Valve-Seats, of which the following is a specification.

My invention comprises a valve seat for use especially with a ball valve when it is desired that the seat shall form a perfect closure for liquids. Such a valve is especially useful in closing the ends of gasoline or other funnels and in other places where the flow and leakage is to be stopped. A ball valve is very useful for such a purpose because as it is spherical it will seat itself however what may be termed its normal vertical axis is inclined to the axis of the seat. But if made of metal the constant striking of the seat will have a tendency to wear it unduly and jam it out of shape unless the seat is of fairly heavy metal.

My invention relates to a valve seat made in sheet brass or other metal when the metal is say one-eighth of an inch or more in thickness, and the preferred mode of constructing my valve seat consists in first producing a round hole in the metal plate somewhat less in diameter than the desired seat, then drawing the edge of the opening down by a countersink so as to form an elongated wall to the opening longer than the normal thickness of the metal and then grinding the valve and seat together in any well known way.

My invention will be understood by reference to the drawings in which—

Figure 1 is a plan and Fig. 2 is a cross section of a blank showing the first step in my method. Figs. 3 and 4 are corresponding views of the blank showing the blank with a counter-sunk opening and Fig. 5 shows the finished seat with the valve in place after the grinding operation has taken place. In Figs. 1 and 2 a is the annulus formed

by the cutting out from the blank of its central portion having an opening a^1 somewhat smaller than the regular valve seat. It will be noted that the edge a^2 of the opening is at right angles with the upper and lower surfaces of the seat.

Figs. 3 and 4 illustrate the next step in which the right-angled edge of the opening shown in Fig. 2 has been drawn down by a countersink to form an elongated edge a^{20} surrounding an opening a^{10} greater in diameter than the opening a^1 and at an obtuse angle to the surfaces of the disk or annulus. A seat is thus formed of greater bearing surface than the thickness of the disk and at the same time one which furnishes a strong wearing surface when it engages the valve. If necessary the valve and seat are then ground together in the ordinary way.

What I claim as my invention is:—

1. The valve seat above described comprising a blank having an opening therein the wall of which is of a thickness greater than the thickness of the blank and forms a flange tapering from the plane of the blank to an edge, whereby the bearing surface of the valve seat is increased over the normal thickness of the metal.

2. The valve seat above described comprising a substantially flat blank having an opening therethrough surrounded by a wall tapering uniformly from the plane of the blank to an edge deeper than the thickness of the blank and projecting from one side thereof, said opening being conical, its small end being outside the plane of said blank.

3. The valve seat above described comprising a substantially flat blank having an opening therethrough surrounded by a wall tapering uniformly from the plane of the blank to an edge and integral therewith.

PAHR ANDERSON.

Witnesses:

GEORGE O. G. COALE,
M. E. FLAHERTY.