

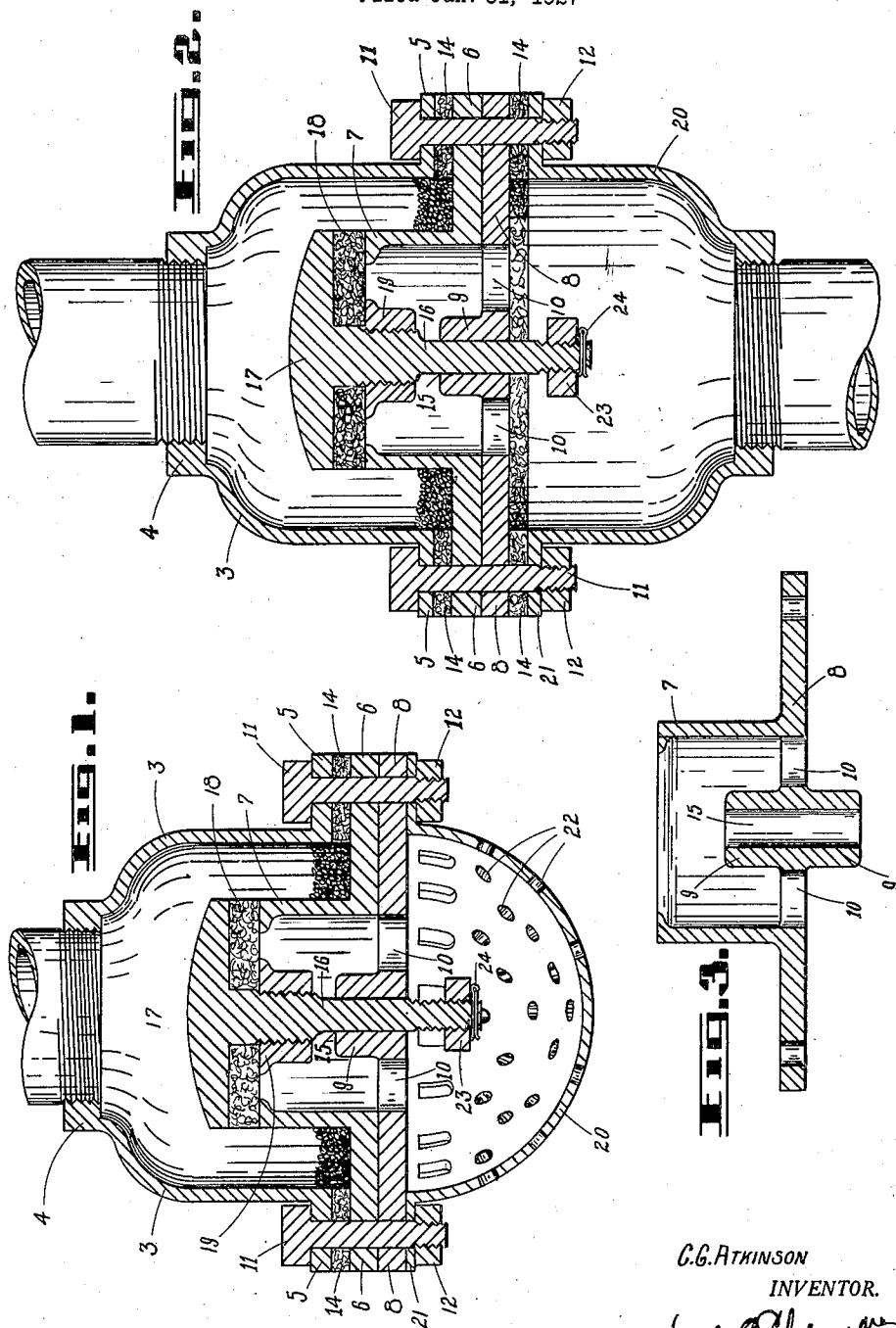
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C. G. ATKINSON

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VALVE

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C.G. ATKINSON

INVENTOR.

BY *Harold C. Shipman*
ATTORNEY.

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CLARENCE G. ATKINSON, OF SHELBURNE, NOVA SCOTIA, CANADA.

VALVE.

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This invention relates to valves and particularly to a construction for use as a pump valve, when applied as a valve in a pump construction; as a foot valve, when applied at the end of a suction pipe or as a check valve, when used intermediate two sections of pipe. In fact, I do not wish to limit myself to any particular use to which the construction may be adapted, as the same may be advantageously used in various fittings where fluid is being drawn through piping.

The main object of this invention is to provide an elevated valve seat having a sediment chamber outwardly of the regular travel of the water through the valve, so that any sediment will not be permitted to lodge on the valve seat and thus prevent a proper fitting of the valve against the same.

A further object is to provide an elevated valve seat having a sediment chamber surrounding the same, the bottom of the sediment chamber being considerably lower than the valve seat.

A further object is to provide an elevated valve seat adapted to be used as a pump valve when used in pump construction, as a foot valve on the end of a suction pipe or as a vertical check valve where a pipe is continued below the usual valve.

Other objects and advantages of my invention will become apparent ensuing a perusal of the following specification read in conjunction with the annexed drawings, in which:

Fig. 1 is a sectional view showing the preferred embodiment of my invention, when used as a foot valve on the end of a suction pipe.

Fig. 2 is a sectional view of the preferred embodiment when used as a vertical check valve between two lengths of pipe.

Fig. 3 is a modified form of a base member embodying the ring member integral therewith.

Like numerals of reference designate corresponding parts throughout the different views.

Referring more particularly to Fig. 1, the numeral 3 indicates a head preferably having a body portion of cylindrical formation. Its upper end is formed inwardly and provided with an open end portion 4 threaded on its inner circumference. The lower end of the head 3 is provided with the outwardly directed flange 5. 6 indicates an

annular ring, preferably having an outer circumference of the same size as the outer circumference of the flange 5. Upwardly from the inner edge of the ring 6, I provide a cylindrical member 7. The height of this cylindrical member 7 may be varied considerably according to the use to which the valve is to be subjected. 8 indicates a base member, preferably having an outer circumference of the same size as the annular ring 6 and flange 5. Centrally of this base member 8, I provide an upwardly extended boss 9, around which are located spaced openings 10. If desired, this boss 9 may extend both upwardly and downwardly from the base member, as shown in Fig. 3. Between the flange 5 and the annular ring 6, I provide a gasket or washer 14, which may be made of any desired material commonly used for this purpose.

The boss 9 is provided with a central vertical opening as at 15, in which a stem 16 is adapted to be reciprocally mounted. This stem 16 will act as a support and guide for properly seating a valve disc, hereinafter mentioned. The upper end of the stem 16 is provided with an enlarged head 17, which preferably has an annular outer circumference and its upper surface convex. Positioned under the head 17 and fitted on the stem 16 is a valve disc 18, preferably having an outer annular circumference parallel with the outer annular circumference of the cylindrical member 7. 19 is a jam nut threadedly engaged on the stem 16 and adapted to tighten the valve disc 18 against the under face of the head 17. The lower end of the stem 16 is threaded to receive the nut 23 near its lower extremity. A cotter pin 24 is fitted through the stem 16 under the nut 23, so as to prevent the nut 23 from coming disengaged from the stem 16. By having this nut 23 positioned on the stem 16, the stem will be retained in the boss 9 against disengagement therefrom.

It will be noted from the drawing, Fig. 1, that the under face of the valve disc 18 will normally rest on the upper flat face of the cylindrical member 7 which will act as a valve seat. If desired the upper end of the cylindrical member 7 may be flanged inwardly to provide a greater seat capacity when found necessary. It may be found to be of advantage to have the seating face, at the upper end of the cylindrical member 7, tapered with the outer or inner edge slightly

higher. If this seat was tapered, the under face of the disc would also be tapered correspondingly.

In Fig. 1, it will be noted that the cylindrical member 7 is spaced considerably from the cylindrical body portion of the head 3 so as to provide a sediment chamber intermediate these cylindrical portions and which sediment chamber will be below the valve seat in this construction.

20 indicates a receiving chamber provided with an annular flange 21. At spaced intervals around the flange 5, annular ring 6, base 8 and the annular flange 21, I provide registering openings through which the bolts 11 are fitted, which bolts 11 when tightened into position by the nuts 12, will retain these parts in fixed position as shown in Fig. 1. When the valve is to be used as a foot valve, this receiving chamber is preferably of a bowl shape formation and provided with a number of spaced openings 22, through which the water or other fluid may enter. In having these openings 22 of a pre-determined size, this receiving chamber will act as a strainer and will not permit any undesirable foreign matter to be sucked into the valve.

Referring more particularly to Fig. 2 of the drawings, it will be noted that the same construction is shown in all the various elements, with the exception that the receiving chamber 20 is of a different formation. This receiving chamber 20, in Fig. 2 of the drawings, is preferably formed of a similar size and style as the head 3. Its lower end is adapted to have threadedly engaged therein a pipe as shown. When this type of receiving chamber is used, a second gasket or washer 14 is used between the flange 21 and the ring 6 so as to make a water tight fit therebetween.

Fig. 3 shows a modified form of base member 8 which embodies the annular ring 6. The cylindrical member 7 being integral with the base 8, which will eliminate the

necessity of two fittings for certain requirements where this form may be found desirable.

Throughout the specification and in the drawings, it will be noted that I refer to the body portion of the head 3 and the member 7 as being cylindrical in formation. I do not wish to limit myself to having these parts cylindrical, as it might be found advantageous to have them square, oval or of any desired formation, in which case, the co-operative parts would be shaped to work in connection thereto.

The foregoing specification and annexed drawings discloses the preferred embodiment of my invention, but it is to be understood that minor changes may be resorted to in the commercial adaptation of my invention without departing from the scope of the invention as hereinafter claimed.

What I claim as new is:

1. In a valve comprising a cylindrical member having an annular flange protruding outwardly from its inner end; a valve adapted to be normally seated on the outer end of said cylindrical member; a boss, supported internally of said cylindrical member, through which the stem of said valve reciprocates and the flange of said cylindrical member being fixedly secured between the receiving chamber and the head portion of a pump construction.

2. In a valve comprising a cylindrical member having an annular flange protruding outwardly from its inner end; a valve adapted to be normally seated on the outer end of said cylindrical member; a boss, supported internally of said cylindrical member but independent thereof, through which the stem of said valve reciprocates and the flange of said cylindrical member being fixedly secured between the receiving chamber and the head portion of a pump construction.

In testimony whereof, I affix my signature.

CLARENCE G. ATKINSON.