No. 626,420. Patented June 6, 1899.

G. F. GODLEY.

VALVE.

(Application filed Oct. 10, 1898.)

(No Model.)

Fig. 1

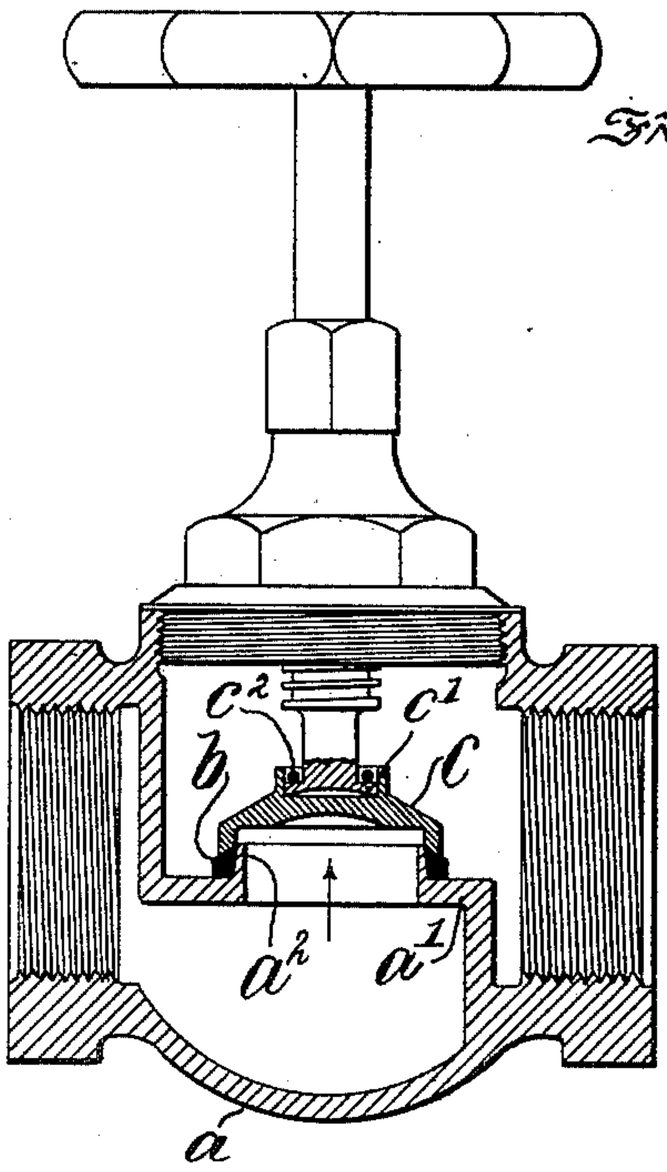


Fig. 3

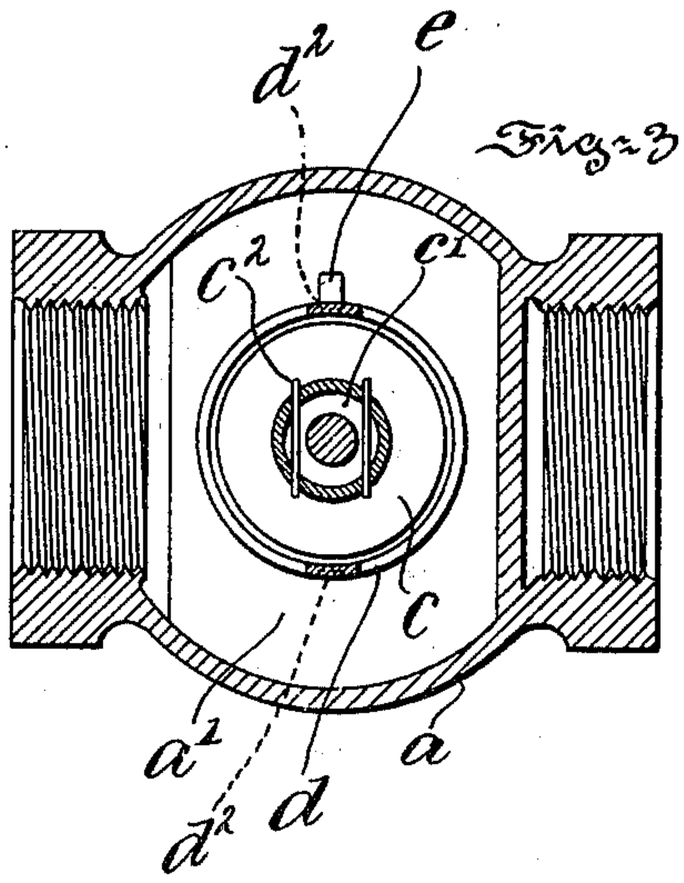


Fig. 4

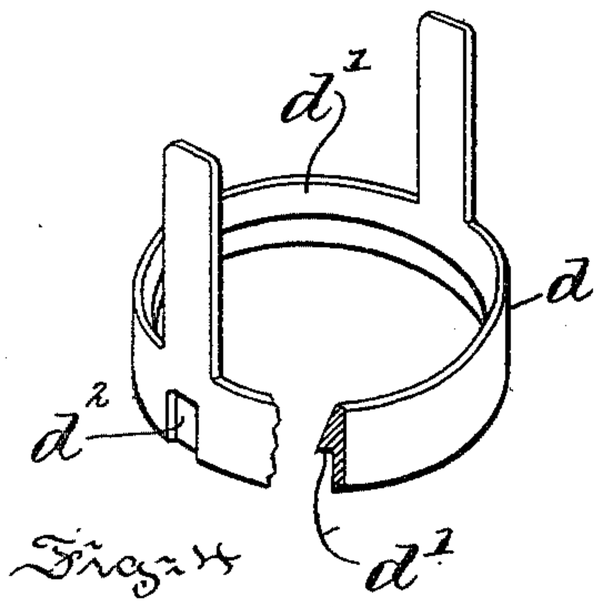
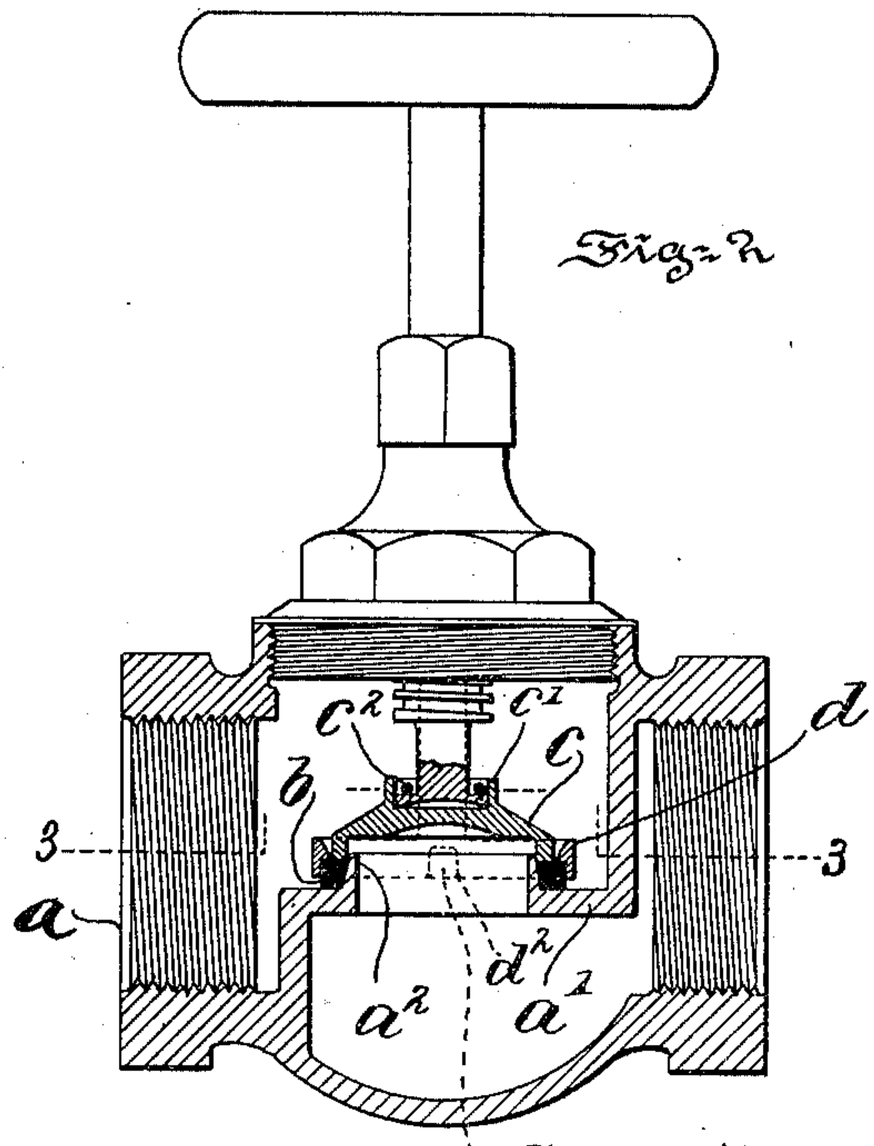


Fig. 2



Witnesses:
Frank Godley
C. L. Butler.

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UNITED STATES PATENT OFFICE.

GEORGE F. GODLEY, OF PHILADELPHIA, PENNSYLVANIA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 626,420, dated June 6, 1899.

Application filed October 10, 1898. Serial No. 693,072. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. GODLEY, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Valves, of which the following is a specification.

The principal object of my present invention is to provide a durable, neat, and comparatively inexpensive method of constructing valves and detachable valve-seats.

The invention consists of the improvements hereinafter described and claimed.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a sectional view, partly in elevation, of a valve embodying features of my invention. Fig. 2 is a similar view illustrating a modified form of my invention. Fig. 3 is a sectional view taken on the line 3 3 of Fig. 2; and Fig. 4 is a perspective view illustrating, on an enlarged scale, the valve-seat shown in Fig. 2.

Referring to the drawings, a is a valve-casing having inlet and outlet openings for the reception of supply and discharge pipes and a partition, as a', provided with an opening for the flow of steam or other fluid, such as are provided in the ordinary type of globe-valves. Although this type is shown, my invention is not limited to same and is only used by way of illustration. From the partition a' I extend upward a collar or flange a^2, which may be slightly tapered and being of an annular contour in plan. Surrounding this collar or flange a^2 very snugly and tightly is a packing-ring b, which is not only held in position by it, but is greatly protected from the steam or other fluids as they pass through the opening in the partition a'. It will be seen in this connection that the steam traveling in an upward direction, as indicated by the arrow in Fig. 1, would come in contact with this collar or flange a^2, and thus save the packing-ring from being acted upon. Good results have been obtained in practice by making the packing-ring b beveled, which affords a very good bearing-surface for the valve-disk c, which may also be beveled, when brought to bear upon such ring.

The valve constructed according to my invention consists of the usual valve-spindle, but provided on its lower extremity with an offset, as c', which is adapted for and received by a recessed portion of the disk c and held into position by means of pins or key c^2 entering into the wall of the recessed disk, as shown in Fig. 3. This, it will be seen, dispenses with all bolts, nuts, and the like, and not only makes a very effective and quick manner of attachment, but on account of the play afforded makes the valve self-adjusting to any irregularity in the valve-seat that may occur.

It is sometimes advisable to use the form of valve-seat in Figs. 2, 3, and 4, where the packing-ring is held in a detachable valve-seat d. This valve-seat is best seen in Fig. 4, where it consists of an annular band provided with a flange d', which is adapted to receive and hold in proper position the packing-ring b. This band is also provided with upwardly-extending arms that engage the bonnet of the valve-casing. In order that these arms may not get into alinement with the discharge-outlet, a lug at e is extending from the valve-casing, and slots d^2 are made in the band of the valve-seat d, so that all that is necessary is to drop the valve-seat into the valve-casing thus coming upon and having a bearing on the ring b, and as one or the other of the slots may engage the lug the valve-seat is locked and the arms are transverse of the outlet.

It will be obvious to those skilled in the art to which my invention appertains that modifications may be made in detail without departing from the spirit of my invention, and hence I do not wish to be understood as limiting myself to the precise construction and arrangement of the parts hereinbefore explained; but,

Having thus explained the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination in a valve-casing presenting a plane flat seat with an upwardly-extending collar, a packing-ring forced under pressure snugly and tightly around said collar, and upon said seat and securely held

thereby from displacement, and free from engagement with any other part of the casing substantially as shown and described.

2. The combination in a valve-casing having a collar, with a detachable valve-seat comprising a band provided with a flange, a packing-ring held in said flange, arms adapted to engage the bonnet of the valve-casing whereby the valve-seat is held against displacement substantially as shown and described.

3. The combination in a valve-casing having inlet and outlet openings, with a detachable valve-seat comprising a band, arms extending upward from the band, a slot in said band, a lug or plug mounted in the valve-casing adapted to engage the slot when the valve-seat is dropped into the valve-casing, whereby the arms are ranged transversely of the inlet and outlet openings, substantially as described.

4. The combination in a valve-casing having a collar with a detachable valve-seat comprising a band, a packing-ring protected by said band and adapted to surround said collar, the same constituting a bearing-surface for the valve-disk substantially as shown and described.

5. The combination in a valve-casing having a collar, a packing-ring surrounding said collar, the packing-ring having a single beveled surface extending obliquely toward the collar from the outer periphery, and constituting a bearing-surface for the valve-disk substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE F. GODLEY.

Witnesses:
NICHOLAS S. ALBERTSON,
JOSHUA R. MORGAN.