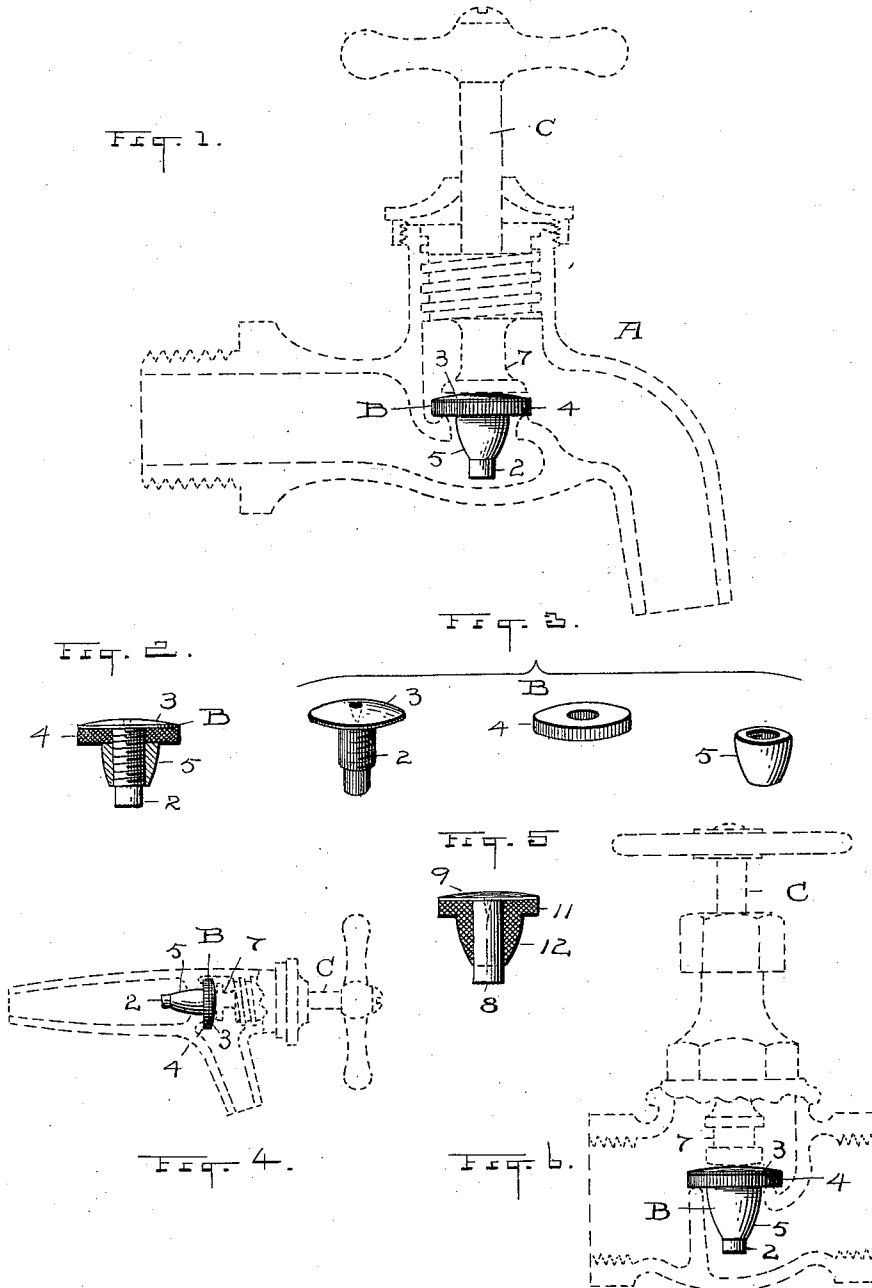


(No Model.)

J. H. GLAUBER.  
VALVE FOR FAUCETS, &c.

No. 595,877.

Patented Dec. 21, 1897.



ATTEST.

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# UNITED STATES PATENT OFFICE.

JOSEPH H. GLAUBER, OF CLEVELAND, OHIO.

## VALVE FOR FAUCETS, &c.

SPECIFICATION forming part of Letters Patent No. 595,877, dated December 21, 1897.

Application filed May 22, 1897. Serial No. 637,679. (No model.)

### *To all whom it may concern:*

Be it known that I, JOSEPH H. GLAUBER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Valves for Faucets and Like Uses; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to valves for faucets and like uses; and the object of the invention is to provide a valve which is separate from the controlling mechanism therefor and which constitutes a separate article of manufacture and sale and is adapted to operate all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of a common form of water-faucet in dotted lines and showing one form of my improved valve in full lines in working position. Fig. 2 is substantially a central sectional elevation of the valve seen in Fig. 1, and Fig. 3 is a view of the details of the said valve. Fig. 4 shows in dotted lines a differently constructed and arranged faucet from Fig. 1, in which the valve-seat is in a vertical instead of a horizontal plane and the valve is seen in full lines. Fig. 5 is a sectional elevation of a modified form of valve as used in Fig. 4. Fig. 6 shows still another style of faucet to which my improved valve is adapted, the faucet being in dotted lines, disclosing the interior construction, and the valve in full lines.

Several different styles or forms of faucets are shown in the drawings simply to demonstrate that my improved valve is not limited to any particular style or pattern of faucet nor to any particular position, whether vertical or horizontal, provided that other conditions are favorable for its use.

It is well known, particularly to those skilled in this art, that faucets are constantly becoming leaky and requiring skilled attention to repair them, simply because the valves are easily and quickly worn out. These valves mostly consist of a leather, rubber, or like disk, substantially as shown in Fig. 3, and adapted to be secured on a threaded pro-

jection on the valve-stem; but by reason of there being a somewhat sharply defined valve-seat and the valve being always brought to its seat by a grinding rotary movement when secured to the stem the valve is soon cut out and the faucet caused to leak. I have sought to remedy this manifest objection found in faucets as they are now commonly used by providing a valve which, first of all, is independent of the valve-stem, so as not to be rotated nor pressed to its seat by a rotary movement of the valve, thus avoiding the grinding or cutting action above referred to, and which, secondly, constitutes it a separate article of manufacture and sale adapted to faucets generally, as already described.

I am of course aware that in the broadest sense a separate valve is not now novel in the art; but I am not aware that any one ever before made or invented a valve constructed and adapted to operate with variously and widely different constructions of faucets regardless of their arrangement, as in the case of my improved valve.

Referring now to Fig. 1, we have a common form of faucet A, purposely shown in dotted lines so as to make clear its internal construction as well, and B is the valve in full lines and shown also in Figs. 2 and 3. The valve B, as here disclosed, consists, essentially, of the three parts seen separately in Fig. 3. Thus the body or main part has a threaded stem 2, with a wide slightly-convex thin disk-shaped head 3 integral therewith. The washer or disk 4, of leather, rubber, or other equivalent material, forming the valve portion proper, is perforated to be slipped onto the stem 2 over the threads thereon, and 5 is a tapered counterbalancing or guiding nut by which the said disk is confined in working position. The relation of the said parts as assembled for use is shown in dotted lines, Fig. 2.

It will be noticed that the very light convex head 3 is substantially as wide as the disk 4 and forms a rounded bearing-surface for pressure-contact by the flat portion 7 of the valve-controlling stem C. The water-pressure will, of course, raise the valve B when the valve-stem is withdrawn. Of course if a disk 4 should become worn it can easily be replaced. The part 5 is preferably tapered, so as to serve as a guide in seating the valve,

and it answers this purpose whether in horizontal or vertical position. It will also be understood that hot or cold water washers may be of varying size and large or small and yet be equally adaptable to use with this valve.

In Fig. 5 I show a modification of this valve in which there are a stem 8 and thin head 9 corresponding to Fig. 3; but the valve-disk 4 and tapered nut 5 seen in Fig. 3 are substituted by a part having a flange 11, corresponding to disk 4 in function, and a tapered portion 12, corresponding to nut 5. This part may be of rubber or any other suitable material and is firmly sleeved onto the stem 8 without a thread in this instance; but a thread might be used, if preferred.

In the positions seen in Figs. 1 and 6 the tapered projection of the valve serves both as a guide and a counterbalance for the valve. Obviously in a faucet like Fig. 6, where there is a large open space all about the valve-seat, there must be a guiding projection below to keep the valve relatively in the right place, and the weight of said projection contributes to this end. The guiding projection is likewise essential in a faucet as shown in Fig. 4, and thus the essentiality of this or a like projection on the valve is apparent.

In operation it occurs that the valve does not always seat in exactly the same place, as more or less rotary movement will take place under the pressure of the water. There is no adapting or fitting to seat necessary in this valve, as the device is ready to be dropped to its seat and to operate without further attention. Any one, therefore, who can remove the handle-stem and replace it can remove an old valve and place a new one in position. Either an entirely new valve can then be inserted or an old holder with a new disk, as in Fig. 2, or a valve portion, as in Fig. 5.

To adapt an ordinary water-faucet which uses valve-disks substantially as seen at 4, Fig. 3, to use with my improved valve, it is only necessary in some styles to remove the usual threaded projection or screw-point, which is on the bottom of the head 7 in such faucets, to secure the disk. This is easily cut off, so that the head 7 will present only a flat bottom surface, as in Figs. 1, 4, and 6. Having done this, my improved valve can be used in such faucet, whether it be one of the several forms here shown or of some other

kindred form, because, as seen, the head of the valve is very thin and nearly flat, so that it occupies very little room and in fact no more room than such valves can accommodate in connection with the seating-disk. It is this thin head that renders the valve practicable with the old and commonly-used faucets above described, and thus I have a valve which is variously usable and requires no specially-constructed faucet to use it.

In other faucets of this kind, instead of having an integral or fixed projection, as described, to receive the disk, there is a screw inserted through the disk into the head 7, so that when the disk is to be exchanged this screw is removed and replaced with the new disk; but experience shows that these screws often work loose and thus release the disk and then the faucet is useless until repaired. In the other case above, with a threaded projection on head 7, the nut securing the disk is liable to work off, which results in impairing the valve.

In Figs. 2, 3, and 5 I show a somewhat-tapered hole or bore centrally in the valve-holder from the top, so that a pointed instrument can be inserted therein to remove the valve.

What I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a valve for faucets consisting of a short central stem and a head integral therewith highest at its center and having a substantially flat under surface, a flexible seat for the valve next beneath said head and a tapered guide bearing against said seat and extending substantially to the lower end of the stem, substantially as described.

2. A valve for faucets consisting of a short central stem having a head integral therewith highest at its center and substantially flat on its under surface, a flexible seating portion next beneath said head and a tapered guide next beneath said seating portion and extending substantially to the lower end of the said stem, in combination with a faucet in which said valve is secured, and a stem arranged to bear on said valve, substantially as described.

Witness my hand to the foregoing specification this 11th day of May, 1897.

JOSEPH H. GLAUBER.

Witnesses:

H. T. FISHER,  
H. E. MUDRA.