

No. 773,578.

PATENTED NOV. 1, 1904.

V. MARTIN.
VALVE.

APPLICATION FILED OCT. 29, 1903.

NO MODEL.

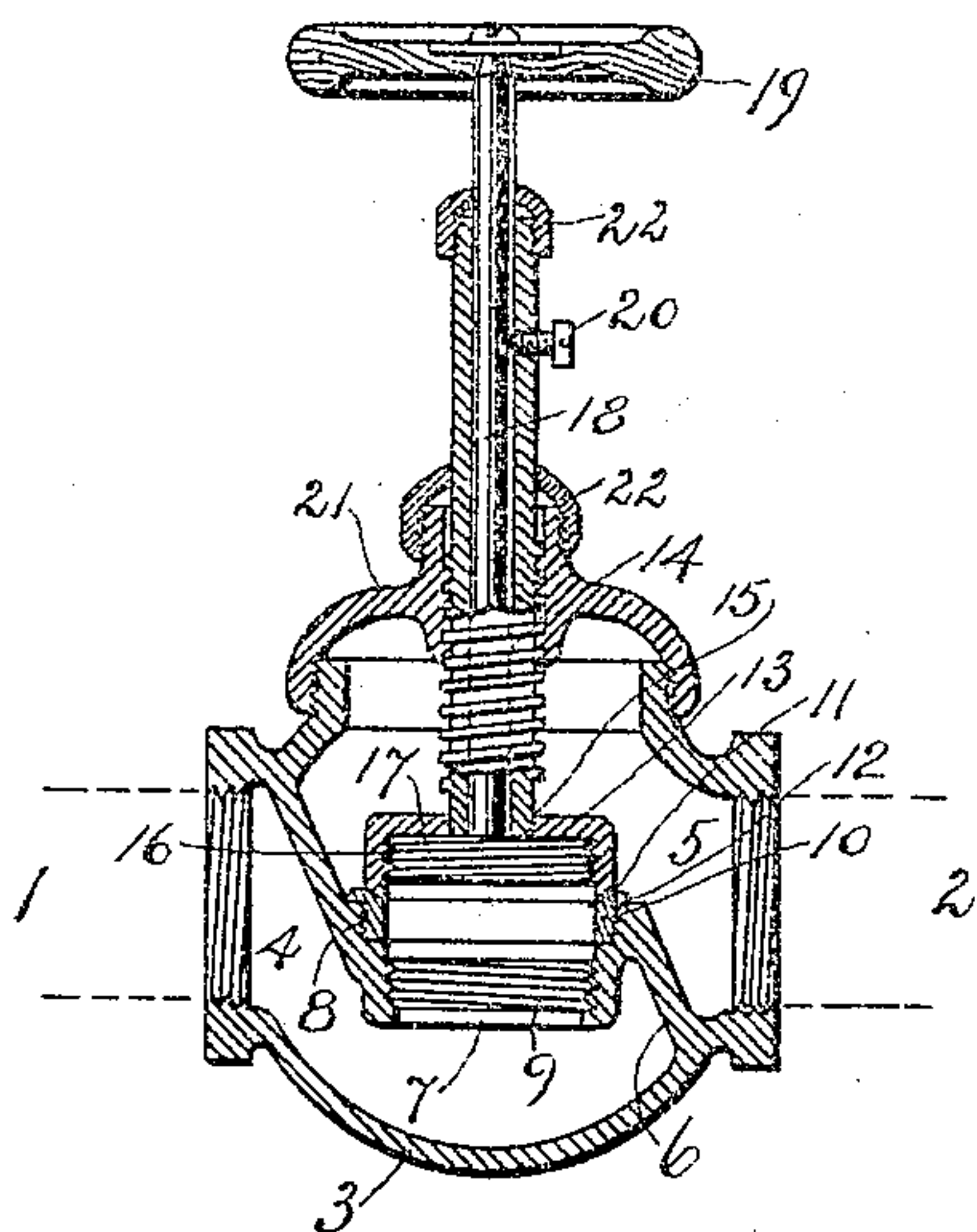


Fig. 1.

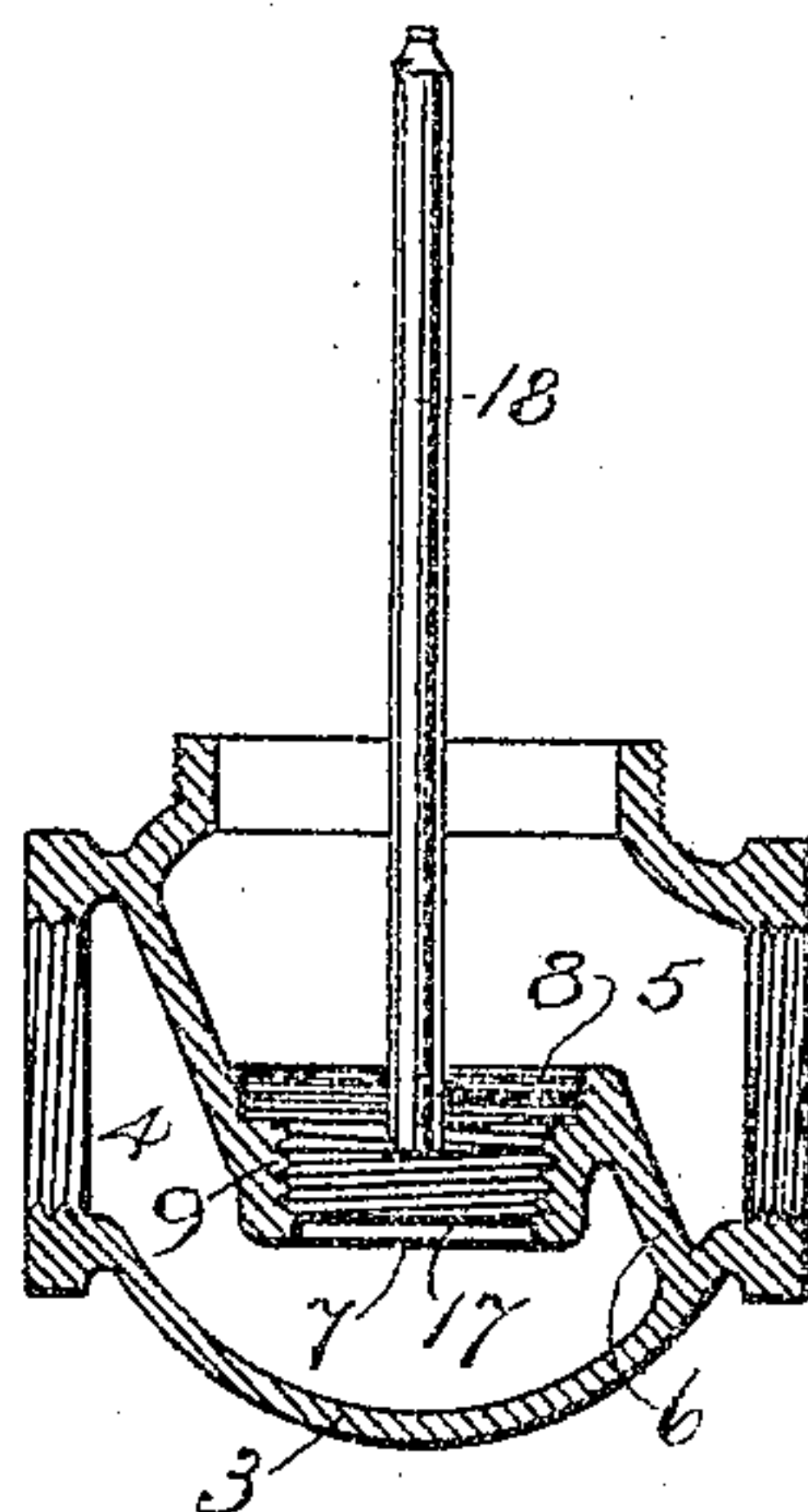


Fig. 2.

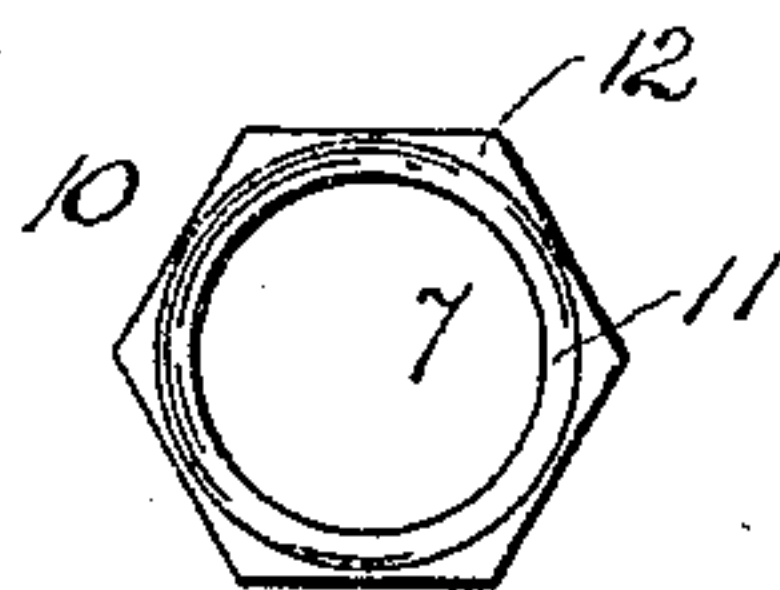


Fig. 3.

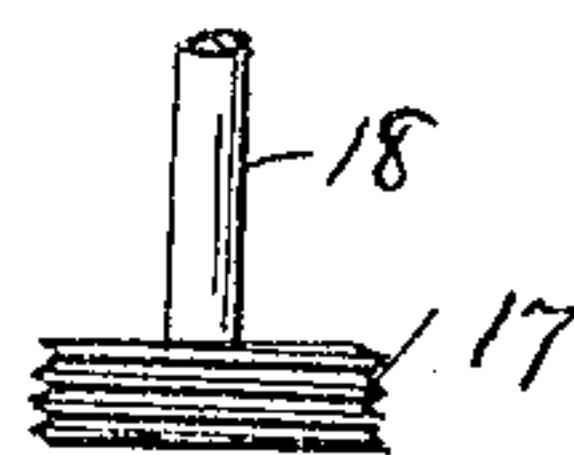


Fig. 4.

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UNITED STATES PATENT OFFICE.

VINTON MARTIN, OF TURTLECREEK, PENNSYLVANIA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 773,578, dated November 1, 1904.

Application filed October 29, 1903. Serial No. 179,041. (No model.)

To all whom it may concern:

Be it known that I, VINTON MARTIN, a citizen of the United States, residing at Turtlecreek, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Valves, of which improvement the following is a specification.

My invention relates to valves; and its object is to produce a valve in which the valve-seat and valve proper may be removed without interfering with the pressure on the inlet side of the pipe-line to which it is connected.

My invention consists of certain novel forms of details and combinations of parts herein after fully described and claimed.

In the accompanying drawings like characters refer to like parts throughout.

Figure 1 is a section through my valve when closed. Fig. 2 is a section with the removable parts absent. Fig. 3 is a detail of my valve-seat. Fig. 4 is a similar view of my plug.

In order that the operation of my valve may be rendered clear, it is shown in Fig. 1 as connected to a steam-pipe, and the pressure side relative to the valve is indicated at 1, while at 2 is shown the exhaust side.

In the construction of my valve I provide a valve-body 3 of the usual globe form and separate the inlet 4 from the outlet 5 by a diaphragm 6, which is provided with a passage 7, having screw-threaded portions 8 and 9. A valve-seat ring 10 is normally screwed into the opening, an external screw thereon coacting with the threaded portion 8, and is provided with a ground or otherwise finished surface 11 and any desired means for rotating the said valve-seat, as a nut 12, capable of being acted upon by a wrench.

A valve-disk 13 is provided above the valve-seat and is adapted to fit thereon. The valve-disk is mounted on a hollow valve-stem 14 by means of the threaded portion 15. This valve-disk is hollow, as shown, and has an interior screw-thread, as seen at 16. A screw-plug 17 is normally held in the hollow of the valve-disk, as shown in Fig. 1, and is provided with a stem 18, passing through the hollow valve-stem 14. A hand-wheel 19 serves to operate the valve and plug, as hereinafter described, and a set-screw 20 connects the plug and valve-

stems to hold them immovable relative to each other when desired or permit their free movement, if necessary.

A bonnet 21 is provided to close the hand-hole to the body of the valve and has the usual threaded portion to act with the thread on the valve-stem.

Packing-glands 22 of any desired type are held on the bonnet and valve-stem to render the same steam-tight.

Passing now to the description of the operation of my device, it will be supposed that it is desired to renew or regrind the valve-disk and seat. The hand-wheel 19 is first turned to close the valve-disk 13 down on the seat 10. The set-screw 20 is then loosened, thus releasing the plug-stem 18 from the valve-stem 14. The hand-wheel 19 is now turned still farther, and this releases the plug 17 from the valve-disk 13 and screws it into the threaded portion 9 of the passage 7, as seen in Fig. 2. This effectually closes the passage 7. The hand-wheel is now removed, the bonnet unscrewed, and the packing-glands taken off. The bonnet, hollow valve-stem, and valve-disk may now be slid off the plug-stem, thus exposing the valve-seat ring, which may in turn be removed through the hand-hole. To replace the parts, it is easily understood that it is only necessary to reverse the operation, and it is obvious that the valve-disk may be detached from the valve-stem and replaced or ground, as desired. It is thus seen that I have provided a simple and efficient device for the purpose specified and one which can be manufactured at low cost.

It is obvious that minor changes may be made in the details of my device without affecting the principles thereof, and I do not, therefore, desire to confine myself to the exact form herein shown and described, but wish to include all such as properly come within the scope of my invention.

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

1. In a valve, a body having a hand-hole therein permitting access to the interior, a removable bonnet closing said hand-hole, a diaphragm in said body provided with a steam-

passage therethrough, a female screw situated at the upper part of said passage, a second female screw at the lower part of said passage, a screw-threaded valve-seat ring held in
5 the first-mentioned screw, a valve-disk having a screw-threaded recess in the lower side thereof, a screw-threaded hollow valve-stem detachably attached to said valve-disk and passing through said bonnet, a screw-threaded
10 plug normally held in the threaded recess of the valve-disk, a plug-stem attached thereto and passing through said hollow valve-stem, means to lock said stems together, means to operate said valve-disk and means to operate
15 said plug, substantially as described.

2. In a valve, a valve-disk carrying a hollow

stem, a plug normally received in said disk and having a stem extending through said hollow stem, and a set-screw passing through the hollow stem and bearing against the plug-stem to
20 enable said stems to operate in unison or independently, said valve-disk having interior threads and said plug having exterior threads for engagement with said interior disk-
25 threads.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

VINTON MARTIN.

Witnesses:

JOHN GROETZINGER,
H. J. LEVIS.