

(Model.)

M. HASTINGS.

VALVE.

No. 246,132.

Patented Aug. 23, 1881.

Fig. 1.

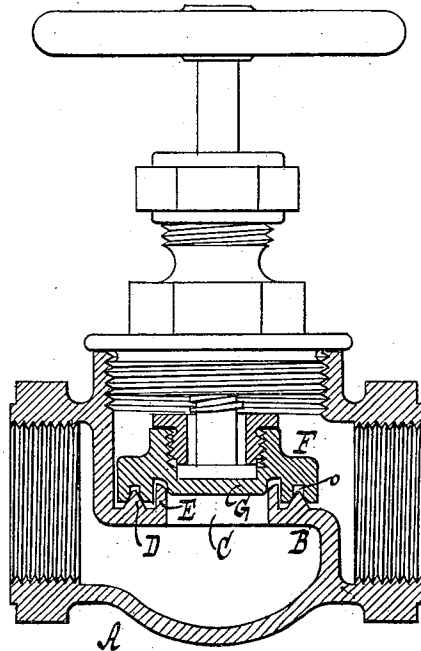


Fig. 2.

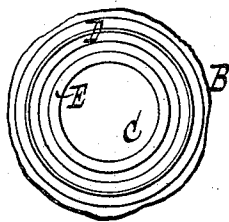
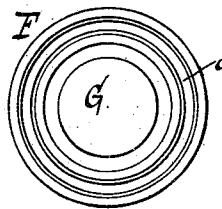


Fig. 3.



Witnesses.
Otto Schufeldt
William Miller

Inventor
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by *Van Santvoord & Hunt*
his attys.

UNITED STATES PATENT OFFICE.

MICHAEL HASTINGS, OF BROOKLYN, NEW YORK.

VALVE.

SPECIFICATION forming part of Letters Patent No. 246,132, dated August 23, 1881.

Application filed June 27, 1881. (Model.)

To all whom it may concern:

Be it known that I, MICHAEL HASTINGS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Valves, of which the following is a specification.

This invention relates especially to the formation of the valve-seat and valve; and it consists in the combination of the valve-diaphragm constructed with an annular raised valve-seat surrounding its port, and with an upwardly-projecting guard-flange interior of and higher than the valve-seat, and the valve proper having an annular groove adapted to the valve-seat, so that while the valve is enabled to close tightly on its raised seat the latter is kept free of grit or other impure matter in the steam or other fluid passing through the valve. The valve has a central stud fitting into or within the guard-flange, for centering the valve, especially in grinding the same to its seat.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a vertical longitudinal section. Fig. 2 shows the valve-seat in plan view. Fig. 3 is an inverted plan view of the valve.

Similar letters indicate corresponding parts.

The letter A designates the valve-shell, cast with the usual diaphragm, B, having a central port or aperture, C.

Surrounding the port C, and at a short distance therefrom, is the valve-seat D, while on the edge of the port is the guard-flange E, so that the latter is interior of the valve-seat. The valve-seat D is raised above the top surface of the diaphragm B, and is annular in its shape or outline, corresponding to the port C, the seat having, moreover, in this example an inverted V shape in cross-section. The guard-flange E is higher than the valve-seat D, and hence, when the valve is opened and steam or other fluid passes up through the port C, the fluid is carried or thrown above the valve-seat by the flange, and blows over the seat, thus leaving it, as well as the space on either side thereof, free of grit or any other impurities that may be mixed with the fluid.

The letter F designates the valve, provided with an annular groove, *o*, in its lower surface. The circle of this groove is equal in diameter to that of the valve-seat D, and its opposite walls are substantially straight, while its width is less than the greatest width of the valve-seat, so that by its means the valve is adapted to wedge down tightly upon the seat.

In a central portion of the valve F, and upon its lower surface, is formed a stud or protuberance, G, the diameter of which is equal to the inner diameter of the guard-flange E, so that it fits into or within this flange. As the valve F approaches its seat the stud G takes its place within the guard-flange E, thus forming a guide for centering the valve, and it will be seen that an important advantage is thereby gained, not only in closing the valve, but also and especially in grinding the same to the seat.

I am aware that the raised valve-seat and grooved valve, broadly, are not new, and I do not claim such as my invention.

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

1. The combination, substantially as hereinbefore set forth, of the diaphragm constructed with the annular raised valve-seat surrounding its port and with the upwardly-projecting guard-flange interior of and higher than the valve-seat, and the valve having an annular groove adapted to the valve-seat.

2. The combination, substantially as hereinbefore set forth, of the diaphragm constructed with the annular raised valve-seat surrounding its port, and with the upwardly-projecting guard-flange interior of and higher than the valve-seat, and the valve having an annular groove adapted to the valve-seat, and having a central stud fitting into or within the guard-flange for centering the valve.

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

MICHAEL HASTINGS. [L. S.]

Witnesses:

W. HAUFF,
CHAS. WAHLERS.