

(No Model.)

M. HASTINGS.

STOP VALVE.

No. 271,067.

Patented Jan. 23, 1883.

Fig.1.

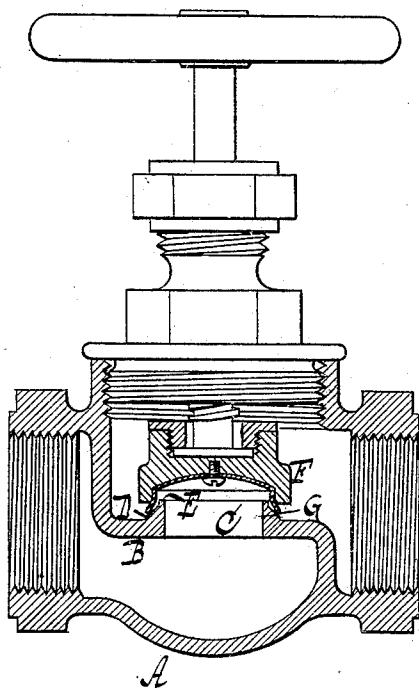


Fig.2.

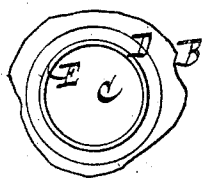
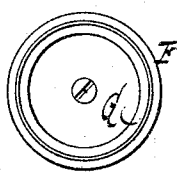


Fig.3.



WITNESSES:

Otto Hufeland

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INVENTOR

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UNITED STATES PATENT OFFICE.

MICHAEL HASTINGS, OF BROOKLYN, NEW YORK.

STOP-VALVE.

SPECIFICATION forming part of Letters Patent No. 271,067, dated January 23, 1883.

Application filed May 31, 1882. (No 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 Stop-Valves, of which the following is a specification.

This invention relates to that class of valves for which Letters Patent of the United States were granted to me August 23, 1881, No. 246,132; and the invention has for its objects to facilitate the manufacture of the valves and to provide novel means whereby a tight joint is provided between the valve and valve-seat, and the latter retained free from grit, sediment, or other impurities. These objects I accomplish by the construction of parts illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical central section. Fig. 2 is a plan view of the valve-seat. 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 in it a port, C, of circular shape. Surrounding the port C is the valve-seat D, which is beveled, either in a straight or curvilinear plane, and at the upper edge of the seat is the guard-flange E, the same forming a continuation of the seat. By this construction the formation of the seat and flange is materially facilitated, while the flange at the same time answers the purpose of keeping the seat free from grit or other impurities that may be contained in the fluid passing through the valve.

The letter F designates the valve, and G its outwardly-flaring elastic lip. This lip is formed by the edge of a sheet-metal cap, which is fitted into a concavity formed in the lower surface of the valve, such cap being secured in position by a screw or suitable means. When the valve is closed the lip G embraces and impinges against the valve-seat, and, owing to its elasticity, it tends to produce a tight joint, while as the lip is forced down on the seat it acts as a scraper to keep the seat free of sediment.

I am aware that a valve has been provided with an inclined valve-seat and with a cup-shaped valve arranged to embrace and cover the valve-seat; also, that the port through the

diaphragm of a valve has been surrounded by a narrow square rim to form a valve-seat; and, further, that the diaphragm of a valve has been provided with a valve-seat formed by a raised annular ledge interiorly beveled and exteriorly curved to co-operate with a valve composed of a recessed plug in which is secured a block of rubber or other packing adapted to be expanded by compression over the exterior curved part of the said annular ledge. Such features, therefore, I do not claim. My invention differs from such in that I provide the diaphragm with a beveled or inclined valve-seat, formed at its upper portion into a vertically-projecting guard-flange, which serves to retain the beveled or inclined seat free from grit and impurities; and, further, I provide the valve with an outwardly-flaring sheet-metal elastic lip, which embraces the valve-seat and its guard-flange, secures a tight joint, and serves to scrape the beveled valve-seat, and thereby retain it free from sediment.

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

1. In a stop-valve, the diaphragm B, constructed with the inclined valve-seat D, formed at its upper edge into a vertical guard-flange, E, in combination with a valve provided with a flaring lip adapted to embrace the inclined valve-seat and its guard-flange, substantially as described.

2. In a stop-valve, the combination of the diaphragm B, provided with the port C, and the surrounding inclined valve-seat D, terminating at its upper portion in a vertically-projecting flange, E, for deflecting grit, &c., away from the valve-seat, and a valve, F, provided with an attached outwardly-flaring sheet-metal lip, G, arranged to embrace the valve-seat, substantially as and for the purposes described.

3. In a stop-valve, the diaphragm B, formed integral with the inclined valve-seat D, and vertical guard-flange E, forming a continuation of the upper portion of the valve-seat, in combination with the valve F, provided with an attached outwardly-flaring sheet-metal elastic lip, G, arranged to embrace the valve-seat and its guard-flange, substantially as and for the purpose described.

4. In a stop-valve, the diaphragm B, provided with the inclined valve-seat D, formed at its upper portion into a vertically-projecting

guard-flange, E, in combination with the valve
F, having a concavity or recess in its lower
side and the detachable sheet-metal cap se-
cured in the said concavity or recess of the
5 valve and provided with the outwardly-flaring
elastic lip G, arranged to embrace the valve-
seat and its guard-flange, substantially as and
for the purposes described.

In testimony whereof I have hereunto set my
hand and seal in the presence of two subscrib- 10
ing witnesses.

MICHAEL HASTINGS. [L. S.]

Witnesses:

HENRY E. HUTCHINSON,
JOHN RYER.