

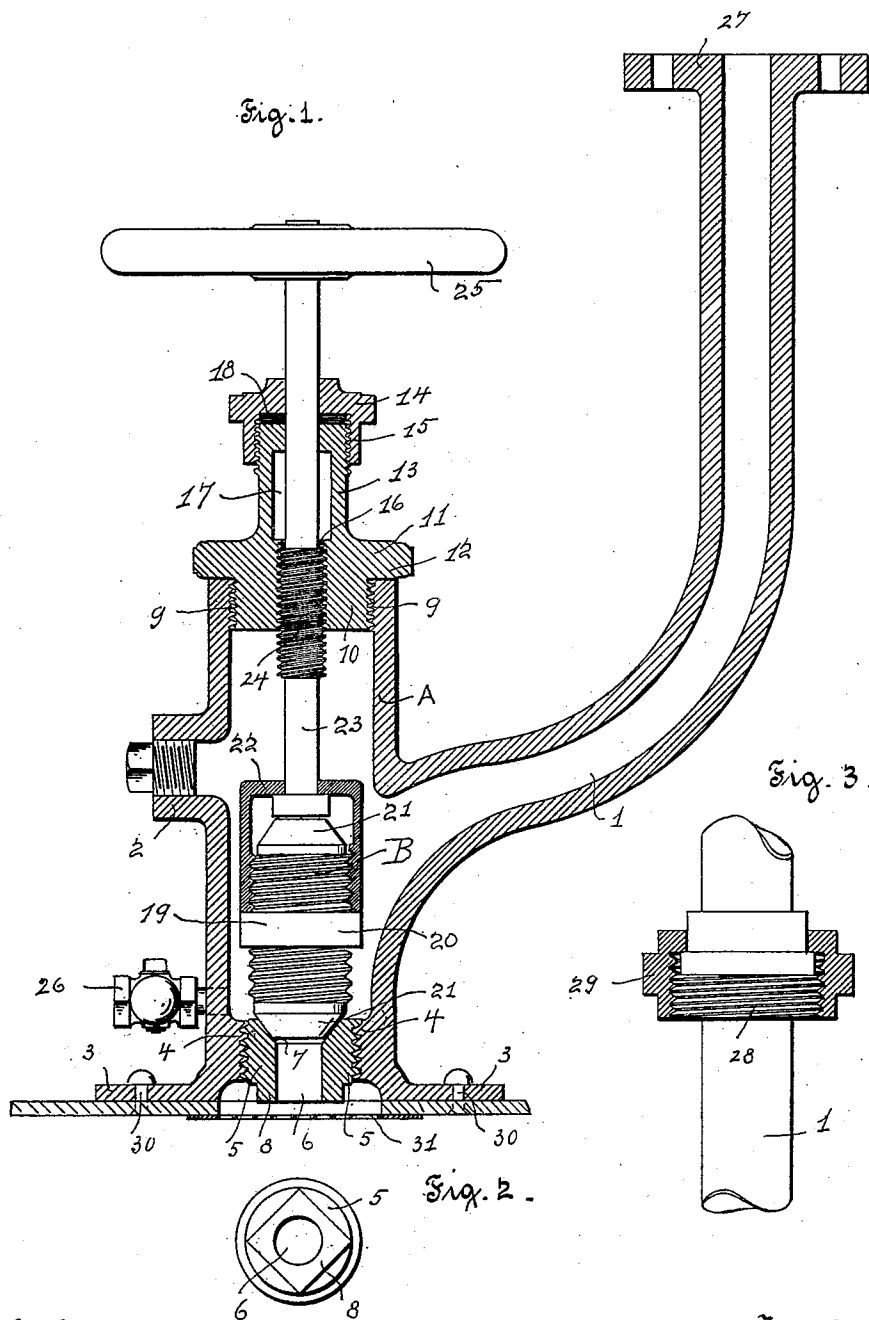
No. 648,923.

Patented May 8, 1900.

F. CHARETTE.
SEA VALVE FOR VESSELS.

(Application filed Mar. 10, 1900.)

(No Model.)



Witnesses—
H. J. Martin
J. A. Boake

Inventor—
Frank Charette
By Robt B Wilson
his Attorney

UNITED STATES PATENT OFFICE.

FRANK CHARETTE, OF TOLEDO, OHIO.

SEA-VALVE FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 648,923, dated May 8, 1900.

Application filed March 10, 1900. Serial No. 8,127. (No model.)

To all whom it may concern:

Be it known that I, FRANK CHARETTE, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Improvement in Sea-Valves, of which the following is a specification.

My invention relates to improvements in sea-valves for vessels, and has for its objects to provide a valve of the kind that is simple and economical in construction, readily adjusted and repaired, and not subject to injury from freezing while the vessel is in winter harbor. I accomplish these objects as illustrated in the accompanying drawings and as hereinafter described.

In the drawings, Figure 1 is a view in vertical transverse section of my invention. Fig. 2 is a bottom view of the detachable valve-seat ring, and Fig. 3 is a view of a modified form of flange for a Y branch threaded for a union.

Referring to the drawings, A is a tubular casing of the valve, having a Y branch 1, a lateral branch 2, and a base-flange 3, all cast integral therewith. At its base casing A is provided with an interiorly-threaded portion 4, into which is fitted a detachable exteriorly-threaded ring 5, forming an entrance-port 6, central to the base of the casing, having its interior rim countersunk to form a valve-seat 7 and its outer rim 8 projected and squared for engagement by a wrench. At its top end casing A is also provided with an interiorly-threaded portion 9, into which is fitted the threaded portion 10 of a plug 11, having a flange 12, angled for a wrench on its outer edge and faced on its lower side for accurate engagement with the rim of casing A, and a neck 13, outwardly threaded at its upper end and provided with a cap 14, having an interiorly-threaded cylindrical flange 15, adapted to engagement with the threaded portion of the neck 13.

Central through plug 11, its neck 13, and cap 14 is an orifice 16 for the valve-stem, at the lower end of which the plug is interiorly threaded, and in the neck 13 is an enlargement 17 of the orifice, and between the top end of the neck and the cap is placed a packing-ring 18.

B is the valve mechanism, comprising an elongated reversible valve-plug 19, provided with a central flange 20 and having the ends 21 made conical and each adapted to seat into valve-seat 7 and close port 6 and having the portions intermediate between the flange and the conical ends threaded, a swivel sleeve 22, inwardly threaded and adapted to threaded engagement with either end of valve-plug 19, and a valve-stem 23, preferably swivel-jointed at its lower end to sleeve 22 and extending through orifice 16 in plug 11 and cap 14 and provided with a threaded portion 24, adapted to engagement with the interior-threaded portion of plug 11, and having a hand-wheel 25 at its upper end for rotating the stem, whereby the valve-plug is raised or lowered to open or close the port.

It is apparent that as constructed the valve-plug 19 may be reversed and either end of it used for contacting with valve-seat 7 to close the port and for engagement with sleeve 22, and that it will not turn with the stem while being tightened into the valve-seat, thereby lessening the wear of the seat and the valve-plug, and that all the parts subject to wear may be readily removed for repair or replaced by similar parts. If desired, however, sleeve 22 may be secured solidly to stem 23.

To avoid injury from water freezing within the casing, the valve is seated in the base of the casing near to the outer sheathing of the vessel, and a drain-cock 26 is secured in the wall of the casing, with its opening at a point adapting it to drain off all the water remaining in the valve and its connecting-pipes when the valve is closed. Thus constructed no injury can result to the valve from water freezing in its outer port.

As shown in Fig. 1, the valve is provided with a Y branch 1 for the main service-pipe and a lateral branch 2, temporarily plugged, for the attachment of an auxiliary or independent service-pipe. The casing, however, may be supplied with one or more or either or both forms of branches, as required, the Y branch being preferable by reason of the reduced friction and number of parts and joints required to make connection with the valve, while affording equal access to the valve-wheel. The Y branch may be con-

structed with a bolt-flange 27, as in Fig. 1, or with a threaded flange 28 and a union 29, as in Fig. 3, for its means of pipe connection.

The valve is secured to the inner surface of the sheathing of the vessel, around a suitable opening therein, by bolts or rivets 30 through the sheathing and the base-flange 3, and the opening in the sheathing is provided with a strainer 31 to prevent fouling of the valve.

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

1. In combination in a sea-valve, a tubular casing provided with one or more integral branches adapted for service-pipe connections, and an outer base-flange adapted for securing the casing to the sheathing of a vessel; a detachable base-ring secured within the base of the casing, forming an entrance-port to the casing central to the base, countersunk at the inner end to form a valve-seat for the port; a detachable top closure for the casing, having a valve-stem extending therethrough in central, rotatable and screw-threaded engagement therewith, and provided with means for packing the stem and the closure and for rotating the stem; a thimble-sleeve within the casing, secured to the inner end of the stem; and a reversible valve-plug having each end adapted either for engagement with the sleeve, or for seating in the valve-seat to close the port, and adapted, when either end is secured to the sleeve, to hold the disengaged end in position to close the port, when brought into contact with the valve-seat by the rotation of the stem.

2. In combination in a sea-valve, a tubular casing provided with one or more integral branches adapted for service-pipe connections, and an outer base-flange adapted for securing the casing to the sheathing of a vessel; a detachable base-ring secured within the base of the casing, forming an entrance-port to the casing central to the base, countersunk at the inner end to form a valve-seat for the port; a detachable top closure for the casing, having a valve-stem extending therethrough in central, rotatable and screw-threaded engagement therewith, and provided with means for packing the stem and the closure and for rotating the stem; a swivel-sleeve within the casing, swivel-jointed to the stem; and a reversible valve-plug having each end adapted either for engagement with the sleeve, or for seating in the valve-seat to close the port, and adapted, when either end is secured to the sleeve, to hold the disengaged end in position to close the port when brought into contact with the valve-seat by the rotation of the stem.

3. In combination in a sea-valve, a tubular casing provided with one or more integral branches adapted for service-pipe connections, and an outer base-flange adapted for securing the casing to the sheathing of a vessel;

a detachable base-ring secured within the base of the casing, forming an entrance-port to the casing central to the base, countersunk at the inner end to form a valve-seat for the port; a detachable top closure for the casing, having a valve-stem extending therethrough in central, rotatable and screw-threaded engagement therewith, and provided with means for packing the stem and the closure and for rotating the stem; a swivel-sleeve within the casing, swivel-jointed to the stem; a reversible valve-plug having each end adapted either for engagement with the sleeve, or for seating in the valve-seat to close the port, and adapted, when either end is secured to the sleeve, to hold the disengaged end in position to close the port when brought into contact with the valve-seat by the rotation of the stem; and a drain-cock secured to and opening within the base of the casing, adapted to drain the water from the casing, when the port of the valve is closed.

4. In combination in a sea-valve, a tubular casing inwardly threaded at each end and provided with one or more integral branches adapted for service-pipe connections, and an outer base-flange adapted for securing it to the sheathing of a vessel; a detachable base-ring outwardly threaded for engagement with the inwardly-threaded portion of the base of the casing, and forming a port central thereto, countersunk at the inner end to form a valve-seat for the port, and provided with means at the outer end for attaching and detaching the ring from the casing; a detachable top closure for the casing, threaded and flanged for engagement with the top end of the casing and provided with a central, rotatable, screw-threaded valve-stem and with means for packing the stem and the closure and for rotating the stem; a sleeve within the casing, inwardly-threaded and swivel-jointed to the stem, and a reversible valve-plug adapted at each end, either for threaded engagement with the sleeve, or for seating in the valve-seat to close the port, and when either end is secured to the sleeve, the other end is in position to close the port when lowered to contact with the seat by the rotation of the stem.

5. The sea-valve herein described, comprising a casing A, having a Y branch 1, a lateral branch 2, and a base-flange 3 cast integral therewith; a detachable base-ring 5 secured within the base of the casing and forming an entrance-port central to the base of the casing, countersunk to form a valve-seat for the port; a detachable top closure for the casing, comprising plug 11, cap 14, and packing 18, having a rotatable, screw-threaded valve-stem 23 extending centrally therethrough and in threaded engagement with the plug 11, and provided with a hand-wheel; an inwardly-threaded swivel-sleeve 22 within the casing, and swivel-jointed to the inner end of stem 23; a reversible plug-valve 19 having a cen-

tral flange 20, conical ends 21, each adapted to seat within the valve-seat and close the port, and threaded portions intermediate between the flange and the ends, adapting the
5 valve-plug for engagement by either end with the sleeve, with the disengaged end in position to be moved into or out of engagement with the valve-seat by the rotation of the stem, and a drain-cock 26 secured to and hav-

ing an opening within the base of the casing, so as and for the purpose set forth.

In witness whereof I have hereunto set my hand this 5th day of March, A. D. 1900.

FRANK CHARETTE.

Witnesses:

F. S. MACOMBER,
CHAS. A. BOAKE.