

F. C. BLANCHARD & P. G. DARLING.
VALVE.

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915,544.

Patented Mar. 16, 1909.

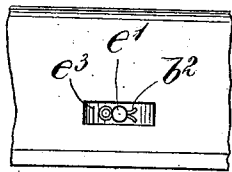


FIG. 2.

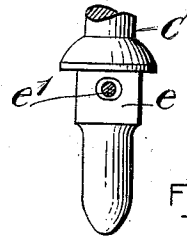


FIG. 3.

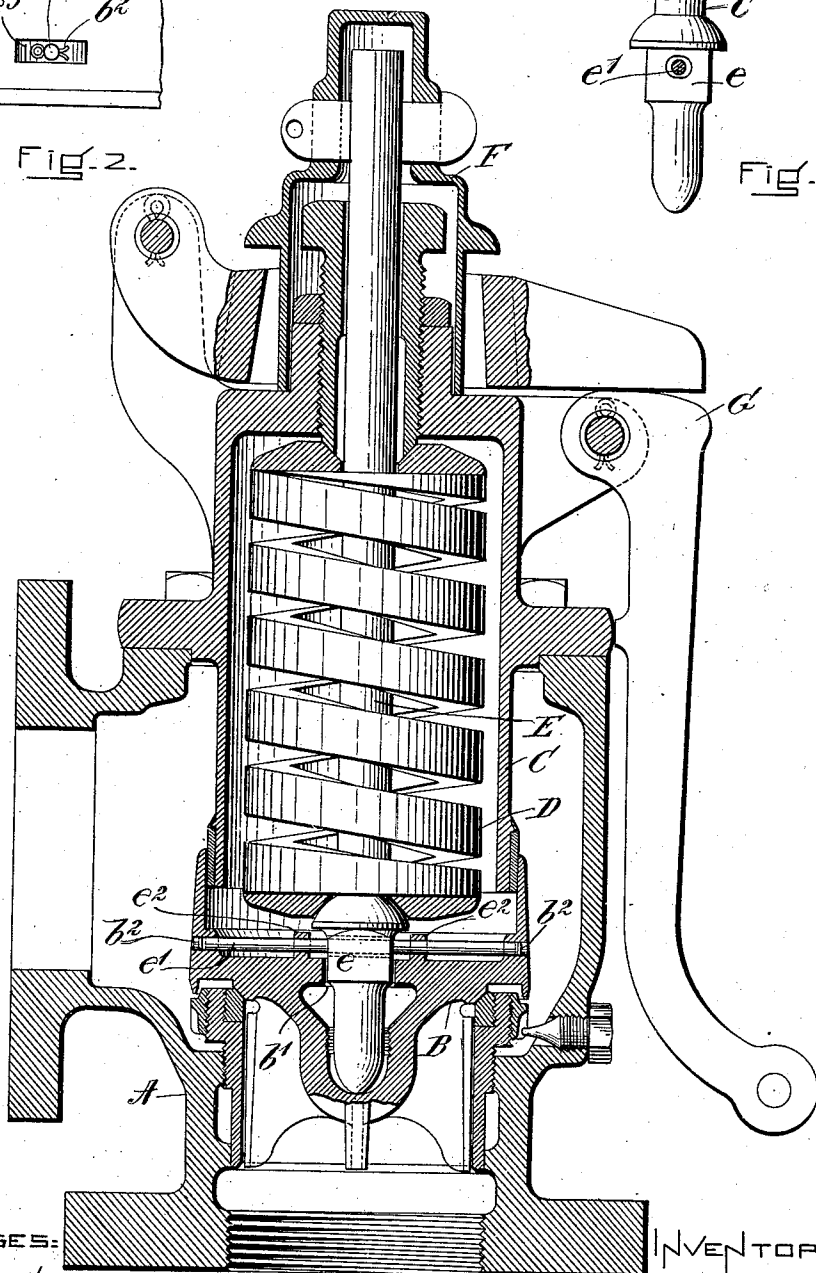


FIG. 1.

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FREDERICK C. BLANCHARD AND PHILIP G. DARLING, OF BRIDGEPORT, CONNECTICUT,
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VALVE.

No. 915,544.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, FREDERICK C. BLANCHARD and PHILIP G. DARLING, citizens of the United States, and residents of Bridgeport, in the county of Fairfield and State of Connecticut, have invented new and useful Improvements in Valves, of which the following is a specification.

Our invention relates to valves and more particularly to marine valves and its object is to provide simple and effective means for rotating the valve on its seat and for lifting it therefrom whether or not said valve is under pressure.

Referring to the drawings illustrating an embodiment of our invention:—Figure 1 is a sectional view of a valve showing our improvements; and Figs. 2 and 3 show details of construction.

A is a valve casing provided with a valve seat.

B is a valve having an upwardly extending cylindrical flange and a square cored hole b' at the center of its head.

C is a spring casing or cover containing a spring D which holds the valve on its seat in the usual manner. The spindle E is milled to a square section e which fits loosely in the hole b' of the valve head, and the upper end of said spindle projects through the top of the cover and is provided with a cap and key F.

The valve is secured to the stem in the following manner: A transverse hole is drilled completely through the valve head and a similar hole registering therewith, is drilled through the square section e of the spindle. Lugs e^2 extend upward from the valve close to the spindle and said lugs are provided with holes registering with the holes in the valve and spindle. The valve pin e' is inserted in these holes and a circular milling cutter is sunk into the valve head at e^3 to permit the insertion of a split pin b^2 through each end of the said valve pin, thus securing the valve to the stem. The insertion of the split pins b^2 prevents the valve pin b' from working out endwise and affords an easy method of removing said valve pin; for when one of the split pins is removed said valve pin may be easily drifted out; in fact, experiment has shown that even though the valve pin be stuck in hard with scale or corrosion,

the correct application of a drift enables the said valve pin to be quickly and easily removed.

In operation, when a rotation of the valve is desired, the spindle is turned by the cap and key in the usual manner. This turning movement of the spindle causes the square section e to engage the side of the square cored hole b' , acting in effect as an interior socket wrench to turn the valve on its seat.

To lift the valve from its seat, the cam-levers G are operated in the usual manner, and as the spindle rises it carries with it the valve B secured thereto by the valve pin b^2 as above described.

The purpose of the valve pin b^2 is merely to lift the valve with the spindle, and in order that the latter may transmit the twisting strain without throwing it upon the comparatively slight valve pin b^2 , the hole in the square section of the spindle is given extreme clearance so that the square section of the spindle engages the side of the squared cored hole, thus transmitting the twisting motion without strain on said valve pin.

What we claim is:

1. In a valve, a valve casing provided with a valve seat, a valve cooperating with said valve seat and provided with a square opening, a spindle having a squared section fitting within and adapted to engage the side of said opening, a pin passing through said valve and said spindle, and means to rotate and to lift said spindle.

2. In a valve, a valve casing provided with a valve seat, a valve cooperating with said valve seat and provided with a square opening, a spindle having a squared section fitting within and adapted to engage the side of said opening, a pin passing through said valve and said spindle, a cap and key mounted upon and adapted to rotate said spindle, and means to lift said spindle.

3. In a valve, a valve casing provided with a valve seat, a valve cooperating with said valve seat and provided with a square opening, a spindle having a squared section fitting within and adapted to engage the side of said opening, a pin passing through said valve and said spindle, a cap and key mounted upon and adapted to rotate said spindle, and a cam lever secured to and adapted to lift said spindle.

4. In a valve, a valve casing provided with a valve seat, a valve cooperating with said valve seat and provided with a square opening, a spindle having a squared section fitting within and adapted to engage the side of said opening, a valve pin passing through said valve and said spindle, split pins inserted in each end of said valve pin and means to rotate and to lift said spindle.
5. In a valve, a valve casing provided with a valve seat, a valve cooperating with said valve seat and provided with a square opening, a spindle having a squared section fitting within and adapted to engage the side of said opening, a valve pin passing through said valve and said spindle, split pins inserted in each end of said valve pin, a cap and key mounted upon and adapted to rotate said spindle, and a cam lever secured to and adapted to lift said spindle.
6. In a valve, a valve casing provided with a valve seat, a valve cooperating with said valve seat and provided with a square opening, a spindle having a squared section fitting within and adapted to engage the side of said

opening, lugs on said valve, a valve pin passing through said valve, said lugs and said spindle, split pins inserted in each end of said valve pin, and means to rotate and to lift said spindle.

7. In a valve, a valve casing provided with a valve seat, a valve cooperating with said valve seat and provided with a square opening, a spindle having a squared section fitting within and adapted to engage the side of said opening, lugs on said valve, a valve pin passing through said valve, said lugs and said spindle, split pins inserted in each end of said valve pin, a cap and key mounted upon and adapted to rotate said spindle, and a cam lever secured to and adapted to lift said spindle.

Signed by us at Bridgeport, Connecticut this 30th day of December, 1908.

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Witnesses:

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