

(No Model.)

L. J. BAKER.

BOAT PLUG.

No. 277,102.

Patented May 8, 1883.

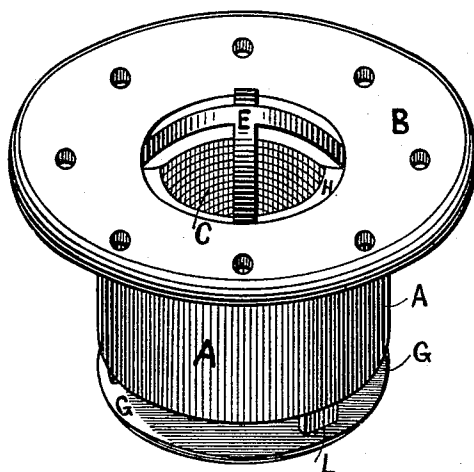


Fig. 1.

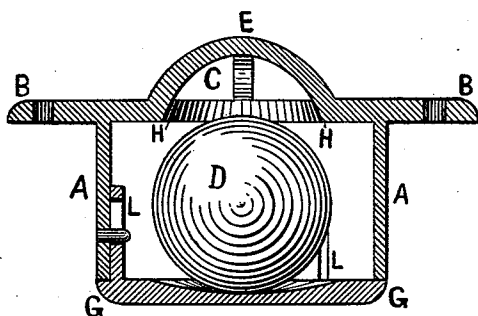


Fig. 3.

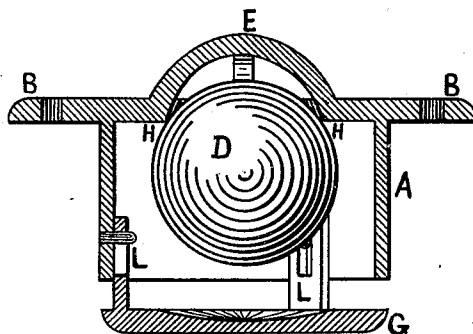


Fig. 2.

WITNESSES.

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UNITED STATES PATENT OFFICE.

LORING J. BAKER, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO FRANK P. BAKER AND JOHN W. CLARK, BOTH OF SAME PLACE.

BOAT-PLUG.

SPECIFICATION forming part of Letters Patent No. 277,102, dated May 8, 1883.

Application filed October 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, LORING J. BAKER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and
5 useful Improvements in Automatic Stoppers or Plugs for the Bottoms of Boats, of which the following is a specification.

The object of my invention is to provide an automatic stopper for the bottoms of boats
10 which shall be held closed when the boat is in the water by the action of the water thereon, and shall automatically open when the boat is removed from the water, so as to permit any water therein to run out; and it consists of a
15 hollow metallic bushing or valve-chamber provided with an elastic or rubber ball-valve, so constructed and arranged within the metal casing as to be free to move up or down with-
in the chamber against its seat, so as to close
20 the opening by pressure of the water beneath and fall therefrom by its own gravity when removed from the water, so as to permit any water that may have collected within the bottom
of the boat to run out, and in further details
25 of construction, as hereinafter more fully described, and set forth in the claims.

Figure 1 represents a perspective view of my invention removed from the boat. Fig. 2 represents a vertical central section of the same,
30 showing internal rubber ball-valve closed upward against its seat. Fig. 3 represents a similar view, with the rubber ball-valve open and the bottom metal stop-valve closed.

A represents a vertical cylindric shell or case,
35 provided at its upper end with a horizontal peripheral or outward-projecting flange, B, provided with screw or bolt holes, whereby the same may be secured within a hole formed in the bottom of a boat to receive the cylindric
40 portion A by screws or rivets passing through said flange and the bottom of the boat adjacent to and surrounding said portion A; and in order to prevent foreign substances from passing downward within the said case A, there
45 is provided a metal, wire-cloth, or other screen, C, which is protected from injury by undue pressure from above by bars or curved truss-
bars E, extending over the said wire-gauze, covering the cylindric opening of the said case
50 A. Now, in order to close the said opening of

the said shell or case A automatically by the action of the water, an elastic or rubber ball-valve, D, is introduced within the said vertical opening through the said shell or cylindric
portion of the said case A, and is adapted to
55 be forced upward against the edge of the inward-projecting annular flange H, formed at the upper end of said case A, thereby closing the internal opening against the upward pas-
sage of water; and in order to retain the said
60 rubber ball-valve D within the said shell or case A, a flat disk or valve plate, G, is fitted to close upward against the lower end of the said case A, and is connected with the interior
of the same by two or more vertical supports
65 or lugs, L, provided with vertical slots or openings, which engage with projecting pins formed within the said case A, near the lower end
thereof, so as to permit the said flat valve G
to be closed in case the bottom of a boat should
70 run aground, so as to prevent mud or other substance entering therein to obstruct the free working of the said automatic rubber ball-
valve D.

It will be seen that when a boat's bottom is
75 provided with the above-described plug or automatic valve-stopper, when drawn ashore or removed from the water, so as to permit both valves to drop down or open, any water within the boat will be free to run out thereat, and
80 that when placed within the water the rubber ball will float or be held up against its seat, so as to act and close the passage against the inlet of water, as shown in Fig. 2.

The size and form of the several parts and
85 their connections with each other may be varied without departing from the essential features of my invention.

It will be seen and understood that when the device is in practical use the lower flat metal
90 valve, G, is open, and thus the water is permitted to enter the lower portion of the vertical shell or case A, and thereby hold the elastic or light hollow rubber valve D closed up-
ward against its seat, thus preventing the
95 water beneath the ball-valve to flow upward through the automatic plug or stopper device above described.

I am well aware that spherical or ball valves
have heretofore been employed in the bottoms 100

of boats. Therefore I do not claim such, broadly, as such valves would not serve the purposes contemplated by my invention.

Having thus described my invention, I
5 claim—

1. The automatic boat-plug consisting of the shell or case provided with a spherical elastic valve, and having an auxiliary flat valve adapted to close the lower end of said case by vertical movement, substantially as described, as
10 and for the purposes set forth.

2. The combination, with the shell or case A, having the flange B, and provided with a screen, C, and guard-bars E, of the elastic ball-

valve D and flat valve G, adapted to close the
lower end of said shell by vertical movement, 15
as and for the purposes set forth.

3. The combination, with the shell or case A, having the elastic ball-valve D, of the flat auxiliary valve G, provided with supports L, 20
and adapted to close the lower end of said case A by vertical movement, substantially as described, as and for the purposes set forth.

LORING J. BAKER.

Witnesses:

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