O. H. & C. H. Bush,

Molasses Gate.

No. 3,002. Patented Mar. 30, 1843.

Fig. 1.

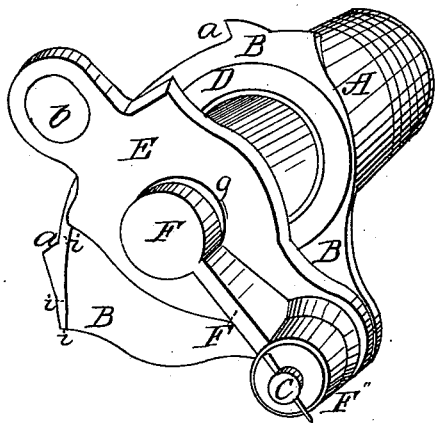
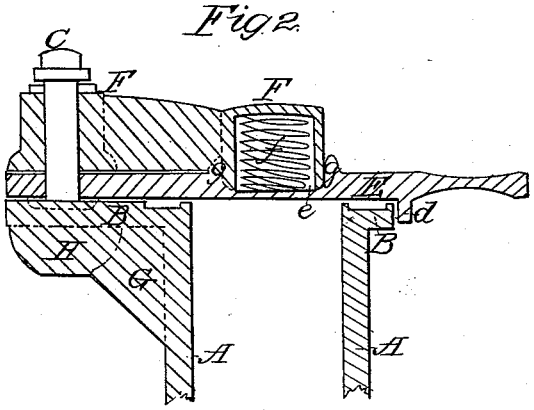


Fig. 2.



Witnesses

by us Adam
Benj F Winslow

Inventors.

Oliver H Bush
Charles H Bush

UNITED STATES PATENT OFFICE.

O. H. BUSH AND CHS. H. BUSH, OF FALL RIVER, MASSACHUSETTS.

LIQUOR-GATE.

Specification of Letters Patent No. 3,002, dated March 30, 1843.

To all whom it may concern:

Be it known that we, OLIVER H. BUSH and CHARLES H. BUSH, of Fall River, in the county of Bristol and Commonwealth of Massachusetts, brass founders, have invented a new and useful Improvement in the Liquor-Gate, and that the following is a full and exact description of the construction and operation of the same as invented or improved by us.

This liquor gate consists of four general parts, to wit: The body, the gate plate, the cap, and the spiral spring. The three first parts are made of lead, or other metal that can be conveniently melted, and cast in sand; and the last part is made of iron wire. The body may be described as combining four parts, to wit: The tube A, the head plate B, the bolt C, and the bearer D. The tube A is four inches long, the metal being one fourth of an inch thick at the head slightly tapering to the end that is to be inserted in the wood of the hogshead or other vessel, on the outer surface of which end, to the extent of two inches, is cut a screw thread, for the purpose of screwing and fastening it in the wood. The caliber of the tube is one inch and one fourth of an inch. The head plate B, is one fourth of an inch thick, in the form of a quadrant of three inches radii, and so cast on to the discharging end of the tube, there being bracket formed pieces connecting it with the tube on its under side, as at G, Figure 2 to render it strong and firm; having a knob H cast on the back of the plate near the center angle, projecting half an inch. Opposite to the knob on the face of the head plate is a round cavity c', one sixteenth of an inch deep and three fourths of an inch in diameter to receive a projection on the gate plate E; three fourths of an inch from each of the angles, on the circular extremity of this head plate is a stop shoulder a, a, made to limit the movement of the gate plate and at the edge, on the face of this plate, is raised an inclined plane i, i, one eighth of an inch wide, and one thirty second part of an inch in its highest elevation at i' and passing off to nothing at about the middle of the curve. This inclined plane is to aid in securing a proper direction in the circular motion of the gate plate. The bolt C, is made of iron, one fourth of an inch in diameter and two inches in height, and passes through the head plate in the center of the cavity before mentioned, and the ends soldered fast in the knob opposite. On this bolt is fastened by a washer and pin, the gate plate and cap; and on which they move. The bearer D, is made of soft leather, as calfskin, and is inserted in a round cavity made as near to the inner surface of the discharging end of the tube as is practicable, one sixteenth of an inch deep and one fourth of an inch wide; and when the leather is inserted, which makes the bearer, it rises one thirty second part of an inch above the surface of the head plate. This bearer is for the purpose of making the gate tight when all the parts are together by the pressure of the spiral spring. The gate plate E, is three sixteenths of an inch thick four inches in length of unequal width, the widest part being one inch and three fourths of an inch. One end of it constitutes a handle to move it being half round and excavated on each side as at b. At the other ends, on the face matching the head plate is cast a projection c', to move in the cavity before mentioned in the head plate; and through the center of this projection passes the bolt C before described. Opposite to this projection, on the neck of the handle is cast a guard d, one fourth of an inch wide and one eighth of an inch high, which strikes the stop shoulder a, a, before mentioned and limits both ways the movement of the gate plate. On the opposite surface of this gate plate is a cavity e, with a circular projection g, g, with an opening to receive the neck of the cap F. This cavity from the top of the projection is one fourth of an inch deep, and three fourths of an inch in diameter, and is made to receive the spiral spring f and the head of the cap. The cap D, is two inches and a half in length, having a head F, neck F′ and hub F″. The head is nine sixteenths of an inch deep, and its circumference, fitted to the cavity of the gate plate, as before described; and in this head is a cavity which receives the spiral spring f and is five eighths of an inch in diameter, and half an inch deep, to receive and press the spiral spring upon the gate plate. The hub F″ of this cap is three fourths of an inch deep, and the surface bearing on the gate plate, seven eighths of an inch in diameter, with a hole passing through it, fitted to the bolt

C before described. The spiral spring is not seen when all the parts of the machine are put together, being covered by the head of the cap. The coil of this spring is one half of an inch in diameter, and before compression, five eighths of an inch in height. All the parts being thus made are joined together on the bolt on which, the gate plate and cap and spring move together, to the extent necessary, in a circular motion, being kept in their place, and receiving the required pressure on the spring by a pin passing through the end of the iron bolt.

We do not intend to limit ourselves to the dimensions of the parts as herein given, nor do we claim as of our invention the employment of a sliding plate to close the tube, as this has been known and used, but not in the manner in which we effect it.

We therefore claim as our invention, and desire to secure by Letters Patent—

The arm F, and helical spring in combination with the plate E, for the purpose and in the manner herein described.

The superior advantages of this liquor gate, over any other heretofore used consists in its being more compact, less expensive, and more durable.

OLIVER H. BUSH.
CHARLES H. BUSH.

Signed in presence of us:
CYRUS ALDEN,
BENJA. F. WINSLOW.