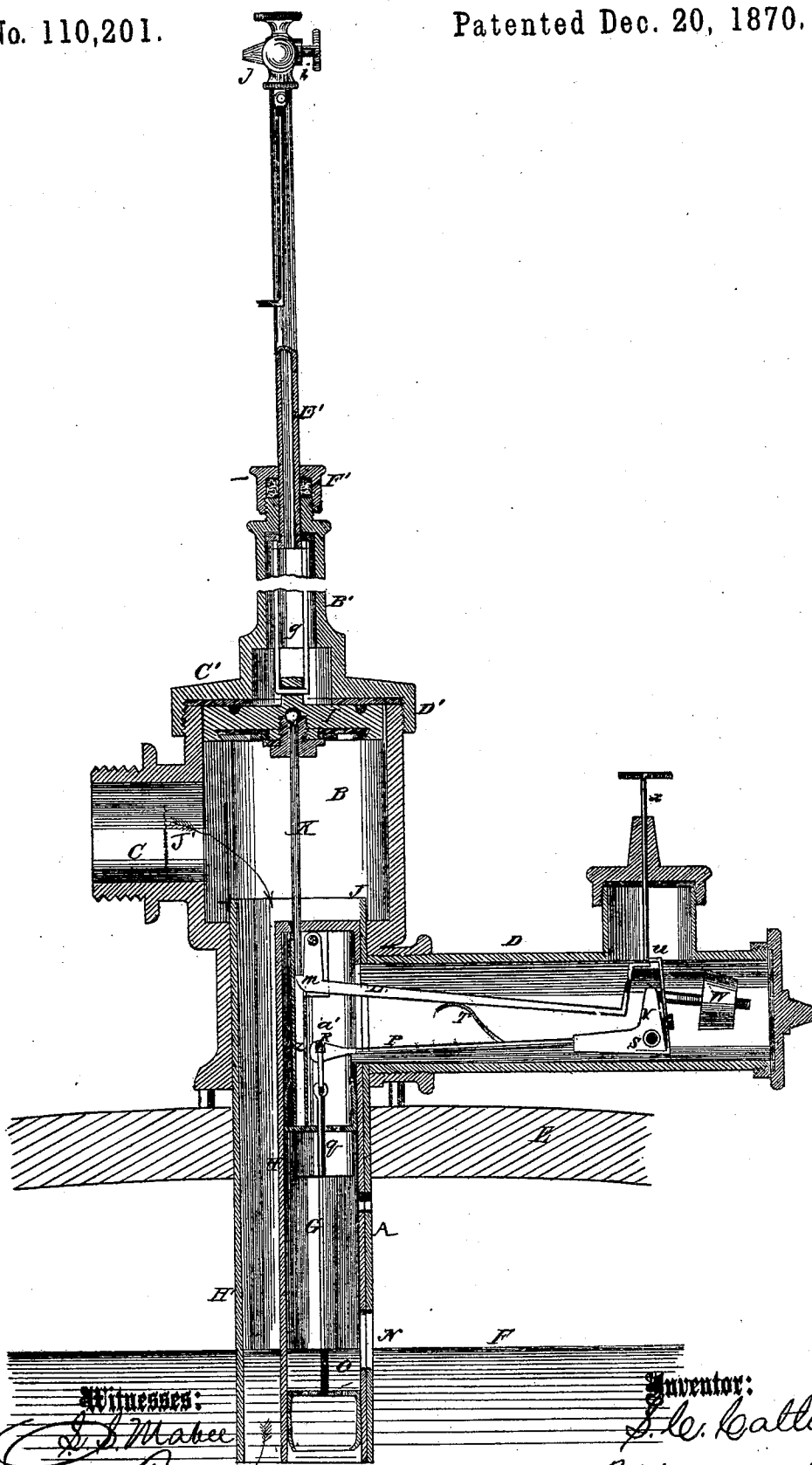


S. C. CATLIN.
BARREL FILLER.

No. 110,201.

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Witnesses:
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SETH C. CATLIN, OF CLEVELAND, OHIO.

Letters Patent No. 110,201, dated December 20, 1870; antedated December 17, 1870.

IMPROVEMENT IN BARREL-FILLERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SETH C. CATLIN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Automatic Barrel-Filler; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The object of this invention is to provide ready and efficient means for automatically stopping the flow of a liquid into a barrel or vessel when such barrel or vessel is filled, or nearly filled; and

It consists in certain mechanical devices, arranged to operate as hereinafter more fully described, and also in a device, in combination with the above, for drawing liquids from the reservoir for testing or other purposes.

The accompanying drawing represents a vertical section of the barrel-filler, showing the different parts arranged in their proper position.

This apparatus consists of a main tube, A, the valve-chamber B, the induction-tube C connected therewith, and the branch tube D, inclosing the adjusting and tripping device, and the float-rods, valves, and the mechanism connected therewith and referred to hereafter.

The barrel-filler is represented as when in use.

E represents the barrel, and

F the surface of the liquid in the barrel.

G is a float, which operates in the tube H, which tube is placed within the tube A, as seen in the drawing.

The course of the liquor from the reservoir into the tank or barrel is indicated by arrows.

The flow of the liquid into the barrel is automatically stopped by the valve I dropping onto the seat J.

This valve is attached to the rod K, and is supported on the lever L by means of the shoulder m.

N is an opening, through the tubes A and H, into the float-chamber O.

The float is made to act on the shoulder m of the lever L, and cause the valve I to drop by means of a lever, P, with which the float-rod q is connected at the point R.

The fulcrum of the lever P is at S.

The lever L rests on the spring T.

As seen in the drawing, the end of the valve-stem K rests on the shoulder m, and the lever L is held down, and in the position seen, by the adjustable spring-hook U, which is attached to the fulcrum-piece V of the lever P.

W is a weight, by which the float is balanced.

X is a rod, by which the end of the lever L is forced down, for setting it for use,

As seen in the drawing, the liquid that is being discharged into the barrel will continue to rise until it flows into the float-chamber O through the opening N, and buoys up the float. When this takes place the end of the lever P will rise, which will throw the adjustable hook U from the end of the lever L. The spring T will then throw up the long end of L, which will withdraw the shoulder m from the end of the valve-stem; the valve will, consequently, drop onto its seat J and stop the flow of the liquid into the barrel.

The quantity of liquid discharged into the barrel at the time of tripping the lever L depends upon the weight of the float, and the weight is varied by screwing the weight out or in on the short arm of the lever P. A gallon, more or less, may thus be left out of the barrel, as may be desired.

The valve-stem K drops down into the tube Z.

The shoulder m and joint-connection R are contained in the tube a', immediately above the float-chamber O. This tube a' may be closed at its top to exclude the liquid.

B' is a tube, which is connected with the cap C' of the valve-chamber B by a screw connection, as seen at D'.

E' is a tube within B', which is kept in position by means of the cap F' and the link piece g. The valve I is loosely attached to this link g and the valve-stem K, so that, when it drops, it is self-adjusting to its seat. This self-adjustment of the valve is an important feature, as a rigid valve dropping onto a rigid seat might not always close tightly.

i is a cap on the tube E'.

j is a valve-cock on this cap.

The liquid enters the tube E' when the valve is either down or raised, and this arrangement is designed for filling phials with the liquid for testing or other purposes.

The inner tube E' is allowed to play through the stuffing-box of the tube F', and the valve I is raised by drawing it up so that the shoulder m catches under the end of the valve-stem, as seen. The tube E' is then pressed down sufficiently to allow the valve I to find its seat when the lever L is tripped.

The lower end of the tube of the barrel-filler, marked in the drawing H', is extended so as to deliver below the surface of the liquid in the barrel for some time before the barrel becomes full. This effectually prevents the foaming of the liquid, and allows time for any foam which had previously accumulated to subside before the barrel is filled, in filling barrels with fermented liquors, as lager beer, ale, &c.

The advantages of this apparatus for filling barrels and other vessels are many, and must be obvious to all. It is perfectly sure in its operation, and auto-

matically stops the flow of the liquid at the precise point of time desired, filling the barrel entirely, or leaving it unfilled to any desired degree.

When once adjusted it is perfectly self-acting, requiring no attention until transferred to another barrel; consequently a single attendant may attend to a number of fillers, keeping them all in operation at the same time, thus greatly facilitating the operation of transferring liquid from a tank or reservoir to other vessels.

The induction-tube of the barrel-filler is provided with a strainer, J', which prevents anything entering which would be likely to obstruct the valve.

The top side of the valve is channeled or grooved out, so as to allow the liquid to find its way above it, and thereby equalize the pressure upon its sides.

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

1. In combination with an automatic barrel-filler the tripping-lever L, with the shoulder *m*, the adjustable spring-hook U, spring T, and setting-rod X, arranged, in connection with the lever P and float G, to operate substantially as and for the purposes described.

2. The self-adjusting drop-valve I, substantially as and for the purposes described.

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Witnesses:

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