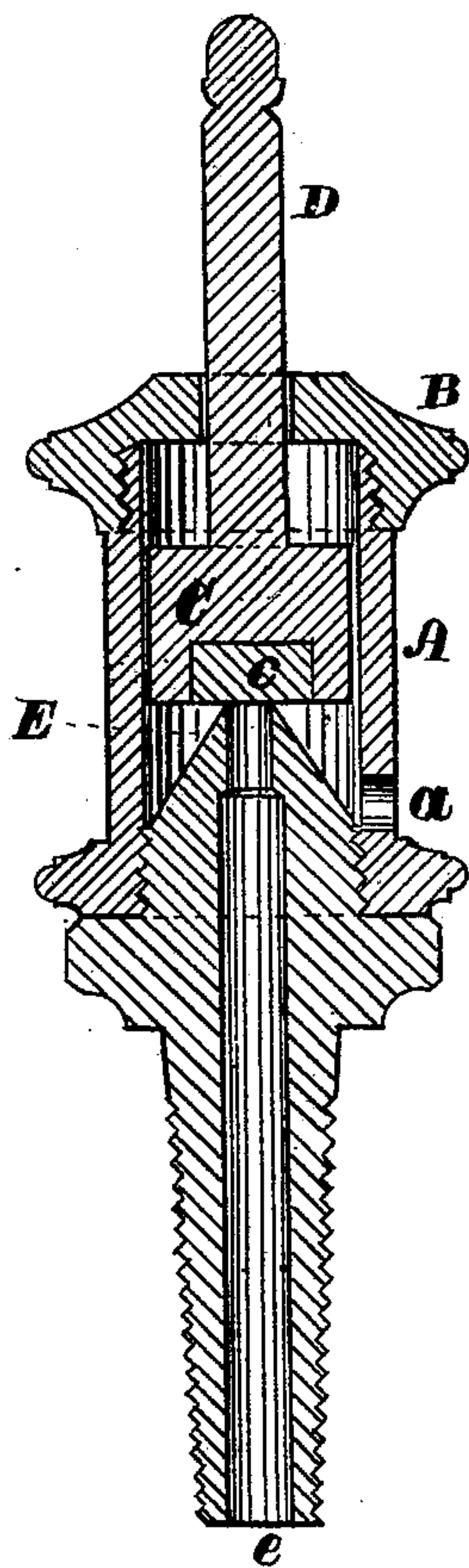


H. SHLAUDEMANN.  
Safety-Valve for Fermented-Liquor Cask.  
No. 204,687. Patented June 11, 1878.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HENRY SHLAUDEMANN, OF DECATUR, ILLINOIS.

## IMPROVEMENT IN SAFETY-VALVES FOR FERMENTED-LIQUOR CASKS.

Specification forming part of Letters Patent No. 204,687, dated June 11, 1878; application filed June 23, 1877.

*To all whom it may concern:*

Be it known that I, HENRY SHLAUDEMANN, of Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Safety-Valves for Casks of Fermented Liquors, reference being had to the accompanying drawing, in which the figure is a vertical section of my safety-valve.

The object of my invention is to produce a safety-valve to be placed upon storage-casks, hogsheads, &c., in which malt and other fermenting or fermented liquors are placed "in stock"—viz., before drawing into vessels for consumption or sale—and is constructed so that the weighted valve will be raised automatically if more than a certain quantity of carbonic-acid gas is generated, and allow said gas to escape without exposing the liquors to the open air, and by thus excluding the air stopping fermentation at a fixed degree, and preventing the bursting of the cask or hogshead, the device inclosing a weighted valve that shall have a fixed and definite capacity of retaining the gases.

In the drawings, A is the valve-case, provided with the vent *a*, for the escape of the gas. B is a cap on the valve-case. C is the weighted valve, provided with the soft rubber *c*, or other suitable packing, to close the valve-seat and exclude the air. The rod D, attached to or formed upon the top of the valve C, passes through a hole in the cap, and serves as a guide for the valve. E is a vertically-projecting conical valve-seat, with an opening, *e*, through the whole length. It is screwed in the bottom of the valve-case, and its lower end is slightly conical, and screw-threaded to secure it in a hole through the bung of a cask.

Thus constructed, the valve can be readily taken apart for cleaning.

The form of the valve and valve-seat may be slightly varied; but it is desirable that the points of contact of the two should extend upon a small surface only, to prevent sealing of the valve by agglutination, and the part of the valve resting on the valve-seat be of yielding material, so as to retain the amount of carbonic-acid gas in the liquor that is desired, and so that if the liquor should generate more gas than is desired it will raise the valve and allow the gas to escape in the case and through the vent *a*.

The weighted valves are made of different capacities, but so fixed or numbered that each valve shall have a definite capacity.

These valves are generally used by careless and inexperienced workmen, and unless the valve has a fixed and definite capacity, and is so constructed as not to easily get out of order or be tampered with, the same danger is encountered as in "over-bunging"—viz., the bursting of the cask by the accumulation of gas.

The rod or guide D, extending above the cap, allows the valve to be raised by hand, and the sound of the gas in escaping indicates the stage of fermentation and the condition of the liquor.

This valve is particularly useful in casks containing lager-beer that is undergoing the "cleaning process," preventing the danger of over-bunging, and thereby the beer from becoming "too wild" before drawing off into barrels and kegs, and also when the air-pump is used in forcing the beer from the cleaning-casks into smaller vessels, as the surplus air and gas will escape through the valve without endangering the cask.

I am aware that vent-plugs controlled by spring-pressure, or adjustable spring vent-valves regulated by a thumb-nut, are not new; but the first cannot accomplish the result that I have in view, (automatic relief to casks,) and the second can be too easily tampered with to be reliable and safe.

Having thus described my invention, I claim—

1. A safety-valve for casks of fermenting liquor, having a predetermined and fixed capacity for retaining and allowing gases to escape, formed of a weighted valve having a projecting stem, and provided with an elastic packing placed in a recess in its lower end, resting on the upper extremity of a perforated conical valve-seat, substantially as shown and described.

2. The combination of the case A and valve C, having a projecting stem, D, and inclosing a soft-rubber packing, *c*, with a perforated conical valve-seat, substantially as and for the purpose set forth.

HENRY SHLAUDEMANN.

Witnesses:

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CHAS. P. HOUSUM.