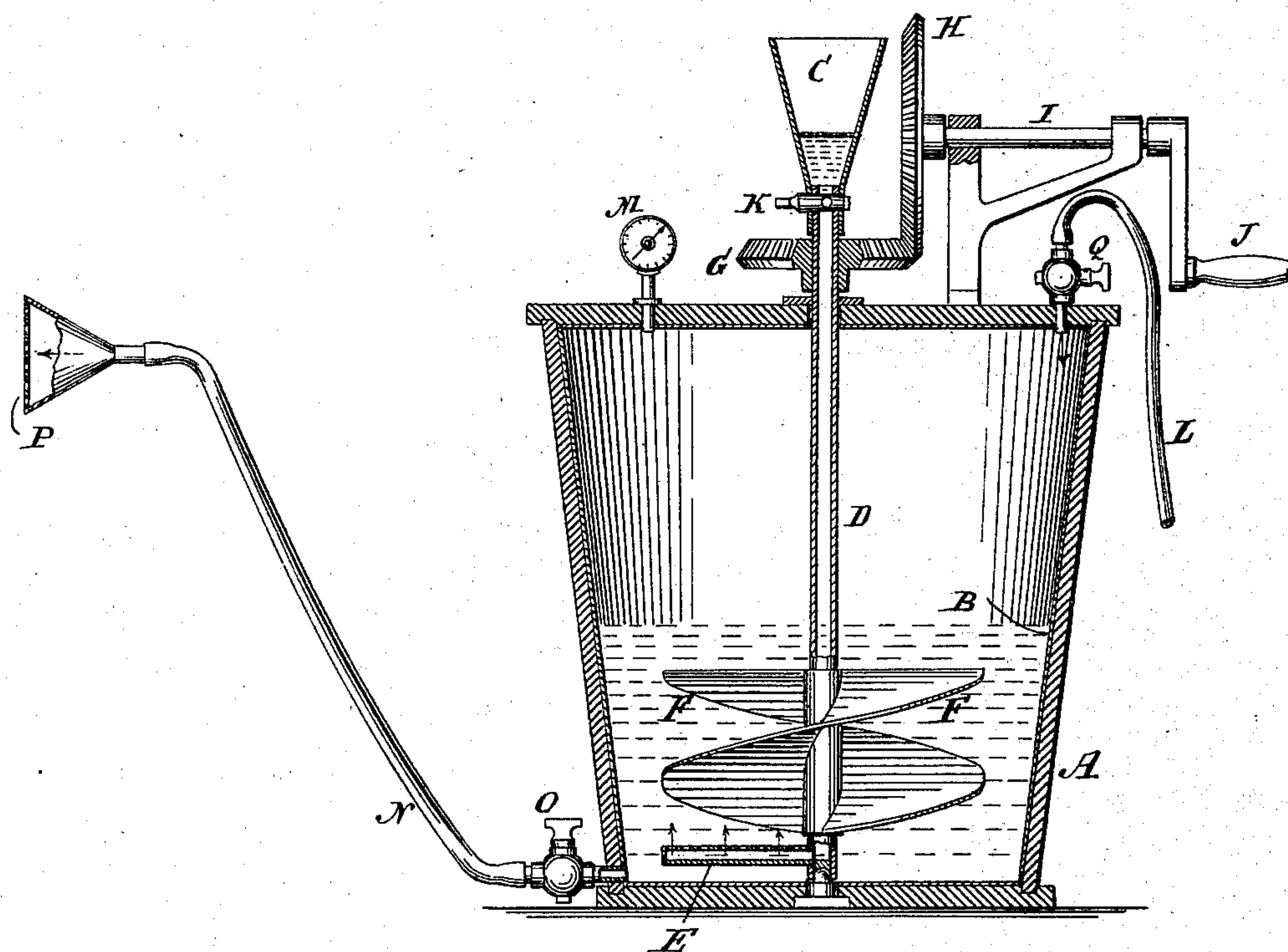


(No Model.)

B. SCHUMM.  
MIXING APPARATUS.

No. 388,724.

Patented Aug. 28, 1888.



WITNESSES:

*Eduard Wolff.*  
*William Miller.*

INVENTOR,

*Bleichard Schumm.*

BY

*Vausantwood & Hauff.*

his ATTORNEYS.



# UNITED STATES PATENT OFFICE.

BLEICHARD SCHUMM, OF NEW YORK, N. Y.

## MIXING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 388,724, dated August 28, 1888.

Application filed March 22, 1888. Serial No. 268,114. (No model.)

*To all whom it may concern:*

Be it known that I, BLEICHARD SCHUMM, a subject of the King of Bavaria, Germany, residing at New York, in the city and county of New York, have invented new and useful Improvements in Mixing Apparatus, of which the following is a specification.

This invention has for its object to provide a novel and simple but efficient apparatus for mixing liquids, such as an acid solution with a diluting fluid for preserving beer; and it consists in the features of construction hereinafter described and claimed, reference being made to the accompanying drawing, in which the figure is a central vertical sectional view of a mixing apparatus constructed in accordance with my invention.

In the drawing, the letter A indicates a reservoir or receiver. A suitable lining, B, such as a non-corrosive metal lining, will add to the durability of the receiver.

C is a supply-vessel mounted upon and made to communicate with the upper end of a vertical discharge-tube, D, having a lateral discharge-arm, E. The arm E has a series of perforations in its upper side, so that the contents of the tube D pass out from the arm E in a series of jets.

To the tube D is connected a stirrer (shown as consisting of two screw-blades, F F) fixed on the tube to revolve therewith in a horizontal plane.

The bevel-gears G H are adapted to impart rotary motion to the tube D, arm E, and stirrer F. A shaft, I, and crank J are shown adapted to rotate the gear H. The bevel-gear G is fixed directly upon the rotary liquid-conducting tube D, below the vessel or hopper C, so that said tube projects through said gear, and thereby serves to support the hopper C above the receiver or reservoir A. By having a stop-cock, K, suitably applied the outflow from the supply-vessel C can be checked or started, as desired.

An inlet-tube, L, is adapted to force air or gas into the receiver A. The passage through the tube L can be cut off by a stop-cock, Q. A gage, M, can be made to indicate the pressure in the receiver. The outlet N from the receiver A can be closed by a stop-cock, O,

and a spray-nozzle, P, can be made to divide the outflow of material from the outlet N.

The apparatus is very serviceable—for example, in preparing preserving-fluids. If the supply-vessel C, for example, contains a concentrated solution of salicylic acid, and the receiver A contains a suitable diluting-fluid, it is only necessary to open the stop-cock K and rotate the tube D, when the solution flowing from the arm E will mingle with the diluting-fluid in the receiver until the fluid in the receiver has attained the proper strength. By then creating a pressure by means of gas or air forced through the tube L into the receiver and opening the stop-cock O the fluid from the receiver A will spray through the nozzle P onto any desired object. Thus the nozzle P can be made to direct the sprays issuing therefrom over a quantity of beer which is to be preserved from spoiling.

I am aware that a churn has been composed of a vessel, a vertical rotary shaft carrying vertically-revolving screw-wheels, and a tube having a discharge-nozzle at its lower end to induce a current of air and deliver it at the bottom of the vessel. Such, therefore, I do not claim.

What I claim as new, and desire to secure by Letters Patent, is—

1. A liquid-mixing apparatus consisting of the reservoir A, having a delivery-outlet, N, a vertical axially-rotating liquid-conducting tube, D, having rigidly-attached stirrer-blades F, and a lateral arm, E, below said blades, provided with perforations, a gear, G, fixed on the tube, a liquid-holding hopper, C, connected with the upper end of the tube above said gear and provided with a stop-cock, K, and a rotary gear, H, for revolving the gear fixed on the tube, substantially as described.

2. A liquid-mixing apparatus consisting of the reservoir A, having the valved outlet N at its bottom and an air-forcing tube, L, at its top, the vertical axially-rotating liquid-conducting tube D, having the rigidly-attached perforated arm E, and screw-blades F, revolving with the tube in a horizontal plane, a gear, G, fixed on the tube above the top of

the receiver, a liquid-holding hopper, C, mounted upon the upper end of the tube above the said gear and provided with a stop-cock, K, and a gear, H, for revolving the  
5 gear fixed to the tube, substantially as described.

In testimony whereof I have hereunto set my

hand and seal in the presence of two subscribing witnesses.

BLEICHARD SCHUMM. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.