

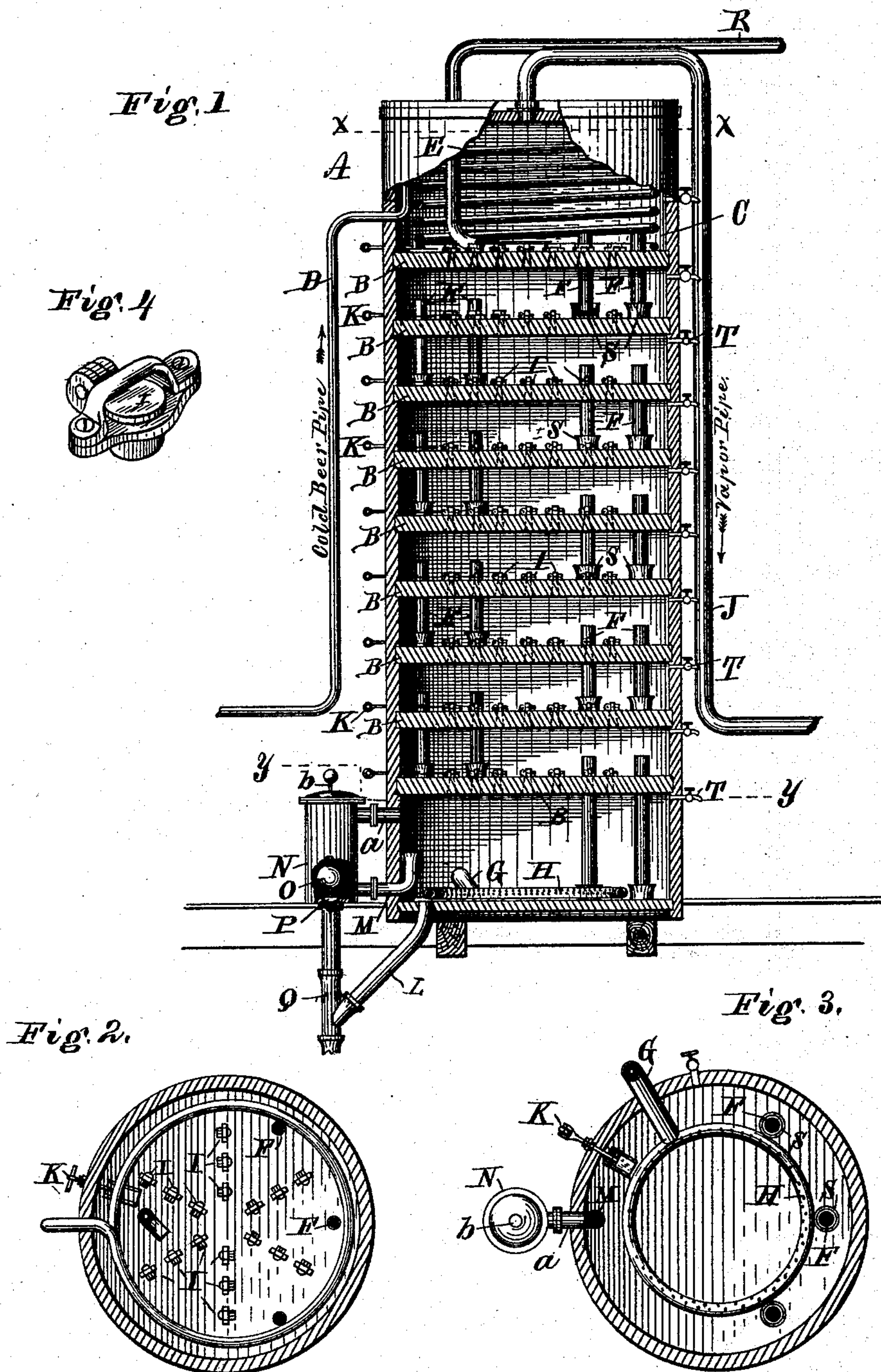
(No Model.)

G. R. BRUCHMANN.

STILL.

No. 325,728.

Patented Sept. 8, 1885.



Witnesses  
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# UNITED STATES PATENT OFFICE.

GUSTAV R. BRUCHMANN, OF MILWAUKEE, WISCONSIN.

## STILL.

SPECIFICATION forming part of Letters Patent No. 325,728, dated September 8, 1885.

Application filed December 15, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAV R. BRUCHMANN, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Stills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in beer or mash stills for making high or low proof alcohol, and pertains to that class in and by which the beer or mash is introduced while the process of distillation is going forward, whereby I am enabled to proceed with the work continuously without stopping to fill the still.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section of my improved still. Fig. 2 is a horizontal section drawn on line  $x x$  of Fig. 1. Fig. 3 is also a horizontal section drawn on line  $y y$  of Fig. 1. Fig. 4 is a perspective of one of the valves I.

Like parts are referred to by the same reference-letters throughout the several views.

A is a vertically-arranged cylinder, which is subdivided into several compartments by the series of partitions B B. Mash or beer to be distilled enters the upper compartment, C, through the pipe D, when it passes through the coil E and escapes through its discharge end upon the upper partition. As the fluid thus admitted rises to sufficient height it overflows into the mouths of the tubes F F, through which it passes into the compartments next below until a sufficient quantity has entered to bring it to the level of the mouth of the next pipes F F below, (similar pipes, F F, being provided in each compartment,) when it flows through such pipe F in like manner from one compartment to another until the fluid thus admitted stands at a uniform depth corresponding to the height of the several pipes F above the several partitions. This being done, steam is admitted through the

pipe G, when it passes into the circular perforated pipe H, by which the steam is uniformly distributed around the bottom of the lower compartment. As the pressure of steam increases in the lower compartment it raises the valves I in the several partitions, and thus passes up through the beer. The steam and beer are both thus admitted during the process of distilling. The vapor thus produced passes off through the vapor-pipe J to the condenser. The slop or non-vaporized substance lying below the upper ends of the pipes F passes from one compartment to another from the highest to the lowest compartment through the pipes F, when it escapes from the lowest compartment through the pipe M. The lower ends of the several pipes F terminate in a cup-shaped receptacle, S, which, when full of beer, forms a trap which prevents the steam from escaping from one compartment to another through said pipes F, as it otherwise would do, instead of passing through the valves I. The slop in passing out flows through the pipe M into the receptacle N, when it buoys up the float O, whereby the valve P, attached thereto, is raised, thus permitting the slop to escape through the pipe Q.

When desirous to treat the liquor which accumulates in the condenser, it is admitted through the pipe R, and from thence it flows of its own gravity from one compartment to another until it is uniformly distributed, as before mentioned, in the several compartments.

T T are a series of cocks, by which the height of the beer is ascertained, and in case the still is clogged the place of the stoppage is located.

The object of the coil E is to retain the beer so that it will become heated before it is discharged from the pipes, while the cool beer or mash in the coils cools the surrounding low-proof vapor in the upper compartment and condenses it.

The object of the pipe  $a$  is to permit the escape of vapor from the receptacle N as it fills, so that the beer may stand upon the same level in the receptacle N as it does in the cylinder A.

$b$  is a rod by which the float A and valve P are raised in case the valve becomes fast. If it becomes necessary, in making repairs, &c., to remove the sediments lying below the mouth



of the pipes F, such sediments are drawn off from all the compartments, from the highest to the lowest, inclusive, through the slide-valves K, when it escapes through the slopp-  
5 pipes L and Q.

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

In a still, the combination of a cylinder, A,  
10 subdivided into a series of compartments by partitions B, provided with upward-opening steam-valves I and downward-extending ducts F, having their upper ends projecting above the upper surface of said partitions,  
15 and their lower ends terminating in recep-

tacles S, cocks T, located at the upper ends of the several compartments, slide-valve K, receptacle N, provided with float O and valve P, said receptacle N communicating at its lower end with the lower compartment of the 20 cylinder A through an upturned pipe, M, and at its upper end through a duct, a, and ducts Q and L, all substantially as and for the purpose set forth.

In testimony whereof I affix my signature in 25 presence of two witnesses.

GUSTAV R. BRUCHMANN.

Witnesses:

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