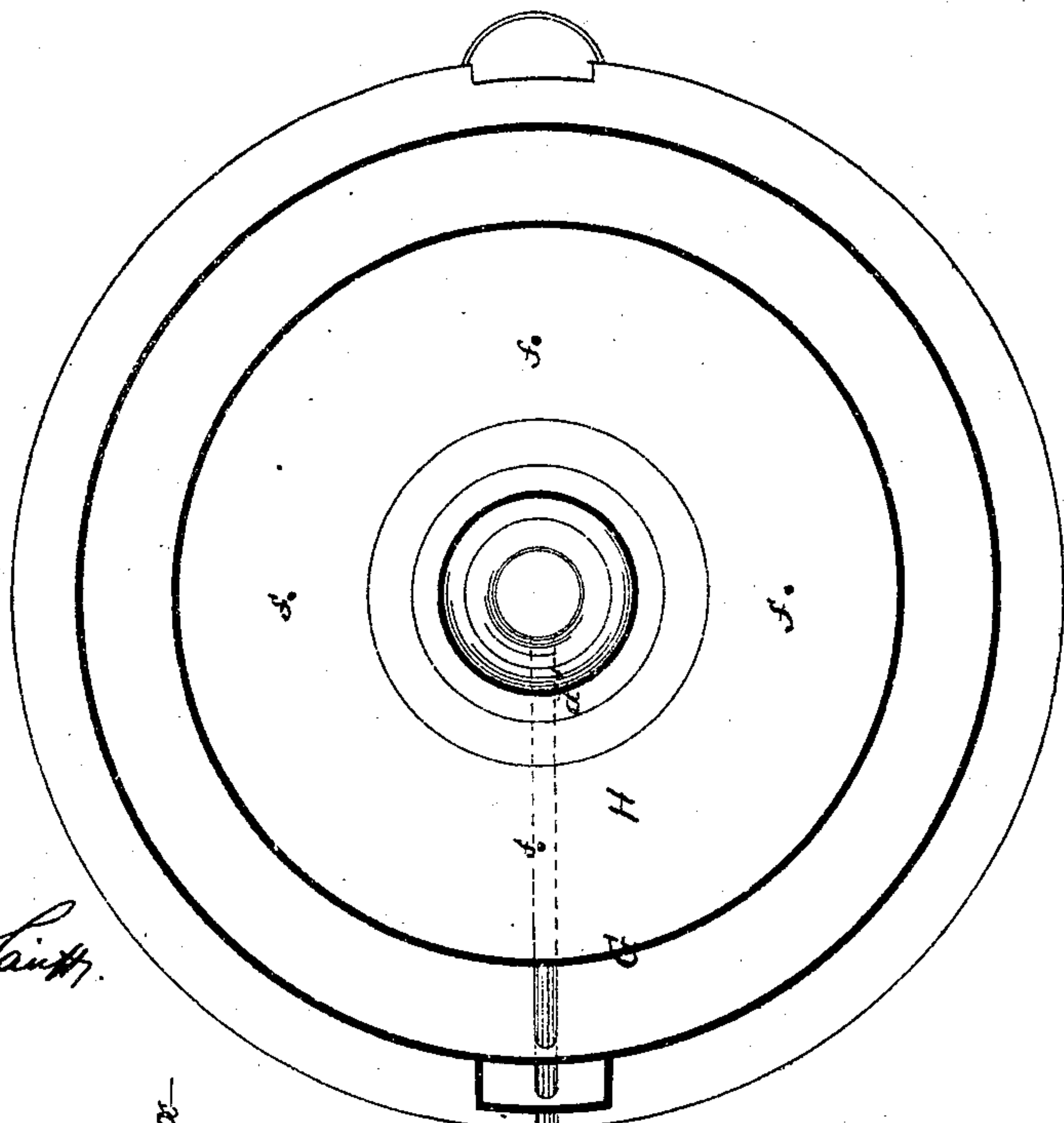


C. Gresiuchna.
Distilling & Rectifying.
N^o 73092 *Patented Jan. 7, 1868.*

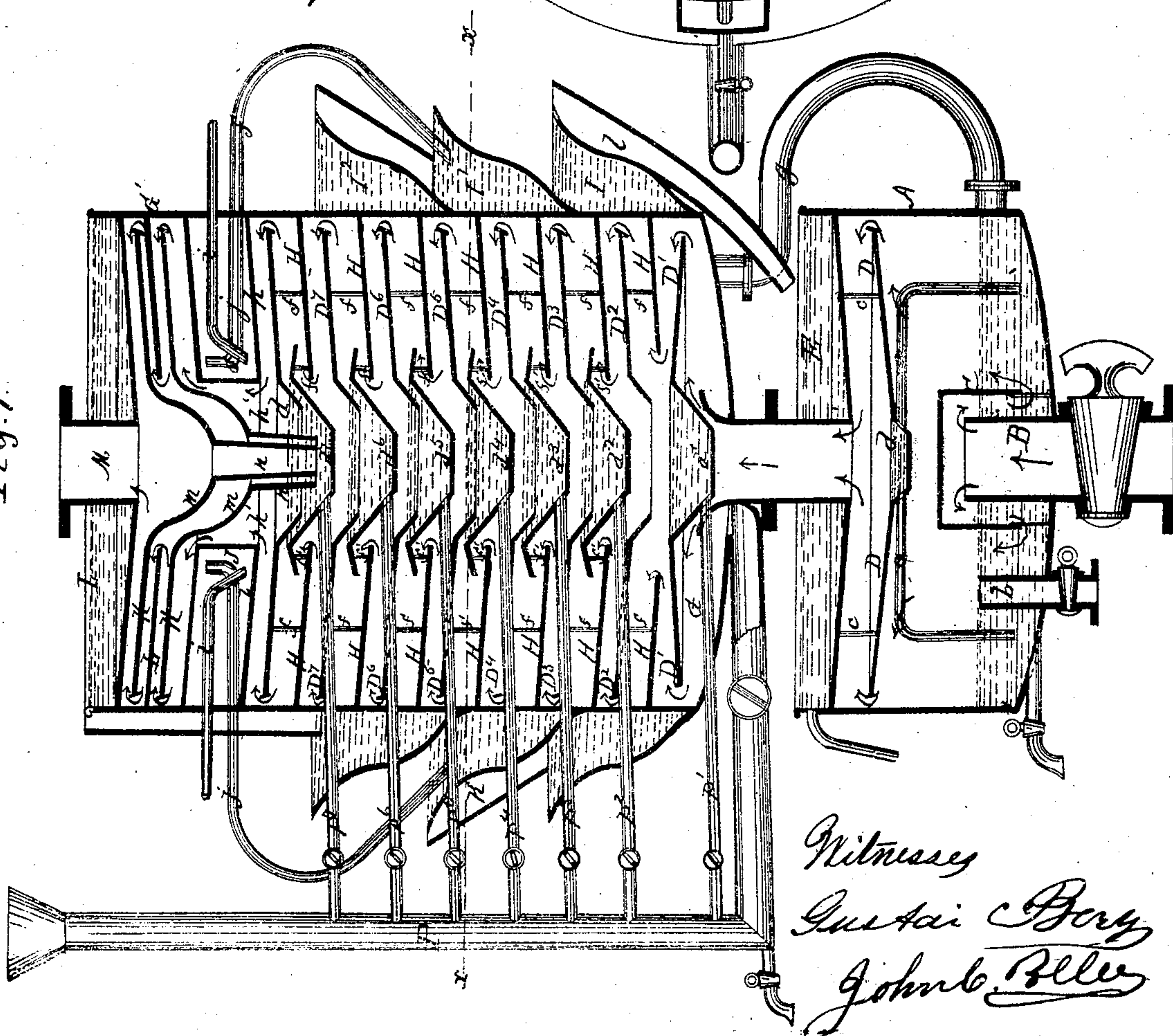
Fig: 2.



Inventor

C. Gresiuchna
for
Van Sautersod & Munn.
Atty.

Fig: 1.



Witnesses
Gustav Berg
John C. Allen

United States Patent Office.

CALLR GRESIUCHNA, OF NEW YORK, N. Y.

Letters Patent No. 73,092, dated January 7, 1868.

IMPROVED APPARATUS FOR DISTILLING AND RECTIFYING.

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, CALLR GRESIUCHNA, of New York, county and State of New York, have invented a new and useful Improvement in Apparatus for Distilling and Rectifying; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 represents a vertical central section of this invention.

Figure 2 is a horizontal section thereof.

Similar letters indicate corresponding parts.

This invention relates to an improvement in an apparatus for rectifying distilled liquids, on which a patent was granted to myself and L. Jarchow, July 2, 1867, No. 66,323.

Said apparatus consists of a receiver, A, which communicates by the pipe B with the still. This pipe extends up through the bottom of the receiver, and its inner end is covered by a cap, C, which fits loosely over it, and which is open at the bottom, being supported by suitable legs or strips *a*, so that the vapors rising through the pipe B are compelled by the cap to turn down in order to escape at the bottom edge of said cap. In passing down through the cap, and up again after having escaped from the same, the vapors are compelled to travel through the low-wine which accumulates at the bottom of the receiver, and the depth of which in the receiver is determined by the overflow-pipe *b*, which may be made to connect with the still or with any other suitable vessel. As the vapors rise in the receiver, they strike the under surface of the circular dish D, the diameter of which is somewhat less than the inner diameter of the receiver, so as to permit the vapors to pass up through the annular space between the dish and the receiver, as indicated by arrows in fig. 1 of the drawing. The dish D is suspended from the top plate of the receiver by pins or studs *c*, and it is provided with a central depression, *d*, intended to receive the low-wine resulting from the condensation of a portion of the vapors during their passage through the space between the dish and the top plate of the receiver. From the bottom part of the depression *d* extend two (more or less,) pipes, *e*, through which the low-wine accumulating in said depressions runs down into the receiver A. The top plate of the receiver is depressed towards its centre, and the edges of the receiver project above said top plate so as to form a vessel, E, capable of holding a quantity of water, whereby the condensation of a portion of the vapors coming in contact with the top plate of the receiver is facilitated. The water in the vessel E is supplied from above, as will be hereinafter described, and the surplus water passes off through a suitable waste-pipe. From the centre of the top plate of the receiver rises a pipe, F, through which the vapors pass up into the rectifier G. This rectifier is provided with a series of circular dishes, D¹ D² D³, &c., similar to the dish D in the receiver, with the exception, that their central depressions are open at the bottom, and that over each of said central depressions a cup, *d*¹ *d*² *d*³, &c., is secured, as shown in the drawing. These cups rest upon pins or studs *f*¹, rising from circular shelves H, which are attached to the interior of the rectifier, and which are depressed towards their centres, where they are provided with apertures for the upward passage of the vapors and for the downward passage of the low-wine resulting from the condensation of a portion of said vapors. The low-wine dripping down over the dishes D¹ D² D³, &c., and over shelves H, collects in the cups *d*¹ *d*² *d*³, &c., and if these cups are full, it overflows and finally passes down through the pipe *g* in the receiver A. The rectifier is provided with three (more or less) water-jackets, I¹ I², which are filled with water, so as to promote the condensation of a portion of the vapors passing up through the rectifier. The manner in which the water-jackets are supplied with water will be presently explained. The top plate *h* of the receiver G is perforated in its centre with a circular aperture, *h*¹, through which the vapors pass up into the additional rectifier G'. The bottom part of this additional rectifier is occupied by a water-chamber, J, which is supplied with water through one or more pipes *i*, and from which the surplus water passes off through overflow-pipes *j*. These overflow-pipes lead down to the water-jacket I¹, which is provided with an overflow-channel, *k*, through which the water passes down into the jacket I, and if this jacket is full, the water flows through the overflow-pipe *l* into the vessel E on the top of the receiver A. By these means the water which is admitted cold into the chamber J, is gradually warmed as it passes down through the jackets I¹, I, and the vessel E, and its cooling effect is proportionately diminished, so that the heaviest vapors will condense below, and as the remaining vapors rise, the condensation extends gradually to lighter vapors. Above the water-chamber

J, in the additional rectifier G, are two or more dishes K, with an intervening shelf, L, and each of the dishes is provided with a central depression, *m*, from which descends a tube, *n*, so that the low-wine, which results from the condensation of a portion of the vapors passing through the additional rectifier, drops down over the dishes K, and through the depressions *m* and tubes *n*, into the upper cup *d*¹ in the rectifier G. On the top of the additional rectifier G' is a water vessel, L, which is supplied with cold water from a suitable reservoir, and from which the water overflows through a channel, *o*, which leads down into the upper water-jacket I² of the rectifier G. The light vapors which will not condense in the rectifiers G G' pass off through the pipe M, which connects with a cooler or condenser of any suitable construction.

In this apparatus it has been found that the impurities contained in the liquid are liable to form a deposit in the cups *d*¹ *d*² *d*³, &c., and heretofore no means were provided to remove this deposit. This defect I have amended by my present improvement. I have applied a pipe, P, provided with branch pipes *p*¹ *p*² *p*³, &c., which communicate with the cups *d*¹ *d*², &c., close down to their bottoms, and which are provided with suitable stop-cocks, so that they can be opened or closed at the will of the operator. The pipe P is provided with a funnel-shaped mouth, so that it can be readily filled with water, and by manipulating the stop-cocks in the branch pipes, each of the cups *d*¹ *d*² *d*³, &c., can be flooded with water, and washed out with ease and facility.

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

The blow-off pipe P, in combination with the cups *d*¹ *d*² *d*³ *d*⁷ in the rectifier G, substantially as and for the purpose described.

CALLR GRESIUCHNA.

Witnesses:

GUSTAV BERG,
W. HAUFF.