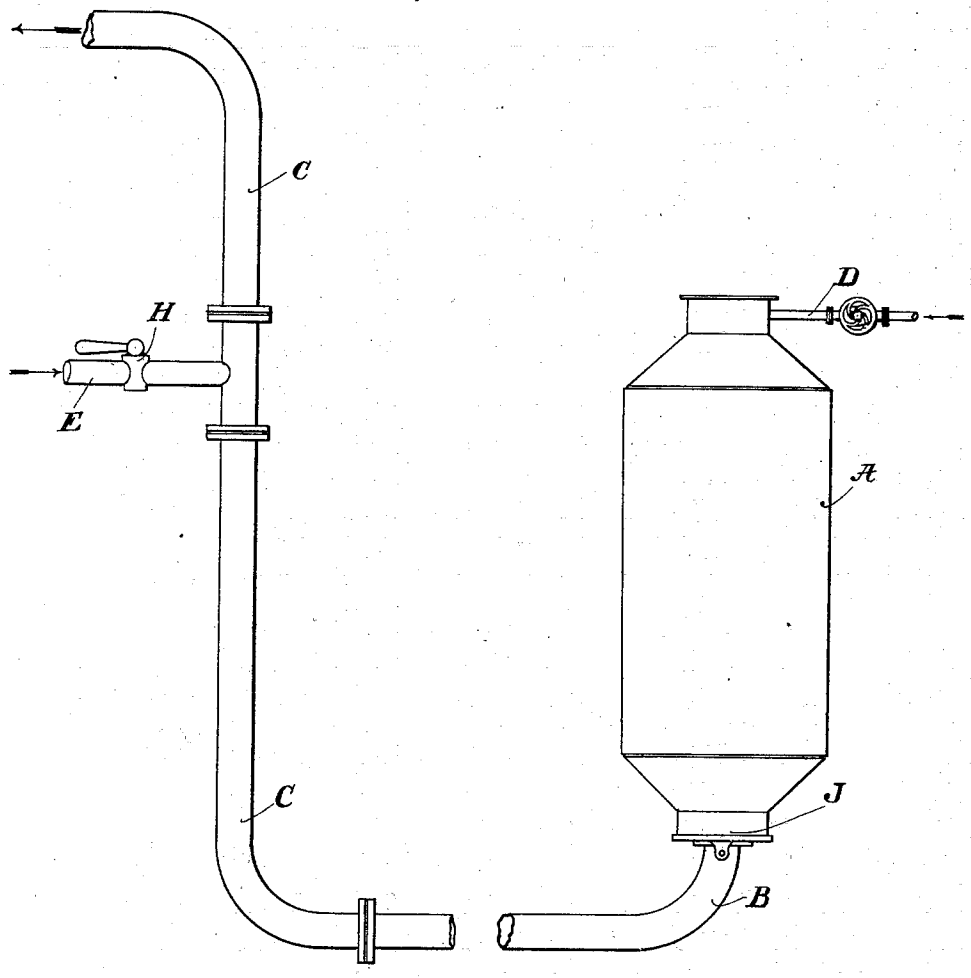
No. 651,883. Patented June 19, 1900.

C. PFEIFFER.

DIFFUSION CELL.

(Application filed Feb. 7, 1898.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

CARL PFEIFFER, OF WENDESSEN, GERMANY.

DIFFUSION-CELL.

SPECIFICATION forming part of Letters Patent No. 651,883, dated June 19, 1900.

Application filed February 7, 1898. Serial No. 669,389. (No model.)

To all whom it may concern:

Be it known that I, CARL PFEIFFER, manager, a subject of the Emperor of Germany, and a resident of Wendessen, Duchy of Brunswick, Germany, have invented a certain new and useful Improved Apparatus for the Removal of the Remainders from Diffusion and Like Cells, of which the following is a specification.

For emptying cells which contain water mixed with solid matters it has been proposed to introduce air, gas, or steam into the cell for the purpose of forcing out the contents. It has been found by this method of attempting to empty the cells that the liquid is forced out more readily than the solid or semisolid matters, and thus a part of the latter remain in the cell.

The object of the present invention is to provide means by which this defective action is avoided. For this purpose I provide means whereby a resistance is offered to the too-rapid flowing away or discharge of the liquid, and the more solid matters, which settle to the bottom of the cell, are caused to be disturbed and discharged with the retarded liquid.

The means for carrying out my invention is shown in the accompanying drawing, only so much of the complete apparatus being shown as is necessary to an understanding thereof.

In the drawing, A is the cell.

D represents the pipe through which the air-pressure is introduced. To the lower outlet J a waste-pipe B is connected, and to this waste-pipe an ascending pipe C is connected. At its upper part the pipe C is connected with a water-inlet pipe E, having a cock H. From its junction with the pipe H the ascending pipe C rises to any suitable place of discharge. Water is introduced into the pipe C through the pipe H either before, during, or after the opening of the lower outlet J, and this water filling the pipe C offers sufficient resistance to the liquid flowing from the cell to retard the discharge thereof, and thus prevent this liquid from leaving the solid or semisolid matters behind in the cell. In this way the solid or semisolid matters will be acted upon by the discharging force for a sufficiently long time before the discharge of the liquid contents to become fully disturbed from its settled condition and to get in proper condition for being discharged with the liquid.

The cell A has a conical bottom, and the discharge-pipe B extends from the lower end of this.

It will be understood that the cell A is used with the usual and necessary juice, water, and heating pipes, which have not been shown, these being well understood.

I claim—

A diffusion apparatus comprising a cell having a discharge-pipe leading from the lower end thereof and extending upwardly, a pressure-supplying means connecting with the upper end of the cell independent of the discharge-pipe and means for introducing into the said ascending discharge-pipe a column of a liquid-resistance medium, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CARL PFEIFFER.

Witnesses:
C. O'REL,
WILHELM BLOCK.