(No Model.)

2 Sheets—Sheet 1.

S. J. HINSDALE.

PERCOLATOR.

No. 266,625. Patented Oct. 31, 1882.

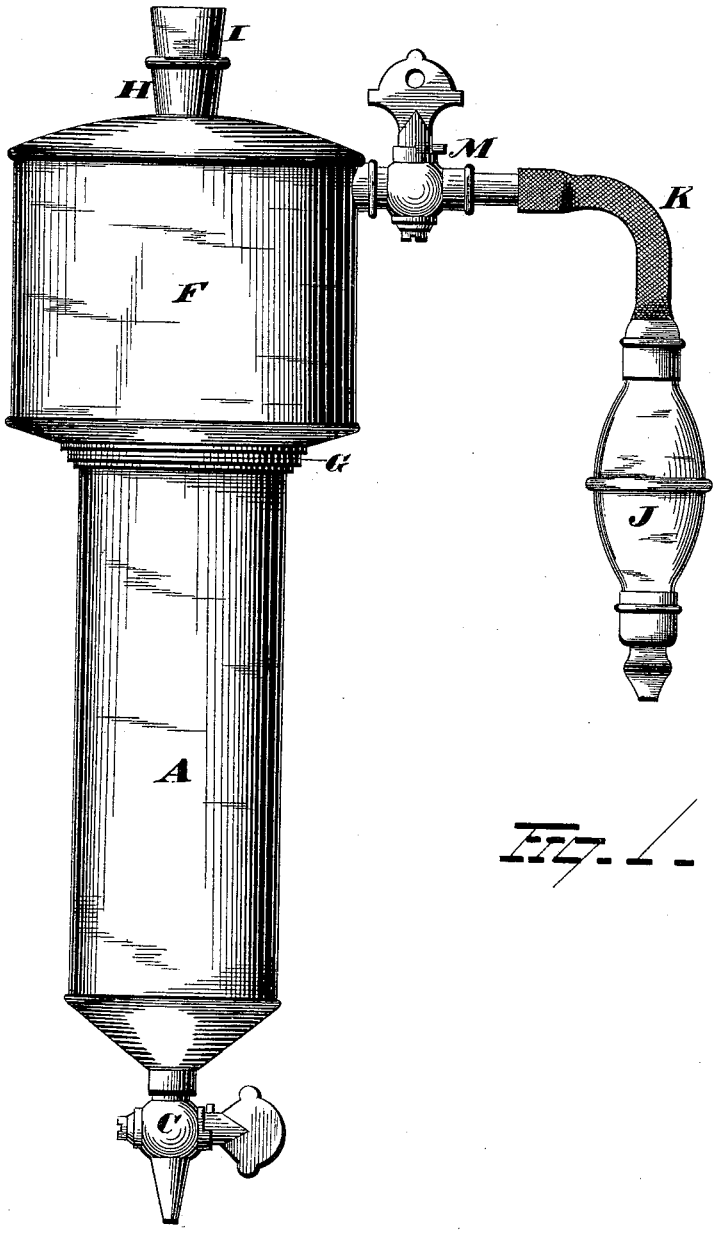

Fig. 1.

WITNESSES

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A. W. Bright

INVENTOR

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(No Model.)

2 Sheets—Sheet 2.

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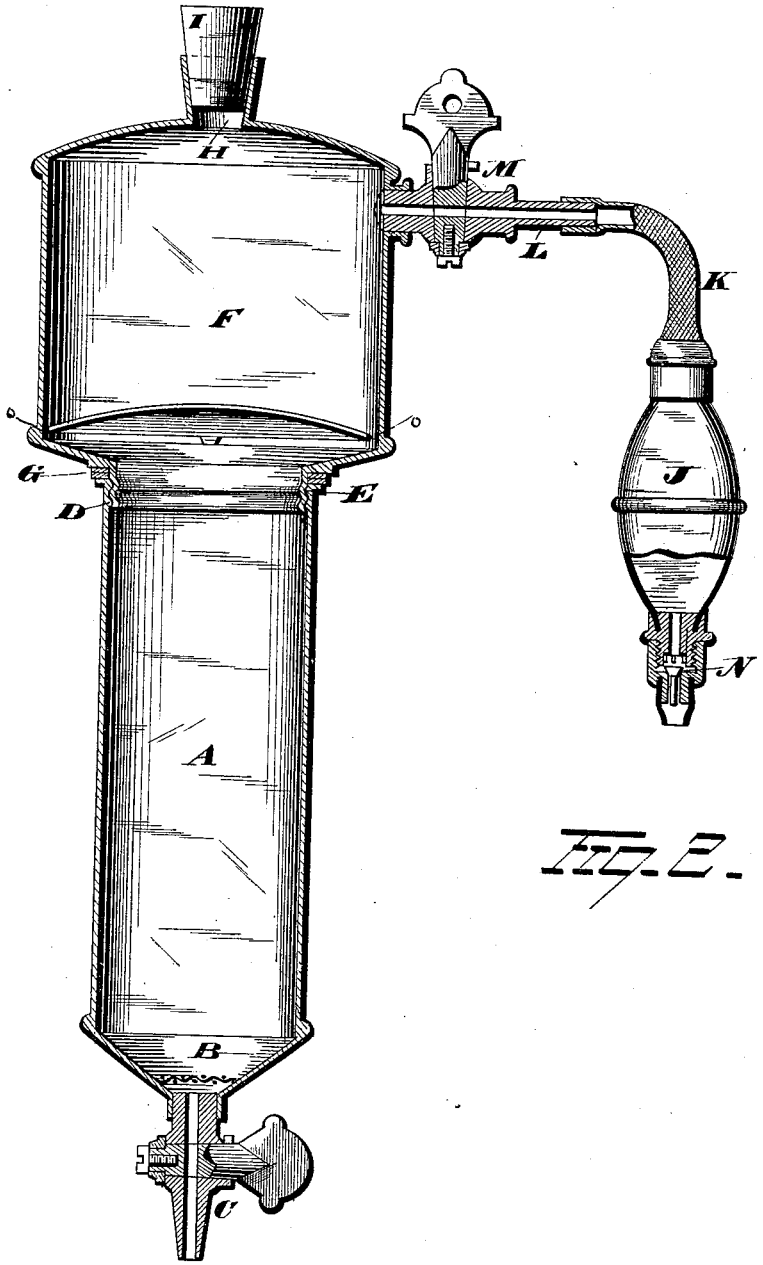

Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

SAMUEL J. HINSDALE, OF FAYETTEVILLE, NORTH CAROLINA.

PERCOLATOR.

SPECIFICATION forming part of Letters Patent No. 266,625, dated October 31, 1882.

Application filed April 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. HINSDALE, of Fayetteville, in the county of Cumberland and State of North Carolina, have invented certain new and useful Improvements in Percolators; 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 pertains to make and use the same.

My invention relates to an improvement in pharmaceutical apparatus, and more particularly to percolators, the object being to provide a device of this character which shall be adapted to the percolation of tinctures, sirups, extracts, and other fluids, and which shall combine simplicity and cheapness of construction with durability and cleanliness, and which shall be adapted to effect the rapid and perfect percolation of the fluid under treatment.

With these objects in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a view in elevation of a percolator constructed in accordance with my invention, and Fig. 2 is a view thereof in vertical cross-section.

The principle involved in my invention is the application of compressed air to the surface of the menstruum, whereby the passage thereof through the substance to be percolated is accelerated.

A is a cylindrical chamber, designed to receive the substance to be percolated. It is provided near its lower end with a strainer, B, and with a stop-cock, C. The upper end of this chamber is interiorly screw-threaded, as shown at D, to adapt it to be screwed onto the flange E of the air-chamber F. One or more rubber gaskets, G, interposed between the two chambers, serve to make the connection between them air-tight. A diaphragm located within the air-chamber, and near its connection with the chamber A, is designed to deflect the menstruum introduced into it through the orifice H, and thus by breaking its force prevent the disturbance of the contents of the chamber A. Said diaphragm, as shown, is of convex form, and is of such a size that when centrally supported within the air-chamber an annular space, *o*, is left between its periphery and the inner side of the air-chamber. When the percolator is in operation the said orifice H is closed by a stopper, I, of cork, rubber, or other equivalent substance. An air-compressing bulb, J, is connected with the air-chamber by means of a flexible pipe, K, and a metallic pipe, L, the latter being provided with a stop-cock, M. The lower end of the bulb J is provided with a valve, N, of any approved form of construction, a gravity-valve being shown in the drawings.

Having described my improved percolator in detail, I will now briefly set forth its mode of operation.

The substance to be percolated is first introduced into the chamber A. The menstruum is then introduced through the orifice H into the air-chamber F, from which it will enter the said chamber A. The orifice H is now closed, the cock M is opened, and the air-compressing bulb is manipulated, every compression thereof resulting in the compression of the air above the surface of the menstruum in the air-chamber. When the air has been raised to the desired tension the stop-cock L is closed and the stop-cock C is opened. Under the tension of the compressed air the percolation of the substance in the chamber A is rapidly effected. After the passage of a portion of the menstruum through the substance being percolated the tension of the air will be reduced by reason of its expansion to fill the space first occupied by the menstruum, and therefore, if desired, the air-compressing bulb may again be brought into play, and the air within the percolator raised to the desired tension.

I am aware that it is not new to attach a menstruum-reservoir to a percolator and to interpose a diaphragm between the two chambers.

I am also aware that it is not new to use air-compressing apparatus with devices constructed as above.

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

In a percolator, the combination, with a percolating-chamber for receiving the substance to be percolated, and an upper chamber into which the menstruum is introduced, said upper chamber being provided at its lower end with

a diaphragm of slightly less diameter than the interior of the chamber, and arranged and adapted to deflect the menstruum between its periphery and the sides of the upper chamber, of devices for compressing the air above the surface of the menstruum, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

SAMUEL J. HINSDALE.

Witnesses:
F. W. BROADFOOT,
W. C. MCDUFFEE, Jr.