G. McPHERSON.

Percolator.

No. 162,673. Patented April 27, 1875.

Fig. 1.

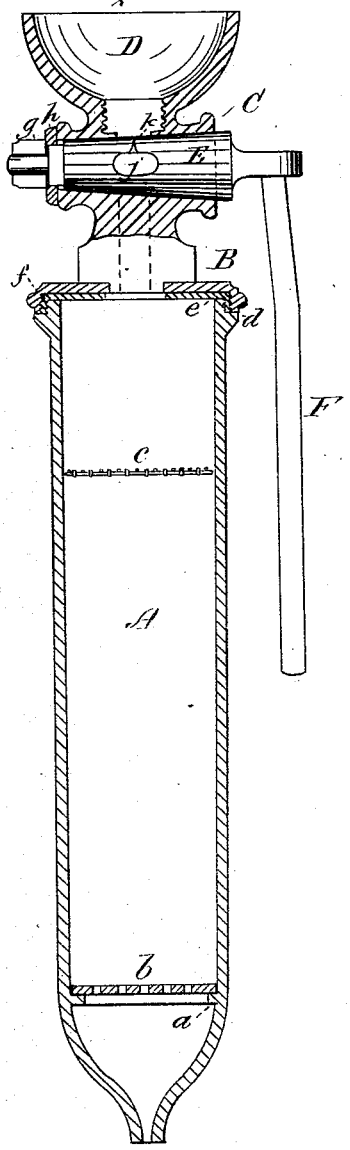

Fig. 2.

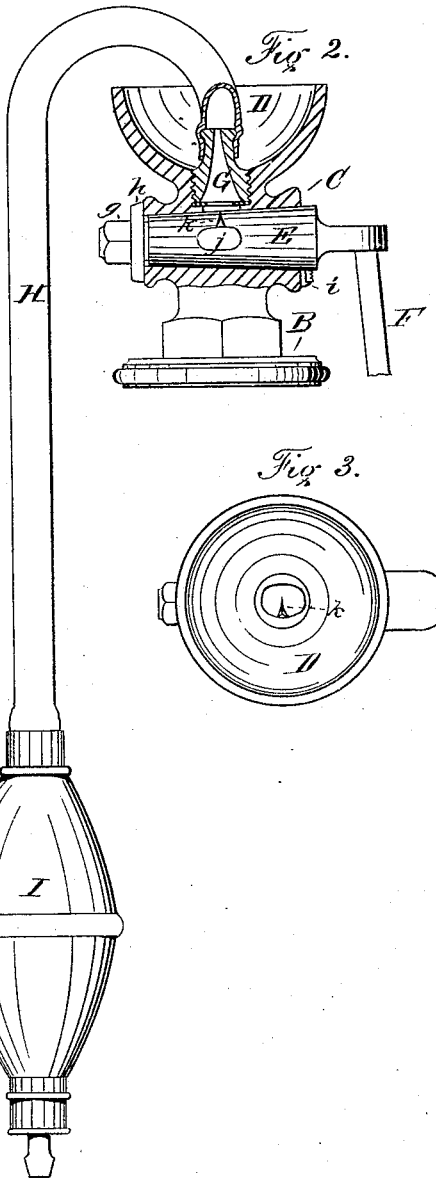

Fig. 3.

WITNESSES.

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UNITED STATES PATENT OFFICE.

GEORGE McPHERSON, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN PERCOLATORS.

Specification forming part of Letters Patent No. **162,673**, dated April 27, 1875; application filed April 2, 1875.

To all whom it may concern:

Be it known that I, GEORGE McPHERSON, of Chicago, in the county of Cook and State of Illinois, have invented a new and valuable Improvement in Regulating-Percolator; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical section of my improved percolator. Fig. 2 is a part section of the head or top of the percolator, showing the attachment of the air-forcing apparatus. Fig. 3 is a plan or top view of the head or cap.

This invention has relation to those devices known as percolators; and my invention consists in a faucet connected to a closed cap upon the head of the percolator, said faucet being provided with depressions upon its outer periphery, whereby the operator is enabled to control the admission of air, to regulate the progress of the menstruum through the drug or material in the percolator, and to secure, in a convenient manner, time for the more thorough extraction by maceration of the medicinal principles contained in the drug, while, during the process, loss of alcohol, ether, and other volatile and expensive liquids by evaporation is entirely prevented. My invention further consists, in connection with such faucet and its depressions, of a suitable pump or air-forcing apparatus, whereby the air may be compressed above the menstruum and the percolation accelerated according to the degree of pressure.

In the drawing, A is designed to represent the body or shell of the percolator, which may be of any suitable form and constructed of glass, porcelain, metal, or other suitable material. This shell slightly tapers at its lower end, as shown in Fig. 1 of the drawings, and near the lower end may be formed, if desired, an annular shoulder, *a*, for a perforated diaphragm, *b*, to rest upon; and upon the drug, after it has been placed within the percolator, is laid a perforated weight, *c*, to prevent the drug from being disturbed by the menstruum. This body or shell of the percolator has formed upon its upper end an annular shoulder, *d*, and above it a suitable screw-thread, which engages with a similar screw-thread upon an air-tight cap, B, and between which is interposed suitable packing *e* and packing *f*. Rigidly connected to the upper part of the cap B is a faucet-shell, C, and an open funnel-top, D, the latter being designed for the purpose of supplying the liquid to the percolator. The cap, faucet, and funnel may be, if desired, formed of any suitable metal or other material which may be thought best adapted to the purpose. Passing through the shell C is a tapering faucet-plug, E, secured in place by a suitable nut and washer, *g h*. The plug at its larger end is provided with a stop, *i*, which abuts against shoulders upon the faucet-shell to limit its rotary movement. Said plug is also provided with the usual orifice *j*, and has upon either side a small V-shaped depression, *k*, running to a final point, and communicating with the plug-orifice diagonally upon opposite sides of the same, so that, as the faucet-plug is turned sufficiently to bring the depressions *k* beyond the bore of the shell C, the admission of air and the consequent rate of dropping is regulated and controlled to the required minuteness.

To still further secure greater nicety in regulating the rate of dropping, there is secured to the faucet-plug an elongated handle, F, and, by the degree with which the handle is moved at its lower end to either side, regulates the admission of air and consequent progress of the menstruum through the material in the percolator, and the rate of dropping of the percolate into the receiver.

The funnel-top D, as will be seen by reference to Fig. 2, has screw-threads upon its interior, where it joins the faucet-shell, to receive the nipple G, a suitable packing being interposed between said nipple and the faucet-shell, so as to insure a perfect air-tight joint.

When it is desired to use an air-forcing apparatus, a tube, H, of suitable material, is secured to such nipple, and communicating with a suitable air-forcing pump or other apparatus, I.

The advantages of combining such an apparatus with a percolator will at once be apparent, from the fact that when the substance to be exhausted is too tightly packed by com-

pressing air above the menstruum, the percolation is accelerated more or less, according to the degree of pressure. The air may also be compressed and retained in the percolator-shell by closing the faucet-plug E until the air is exhausted, after which the same process may be repeated.

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

1. The combination, with a percolator, of a suitable faucet, provided with depressions *k k*, for controlling and regulating the admission of air, substantially as and for the purpose set forth.

2. The percolator, provided with the air-tight-fitting cap B, faucet-shell A, and plug E, the latter provided with orifice *j* and depressions *k k*, substantially as and for the purpose set forth.

3. In combination with the closed-top percolator A B, the faucet shell and plug C E, the latter provided with the long handle F, substantially as and for the purpose specified.

4. The combination, with a percolator, of the faucet, substantially as herein described, provided at its top with a funnel, for the purpose specified.

5. The combination, with a percolator provided with closed top B, faucet E, and depressions *k k*, of a suitable pump or air-compressing apparatus, substantially as and for the purpose specified.

6. In combination with the percolator, provided with the closed top B and faucet E and funnel D, the removable nipple G, for the purpose set forth.

7. The percolator herein described, consisting of the body or shell A, perforated diaphragm *b*, perforated weight *c*, air-tight cap B, shell C, faucet E, the whole combined to operate as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE McPHERSON.

Witnesses:
NAT. E. OLIPHANT,
A. P. SIMS.