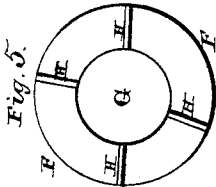
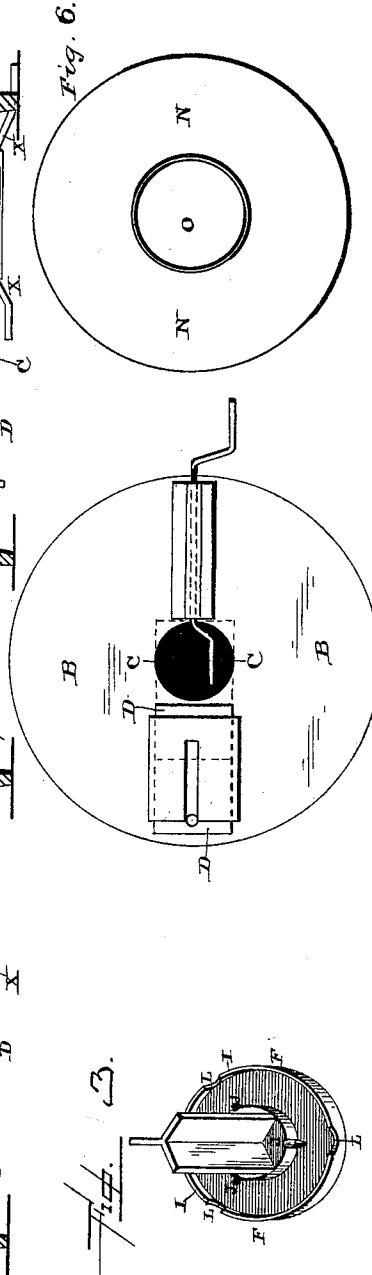
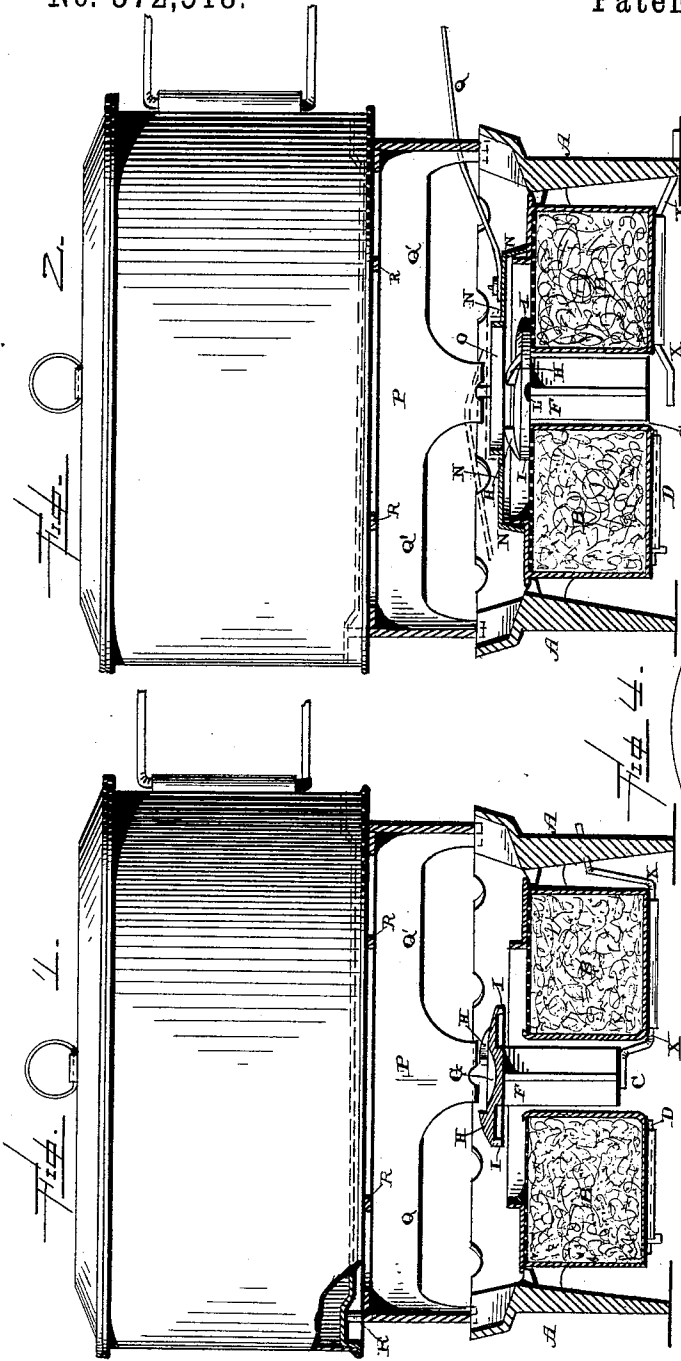


(No Model.)

H. CLAYTON. LAMP STOVE.

No. 372,518.

Patented Nov. 1, 1887.



WITNESSES.
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UNITED STATES PATENT OFFICE.

HERBERT CLAYTON, OF CINCINNATI, OHIO.

LAMP-STOVE.

SPECIFICATION forming part of Letters Patent No. 372,519, dated November 1, 1887.

Application filed February 16, 1887. Serial No. 227,815. (No model.)

To all whom it may concern:

Be it known that I, HERBERT CLAYTON, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Lamp-Stoves; 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 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in alcohol stoves; and it consists in the arrangement and combination of parts, which will be more fully described hereinafter.

The object of my invention is to provide an alcohol stove having a center draft and an adjustable valve to regulate the flame.

Figure 1 is a vertical section of a lamp embodying my invention without the cap or cover. Fig. 2 is a similar view showing the cover in position. Fig. 3 is an inverted perspective of the central valve. Fig. 4 is an inverted view of the body of the lamp. Fig. 5 is a plan view of the valve. Fig. 6 is a plan view of the cover.

A represents the metallic supporting frame, in which the reservoir B is placed in the usual manner. This reservoir B is provided with an air flue or passage, C, through its center, and which air passage or flue can be closed at its bottom by means of the slide or valve D, of any kind which will make a close fit and prevent the vapor of the alcohol from escaping at this point while the lamp is packed up for transportation or not in use. Placed in the top of this central flue or opening, C, is the valve F, which forms both a valve for regulating the flow of air through the central flue and as a spreader for the flame. In the top of the valve is formed a recess, G, and extending outward from this recess is a suitable number of radial flanges or ribs, H.

The alcohol or other fluid to be used is poured slowly into the recess G, and then it flows outward over the top of the valve and spreader into the asbestos or other material with which the body of the stove is filled. The flanges or ribs serve to divide the fluid evenly as it flows outward from the recess G, so as to distribute the alcohol evenly to all parts of the surface of the burner. By evenly distributing the al-

cohol to the burner a flame of equal intensity is produced at all points.

The under side of the top of the valve is hollowed out or recessed and provided with the flange I around its edge. The lower portion of the shank extends down into the central opening, C, and forms a guide for the valve in its vertical movements. The upper part of this shank is made circular and of little less diameter than the central flue, C, and in the edge of this central portion and in the under side of the top are formed the grooves or air-passages J, which correspond to the small notches L, made in the edges of the flange around the outer edge. Through these small notches L and grooves or air-passages J the air passes for the purpose of supplying oxygen to the flame when the valve is depressed, so as to rest upon the top of the burner, and when the cover N, provided with the opening O through its center, is being used. Were it not for these grooves or air-passages, the air would be cut off entirely from the flame, and hence there would be but a very poor combustion at best. When the valve is raised upward, so as to allow a full supply of oxygen to the flame, the cover is entirely removed, for then the full surface of the burner is brought into play. For the purpose of operating this combined valve and spreader, a cranked wire or rod, X, is journaled upon the bottom of the body B, and which is provided with a handle at its outer end and with an operating-crank at its inner one. The shank of the valve extends down so as to be readily operated by the crank at the inner end of the operating wire or rod. When the crank strikes the lower end of this shank, the valve is raised upward; but when the crank is so turned that it does not come in contact with the shank the valve sinks downward from its own gravity and rests solidly upon the top of the burner, and thus cutting off all supply of air through the central flue, C, except what is absolutely needed to produce a small flame. By raising the valve upward and supplying oxygen to the flame through the central flue, C, a much more perfect combustion and a more intense heat are obtained and with a less consumption of alcohol than can be done where no central flue is used.

When it is desired to produce a small flame,

the valve is dropped downward so as to rest upon the top of the burner, and then the cover is placed over the top of the burner so as to leave but a small opening for the escape of the flame. When it is desired to extinguish the flame, a cap is placed over the opening in the cover, and this cap and the slide upon the bottom of the lamp prevent any escape of the vapor of the alcohol while the lamp is not in use. The handle Q, which is secured to the cover, is pivoted in position, so that when the lamp is to be packed up for transportation the handle can be turned inward, as shown in dotted lines, so as to come within the circumference of the frame A.

The griddle P is provided with the depending flange Q' around its outer edge, so as to catch the rising heat and confine it more under the vessel or object placed upon the griddle than can be done where this flange is not used. Rising from around the top edge of this griddle are a number of projections, R, which serve to raise the vessel above the griddle, and thus allow the heat to pass freely outward and rise around the sides of the vessel. Where the vessel rests solidly upon the griddle, the heated air does not come in contact with the bottom of the vessel as perfectly as it does where these projections are used.

In alcohol-stoves where no central passage is used so as to supply oxygen to the flame, the flame burns sluggishly and is apt to incline to one side or the other of the burner, thus producing a very irregular unsatisfactory flame. By having the central air-passage this tendency to waver and to burn sluggishly is entirely overcome and a steady heating flame is produced.

Having thus described my invention, I claim—

1. The combination of the reservoir B, filled

with an absorbent material and provided with a perforated top, which serves as a burner, and which has a central air-flue, C, extending vertically through it, with a combined valve and air-spreader provided with air-passages, and which is placed in the flue C, substantially as shown.

2. An alcohol-stove, B, provided with a perforated top, which serves as a burner and is filled with a suitable absorbent material, and having an air-flue through it, with the valve F, having a recess, G, in its top, substantially as described.

3. The combination of the reservoir B, filled with an absorbent material and having a perforated top, which serves as a burner, and is provided with an air-flue, C, with the valve F, having the recess G in its top, and the radial flanges H, substantially as set forth.

4. In an alcohol-stove, the combination of the reservoir, having a central air flue or passage, with the combined spreader and valve provided with air-passages, and a cranked operating-rod, which is journaled upon the bottom of the reservoir, for raising or lowering the spreader and valve to regulate the size of the flame, substantially as specified.

5. The combination of the reservoir B, having a central air flue or passage, with the combined spreader and valve provided with air-passages, a cranked rod, which is journaled upon the bottom of the reservoir, for raising and lowering the spreader, and a slide for closing the lower end of the flue or passage C, substantially as shown.

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

HERBERT CLAYTON.

Witnesses:

EDM. P. ELLIS,

F. A. LEHMANN.