

No. 617,697.

Patented Jan. 10, 1899.

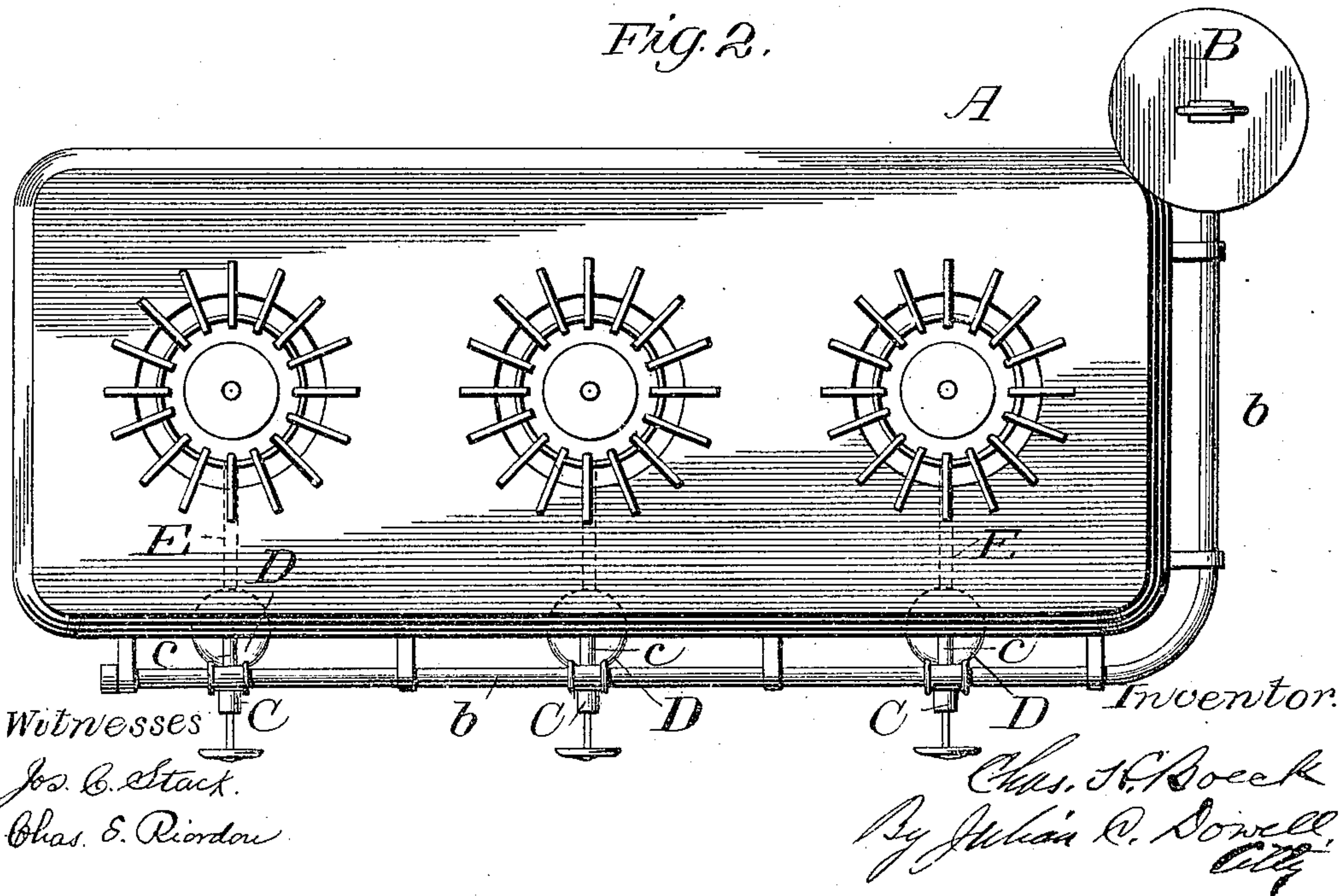
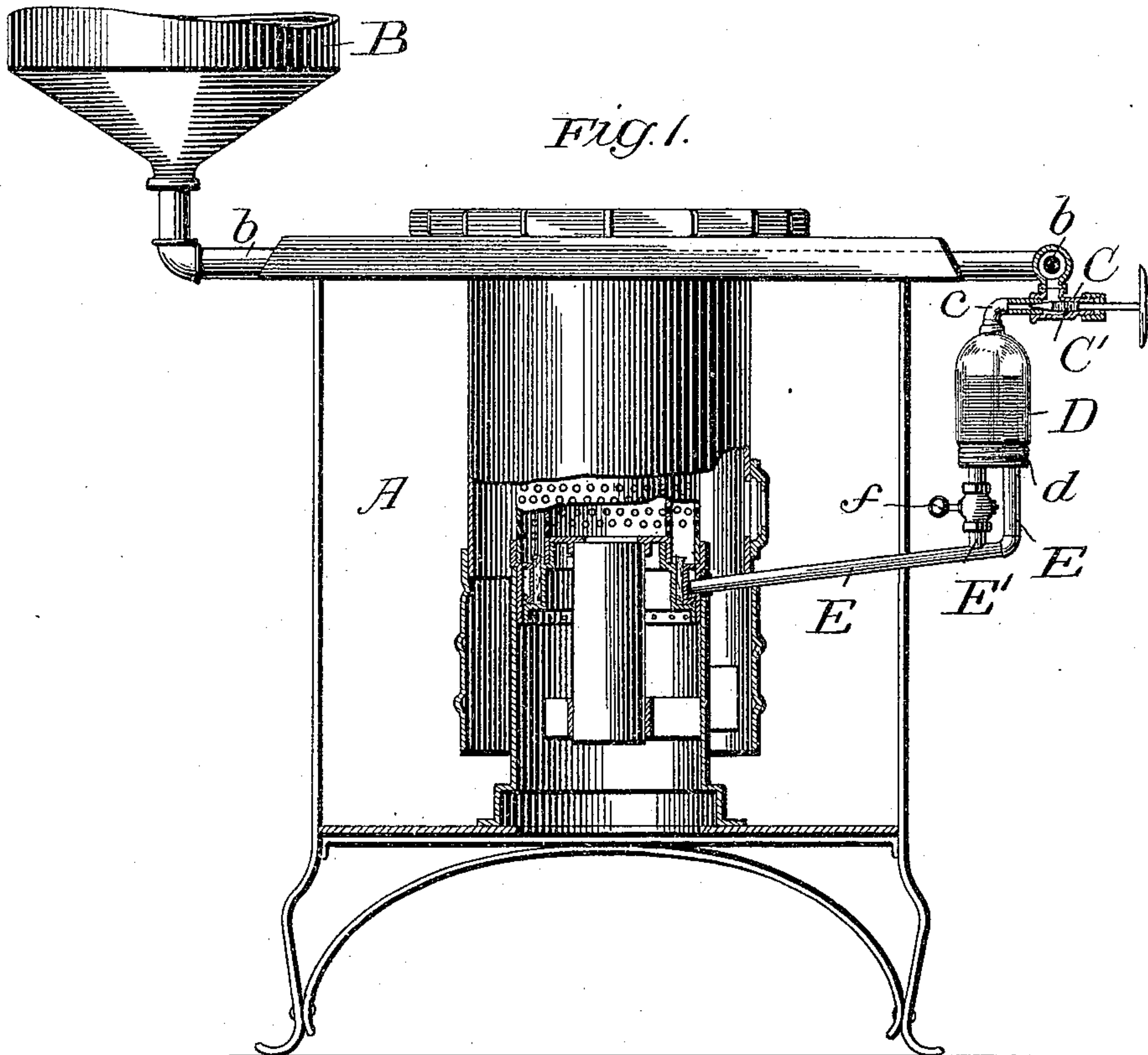
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FEEDING ATTACHMENT FOR OIL STOVES.

(Application filed Sept. 16, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses  
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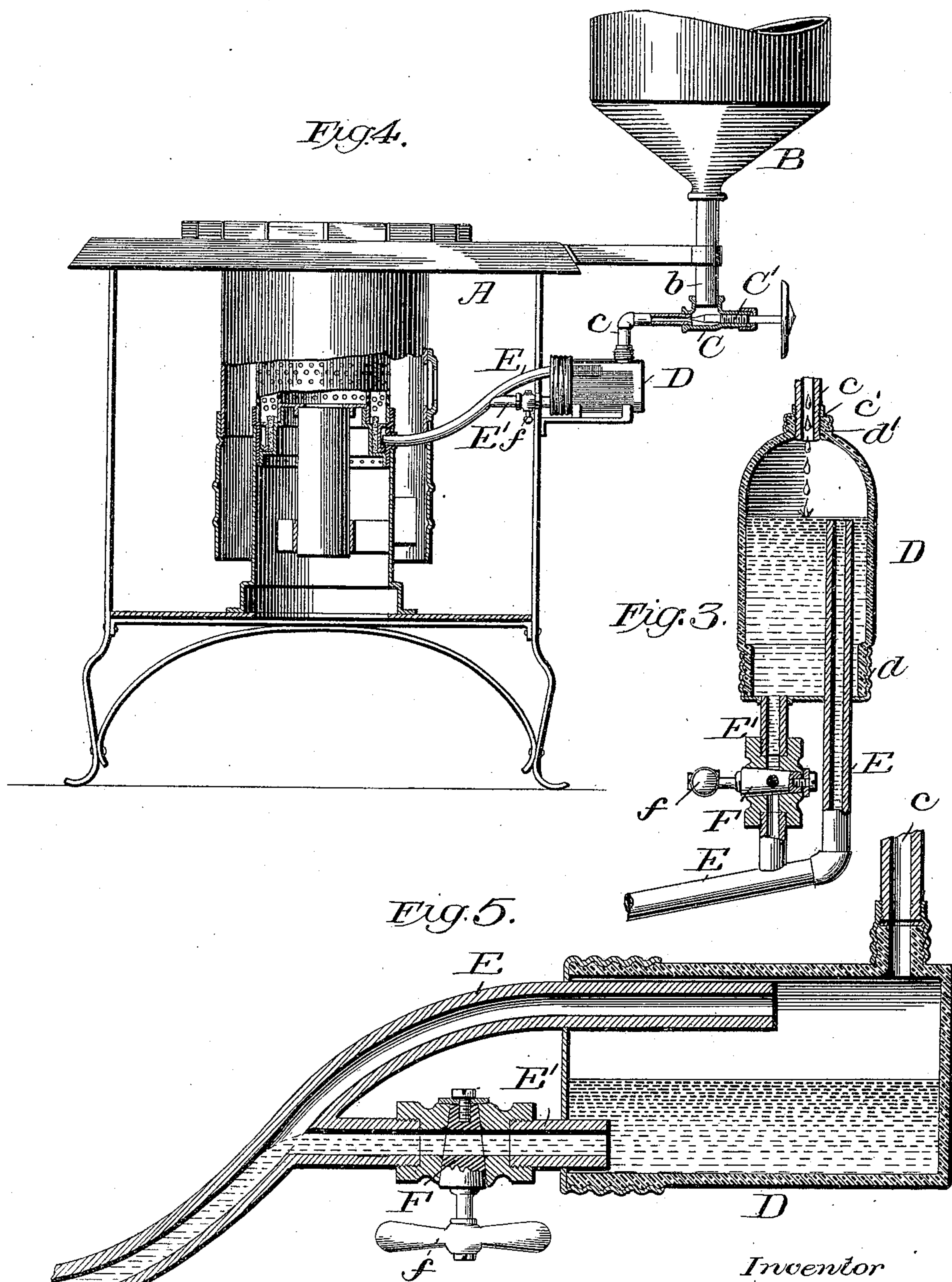
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# UNITED STATES PATENT OFFICE.

CHARLES H. BOECK, OF JACKSON, MICHIGAN, ASSIGNOR TO THE NOVELTY MANUFACTURING COMPANY, OF SAME PLACE.

## FEEDING ATTACHMENT FOR OIL-STOVES.

SPECIFICATION forming part of Letters Patent No. 617,697, dated January 10, 1899.

Application filed September 16, 1898. Serial No. 691,060. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. BOECK, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Feeding Attachments for Oil-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 appertains to make and use the same.

This invention relates to the class of vapor-stoves known as "blue-flame" oil-stoves, and more particularly to that type wherein the flow of the oil-feed is regulated by a valve to correspond with the consumption in the burner in contradistinction to that type of stoves in which a certain oil-level is maintained on the student-lamp principle.

It is well known that in lighting a stove of the type to which my invention more particularly relates it is necessary for the operator to wait some time before the wick-chamber is sufficiently charged to permit lighting of the wick, owing to the fact that the oil-feed is necessarily very much restricted in this class of stoves—in fact, passing through the valve only in drops. It is also necessary for the operator to carefully watch the burner to prevent an overflow before the stove is lighted, and when the wick-chamber is fully supplied with oil ready for lighting the operator must close the feed-valve, light the burner, and still watch it until the oil is practically consumed therefrom, when the feed-valve must be reopened to allow the oil to drop into the burner.

The main objects of my invention are to provide means for quickly putting the stove in lighting condition without waiting for the wick-chamber to become charged by the inflow of oil drop by drop and to avoid the necessity for watching to prevent an overflow before the stove is lighted or of watching the burner after lighting, and at the same time to provide a simple and satisfactory "sight-feed" so placed as not to be easily hidden from view.

In a previous application, filed August 18, 1898, Serial No. 688,892, I have shown means for quickly putting the stove in lighting con-

dition, consisting, essentially, of an auxiliary oil fount or reservoir incorporated in the conduit between the main reservoir and burner, the auxiliary fount being invertible, so that when inverted its contents may flow into the conduit, quickly charging the burner, and when returned to its normal position it is refilled from the main oil reservoir or tank, and the continued flow of oil from the main reservoir causes an overflow of the auxiliary reservoir, whereby the burner is kept supplied with oil.

Another object of my invention is to provide a simple and efficient device of the character referred to in my aforesaid application with a visible or sight feed and conveniently arranged for manipulation by the operator without inverting the auxiliary reservoir.

With the above objects in view I provide an auxiliary fount or reservoir which is incorporated in or in communication with the feed pipes or conduit between the main reservoir and burner, and which is preferably formed either wholly or in part of glass or other transparent material to show a "sight-feed" and is of such size or capacity that it may hold sufficient oil only to charge the wick-chamber or burner-ring for lighting purposes without overflowing the burner, together with means for controlling the supply of oil to and the discharge from said auxiliary fount, so that it may be quickly emptied for charging the wick-chamber or burner-ring for lighting and refilled while the initial charge of oil is being consumed, the burner being continuously fed after the consumption of such initial charge by the overflow from the auxiliary fount, so that the latter may be kept full for subsequently quickly charging the burner for lighting.

The invention will first be hereinafter more particularly described with reference to the accompanying drawings, which form a part of this specification, and then pointed out in the claims at the end of the description.

In the drawings, in which similar parts are designated by similar letters of reference, Figure 1 represents, in side elevation and partly in section, an ordinary oil-stove with an auxiliary oil fount or reservoir embodying my invention. Fig. 2 is a plan view of the



same. Fig. 3 is a vertical sectional elevation of the auxiliary fount or reservoir. Fig. 4 represents, in side elevation and partly in section, an ordinary oil-stove with an auxiliary oil fount or reservoir embodying a modified form of my invention; and Fig. 5 is a vertical longitudinal sectional elevation, on an enlarged scale, of the horizontally-arranged auxiliary fount or reservoir shown in Fig. 4, with attached conduits or feed-pipes partly broken away.

Referring particularly to Figs. 1 and 2, the reference-letter A denotes the frame of an ordinary oil-stove; B, the main reservoir, suitably supported adjacent thereto; *b*, the feed-pipe, leading from the main reservoir; C, a head with which said feed-pipe communicates; *c*, a feed-pipe screwing into said head and formed or provided with an interior tapered valve-seat to cooperate with an ordinary needle-valve C'.

The head C is preferably set horizontally, the feed-pipe *c* extending correspondingly horizontally therefrom and by means of an elbow-joint continuing vertically to the auxiliary reservoir. The auxiliary fount or reservoir, which is designated by the letter D, may be in the form of a glass cylinder or bottle, which is preferably placed in a perpendicular position and provided at its top or upper surface with an inlet for the feed-pipe *c* and at its bottom or one end with an opening or open end, which is closed by an interiorly-threaded metal cap *d*, screwing onto the externally-threaded end of the cylinder and through which project two outlet-tubes E and E', the tube E extending through the removable cap or bottom *d* upward to near the inlet end of the reservoir, while the branch outlet-tube E' is in communication with the bottom or lower portion of the auxiliary reservoir, so that after the valve in the branch outlet is closed the oil must rise in the reservoir to the height of the tube E, which will conduct the overflow to the burner. The inlet may consist of a neck or nipple *d'*, held in conjunction with the feed-pipe *c* by a union-coupling *c'*. In the horizontally-arranged position of the auxiliary reservoir (shown in Figs. 4 and 5) the outlet-tube E preferably projects into the upper part of the reservoir and beyond the metal cap, so that the operator may readily see when the reservoir is full to the level or bottom of said tube, while the lower tube or branch E' projects through the lower part of the cap, so as to drain the reservoir. The lower or branch tube E' in both forms is provided with a suitable valve or cut-off—such as a rotary cock F, having a handle *f* and adapted to control the flow through the tube—said branch tube having its discharge end opening into the upper or main tube E, which connects with or is a continuation of the feed-pipe for supplying the burner from or through the auxiliary reservoir.

When it is desired to light the stove, the operator opens the valve or cut-off F, thereby emptying the entire contents of the auxiliary fount or reservoir through the pipe E', which immediately charges the wick-chamber and permits the burner to be lighted. This being done, the valve F is then closed and the valve C' in the feed-pipe or head C is opened, whereupon the reservoir is refilled from the feed-pipe and the continued flow from the main reservoir causes an overflow of the auxiliary reservoir, which is carried out through the upper tube E, or the tube having its outlet at the highest elevation, and thence to the burner. The capacity of the auxiliary reservoir is such that said reservoir will be refilled and the overflow through the tube E commenced by the time the initial supply of oil in the burner is consumed.

Thus it will be apparent that my invention provides a simple means for quickly putting the stove in lighting condition and obviates all necessity of watching the burner to prevent overflow before the stove is lighted or of watching the development of the flame after lighting. Furthermore, the transparent auxiliary oil-reservoir serves as an effectual sight-feed, enabling the operator to notice the amount of oil dropping from the main reservoir, and, moreover, the auxiliary reservoir is easily placed practically under the main reservoir at the side of the stove, where it is not easily hidden from view, whereas in oil-stoves heretofore in use in which a sight-feed has been employed it is usually placed at the back of the stove or in such position as to be readily hidden by any oven, boiler, or cooking utensil placed upon the stove, so as to render it impossible for the operator to discern the amount of oil that is passing to the burner.

It will be understood, of course, that the above-described arrangements may be modified in a number of ways without departing from the scope or spirit of my invention. While I preferably employ an auxiliary reservoir of cylindrical form and of glass with an open bottom or end exteriorly screw-threaded to receive an internally-screw-threaded cap or removable bottom, a reservoir of any suitable form or shape may be employed and the cap or cover may be secured thereto in any suitable manner or might be dispensed with, the feed-pipes being passed through suitable apertures in the reservoir formed integrally of glass or other transparent material.

Instead of forming the reservoir entirely of glass it may be desirable to provide a glass or transparent window-like fitting, which will enable the operator to discern the amount of oil that is passing to the burner and to discover when the auxiliary reservoir is filled to the desired extent, as it may be desirable at times to only partially refill the reservoir for charging or recharging the burner, and in the use of the word "transparent" as employed in any one of the appended claims I do not de-



sire to be limited to a receptacle made entirely of glass or other transparent material, though the cylindrical glass form is preferred.

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

1. In an oil-stove, the combination with the burner and the main reservoir, of an auxiliary fount or reservoir through which the oil from the main reservoir passes on its way to the burner, said auxiliary reservoir having two outlets for supplying oil to the burner, one outlet being controlled by a suitable valve and arranged in a plane below the other to permit the contents of the reservoir to be quickly emptied when the valve is open, while the other outlet in a higher plane permits the continuous feeding of the burner by the overflow from the auxiliary reservoir while the latter is kept full for subsequent lighting purposes.

2. A "sight-feed" device for oil-stoves comprising a transparent receptacle communicating by a valve-controlled pipe with the main oil-reservoir and by an overflow-pipe with the burner, so as to discharge the oil into the burner through said overflow, and a valve-controlled pipe on a lower level than the overflow by which the contents of the receptacle may be quickly emptied for lighting purposes.

3. In an oil-stove, an auxiliary oil fount or reservoir interposed between the main reservoir and the burner and in communication therewith, having duplicate discharge-pipes one arranged in a plane above the other, so as to provide an overflow through the upper pipe; the lower pipe being provided with a stop-cock or valve for closing the same, whereby the burner may be initially quickly charged through the lower pipe for lighting purposes and the feed thereto continued, after the initial supply of oil is consumed, by the over-

flow from the auxiliary reservoir through the upper pipe, while the lower one is closed, substantially as described.

4. In an oil-stove, the combination with the burner and a main oil-reservoir, of an auxiliary reservoir interposed between the main reservoir and the burner in communication with the feed-pipes; said auxiliary reservoir having duplicate discharge-pipes for supplying oil to the burner; one of said pipes being arranged in a plane above the other, so as to provide an overflow from the auxiliary reservoir to the burner when the auxiliary reservoir is filled, and the lower pipe having a suitable valve, whereby the contents of the reservoir may be quickly emptied for lighting purposes and the feeding of the burner continued through the overflow after refilling the auxiliary reservoir.

5. In an oil-stove, the combination with the main oil-reservoir and the burner, of feed-pipes leading from said reservoir to said burner, and an auxiliary reservoir through which the oil is conducted on its way to the burner, said auxiliary reservoir being provided with two discharge ports or pipes arranged at different elevations; the upper pipe providing a free exit for the oil when the auxiliary reservoir is full, and the lower pipe provided with a suitable stop-cock or valve for controlling the outlet therefrom, to permit the contents of the vessel to be quickly emptied for charging the burner for lighting purposes, and a suitable valve controlling the discharge from the main reservoir into the auxiliary reservoir, substantially as described.

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

CHARLES H. BOECK.

Witnesses:

H. L. SMITH,

WILLIAM H. ROSS.