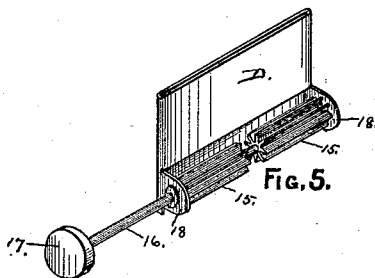
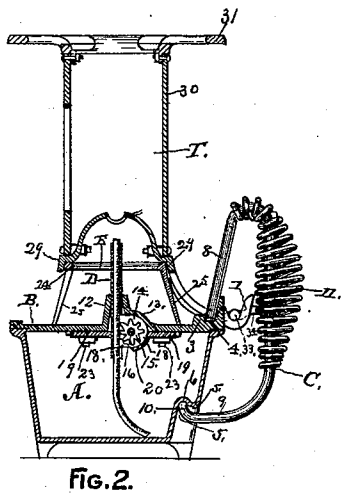
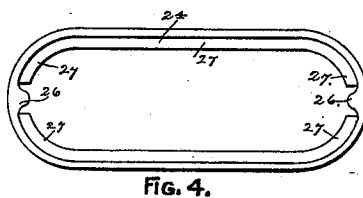
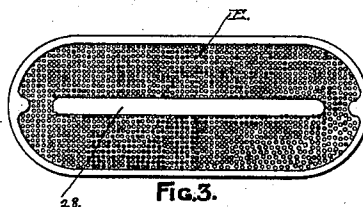
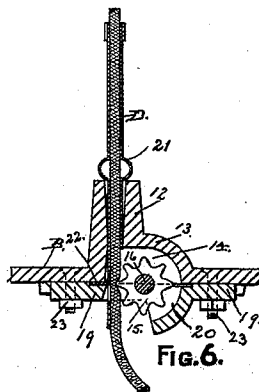
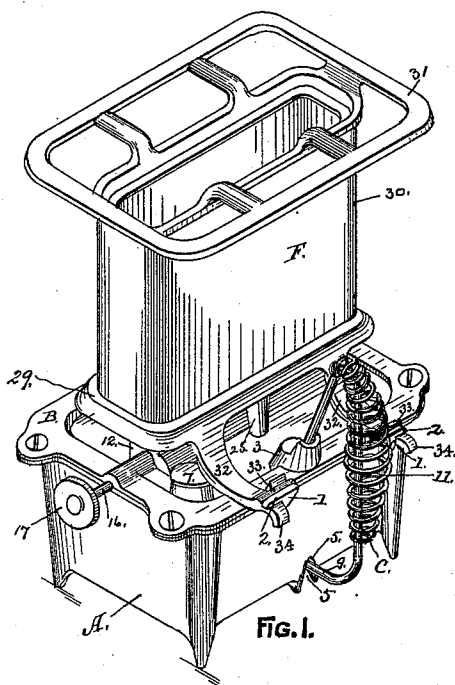


(No Model.)

R. Z. LIDDLE.
OIL STOVE.

No. 484,030.

Patented Oct. 11, 1892.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT Z. LIDDLE, OF ALBANY, NEW YORK.

OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 484,030, dated October 11, 1892.

Application filed March 9, 1891. Serial No. 384,263. (No model.)

To all whom it may concern:

Be it known that I, ROBERT Z. LIDDLE, of the city and county of Albany, in the State of New York, have invented new and useful
5 Improvements in Oil-Stoves, of which the following is a specification.

My invention relates to improvements in oil-stoves; and the object of my invention is to simplify the construction and to render the
10 stove more efficient, safe, and durable. This object I attain by the construction illustrated in the accompanying drawings, which are herein referred to and forms part of this specification, and in which—

15 Figure 1 is a perspective view of my stove. Fig. 2 is a transverse vertical section of the same, taken near the middle. Fig. 3 is a detached plan view of the perforated diaphragm and its frame. Fig. 4 is a detached plan
20 view of the frame for holding the perforated diaphragm. Fig. 5 is a detached perspective view of the wick-tube of the form shown in Fig. 2, and Fig. 6 is an enlarged transverse vertical section of a modified form of the
25 wick-tube, top plate, and binder, said top plate being shown broken widthwise.

As represented in the drawings, A designates the oil-reservoir of my stove, and B the top plate, which is secured to said reservoir
30 by means of bolts in the usual manner of such construction. Said top plate is provided at its rearmost edge with grooved lugs 1, which form one part of the hinges for the chimney, and each of said lugs has a hook or
35 arm 2, which projects laterally therefrom, said hooks projecting outwardly in opposite directions. At about the middle of its rearmost edge the top plate B is provided with a standing lug 3 of semi-tubular form and having
40 a circular pit or depression 4 at the lower extremity of its concave side. Directly under the lug 3 the oil-reservoir A is provided with an upwardly-extending groove 5 in the lower part of its rearmost side, and said groove
45 terminates at its inner end in an upwardly-extending circular pit 6. The top plate B is also provided with a feed-opening, which is covered by a detachable cap 7, which can be readily removed to allow the reservoir A to
50 be filled with oil.

C designates a detachable handle, which is preferably made of a stiff wire bent in the

form, substantially as shown, to produce a downwardly-extended limb 8, that is fitted to engage in the lug 3 and pit 4, and a lower
55 limb 9, that is fitted to engage in the groove 5, and is provided with an upwardly-turned end 10, that is fitted to engage in the pit 6. Said handle is preferably provided with an openly-formed spiral 11, made of small wire
60 and attached to the larger wire of the handle C in such manner that a free circulation of air may be had between said spiral and larger wire for the purpose of keeping the handle
65 C in a cool condition; but when preferred any material that is a non-conductor of heat may be substituted for the spiral 11. The essential feature of the handle C is the mode
70 of attaching it without bolts to the stove, so that it will be self-attaching and readily removable therefrom. The top plate B is provided with an oblong collar 12, which forms a slotted
75 opening for receiving the wick-tube. Said collar has a convexo-concave swell 13 at one side for the purpose of forming a recess 14 for containing a revoluble wick-raiser 15. At opposite
80 ends of the collar 12 the lower side of the top plate B is provided with grooves which form the upper part of the journal-boxes for the shaft 16 of said wick-raiser. One end of
85 said shaft projects beyond the end of the swell 13, and it may, as shown in Fig. 1, extend beyond the end of the top plate B, and is provided with a milled head 17 or other appliance for rotating said wick-raiser.

D designates the wick-tube, which is made of sheet metal or other suitable material in the form of a flat tube, which fits snugly into the slotted opening in the collar 12. As shown
90 in Figs. 2 and 5, said wick-tube is provided with lugs 18, which are integral with said tube and form bearings in which the wick-raiser 15 is journaled. When made in this form, said wick-tube is inserted in the slot-
95 ted opening of the collar 12 by pushing it upwardly from the lower side of the top plate B, and it is secured in place by a binder 19, which bears upon the lugs 18 of said tube. As shown in Fig. 6, the wick-tube D is pro-
100 vided with transverse ribs 21, which are fitted to bear upon the upper face of the collar 12. In this last-described form said wick-tube is inserted into the collar 12 from the upper face of the top plate B. A lug or lugs

22 are formed at one side of said wick-tube, and being bent at right angles thereto are clamped between the top plate B and the binder 19. The latter in both forms of the wick-tube shown and described is secured to the under side of the top plate B either by means of screw-bolts 23, which pass through said top plate and binder, or by screws cast in said top plate and passing through said binder only. In the modified form of wick-tube D (shown in Fig. 6) the wick-raiser 15 is independent of the wick-tube, and is journaled in grooves formed in the top plate B and binder 19.

E designates a perforated diaphragm which is located just below the upper extremity of the wick-tube D. Said diaphragm is usually made of perforated sheet metal and is held in a metallic frame 24, which is provided with feet 25, that rest on the top plate B. Said frame is provided with lugs 26, which are preferably formed at opposite ends of said frame, with the upper face of same on the same plane as the upper face of said frame. At opposite sides of the opening in said frame longitudinal flanges 27 are formed at sufficient distance below the plane of the lower side of the lugs 26 to permit the diaphragm E to be inserted in the space formed between level of said lugs and flanges, said insertion being accomplished by first entering one end of it under one of the lugs 26, then bending said diaphragm upwardly until its free end will pass freely under the lug at the opposite end of the frame, and then pressing the diaphragm downward until the latter lies smoothly in its place on the flanges 27. The diaphragm E is provided with a slotted opening 28, through which the upper extremity of the wick-tube D will protrude.

F designates a chimney, which consists of a base-piece 29, a tube 30, and a top frame 31. Said base-piece is provided with arms 32, which extend rearwardly and downwardly therefrom, and each of which is provided with a horizontal pintle 33. Said pintles range in the same line and extend toward each other,

so as to enter the grooves in the lugs 1 and form the complement of the hinge-joints for said chimney. Each of the arms 32 is provided with a projection 34, which by engaging with the rearmost side of the oil-reservoir A prevents the chimney F from being turned rearward beyond a required point. Said projections will also take against the hooks 2 when said chimney has attained an erect position, as shown in Fig. 1.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an oil-stove, the combination of a perforated diaphragm made of flexible metal and a rigid metallic frame for said diaphragm, provided at each of the inner sides of the opposite ends with inwardly-turned lugs and having at the inside of each of its opposite side bars a flange arranged at a lower plane than said lugs, as and for the purpose herein specified.

2. In an oil-stove, the combination of a top plate provided with a collar having a slotted opening for containing a wick-tube and having a convexo-concave swell formed at one side of said collar, a wick-tube which fits into said slotted opening, and a binder secured to the lower side of said top plate and fitted to bear upon said wick-tube, as and for the purpose herein specified.

3. In an oil-stove, the combination of a top plate provided with a collar having a slotted opening for containing a wick-tube and having a convexo-concave swell at its side, the hollow of said swell forming part of a recess for containing a revoluble wick-raiser, and a slotted binder provided with a convexo-concave swell at one side of its slotted opening, said swell forming the complement of the recess for the wick-tube and said binder being secured to the lower side of said top plate, so as to bear upon the wick-tube, as and for the purpose herein specified.

ROBERT Z. LIDDLE.

Witnesses:

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WM. H. LOW.