

J. McG. ADAMS.  
Coal Oil Stove.

No. 230,850.

Patented Aug. 10, 1880.

Fig. 1

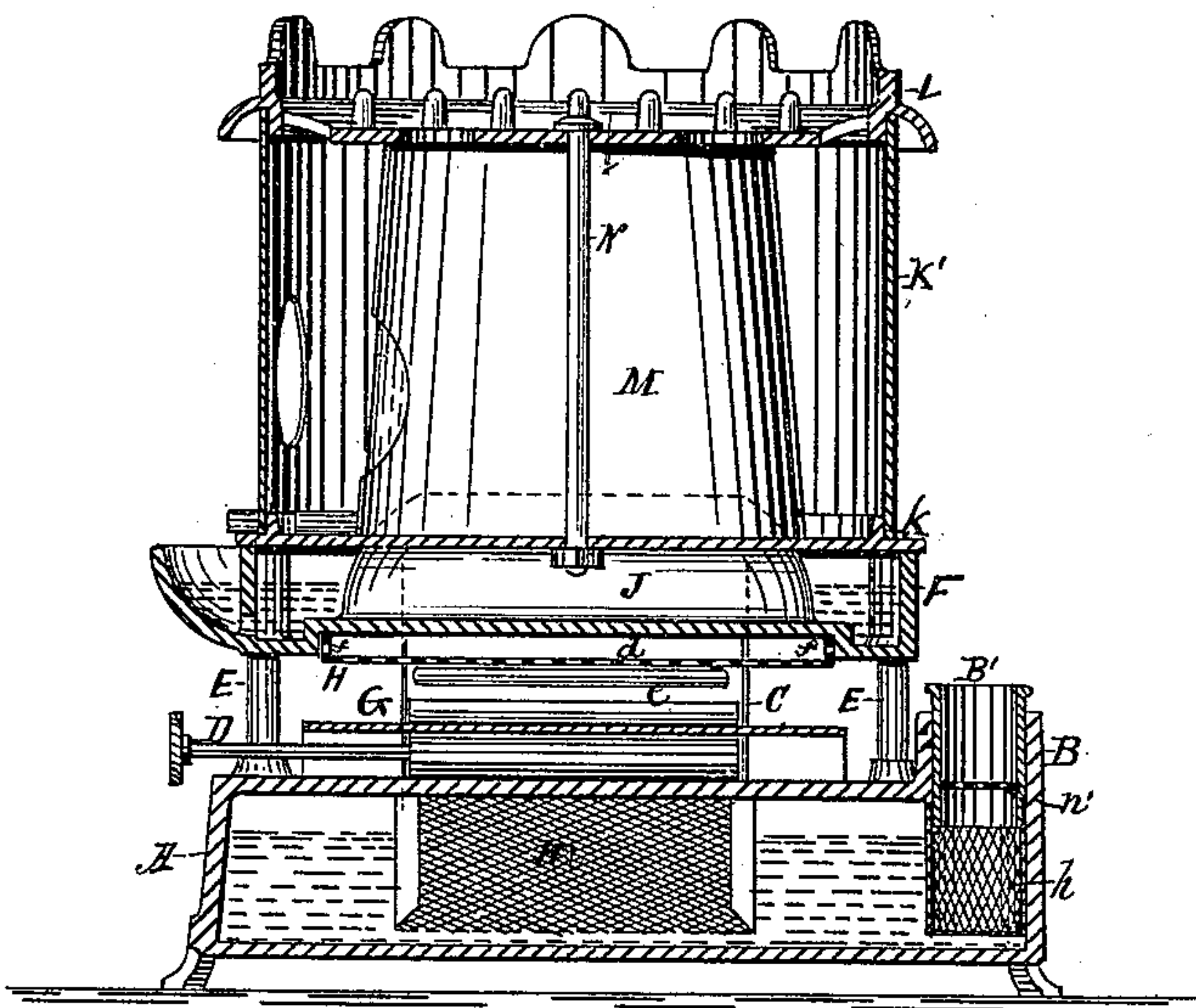
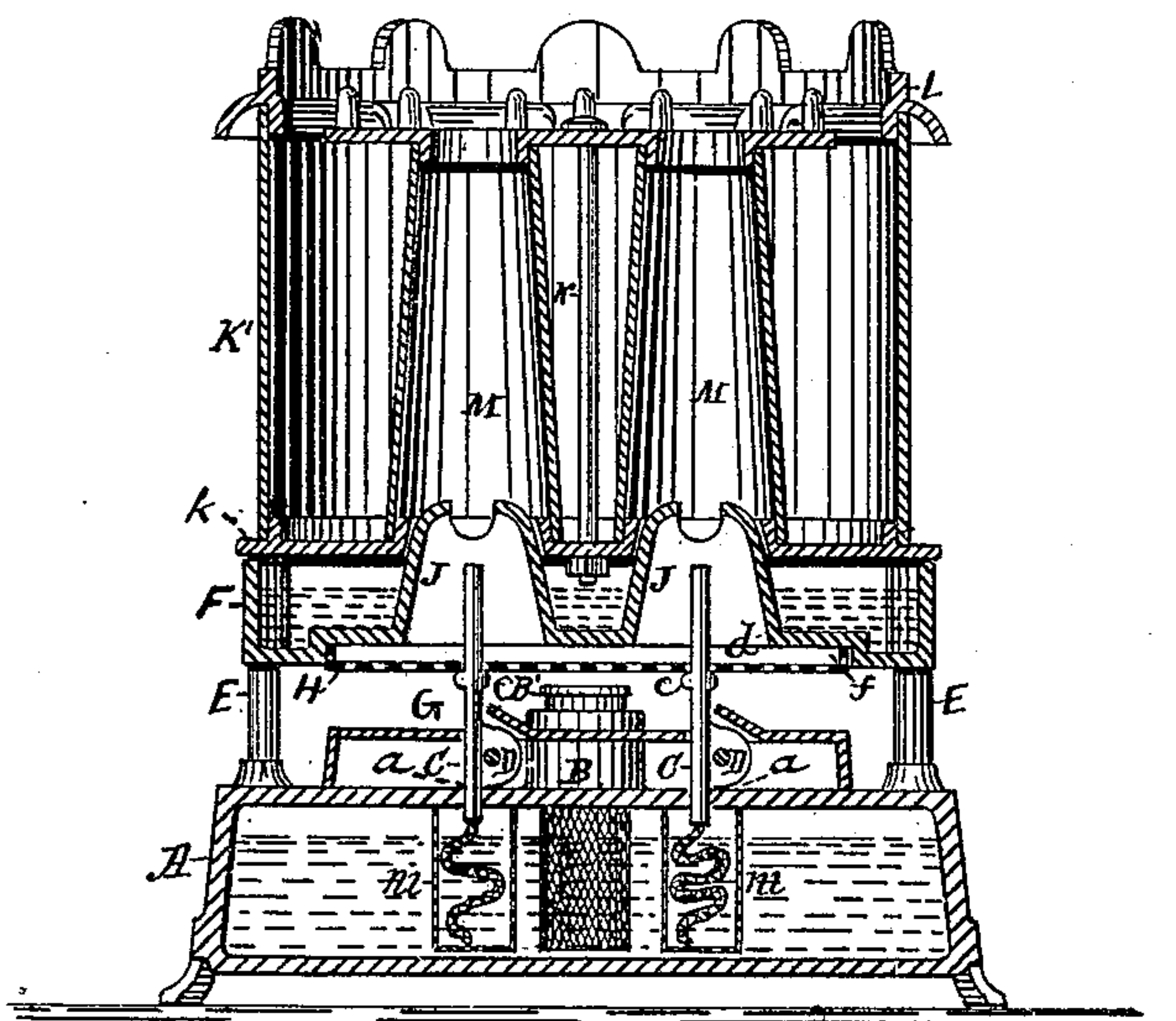


Fig. 2



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# UNITED STATES PATENT OFFICE.

J. MCGREGOR ADAMS, OF CHICAGO, ILLINOIS.

## COAL-OIL STOVE.

SPECIFICATION forming part of Letters Patent No. 230,850, dated August 10, 1880.

Application filed June 25, 1877.

*To all whom it may concern :*

Be it known that I, J. MCGREGOR ADAMS, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Coal-Oil Stoves; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical longitudinal central section of a coal-oil stove embracing my said invention. Fig. 2 represents a vertical transverse central section of the same.

My invention relates to that class of coal-oil stoves designed more especially for the purpose of cooking; and the object of my invention is to improve the construction of such stoves, so as to render them more convenient in use and more perfect in operation, and to prevent them from being exploded by the formation of explosive gases within the oil-reservoir.

The invention consists in the special construction and arrangement of the oil-reservoir and wick-receptacles, and also in a special device for the protection of the filling-aperture to prevent explosions.

In the drawings, A represents the oil-reservoir, which may be cast of any suitable metal and in any desired form, but is made entire—that is, the top and sides are cast in one piece and the bottom soldered thereto after the wick-receptacles are in place, so that the completed base is without openings except an aperture in the top, through which the reservoir may be filled, and one or more slots, *a*, in the top, in which the wick-tubes are inserted.

The wick-tubes C are of ordinary construction, and at their lower ends are inserted in the slots *a*, within which they are secured, and thus communicate directly with the interior of the reservoir, and are also provided with ordinary ratchet-shafts D. Upon this reservoir as a base may be placed a superstructure of varied construction for the purpose of completing the stove. One is shown in the drawings, in which there are columns E rising from the reservoir, on which is sup-

ported a water-reservoir, F, leaving an air-space, G, between it and the oil-reservoir.

The bottom of the water-reservoir is raised in the center, so that, in connection with a perforated diaphragm, H, immediately below, an air-chamber, *d*, is formed around the wick-tubes. The diaphragm H is supported by ribs *c* on the wick-tubes.

The usual deflecting-cones J are arranged above the diaphragm around the upper ends of the wick-tubes and extend upward through the water-chamber.

M M are the chimneys. A sheet-metal jacket or drum, K', is mounted upon a plate, *k*, over the water-reservoir, and is held in place by a metal cap, L, and screw-bolt N, the construction being an ordinary one, and not requiring special description here.

A small receptacle, *m*, of perforated metal plate or wire-gauze, is attached to the under side of the top of the oil-reservoir, immediately underneath each slot for the wick-tubes, and depends from the reservoir-top within the reservoir itself. These receptacles are for the purpose of retaining each wick independently of the others and of the reservoir itself, and at the same time permitting the oil to pass freely within them to saturate the wicks, the walls of the receptacles being perforated sufficiently fine to prevent the flame from passing through them should the oil and vapor within the receptacles be ignited, thereby preventing an explosion of the oil in the reservoir.

The filling-aperture B in the top of the oil-reservoir is provided with a tubular stopper, B', which has a diaphragm, *n*', of perforated plate or wire-gauze, which permits the escape of gases generated within the reservoir, but at the same time is a preventive of explosions resulting from external causes.

The filling-aperture B may also be provided with an interior safety-tube, *h*, closed at its lower end. This tube is also made of wire-gauze or perforated plate, and the tubular stopper fits within it, so that it serves as an additional device to prevent explosions, while at the same time the oil will pass through it readily to fill the reservoir.

The peculiar construction and arrangement of the oil-reservoir and wick-receptacles above described are very cheap and simple, and pro-

vide a substantially closed top for the oil-reservoir, there being no loose and removable pieces except at the filling-aperture; but this filling-aperture, as will be readily understood  
5 from the above description, is thoroughly protected, so that explosions resulting from the ignition of the oil within the reservoir are almost, if not wholly, impossible.

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

1. A closed oil-receptacle, A, the top of which is entire, except a filling-aperture and a slot or slots within which the wick-tubes are se-  
15 cured, in combination with the wick-tubes C,

fitted in the slots *a*, and independent wick-receptacles *m*, of perforated plate or wire-gauze, attached directly to the under side of the oil-reservoir top, and arranged respectively directly underneath the wick-tube slots, substan- 20 tially as and for the purpose set forth.

2. The tubular stopper B, fitted to the filling-aperture and provided with the perforated diaphragm *n'*, in combination with the perforated safety-tube *h*, substantially as and for the pur- 25 pose specified.

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