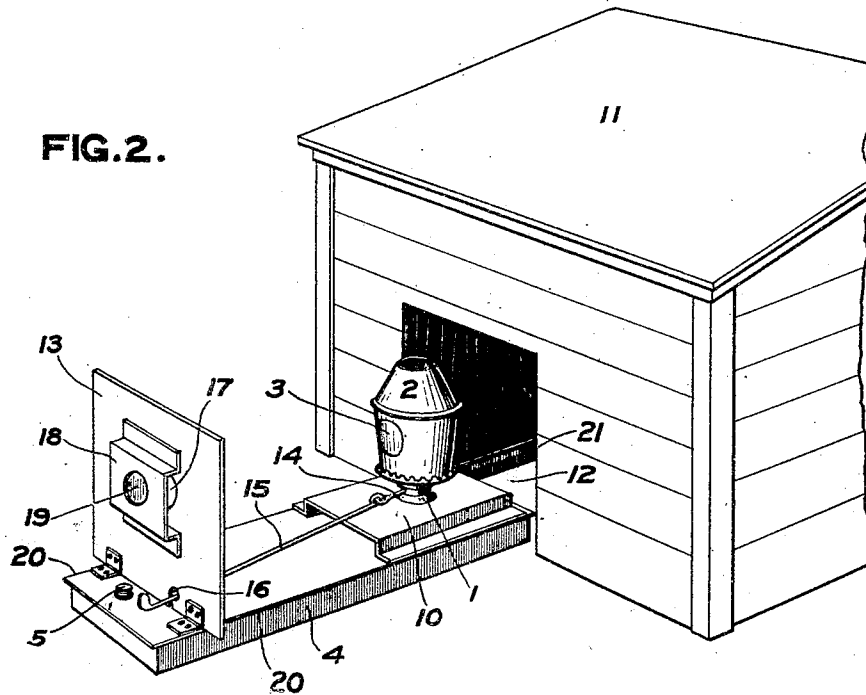
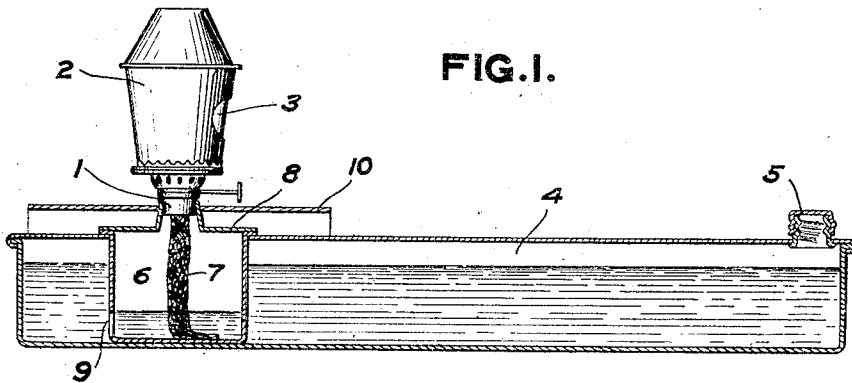


C. E. ADAIR.
OIL LAMP.

APPLICATION FILED JAN. 2, 1907.

931,712.

Patented Aug. 24, 1909.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES E. ADAIR, OF BUFFALO, NEW YORK, ASSIGNOR TO CYPHERS INCURATOR COMPANY, OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

OIL-LAMP.

931,712.

Specification of Letters Patent.

Patented Aug. 24, 1909.

Application filed January 2, 1907. Serial No. 350,526.

To all whom it may concern:

Be it known that I, CHARLES E. ADAIR, a citizen of the United States, and resident of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Oil-Lamps, of which the following is a specification.

This invention relates to oil lamps, and particularly to such lamps as are suitable for use in connection with brooders, incubators, and like devices.

The invention consists in the mechanism hereinafter described and claimed, and its object is to produce an efficient and convenient lamp for heating purposes that shall require the minimum care and shall embody the maximum of safety.

In the drawings:—Figure 1 is a vertical section through a lamp embodying this invention; and Fig. 2 is a perspective view of such a lamp adapted for use in connection with a particular form of brooder, a part of which is shown also.

In the drawings, 1 is a burner comprising a wick tube as usual, and 2 is a chimney made of sheet metal, and having a sight-hole 3 covered with a noninflammable substance, such as mica.

4 is a shallow oil reservoir of large area, and 5 is a screw cap closing a perforation through which the oil reservoir 4 may be filled. The screw cap closes the oil reservoir air-tight. In the oil reservoir, and extending from the top to the bottom thereof, is a separate oil vessel 6, in which is the wick 7. The top of the oil vessel 6 carries the wick support 1 in any suitable manner. In the side, and close to the bottom of the oil vessel 6, is a perforation 9. When the oil vessel 6 with its top 8 is in place, the oil reservoir 4 is air-tight, and the oil vessel 6 is air-tight except for the perforation 9 and the wick tube through which the wick 7 passes. When oil is placed in the reservoir 4, it will pass into the oil vessel 6 through the perforation 9, and after the wick 7 is soaked with the oil, the wick will fill the wick tube so that the entrance of air into the oil vessel 6 is prevented, except as the oil from said vessel is exhausted by the wick. When the level of the oil in the oil vessel 6 is below the top of the perforation 9, some of the air from the oil vessel will pass out through the perforation into the reservoir 4, thus permitting the corresponding quantity of oil to pass into

the oil vessel 6, and thus the vessel is fed as the lamp is burned. This operation is entirely automatic until the whole of the oil in the reservoir is exhausted. The shallowness and large area of the reservoir is such as to keep the oil cool to the lowest possible temperature under the circumstances. The air-tight character of the vessels is such that the lamp may be handled carelessly and tilted in any direction without oil passing out from the same, except such amount as can pass through the wick itself. Of course, the wick must fill the wick tube, and the wick support 1 must fit air-tight into the top perforation of the oil vessel. The small quantity of oil that can pass out through the wick under these circumstances is negligible. So too, a brooder in which this lamp is used need not be placed upon ground that is entirely level, for the oil freed from the reservoir into the oil vessel can occur only so fast as the burning exhausts it from said oil vessel.

When the device is used in connection with the brooder 11, the brooder is provided with an opening 12 through which the lamp may be inserted. To the top of the reservoir 4 is hinged a plate 13, which is of sufficient area to close the opening 12 and to constitute a door for the same. The wick raising rod 14 has an extension 15 connected to it, which latter rod passes through a perforation 16 in the plate 13, so that by turning the rod 15 from outside the plate and brooder, the wick may be raised or lowered. This operation is observed through a sight-hole 17 in the door 13. A plate 18 is fastened to the door 13, and has a central sight-hole 19 (covered by a noninflammable substance, such as mica), which is in line with the sight-hole 17, and the chimney 2 is so turned that its sight-hole 3 is in line with the two sight-holes 17 and 19 and the condition of the flame may be observed through them. The plate 18 is considerably greater in area than the sight-hole 17 so as to deflect the draft coming out therefrom, and to prevent fumes from blowing into the face of the operator. The said plate 18 is preferably raised a suitable distance from the plate 13 to act as a handle for manipulating the lamp itself, or

When the device is to be shipped, the plate 13 is turned down on its hinges so as to lie against the top of the reservoir 4. In this case the extension rod 15 is disconnected.

In order to prevent heat radiating from the chimney 2 from affecting the adjacent portions of the reservoir 4, an insulating plate 10 is supported on top of the reservoir 4 surrounding the wick support 1, and between the chimney 2 and the top of the reservoir. An air space is provided between the plate 10 and the top 8 of the oil vessel and the top of the reservoir, and the said space is open to the air so that the air may circulate freely across it, and thus insulate the chimney and the adjacent heated parts of the lamp from the oil reservoir. This device is a great protection for this lamp, which must necessarily be left for long periods of time without any attention. For this purpose the reservoir is adapted to contain a large quantity of oil.

In order to support the lamp in a brooder, the reservoir 4 has flanges 20 which are adapted to rest on a pair of cleats 21 (of which only one is shown) in the brooder, and which support the lamp at a suitable height above the ground so that air can pass in under the reservoir and aid in cooling the oil in the reservoir and in the oil vessel.

The screw cap 5 is on the portion of the reservoir that is outside the plate 13, and thus the reservoir may be filled without opening the door and with perfect safety, even though the lamp is burning.

What I claim is:—

1. The combination of an incubator, brooder, or the like having a door opening, a lamp adapted to be inserted in said opening and comprising an oil reservoir, a plate adapted to close said opening and hinged to the top of said reservoir and provided with

a sight-hole, and a deflector plate supported over said sight-hole and having a glazed orifice in line with said sight-hole.

2. The combination of an incubator, brooder, or the like having a door opening, a lamp having an oil reservoir adapted to be inserted in said opening and normally projecting therefrom, and a plate projecting vertically from the top of said reservoir and adapted to close said door opening when the lamp is inserted through the same.

3. The combination of an incubator, brooder, or the like having a door opening, a lamp having an oil reservoir adapted to be inserted in said opening and normally partly projecting therefrom, a plate projecting vertically from the top of said reservoir and adapted to close said door opening when the lamp is inserted through the same, and a filling orifice in that portion of said reservoir projecting from the door opening and outside of said plate.

4. The combination of an incubator, brooder, or the like having a door opening, a lamp having an oil reservoir adapted to be inserted in said opening and normally partly projecting therefrom, a burner, a plate projecting vertically from the top of said reservoir and adapted to close said opening above the reservoir, a wick controller passing through said plate and adapted to be operated from outside the same, and a filling orifice in the projecting part of said reservoir and outside of said plate.

CHARLES E. ADAIR.

Witnesses:

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