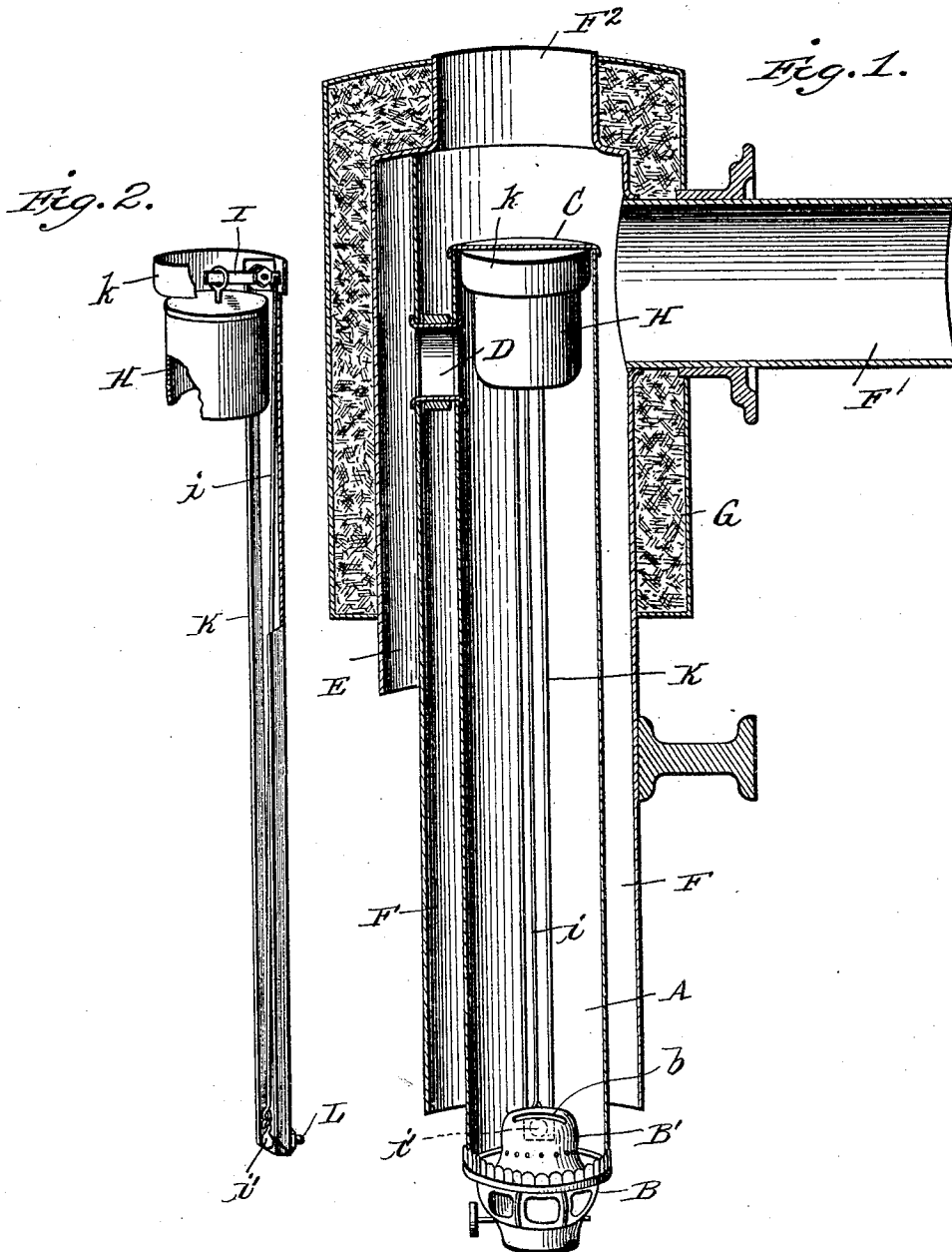


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 EXTINGUISHER FOR INCUBATOR HEATERS.
 APPLICATION FILED NOV. 27, 1908. RENEWED JULY 12, 1909.

932,448.

Patented Aug. 31, 1909.



Witnesses

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EXTINGUISHER FOR INCUBATOR-HEATERS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES A. CYPHERS, of Buffalo, in the county of Erie, State of New York, have invented a certain new and useful Improvement in Extinguishers for Incubator-Heaters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

The object of the present invention is to provide an efficient means for automatically extinguishing the flame of a heater or lamp when the flue for carrying off the products of combustion becomes obstructed or when from any cause the temperature rises in proximity to the burner to the predetermined point where the extinguisher becomes operative.

The invention is primarily designed for use in connection with incubators and in the accompanying drawings it is shown in connection with an incubator heater.

In said drawings: Figure 1 is a sectional view of an incubator heater with a burner and flame extinguishing devices in elevation. Fig. 2 is a perspective view of the extinguisher and its supporting mechanism.

Like letters of reference in the several figures indicate the same parts.

The incubator heater illustrated is of well known construction and embodies a chimney or vertical flue A, adapted to fit over a burner B, having a central flame spreader B' of the usual conical form with a flat flame slot b. At its upper end the chimney is closed by a cap C and communicates through a transverse opening or flue D with an exhaust flue E, preferably opening downwardly and through which the heated products of combustion are discharged from the heater.

A fresh air duct F surrounds the chimney or flue A and at the top is provided with two discharges, one F' leading transversely to the incubator chamber and the other F² leading directly to the atmosphere and adapted to be controlled by automatic damper mechanism of well known construction for causing more or less of the fresh hot air to pass to the said chamber. Except for the exit flue D the upper part of the chimney or vertical flue A is entirely surrounded by the fresh air flue and to conserve the heat as far

as practicable the upper portion of the heater is surrounded by an insulating jacket G. The extinguishing mechanism consists essentially of a smothering cup H adapted to be suspended with its open end down in the upper end of the chimney or vertical flue, and in position to drop by gravity when released from its suspending means and to inclose the central portion of the burner thereby instantly extinguishing the flame.

The smothering cup is preferably suspended on a support I pivotally mounted on the upper end of a channel iron K and surrounded by a circular guide and protecting ring L of proper diameter to pass up into the chimney and hold the cup in a substantially central position.

From the shorter arm of the pivoted support I a connection i extends down within the groove of the channel iron and is connected at its lower end to a hook or securing device i' connected with the inner end of a bolt L passing through the channel iron and adapted to also pass through the wall of the chimney for holding the device in place.

The hook or securing device or its attachment with the bolt is of fusible metal thereby forming a fusible link in the supporting connections for the smothering cup, located at a point in proximity to the burner and preferably slightly below the flame itself. The conical shape of the flame spreader insures a tight fit for the lower edge of the smothering cup when the latter is tripped and dropped over the flames to smother or extinguish the same.

With an equipment embodying the present invention, should the lamp be left with the flame too high or so that it smokes, the accumulation of carbon deposited in the flues causes a rise in temperature around the burner to a point where the fusible metal will be softened or melted and the smothering cup released. The same results follow if the temperature in proximity to the burner rises from any cause and hence the device constitutes a safety device which will eliminate to a very large extent danger of fire from over heated incubators and in addition effectually guards the incubator room from the evil effects of a smoky lamp or burner.

Having thus described the invention, what I claim as new and desire to secure by Letters-Patent, is:

1. A safety device of the character speci-

fied embodying a vertically arranged chimney flue adapted to fit over a burner, a flame smothering cup suspended in the upper end of said chimney flue with its open end down
5 and a fusible metal connection for holding said cup in its elevated position.

2. A safety device of the character specified embodying a vertically arranged chimney flue adapted to fit over a burner, a flame
10 smothering cup suspended in the upper end of said chimney flue with its open end down and a fusible metal connection located in proximity to the lower end of the chimney flue for holding said cup in its elevated
15 position.

3. A safety device of the character specified embodying a vertically arranged chimney flue adapted to fit over a burner, a flame smothering cup suspended in the upper
20 end of said chimney flue with its open end down, a connection extending from said cup down within the chimney flue to a point near the lower end of the latter and a fusible metal connection for retaining the first mentioned connection in position to hold the
25 cup in its elevated position.

4. A safety device of the character specified embodying a vertically arranged chimney flue adapted to fit over a burner, a flame
30 smothering cup suspended in the upper end of said chimney flue with its open end down, a pivoted lever on which said cup is suspended and a connection for holding said lever in suspending position extending down with-
35 in the chimney flue to a point near its lower end.

5. A safety device of the character speci-

fied embodying a vertically arranged chimney flue adapted to fit over a burner, a flame smothering cup suspended in the upper end
40 of said chimney flue with its open end down, a vertical support located within the flue, a lever pivoted on said support and on which the cup is suspended, a connection for holding the lever in its suspending position extending
45 down in the chimney flue and secured at its lower end to the lower end of the support.

6. A safety device of the character specified embodying a vertical support, a lever
50 pivotally mounted on the upper end of the support, a smothering cup suspended on the lever, a connection extending from said lever to the lower end of the support and having a fusible metal connection with the lower
55 end of the support and means for securing the support and cup within the chimney flue of a heater.

7. In a safety device of the character specified, the combination with the burner
60 having the conical flame spreader and the vertical chimney flue, of the vertical support within the chimney flue, the lever pivoted on said support, the smothering cup suspended on the lever, the connection for holding the lever in suspending position extending
65 down in proximity to the burner and a fusible metal attachment for securing its lower end.

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Witnesses:

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