No. 855,523. PATENTED JUNE 4, 1907.

J. T. MOLLOY.

CAP FOR INCUBATOR LAMPS.

APPLICATION FILED MAR. 6, 1906.

Fig. 1.

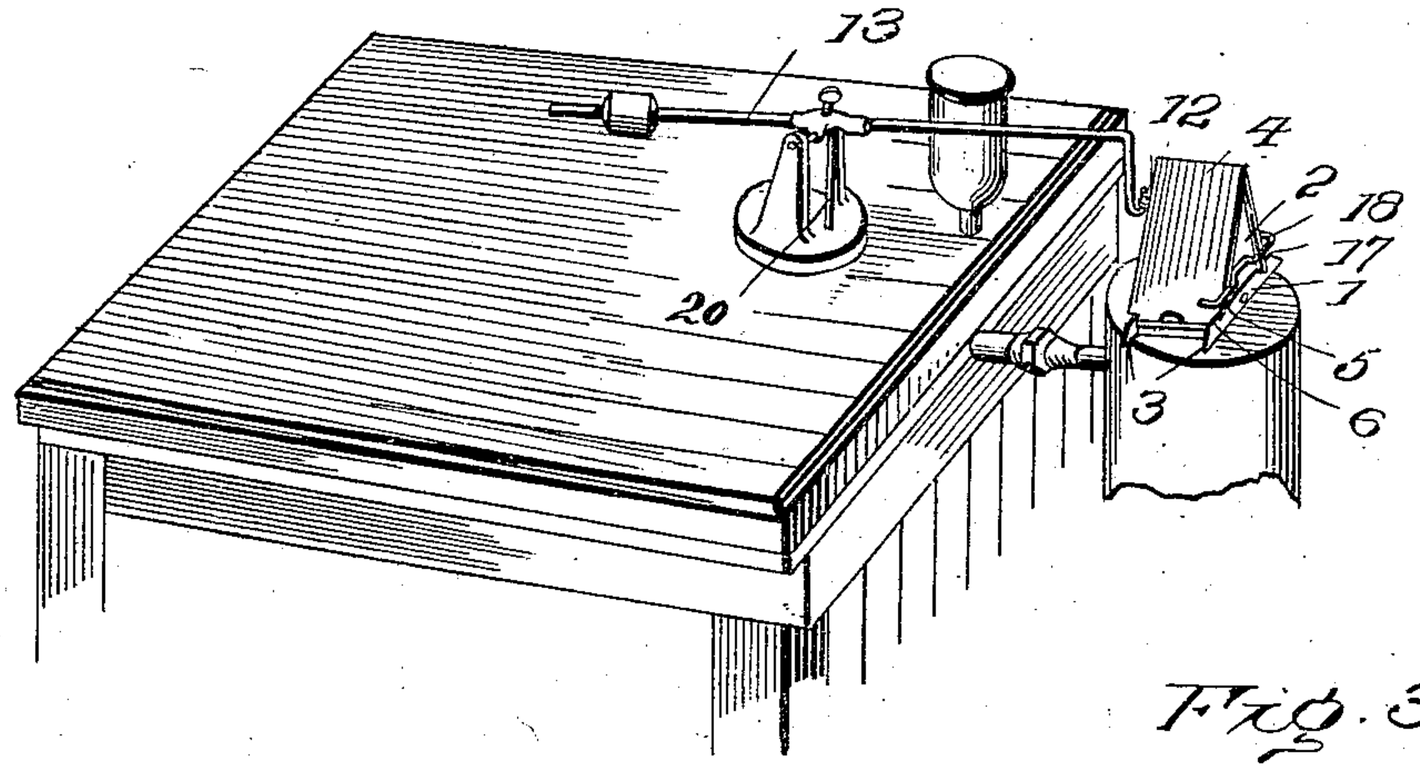
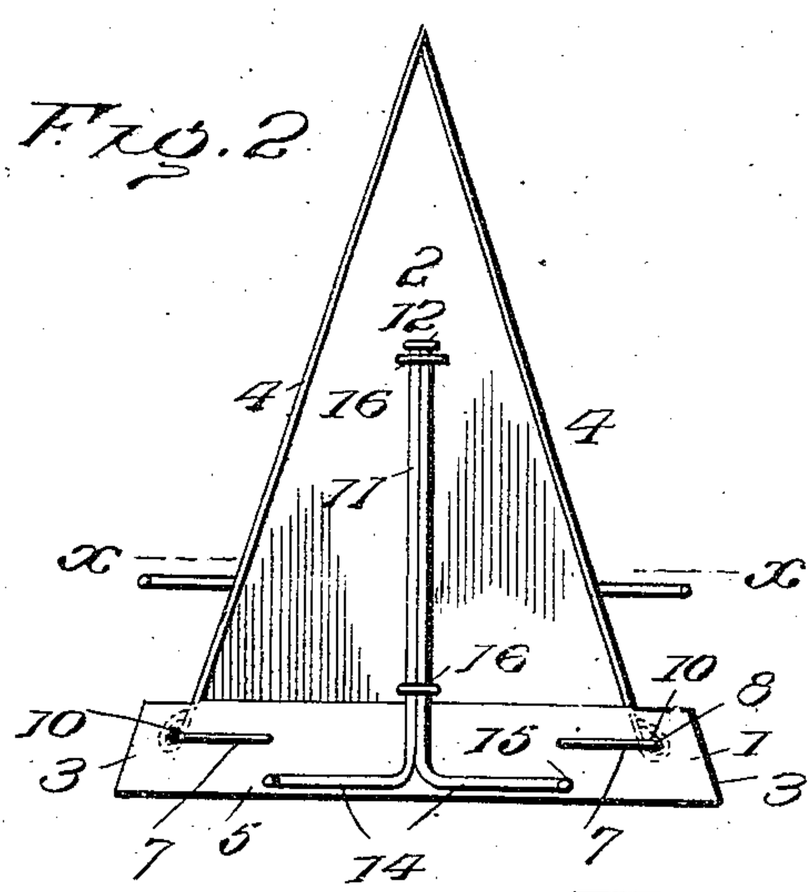
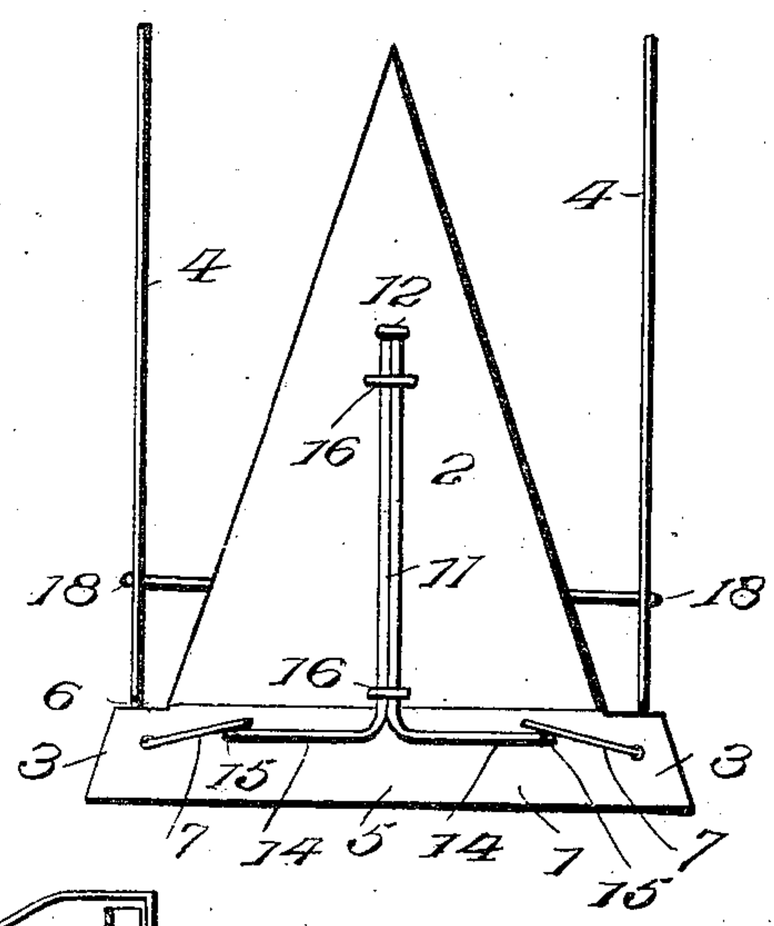



Fig. 3

Fig. 2.



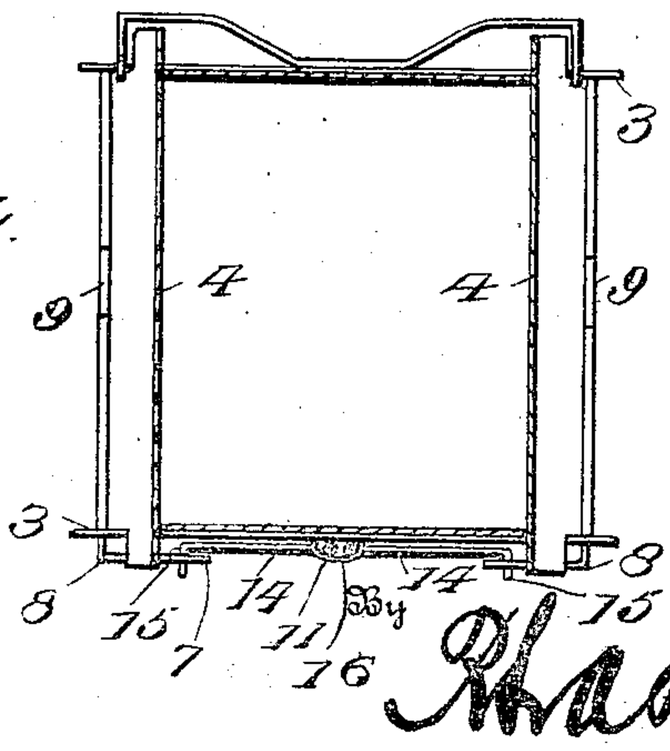




Fig. 4.

Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES T. MOLLOY, OF ALBION, IOWA.

## CAP FOR INCUBATOR-LAMPS.

No. 855,523. Specification of Letters Patent. Patented June 4, 1907.

Application filed March 6, 1906. Serial No. 304,588.

*To all whom it may concern:*

Be it known that I, JAMES T. MOLLOY, a citizen of the United States, residing at Albion, in the county of Marshall and State of Iowa, have invented certain new and useful Improvements in Caps for Incubator-Lamps, of which the following is a specification.

This invention relates to an improved cap for incubator lamps of that type which are so designed as to automatically regulate the direct draft according to the temperature within the incubator.

The object of the invention is to provide a cap of this character which will be extremely sensitive to small variations in temperature and which will thereby enable a constant heat to be maintained.

A further object is to so construct the cap that it can be effectively employed in connection with any of the various types of lamps in most common use.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view showing the application of the device; Fig. 2 is a side elevation showing the doors in a closed position; Fig. 3 is a similar view showing the doors in an open position; and, Fig. 4 is a horizontal sectional view on the line *x*—*x* of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The device comprises essentially a body portion or framework having a pair of oppositely swinging doors hinged thereto, and means whereby the doors can be operated by the balance bar upon the incubator.

The numeral 1 designates the base of the framework which is shown as approximately rectangular in shape, the sides of the base being formed with upwardly extending projections 2 each of which has upwardly converging sides. These sides of the base are also formed with laterally extending ears 3 between which the doors 4 are pivoted and for this purpose strips 5 may be secured to the sides, the ends of the strips projecting outwardly to form the ears 3. The doors 4 normally lie against the edges of the upper extensions 2 so as to form a tight closure which shuts off all direct draft from the lamp, and the lower ends of the doors are pivoted between the ears 3. It will be observed that the sides of these doors project slightly beyond the extensions, and that the lower corners of the doors are notched at 6 so as to fit between the ears 3. Arms 7 are provided by means of which the doors can be swung outwardly to produce a direct draft, and these arms 7 are shown as formed by bending inwardly one end of each of the pintles 8 upon which the doors are mounted. For this purpose the pintles and doors are rigidly connected to each other and in the construction shown in the drawings, it will be observed that the pintles are formed with an offset portion 9 which is engaged by bending the lower ends of the doors upwardly as seen at 10.

In order to provide for the simultaneous operation of the two doors a bar 11 is provided which is slidably mounted upon one of the extensions 2. The upper end of the bar 11 is formed with an outwardly bent portion 12 which engages with the balance bar 13 upon the incubator, while the lower end of the bar 11 is formed with oppositely projecting arms 14 having their ends bent outwardly to form projections 15 which engage with the arms 7 by means of which the doors 4 are opened. It will thus be apparent that any upward pull upon the outwardly bent portion 12 of the bar 11 will cause the same to slide upwardly so as to open the doors 4 and produce a direct draft for the lamp. In the preferred construction the bar 11 is formed out of a single piece of wire or similar material by doubling the same upon itself, the ends of the wire being bent so as to form the oppositely extending arms 14. This operating bar 11 may be very conveniently mounted upon the framework by means of eyes 16 projecting therefrom.

In order to limit the swinging movement of the doors 4 stops are provided and in the preferred construction these stops are formed by bending the ends of a rod 17 inwardly as seen at 18. This rod 17 is rigidly secured at an intermediate point to the extension 2 opposite to that upon which the operating bar 11 is mounted and it will be observed that this rod 17 is provided with offset portions which are located adjacent the point at which it is secured in position and which throw the major portion of the rod away from the framework so that it does not in any manner

interfere with the free operation of the door 4. The stops 18 are preferably so arranged that the doors will always assume a closed position of their own accord when not held open by means of the operating bar 11.

In the operation of the device, the cap is placed upon the lamp in the usual manner so that the outwardly bent portion 12 of the bar 11 is in engagement with one arm of the balance bar 13 upon the incubator. It will thus be seen that any movement of the balance bar 13 caused by the variations in temperature within the incubator will operate to either open or close the doors 4 and regulate the direct draft upon the lamp. It may be mentioned that the movements of the balance bar 13 are caused by the variations in the length of the upright rod 20 which extends within the incubator and expands and contracts according to the changes of temperature therein. Owing to the fact that the arms 7 are secured directly to the hinged portion of the doors 4 and are comparatively short a very small movement of these arms will produce a comparatively large movement of the doors. This feature renders the device extremely sensitive to very small variations in temperature and thus enables the incubator to be kept at a uniform temperature.

Having thus described the invention, what is claimed as new is:

1. A cap for incubator lamps comprising a framework, a door hinged to the framework so as to control the effective size of the opening therethrough, an arm for swinging the door, and an operating bar slidably mounted upon one side of the framework and engaging with the before mentioned arm to control the movements of the door, said bar being adapted to be engaged and moved by the balance bar upon the incubator.

2. A cap for incubator lamps comprising a framework, a door hinged to the framework and controlling the effective size of the opening therethrough, an operating arm for swinging the door, a stop for limiting the swinging movement of the door, the said stop being supported by an arm projecting from the framework, and an operating bar slidably mounted upon one side of the framework and engaging with the door-operating arm to control the swinging movement of the door, and provided with means whereby it is adapted to be controlled in its movement by the balance bar upon the incubator.

3. A cap for incubator lamps comprising a framework, a door hinged thereto and controlling the effective size of the opening therethrough, an arm for swinging the door, an operating bar slidably mounted upon one side of the casing and engaging with the before mentioned arm to control the swinging movement of the door, an outwardly projecting member upon the operating bar, and a balance bar upon the incubator which engages with the outwardly projecting portion upon the operating bar and controls the swinging movement of the door.

4. A cap for incubator lamps comprising a framework, a pair of oppositely swinging doors hinged to the framework and controlling the effective size of the opening therethrough, inwardly extending arms projecting from the bearings of the two doors, an operating bar slidably mounted upon one side of the framework, oppositely projecting arms upon the operating bar which engage with the before mentioned arms projecting from the bearings of the doors to regulate the swinging movement of the same, a balance bar upon the incubator, and means whereby the sliding movement of the operating bar can be controlled by the said balance bar.

5. A cap for incubator lamps comprising a framework having upwardly extending projections upon opposite sides thereof, doors hinged to the framework and swinging against the extensions to control the effective size of the opening through the framework, an operating bar slidably mounted upon one of the extensions, means whereby the doors are controlled in their swinging movement through the operating bar, a balance bar for the incubator and means whereby the sliding movement of the operating bar is controlled by the balance bar.

6. A cap for incubator lamps comprising a framework having upwardly projecting extensions upon opposite sides thereof, a pair of doors hinged to the framework and swinging against the extensions to control the effective size of the opening through the framework, arms projecting inwardly from the bearings of the doors, an operating bar slidably mounted upon one of the extensions and provided with oppositely projecting arms which engage with the before mentioned inwardly projecting arms from the bearings of the doors to regulate the swinging movement of the latter, and a balance bar upon the incubator which controls the sliding movement of the operating bar.

7. A cap for incubator lamps, comprising a framework, a pair of oppositely swinging doors hinged thereto, inwardly projecting arms secured to the said doors, an operating bar mounted to slide upon one side of the framework, one end of said bar engaging with the inwardly projecting arms and adapted to move the doors in one direction, the opposite end of the operating bar being provided with an outwardly projecting portion, and a balance bar upon the incubator adapted to engage the outwardly projecting portion of the operating bar whereby the latter is moved as the balance bar is moved.

8. A cap for incubator lamps comprising a framework, a pair of oppositely swinging doors which control the direct draft of the lamp and which normally assume a closed

position, stops limiting the swinging movement of the doors, arms secured directly to the pivot portions of the doors and projecting toward each other, an operating bar slidably mounted upon one side of the framework, one end of the operating bar being formed with oppositely projecting portions which engage with the arms upon the doors, while the opposite end of the operating bar is bent outwardly, and the balance bar upon the incubator adapted to operate through the outwardly bent portion of the operating bar to open or close the door.

9. A cap for incubator lamps comprising a framework having upwardly projecting extensions upon opposite sides thereof, the sides of each extension converging upwardly, a pair of swinging doors pivoted to the framework and folding against the extensions to control the effective size of the opening through the framework, said doors being secured upon pintles, with which they are movable a pair of inwardly extending arms formed in connection with the pintles and serving as an operating means for the doors, an operating bar slidably mounted upon one of the extensions, oppositely projecting arms at the lower end of the operating bar which engage with the before mentioned inwardly projecting arms extending from the pintles to control the movement of the doors, an outwardly projecting portion at the upper end of the operating bar, and a balance bar upon the incubator which engages with the before mentioned outwardly projecting portion at the upper end of the operating bar to regulate the sliding movement of the same.

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

JAMES T. MOLLOY. [L. S.]

Witnesses:
F. M. KINSEY,
FRANK HUMLONG.