

M. J. SPICER.
INCUBATOR HEATER.
APPLICATION FILED MAY 28, 1906.

899,347.

Patented Sept. 22, 1908.

FIG. 1.

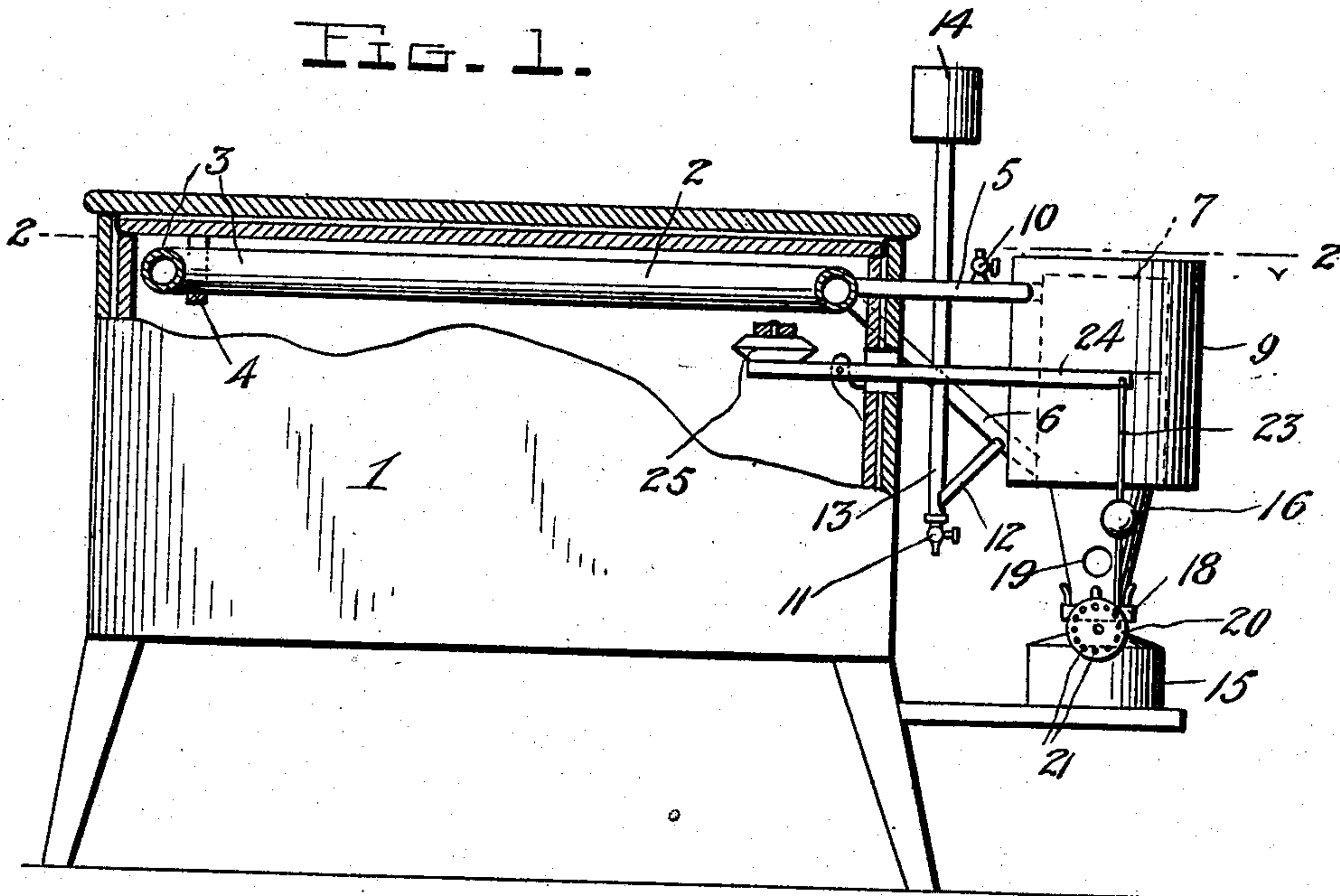
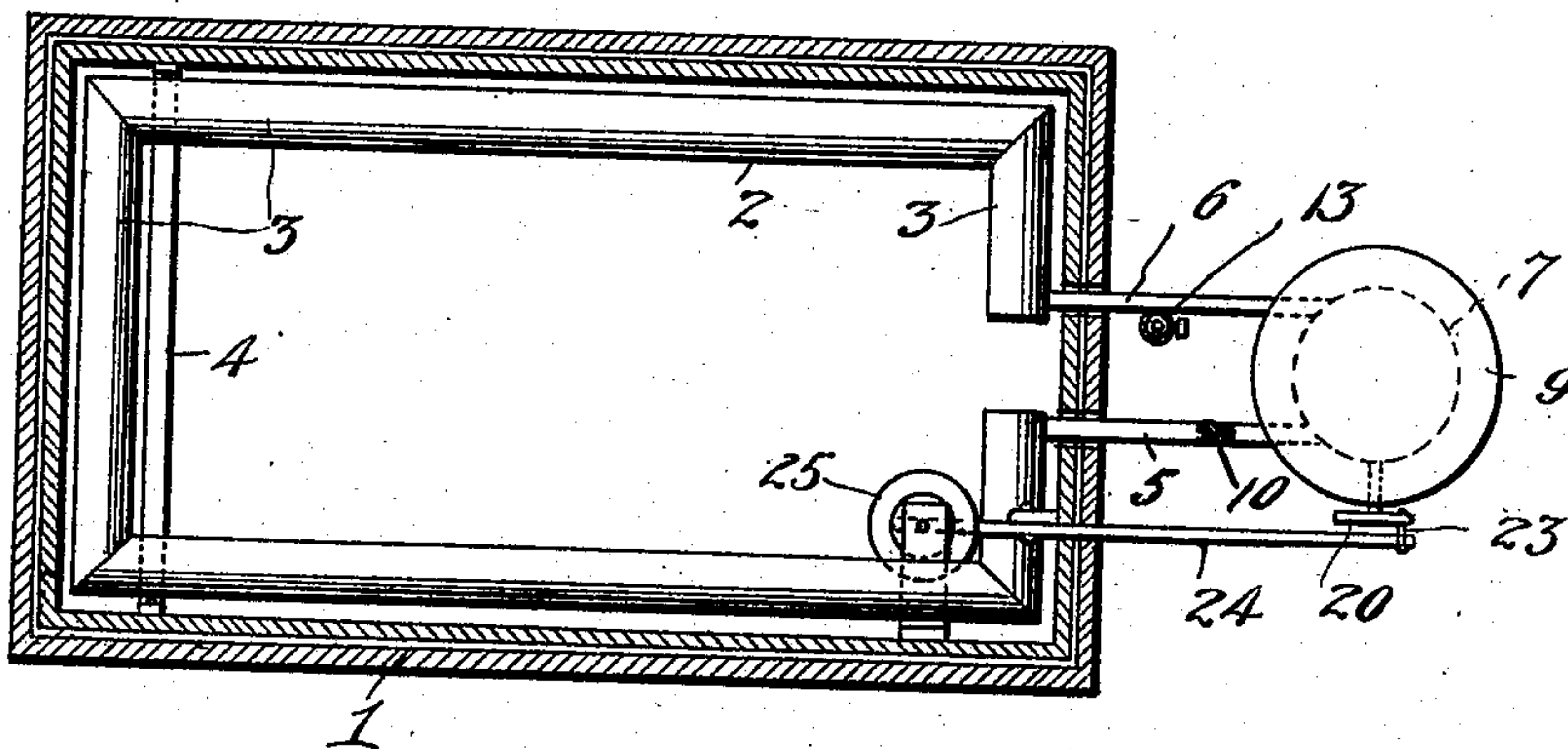


FIG. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

MILTON J. SPICER, OF FAIRFIELD, NEBRASKA.

INCUBATOR-HEATER.

No. 899,347.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed May 28, 1906. Serial No. 319,180.

To all whom it may concern:

Be it known that I, MILTON J. SPICER, a citizen of the United States, residing at Fairfield, in the county of Clay and State of Nebraska, have invented certain new and useful Improvements in Incubator-Heaters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in heaters for incubators and brooders, and it consists in the novel construction, combination and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a simple, inexpensive and efficient hot water heating system for incubators and brooders, which will have a forced circulation of water, so that the pipes will be always full of water and an even temperature maintained, and in which the heating lamp will be automatically turned up and down to keep the water at the proper temperature, prevent a waste of oil, and obviate danger of explosion.

The above and other objects which will appear as the nature of the invention is better understood, are accomplished by the construction illustrated in the accompanying drawings, in which:—

Figure 1 is a vertical longitudinal sectional view through my improved hot water heater, showing it applied to an incubator; Fig. 2 is a horizontal sectional view taken on the plane indicated by the line 2—2 in Fig. 1.

Referring to the drawings by numeral, 1 denotes a portion of an incubator, brooder or the like in which my improved heating system 2 is mounted. This system comprises a plurality of hot water circulating pipes 3, which may be of any suitable form and construction according to the size and shape of the incubator or brooder. As shown, these pipes 3 are connected so as to form a rectangular frame which is supported in the incubator casing 1 at one end by a transversely extending brace or bracket 4 and at its opposite end by flow and return pipes 5, 6 which are connected to the ends of the rectangular frame 3 and to a water boiler 7 adjacent to the upper and lower ends of the latter. The pipes 5, 6 extend through openings or slots in the casing 1, the flow or outlet pipe 5 being substantially horizontal and the return or inlet pipe 6 being inclined down-

wardly, as shown. A pet-cock 10 is provided in the flow pipe 5 to permit of the escape or outlet of air when the system is filled with water; and a similar pet-cock 11 is provided at the lowermost point in an angular pipe 12 which projects from the lower portion of the return pipe 6, the cock 11 being provided for the purpose of draining the system. At the top of the upwardly extending branch 13 of the angular pipe 12 is provided a cup or receptacle 14 in which the water may rise as it expands in the system.

The water in the boiler or drum 7 is heated by an oil lamp 15, which may be of any desired form and construction, and suitably supported so that its upwardly flared metal chimney 16 projects upwardly and into the boiler 7. This chimney 16 is removably mounted upon the lamp burner 18 in the usual manner and is formed with a sight opening 19 through which one may see the flame of the lamp. Upon the usual stem or shaft 20, which projects laterally from the burner 18 and is turned to raise and lower the wick of the burner, is a disk 20^a formed adjacent to its edge with an annular row of apertures 21, with any one of which may be engaged the lower end 22 of a link 23 having an inertia weight secured thereto intermediate its length. The upper end of the latter is connected to a regulator arm 24 which extends through the casing 1 of the incubator or brooder and is connected to a thermostatic expansion element 25 which operates it. It will be seen that when the arm 24 is shifted, the link 23 will be raised or lowered to rotate the disk 20^a and the wick shaft 20, so that the wick will be automatically raised or lowered. The provision of the openings 21 around the disk 20^a permit the link or rod 23 to be adjusted upon it so as to raise or lower the wick to the desired extent.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation and advantages of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined by the appended claims.

Having thus described my invention, what

I claim as new and desire to secure by Letters-Patent is:—

In an incubator, a casing having an aperture in the side wall thereof, an inwardly curved upstanding bracket arranged integrally of the casing adjacent said aperture, a thermostat mounted within the casing in line with the pivotal point of said bracket, a straight rod connected to said thermostat at one end and pivotally connected to the bracket adjacent the thermostat so as to have a multiplied movement at its outer end, said rod having its outer end projecting through the aperture in the casing, a depending link pivoted to the outer end of said rod at right angles thereto and having an engaging hook at its lower end, a supporting

bracket projecting from the legs on the incubator exteriorly of the casing, a lamp thereon having a wick shaft, a disk on the wick shaft having a plurality of apertures adapted to be engaged by the hook end of said link, and an inertia weight mounted intermediate the length of said link for preventing too rapid action and to permit flexibility of movement.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MILTON J. SPICER.

Witnesses:

W. E. UNDERKOFER,
F. P. SHIVELY.