H. M. SHEER.

THERMOSTATIC REGULATOR FOR INCUBATORS.

APPLICATION FILED MAY 13, 1908.

961,654. Patented June 14, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

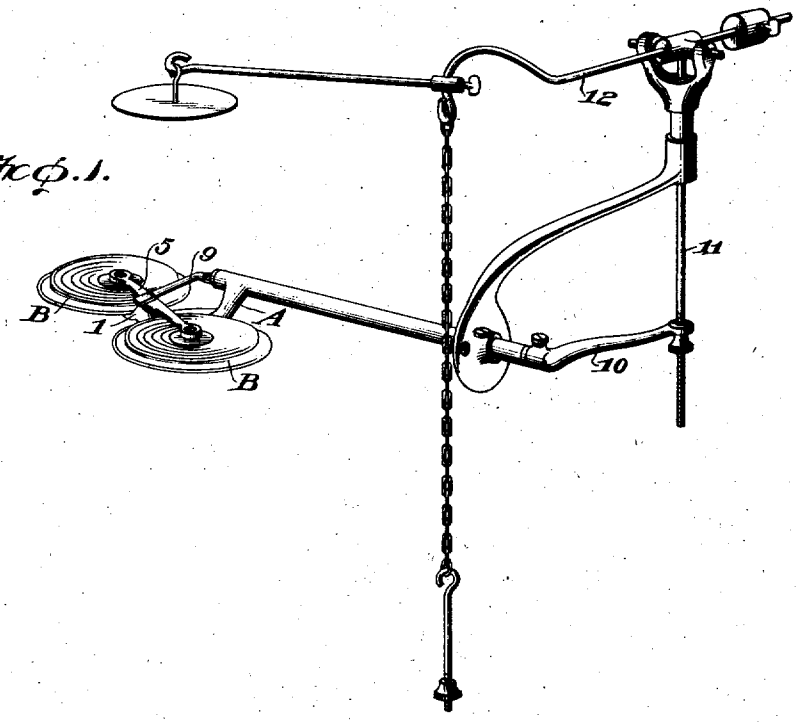


Fig. 2.

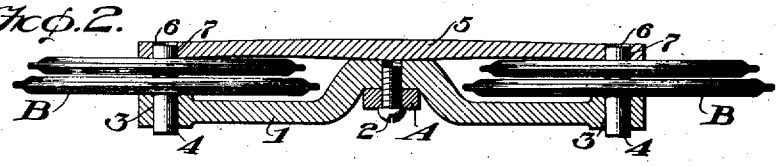
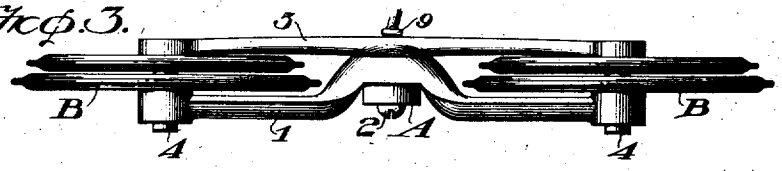


Fig. 3.



Witnesses

Lloyd W. Patch

A. A. Hammond.

Inventor

Henry M. Sheer

By

Vernon E. Hodges

his Attorney

H. M. SHEER.

THERMOSTATIC REGULATOR FOR INCUBATORS.

APPLICATION FILED MAY 13, 1908.

961,654.

Patented June 14, 1910.

2 SHEETS—SHEET 2.

Fig. 4.

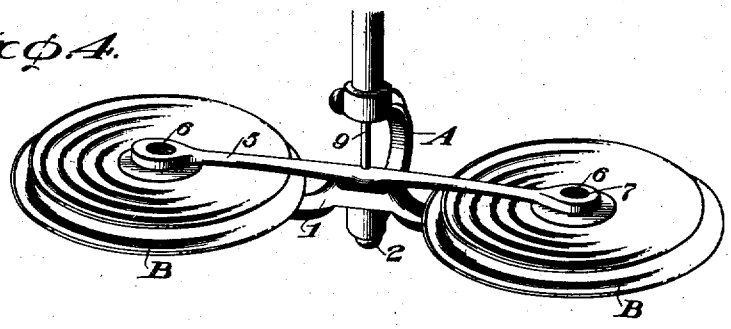
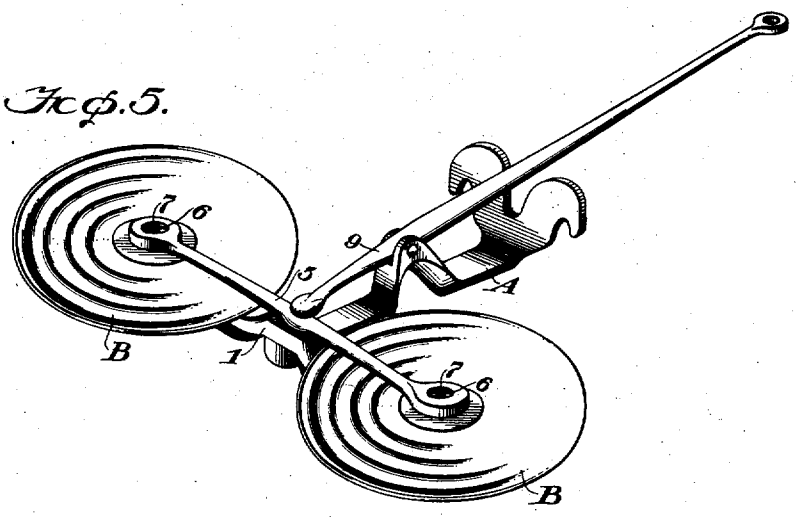


Fig. 5.



Witnesses

Lloyd W. Patch

A. A. Hammond

Inventor

Henry M. Sheer

By Vernon E. Hodges

his Attorney

UNITED STATES PATENT OFFICE.

HENRY M. SHEER, OF QUINCY, ILLINOIS.

THERMOSTATIC REGULATOR FOR INCUBATORS.

961,654. Specification of Letters Patent. Patented June 14, 1910.

Application filed May 13, 1908. Serial No. 432,707.

To all whom it may concern:

Be it known that I, HENRY M. SHEER, citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Thermostatic Regulators for Incubators, of which the following is a specification.

My invention relates to an improvement in thermostatic regulators for incubators, and the object is to provide means whereby two disks or wafers can be attached to a bracket, which will operate the regulator rod on the same principle as heretofore, but the strain upon the wafers will be divided so that it is hardly noticeable to either wafer. Again the action of the wafers is such that one wafer does not control or govern the action of the other and that they can operate independently or coöperatively as a unit. By this method of operating the regulator I not only produce the same results as obtained by a single disk or wafer, but the action upon the regulator rod receives double motor power with the least expansion and contraction of the wafers, which permits the wafers to be used for a greater length of time than is possible with the single wafer, as with the single wafer the continual strain imposed upon it in operating the regulator soon begins to lose its effect after it has been used for a certain length of time and the wafer becomes less and less responsive to the heat action under this continual strain.

My invention consists of certain novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a perspective view showing my invention applied to a bracket for operating the regulator; Fig. 2 is a longitudinal sectional view through the disks and support; Fig. 3 is an end view; and Figs. 4 and 5 are views showing the disks applied to different forms.

A represents a bracket upon which is mounted a cross-bar 1, which is held thereon by a screw 2. The cross-bar is slightly raised through the center and the outer ends are offset therefrom and extend outwardly and the outer ends of the bar are provided with openings 3, 3, in which are received the shank 4 of the disk or wafer B. In Fig. 1 I have shown the compound disk but of course a single disk can be used to the same advantage, and I therefore do not wish to be limited to the form of disk used. The disks or wafers are mounted upon the cross-bar and extending over the tops of the wafers is a bar 5, which is adapted to normally rest upon the central portion of the cross-bar. The bar 5 is provided with openings 6, 6 at its outer ends in which are received the upper shanks 7 of the wafers.

Mounted on the bracket 1 is an arm 9, one end of which is adapted to rest upon the central portion of the bar 5, and connected to the other end of the arm 9 is a crank arm 10, to which is connected a rod 11, which is connected to the regulator rod 12.

In the forms shown in Figs. 4 and 5 the only difference is that the arms 9 are connected directly to the rod 11 instead of having the crank arm 10.

The operation is as follows: The expansion of either wafer will cause the bar 5 to be raised according to the expansion of the disks or wafers which expansion operates the regulating rod as the arm 9 which is connected to the regulating rod is in engagement with the bar 5. The heat action will act on both wafers, which will raise the bar to a uniform height on each side and cause the regulator rod to be operated accordingly, but if for any reason one of the wafers is not as responsive to the heat action as the other, this lack of uniformity of expansion of the two wafers would in no wise effect the operation of the regulator, as the bar 5 would be raised to the proper height according to the heat expansion of the wafers. The disks are capable of operation independently or they will coöperate as a unit and thereby relieve the strain upon one disk and at the same time give a double lifting power to the regulator when acting together.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth, but:—

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

1. The combination with a regulator, of a bracket, a cross-bar mounted upon the bracket, thermostatic wafers mounted upon the cross-bar at each end thereof, a bar mounted upon the cross-bar adapted to en-

gage the thermostatic wafers, and means connected to the regulator and in engagement with the bar, adapted to be actuated by the movement of the bar for operating the regulator.

2. The combination with a regulator, of a bracket having openings in either end, thermostatic wafers mounted thereon in tandem and having shanks on both sides, a bar provided with openings at either end connecting the wafers, the shanks of the wafers adapted to enter the openings in the bracket and bar, and means operated by the bar for controlling the regulator.

3. The combination with a regulator, of a bracket, thermostatic wafers mounted thereon in tandem, a bar connecting the wafers and adapted to be operated thereby, a hollow bearing extending from the bracket, a lever journaled in said bearing and in contact with the bar connecting the wafers and means for connecting the lever with the regulator.

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

HENRY M. SHEER.

Witnesses:
GERHARD G. ARENDS,
FRANK A. LUBBE.