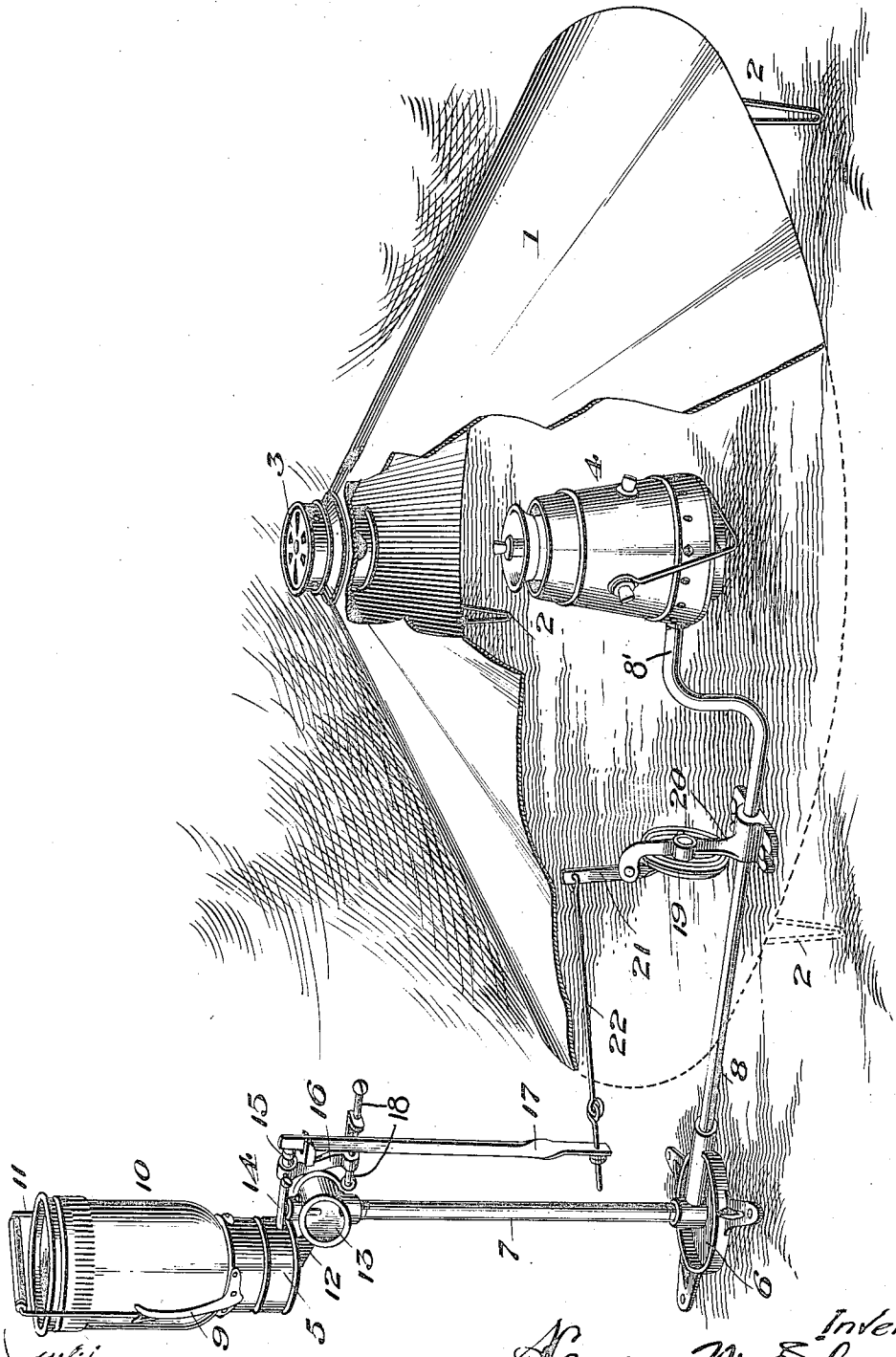
H. M. SHEER.

HEATER FOR BROODERS.

APPLICATION FILED FEB. 14, 1920.

1,421,315. Patented June 27, 1922.



Witness

Inventor

Henry M. Sheer

By Vernon O. Hodged

his attorney

UNITED STATES PATENT OFFICE.

HENRY M. SHEER, OF QUINCY, ILLINOIS.

HEATER FOR BROODERS.

1,421,315. Specification of Letters Patent. Patented June 27, 1922.

Application filed February 14, 1920. Serial No. 358,629.

To all whom it may concern:

Be it known that I, HENRY M. SHEER, a 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 Heaters for Brooders, of which the following is a specification.

My invention relates to an improvement in heaters for brooders, incubators, and the like, and one object is to provide a visible oil feed, whereby the exact amount of oil being fed to the burner may be ascertained.

A further object is to maintain a constant, uniform and unobstructed flow of oil through the needle-valve which is controlled by an automatic regulator which in turn is controlled by a thermostat placed within the brooder or the like, adapted to be actuated by the changes in temperature therein.

A further object is to provide, in combination with the visible feed, a manual adjustment for the valve, whereby the exact amount of oil being fed may be ascertained at once, eliminating the necessity of waiting for the flame or burner to fully respond.

In the accompanying drawings:

Fig. 1 is a perspective view of my complete device as applied to a brooder.

1 indicates a canopy or hover constructed of any desired material supported upon suitable legs 2 and provided with a ventilator 3 at its apex. A burner 4 is arranged centrally of the canopy and at a proper distance below the ventilator.

Connected to the burner is an oil font 5 supported by a base 6 by means of a vertical feed pipe 7, the base 6 preferably being secured to the floor. Leading from the base 6 is a horizontally-arranged pipe 8, the major portion of which is arranged horizontally and in close proximity to the floor, allowing free movement of the chicks beneath the canopy. Said pipe 8 is supported near its outer end by a bracket 20, which together with the base 6 provide a suitable support for the heating system. The outer end of the feed-pipe 8 is preferably bent upwardly near its outer end, and then horizontally as at 8′ just prior to entering the burner, thereby acting as a support for the burner. This pipe 8 is preferably placed on the floor as a means of convenience and to make it less liable to tip the container over.

The oil font 5 is preferably provided with suitable brackets 9 which are adapted to receive an oil reservoir 10, which, in this instance, is made of glass and provided with a stopper controlled mechanism 11 adapted to be actuated after the glass reservoir is inverted and its open end placed within the oil font 5. A bracket 12 is adapted to directly support the oil font 5, said bracket having formed in its outer end a visible chamber 13. Leading from the oil font 5 is a tube 14 provided with a spring-actuated valve 15, which is adapted to regulate the feed from the oil font to the visible chamber from which the feed pipe 7 leads.

The tube 14 containing the valve is adapted to extend horizontally beyond the visible chamber, and is provided at its outer end with a downwardly projecting bracket 16, pivoted to which is an actuating lever 17, which is adapted to bear upon the outer end of the spring-actuated valve 15. The extreme lower end of the bracket 16 is provided with a pair of adjusting screws 18 which are adapted to be adjusted to control the stroke of the actuating lever 17, in order to effect a maximum and minimum feed by the adjustment of the spring actuated valve 15.

Arranged within the canopy is a thermostatic regulator 19 which is adjustably supported upon the feed pipe 8 by a suitable bracket 20. The actuating lever 21 of the thermostat, and the actuating lever 17 of the oil font are connected together by a connecting rod 22, this construction effecting an accurate control of the valve 15 according to the variation of the temperature within the canopy, causing the thermostat 20 to either contract or expand in transmitting a relative movement to the spring valve 15. In actual use, the adjusting screws 18 are manually adjusted for the minimum and maximum flow of oil, the regulator merely controlling the flow of oil between the two limits.

As is apparent, the visible oil feed enables the operator to determine both the minimum and maximum flow of oil by counting the number of drops of oil passing through the visible oil chamber, and it is not necessary for the operator to wait for the flame to fully respond. This construction avoids the necessity of such constant care of heaters of this type.

It will thus be seen that after the burner is properly heated, the heat generated there-

from confined within the canopy will in turn actuate the thermostat 19, which in turn by the mechanism above described will actuate the valve 15, thereby admitting more or less oil to the burner according to the variation of the temperature within the canopy, in this manner assuring a comparatively constant temperature within the canopy.

I claim:

1. A portable heating system comprising an oil container, a burner, supporting means for the container and burner, a feed-pipe arranged between the container and burner, a portable canopy arranged over the burner, and an oil control mechanism adapted to control the supply of oil to said feed-pipe and means for actuating said mechanism thermostatically from within the canopy.

2. A portable heating system comprising an oil container, a burner, a base arranged between the container and burner, a feed-pipe arranged between the container and burner, a portable canopy arranged over the burner, an oil control mechanism arranged adjacent the oil container and externally of the portable canopy, and a thermostatic control means arranged within the portable canopy and connected to the oil control mechanism to control the flow of oil to the burner.

In testimony whereof I affix my signature.

HENRY M. SHEER.