Jan. 27, 1953

J. L. HOLLINGER

2,627,016

INFRARED LAMP BROODER

Filed Aug. 20, 1951

2 SHEETS—SHEET 1

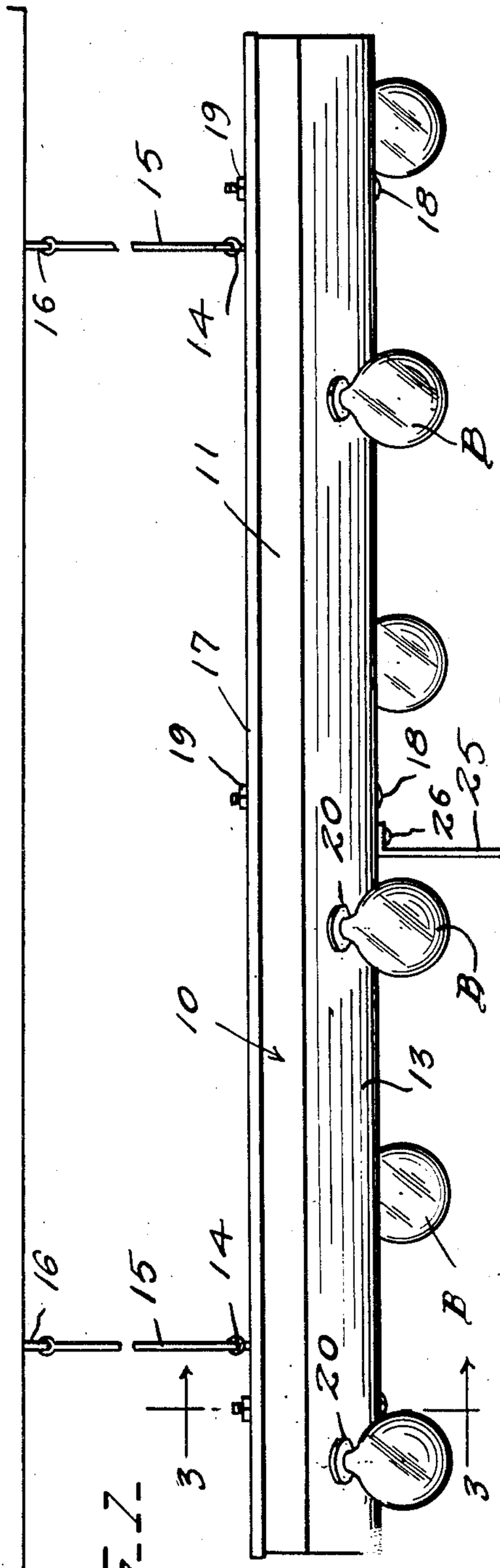

FIG. 1.

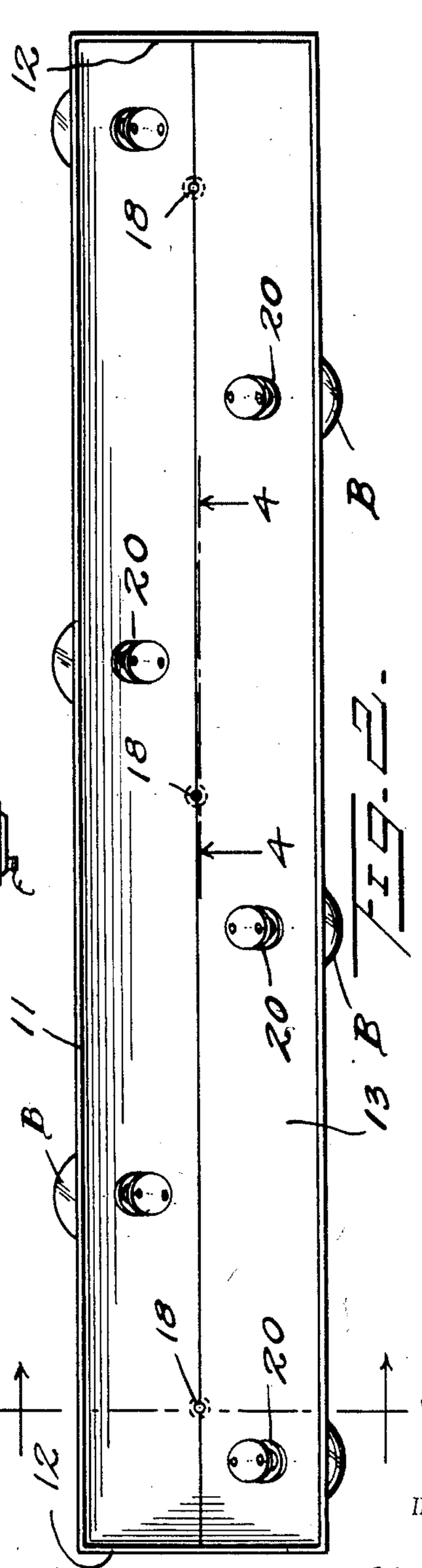

FIG. 2.

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2 SHEETS—SHEET 2

Fig. 3.

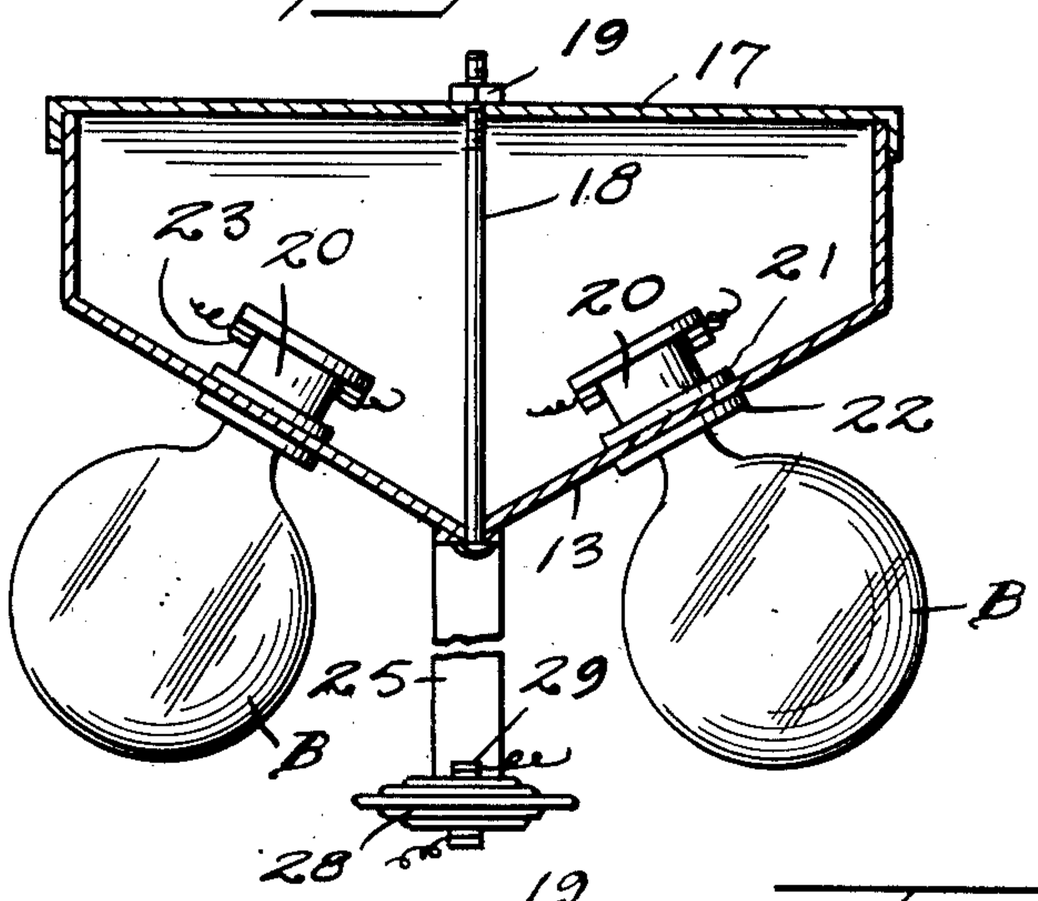

Fig. 4.

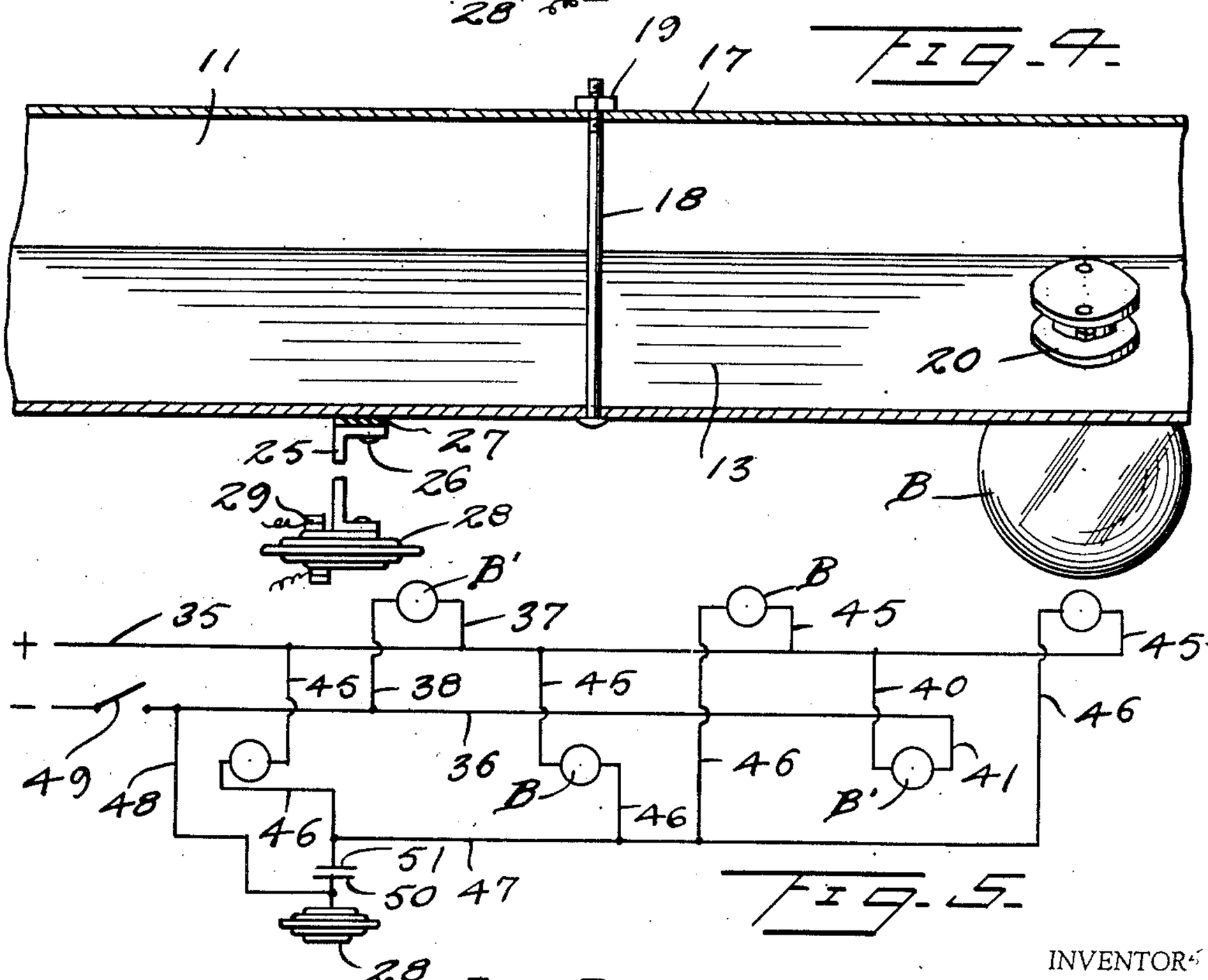

Fig. 5.

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Patented Jan. 27, 1953 2,627,016

UNITED STATES PATENT OFFICE

2,627,016

INFRARED LAMP BROODER

Jay Lawrence Hollinger, Hershey, Pa.

Application August 20, 1951, Serial No. 242,721

1 Claim. (Cl. 219—45)

1

This invention relates to a brooder for baby chicks or the like, and has as its primary object the provision of an improved brooder utilizing the heat of infra-red lamps.

An additional object of the invention is the provision of a brooder wherein the customary shield beneath which the chicks huddle is eliminated.

A further object of the invention is the provision of a brooder which may be suspended relatively high above the chicks whereby the chicks may scatter over a relatively wide area and still be adequately warmed.

Other objects will in part be obvious and in part be pointed out as the description of the invention proceeds, and shown in the accompanying drawing wherein there is disclosed a preferred embodiment of this inventive concept.

In the drawings:

Figure 1 is a side elevational view of one form of brooder embodying features of the instant invention,

Figure 2 is a top plan view of the brooder of Figure 1, with the cover removed,

Figure 3 is an enlarged sectional view taken substantially along the line 3—3 of Figures 1 and 2, as viewed in the direction indicated by the arrows,

Figure 4 is an enlarged sectional view taken substantially along the line 4—4 of Figure 2, as viewed in the direction indicated by the arrows,

Figure 5 is a schematic view of the wiring diagram of the device.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring now to the drawings indetail there is generally indicated at 10 an elongated trough-like receptacle provided with side walls 11 and end walls 12, and a V-shaped bottom wall 13. A cover 17 is provided with eyes 14 adjacent each end thereof, adapted to be engaged by hook members 15, which in turn engage upper supporting eyes 16 secured to the ceiling of the brooder hut or the like for suitably supporting the device at the desired height above the floor.

The cover 17 is adapted to be secured in position as by means of bolts 18 extending through suitable apertures in the V-shaped bottom 13 and in cover 17, and secured in position as by means of nuts 19. The V-shaped bottom 13 of the receptacle 10 is provided with a plurality of spaced sockets 20 of any desired conventional configuration, sockets 20 being suitably staggered on opposite sides of the V-shaped bottom 13 and

2

including inner and outer flanges 21 and 22 respectively, adapted to be positioned on opposite side of the wall of the bottom 13 to secure the sockets in related assembly therewith. Sockets 20 are also provided with suitable terminals 23 for the connection of suitable wires for conducting current thereto.

As best shown in Figures 3 and 4, a bracket 25 is secured as by means of a bolt 26 to a bar 27 fixed to the bottom of the trough, and carries at its lower extremity below receptacle 10, a bellows type thermostat 28 of any desired conventional construction, provided with suitable terminals 29 for the connection of electric wires thereto.

Referring now to Figure 5 particularly, there is disclosed a schematic wiring diagram which includes a hot line 35, and a cold line 36. From the hot line 35 a wire 37 leads to a socket 20 from the opposite terminal of which a wire 38 extends to cold line 36. A second socket 20 is also directly connected to hot line 35 by means of a wire 40 and to cold line 36 by means of a wire 41.

Each of the remaining sockets 20 is connected as by means of wires 45 to hot line 35 and by means of wires 46 to an auxiliary cold line 47 which is connected by wire 48 to cold line 36. A suitable manually controlled switch 49 is provided for breaking the circuit to all of the sockets 20 as desired. Wire 43 is connected to one contact 50 of a switch operable by bellows type thermostat 28 in accordance with temperature conditions, the arrangement being such that upon a decrease in temperature expansion of bellow thermostat 28 causes contact 50 to engage an opposed contact 51 carried by supplemental cold line 47.

The arrangement, therefore, is such that when the switch 49 is closed and the temperature is low, the bulbs B, which, it is pointed out, are of an infra-red type, contained in the sockets 20 are all illuminated. Upon a rise in temperature above a predetermined level, contraction of bellows 28 will cause separation of the contacts 50 and 51, thus cutting out the intermediate infra-red bulbs, but since the end bulbs B of the device are connected directly between the hot and cold lines, these will remain activated as long as the switch 49 is closed. Obviously a drop in the temperature will reclose contacts 50 and 51 to re-energize the intermediate bulbs.

From the foregoing it will now be seen that there is herein provided an improved brooder construction which accomplishes all of the objects of this invention and others, including many

advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept and as many modifications may be made in the embodiments hereinbefore shown and set forth, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

What I claim is:

A brooder for baby chicks or the like comprised of an elongated trough-like receptacle of V-shaped cross section having a plurality of staggered sockets diverging from opposite sides of the receptacle therein including end and intermediate sockets, a circuit supplying current to said sockets, infra-red bulbs in said sockets, and a

thermostatic switch depending below said receptacle operable automatically to energize and de-energize said intermediate sockets in accordance with temperature variation, said end sockets remaining continuously energized.

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