J. H. JOHNSON.

BROODER.

APPLICATION FILED JUNE 1, 1909.

953,667. Patented Mar. 29, 1910.

Fig. 1.

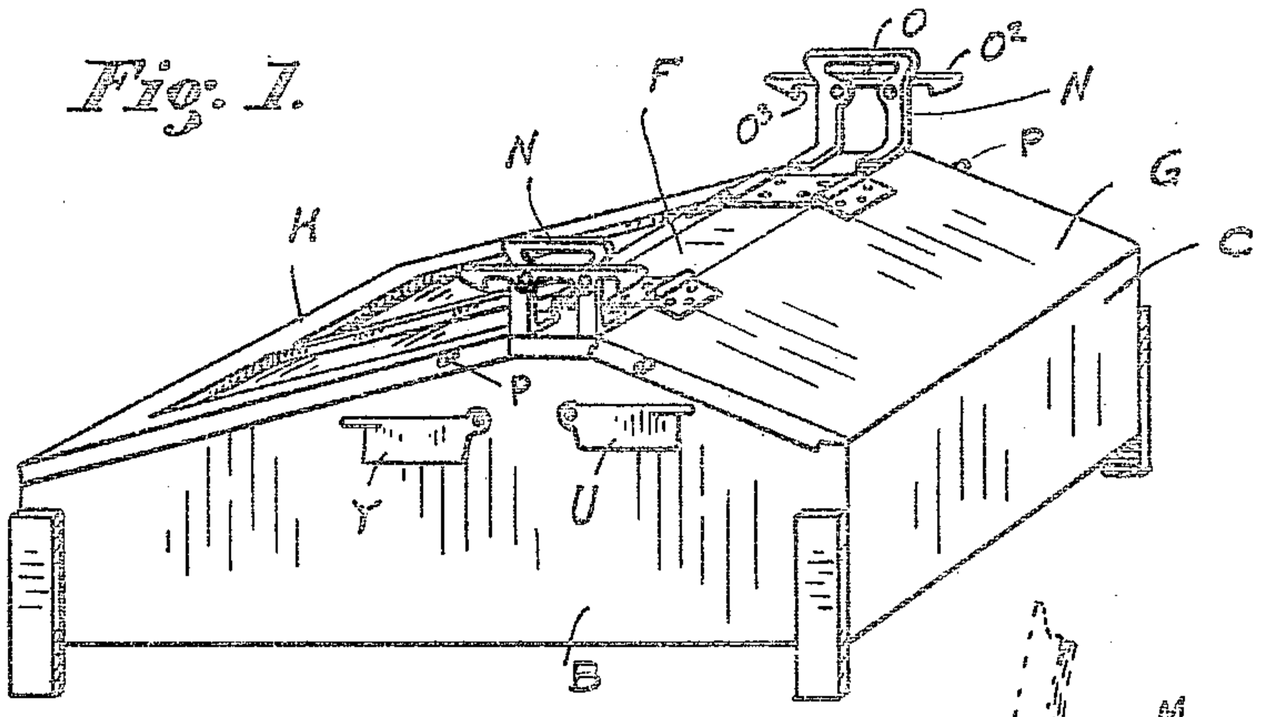


Fig. 2.

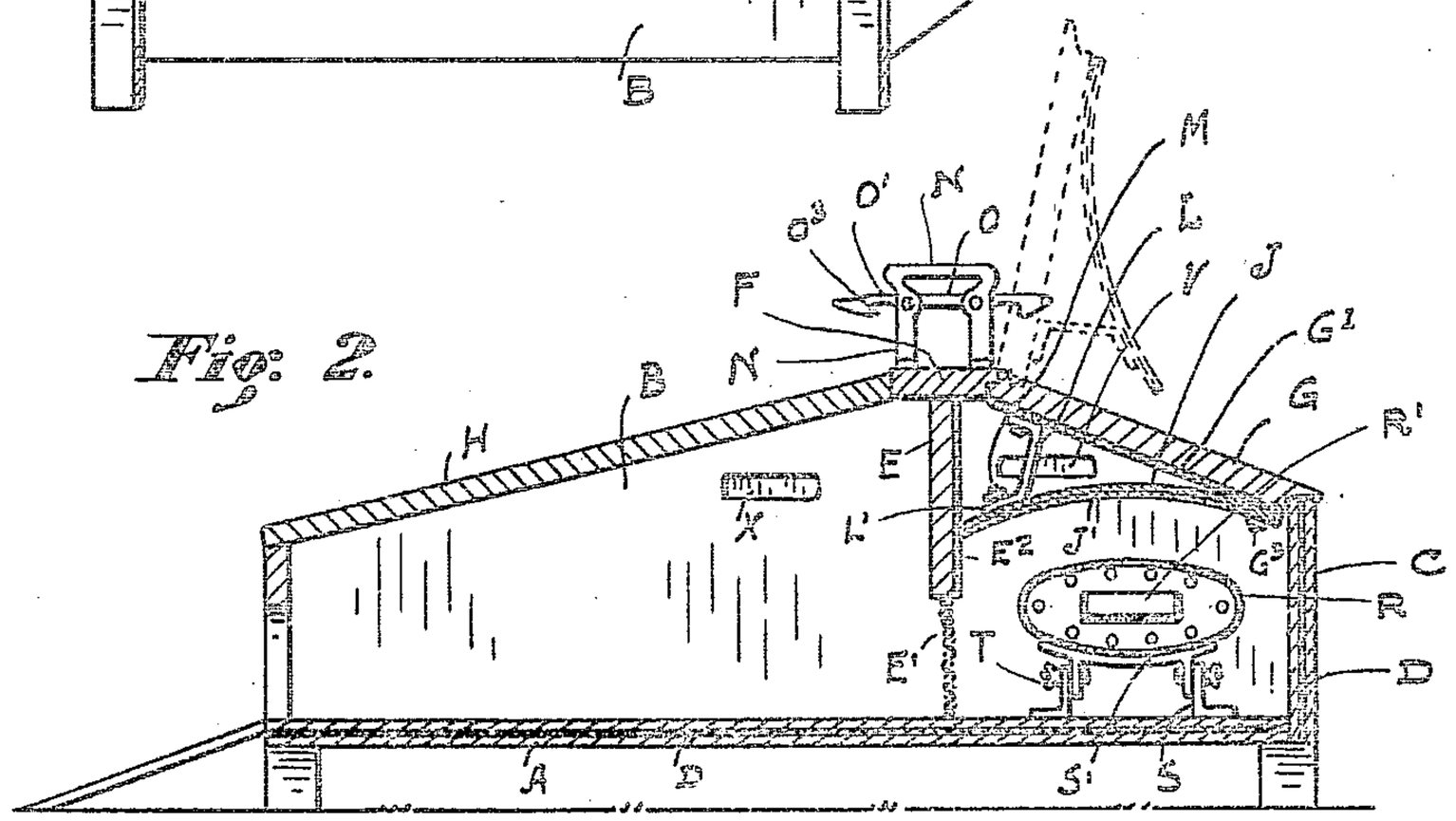
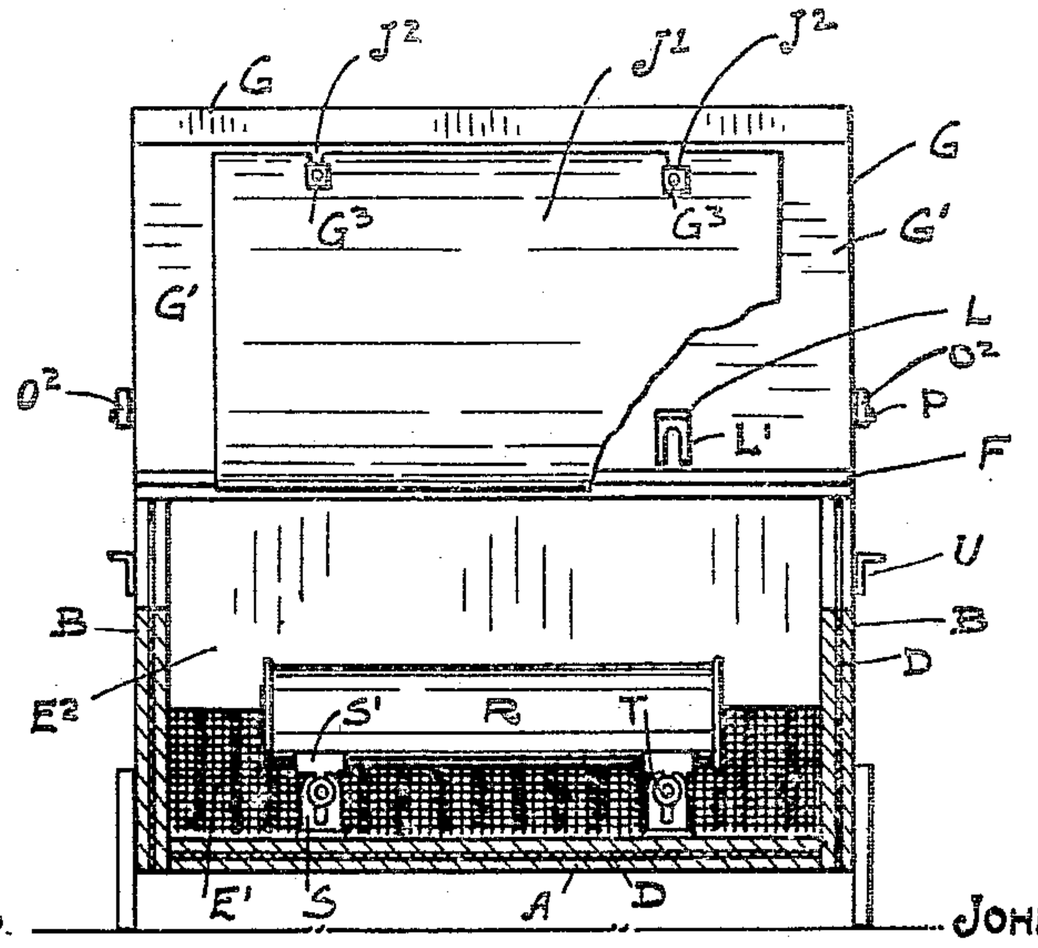


Fig. 3.



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BROODER.

953,667. Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed June 1, 1909. Serial No. 499,274.

To all whom it may concern:

Be it known that I, JOHN H. JOHNSON, a citizen of the United States, and residing in Delaware township, in the county of Delaware and the State of Indiana, have invented a new and useful Brooder, of which invention the following is a specification.

For the successful brooding of chicks it is essential and necessary that the drapery or surface element into and against which the chick will nestle, should hold and maintain an equable and invariable heat and that the temperature about the same should be equable and that there should be a minimum degree of circulation of air or air currents thereabout.

In brooders as the same have been hitherto devised, various combinations and arrangements of parts have been contrived consisting generally of a heating element of the character of a steam or hot water pipe or boiler or a lamp arranged in a receptacle or room in a compartment above the heating device, and with ventilatory ports and openings whereby the suitable thermal condition at the element or body against which the chick may nestle, will be obtained. Faults of the brooders heretofore devised are that the structures thereof are more or less complex, and many parts, partitions and passages or vents are necessary to conserve and direct the heat rays or currents furnished by the heating device, and to keep such brooders clean and at all times in practicable working condition, much time and expense are necessary.

The objects of my invention are to overcome the foregoing faults and to provide a brooder wherein the use of an oil burning lamp or gas heater is wholly unnecessary and which brooder will be simple of construction and manipulation; and capable of being easily cleansed and renovated, and which will be durable and will need a minimum amount of attention for its operation.

The objects of my invention are accomplished by and my invention consists in the new construction combination and arrangement of parts shown in the accompanying drawings wherein corresponding parts are designated by similar reference letters throughout the several views, in which—

Figure 1 is a perspective view, and Fig. 2 is a central vertical longitudinal sectional view of my improved brooder. Fig. 3 is a transverse sectional view taken on the line 3—3 Fig. 1, the cover plate being shown in the open position as indicated in Fig. 2, and a portion of the arch J being broken away.

The floor A and the walls B and C of my improved brooder consist of two layers of wood between which layers are disposed a continuous filling of sheet asbestos D. By this construction of the floor and the walls the tendency of outside moisture to affect the temperature of the surface of the floor and the inner surfaces of the walls will be prevented, and the warmth imparted to the floor and walls by the heating device in the interior of the box as will presently be described will be conserved. The two compartments into which my improved box is divided by the partition E are designated as the exercise room and the brooder room. The lower portion E^1 of the partition E is composed of a soft textile fabric such as flannel and is slitted at intervals to afford easy access from one compartment to the other. Between the side walls of the box and on top of the partition is the cross plate F to the sides of which are hingedly secured the brooder cover plate G, and the exercise room cover frame H the latter being glazed as shown, to permit of the free passage into the exercise room of sunlight and heat.

The surface of the partition E has the lining E^2 of refractory material such as asbestos. The edges of the cover plate G are of mortised form so that when the cover plate is in the closed position, the lines of jointure with the sides and end of the box will be tight. The underside of the cover plate is lined with asbestos G^1, the function of which is to repel the action of outside temperature and moisture and to conserve the heat contained in the brooder room as will be hereinafter referred to.

Carried on the underside of the cover plate G is the refractory arch J. The curvature of this arch is such that when the cover plate is in the closed position as shown the arch will be supported substantially concentric to the curved surface of the carriage heater hereinafter referred to. This arch J is preferably made of sheet metal and its underside is covered with asbestos J^1. Its inner edge will register with the asbestos lining E^2, and the ends of the arch will be terminated a slight distance short of the walls B, so that there are spaces between the

walls B and the said ends. The feet L^1 of the hangers L are recessed to receive the threaded studs M provided on the upper side of the arch J. The opposite side of the arch has recesses J^2 which will be engaged by the studs G^3 carried by the cover plate and which studs have suitable heads thereon. When the nuts M are tightened the arch will be secured in position.

The handle members N are of metal and are secured to the ends of the cross plate F. Secured to the outer sides of these handle members are the lock bars O, the portions O^1 of which are sufficiently springy or resilient that when the cover plate G or the cover frame H are raised to open position, the studs P will engage and slightly raise the noses O^2 which will then snap down and catch and retain the studs P in the offsets O^3.

The brooder room is provided with a carriage heater R which is supported removably on the standards S. The feet of these standards are secured to the floor of the brooder room, and the upper portions S^1 thereof are adjustable to various heights by the set screws T. This carriage heater is of the well known form and structure, having the oval form in cross section and being provided with the drawer R^1 in which is retained heated charcoal.

By the peculiar structure of the floor and arrangement and relative positioning of walls, partition, arch and cover plate of the brooder room with reference to this carriage heater, results of the peculiar manner of the radiation of heat by this heater are that the temperature of the interior of the brooder room is equable and constant, and there will be no drafts or air currents in the lower part of the brooder room.

The effects produced by the refractory lining G^1 and E^2 of the ceiling and partition, respectively, and by the arch J are obvious. The heat generated by the carriage heater will be so conserved, and the refractory action of the surfaces J^1 and E^2 are such that a brooding temperature at the floor and immediately adjacent the heater will be maintained. By moving the closure plates U the apertures V which are located at a point above the plane of the arch J, may be opened and desired ventilation may be had without effect on the temperature or equable condition of the heat at the floor, and at and adjacent the lower surface of the heater, against which the chicks will nestle. The similar apertures X provided with the closure plate Y are provided in the walls of the exercise room.

By raising the cover plate G, the brooder room is open for the reception of the carriage heater. The carriage heater having been ready is lowered to position on the standards and the cover plate is returned to the closed position. The desired height for the carriage heater above the floor may be fixed by adjustment of the upper portion M^1 of the standards.

What I claim as my invention and desire to secure by Letters Patent, is—

1. A device of the kind described, consisting of a box provided with a partition to divide the box into two compartments the lower portion of said partition composed of slitted textile fabric, and its upper portion joined to a transverse plate, a glazed cover for one compartment and a solid cover for the other compartment said covers being hingedly secured to the said transverse plate, an arched member detachably secured to the underside of the solid cover and having length less than the inside width of the box, there being ventilatory openings in the walls of the box above the plane of the said arch, a support beneath the said arched member, a carriage heater to rest on said support.

2. A device of the kind described, consisting of a box provided with a partition to divide the box into two compartments the lower portion of said partition composed of slitted textile fabric, and its upper portion joined to a transverse plate, a glazed cover for one compartment and a solid cover for the other compartment said covers being hingedly secured to the said transverse plate, an arched member secured to the underside of the solid cover and having length less than the inside width of the box there being ventilatory openings in the walls of the box above the plane of the said arch, a support arranged underneath the said arched member comprising a plurality of slotted uprights secured to the floor and cross-pieces fastened adjustably to said uprights, a carriage heater to rest on said cross-pieces.

In testimony whereof I sign my name to this specification in the presence of two subscribing witnesses.

JOHN H. JOHNSON.

Witnesses:
JOHN W. RYAN,
ETHEL L. LISTER.