

No. 862,180.

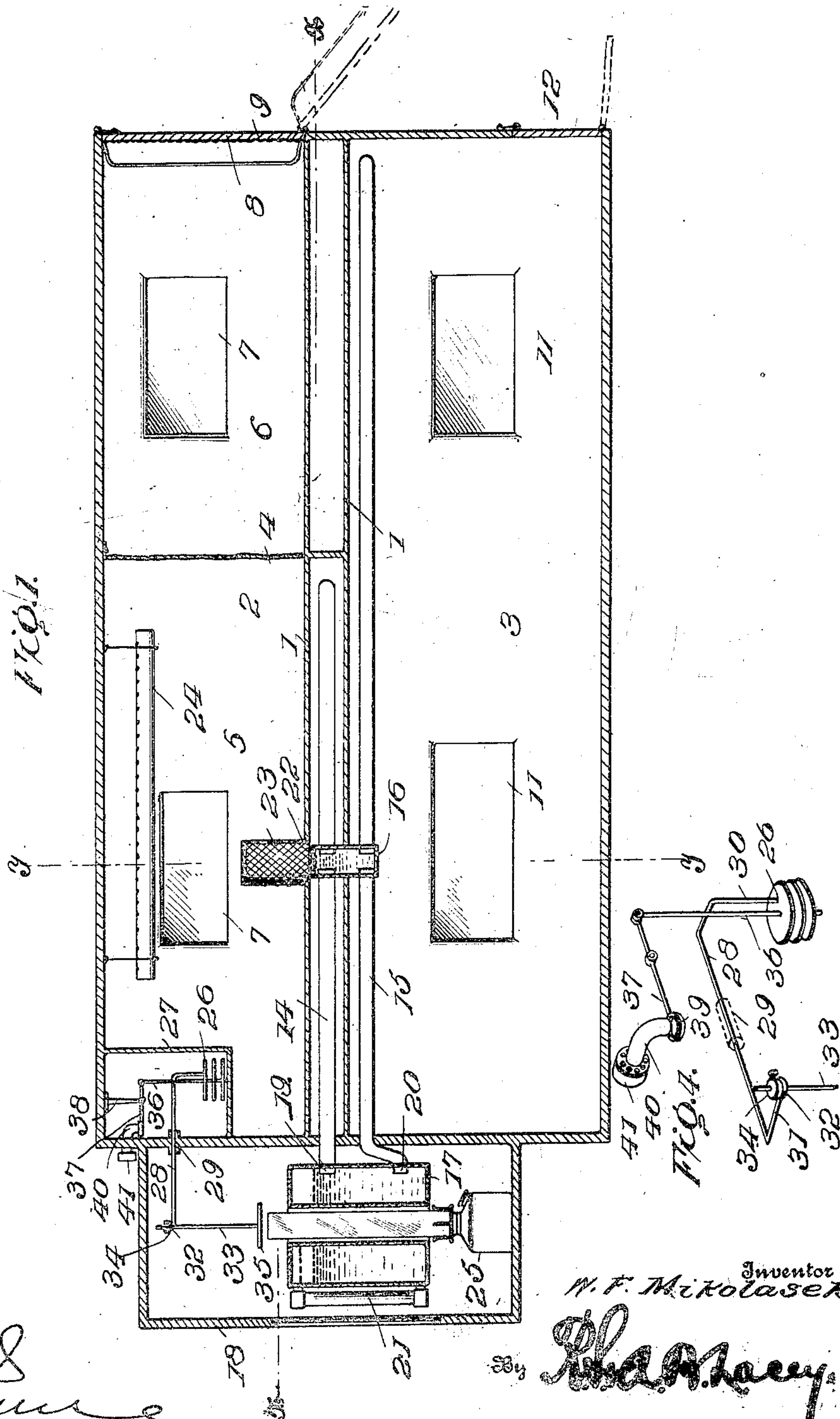
PATENTED AUG. 6, 1907.

W. F. MIKOLASEK:

BROODER.

APPLICATION FILED OCT. 6, 1906.

2 SHEETS—SHEET 1.



Witnesses

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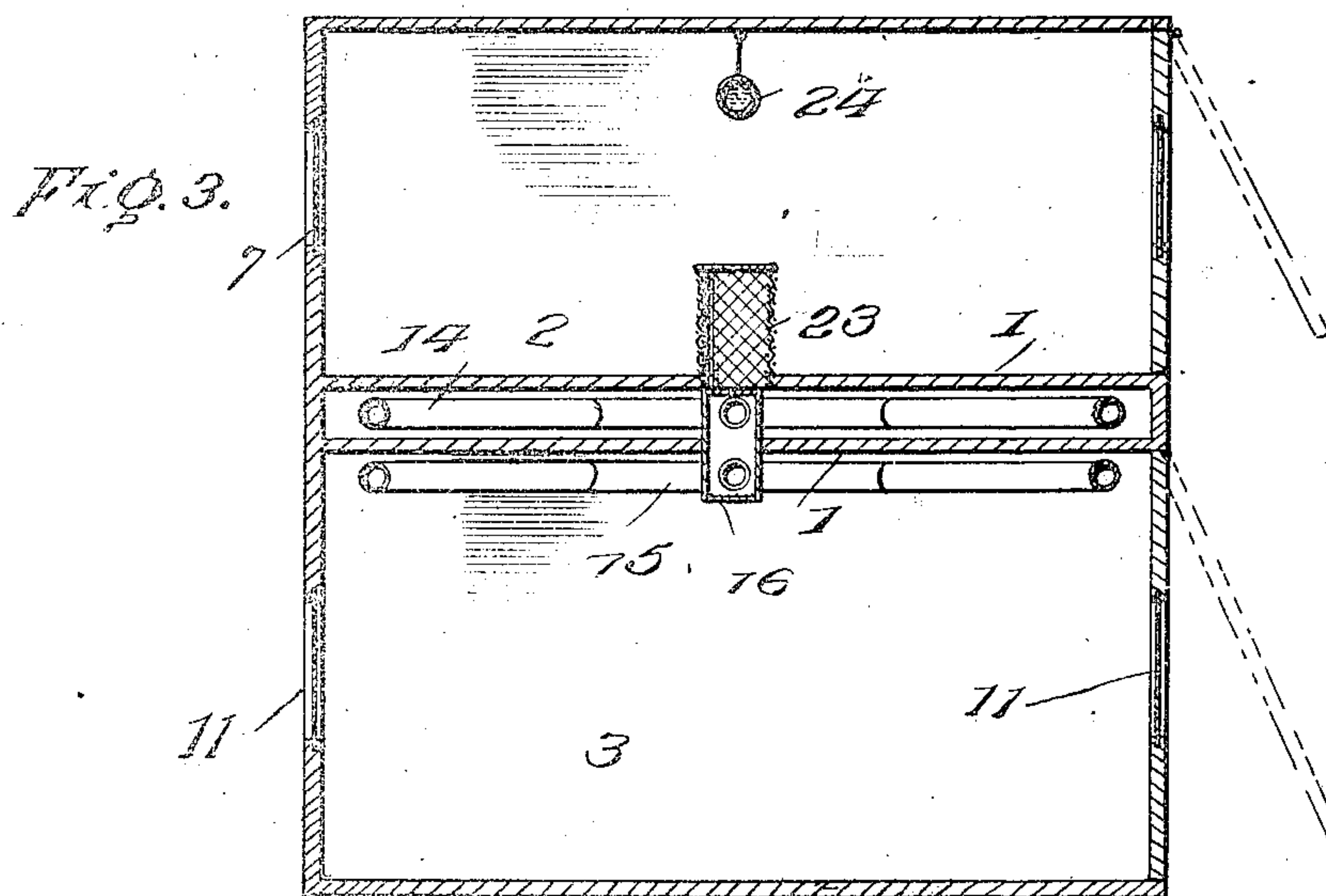
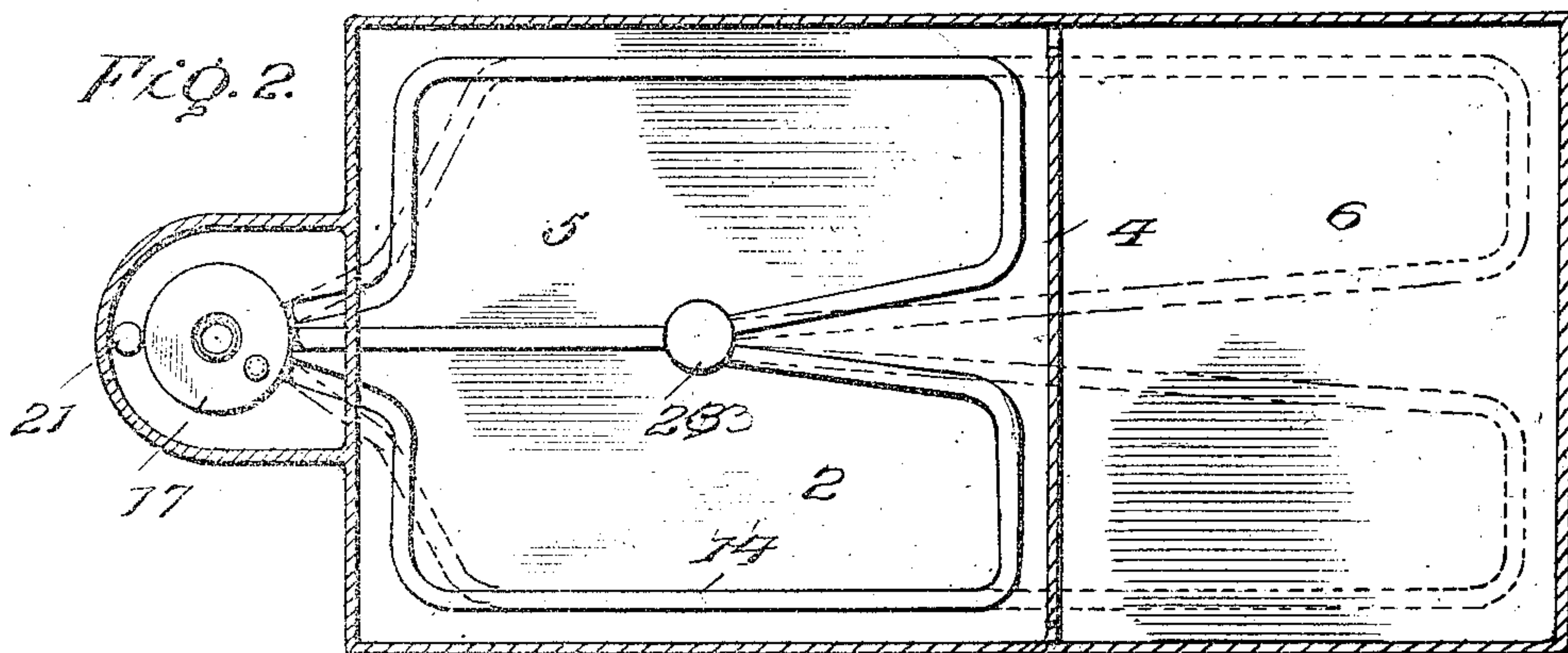
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Witnesses
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UNITED STATES PATENT OFFICE.

WENCESLAUS F. MIKOLASEK, OF VODNANY, SOUTH DAKOTA.

BROODER.

No. 862,180.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed October 6, 1906. Serial No. 337,759.

To all whom it may concern:

Be it known that I, WENCESLAUS F. MIKOLASEK, a citizen of the United States, residing at Vodnany, in the county of Bonhomme and State of South Dakota, have invented certain new and useful Improvements in Brooders, of which the following is a specification.

This invention has for its object an improved construction of brooder embodying upper and lower compartments for the chicks of different ages and improved means for heating such compartments to the proper temperatures by a circulation of water through the arrangement of pipes hereinafter described.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a longitudinal sectional view of my improved brooder; Fig. 2 is a horizontal sectional view thereof on the line $x-x$ of Fig. 1; Fig. 3 is a transverse vertical section on the line $y-y$ of Fig. 1; Fig. 4 is a perspective view of the temperature controlling mechanism.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

My improved brooder is divided by the two spaced horizontal walls 1 into an upper compartment 2 and a lower compartment 3, the upper compartment being designed for the smaller or younger chicks and the lower compartment for the larger ones. The upper compartment 2 is further sub-divided by a partition 4, preferably, a flexible curtain of fabric, into sub-compartments 5 and 6, the former being intended as a room for the chicks to warm themselves and the latter being intended as a compartment in which the chicks are to be fed. Each one of these sub-compartments 5 and 6 is preferably provided with one or more windows 7 for the admission of light. The upper compartment 2 is provided at one end with a hinged wall 8, said wall being hinged at its lower edge. The lower compartment 3 is also provided on either or both sides with windows 11 and it is further provided with a door 12 which is intended to permit the larger chickens to walk out of or into the compartment. As shown best in Fig. 3 each of these compartments is provided with a hinged wall, preferably hinged at its upper edge. By means of these hinged walls, either of the compartments may be opened and cleaned without disturbing the other compartment.

The heating of the respective compartments for the chicks is effected by means of warmed water which is arranged to circulate through pipes 14 and 15. The pipes 14 are arranged between the double walls or floor and ceiling 1-1 and below the sub-compartment 5 and such pipes 14 are composed of a number of branches ar-

ranged as illustrated and are connected by a coupling 16 extending through an opening in the lowermost wall 1 to the lower set of pipes 15. These latter also comprise any desired arrangement of branches and as shown they extend along underneath the ceiling of the compartment 3, preferably, through the entire length thereof, while the pipes 14 terminate preferably at the plane of the curtain 4. The water to feed these circulating pipes flows from a cylindrical reservoir 17 which is mounted within a casing 18 secured to the outside of the brooder in any convenient manner. The water leaves the reservoir at the outlet port 19 and flows in the upper set of pipes 14 thence through the pipe 16 into the lower set of pipes 15 and thence back again through the inlet port 20 into the reservoir, a complete and continuous circulation being thus maintained. The water reservoir 17 may be provided with a gage 21 by which the amount of water in the reservoir and pipes may be determined. The upper set of pipes, heats the sub-compartment 5 of the upper compartment 2, the heat from such pipes being augmented to some extent by the heat from the lower set of pipes. The floor of the sub-compartment 5 is provided with an opening 22 so that the heat may find ready access to said sub-compartment, and preferably, the opening 22 is surrounded by a foraminous cylinder 23. To keep the heated air in said sub-compartment moist for the younger chicks, I provide a tube 24 suitably suspended from the ceiling of the sub-compartment 5 and adapted to contain water and provided with a plurality of upwardly opening apertures.

The water in the reservoir 17 is heated by means of a lamp 25, the flame of which is directed within the cylinder constituting the reservoir, and the heat of this lamp is automatically controlled. The automatic control in the present instance comprises a series of thermostatic disks 26 mounted within a casing 27 of zinc or similar metal or material which is suspended at one upper corner of the sub-compartment 5 in such position that the chicks can not interfere with the parts which it contains. A shaft 28 is mounted to partially rotate above its longitudinal access within a tubular bearing 29 and is provided at its ends with two angular arms designated 30 and 31, respectively. The arm 30 is operably connected to the uppermost disk 26, so that as said disks expand or contract, the shaft 28 will be rocked, and the other arm 31 of said shaft is provided with a loop 32 through which a rod 33 extends, said rod being suspended within said loop and held therein by different vertical adjustments by means of a thumb screw 34. The rod 33 carries a plate 35 at its lower end, said plate being in vertical alinement and in proximity to the upper end of the chimney of the lamp 25 so that as the shaft is rocked by variations in the temperature, the plate will be raised or lowered with respect to the lamp chimney and thereby regulate the heat directed to the reservoir.

In addition to the direct heat varying means just described, I provide my improved brooder with automatic means for controlling the escape of the vitiated air from the sub-compartment 5. In the present instance, 5 this automatic means comprises a rod 36 secured to the uppermost disk 26 at one end and secured at its other end to one end of a lever 37 fulcrumed intermediate of its ends upon a hanger 38 depending from the ceiling. The other end of the lever 37 carries a valve 39 adapted 10 to close one end of an air outlet tube 40 and said tube extends out through a wall of the sub-compartment 5 and is provided with a cap 41 with openings in its sides or bottom so that air may escape without at the same time admitting snow, or rain, or dust.

15 From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided an improved construction of brooder in which by the arrangement of two main compartments, will enable the farmer to raise chicks of two different ages in 20 the same brooder and in which the smaller chicks, as they need more heat, have theirs under the floor, while the older chicks, in order to prepare them for the outside air, have their compartment cooler and heated

near the ceiling. The air in the compartment may be kept suitably moist, as above set forth, and the water 25 heating system secures a proper maintenance of water circulation and results in a uniform temperature which may be automatically controlled as above set forth.

Having thus described the invention, what is claimed as new is: 30

A brooder, comprising an upper and a lower compartment and spaced horizontal walls separating such compartments, the upper compartment being provided with a partition dividing it into sub-compartments, two sets of water circulating tubes, one set being located between the 35 two spaced walls and terminating at one of the sub-compartments, and the other set being connected to the first named set and being located below the lowermost one of said spaced walls, a water reservoir adapted to feed said pipes, means for heating the water in said reservoir, and 40 automatic means for controlling the temperature of the water.

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

WENCESLAUS F. MIKOLASEK. [L. S.]

Witnesses:

JOS. CHAK,
E. A. BOUSKA.