

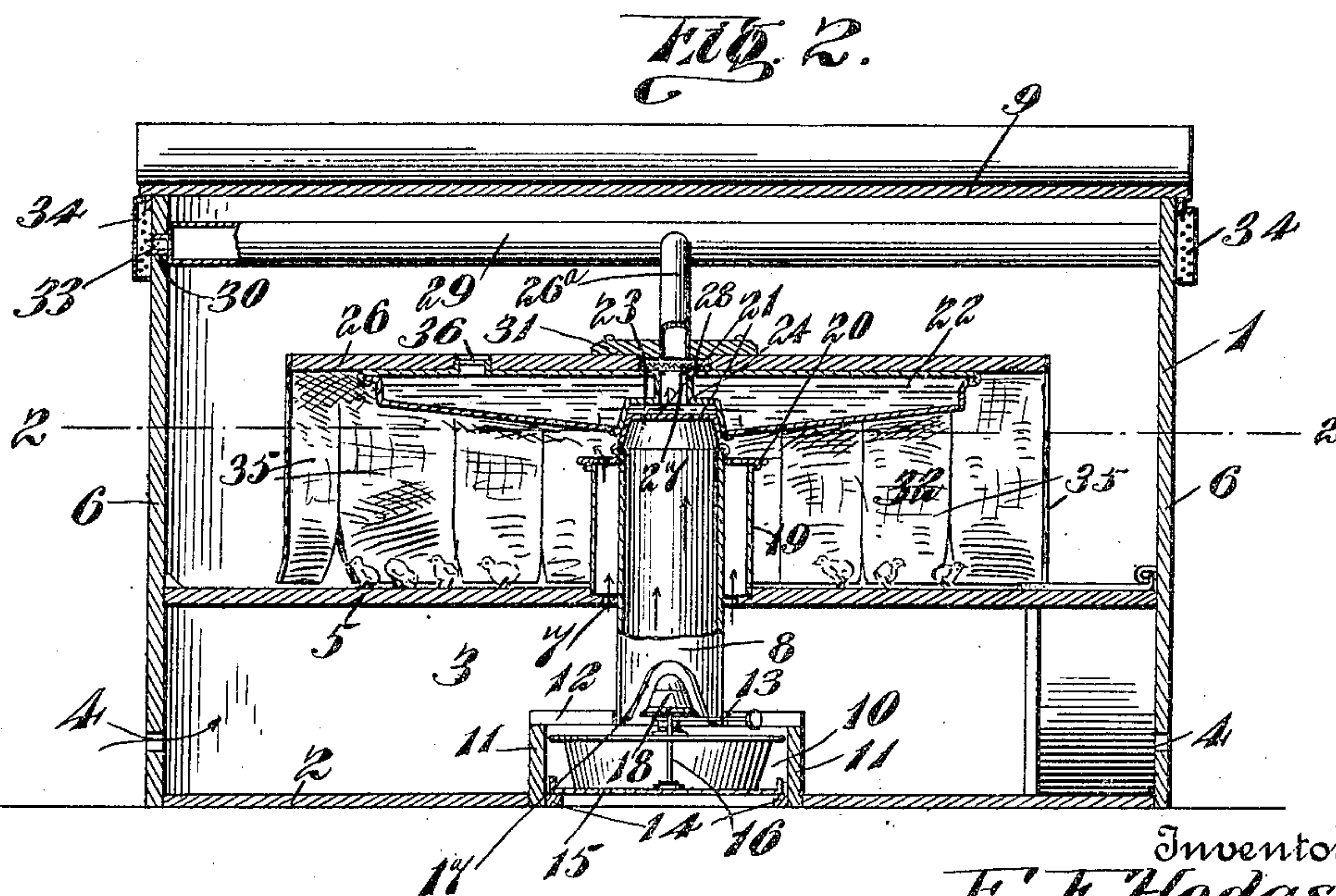
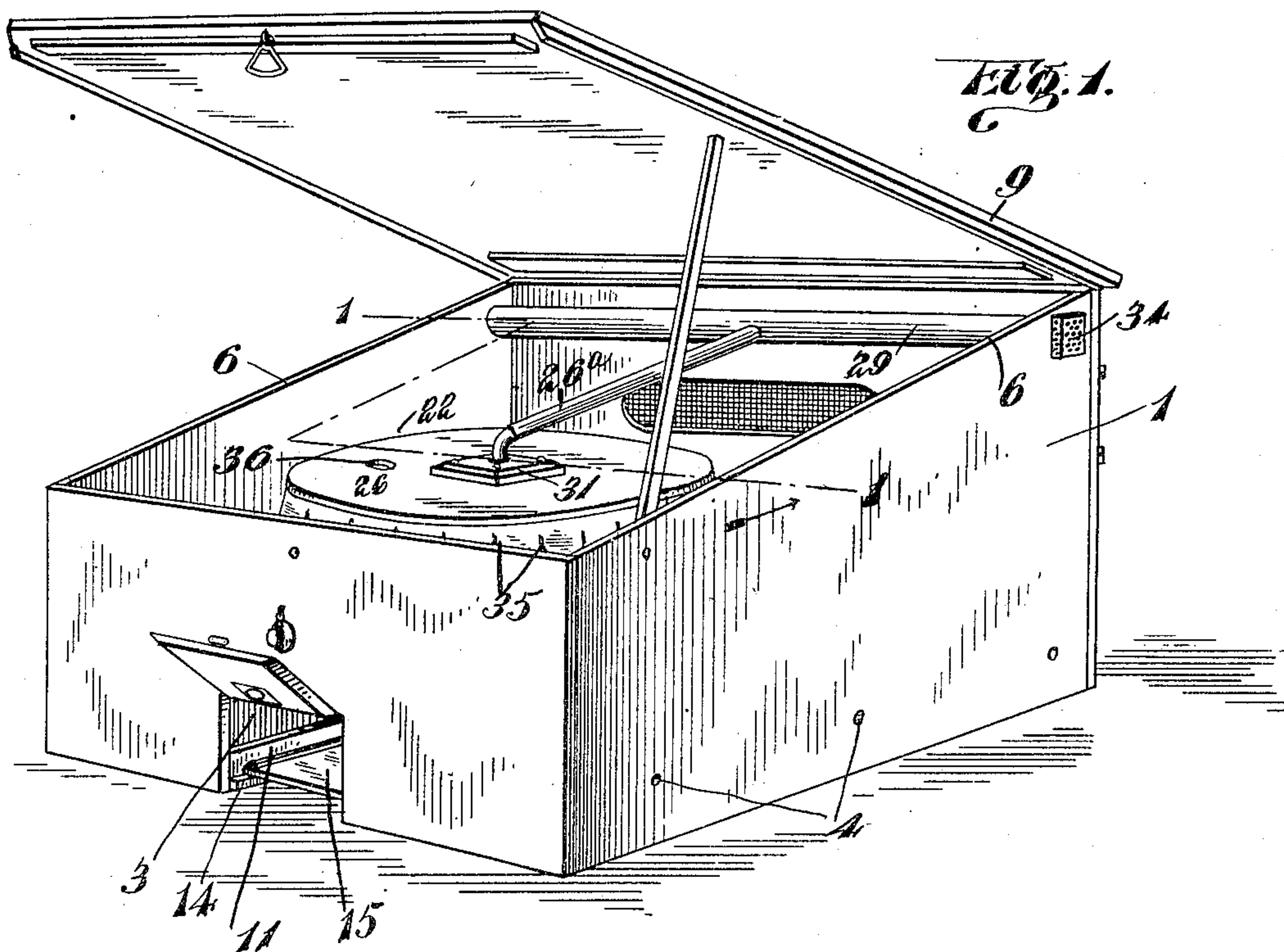
No. 790,898.

PATENTED MAY 30, 1905.

E. F. HODGSON.  
POULTRY BROODER.

APPLICATION FILED AUG. 11, 1904.

3 SHEETS—SHEET 1.



Witnesses

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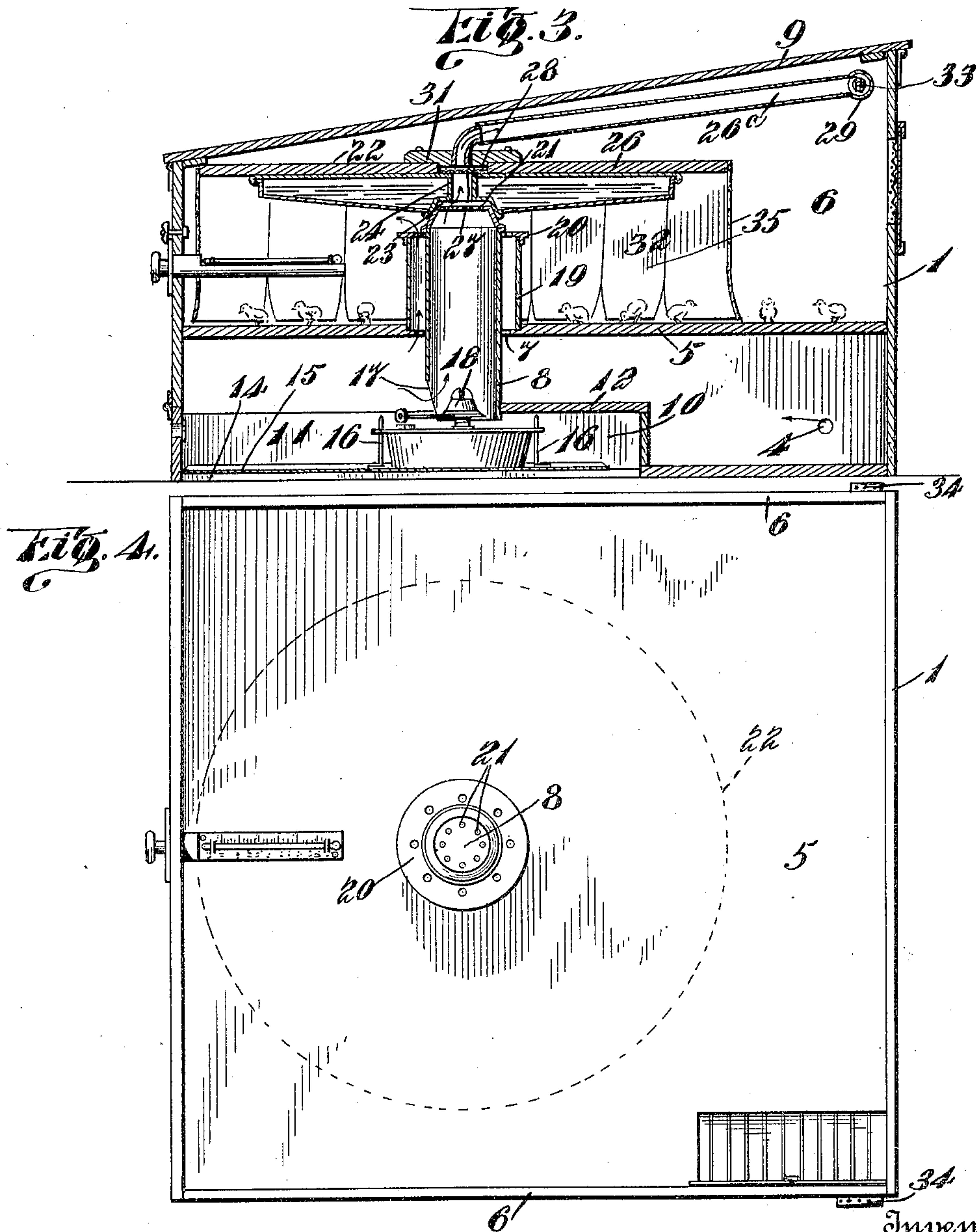
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3 SHEETS—SHEET 2.



Witnesses

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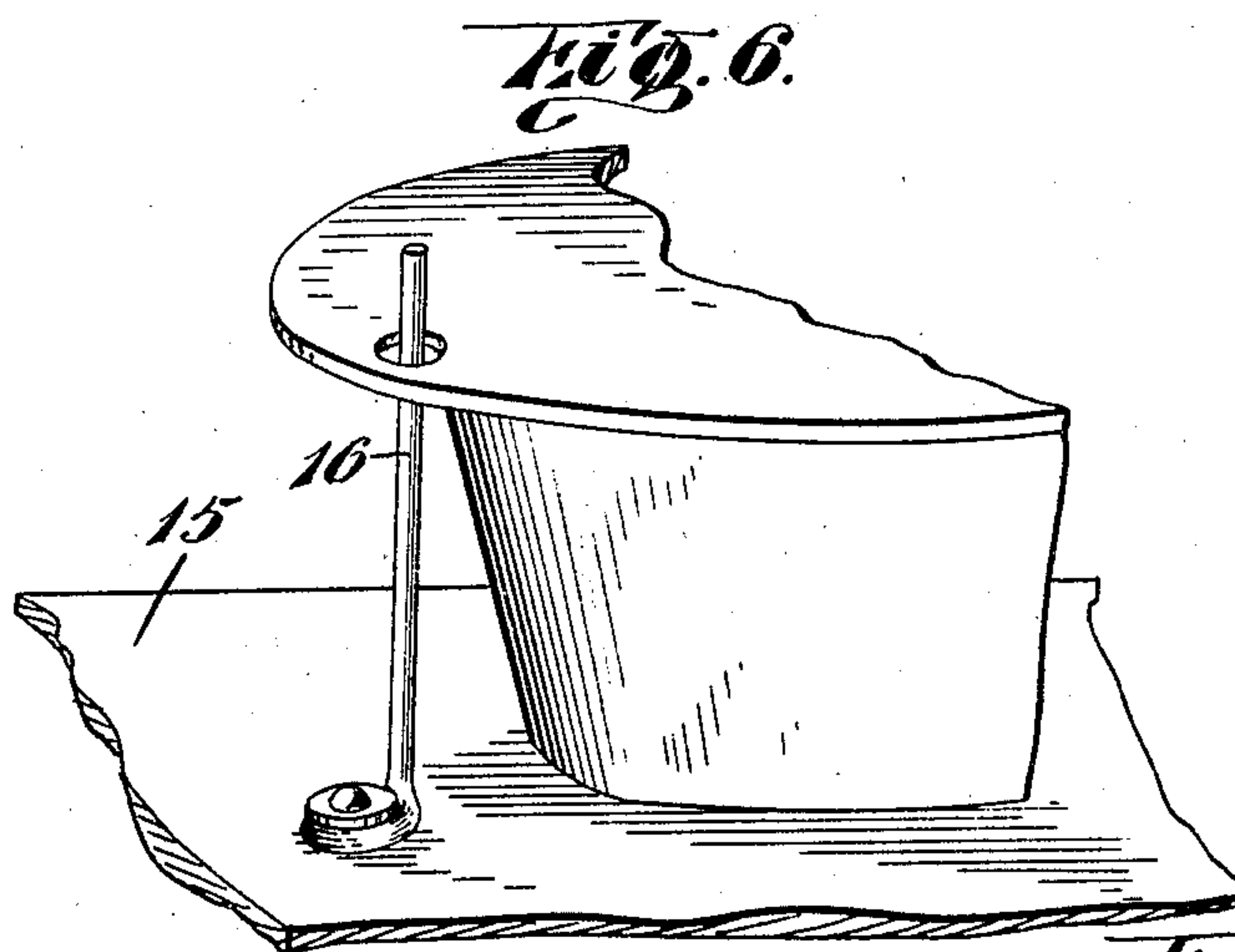
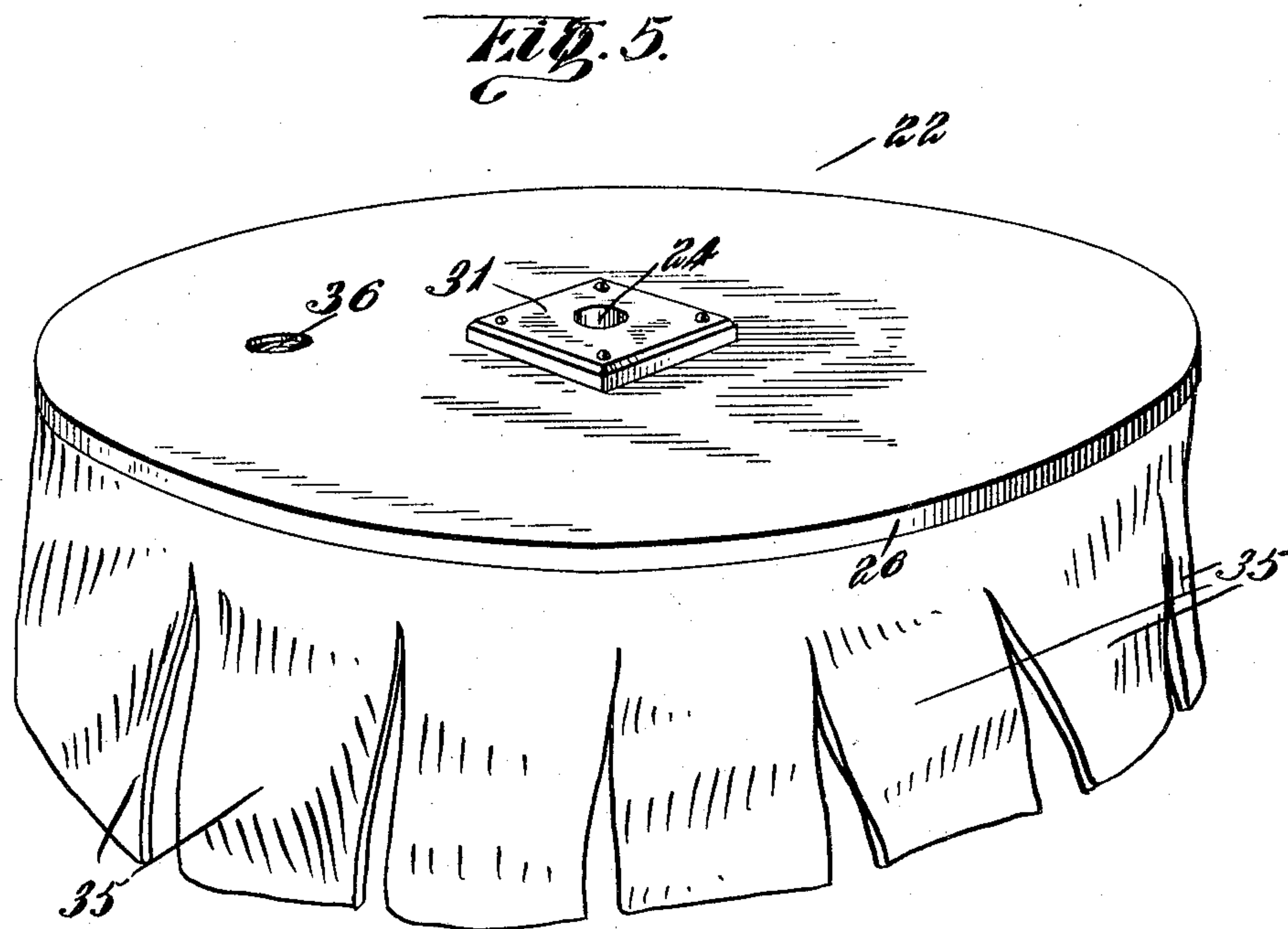
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

ERNEST F. HODGSON, OF DOVER, MASSACHUSETTS.

## POULTRY-BROODER.

SPECIFICATION forming part of Letters Patent No. 790,898, dated May 30, 1905.

Application filed August 11, 1904. Serial No. 220,410.

*To all whom it may concern:*

Be it known that I, ERNEST F. HODGSON, a citizen of the United States, residing at Dover, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Poultry-Brooders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to poultry-brooders, and the objects of the same are to provide a device of simple construction which may be easily managed by an unskilled person and which will maintain a substantially uniform temperature after once adjusted.

Another object is to provide means to prevent sudden drafts of air from affecting the temperature of the interior of the brooder or for preventing any fluctuation in the burner.

Another object is to provide means for heating the brooder by hot water and arranging the various parts in such manner that access may be had to the various interior parts of the brooder.

I attain these and other objects by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a brooder made in accordance with my invention, the hinged roof or door of which is open to show the interior construction. Fig. 2 is a transverse vertical section of the brooder on the line 1 1, Fig. 1. Fig. 3 is a front to rear central vertical section of the same. Fig. 4 is a plan view of the brooder with the water-tank and the exhaust-tube removed, taken on the line 2 2, Fig. 2. Fig. 5 is a perspective view of the water-tank and its connected parts, and Fig. 6 is a perspective view illustrating the manner in which the heater is secured to the removable sliding shelf.

Referring to the drawings for a more detailed description of the invention, the numeral 1 designates a housing or brooder frame, which may be of any desired size and shape. This housing comprises a bottom or flooring 2, having a lower air-compartment 3, provided with suitable air-holes 4 to admit air from the outside. A flooring 5 is secured to the side

portions 6 at a suitable distance above the bottom, and said floor is provided with a central aperture 7 to admit the metal burner-tube 8, and a hinged roof or door 9 covers the entire structure or housing. Extending from the front toward the rear at the bottom of the housing is a recess 10, formed by means of the side strips 11 and the top piece 12, the latter covering the rear portion of the recess 10 and having a recess or opening 13 to admit the burner-tube 8. Cleats 14 are secured at the lower edges of the pieces 11 to form a support for a sliding shelf 15, upon which the lamp or burner is secured. The lamp or burner is held in place upon the shelf by means of the pointed rods 16 passing through ears formed at suitable points upon the lamp, and the shelf 15 may be slid out and in without danger of deranging the parts.

The metal burner-tube 8 is provided with a recess 17 upon the front side of such size as to admit the lamp-burner 18. A metal tube or deflector 19 rests upon the floor 5 and surrounds the burner-tube 8. Said deflector extends upward and terminates at a point a slight distance under the water-tank. A perforated cap 20 fits over the upper end of the deflector 19 and serves to retard the heated air and to distribute it uniformly under the water-tank. The upper end of the burner-tube 8 is provided with a suitable number of perforations 21 for a purpose which will presently appear.

The water-tank 22, which is herein shown as of circular conformation, is provided with a recess 23 to accommodate the upper end of the burner-tube 8, said recess being slightly flared to conform to the tapered upper end of the burner-tube, as shown more clearly in Fig. 2. An opening 24 extends centrally through the water-tank and communicates at its upper end with a chamber 28, formed in a wooden top or cover 26. Within the chamber 28 a wire-cloth or foraminous screen or deflector 27 is located. Covering the opening at the top of the chamber 28 is a block or cap, to which is secured a pipe 26<sup>a</sup>, said pipe extending upward a short distance as an elbow and thence extending backward and communicating with the outlet pipe or flue 29. The pipe



or flue 29 is provided at its opposite ends with reduced tubular portions 30, journaled in the opposite side pieces 6 6 of the housing. By this arrangement the pipe or elbow 28 may be lifted from its seat within the cap or block 31 in order that the water-tank and the board or hover 26 may be removed or lifted from the burner-tube 8 to gain access to the brooder-chamber 32. Secured to the outer ends of the reduced portions 30 of the pipe 29 are wire-cloth screens 33, and secured to the sides 6 of the housing over the screens 33 are perforated boxes or caps 34, which serve to prevent sudden drafts of air from affecting the temperature within the brooder. Strips of felt 35 may be secured to the disk 26, said strips extending downward to the floor 5 of the brooding-chamber.

In the back of the brooder or other suitable parts openings may be formed and covered by wire-netting, glass, or mica, and a suitable opening or stairway may be provided to admit the chickens or to let them out, as desired.

A screw-cap 36 extends through the hover-board 26 to provide a filler-opening for the water-tank.

The operation of my brooder is as follows: When the burner is lighted, the heat passes upward through the perforations 21 and is retarded in its passage through the tube 24 by coming in contact with the lower wall of the recess 23, the heat thence passing upward through the pipe 24 and being again retarded and distributed by means of a screen 27 and thence passing upward through the pipe 26<sup>a</sup> to the outlet pipe or flue 29 and out through the screen 33 and perforated box 34. The fresh air is permitted to enter the openings 4 and passes up around the heater-tube 8, through the aperture 7 and inside the deflector 19 out through the foraminous cap 20, the perforations in said cap distributing the heat equally and radiating it outward under the water-tank 22, as will be obvious upon reference to Fig. 2. The deflector 19 serves to insulate the heat at the center and to screen the chicks from the burner-tube 8. Moreover, the heat being distributed equally throughout the brooder-chamber, there is no tendency for the chicks to crowd toward the center or around the burner-tube 8. Owing to the arrangement of screens at the ends of the pipe or flue 29 any draft or gust of wind which might cause fluctuation in the burner

and change the general temperature of the brooder-chamber is dissipated to a great extent owing to the fact that the openings 30 are comparatively small while the screens 33 and the cap 34 exclude the greater portion of the air at these points.

From the foregoing it will be obvious that my invention is of comparatively simple construction, may be easily managed, that the parts may be easily reached for repairs, and that an efficient and inexpensive device for the purpose is produced.

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

1. In a poultry-brooder, a burner-tube having a recess at its side to admit the burner, a foraminous top, a water-tank surrounding the upper end of the burner-tube and provided with a central aperture, a chamber above said aperture, a cap covering the chamber, a pipe or elbow extending to the cap and communicating with the outlet-flue, said outlet-flue being pivoted at its ends within the brooder-housing, substantially as described.

2. In a poultry-brooder, a burner-housing provided with cleats or supports, a shelf adapted to rest upon said supports and provided with means for securing a lamp or burner thereon in combination with a metal burner-tube having a recess in the side thereof to admit the burner of a lamp, substantially as described.

3. In a brooder, the combination of a burner, a burner-tube having a foraminous top, a water-tank having a recess to fit the top of the burner-tube, a screen or deflector surrounding the burner-tube within the brooder-chamber and provided with a perforated cap at its upper end, substantially as described.

4. In a brooder a hot-water tank, a wooden cap to which the tank is secured, a central aperture in the cap, a cover for the aperture, a movable pipe passing through the cover, in combination with a burner and an outlet-flue pivoted within the brooder-walls, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ERNEST F. HODGSON.

Witnesses:

ASA T. STOWELL,  
ARTHUR L. POTTER.