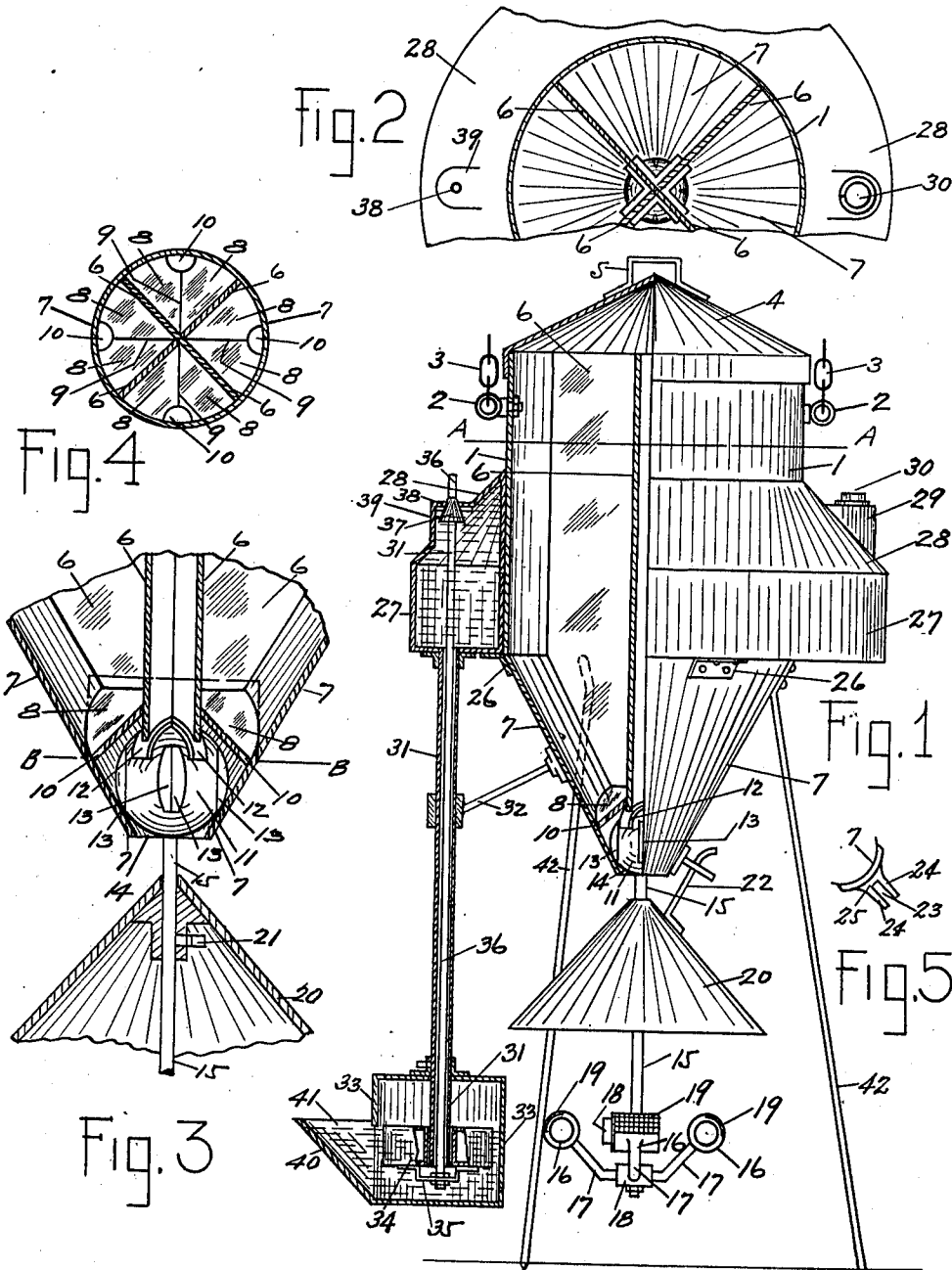


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AUTOMATIC FEEDER.  
APPLICATION FILED MAR. 31, 1911.

1,021,209.

Patented Mar. 26, 1912.



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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC FEEDER.

1,021,209.

Specification of Letters Patent.

Patented Mar. 26, 1912.

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*To all whom it may concern:*

Be it known that I, THOMAS M. PLATT, a citizen of the United States, residing in the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Feeders, of which the following is a specification.

My invention relates to automatic means for feeding live stock, particularly poultry.

My invention resides in apparatus of the character above referred to, in which a hopper, having one or more compartments, contains the grain or other feed which falls by gravity to the lower end of the hopper. The free exit of the feed is impeded or controlled by an oscillating member, which may be termed a valve, having a seat at or near the lower end of the hopper and adapted to be oscillated by the live stock attempting to secure feed or bait in "tempters" which are connected with the oscillating valve by a rod.

My invention resides in the features of construction hereinafter described and claimed.

For an illustration of one of the forms my invention may take, reference is to be had to the accompanying drawing, in which: Figure 1 is a side elevational view, parts in section, through my improved apparatus. Fig. 2 is a fragmentary top plan view, partly in section, taken on the line A—A, of Fig. 1. Fig. 3 is a fragmentary sectional view, on enlarged scale, through the bottom of the hopper and associated parts. Fig. 4 is a horizontal sectional view taken on the line B—B, of Fig. 3, showing the diaphragms and feeding slots. Fig. 5 is a fragmentary view, in plan, showing an ear for preventing the oscillating valve and associated parts from revolving.

The hopper 1, here shown, by way of example, as cylindrical, is preferably made of sheet metal and is provided with removable eyes 2 by which it may be suspended from any suitable support by chains or other devices 3. The hopper 1 is provided with a cover 4 having a handle 5 for ready access to the top of the hopper. Within the hopper are provided, if desired, a plurality of partitions 6 to divide the same into a plurality of compartments, for containing the same variety or different varieties of feed

or other material, as grit, ground shells, or whatever may be desired.

The lower end of the hopper 1 diminishes in diameter, as indicated by the cone 7, the partitions 6 extending well down into the cones 7. In the bottom of each compartment between partitions 6 is a downwardly and outwardly extending diaphragm 8 fitting the inside of the cone 7 and against the partitions 6, each diaphragm 8 being trough-shaped, the bottom of the trough being indicated at 9 in Fig. 4. At the outer edge of each diaphragm 8 is a small opening 10.

Beneath the diaphragms 8 and resting within the lower end of the cone 7 is the oscillating valve member 11, here shown substantially spherically shaped and disposed immediately above the member 11 are the members 12, curved in more or less conformity to the member 11, to form an inverted seat for the same to prevent the same from rising up out of contact with the lower end of the cone 7. In the member 11 are a plurality of slots or passages 13, one for each opening 10 and in substantial alinement therewith. These slots are of such depth in the member 11, that when the member 11 is oscillated, as hereafter described, the slot will come into communication with the feed discharge opening 14 in the lower end of the cone 7. Secured to the member 11 is the depending pendulum rod 15 to whose lower end are secured the tempters 16, here shown as four in number, supported upon the rods 17 held by the lock 18, which latter is secured to the rod 15. Each tempter is here shown as consisting of a substantially cylindrical portion 16 within which may be confined by a cap 18 suitable tempting feed or other material visible but inaccessible to poultry or other stock through the wire netting 19 which occupies substantially a quadrant, being preferably the upper and outside quadrant of each tempter. The tempter may be a complete ring instead of several short units as shown. Between this member 11 and the tempters there is secured upon the rod 15 the deflector 20, here shown conical in shape, the same being secured upon the rod 15 by the screw 21, by which it is adjustable to different heights along the rod 15. Upon the deflector 20 is secured a pin or rod 22 adapted to extend into the space 23, see Fig. 5, between the prongs 24 of a

member 25 secured on the outer side of the cone 7 as shown in Fig. 1. By this means the ball member 11 and attached parts, are prevented from rotating, as around the vertical axis of the member 11, thus keeping slots 13 in alinement with their respective openings 10.

Upon the cone 7 may be provided a plurality of brackets 26 upon which may rest the annular water tank or reservoir 27 which may have the upwardly diminishing portion 28. 29 is an opening into the tank 27 for admission of water, this opening being closed air-tight by a cap 30. Communicating with the inside of the tank 27 through its bottom and depending therefrom is the downwardly extending tube 31 which may be laterally braced by the member 32 secured upon the cone 7. Upon the lower end of the tube 31 is supported the tank 33 within which is disposed the float 34 loosely embracing the tube 31. A bracket 35 secured upon the float 34 supports the rod 36 which extends upwardly through the tube 31 and through the tank 27 and carries at its upper end a valve 37 adapted to close an aperture 38 in the part 39 in communication with the interior of the tank 27. The tank 33 has a spout 40 open to the poultry or other live stock at 41.

If instead of suspending the apparatus thus far described by chains or other devices as 3, it is desired to rest the apparatus upon the floor or ground, three or more legs 42 may be provided, secured to the cone 7 or to any other suitable part of the apparatus.

The operation of my apparatus is as follows: Feed or other suitable material is placed in the compartments in the hopper 1, the same resting upon the diaphragms 8 which sustain in part, at least, the weight of the material to be fed. The feed falls by gravity through the apertures 10 in the diaphragms into the slots 13 in the valve member 11. The poultry or other live stock in attempting to secure the bait or food in the tempters 16 will oscillate the pendulum rod 15 in any direction, which rod, however, is prevented from rotating by the engagement of rod 22 in the opening 23 as above described. This pendular or oscillating action of the rod 15 and the attached parts, swings the valve member 11 so that one or another of its slots 13 is brought into communication with the opening 14, whereupon the feed or other material drops through the opening 14 on to the top of the deflector 20 which scatters the feed upon the ground or floor. There being a plurality of tempters, and a plurality of slots 13 in the member 11, the member 11 will be from time to time oscillated in all directions so that one or another of the slots 13 will come into communication with the discharge outlet 14 thereby

causing the various kinds of feed within the hopper to be scattered upon the ground.

For watering, the cap 30 is removed and the tank 27 filled to a desired level and the cap 30 returned and secured air-tight to prevent admission of air. The water descends through the tube 31 into the tank 33 and rises to a suitable level in the spout 40, so that the same may be drunk by the poultry or other live stock. As the level of the water in the tank 33 is lowered by consumption or evaporation, the float 34 descends until finally the valve 37 is removed from its seat opening the aperture 38 and allowing entrance of air to reduce the partial vacuum which had been formed in the tank 27 by consumption of water from tank 33. This admission of air then allows a flow of water down the tube 31 into the tank 33, whereupon the float 34 again rises and through the rod 36 raises the valve 37 to close the aperture 38 air-tight. The level of the water in the tank 33 is now again higher and suitable for further consumption, and when the level in the tank 33 again diminishes to a certain point the aforementioned operation is automatically repeated.

What I claim is:

1. In apparatus of the character described, a hopper having a feed discharge opening, a valve seat approximate said opening, a substantially spherically shaped valve member having an aperture and having universal movement on said seat, a member supported by and hung from said valve member for oscillating said valve member, whereby said aperture is brought into communication with said discharge opening, and a tempter device whereby said member may be actuated.

2. In apparatus of the character described, a hopper having a plurality of compartments and a feed discharge opening, a pendulum valve member having a plurality of passages controlling communication between said discharge opening and said compartments, and a tempter device whereby said valve member may be actuated.

3. In apparatus of the character described, a hopper having a plurality of compartments and a feed discharge opening, a pendulum valve member having a plurality of passages controlling communication between said discharge opening and said compartments, a tempter device whereby said valve member may be actuated, and a perforated diaphragm intervening between each of said compartments and said valve member.

4. In apparatus of the character described, the combination with a hopper having a feed discharge opening, of a feed controlling diaphragm in said hopper above said discharge opening, a valve member disposed between said diaphragm and said dis-

charge opening, a pendulum rod depending from and supported by said valve member, and a tempter device whereby said rod may be actuated.

5. In apparatus of the character described, the combination with a hopper having a feed discharge opening, of a pendulum valve member controlling said opening, a pendulum rod depending from and supported by said valve member, a tempter device whereby said rod may be actuated, and a deflector movable with said rod.

6. In apparatus of the character described, the combination with a hopper having a feed discharge opening, of a pendulum valve member controlling said opening, a seat for said valve member, a pendulum rod depending from and supported by said valve member, a tempter device whereby said rod may be actuated, and means for preventing said valve member from rising from its seat.

7. In apparatus of the character described, a feed hopper having a plurality of compartments and a feed discharge opening, a pendularly oscillating valve member having a slot for each compartment of said feed hopper, said valve member controlling said discharge opening, and means for actuating said valve member, whereby a slot in said valve member affords communication with a compartment of said hopper and said discharge opening.

8. In apparatus of the character described, a feed hopper having a plurality of compartments and a feed discharge opening, a valve member having a seat adjacent to said discharge opening, a member secured to said valve member and extending through said discharge opening, and a tempter device for actuating said member, said valve member having a slot for each compartment of said feed hopper, whereby when said member is actuated by said tempter device a slot affords communication between a compartment of said hopper and said discharge opening.

9. In apparatus of the character described, the combination with a feed hopper having a plurality of compartments, a troughed diaphragm at the bottom of each compartment, each diaphragm having an opening, a valve member seated below said diaphragms, said hopper having a feed discharge opening below said diaphragms, said valve member normally closing said discharge opening, a slot in said valve member for each compartment, and means for actuating said valve member.

10. In apparatus of the character described, the combination with a feed hopper having a plurality of compartments, a diaphragm in the bottom of each compartment, said diaphragm being troughed and extending downwardly and outwardly, each diaphragm having an opening, a valve

member seated below said diaphragms, said hopper having a feed discharge opening below said diaphragms, said valve member normally closing said discharge opening, a slot in said valve member for each compartment, and means for actuating said valve member.

11. In apparatus of the character described, a hopper having a discharge opening, partition members within said hopper for dividing the same into compartments, feed controlling diaphragms at the bottoms of said compartments, an oscillating valve member controlling said discharge opening, and an inverted seat for said valve member secured upon said partition members.

12. In apparatus of the character described, a hopper having a feed discharge opening, a slotted substantially spherically shaped valve member controlling said discharge opening, and a tempter device hung upon and supported by said valve member, whereby said valve member may be oscillated in any direction and a slot brought into communication with said discharge opening.

13. In apparatus of the character described, a hopper having a feed discharge opening, a slotted substantially spherically shaped valve member controlling said discharge opening, a tempter device hung upon and supported by said valve member, whereby said valve member may be oscillated in any direction and a slot brought into communication with said discharge opening, and a feed deflector swinging with said valve member.

14. In apparatus of the character described, a hopper having a feed discharge opening, a slotted substantially spherically shaped valve member controlling said discharge opening, a tempter device hung upon and supported by said valve member, whereby said valve member may be oscillated in any direction and a slot brought into communication with said discharge opening, and a feed controlling diaphragm in said hopper above said valve member.

15. In apparatus of the character described, a hopper having a feed discharge opening, a slotted substantially spherically shaped valve member controlling said discharge opening, a tempter device hung upon and supported by said valve member, whereby said valve member may be oscillated in any direction and a slot brought into communication with said discharge opening, and a troughed feed controlling diaphragm in said hopper above said valve member.

16. In apparatus of the character described, a hopper having a feed discharge opening, a slotted substantially spherically shaped valve member controlling said discharge opening, a tempter device hung upon and supported by said valve member, where-

by said valve member may be oscillated in any direction and a slot brought into communication with said discharge opening, and an inclined troughed feed controlling diaphragm in said hopper above said valve member.

5 In testimony whereof I have hereunto af-

fixed my signature in the presence of the two subscribing witnesses.

THOMAS M. PLATT.

Witnesses:

ANNA E. STEINBOCK,  
ELEANOR T. MCCALL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents  
Washington, D. C."