S. KARASUDA

CHICKEN FEEDING TROUGH

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To all whom it may concern:

Be it known that I, Seisake Karasuda, a citizen of Japan, residing at Kapaa, in the county of Kauai and Territory of Hawaii, have invented certain new and useful Improvements in Chicken-Feeding Troughs, of which the following is a specification.

This invention relates to improvements in chicken feeding troughs, and particularly to the type wherein the trough is supplied with feed from the hopper having means for controlling the flow of the feed into the hopper operated by the chickens.

An object of the invention resides in providing a device of the above mentioned character, wherein a hopper construction is provided with a pair of end plates depending below the main body of the hopper, and supported on suitable supporting legs, a trough being provided between the lower ends of the end plates for receiving feed adapted to be dispensed in predetermined quantities from the hopper controlled by chicken operated controlling mechanisms for permitting predetermined amounts of heat to be discharged from said hopper into the trough upon each operation of the controlling means.

Another object of the invention resides in providing a construction of the character above mentioned including a pair of end plates having a divided hopper secured between the upper ends thereof provided with inclined bottom portions terminating adjacent the central partition wall with outlet slots adapted to permit the feed of material in said hopper to a suitable controlling and measuring means adapted for governing the feed of material through the slot and into said measuring means and the discharge thereof from the measuring means to a trough mounted between the lower ends of said end plate, said operating means being provided for controlling the operation of the material measuring and controlling means.

The invention also comprehends other objects and improvements in the details of arrangement and construction of the parts of the invention for carrying out the same in a simple and efficient manner, which are more particularly pointed out in the following detailed description and claims, directed to a preferred form of the invention, it being understood; however, that various minor changes may be made in the construction, without departing from the spirit and scope of the invention as described and claimed.

In the drawings illustrating the preferred form of the invention:

Figure 1 is a side elevation of the improved feed hopper constructed according to the invention.

Figure 2 is a horizontal sectional view, taken on the line 2—2 of Figure 1.

Figure 3 is an end elevation of the hopper constructed as illustrated in Figure 1.

Figure 4 is a vertical transverse sectional view, taken on the line 4—4 of Figure 1.

End plates indicated 1 are mounted in vertical spaced parallel relation at the ends of the hoppers 2 and 3 formed by the inclined bottom plates 4 connecting the end plates and the hinged cover plate 5, said chambers being separated by a central partition wall 6, extending between the end plates and arranged in a substantially vertical plane. Side plates 7 also connect the opposite sides of the end plates 1 at the upper side portions thereof and with which the upper outer edges of the inclined bottom 4 of the hoppers are connected. The lower inner ends of the bottom 4 of said hoppers are formed with depending extensions 8 arranged in spaced parallel relation with respect to the lower end portion of the partition wall 6. Each bottom plate 4 of the hopper is slotted as indicated at 9 for receiving a fastening means 10 for adjustably securing control plates 11 on the inner edges of said bottom plates for controlling the size of the slots governing the discharge of material from the hoppers.

A control gate 12 is provided for each hopper mounted for swinging movement on a rod 13, shown within the end plate 1, so that in one position said gate will be adapted to engage the plates 11, and prevent the discharge of material through the slots and outwardly of the hopper, while in the position shown in Figure 4, the material in the hopper is free to discharge through the slots extending along the central partition wall 6 and downwardly between the partition wall and the depending extensions 8 on the bottom plates 4. Deflector plates 14 are mounted on the central partition 6 below the discharge spouts from the hopper for deflecting the materials fed therethrough away from the hinge mounting of the clo.
sure gate 15, mounted for swinging movement on rod 16 journaled in the end plate adjacent to end at opposite sides of said partition 6, said closure gates being adapted in the position shown in Figure 4, to substantially engage the lower end of the depending extensions on the bottom plate 4, for closing the opening between said depending portions 8 and the central partition wall, and thereby preventing the discharge of feed from the hopper, but permitting the space between the control gate 12 and said closure gate to be filled with material, so that the charge contained therein will subsequently be discharged upon the proper operation of the control gates and the closure gates, in a manner which will be presently described.

The bottom portions of the end plates 1, 5, 7, 10 mounted a trough 17 adapted to receive the material discharged from said hoppers, when the closure gates 15 are opened.

Operating pedals 18 are secured to bars 19 which are pivotally connected at one end with the end plates 1, so as to mount said bars for swinging movement at the side of the device and adapt it to be operated by the weight of a chicken or other fowl stepping thereon, in a manner which will presently appear. Each of the pedals is provided at one end with a bar connection 20 pivotally connected to one end of the weighted lever 21 mounted in the central portion for rocking movement on one of the shafts 16, the lever at one end being mounted on one shaft 16, while the lever at the opposite end of the hopper is mounted on the other shaft 16. The weights 22 on said lever 21 normally retain the lever in the position shown in Figure 3, so that the pedals 18 will be held in an upward limit of movement, as illustrated in Figures 3 and 4. The rods 13 extend beyond the end plates 1 and mount levers 23 on the ends thereof, with which are adjustably connected links 24 extending to the pedal at the respective sides of the hopper with said shaft 13, so that in the downward movement of one of the pedals, the levers 21 and 23 controlling the gates 12 and 15 at the respective side of the casing will move the gates 12 to closed position, and the closure gate 15 to open position for permitting the discharge of material therebetween into the trough 17. The operation of the pedal is adjusted, so that the weight of the chicken for which the feeder is especially adapted will cause the downward movement thereof in order to permit the discharge of a predetermined quantity of feed or other material in the hopper into the trough 17. The rapidity of the flow of material from the hoppers 2 and 3 into the respective compartments below the control gate 12 or through the discharge slot may be controlled by adjusting the slide plates 11 to control the width of the slot in cooperation with the central partition 6. The covers 5 normally close the open upper ends of the hoppers and are positioned in inclined position as illustrated, and hinged along the central portion at the upper edge of the central partition 6, so that the same may be positioned in the open and will not be affected by moisture which will be drained off at the sides of the hopper, the covers permitting the refilling of the hoppers when desired.

From the foregoing description, it should be readily apparent that an exceedingly simple and novel hopper construction has been provided, particularly adapted for feed hoppers for chickens and the like, which is efficient in operation and which will prevent the waste of feed.

What is claimed is:

1. A device of the class described comprising end plates arranged in vertical spaced relation, a vertical partition wall extending between said end plates at the upper end portions thereof, bottom plates extending between the upper end portions of said end plates and cooperating with said central partition to form a pair of hoppers at opposite sides thereof, said bottom plates having depending inner ends arranged in spaced relation to the lower end of said central partition forming the discharge for said hopper, means for controlling the rate of discharge from said hoppers, control means for permitting the intermittent discharge of predetermined quantities from each of said hoppers, and independent pedal operated means for operating the control means from said hoppers.

2. A device of the class described comprising a pair of end plates, a central partition extending therebetween, said partition in vertical relation at the central portion and at the upper ends thereof; a pair of inclined bottom forming plates positioned between said end plates and cooperating with said partition to form a pair of hopper compartments therewith, said bottom plates having depending extensions on the inner ends thereof arranged in spaced parallel relation with the lower edge of said central partition, a control gate mounted for swinging movement adjacent the central partition in each hopper, and adapted to close the slot formed between the bottom plate in said partition and prevent the discharge of material from the hopper, means for controlling the slot formed between the central partition and the bottom plate for controlling the discharge of material from the hopper, closure gates mounted for swinging movement at the lower edge of the end plates and adapted for cooperation with the lower ends of the depending extensions on the bottom plates, to
prevent the discharge of material from the compartment formed below the control gate and between the central partition and the bottom plate, pedals pivotally mounted at the lower ends of the end plates and extending along the sides of the device, a trough mounted in the end plates and between the lower end thereof for receiving material discharged from said hoppers and operating connections between said pedals and the control and closure gates of said hopper for operating said gates to permit the intermittent discharge of a predetermined quantity of material from said hopper into said trough.

In testimony whereof I affix my signature.

SEISAKE KARASUDA.