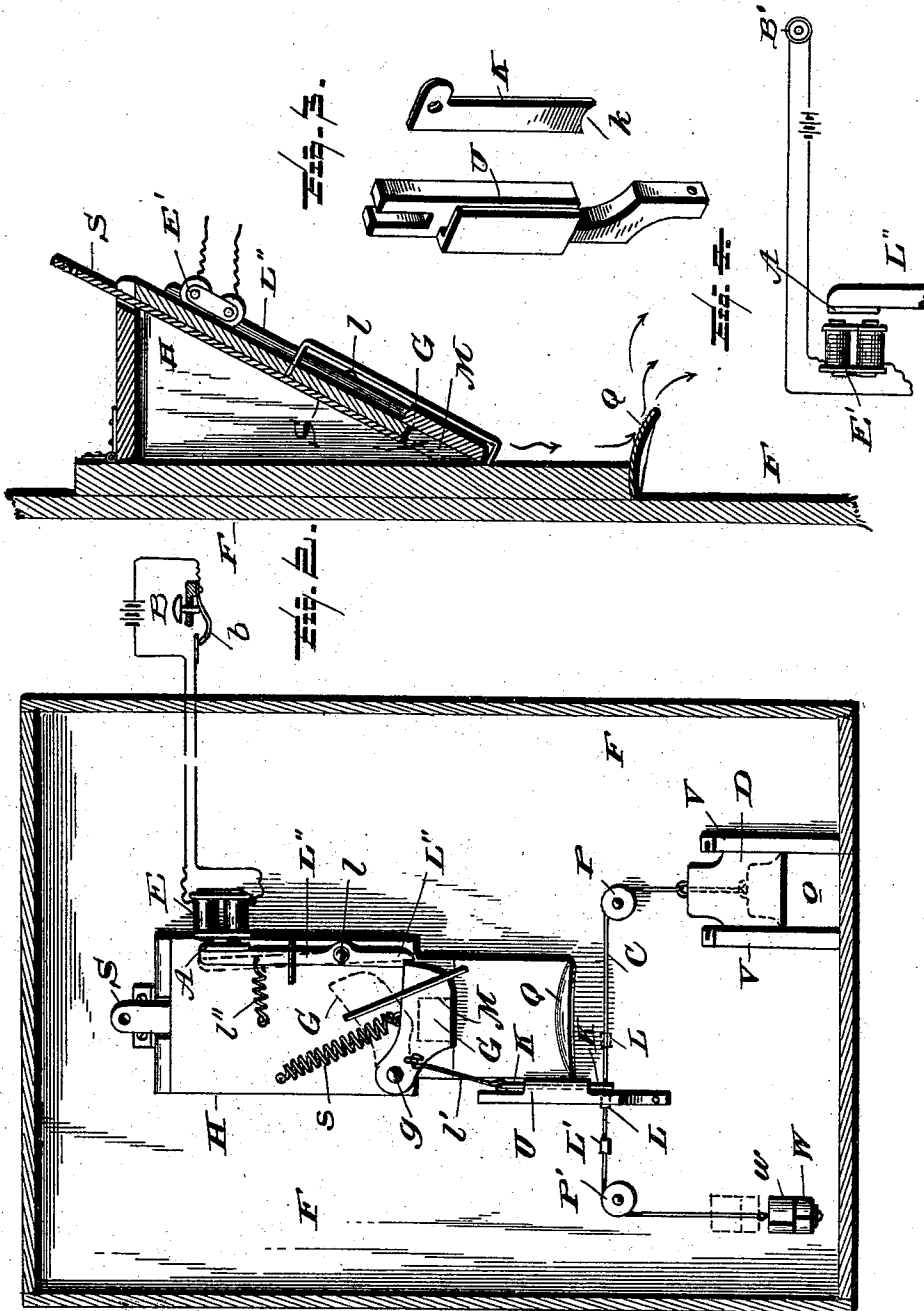


(No Model.)

O. W. MAPES.
STOCK FEEDING AND HOUSING DEVICE.

No. 513,806.

Patented Jan. 30, 1894.



Witnesses:

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UNITED STATES PATENT OFFICE.

OSCAR W. MAPES, OF MIDDLETOWN, NEW YORK.

STOCK FEEDING AND HOUSING DEVICE.

SPECIFICATION forming part of Letters Patent No. 513,806, dated January 30, 1894.

Application filed May 25, 1893. Serial No. 475,483. (No model.)

To all whom it may concern:

Be it known that I, OSCAR W. MAPES, a citizen of the United States, and a resident of Middletown, Orange county, State of New York, have invented certain new and useful Improvements in Stock Feeding and Housing Devices; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to the care of live stock, and more especially to the feeding and housing of poultry; and the object of the same is to produce an improved device of this character to the end set forth below.

The invention consists in improved means for discharging the contents of an elevated feed box or hopper by touching an electric button at a remote point, and also in improved means for opening or closing the door of the hennery by the same movement by which the feed is discharged—all as hereinafter more fully described and as illustrated in the drawings, wherein—

Figure 1 is an inside elevation of the front end of a hen house, showing in full lines the mouth of the hopper as closed and the door of the hen house as open, and in dotted lines illustrating how the hopper mouth is opened and the hen house door is closed by the same movement. Fig. 2 is a central vertical section of the hopper and the slide therein on an enlarged scale. Fig. 3 is a perspective view of the catch and its guides. Fig. 4 is a detail of a modified arrangement of the magnet and lever which I may adopt.

It is conceded by all poultrymen that hens will be more healthy and productive when allowed full liberty to roam at large in search of worms, insects, grass, &c., than when confined in small inclosures. It is also generally conceded that small flocks are more profitable in proportion to numbers than large ones. I have discovered by actual experience that any number of small flocks can be kept in houses that are distant at least eight rods from each other, and given such full liberty, when fed by means of my improved feeding device. It also very materially reduces the labor and expense for attendance. By means

of this invention any number of small flocks can be fed simultaneously, each in its own house, by simply pressing an electric button at a distant point, as at one's office or residence. The doors can be closed in the same manner after the hens have gone to roost for the night. The grain in falling over the metal deflector makes sufficient noise to be heard by the hens at any distance to which they are likely to ramble, and as the grain falls in all the houses simultaneously each hen runs to her own home to eat. Every head goes up instantly, and away they all scamper for their supper. The house, is, of course, provided with clean and neat nests elsewhere.

In practice, I visit each house in the morning to give the flock a morning meal of soft feed or mush and open the door. The fowls then wander outside and the hens return at proper intervals to lay their eggs. At about 4 p. m. I distribute within the hen house, by means of the invention described below, the evening meal of grain. Later, I visit the house and remove the eggs from the nests, and at this time I set the apparatus with the door open but capable of being closed for the night. I then return to my residence or office; and, after allowing sufficient time for any belated fowl to enter the hen house, I close the door thereof for the night by the means set forth below. Under this system I have found that hens can be profitably kept by the acre instead of by the flock, and their manure will improve the land rather than otherwise.

Coming now to the present invention, the letter F designates the front wall of a hen house having an opening O adapted to be closed by a door D sliding in vertical guides V.

C is a cord leading upward from the door over pulleys P and P', and thence downward to a weight W which is lighter than the door. w is another weight adapted to be connected with the main weight W, and the two weights are heavier than the door.

L L' are lugs connected with the cord C between the pulleys. Mounted on the front wall F above the cord is a hopper H over whose mouth M moves a slide S within the hopper so that the mouth can be opened or closed by hand whenever desired.

G is a gate pivoted at g to the hopper so as

to close over the exterior of the mouth M, and normally raised by a spring *s* so as to open the mouth.

L'' is a lever pivoted at *l* to the hopper and having its lower end adapted to move over the free end of the gate to hold the same in position to close the mouth M, while the upper end of the lever carries an armature A standing adjacent an electro-magnet E which is in circuit with a push-button B at a remote point, as in my residence or office. This push button is preferably of that type wherein by pressing the button a spring *b* is thrown out of contact with the terminal of the other wire so that the circuit is broken; and at this time a spring *l''* draws the upper end of the lever L'' away from the electro-magnet E.

In some cases I may find it desirable to substitute the ordinary push button B' as shown in Figs. 2 and 4, when the electro-magnet E' would stand at the other side of the lever L'', so that when the button was pressed the circuit would be completed and the magnet would move the lever to disengage the gate; but I consider the arrangement shown in Fig. 1 preferable. The slide S being raised so as to open the mouth M from the inside of the hopper and the latter filled with grain, it is obvious that by pressing the button B the circuit will be broken so that the magnet E will no longer attract the armature A, and the spring *l''* will move the lever L'' so as to allow the spring *s* to raise the gate G and drop the grain out of the mouth M.

The letter Q designates a curved plate or deflector arranged beneath the mouth so that as the grain falls therefrom it is scattered broadcast over the floor of the hen house.

Moving in suitable upright guides U is a catch K having a notch *k* in its lower end adapted to pass over the cord C, and the upper end of this catch is connected by a link *l'* with the gate G. As the gate rises the catch is raised and its notched lower end is housed within the guides U; but when the gate is lowered said notched lower end is adapted to pass over the cord and to be engaged by one of said lugs.

When I deliver the morning meal to the fowls, I open the door D and slide S, fill the hopper, close the gate G, and latch it closed by the lever L''. After eating their morning meal the fowls pass out the door, but I have found that they will return at about the hour they expect their evening meal. About 4 p. m. I press the button B, when the grain in the hopper is thrown onto the floor of the hen house. Later, I visit the hen house to collect the eggs, at which time I remove the weight *w*, and close and latch the gate G, which movement engages the notched lower end *k* of the catch with the cord C at the right of the lug L. I then return home, and at about dark I again press the button B whereby the gate is raised by the spring *s*, which motion raises the catch out of engagement with the lug L and permits the door D to close. If the

hopper has been filled with grain, the slide S may then be serviceable for preventing such last opening of the gate from delivering the grain. The other lug L' and the additional weight *w* are useful when it is desired to have the movement of the catch permit the door to open instead of to close—an operation which may sometimes be needed.

The precise sizes, shapes, proportions, and materials of parts are not essential, and considerable change may be made in the exact details of construction without departing from the spirit of my invention.

What is claimed as new is—

1. In a stock feeding device, the combination with an elevated hopper having a discharge mouth, a gate for closing said mouth, and means for opening the gate from a remote point; of a door, a weight for opening said door, a link connected with the gate, and connections between the link and weight for permitting the descent of the latter when the gate is opened, as and for the purpose set forth.

2. In a stock feeding device, the combination with a hopper having a mouth at its lower end, a gate pivoted on the exterior of the hopper and adapted to close said mouth, a vertically movable slide within the hopper its lower end adapted to close said mouth from the inside independently of the gate and its upper end extending above the hopper and forming a handle, and a spring for raising said gate; of a centrally pivoted lever whose lower end engages the gate when it is closed, an armature at the upper end of the lever, an electro-magnet adjacent said armature, and a battery and push button in circuit with said magnet, as and for the purpose set forth.

3. In a stock feeding device, the combination with a hopper, a pivoted gate for closing the mouth thereof, and means for causing the opening of the gate from a remote point; of a weighted door, a lug connected therewith, a catch engaging said lug, and a link connecting the gate and catch for disengaging the latter from the lug when the gate is opened, as and for the purpose set forth.

4. In a device of the character described, the combination with a vertically sliding door, a cord leading therefrom horizontally over two pulleys to a weight, an additional weight adapted to be connected with the first weight whereby the combined weight will be heavier than the door, and two lugs secured to the cord between the pulleys; of a catch sliding in upright guides and having a notched lower end adapted to engage the cord adjacent either lug, a hopper, a gate for closing the mouth thereof, means for raising said gate from a remote point, and a link connecting the gate and catch, as and for the purpose set forth.

5. In a device of the character described, the combination with a vertically sliding door, a cord leading therefrom horizontally over two pulleys to a weight, and a lug secured to the cord between the pulleys; of a catch slid-

ing in upright guides and having a notched lower end adapted to engage the cord adjacent said lug, a hopper having a delivery mouth at its lower end, a gate over said mouth, a link connecting the gate and catch, and means for raising said gate from a remote point, as and for the purpose set forth.

6. In a device of the character described, the combination with a vertically sliding door, a cord leading therefrom horizontally over two pulleys to a weight, an additional weight adapted to be connected with the first weight whereby the combined weight will be heavier than the door, and two lugs secured to the cord between the pulleys; of a catch sliding in upright guides and having a notched lower end adapted to engage the cord adjacent either lug, and means for raising said catch from a remote point, as and for the purpose set forth.

7. In a stock feeding and housing device, the combination with a hopper, a gate over its mouth, a spring for normally opening said gate, a lever for holding the gate closed, and a slide within the hopper adapted to close the mouth thereof independently of the gate; of a battery and push button in circuit with an electro-magnet, an armature on the lever adjacent said magnet, a door, a lug connected therewith, a sliding catch for engaging said lug to hold the door open, and a link connecting said gate and catch for raising the latter when the former is opened, as and for the purpose set forth.

8. In a stock feeding and housing device, the combination with a hopper, a pivoted gate over its mouth, a spring for normally opening said gate, a lever for holding the gate closed, and a spring for moving the lever to disengage

the gate; of a battery and push button in circuit with an electro-magnet, an armature on the lever adjacent said magnet, the latter standing in position to move the lever against the tension of its spring, and the push button being of that type wherein the circuit is normally closed, a door, a lug connected therewith, a sliding catch for engaging said lug to hold the door open, and a link connecting said gate and catch for raising the latter when the former is opened, as and for the purpose set forth.

9. In a stock feeding and housing device, the combination with a weighted door, a horizontally moving lug connected therewith, and a vertically moving catch whose lower end is adapted to engage said lug when the door is opened; of a hopper, a gate over its mouth, a spring for normally opening the gate, a link connecting the gate with the catch, and an electrically operated lever for holding the gate closed, as and for the purpose set forth.

10. In a stock feeding device, the combination with an elevated hopper having an inclined front with a downwardly opening mouth near its lower end, and a vertically movable slide within said hopper for closing said mouth when desired; of a gate pivoted to said front and adapted to close said mouth on the exterior of the hopper, and means for opening said gate from a remote point, as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my signature on this the 23d day of May, A. D. 1893.

OSCAR W. MAPES.

Witnesses:

MOSES CRIST,
ISAAC B. CLEMENTS.