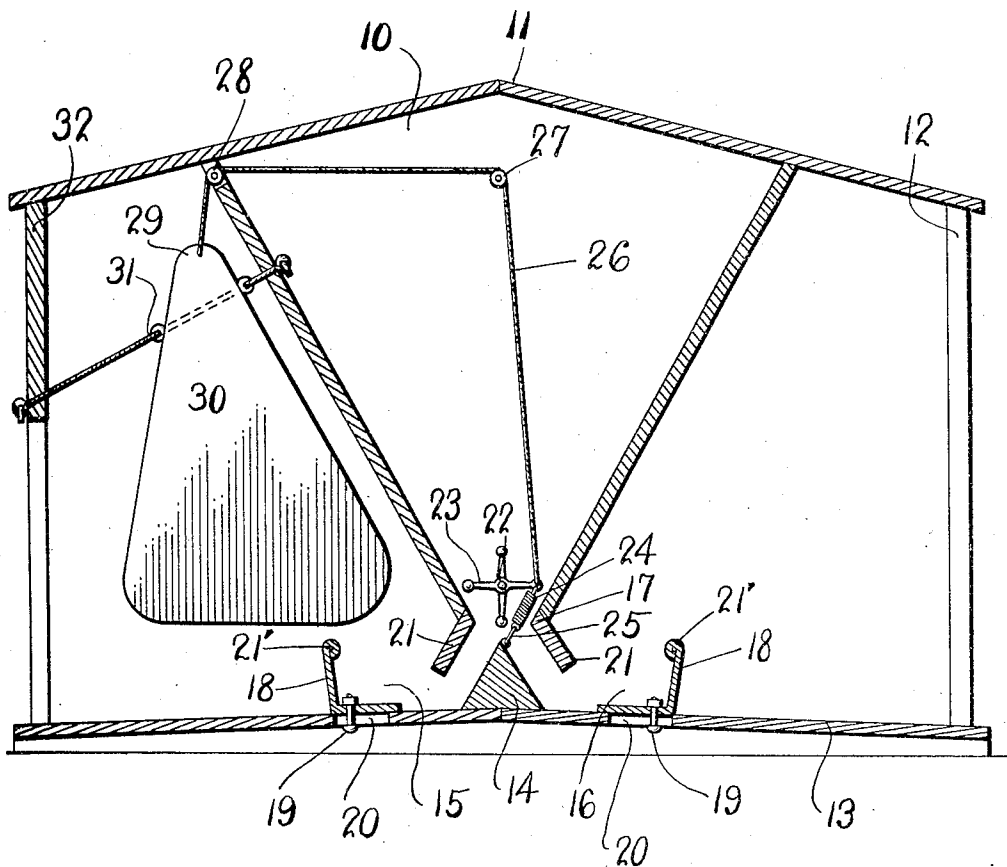


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FEEDER.
APPLICATION FILED AUG. 26, 1919.

1,336,320.

Patented Apr. 6, 1920.
2 SHEETS—SHEET 1.

Fig. 1.



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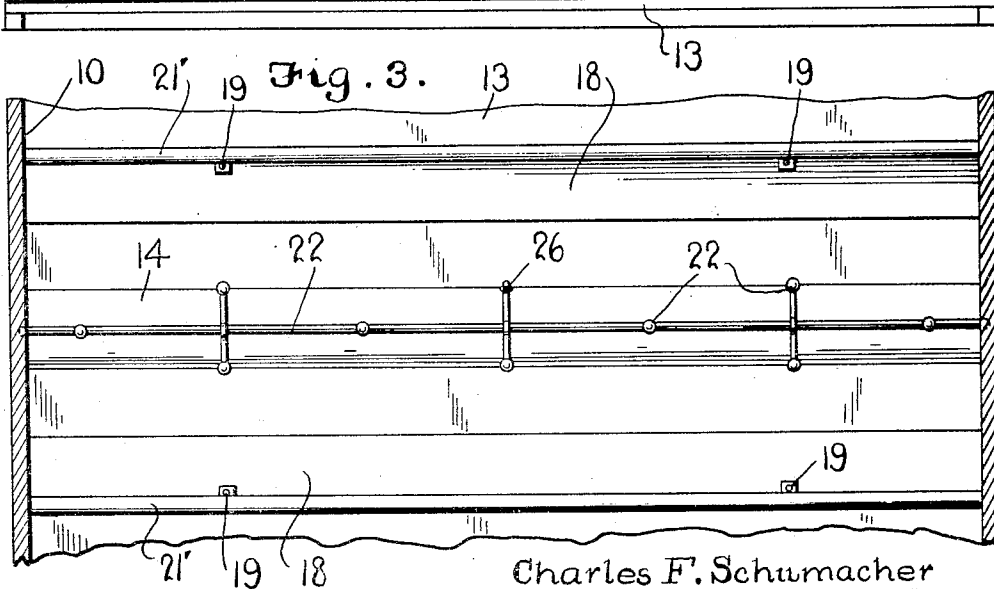
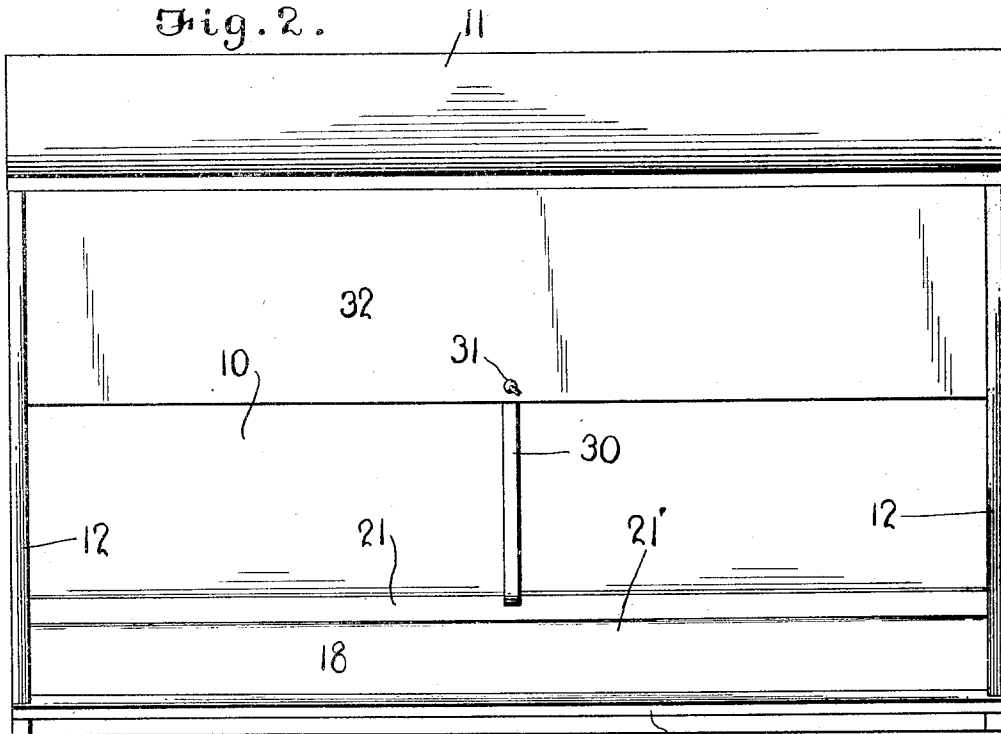
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2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

CHARLES F. SCHUMACHER, OF HILLSBORO, OHIO.

FEEDER.

1,336,320.

Specification of Letters Patent.

Patented Apr. 6, 1920.

Application filed August 26, 1919. Serial No. 319,880.

To all whom it may concern:

Be it known that I, CHARLES F. SCHUMACHER, a citizen of U. S. A., residing at Hillsboro, in the county of Highland and State of Ohio, have invented new and useful Improvements in Feeders, of which the following is a specification.

The object of the invention is to provide a simple and efficient poultry and stock feeder, adapted for furnishing feed of different kinds or having different degrees of mobility to the stock or poultry as required without the disadvantages of overflowing, and under such conditions as to prevent the stock from displacing the feed from the trough except in the proper way, to avoid waste and also to provide such a construction as to afford a shelter or protection for the stock while feeding.

With these and other objects in view the invention consists in a construction, and combination of parts hereinafter specifically set forth, it being understood that changes in form, and proportion may be resorted to within the scope of the claims without departing from the principles involved.

In the drawings:—

Figure 1 is a cross sectional view of a feeder constructed in accordance with the invention.

Fig. 2 is a side view of the same.

Fig. 3 is a detail view of the lower portion of the hopper and the feed troughs preferably arranged in duplicate as shown.

The hopper 10 is arranged preferably within a shelter having a roof 11 and suitable uprights or standards 12 surmounting a floor 13 which is depressed or inclined downwardly from the center indicated by the division block 14 toward the lateral edges to afford a drainage for moisture. The walls of the hopper converge toward the plane of the troughs 15 and 16 of which the bottoms are formed by the floor of the structure, and are separated intermediately and under the center of the throat 17 of the hopper by the upwardly tapered or wedge shaped division block or strip 14, and bounded at their outer sides by walls 18 which are adjustable toward and from the throat of the hopper by the means of fastening bolts 19 engaging slots 20 in the floor, so that the width of the troughs may be varied as required.

At their lower ends the walls of the hopper are provided with out-turned lips 21 dis-

posed approximately parallel with the side surfaces of the division strip 14, to provide the outlets respectively into the troughs which are accessible from opposite sides of the hopper, the upper portions of the walls of the hopper extending outwardly to afford additional shelter for the stock while feeding and at the same time afford the required capacity for the necessary supply of feed which may be introduced at the top thereof.

At the upper edges of the outer walls 18 of the troughs there are arranged the inwardly projecting beads 22 which serve to prevent the stock from dragging the feed out of the trough and upon the floor and thus involving waste of the feed.

Arranged in the throat of the hopper is an oscillatory agitator consisting of a spindle 22 and a series of radial arms 23 and adapted to be yieldingly held in its normal position and to be returned to such normal position after displacement by means of a spring 24 connected with the division block by means of a rope or cord 25. Connected with an arm 23 of the feeder is an operating cord 26 leading over suitable direction pulleys or guides 27 and 28 which, obviously, may consist of eyes or rings, to the upper arm 29 of a crowding board 30 disposed at an intermediate portion of the length of the trough for lateral swinging movement caused by the side pressure of stock in approaching the trough. The crowding board is preferably fulcrumed as at 31 upon a pivot disposed at an inclination to the vertical, and preferably perpendicular to the side wall of the hopper and supported at its outer end by a suitable bracket 32.

Obviously the agitator may be made in a single structure extending the full length of the hopper or it may be made in sections and in the latter event a plurality of the crowding boards may be arranged at intervals throughout the length of the trough so that different agitators are independently operated by different crowding boards to the end that as the stock crowd each other in approaching the trough they cause the movement of the crowding board necessary to move the agitator and thus induce a more rapid flow of the feed from the hopper to the trough.

The agitator or displaced agitator section will be returned to its normal position by the retracting spring 24 which is connected therewith, and obviously the displaced

crowding board will be returned after removal of pressure to its normal vertical position by gravity, the said board being suspended as a pendulum with the operating
5 cord connected with the upper arm thereof or that portion which is arranged above the point of fulcrum. Also as shown these crowding boards may be arranged at both
10 sides of the hopper or with reference to both of the feed troughs where the device is of the double construction indicated in the drawings, independent operating cords serving to connect the said boards with the agitator or agitator section.

15 Having described the invention what I claim is:—

1. A feeder having a hopper provided with an outlet throat and a trough for receiving material from the throat, an agitator
20 mounted in the throat of the hopper and yieldingly held in its normal position, and a pendant vibratory crowding board disposed adjacent to the trough for movement in opposite directions from a neutral position and
25 connected with the agitator for moving the latter out of normal position.

2. A feeder having a hopper provided with an outlet throat, and a trough for receiving feed from said throat, a rotary
30 armed agitator mounted in the throat of the hopper and yieldingly held in its normal position, and a pendant vibratory crowding board arranged adjacent to the trough and

flexibly connected with said agitator for moving the latter out of its normal position. 35

3. A feeder having a hopper provided with an outlet throat and a trough for receiving material from said hopper throat, an armed rotary agitator mounted in the
throat of the hopper, a spring for yieldingly
40 holding the agitator in its normal position, a swinging crowding board fulcrumed at a point between its ends and suspended adjacent to the trough at an intermediate point of the length thereof, and a flexible connection
45 between the upper extremity of the crowding board and said agitator.

4. A feeder having a hopper provided with an outlet throat and a trough for receiving material from said hopper throat, a
50 rotary armed agitator mounted in the throat of the hopper and having an actuating spring for maintaining the same yieldingly in its normal position, a crowding board suspended for swinging movement at an intermediate point of the length of the trough
55 and having its fulcrum disposed perpendicular to the wall of the hopper, said crowding board having an arm extending above its fulcrum, and a flexible connection between
60 said arm of the crowding board and an arm of the agitator for moving the latter in opposition to its actuating spring.

In testimony whereof I affix my signature.

CHARLES F. SCHUMACHER.