

No. 891,534.

PATENTED JUNE 23, 1908.

G. E. GIBSON.
CHICKEN FEEDER.
APPLICATION FILED APR. 30, 1907.

Fig. 1.

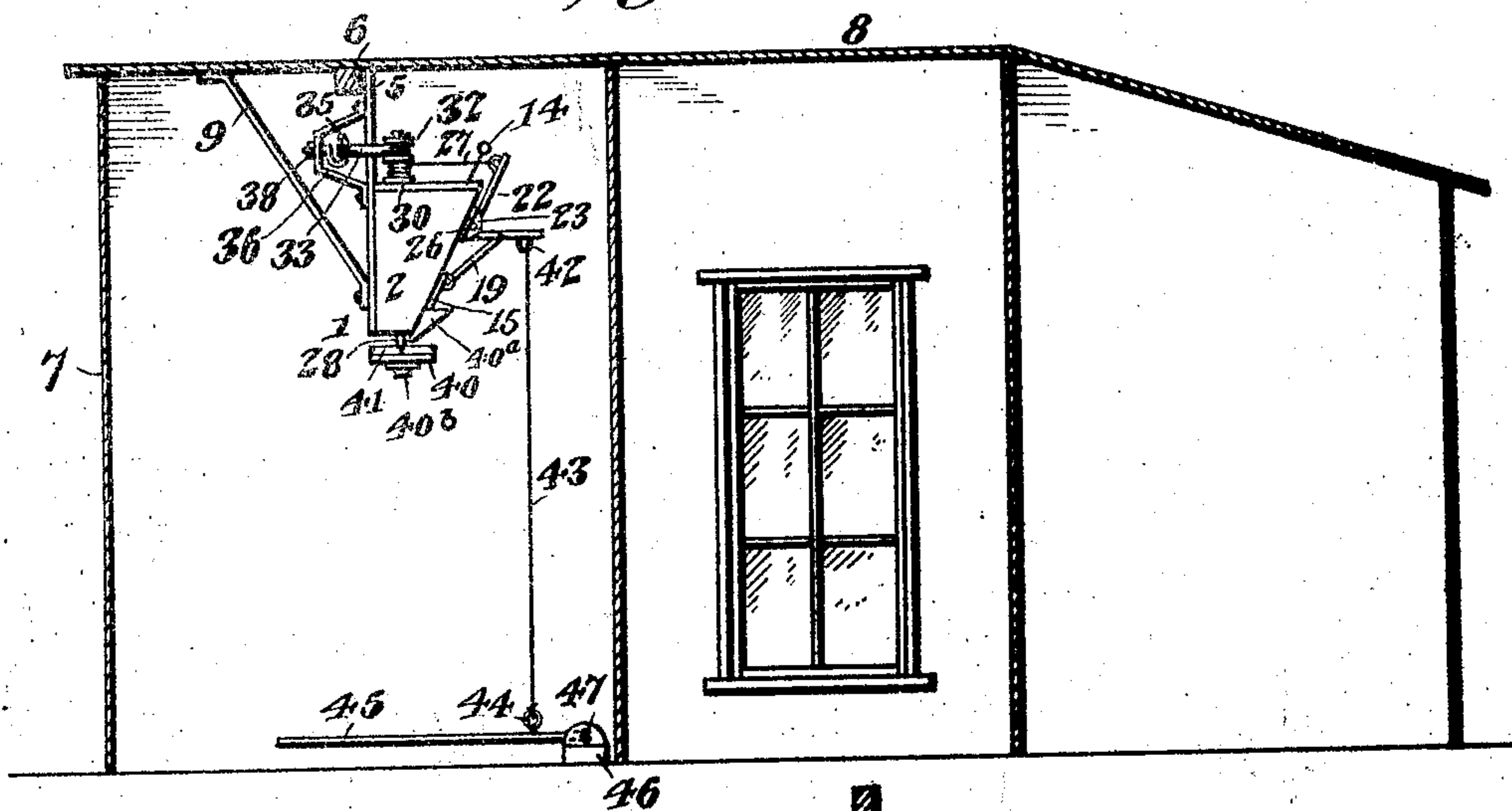
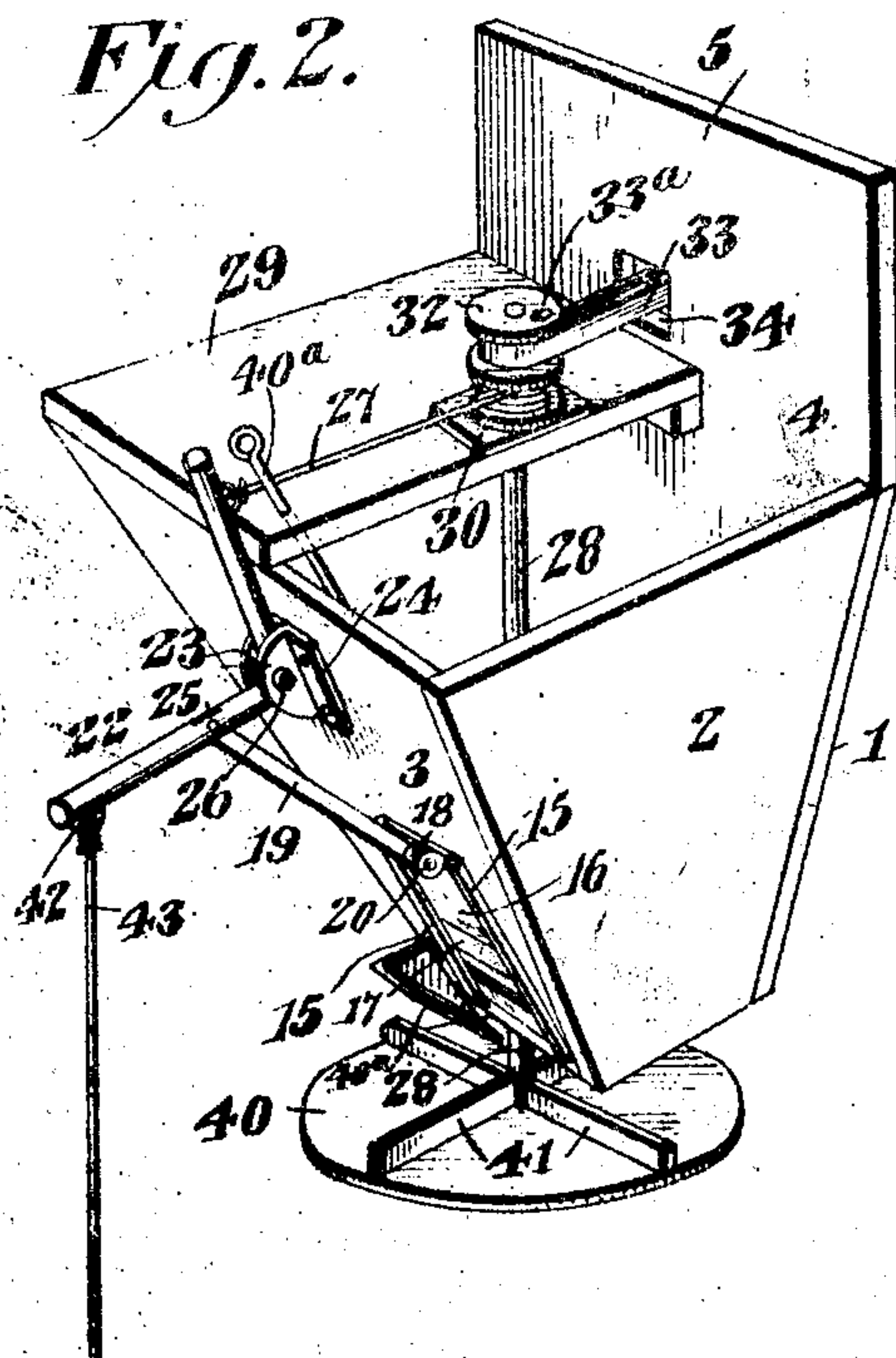


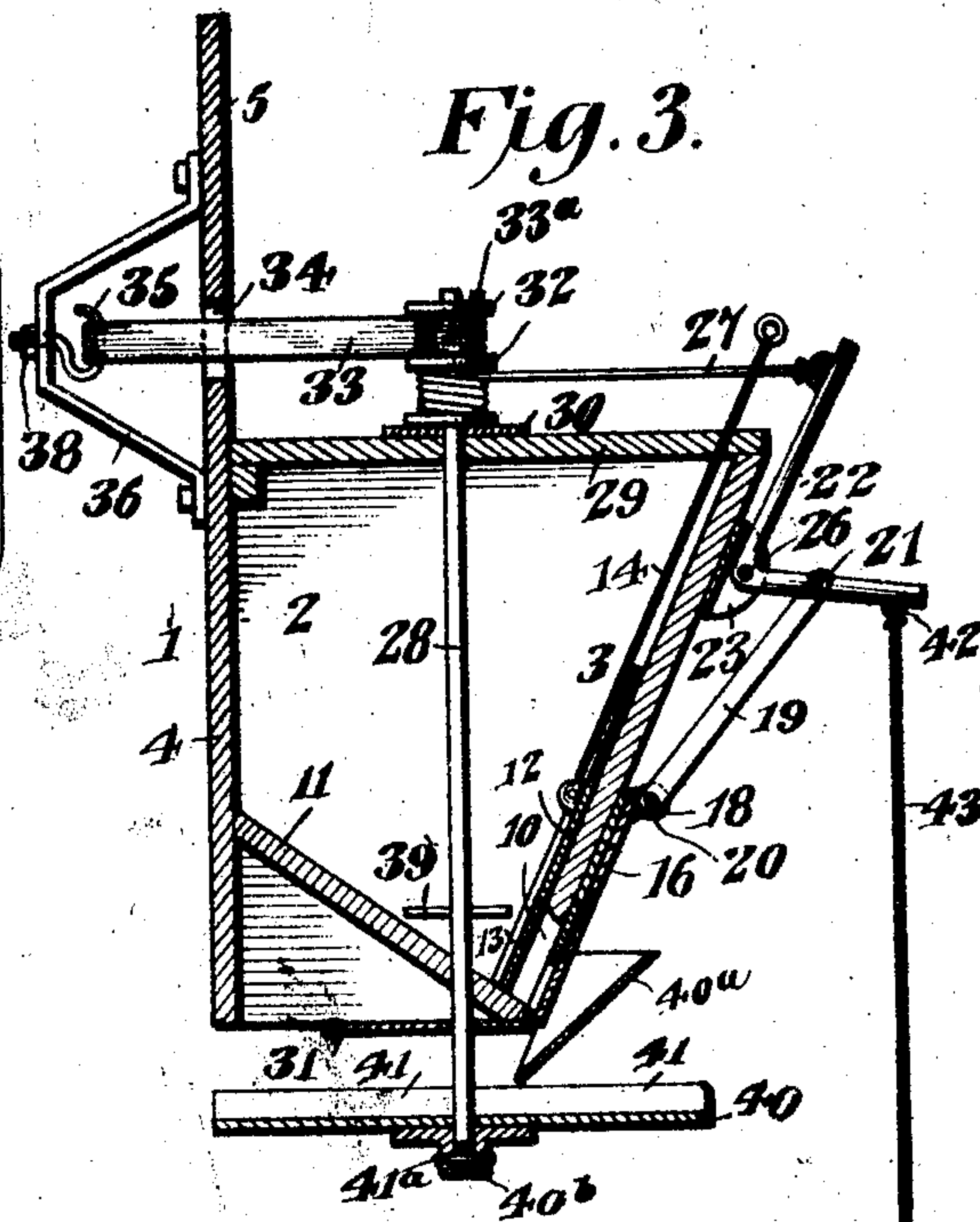
Fig. 2.



Witnesses

Jas E. McEathran
J. J. Riley

Fig. 3.



George E. Gibson, Inventor

By

E. J. Higgins

Attorney

UNITED STATES PATENT OFFICE.

GEORGE EMERY GIBSON, OF JEFFERSON, IOWA.

CHICKEN-FEEDER.

No. 891,534.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed April 30, 1907. Serial No. 371,142.

To all whom it may concern:

Be it known that I, GEORGE E. GIBSON, a citizen of the United States, residing at Jefferson, in the county of Greene and State of Iowa, have invented a new and useful Chicken-Feeder, of which the following is a specification.

The invention relates to improvements in chicken feeders.

10 The object of the present invention is to improve the construction of chicken feeders, and to provide a simple, inexpensive and efficient device, adapted to lessen the labor of feeding chickens and other fowls, and capable of being easily operated by the chickens, and of scattering among straw or other rubbish a quantity of feed each time it is operated.

20 A further object of the invention is to provide a chicken feeding device of this character, adapted to afford the exercise necessary to a maximum production of eggs.

25 With these and other objects in view, the invention consists in the construction and novel combination of parts, hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims here- to appended; it being understood that various changes in the form, proportion, size and 30 minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

35 In the drawing:—Figure 1 is a side elevation of a chicken feeding device, shown applied to a poultry house, the latter being in section. Fig. 2 is a perspective view of the chicken feeding device. Fig. 3 is an enlarged vertical sectional view of the same.

40 Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a feed hopper, constructed of wood, or other suitable material and designed to be of a capacity to correspond to the number of chickens, or other fowls to be fed.

45 In practice the device is designed to be of sufficient size to hold enough feed for supplying the chickens a day, so that it will only be necessary for the attendant to fill the hopper once a day, but the feed hopper may be made to hold either a large or small quantity of feed. The hopper is provided with inclined 50 sides 2 and an inclined front 3, and it has a vertical back or rear wall 4, which is ex-

tended vertically above the upper edges of the side and front walls. The extended portion 5 of the rear wall 4 is secured to one of the rafters 6 of a scratching shed 7 of a poultry house 8. The hopper is designed to be arranged close to the top or roof of the scratching shed, but it may be mounted in any other desired manner. It is preferably supported by an inclined brace 9, extending 65 from the lower portion of the rear wall of the hopper to the roof of the scratching shed. The front wall 3 of the hopper is provided with a discharge opening 10, and the feed is directed toward the said opening by an inclined bottom section or member 11, extending 70 from the rear wall to the lower edge of the front wall, as clearly illustrated in Fig. 3 of the drawing.

The size of the discharge opening 10 is controlled by a slide 12, constructed of sheet 75 metal, or other suitable material and guided in suitable ways 13 at the inner face of the front wall 3 of the hopper and connected to the lower end of an operating rod 14. The operating rod extends above the top of the hopper and the slide is adapted to be raised or lowered to cover or uncover the discharge opening 10, and it will enable the flow of the grain to be controlled and entirely cut off 85 when desired. The hopper is also provided on the exterior of its front wall with a guide 15, in which reciprocates a sliding door or cut-off 16, arranged to move upwardly and downwardly to cover and uncover the feed open- 90 ing to permit a quantity of the contents of the hopper to be discharged, when it is reciprocated. The guide preferably consists of a plate of sheet metal, secured to the hopper and having its longitudinal edges bent to form 95 inwardly extending guiding flanges, which overlap the side edges of the slidable cut-off 16. The guide is provided with an opening to register with the discharge opening of the hopper, and the sliding cut-off has an open- 100 ing 17 adapted, when the cut-off is moved downwardly, to register with the opening of the hopper to permit a discharge of the contents of the latter. The lower end portion of the sliding cut-off forms a closure for the hop- 105 per, when the cut-off is at the limit of its upward movement.

The upper end of the slidable cut-off is provided with spaced eyes 18, and is connected with the lower end of a link 19 by a 110 pivot or pintle 20. The upper end of the link 19 is pivoted by a pin or rivet 21 to one arm

of a substantially L-shaped or bell crank lever 22. The bell crank lever 22 is fulcrumed at its angle between ears or flanges 23 of a bearing bracket 24, and it is composed of a lower outwardly extending arm and an upwardly extending arm. The lower outwardly extending arm is provided at an intermediate point with a slot 25 to receive the upper end of the link 19, and the pivot 26 of the lever pierces the same and the ears or flanges 23 of the bearing bracket. When the bell crank lever is oscillated, the slidable cut-off is reciprocated.

The upwardly extending arm of the bell crank lever is connected by a cord 27, or other flexible connection with a vertical shaft 28, which is journaled in suitable bearings at the top and bottom of the hopper. The feed hopper is provided with a top section 29, extending from one side of the hopper to a point slightly beyond the center thereof, and having a metallic bearing plate 30 for the reception of the upper portion of the shaft. The hopper is also provided at the bottom with a metallic plate 31, through which the lower portion of the shaft passes. The vertical shaft may, however, be mounted in any other suitable bearings, and it pierces the top section 29 and the inclined bottom member 11. The top section 29 terminates short of one side of the hopper to provide an opening for affording access to the interior of the hopper.

The upper end of the vertical shaft carries a double spool or drum 32, which receives the cord 27 and an elastic connection 33. The double spool or drum is provided with an eccentrically arranged pin 33^a, by means of which the inner ends of the elastic band 33 and the cord 27 are secured to the drum or pulley. The elastic connection 33 may consist of a band of rubber, as clearly illustrated in Figs. 2 and 3, but any other form of elastic connection, such as a cord and spring may be employed. As the latter construction is perfectly obvious, illustration thereof is deemed unnecessary. The cord 27 and the elastic connection 33 are wound around the double spool or drum in opposite directions, so that when the upwardly extending arm of the bell crank lever is swung outwardly, it unwinds the cord from the drum or spool and simultaneously winds the flexible connection around the same. This operation stretches or places the elastic connection under tension, so that the said elastic connection will quickly rotate the shaft, when the latter is free to return to its initial position. The elastic connection extends through an opening 34 of the back of the hopper and engages a hook 35 of a supporting bracket 36. The supporting bracket 36, which has its terminals attached to the back of the hopper at points above and below the opening 34, consists of inclined upper and lower portions

and an intermediate vertical portion to which the hook 35 is secured. The shank of the hook pierces the intermediate vertical portion of the bracket or support 36, and may be threaded to receive a nut 38, as illustrated in Fig. 3 of the drawing, but any other suitable means may be employed for mounting the hook on the bracket or support. The bracket or support enables an elastic connection of sufficient length and strength to secure the desired movement of the shaft to be employed.

The vertical shaft is provided with agitating means 39, arranged interiorly of the hopper adjacent to the bottom thereof, and at a point opposite the discharge opening to prevent the feed from clogging within the hopper, and to produce a positive discharge of feed at each operation of the device. The agitating means preferably consist of horizontal arms projecting from the shaft. Any number of agitating arms may be employed.

The lower end of the vertical shaft carries a rotary feed scattering disk or member 40, constructed of sheet metal, or other suitable material, and consisting of a horizontal plate, provided with radially arranged diametrically disposed blades or flanges 41, projecting vertically from the upper face of the disk or member 40 and extending from the shaft 28 to the periphery of the plate or member. The blades or flanges 41 are adapted to engage the feed, and when the disk or member 40 is rapidly rotated, they will cause the feed to be thrown outwardly and scattered over the floor or ground within the scratching shed. The feed is thrown outward by centrifugal force incident to the rapid rotary return movement of the disk or member 40. The disk is provided with a central metallic hub portion 40^b, consisting preferably of a sleeve or collar and a horizontal flange. The sleeve or collar is secured to the shaft 28 by a pin 41^a, and the flange, which extends from the upper end of the sleeve is suitably secured to the lower face of the disk or plate 40.

The hopper is provided at its front with a deflecting chute 40^a, adapted to receive the grain from the hopper and arranged to direct the said grain to the four quarters of the disk, so that the grain will be distributed uniformly by the apparatus. The chute 40^a is composed of an inclined front wall and side walls, which are secured to the sides of the hopper. The inclined front wall extends to a point below the bottom of the hopper, as clearly illustrated in Fig. 3 of the drawing.

The outwardly extending arm of the bell crank lever is provided at its outer end with a depending eye 42, to which is secured the upper end of a wire 43, or other suitable flexible connection. The lower end of the wire is attached to an eye 44 of the operating lever 45, arranged horizontally and located a short distance above the floor or ground of the

scratching shed. One end of the operating lever is fulcrumed on a support 46, preferably consisting of a relatively heavy casting, which may be secured to the floor or ground of the scratching shed, or which may be of sufficient weight to retain it in position. The eye 44 is located adjacent to the pivot 47 of the operating lever, and the latter extends a considerable distance from the support 46, so that the chickens in moving about the scratching floor will jump upon the operating lever. When a chicken jumps or steps upon the operating lever, its weight will cause a rotary movement of the shaft in one direction. This causes a downward movement of the cut-off and permits a quantity of feed to fall upon the rotary scattering plate or member. As soon as the chicken, or other fowl steps off the lever, the latter will be swung upward by the elastic connection, which will rapidly rotate the shaft and thereby cause the rotary scattering plate or member to scatter the feed over the floor or ground of the scratching shed. As the floor or ground of the scratching shed is designed to be covered with straw, or other litter, it will be necessary for the chickens to scratch for the feed and the exercise necessary for the production of a maximum quantity of eggs will be afforded. Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A feeding device of the class described comprising a feed hopper, operating mechanism for discharging a quantity of feed from the hopper, and rotary means for scattering feed.

2. A feeding device of the class described comprising a feed hopper, operating mechanism for discharging a quantity of feed from the hopper, a rotary device for scattering the feed, and means for actuating the rotary device for causing the feed to be thrown from the same by centrifugal force.

3. A feeding device of the class described comprising a feed hopper, a rotary scattering member having means for positively engaging the feed, operating mechanism for delivering a quantity of feed to the rotary scattering member, and means for actuating the scattering member to cause the feed to be thrown therefrom by centrifugal force.

4. A feeding device of the class described comprising a feed hopper, a rotary scattering member provided with radial flanges, operating mechanism for delivering a quantity of feed to the rotary scattering member, and means for actuating the scattering member to cause the feed to be thrown therefrom by centrifugal force.

5. A feeding device of the class described comprising a feed hopper having a discharge opening, a cut-off for controlling the discharge of the feed, operating mechanism for actuating the cut-off, a rotary scattering de-

vice located below the discharge opening, and means for communicating motion from the operating mechanism to the scattering device.

6. A feeding device of the class described comprising a feed hopper having a discharge opening, a cut-off for controlling the discharge of the feed, a scattering device arranged to receive the feed discharged from the hopper, agitating means operating within the hopper, and means for operating the cut-off and for actuating the scattering device and the agitating means.

7. A feeding device of the class described comprising a feed hopper, a cut-off for controlling the discharge of the feed, a rotary scattering device arranged to receive the feed discharged from the hopper, a rotary agitator located within the hopper and connected with the scattering device, and mechanism for operating the cut-off and for rotating the scattering device and the agitator.

8. A feeding device of the class described comprising a hopper having a cut-off for controlling the discharge of the feed from the hopper, a lever mounted on the said hopper, a link connecting the cut-off with the lever, and an operating lever connected with the said lever.

9. A feeding device of the class described comprising a hopper having a discharge opening, a slide for controlling the size of the discharge opening, a cut-off movably mounted on the hopper for covering and uncovering the said opening, a lever connected with the cut-off for opening and closing the same, and an operating lever connected with the said lever.

10. A feeding device of the class described comprising a hopper, a slidable cut-off for controlling the discharge of the feed, a lever mounted on the hopper and connected with the slidable cut-off, a support, and an operating lever fulcrumed on the support and connected with the said lever.

11. A feeding device of the class described comprising a feed hopper, a cut-off for controlling the discharge of the feed, a shaft mounted on the hopper, a rotary scattering device carried by the shaft and arranged to receive the feed from the hopper, a flexible connection wound around the shaft, operating mechanism connected with the cut-off and with the flexible connection for rotating the shaft in one direction, and an elastic connection reversely wound around the shaft for rotating the shaft in the opposite direction.

12. A feeding device of the class described comprising a feed hopper having a cut-off, a shaft mounted on the hopper, a rotary scattering device carried by the shaft, a drum or spool mounted on the shaft, a flexible connection wound around the drum or spool, operating mechanism connected with the

cut-off and with the flexible connection, and an elastic connection reversely wound around the spool or drum.

13. A feeding device of the class described
5 comprising a hopper having a cut-off, a shaft mounted on the hopper, a scattering device carried by the shaft, a flexible connection wound around the shaft, a bell crank lever connected with the flexible connection and
10 with the cut-off, an operating lever connected with the bell crank lever and adapted to rotate the shaft in one direction, and an elastic connection wound around the shaft for rotating the same in the opposite direc-
15 tion.

14. A feeding device of the class described comprising a feed hopper provided at the top with an extension, a cut-off for controlling the discharge of the feed, a shaft extending
20 through the hopper and carrying a scattering device, a flexible connection wound around the shaft, actuating means connected with the cut-off and with the flexible connection, a bracket or support having a hook
25 spaced from the extension, and an elastic band wound around the shaft and passing through the extension and engaging the said hook.

15. A feeding device of the class described
30 comprising a hopper, operating mechanism

for discharging the quantity of feed from the hopper, a rotary device for scattering the feed, and a chute arranged to receive the feed from the hopper for directing the same to the rotary device.

16. A feeding device of the class described comprising a hopper, operating mechanism for discharging the quantity of feed from the hopper, a rotary device for scattering the feed, and a chute mounted on the hopper and
40 provided with an inclined portion for directing the grain to the rotary device.

17. A feeding device of the class described comprising a hopper having a discharge opening, a cut-off for controlling the dis-
45 charge of the feed, operating mechanism for operating the cut-off, a scattering device, a slide mounted within the hopper for regulating the size of the discharge opening, and an operating rod extending to the top of the
50 hopper and connected with the slide for raising and lowering the same.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of witnesses.

GEORGE EMERY GIBSON.

Witnesses:

C. E. CHAMBERLAIN,
J. H. CROW,
S. J. SAYERS.