No. 664,984. Patented Jan. 1, 1901.

T. TORGERSON.

STOCK FEEDER.

(Application filed Mar. 21, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

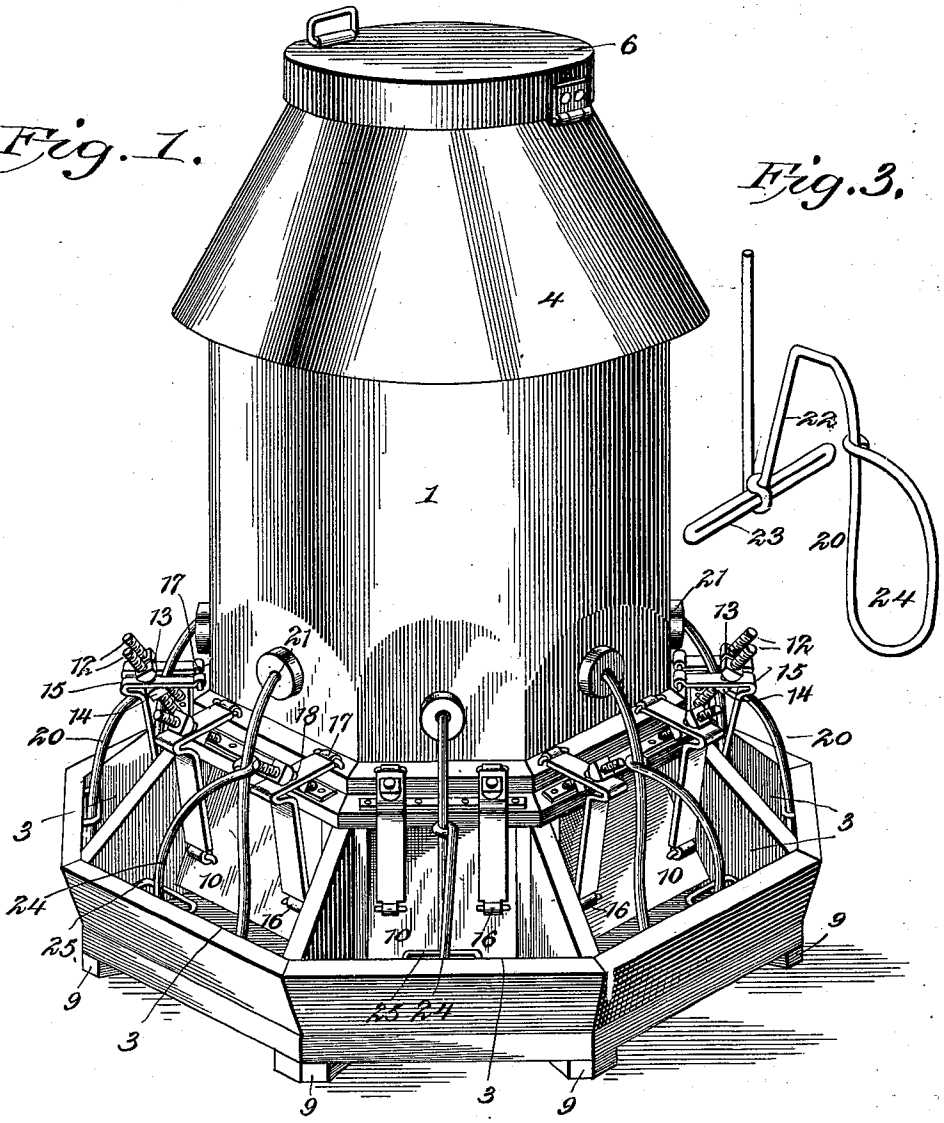


Fig. 3.

Witnesses
Howard D. Orr.
H. C. Riley

Thorval Torgerson, Inventor.
By his Attorneys,
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 664,984. Patented Jan. 1, 1901.

T. TORGERSON.

STOCK FEEDER.

(Application filed Mar. 21, 1900.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 2.

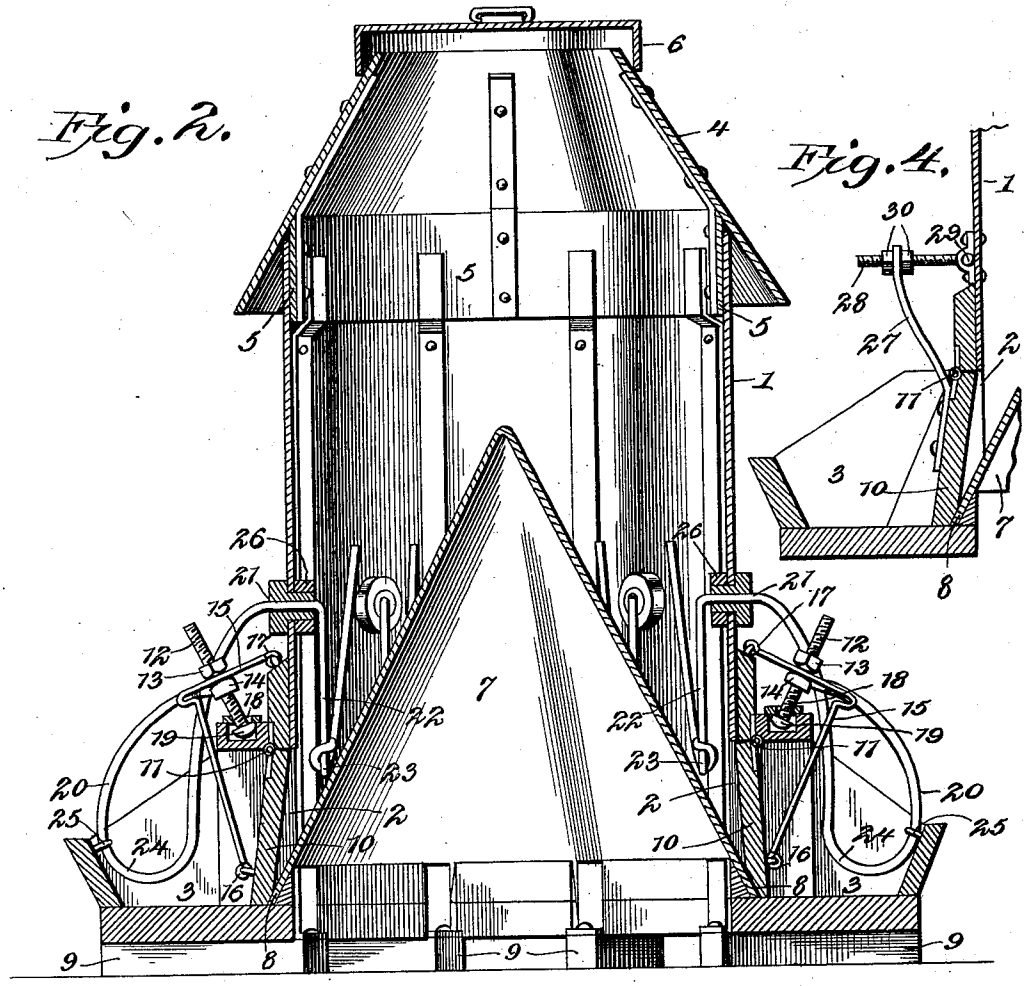


Fig. 4.

Fig. 5.

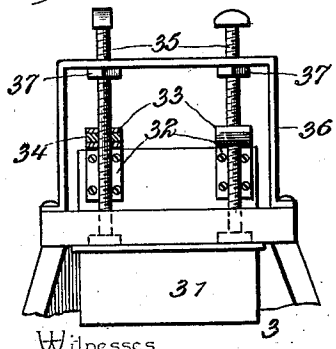


Fig. 6.

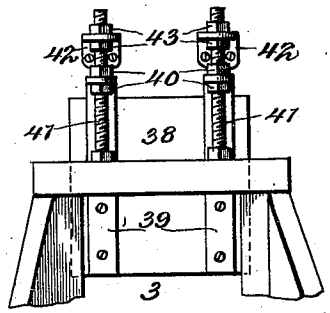
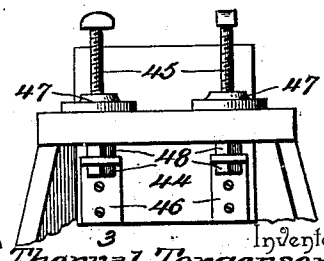


Fig. 7.



Witnesses
Howard D. Orr.
H. J. Riley

By his Attorneys,
C. A. Snow & Co.

Inventor,
Thorval Torgerson,

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THORVAL TORGERSON, OF DELANA, IOWA.

STOCK-FEEDER.

SPECIFICATION forming part of Letters Patent No. 664,984, dated January 1, 1901.

Application filed March 21, 1900. Serial No. 9,574. (No model.)

To all whom it may concern:

Be it known that I, THORVAL TORGERSON, a citizen of the United States, residing in the township of Delana, in the county of Humboldt and State of Iowa, have invented a new and useful Stock-Feeder, of which the following is a specification.

The invention relates to improvements in stock-feeders.

The object of the present invention is to improve the construction of stock-feeders and to provide a simple and comparatively inexpensive one adapted to contain and protect a quantity of feed and capable of automatically delivering the same into a series of troughs and of regulating the flow of the material to the troughs.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a stock-feeder constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail perspective view of one of the agitators. Fig. 4 is a detail sectional view illustrating a modification of the means for adjusting the cut-off, the section being taken at the center of the cut-off and showing one of the adjusting devices. Figs. 5, 6, and 7 are detail sectional views showing other means for adjusting the cut-offs.

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

1 designates a vertically-disposed cylindrical receptacle or casing designed to contain feed for stock and provided at its bottom with openings 2, communicating with an annular series of feed-troughs 3, arranged around the lower end of the cylindrical receptacle or casing, as clearly illustrated in Fig. 1 of the accompanying drawings. The cylindrical receptacle is provided with a truncated conical top 4, extending beyond the upper edges of the body portion of the receptacle, as illustrated in Fig. 2 of the drawings, to shed water, and provided with a depending flange 5, fitting within the body portion of the receptacle and retaining the top thereon. The body portion and the top of the receptacle may be reinforced by cleats, as illustrated in Fig. 2 of the drawings, and the top is provided with a hinged lid 6. By this construction the cylindrical receptacle may be entirely filled with feed without liability of any of it escaping at the top.

Within the receptacle is arranged a conical distributer or deflector 7, arranged at and extending upward from the bottom of the receptacle and adapted to cause the feed to flow outward toward the troughs, and it is provided at its base with inclined extensions 8, projecting through the openings at the lower end of the receptacle into the troughs, as illustrated in Fig. 2, to guide the material into the latter.

The feed-troughs, which may be of any desired construction, are preferably supported above the ground or other supporting-surface by means of radial bottom bars or pieces 9, and the flow of the material through the openings of the receptacle is regulated by an annular series of adjustable cut-offs 10, which may be hinged at their upper edges 11, as illustrated in Figs. 2 and 4 of the accompanying drawings; but instead of employing hinged cut-offs they may be constructed to slide vertically, as illustrated in Figs. 5, 6, and 7 of the drawings. The hinged cut-off (illustrated in Figs. 1 and 2 of the accompanying drawings) is adjusted by means of a pair of screws 12, provided with nuts 13 and 14, arranged in pairs and engaging substantially L-shaped bars or brackets 15, hinged at their lower ends 16 to the cut-off 10 and having their upper ends 17 hinged to the back of the feed-trough. The screws pass through openings 18 of the bars or brackets and are hinged or fulcrumed at their heads or lower ends 19, the nuts 13 and 14 being located at the opposite faces of the upper portions or arms of the L-shaped bars or brackets. The heads 19 of the screws are rounded and arranged in suitable sockets or bearings, as clearly shown in Fig. 2, and by adjusting the nuts the cut-off may be opened to a greater or less extent or closed entirely. The L-shaped bars or brackets, which may be hinged in any suitable manner, are preferably reduced at their ends and

provided with eyes which are linked into staples of the cut-off and the back of the feed-trough. The hinge-joints have sufficient play to permit the cut-offs to be freely opened and closed when the nuts are adjusted, and they form loose connections between the ends of the L-shaped bars or brackets and the cut-offs and the backs of the feed-troughs.

The feed-troughs may be constructed in any suitable manner and each is provided with an oscillating agitator 20, consisting of a rock-shaft journaled in a suitable bearing 21 of the casing and provided with inner and outer arms depending from the bearing, as clearly shown in Fig. 2. The inner arm 22, which may be constructed in any suitable manner, is preferably provided with a T-shaped head 23, having vertical and horizontal arms or portions, as clearly shown in Fig. 3. The outer arm of the rock-shaft is provided with a loop 24, which is linked into a keeper 25, arranged at the inner face of the outer side of the feed-trough and adapted to limit the oscillation of the agitator. By this construction animals feeding will automatically operate the agitators and produce a flow of the material which will continue as long as the feeding continues or until the contents of the receptacle are consumed. The agitator, which prevents the material from lodging or clogging in the space between the cone and the walls of the receptacle, is preferably constructed of a single piece of stout wire which is bent to form the loop 24 and the T-shaped head 23. The T-shaped head is inverted, its transverse arms consisting of closed loops arranged at the bottom of the vertical portion or stem. The bearing 21 may be constructed in any suitable manner, and, as illustrated in Fig. 2, it is provided at its outer end with a head and it has a nut 26 at its inner end. The head of the bearing engages the outer face of the receptacle and the nut engages the inner face of the same.

In Fig. 4 of the accompanying drawings the hinged cut-off is provided with an upwardly-extending bracket or bar 27, secured at its lower end to the cut-off and provided at its upper end with an opening through which passes a screw 28. The screw 28, which is hinged or fulcrumed at its inner end or head 29 at the back of the feed-trough, is provided with nuts 30, arranged in advance and in rear of the upper portion of the bar or bracket 27. By adjusting the nuts inward and outward on the screw the cut-off is opened and closed, as will be readily apparent.

In Fig. 5 of the drawings a sliding cut-off 31 is illustrated, and this sliding cut-off, which is designed to be mounted in suitable ways of the trough, is provided with substantially L-shaped brackets or bars 32, having loops 33 for the reception of nuts 34, which engage vertical screws 35. The screws 35, which are supported in a substantially rectangular frame 36, are provided with nuts 37 and are adapted to be rotated to raise and lower the cut-off. The nuts 37 are arranged adjacent to the lower face of the upper portion of the frame 36.

The sliding cut-off 38 (shown in Fig. 6) is also provided with L-shaped bars or brackets 39, which are engaged by nuts 40 of screws 41. The screws are mounted at their lower ends at the top of the feed-trough and their upper ends are supported by brackets 42, nuts 43 being provided at the upper and lower faces of the brackets 42.

The sliding cut-off 44 (illustrated in Fig. 7 of the accompanying drawings) is adjusted by means of vertical screws 45 and is provided with a pair of substantially L-shaped brackets or bars 46. The vertical screws 45 engage suitable threaded openings of nuts or plates 47 and are provided at their lower ends with nuts 48, arranged at the upper and lower faces of the L-shaped brackets or bars 46. Various other means may be employed for adjusting the cut-off for regulating the flow of the material from the receptacle to the feed-troughs.

It will be seen that the stock-feeder is simple and comparatively inexpensive in construction, that the flow of the feed may be readily regulated, and that the agitators are adapted to be operated by the stock while feeding and are capable of producing a continuous flow of the material until the contents of the receptacle are consumed.

What is claimed is—

1. A stock-feeder comprising a receptacle, a feed-trough, an agitator consisting of a rock-shaft extending through the receptacle and provided with inner and outer arms, the outer arm consisting of a large loop arranged to be engaged by the stock, and the keeper mounted on the trough and receiving the loop to limit the movement thereof, substantially as described.

2. A stock-feeder comprising a receptacle, a feed-trough, an agitator consisting of a rock-shaft extending through the receptacle and provided with inner and outer arms, the outer arm consisting of a large loop extending inward from the front wall of the trough and adapted to be engaged by the stock, and the keeper mounted on the front wall of the trough and receiving the loop to limit the movement thereof, substantially as described.

3. A stock-feeder comprising a receptacle, a hinged cut-off, a trough, a bracket or bar connected with the cut-off, a screw hinged or fulcrumed at one end and arranged to oscillate to change its position with the bracket or bar, and nuts mounted on the screw and engaging the bracket or bar, substantially as described.

4. A stock-feeder comprising a receptacle, a feed-trough, a hinged cut-off, a bracket or bar extending upward from the cut-off and connected with the same and provided with an opening, a screw hinged or fulcrumed at

its inner end and adapted to oscillate to change its position with the bracket or bar, and passing through the opening of the same, and a pair of nuts mounted on the screw and arranged at the inner and outer faces of the bracket or bar, substantially as described.

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

THORVAL TORGERSON.

Witnesses:
E. A. WEDER,
S. B. THOMAS.