J. J. O'BRIEN.

STOCK FEEDER.

APPLICATION FILED MAR. 21, 1914.

1,109,009. Patented Sept. 1, 1914.

Fig. 1

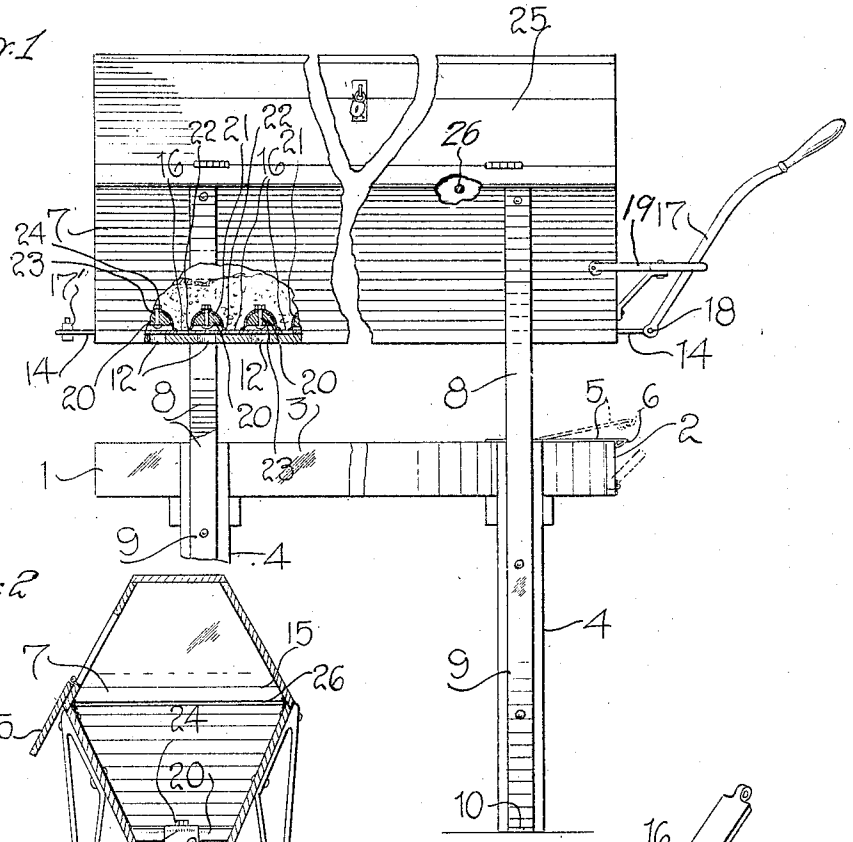
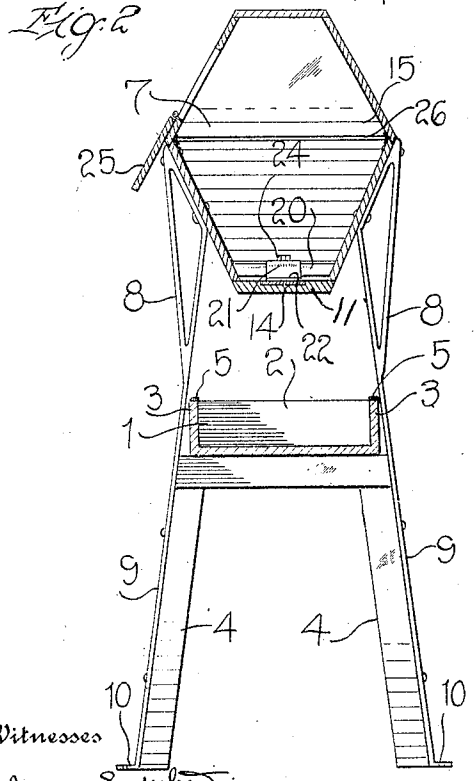


Fig. 2



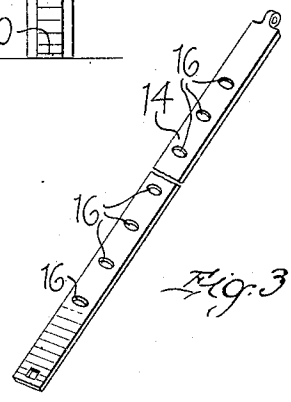


Fig. 3

Witnesses

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STOCK-FEEDER.

1,109,009. Specification of Letters Patent. Patented Sept. 1, 1914.

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To all whom it may concern:

Be it known that I, JOHN J. O'BRIEN, a citizen of the United States, residing at Sterling, in the county of Logan and State of Colorado, have invented certain new and useful Improvements in Stock-Feeders, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in stock feeders and has relation more particularly to a device of this general character especially designed and adapted for use in connection with the supplying of feed for sheep or the like; and the object of the invention is to provide a device of this particular type whereby the feed may be discharged from a granary to the trough in an even and uniform manner whereby it is assured that the feed will be properly conveyed.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved stock feeder whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise more convenient and advantageous for use, all as will be hereinafter more fully set forth.

The novel features of the invention will be carefully defined in the appended claim.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Figure 1 is a fragmentary view in side elevation of a feeding device constructed in accordance with an embodiment of my invention; Fig. 2 is a vertical transverse section taken through the device as shown in Fig. 1, with the closure for the granary in open position; and Fig. 3 is a view in perspective, detached, of the slide member herein embodied.

As disclosed in the accompanying drawings, 1 denotes a trough of predetermined dimensions having the upstanding end and side walls 2 and 3 and being operatively supported at a predetermined distance above the ground by the legs or standards 4. In order that the trough may be cleansed with convenience, one of the end walls 2 is hingedly connected with the trough proper and adapted to be swung downwardly and is maintained in vertical or operative position through the medium of the spring latches 5—5 projecting beyond the adjacent ends of the side walls 3 and beneath which the upper marginal portion of the hingedly connected end wall 2 is adapted to be sprung, such latch members being provided with the depending engaging hooks 6, as disclosed in the drawings.

Fixedly supported above the trough 1 at a predetermined distance thereabove is the hopper or granary 7 substantially diamond shape in vertical cross section and operatively connected with the trough 1 through the medium of the brackets 8, each of such brackets having an extension 9 adapted to overlie a supporting standard 4 and having its lower extremity terminating in an angularly disposed perforated foot 10 adapted to afford a means whereby the device may be readily and conveniently anchored to a stationary support, if the necessities of practice may so require. The lower face or bottom 11 of the hopper or granary 7 is provided with a plurality of equidistantly spaced discharge openings 12, through which the feed or grain stored within the granary or hopper 7 is adapted to be emitted in order to be deposited upon the trough 1 and, as herein disclosed, the discharge through such openings 12 is controlled by the elongated slot member 14 projecting through the opposite ends 15 of the granary or hopper 7 and being provided with the openings 16 adapted to register with the discharge openings 12 when the slide member 14 is at the limit of its movement in one direction, such limitation being created by the stop member 17′ adjustably secured upon one projected extremity of the slide member 14 and adapted to engage or abut the adjacent end wall 15 of the granary or hopper 7.

As herein disclosed, the requisite reciprocal movement is imparted to the slide member 14 through the medium of the lever 17 pivotally secured at its lower end to a projected portion of the slide member 14, as indicated at 18. The lever 17 is operatively engaged intermediate its length by the bracket 19 projecting from the adjacent end of the granary or hopper 7 whereby such lever may be readily and conveniently rocked to properly adjust the slide member 14, as is believed to be self-evident.

It is the purpose of my present invention to have the slide member deliver a pre-

determined and fixed quantity of grain to the trough 1 when the openings 16 thereof are in register with the discharge openings 12. This is accomplished by having disposed directly above each of the discharge openings 12 and directed transversely of the granary or hopper 7, the beams 20, each of such beams being of a width in excess of the diameter of the discharge opening 12 therebeneath and positioned slightly thereabove so that no resistance will be offered thereby to the proper movement of the slide member 14. By this arrangement of the transverse beams 20, it is thought to be obvious that they serve as an effective means to prevent the grain within the hopper or granary from discharging through the openings 12 when the openings 12 and 16 are in register. By this arrangement, it will be readily seen that a fixed and predetermined quantity of grain will be caused to be discharged within the trough 1 when the slide member 14 is reciprocated, it being readily understood that when the openings 12 and 16 are out of register the openings 16 will be so positioned relative to the transverse beams 20 as to permit the same to receive the grain.

In order to better assure the delivery of the proper amount of grain to the discharge openings 12, I find it of advantage to direct over each of the transverse beams 20, such beams being substantially semi-circular in form, the flat spring member 21 of a width in excess of the width of the openings 16 and having their extremities rounded, as indicated at 22, and adapted to contact with the upper surface of the slide member 14, whereby it will be readily perceived that such spring member effectively serves as a medium whereby an excessive delivery of the grain to the adjacent discharge opening is prevented. As herein set forth, such spring member 21 is maintained in operative position upon its transverse beam 20 through the medium of the upwardly directed headed bolt 23 having its upper or projected extremity engaged by the clamping member 24, operating in a manner which is believed to be self-evident.

While I do not wish to be in any way limited as to proportions, I wish to state that I find it of advantage to have my improved stock feeder of such a height that the hinged cover 25 which is adapted to close an upper side wall of the granary or hopper 7, is so positioned that when such cover or closure member 25 is swung downwardly it will contact with the top or coping of a wagon body, whereby it will be readily perceived that the granary or hopper 7 may be filled when the occasion requires with a minimum of loss. As the hopper or granary 7 is adapted, under ordinary circumstances, to hold approximately fifty bushels of grain, I also find it of advantage to suitably reinforce the same by the transversely directed reinforcing members or bars 26.

From the foregoing description, it is thought to be obvious that a stock feeder constructed in accordance with my invention is of an extremely simple and comparatively inexpensive nature and is particularly well adapted for use by reason of the convenience and facility with which it may be operated and by reason of the certainty with which the grain may be properly deposited upon the trough, and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

I claim:

A device of the character described including a hopper having a plurality of discharge openings in its base, a slide member positioned upon such base and provided with openings adapted to register with the discharge openings, transverse members disposed above the discharge openings of the hopper and the slide member, and spring members carried by the transverse members contacting with the adjacent face of the slide member.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN J. O'BRIEN.

Witnesses:
E. M. KELSEY,
L. M. BIRD.