

(No Model.)

2 Sheets—Sheet 1.

W. S. WITTEN.
FEED HOLDING BIN.

No. 564,495.

Patented July 21, 1896.

Fig. 1.

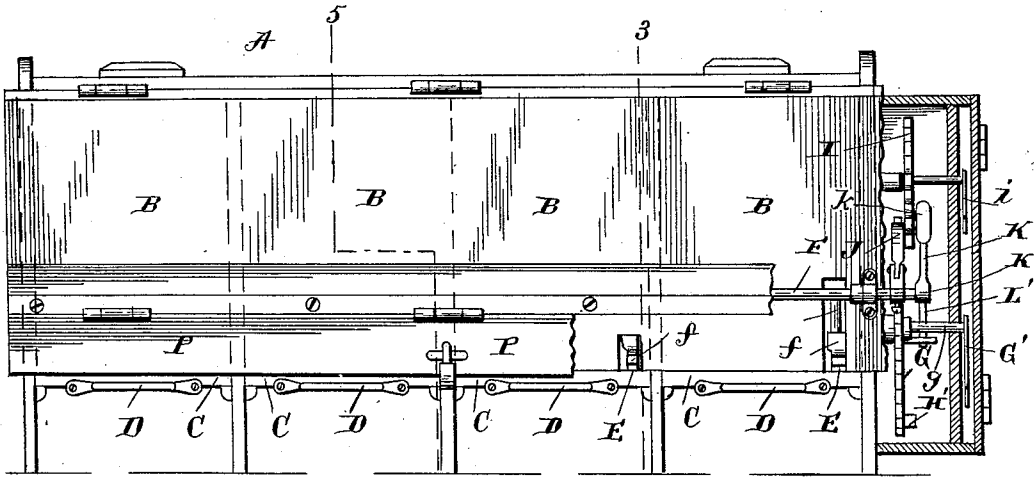


Fig. 2.

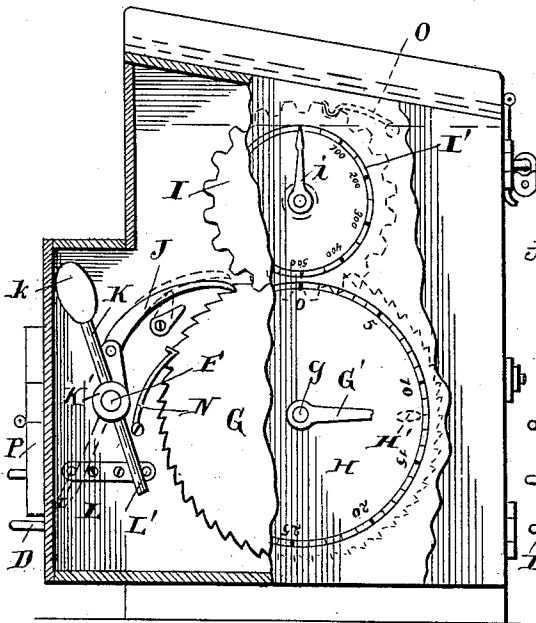
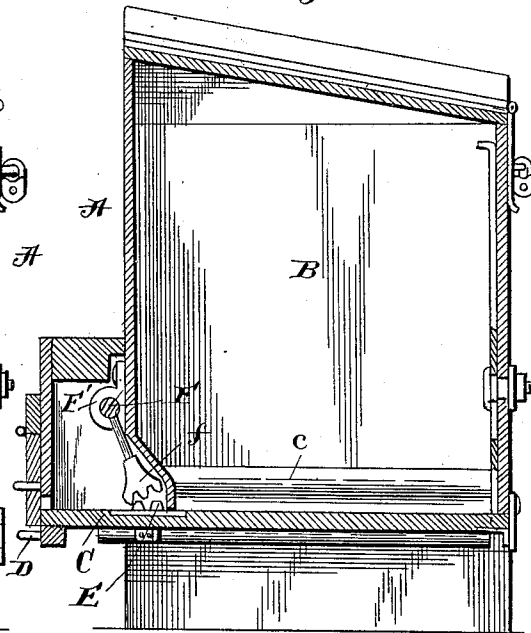


Fig. 3.



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Fig. 4.

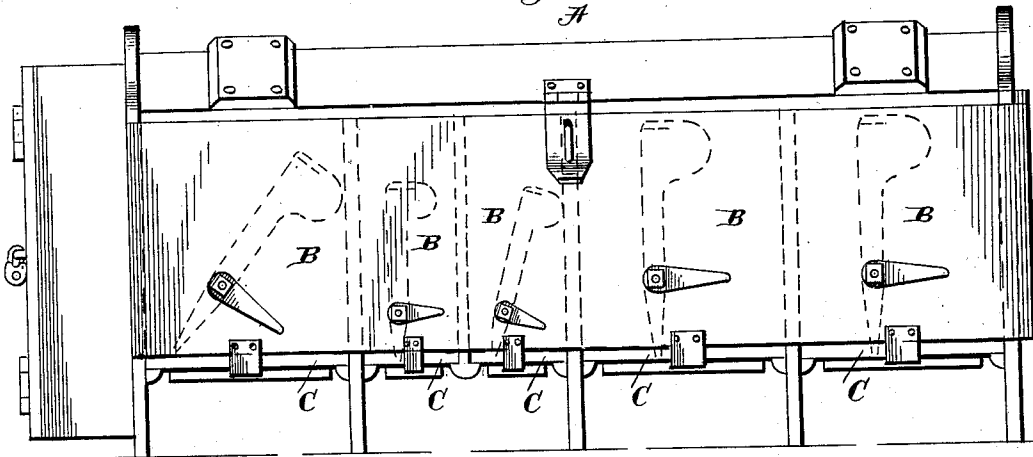


Fig. 6.

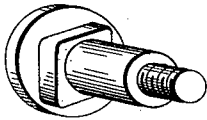
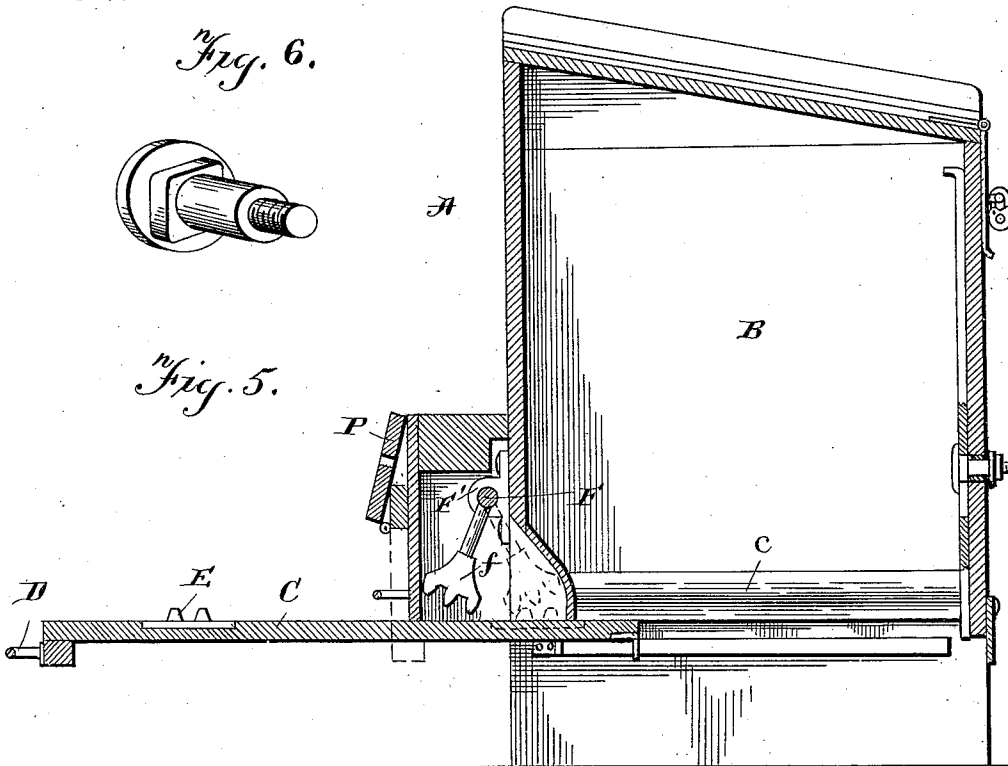


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM S. WITTEN, OF SOUTH OMAHA, NEBRASKA.

FEED-HOLDING BIN.

SPECIFICATION forming part of Letters Patent No. 564,495, dated July 21, 1896.

Application filed February 15, 1896. Serial No. 579,383. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. WITTEN, a citizen of the United States, residing at South Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Feed-Holding Bins; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

15 This invention relates to certain new and useful improvements in feeding-troughs, and especially to a compartment trough designed to hold feed and means for locking the compartments to prevent the feed from being withdrawn.

20 This invention is designed as an improvement upon a feeding-trough for which I have made an application for Letters Patent, it being my purpose to provide a rack-and-pinion mechanism for holding slides or boxes within the bins, whereby but one slide or box may be withdrawn at the same time.

25 A further aim of my invention resides in the provision of a registering device attached preferably to the end of the trough and so connected with the slides or boxes as to cause an indication to be made whenever one of the compartments of the feeding-trough is emptied by pulling out one of the slides or boxes contained therein.

30 To these ends and to such others as the invention may pertain, the same consists, further, in the novel construction, combination, and adaptation of the parts, as will be hereinafter more fully described, and then specifically defined in the appended claim.

35 I clearly illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings similar letters of reference indicate like parts throughout the several views, in which—

40 Figure 1 is a side elevation of a trough embodying my invention. Fig. 2 is an end elevation showing the registering mechanism. Fig. 3 is a cross-section through the trough, showing the locking rack and pinion for lock-

ing one of the slides or boxes. Fig. 4 is a rear side elevation of the trough. Fig. 5 is a cross-sectional view of the trough, showing one of the slides withdrawn. Fig. 6 is a detail view of a bolt holding one of the indicating-points. Fig. 7 is a sectional view showing a modified form of trough having a hinged bottom with side guide-pieces. Fig. 8 is a cross-sectional view showing a sliding box which may be used instead of the sliding bottom.

Reference now being had to the details of the drawings by letter, A designates the trough or bin, made up of a series of compartments B, made of any suitable size, preferably holding one bushel, while some of the compartments will hold but half that measure of feed.

40 Secured to the bottom of each compartment is a slide C, which is adapted to slide in recesses in the walls of the compartments, a suitable cleat-piece *c* being secured immediately above each recess to prevent any feed from dropping into the said recess to hinder the slide from working in and out freely. Each slide is provided with a handle D, and seated in a depression on the upper surface of each slide is a rack-bar E, and these rack-bars are disposed at different locations from the end of each slide, no two being the same distance from the end thereof, for purposes which will hereinafter appear. Pivoted to brackets F' on the side wall of the trough is a rod F, which carries the segment-arms *f*, the teeth of which are designed to mesh with the teeth of the said rack-bars on the slides, whereby the slide is prevented from being withdrawn without a registering being effected.

45 Secured to the end of the trough on a suitable pivot *g* is the toothed wheel G, which carries on its hub portion an indicating-pointer G', and H is a dial which is placed over the said toothed wheel, and is graduated so that at every revolution of the said wheel the indicating-hand will register the numeral "50."

50 H' is a lug carried by the toothed wheel, and at every revolution of the wheel G the said lug engages in a notch in the circumference of a second registering-wheel I, which latter is also pivoted to the end of the trough,

and is provided with a dial I', graduated to register one thousand bushels, and an indicating-pointer *i*, mounted to revolve with the said wheel I, and at each revolution of the 5 pointer carried by the hub of the wheel G it will be seen that a partial revolution of the wheel I will be effected and the pointer *i* will register opposite the numeral "50" on the dial I'. This registering mechanism will be suit- 10 ably incased and under padlock and key to prevent any person tampering with the registering mechanism. Keyed to the end of the rod F is a pawl J, the free end of which rests normally on the teeth of the wheel G, 15 and K is a lever mounted on a collar K', which is also keyed to the shaft F, and *k* is a weight fastened to the upper end of the lever K, which is provided to hold the said rod in its rocked position when the slide is with- 20 drawn, and prevents other slides being withdrawn until the slide is replaced and the said weighted lever tilted in the opposite direction. This weight also prevents undue friction against the teeth of the rack.

25 Secured to the end of the trough or bin is a plate L, having two lugs L', which act as stops to the throw of the weighted lever, and N is a pawl, one end of which is pivoted to the end of the bin, its other end engaging 30 with the teeth of the wheel G to prevent any backward revolution thereof. A pawl made of spring metal, O, is provided at the upper end of the bin, its free end adapted to rest in one of the notches in the circumference of 35 the wheel I to prevent a backward revolution of the same.

Hinged to the broad side of the bin or trough is a board P, which, when in the position shown in Figs. 1 and 2, locks all of the slides 40 to the bottoms of the compartments, and on the opposite side of the bin are the indicating-dials, for which I make no claim in this application, as they form the subject-matter of an application now pending before the 45 Office.

It will sometimes be found convenient to utilize boxes instead of slides in each compartment of the bin which will pull out, and in this modification (shown in Fig. 8) I employ the same locking mechanism as before 50 described, excepting, instead of placing the rack-bars on the upper side, as shown on the

slides, I attach the rack-bars to the bottom of the box and place the rod carrying the segment-arms on the under side of the bin 55 in such a position that the arms carrying the teeth will readily mesh with the teeth of the rack-bars, as will be clearly seen in the drawings. With this modification I employ the same registering mechanism, as shown in Fig. 60 2 of the drawings.

A still different modification is shown in Fig. 7 of the drawings, where I dispense with both the slide and the box and provide a 65 swinging scoop-shaped bottom piece to each compartment, having side guide-pieces R, whereby, when the corn or other feed is released from the compartment, it will shoot into a basket or other receptacle without spill- 70 ing on the ground. In this construction of bin attachment I apply the rack-bars to the swinging edge of the swinging bottom and provide a spring-catch S, which is designed to engage with a projection T on the swing- 75 ing bottom to lock the latter shut.

It is my purpose to have a portion of the compartments contain a half-bushel of feed, and in this case I will have a separate regis- 80 tering mechanism connected to the slides of the smaller compartments, which will be similar in construction and operation to the device hereinbefore described.

Having thus described my invention, what I claim to be new, and desire to secure by Let- 85 ters Patent, is—

A compartment feeding-bin, having slides working at the bottom of each compartment, rack-bars carried in depressions on the upper 90 side of each slide, combined with a rocking shaft pivoted to the side of the bin, and carrying a series of segment-arms, designed to mesh with the teeth of the said rack-bars, when the slide is withdrawn, and a pawl on said shaft, the free end of which rests on the circumfer- 95 ential teeth of a registering-wheel, and a weighted lever carried by the said shaft, substantially as shown and described.

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

WILLIAM S. WITTEN.

Witnesses:

FREDERICK GRAY,
A. L. HOUGH.