

L. A. ROGGENSACK.
 AUTOMATIC STOCK FEEDING DEVICE.
 APPLICATION FILED JAN. 27, 1908.*

938,608.

Patented Nov. 2, 1909.

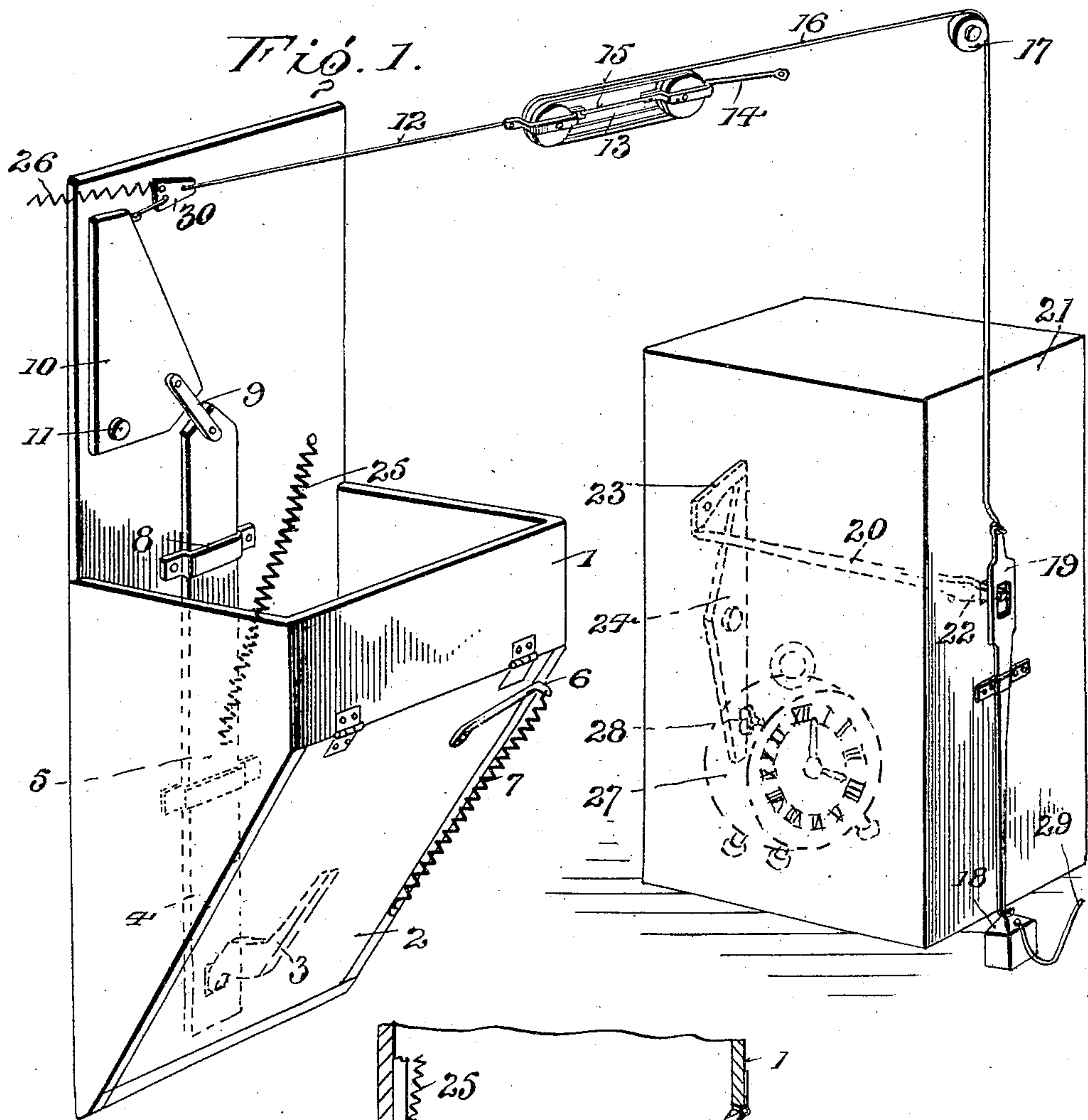
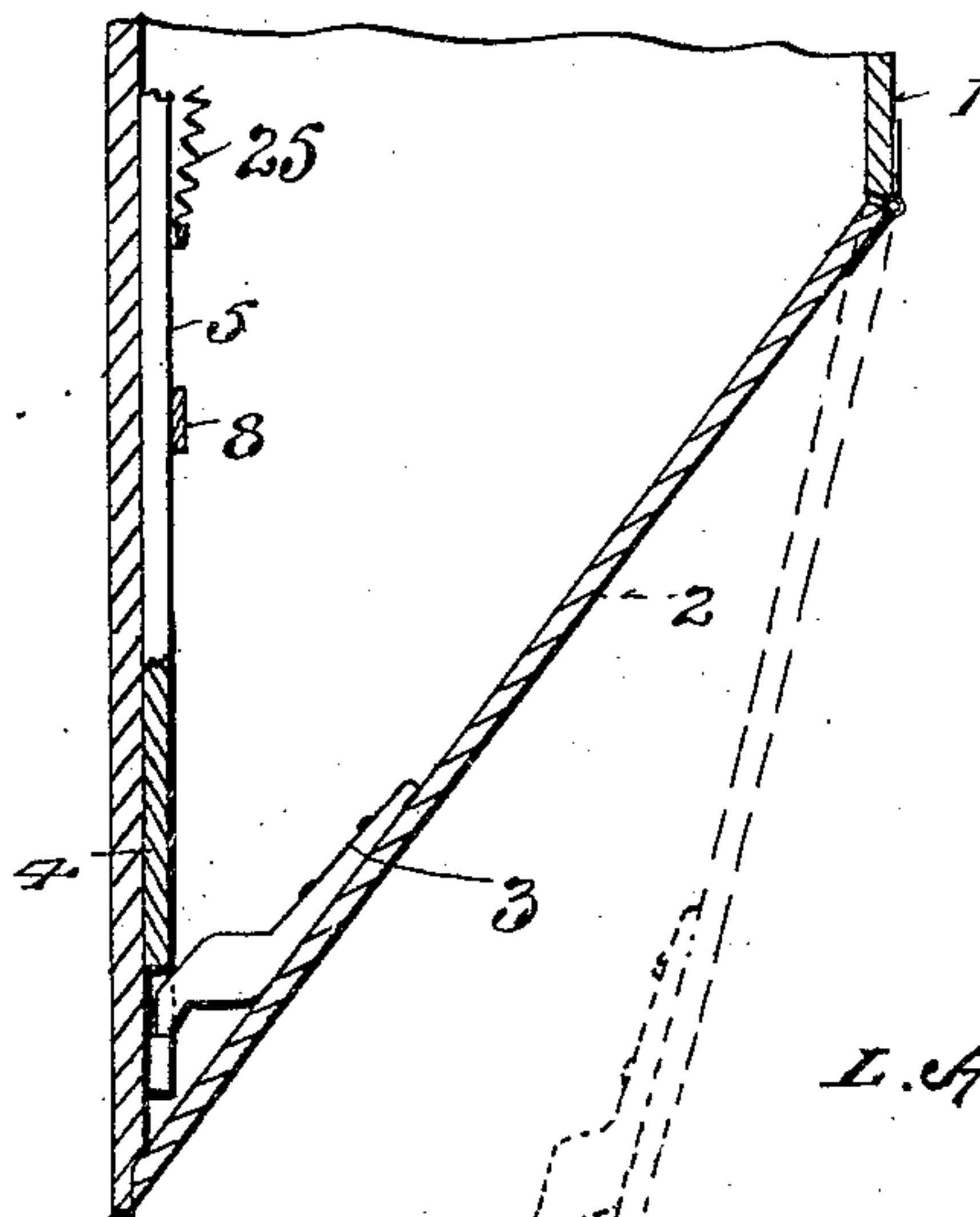


Fig. 2.



Witnesses

W. H. H. H.
W. H. H. H.

Inventor

L. A. Roggensack

By

Frank Macey, Attorneys

UNITED STATES PATENT OFFICE.

LUTIE A. ROGGENSACK, OF BALFOUR, NORTH DAKOTA.

AUTOMATIC STOCK-FEEDING DEVICE.

938,608.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed January 27, 1908. Serial No. 412,945.

To all whom it may concern:

Be it known that I, LUTIE A. ROGGENSACK, citizen of the United States, residing at Balfour, in the county of McHenry and State of North Dakota, have invented certain new and useful Improvements in Automatic Stock-Feeding Devices, of which the following is a specification.

The present invention relates to improvements in stock feeding devices and has for its primary object to provide a device of this character embodying novel means for automatically discharging the feed from a hopper into the feed box at a predetermined time.

The invention further contemplates an automatic stock feeding device which is actuated by the alarm mechanism of a clock and serves to discharge the feed when the alarm is sounded.

A further object of the invention is the provision of a stock feeding device which is simple and inexpensive in its construction, which can be readily mounted in an operative position and which will be positive and reliable in its action.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view, and Fig. 2 is a sectional view through the hopper.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawing, the numeral 1 designates the hopper which is designed to contain the feed and from which the feed is discharged at a predetermined time into a feed trough located below the same. The bottom of this hopper is normally closed by a swinging door 2 which is hinged at its upper edge to the hopper and is provided at its lower edge with a catch 3, the said catch being designed to engage an opening 4 in a slide 5 to lock the door in a closed position. An arm 6 projects outwardly from the upper portion of the door 2 and is connected to one side of the hopper by means of a spring 7 which tends to hold the door in a closed position. However, when the catch 3 is released by a downward movement of the vertical slide the weight of the

feed within the hopper overcomes the action of the spring 7 and swings the door 2 into an open position, whereupon the feed drops from the hopper into the feed trough located under the same. The slide 5 is shown as mounted within a pair of keepers 8 applied to the back of the hopper and has the upper end thereof loosely connected by means of a link 9 to one corner of a triangular plate 10 which constitutes in effect a bell crank lever. This plate 10 is pivoted at one of its corners upon the back of the hopper and has the upper end thereof connected by a cable 12 to a pair of double pulleys 13, the said pulleys being connected to the wall or other suitable support at 14 and being also connected to each other by a cord 15 which serves to limit the amount by which the pulleys themselves can be drawn away from each other. The cable 16 for operating the double pulleys 13 passes around the pulley or guide member 17 and has a weight 18 applied to the extremity thereof. A plate 19 is also applied to the cable 16 and is formed with an opening designed to receive the end of a rod 20 arranged transversely within a casing 21 and projecting through an opening 22 in one side thereof. When this rod is held in operative position and engages the opening in the plate 19, the weight 18 is supported thereby and does not produce tension in the cable 16. The inner end of the rod 20 bears upwardly against one end of a horizontal lever 23 which is pivoted between its ends upon one side of the casing 21, the opposite end of the lever engaging the upper end of an upright trigger 24 which is also pivoted between its ends. When this trigger 24 is swung under the lever 23 the said lever is held against any swinging movement such as would be caused by the pressure of the rod 20 thereon and the rod 20 is retained in an operative position. However, when the trigger 24 is swung out of engagement with the lever 23, the said lever turns about its pivot and releases the rod 20 whereupon the plate 19 becomes disengaged from the rod and the weight 18 drops and produces tension in the cable 16 and operates the double pulleys 13. In this manner tension is also produced in the cable 12 and the plate 10 swung about its pivot in such a manner as to move the slide 5 downwardly and permit the door 2 at the bottom of the hopper to swing outwardly into an open position. As soon as the feed within

the hopper has been discharged the spring 7 again closes the door 2. A spring 25 which is connected to the slide 5 normally tends to move the same upwardly, and a
5 spring 26 which is connected to a plate 30 interposed in the length of the cable 12, normally tends to swing the plate 10 against the action of said cable 12, the said springs serving to take up any slack in the cable 12
10 and not being of sufficient strength to interfere with the action of the weight 18.

An alarm clock 27 of the usual construction is designed to be placed within the casing 21 so that the winding key 28 of the
15 alarm mechanism thereof engages one side of the trigger 24 at the lower end thereof. When this winding key is in vertical position, the trigger can be swung under the releasing lever 23 so as to hold the same in an
20 operative position. The door 2 of the hopper is then locked in a closed position and the feed securely retained within the hopper. However when the alarm is sounded, the winding key 28 is caused to revolve and
25 in so revolving swings the trigger 24 from under the releasing lever 23 and frees the rod 20. The weight 18 which is thereby released then operates as previously described to move the slide 5 upwardly and permit the

door 2 to swing upwardly and discharge the 30 feed from the hopper. As shown on the drawing the weight 18 is connected by a cord 29 to the wall or other suitable support, the said cord supporting the weight when it reaches its lowermost position and thereby 35 relieving the cables 16 and 12 of all unnecessary strain.

Having thus described the invention, what is claimed as new is:

In a stock feeding device, the combination 40 of a hopper, a swinging closure for the hopper, a catch for holding the swinging closure in a closed position, a cable having an operative connection with the catch, a weight 45 applied to the cable, a plate also applied to the cable, a casing, a rod extending transversely across the casing and projecting through one side thereof into engagement with the plate, a releasing lever engaging 50 the rod to hold it in operative position, a trigger for the releasing lever, and a clock mechanism for automatically moving the trigger into an inoperative position at a predetermined time.

L. A. ROGGENSACK.

Witnesses:

H. F. ROGGENSACK,
FRANK L. MAY.