(No Model.)

C. S. LOCKE.

AUTOMATIC ATTACHMENT FOR FEED BOXES.

No. 566,778. Patented Sept. 1, 1896.

Fig. 1.

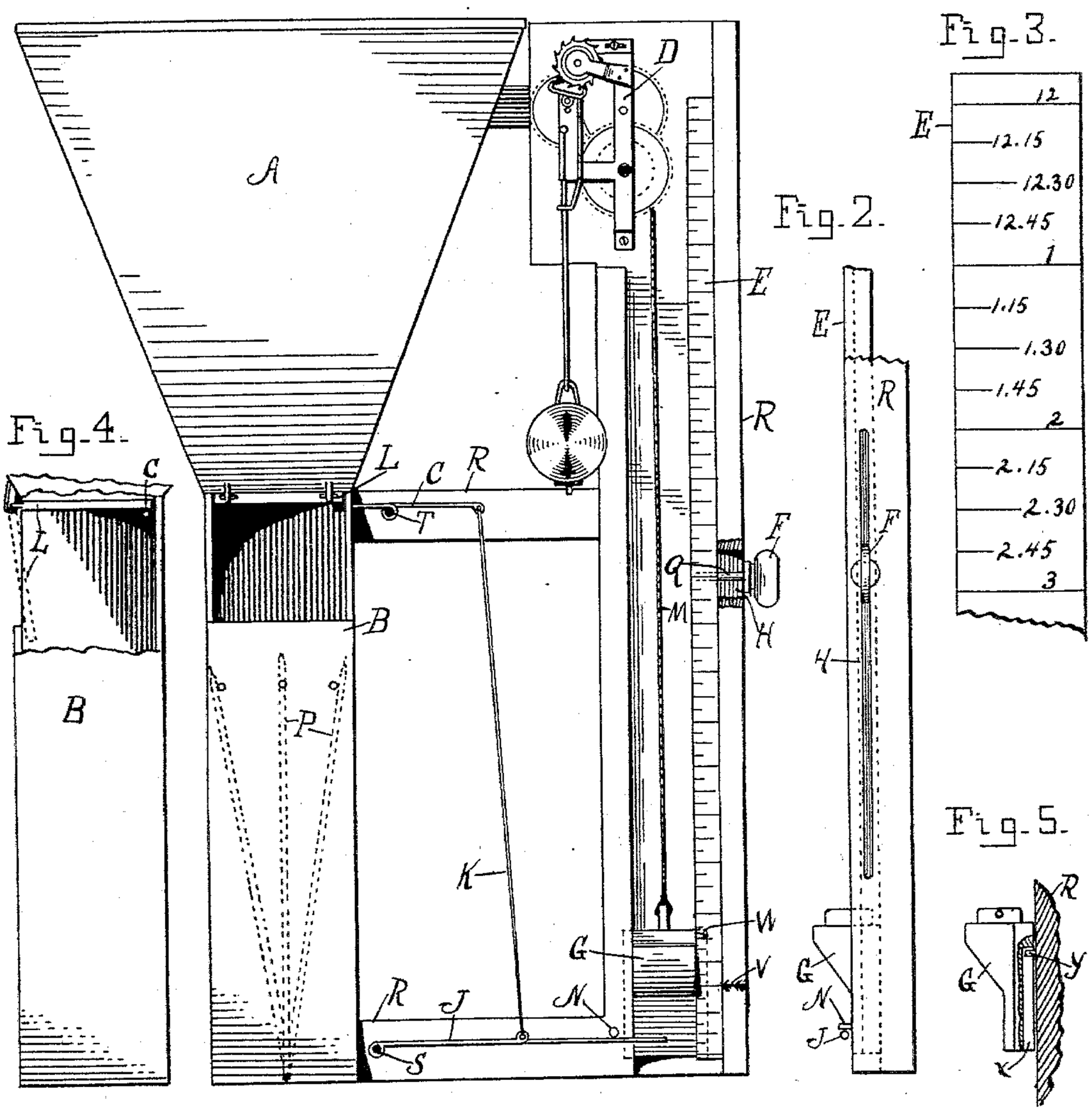


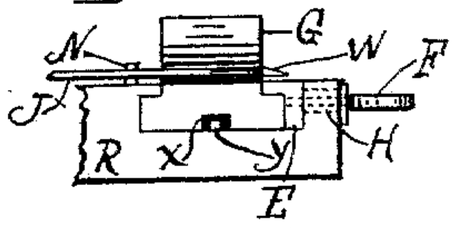
Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.



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CHARLES S. LOCKE, OF JOLIET, ILLINOIS.

AUTOMATIC ATTACHMENT FOR FEED-BOXES.

SPECIFICATION forming part of Letters Patent No. 566,778, dated September 1, 1896.

Application filed January 13, 1896. Serial No. 575,315. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. LOCKE, a citizen of the United States of America, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in an Automatic Attachment for Feed-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a front elevation. Fig. 2 is a side view of a portion of the adjustable dial and its frame and of a portion of the inclined weight. Fig. 3 is a front view of a portion of the adjustable dial. Fig. 4 is a side elevation of the hopper-spout, a portion being broken away to show a trip-valve therein at the base of the hopper. Fig. 5 is a side view of the beveled weight, a portion being broken away to show a vertical recess in the rear side for receiving a pin projecting from the frame for arresting the further movement downward of said weight; and Fig. 6 is a view on the bottom of the weight and its guide-frame and dial, showing the form of the grooved way in which the weight slides.

This invention relates to certain improvements in an automatic attachment for feed-boxes for animals, which improvements are fully set forth and explained in the following specification and claims.

Reference being had to the accompanying drawings, A represents a hopper for holding a quantity of feed to be discharged to feed-boxes, not necessary to be shown.

B is a spout for conducting the feed from the hopper to the feed-boxes. Said spout is provided at its upper end with a trip-valve L, adapted to be tripped at a time fixed upon, and thus permit the feed to pass from the hopper to the feed box or boxes.

P is a valve (shown in broken lines in Fig. 1) arranged centrally in spout B, and extends across it from side to side, and is pivotally connected thereto at its lower end in such manner that its upper end is free to engage either side of the spout, as shown in said broken lines, and thus direct the feed to either one of two feed-boxes that may be connected with the lower end of said spout, or if the said valve is arranged to stand in a perpendicular position an equal quantity of feed will pass down on either side of it to the feed-boxes, so that each will receive an equal amount. The free end of said valve P may be held in any desired place by means of a pin, as shown.

R is a guide-post arranged to stand at the side of the hopper and its spout, and is connected therewith, as shown, by means of horizontal straps or bars. Said guide-post is provided with a longitudinal groove for receiving a weight G, retained in said groove, as shown in Figs. 1 and 6, by means of a flanged way on one side and by the flanged dial E at its opposite side, as shown particularly in Fig. 6. Said weight is suspended by a cord M, which is attached at its upper end to a drum on the winding-shaft of one of the train of gears D, attached to the upper end of said guide-post, said train of gears having attached thereto an ordinary pendulum, verge, and escapement, as shown. It is intended that when the weight G is wound up it will cause the pendulum to vibrate and cause the train of gears to permit the weight to gradually descend to the bottom of the guide-post to the position shown in Fig. 1.

E is a dial arranged in the groove of the guide-post at the side of the weight G, and is formed so as to project and hold said weight in the guide-groove, as shown in Figs. 1 and 6. Said dial is provided with a laterally-projecting screw-threaded pin Q, which passes out through a slot H in the side of the guide-post R, and has a thumb-nut F turned on its projecting end, as shown in Figs. 1 and 2. Said dial is thus adapted to be vertically adjusted at any desired place by means of said pin and thumb-nut attachment. The said dial is provided on its face with the ordinary division-marks, denoting hours, half-hours, and quarter-hours, as shown in Figs. 1 and 3, and the weight G is provided on its side adjacent to said dial with a projecting pointer W, moving over said division-marks, as shown in Figs. 1 and 6, for the purpose of adapting the weight to be set opposite any division-mark denoting the time the cord M is wound up and the weight set.

J is a lever having its inner end pivotally attached to the frame at S and having its outer end project in front of the beveled side

of the weight G and under a projecting pin N. Said lever J is connected, by means of a rod K, with the outer end of another lever, C, pivotally connected, at about its center, at T, with the upper part of the frame of the device. The inner end of said lever C projects under the free end of valve L to hold it closed. The weight G is beveled on its outer face, as shown in Figs. 2 and 5, for the purpose of forcing lever J off from pin N when the weight G descends far enough, and thus trip the valve L and permit the feed to pass from the hopper down through spout B to a feed box or boxes below.

In operation feed is placed in the hopper A, so as to rest on the valve L when the parts are in the position shown in Fig. 1. The thumb-nut F is then loosened and the dial E is moved so as to cause the mark thereon denoting the time at which it is desired to trip the valve and discharge the feed to be opposite or register with the mark V on the guide-post R. The cord M is then wound up until the pointer W on the weight will be opposite or register with the mark on the dial denoting the time at which the device is wound up and set. The weight will then cause the pendulum to vibrate, so as to permit the train of gears to unwind the cord and permit the weight to descend until it will engage the lever mechanism by means of the beveled face of said weight pushing lever J off of pin N, and thus trip the feed-valve, as stated. It is intended that the gear mechanism will be of sufficient size to cause the weight to be one hour in moving from one hour-division mark on the dial to another, so that the device can be set at any given time to cause the feed to be discharged at any given time by means of adjusting the dial and setting the weight, as described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows:

1. In an automatic attachment for feed-boxes the combination of the beveled weight having the pointer W, the adjustable dial E, the valve L, the lever mechanism intermediate said valve and weight and operated by the latter, and the means for operating said weight, all arranged to operate substantially as and for the purpose set forth.

2. In an automatic attachment for feed-boxes, the combination of the feed-hopper A, spout B having the trip-valve L, levers C and J, rod K for connecting said levers, guide-post R, beveled weight G having the pointer W, adjustable dial E, and the means for operating said weight, all arranged to operate substantially as and for the purpose set forth.

3. In an automatic attachment for feed-boxes the combination of the hopper A, spout B having the trip-valve L, levers C and J, pin N, beveled weight G, guide-frame R, and the means for actuating said weight, all arranged to operate substantially as and for the purpose set forth.

4. In an automatic attachment for feed-boxes the combination of a feed-hopper having a trip-valve in its bottom, a weight adapted to be wound up, the lever mechanism adapted to be engaged by said weight in its descent for tripping said valve, and the adjustable dial adapted to be vertically adjusted and cause the weight to trip said valve at a given time, all arranged to operate substantially as and for the purpose set forth.

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