W. N. GREENE.

TIME OPERATED APPARATUS FOR FEEDING LIVE STOCK.

APPLICATION FILED FEB. 6, 1911.

998,502.

Patented July 18, 1911.

2 SHEETS—SHEET 1.

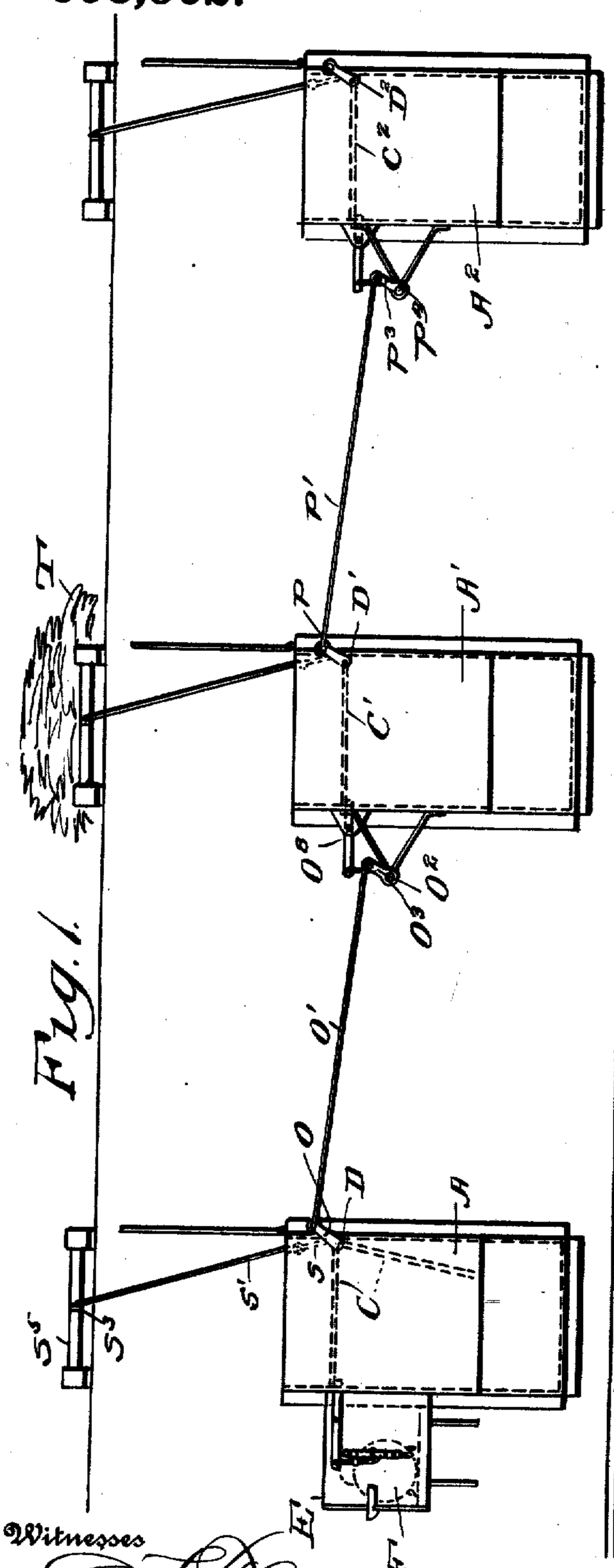

Fig. 1.

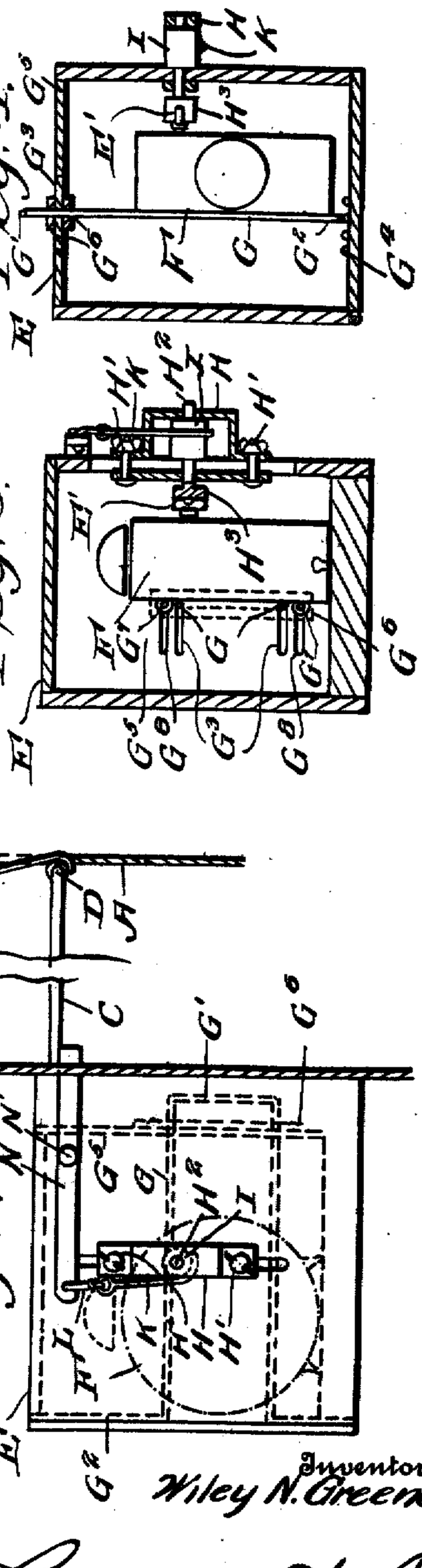

Fig. 3.

Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 7.

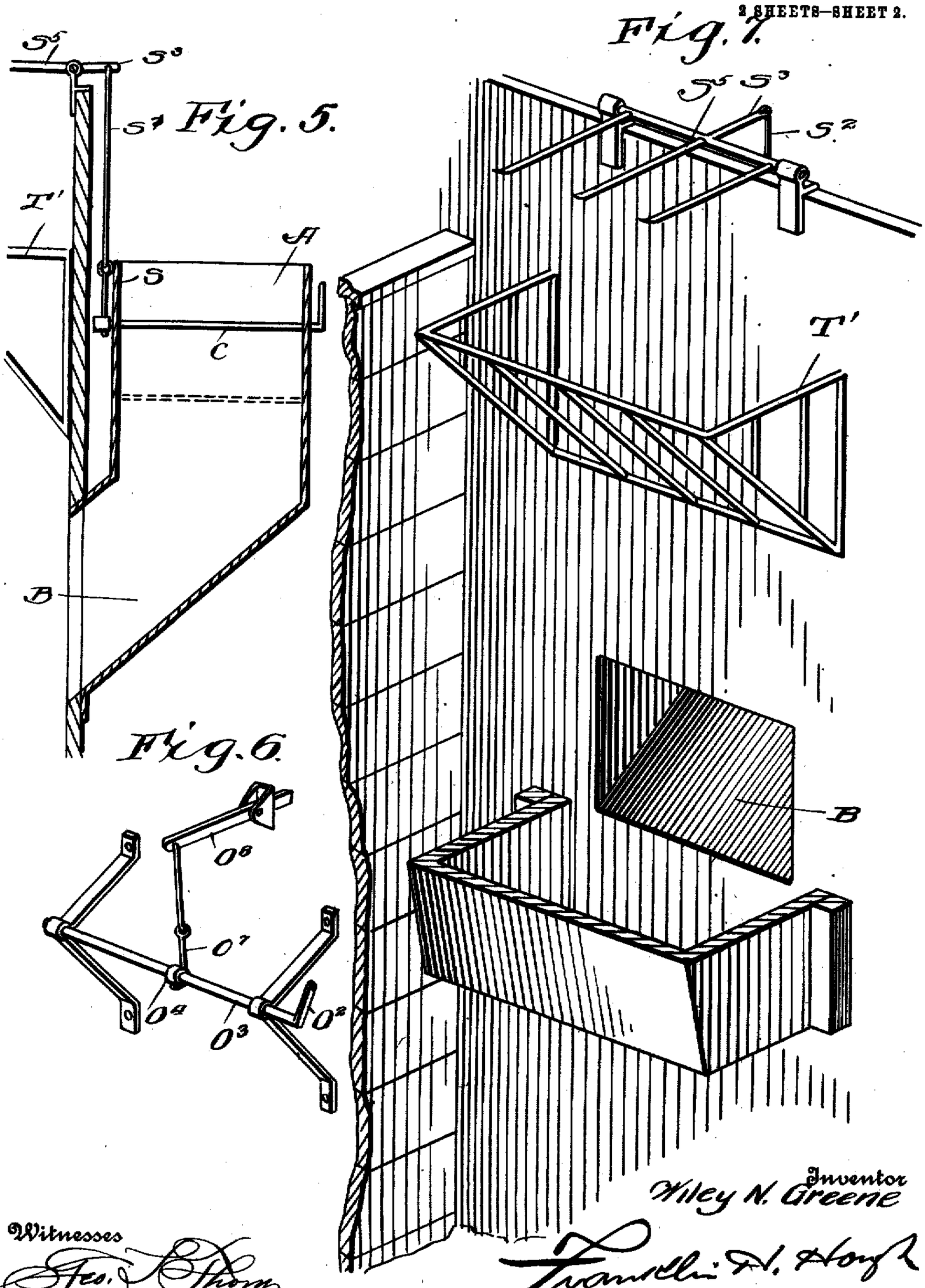

Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

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TIME-OPERATED APPARATUS FOR FEEDING LIVE STOCK.

998,502. Specification of Letters Patent. Patented July 18, 1911.

Application filed February 6, 1911. Serial No. 606,835.

To all whom it may concern:

Be it known that I, WILEY N. GREENE, a citizen of the United States, residing at Wayside, in the county of Jones and State of Georgia, have invented certain new and useful Improvements in Time-Operated Apparatus for Feeding Live Stock; and I do hereby 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in clock-actuated apparatus for automatically feeding grain, fodder, etc., to live stock and comprises various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation showing the application of my invention to a series of feeding troughs. Fig. 2 is a rear elevation of the clock holding mechanism. Fig. 3 is a side view of the mechanism shown in Fig. 2. Fig. 4 is a sectional view showing the adjustable means for holding the clock. Fig. 5 is a sectional view vertically through the feed chute. Fig. 6 is a detail perspective view showing means for releasing a grain tilting member, and Fig. 7 is a detail perspective view showing the fodder holding device, hopper and trough.

Reference now being had to the details of the drawings by letter, A, A′ and A² designate three receptacles adapted to contain grain and automatically fed through the trough B. Said receptacles are provided with hinged bottoms, designated respectively by letters C, C′ and C², and fixed to rock shafts D, D′ and D² respectively.

Mounted in a suitable casing E is an ordinary clock F having a winged key E′ whereby the clock may be wound and which key is utilized in actuating the mechanism to allow the grain and fodder to be automatically fed. Clocks of different sizes may be held in the casing E by the mechanism illustrated in Figs. 2 to 4 inclusive, which consists of a wire G having a bail-shaped portion G′, shown in dotted lines in Fig. 2 of the drawings, and having ends G² at right angles thereto. Said bail-shaped portion of the wire passes through slots G³ in the side wall G⁵ of the casing and also through apertures in the plate G⁶, the said bail-shaped portion being movable within the slots G³. The plate G⁶ has bolts G⁷ which are adjustable in the slots G⁸, shown in Fig. 3 of the drawings. The ends G² of the wire, which are at right angles to the bail-shaped portion, as shown clearly in Fig. 2, are adapted to pass through apertures G⁴ mounted in the top and bottom of the slot containing casing, thus forming means whereby clocks of various sizes may be utilized in connection with my improved apparatus for automatically feeding grain, fodder, etc.

Mounted upon an adjustable bracket member H, held by the adjusting bolts H′ to the rear case of the clock casing, is a shaft H² having a slotted head H³ and its inner end designed to receive the key F and cause the shaft to rotate therewith as the spring upon the winding post rotates and with it the key. A drum I is fixed to the shaft H² and a hook K normally engages the drum and is designed so that when the drum rotates, the frictional contact intermediate the drum and the hook will cause the latter to tilt upon its pivot and also tilt the lever N. Said hook K is connected to a cord or chain L, which in turn is pivotally connected to a tilting lever N, mounted upon the pivot N′ and the inner end of said lever is adapted to normally support the hinged bottom C and, when the lever N is released and allowed to tilt down by the weight of the grain upon the bottom C, will cause the grain to dump into the trough B. A crank arm O is fixed to the shaft D and is connected by means of a rod or cord O′ with a similar crank shaft O² which is fixed to the rock shaft O³ which engages a drum O⁴ upon the shaft O⁵ and to which shaft a crank arm O⁶ is fixed. A hook O⁷, similar to the hook K′, is adapted to engage the drum O⁴ upon the shaft O³ and is fastened to a tilting lever O⁸ which supports the swinging edge of the hinged bottom C′. The rock shaft D′ has a crank P fastened thereto and is connected by a rod P′ with the crank arm P³ which is fixed to the shaft P⁴ and which in turn, by similar construction

of apparatus, allows the tilting bottom A^2 to swing down to dump the grain held thereby.

Engaging each rock shaft in the several receptacles A, A′ and A^2 is a hook S connected by means of a rope S′ passing over a roller or pulley S^2 and connected to the arm S^3 upon the tilting fork S^5, shown clearly in Fig. 7 of the drawings, thus allowing the fodder or hay T supported upon said fork to drop into the manger T′.

From the foregoing, it will be noted that, by the provision of the apparatus shown and described, a simple and efficient means is afforded whereby clock mechanism is adapted to actuate releasing devices whereby both grain and fodder may be fed, at predetermined moments, determined upon by the unwinding of the winding post of the clock, into the trough and manger respectively.

What I claim to be new is:—

1. A time-actuated apparatus for feeding grain and fodder comprising a receptacle, a hinged bottom therein, a clock, a casing therefor, a rock shaft having a slotted head engaging the winding key, means for adjusting said shaft to fit different sizes of clocks, and means actuated by the rocking of the shaft to release said hinged bottom.

2. A time-actuated apparatus for feeding grain and fodder comprising a receptacle, a hinged bottom therein, a clock, a casing in which the latter is mounted, a bail-shaped wire passing through the side of the casing and having ends engaging holes in the top and bottom of the latter, a rock shaft actuated by the winding key, a drum upon said shaft, a hook engaging the drum, and connections between the latter and said hinged bottom adapted to release the same.

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

WILEY NATHANIEL GREENE.

Witnesses:
ROBT. N. HARDEMAN,
RICHARD H. BONNER.