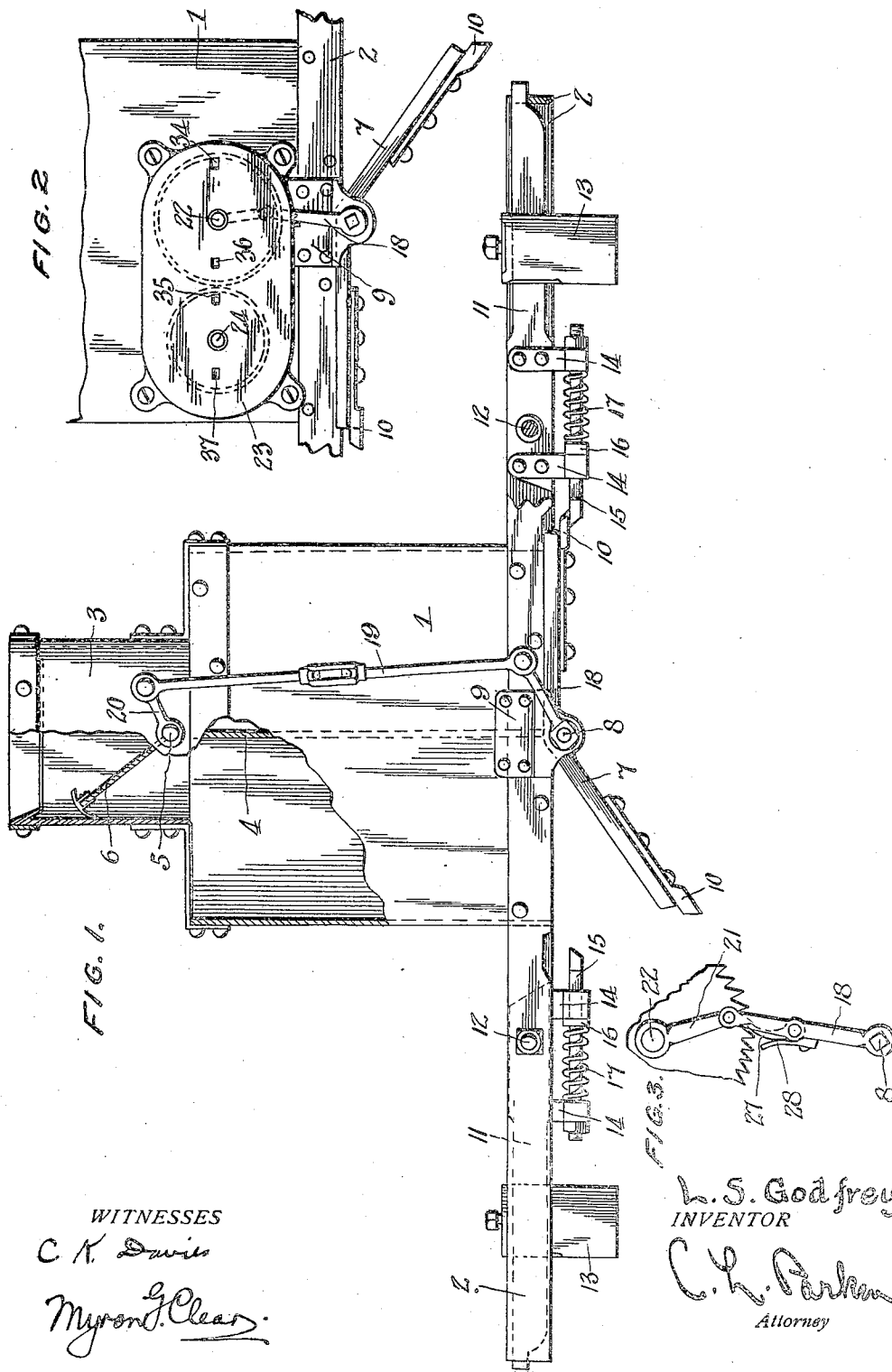


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 AUTOMATIC GRAIN WEIGHER.
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Patented Nov. 30, 1909.



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AUTOMATIC GRAIN-WEIGHER.

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To all whom it may concern:

Be it known that I, LOYD S. GODFREY, a citizen of the United States, residing at Binger, in the county of Caddo and State of Oklahoma, have invented certain new and useful Improvements in Automatic Grain-Weighers, of which the following is a specification.

My invention relates to grain weighers of that type embodying a divided grain receiving chamber, and a weight controlled swinging base therefor, adapted to automatically dump the grain when a prescribed weight has been placed thereon, and the object of my invention is to provide a device of this character, embodying several simple and novel structural elements and to provide connections for operating a simple tally to register the bushels dumped through the weighing apparatus and the price thereof.

In the accompanying drawings, illustrating my invention, and forming a part of this specification, and wherein like numerals are used to designate like parts throughout the several figures, Figure 1 is an elevation of one side of the complete apparatus, partly broken away and in section. Fig. 2 is an elevation of the lower portion of the opposite side of the grain receiving chamber, with the scale frames broken away, and, illustrating the tally device, and Fig. 3 is a fragmentary elevation of the tally operating levers in engagement with a portion of one of the tally wheels.

In the practical embodiment of my invention, I provide a grain receiving chamber 1, secured centrally within a rectangular frame 2. The chamber 1 is provided with a hopper 3, disposed thereon and leading therein, and is divided centrally by a partition plate 4 extending upwardly from the base of said chamber to a rotatable shaft 5 extending transversely through the base of the hopper 3, which shaft has a deflecting plate 6 secured thereto within said hopper, to engage the inner surface thereof, whereby the rocking movement of shaft 5 causes movement of said plate from one side of said hopper to the other, to cause the introduction of the grain within the chamber 1 upon one side or the other of the partition plate 4 therein.

The base of the chamber 1, comprises a plate 7, mounted to rock upon a transverse shaft 8, journaled between brackets 9 secured to opposite sides of the chamber 1 and alined below the partition plate 4, said

base plate 7 embodying portions upon each side of said shaft 8, at an angle to one another, whereby when one portion thereof is in the upper position against the base of chamber 1, to close one compartment thereof, the other portion of said base plate extends downwardly at an angle and allows the contents of the opposite chamber compartment to discharge. Each of the side portions of the base plate 7 are provided with latch pieces 10 extending outwardly from the sides thereof toward the ends of the frame 2.

The ends of the frame 2 supports the outer ends of scale bars 11, extending between the said frames and the receiving chamber 1, upon each side of the latter, and fulcrumed to swing in a vertical plane upon transverse bars extending between the sides of the frame 2, adjacent the inner ends of said scale bars. The scale bars 11 are each provided with an adjustable weight 13, slidably disposed thereon between their fulcrum 12 and the outer end thereof, and are also provided with depending brackets 14, one upon each side of their said fulcrum.

Mounted to slide horizontally and longitudinally through the lower ends of the scale bar brackets 14, are latch bars 15, provided with collars 16 thereon between said brackets, and pressed longitudinally, inwardly, by means of coil springs 17, surrounding the same between their collars 16 and the outer one of the brackets 16, into position to engage the latches 10 of the base plate 7, when the adjacent portion of said base plate is in the upper position against the base of the chamber 1, whereby to lock the same against downward movement until sufficient grain has been dumped thereupon to overcome the scale bar weight 13. The scale bar will then swing vertically upon its fulcrum 12 to allow the latches 10 and 15 to pass one another, said latch 15, being longitudinally movable to allow of the passage thereby, of latch 10 when the same is again moved upwardly to the closed position, by the dumping movement of the opposite portion of the base plate 7.

The ends of the shaft 8, beyond the journals 9 thereof, are provided with angular arms 18, at each side of the chamber 1, the arm 18 at one end thereof being connected, by a vertical operating bar 19, to an angular arm 20 secured upon one end of the deflecting plate operating shaft 5, whereby the swinging movement of the base plate 7 is

communicated to the deflecting plate 6 whereby to deflect the grain from the hopper 3, into the compartment of the chamber 1 having its base closed by a portion of the base plate 7. The arm 18 upon the opposite side of the chamber 1, is pivotally connected at its end to the end of an arm 21, secured to and extending from a stud shaft 22, journaled between the wall of chamber 1 and a casing 23, secured upon said wall in spaced relation. The stud shaft 22, carries thereon one of the wheels, of the tally, the other wheel of which is mounted upon a similar stud shaft 24, in horizontal alinement therewith said wheels being provided with toothed peripheral edges in close juxtaposition, and totaling in bushels.

Inasmuch as the compartments of the receiving chamber are capable of holding half a bushel of grain, each, they must both be dumped, and the portions of the base plate 7 each lowered before the tally should register one bushel. To provide for this, the arm 18, connected to the tally arm 21, has a swinging pawl 27, spring pressed in one direction by a flat spring 28, whereby upon one movement of the base plate 7, the pawl 27, in engagement with a tooth of one of the wheels, advances the wheel one tooth, and

upon the other movement of said base plate, said pawl is returned to engage the succeeding tooth.

From the foregoing description, the operation of my improved weighing apparatus and the connection between the same and the tally whereby to operate the latter will be readily apparent.

Having fully described my invention, I claim:

In a device of the character described, the combination with a receiving chamber, having a partition dividing the same into compartments, and a base therefor, having swinging movement upon a central shaft below said partition, of a tally to register movement of said base, and operating levers, connecting said tally and said base, extending from the shafts thereof, and pivotally united at their contiguous ends, one of said levers being provided with means engaging the periphery of the tally, substantially as described.

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

LOYD S. GODFREY.

Witnesses:

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