

(No Model.)

2 Sheets—Sheet 1.

T. S. PEARSON.
GRAIN WEIGHER.

No. 468,466.

Patented Feb. 9, 1892.

FIG. 4-

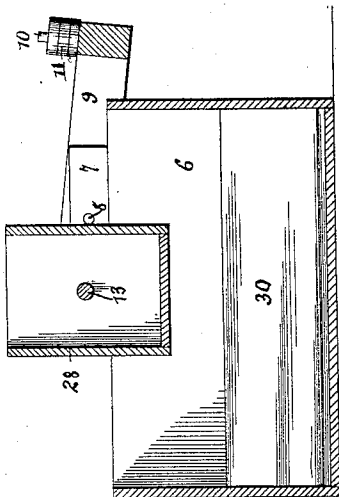


FIG. 2 -

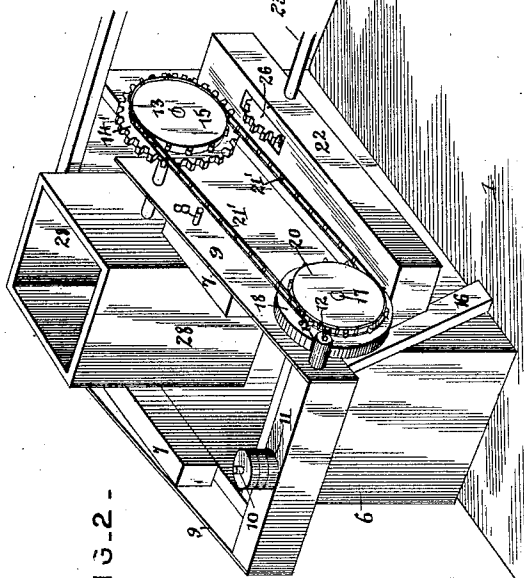
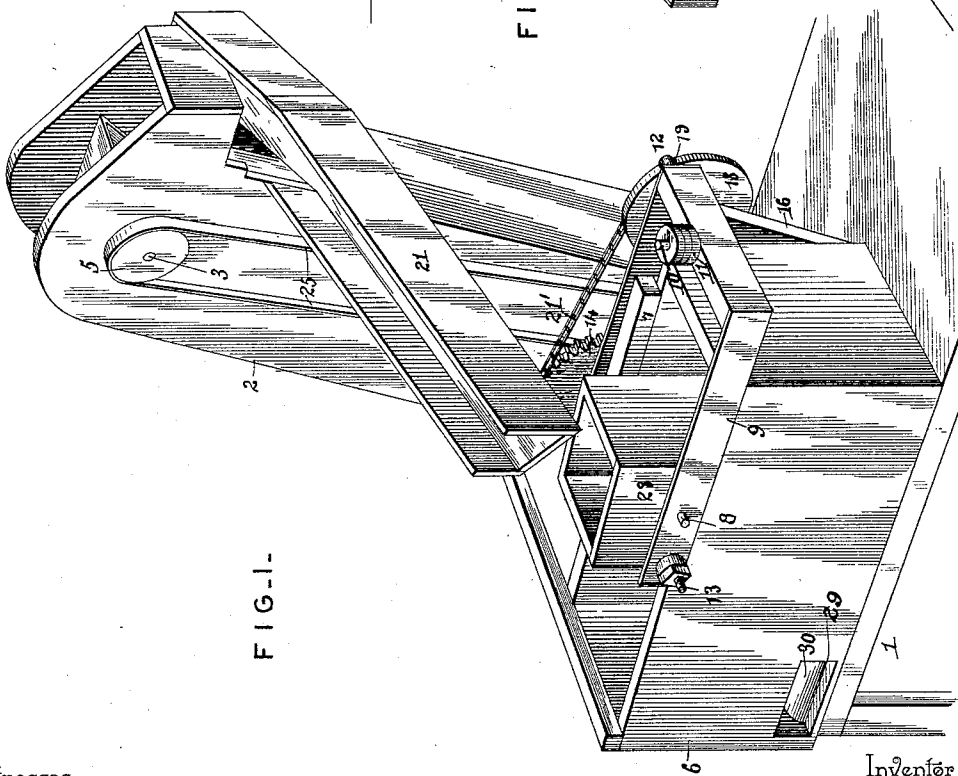


FIG. 1-



Witnesses:

Jas. H. McLathran
W. S. Duwall.

By his Attorneys,

Thomas S. Pearson
C. A. Snow & Co.

Inventor

(No Model.)

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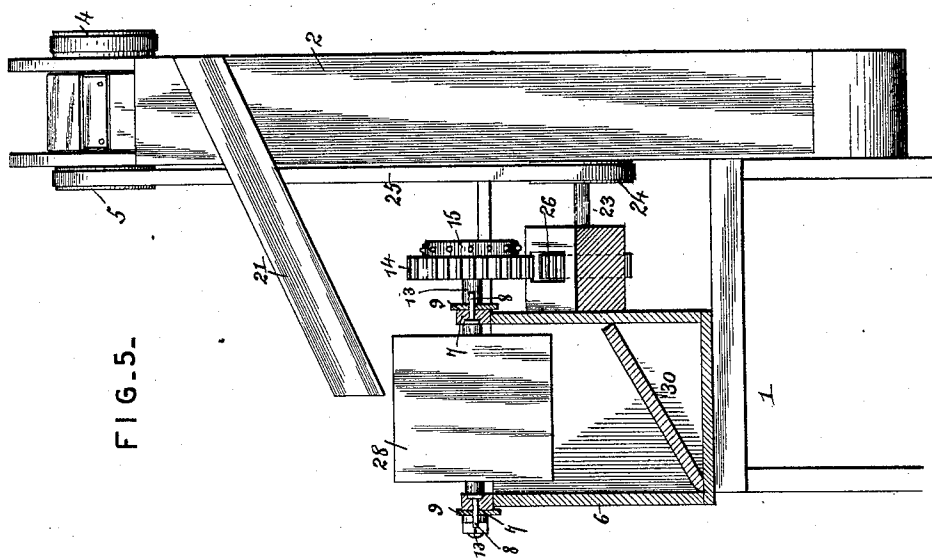


FIG. 5-

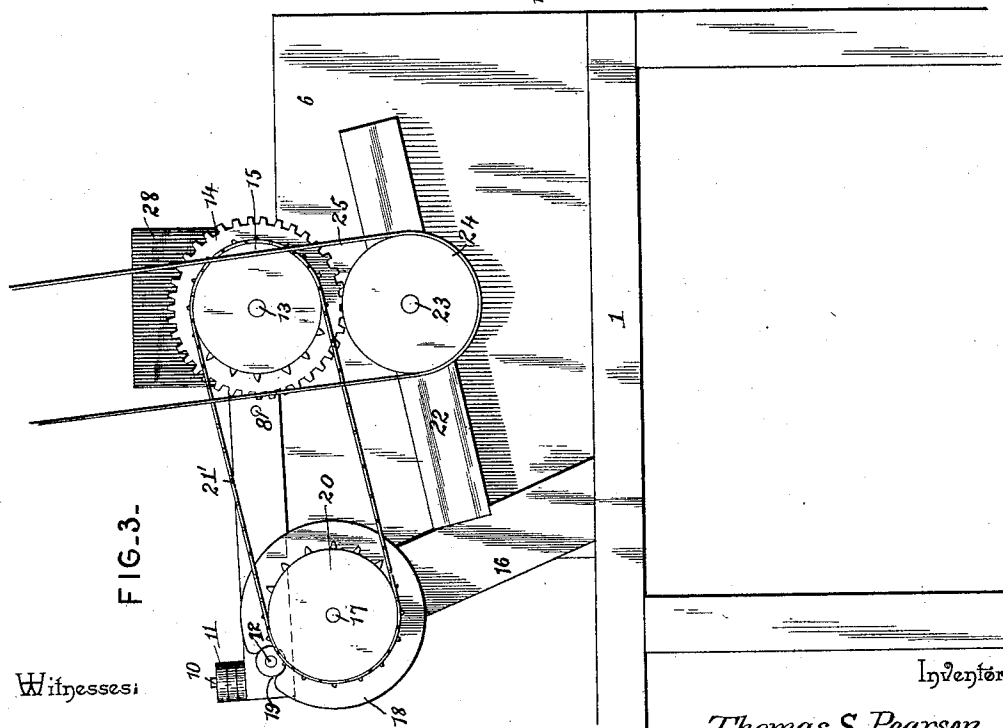


FIG. 3-

Witnesses:

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M. S. Duval.

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Inventor

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UNITED STATES PATENT OFFICE.

THOMAS S. PEARSON, OF CASSVILLE, INDIANA.

GRAIN-WEIGHER.

SPECIFICATION forming part of Letters Patent No. 468,466, dated February 9, 1892.

Application filed May 20, 1891. Serial No. 393,375. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. PEARSON, a citizen of the United States, residing at Cassville, in the county of Howard and State of Indiana, have invented a new and useful Grain-Weigher, of which the following is a specification.

This invention relates to improvements in grain-weighers, the objects in view being to provide a weigher adapted for use in connection with various kinds of grain and to be automatic in its operations.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a grain-measure constructed in accordance with my invention. Fig. 2 is a detail in reverse perspective of the measure. Fig. 3 is a vertical longitudinal section between the inner side wall of the grain receiving and discharging box and the gearing for locking and liberating the weighing mechanism. Fig. 4 is a vertical longitudinal section of the grain-receiving box and weighing-hopper in detail. Fig. 5 is a transverse section through the box and in front of the intermittingly-operated cog.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates a platform or table of suitable height, and to one side of the same is secured the elevator 2, which, as will be understood, includes in its make-up the usual endless carrier operated upon and by the transverse shaft 3, extending through the upper end of the same and carrying at one side the drive-pulley 4. At the opposite side a pulley 5 is located, the same being for the transmission of motion to the hereinafter-described mechanism.

Upon the table 1 is mounted the grain-receiving box 6, provided at opposite sides and at one side of its center with bearings 7, to which, by means of bearing-pins 8, is fulcrumed a U-shaped bail 9. The bail 9, at its front end, is provided with a pin 10, upon which may be removably mounted suitable weights 11, and from the inner side of the bail there projects laterally a stop lug or pin 12. The terminals of the bail, which occur about opposite the center of the box 6, are

provided with bearing-openings, in which is journaled a shaft 13, said shaft extending at its inner end considerably beyond its bearings toward the elevator. Upon this extended portion of the shaft there is rigidly mounted a gear-wheel 14 and at one side of the gear a sprocket-wheel 15. In a standard 16, mounted upon the platform at the inner side of the box 6, there is mounted a stub-shaft 17, upon which is loosely journaled a disk 18, having a peripheral notch 19—in this instance at one portion of its periphery. This notch may, however, as will hereinafter be apparent, be duplicated. At one side of the disk 18 a sprocket 20 is mounted loosely upon the stub-shaft 17, and said sprocket is connected with and driven by the sprocket 15 of the shaft 13.

A frame 22 is secured at the inner side of the box 1, and a shaft 23 journaled in said frame, the rear end of the shaft extending beyond the frame, and there carrying a pulley 24, driven by a belt 25, connecting the same with the pulley 5 of the elevator. A cog-wheel 26 is mounted upon the shaft 23 within the frame 22, and is located immediately below the gear 14, which latter is thrown into engagement and driven by the gear 26 at such times as the inner end of the weighing-bail is depressed.

Within the box 6, upon the shaft 13, there is fixed a weighing-hopper 28, adapted to be revolved or rotated with the shaft. One of the side walls of the box 6 is provided with a discharge-opening 29, and said box 6 is provided with an inclined seed-guiding board 30 leading to the opening.

In operation the elevator is run through the medium of the pulley 4, and thus motion is communicated from thence to the pulley 24, which latter is continuously operated, together with the shaft 23 and the gear 26. The grain is elevated by the elevating mechanism, and by a discharge-spout 21 is discharged into the grain-weigher hopper. The grain falling from the discharge-spout into the weighing-hopper finally overcomes or counterbalances the weight of the weighing-bale, thus depressing the rear end of the same, together with the shaft 13, the gear 14, and the sprocket 15. Such depression of the shaft throws the teeth of the gear 14 into engagement with the teeth of the gear 26, and as the gear 26 is constantly

rotating motion is imparted from said gear to the shafts 14 and 13, respectively. The elevating of the front end of the bail serves to raise the lug or pin 12 out of engagement with the notch 19 of the disk, so that the stub-shaft 17, the disk 18, and the sprocket 20 are all driven by the sprocket-chain 21'. As the shaft 13 rotates so also is the hopper 28 rotated, so that its contents is dumped into the box 6 and is delivered from thence down the inclined seed-board to the delivery-opening, from which it may pass into the wagon or other receptacle thereunder. After delivering the grain from the hopper the continued rotation of the same and its shaft brings the hopper to its original position under the delivery-spout of the elevator, and when in such position the notch in the disk 18 will have arrived in such position as to permit of the lug or pin 12 again dropping therein and thus locking the hopper against rotation. In this manner the hopper is successively filled, automatically dumped, and returned to position.

It will be obvious that, as before stated, the disk 18 may have a series of notches 19 and as many hoppers, whereby the necessity of the hopper making an entire rotation before arriving at the receiving-point is unnecessary.

It will be observed that the action of the machine is entirely automatic, requiring no attention, and that the construction is simple and economical, in that but few cogs and very little gearing are employed and that of the simplest kind, rendering the machine not liable to excessive wear or breakage of parts.

Having described my invention, what I claim is—

1. In a grain-meter, the combination, with the fulcrumed scale-beam having a counterbalancing-weight at one end and a hopper-shaft journaled in the beam at the opposite side of the fulcrum, a hopper mounted rigidly upon the shaft, and a gear mounted upon the shaft, of a delivery or discharge leading to the hopper, a gear located below the hopper-shaft gear and in the path of the same, and means for rotating the gear continuously, substantially as specified.

2. In a grain-meter, the combination, with the grain-receiving box, the U-shaped bail fulcrumed thereon, the counterbalancing-weight mounted upon one end of the bail, the rotatable shaft, the hopper mounted rigidly upon the shaft and adapted to rotate therewith, and

the gear mounted on the shaft, of the elevator having the discharge terminating over the hopper, a pulley mounted upon the elevator-shaft, bearings below the same, a shaft mounted in the bearings, a pulley thereon, a belt connecting the elevator-pulley with said pulley, and a gear mounted upon the shaft in the path of the gear of the hopper-shaft, substantially as specified.

3. In a grain-meter, the combination, with the scale-beam, a weight located at one end of the same, a shaft journaled at the opposite end, a hopper mounted for rotation with the shaft, a sprocket mounted upon the hopper-shaft, a shaft located in front of the hopper-shaft, a sprocket thereon, chain connections between the two sprockets, a disk mounted on said front shaft and having a notch, and a lug projecting from the scale-beam and adapted to engage the notch when said beam is depressed at its weighted end, of a discharge-spout terminating above the hopper and means for rotating the hopper-shaft at each depression of the hopper end thereof, substantially as specified.

4. In a grain-meter, the combination, with the grain-receiving box having a discharge, a U-shaped scale-beam fulcrumed on the box, a counter-weight at one end of the same, a shaft journaled at the opposite end, a hopper mounted upon and for rotation with the shaft and directly over the box, a sprocket and gear mounted upon the shaft, a front shaft, a sprocket and disk mounted thereon, the latter being provided with a notched periphery, a chain connecting the two sprockets, and a lug mounted upon the weighted end of the bail and adapted when lowered to engage with the notch of the disk, of an elevator, a pulley mounted upon the shaft thereof, a belt depending from the same, a frame having bearings located below the hopper-shaft, a shaft mounted in the bearings thereof, a gear mounted on the shaft below the gear of the hopper-shaft, and a pulley mounted on the shaft and operated by the belt, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS S. PEARSON.

Witnesses:

JESSE HAINES,
D. M. PEDIGO.