

C. H. HORTON.  
GRAIN-REGISTER.

No. 187,137.

Patented Feb. 6, 1877.

FIG. 1.

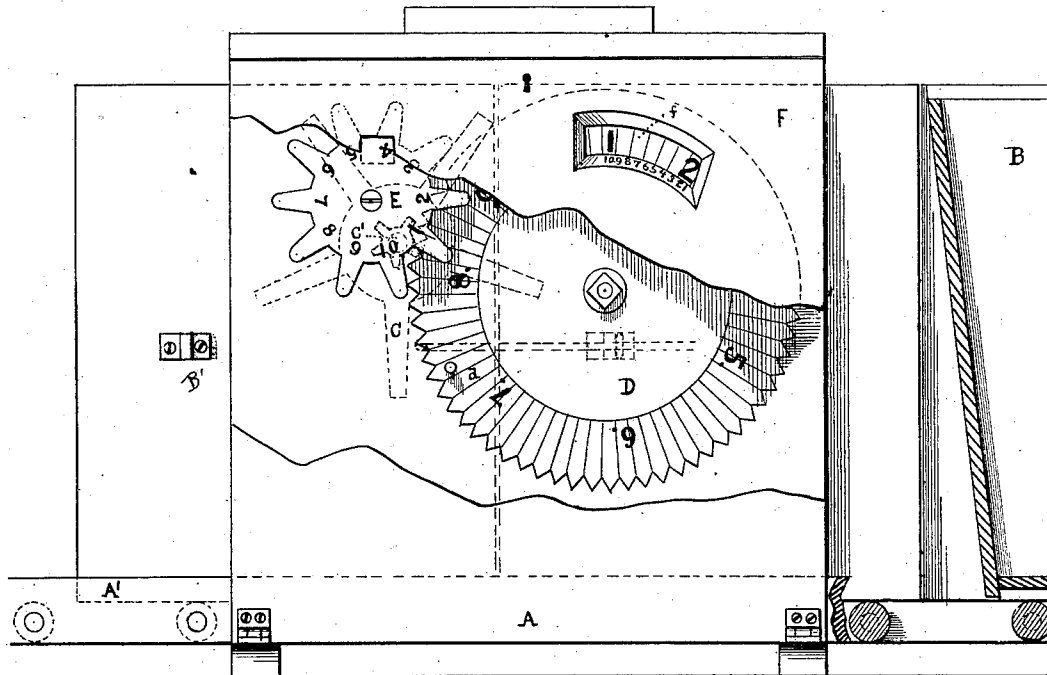
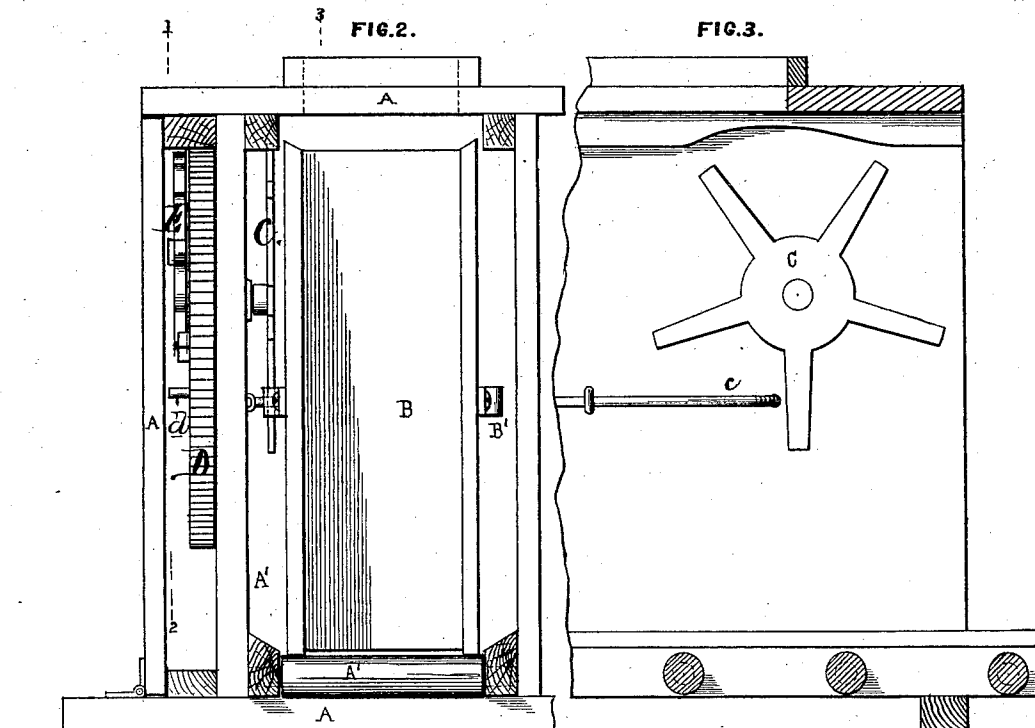


FIG. 2.

FIG. 3.



WITNESSES:  
Geo. W. Cushing  
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INVENTOR:  
Chas. H. Horton.  
By James L. Norris.

# UNITED STATES PATENT OFFICE.

CHARLES H. HORTON, OF ROCHESTER DEPOT, OHIO.

## IMPROVEMENT IN GRAIN-REGISTERS.

Specification forming part of Letters Patent No. **187,137**, dated February 6, 1877; application filed July 11, 1874.

### *To all whom it may concern:*

Be it known that I, CHARLES H. HORTON, of Rochester Depot, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Grain-Measures, of which the following is a specification:

My invention relates to apparatus to be used in connection with thrashing-machines for measuring and recording the measurement of grain as it is delivered from the thrashing-machine.

It has been found, in practice, that registering apparatus in which the blow of a measuring-vessel actuated a pawl to set in motion the ratchet-wheel of a registering mechanism was objectionable for several reasons, principal among which was the fact that the use of a pawl or series of pawls involved the use of corresponding retractile springs, which soon become inoperative, owing to the frequent jarring given by the blows necessary in revolving. I have had it in view to make a register in which the use of all such springs could be dispensed with, and the impact be given directly to one of the wheels of the register-train. My invention, to accomplish this, will be more fully hereinafter described.

In the drawings, Figure 1 is a front elevation of the apparatus with the door broken, showing the registering apparatus; Fig. 2, a vertical cross-section of my apparatus; and Fig. 3, a detached view, showing the armed wheel which actuates the mechanism, &c.

My invention consists in a registering-train operated by an armed or spurred wheel arranged to be turned in one direction by a lug or projection on a measuring-vessel, and held in the other direction by a stop; and an inclosed passage-way, having suitable guides for the measuring-vessel, all arranged and combined so that the measuring-vessel can be passed through said passage in one direction only, and that said vessel, during its passage, shall set in operation the registering-train, substantially as herein set forth and shown.

The letter A represents a chamber or structure, inclosed at the sides and open at opposite ends, forming a passage through which the measuring-vessels can be passed. Through said passage extends a track, A', consisting of a series of friction-rollers journaled at suitable

distances apart along the bottom of the passage. B represents the measuring-vessels, which may be made in any desired form, each of which is provided with a projection, B', on one side, to operate the armed or spurred wheel C, which is situated on the side of the wheel in such position as to be operated by the lugs or projections on the measuring-vessels during their passage. On the same side of the passage is a spring-stop, c, which is so constructed and arranged that as one of the arms of the wheel C is operated by the projection on the measuring-vessel and carried forward, the next succeeding arm will be held by the spring-stop until the next succeeding vessel carries it forward. By this construction it will be evident that the vessels can be passed through the passage in one direction only. The armed wheel C is rigidly centered on an axle or shaft which is journaled in the structure A, said shaft serving to operate the recording and registering devices. On the opposite end of said shaft is rigidly secured a cog-wheel, c', which gears with the toothed gear-wheel D. This wheel is provided with one hundred teeth or cogs, and also with a pin, d, so situated on its face as to engage with an armed registering-wheel, E, at each revolution. The said wheel E is journaled in the side of the structure or chamber A in any convenient manner and gears into the wheel D. M represents a door hinged to the side of the structure over the registering apparatus, and provided with suitable means for locking, to prevent tampering with said apparatus. This door is provided with openings or apertures f, one over each registering-wheel, to enable the operator at any time to ascertain the number of vessels and the quantity of material passed through, the vessels being of a known capacity.

The operation of the apparatus is as follows: The measuring-vessels are passed, one at a time, a sufficient distance into the passage to come under the hopper on the top of the same. The grain is then filled in through the hopper; and when the vessel is filled the next succeeding vessel is pushed forward, so as to advance the first and take its place. The lug or projection on the first vessel engages one arm of the spurred wheel and moves

it sufficient distance to carry the first registering-wheel one tooth. This registers one on the wheel D. When one hundred vessels have passed, the pin *d* engages the wheel E, and moves it one notch or tooth, thus registering the hundred vessels that have passed. The operator observes the numbers through the openings in the door, and, as the latter is locked, any tampering with the registering devices will be prevented. The wheel D indicates the hundreds, and the wheel E indicates units and tens.

What I claim, and desire to secure by Letters Patent, is—

1. A grain-registering apparatus, consisting of a registering-train operated by an armed or spurred wheel, arranged to be turned in one direction by a lug or projection on a measure, and held in the other direction by a stop, and an inclosed passage-way having suitable guides for the measure, all arranged and com-

bined so that the measure can be passed through in one direction only, and that such passage shall set in operation the registering-train, substantially as set forth.

2. The armed wheel C, and spring-stop *c*, in combination with the sliding measuring-box, having a side projection engaging with said wheel, substantially as and for the purpose set forth.

3. The combination, substantially as hereinbefore described, of the armed wheel C, spring-stop *c*, sliding measuring-box B, provided with side projections B', and the registering apparatus, as described.

In testimony that I claim the foregoing I have hereunto set my hand.

C. H. HORTON.

Witnesses:

WILLIAM OSTRANDER,  
W. H. BLAIR.