

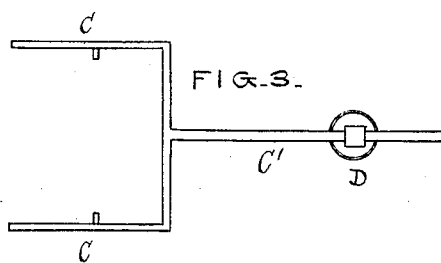
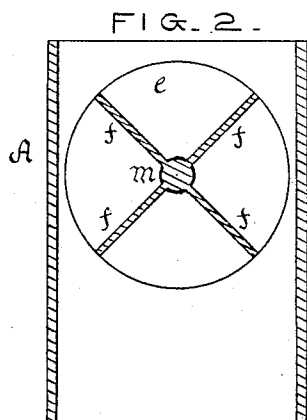
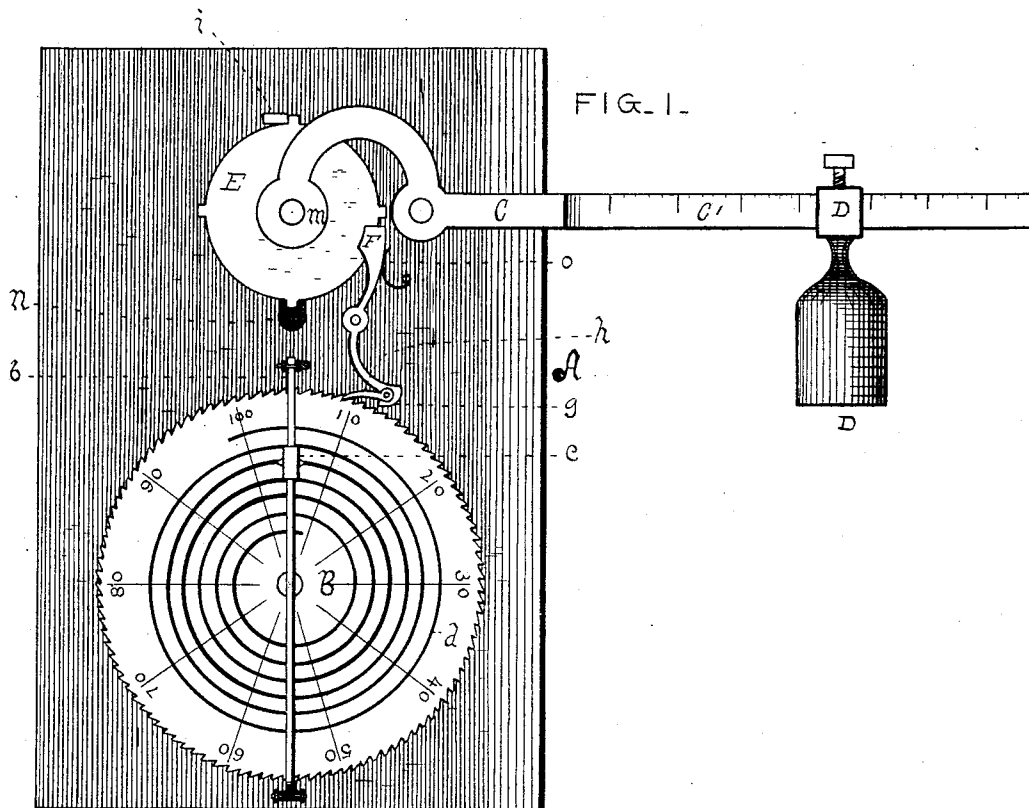
(No Model.)

E. N. WILLIAMSON.

GRAIN METER.

No. 315,585.

Patented Apr. 14, 1885.



Witnesses.

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J. D. Walker

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# UNITED STATES PATENT OFFICE.

ELWOOD N. WILLIAMSON, OF NEAR LODGE, ILLINOIS.

## GRAIN-METER.

SPECIFICATION forming part of Letters Patent No. 315,585, dated April 14, 1885.

Application filed August 16, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ELWOOD N. WILLIAMSON, a citizen of the United States, residing near the town of Lodge, in the county of Piatt and State of Illinois, have invented certain new and useful Improvements in Grain-Meters, of which the following is a specification.

My invention relates to that class of grain-meters in which rotating sector-formed receptacles are swung in the end of a scale-beam and made to descend with a given weight of grain, and by a partial revolution effect a discharge.

My invention consists in the mechanism employed to produce the necessary rotation in the descending receptacles.

In the drawings accompanying and forming a part of this application, Figure 1 is a side view of my device. Fig. 2 is a vertical section of the same on a surface parallel to the surface indicated in Fig. 1, and Fig. 3 is a plan of the scale-beam.

The receptacles used to weigh the grain are shown in section in Fig. 2, *e* representing an end of the same, *f f f* showing the partitions, and *m* indicating the axle on which the entire device rotates. Axle *m* projects through slots *n* on both sides of casing *A*, and is supported by terminations *C C* of bifurcated scale-beam *C'*.

Rigidly attached to an end of axle *m* is a wheel, *E*, provided with projections corresponding in number to the number of receptacles on the axle. In contact with wheel *E* is pawl *F*, located in substantially the position shown. Spring *o* holds pawl *F* constantly in contact with wheel *E*. Pawl *F* extends below its fulcrum and forms a bearing for hinged ratchet *h*, which imparts motion to indicator *B*. Wheel *B* is provided on its circumference with ratchet-teeth and on its face with a spiral groove, *d*. Bar *b* extends diametrically across the face of wheel *B*, and is provided with sliding pointer *c*, which engages the groove *d*.

As shown in Fig. 1, a projection of wheel *E* rests against block *i*, and holds the receptacles in the position to receive the grain. (See Fig. 2.)

The grain has no tendency to rotate the receptacles, but simply depresses the end of the scale-beam whenever a sufficient weight has accumulated. As the receptacles descend, wheel *E* ceases to press against block *i*, and pawl *F*, by opposing a resisting-surface tangentially to a projection on said wheel, trips the receptacles and begins a quadrantal rotation that the weight of the grain completes, thereby discharging the grain from the loaded receptacle, and carrying an empty receptacle in proper position to receive the grain from the discharge-spout of the separator. At every partial revolution of wheel *E* a projection operates on pawl *F* and moves wheel *B* one notch. There being one hundred notches on the wheel, any number from one to one hundred, inclusive, can be indicated on the circumference of the wheel, and any number over one hundred can be indicated by the figures on the circumference, together with the pointer *d*.

In the position shown in the drawings, wheel *b* indicates that the wheel *E* has made two hundred and five quarter-revolutions—that is, pointer *d* shows that two complete revolutions of wheel *B* have been accomplished, and the circumference of the wheel shows that five notches have passed indicating-bar *b*.

It will be readily seen that the capacity of the indicator can be increased by increasing the number of coils in the groove, and the device may be reset at any time by detaching one end of bar *b*, and sliding pointer *c* to its highest position. End *g* of pawl *F*, by coming in contact with wheel *B* at the termination of every stroke, acts as a lock to prevent an excess of rotation.

The registering device herein set forth forms no part of my invention, and is shown and described merely as an expedient form of attachment for my measuring device.

I claim—

The combination, with receptacles *e f*, of beam *C C'*, weight *D*, wheel *E*, block *i*, and trip-pawl *F*, as and for the purpose set forth.

ELWOOD N. WILLIAMSON.

Witnesses:

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