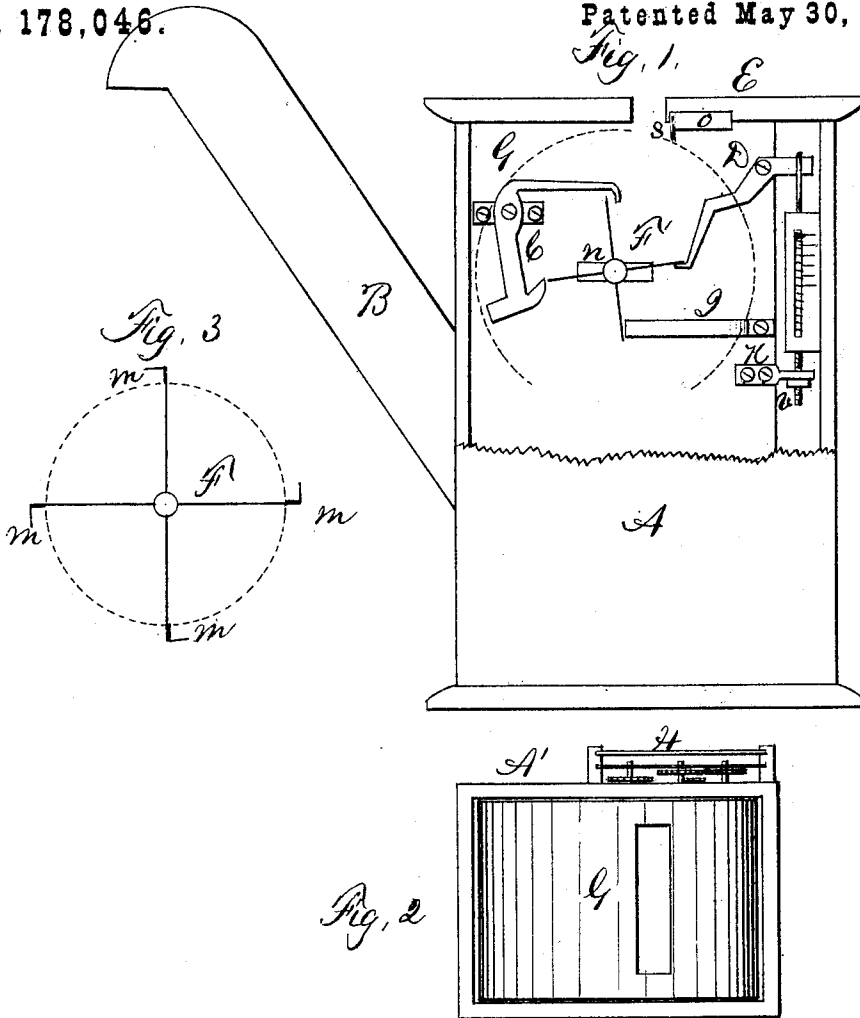


J. T. CARMONY.
GRAIN WEIGHER.

No. 178,046.

Patented May 30, 1876.



Witnesses.
James A. [Signature]
Samuel [Signature]

Inventor.
Joseph T. Carmony
By Barton Pickering
His Atty, in Fact

UNITED STATES PATENT OFFICE.

JOSEPH T. CARMONY, OF WEST BALTIMORE, OHIO.

IMPROVEMENT IN GRAIN-WEIGHERS.

Specification forming part of Letters Patent No. **178,046**, dated May 30, 1876; application filed March 4, 1876.

To all whom it may concern :

Be it known that I, JOSEPH T. CARMONY, of West Baltimore, State of Ohio, have invented an Automatic Grain-Weigher, of which the following is a specification:

The object of my invention is to weigh grain automatically. As the grain descends through the machine it is weighed, and the amount in bushels is indicated by a register attached directly to the machine.

Figure 1 is a side elevation of the machine, parts being cut away to show interior portions. Fig. 2 is a top view of the interior part of the frame. Fig. 3 is a transverse section of the revolving wheel.

A represents a frame which has two parts, the external to close all within securely, and the internal, which supports the operating parts. Externally it is a quadrangular box, having a pipe, B, attached to the left side, through which the grain is carried by an elevator to the end, where it falls into a bag. The elevator is driven by a belt from the separator to which the weigher is attached.

At Fig. 3 is shown the revolving wheel, which may be described as a shaft, to which are attached four wings, being equidistant apart, the ends being closed up so as to form four distinct apartments. The wings and the ends are lined with cloth to prevent the grains getting between the wheel and the case which surrounds it. At Fig. 3, *m*, and dotted lines, show the position of the cloth. External to the interior frame are attached four arms, *F'*, to the shaft, the same being equidistant apart. This wheel is supported on bearings *n* within the frame. The rear end of the shaft has on it a cog-wheel, which gears into a system of wheels, pointers, and dials, (shown in part at H, Fig. 2,) which in its entirety constitutes a register constructed after a well-known plan. The wheel is surrounded in part by the case G, (shown in dotted lines, Fig. 1, and a top view at Fig. 2.) At the top is a quadrangular orifice through it corresponding with an orifice through the top E. The grain passes through these orifices into the chambers of the wheel. At the bottom is a larger orifice for the discharge of the grain from the wheel, as shown at the lower margin of dotted lines G, Fig. 1. To protect the grain in its passage into the

chambers of the wheel bristles *s*, which are held in a recess within the top by the block *o*, are so placed to prevent the grain being caught between the wings and the case. If the grain should be caught at this point it would prevent that freedom of movement which is essential to the proper working of the machine.

Near the upper right-hand corner of the frame is pivoted the lever D. The lower end of this lever engages successively the four arms *F'* of the revolving wheel. The upper end is connected with a device very similar to a spring-balance. The wire hooked over this arm extends to the bottom of a spiral spring. A rod, terminating in a screw, connects the upper end of the spiral coil to the arm K, and on this screw is an adjusting-nut, *v*, the use of which is to regulate the amount of grain which shall release the hold of the lever on the arms. The marks on the scale may have numbers corresponding with a specific weight, and thereby indicate by a hand just where it should be set to indicate a bushel of different kinds of grain. A weight suspended from this lever would produce like results. When the arm has escaped from the lever its movement is impeded by the flat spring I. The purpose of this is to relieve the machine of an excessive or injurious jar. At the upper left-hand corner is pivoted the lever C, the horizontal part of which has a curved end, which may engage the arms of the wheel. The lower end of this lever is made heavy, and when undisturbed will free the upper portion from the arms; but as the lower part is moved out by the arms striking the rounded face of this lever, the hooked end, for an instant, is made to engage the vertical arm, and thereby arrests the revolving movement of the wheel before the horizontal arm strikes the adjusting-lever D, and thereby relieves it from an injurious jar.

The operation may be thus described: The grain passes through the orifice in the top into the chamber on the right side of the wheel. The chamber continues to fill up until the lever is depressed. The wheel is then free to rotate from the weight of grain. The spring I impedes the movement, and the lever C nearly arrests the movement, and the next

arm settles on the adjusting-lever, to be released when the chamber again receives its load, and thus the operation continues while the grain is supplied to the machine, and the register records the number of bushels which has passed through the machine.

An elevator is used in connection with the machine for the purpose of conveying the grain into sacks. The external frame is closed with a door, which may be locked, and prevent any interference with the proper working of the machine.

What I claim as my invention is—

The revolving wheel F, with its arms F', the case G, the lever C, spring I, and adjusting-lever D, with a spring or weight counterpoise, constructed substantially as and for the purpose set forth.

JOSEPH T. CARMONY.

Witnesses:

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