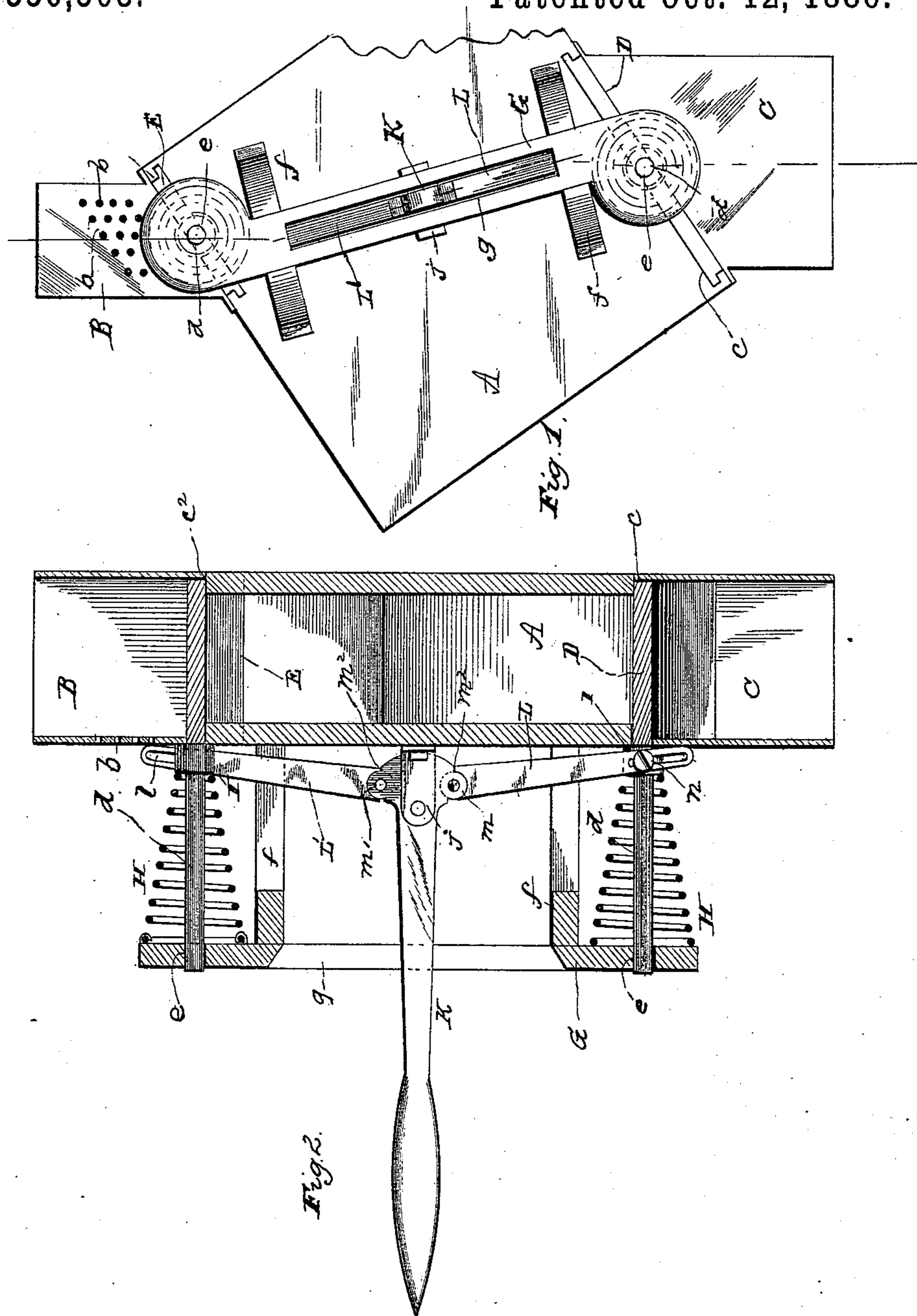


(No Model.)

W. J. RICARDS.  
GRAIN MEASURING DEVICE.

No. 350,503.

Patented Oct. 12, 1886.



Witnesses:  
*E. Nottingham*  
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# UNITED STATES PATENT OFFICE.

WILLIAM JOSEPH RICARDS, OF BRIDGEVILLE, DELAWARE.

## GRAIN-MEASURING DEVICE.

SPECIFICATION forming part of Letters Patent No. 350,503, dated October 12, 1886.

Application filed April 29, 1886. Serial No. 200,550. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM JOSEPH RICARDS, of Bridgeville, in the county of Sussex and State of Delaware, have invented certain new and useful Improvements in Grain-Measuring Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in grain-measuring devices.

The object is to provide a simple attachment for the bagger of a thrashing-machine, by means of which all the grain passing therein on its passage from the machine may be quickly and accurately measured.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the meter in end elevation. Fig. 2 is a vertical section.

A represents a hollow box or receptacle, square or rectangular in the present instance, in which the grain is measured. The box is provided at two opposite corners with a pair of spouts, B and C, for receiving and discharging the grain. The smaller spout, B, is adapted to fit on the machine, and is provided with a series of perforations, *b*, in its side, while the larger one, C, acts as an outlet simply. The spouts are located at the corners of the receptacle, to always insure the complete filling and emptying of the said receptacle, so that the greatest accuracy in measurement may be attained. At points *c*<sup>2</sup> and *c*, at the bases of the spouts B and C, respectively, the doors or gates D and E are located. Each door is provided at its central portion with an operating-rod, *d*. The rods *d* slide in perforations *e*, formed in a bar, G, the latter being secured to the box by a pair of brackets, *f*, which serve to hold it at the desired distance away from the side of the box. Between each sliding door D E and the bar G a conical spiral spring, H, preferably of brass wire, is interposed, encircling the rod *d*, with its larger end rigidly secured to the bar G, and its opposite end impinging upon a collar, I, which surrounds the rod where it

unites with the door. The bar G is held at a distance from the box corresponding approximately to the length of the sliding doors D and E. A hand-lever, K, which extends outwardly through an elongated slot, *g*, in the bar G, is pivotally secured near its inner end between a pair of knee-brackets, *j*, or between the branches of a bifurcated lug secured to the side of the box A, about midway between the brackets *f*. The extreme inner end of the lever K is widened or provided with oppositely-extending projections *m m'*, to which are hinged the gate-operating arms L L'. The opposite ends of the arms L L' are provided at their ends with elongated closed slots *l*, which embrace studs or pins *n*, set in the sides of the collars I. The arms L L' are allowed a swinging motion toward and away from the box A, within slots *i*, formed in the brackets *f*. The hinge-joints at the junction of the arms L L' with the lever are so constructed that when the lever K rests at right angles to the side of the box the two arms L L' will occupy positions along the face of the box, with their inner end shoulders, *m*<sup>2</sup>, in contact with their corresponding seats on the end of the lever, to allow the latter to swing to the right or left far enough to open one of the sliding doors.

The following is the operation of the device: By depressing the lever K in the slot *g*, the shoulder *m*<sup>2</sup> being in engagement with the end of the lever, the arm L' is swung outwardly, carrying with it the slide-door E. The slide-door E is held in this adjustment until the receptacle is entirely filled, as observed through the perforations in the upper spout, when the lever K is raised quickly, allowing the tension of the spring H to close the door E, thereby cutting off the supply of grain. As the raising of lever K is continued past the center the door D is opened by arm L in like manner as the door E was opened by the arm L', and the grain is let out. As soon as all of the grain is expelled the door E is again opened, as described, and the receptacle again filled.

It is evident that slight changes might be resorted to in the form and arrangement of the various parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the construction herein set forth; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a grain-measuring device, the combination, with the grain-receptacle, of a pair of spring-actuated sliding doors or gates, and a single vibrating lever connected with each door or gate, and adapted to open either door or gate while the other remains closed, substantially as set forth.

2. In a grain-measuring device, a vibrating gate-operating lever having gate-operating arms hinged thereto, and a gate loosely connected to each operating-arm, substantially as set forth.

3. In a grain-measuring device, the combination, with the operating-lever pivotally secured to the grain-receptacle, and the shouldered operating-arms hinged to the lever, of the sliding gates and the springs secured on the gate-operating rods and adapted to close the gates, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM JOSEPH RICARDS.

Witnesses:

JAMES A. HOUSEL,  
M. W. WELCH.