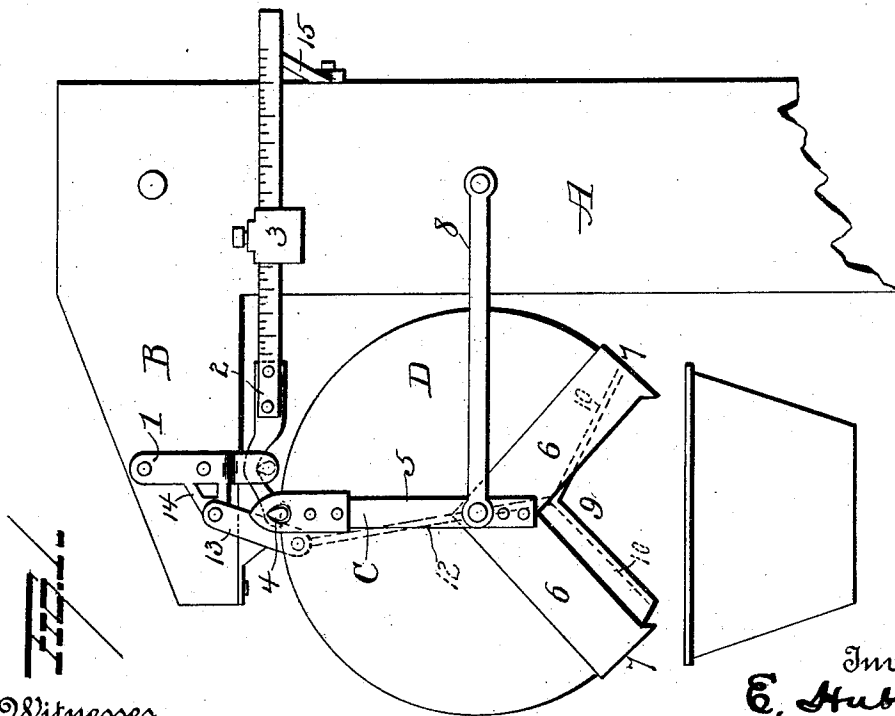
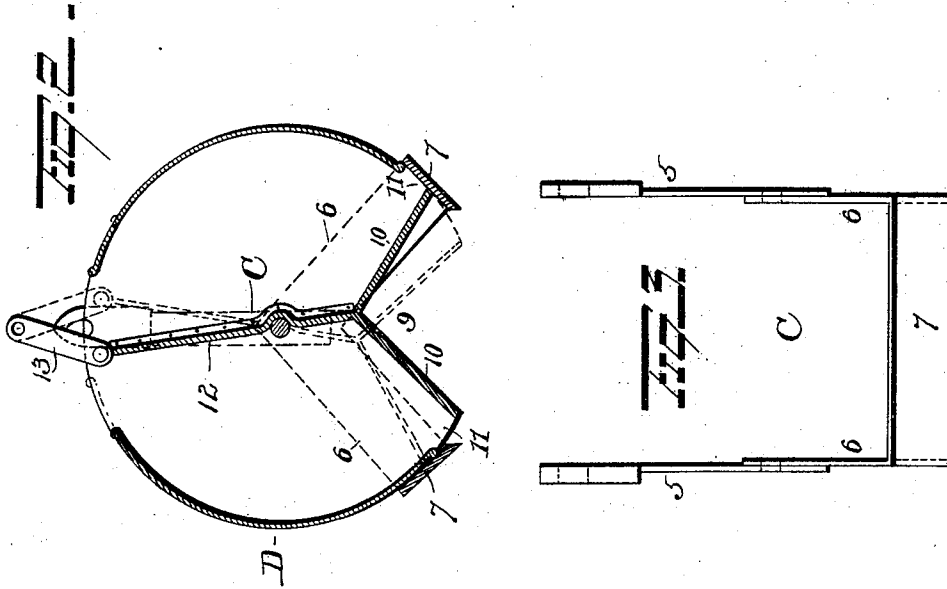


(No Model.)

E. HUBER & J. W. MILLER.
GRAIN METER.

No. 548,550.

Patented Oct. 22, 1895.



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UNITED STATES PATENT OFFICE.

EDWARD HUBER AND JACOB W. MILLER, OF MARION, OHIO.

GRAIN-METER.

SPECIFICATION forming part of Letters Patent No. 548,550, dated October 22, 1895.

Application filed May 8, 1895. Serial No. 548,557. (No model.)

To all whom it may concern:

Be it known that we, EDWARD HUBER and JACOB W. MILLER, of Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Grain-Meters; and we 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.

Our invention relates to an improvement in grain-meters, the object of the invention being to produce a grain-meter which shall be simple in construction, comparatively cheap to manufacture, easy to place in position for use, and one which shall be effectual in the performance of its functions and not liable to get out of order.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation illustrating our improvements. Fig. 2 is a sectional view. Fig. 3 is a detail view.

A represents the casing of a grain chute or elevator, and B an outlet-spout at the upper end thereof, to which latter our improved grain-meter is attached. A bracket or hanger 1 is secured to the spout B, and in this bracket or hanger a scale-beam 2 is mounted, at a point near one end, said scale-beam being provided with the usual sliding weight 3. At the extremity of the smaller arm of the scale-beam knife-edges 4 are located, and on these knife-edges a frame C is suspended. The frame C comprises parallel depending bars 5, diagonally-disposed arms 6, radiating from the lower ends of said bars, and cross-bars or plates 7, connecting the free extremities of the respective pairs of radiating arms 6, said cross-bars or plates being intended to constitute fixed gates, in a manner hereinafter explained.

An oscillatory drum D is disposed within the frame C and pivotally connected thereto, preferably at the juncture of the bars 5 with the radiating arms 6, and in order to properly guide the meter in its vertical movements when the scale-beam is oscillated the frame

C is connected with the casing A by means of pivoted links 8. The lower portion of the drum is recessed, as at 9, to form two inclined bottoms 10, the outer or lower ends of which form one wall or edge of lateral outlets 11 in the lower portions of the drum, said outlets being alternately opened and closed by the cross-bars or gates 7 as the drum oscillates. From the apex formed by the inclined bottoms 10 a partition 12 extends upwardly through the center of the drum and divides the latter into two compartments, which receive grain from the spout B alternately. Links 13 are pivotally connected at one end to the drum D at points in line with the partition 12, and at the other end to the spout B or suitable arms 14, projecting from the hangers, which support the scale-beam, said links being normally disposed in an inclined position and adapted to prevent the oscillation of the drum until the weight of the grain in one of its compartments shall have caused the drum to descend against the resistance of the counter weight on the scale-beam. The scale-beam will be retained normally in a horizontal position by means of a stop or rest 15.

From the construction and arrangement of parts above set forth it will be seen that the outlet of one compartment of the drum will be always closed by one of the cross-bars or gates 7, while the outlet of the other compartment will be open to permit the discharge of grain therefrom. While grain is entering the closed compartment of the drum the latter will be prevented from oscillating by the links 13, but when the weight in said compartment shall have become sufficient to overbalance the counterweight on the scale-beam, the latter will turn on its fulcrum and permit the drum to descend slightly, whereupon the links 13 will become disposed (momentarily) parallel or in line with the partition 12, and the overbalancing weight of the grain in one of the compartments of the drum will cause the latter to oscillate, so that its outlet will move away from the cross-bar or gate 7 and permit the discharge of grain from said compartment, the oscillation of the drum at the same time causing the outlet of the other compartment to be closed by moving over the other cross-bar or gate 7. The links 13 will prevent the drum from oscillating too far in

either direction. It is evident that when the contents of one compartment shall have been released, and the consequent weight removed from the drum, the latter will rise, the links
5 13 assuming a reverse angle, as shown in dotted lines in Fig. 1, and serves to lock the drum in its shifted position while the grain flows into the empty compartment, upon the filling of which to a sufficient extent to again
10 overcome the weight of the counterbalance on the scale-beam the device will again operate in the manner above explained.

Our improvements are exceedingly simple in construction; the drum, being located inside the frame C, is protected from obstructions, and the device is, in every respect, effective in the performance of its functions.

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

1. In a grain meter, the combination with a scale beam and a frame or casing suspended therefrom, of an oscillatory drum mounted in said frame or casing and having outlets
25 adapted to be closed by rigid portions of the frame or casing, and a partition in said drum terminating at its lower end in spreading or inclined bottoms, adapted, when the drum oscillates, to move in a path concentric with
30 and inside of the outer frame or casing, substantially as set forth.

2. In a grain meter, the combination with a pivoted scale beam and a frame or casing suspended from one end thereof, said frame

or casing having diagonal or radiating portions at its lower end connected by rigid cross bars, of an oscillatory drum mounted in said frame or casing, a partition in said drum, and inclined bottoms radiating from the lower end of said partition, said inclined bottoms forming one edge of the outlets of the respective compartments formed by said partition, and said cross bars of the frame or casing forming gates for said outlets, substantially as set forth.

3. In a grain meter, the combination with a fixed support, a scale beam pivoted between its ends thereto, and a frame or casing carrying gates, of an oscillatory drum mounted in said frame or casing and having outlets adapted to be alternately closed by said gates, a partition dividing said drum into two compartments, and links pivoted at one end to the drum and at the other end to said fixed support, said links being normally disposed
5 in an inclined position and serving to lock the drum in its normal position and limit the oscillation of said drum, substantially as set forth.

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

EDWARD HUBER.
JACOB W. MILLER.

Witnesses:

JOHN J. CRAWLEY,
FRANK G. NORTON.