(No Model.) 2 Sheets—Sheet 1.

J. HUG.

MEASURING APPARATUS FOR SEPARATORS.

No. 300,779. Patented June 24, 1884.

Fig. 1.

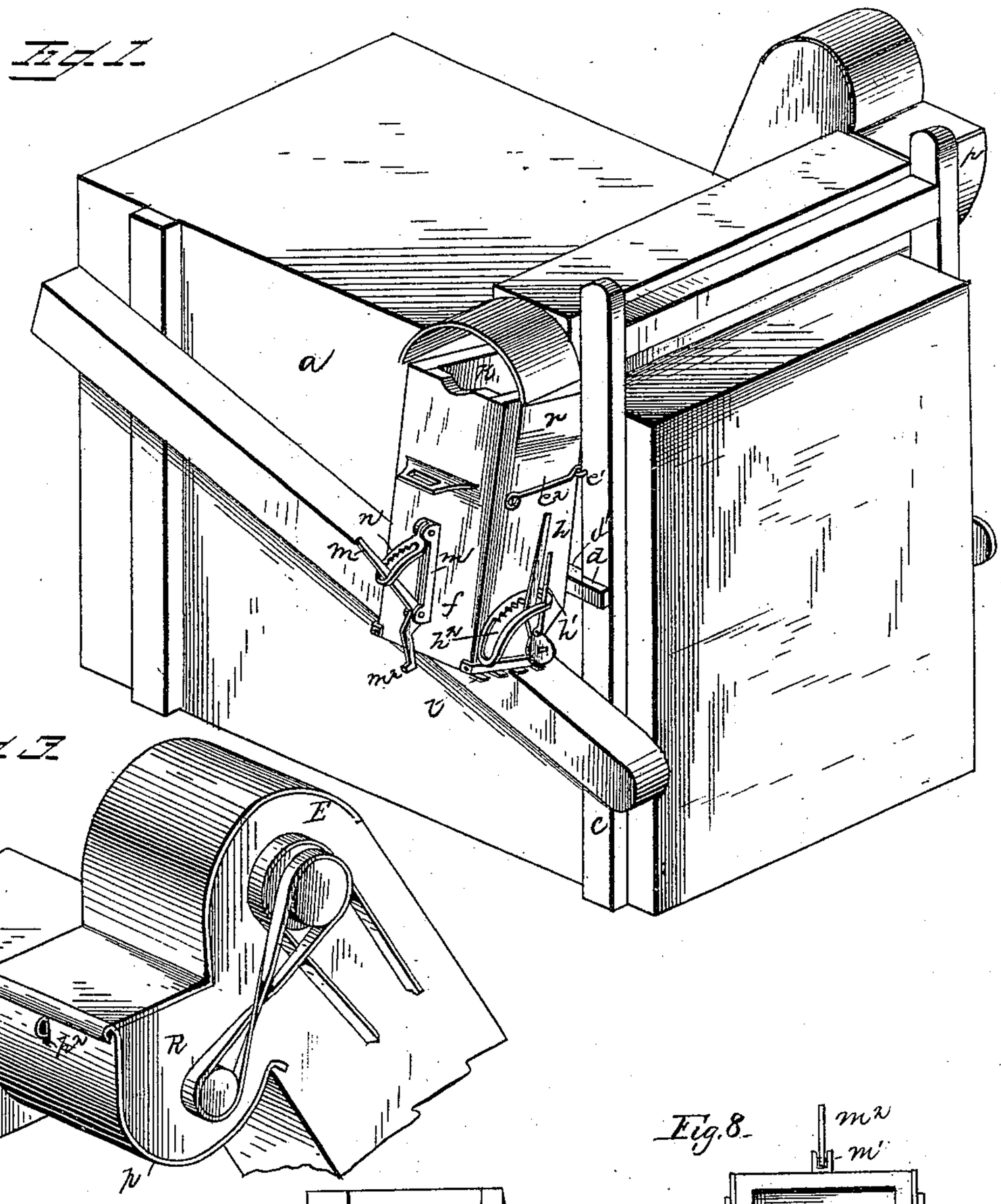


Fig. 2.

Fig. 4.

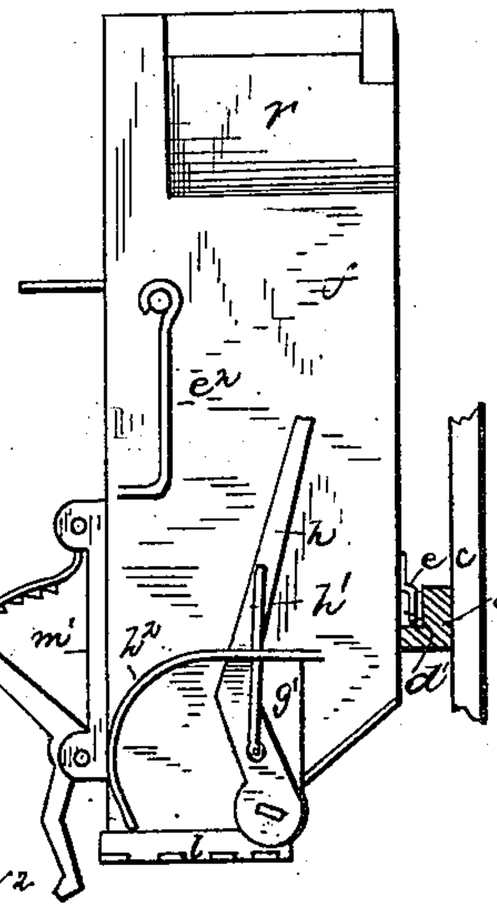
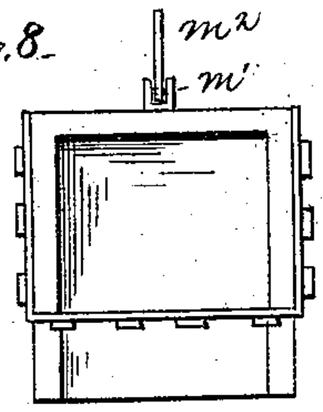


Fig. 8.



WITNESSES
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(No Model.) 2 Sheets—Sheet 2.

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MEASURING APPARATUS FOR SEPARATORS.

No. 300,779. Patented June 24, 1884.

Fig. 2.

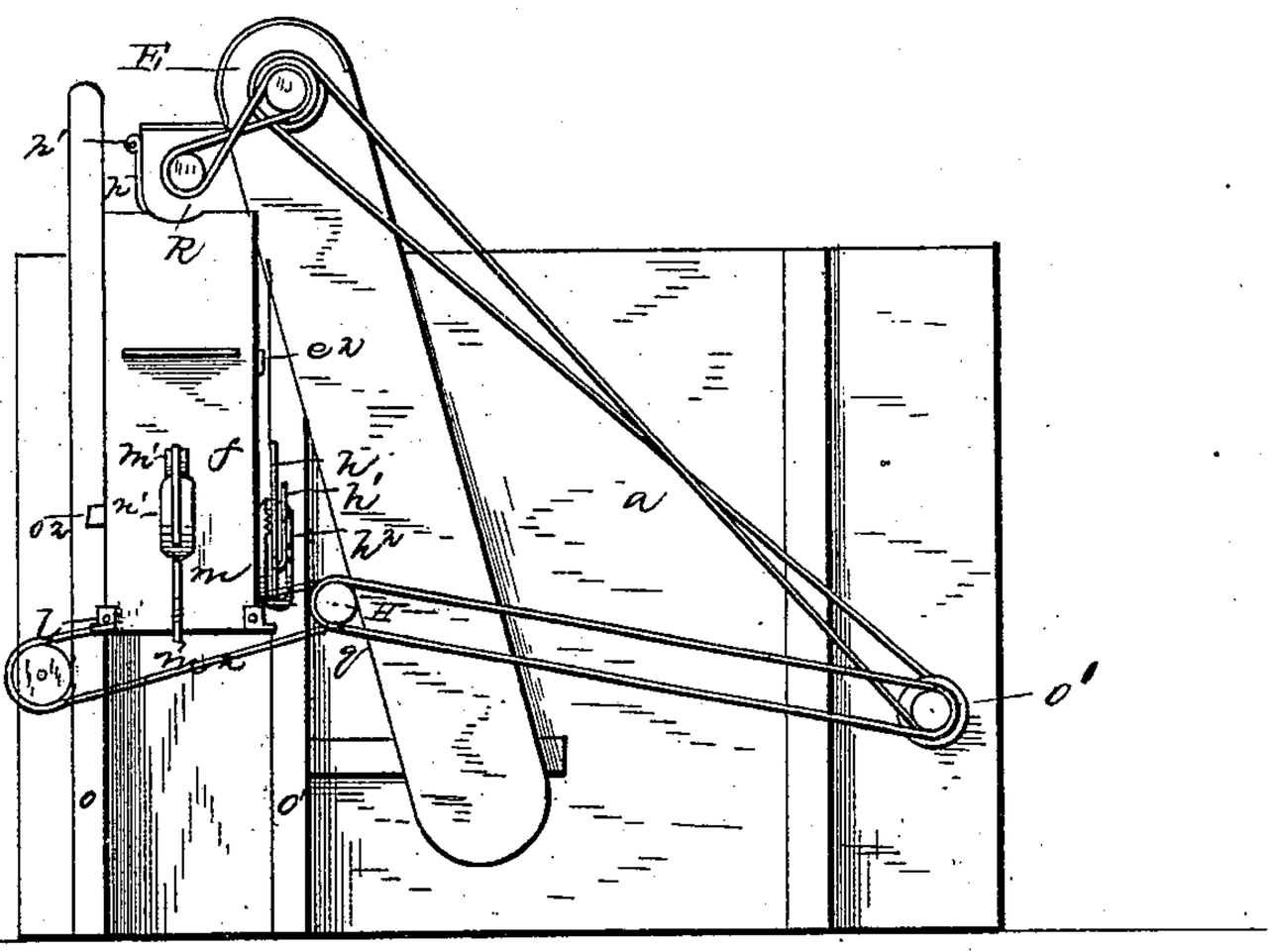

Fig. 5.

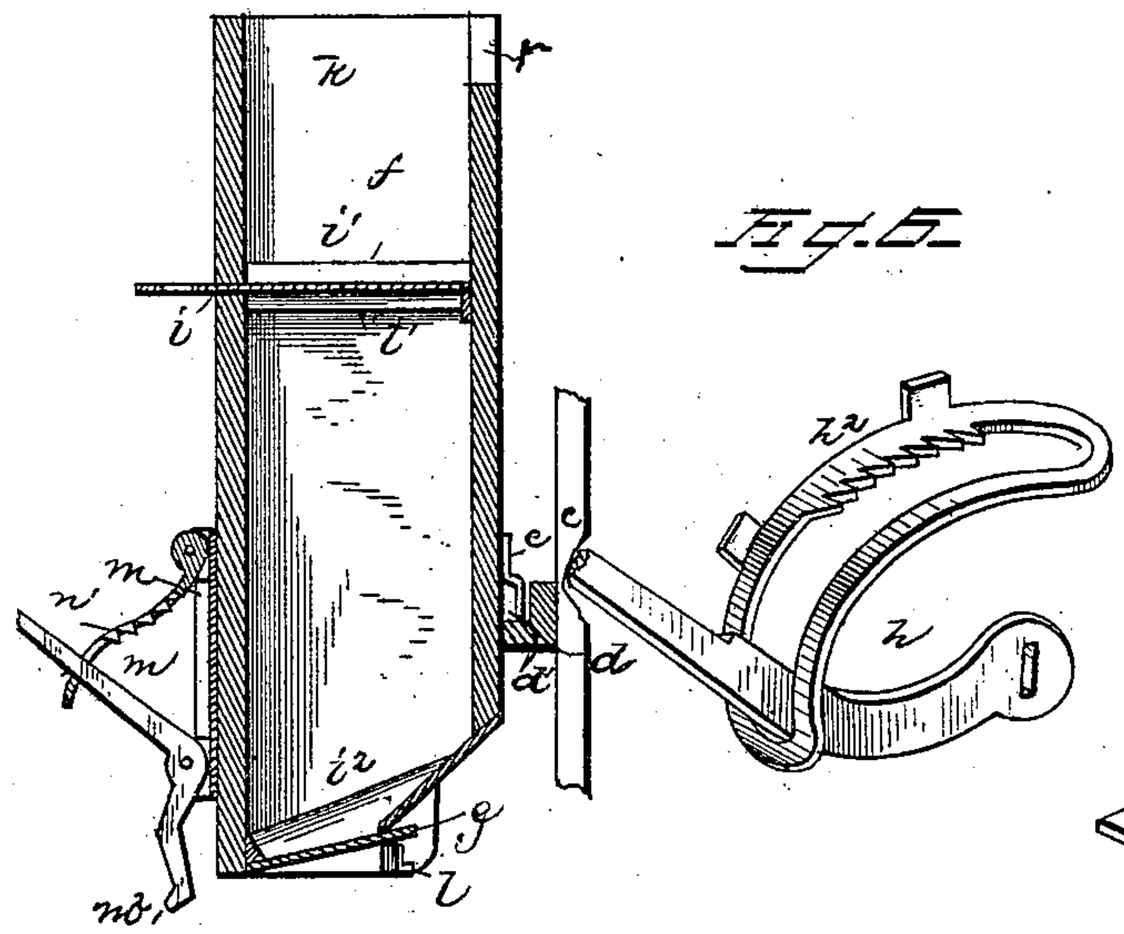

Fig. 6.

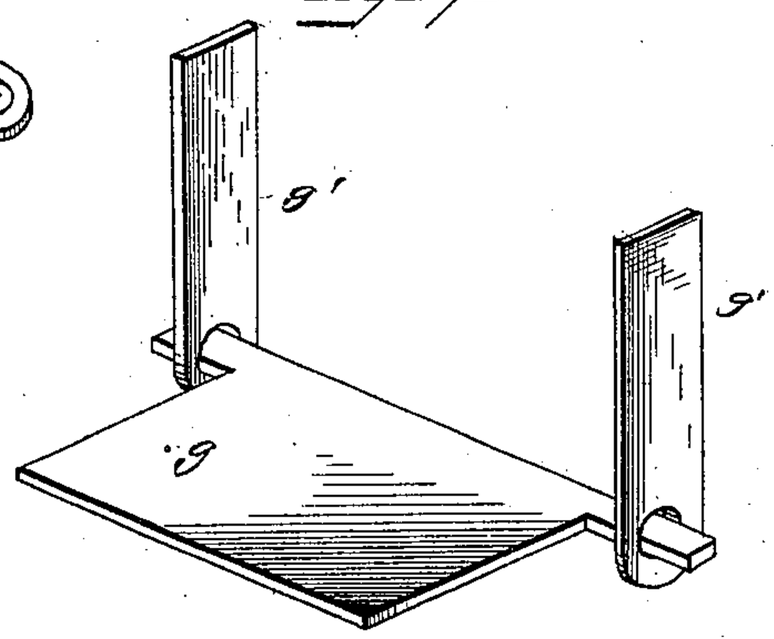

Fig. 7.

WITNESSES
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UNITED STATES PATENT OFFICE.

JACOB HUG, OF ST. JACOB'S, ILLINOIS.

MEASURING APPARATUS FOR SEPARATORS.

SPECIFICATION forming part of Letters Patent No. 300,779, dated June 24, 1884.

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

To all whom it may concern:

Be it known that I, JACOB HUG, a citizen of the United States, residing at St. Jacob's, in the county of Madison and State of Illinois, have invented a new and useful Measuring Attachment for Separators, of which the following is a specifiation, reference being had to the accompanying drawings.

Figure 1 is a perspective view of a portion of a grain-separator having my improved measuring attachment secured to the left-hand side of the same. Fig. 2 is a side view of the attachment secured to the right-hand side of the separator. Fig. 3 is a detail view of the connection between the elevator and the conveyer at the right-hand side of the separator. Fig. 4 is an end elevation of the measuring attachment. Fig. 5 is a vertical longitudinal secitonal view of the same. Figs. 6 and 7 are detail views; and Fig. 8 is a detail view of the bottom of the measuring-box, showing the curved tooth-bar *l* and the distending-lever for holding the sack while being filled.

This invention has relation to measuring attachments for grain separators and baggers; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims appended.

Referring by letter to the accompanying drawings, *a* designates a grain-separator of any approved construction, provided with the necessary shafts, pulleys, and belting to run the elevator, conveyer, &c. From pulley O a cross-belt runs to pulley F to drive the elevator, and a short cross-belt runs from a pulley, R, to a pulley, E, to drive the conveyer. When the belt is thrown off of the pulley E, the conveyer remains idle and the grain falls from the elevator to the measuring-box, hereinafter described, when the measuring-box is attached to the right-hand side of the separator. The casing of the grain-separator *a* is provided on its left-hand side with the vertical strips *c c'*, and the horizontal connecting-strip *d*, secured to them, and provided with the top groove, *d'*, near its front face, to receive the hooks *e e* on the rear face of the measuring-box *f*. Staples *e' e'* are also provided for the hooks e^2 e^2, pivoted to the ends of the measuring-box *f*, whereby said measuring-box *f* is attached to the left-hand side of the separator, beneath the end of the conveyer. The measuring-box *f* is provided with a pivoted bottom, *g*, journaled in bearing-plates *g'* on the outside of the box *f*. The lower end of the box *f* is contracted, as shown, and the journals are at the rear edge of the pivoted bottom *g*. The journals of the bottom *g* project through their bearings, and one of the journals is provided with a hand-lever, *h*, provided with a spring, *h'*, and working in a ratchet-guard, h^2, secured to the end of the box *f*, as shown. The box *f* is provided with a cut-off slide working through a slot, *i*, in the front side of the box, and in guides *i'*, attached to the inner faces of the other three walls of the box, as shown. Above the pivoted bottom *g* beveled strips i^2 are secured to the inner faces of the walls of the box, to prevent any accidental escape of grain around the edges of the pivoted bottom *g*. The measuring-box *f* is so constructed that the space between the pivoted bottom and the cut-off slide is just large enough to hold a bushel of grain. An opening or view-hole, *k*, is provided in one end of the box *f*, whereby the interior may be inspected to ascertain at what time a bushel of grain has accumulated in the measuring-box. A rectangular toothed bar, *l*, extends along the ends and across under the contracted mouth or discharge of the measuring-box to form a sack-holder, and the mouth of the sack to be filled is engaged with the teeth of this curved bar. The front side of the measuring-box *f* is provided with an angle-lever, *m*, fulcrumed in a bearing, *m'*, and provided with a hook, m^2, at its lower end. This lever *m* is provided with a detent which engages the teeth of a curved slotted rack, *n'*, pivoted to the front of the measuring-box above the fulcrum of the lever *m*. This lever *m* is used to distend the mouth of the sack while it is being filled by means of the hook m^2. The right-hand side of the casing of the separator is also provided with uprights *o o'* and a cross-strip, o^2, something similar to those on the left-hand side, having the groove in the strip o^2, and a staple for the hook c^2, in order that the measuring-box *f* may be detached from the left-hand side and attached to the right-hand side directly under the elevator-discharge. When this change is made, the belt is thrown off of the pulley E, so that the con-

veyer remains idle. The bottom plate, *h*, having a hooked edge, *h'*, and staple-openings h^2, is then sprung from its staples and slipped out of its groove, so that the elevator-discharge will open into the measuring-box *f* and the grain will be measured directly from the elevator without passing through the conveyer. The fan-shaft *q* is secured in bearings, one of which is secured to the upright *o'* of the casing and the other to the elevator-casing, as shown. A belt from the pulley O runs to a pulley, H, on the shaft *q*, and a cross-belt runs from the pulley on the shaft *q* to the pulley L, before described.

The measuring-box and the entire arrangement of belts, shafting, and pulleys are simple and easily operated, and the grain can be measured accurately from either the conveyer or directly from the elevator-discharge and conveyed, through the instrumentality of the measuring-box, to the sack in which it is to be transported. The top of the measuring-box *f* is provided with a cut-away portion, *r*, and a bevel portion, which adapts it to fit under the elevator-casing when attached to the right-hand side of the separator, so that the grain will be properly delivered to the box. When the box contains a bushel of grain, the cut-off slide is pushed in and the bottom of the box is opened to permit the bushel thus measured to run into the sack beneath the box.

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

1. The combination, with the separator-casing having right-hand and left-hand receiving attachments, of a detachable measuring-box having a cut-off slide and a pivoted bottom operated by a lever engaging a holding-rack, and hook attachments adapted to engage the receiving attachments on the separator-casing, substantially as specified.

2. The measuring-box having the pivoted bottom in its contracted end operated by a lever provided with a spring for holding it in engagement with a curved rack secured to the outside of the box, in combination with the cut-off slide working in ways secured to three sides of the interior of the box and through a slot in the front of the same, substantially as specified.

3. The combination, with the measuring-box having the pivoted bottom, of the rectangular toothed bar *l*, extending along the ends and across under the contracted portion of the box, and the angular distending-lever having a hook at its lower end, and the pivoted guard-rack *n'*, for holding the sack while being filled from the measuring-box, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JACOB HUG.

Witnesses:
GODFREY J. HANNI,
SAMUEL FREY, Jr.