E. REISERT.
Grain-Meter.

No. 215,160. Patented May 6, 1879.

Fig. II.

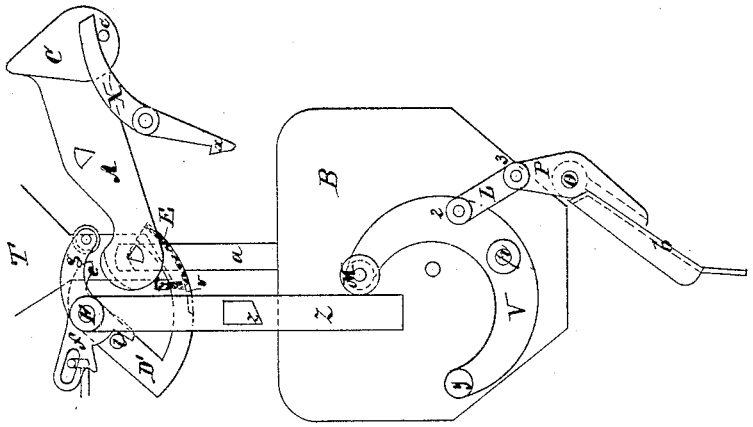
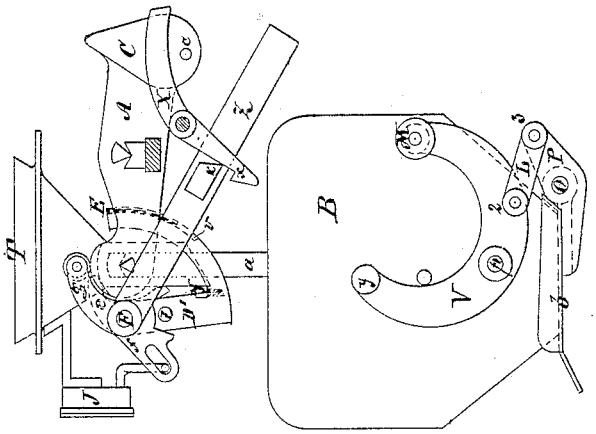


Fig. I.



Witnesses.
O. Arnold.
A. W. Vanblarcom

Inventor.
Edward Reisert
per Dewey & Souder
Attorneys.

UNITED STATES PATENT OFFICE.

EDUARD REISERT, OF COLOGNE, PRUSSIA, ASSIGNOR TO SCHAEFFER & BUDENBERG, OF BUCKAU, NEAR MAGDEBURG, GERMANY.

IMPROVEMENT IN GRAIN-METERS.

Specification forming part of Letters Patent No. **215,160**, dated May 6, 1879; application filed October 5, 1878.

To all whom it may concern:

Be it known that I, EDUARD REISERT, of Cologne, Prussia, have invented new and useful Improvements in Automatic Scales, of which the following is a specification.

The nature of my invention consists of an improvement on the automatic weighing-machine for which an application has been filed by me on the 17th day of May, 1878, and relates principally to the arrangement for closing the hinged bottom of the weighing-vessel.

In the accompanying drawings the two figures represent side views of parts of the machine embodying my invention, to be referred to more particularly in the following description.

Similar letters represent similar parts.

The operation of the valve E, which closes and opens the mouth of the hopper T, acted upon by its arm *e* on one side in contact with the end of the beam-arm A, and at the other side by the pin *l*, attached to the valve-arm D′, and operated by the fork-piece *f*, in connection with the arm *g* and lever Z, is similar, as fully described in my application filed May 17, 1878; and the operation of the lever Z, with its arm *g*, acted upon by the beam-arm A, locked during a certain time of the operation of the scales by means of the arm X, which latter, when the scales turn and the projection *c*, attached to the weight C, is then disengaged from said lever Z, whereby this lever Z is allowed to fall, striking the projection *y* on the lever V to open the hinged bottom *b* of the vessel B, is likewise similar and substantially the same as described in my application of May 17, 1878.

The lever V turns on a pin, *p*, firmly attached to the vessel B, and has on one end a projection, *y*, and at its other end a projection which may be provided with a friction-wheel, M. The arms of this lever V are turned upward, forming a U, to bring the projections *y* and M in the proper positions to be acted upon by the lever Z.

To the hinged bottom *b*, turning on the axis O a lever, P, is attached connected through a link or rod, L, with the lever V. Suitable weights may be attached to the bottom *b* to counterbalance the same, if required.

During the time the vessel is being filled, and when the bottom *b* is in the position shown in Figure I, and has closed said vessel B, the center of the connecting-pin 2, which connects the link L to the lever V, is situated a little below a line passing through the center of pin *p* and the center of pin 3. The link L and that part of the lever V from *p* to 2 form, therefore, a joint operating similar to a toggle-joint; and as long as the center of the pin 2 is situated below the line passing through the center of pin *p* and the center of pin 3 the lever P will be held firmly in its position, and prevented from moving independent of the weight which may be placed upon the bottom *b;* and as the lever P is firmly attached to the shaft O, upon which the bottom *b* is likewise firmly attached, this bottom *b* will be retained in this position, closing the vessel B until the above-described position of the pin 2 is changed.

When the vessel B has been filled with the desired fixed quantity of material, and the scale-beams turn, the projection *c* on the weight C comes in contact with the lever X, as described in my former above-mentioned specification, and relieves thereby the lever Z, allowing the same to fall, and, coming in contact with the projection *y* on the lever V, causes the same to move or turn on its center *p*, thereby moving the joint 2 above the line passing through *p* and 3, when the weight resting upon the bottom *b* will cause the same to open easily to discharge the contents of the vessel B.

When the vessel B has been emptied the weight C will turn the beam-arms A, bringing thereby the end of the beam-arm A against the arm *g*, connected with the lever Z, and cause thereby said lever Z to move or swing again upward, at the same time coming in contact with the projection or wheel M. (See Fig. II.) This swinging motion of said lever Z will cause the turning of the lever V around its center *p*, and moving thereby through the connecting-link L and arm P the bottom *b*, so as to close the vessel B again ready for the next operation.

The motion of the lever V brings the center 2 again somewhat below the line, passing through *p* and 3, after which the end of the lever Z can pass above the projection or wheel M and complete its swinging upward motion.

All other operations of this automatic scale are similar and fully described in my former above-mentioned specification.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a scale-vessel, B, provided with a hinged bottom, *b*, the arm P and link L, connected at 2 to the lever V, turning on a fixed pin, *p*, attached to said vessel B, and forming a toggle-joint, arranged to operate, in combination with the swinging lever Z, in the manner and for the purpose substantially as described.

2. The combination of the vessel B, suspended from the beam-arms and provided with a hinged bottom, *b*, the arm P, connecting-link L, lever V, provided with end projections *y* and M, the swinging lever Z, arm *g*, and the scale-beams A, arranged to operate substantially in the manner and for the purpose herein described.

EDUARD REISERT.

Witnesses:

HERM. HEYER,

GEORG HEIDERICH.