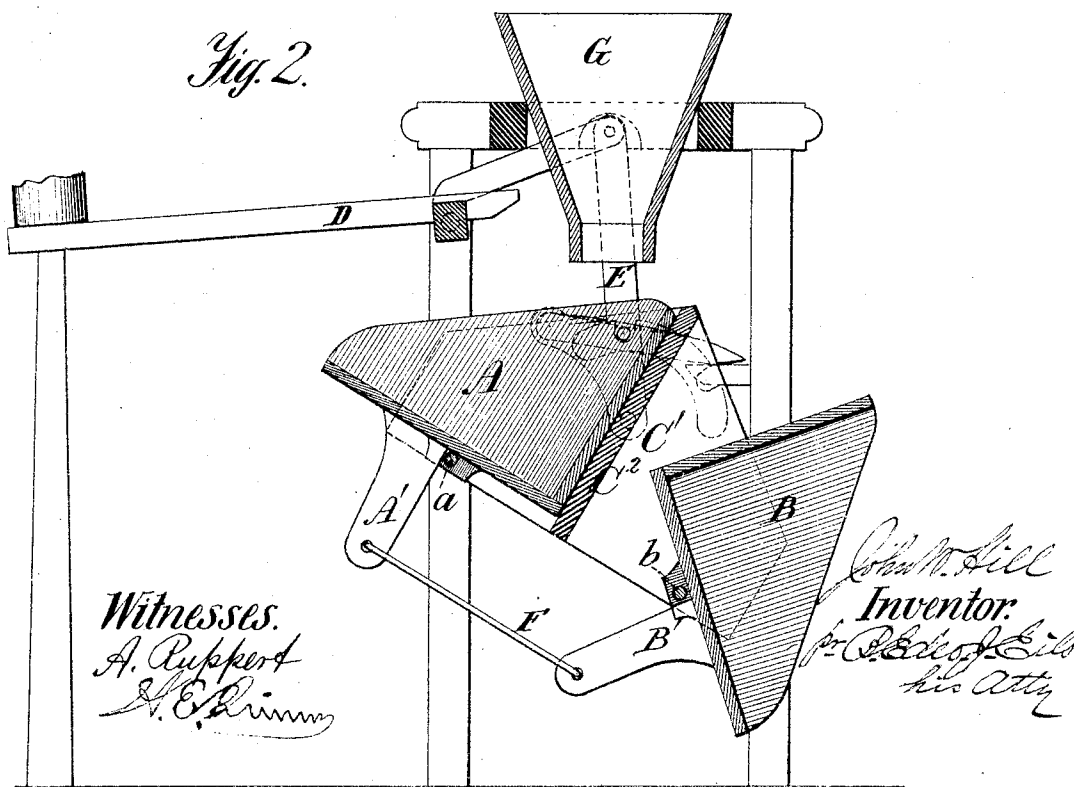
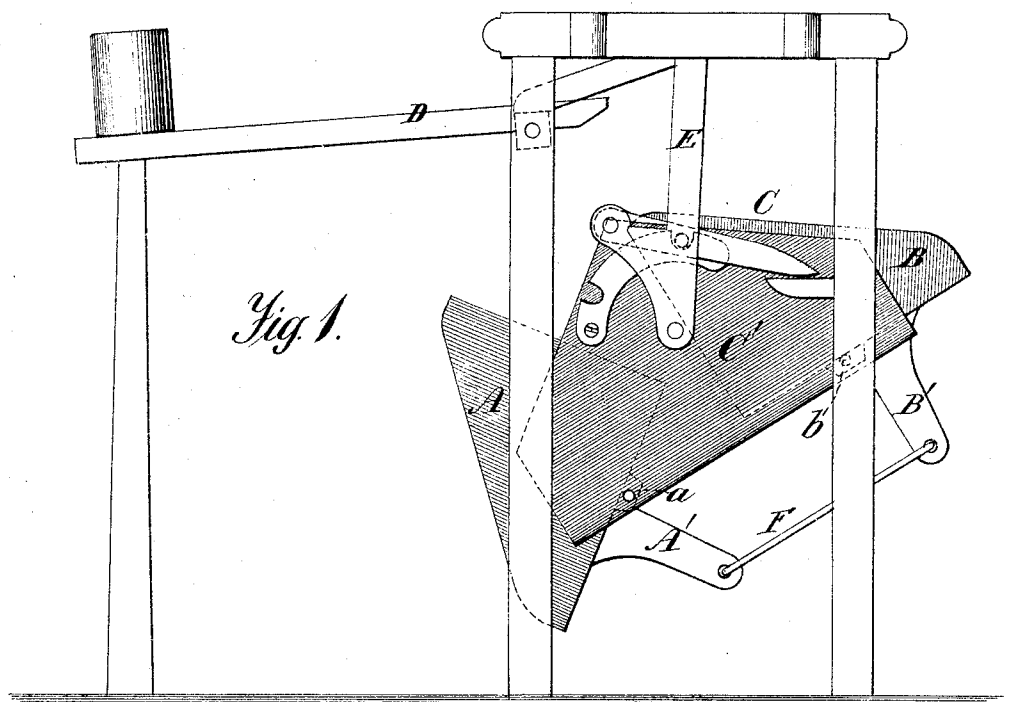


J. W. HILL.

Automatic Grain-Weighers.

No. 144,541.

Patented Nov. 11, 1873.



UNITED STATES PATENT OFFICE.

JOHN W. HILL, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO
CHRISTIAN HERCHELRODE, OF SAME PLACE.

IMPROVEMENT IN AUTOMATIC GRAIN-WEIGHERS.

Specification forming part of Letters Patent No. **144,541**, dated November 11, 1873; application filed
August 30, 1873.

To all whom it may concern:

Be it known that I, JOHN W. HILL, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Automatic Grain-Weighers; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The object of this invention is to overcome a certain practical difficulty met with in the operation of the automatic grain-weigher for which Letters Patent, No. 137,921, were granted to me April 15, A. D. 1873. It has been found that in weighing damp grain the scale-pans, in order to dump the grain rapidly and clean, which is important to the proper and correct action of the machine, must be tilted to a degree of inclination which cannot very well be obtained where they are rigidly connected, as shown in my said patent. My improvement provides for this necessity by the employment of two separate scale-pans, which are linked together and pivoted to a frame or hanger suspended from the scale-beam in such a manner that, on the descent and oscillation of the connected hanger and pans, the loaded pan will turn over independently of its supporting-hanger, and, in doing so, also turn up the empty pan into the proper position for receiving grain from the hopper or spout overhead.

In the annexed drawings, Figure 1 is a side elevation of an automatic grain-weigher embodying my improvements. Fig. 2 is a vertical longitudinal section thereof.

The same letters of reference are used in both figures in the designation of identical parts.

The scale-pans A and B are pivoted, by means of the shafts or journals *a* and *b*, to the sides C¹ C¹, and within the open-ended frame or hanger C, which is suspended from the short arms of the scale-beam D by rods or bars E. The hanger is locked in an inclined position to the suspension-rods by means of detents and catches, and oscillated into the reverse inclination each time it sinks under the load of the

grain in one or the other of the scale-pans, substantially in the manner set forth in my said patent of April 15, A. D. 1873, to which reference may be had as to the details. The hanger has a central dividing board or bar, C², which forms a support for the back of the scale-pans alternately. From the bottom of the scale-pans project arms A' and B', respectively, which are connected by a rod, F. Thus, as one is turned over by its load of grain, the other will be simultaneously turned up, and, striking with its back against the bar C² of the hanger, arrest further movement of both. The axes of the tilting pans are so disposed that a slight oscillation of the hanger will throw the preponderance of the load of a loaded pan beyond its axis, and cause it to turn thereon. In the example illustrated, the pans, in dumping their loads, are turned until the bottom reaches a nearly vertical position, insuring the almost instantaneous and clean discharge of the load. The grain descends from a hopper or spout, G, which may be provided with an automatically-acting cut-off, in the manner shown in my former patent.

Although I prefer connecting the scale-pans so that the empty one will be righted by the dumping of the loaded one, yet I do not wish to confine myself strictly to this feature, as means might be provided causing the pans to right themselves independently of each other.

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

1. In an automatic grain-weigher of the character stated, the sinking and oscillating hanger C, in combination with the self-dumping and self-righting scale-pans A and B, pivoted thereto, substantially as and for the purpose specified.

2. The sinking and oscillating hanger C, in combination with the self-dumping and self-righting scale-pans A and B, linked together by a connecting-rod, F, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand.

JOHN W. HILL.

Witnesses:

CHRISTIAN HERCHELRODE,
JOHN F. STRAHLER.