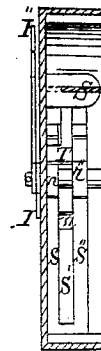
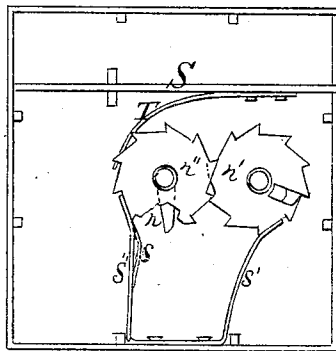
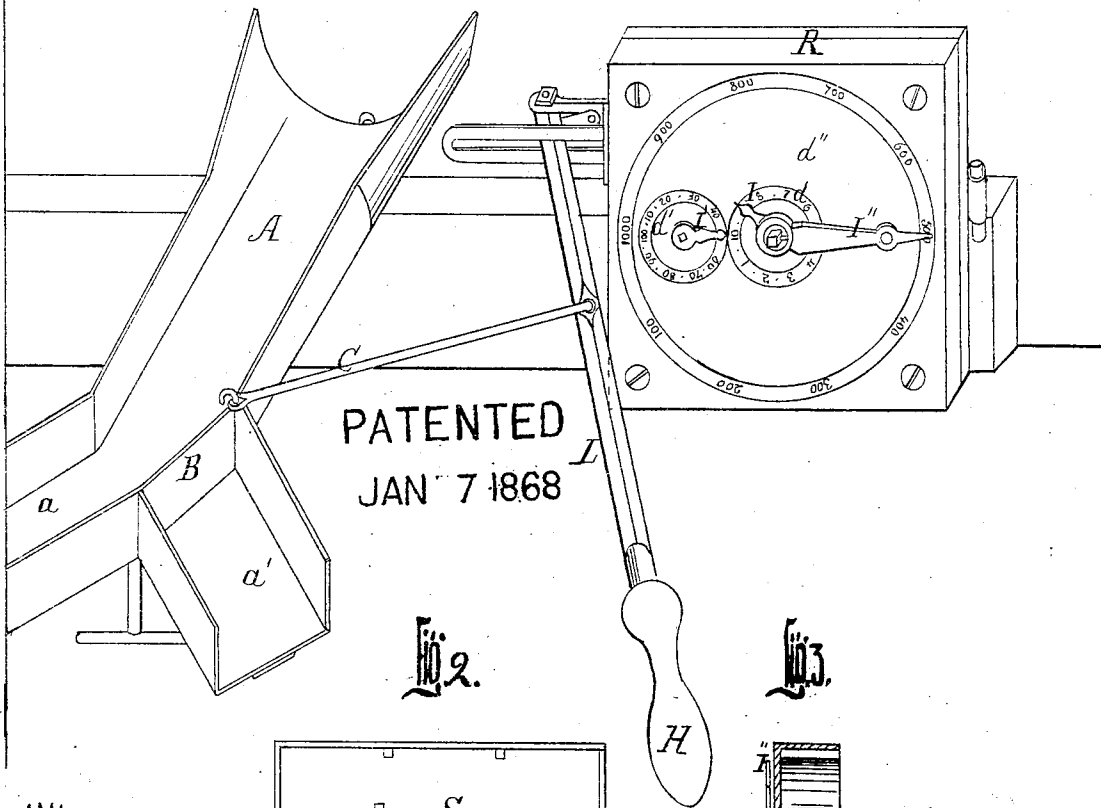


E.O. Melvin.

Grain Measuring App.

73112

Fig. 1.



Inventor:
E. O. Melvin
By Munn & Co.
Attorneys

United States Patent Office.

E. O. MELVIN, OF BROOKLYN, WISCONSIN.

Letters Patent No. 73,112, dated January 7, 1868.

IMPROVEMENT IN GRAIN-MEASURES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, E. O. MELVIN, of Brooklyn, in the county of Green, and State of Wisconsin, have invented a new and improved Grain-Measuring Apparatus; and I do hereby declare the following to be a clear, full, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a perspective view of my invention.

Figure 2 is a front elevation of the interior of the registering-apparatus, showing its operation, and

Figure 3 is a cross-section of the same.

In this invention the main feature is a bifurcated chute, provided with a gate which alternately closes one or the other branch of the chute; and which is connected with a registering-apparatus that records the number of times the gate has been opened and closed.

Similar letters of reference indicate corresponding parts.

In the drawings, A is the main chute, through which the grain is poured, terminating near its lower extremity in two branches, $a a'$, which discharge the grain alternately into suitable measures. At the point where the branches of the chute meet is hinged a gate, B, which alternately closes one or the other of them in the manner shown in fig. 1. R is the registering-apparatus, contained within a neat box, and provided with dials, $d d' d''$, and indices, $I I' I''$, which respectively indicate upon their dials the units, tens, hundreds, and thousands of times that the gate B has been opened and closed. The gate is connected with the registering-apparatus by means of a connecting-rod, C, a lever, L, and a sliding-rod, S, the latter operating the ratchets and spindles that carry the index-hands. The lever L is provided with a handle, H, by which the operator opens and closes the gate B, and records the act upon the index.

Of course, the use of this instrument is designed to be limited to no particular size of measure, but in general it will be better to use half-bushel measures in connection with it, and to construct the machine so as to move the unit-hand one degree at every second movement of the gate. In this way, although half-bushel measures are used, the record will be kept in bushels.

The measures are placed under each branch, $a a'$, of the chute, and the grain is poured into the chute till one of them is filled. By a movement of the handle H, the operator then closes that branch of the chute and opens the other, and the other measure begins to be filled. While it is filling, he empties and replaces the first measure. When the second measure is filled, he throws the lever and gate back to their original position, and in going back, the lever, by means of the rod S and the mechanism hereafter explained, causes the index to record one bushel, and so on till ten bushels, one hundred, one thousand, &c., are recorded.

Ratchet-wheels, $r r' r''$, each having ten equal teeth, and provided respectively with small springs, $s s' s''$, to steady their motion, are fixed respectively to the spindles of the unit, tens, or hundreds hand. At every revolution of the ratchet r , a cam upon it strikes the ratchet r' , and moves it one degree, and at every revolution of the ratchet r' , a similar device moves the ratchet r'' in a similar manner. The ratchet r itself is operated by a bent arm, T, fixed to the sliding-rod S, which catches a tooth of the ratchet, and moves the wheel forward one step every time the rod S is retracted by the lever L. As the rod S is retracted at every forward movement of the lever, or as often as every second measure is filled, it follows that the index-hands will register bushels.

I do not mean to limit my invention to the use of a rod, S, operating the ratchet r , as it slides in one direction only, but may make it operate in both ways if I think it necessary.

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

The combination of the bifurcated chute A $a a'$ with the gate B, lever L, rod S, and the registering-apparatus above described, substantially as described, for the purpose herein set forth.

Witnesses:

ISAAC M. BENNETT,
FORDYCE R. MELVIN.

E. O. MELVIN.