

W. P. SHEETS.
Grain-Tally.

No. 217,824.

Patented July 22, 1879.

Fig. 1.

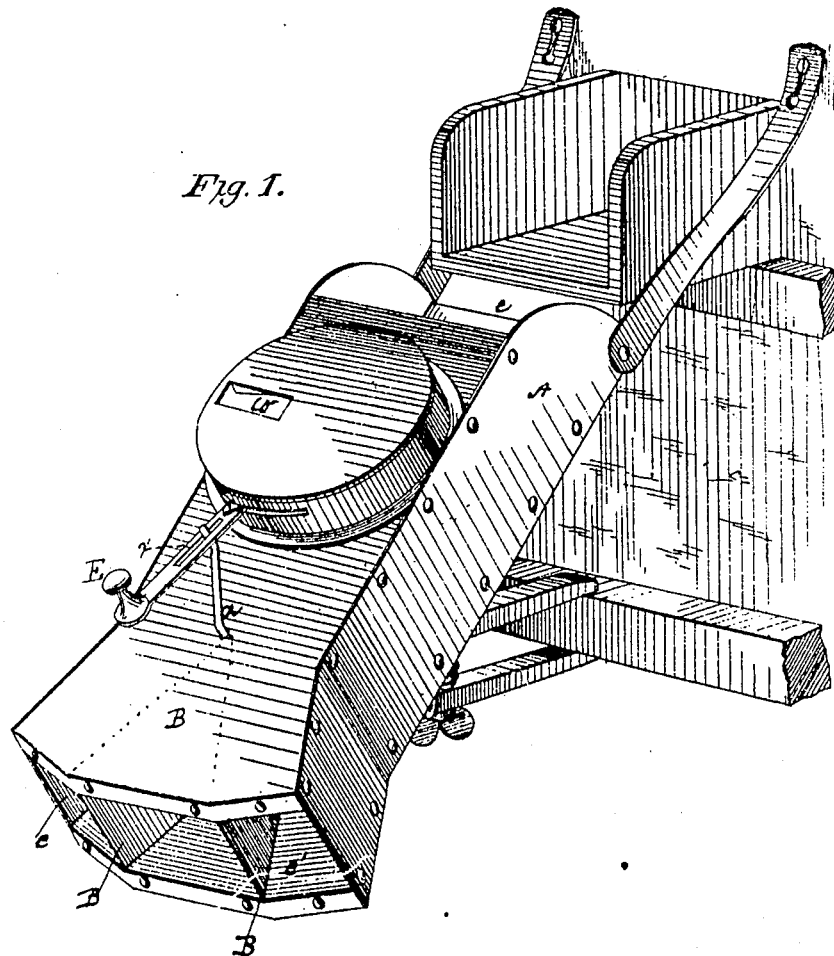
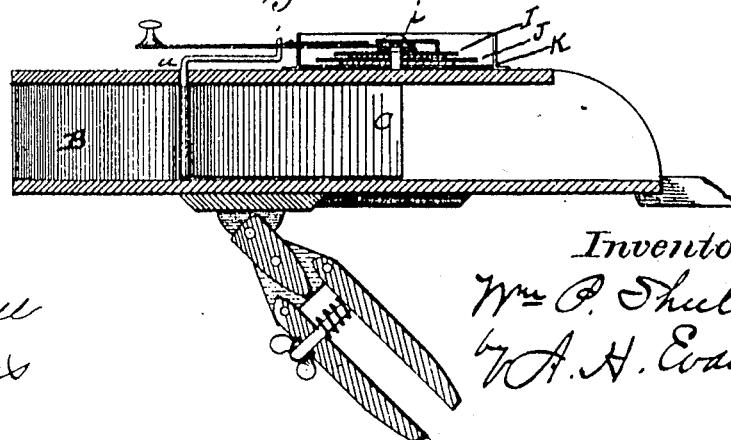


Fig. 2.



Witnesses:

H. H. Morrell
R. K. Evans

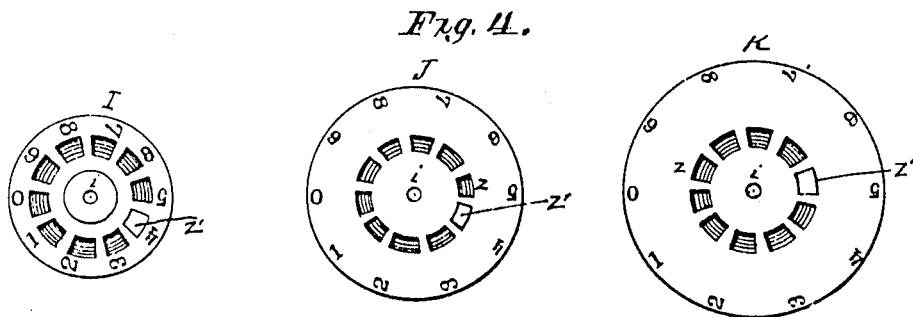
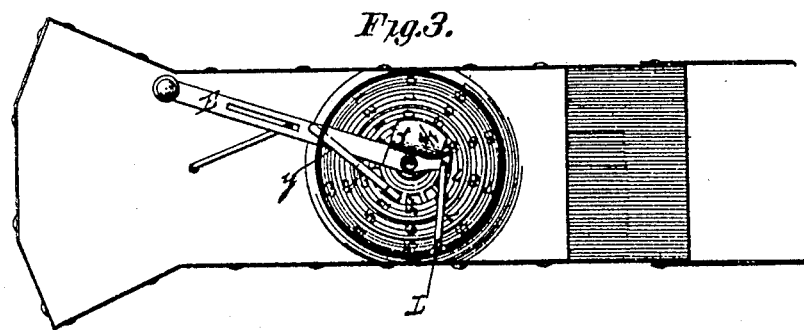
Inventor:

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Witnesses:

W. H. F. Morsell
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Inventor:

Wm. P. Sheets
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UNITED STATES PATENT OFFICE.

WILLIAM P. SHEETS, OF PRINCETON, MISSOURI, ASSIGNOR OF ONE-HALF
HIS RIGHT TO S. D. ARNOLD, OF SAME PLACE.

IMPROVEMENT IN GRAIN-TALLIES.

Specification forming part of Letters Patent No. **217,824**, dated July 22, 1879; application filed
February 21, 1879.

To all whom it may concern:

Be it known that I, WM. P. SHEETS, of Princeton, in the county of Mercer and State of Missouri, have invented a new and Improved Grain Chute and Register; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of my device. Fig. 2 is a longitudinal section of the same. Fig. 3 shows the registering and counting apparatus with the face removed. Fig. 4 shows the registering-wheels separated.

My invention relates to that class of grain-chutes wherein the chute is bifurcated and operates with a shifting diaphragm and a counting-register, the shifting of the diaphragm moving the register; and my invention has for its object to reduce the whole apparatus to one integral device and insure a greater certainty of action.

My invention consists in placing the counting mechanism directly on the surface of the chute and connecting the counting apparatus and the shifting diaphragm by means of a slotted lever and an intermittent crank-lever operating the diaphragm.

My invention also consists in a device to prevent the disks of the counting apparatus moving when the moving pawl passes over the face to enter a new depression and feed the disk forward one count.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is the main chute, rectangular in cross-section and having its lower end flaring in outline. Inside the chute, at the base, is a conical partition, B, extending up to the point where the trough begins to flare. At the peak of partition B a crank-rod, *a*, passes through the trough from front to rear, and rigidly fastened thereto is the long vertical diaphragm C, extending two-thirds of the distance to the top of the chute.

By means of the crank-rod *a* the diaphragm C can be vibrated back and forward, or rather from side to side, until its upper edge strikes

the sides of the chute. The pyramidal partition B forms the lower portion of the chute into two smaller chutes, *e e'*. These smaller chutes are made to connect with the main chute, first one and then the other, by shifting the diaphragm C from side to side. The grain is allowed to run through chute *e* into a half-bushel or other measure until the measure is full, when the operator, by means of the crank, suddenly shifts the diaphragm and directs the course of the grain through *e'* and to the measure at its mouth.

The following means are used to shift the diaphragm and turn the counting-register at the same time: The end of the crank-rod *a* enters a slot, *x*, in a vibrating handle, E, which is pivoted at the center of the dial-indicator and works in a slot in the casing covering the register. The pivoted end of handle E has fixed to it a plate, marked *r*, one-half of which is brought into view at each alternate stroke of the lever, so as to count every alternate half-bushel, supposing a half-bushel measure is in use. The count is made by means of a spring-catch, *y*, which is fastened to handle E and drops into depressions *z z* in disks I J K, which are pivoted at *i* and move concentrically. At each stroke of handle E the diaphragm is vibrated, and at the same time spring-catch feeds plate I around one division, and makes a count by displaying the proper figure through a transparent portion, *w*, of the casing. Each counting-wheel has, besides the depressions, an opening entirely through it, as seen at *z'*, and this is so arranged that when the unit count has passed to 9 on the next stroke the spring-catch passes clear through plate I and engages in one of the depressions in plate J, moving both plates forward one point to indicate the count of tens.

The operation is substantially the same in the count of hundreds, the spring-catch passing entirely through plates I J and engaging in a depression in plate K, all of them feeding forward at once. A spring-retaining pawl, L, drops into the depressions on the outer disk, I, and prevents any reverse movement of the disk when the spring-catch *y* is moving over its face to take hold in a new depression.

In starting the count the three disks are

moved by means of holes z' z' and any sharp instrument inserted therein until the zeroes are in line. Then on each alternate stroke of the lever a digit is moved forward, so as to be observed through the opening w on the other stroke the one-half on plate r .

I am aware that heretofore bifurcated chutes provided with a shifting diaphragm have been used in combination with a counting device; and I am also aware a counting device has been made of a series of plates having depressions and perforations, said plates being fed forward by a pawl; hence I do not claim either combination of devices; but,

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

A counting-register arranged upon a grain-chute with a shifting diaphragm, C, and provided with a series of counting-disks having depressions and perforations, in combination with the crank-lever a , lever E, having the slot x , the feeding-pawl y , the spring-detent L, and rear screw-clamp fastening, z'' , whereby the register is secured in position, all constructed and arranged as shown and described.

WM. P. SHEETS.

Witnesses:

L. W. BRANNON,
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