B. TAYLOR.

Grain Register.

No. 80,372. Patented July 28, 1868.

Fig. 1.

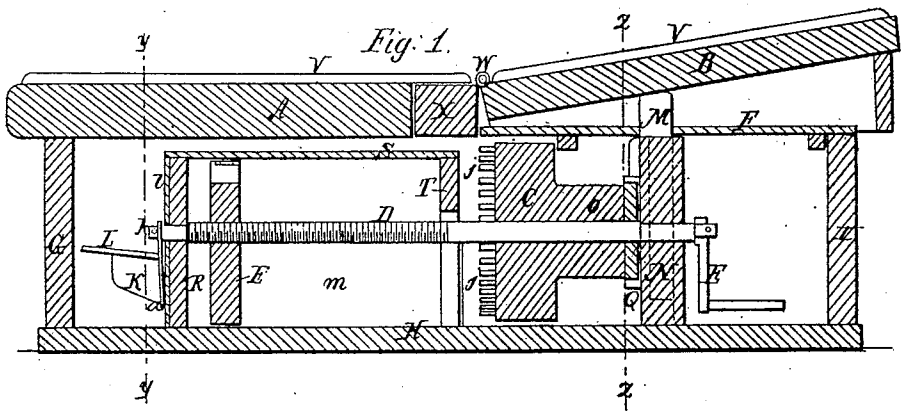


Fig. 2.

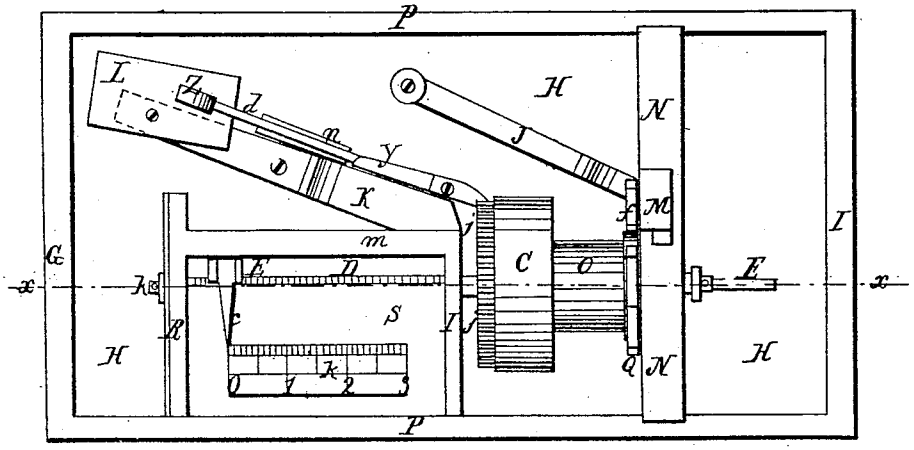


Fig. 3

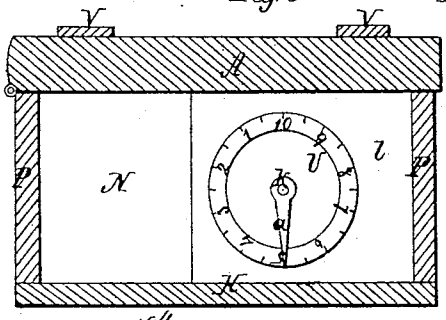
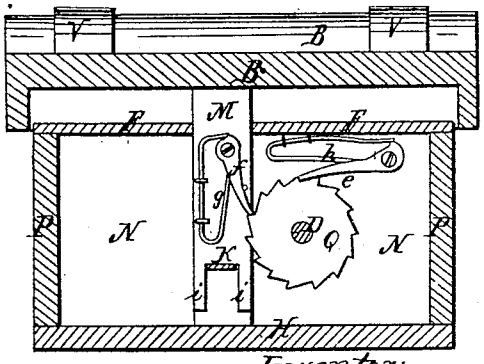


Fig. 4.



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BARNETT TAYLOR, OF FORESTVILLE, MINNESOTA.

Letters Patent No. 80,372, *dated July* 28, 1868.

IMPROVEMENT IN GRAIN-REGISTERS.

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, BARNETT TAYLOR, of Forestville, in the county of Fillmore, and State of Minnesota, have invented a new and useful Improvement in Grain-Registering Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central vertical section of my improved grain-register, through the line *x x*, fig. 2.

Figure 2 is a top view of the interior mechanism.

Figure 3 is a cross-section of the box, showing graduated dial and pointer, the section being taken through the line *y y*, fig. 1.

Figure 4 is a section through the line *z z*, fig. 1, showing the vertical wheel and pawls.

Similar letters of reference indicate like parts.

The object of this invention is to accomplish the registering of grain automatically.

It consists of a box, provided with a yielding top, which is actuated downward by the weight of a measure of grain, the top being connected with suitable mechanism to register the number of times the top is depressed, as will hereinafter be more fully set forth.

In the accompanying plate of drawings the box containing the registering-mechanism is shown at G H P I.

The top, A, may be hinged to the cross-piece X, and provided with a lock, or hinged to the side, as shown.

The yielding top B is hinged, at W, to the cross-piece X, and is held elevated upward, to show, by means of the upper end of the sliding upright M, which latter slides in a groove in the partition N, as shown.

K is a spring affixed to the bottom, H, of the box, and its function is to actuate the sliding upright against the hinged top, and keep it raised until pressed down by the weight of the measure of grain.

F is a fixed top beneath the hinged top, and encloses the interior mechanism.

In practice, this top, F, may be hinged, and provided with a lock, so that the crank, E, by which the register is set back, may not be accessible by any other than the proper person.

Through the top, F, the upper end of the sliding upright projects and supports the hinged top B, as aforesaid.

When the hinged top is pressed downward by the weight of a measure of grain, the sliding upright M is also bowed downward against the tension of the spring K, the free end of which rests in a recess between the projections *i i*, forming part of the said sliding upright.

A ratchet-wheel, Q, is mounted on the shaft D, and affixed to the reduced part, *o*, of the wheel C, which latter is provided with lateral teeth or pins *j*, so that when the sliding upright is actuated downward by the top, B, the ratchet-pawl *f*, pivoted to the said upright, and actuated against the ratchet-wheel by a spring, *g*, as shown, will catch upon the teeth of the ratchet-wheel, and rotate it a short arc at each downward movement of the hinged top.

At each partial rotation of the ratchet-wheel, the pointer *a*, on the reduced end *k* of the shaft D, will indicate, on a graduated circle, U, the said partial revolution, and mark or register each downward movement of the hinged top.

The graduated circle U is engraved or painted upon a plate of sheet metal, *l*, affixed to the end, R, of the interior chamber, R S T *m*, which latter encloses the nut E, bearing the horizontal pointer *c*. This nut E is moved, when the shaft D is turned, by means of a screw-thread cut or formed thereon, as shown, and in so moving, causes the pointer to indicate or register, upon the rectilineal scale *b*, the number of revolutions made by the shaft.

The circle U is graduated to a certain number, as 10; and the scale *b* is graduated to decimal spaces, or the larger spaces, 1, 2, 3, &c., and the smallest divisions on the scale *b* are made to correspond to one complete revolution of the shaft D, so that one space on the scale *b* indicates that the shaft has been once revolved, or that ten measures of grain have passed over the hinged top B.

At each downward movement of the hinged top, one of the teeth *j* passes the end of the lever Y, which is pivoted to the block K, affixed to the bottom of the box, as shown. The passing tooth depresses the proximate end of the said lever, and the latter, when disengaged therefrom, brings down the clapper Z upon the bell or sonorous plate L with a smart blow, which thus announces, with a distinctly audible sound, to all persons near by, each time a measure of grain has passed over the hinged top B.

The object of this latter device is to serve as a check upon the attendant, who might otherwise surreptitiously press down the hinged top, or prevent the measure of grain from doing so, according as it was advantageous for him to make the machine register more or less than the actual amount of grain passed; but the knowledge that the proper interval of sounds would be broken by either course, and thus call the attention of others to the circumstance, will serve to deter him from any fraudulent attempts.

The plate L is affixed to the block K, and the clapper Z is connected with the lever Y by the spring-stem *d*, which latter strikes upon the rest *n*, which holds the clapper clear of the plate, that it may produce the proper sound after it has been struck.

This invention is more particularly designed for the registering of grain as it comes from the threshing-machine, but is applicable to other equivalent uses.

In practice, the measure, as the common half-bushel measure, is placed upon the top, A, under the spout or discharge-chute of the grain or other substance being measured.

When filled, the measure is slid along on the battens V V to the hinged top B, which yields downward and operates the mechanism, as before described.

Thus several measures are continuously passing, and the amount thereof is automatically registered; that is to say, the number of times a filled measure passes over the yielding top will be duly indicated on the graduated circle or scale *b*.

In practice, a bell will be substituted for the bell-plate shown.

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

1. The hinged top B or its equivalent, in combination with a shaft, D, pointer *a*, ratchet-wheel Q, and sliding upright M, and one or more pawls, all substantially as shown and described and for the purpose set forth.

2. The hinged top B or its equivalent, in combination with the shding upright M, with one or more pawls or their equivalent, the screw-shaft D and nut E, all substantially as and for the purpose shown and described.

3. The closed box, having a hinged top, B, the vibrating of which actuates the interior registering-machine of the said box, by means of a sliding upright, M, all substantially as shown and described, and for the purpose of registering measures of grain by the weight of the same, all as set forth.

4. The bell-plate L, clapper Z, lever Y, toothed wheel C, and sliding upright and ratchet-wheel, all substantially as shown and described, in combination with the yielding top B, all as and for the purpose set forth.

5. The graduated circle U and scale *b*, substantially as shown and described, in combination with the pointers *a* and *c*, screw-shaft D, and nut E, all as and for the purpose set forth.

6. Sliding upright M, spring J, and hinged top B of a closed box containing any registering-mechanism, all substantially as shown and described and for the purpose set forth.

7. The screw-shaft D, nut E, pointer *c*, scale *b*, pointer *a* on the said shaft, and graduated circle U, all constructed and operating substantially as shown and described and for the purpose set forth.

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