W. N. PHIPPS.

Grain-Tally.

No. 206,480. Patented July 30, 1878.

Fig: 1.

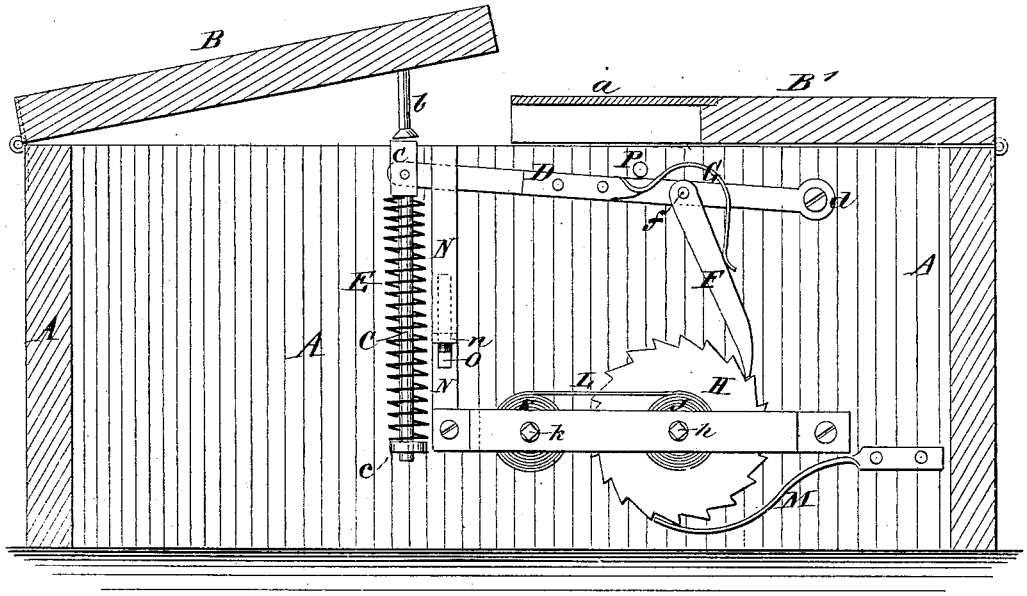
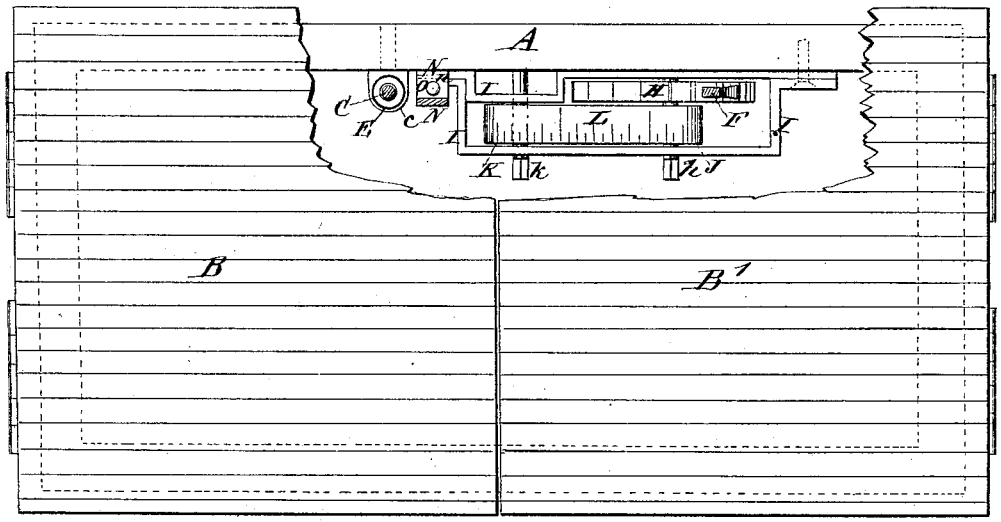


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM N. PHIPPS, OF GLENWOOD, IOWA.

IMPROVEMENT IN GRAIN-TALLIES.

Specification forming part of Letters Patent No. **206,480**, dated July 30, 1878; application filed June 26, 1878.

To all whom it may concern:

Be it known that I, WILLIAM N. PHIPPS, of Glenwood, in the county of Mills and State of Iowa, have invented a new and Improved Grain-Tally, of which the following is a specification:

The object of my invention is to provide a cheap and simple device to be used at thrashing-machines, for ascertaining the number of bushels or half-bushels of grain thrashed.

To accomplish this a hinged lid is arranged to be supported in a raised position upon the end of a vertical sliding rod, kept up by a spiral spring, which latter is compressible by just the weight of a half-bushel of grain. The sliding rod is connected with a lever and spring-pressed pawl, to operate a ratchet-wheel on the end of a drum or roller, which is connected by a surrounding tape to another roller. The depression of the lever is limited by an adjustable stop, and at each depression the ratchet-wheel is revolved for the space of one tooth, moving the tape forward an equal distance.

Figures marked on the tape, and visible through a glass pane on the cover of the box in which the apparatus is inclosed, indicate the number of teeth moved forward, and, consequently, the number of half-bushel measures successively placed upon the hinged lid.

In the accompanying drawing, Figure 1 represents a longitudinal vertical section of my improved grain-tally. Fig. 2 is a top view of the same, partly in section.

Similar letters of reference indicate corresponding parts.

A is the box inclosing the counting mechanism, which is attached to one of the upright sides of the box. This is covered with two lids, B B′, hinged one at each end of the box, and meeting at the center, each lid covering one-half of the box A. The lid B′ has an opening through it, covered with a glass pane, *a*, through which the index is observed. The lid B is provided on the under side with a pin, *b*, which rests upon the upper end of the rod C, pivoted to one end of the lever D, and whose lower end is guided in a hole through the stationary lug *c*. The rod C is surrounded with a spiral spring, E, interposed between the lug *c* and a shoulder on the rod at its upper end. The expansion of the spring E keeps the lid B raised, as shown in the drawing, until depressed by the weight of one-half of a bushel of grain placed upon the lid B.

The lever D is pivoted or fulcrumed at *d* to the side of the box A, and is provided with a pawl, F, pivoted to it at *f*, which pawl is pressed, by a spring, G, against the face of a ratchet-wheel, H, mounted on a shaft, *h*, which revolves in bearings in the frame I on the inside of the box A.

On the shaft *h* is secured a roller, J, and another roller, K, is mounted on a shaft, *k*, and arranged in the frame I to revolve parallel with the roller J.

L is a band or tape, stamped with numbers in successive arithmetical order, at distances apart corresponding to the space of one tooth of the ratchet-wheel H. One end of the tape L is attached to the roller J, and the other end to the roller K, so that the tape may be wound off one roller and onto the other. The wheel H is kept from turning back with the receding of the pawl F by the stationary spring-pawl M, which latter is raised when desired to reset the tape, which is done by winding it onto the roller K by an ordinary clock-key applied on the end of the shaft *k*.

The forward end of the lever D is guided in its movement between the side of the box A and the vertical bar N, which latter is secured with its lower end to the side of the box, and has a horizontal offset, *n*, through which is a threaded hole, with a set-screw, O, in it, to regulate and limit the downward throw of the lever D to correspond with the pitch of the ratchet-wheel H.

P is a stop, attached to the side of the box A above the lever D, to stop the latter from being moved too far upward by the pressure of the spring E.

If desired, the roller J may be connected with its shafts *h* by a key, which key may be withdrawn when it is desired to wind the tape L from the roller J to the roller K, so that this may be done without turning the ratchet-wheel H.

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

The hinged lid B, supported on the spring-raised rod C, in combination with the pivoted lever D, having the pawl F and moving between the stops N P, and with the ratchet-wheel H, rollers J K, and indicator-tape L, substantially as and for the purpose set forth.

Witnesses: WILLIAM N. PHIPPS.

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