(No Model.) 2 Sheets—Sheet 1.

G. H. CAUGHREAN.

SACKING, WEIGHING, AND REGISTERING MACHINE.

No. 301,673. Patented July 8, 1884.

Fig. 1.

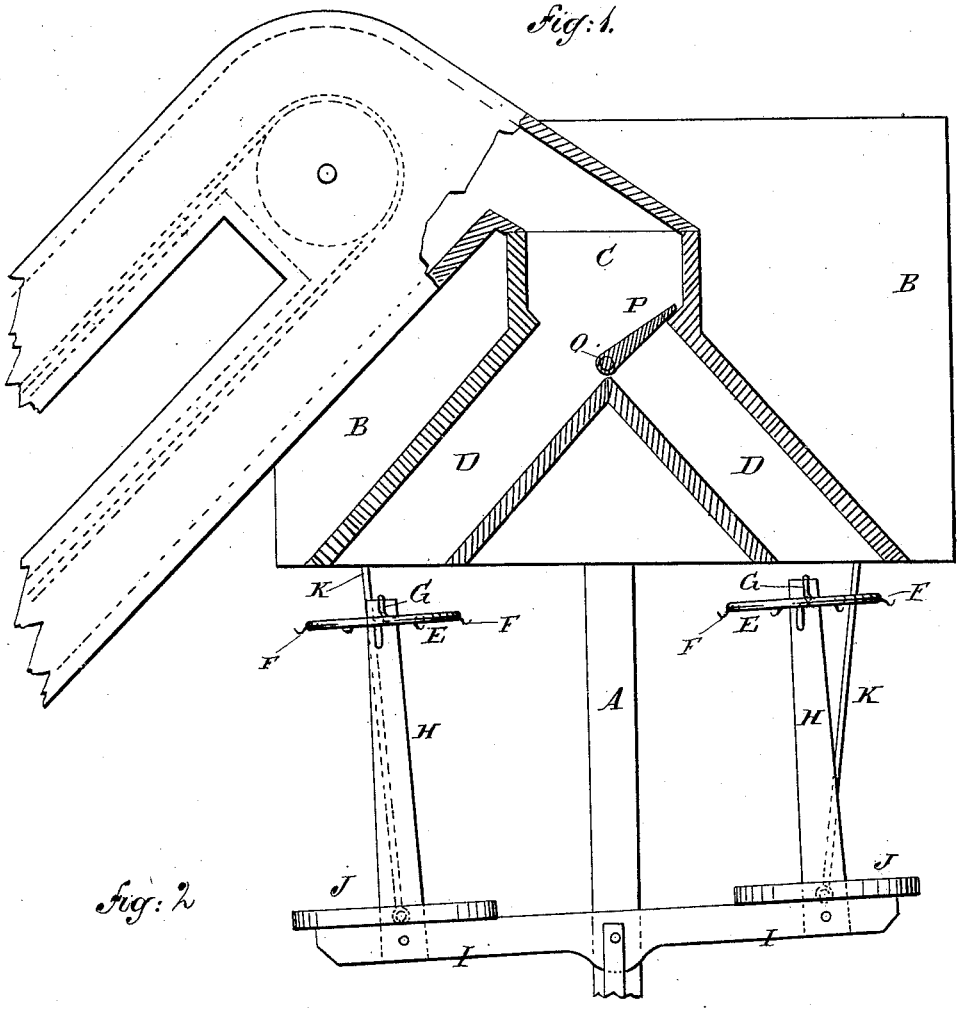
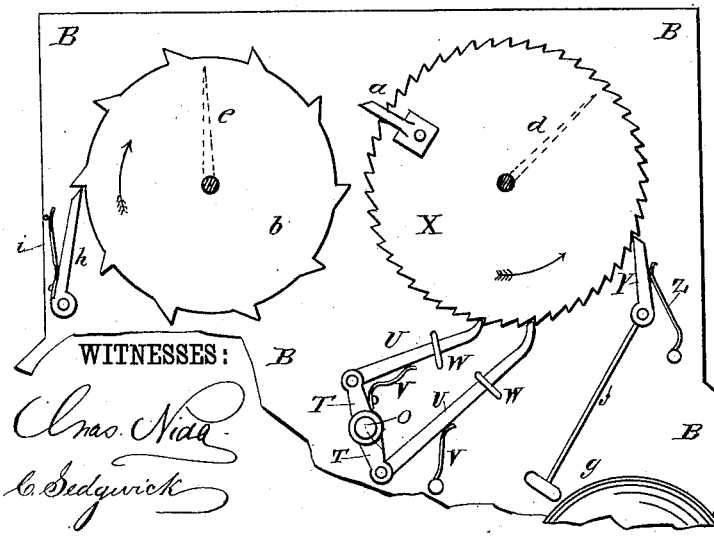


Fig. 2.



WITNESSES:

Chas. Nida

C. Sedgwick

INVENTOR:

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

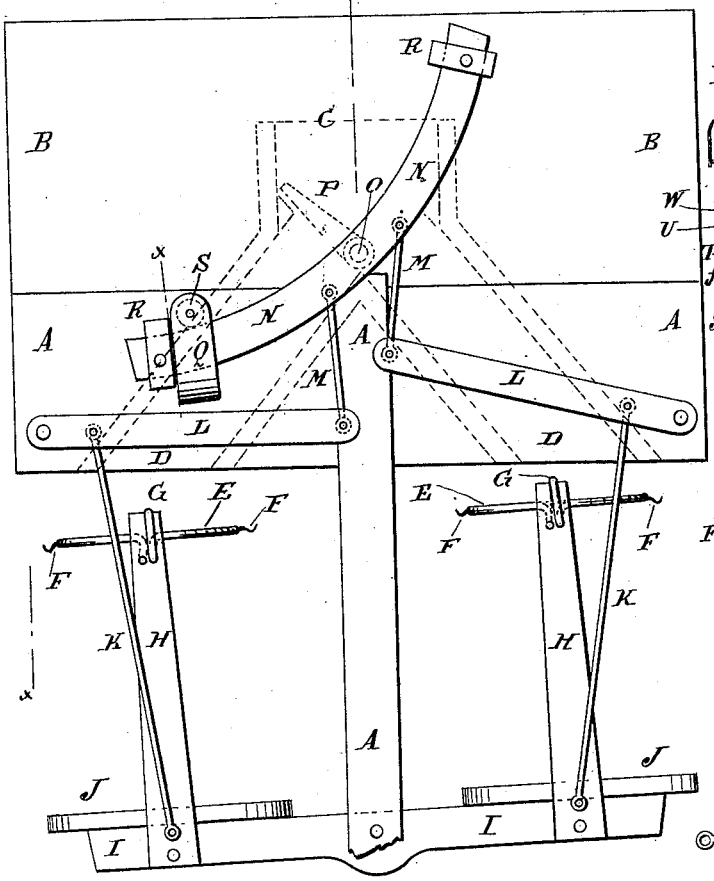


Fig. 4.

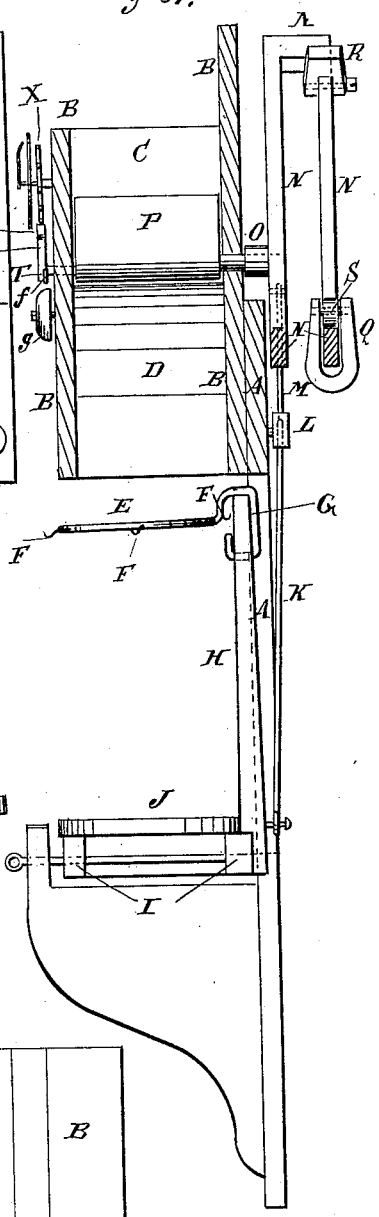
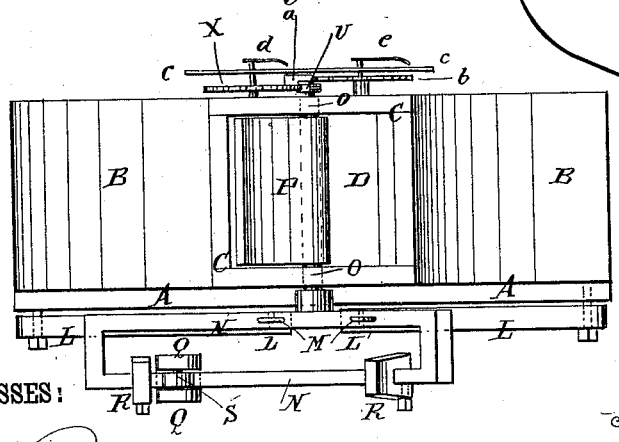


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE HENRY CAUGHREAN, OF RAYMORE, MISSOURI.

SACKING, WEIGHING, AND REGISTERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 301,673, dated July 8, 1884.

Application filed March 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HENRY CAUGHREAN, of Raymore, in the county of Cass and State of Missouri, have invented a new and useful Improvement in Sacking, Weighing, and Registering Machines for Grain and other Substances, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1, Sheet 1, is a front elevation, partly in section, of my improvement, shown as connected with an elevator. Fig. 2, Sheet, 1, is a front elevation of a part of the same, the dial-plate being removed and the pointers indicated in dotted lines. Fig. 3, Sheet 2, is a rear elevation of the improvement. Fig. 4, Sheet 2, is a sectional side elevation of the same, taken through the broken lines *x x x*, Fig. 3. Fig. 5, Sheet 2, is a plan view of the same.

The object of this invention is to facilitate the sacking, weighing, and registering of grain and other substances as they come from thrashing-machines, corn-shellers, mills, and other places, and also to promote accuracy in such sacking, weighing, and registering.

The invention consists in the combination, in a sacking, weighing, and registering machine, with the frame, spouts, and oscillating cut-off, of a vibrating frame having platforms and sack-holders, connecting-rods, levers, and a slotted scale-bar having adjustable stops and a traveling weight, whereby the weight of the filled sacks will reverse the cut-off. The pivot of the cut-off is connected with the first wheel of the register by a double-crank arm and two spring-held hinged pawls, whereby the movement of the cut-off is made to operate the register, as will be hereinafter fully described.

A represents the frame, and B the casing, of the machine.

In the upper part of the casing B is placed a hopper, C, to receive the grain or other substance from an elevator or other delivery-spout.

With the bottom of the hopper C are connected the upper ends of two spouts, D, which incline from each other, as shown in Fig. 1 and in dotted lines in Fig. 3.

Beneath the lower ends of the spouts D are placed the sack-holders E, which are made in circular form, and are provided with projecting hooks F, to keep the mouths of the sacks in place, and with shanks G, which are attached to the upper ends of standards H. The shanks G are made with upward bends to allow the mouths of the sacks to be drawn up over the sack-holders E smoothly. The lower ends of the standards H are attached to the rear sides of the end parts of the frame I, which is pivoted at its center to the lower end of the upright bar of the frame A.

To the end parts of the frame I are attached platforms J, for the bottoms of the sacks to rest upon.

To the end parts of the pivoted frame I, or to the lower parts of the standards H, are pivoted the lower ends of the connecting-rods K, the upper ends of which are pivoted to the levers L at a little distance from their outer ends. The outer ends of the levers L are pivoted to the end parts of the cross-bar of the frame A.

To the inner ends of the levers L are pivoted the lower ends of short connecting-bars M, the upper ends of which are pivoted to the bar N, upon the opposite sides of and equally distant from its center. The center of the bar N is rigidly attached to or formed in one piece with the end of the pivot O, which rocks in bearings in the sides of the hopper C, directly over and close to the point where the lower walls of the spouts D meet, as shown in Fig. 1 and in dotted lines in Fig. 3.

To the pivot O is attached a plate, P, which, as the bar N rocks, will be turned to close successively the upper ends of the spouts D. The bar N is curved upon the arc of a circle, is slotted longitudinally, and has the rods M and pivot O connected with its inner arm to leave its outer arm free to receive the weight Q and the stops R. The weight Q is made in the form of a clevis, or of other suitable form, to receive the outer arm of the bar N, and has a small roller, S, pivoted to it to rest upon the upper edge of the said arm, and cause the said weight to move easily and smoothly. The stops R are secured to the outer arm of the bar N by set-screws, so that they can be readily adjusted to limit the distance to which the weight Q passes from the center of the said

bar N, and thus regulate the leverage of the said weight, as the weight of the substance and the amount to be put in each sack may require. The bar N is designed to be provided with a scale of division-marks, numbered with figures representing the number of pounds required upon one of the platforms to balance the weight Q when at that mark. To the other end of the pivot O is rigidly attached a double-crank arm, T, to the outer ends of which are hinged pawls U, held up by springs V, resting against their lower sides and attached to the crank-arms T. The pawls U are kept in place by keepers W, through which they pass, and their engaging ends rest against the teeth of a wheel, X, pivoted to the case B. The pawls U are so arranged as to turn the wheel X through the space of one tooth at each movement of the double crank T, and said wheel is held from being turned back by the friction of the rearward movement of the pawl U by a holding-pawl, Y, pivoted to the case B, and held against the teeth of the wheel X by a spring, Z.

To the wheel X is attached a pin or arm, *a*, which at each revolution of the said wheel X comes in contact with a tooth of a second wheel, *b*, and turns the said wheel through the space of one tooth. The wheel *b* is held in place by a pawl, *h*, pressed against the teeth of the said wheel by a spring, *i*.

The wheels X *b* can be made with any desired number of teeth; but I prefer to make the wheel X with fifty teeth and the wheel *b* with ten, so that each tooth of the wheel X will register a sack, and a revolution of the said wheel fifty sacks, and each tooth of the wheel *b* will register fifty sacks, and a revolution of the said wheel will register five hundred sacks. The journals of the wheels X *b* pass through a dial-plate, *c*, and have pointers *d e* attached to them to move along circular scales of division-marks formed upon the said plate.

To the holding-pawl Y is attached the arm of a hammer, *f*, which projects into such a position that the head of the said hammer at each movement of the pawl Y will strike a bell, *g*, attached to the casing B, and thus give notice to the attendants.

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

In a sacking, weighing, and registering machine, the combination, with the frame A, spouts D, and oscillating cut-off P, of the vibrating frame I, having platforms J and sack-holder E, connecting-rods K M, the levers L, and the slotted scale-bar N, having adjustable stops R, and traveling weight Q, substantially as herein shown and described, whereby the weight of the filled sacks will reverse the cut-off, as set forth.

GEORGE HENRY CAUGHREAN.

Witnesses:

L. F. GRAY,

D. W. CASTLE.