2 Sheets, Sheet 1.

W. A. Workman,

Grain Tally.

No. 97,978. Patented Dec. 14, 1869.

Fig. 1

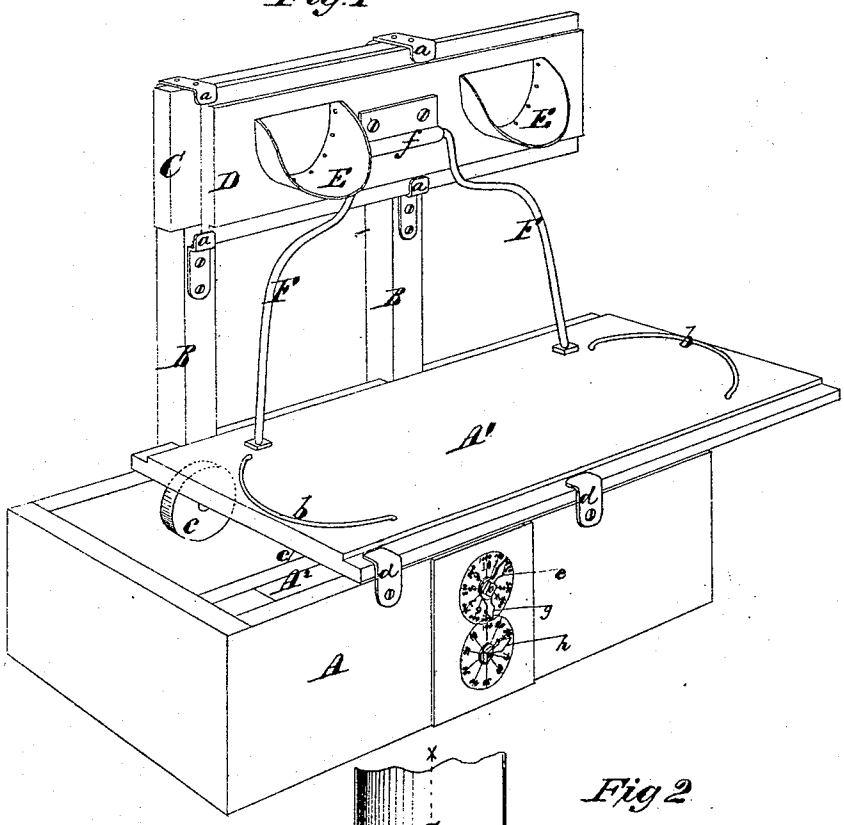
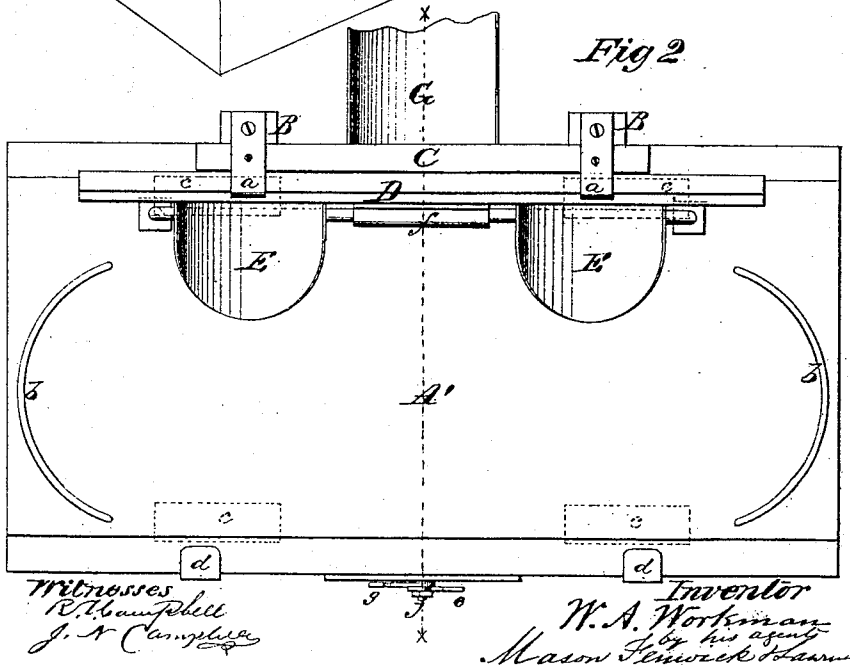


Fig 2



Witnesses
P. Campbell
J. N. Campbell

Inventor
W. A. Workman
by his agent
Mason Fenwick & Lawrence

2 Sheets, Sheet 2.

W. A. Workman,

Grain Tally.

No. 97,978. Patented Dec. 14, 1869.

Fig. 3.

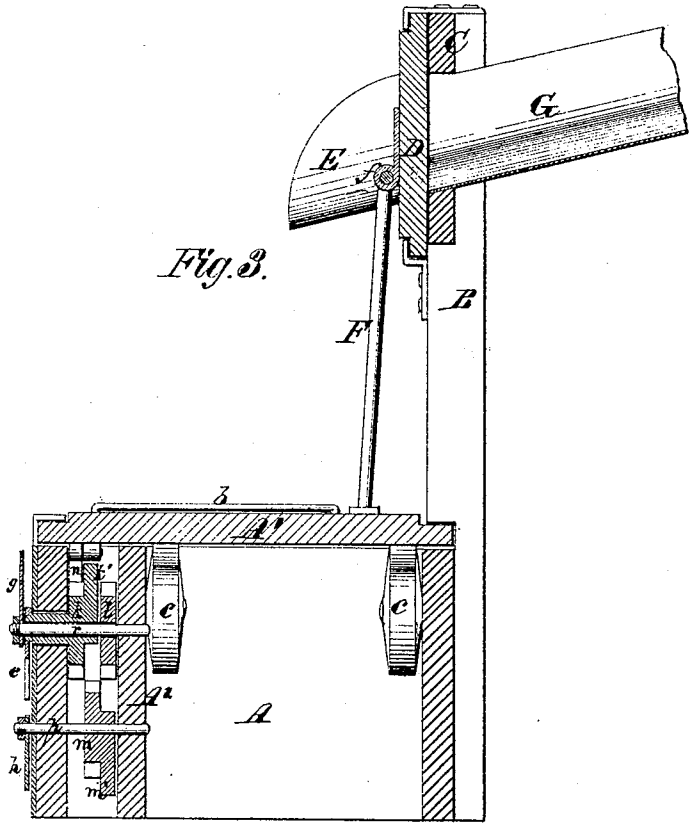
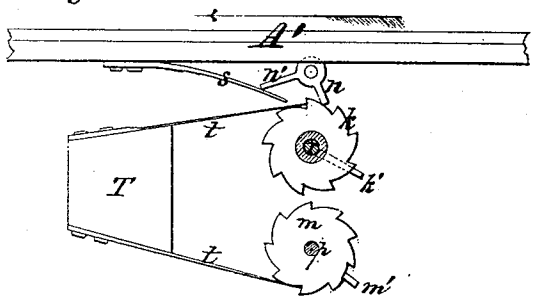


Fig. 4



Witnesses.
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UNITED STATES PATENT OFFICE.

W. A. WORKMAN, OF FAIRFIELD, IOWA.

IMPROVEMENT IN GRAIN-MEASURING ATTACHMENT TO THRESHING-MACHINES.

Specification forming part of Letters Patent No. **97,978**, dated December 14, 1869.

To all whom it may concern:

Be it known that I, W. A. WORKMAN, of Fairfield, in the county of Jefferson, and State of Iowa, have invented a new and improved Measuring-Attachment for Threshing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, plate 1, is a perspective view of the improved measuring-attachment.

Figure 2, plate 1, is a top view of the same.

Figure 3, plate 2, is a section, taken transversely through the instrument in a vertical plane.

Figure 4, plate 2, is a view, in detail, of two of the registering-wheels and the acutating-dog.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and useful improvement on attachments for threshing-machines, for measuring the grain flowing therefrom, and registering the measured quantity.

I employ a registering-mechanism, which is actuated by a dog, applied to the bottom of a horizontally-reciprocating table.

On this table the measuring-vessels are placed, for receiving the grain, as it flows from the spout of the cleaner or thresher.

To this table a sliding cut-off is applied, and provided with two spouts, through which the grain is alternately caused to flow from the spout of the thresher.

The said sliding cut-off serves to stop the flow of grain from the spout of the cleaner, while moving the table, in the act of bringing a measuring-vessel beneath the said spout, so that none of the grain will escape from the machine unmeasured.

The following is a description of my improved measuring-attachment:

In the accompanying drawings—

A represents a rectangular box, which serves as a support for the horizontally-reciprocating table A′, which latter is applied on top of the box A, to move on four rollers *c*, and held in place by guides *d d* and standards B B.

This sliding table A′ is allowed to receive a free lengthwise-reciprocating movement on its rollers *c*, and it is provided on top, near its ends, with semicircular ribs or bails *b b*, which serve to indicate the proper positions of the measuring-vessels upon the table.

Beneath this table A′, and pivoted near its front edge, is a dog, *n*, one limb, *n′*, of which is acted upon by a spring, *s*, that keeps the other limb perpendicular to the table, except when this limb is acting, in the direction indicated in fig. 4, upon the ratchet-wheel K.

The wheel *k* is applied loosely upon a horizontal shaft, *r*, and has an index-hand, *e*, fastened to that end of its hub, which extends through the front side of box A, which hand points to units on an index-face.

This wheel *k* is moved one tooth, or a tenth of a revolution, at every two movements of the table A′, by the action of the dog *n*, and when this wheel makes a full revolution, a long radial tooth, *k′*, on one side of it, will give one-tenth of a revolution to a ratchet-wheel, *m*, which is keyed on a shaft, *p*, and which carries on its outer end a hand, *h*, that points to tens on an index-face.

A tooth, *m′*, on the wheel *m*, will, at every full revolution of this wheel, give one-tenth of a turn to a wheel, *l*, which is fast on the shaft *r*, which shaft carries a hand, *g*, on its outer end, that points to hundredths on the index-face.

By this means, the number of strokes given to the table A′ will be registered upon a plate affixed to the front side of the box A.

Rising from the back side of the box A are two standards B B, which have a board, C, secured across their upper ends, through which grain from a spout, G, flows. This spout leads from a threshing-machine or grain-clearer, and terminates, at the board C, in an opening which is made at the middle of the length of this board, and in the relation shown in fig. 2, to the ribs or bails *b b*, when the table A′ is in a position shown in this figure.

In front of the board C, and connected to it by means of guides *a*, is a sliding board, D, which I term a cut-off, and which is provided with two spouts, arranged in such a relation to the ribs or bails *b*, beneath them, that grain flowing from these spouts will fall into measuring-vessels, adjusted in proper places upon the table A′.

This sliding cut-off D is connected by rods

F to the table A′, so as to move with this table, and so, that by reciprocating the table, the spouts E E will be alternately caused to register with the opening of the spout G.

Operation.

Two vessels of a given capacity, say one-half bushel each, are employed for receiving and measuring the grain. One vessel is adjusted upon the table A′, with its bottom against one of the ribs or bails *b*, in which position the vessel is directly beneath a spout, E. The table A′ is then moved a given distance, determined by a suitable stop, which movement brings the said vessel, and the spout E above it, in line with the grain-spout G, and allows the grain to flow from the latter into the vessel.

When one vessel is filled, and an empty one adjusted in place upon the opposite ends of the table, which can be done during the filling of the first vessel, the table A′ is moved backward far enough to bring the second vessel, and the spout E directly above it, into line with the spout G, in which position this vessel will be filled.

In this way, one vessel after another is filled with grain flowing from the spout G, and the quantity measured and indicated upon the face-plate at the front of the machine.

During the movements given to the table A′, for the purpose of bringing an empty vessel beneath the spout G, the slide D will cut off the flow of grain, and thus prevent any grain escaping from the spout G, which does not flow into a measuring-vessel.

Having described my invention,

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

A sliding cut-off, D, provided with spouts E E, and combined with a reciprocating table, A′, a grain-spout, G, and a registering-device, substantially as described.

W. A. WORKMAN.

Witnesses:

A. H. BROWN,

JOHN STEPHENS.