

(No Model.)

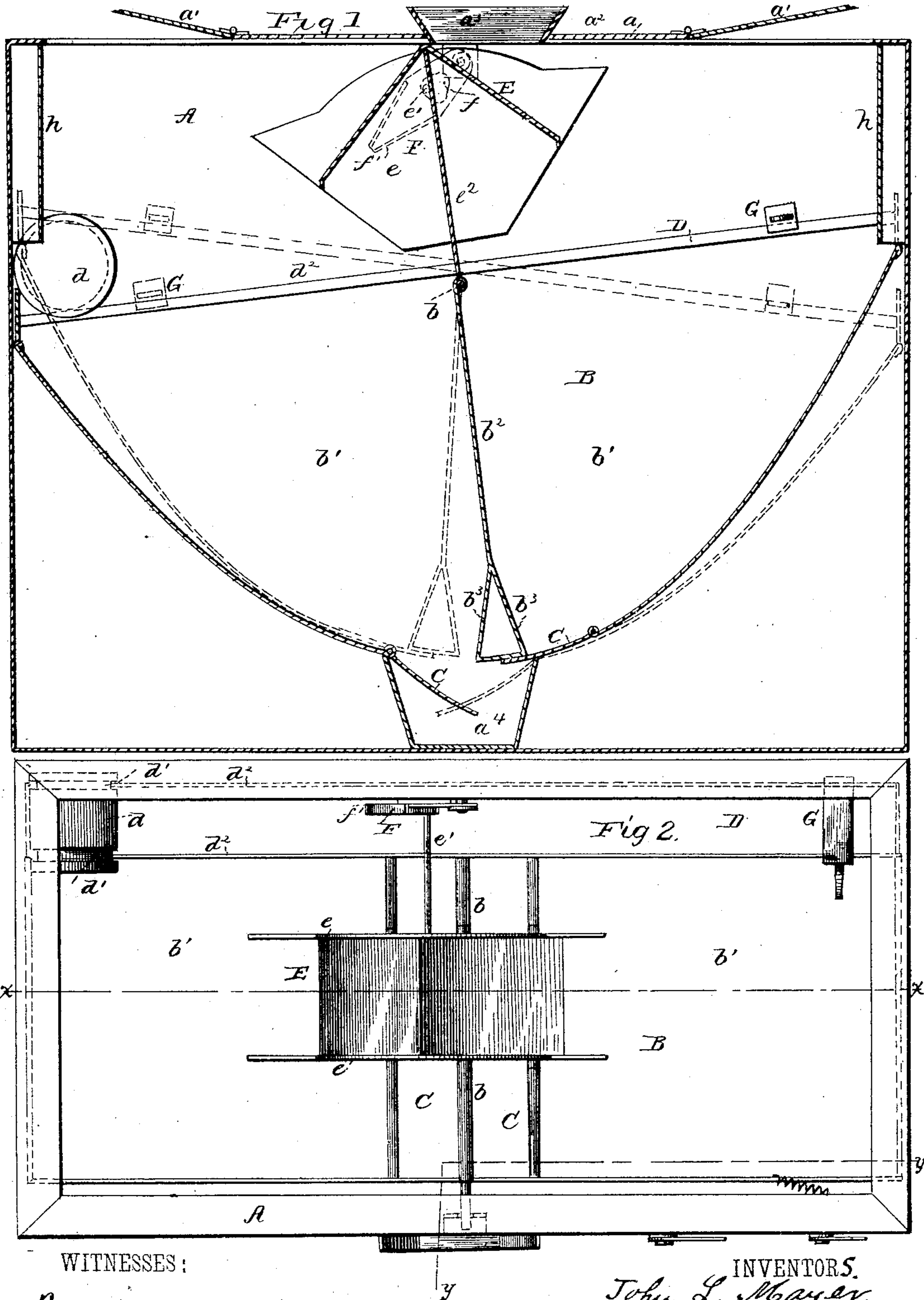
2 Sheets—Sheet 1.

J. L. MAYER & J. SUTTER.

AUTOMATIC GRAIN MEASURE.

No. 274,626.

Patented Mar. 27, 1883.



WITNESSES:

And. G. Dieterich.  
Jno. W. Stockett.

INVENTORS.

John L. Mayer.  
Joseph Sutter  
By De Witt C. Allen,  
ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

J. L. MAYER & J. SUTTER.

AUTOMATIC GRAIN MEASURE.

No. 274,626.

Patented Mar. 27, 1883.

Fig. 3.

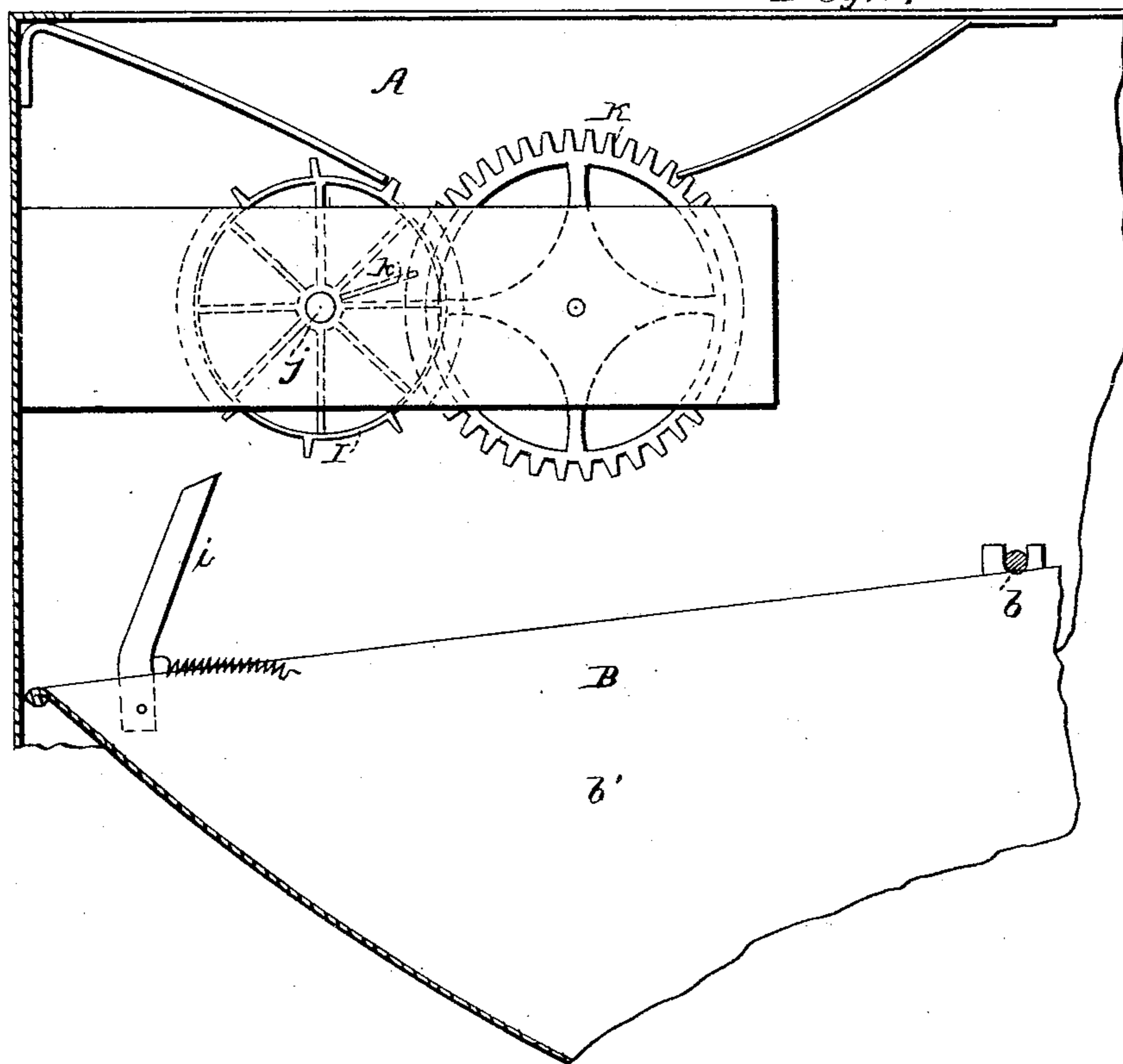
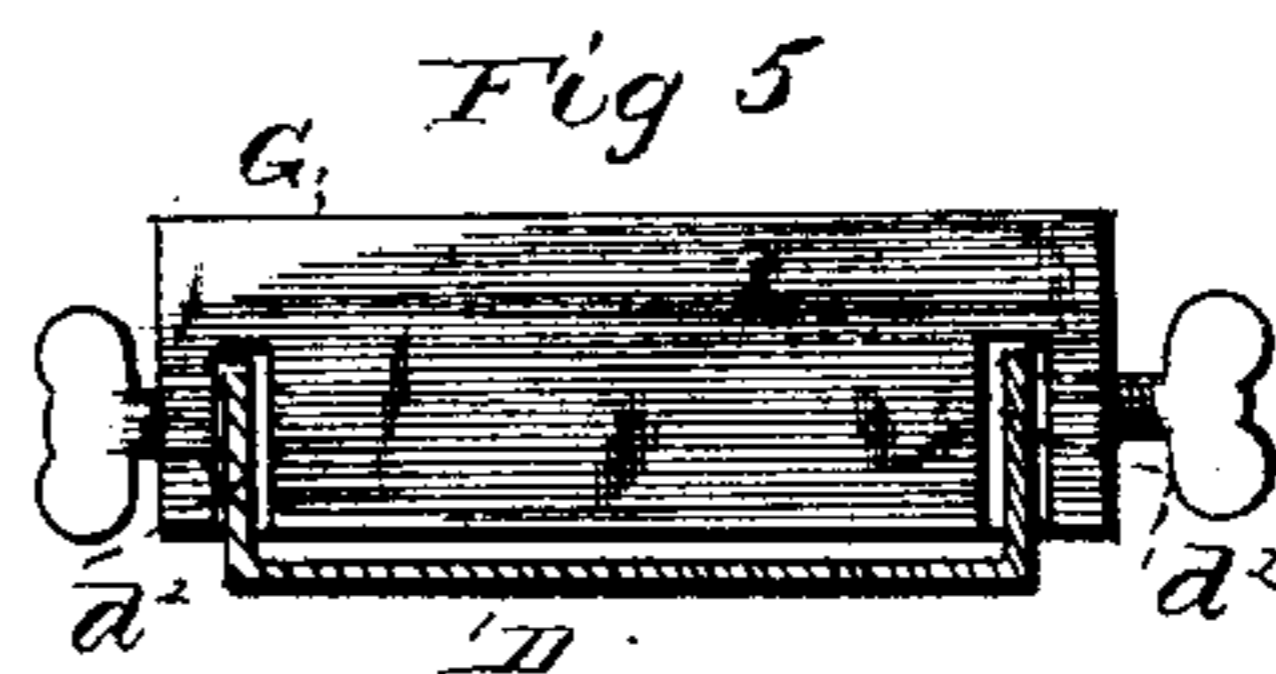
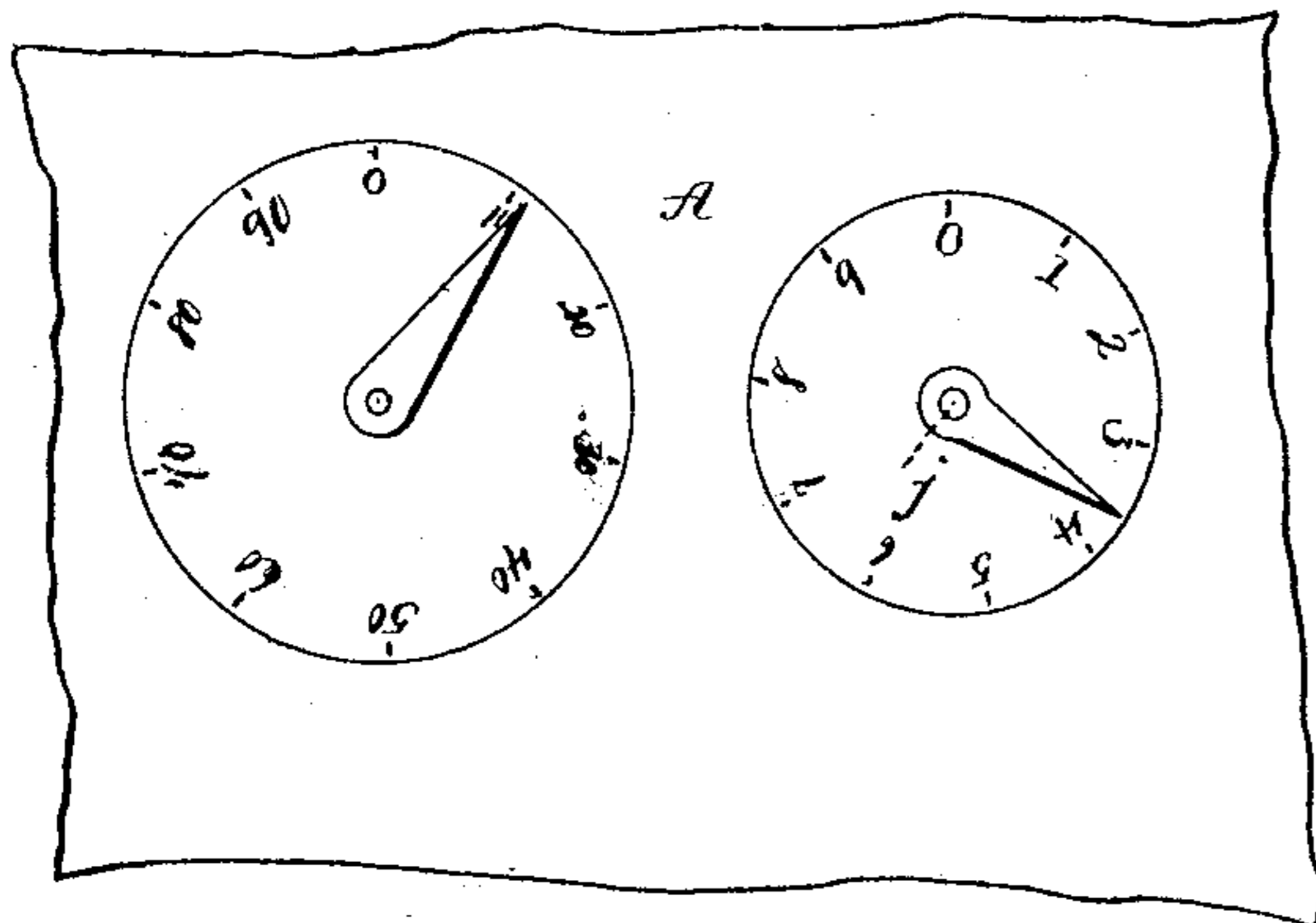


Fig. 4.



WITNESSES:

*Wm. L. Dieterich*  
*Geo. W. Stockett*

INVENTORS,  
*John L. Mayer*  
*Joseph Sutter*  
By *De Witt C. Allen*  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

JOHN L. MAYER AND JOSEPH SUTTER, OF MCLEAN COUNTY, ILLINOIS.

## AUTOMATIC GRAIN-MEASURE.

SPECIFICATION forming part of Letters Patent No. 274,626, dated March 27, 1883.

Application filed October 19, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN L. MAYER and JOSEPH SUTTER, both of the county of McLean, and in the State of Illinois, have jointly invented certain new and useful Improvements in Automatic Grain-Measures; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, and in which—

Figure 1 represents a longitudinal vertical section through the line  $x x$ , Fig. 2; Fig. 2, a top view or plan with the cover removed; Fig. 3, a longitudinal vertical section through the line  $y y$ , Fig. 2; Fig. 4, a side elevation of a portion of the box or casing; Fig. 5, a detail view of one of the bumpers.

This invention relates to certain new and useful improvements in the class of automatic grain-measures employing an oscillating measure having two compartments provided with discharge-valves and operated by gravity or the weight of the grain; and the invention consists in novel features of construction and combination and arrangement of parts, all as will be hereinafter fully described, and set forth in the claims hereto annexed.

In the drawings, A represents a rectangular box or casing provided with a cover,  $a$ , having hinged sections  $a' a'$ , arranged to be turned up at right angles to the central section,  $a^2$ . The central section,  $a^2$ , is provided with a hopper,  $a^3$ , through which the grain enters the box or casing, and a transverse inclined spout,  $a^4$ , is at the bottom of said box or casing for receiving the grain from the oscillating measure B and discharging it through an opening at the end out of the box or casing into any suitable receptacle.

The oscillating measure B is securely mounted upon a transverse shaft,  $b$ , journaled in bearings secured to inner sides of the box or casing, and said measure is divided into two compartments,  $b' b'$ , by a vertical transverse central partition,  $b^2$ , having at its lower end diverging wings  $b^3 b^3$ . The top of the measure is open and its ends inclined downward and inward, and provided at their lower edges with hinged valves C C, which are made of such length that their free edges may close against

the diverging wings  $b^3 b^3$  and be held in a closed position by engaging the top edges of the sides of the transverse inclined discharge-spout  $a^4$ .

Upon the top, and at one side of the measure B, is arranged a longitudinal track, D, upon which travels the weighted roller  $d$ , having circumferential grooves  $d' d'$ , which engage the rails  $d^2 d^2$  of the track, and thus keep said roller in position thereon as it travels or moves from one end of the measure to the other as soon as the weight of the grain admitted to either compartment is sufficient to overcome the weight of the roller by which the measure is oscillated.

E represents an inverted-V-shaped divider arranged directly under the bottom of hopper  $a^3$ , and hinged or pivotally connected by a rod,  $e^2$ , at its lower end to the transverse shaft  $b$ , upon which the measure is mounted. This divider E is provided with side flanges,  $e$ , to prevent the grain from falling or flowing off at its sides, and is also provided at one side with a projecting rod,  $e'$ , the free end of which projects into an enlarged slot,  $f$ , through a bar, F, pivotally connected to the inner side of the box or casing A, and having a V-shaped or downwardly-projecting tapering end,  $f'$ , against which the weighted roller D engages and oscillates as it travels over the measure, so that said divider may be discharging the grain from the hopper  $a^3$  into either one of the compartments of the measure when the other compartment is discharging the grain therefrom. The weight of the grain is regulated by bumpers G G, against which the roller D strikes in its movement over the track, and these bumpers are arranged one on each side of the center or pivotal point of the measure, and are adapted to be adjusted or moved toward or from each other, and secured in position by set-screws or other suitable means. The farther the bumpers are away from the center of oscillation of the measure the greater the amount of grain can be measured, and the nearer to the center of oscillation the lesser amount of grain can be measured, and which can be definitely ascertained by having a scale on the track to adjust the bumpers by. Side stops,  $h h$ , limit the upward or oscillating movement of the measure.

Near the end, on one side of the measure, is arranged a pivoted spring-pawl, *i*, which engages with and turns a gear-wheel, *I*, at each complete or return oscillation of the measure to its normal position, or for every bushel of grain measured. This wheel *I* is mounted on a shaft, *j*, projecting through the side of casing or box, and having an index-finger or pointer on its outer end, which registers with an index-scale on the outer side of the box or casing. The wheel *I* is provided with a lug or dog, *k*, that engages and turns a larger wheel, *K*, at each complete revolution of the wheel *I*, which wheel is also mounted upon a shaft having an index-finger or pointer which registers every complete revolution of the wheel *I*.

The operation of our improved measure is as follows: The weighted roller is first placed on the track at the opposite end from the register, and the grain, which is carried to the hopper *a*<sup>3</sup> from a thrashing-machine, or from an elevator, where it is stored, passes to the compartment of the measure nearest the register, and when said compartment is sufficiently filled to overcome the weight of the roller it will oscillate the measure and cause the roller to move to the other side of the measure, and in so doing will operate the divider so that the grain will flow from the hopper *a*<sup>3</sup> into the empty compartment, the oscillating movement of the measure opening the valve in the compartment containing the grain, to discharge it therefrom, while closing the valve of the other compartment to receive the grain.

The above-described operation is repeated as soon as either compartment has been sufficiently filled with grain to overcome or overbalance the weighted roller.

Further description of the operation of the measure is deemed unnecessary, it being obvious from the foregoing.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In an automatic grain-measure, the combination of an oscillating measure divided into two compartments and provided with a longitudinal track, a roller adapted to move over said track, and an oscillating inverted-V-shaped grain-divider provided with a tapering bar, *F*, adapted to be operated by said roller in its movements over said track, substantially as and for the purpose herein shown and described.

2. In an automatic grain-measure, the combination, with an oscillating measure divided into two compartments, of the pivoted inverted-V-shaped grain-divider provided with side flanges, *e*, and projecting rod *e'*, the pivoted bar *F*, provided with an oblong slot, *f*, and a tapering end, *f'*, and a roller adapted to move over said measure and operate or oscillate the bar *F*, substantially as and for the purpose herein shown and described.

3. The combination, with the registering mechanism of an automatic grain-measure, of an oscillating divided measure having a spring-pawl adapted to operate said registering mechanism, and a longitudinal track, a roller adapted to move over said track, and a movable grain-divider having a tapering bar, *F*, adapted to be operated by said roller, substantially as and for the purpose specified.

In testimony that we claim the foregoing we have hereunto set our hands this 14th day of October, 1882.

JOHN L. MAYER.  
JOSEPH SUTTER.

Witnesses:

THOS. SLADE,  
IRVING UNDERHILL.