

(No Model.)

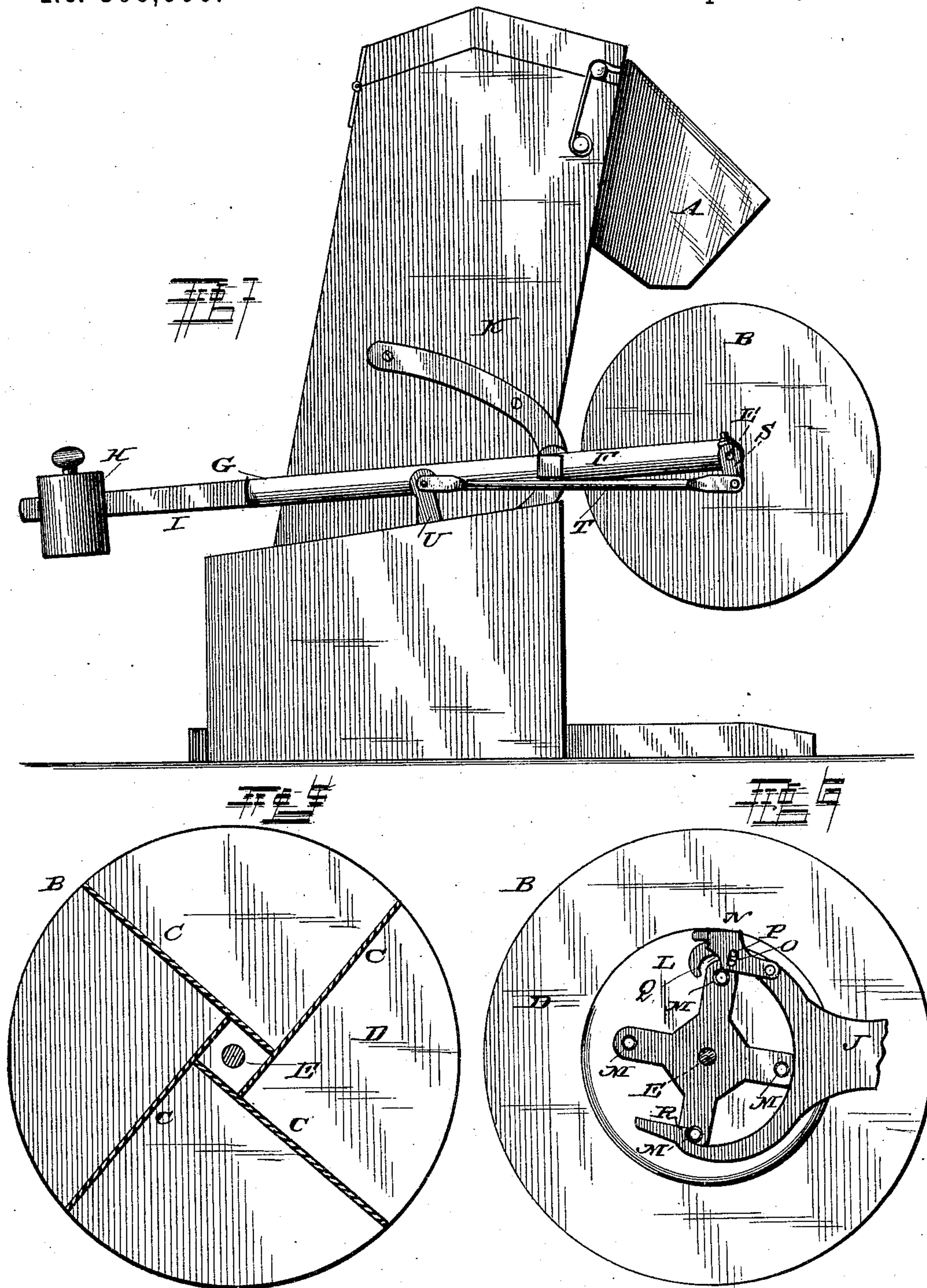
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J. L. & E. D. CLAUDIN.

AUTOMATIC GRAIN AND SEED MEASURE AND REGISTER.

No. 306,000.

Patented Sept. 30, 1884.



WITNESSES:

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J. H. Secher

INVENTORS:

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Edward J. Claudine,
by Louis Bagger Co.
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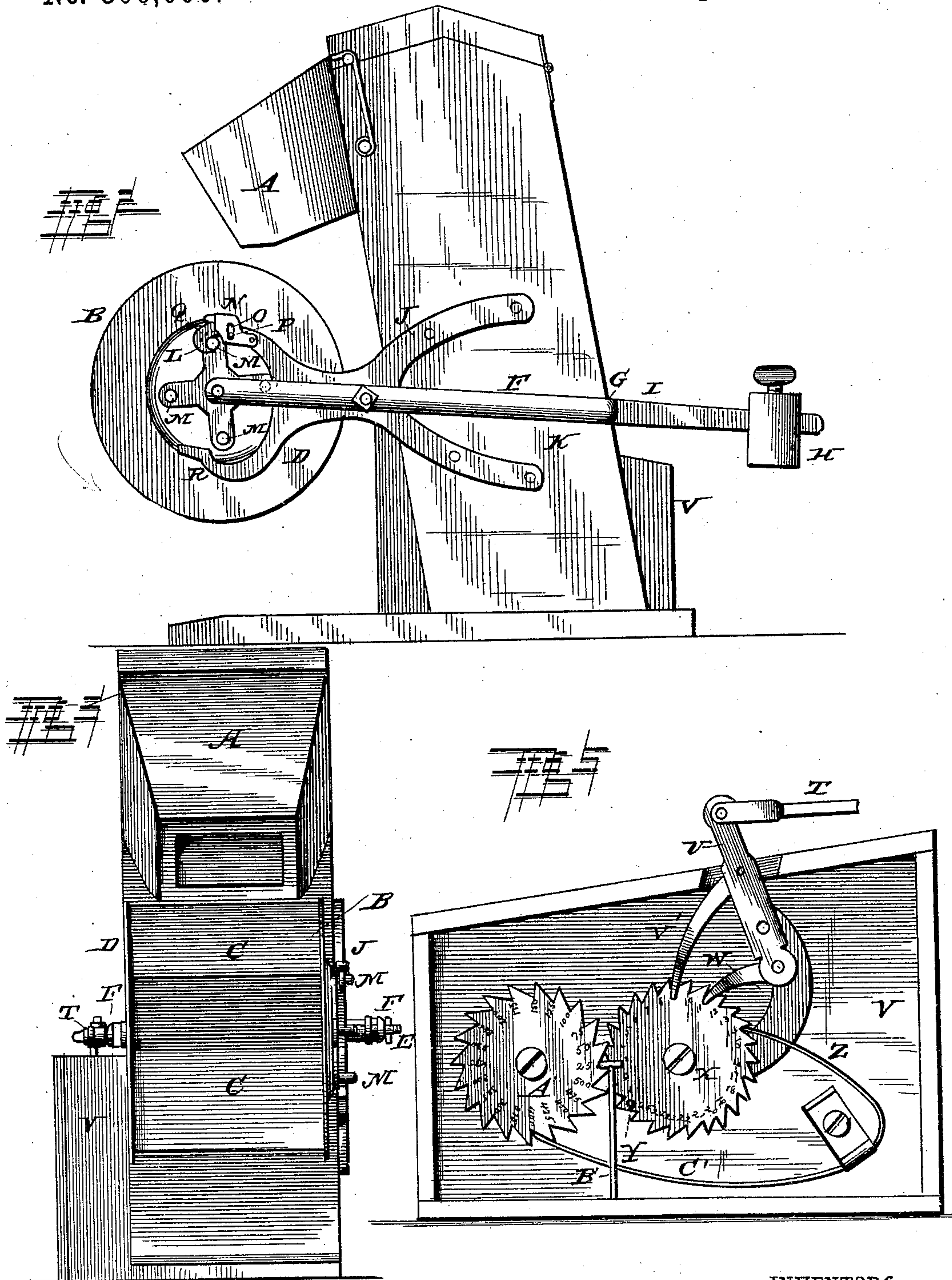
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UNITED STATES PATENT OFFICE.

JOHN L. CLAUDIN AND EDWARD D. CLAUDIN, OF MORTON, ILLINOIS.

AUTOMATIC GRAIN AND SEED MEASURE AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 306,000, dated September 30, 1884.

Application filed June 18, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN L. CLAUDIN and EDWARD D. CLAUDIN, citizens of the United States, and residents of Morton, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Automatic Grain and Seed Measure and Register; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figures 1 and 2 are side views of our improved automatic grain measure and register, seen from opposite sides. Fig. 3 is a front view of the same; and Figs. 4, 5, and 6 are detail views, respectively, of the revolving measuring-vessel, the register, and the mechanism for stopping the measuring-vessel.

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

Our invention has relation to automatic grain measures or weighers and registers; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the discharge-spout, through which the grain passes from an elevator, bin, or other machine or receptacle, and B indicates the revolving measuring-vessel, which has four (more or less) inclined partitions, C, extending transversely from the circular heads or end pieces, D, of the vessel, the inner ends or edges of the partitions bearing against the side of the adjoining partition a distance from its inner edge, thus placing the inner edges of the partitions eccentric to the axle or shaft E of the vessel. This shaft is journaled at its ends in the ends of the bifurcated arms F F of a scale-lever, G, which lever has its fulcrum in the bifurcated arms, while the poise H slides adjustably upon the single-scale beam I of the lever. A bifurcated arm, J, projects at one end of the revolving measuring-vessel from the support K of the device, which support may either be the casing of the elevator or any portion of the frame of the machine or receptacle to which the device is attached, and the

upper arm of this bifurcated arm forms a downwardly-hooked catch, L, adapted to engage one of a number of laterally-projecting lugs, M, upon the end of the revolving vessel, which lugs correspond in number and position to the number of receptacles formed in the vessel by the partitions, the lugs being secured to the end of the vessel a short distance in advance of each partition. A weighted catch, N, is pivoted upon the said upper branch of the bifurcated arm, to the rear of the hook, and has a downwardly-projecting flange upon its outer side, which has a segmental slot, O, sliding upon a stud, P, projecting from the outer side of the branch, and the outer end of the said flange is cut out rounded, as shown at Q, for the purpose of bearing against the rear side of one of the lugs upon the revolving vessel, when the lug is caught by the hook, preventing the vessel from revolving backward. The lugs are held by the hook and by the pivoted catch when the poise upon the scale-beam bears the bifurcated ends of the scale-lever and the vessel with it upward; but when the weight of the grain in the vessel overcomes the weight of the poise the lug formerly held by the hooked catch will be drawn downward out of engagement with it, while the lug diametrically opposite to it will be brought to bear against the lower branch of the arm, the outer end of which branch forms a step or shoulder, R, which will prevent the lug from slipping outward, while the lug may slide upon the curved edge of the branch, the vessel thus being only permitted to revolve in one direction. A crank, S, is secured upon the other end of the shaft of the measuring-vessel, and a connecting-rod or pitman, T, is pivoted at one end to the said crank, while its other end is pivoted to a lever, U, pivoted in a casing or frame, V, secured upon the side of the support or frame for the device. The pitman is pivoted to the upper longer arm of the lever, and a longer pawl, V', is pivoted at one end to the middle of the longer arm, while a shorter pawl, W, is pivoted to the end of the shorter arm of the lever, and these pawls engage the teeth of a ratchet-wheel, X, and the stroke of the lever is such that the pawls will move the ratchet-wheel one tooth forward at each half-revolution of the crank, and the ratchet-wheel

is prevented from slipping backward by a spring-pawl, Z, which bears with its end against the periphery of the wheel. The teeth of the ratchet-wheel are numbered, each number indicating two quarter-revolutions of the measuring-vessel, and a pin or lug, Y, upon the face of the ratchet-wheel engages once in each revolution of the ratchet-wheel one tooth of a ratchet-wheel, A', the teeth of which are also numbered, and a pointer-rod, B', having a cross-piece at its upper end, serves as an index to show the starting-point of the wheels. A spring-pawl, C', engages the teeth of the latter ratchet-wheel, preventing it from traveling backward, and it will be seen that the long pawl-arm will operate the ratchet-wheel when the crank is traveling from forward toward the rear, while the short pawl will operate the wheel when the crank is traveling from the rear toward the front. It will thus be seen that the grain passing out through the spout will fall into the compartment of the receptacle facing upward in the measuring-vessel, and the poise upon the scale-beam having been adjusted to be raised by the weight of the amount of grain measured in one of the compartments of the vessel, the said measuring-vessel will be tilted downward, disengaging the lug upon the end of the vessel from the hooked catch, and will thus be allowed to revolve one-quarter of a revolution, emptying its contents, whereupon the poise will again raise the vessel, allowing the next lug upon the end of the revolving vessel to engage the hooked catch, when the same process will be repeated every time the compartment is full. Each half-revolution of the vessel will cause the registering lever and pawls to move the ratchet-wheel one tooth forward, the capacity of each compartment of the measuring-vessel being preferably one-half of the usual dry-measure unit—say one-half bushel—and by increasing the number of registering ratchet-wheels any number of measures full of grain may be measured and registered.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. In an automatic grain-measuring device, the combination of the revolving measuring device journaled in the bifurcated arms of a scale-lever, having transverse oblique partitions, as described, and having lugs projecting from one end corresponding in number and

location to the compartments formed by the partitions, with a bifurcated arm having a hooked catch at the end of its upper branch, and a shoulder at the outer end of its lower branch and straddling around the lugs, as and for the purpose shown and set forth.

2. In an automatic grain-measuring device, the combination of the lugs upon the ends of the revolving measuring-vessel, the bifurcated arm having the hooked catch at the outer end of its upper branch, and the laterally-projecting pin upon the side of the said branch, and the weighted and flanged catch pivoted upon the side of the upper branch of the bifurcated arm, and having a segmental slot in its flange sliding upon the pin, as and for the purpose shown and set forth.

3. The combination of the revolving measuring-vessel having the lugs upon its end, the bifurcated arm, having a hooked catch at the outer end of its upper branch and a pin upon the side of the said branch, and having a shoulder at the end of its lower branch, and the weighted flanged catch pivoted upon the side of the upper branch of the bifurcated arm, and having a segmental slot sliding upon the pin upon the side of the said branch, as and for the purpose shown and set forth.

4. The combination of the bifurcated scale-lever having the single beam, the poise sliding upon the said beam, the measuring-vessel divided into compartments and journaled transversely between the ends of the bifurcated lever, the lugs secured upon one end of the revolving measuring-vessel registering with the compartments in the same, the rigid bifurcated arm formed with a hooked catch at the outer end of the upper branch of the same, and with a shoulder at the end of the lower branch, and provided with a laterally-projecting lug upon the side of its upper branch, and the weighted flanged catch pivoted upon the side of the upper branch of the bifurcated arm, and having a segmental slot sliding upon the lug upon the side of the same, as and for the purpose shown and set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

JOHN L. CLAUDIN.

EDWARD D. CLAUDIN.

Witnesses:

WILLIAM F. DENNE,
CARL F. GRIESSER.