

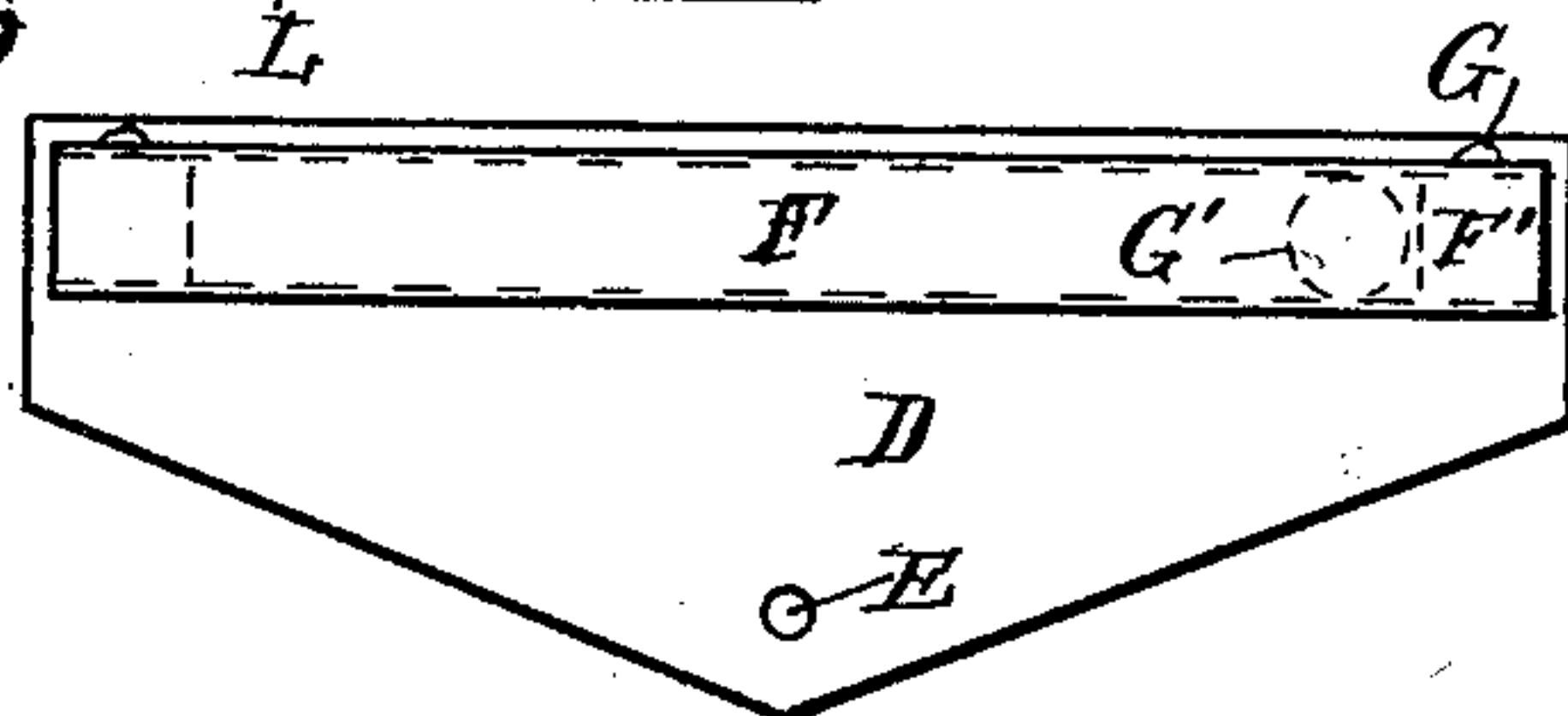
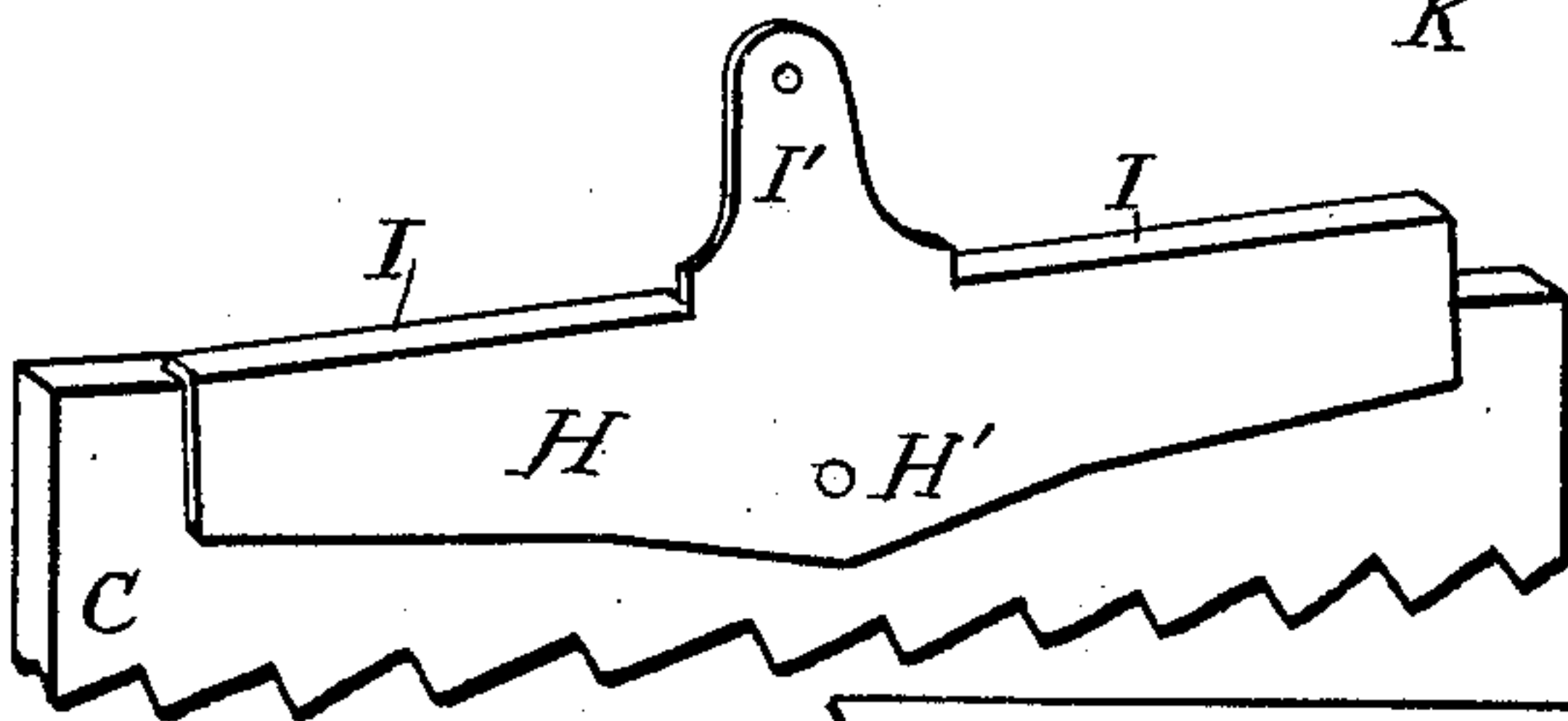
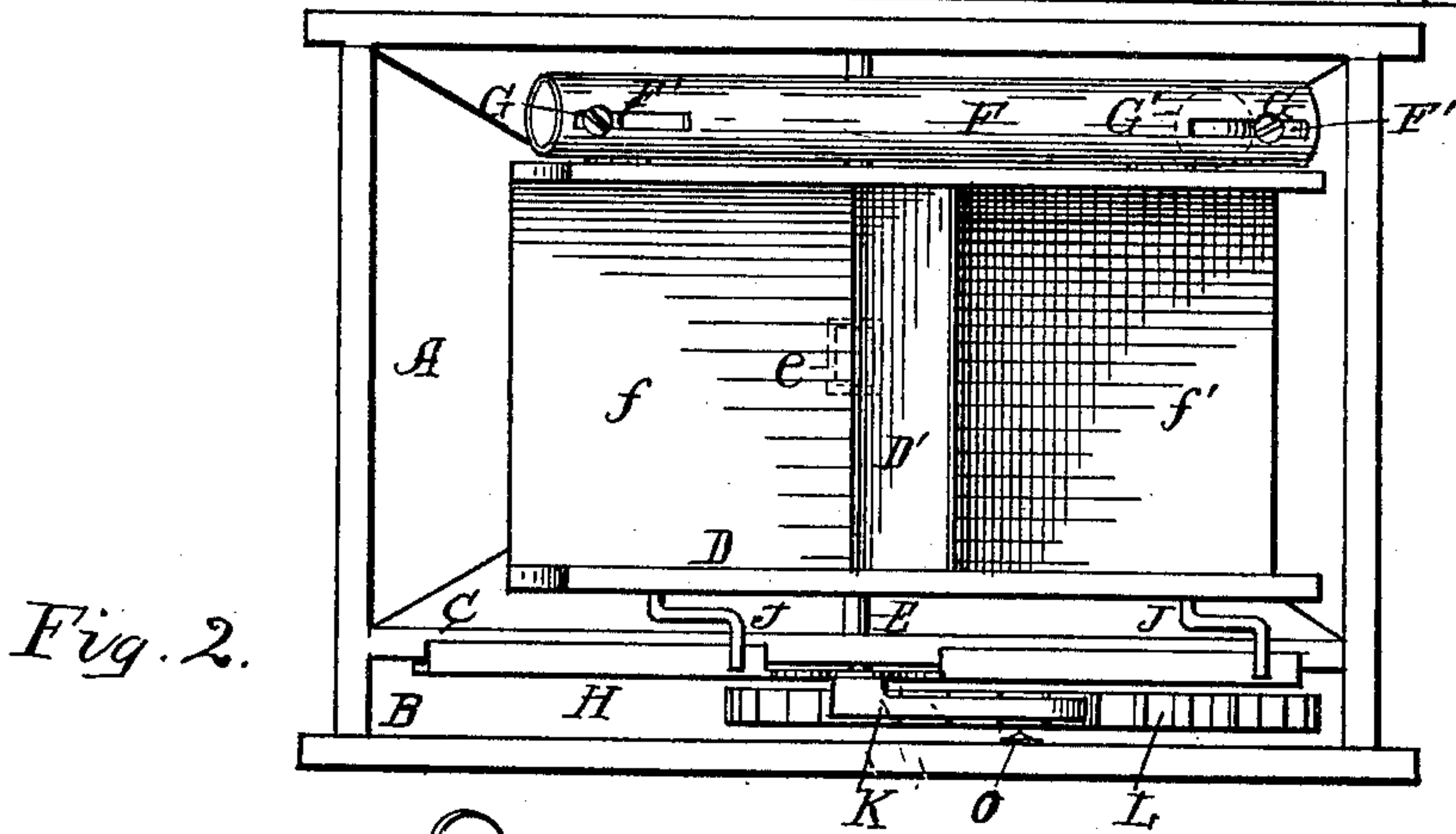
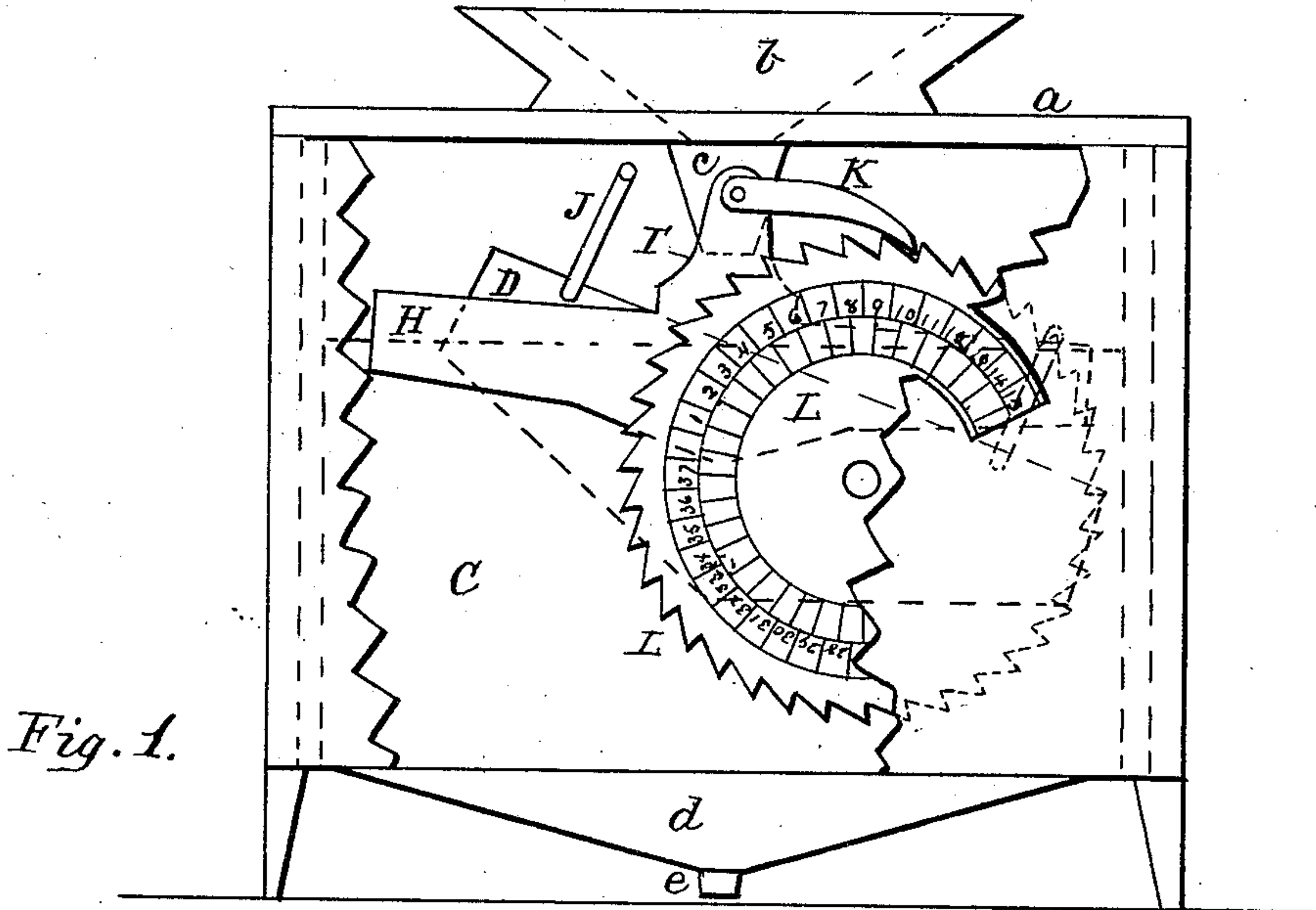
(No Model.)

J. THOMAS.

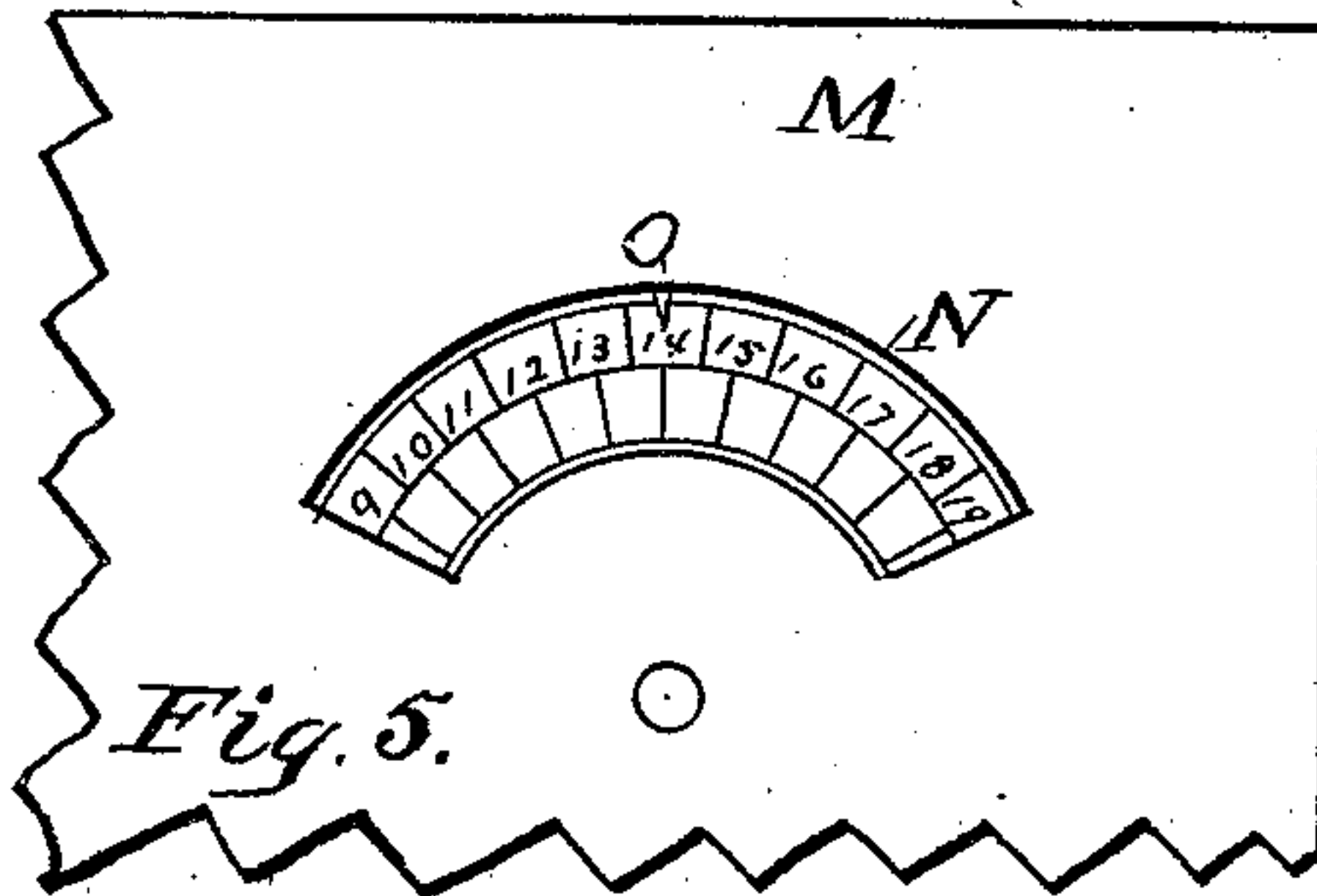
OSCILLATING GRAIN AND LIQUID METERS.

No. 246,243.

Patented Aug. 23, 1881.



Witnesses:
O. J. Bailey
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UNITED STATES PATENT OFFICE.

JOHN THOMAS, OF GALVESTON, INDIANA.

OSCILLATING GRAIN AND LIQUID METER.

SPECIFICATION forming part of Letters Patent No. 246,243, dated August 23, 1881.

Application filed May 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMAS, of Galveston, in the county of Cass and State of Indiana, have invented a new and useful Improvement in Grain and Liquid Measures, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation with the front part of the casing cut away. Fig. 2 is a top view with the lid of the casing removed. Fig. 3 is a perspective elevation of the partition and the beam for operating the pawl. Fig. 4 is a rear view of the oscillating cup or buckets, and Fig. 5 is an exterior view of part of the front face of the case.

The object of my invention is to provide a cheap and simple automatic grain or liquid measure provided with a dial-plate and pointer for indicating the quantity of liquid or amount of grain passed through the weigher, as will be hereinafter more fully set forth.

The accompanying drawings represent a box of suitable size and shape divided into two compartments, A and B. The box is provided on top with a lid, *a*, having a hopper, *b*, and a chute, *c*, extending down below the lid. The bottom of the box *d* is funnel-shaped, and provided centrally with a discharge-spout, *e*, which may have a valve or not, as desired. The large compartment A is provided with an oscillating cup or bucket, D, divided centrally by a partition, D', so as to form two parts, *f f'*. These oscillating buckets swing on a horizontal shaft, E, journaled in the rear side of the box and in the partition C between the two compartments. These buckets are provided on the rear side with a cylinder, F, horizontally disposed, and slotted on the upper side near each end. Plugs or stops F' are placed in the ends of the cylinder, and screws G pass through the slots and enter these stops, so as to hold them at any desired point. A weight or ball, G', is placed in the cylinder to counter-balance the grain or liquid to be placed in the bucket at the opposite end. A rod having a sliding weight might be substituted, or an oblong box, or other equivalent, the principal design being to provide a sliding weight, so that the cylinder in oscillating from one side to the other will throw the weight the moment

the end containing the weight is raised above the level, thereby causing it to travel rapidly to the opposite end and bring down the cylinder and accompanying buckets with a sudden impulse.

The partition C is provided with a beam, H, hinged thereto centrally at H'. This beam has flanges I, which extend over on the partition, and directly above the hinged point an arm, I', extends upward from the beam. The beam is hinged so that it will oscillate slightly. Arms J, attached to the ends of the oscillating buckets D, project upward and have a right-angled extension, which extends forward over the top of the beam H at each end. It will thus be observed that the buckets H in oscillating cause the arms J to strike the beam H, when near the lowest point of their motion, and oscillate the beam.

Within the compartment B is journaled a ratchet-wheel, L, having a suitable dial-plate on its face. A pawl, K, hinged to the upper end of the arm I', engages with this ratchet-wheel, and when in motion this pawl moves the wheel forward one tooth whenever the buckets oscillate twice.

The operation of the machine is as follows: The grain is placed in the supply-hopper *b* and passes down through the tube *c* into the elevated cup or bucket *f*. We will now suppose that the ball or weight G' is so located by means of the stop F' that it will weigh a half-bushel of grain in the bucket *f*. The stop at the opposite end of the cylinder is also properly adjusted. When a half-bushel of grain has been deposited in the bucket *f* it descends, and when near the lowest part of its descent the arm J strikes the beam H, causing it also to descend and retract the pawl K. When the bucket *f'* in like manner is filled the bucket oscillates as before, the other arm, J, strikes the opposite end of the beam, and causes the pawl to move forward the wheel L one tooth. A pointer, O, affixed centrally in the opening N in the front of the box, indicates the amount weighed.

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

1. The oscillating cup D, having the arms J J, in combination with the beam H, having

the arm I' and pawl K, and with the ratchet-wheel L, substantially as set forth.

2. The oscillating cup D, having the cylinder F secured thereto at one side, provided
5 within with a shifting weight, G', and having also the arms J J, in combination with the beam H, having the arm I' and the pawl K,

and with the ratchet-wheel L, having on its face the dial-plate, and the pointer O on the casing, as herein set forth.

JOHN THOMAS.

Witnesses:

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