No. 715,172. Patented Dec. 2, 1902.

W. F. STIMPSON.

COMPUTING SCALE.

(Application filed July 1, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

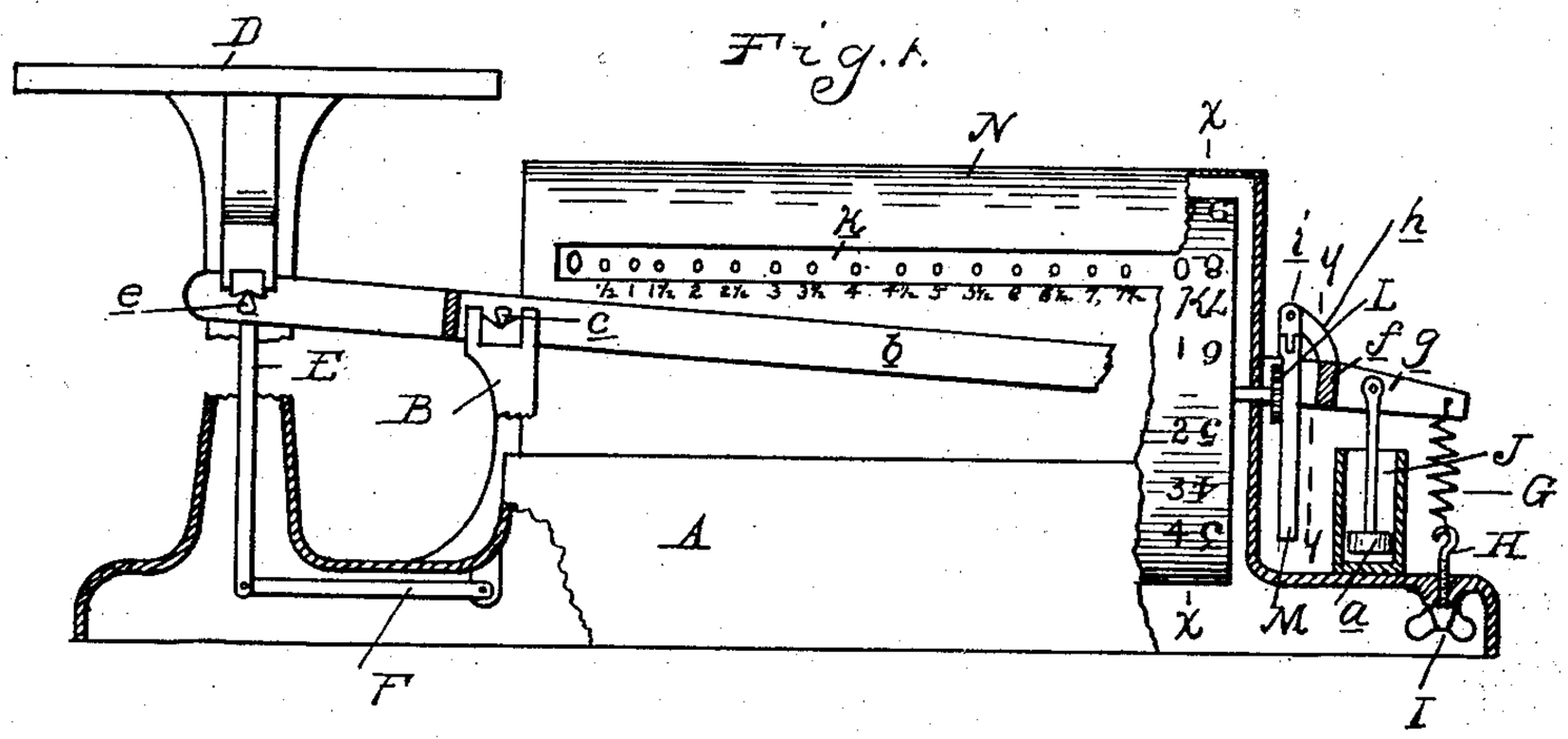
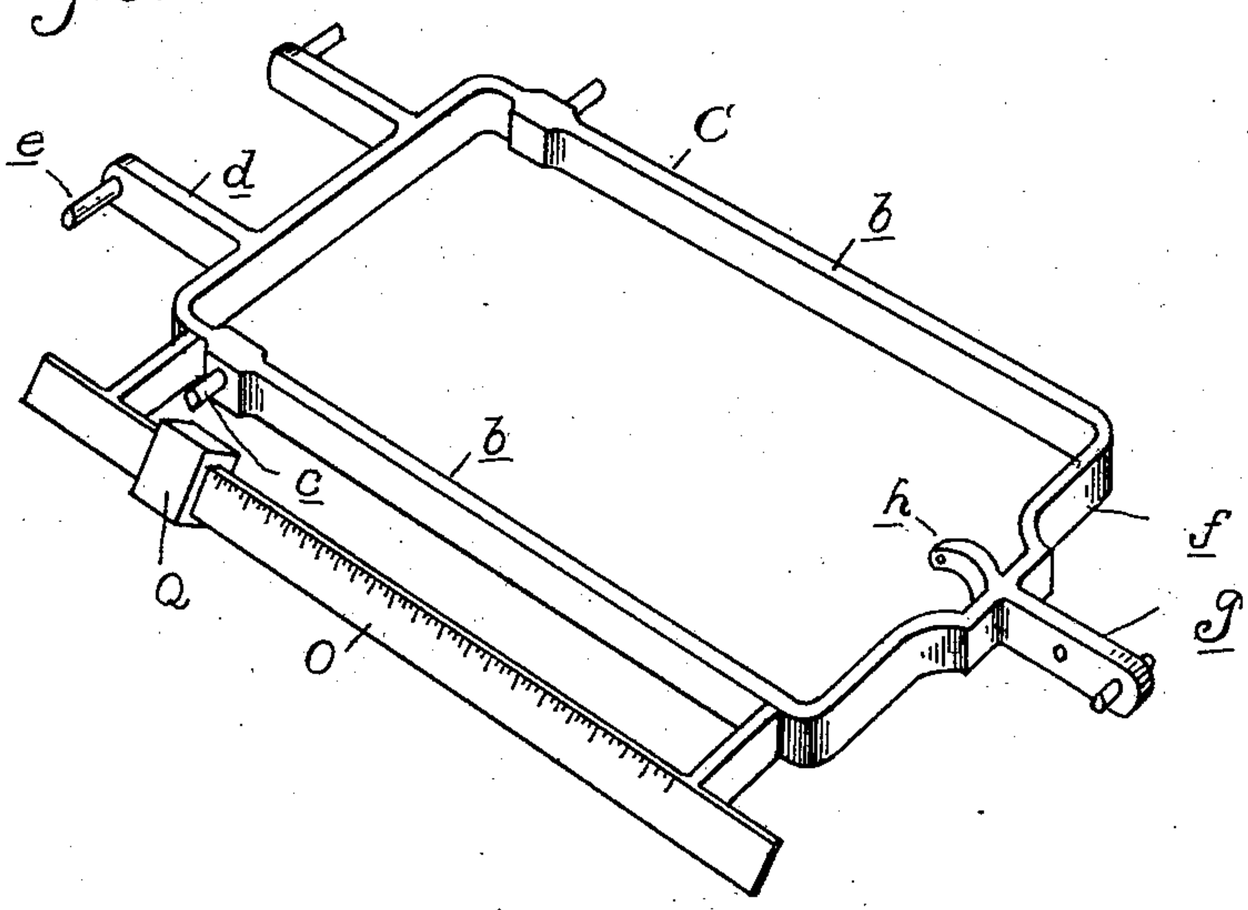


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

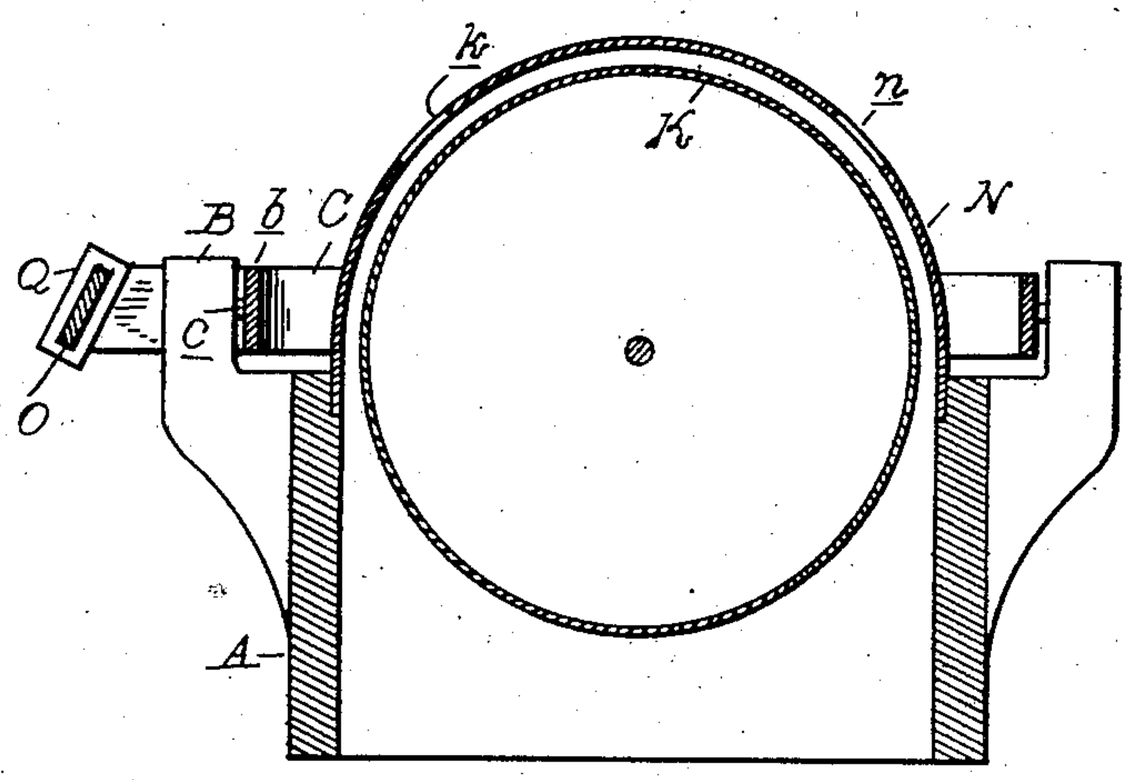
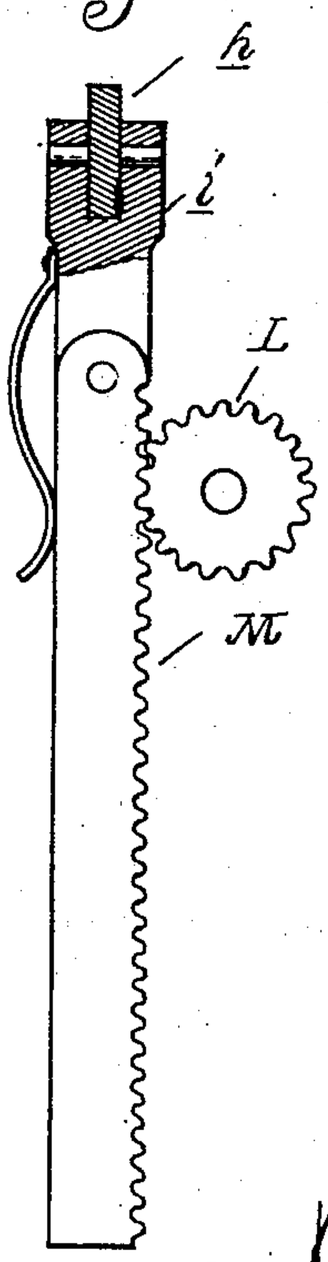


Fig. 4.



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UNITED STATES PATENT OFFICE.

WALTER F. STIMPSON, OF DETROIT, MICHIGAN.

COMPUTING-SCALE.

SPECIFICATION forming part of Letters Patent No. 715,172, dated December 2, 1902.

Application filed July 1, 1901. Serial No. 66,662. (No model.)

To all whom it may concern:

Be it known that I, WALTER F. STIMPSON, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Computing-Scales, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to computing-scales of that class in which the computations are arranged upon a rotatable cylinder which is actuated by the movement of the scale-platform.

It is the object of the present invention to obtain a construction which is especially adapted for a counter-scale and in which the computing-cylinder is conveniently arranged.

It is a further object to obtain a simple construction to build which is accurate in its indications of weight and price.

The invention consists in the construction as hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation, partly in longitudinal section, of the scale. Fig. 2 is a perspective view of the beam detached. Fig. 3 is a cross-section on line $x\,x$, Fig. 1; and Fig. 4 is an enlarged section on line $y\,y$, Fig. 1.

A is a suitable base or frame for supporting the operating parts. This base is provided with a standard B, in which the beam C is fulcrumed. Supported upon one end of this beam is a weighing-platform D, which is provided with a downwardly-extending shank E, entering an apertured standard in the base A and suitably guided, as by a pivotal link. That arm of the beam C upon the opposite side of the fulcrum from the platform D is preferably of greater length and is connected at its free end with a suitable counter tension device, such as the spring G. The position of this spring may be adjusted by connecting it with a threaded shank H, which passes through the top of the base and has an adjusting-nut I thereon within the base.

J is a dash-pot arranged upon the base and having its movable plunger a pivotally connected with the beam C, thereby serving to retard the oscillations of said beam.

Adjacent to the beam C is arranged a computing-cylinder K. This cylinder, as shown, is rotatable about a horizontal axis and is journaled in suitable bearings upon the base. At one end it is connected with a pinion L, which is arranged adjacent to the free end of the beam C.

M is a rack connected to the beam and engaging with a pinion L, the arrangement being such that the movement of the beam will actuate said rack to rotate the pinion and the computing-cylinder.

In order to provide a convenient arrangement for the computing-cylinder in relation to the beam, I preferably form the latter as shown in Fig. 2 of the drawings, and consisting of an open frame, the side members b thereof being arranged upon opposite sides of said cylinder.

c represents the fulcrum-pivots, which are preferably secured to the side bars b, and d represents arms extending from one end of the frame and carrying pivots e, which support the platform. The opposite end bar f of the open frame has centrally connected thereto an arm g, to which the spring G and plunger a of the dash-pot are secured.

h is a finger projecting inwardly from the bar f, to which a rack-bar M is secured, preferably with a universal joint, comprising the link i, pivotally connected at its opposite ends to said finger h and rack-bar in transverse planes. The rack-bar is thus free to maintain this engagement with the pinion L during the oscillation of the beam and may be held in engagement by any suitable means, such as a spring j.

The cylinder K is arranged upon the base, so as to be surrounded by the beam, as above described, and is provided with the computations in circumferential rows.

N is a casing covering the cylinder K and provided on one side with a longitudinal slot k. The units of price are arranged upon the casing adjacent to this slot k and in connection with their corresponding rows of computations upon the cylinder. The weight-indications are preferably arranged at one or both ends of the cylinder and may be observed through the slot k. The opposite side of the casing N is also preferably provided with a slot or window n, through which reverse weight-indications on the cylinder may be observed by the purchaser.

The beam C is preferably provided with a tare-beam O, as shown in Fig. 2, which may be secured at one side of the open frame and is provided with an adjustable poise Q.

In operation the movement of the beam C will be resisted by the spring G until a balance is established, while this movement in turn will be translated into rotary movement of the computing-cylinder through the rack-and-pinion connection, which indicates the weight and price.

It is obvious that any suitable tension device may be employed in place of the spring G which will resist the movement of the beam, so as to balance the variable weight on the platform.

What I claim as my invention is—

1. In a scale, the combination with a base, of a horizontal computing-cylinder journaled on said base, a beam extending longitudinally in adjacence to said cylinder, a pinion connected to one end of said cylinder, a vertically-arranged rack-bar meshing therewith and connected to one end of said beam, a weighing-platform connected to the opposite end of said beam, and a spring for resisting the movement of said beam.

2. In a scale, the combination with a base, of a horizontal computing-cylinder journaled thereon, a beam arranged longitudinally of and in adjacence to said cylinder, a pinion at one end of said cylinder, a vertically-arranged rack-bar in mesh with said pinion, a universal-joint connection between said rack-bar and one end of said beam, a weighing-platform at the opposite end of said beam and a counter tension device for resisting the movement of said beam.

3. In a scale, the combination with a base, of a beam fulcrumed thereon, a computing-cylinder rotatively mounted upon said base in adjacence to said beam and having its axis of rotation substantially parallel thereto, a weighing-platform connected to said beam at one end of said cylinder, a weighing-spring connected to the opposite end of said beam for resisting the movement thereof, a vertically-arranged rack-bar pivotally connected to said beam and a pinion connected to said cylinder in mesh therewith and a poise adjustable upon said beam.

4. In a scale, the combination with a base of a computing-cylinder rotatively mounted thereon, a beam fulcrumed upon said base having a portion thereof bifurcated to embrace said cylinder, a weighing-platform connected to one end of said beam, at one end of said cylinder, a pinion connected to the opposite end of said cylinder, a rack-bar connected to said beam engaging said pinion and a spring for resisting the movement of said beam.

5. In a scale, the combination with a computing-cylinder having a substantially horizontal axis of rotation, of a weighing-platform arranged at one end of said cylinder, a beam supporting said platform embracing said cylinder and extending to the opposite end thereof, an actuating connection at the latter end of said beam between the same and said cylinder, and a counter tension device for resisting the movement of said beam.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER F. STIMPSON.

Witnesses:

M. B. O'DOGHERTY,

H. C. SMITH.