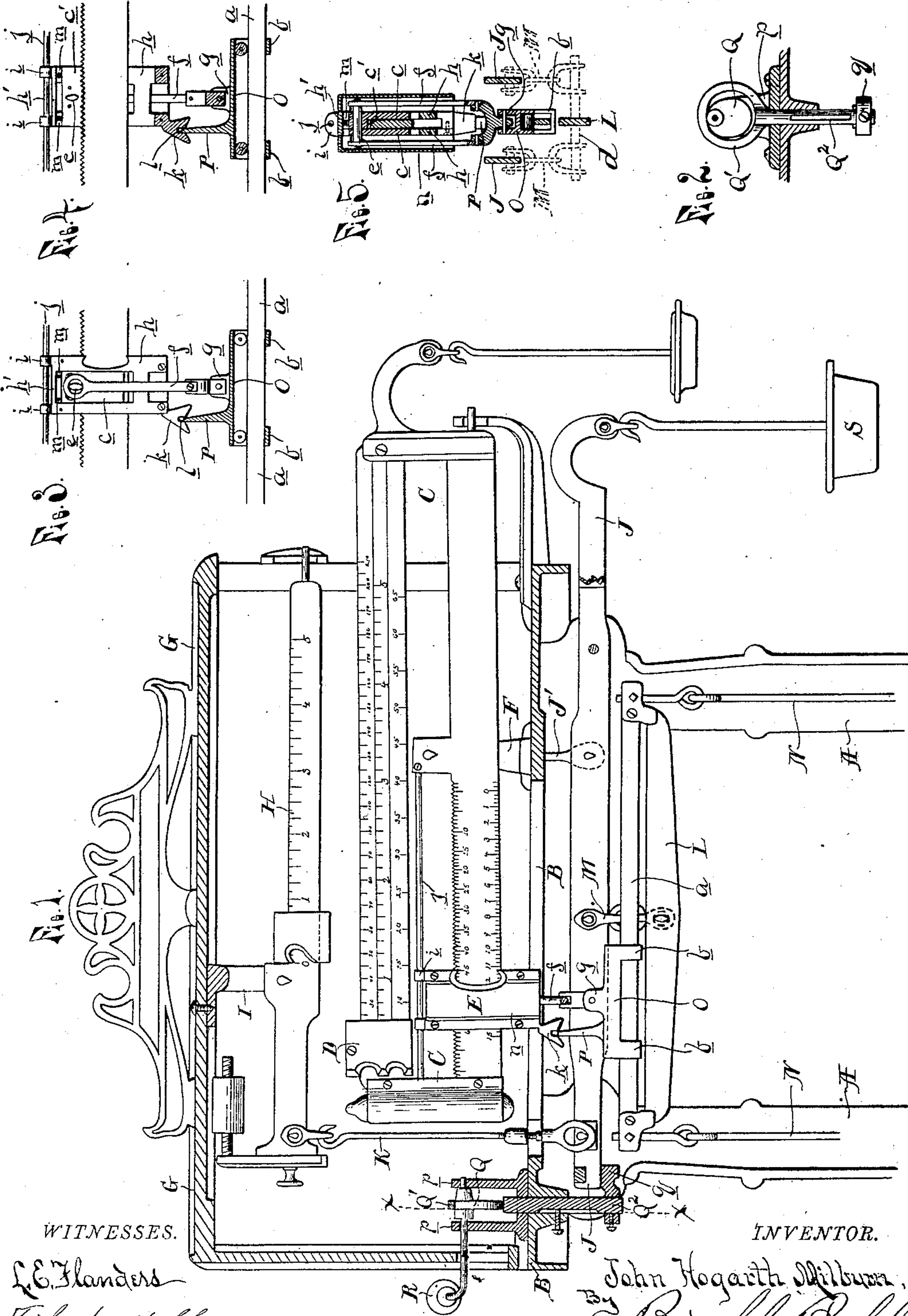


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COMPUTING PLATFORM SCALE.  
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NO MODEL.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## COMPUTING PLATFORM-SCALE.

SPECIFICATION forming part of Letters Patent No. 725,468, dated April 14, 1903.

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*To all whom it may concern:*

Be it known that I, JOHN HOGARTH MILBURN, a citizen of the United States of America, 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.

10 This invention relates more specifically to computing platform-scales, and has particular reference to certain improvements in the construction, arrangement, and operation of different parts, all as more fully hereinafter described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a sectional front elevation of my improved computing-scale. Fig. 2 is a section thereof on line *x x*. Figs. 20 3 and 4 are detached sectional elevations of the indicating sliding block on the price-bar of the computing-beam, and Fig. 5 is a cross-section of said indicating sliding block.

25 A A represent the supporting-pillars, rising from the base of the frame, the latter with the platform and load supporting system thereof being omitted from the drawings.

B is a shelf or cap supported on top of the pillars.

30 C is the computing-beam, composed of two bars, the one on top being what is known as the "value-bar" and carrying the indicating slide-block D, and the one below being the price-per-pound beam and carrying the indicating-block E.

35 F is the support upon which the computing-beam is fulcrumed.

40 G is an overhead frame composed of two vertical side bars supported upon the ends of the shelf and of a horizontal top bar uniting them.

H is a tare-beam fulcrumed below the top bar of the frame above the computing-beam upon a hanger I and carrying an indicating-block.

45 J is a scale-beam fulcrumed below the shelf upon a hanger J' in vertical line with the fulcrum of the computing-beam, the long arm of said scale-beam being forked as in the usual manner.

50 K is a coupling connecting corresponding

ends of said scale-beam and tare-beam together.

L is a horizontal draft-bar extending between the pillars of the frame below the scale-beam J and connected at its opposite ends 55 by means of vertical draft-rods N to a suitable platform-supporting system, (not shown), whereby the load will exert at all times an equal pull upon both ends of the draft-bars 60 and maintain the draft-bar L in a horizontal position. The draft-bar L and scale-beam J are pivotally connected by means of the links M, pivotally secured to the forked arm of the scale-beam and engaging with a knife-bar *d*, 65 transversely secured to the draft-bar.

O is a sliding block or carriage movable upon the draft-bar L, the latter being formed with a suitable track-rail *a*, upon which the sliding block is supported by small travel- 70 ers *b*.

The sliding block E is coupled with the carriage O and is normally locked in position against movement in the following manner: The price-per-pound bar is notched upon 75 its upper edge, and the sliding block E has an interior portion *c*, composed of two united halves, forming between them a vertical slot for the price-bar to pass through. This interior portion is provided with a bearing portion 80 *c'*, which normally rests on top of the price-bar and is provided with one or more teeth upon its under side to engage and interlock with the notches in the price-bar to prevent the sliding block E from being 85 shifted thereon. This interior portion *c* carries knife-edge trunnions *e*, which pivotally engage with the arms of a yoke *f*, the lower end of which is pivotally secured between the ears *g*, formed on the sliding carriage. 90 The interior portion *c* slides within a vertical frame *h*, also made of two united halves and adapted to form a vertical guide-bearing for the interior portion. The frame *h* is provided on top with ears *i*, which slidably engage 95 with a steady-rod *j*, rigidly secured to the price-bar, above the same, and at its lower end it has a dependent lug *k*, formed with a notch *l* in the center of a V-shaped depression in the under side of the lug and adapted to 100 freely engage with the end of a finger P, formed with or secured upon the carriage O.



The guide-frame *h* extends with the portion *h'* over the top of the interior portion *c*, and between this portion *h'* and the portion *c* are interposed two small springs *m*, adapted to  
 5 exert tension upon the portion *c* to hold it in engagement with the notches of the price-bar. The interior portion *c*, together with the frame *h*, are inclosed in a housing of  
 10 sheet metal *n*, suitably secured to the frame *h* without interfering with the free movement of the portion *c* within the frame.

Operating in connection with the afore-described parts there is an arrest provided for the beam *J*, which consists of an eccentric *Q*, mounted upon a shaft journaled in  
 15 bearings *p* and carrying an eccentric-strap *Q'*, with a depending strap-rod *Q<sup>2</sup>* passing through vertical guide-bearings in the shelf and carrying at its lower end, adjustably se-  
 20 cured thereto, a rest *q*, projecting beneath the free end of the beam *J*. The shaft which carries the eccentric is provided with a handle *R* in suitable position for manipulating it  
 25 by hand, whereby in one position of said handle the eccentric will raise the rest *q* beneath the free end of the beam and prevent the beam *J*, and with it the horizontal draft-bar *L*, from vibrating.

As long as the computing-beam and the  
 30 horizontal draft-bar are free to vibrate together the sliding block *E* is locked in engagement with the price-bar and cannot be shifted from its position, at least not by any  
 35 such force as might arise from a jar or from inadvertence or accident. If either the computing-beam or the draft-bar is, however, held from vibrating, it will take but a slight  
 lateral pressure against the sliding block to shove it in any desired position along the  
 40 price-bar. Thus if the horizontal draft-bar is prevented from vibrating by the means above described the portion *c'* of the sliding block which is interposed between the price-  
 45 beam and the springs *m* becomes a fixed abutment for the springs *m*, and by pressing against the sliding block the springs *m* will  
 be compressed and the price-bar depressed and freed from its engagement with the part  
 50 *c'*, thus permitting the adjustment of the sliding block *E* into any desired position.

It is obvious that the tare-beam may be used for weighing independently of the computing-beam, and my construction, which lo-  
 55 cates the tare-beam above the computing-beam, where it is in full view, presents, therefore, an advantage over the usual construction.

For weighing any load above the capacity of the sliding block on the tare-beam coun-  
 60 terpoise-weights are provided for use in connection with the balancing-counterpoise *S*, suspended from the end of the beam *J*.

My construction places the beam *J* and the horizontal draft-bar below the shelf, with only  
 65 the computing-beam and the tare-beam above the shelf, and thus the height of the scale is less than that of scales of like character.

Having thus fully described my invention, what I claim is—

1. In platform computing-scales, the com- 70  
 bination of a horizontal draft-bar, a counterbalancing-beam fulcrumed above said draft-bar and from which said draft-bar is suspend-  
 ed, a computing-beam fulcrumed above said beam and provided with value and price bars 75  
 having indicating slide-blocks thereon, a sliding block on the horizontal draft-bar coupled with the sliding block on the price-  
 bar, a tare-beam above the computing-beam and a coupling-rod connecting said tare-beam 80  
 with the counterbalancing-beam.

2. In platform computing-scales, the com-  
 bination with the supporting-frame and shelf thereof, of a horizontal draft-bar extending  
 85 below the shelf, a counterbalancing-beam fulcrumed intermediately between the shelf and draft-bar and from which said draft-bar is  
 suspended, a computing-beam fulcrumed above the shelf and provided with value and price bars with indicating sliding blocks 90  
 thereon, a sliding block on the horizontal draft-bar coupled with the sliding block on the price-bar, and a tare-beam above the com-  
 puting-beam and coupled with the counterbalancing-beam. 95

3. In platform computing-scales, the com-  
 bination with the shelf and its supporting-pillars at the ends thereof, of a horizontal  
 draft-bar extending between the pillars, a sliding block thereon, a counterbalancing- 100  
 beam fulcrumed beneath the shelf and from which said draft-bar is suspended at its mid-  
 dle, a computing-beam above the shelf and provided with value and price bars with indi-  
 cating slide-blocks thereon, the slide-block on 105  
 the price-bar being coupled with that of the horizontal draft-bar, and a tare-beam above the computing-beam and coupled with the  
 counterbalancing-beam.

4. In platform computing-scales, the com- 110  
 bination with the shelf and its supporting-pillars at the ends thereof, of a horizontal  
 draft-bar extending between said pillars and carrying a sliding block, a counterbalance-  
 beam fulcrumed beneath the shelf and from 115  
 which said draft-bar is suspended free to rise and fall vertically with the motion of said  
 beam, a computing-beam fulcrumed above the shelf and provided with value and price  
 bars carrying sliding blocks thereon the slid- 120  
 ing block of the price-bar being coupled with that of the horizontal draft-bar, and a tare-  
 beam fulcrumed above the computing-beam and carrying a sliding block, said tare-beam  
 being connected with the counterbalancing- 125  
 beam through a coupling-rod and adapted for weighing independently of the computing-  
 beam and counterbalance-beam within the capacity of its sliding block.

5. In platform computing-scales, the com- 130  
 bination with the computing-beam having a price-bar provided with notches upon its up-  
 per edge, of a sliding block thereon composed of an exterior portion, an interior portion



slidingly held in vertical guide-bearings of the exterior portion and provided with teeth for engagement with the notches of the price-bar, springs interposed between the two portions, and a steady-rod secured to the computing-beam above the notches in parallel relation thereto, the exterior portion of the sliding block being supported from said guide-rod free to slide thereon.

6. In platform computing-scales, the combination with the computing-beam having a price-bar provided with notches upon its upper edge, of a sliding block thereon composed of an exterior portion consisting of a skeleton frame and metal plates secured thereto and forming a housing, an interior portion vertically guided therein in guide-bearings formed by the skeleton frame and adapted to engage with the price-notches on the price-bar, springs interposed between said exterior and interior portion and adapted to hold said interior portion in engagement with the price-bar, a steady-rod secured to the computing-beam above the price-notches and upwardly-projecting ears on the exterior portion of the sliding block engaging with said steady-rod to hold the same suspended in sliding engagement therewith, the interior portion embracing the sides of the price-bar to guide the

sliding block in its movement along the price-bar. 30

7. In platform computing-scales, the combination of a horizontal draft-bar, a sliding block thereon, a counterbalancing-beam above said draft-bar from which said draft-bar is suspended, a computing-beam above said counterbalancing-beam and provided with a notched price-bar, a sliding block thereon composed of two parts one adapted to slide freely on the price-bar and held against vertical movement thereon and the other adapted to normally engage with the notches on the price-bar and having a limited vertical play thereon in vertical bearings formed between the two parts, a coupling connecting the last-named part with the sliding block on the draft-bar, an eccentric supported upon the frame of the scale and adapted to be manually operated and a rest projecting into the path of the counterbalancing-beam and adapted to be raised and lowered by the movement of the eccentric. 40 45 50

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

JOHN HOGARTH MILBURN.

Witnesses:

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JOSEPH A. NOELKE.