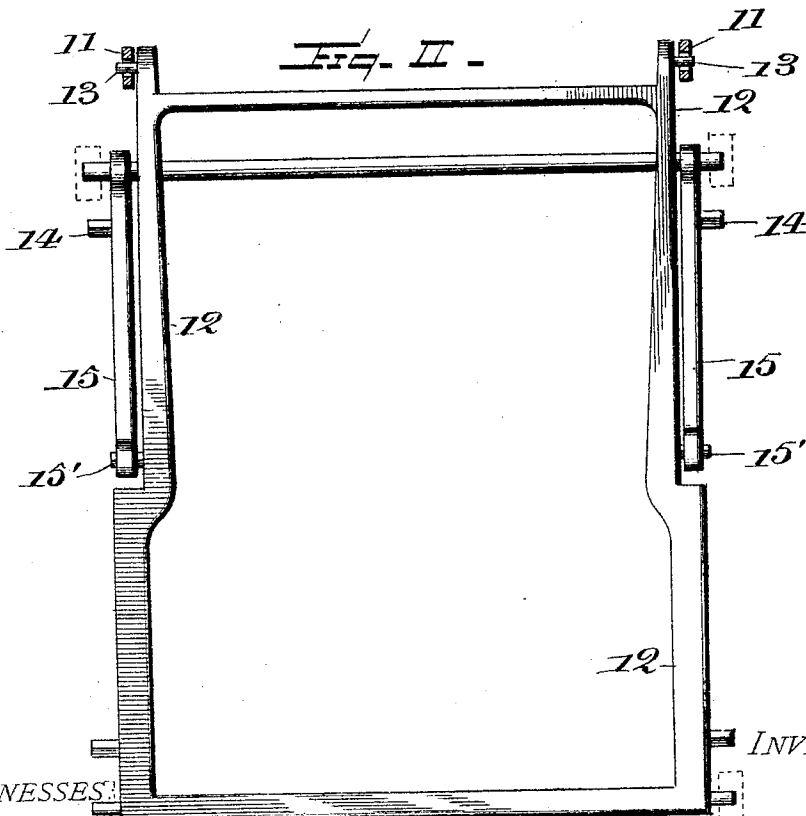
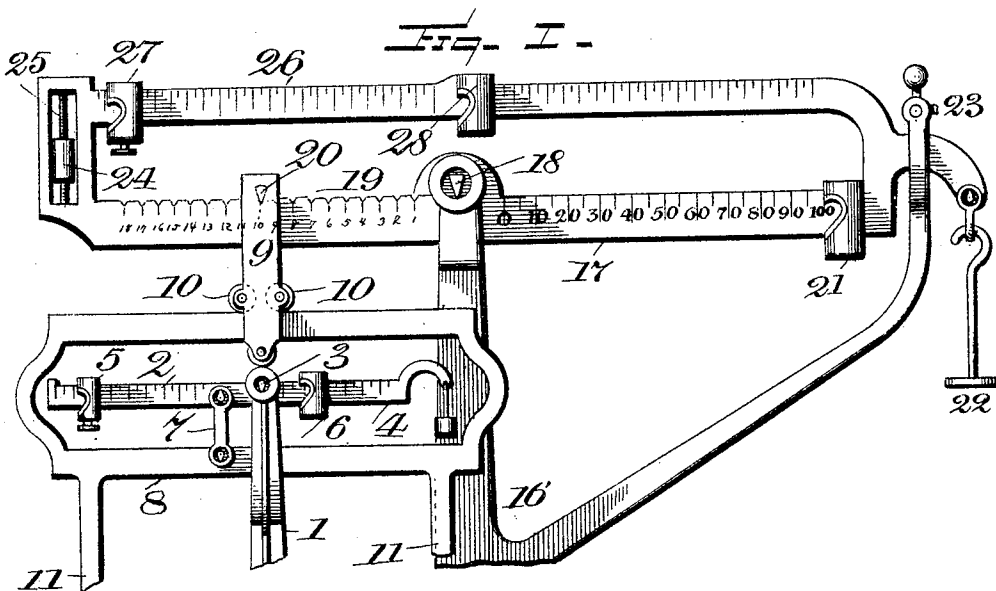


No. 804,915.

PATENTED NOV. 21, 1905.

S. J. AUSTIN.
COMPUTING SCALE.
APPLICATION FILED MAR. 19, 1897.

2 SHEETS—SHEET 1.



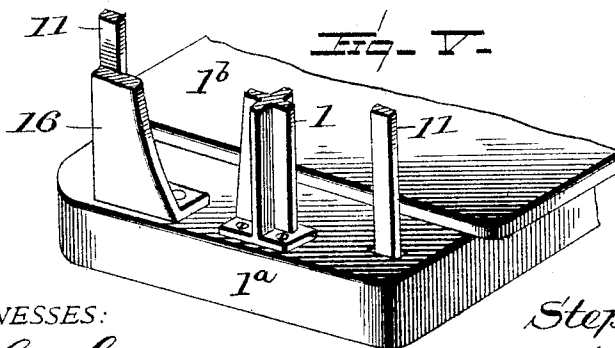
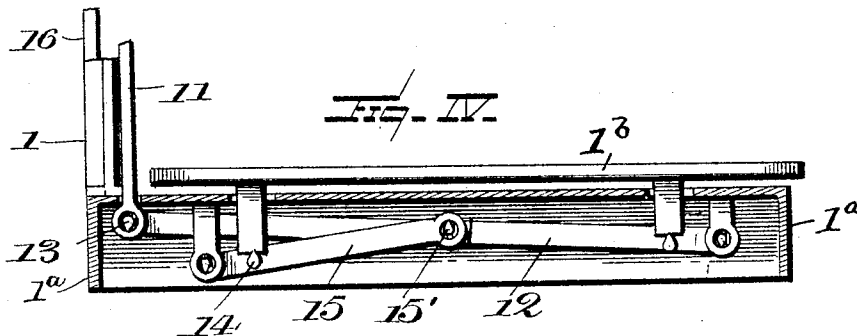
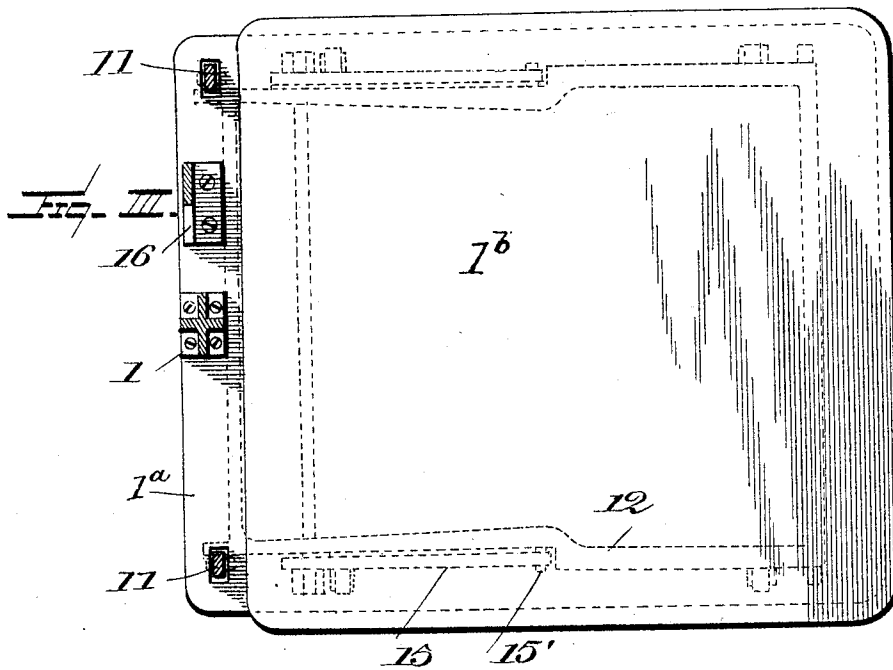
WITNESSES:

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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COMPUTING-SCALE.

No. 804,915.

Specification of Letters Patent.

Patented Nov. 21, 1905.

Application filed March 19, 1897. Serial No. 628,266.

To all whom it may concern:

Be it known that I, STEPHEN J. AUSTIN, a citizen of the United States, and a resident of Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Computing Weighing-Scales, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in weighing-scales, a price-beam controlled by a movable connection with the frame of an independently and normally balanced weighing-scale being provided, said frame being linked to the main scale-beam. On the price-beam may be readily computed the price of a given weight of any commodity placed upon the scale-platform.

I carry out my invention by means of the device illustrated in the accompanying drawings, in which—

Figure I is a side elevation of the upper part of my improved weighing-scale, showing the main scale-beam and the price-beam with parts of the standards. Fig. II is a top plan view showing the system of platform-levers and frame-bars. Fig. III is a top view of the platform and base, the platform-levers being shown in dotted lines. Fig. IV is a side elevation thereof, the base being shown in section. Fig. V is a perspective view of the inner end of the platform and base, showing the lower ends of the frame-bars and standards.

1 is a stationary main standard secured to the base 1^a and supporting the main scale-beam, which is pivoted thereto by the knife-edge connection 3. The scale-beam has arms 2 and 4.

5 and 6 are the poises on the arms 2 and 4, respectively.

7 is a coupling-link furnished with loops which bear against the knife-edges, connecting the lower bar of the frame 8 with the arm 2 of the scale-beam.

9 is a movable connection or member having a roller-bearing 10 connecting the upper bar of the frame 8 with a price-beam herein-after to be described.

The frame 8 is connected by the rods 11 thereof and knife-edges 13 with a lever 12, located beneath the platform 1^b, the whole independently of the price-beam being a regularly-balanced weighing-scale. The platform

rests upon knife-edges 14, carried by the lever 12 and links 15. The links 15 are pivoted to the lever 12 by knife-edges 15' and are hung in the usual manner at the outer ends, being adapted to effect the movement of the frame through the lever 12 by a weight placed upon any portion of the platform. This movement, it will be readily seen, moves the frame 8 and is controlled or governed by the main scale-beam by means of a link 7.

16 is a stationary auxiliary standard, on whose upper end is pivoted the price-beam by means of the knife-edge 18. The price-beam has bars marked with graduations and is adapted to indicate the value of the commodity weighed. The inner arm 19 of the price-beam is notched in cents "1" to "18," as shown in the drawings, and into the notches a knife-edge 20 on the upper end of the movable connection 9 is adapted to seat.

By the construction described the scale can be balanced independently of the price-beam—that is, in the usual or normal or regular manner—by means of the scale-beam. The movable connection 9 resting on the frame 8 and being balanced with it, the scale having been thus balanced, the moving of the movable connection 9 to the right or left, while it would change the ratio or multiplication of the price-beam, would not affect the balance of the scale-beam or the price-beam either. In this way I change the ratio without affecting the balance. The price-beam is of course balanced first by itself.

21 is a poise riding on the outer arm 17 and indicates dollars and cents, and the pendant 22 carries weights indicating dollars adapted to operate in conjunction with this part and pounds adapted to operate with poises 27 and 28 on the upper bar 26. 23 is an ordinary lock, and 24 is a balance-ball riding on the screw-rod 25.

The operation of the device is as follows: The arm 19 of the price-beam is graduated from "1" to "18" to indicate the number of cents per pound that the commodity is worth. The knife-edge 20 is placed in a given notch indicating the price of the commodity—we will say ten cents per pound. If one dollar's worth of this commodity is desired, the poise 21 is carried out on the value part of the arm 17 to the dollar-point, as shown. Then the commodity is placed upon the platform of the weighing-scale until the scale-beam indicates a bal-

ance. It will be seen that in this manner one dollar's worth of an article at ten cents a pound is obtained. If the arm 17 is graduated to one dollar and any great value is desired, it can be obtained by putting dollar-weights upon the pendant 22.

In the scales illustrated and described it will be observed that the scale or tare beam constitutes a counterbalancing means for the system of platform-levers, frame, and connecting-block and is connected with the frame by a link 7, located vertically between the pivots between the frame and platform-lever. The result of this arrangement is that the draft exerted by the scale-beam holds both pivotal bearings at the lower edge of the frame firmly in contact and with a substantially equal pressure at all times. Furthermore, the link 7 permits the frame to move in a vertical plane, while the scale-beam swings on a fixed axis, thereby preventing any binding or cramping during the operation of the parts. These results are particularly important in this type of scale, wherein the vertical frame extends above the tare or scale beam and directly supports the head or connecting-block for cooperation with a price-beam which is in balance independently of the frame and head-block.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a price-scale embodying platform-levers, a vertically-extending frame pivotally connected with one of the platform-levers, a price-beam and a shiftable head-block connecting the frame and price-beam whereby the point of connection between the head-block and price-beam may be shifted to set the scale for weighing at different rates per unit, a tare-beam pivoted on a fixed axis below the level of the price-beam and a link pivotally connected at one end to the tare-beam and at the opposite end to the vertically-extending frame; substantially as described.

2. In a price-scale, the combination with the platform-levers and price-beam, of a vertically-extending frame pivotally connected at the lower end with one of the platform-levers, a shiftable connection between the top of said frame and price-beam whereby the point of engagement with the price-beam may be varied to set the scale for weighing at different rates per unit, a tare-beam located below the top of the frame and a link pivotally connected at one end with the tare-beam and pivotally connected at the opposite end with the frame; substantially as described.

3. In a price-scale the combination with the platform-levers, price-beam, vertically-extending frame pivotally connected with one

of the platform-levers at two points and a shiftable head-block on said frame and adapted to cooperate with the price-beam, of a tare-beam pivoted on a fixed axis and a link pivotally connecting said tare-beam and frame; substantially as described.

4. In a price-scale, the combination with the platform-levers, price-beam, vertically-extending frame pivotally connected with one of the platform-levers at two points and a shiftable head-block on said frame and adapted to cooperate with the price-beam, of a tare-beam pivoted on a fixed axis, a link pivotally connected at one end with the tare-beam and pivotally connected at the opposite end with the frame at a point vertically intermediate the pivotal connections between the frame and platform-lever; substantially as described.

5. In a price-scale, the combination with the platform-levers, price-beam, vertically-extending frame pivotally connected with one of the platform-levers at two points and a shiftable head-block on the upper part of said frame adapted to cooperate with the price-beam, of a tare-beam pivoted on a fixed axis below the price-beam, a link pivotally connected at one end with the tare-beam and pivotally connected at the opposite end with the vertically-extending frame at a point below the level of the head-block and vertically intermediate the pivotal connections between the frame and platform-lever; substantially as described.

6. In a price-scale, the combination with the price-beam pivoted on a fixed axis, the platform-levers, and a vertically-extending frame having a horizontal guide at the top and pivotally connected with one of the platform-levers at the bottom at two separate points, of the head-block working on said horizontal guide and adapted to cooperate with the price-beam, the tare-beam mounted on a fixed axis below the level of the guide and a link pivotally connected at one end with the tare-beam and pivotally connected at the opposite end with the vertically-extending frame below the level of the guide; substantially as described.

7. In a computing-scale, the combination of a price-beam, a connecting-block, a platform-lever with two separated connecting-points, and an element having separate pivotal engagement with each of said connecting-points connecting it with the price-beam through said connecting-block and means independent of the price-beam for holding the connecting means in an upright position.

STEPHEN J. AUSTIN.

In presence of—

CHAS. W. BAGGOTT,
GEO. LIGHT.