

No. 735,273.

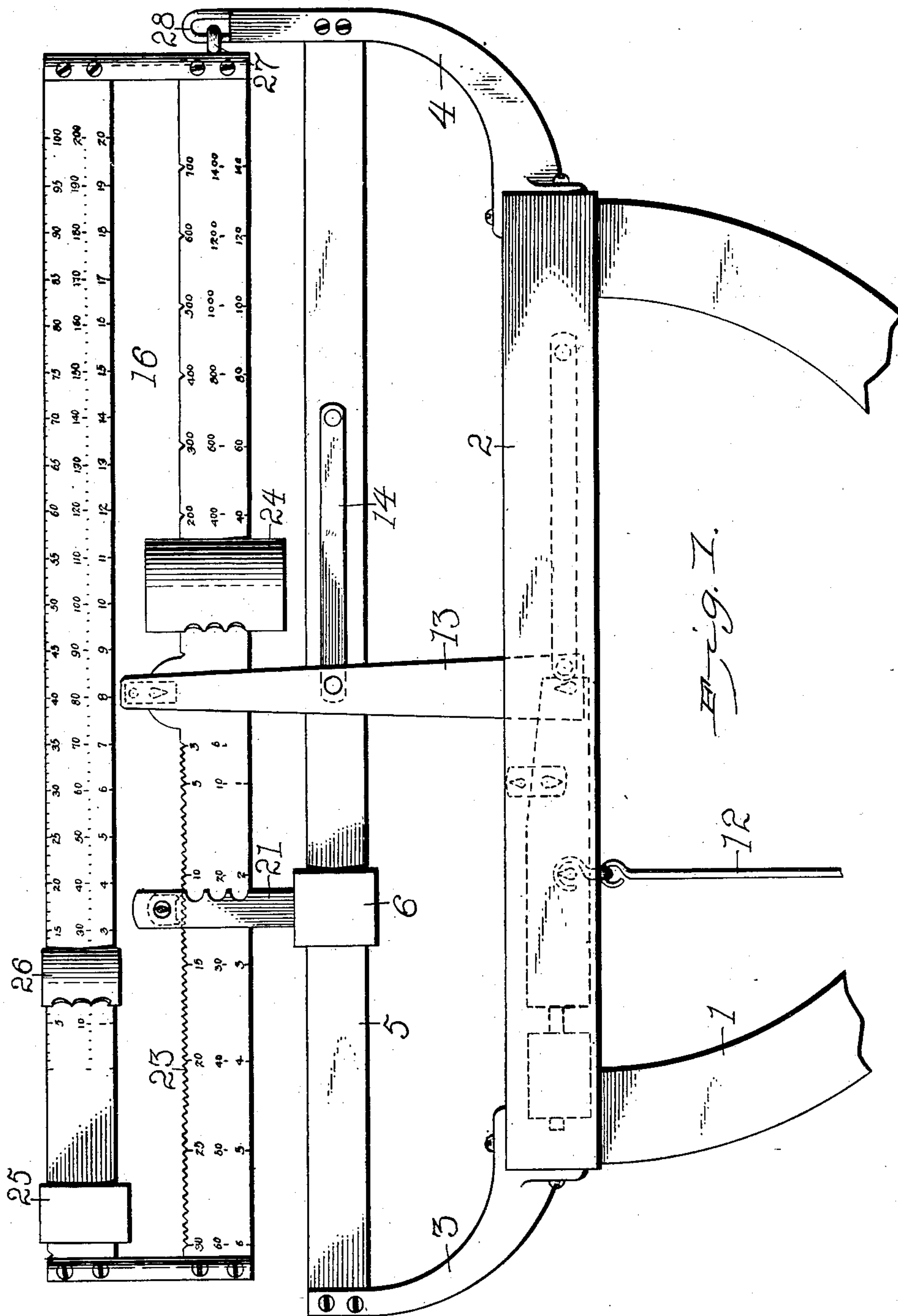
PATENTED AUG. 4, 1903.

H. F. KINSER.
COMPUTING SCALE.

APPLICATION FILED SEPT. 3, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

Witnesses
E. J. Howard
J. H. Riley

by

H. F. Kinser, Inventor.

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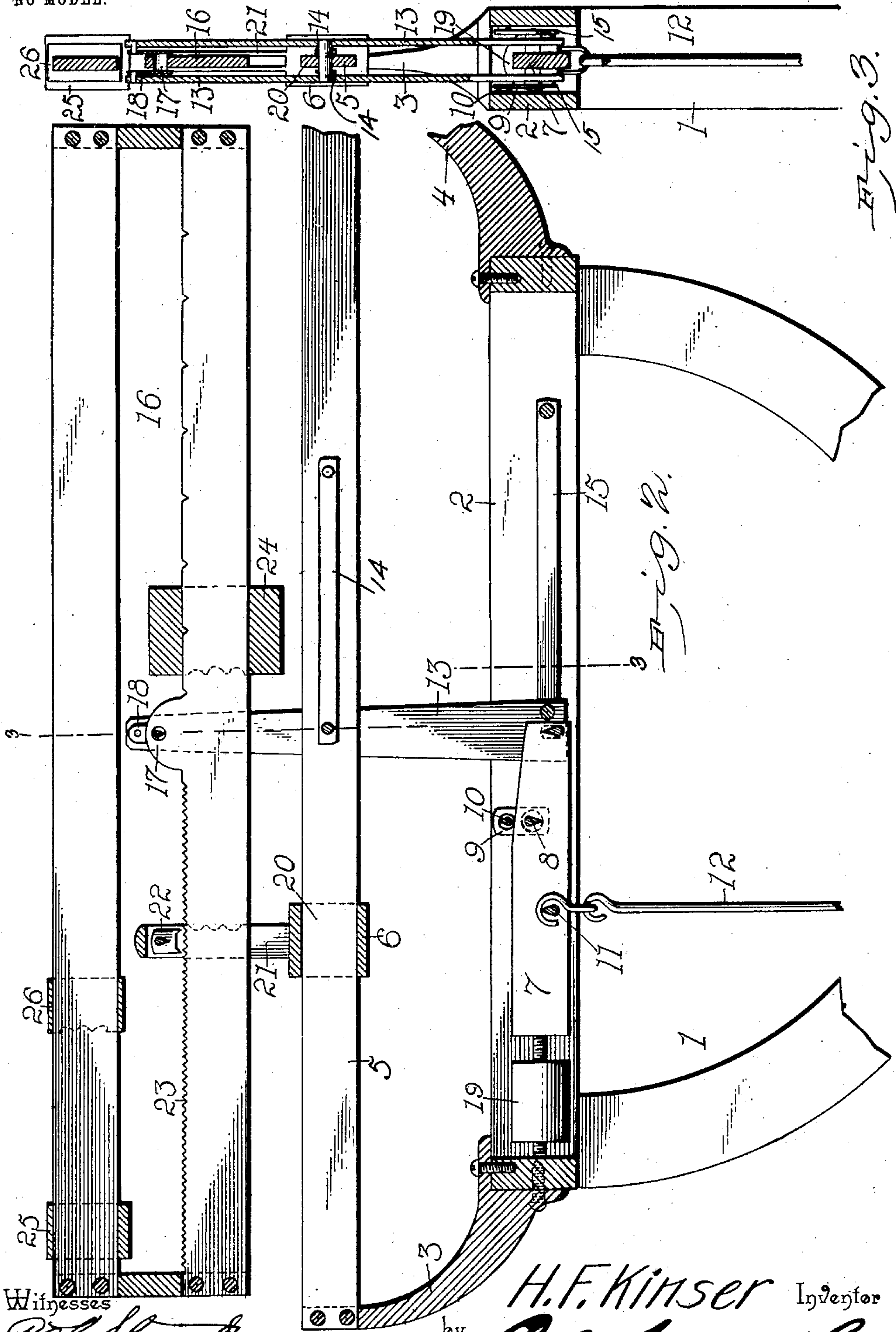


Fig. 3.

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

HENRY FRANCIS KINSER, OF ATHENS, TENNESSEE, ASSIGNOR TO ARITHMETICAL SCALE COMPANY, OF CHATTANOOGA, TENNESSEE.

COMPUTING-SCALE.

SPECIFICATION forming part of Letters Patent No. 735,273, dated August 4, 1903.

Application filed September 3, 1902. Serial No. 121,984. (No model.)

To all whom it may concern:

Be it known that I, HENRY FRANCIS KINSER, a citizen of the United States, residing at Athens, in the county of McMinn and State of Tennessee, have invented a new and useful Computing-Scale, of which the following is a specification.

The invention relates to improvements in computing-scales.

The object of the present invention is to improve the construction of computing-scales and to provide a simple and comparatively inexpensive one capable of accurately indicating the value of the goods weighed and adapted to be readily operated to enable the weight of a quantity of goods to be ascertained.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation of a computing-scale constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a vertical sectional view on the line 3 3 of Fig. 2.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a supporting-frame designed to be connected with the base or frame (not shown) which receives the platform for the reception of the goods to be weighed; but the weighing mechanism, hereinafter described, may be connected with any other form of receptacle for the goods to be weighed. The frame 1, which is provided with an open-top portion 2, has outwardly-extending arms 3 and 4, supporting a fixed horizontal bar 5, which extends from one end of the frame to the other and which forms a support for a sliding price-block 6, hereinafter described. Fulcrumed within the open portion 2 is a beam 7, having knife-edge bearings 8 and preferably suspended by short vertical links or plates 9, which are also provided with knife-edge bearings 10. The beam 7 is provided at its left-hand arm with knife-edge pivots 11 and is connected thereat by a link or rod 12 with the platform-levers. (Not shown.) The rod 12 is

provided at its upper end with an eye, which is linked into an approximately U-shaped link having hooks or eyes at its sides to receive the knife-edge pivots 11. The knife-edge pivots 11 may be constructed in any desired manner and may consist of a pin set in an opening of the beam and projecting from opposite sides thereof. The right-hand end of the beam 7 is provided with knife-edge pivots receiving upright supporting bars or links 13, arranged at opposite sides of the fixed horizontal bar 5 and connected with the same and with the frame 1 by upper and lower horizontal links 14 and 15, which are adapted to maintain the plates or links 13 in an upright position and permit the same to move vertically. The upper ends of the plates or links support a calculator or computing beam 16, composed of upper and lower bars connected at their ends. The calculator or computing beam is suspended by knife-edge pivots 17, which are arranged in openings of short links 18, and the latter are pivoted at their upper ends to the upright supporting plates or links and are adapted to permit a limited play of the calculator or computing beam to prevent friction.

The weight of the platform and the left-hand arm of the beam 7 is adapted to counterbalance the calculator or computing beam and its connections when the weights of the calculator-beam are at zero, and the said beam 7 is provided at its left-hand end with an adjustable weight 19, adapted to correct any inaccuracy of the scale and bring the parts to a poising-point when the said weights are at zero.

The slidable price-block 6 is provided with an opening 20 to receive the bar 5, and it has an upwardly-extending slotted arm 21, in which is mounted a fulcrum 22, having knife-edge bearings and adapted to engage the upper edge of the lower bar of the calculator or computing beam, which is provided with notches 23 to receive the said fulcrum 22. The arms of the lower bar are provided with three sets of graduations, and the upper bar of the calculator or computing beam is similarly graduated. These graduations are designed to be provided for use as follows: The bottom graduations, which may be arranged

for weighing goods at a price less than three cents a pound, are preferably employed for ascertaining the weight in simple weighing operations when the price-block is located at the inner end of the graduations at one cent per pound. The top graduations are preferably arranged for weighing goods at a price between three cents and thirty cents, and the intermediate graduations are preferably arranged for weighing goods at a price greater than thirty cents. The graduations, however, may be of any other desired character to suit the use to which the scale is to be applied. The right-hand arm of the lower bar of the calculator or computing beam is provided with a slidable poise or weight 24, and the upper bar has weights or poises 25 and 26. The poise 25 is a tare poise or weight and is adapted to counterbalance a vessel or other receptacle for the goods to be weighed, and the other poise 26 operates on the graduated portion of the upper bar of the calculator or computing beam. The calculator or computing beam is provided at its right-hand end with an eye 27, which is linked into a keeper or guide 28, located at the upper end of the arm 4, which extends above the fixed bar 5.

The scale is operated by first moving the price-block to the price per pound of the goods to be weighed, and if a vessel is to be used it is counterbalanced by the tare poise 25. The poises 24 and 26 are then set to indicate the price of the goods, and a sufficient quantity of the same is placed on the scale to bring the latter to a poising-point. When it is desired to ascertain the price of a quantity of goods, the price-block is arranged to indicate the price per pound. The goods are then placed upon the scale and the poises 24 and 26 are adjusted to bring the scale to a poising-point, and it will indicate the price of the goods.

What I claim is—

1. In a scale of the class described the combination of a frame, a movable price-block mounted on the frame, a lower beam fulcrumed on the frame at a point below the price-block and designed to be connected with the goods to be weighed, an upright supporting device pivotally mounted on the lower beam and extending upward therefrom, means for maintaining the supporting device in an upright position, a calculator-beam pivotally connected with the upright supporting device and located above that portion of the frame on which the price-block is mounted and arranged to be fulcrumed on the said price-block, and a movable poise for the calculator-beam, substantially as described.

2. In a scale of the class described, the combination of a frame, a lower beam fulcrumed on the frame and designed to be connected with the goods to be weighed, a supporting device pivotally supported by and extending

upward from the lower beam, a horizontal link pivotally connected with the supporting device and with the frame to maintain the former in an upright position, a calculator-beam pivotally connected with the supporting device and having a movable poise, and a price-block mounted on the frame, substantially as described.

3. In a scale of the class described, the combination of a frame, a lower beam fulcrumed between its ends on the frame and designed to be connected with the goods to be weighed, an upright support pivotally mounted on the lower beam and extending upward therefrom, a calculator-beam pivotally connected with the support and having movable poises, upper and lower oscillatory links arranged horizontally and connecting the support with the frame, and a slidable price-block mounted on the frame and arranged to engage the calculator-beam, substantially as described.

4. In a scale of the class described, the combination of a frame having a fixed horizontal bar, a lower beam fulcrumed on the frame, an upright pair of supporting-plates located at opposite sides of the fixed horizontal bar and pivotally connected at their lower ends with the lower beam, a calculator-beam arranged between and pivotally connected with the supporting-plates, horizontal links connecting the supporting-plates with the frame, a price-block movably mounted on the horizontal bar and arranged to form a fulcrum for the calculator-beam, and a movable poise arranged on the calculator-beam, substantially as described.

5. In a scale of the class described, the combination of a frame having an open-top portion and provided with a fixed horizontal bar, a horizontal beam located within the top portion of the frame and provided at one end with an adjustable weight, short links suspending the said beam from the frame and arranged between the ends of the former, a pair of upright plates located at the other end of the said beam and pivotally connected therewith and arranged at opposite sides of the horizontal bar, a calculator-beam, a pair of short links suspending the calculator-beam from the upper ends of the upright plates, upper and lower horizontal links connecting the upright plates with the frame, a price-block mounted on the frame and arranged to be engaged by the calculator-beam, and a movable poise mounted on the latter, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY FRANCIS KINSER.

Witnesses:

D. GEORGE MORGAN,
F. E. TYLER.