

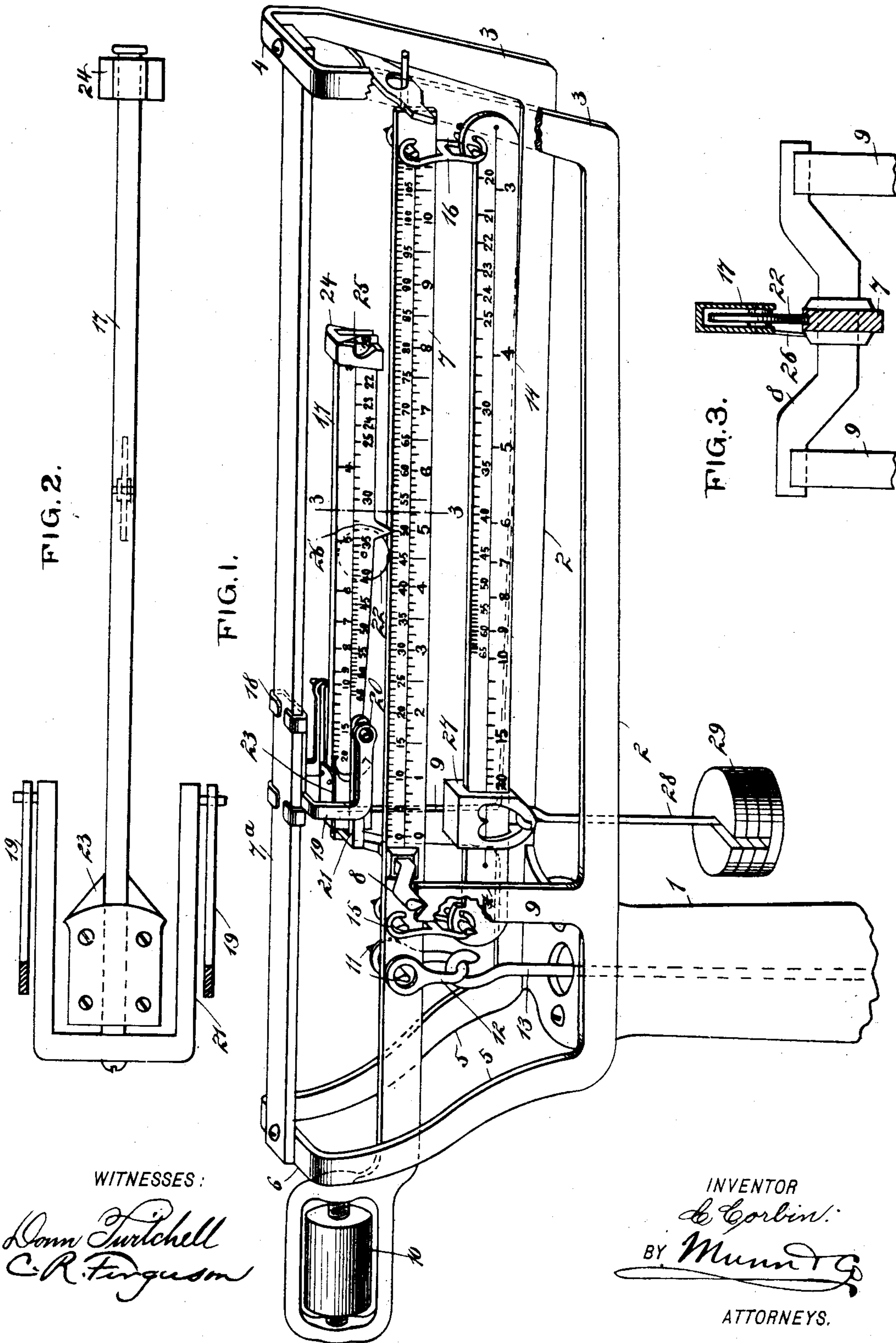
No. 608,441.

Patented Aug. 2, 1898.

C. CORBIN.
COMPUTING SCALE.

(Application filed June 18, 1897.)

(No Model.)



WITNESSES:

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CLARK CORBIN, OF CARBON CLIFF, ILLINOIS.

COMPUTING-SCALE.

SPECIFICATION forming part of Letters Patent No. 608,441, dated August 2, 1898.

Application filed June 16, 1897. Serial No. 640,985. (No model.)

To all whom it may concern:

Be it known that I, CLARK CORBIN, of Carbon Cliff, in the county of Rock Island and State of Illinois, have invented new and useful Improvements in Computing-Scales, of which the following is a full, clear, and exact description.

This invention relates to scales for weighing commodities and for indicating the net price of the commodity; and the object is to provide a scale of this character in which the price in dollars or in fractions of a dollar may be quickly ascertained by weighing the article, thus obviating the necessity of mental calculation.

I will describe a computing-scale embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a computing-scale embodying my invention. Fig. 2 is a top plan view of a value-beam employed, and Fig. 3 is a section on the line 3 3 of Fig. 1.

Referring to the drawings, 1 designates a hollow post extended from an ordinary counter or other platform scale, and on this post is mounted a beam-carrying frame comprising the horizontally-extended members 2, the vertically-disposed members 3 at the forward end, connected at the top by a cross-piece 4, and at the inner end there are vertically-disposed members 5, connected at the upper end by a cross-piece 6. A bar 7^a connects the cross-pieces 4 and 6.

The value and weighing beam 7 is provided with fulcrum-arms 8, having knife-edges engaging in notches in the upper ends of posts 9, extended upward from the portions 2 of the frame, and on the rearwardly-extended portion of this beam 7 is a counterbalance 10 for adjusting purposes. Rearward of the pivot-arms 8 are knife-edge lugs 11, from which a yoke 12 is suspended, and engaging with this yoke 12 is a rod 13, which extends through the post 1 to a connection with the balancing mechanism of the scale in the usual manner.

The dollar price-beam 14 is suspended from the beam 7 by means of a stirrup 15, engaging with the knife-edge lugs at the inner end

of the beam 14 and with knife-edge lugs on the beam 7 rearward of its pivot-arms 8, and the forward end of the beam 7 is suspended in a similar manner by means of a stirrup 16. Above the beam 7 is a price-beam 17 for fractions of a dollar. This price-beam 17 is designed to be moved along the beam 7. As here shown, a carriage 18 is attached to the bar 7^a in such manner as to slide thereon. From the carriage 18 arms 19 extend downward and outward, and at the ends of the outward or horizontally-disposed parts of the arms are openings in which knife-edge fulcrum-points 20 pass and bear upon the lower wall of said openings. These fulcrum-points are extended from a yoke 21, having portions parallel with the beam 17 and the connecting portion at the rear, which is rigidly attached to the inner end of the beam 17. This price-beam 17, as clearly indicated in Fig. 3, is made of box-like construction, open at the bottom, and mounted to rotate in this beam 17 is a roller 22, engaging the upper side of the beam 7. Preferably the beam 7 will have a channel formed longitudinally in its upper edge, into which the roller may pass. The side walls of this channel by engaging with the roller 22 will prevent any lateral movement of the beam 17 relatively to the beam 7.

Mounted to slide on the beam 17 is a weight 23, and also mounted to slide on this beam 17 is another weight 24. The weight 24 is designed normally to remain at the free end of the beam 17, and to detachably hold it in such position the weight may be provided with a lug 25 to engage in a notch at the end of the beam. The beam 17 has at its under side a downwardly-extended pointer 26.

The upper half of the beam 7 is graduated from "0" to "110," and these graduations represent value in cents. The lower half of this beam is graduated in pounds and ounces from "0" to "11" pounds, the same as the ordinary pound and ounce scale. The graduations of the beams 14 and 17 are made in a peculiar manner. The upper half of the beam 14 is graduated from "20" to "65" and the lower half from "3" to "20." It is not necessary, however, that the divisions should be at "20," as any number may be placed at the end of the beam and the beam graduated from it. I commence with a smaller number

at the right end of the beam and graduate to the left. Should the beam be reversed, however, so that the outer end will point to the left, the graduating will run to the right.

5 The graduations are placed on the dollar price-beam by the following rule: We will assume the zero-mark to be placed on the price-beam 14 directly under the fulcrum-point 8, as indicated at x . The number farthest from
10 x , which in this instance is "3," is placed at a desired point. Now to find the distance in which either one of the intermediate numbers must be placed multiply the distance in inches from "0" to "3" and divide by the
15 number to be placed, and the quotient will be the distance in inches from "0" to the position of this number. For example, suppose it is desired to find the position for the figure "4" and from "0" to "3" it is thirteen
20 and one-half inches. This being ascertained, multiply thirteen and one-half by three and divide by four, and the answer will be ten and one-eighth inches from "0" to the point where the figure "4" is to be placed. This
25 rule will of course be carried out for all the numbering. The beam 17 is graduated in the same manner; but the zero-mark will be an imaginary one which is just four times as far from the figure "3" as the figure "4" is
30 from "3"—that is, beyond the last mark on the bar. On the beam 14 is a sliding weight 27, depending from which is a hanger 28 for supporting ordinary slide-weights 29. The hanger 28 and weight or weights 29 are only
35 to be used, however, when the weight 27 is not sufficient, as will be set forth in the description of operation.

I will now explain the operation of the scale: Place the article to be weighed on the platform of the scale. Then to get the weight in
40 pounds and ounces first see that the weight 24 is in its notch at the end of the beam 17 and that the weight 27 is poised at "0" on the beam 14. Next move the weight 23 to the
45 graduation-mark "10" on the beam 17. Then move the beam 17, with its weights, to the right until the beam 7 balances. The graduation-mark on the lower half of the beam 7 directly below the pointer 26 will indicate the weight
50 of the article.

Should the article be heavier than can be weighed by the beam 7, as explained above, the weight 27 is to be moved out on the beam 14 to the graduation-mark "10," which represents ten pounds. Then proceed as before.
55 Should it still be too heavy, weights 29 may be added to the weight 27. The weights 29 may represent twenty pounds, which amount must be added to the amount represented or
60 indicated by the pointer 26 on the beam 17.

To get the value of the article weighed at a price from three to twenty cents per pound, the weight 27 must be placed at "0" on the beam 14 and the weight 24 must be in its
65 notch, as before described. The weight 23 must be moved to the number on the beam 17 that corresponds with the price to be used.

The beam 17 with its weights must be moved to the right, as before, until the scale balances. Then the graduation-mark on the upper half of the beam 7 directly below the
70 pointer 26 will represent the value at the price per pound being used on the beam 17. Should it be impossible to balance the article by means of the beam 7, then move the weight
75 27 out on the beam 14 until it poises on the number corresponding with the price being used. This represents one dollar's worth. Then proceed as before. When the scale balances, the number of dollars' worth on the
80 beam 14 added to the amount represented underneath the pointer 26 on the beam 7 will be the value of the article. If the price is above twenty cents per pound, the weight 23
85 must be moved to the extreme left end of the beam 17 and the weight 24 used in the same manner that the weight 23 was used.

Whatever the arrangement of parts as described, it is obvious that the weight and value of an article may be quickly ascertained without mental calculation.

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

1. A computing-scale, comprising a frame, 95 a beam fulcrumed in said frame and connected with the balancing mechanism of the scale, the said beam having a weight-scale at its lower portion and a value-scale at its upper portion, a price-beam suspended loosely at
100 its ends from the weight and value beam, a weight mounted to slide on said price-beam, the said price-beam having a scale indicating prices, a price-beam for fractions of a dollar arranged above the weight and value beam,
105 a roller journaled in said beam for fractions of a dollar, the said roller engaging in a longitudinal channel formed in the top of the weight and value beam, a carriage movable longitudinally of a bar supported on the
110 frame, a hanger depending from the carriage and to which the beam is fulcrumed, and two weights mounted to slide on said last-named beam, substantially as specified.

2. A weighing and computing scale, comprising a frame, a beam fulcrumed on said
115 frame and connected with the balancing mechanism of the scale, the said beam having a weight-scale at its lower portion and a value-scale at its upper portion, a price-beam suspended loosely at its ends from the said
120 weight and value beam, a weight mounted to slide on said price-beam, an adjustable price-weight comprising a beam and two price-weights arranged above the weight and value
125 beam and movable along the top edge thereof, a carriage movable on a bar supported on the frame, and a hanger on the carriage and to which the adjustable weight is connected, substantially as specified.

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Witnesses:

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