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(No Model.)

2 Sheets—Sheet 1.

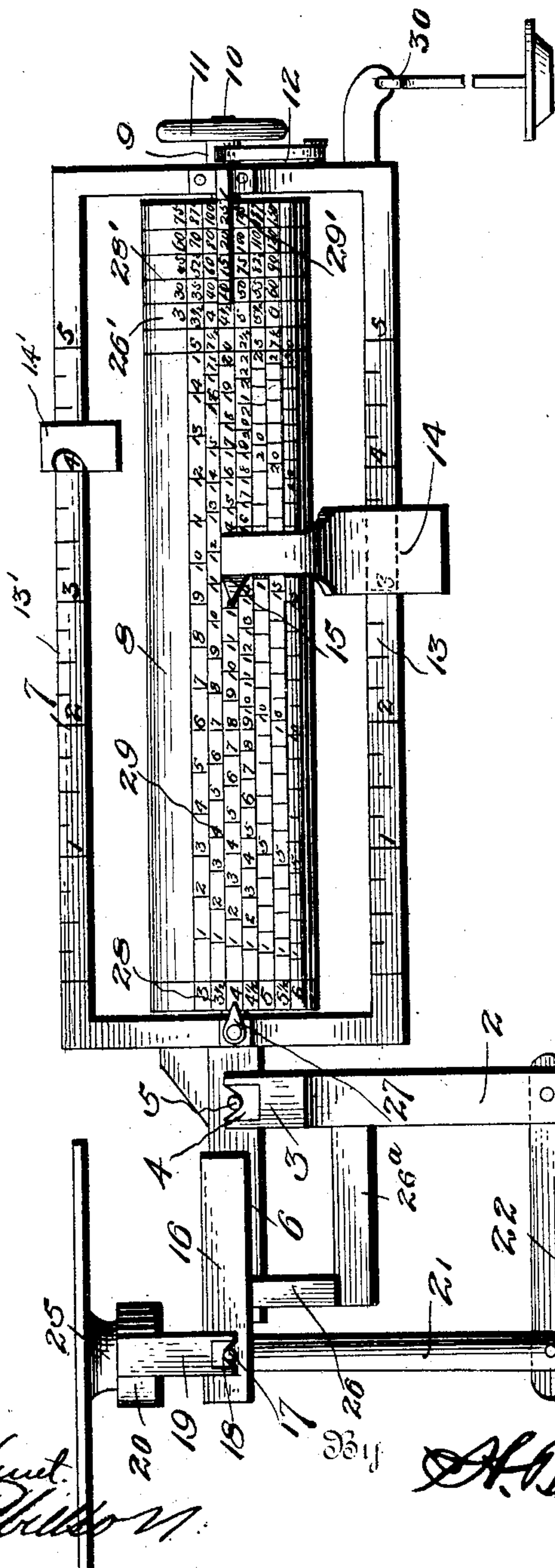


Fig. 5.

28	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	3 1/2	30	45	60	75
9	3 1/2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	4	40	60	90	100
7	4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	4 1/2	45	68	90	113
6	4 1/2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	5	50	75	100	125
5	5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	5 1/2	55	82 1/2	110	137
5 1/2	5 1/2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	6	60	90	120	150
6	6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	6 1/2	65	97 1/2	130	165

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Witnesses

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20. 19

UNITED STATES PATENT OFFICE.

CORNELIUS T. TIPTON, OF ELIZABETHTON, TENNESSEE.

COMPUTING-SCALE.

SPECIFICATION forming part of Letters Patent No. 704,668, dated July 15, 1902.

Application filed July 8, 1901. Serial No. 67,492. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS T. TIPTON, a citizen of the United States, residing at Elizabethton, in the county of Carter and State of Tennessee, have invented certain new and useful Improvements in Computing-Scales; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in computing-scales; and its object is to provide a scale of this character which is simple and cheap in construction and efficient in operation.

To this end the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a front side elevation of a computing-scale embodying my invention. Fig. 2 is a top plan view, a portion of the frame being broken away to show the cylinder-shaft. Figs. 3 and 4 are front and rear end elevations, the scale-pan appearing in section in said front elevation; and Fig. 5 is an enlarged detail view of the cylinder.

Referring now more particularly to the drawings, the numeral 1 represents a base from which rises a supporting post or standard 2, forked at its upper end 3 and provided with open bearings 4 to receive trunnions 5 on an oscillating bar 6. To the rear end of this bar is secured an oblong rectangular vertical frame 7, in which is mounted the computing-cylinder 8, said cylinder being fixed upon a shaft 9, journaled at its ends in the ends of said frame. The rear end of this shaft projects beyond the frame and is provided with a rectangular portion 10 to receive a thumb disk or knob 11, by which the cylinder is turned and against which bears a spring 12 for preventing accidental turning of the cylinder and for maintaining said cylinder in adjusted position. The lower rail of the frame 7 is graduated to form a weighing-beam 13, along which slides a poise 14, provided with an indicating-finger 15.

To the forward end of the bar 6 is secured a horizontal frame 16, which is provided upon

its sides with trunnions 17, which cooperate with removable open bearings 18 upon the lower ends of posts 19, depending from a cross-head 20, secured to the upper end of the scale-pan-supporting rod 21, which rod is pivoted at its lower end by a link 22 to the standard 2, so as to maintain the vertical position of said rod. The cross-head 20 carries a pin 23 to engage a socket 24, formed in the scale pan or plate 25 to retain the latter in position upon said cross-head. This pin is preferably formed by a reduced extension from the upper end of the rod 21, which projects up through the cross-head, as shown. The downward-swinging movement of the scale-pan and cooperating parts is limited by a stop 26, carried by an arm 26^a, projecting from the standard 2.

Mounted upon one side of the forward end piece of the beam or cylinder-frame 7 is an index or pointer 27. This index cooperates with a series of numerals on the outer surface or periphery of the cylinder. Extending annularly or circumferentially around that end of the cylinder adjacent to the pointer 27 is a column of numerals 28, constituting price-per-pound numerals, and cooperating therewith are longitudinal rows of numerals 29 on the periphery of the cylinder, which indicate the cost of the article at such price per pound multiplied by the number of pounds. These numerals in the rows 29 are adapted to cooperate with the indicating-finger 15 of the poise 14, so as to indicate the price of the article being weighed at a certain price per pound. If the price of an article is four cents per pound, for instance, the cylinder is turned to bring the numeral "4" of the column 28 into alinement with the indicator 27, when, the poise having been adjusted to indicate the weight of the article—say three pounds—the pointer 15 will indicate the total cost price of the article to be twelve cents by pointing to the numeral "12" in the longitudinal row 29 in alinement with the numeral "4" in the row or column 28.

The scale constructed as thus far described is adapted for computing the cost price of goods weighing five pounds or less at a certain price per pound within the limits defined by the price-per-pound numerals in the column 28. To adapt the scale for indicating

the cost price of goods weighing more than five pounds and, say, up to twenty-five pounds, I provide the cylinder with an auxiliary scale located at its outer end and consisting of an annular row of price-per-pound numerals 26' and outer rows of numerals 28', which indicate the total cost price of the goods. Coöperating with the rows of numerals 28' is an indicator-beam 29', carrying numerals "10," "15," "20," and "25," designating pounds. The weighing capacity of the scale is extended to ten pounds by utilizing the upper rail of the frame as a tare-beam 13', along which slides a poise 14'. Each scale-beam 13 13' is graduated to coöperate with the poise members 14 14' to weigh up to five pounds, thus making their aggregate weighing capacity ten pounds, and to further increase the weighing capacity of the scale I provide the frame 7 with an ordinary form of weight-hanger 30, in connection with which a five and ten pound weight may be used to carry the weighing capacity of the scale up to twenty-five pounds.

To employ the auxiliary scale and coöperating parts in computing the value of goods weighing more than five pounds, the poise members, if the weight is not over ten pounds, are properly adjusted and the cylinder turned until the numeral in the row 26' representing the cost price of the article per pound—say the numeral "4," representing four cents—is brought into alinement with the upper edge of the scale-beam 29', when, if the weight of the article should be ten pounds, the numeral "40" will appear in the innermost row or column 28' and indicate the total cost price of the article to be forty cents. If it should be desired to compute the value of goods weighing more than ten pounds, the poise members are properly adjusted and the proper weight or weights placed on the hanger 30, as will be readily understood.

While the preferred embodiment of the invention is as herein disclosed, it will of course be understood that changes in the form, proportion, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

1. In a computing-scale, the combination of a base, a standard rising therefrom and bifurcated at its upper end and carrying open bearings, an oscillating bar provided with trunnions mounted in said bearings, an open rectangular frame mounted upon the rear end of said bar and forming a scale-beam, a computing-cylinder mounted in said frame, a poise slidable on the frame, an indicator on the frame coöperating with the poise and the indice-numerals on the cylinder, an open horizontal supporting-frame upon the front end of the bar and provided with trunnions, a cross-bar provided with depending posts having open bearings to receive said trunnions, a pan-supporting rod provided at its upper end with a pin passing through said cross-bar, a scale pan or plate having a socket to receive said pin, and a link connecting the lower end of said rod to the standard, substantially as described.

2. In a computing-scale, the combination with a scale-beam, and a poise provided with a pointer, of a computing-cylinder rotatably mounted in said beam, and carrying a main computing-scale and an auxiliary computing-scale, the main computing-scale having price-per-pound numerals and cost-price numerals arranged in regular progression and within determined limits, and the auxiliary scale having price-per-pound numerals and cost-price numerals arranged in multiples in proper progression, a pointer on the beam coöperating with the poise and the main-scale numerals on the cylinder, and a bar carrying pound-indices supported by the beam and coöperating with the auxiliary scale, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CORNELIUS T. TIPTON.

Witnesses:

J. B. BORING,
R. P. SCOTT.