

(No Model.)

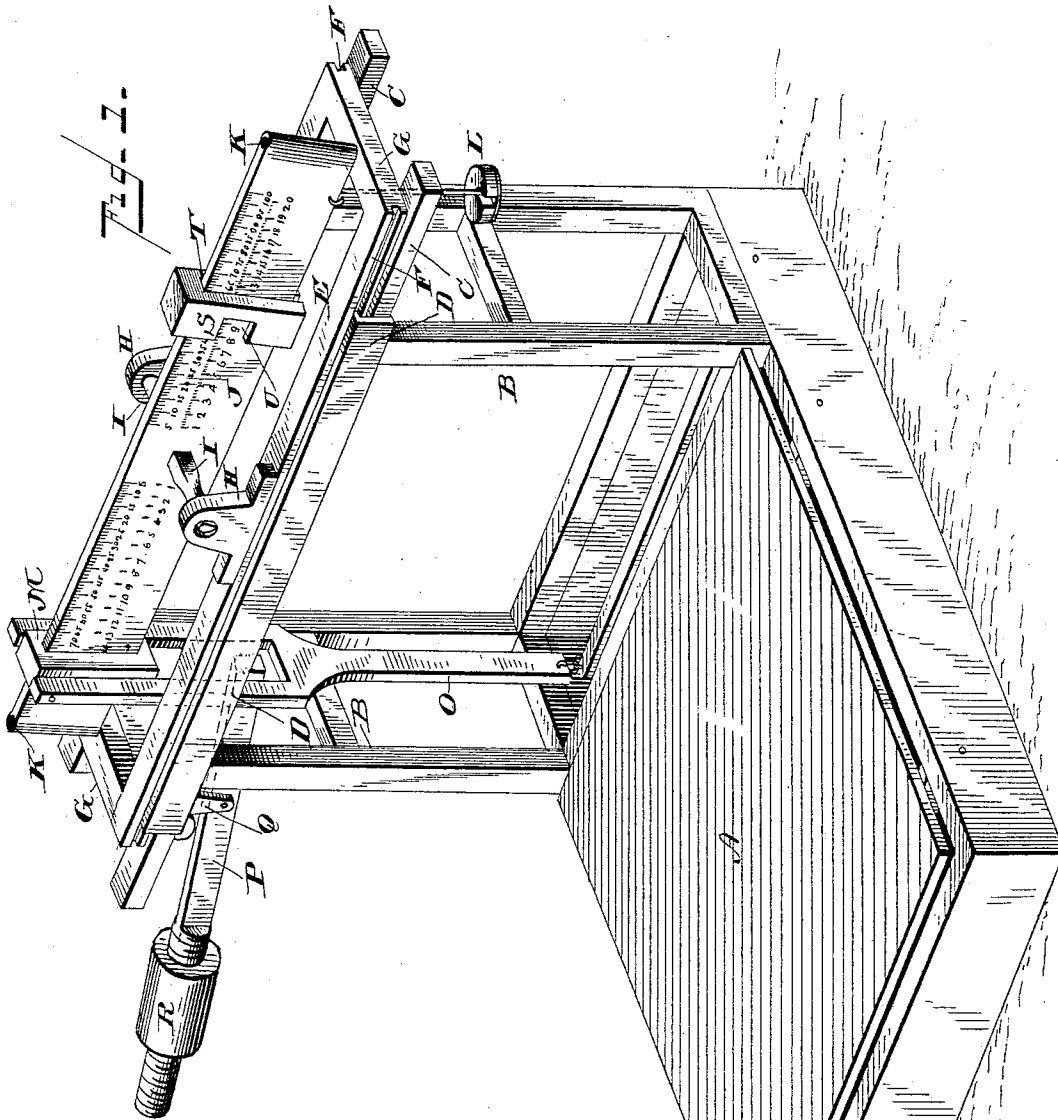
3 Sheets—Sheet 1.

J. G. McNEILL,

WEIGHING AND PRICE SCALE.

No. 396,285.

Patented Jan. 15, 1889.



WITNESSES

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Attorneys.

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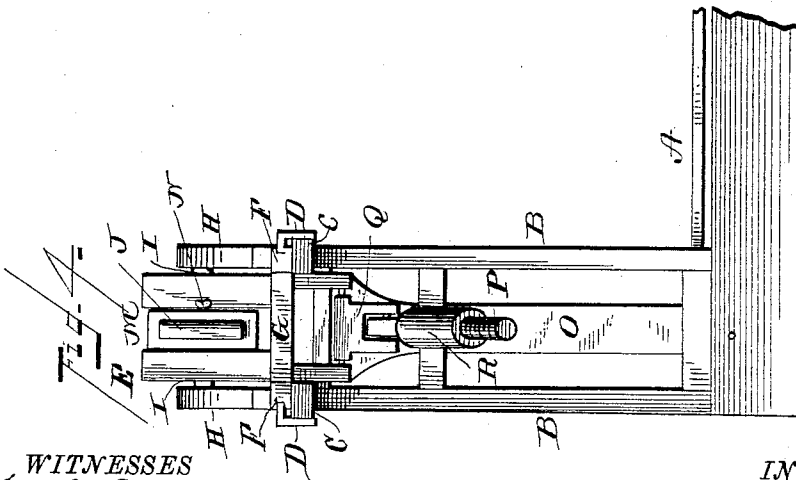
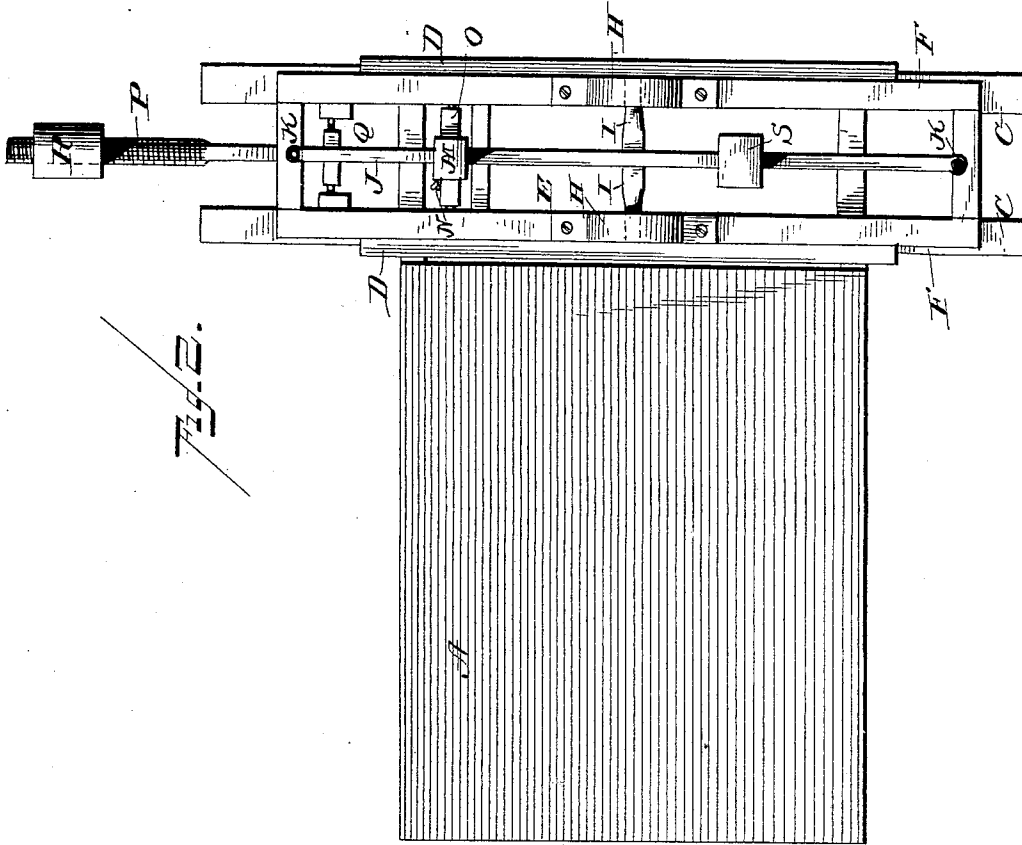
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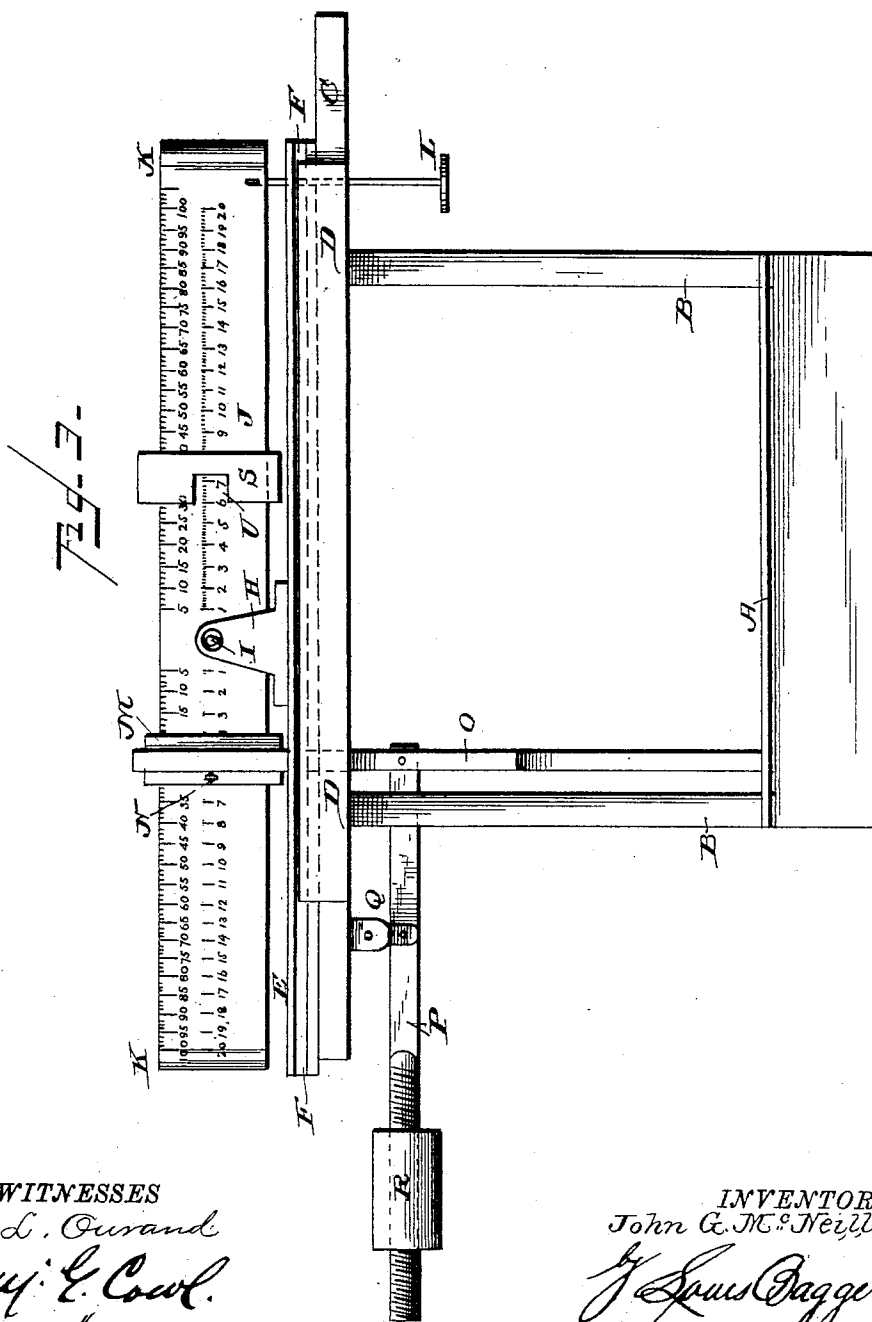
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UNITED STATES PATENT OFFICE.

JOHN GRANVILLE MCNEILL, OF OTTAWA, KANSAS.

WEIGHING AND PRICE SCALE.

SPECIFICATION forming part of Letters Patent No. 396,285, dated January 15, 1889.

Application filed May 7, 1888. Serial No. 273,112. (No model.)

To all whom it may concern:

Be it known that I, JOHN GRANVILLE MCNEILL, a citizen of the United States, and a resident of Ottawa, in the county of Franklin and State of Kansas, have invented certain new and useful Improvements in Weighing and Price Scales; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved scales. Fig. 2 is a plan view of the same. Fig. 3 is a front view, and Fig. 4 is an end view.

The same letters of reference denote the same or corresponding parts in the several figures.

My invention has relation to that class of scales which gives the value of merchandise to a cent at any given rate per pound or ounce, and which entirely dispenses with the troublesome calculation of the cost of fractional parts of pounds or ounces.

To this end my invention consists in the improved construction and combination of parts of the same, as will be hereinafter more fully set forth.

In the accompanying drawings my invention is represented as being attached to platform-scales of the ordinary construction, but which may be attached to stock-scales or counter-scales without departing from the spirit of my invention in the least, as the particular construction of the platform and its concealed mechanism form no part of my invention.

A indicates the platform of the scales, and B the uprights or posts, which are provided at their upper ends with the parallel cross-pieces C, having secured to the outer sides of each a flanged strip, D, which, together with the cross-pieces, form guideways.

E denotes the sliding frame, which slides in the guideways above referred to, and which is composed of longitudinal grooved side pieces, F, and the cross end pieces, G, the grooves of the side pieces engaging the flanges of the strips D, thereby holding the frame in place against vertical displacement. Apertured bearings H are secured to the upper

sides of these longitudinal side pieces at the center thereof and receive the knife-edged ends of the fulcrum I, which supports the scale-beam J. This beam is provided at its ends with cylindrical bores K, which are adapted to receive suitable weights for balancing, such as shot or the like.

Each end of the beam is provided with two rows of numbers or numerals, one above the other, each of the upper rows commencing with 5 near the pivotal point of the beam and running up to 100 at the ends, while the lower rows commence with 5 at the central part of the beam and run up to 20 at the outer ends, the numbers in the upper rows being some multiple of the number directly below it in the lower row. The portions of the beam or spaces between the numbers in the rows are divided into five equal parts, except the spaces of the lower right-hand row, which is preferably divided into sixteen equal spaces, which, when the weight of the article is required, will indicate pounds and ounces, while the other divisions will indicate dollars and cents when it is desired to find the cost of an article. All the numerals to the left of the fulcrum represent price per pound and those to the right indicate value.

The extreme right-hand end of the beam is provided with the ordinary weight-holder, L, which is adapted to hold weights marked, for example, "20 cents" or "1 dollar," "40 cents" or "2 dollars," and so on, as the case may be.

A vertically-slotted block, M, is loosely mounted upon the left-hand side of the scale-beam, and through the side of which works the set-screw N, the object of which will be presently set forth. To this block are pivoted the upper bifurcated ends of the vertically-moving rod O, which is connected to the mechanism of the well-known construction which is concealed beneath the platform. Pivoted at one end to the intermediate slotted portion of this rod is a lever, P, fulcrumed to the under side of the left-hand portion of the top frame by means of a swinging bracket, Q. The outer free end of this lever is screw-threaded and is provided with an ordinary balancing adjustable weight, R.

S denotes the sliding pea, which slides upon the right-hand side of the scale-beam. This pea is formed with the vertical slot T, by means of which it is placed in position on the

beam, and with a transverse notch, U, which enables it to be adjusted near and against the fulcrum of the scale-beam, so as to slide it to the number 5 of the upper right-hand series of numerals. This construction is optional, however, as the figures may be set farther from the fulcrum, in which case the sliding pea will be formed without the transverse notch.

10 The operation of the invention is as follows: In weighing flour or any other article at five cents per pound the sliding frame is slid to the left until the slotted block M reaches the numeral 5 in the upper left-hand series. The
15 article is then placed on the platform, and then the sliding pea S is adjusted on the right-hand side of the beam until it causes the beam to again come into equilibrium, when the figure in the top line over which the
20 pea rests will be the value of the article unless the article is so heavy as to require an extra weight on the weight-holder suspended from the extreme end of the right-hand portion of the beam. If such be the case, then
25 the number of dollars indicated by said weights are added to the number indicated on the beam where the sliding pea rests. If articles at one cent per pound are desired to be weighed, the slotted block will be held securely by the set-screw in the same place as
30 it was when the price of the article was five cents per pound, (the number 1 being beneath the numeral 5,) and after the articles have been placed upon the scales and the pea adjusted to establish a balance the numeral in
35 the lower series of the right-hand portion of the beam at which this pea rests when the beam is balanced indicates the price, and when it is necessary to employ the end weights
40 to effect the balance the price marked upon the same will be one-fifth of the price marked upon the weights used when the price is ascertained from the upper series of figures, or twenty and forty cents, instead of one dollar
45 and two dollars.

In Fig. 3 I have shown the slotted block set at 18, the cost per pound of the article on the scales, and the beam shown balanced at 30. Therefore by reckoning by the upper rows of
50 figures it is found that the article is worth thirty cents; but if it were desired to weigh by the lower row of numerals it will be seen that the slotted block is over three and three-fifths, (price per pound,) and the sliding pea
55 shows the value to be six cents.

When it is desired to know only the weight of an article regardless of the price per pound, the beam is moved to the left until the slotted block M stands directly over the numerals 5
60 and 1, to the left of the fulcrum. The balancing-pea upon the opposite end of the beam is then moved out until the beam is brought into equilibrium, when the numerals at the point at which the pea will thus balance the
65 article being weighed will indicate the pounds and parts thereof that the article will weigh, the numeral of the upper row indi-

cating the pounds and the numeral of the lower row indicating the parts of pounds or the ounces, and the weights upon the weight-
70 holder will indicate twenty pounds, or some multiple of twenty. When, however, the block M stands over any other number than 5, it will indicate price per pound, and the numerals upon the opposite end of the beam will
75 give the full value of the article instead of weight.

For another example of the operation of my invention, a tub containing butter is placed upon the scales, and the cost price is seven-
80 teen cents per pound. The sliding frame is then slid until the slotted block rests at 17 in the upper line, to the left of the fulcrum. For convenience, say that the tub and contents weigh eighteen pounds. That will re-
85 quire the one-dollar and the two-dollar weights to be placed upon the weight-holder, and then the sliding pea is slid upon the scale-beam until it balances, which, for instance, is at 6.
90 Therefore this added to the amount represented by the weights upon the weight-holder gives the price of the butter and the tub, which is three dollars and six cents. The but-
95 ter is now removed from the tub, which is now placed upon the platform and found to be worth seventy-six and one-half cents at seven-
teen cents per pound, which, after having been deducted from three dollars and six cents, leaves two dollars and twenty-nine and
100 one-half cents, the cost of the butter.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my invention will be readily understood. It will be
105 seen that the cross end pieces, G, of the sliding frame serve to limit the play and support the ends of the scale-beam, and that by forming the ends of the scale-beam with cylindrical bores which are adapted to receive
110 suitable weights the beam may be easily and quickly balanced.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, in a weighing and
115 price scale, with the frame, of a sliding frame thereon having end pieces and a scale-beam fulcrumed upon the sliding frame, the ends of which are limited in the vertical move-
120 ment by the end pieces of the sliding frame, substantially as set forth.

2. The combination, in a weighing and price scale, of a sliding frame and a scale-beam fulcrumed thereon, the ends of which are semi-cylindrical and provided with cylin-
125 drical bores, substantially as set forth.

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

JOHN GRANVILLE MCNEILL.

Witnesses:

CHRISTIAN T. EBERLY,
ALVIN J. CHRISTY.