

(No Model.)

A. D. HOFFMAN.
PRICE SCALE.

No. 487,272.

Patented Dec. 6, 1892.

Fig. 1.

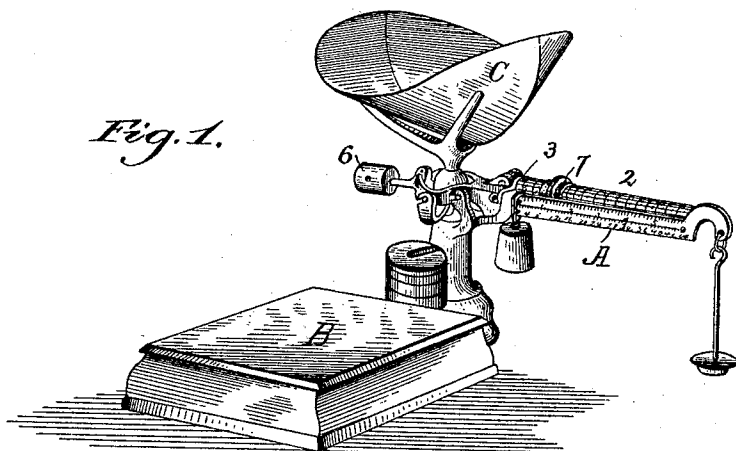


Fig. 2.

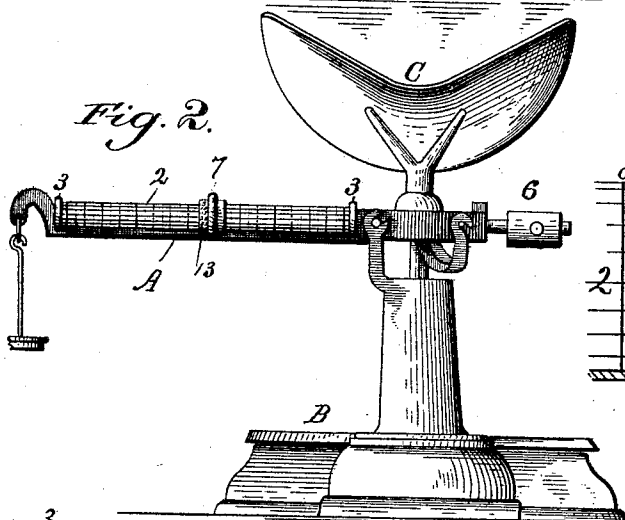


Fig. 3.

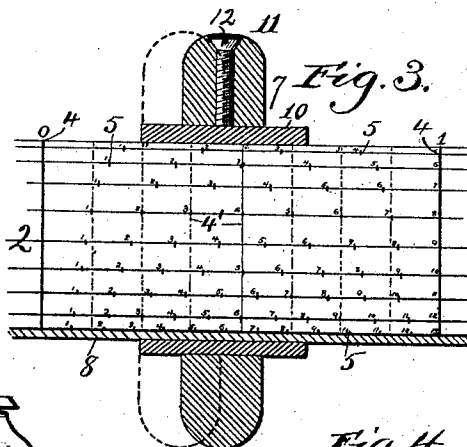
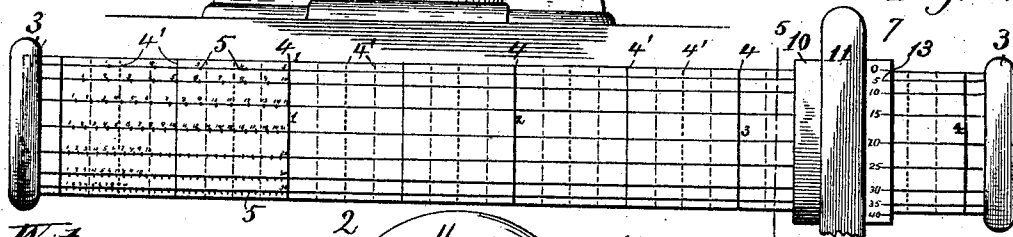


Fig. 4.



Witnesses:

J. B. McGirr.

T. J. Benjamin.

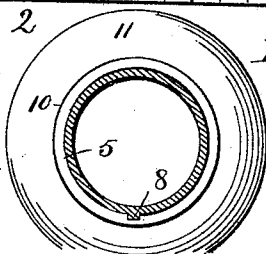


Fig. 5.

Inventor.

Austin D. Hoffman.

by J. S. Barker.
his Attorney.

UNITED STATES PATENT OFFICE.

AUSTIN D. HOFFMAN, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO THE
HOFFMAN MANUFACTURING COMPANY, OF SAME PLACE.

PRICE-SCALE.

SPECIFICATION forming part of Letters Patent No. 487,272, dated December 6, 1892.

Application filed February 9, 1892. Serial No. 420,901. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN D. HOFFMAN, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Scales, of which the following is a specification.

My invention has for its object to produce a scale which shall be adapted for use in the ordinary manner—that is, to determine units and fractions of units of weight—and which is also adapted to facilitate the making of computations by which the cost of any given quantity of a commodity, whatever be its price per unit, may be ascertained, and by which, also, if the amount to be expended be known, the desired quantity of the commodity, whatever be its price per unit, can be readily ascertained and weighed, such computations being made by simply moving a poise along a beam graduated in a peculiar manner.

The invention consists of a revoluble beam marked in a peculiar manner and having thereon a poise arranged to slide longitudinally thereof. It consists, further, in an improvement in the construction of the poise and in the combination, with a graduated beam and means for securing it to the ordinary beam of a scale, of a counterbalance therefor.

In the accompanying drawings I have shown my invention applied to a small platform and scoop scale, although it will be evident that it may be applied to and used with scales of many different kinds.

Figure 1 is a perspective view from the front of a scale having my invention applied thereto. Fig. 2 is a rear elevation of the same. Fig. 3 is a longitudinal section through the sliding poise. Fig. 4 is an enlarged view of the graduated beam. Fig. 5 is a cross-section of the beam on the line 5 5, Fig. 4.

In the drawings, A represents the ordinary beam, B the platform, and C the scoop.

The scale shown is of well-known construction and need not therefore be described in detail.

2 designates a revoluble graduated beam,

which is shown as being detachably secured to the scale-beam A, although the beam 2 may be made to take the place of the beam A entirely.

3 are the brackets, which are detachably secured to the beam A near its opposite ends, such brackets having bearings in which the beam 2 is mounted, so as to be free to turn on its longitudinal axis, but by which it is held against any longitudinal movement.

The beam 2 has upon its surface certain graduation-marks 4, (indicated in the drawings by heavy lines,) which either extend completely around it or are so disposed as to be visible from all sides thereof, and these marks indicate units of weight. It has also certain other graduation-marks 4' upon its surface, (indicated in the drawings by light and broken or dotted lines,) which are likewise visible from all sides thereof, and indicate fractional parts of the units of weight. These I term the "weight-marks" or "graduations." The surface of the beam is also divided by other graduation-marks 5, (indicated in the drawings by dots,) which I term "price-marks," and which are arranged in series parallel with the longitudinal axis of the beam, each series beginning at the zero-point or line of the graduations 4 and 4'. The price-marks of each series divide the spaces between the unit-marks of the weight-graduations into equal parts, each series of marks 5, however, dividing such space into a different number of parts. The graduation-marks 4 and 5 are preferably numbered, so as to facilitate reference thereto. I prefer that the beam should be round in cross-section; but it may be polygonal, each series of marks 5 occupying one side or face of the polygon.

When the beam 2 is applied as an attachment to an ordinary scale, I provide an adjustable detachable counter-balance 6, so that there need be no change in the relation of any of the movable parts of the scale. Upon the graduated beam is placed a poise 7, free to be moved longitudinally thereof, but not to turn thereon. I prefer that the beam should be provided with a rib 8 and the poise

with a groove; but the relative position of these two parts may be reversed, or other well-known means made use of to prevent independent rotation of the poise on the beam, while allowing longitudinal movement.

To illustrate the ease with which computations may be made by the use of a graduated beam such as I have described and a poise movable thereon, I will suppose that a commodity is for sale at twenty-nine (29) cents per pound and, first, that a purchaser wants to purchase twenty (20) cents' worth thereof. The person using the scale first turns the beam 2 until the part thereof having the unit-spaces divided into twenty-nine parts by the graduation-marks 5 is in sight and then moves the poise to the mark 20 of this series. This will indicate that twenty twenty-ninths of a pound of the commodity will be required to counterbalance the poise, and that this is the amount that the purchaser is entitled to for his money. In the second place, I will suppose that the purchaser desires three-eighths of a pound of the commodity. In this case the person using the scale after turning the beam to the proper position, moves the poise to that graduation-mark 4' indicating three-eighths of a pound and then reads the number upon the scale 5 next beyond the poise, which is "11" and indicates the cost of the amount of the article asked for.

In order to facilitate the use of my invention, I provide the poise with a series of numbers 13, corresponding in number with the series of graduation-marks 5, opposite to which they are arranged, the number on the poise indicating the number of parts into which the unit-space opposite thereto is divided by the marks 5.

The poise itself is of novel construction. It consists of a sleeve or ferrule 10, which fits closely, though so as to slide freely, on the beam 2, a weight-ring 11, surrounding this sleeve and movable thereon lengthwise, and a means for securing the ring to the sleeve or ferrule, such as the screw 12. The series of numbers 13, already described, is placed upon the ferrule, preferably near its outer edge. By shifting the weight-ring upon the sleeve, and thus changing the center of gravity of

the poise as a whole, the latter can be made to act as a perfect counterbalance.

I am aware that it is not new to provide a scale with a price-beam having its surface divided into spaces to facilitate ascertaining the amount to be sold for a stated amount of purchase-money and having a poise mounted upon such beam, and hence I lay no claim to these features of themselves as my invention.

What I claim is—

1. In a scale, a revoluble beam provided on its surface with graduation-marks denoting weight-units and fractions thereof arranged to be visible from all sides of the beam, and with other graduation-marks arranged in series, each series extending along a line parallel with the axis of the beam, the said series of graduation-marks dividing the spaces between the unit weight-marks into different numbers of parts, substantially as set forth.

2. In a scale, a revoluble beam provided on its surface with graduation-marks denoting weight-units and fractions thereof arranged so as to be visible from all sides of the beam and with other graduation-marks arranged in series, each series extending along a line parallel with the axis of the beam, the said series of graduation-marks dividing the spaces between the unit weight-marks into different numbers of parts, in combination with a poise movable longitudinally upon said beam and provided along its edge with numbers which denote the number of parts into which that part of the beam opposite such number is divided between the units of weight-marks, and means for preventing the poise from turning upon the beam, substantially as set forth.

3. In combination with the beam of a scale, a poise movable thereon, consisting of a sleeve or ferrule upon the beam, a weight-ring adjustable upon the sleeve or ferrule, and means for securing the sleeve and weight-ring together, substantially as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

AUSTIN D. HOFFMAN.

Witnesses:

H. M. FARNAM,
L. GRASS.