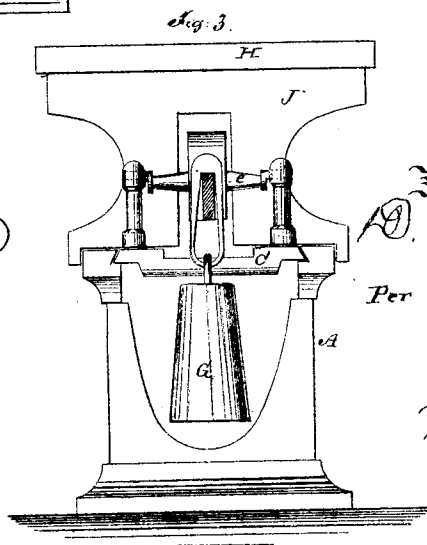
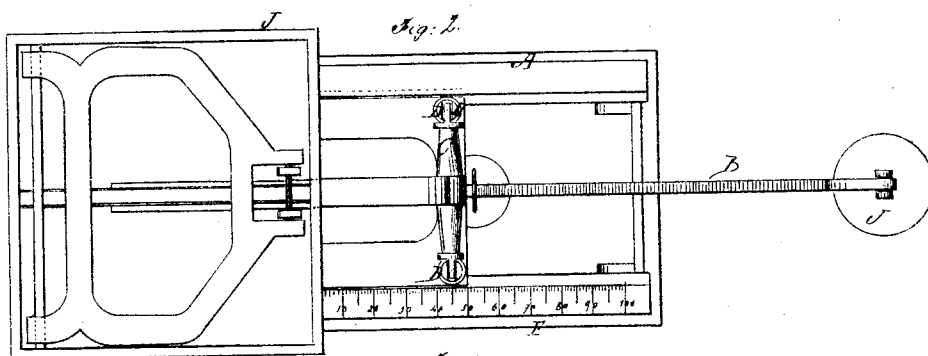
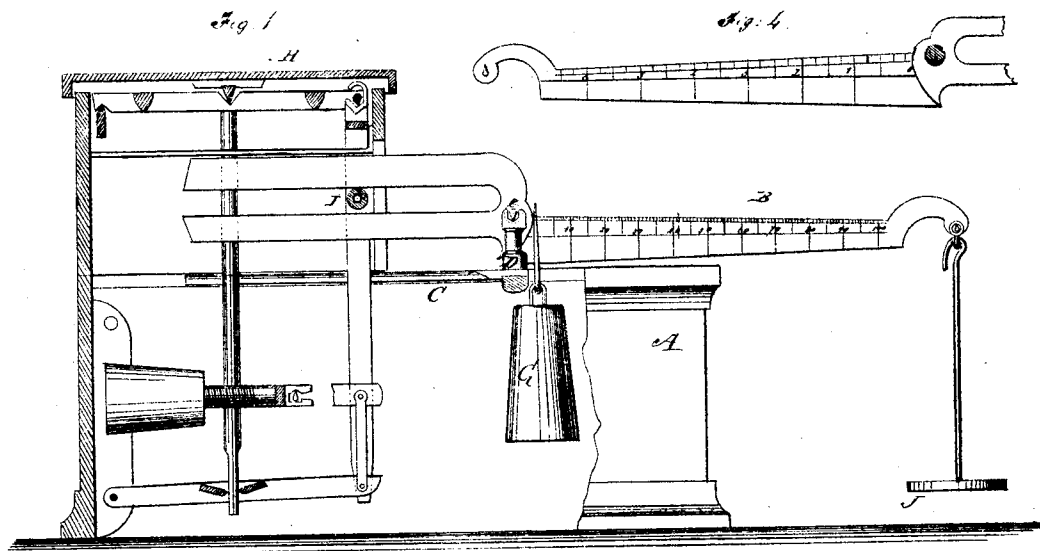


D. D. ALLEN.

Improvement in Weighing-Scales.

No. 114,248.

Patented May 2, 1871.



Witnesses:

Chas. Nida
L. S. Maher

Inventor:

D. D. Allen

Per

Munn & Co

Attorneys.

United States Patent Office.

DARWIN D. ALLEN, OF ADAMS, MASSACHUSETTS.

Letters Patent No. 114,248, dated May 2, 1871; antedated April 27, 1871.

IMPROVEMENT IN WEIGHING-SCALES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DARWIN D. ALLEN, of Adams, in the county of Berkshire and State of Massachusetts, have invented a new and useful Improvement in Weighing-Scales; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The object of this invention is improvement in that class of weighing-scales in which the value of any article, at a given rate per pound, is ascertained and shown upon a graduated beam, when the beam, or one connected therewith, receives its weight.

The invention consists in the improved construction and arrangement of parts as hereinafter described.

In the accompanying drawing—

Figure 1 represents a side elevation of the scale partly in section.

Figure 2 is a top or plan view with the balanced platform off.

Figure 3 is a front end view.

Figure 4 is a detail of the graduated portion of the beam, showing the opposite or left side.

Similar letters of reference indicate corresponding parts.

A is the bed of the scale.

B is the graduated balance-beam.

C is a frame, which is made to slide in grooves or dovetail rebates in the bed, as seen in fig. 3.

D D are the fulcrum-stands on the sliding frame C. e is the fulcrum-bar, which passes through the balance-beam B and rests on knife-edge bearings in the usual manner.

The beam with its fulcrum is thus made to slide back and forth on the bed, as may be required, for balancing articles of different weight.

The top edge of the graduated portion of the beam is notched from one to one hundred; each notch represents a cent, and the marks and figures on the side of the beam, as seen in fig. 1, are made to correspond therewith, this beam being an enumerator and not indicating weight.

The back portion of the beam is made to bear the weight of the article to be weighed or balanced, and at distances from the fulcrum varying according to the price per pound of the article.

Those distances of the points of bearing vary with the price per pound of the article balanced, and the forward beam is graduated to accomplish this object.

F represents a price scale (per pound) on the top of the bed A.

The front end of the sliding frame C is the indicator. As the slide is set on the scale F the bearing-point of the article to be balanced is varied in distance from the fulcrum.

G is the poise, by means of which the article is balanced.

The beam is arranged to operate in connection with a balanced platform, H.

The back portion of the beam B is forked, to connect therewith, as seen at I, fig. 1.

The mechanism by which the platform H is balanced is similar to that of the ordinary platform-scale.

J is the frame by which this mechanism is inclosed, which frame is attached by screws or otherwise to the bed A.

The left side of the balance-beam, shown in fig. 4, is graduated to indicate weight, or pounds and ounces.

To ascertain the weight of an article in pounds and ounces when it is made to bear upon the beam, as before mentioned, the slide C is placed on the scale F at the number sixteen.

When balanced by the poise the left side of the beam will give the weight.

To illustrate the operation of the scale for the purposes for which it is more especially intended—that is, to obviate the necessity of computing the cost of an article mentally, or by the use of figures,—we will suppose that a butcher is selling beef at thirty cents per pound; a customer wants a certain piece. The butcher sets his slide at thirty on the scale F, and balances the beef, as before stated; the exact price or cost of the piece will be given on the beam without making a figure or any computation whatever, thus avoiding the possibility of making a mistake, besides saving much time.

The graduation is such that each notch on the beam indicates such a portion of a pound as is designated by the position of the slide.

In the arrangement here presented, when the slide is at ten, each notch on the beam is the tenth of a pound, or when at one hundred, then each notch indicates the hundredth of a pound; so we have only to set the slide at the price per pound on the scale F, when each notch will indicate just a cent's worth of the article balanced.

On the end of the graduated beam there is a suspended plate, J, for holding metallic weights for balancing articles beyond a certain weight, such metallic weights indicating one or more dollars each.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The balance-beam B, graduated as described, forked to connect with the platform C, and sliding in the bed A, provided with the price-scale F, all arranged as shown and described, to operate in the manner specified.

The above specification of my invention signed by me this 13th day of July, 1870.

DARWIN D. ALLEN.

Witnesses:

F. O. SAYLES,
W. E. HARMON.