H. WILLARD. BEST AVAILABLE COP

Weighing-Scales.

No. 204,869. Patented June 11, 1878.

Fig: 1

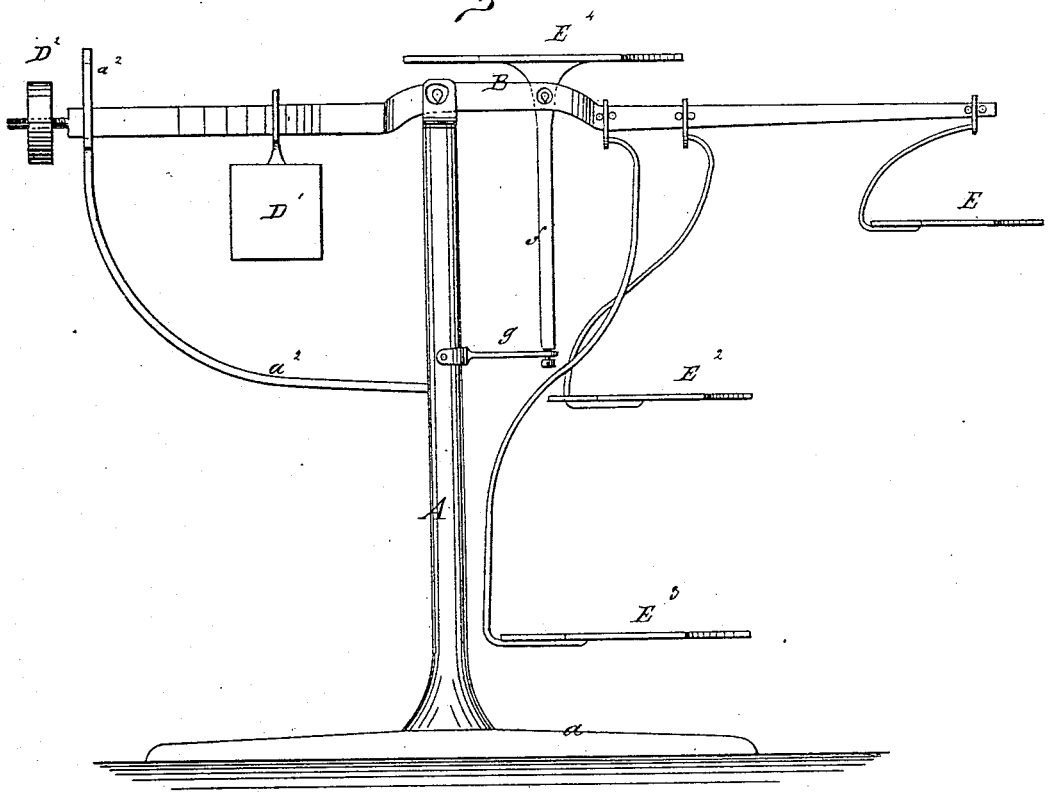
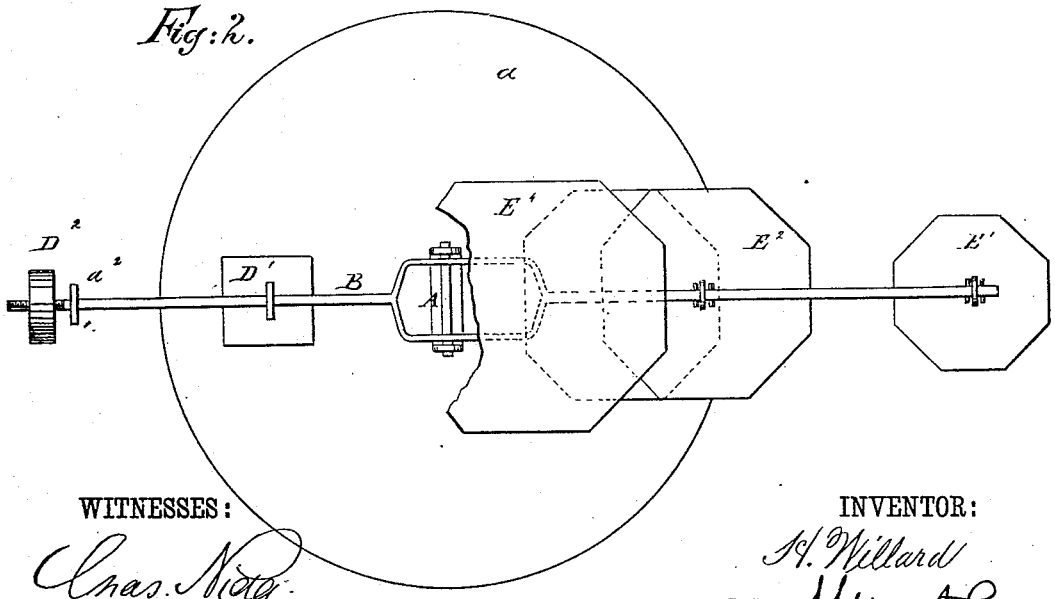


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HOSEA WILLARD, OF VERGENNES, VERMONT, ASSIGNOR TO HIMSELF AND FREDERICK W. COE, OF SAME PLACE.

IMPROVEMENT IN WEIGHING-SCALES.

Specification forming part of Letters Patent No. **204,869**, dated June 11, 1878; application filed May 20, 1878.

To all whom it may concern:

Be it known that I, HOSEA WILLARD, of Vergennes, in the county of Addison and State of Vermont, have invented a new and useful Improvement in Weighing-Scales, of which the following is a specification:

My invention is particularly applicable to what are known as "letter-scales" for ascertaining the weight of letters and other mail matter; but the invention is also applicable to beam-scales of various descriptions and for various purposes.

The object of the invention is to economize time in ascertaining the weight of an article by avoiding the necessity for shifting the poise on the scale-beam.

To this end the invention consists in providing a scale-beam with a number of dishes suspended from different points on said beam, and representing or corresponding with different weights, whereby the weight of an article may be ascertained by placing it in one or more of said dishes and observing which dish is depressed thereby.

The accompanying drawing will serve to illustrate a mode of carrying out my invention, being a view of a weighing-scale embodying my improvements.

A represents a standard or pedestal, provided with a foot, *a*, and at its upper end supporting a pivoted scale-beam, B. An arm, a^2, extends outward and upward from the standard A, and is provided at its upper end with a guide-slot for the scale-beam. A sliding poise, D^1, is suspended from the beam B, and a screw-poise, D^2, is applied to the end of said beam. These parts of the apparatus may be of the usual or any other suitable description without affecting the essential character of the invention.

To the parts above described, or other suitable parts for the same purposes, I apply any desired number of dishes by suspending them from the scale-beam at the proper points, and adjusting the poise or poises so that the beam will be exactly balanced.

The drawing shows four dishes, E^1 E^2 E^3 E^4, suspended by means of attached rods or arms, provided with loops or bows engaging with the knife-edge of the scale-beam B. The points of suspension are different for the different dishes, and each point represents or corresponds with a distinct weight, so that the nearer the fulcrum a dish is suspended the greater the weight required to depress it.

Supposing the apparatus illustrated in the drawing to be intended for use as a letter-scale, the dishes may be arranged at such distances from each other as to represent a weight of half an ounce between any two of them, and the different dishes marked accordingly. Thus the dish E^1 would require a weight of half an ounce to depress it, the dish E^2 one ounce, the dish E^3 one and a half, and the dish E^4 two ounces.

If a letter or package placed first in the dish E^1 and then in the dish E^2 would depress the first and not depress the second, it would be instantly seen that the weight of said letter or package amounted to more than half an ounce and less than an ounce, and if said package would depress the third dish and not depress the fourth, the weight would be known to be more than one ounce and a half and less than two ounces.

It is obvious that any suitable number of dishes may be applied to the scale-beam in any suitable manner, and arranged at such points thereon as to represent other weights than ounces or fractions thereof.

The dish E^4 shows another mode of attachment to the beam. Instead of being suspended below the beam its carrying rod or arm *f* is provided with a loop or bow, through which the beam passes, and the lower end of said rod or arm engages with an arm, *g*, which may be arranged to hold the dish clear of the beam, and to co-operate with said beam in determining the weight required to depress it.

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

A weighing-scale having its scale-beam provided with a number of dishes suspended from different points thereon to represent or correspond with different weights, and requiring different weights to depress the different dishes, substantially as and for the purpose herein described.

HOSEA WILLARD.

Witnesses:
J. S. HICKOK,
F. C. STRONG, Jr.