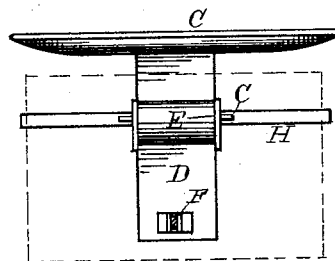
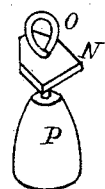
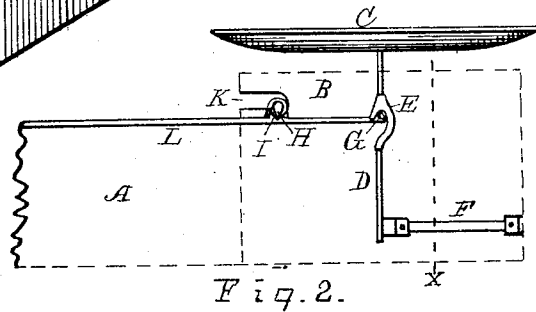
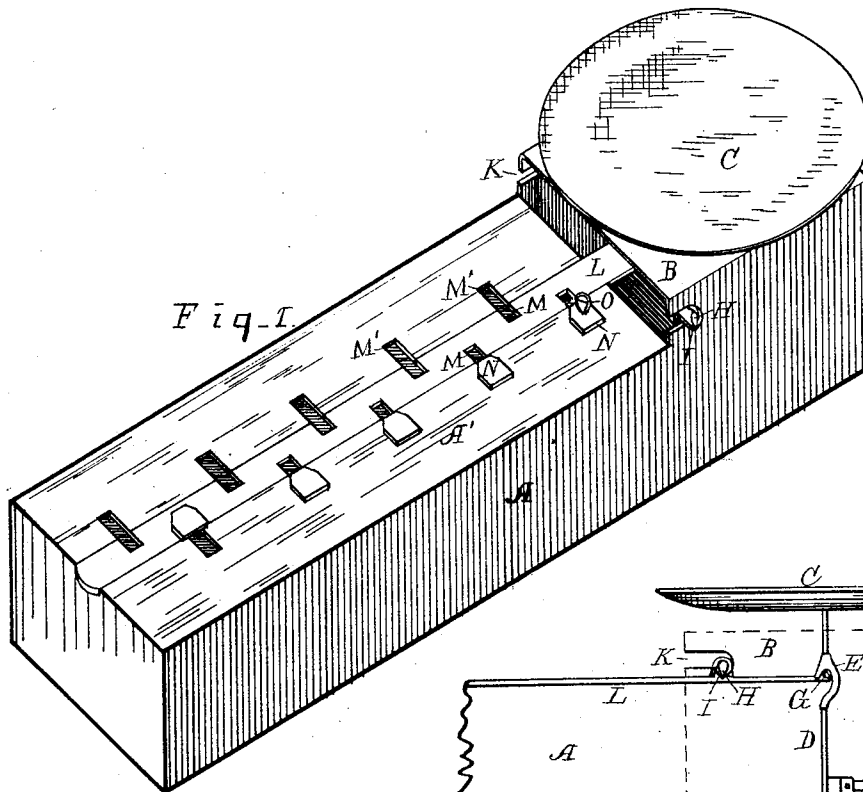


G. A. PHIFER.
Balance-Scale.

No. 224,038.

Patented Feb. 3, 1880.



Witnesses:
J. C. Frothingham
J. Bailey

Inventor:
George A. Phifer
By *J. S. Gerber*
Atty

UNITED STATES PATENT OFFICE.

GEORGE A. PHIFER, OF NEW RICHMOND, OHIO.

BALANCE-SCALE.

SPECIFICATION forming part of Letters Patent No. 224,038, dated February 3, 1880.

Application filed November 26, 1879.

To all whom it may concern:

Be it known that I, GEORGE A. PHIFER, of New Richmond, in the county of Clermont and State of Ohio, have invented a new and useful
5 Improvement in Scales, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is an isometric view. Fig. 2 is a side view, showing interior arrangement; Fig.
10 3, perspective view of weight; and Fig. 4, cross-sectional view of Fig. 2 through the line *x*.

The object of my invention is to provide a cheap family scales, constructed without the use of springs, and so arranged that the weights
15 are permanent parts of the scales, and can readily be slipped on or off the scale-beam. It also provides for the taking of tare in a simple manner, as will hereinafter be more fully set forth.

20 In the drawings, A represents a rectangular body or box, having at one end a raised square platform, B. The main portion of the box A has a permanent cover, A', longitudinally divided to allow of a small space or
25 opening between the two parts of said top.

C is the platform for the reception of goods to be weighed, poised on a standard, D, which passes down centrally through a slot in the platform B. At the lower end of this stand-
30 ard it is hinged to a lever, F, the opposite end of which is pivoted to the end of the body A. In the sides of the body A, at the point where the raised platform B terminates, are two horizontal slots, K, having seats I.

35 The lever L is provided with cross-pieces H and G, forming pivots, the latter of which is secured to the end of said lever and operating within the seats E. The pivot H is passed through the slots K into the seats I, and the
40 body of the lever L rests in the opening formed by the top A', so that the upper surface of the lever L will be even with the surface of the said top A', as shown in Fig. 1.

At suitable distances along the opposite
45 sides of the lever L, and alternating, are slots M, and corresponding with them, in the top A, are also slots M', as shown.

The weight P is attached to the handle or knob O below the support-piece N, and when attached to the scales the part N rests on the
50 top A' or on the lever L.

These weights may be of any desired size suitable for the purpose, and it is designed to have a special or separate weight for each slot in the scale; but for convenience only a
55 portion is shown.

In operation, if it is desired to take the tare of a vessel, it is placed on the platform C and the weight removed from the top A' to the balance. The requisite weight or weights are
60 then put on the beam L.

I do not confine myself to the number of slots or weights to be applied, nor do I wish to specifically point out the figures of weights to be placed on the scale-beams, the invention
65 being equally applicable to any number of weights. By this construction the proper weights are always in the positions indicated by the figures on the scale-beam, and cannot
70 be lost or misplaced.

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

1. In scales, the beam L, provided with slots M, alternating on opposite sides, as shown, 75 in combination with the slots M' in the permanent top, substantially as herein set forth, and for the purpose specified.

2. The combination of the slotted beam L, slots M', and sliding weights P, substantially 80 as and for the purpose herein described.

3. The combination of the slotted beam L with the pendent weight P, substantially as herein described and set forth.

In testimony that I claim the foregoing I 85 have hereunto set my hand this 15th day of November, A. D. 1879, in the presence of witnesses.

GEORGE A. PHIFER.

Witnesses:

H. W. MAHAN,

H. W. SCHUMACHER.