

S. L. PLUMB.
WEIGHING SCALES.

Patented May 30, 1876.

No. 178,188.

Fig 1

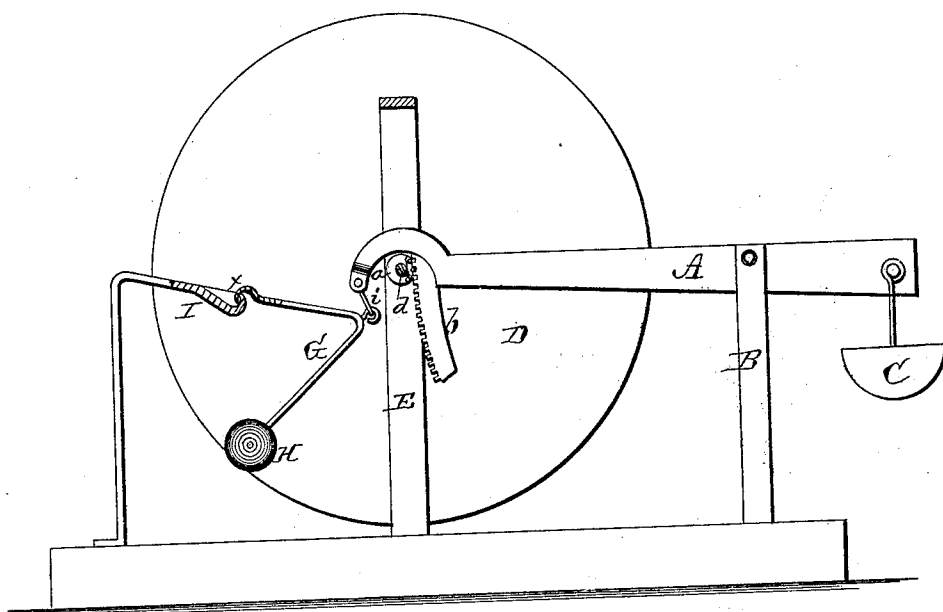
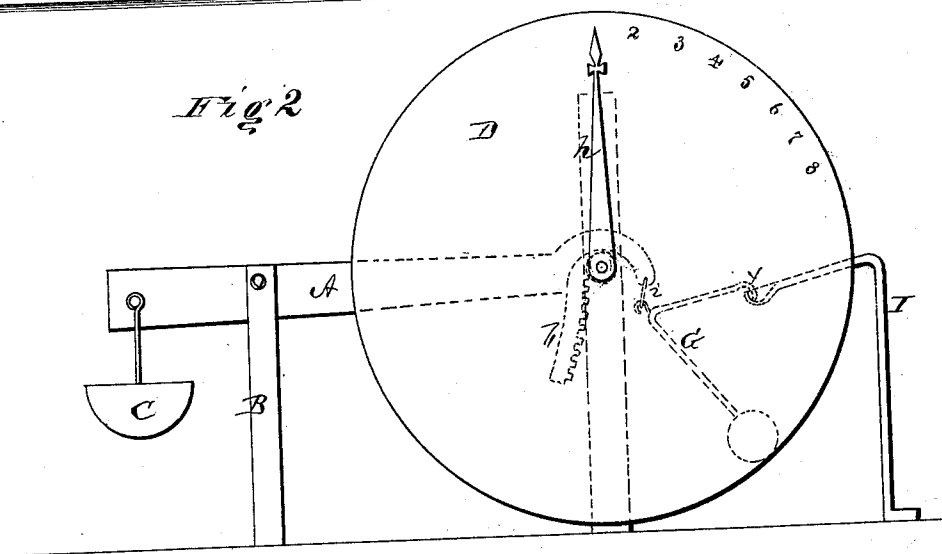


Fig 2



WITNESSES

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IMPROVEMENT IN WEIGHING-SCALES.

Specification forming part of Letters Patent No. **178,188**, dated May 30, 1876; application filed March 30, 1876.

To all whom it may concern:

Be it known that I, SHERMAN LEANDER PLUMB, of Portage, in the county of Columbia and State of Wisconsin, have invented certain new and useful Improvements in Scales; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of my invention is to construct a scale without springs or detachable weights, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a rear elevation of my scale. Fig. 2 is a front view of the same.

A represents the scale-beam, hung upon usual pivots in standards B B, and provided at its outer end with a suitable device, C, for supporting the article to be weighed. The other or inner end of the beam A is curved, as shown, and at the commencement of this curve is attached a rack-bar, *b*, which meshes with a pinion, *a*, on a shaft, *d*, having its bearings in upright standards E, and provided on its front end with a hand or finger, *h*, to indicate the amount weighed on a dial, D, attached stationary to one of the standards E. G represents a V-shaped lever, connected at the angle by a link, *i*, with the inner or curved end of the beam A. On the lower arm of the lever G is a weight or poise, H, as shown, while the end of the upper arm of the lever is formed with a bend or hook, X, which rests

in a recess formed in the end of the horizontal arm of an L-shaped standard, I. As the inner end of the beam A is raised by the substance being weighed, more and more the weight or poise H will exert an influence upon the beam, corresponding with the weight of the article or substance in the pan C, such weight being then indicated by the finger or pointer *h* on the dial D. This influence of the poise H upon the beam A varies with the distance such poise is from a perpendicular line drawn from the supporting-point of the lever G.

It is, of course, evident that the lever G need not necessarily be V-shaped, but that it may be made of any form that will answer the same purpose. The weight or poise H may also be made movable on the lower arm of the lever G, for the purpose of increasing the capacity of the scales.

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

The combination, in a weighing-scale, of the weighing-beam A, provided with the rack-bar *b*, the angular lever G, supported at one end, and provided at the other end with a poise, H, the link *i*, connecting the lever G with the beam A, and the pinion, shaft, index, and dial, all constructed substantially as and for the purposes herein set forth.

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

SHERMAN LEANDER PLUMB.

Witnesses:

JAMES B. TAYLOR,
N. J. CURRIER.