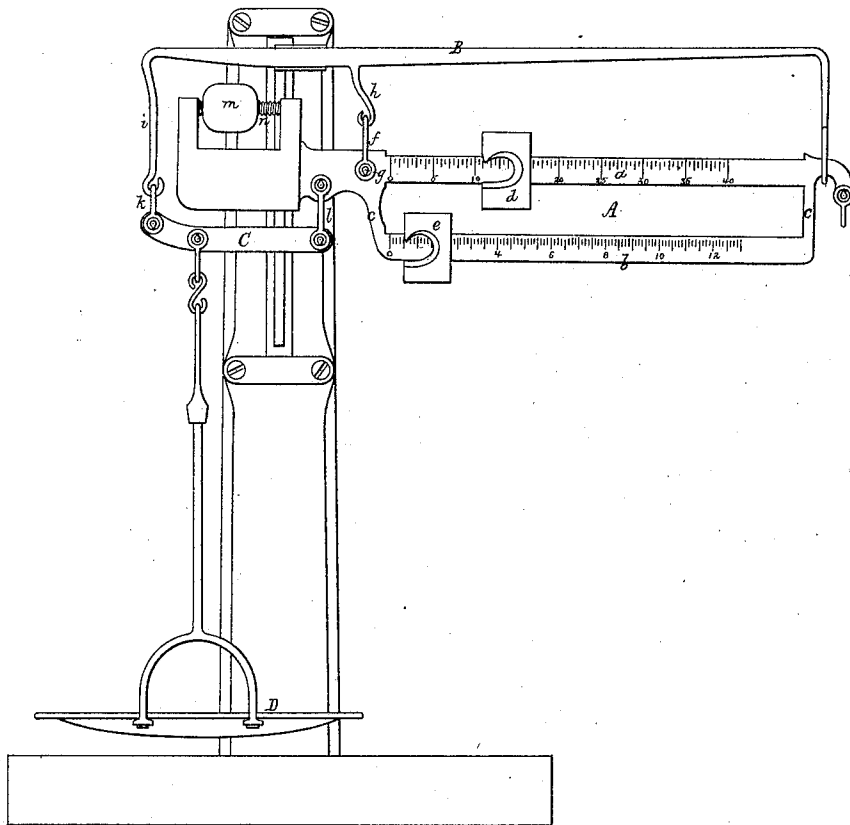


W. W. REYNOLDS.
WEIGHING APPARATUS.

No. 173,669.

Patented Feb. 15, 1876.



Witnesses.

S. M. Piper
S. M. Miller

Wm. W. Reynolds.

by his attorney
R. H. Eddy

UNITED STATES PATENT OFFICE.

WILLIAM W. REYNOLDS, OF BRANDON, VERMONT, ASSIGNOR TO BRANDON MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN WEIGHING APPARATUS.

Specification forming part of Letters Patent No. **173,669**, dated February 15, 1876; application filed October 12, 1875.

To all whom it may concern :

Be it known that I, WILLIAM W. REYNOLDS, of Brandon, of the county of Rutland and State of Vermont, have invented a new and useful Improvement in Apparatus for Weighing; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, which is a side elevation of a duplex scale-beam provided in accordance with my invention, with a multiplying-lever for supporting its scale-pan or platform.

This multiplying-lever saves the necessity of using one or more heavy poises on the end of the scale beam, they being liable to be lost or mislaid.

In the drawing, A is the duplex scale-beam, composed of two beams, *a b*, one being arranged directly over the other, and both being united by connections *c c*, as shown. Each of them is provided with a separate slide-weight, *d* or *e*.

The duplex beam has the hanger *f* of its fulcrum *g* suspended on a hook, *h*, extending from a horizontal bar, B, which at its rear end is furnished with a hooked arm, *i*, to support the back loop or hanger *k* of a short multiplying-lever, C, whose longer arm, near its end, is connected with the shorter arm of the duplex beam by a loop or hanger, *l*. The scale-platform or pan D is suspended from the fulcrum of the multiplying-lever, as shown. Over the multiplying-lever the duplex beam has an adjustable weight *m*, applied to a screw, *n*, all being as represented. My invention relates to a kind of weighing-scale largely used by market-men and grocers, and is designed to take the place of the old style steelyards, spring-balance, and the common beam with notches and loose poises, and other scales which are used in this class of weighing. The spring becomes inaccurate after being in use a short time, by the spring becoming weak. The common beam is very inconvenient; it takes too much room. The notches soon become worn, as does the hook on the poises, losing its sharp edge, which renders both inaccurate. The poises are not attached to the beam, consequently get lost, and by

tumbling about lose in weight, and thus become inaccurate, all of which is a great detriment to both buyer and seller. In my invention all these faults are obviated, as follows, viz: I use a double beam, which is shorter, giving the same number of pounds. I also use poises attached to the beam and to indicate on the side, and have no notches on the beam. The poises are lighter, not weighing over one pound. To enable me to do this, I use a multiplying-lever under and between the beam and the suspended pan or platform.

The bar B is fixed to a crane or swinging bracket, F, arranged with a post, G, as shown, and pivoted thereto, so as to be capable of being turned horizontally, the bar B swinging or turning with the crane F.

The said bar B performs the functions of not only supporting the duplex scale-beam A, but the lever C, the latter being suspended from the arm or part *i* of the said bar.

I do not claim in combination with a steelyard-lever, an auxiliary lever suspended at one end from the shorter arm of the steelyard, and at the other from a beam, separate and distinct from that from which the steelyard is hung, for in my weighing apparatus the single bar D is used to support both the duplex weighing-lever A and the shorter lever C, thereby enabling both levers A C to be swung around simultaneously with and by the crane, which cannot be accomplished by anything shown in the United States Patent No. 103,478 to C. C. Lyman; nor do I claim a single scale-beam and an auxiliary one connected and suspended from a single bar, as shown in the United States Patent No 56,547.

I claim—

My improved weighing apparatus, as described, consisting of the bar B, its three arms or weighing-lever supporters, the lever G, and the main and auxiliary connected scale-beams *a b*, provided with the slide-weights *c d*, all being arranged, constructed, and applied as set forth.

WM. W. REYNOLDS.

Witnesses:

H. C. COPELAND,
H. C. HOLLEY.

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made