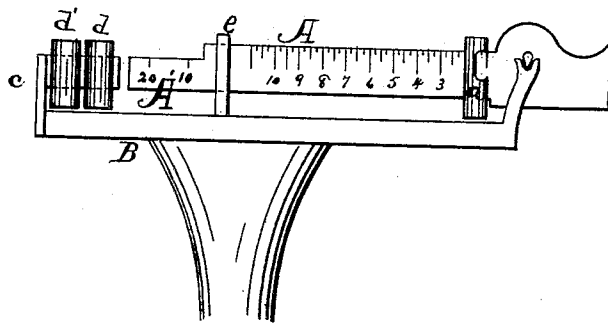


C. H. BIDWELL.
Scale Beam.

No. 229,663.

Patented July 6, 1880.



Witnesses:
J. A. Parsons.
J. R. Drake.

C. H. Bidwell,
Inventor by
J. R. Drake,
Atty.

UNITED STATES PATENT OFFICE.

CARL H. BIDWELL, OF BUFFALO, NEW YORK, ASSIGNOR TO THE BUFFALO SCALE COMPANY, OF SAME PLACE.

SCALE-BEAM.

SPECIFICATION forming part of Letters Patent No. 229,663, dated July 6, 1880.

Application filed January 22, 1880.

To all whom it may concern:

Be it known that I, CARL H. BIDWELL, of Buffalo, in the county of Erie and State of New York, have made certain Improvements in Poises and Beams of Weighing-Scales, of which the following is a specification.

This invention relates to single-beam scales, (though a second or "tare" beam may be used, if desired,) the object being to get a greatly-increased capacity from a single beam and to do away with loose poises or weights, thus preventing their getting lost or mislaid, and to always have them at hand just where wanted, and, finally, to do away with having several permanent poises on a single beam all the time, which takes away from its accuracy by destroying its sensitiveness; and the invention consists in continuing the beam through the trig-loop, (the weighing-numbers ending at the loop,) the part extending beyond acting as a bar or rod to receive the poise or poises, which rest on a short arm or poise-holder exactly opposite the end of the beam, but leaving a space for the free movement of the beam itself in the trig-loop, and not allowing the poises to be taken off.

The end of the beam beyond the trig-loop is notched and marked decimally in numbers—say from 10 up—as may be desired, and the poises may be correspondingly marked to set on corresponding numbers by being slid from the holder onto the end of the beam, thus increasing the capacity of the beam and preventing the poises being lost, all as hereinafter explained.

In the drawing the figure is a side elevation of the device.

A represents the beam, with a single line of figures thereon, from 0 to 10, though it may be numbered up to any desired amount.

On the beam is a single sliding poise, *a*, which, on being moved to the end of the beam, will give the weighing capacity of the beam—say ten pounds—as shown. To get a greatly-increased capacity from this single beam I extend the end of the beam beyond the trig-loop *e*, as shown at *A'*, and number it first with, say, 10, the next being 20, and so on. Opposite the end of this extension, but leaving a small space between, is set a short arm, *b*, upheld by an upright short standard, *c*, at-

tached to the end of the cap B. On this slide one, two, or more poises, *d d'*, all differently weighted, and marked, if desired, in numbers to correspond with those in the end of the beam, and arranged so that the one nearest the end must be slid onto the end of the beam and next the trig-loop to set in the notch to indicate 10, which, added to the 10 on the beam proper when the poise *a* is set on 10 therein, gives a total of twenty pounds. Of course this supplementary poise is not used until the capacity of the beam proper has been exhausted by the poise *a*. If the commodity weighs over twenty pounds, then the next poise, *d'*, is slid onto the 20 mark and the poise *a* is set at the balancing-figure on the beam, which indicates the weight over twenty pounds and up to thirty pounds, if the commodity weighs so much, the capacity of the beam being thirty pounds, as shown in the drawing.

The space between the extension end of the beam proper and the poise-holding arm is so small as to prevent the withdrawal of the poises therefrom, and thus prevents their being lost or the wrong one used, as they have to be moved in their consecutive order as they stand on the arm *A'*.

Each supplementary poise is differently weighted, decreasing in weight or size as it is to be set nearer to the end of the extension-beam; but each is marked in higher figures as it decreases in size or increases its distance from the trig-loop.

I claim—

The single beam A, elongated beyond and extending through the trig-loop, forming a longitudinal counterpoise, *A'*, and in combination with a poise-holding arm set exactly opposite thereto, having a poise or series of poises differently weighted thereon to slide on and off said arm *A'*, substantially as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

C. H. BIDWELL.

Witnesses:

J. R. DRAKE,

A. A. HOUGHTON.