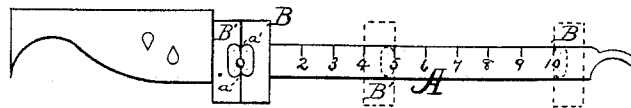


J. R. LINEN.
Scale-Beam.

No. 215,826.

Patented May 27, 1879



Witnesses:

T. H. Parsons.
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UNITED STATES PATENT OFFICE

JOHN R. LINEN, OF BUFFALO, NEW YORK.

IMPROVEMENT IN SCALE-BEAMS.

Specification forming part of Letters Patent No. **215,826**, dated May 27, 1879; application filed April 13, 1879.

To all whom it may concern:

Be it known that I, JOHN R. LINEN, of Buffalo, in the county of Erie and State of New York, have made certain Improvements in Weighing-Scales, of which the following is a description.

This invention relates to a single-beam scale having only the usual single line of figures thereon; and the invention consists in putting two poises thereon, each poise pointing to the same single line of figures, and with their index-faces opposite each other, both poises being sealed alike, and by which the capacity of every single beam is doubled, as hereinafter fully explained.

This invention is intended to overcome certain objections to compound beams, also to a single beam with several (two or more) lines of figures consecutively marked thereon.

In the drawing, the figure represents a side elevation of a single beam, A, having a single line of figures thereon—for example, from 0 to 10. B B' are two poises, shown at their normal position, and at which the beam balances, the first, B, and second, B', both with their indexes *a a'* pointing to 0. If the poise B is moved to the extreme end of the beam, as shown in dotted lines, it would indicate ten pounds weight. If the article on the scale weighed more than that, then the second poise, B', is moved, say, to figure 5, as indicated in dotted lines, which, added to the 10 already indexed by the first poise, gives the exact weight, fifteen pounds. If both poises be moved to the extreme end, close together, both would index the same figure, 10, but would give a result in weight of just twenty pounds, or double the amount to which both indexes *a a'* pointed.

To simplify weighing, the outer figures at the end of the beam will usually be marked with some decimal, 10, 20, 50, and so on, so that they can at once be mentally and easily added to the amount indicated by the second poise.

The operation is as follows: When weighing is to be done, the first poise, B, after being moved to the end of the beam, and thereby exhausting the line of figures, is left there, and

the second poise, which is "sealed" exactly the same as the first, is then moved until the beam is still. The figures at which it rests are then added to those at the outer end of the beam, where the first poise sits, making the total weight. The two poises B B' are sealed exactly alike, and have the novel feature of their indexes facing each other, or always opposite each other, and both indexes pointing to the same figure when together, as shown in the drawing. Therefore, if both are moved forward to the figure 1, for example, both indexes being on the line of that figure, a weight of two pounds is indicated; but only when the first index has been set at the extreme outer end of the beam will the second poise be brought into use ordinarily.

It is obvious that it is impossible to weigh with two poises on a single beam having only a single line of figures unless the index-faces of the two poises are opposite each other, as before described.

By this simple device two or more lines of figures on a single beam are done away with. A short and narrow beam will do the work of a very long one or two compound beams, and by the use of two poises on a singly-marked beam the beam may be made of the usual width, instead of broadening it, as is now done when two or three lines of figures are used on a single beam, and which has the additional disadvantage of spreading the beam when these lines of figures are stamped thereon, and which will prevent absolute correctness in weighing, as has been demonstrated in practice.

My device gives all the simplicity of a single beam and all the advantages of compound beams, besides being much more cheaply constructed than either. The poises slide on the beam A, and are permanent.

My improvement has no relation to a scale-beam having two or more poises thereon, each poise pointing to a different line of figures on said beam, or to different lines of figures on separate beams, but only to a single beam with a single line of figures thereon, as is customary, having two poises sliding thereon, both pointing to the same and single line of figures,

which, by adding together, gives the result according to the weight of the article or commodity weighed.

I claim—

In combination with a single scale-beam, A, with a single line of figures or characters thereon, the two poises B B', their indexes *a a'* facing each other on the same beam, and when brought together the indexes of both pointing

to the same figure or figures, substantially as and for the purpose specified.

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

JOHN R. LINEN.

Witnesses:

J. R. DRAKE,

A. A. HOUGHTON.