

E. T. SETON.
STEELYARD.

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1,000,201.

Patented Aug. 8, 1911.

2 SHEETS—SHEET 1.

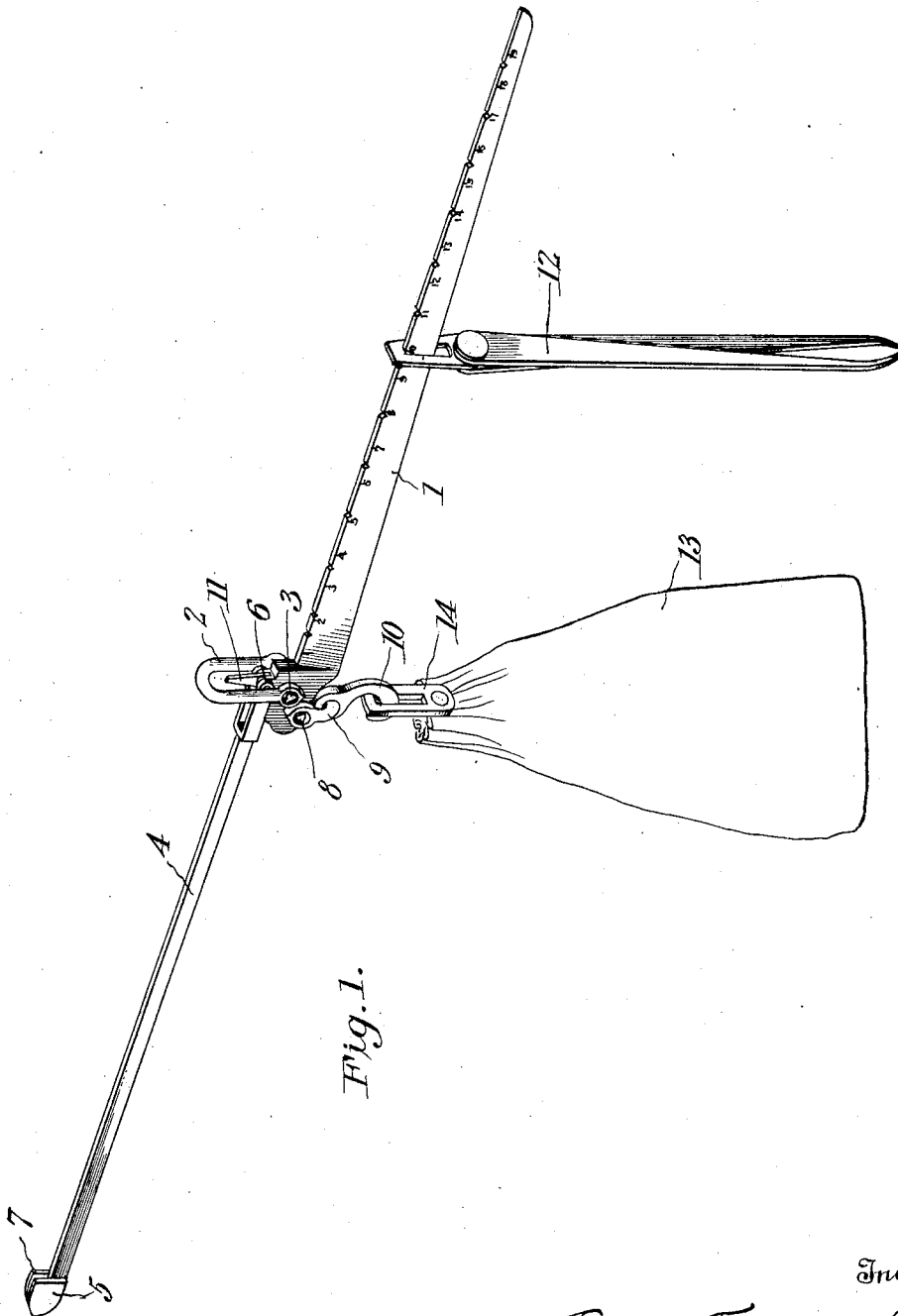


Fig. 1.

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 2 SHEETS—SHEET 2.

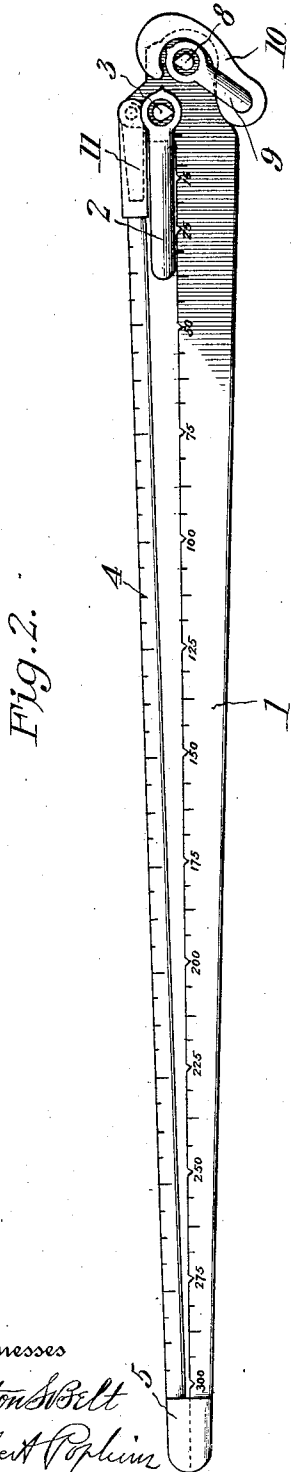


Fig. 2.

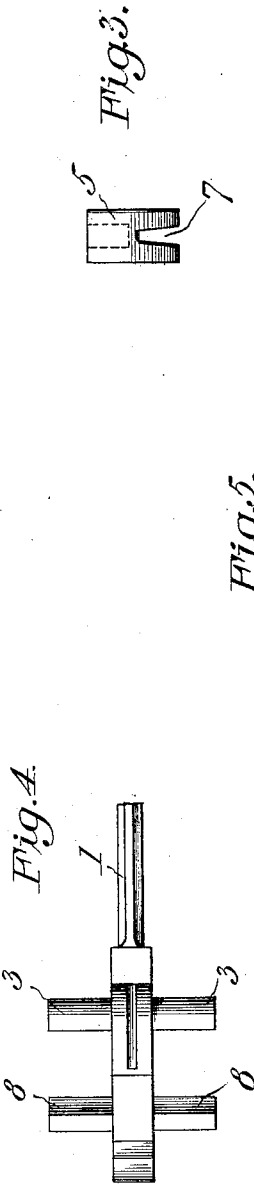


Fig. 3.

Fig. 4.

Fig. 5.

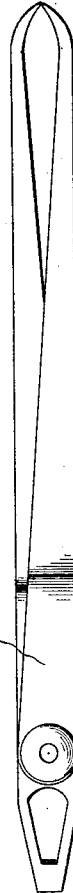


Fig. 6.



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STEELYARD.

1,000,201.

Specification of Letters Patent.

Patented Aug. 8, 1911.

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To all whom it may concern:

Be it known that I, ERNEST THOMPSON SETON, a subject of the King of Great Britain, residing at Coscob, in the county of Fairfield, State of Connecticut, have invented certain new and useful Improvements in Steelyards, of which the following is a description, reference being had to the accompanying drawing and to the letters and figures of reference marked thereon.

The invention relates to new and useful improvements in steelyards or weighing scales, which are especially adapted for ready and easy transportation.

An object of the invention is to provide a steelyard which shall be of comparatively light weight, and at the same time capable of ascertaining the weight of comparatively heavy objects.

A further object of the invention, is to provide a steelyard which is capable of being folded into small compass to facilitate the transportation thereof.

These and other objects will in part be obvious, and will in part be hereinafter more fully described.

In the drawings which show by way of illustration one embodiment of the invention; Figure 1 is a perspective view, showing my improved folding steelyard. Fig. 2 is a side elevation showing the steelyard folded. Fig. 3 is an end view of the weight on the counter-balancing arm or bar. Fig. 4 is a top view of the rear end of the main beam. Fig. 5 is a side view of the poise for the beam. Fig. 6 is an edge view partly broken away, of the same.

In carrying out my invention, I have provided a main beam 1, which is provided with the usual notches in its upper face to assist in locating and holding the counter-poise. Said beam as shown in Fig. 1, is provided with graduating marks from one to nineteen. It is of course, obvious that these graduating marks may be differently arranged, if desired. The opposite side of the beam as shown in Fig. 2, is provided with graduating marks of higher denominations. The purpose of placing these graduating marks of different denominations on different sides of the beam, is so that counter-poises of different weights may be used. The weights of the different counter-poises will of course, correspond to the different sets of graduations.

The beam 1 is provided with a supporting

hook or clevis 2, such as used in the ordinary steelyard. Said clevis supports the beam 1, by means of the usual knife edge fulcrum pins 3. In the place of the ordinary counter-weight for the beam, I have provided a counter-balance bar 4. Said bar 4 carries at its outer end a weighted portion 5. The bar 4 is pivoted at 6, to the main part of the steelyard. The inner end of the beam 1, as clearly shown in the drawings, extends upwardly slightly, and the balance bar 4 is pivoted to the upper portion thereof. This allows the supporting clevis 2 to be folded down against the upper face of the beam 1, and the balance bar 4 to fold over the clevis, and to a position adjacent the upper edge of the beam 1. The balance bar 4 is substantially the same length as the beam 1, and the weight 5 is cut away at 7 (see Figs. 1 and 3), so that when said balance bar 4 is turned to folded position, said cut away portion 7 will engage the outer end of the beam 1. The beam 1 as shown in Figs. 1 and 2, is provided on the opposite side of the fulcrum pin 3, with a supporting knife edge pin 8, which is also of the character used in the ordinary steelyard. A clevis 9 is supported by the pin 8 and a hook 10 is carried by the clevis. The inner end of the beam 1 is slightly cut away as shown in Fig. 2, and the hook 10 so proportioned as to swing about the base of the clevis and the supporting pin when the parts are folded for transportation.

The object to be weighed is attached in the usual manner, to the supporting hook 10, and the counter-poise moved on the graduated beam in the usual manner. In order to aid in determining when the parts are properly balanced, I have provided a pointer 11. The inner end of the balance bar 4 is forked so as to engage the outer faces of spaced lugs carried by the main beam, and the pointer 11 is pivoted between said lugs. Said pointer may be folded to the position shown in Fig. 2, or raised to an upright position as shown in Fig. 1. Any suitable means may be used for maintaining the pointer in either position. The poise 12 which I prefer to use in connection with the smaller graduations on the beam, may be comparatively light, and as herein shown, I have constructed the same in the form of a caliper. The caliper of course, has no function in connection with the steelyard other than a weight; but it is however, useful for

other purposes among hunting naturalists and I therefore, desire to use this form of construction, although it is obvious that from certain aspects of the invention, any form of poise may be used.

The poise for the larger graduations on the opposite side of the beam, is preferably made in the form of a collapsible receptacle 13, (see Fig. 1). Said receptacle has a steel clip 14 riveted or otherwise secured to its upper edge, and said clip is provided with a knife edge to engage the notches in the upper edge of the beam, when the receptacle is used as a counter-poise. The object in making the counter-poise 13 in the form of a collapsible receptacle, is to avoid the transportation of a heavy weighted poise holding means, which is necessary in weighing heavy objects. If the beam is graduated so as to take a counter-poise weighing 10 pounds, the receptacle 13 is hung from the weighing hook 10 and the counter-poise 12 set at the proper graduation so as to weigh ten pounds. The receptacle 13 may then be filled with any material that may be at hand until the scales are balanced. In this manner a temporary poise of the desired weight may be made, and the same is used in connection with large graduations for weighing heavy objects. The collapsible receptacle forming the counter-poise may also be used as a storage receptacle for the folded steelyard. By the use of the temporarily constructed poise holding means, I avoid carrying about any unnecessary weight. Also by the use of the long balance arm 4, I am able to counter-balance the beam without providing the heavy weighted parts usually employed in the ordinary steelyard. The balancing means for the beam is so constructed that the beam will balance about its fulcrum when the poise is removed from the beam and the sets of graduations have their zero points at the fulcrum of the beam. By this construction, I am able to use two poises of different weights independently upon the

beam, so that one may be used in connection with one set of graduations and the other in connection with the other set of graduations. The balance bar 4 may be graduated in inches and fractions thereof, and thereby afford a convenient measuring device.

It will be obvious that minor changes in the details of construction may be made, without departing from the spirit of my invention.

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

1. A steelyard including in combination, a graduated beam adapted to receive a counter-poise, a balance-bar substantially the same length as said beam pivoted to the inner end of said beam, and a weighted part carried by the outer end of said balance bar, and serving as a counter-weight for said beam.

2. A steelyard including in combination, a graduated beam, having an upwardly projecting part at its inner end, a balance bar pivoted to the upper portion of said part, and adapted to fold to a position adjacent the upper edge of said beam, a weight carried by the outer end of said balance bar, a supporting clevis adapted to fold between said balance bar and said beam, and a supporting hook attached to the inner end of said beam.

3. A steelyard including in combination, a graduated beam adapted to receive a counter-poise, a balance bar pivoted to the inner end of said beam and adapted to fold against the same, and a pivoted pointer connected to said beam and swinging therewith, which pivoted pointer is adapted to be folded against the beam.

In testimony whereof I affix my signature, in presence of two witnesses.

ERNEST THOMPSON SETON.

Witnesses:

GRACE G. SETON,
NEMIL A. DUFFEY.