2 Sheets--Sheet 1.

O. T. BAKER.

Scales.

No. 163,135. Patented May 11, 1875.

Fig. 1.

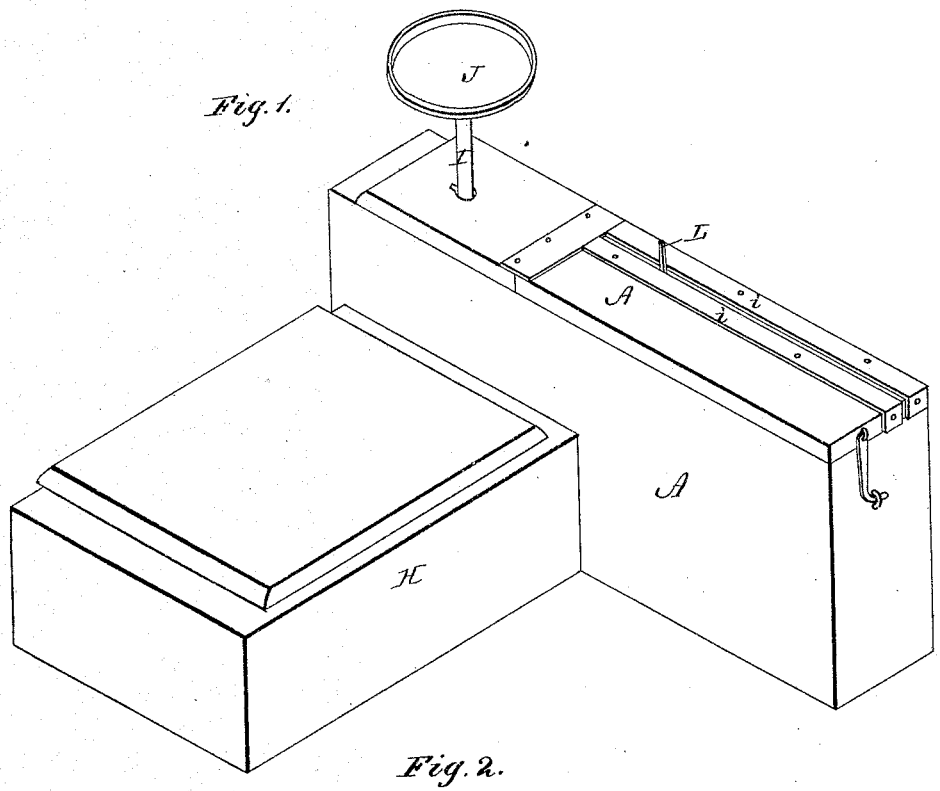
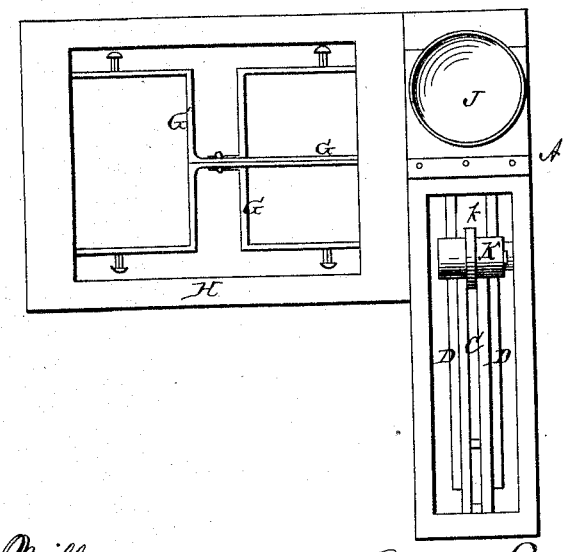


Fig. 2.



WITNESSES

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2 Sheets--Sheet 2.

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Fig. 3.

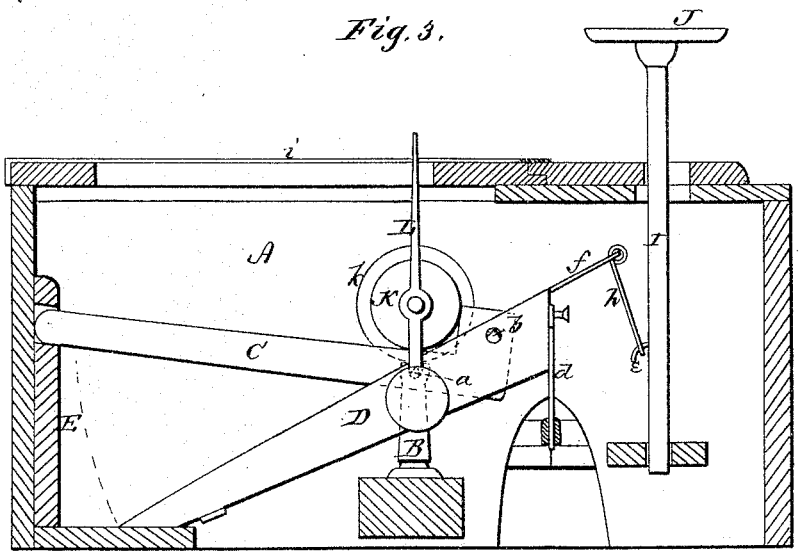


Fig. 4.

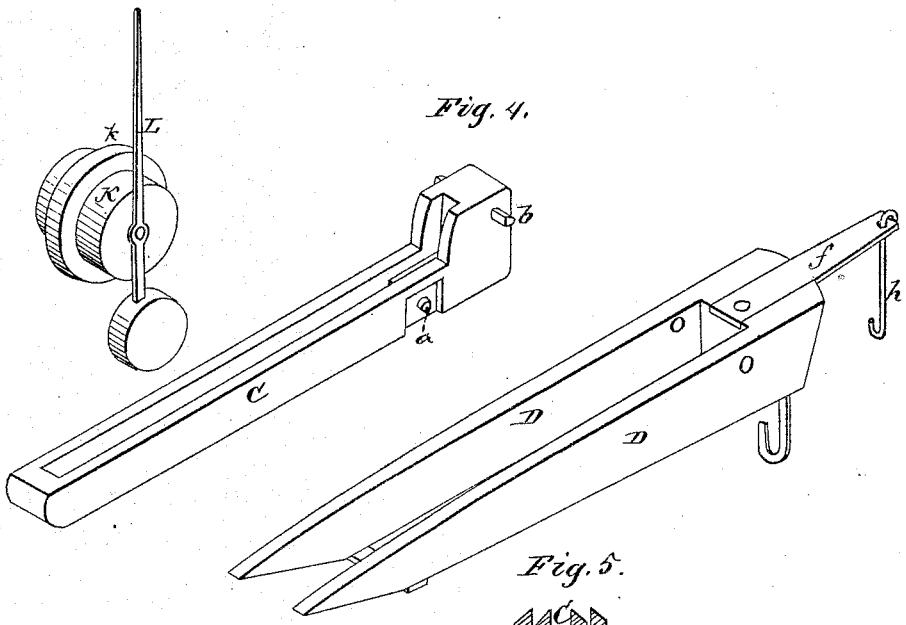
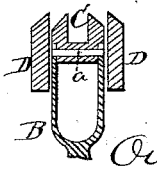


Fig. 5.



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UNITED STATES PATENT OFFICE.

OWEN T. BAKER, OF WAMEGO, KANSAS, ASSIGNOR OF ONE-HALF HIS RIGHT TO OSCAR M. GAY, OF SAME PLACE.

IMPROVEMENT IN SCALES.

Specification forming part of Letters Patent No. **163,135**, dated May 11, 1875; application filed April 8, 1875.

To all whom it may concern:

Be it known that I, OWEN T. BAKER, of Wamego, in the county of Pottawattomie, and in the State of Kansas, have invented certain new and useful Improvements in Scales; and 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, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a weighing-scale, 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 drawings, in which—

Figure 1 is a perspective view of a counter-scale embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal vertical section of my scale. Figs. 4 and 5 are views of detached parts thereof.

A represents a suitable case or box, in which is a stationary vertically-slotted standard, B. The upper ends of this standard are forked or notched to receive the knife-edged ends of a pivot, *a*, which is passed through a slotted lever, C, near, or a suitable distance from, one end. The other end of this lever is placed in a slotted bar, E, attached to the end of the box or casing A, the slot being of such length as to allow the lever to vibrate a short distance up and down at that end. The end of the lever C beyond the pivot *a* is extended upward at right angles for a short distance, and in this extended part is another pivot, *b*, with its knife-edge on top, said pivot being above a horizontal line drawn through the center of motion of the other end of the lever within the slotted bar E. The lever C thus forms an inclined plane, as shown in Fig. 3. The pivot *b* of the lever C passes through and supports two levers, D D, which are permanently connected together immediately beyond the points where the pivot passes through the levers, and as these levers are turned upon the pivots they pass up one on each side of the slotted lever or inclined plane C. The inner or pivoted end of the double lever D is, by a rod or bar, *d*, connected with the scale-levers G of a platform-scale arranged in a box or case, H, extending from the casing A. This platform-scale may be constructed in any of the known and usual ways. From the pivoted end of the double lever D extends an arm, *f*, connected by a link, *h*, with a hook, *e*, on a vertical rod or bar, I, which passes up through suitable guides in the case A, and is at its upper end provided with a plate or dish, J, for counter purposes.

The weight employed with my scale-beams consists of a roller, K, with central circumferential flange *k*, which fits in the slot of the lever C, the ends of the roller projecting sufficiently beyond the sides of said lever or inclined plane C to be operated upon by the levers D on each side thereof. On one end of the roller or rolling weight K in the center is pivoted an index, L, the lower end of which is weighted to hold the index always in a vertical position whichever direction the weight may roll in. The upper end of the index L projects through a slot in the top of the case A, and moves from end to end therein. On both sides of this slot are scales *i i*, to indicate the amount weighed, one being for the platform-scale, and the other for the counter-scale.

The operation of the levers D D is to roll the weight K up the incline C, which always adjusts itself by being allowed to vibrate in the slot of the bar E. The action is simple and easy, as well as accurate and reliable.

For stores, warehouses, &c., the arrangement of small platform and counter scale, as described, is most convenient.

In the top of the case A I propose to have inserted two levels at right angles with each other, so as to show if the scale is set perfectly level.

For heavy weighing, such as on railroads, hay-scales, &c., the box H is to be sunk in the ground as usual, and the counter-scale J is entirely dispensed with.

The arrangement of the platform-levers G may be in any of the known or usual ways; or, in other words, my invention may be applied to any of the well-known platform-scales. And when platform scales only are used a

door is made in the side of the case A, to show the index and graduations arranged therein instead of on top.

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

1. The inclined plane C, hung upon pivots *a* near one end, the other end vibrating in a slotted bar, E, and provided beyond the pivots *a* with pivots *b*, for the reception of the levers D, said pivots *b* being above a horizontal line through the center of motion of the vibrating end of the incline, substantially as herein set forth.

2. The combination, in a scale, of the vibrating incline C, levers D D, rolling weight K, and weighted index L, pivoted in the center of the weight at one end, substantially as and for the purposes herein set forth.

3. The combination, with the incline C, levers D, and rolling weight K, of the counter-scale and platform-scale, connected to the levers, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of April, 1875.

OWEN T. BAKER.

Witnesses:
WILLIAM L. BRAMHALL,
C. L. EVERT.