

R. L. McCOLLUM.

Balance Scales.

No. 1,048.

Patented Dec. 31, 1838.

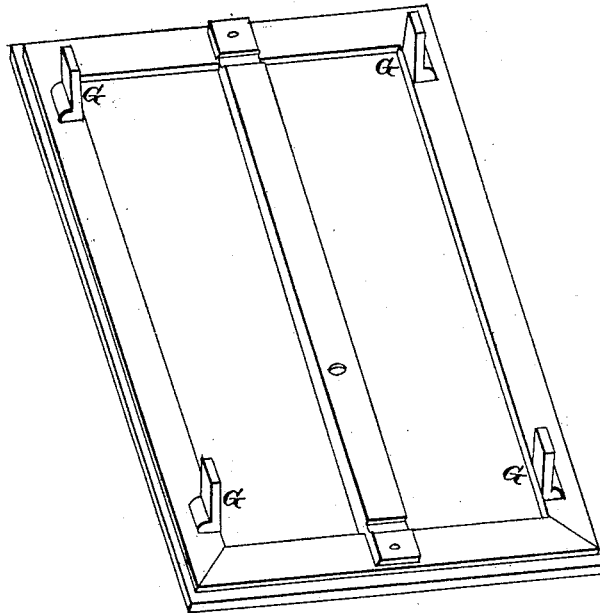


Fig. 1.

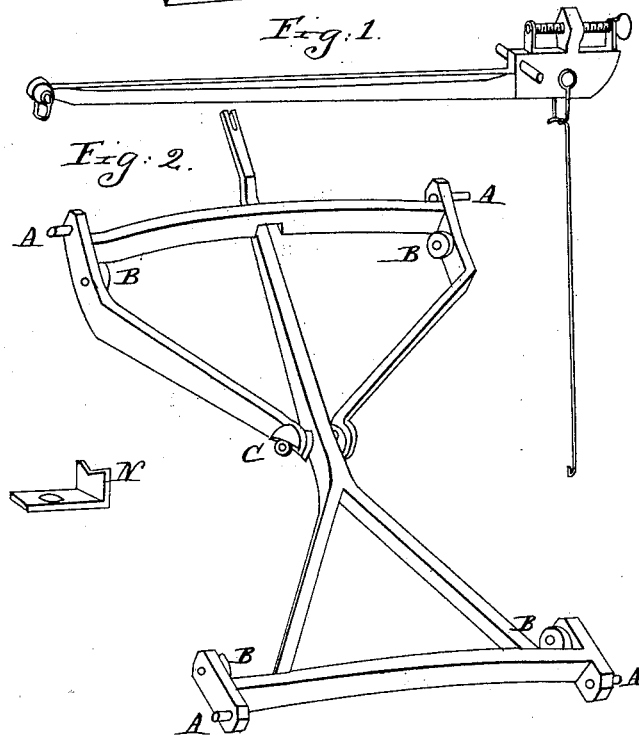


Fig. 2.

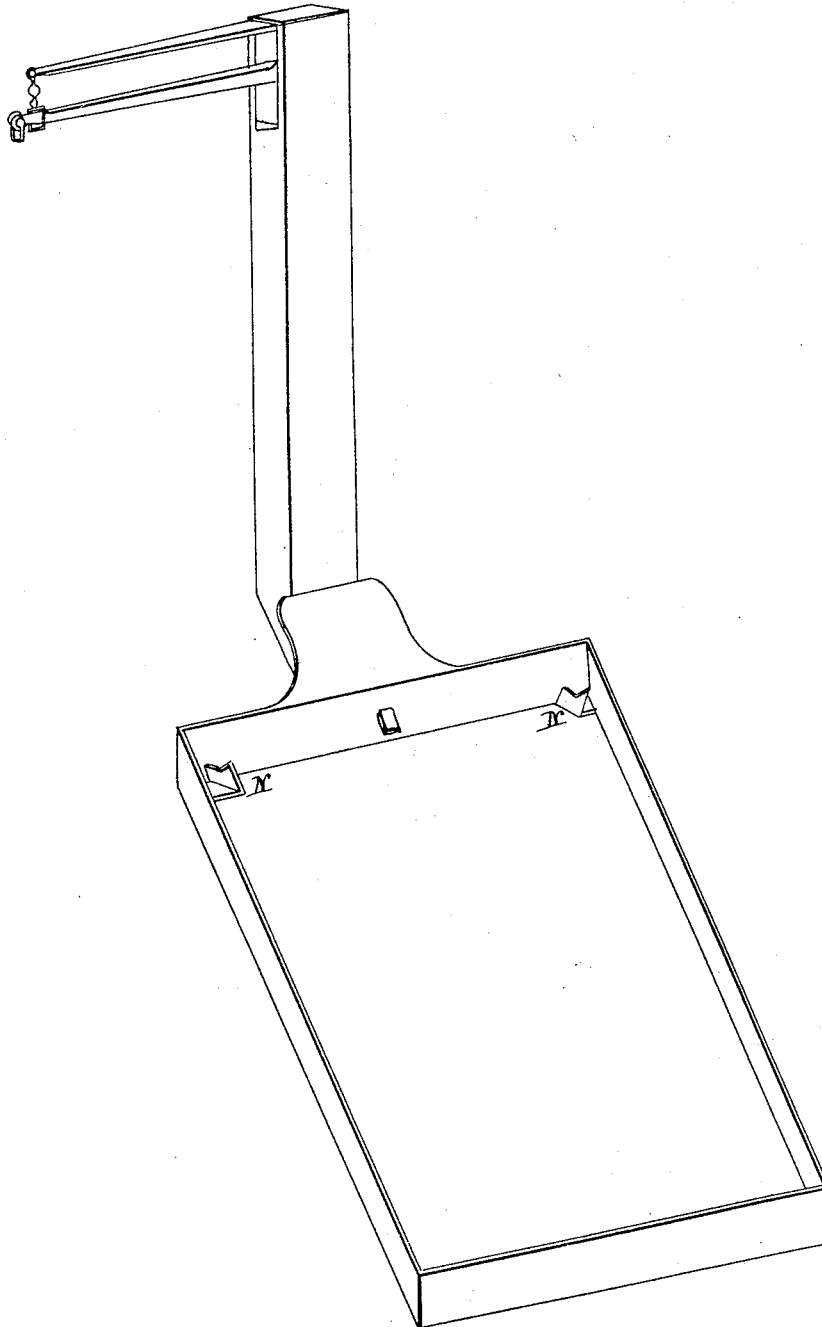
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

ROBERT L. McCOLLUM, OF ROCHESTER, NEW YORK.

PLATFORM-BALANCE.

Specification of Letters Patent No. 1,048, dated December 31, 1838.

To all whom it may concern:

Be it known that I, ROBERT L. McCOLLUM, of the city of Rochester, in the State of New York, have invented a new and improved mode of employing the lever for the purpose of weighing ponderous bodies, in a combination which I denominate the platform balance, of which I declare the following to be a full and correct description, reference being had to the drawings accompanying this specification.

The machinery is contained in a rectangular box of wood which is represented in Drawing No. 1, the lid or platform being removed.

N, N are notches of cast-steel screwed to the bottom of the box, on which rest the edges which are the fulcrum of the system of levers. One of these notches, of which there are four (one near each corner of the box) is also represented by N in Drawing No. 3.

From one side of the box a spout projects, into which is inserted a vertical pipe, or hollow pillar of wood of a square form. The index bar represented in Drawing No. 1 turns upon edges which rest on plates screwed to the sides of the pillar. An iron rod one end of which is hooked to the index bar and the other to the anterior extremity of the pole of the posterior lever hereinafter described, passes down through the pillar. The index bar and the iron rod are represented in Drawing No. 3, Figure 1.

Drawing No. 2 represents the platform, or lid of the box, on which rests the body whose weight is to be determined. It is represented reversed, the lower surface being exposed.

G, G, G, G are the feet, rectangular prisms of iron, which rest upon the top of rings suspended from edges inserted into the levers. The feet are inserted into the platform at right angles to its plane.

Fig. 2, Drawing No. 3, represents the two levers, each consisting when of iron of a single casting, including the arms.

A A A A are the edges upon which the levers turn and which rest upon the notches (N N in Drawing No. 1) hereinbefore mentioned. Inside of these edges (that is nearer the center of the system) are four

other edges B B B B, two upon each lever. Upon the latter edges hang round rings of cast iron which move freely upon the edges. Upon the top of these rings rest the feet of the platform.

The posterior lever (that is the one remote from the pillar which supports the index bar) has two arms converging together at something less than half the distance to the anterior lever, and uniting in a single arm or pole, at the extremity of which is attached by a hook the iron rod connecting the system with the index or steelyard bar. The anterior lever has two arms converging toward the pole of the posterior lever. The extremities of these arms rest on the top of rings suspended from edges inserted on each side of the pole of the posterior lever. The arms it will be perceived are in fact the levers constituting four levers so constructed as to act as two.

The mode of operation is sufficiently obvious. The weight upon the platform pressing down upon B B on the anterior lever, depresses the extremities of its arms which extremities press down upon the rings suspended from the sides of the pole of the posterior lever, thus acting in conjunction with the direct pressure of the weight at B B on the posterior lever depressing the anterior extremity of its pole, which passes through an opening in the side of the box, represented in Drawing No. 1, until it reaches the iron rod, through which it acts upon the index bar.

What I claim as my invention and desire to secure by Letters Patent is—

The resting the feet of the platform upon the tops of rings suspended upon edges and moving with perfect freedom upon them, so that the ring will always adjust itself in such a manner that the bearing of the platform shall be directly over the edge, and a similar adjustment of the other bearing points of the machinery of the balance all as above described.

ROBERT L. McCOLLUM.

Witnesses:

E. PESHINE SMITH,
P. G. BUCHAN.