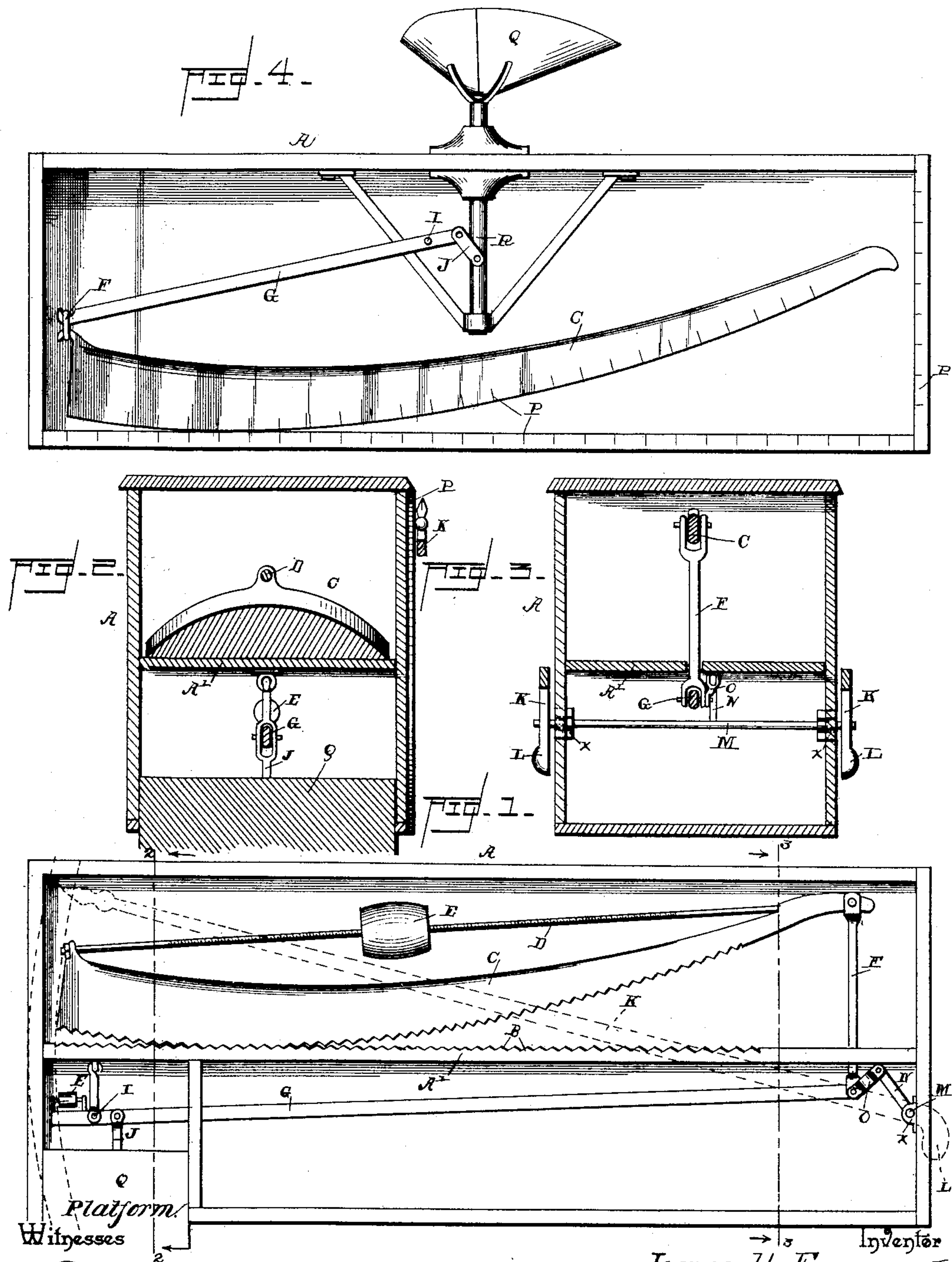


(No Model.)

J. H. FREEMAN, Jr.  
ROCKING SCALE.

No. 465,174.

Patented Dec. 15, 1891.



James H. Freeman, Jr.

E. S. Duvall, Jr. By his Attorneys,  
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# UNITED STATES PATENT OFFICE.

JAMES HOLMAN FREEMAN, JR., OF HOWARD, COLORADO.

## ROCKING SCALE.

SPECIFICATION forming part of Letters Patent No. 465,174, dated December 15, 1891.

Application filed February 24, 1891. Serial No. 382,559. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES HOLMAN FREEMAN, Jr., a citizen of the United States, residing at Howard, in the county of Fremont and State of Colorado, have invented a new and useful Rocking Scale, of which the following is a specification.

This invention relates to scales; and the object of the same is to construct a scale having an improved scale-beam, itself acting as the counterbalancing-weight.

To this end the invention consists of the details of construction hereinafter more fully described and claimed, and as illustrated on the sheet of drawings, wherein—

Figure 1 is a front elevation of one form of scale embodying my invention, with the face of the casing removed. Figs. 2 and 3 are cross-sections thereof on the lines 2 2 and 3 3. Fig. 4 is a front elevation of another form of scale with some of the parts omitted, with the face of the casing removed.

Referring to the said drawings, the letter A designates the casing within which the works of this improved scale are inclosed, and this casing may be of any suitable size and shape, depending entirely upon the nature and scope of the scale being built. Within this casing is a transverse shelf A', preferably having teeth B on its upper face, although they may be omitted, as shown in Fig. 4, and supported by this shelf is a rocking scale-beam C, which necessarily has teeth upon its lower face engaging those lettered B when the latter are used. This beam is quite broad and thick at one end, Fig. 2, but tapers gradually to a narrow tongue at the other end, Fig. 3, and the ends of this scale-beam may be connected by a threaded rod D, on which turns an adjusting-weight E, whereby the exact balance of the scale may be maintained.

In Fig. 4 is shown a simple form of scale wherein graduation-marks P are marked upon the beam and the edge of the bottom and of one end of the frame, and the weight may be indicated by noting which of the marks P on the beam C register with those on the bottom, or by connecting an index of any approved pattern with the beam and allowing its tip to move over the marks P on the end of the frame.

The letter Q designates the platform or pan of the scale, which in the construction shown in Fig. 4 is mounted on a vertical rod R.

J is a link connecting the platform or the rod supporting the pan with the weight-beam G, the latter being supported by a fixed pivot I. This beam may also carry an adjusting-weight E at a suitable point, as shown and as well known in the art. The other extremity of the weight-beam G is connected by a link F with the scale-beam, and the whole is so arranged that by a depression of the platform or pan the scale-beam will be rocked farther and farther toward its lighter end, thus elevating its heavy end and offering greater and greater resistance, the shape of the scale-beam being such that this increased resistance will be regularly applied.

The letter K designates an index keyed upon the shaft M, journaled in bearings X, and weighted at L at the end opposite said shaft, the tip of this index moving over graduation-marks upon one or both sides of the casing A, according as there is one or two of these indices secured to the shaft M. Between the bearings X an arm N is keyed to the shaft M, and the outer end of this arm is connected by a link O with the pivot between the link F and the weight-beam G. By this mechanism, as said beam descends the index is caused to turn about its pivot and the weight of the article or articles upon the platform or in the pan Q is indicated. I have shown the indices K as moving over the exterior of the casing A on both sides, which is preferable, although one might be omitted, and it will be understood that these indices might be covered with glass, or they might be located within the casing and the sides thereof made of glass. This index is omitted from the small scale shown in Fig. 4; but it will be understood that it may be applied thereto by a proper adaptation of parts.

I do not confine myself to the exact details of construction herein shown and described, as considerable change may be made therein without departing from the spirit of my invention.

The shelf on which the rocking beam rests may be made convex, so as to make it the reverse shape of the under side of the beam, or



the rocking beam can be perfectly straight and the entire curve be provided on the shelf.

What is claimed as new is—

1. In a scale, the combination, with a rocker-shaped scale-beam heavier at one end than at the other and having teeth upon its lower face, and a shelf having a toothed face upon which said beam rests, of a platform and connections between said platform and scale-beam, substantially as described.

2. In a scale, the combination, with a rocker-shaped scale-beam one end of which is heavier than the other, a threaded rod connecting said ends, and an adjusting-weight upon said threaded rod, of a shelf upon which said beam rests, a platform, and connections between said platform and scale-beam, substantially as described.

3. In a scale, the combination, with a rocker-shaped scale-beam heavier at one end than at the other and having teeth on its lower face, and a shelf having a toothed upper face upon which said beam rests, of a platform, a pivoted weight-beam connected to said platform, a link connecting the two beams, graduation-marks carried by the casing, a pivoted

index, and connections between said index and one of the beams, substantially as described.

4. In a scale, the combination, with a rocker-shaped scale-beam gradually increasing in size from one end to the other, a casing having a shelf upon which said beam rests, and graduation-marks upon said casing, of a platform, a weight-beam pivoted to said casing, a link connecting said weight-beam and platform, a link connecting the other end of said weight-beam with the lighter end of the scale-beam, a shaft journaled in bearings in the casing, an index keyed to said shaft with its free end moving over said marks, an arm also keyed to said shaft, and a link connecting the outer end of said arm with the weight-beam, substantially as hereinbefore described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES HOLMAN FREEMAN, JR.

Witnesses:

J. H. PICKENS,  
DAISY PICKENS.