

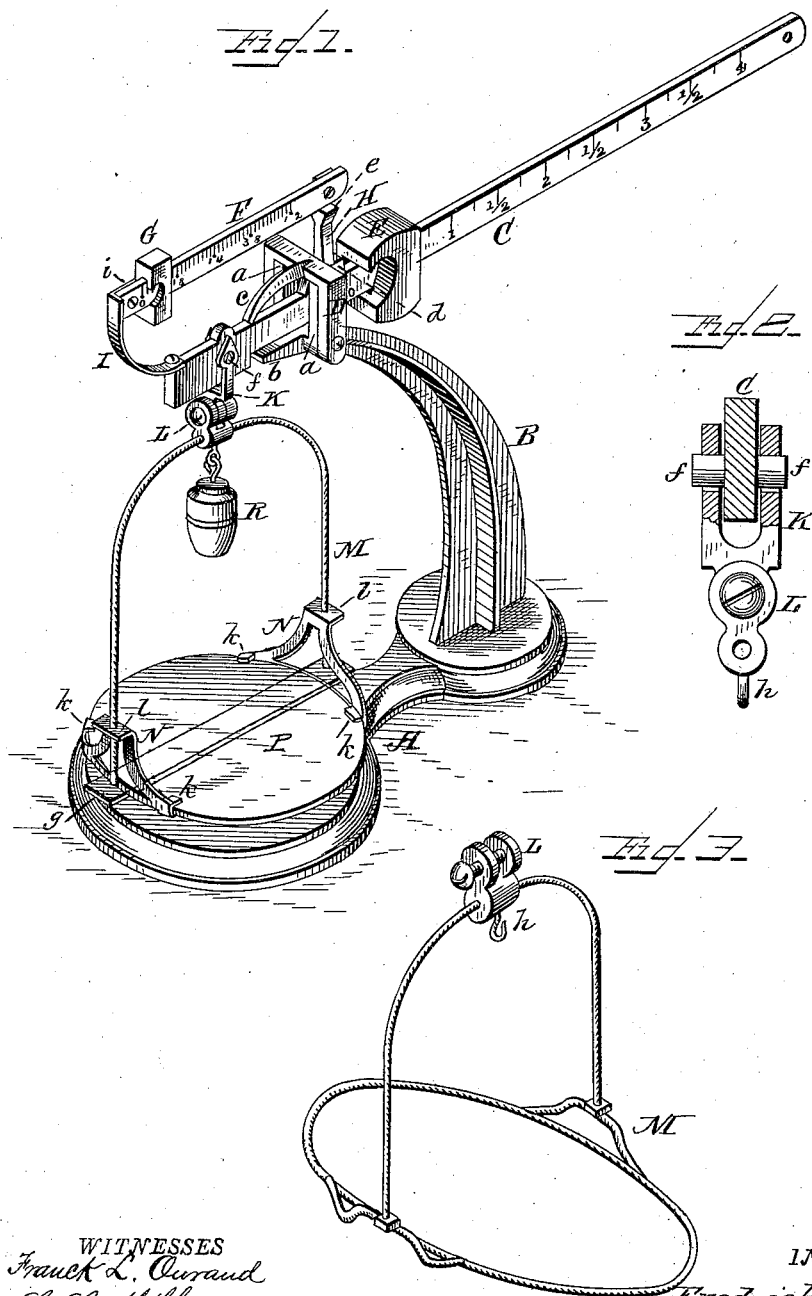
(No Model.)

F. F. MEYER, Jr.

BALANCE.

No. 305,947.

Patented Sept. 30, 1884.



WITNESSES
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UNITED STATES PATENT OFFICE.

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BALANCE.

SPECIFICATION forming part of Letters Patent No. 305,947, dated September 30, 1884.

Application filed April 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK F. MEYER, Jr., a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Balances; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of a balance constructed in accordance with my invention; Fig. 2, a detail view of the device for attaching the pendulum-cradle to the beam; and Fig. 3, a detail view, in perspective, of a modification of the pendulum-cradle.

The present invention has for its object to improve the construction of that class of balances for which a patent was granted to me February 5, 1884, No. 292,935; and it consists in the several details of construction, substantially as shown in the drawings, and herein-after described and claimed.

In the accompanying drawings, A represents a suitable base provided with a column or standard, B, having at its upper end bearings *a* for the knife-edged projections, extending from the sides of a main beam, C, and also an under stop, *b*, for said beam. A cap, D, is removably secured to the bearings *a* by screws or other suitable means, and has an extension, *c*, to form the over-stop for the beam, the latter having the usual poise, E.

The above-described features of my invention do not differ materially from the construction shown in my former patent, and further reference to them is considered unnecessary.

To the beam C, at its forward end, is connected a tare-beam, F, directly over it, as shown, and is provided with a suitable poise, G.

The manner of attaching the beam F is as follows: The beam C is cast with a socket, *d*, in which is fitted the reduced end of a short post, H, said post having a shoulder, *e*, for supporting the end of the beam F, which is secured thereto by a screw or other like fastening. The opposite end of the beam F has attached to it a curved arm, I, the lower end

of said arm being secured to the end of the beam C. The arm I is formed of sheet metal, preferably spring metal, so as to better support the end of the beam F without the necessity of heavy cast-metal posts, the upper end of the arm having an angle-plate, *i*, for convenience of attaching it to the side of the beam. The forward end of the beam C is provided with the usual knife-edged bearings or projections, *f*, for supporting a suitable yoke, K, to which is pivoted a hanger, L, of any desirable construction. To this hanger is suitably connected the wire cradle M, said cradle being provided with spring-clamps N, which embrace the edge of a scale-pan, P, of glass or other suitable material, at points diametrically opposite each other, said plate resting on the cross-bar *g*. The clamps N are stamped from spring metal, and are on the arc of a circle, to embrace the scale-pan P at two points upon each side thereof, and for this purpose the clamps are provided with lips *k*, to extend over and under the pan, and outwardly-extending shoulders *l*, the lower ends of the cradle M passing through said shoulders, and their extremities secured to the cross-bar *g*.

In Fig. 3 I have shown a modification of the cradle, constructed in such manner as to adapt it for holding and supporting a pan or scoop, the spring-clamps in this instance being dispensed with.

The hanger L is provided with a hook or eye, *h*, for suspending therefrom a suitable weight, R, when found necessary to counter-balance any difference in the weight of the cradles used.

By the employment of the extra beam F the weight of any vessel can be ascertained when placed on the plate P, and the exact weight of the contents of said vessel may be taken on the main beam C.

The pivoted hanger L, to which the cradle is attached, admits of the latter having a swinging motion, and especially is this important where a scoop is used with the cradle, so as to empty it of its contents without removing it from the cradle.

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

1. In a balance, the combination, with a main beam, of a tare-beam connected thereto at its rear end by a post seated in a socket cast on the main beam, and having a shouldered upper end, to which is secured the end of the tare-beam, the opposite or front end thereof being secured to an angle-plate upon the end of a curved arm, which is in turn secured to the end of main beam, substantially as and for the purpose set forth.

2. In a balance, the combination, with a suitable cradle, of spring clamping devices for holding a plate thereon, substantially as and for the purpose set forth.

3. In a balance, a main beam and a tare-beam, in combination with means of connecting them

together, consisting of a socket cast with the main beam, a shouldered post having its lower end supported therein, and a curved arm, substantially as and for the purpose specified. 20

4. A balance consisting of a main beam provided with a tare-beam, a cradle provided with spring clamping devices and connected to the main beam by a pivoted hanger, and a yoke, substantially as and for the purpose described. 25

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FREDRICK F. MEYER, JR.

Witnesses:

FRANKLIN L. MEYERS,
RICHARD LEBES.