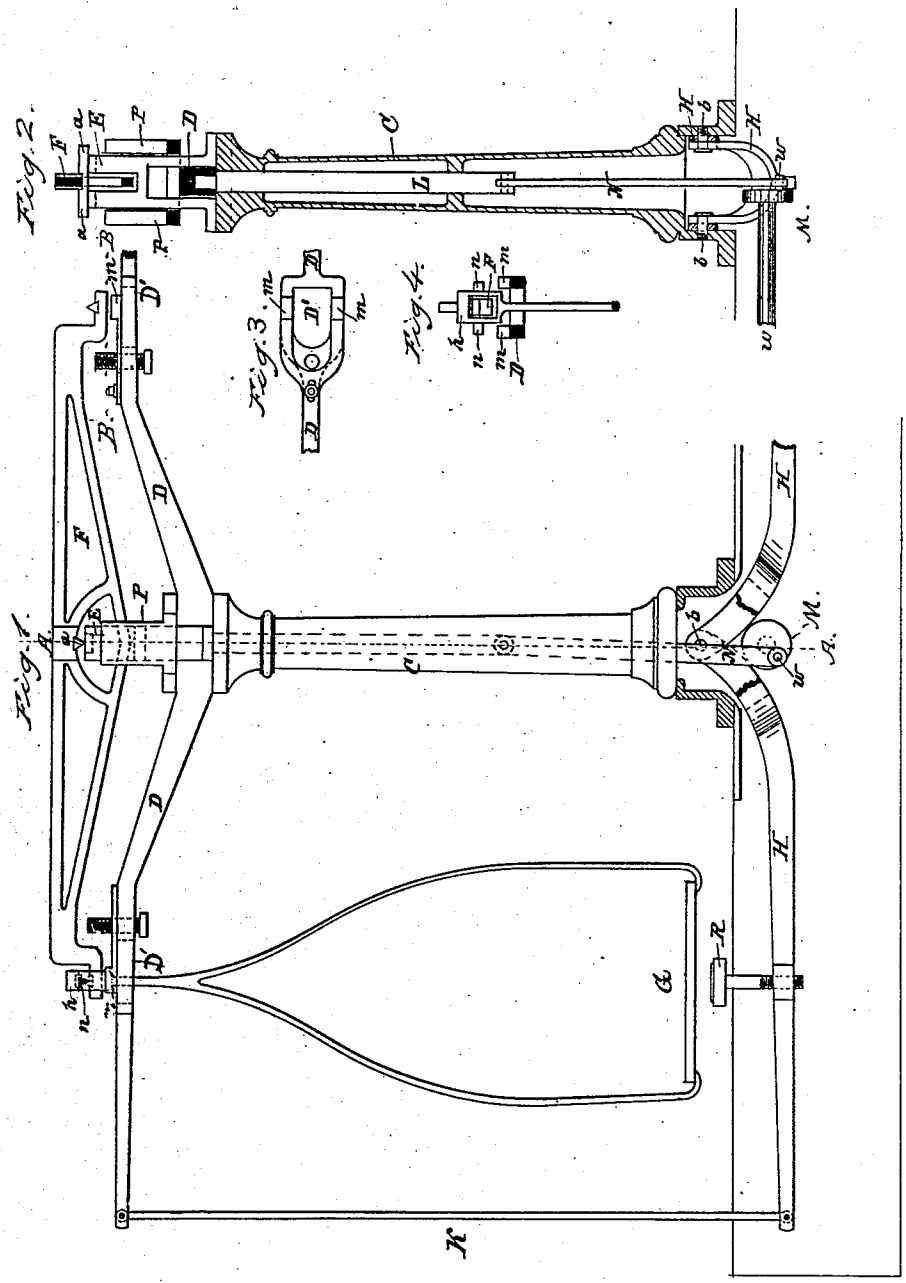
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(No Model.)

C. BECKER.

WEIGHING SCALE.

No. 313,468. Patented Mar. 10, 1885.



WITNESS:

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CHRISTOPHER BECKER, OF NEW ROCHELLE, NEW YORK.

WEIGHING-SCALE.

SPECIFICATION forming part of Letters Patent No. 313,468, dated March 10, 1885.

Application filed September 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER BECKER, a citizen of the United States, residing at New Rochelle, in the State of New York, have invented a new and useful Improvement in Scales, of which the following is a specification.

In the accompanying drawings, Figure I represents a side view of a scale, partly in section, with my improvement attached. Fig. II is a cross-section at the center line, A, Fig. I. Fig. III is a top view of the beam D at the line B, Fig. I. Fig. IV is a cross-section at line B, Fig. I.

Similar letters represent similar parts in all the figures.

Upon a suitable frame, C, a stand, E, is attached, supporting the balance-beam F and the usual knife-edges, *a*, and at the ends of said beam the scale-pans G are supported in a similar manner, only one of which is shown in the drawings.

Below the balance-beam F, a beam, D, is arranged, resting upon the top of the frame [illegible] made with suitable slots or openings, D′, [illegible] Fig. III,) through which the rods and [illegible] *h*, which support the scale-pans G, can [illegible] This beam D extends some distance [illegible] of the scale-pans G.

[illegible] lower part of the frame C, levers H [illegible] anged some distance below the [illegible], turning upon fixed centers *b b* [illegible] C. The outer ends of these le- [illegible] d of the beam D are connected [illegible] by rods K.

The center of the beam D is attached to a rod, L, guided in the frame C, to the lower end of which a rod, N, is attached, operated by a crank-pin, *w*, fast to a suitable disk at the end of the crank-shaft M.

At the center of the beam D, a suitable frame, P, is attached, extending upward to within a short distance of the knife-edges *a* on the balance-beam F.

On each side of the openings D′ of the beam D, bearings *m m* are attached, for the knife-edges *n n*, attached on the outside of the strap *h*, whenever the beam D is moved upward.

In the levers H H, screw-buttons R are arranged directly under the center of the scale-pans G, the top of which may be covered by a soft material.

Whenever the scales are to be used, and any weight is to be placed upon the scale-pans G, or some weight to be taken off, the crank-shaft M will be turned by means of a knob or other suitable attachment at its outer end, so as to move its crank-pin *w* upward, when, through the connecting-rod N and rod L, the beam D will be moved upward. The bearings *m m* will then come first in contact with the knife-edges *n n* at the sides of the straps *h*, lifting thereby the scale-pans off from the ends of the balance-beam F. At the same time the levers H H will be moved upward on account of their connection with the beam D, through the rods K, whereby the screw-buttons R will come against the under side of the scale-pans G, supporting thereby the bottom of the scale-pans, and thus prevent any vibration.

A further upward motion of the beam D brings the frame P in contact with the knife-edges *a a* of the balance-beam F, and lifts the same off its bearings. The scale-pans G are therefore by this arrangement supported on top and bottom and clear of the balance-beam F, and any weight may be placed upon the scale-pans or taken off from the same without producing any vibration at the scale-pans and without producing any detrimental effect upon the knife-edges at the ends of the balance-beam F, or upon the central knife-edges, *a*, of said beam, this beam F and the scale-pans G being during that time supported independent of each other.

The turning of the crank-shaft M, so as to move its crank-pin *w* downward, will bring all parts gradually into their normal position, and then leaves the balance-beam F and scale-pans G perfectly free ready to weigh any article placed in the scale-pans in the usual manner.

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

In combination with a balance-beam, F, and scale-pans G, and projections *n n* at the sides of the suspending-strap *h*, the beam D, with central frame, P, bearings *m m*, rods K K, levers H H, turning on fixed centers *b b* and screw-buttons R R, crank-shaft M, connecting-rod N, and rod L, substantially in the manner and for the purpose described.

CHRISTOPHER BECKER.

Witnesses:

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