R. MURDOCH.

Scale and Balance Stands.

No. 165,114. Patented June 29, 1875.

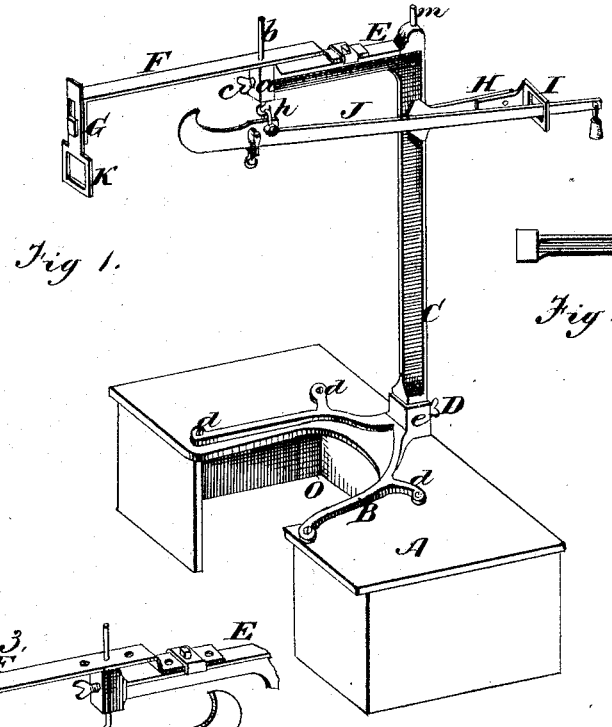

Fig 1.

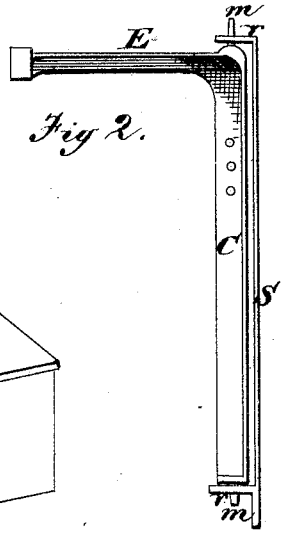

Fig 2.

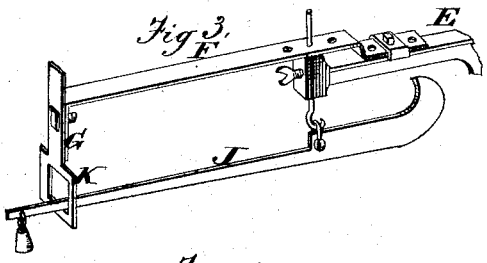

Fig 3.

Fig. 6.

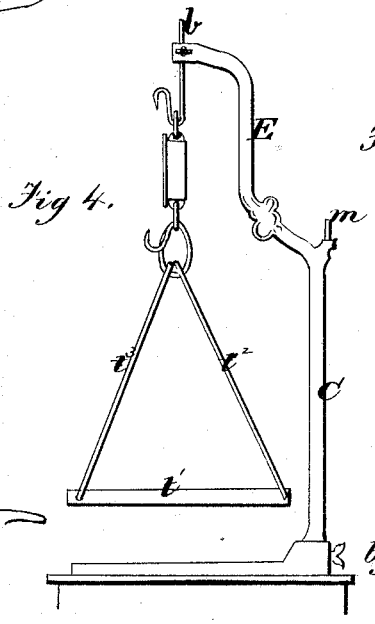

Fig 4.

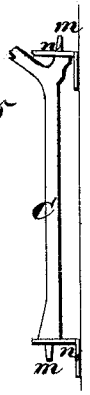

Fig 5

Witnesses;

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UNITED STATES PATENT OFFICE.

RICHARD MURDOCH, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN SCALE AND BALANCE STANDS.

Specification forming part of Letters Patent No. **165,114**, dated June 29, 1875; application filed August 31, 1874.

To all whom it may concern:

Be it known that I, RICHARD MURDOCH, of Baltimore, in the State of Maryland, have invented new and useful Improvements in Scale and Balance Stands; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my invention; and Figs. 2, 3, 4, 5, and 6, views of parts in detail, showing various modifications of the same.

Similar letters of reference in the accompanying drawings denote the same parts.

The object of my invention is to provide a portable and convenient stand for suspending spring or other balances in which the scale or pan is immediately under the point of suspension of the balance, and the stand readily removable from place to place; and to this end my invention consists, first, in the employment of a balance-stand having a U-shaped base, fitting over a corresponding opening in a counter or bench, and an upright removably attached to the base, and having a horizontal arm, to which the weighing devices are adjustably attached.

In the accompanying drawings, A represents a counter, provided with an opening, O, preferably of a U-shaped form, around the upper edges of which is fitted the similarly-formed base B of the balance-stand, the former being provided with perforated lugs *d d*, by means of which the base may be securely attached, by screws or their equivalents, to the top of the counter, and at the same time be readily removed therefrom when desired. *e* is a step in the middle of the curve of the base B, in which is inserted the cylindrical end *m* of the upright C, which is held securely in place by the screw D, but which can readily be removed, when desired, by unscrewing the latter. The upper end of the removable upright C is provided with a horizontal arm, E, having at its outer end the perforated projecting piece *a*, which receives the adjustable rod *b*, held in place by the screw *c*, and provided at its lower end with a hook, *h*, to which is attached, by a loop, the scale-beam J, the smaller end of which may pass through the slot I in the bent arm H, as seen in Fig. 1; or the scale-beam may be reversed, and the removable arm F (attached to the horizontal arm E by a nut and screw) may be attached to the latter, the smaller end of the scale-beam, in this instance, passing through the slot K in the arm G, the arm H being removed.

By this construction of parts the beam may readily be reversed, as desired, and at the same time the point of suspension of the beam is retained in the same position over the opening in the counter, the latter allowing the weighing of long bodies reaching nearly to the floor. The point of suspension of the weighing device can be raised or lowered by raising or lowering the rod *b*, and, when adjusted, it is retained in position by the set-screw *c*.

It is obvious that in lieu of a scale-beam, as seen in Figs. 1 and 3, a spring-balance may be applied to the hook on the rod *b*.

If it is desired to attach the balance to a wall, pillar, or other upright part of the store, the upright can be detached from its base, and can be employed as a crane for this purpose. To effect this result the upright C may be vertically attached to the wall by means of two perforated brackets, *n n*, situated one directly above the other, and attached directly to the wall, as seen in Fig. 5, the cylindrical ends *m m* at the ends of the upright engaging with the perforations in the upper horizontal parts of the brackets *n n*. Preferably, however, I employ a metal or other plate, S, (see Fig. 2,) hung vertically to the wall by a hook or otherwise, the plate being provided with perforated brackets *n n* for the reception of the cylindrical ends *m m* of the upright C.

In Fig. 4 I have represented the removable upright, having the arm E inclined upwardly, and provided at its upper end with an orifice for the reception of the adjustable rod *b*, having a hook at its lower end, to which a spring-balance and scale are attached. The hooked rod is adjustable to raise or lower the scale, and the upright is removable from its step, and may be applied to the brackets *n n* when desired.

If desired, a curved brace may be employed to secure the upright immovably in position.

t represents a scale, provided with a concave bottom and end flanges t^1 t^1, to which the bails t^2 t^3, made separate, are hinged.

By this construction the bails may be folded down on the scale into a compact form when not in use.

I claim as my invention—

1. The balance-stand herein described, consisting of the removable U-shaped base B, removable upright C, horizontal arm E, provided with the vertically-adjustable hook-rod b, from which the scale-beam J is suspended, and the removable arms F G and H I, constructed and operating as and for the purposes set forth.

2. The removable upright C, having the arm E, provided with the vertically-adjustable hook-rod b, for suspending and adjusting the scale-beam J, as set forth.

RICHARD MURDOCH.

Witnesses:

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