F. FAIRBANKS.

Adjusting Device for Weighing-Scales.

No. 198,365. Patented Dec. 18, 1877.

Fig: 1.

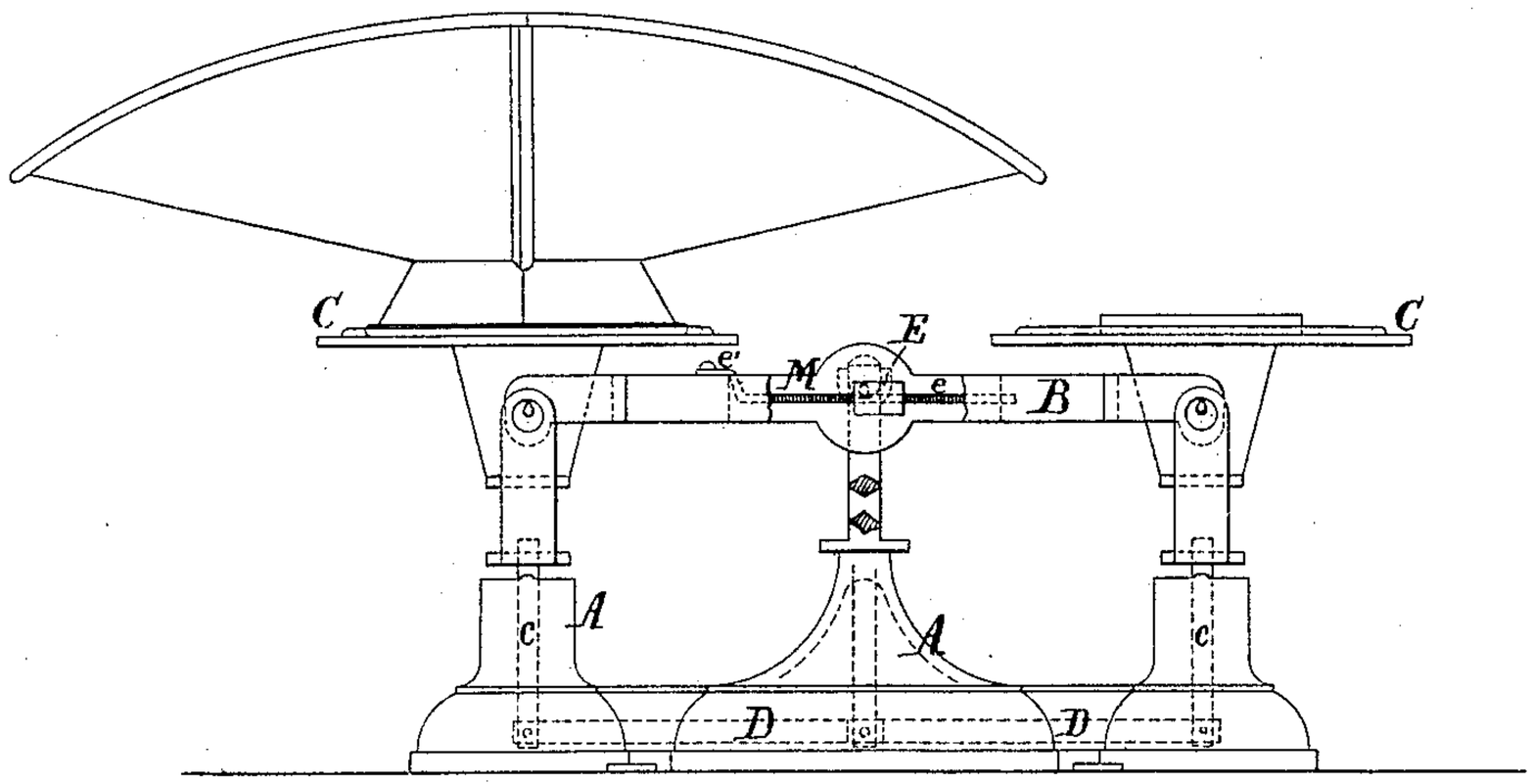
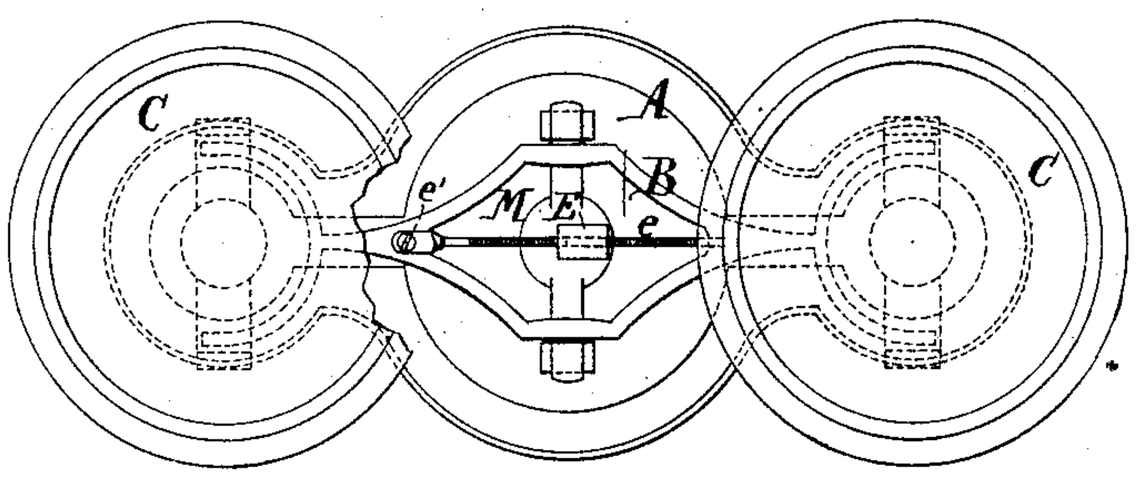


Fig: 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANKLIN FAIRBANKS, OF ST. JOHNSBURY, VERMONT.

IMPROVEMENT IN ADJUSTING DEVICES FOR WEIGHING-SCALES.

Specification forming part of Letters Patent No. **198,365,** dated December 18, 1877; application filed September 28, 1877.

To all whom it may concern:

Be it known that I, FRANKLIN FAIRBANKS, of St. Johnsbury, Caledonia county, in the State of Vermont, have invented certain new and useful Improvements relating to Equal-Beam Scales, of which the following is a specification.

The object of the invention is to better provide for delicately adjusting the balance.

It is common to make the beam of cast-iron, with an opening in the center. I increase the capacity of the opening, and mount a screw therein at the level of the knife-edges, and a balanced pawl or weight is threaded upon this screw, and may be turned to any required degree to cause it to shift its position gradually toward one end or the other of the beam.

I crook the screw rod and peculiarly mount it, in order that the center of gravity of the balance-pawl be down at or near the level of the knife-edges, and also to cause the balance-ball and its supporting-screw to be more effectually out of the way and protected from danger of accidental blows, and the like, and to facilitate the introduction and removal of the parts. The main part of the rod is straight and screw-threaded, and adapted to be inserted at one end into a horizontal hole at the end of the cavity at the mid-height of the lever. The other end is crooked, being bent quite sharply upward till it reaches the level of the top of the lever, and then extended horizontally again. Through this last horizontal extension is inserted a screw, which secures the whole.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a side elevation, partly in section. Fig. 2 is a plan view.

Similar letters of reference indicate like parts in both the figures.

A is the frame-work; B, the beam, supported on knife-edges at the center, as usual, and supporting the pans or disks C on knife-edges equidistant from the central support, while *c c* are the stems or upright parts, connected to the disks C, and D D are the bottom links, arranged to serve as usual.

The beam B has a capacious cavity between the supporting knife-edges at its center. A horizontal hole or step is formed at one end of this cavity, which receives the end of a finely-threaded screw, *e*, which carries a correspondingly-threaded pawl or weight, E. The other end of the rod E has an offset, extended squarely upward, and thence extended again horizontally, as indicated. A screw-fastening, *e'*, is inserted through the hole in the flattened end of the rod *e*, which is, by means of the offset shown, caused to lie upon the upper face of the beam. When, from any irregular wear or other cause, the scales become out of balance, the turning or partial turning of the ball E causes it to change its position longitudinally on its threaded support and restore the equilibrium.

The rod *e*, formed as described, supports the ball E at such a level that it has no effect in disturbing the sensitiveness of the scale, as it would if above or below the line of the knife-edges. Furthermore, the carrying the ball in this manner in the cavity in the beam holds it better protected than it would otherwise be against danger of receiving shocks and injuries in moving or operating the scale.

The difficulties attending the proper mounting of a balance-ball on this class of scale are successfully overcome by this invention, and the scales may be balanced and readily adjusted with ease and with any required degree of nicety.

I claim as my invention—

The screw-rod *e*, bent as shown, in combination with the fastening-screw *e'*, balance-ball E, and with the beam B of an equal-beam scale, adapted to serve as and for the purposes herein specified.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

FRANKLIN FAIRBANKS.

Witnesses:

E. D. BLODGETT,

D. DEAN PATTERSON.