C. R. TUTTLE.

Balance and Load Weight.

No. 209,434. Patented Oct. 29, 1878.

Fig. 1.

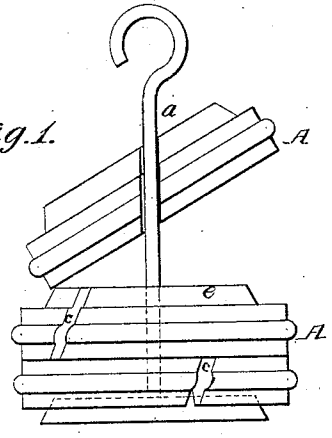


Fig. 2.

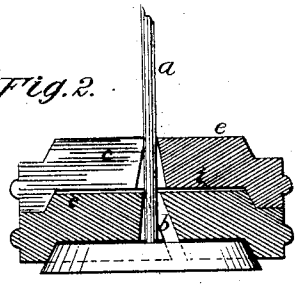
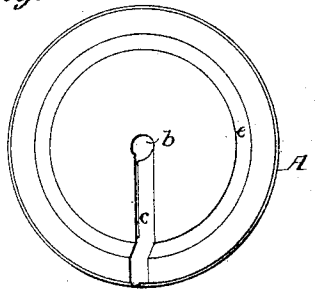


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

CALVIN R. TUTTLE, OF NEW BRIGHTON, PENNSYLVANIA.

IMPROVEMENT IN BALANCE AND LOAD WEIGHTS.

Specification forming part of Letters Patent No. **209,434**, dated October 29, 1878; application filed April 19, 1878.

To all whom it may concern:

Be it known that I, CALVIN R. TUTTLE, of New Brighton, Beaver county, Pennsylvania, have invented an Improved Load or Balance Weight, of which the following is a specification:

My invention is an improved balance or load weight, constructed as fully described hereinafter, so as to prevent displacement when the weight-carrier is disturbed.

In the drawing, which forms part of this specification, Figure 1 represents a carrier with a series of weights, the upper one of which is in a position ready for removal. Fig. 2 is a sectional view, and Fig. 3 a plan view, of one of the weights.

Ordinary weights, used for balancing scale-beams or for loading knitted fabrics and similar purposes, are provided with central openings and with slots extending radially therefrom, with sides parallel to the shaft *a* of the hanger by which the weights are supported. As a consequence, any jarring of the hanger will cause the displacement of the weights, which sometimes results in a serious loss, as when the weights are used to load a fabric suspended from the needles of a knitting-machine. I overcome this objection by constructing each weight A with a central opening, *b*, and radial opening *c*, communicating with the opening *b* at an angle, so that the weight can only be applied to or removed from the stem *a* after tilting it to the position shown in Fig. 1.

As no jarring or movement of the hanger would carry the weight to such a tilted position, the construction above described renders the displacement of the weight from such a cause almost impossible.

In order to insure increased safety, each weight may have a recess, *i*, at the bottom and corresponding projection *e* at the top, the projection of one weight fitting the recess of that above, as shown in Fig. 2, and rendering it impossible to assume an inclined position without being entirely lifted from that below it.

I claim—

1. A balance or load weight provided with a central opening, *b*, and radial opening *c* at an angle to said opening, substantially as and for the purpose specified.

2. The weight *a*, provided with a central opening and angular slot, and with a recess, *i*, and projection *e*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CALVIN RUTTER TUTTLE.

Witnesses:

LYMAN BLOOD,

CHAS. J. BELLAMY.