

I. Fairbanks.

Platform Scales.

N^o 34,417.

Patented Feb. 18, 1862.

Fig. 1.

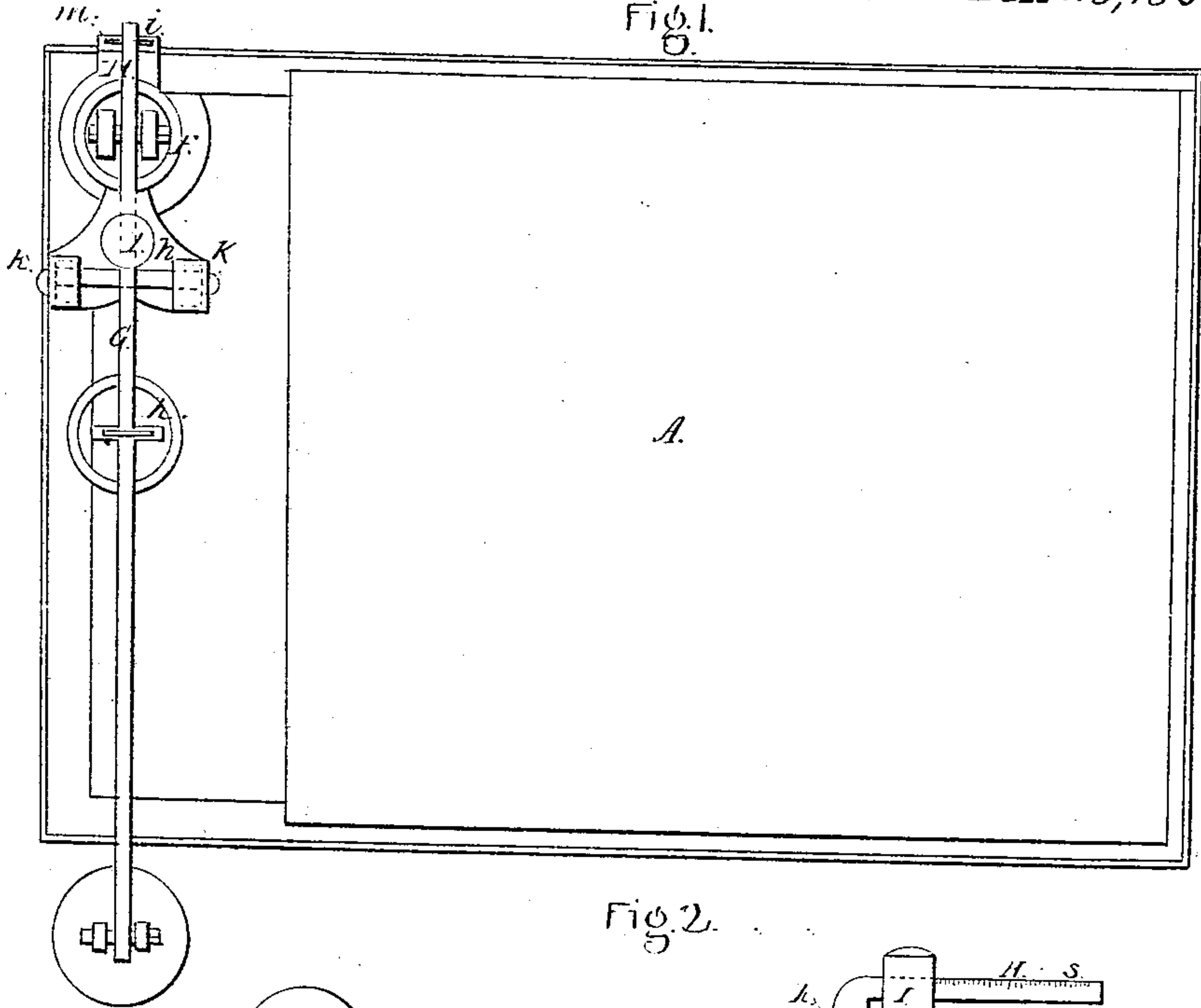


Fig. 2.

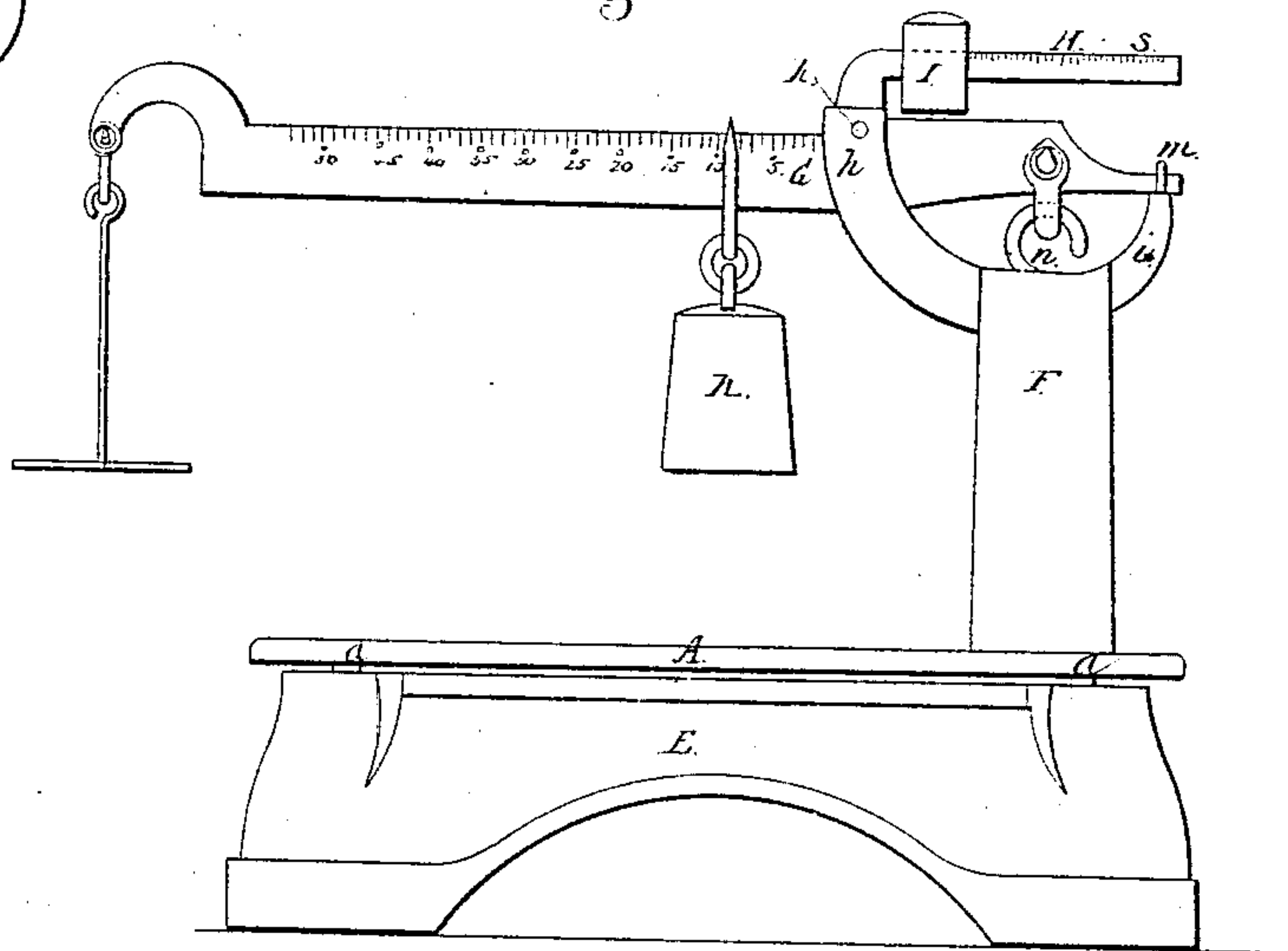
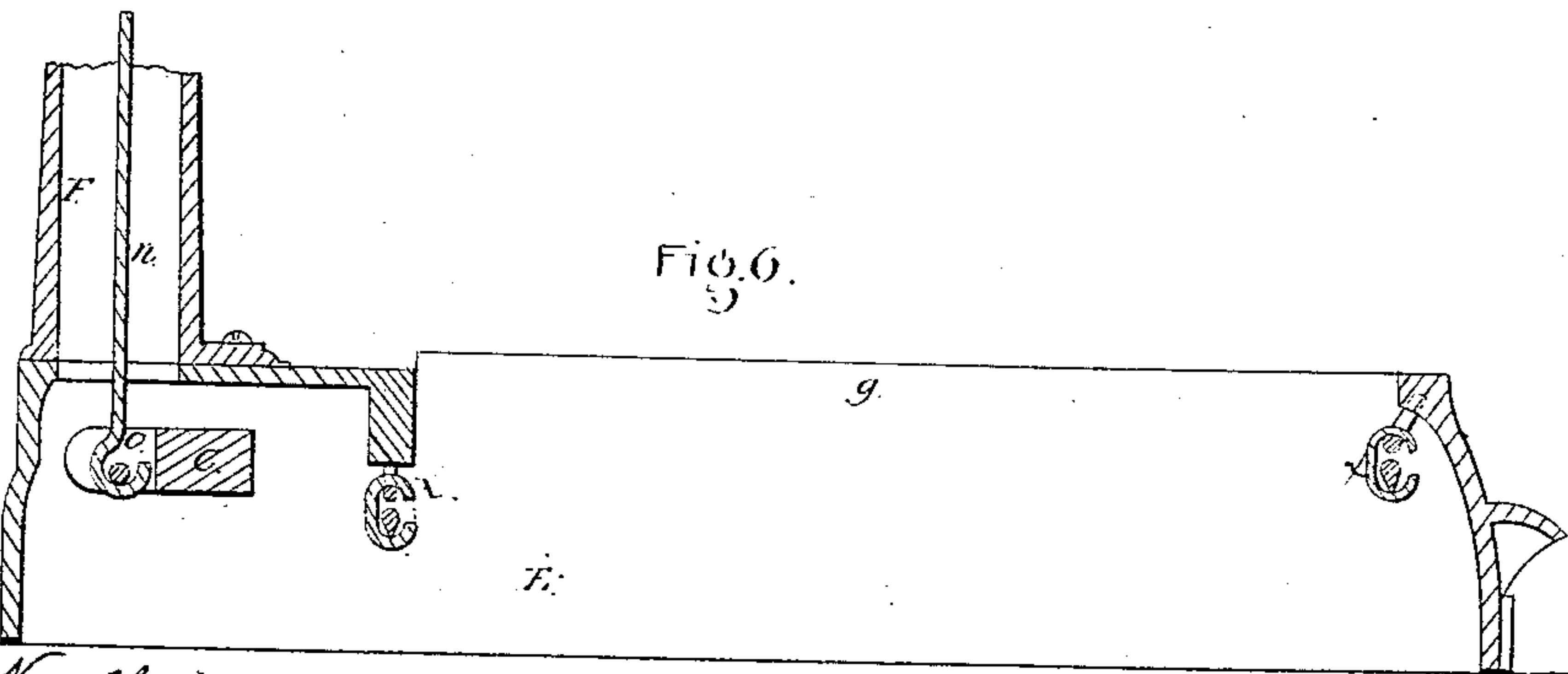


Fig. 6.



Witnesses:

Arthur Nee
Fred. Curtis

Inventor:

Thaddeus Fairbanks

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*Sheet 2,
2 Sheets.*

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Fig. 5.

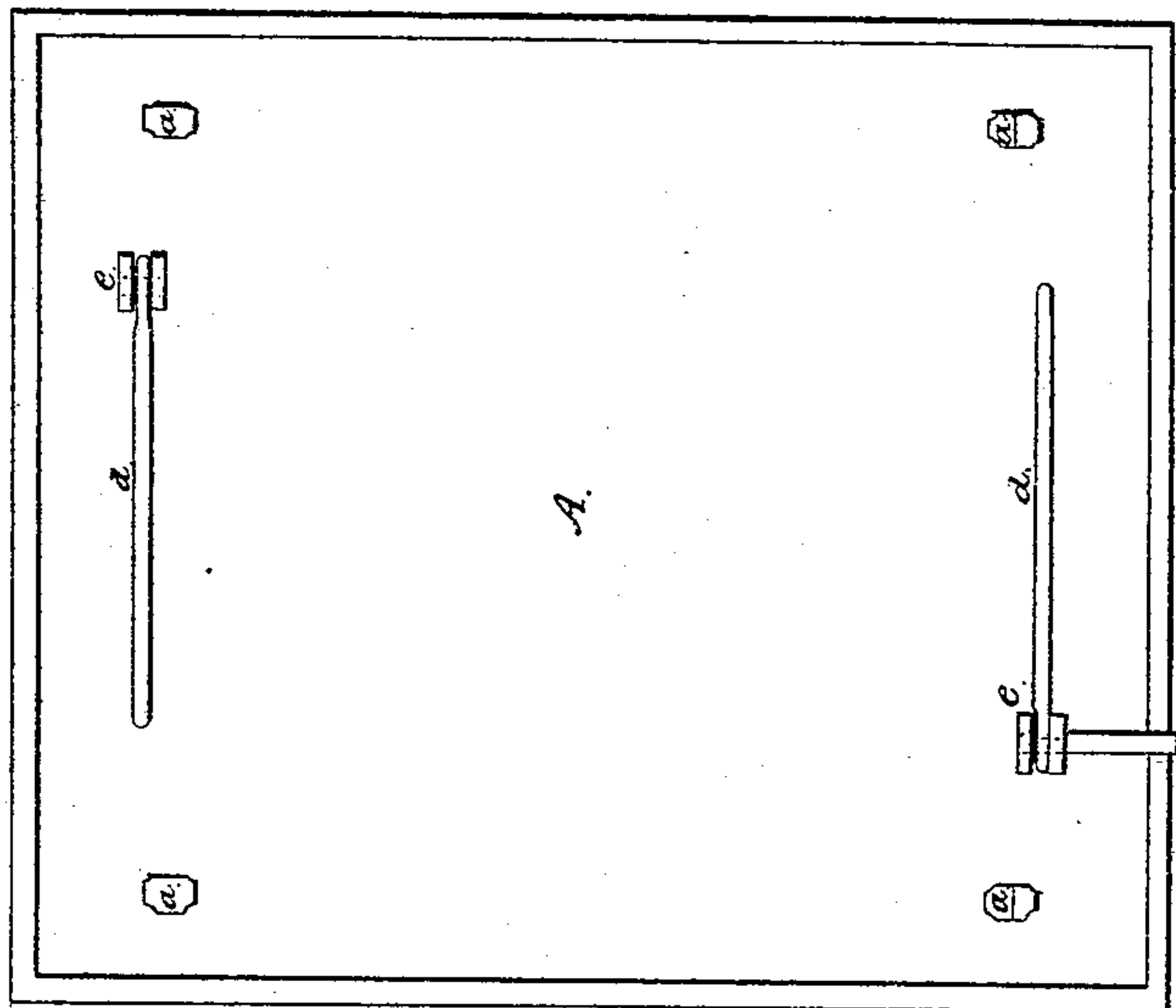
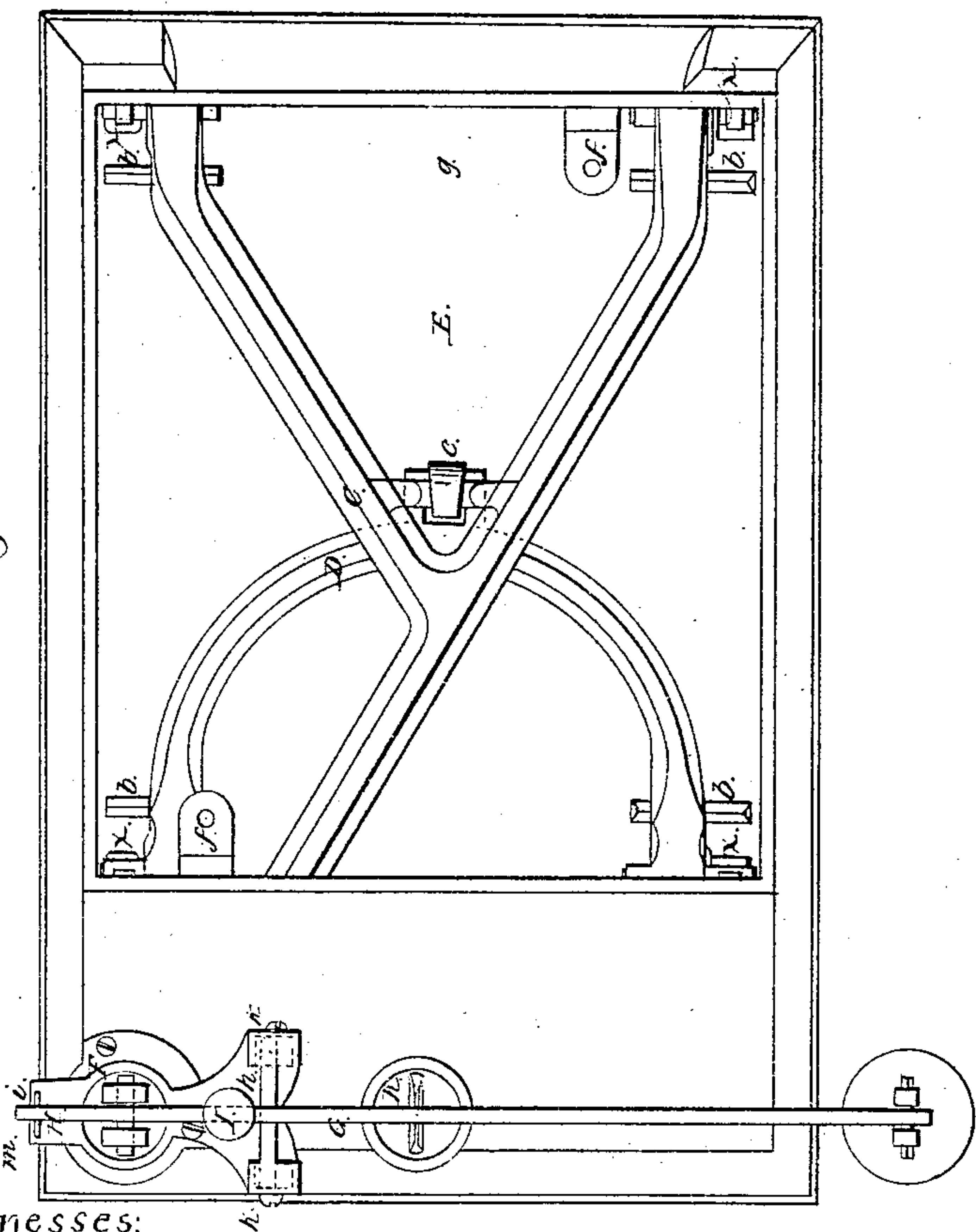


Fig. 3.



Witnesses:

*Arthur Neill
Fred. Curtis.*

Fig. 7.

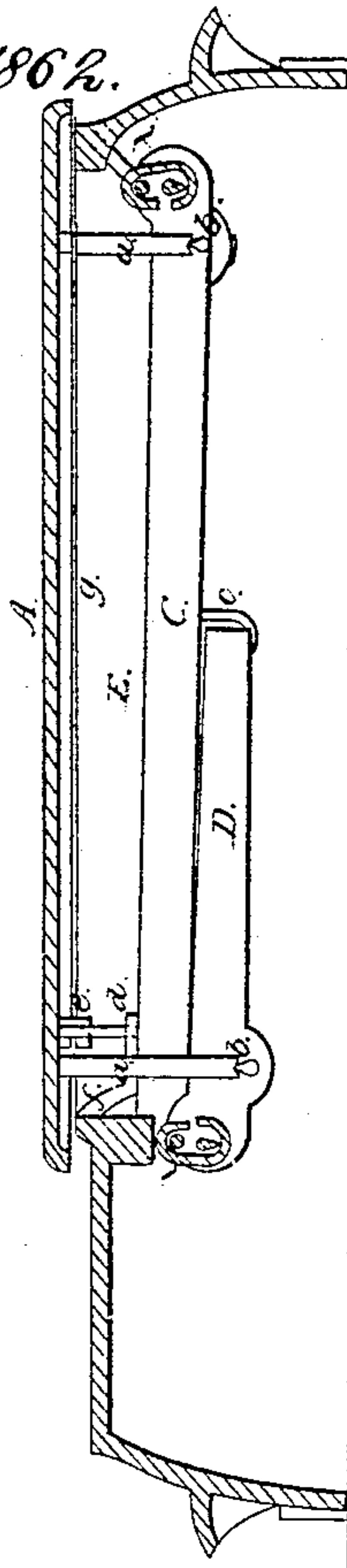
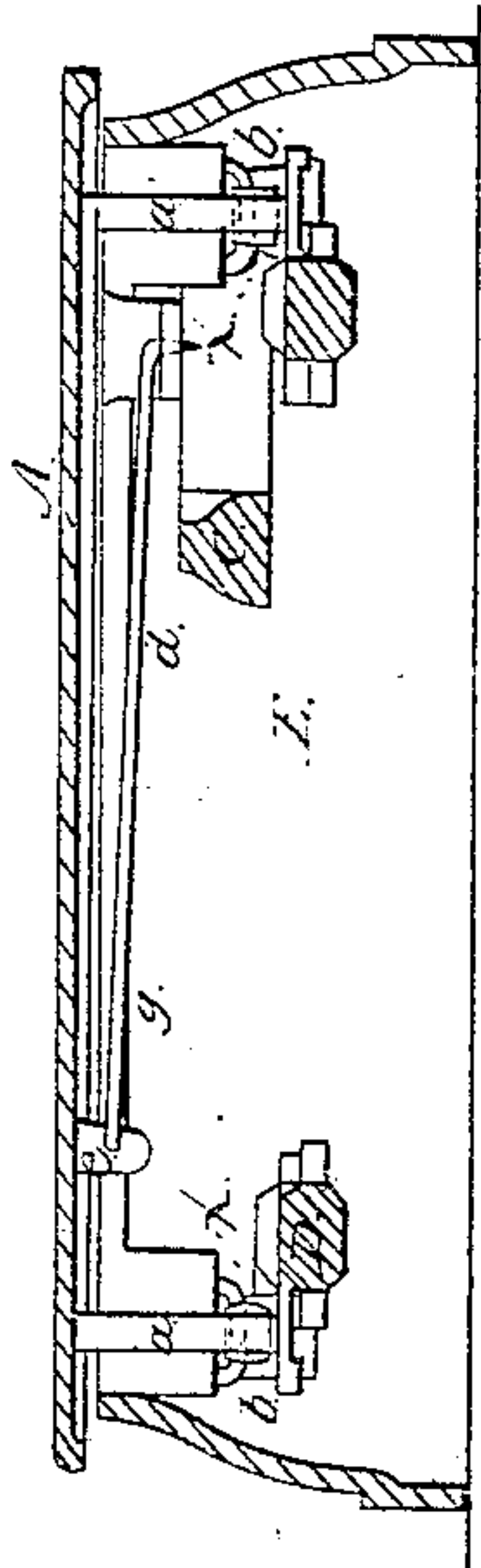


Fig. 4.



Inventor:

Thaddeus Fairbanks

UNITED STATES PATENT OFFICE.

THADDEUS FAIRBANKS, OF ST. JOHNSBURY, VERMONT.

IMPROVEMENT IN PLATFORM-SCALES.

Specification forming part of Letters Patent No. 34,417, dated February 18, 1862.

To all whom it may concern:

Be it known that I, THADDEUS FAIRBANKS, of St. Johnsbury, in the county of Caledonia and State of Vermont, have invented a new and useful Improvement in Platform Counter-Scales or Weighing Apparatus; and I do hereby declare the same to be fully described in the following specification, and illustrated in the accompanying drawings, of which—

Figure 1 denotes a top view, and Fig. 2 an end elevation, of a platform-scale provided with my invention. Fig. 3 is a top view of the stand or base and the platform-levers contained within the same. Fig. 4 is a transverse section of the base, the platform, and the levers of the latter. Fig. 5 is an under side view of the platform and its hooked retainers. Fig. 6 is a vertical section taken through the suspension-loops of the platform-levers.

In the drawings, A denotes the platform on which an article to be weighed is placed, such platform being supported by means of four feet *a a a a*, resting in four knife-edge bearings *b b b b*, projected from the levers C D, such levers being formed and arranged with respect to one another and within a hollow base or stand E, in manner as seen in the drawings. The outer extremities of each of the said levers are provided with knife-edge bearings, which are supported in loops *x x*, depending from the base or stand, the whole being as in other platform-scales in common use. The inner end of the inferior lever D is hung to the middle of the superior lever C by a loop *c*, as shown in Fig. 7, which is a longitudinal and central section of the weighing apparatus.

The platform is maintained in its position, but allowed to play vertically, by means of two hooked retainers *d d*, which are respectively hinged to two projections *e e*, extending downward from the platform, and being arranged thereon as shown in Figs. 4 and 5. These retainers are respectively hooked into two ears *f f*, arranged within the platform-opening *g* of the stand, in manner as shown in the drawings.

Instead of arranging the superior lever as in many other platform-scales—viz., so as to extend toward the middle of one end of the base or stand—I arrange it so as to project toward one corner of such stand, and upon

this corner I elevate a hollow post F, provided with two arms *h i*. The first of these arms is forked and serves to support the knife-edges *k k* of the scale-beam G, which is arranged parallel to the adjacent end of the platform, and so as to extend horizontally over the base E, as exhibited in the drawings. The other arm sustains a staple or arch *m*, into which the lesser arm of the beam G is projected, as seen in Figs. 1 and 2.

The lever C is connected with the shorter arm of the scale-beam, as shown in the drawings, the connection being a rod *n* and a hanging loop *o*, the rod being extended upward through the post F.

Furthermore, there projects from the upper edge of the beam G, and at or near its fulcrum and upward, and thence backward and parallel to and over the shorter arm of the beam, an auxiliary arm or fractional scale H. On this arm or scale H a weight I slides longitudinally, such weight being provided with a tooth to take into any one of a series of notches made along the upper edge of the said scale, as shown at *s*. When the tooth is at zero or the commencement of a scale of divisions marked on one side of the scale H, it counterbalances the scale-beam, provided the main weight K thereof is suspended on the zero or commencement of the scale of division of the longer arm of the beam.

When an article to be weighed is placed on the platform of the scale, the main weight K may be moved along the scale of divisions on the longer arm of the beam until it will reach that division which will indicate the number of even pounds there may be in the article. The excess or fractional parts of a pound or ounces, as the case may be, may be obtained by means of the scale H and the weight I, the two being properly made for such purpose—that is to say, if the spaces between each of the divisions of the scale-beam exhibit pounds or any other even weights we first should counterbalance the beam by means of the weight I when the main weight K is on the commencement or zero of the beam. This having been done, we should carefully notice and mark on the fractional scale the position of the tooth of the weight I. Next, we should place on the platform a pound-weight or the weight expressed by the distance between any two

next adjacent divisions of the scale-beam. This having been done, we should next move the weight I along its scale H until the beam is again counterbalanced, taking care to then note and mark on the scale H the new position of the tooth of the weight I. Next, if we divide the distance moved by the weight I into sixteenths, or any other suitable number of parts, we shall have a scale which will exhibit fractional parts of the weight on the platform, so that, if by the scale of the beam we can weigh even pounds, we can, by means of the auxiliary arm or scale H and its weight I, ascertain fractions thereof or ounces.

The arrangement of the superior lever and the post and scale-beam relatively to the base of the platform-scale render the whole scale much more compact and useful for shop-counters than when the post is placed in the middle of one end of the base.

I do not herein claim the application of an auxiliary scale and weight in manner and so as to operate with a steelyard and its movable weighing-weight, as represented in Letters Patent No. 47,614, granted to me on September 15, 1846.

I claim—

1. The hereinbefore-described application or arrangement of a fractional scale-arm H, and a movable counterbalance-weight I, relatively to the scale-beam and to operate therewith, substantially as specified.

2. The arrangement of the superior lever C and the post F with respect to the stand or base of the platform of the scale.

THADDEUS FAIRBANKS.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.