A. M. MAYNARD.

Weighing and Price Balances.

No. 144,914. Patented Nov. 25, 1873.

Fig. 1.

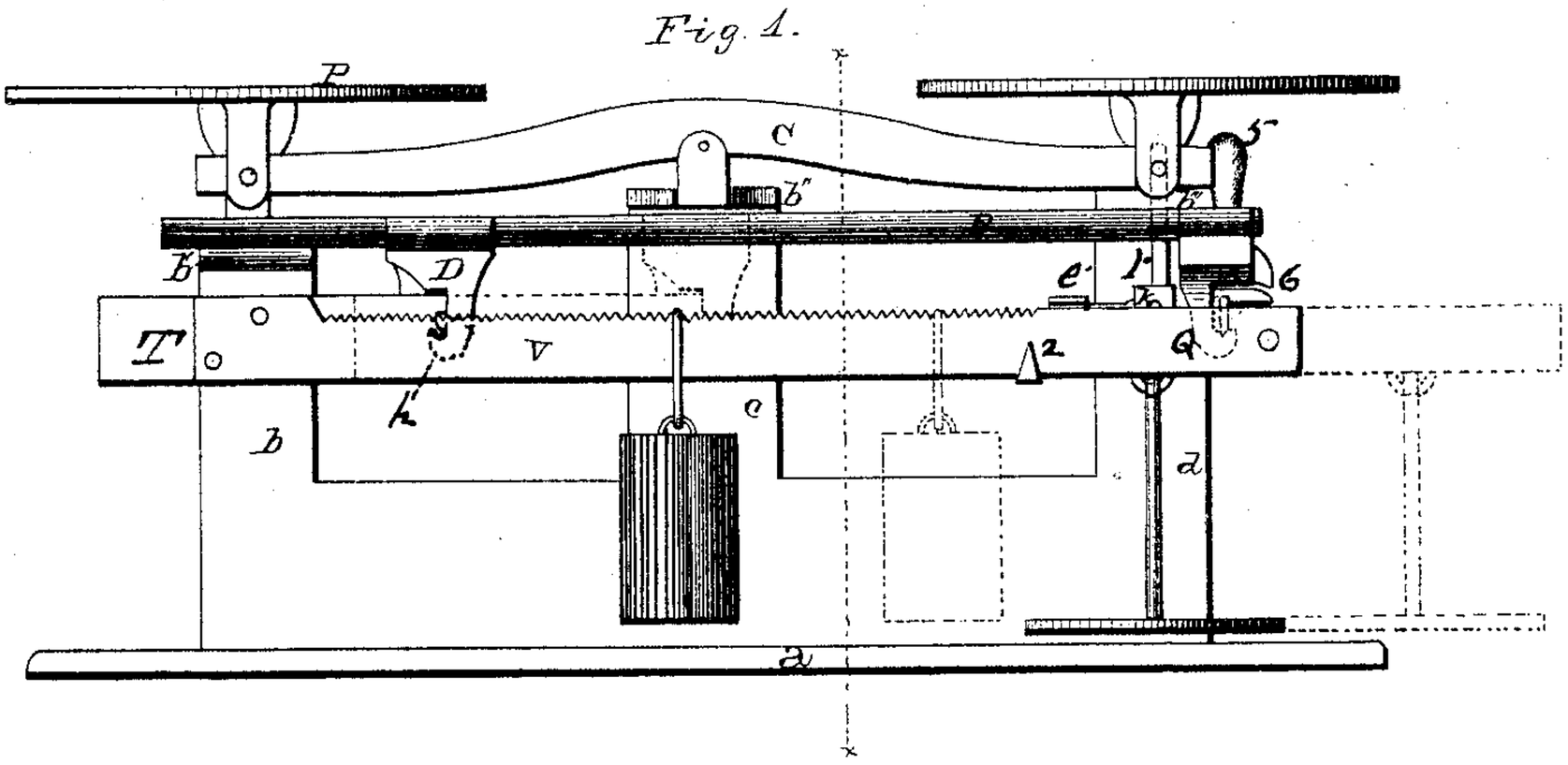


Fig. 2.

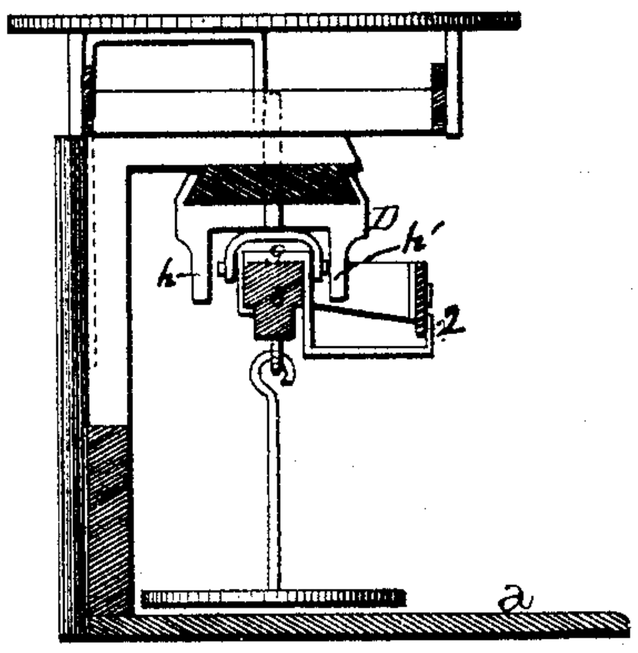


Fig. 4.

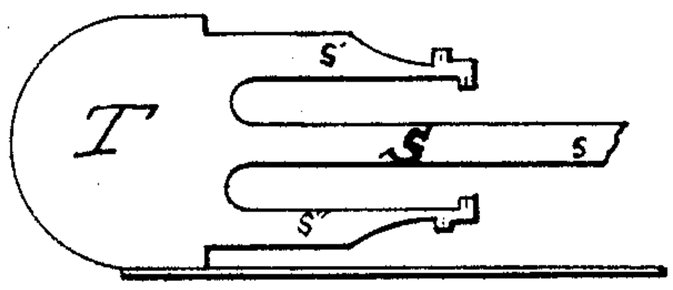
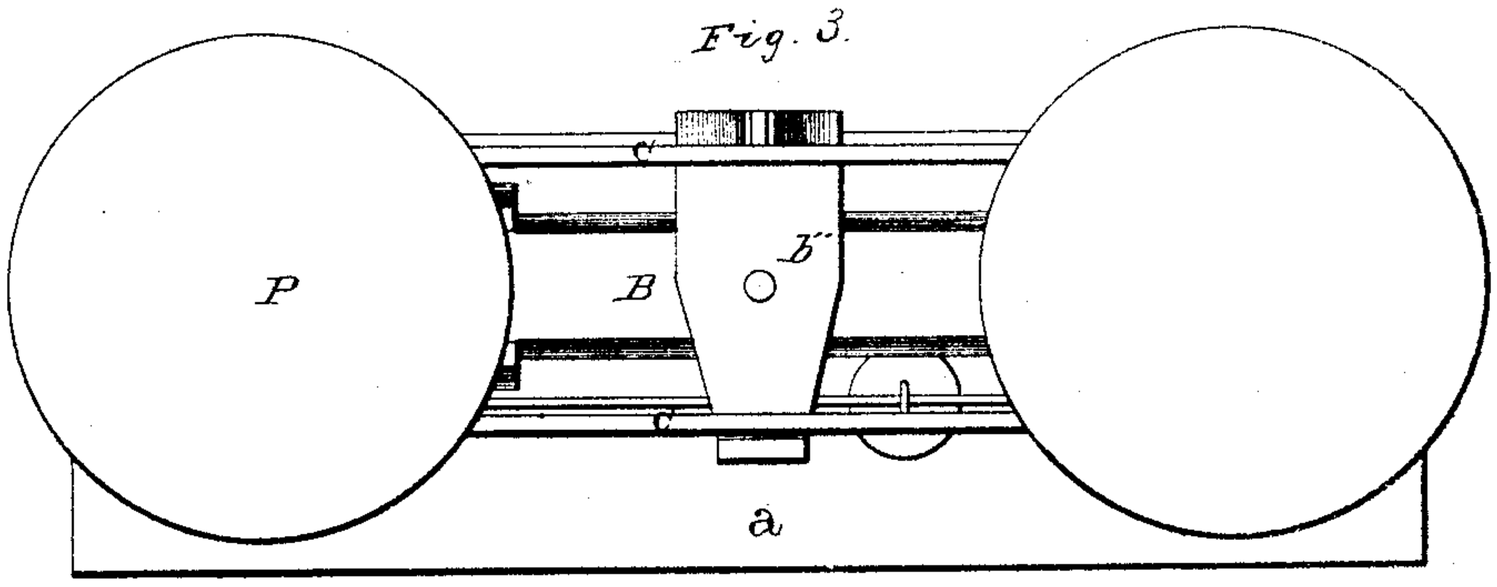


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

ALBERT M. MAYNARD, OF SAVOY, MASSACHUSETTS.

IMPROVEMENT IN WEIGHING AND PRICE BALANCES.

Specification forming part of Letters Patent No. **144,914**, dated November 25, 1873; application filed September 30, 1873.

To all whom it may concern:

Be it known that I, ALBERT M. MAYNARD, of Savoy, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Weighing-Balances; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to that class of weighing-balances which show the total price of the article weighed, the apparatus being adjusted for the price per pound; and it consists in the mechanical devices and arrangements hereinafter described, with reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a transverse sectional view of the same, taken on the line *x x*, Fig. 1. Fig. 3 is a plan of the scale-beam. Fig. 4 is a detail view.

a is the base-plate, from one side of which rise the standards *b c d*, having arms *b′ b″ b‴*, projecting over the base-plate. From the arm *b″* project upward two ears, having bearings for the knife-edges, on which is balanced the double lever C. B is a bar, one end of which rests upon arm *b′*, while the other end is secured to the under side of *b‴*, and its middle secured to the under side of *b″*. The longitudinal edges of bar B are beveled, and form a way on which the sliding bracket D is dovetailed, so as to be adjusted back and forth. This bracket D is provided with downward-projecting hook-bearings for the knife-edges of the scale-beam. S is the scale-beam, the central beam *s* of which, and two arms, *s′ s″*, extend from and are cast in one piece with the block T. The graduated bar U is attached to the beam by screws or rivets, as shown. Each of the arms *s′ s″* is provided with a knife-edge intended to rest in the hook-bearings *h h′*. P is the platform on which is placed the article to be weighed and priced. From the under side of the opposite platform a rod, *r*, jointed to a lug thereon, projects downward, ending in a loosely-attached bifurcated cross-head, *k*, which straddles the central beam of the scale-beam, and the saddle-piece thereon. The bifurcations of cross-head *k* are provided with apertures, into which knife-edges project from the saddle-piece *g*. From this saddle-piece also project lugs *l l′*, which, by coming in contact with hooks Q Q′, limit the downward movement of the scale-beam. Attached to the saddle-piece *g* by a connecting-piece, V, is another saddle-piece, *g′*, one end of which is considerably longer than the other, and is bent outward in the plane of the lower edge of the scale-beam, its pointed end being bent upward to form an index, 2, just in front of the graduated bar. These saddle-pieces ride up and down upon the scale-beam, but are prevented from longitudinal movement by the lugs in the hooks Q′, the scale-beam sliding through the embracing parts. 5 is the pivoted key, by which the scale-beam is held down when desired, the point 6 resting upon the top of the beam when the handle is in the position shown in the drawing.

The manner of using my improved balances is as follows: Push the scale-beam in, or pull it out, as is required, so that the index 2 points to the number on the graduated bar, which indicates the price per pound of the article to be weighed. Then, by means of the weighing-poise, proceed to weigh as in ordinary beam-scales, each notch of the beam counting a given unit of price, as one cent, instead of a unit of weight.

It is obvious that the apparatus may be so proportioned as to give any desired indications. If the weight of the article exceeds the weight of the graduated bar—for instance, if its total price is more than one dollar—one or more weights, each equivalent to the bar's capacity, or a multiple thereof, may be hung upon the counterpoise. The amount of the extra weights (if any) hung upon the counterpoise, added to the amount indicated by the index, gives the total price of the article weighed. If it is simply desired to weigh in pounds and ounces, take all extra weights off of the counterpoise, and place the weighing-poise in the first notch of the graduated bar.

The apparatus will then be evenly balanced. The article to be weighed is then placed upon either platform, and its equivalent in weight upon the other, as in the ordinary Roman balance.

Having thus described my invention, I claim—

1. The combination of the platform P′, connecting-rod *r*, and the saddle-piece upon the scale-beam, substantially as specified.

2. The combination of an apparatus for weighing in pounds and ounces and a separate price-computing attachment, which may or may not be used in connection therewith, substantially as shown and described.

3. The combination of the equal arm-balance, central beam *s*, and graduated bar U, and connecting-rod *r*, or its equivalent, substantially as and for the purpose set forth.

4. The combination of the base-plate *a* and standards *b c d*, having arms projecting over the base-plate, with the duplex apparatus described, substantially as shown.

5. The saddle-piece *g*, having the lugs *l l′*, in combination with the hooks Q Q′, substantially as specified.

6. The scale-beam consisting of the central beam *s* and parallel arms *s′ s″*, provided with knife-edges cast in one piece with the block *t*, and having the graduated bar U attached thereto parallel with the central beam, substantially as described.

7. The sliding bracket *g*, and the small bracket thereunder, for holding the knife-edges of the scale-beam in position, substantially as set forth, and combined as shown.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 18th day of September, 1873.

ALBERT M. MAYNARD. [L. S.]

Witnesses:
F. O. SAYLES,
DENNIS HASKINS.