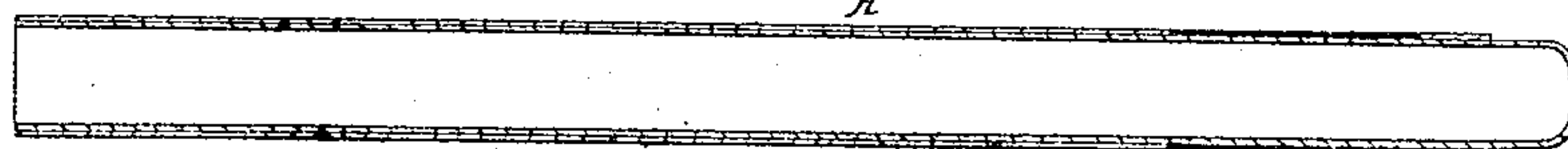
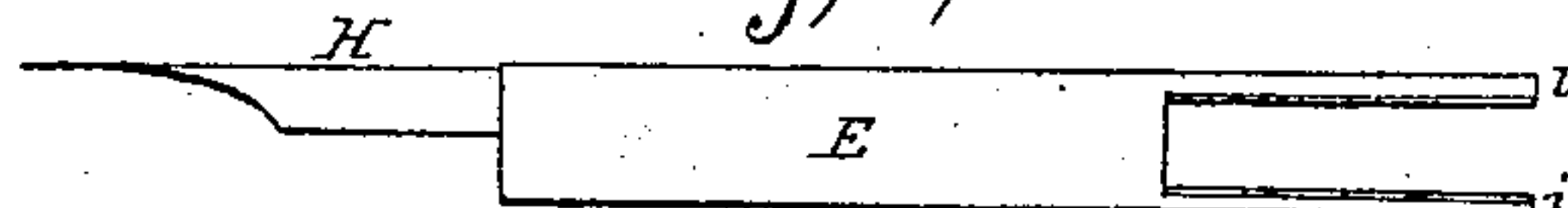
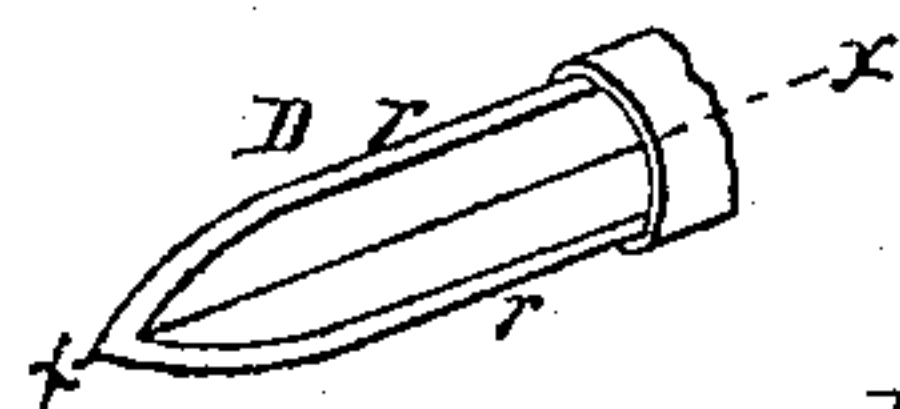
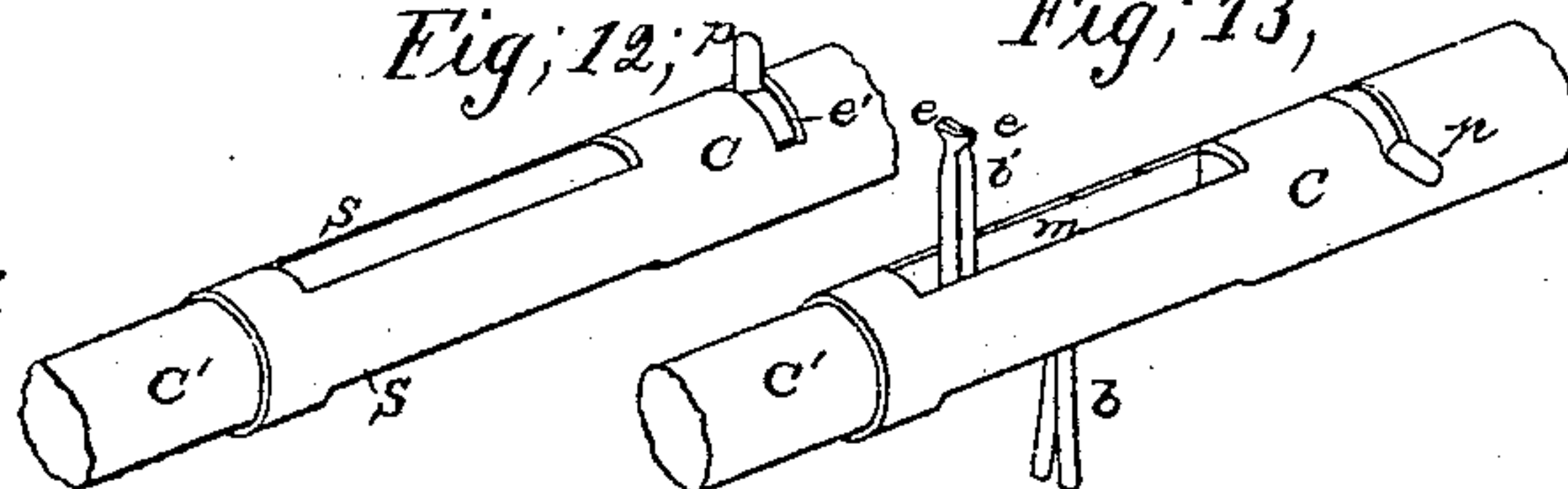
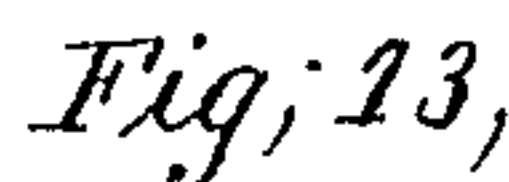
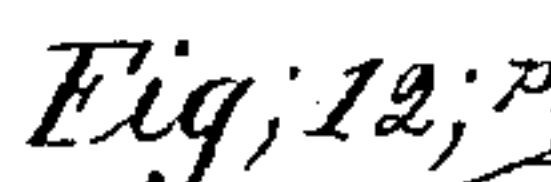
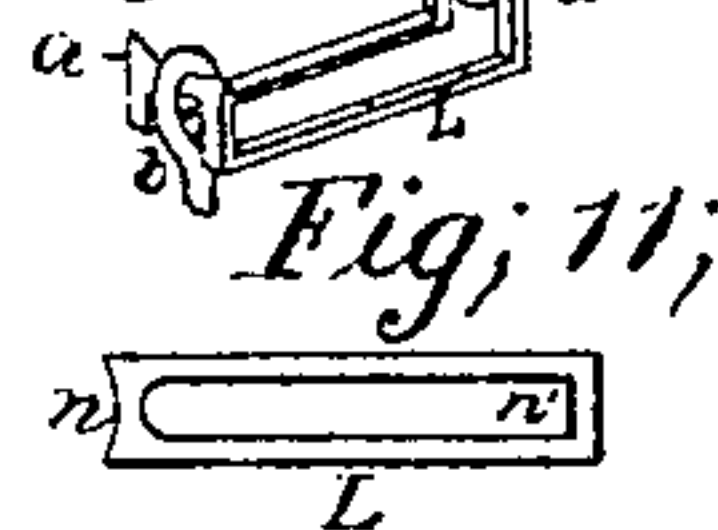
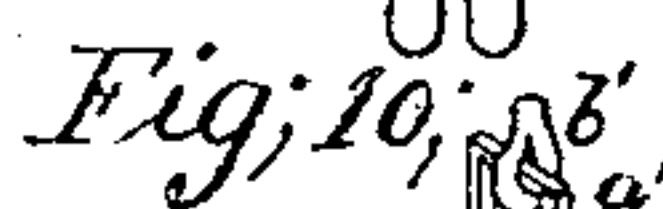
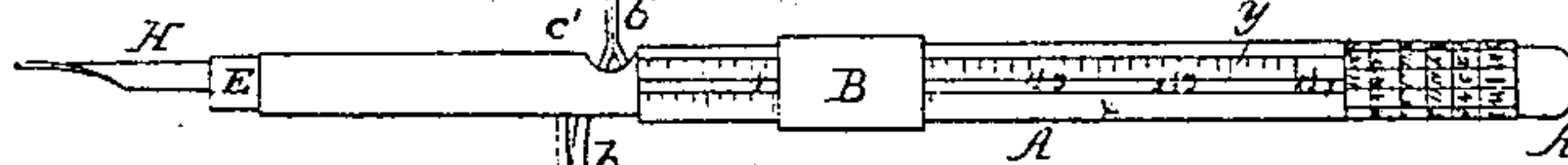
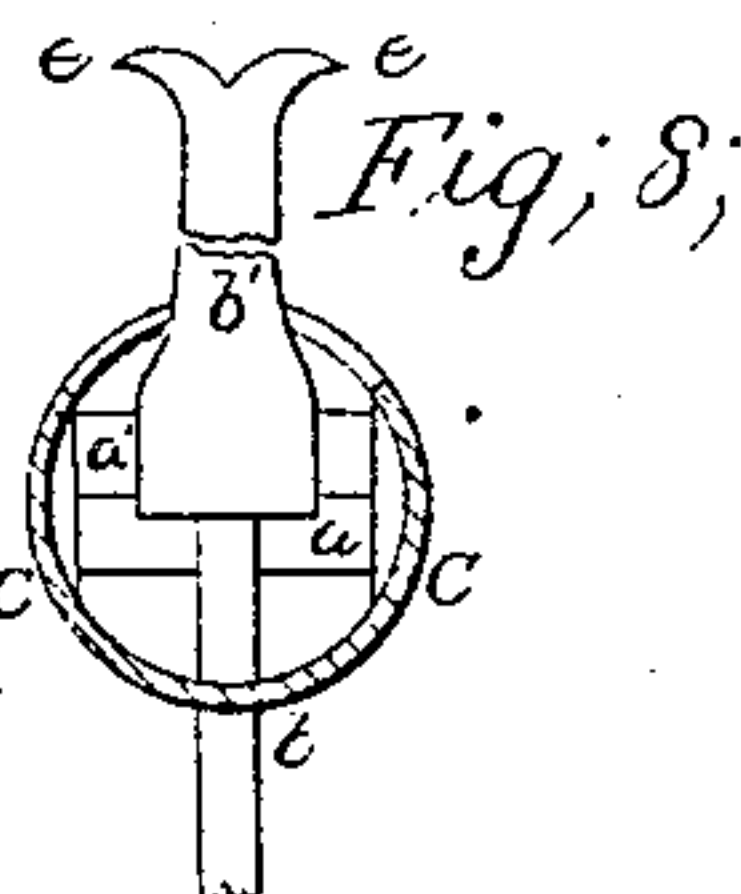
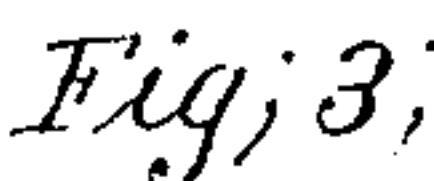
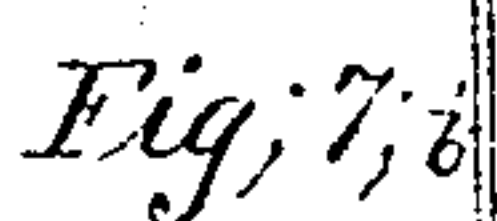


*Fig; 1;*



Inventor;  
R. B. Kefner  
By his attorney.  
J. H. Howson



# United States Patent Office.

ROBERT B. KEPNER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 93,720, dated August 17, 1869; antedated August 12, 1869.

## IMPROVEMENT IN COMBINING A LETTER-BALANCE AND A PEN-HOLDER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ROBERT B. KEPNER, of Philadelphia, Pennsylvania, have invented a Combined Pen-Holder and Balance; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a pen-holder, graduated and combined with certain devices, described hereafter, or their equivalents, so that it can be used as a letter-balance.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a longitudinal section of my combined pen-holder and balance;

Figure 2, an exterior view, showing the instrument adjusted for writing;

Figure 3, the same adjusted for weighing;

Figures 4, 5, 6, 7, 8, 9, detached views of parts of the instrument;

Figures 10 and 11, views illustrating the manner of constructing the knife-edge bearings; and

Figures 12 and 13, perspective views, showing a modification.

With the exception of figs. 2, 3, 10, and 11, the views are drawn to an enlarged scale.

A is a hollow cylindrical case, closed at one end, and to this case is adapted a slide, B.

On the outside of the case are engraved, or otherwise formed, two parallel lines, *x* and *y*, the former being graduated to indicate ounces avoirdupois, and subdivisions of the same, and the graduations of the line *y* representing ounces and subdivisions of an ounce troy, the main divisions in the former scale being an inch in length, so that this scale can be used as a measuring-rule.

Near the closed end of the case is engraved a cylindrical calendar, that portion which contains the initial letters of the days of the week being formed into a ring which turns on the case, but cannot be detached from the same.

To the case is fitted a tube, *c*, from the inner end of which extends a blade, *D*, and to knife-edge bearings *a a'*, in the tube, are connected the clevises *b b'*, which, when turned to a vertical position, extend through openings *c c'* in the tube, fig. 7, but may be brought to a horizontal position within the tube, as shown in fig. 1.

The clevis *b* consists of a wire or rod, doubled at the centre, to form an eye, the ends of the wire being brought together, so as to form an elastic clip, for retaining a letter or other object. At the upper end of

the clevis *b'* are two sharp-pointed projections *e e*, for a purpose described hereafter.

To the tube *C* is fitted another tube, *E*, which is cut away at the rear end to form two fingers, *i i*, (fig. 6,) and at the front end of the said tube *E* is secured a writing-pen, *H*.

When the instrument is to be used as a pen-holder, the clevises *b b'* are folded into the tube *C*, the latter is pushed back into the tube *A*, and the tube *E* is placed in the tube *C*, so that the pen shall project beyond the end of the case *A*, as shown in fig. 2, the tube *E* being turned so that its fingers *i i* shall close the openings *c c'* in the tube *C*, and retain the clevises in their position within the tube.

When a letter or other article is to be weighed, the tube *E* is turned, to remove the fingers *i* from the openings *c c'*, and the tube *C* is drawn out to such an extent that the clevises may be turned to a vertical position, (fig. 3.) The slide *B* is now placed with its edge at the zero-mark on the avoirdupois scale, and the tube *E* is moved in or out, as may be necessary to balance the instrument, when suspended by the clevis *b'*, the latter being held between the finger and thumb, which bear only on the points *e e*, so as to allow the clevis to swing freely, and maintain its vertical position. The letter or other article is now introduced into the clip of the clevis *b*, and the slide *B* is moved in the case *A* until the instrument is balanced, when the position of the slide on the scales will indicate the weight of the article in ounces (or fractions of an ounce) either avoirdupois or troy.

When necessary, the blade *D* may be used as an eraser, the tube *C* forming the handle. This blade is formed of a thin plate of steel, bent, as shown in fig. 9, so that the two portions, on opposite sides of the line *x*, shall be at an angle to each other; the plate being ground at the hollow side from the shank to a point on the line *x*, to form edges *r r*, which are at an angle to each other, and meet at the point.

The blade, thus formed, may be sharpened upon an ordinary stone, by passing it over the latter, with the hollow side adjacent to the stone, the inclination of the upper sides producing, with the newly-ground faces, the sharp cutting-edges required.

Although the knife-edge bearings *a a'* may be made from steel rods, in the ordinary manner, I prefer to form them by cutting a thin steel plate, *L*, to the form shown in fig. 11, sharpening the edges *n n'*, bending the ends, as shown in fig. 10, and then tempering the plate to produce the required degree of hardness at the bearing-edges.

Instead of securing the clevises to the tube *C*, as described, they may be arranged in a recess in a rod, *C'*, (figs. 12 and 13,) extending into the tube *C*, and

admitting of being turned in the latter to an extent limited by a pin, *p*, extending into a slot, *e'*, in the tube, openings *s*, in which, (when the rod *O'* is in the position shown in fig. 13,) permit the clevises to be turned to a vertical position. When the rod is turned to the position shown in fig. 12, the recess *m* is brought from opposite the openings *s*, so that the clevises are retained within the recess.

In some instances the case *A* may be formed into a receptacle for a balance, which may be detached and used separately from the case.

Without confining myself to the precise construction and arrangement of devices described,

I claim as my invention, and desire to secure by Letters Patent—

1. A pen-holder, so constructed as to form a lever-balance, graduated, and provided with an adjustable counterbalance, and with a clip or other device for securing a letter to the holder, all substantially as and for the purpose described.

2. The tube or rod *C*, with its clevises *b b'*, the whole being adapted to the tube *A*, substantially as described.

3. The combination of the tube *C*, its clevises *b b'*, and openings *c c'*, and the sliding tube or rod *E*, and its fingers *i i*, all substantially as and for the purpose described.

4. The plate *L*, having knife-edges *n n'*, and bent and otherwise constructed as specified.

5. The projections *e e* on the clevis *b'*, for the purpose set forth.

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

ROBT. B. KEPNER.

Witnesses:

CHARLES E. FISHER,  
THOS. J. MYERS.