

(No Model.)

W. R. WATT.  
MEDICINE OR POSTAL SCALES.

No. 409,080.

Patented Aug. 13, 1889.

Fig. 1.

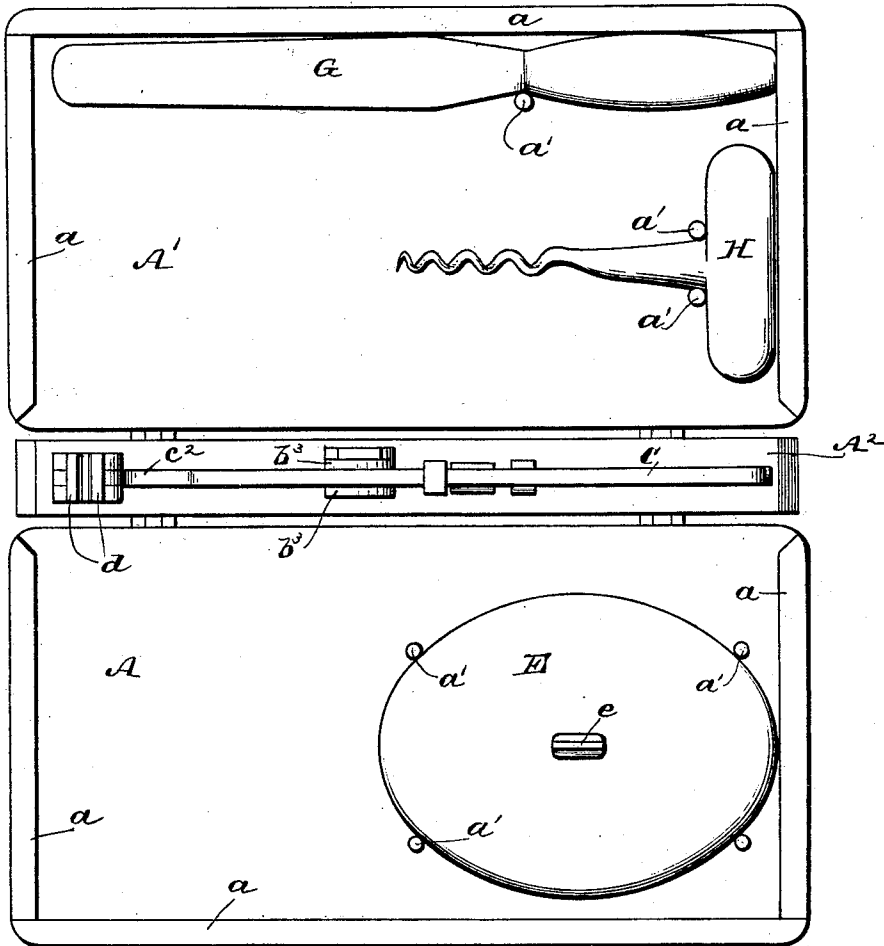
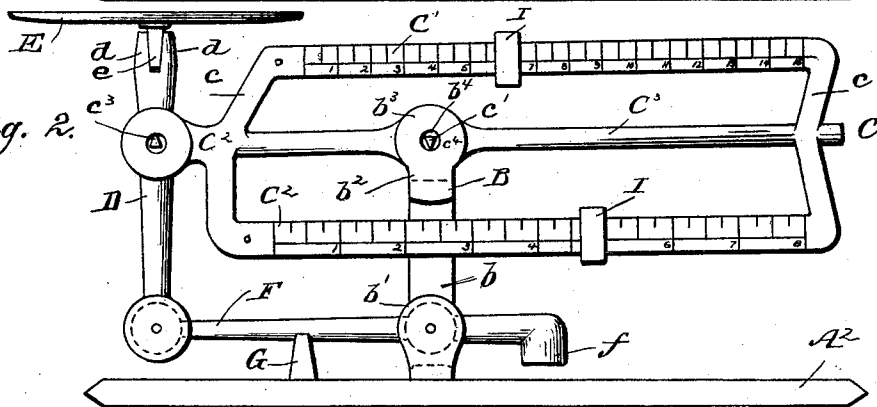


Fig. 2.



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## MEDICINE OR POSTAL SCALES.

SPECIFICATION forming part of Letters Patent No. 409,080, dated August 13, 1889.

Application filed October 4, 1888. Serial No. 287,176. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM RUFUS WATT, of Somerville, in the county of Fayette and State of Tennessee, have invented a new and useful Improvement in Medicine and Postal Scales, of which the following is a full, clear, and exact description.

The present invention, while capable of embodiment in scales of comparatively large size, has for its especial object to improve the construction of small scales with respect to simplicity and durability. The scales are designed for use in connection with an inclosing-case to protect the scales and afford a convenient means of carrying the same. The scales may be made of a size to be received with its case in one's pocket, as will be desirable in medicine-scales, or it may be made large and adapted for use as postal-scales.

The invention consists in the novel construction and combination of parts, hereinafter particularly described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of the scales and case constructed in accordance with my invention, the case being shown open, and the removable scale-pan being detached from the scales and held in the case; and Fig. 2 is a side elevation thereof, the scale-pan being shown in place on the scales and the side of the case removed.

The sides or covers  $A A'$  of the case are hinged at one edge to the bottom or back strip  $A^2$ , and are each formed on their three remaining edges with flanges or strips  $a$ , the strips  $a$  of the opposite sides or covers meeting when in the closed position and receiving the scales entirely within them.

The scale-standard  $B$  is fixedly secured to the bottom strip  $A^2$  of the case in any suitable manner, and is formed with a recess  $b$  at one side, forming enlarged projecting bottom end  $b'$  and enlarged overhanging upper end  $b^2$ . The upper end  $b^2$  of the standard is slotted vertically, forming ears or lugs  $b^3$ , between which the scale-beam  $C$  is pivoted.

The scale-beam  $C$  is of double form, consisting of the integral parallel members  $C' C^2$ , each having graduations, the nature of which graduations will be in accordance with the purposes for which in practice the scales will be designed. The scale-beam is pivoted on its standard  $B$  by its central longitudinal bar  $C^3$ , which extends between the vertically-aligned members  $c$ , that unite the graduated beams  $C' C^2$ , the knife-edge pivot  $c'$  of bar  $C^3$  resting in the bearings  $c^4$ , formed in the ears  $b^3$  of standard  $B$ . The lower graduated member  $C^2$  oscillates in the recess  $b$  of standard  $B$ , and as the members  $C'$  and  $C^3$  are in the same vertical plane therewith all three members are within the vertical plane of the said standard, which lies wholly within the plane of the strip  $A^2$  of the case.

To the projection or arm  $c^2$  of scale-beam  $C$  is pivoted, by means of knife-edge pivot  $c^3$ , the vertical supporting-arm  $D$ , which is adapted to receive the removable scale-pan  $E$ . The upper end of arm  $D$  is forked, as at  $d d$ , and in said fork is received the projection  $e$  on the under side of the scale-pan  $E$ .

To the lower end of the arm  $D$  is pivoted one end of weighted balance-arm  $F$ , which is also pivoted at a distance from its opposite end to the enlarged lower end  $b'$  of the standard  $B$ , in a manner similar to the pivoting of the scale-beam  $C$ .

The extreme inner end of balance-arm  $F$  is weighted, as at  $f$ , the said weighted end projecting downward to limit the downward movement of said end.

A stop  $G$  projects upward from bottom strip  $A^2$  of the case at the side of the pivot opposite the weight  $f$ , and limits the movement of the other end of the arm  $F$ .

The scale-pan  $E$  is removed when the scale is not being used, and placed in inverted position on one of the sides  $A$  or  $A'$  between retaining pins or studs  $a'$  on said cover. In the other cover  $A$  or  $A'$  are preferably held a spatula  $G$  and a corkscrew  $H$ , which are held in place by retaining-pins  $a'$ , as in the case of the scale-pan.

In operation the sliding weights  $I$ , of which one is provided on each graduated member  $C' C^2$  of the scale-beam, are moved from

left to right to counterbalance the weight of the material in its scale-pan, the scale in practice being so arranged that with the sliding weights in the extreme left-hand position and the scale-pan in place the scales will be in equipoise.

The graduations on the members  $C'$   $C^2$  may in practice, in the case of medicine-scales, represent, respectively, drams and fractions thereof, and grains and fractions thereof, and in postal-scales pounds and fractions thereof, and ounces and fractions thereof.

The size of the scales and the case may be sufficiently small to permit of being carried in one's pocket, or larger, as desired. In any event the case forms a protector for the scales and a convenient receptacle for a corkscrew, spatula, or similar devices, and the weights, not being detachable, will always be conveniently at hand.

Having thus described my invention, I claim as new and desire to secure by Letter Patent—

1. A pocket-scale comprising a casing formed of a back or bottom strip, and two sides hinged at their inner edges thereto, and a scale having its standard secured to the inner side of said back or bottom strip, whereby when the two sides are swung outward in opposite directions the scale will be exposed and in position for use, substantially as set forth.

2. The combination, with the standard, of

the scale-beam formed of three horizontal vertically-aligned members connected at their ends, the upper and lower members being graduated and the middle bar or member being pivotally connected between its ends to said standard, a vertical scale-pan supporting-arm pivotally connected between its ends to one end of said scale-beam, and a horizontal balance-arm pivoted between its ends to the standard, pivotally connected at one end to the lower end of said scale-pan supporting-arm, and provided at its opposite end with a weight, substantially as set forth.

3. The combination, with the scale-standard B, formed with a recess  $b$ , forming the enlarged lower and upper ends  $b'$   $b^2$ , of the scale-beam C, comprising three parallel members  $C'$   $C^2$   $C^3$ , the members  $C'$   $C^2$  being graduated, member  $C^2$  lying in the recess  $b'$  of standard B, and the member  $C^3$  being pivoted to the upper enlarged end  $b^2$  of said standard, the arm D, pivoted to the scale-beam and acting as a support for the scale-pan, and the weighted balance-arm F, pivoted to arm D and to lower end  $b'$  of standard B, substantially as described.

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Witnesses:

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