(No Model.)

C. H. FITCH.

PRESCRIPTION SCALES.

No. 418,708. Patented Jan. 7, 1890.

Fig. 1.

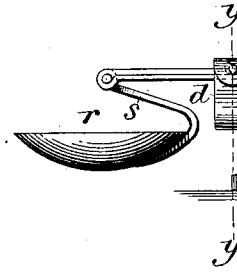


Fig. 4.

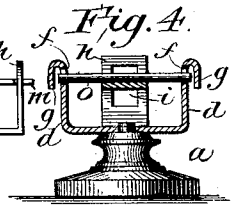


Fig. 2.

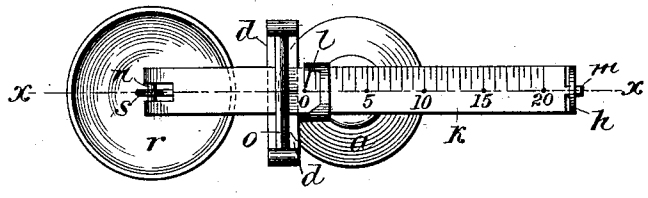


Fig. 3.

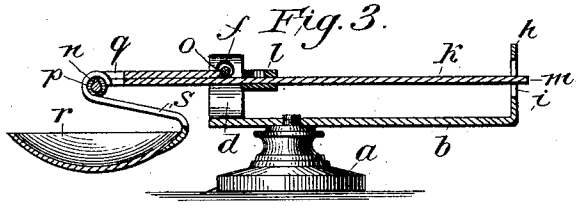


Fig. 5.

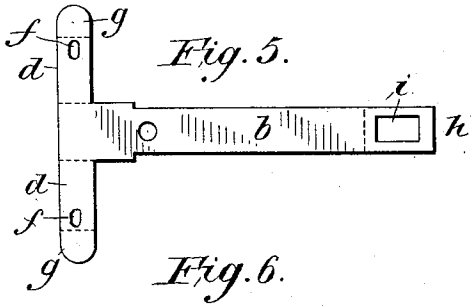
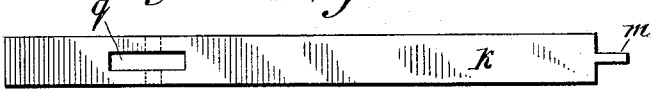


Fig. 6.



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UNITED STATES PATENT OFFICE.

CALVIN H. FITCH, OF MIDDLETOWN SPRINGS, VERMONT.

PRESCRIPTION-SCALES.

SPECIFICATION forming part of Letters Patent No. 418,708, dated January 7, 1890.

Application filed June 26, 1889. Serial No. 315,602. (No model.)

To all whom it may concern:

Be it known that I, CALVIN H. FITCH, a citizen of the United States, residing at Middletown Springs, in the county of Rutland and State of Vermont, have invented certain new and useful Improvements in Pocket Prescription-Scales, of which the following is a full, clear, and exact description.

The object of this invention is to provide scales for dispensing medicine which may be carried upon the person, the invention therefore being designed more particularly for the use of country physicians and other physicians who carry with them a supply of medicine which they may have occasion to prescribe.

The invention consists in certain details of construction, as I will proceed now more particularly to set forth, and finally claim.

In the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation; Fig. 2, a top plan; Fig. 3, a longitudinal section on line *x x* of Fig. 2, and Fig. 4 a transverse section on line *y y* of Fig 1. Fig. 5 is a plan of the blank from which the frame of the scales is constructed, and Fig. 6 is a plan of a blank from which the scale-beam is constructed.

The base or pedestal *a* may be a casting of suitable shape and weight to firmly support the scales when in use. This pedestal or base is detachably secured to the frame *b*, as by means of a screw-threaded stud on the base entering a screw-threaded hole in the frame. The frame *b* is composed of a longitudinal body, the forward end of which has laterally-extended arms *d*, which arms are turned up substantially at right angles to the body and parallel to one another to form bearings for the pivot of the scale-beam, and to this end the arms are provided with openings *f*. The extreme ends of the arms *d* are turned over and down to form guards *g* to limit the lateral vibration and escape of the pivot of the scale-beam. The other end *h* of the body *c* is turned up at right angles to itself and provided with an opening *i* to receive the end of the scale-beam, and thereby form a check to its vibration. The frame thus constituted may be constructed from a single piece of metal, preferably steel, by punching out the same in dies or by press, and thereafter bending the various parts as described and thus the said frame may be produced very economically and also very accurately.

The scale-beam *k* is provided with the usual graduations and supplied with the usual movable counterpoise *l*. The tail *m* of the beam may be reduced, as shown in Figs. 1, 2, and 6, to play in the opening *i* of the frame. The other end of the beam is doubled upon itself and provided with the knife-edge *n*, arranged in the loop formed by doubling the material of the beam upon itself. The doubled end of the beam forms what is known as the "short arm" of the scale-beam. The pivotal knife-edge *o*, which is fitted in the bearings *f*, is soldered to the upper surface of the beam and against the squared end of the overturned portion of said beam. In bending over the end of the beam the looped portion *p* is depressed to such an extent that when the knife-edge *n* is placed therein the active end of said knife-edge will be in the same plane as the active end of the pivotal knife-edge *o*. The turned-over portion of the short arm of the scale-beam may be soldered, brazed, or otherwise firmly connected to the other portion, and forms a guide for the attachment of the knife-edge and a rigid support therefor. As will be readily understood from an inspection of Fig. 6, the scale-beam is constructed of a single piece of metal. An opening *q* is made in the short arm of the scale-beam to receive a hook extending from the pan, so as to permit the pan to freely swing upon its knife-edge.

The pan *r* is provided with a suspending-hook *s*, curved upwardly over the said pan, so that its bearing-surface upon its knife-edge will be substantially in the center of the pan. The pan is saucer-shaped by preference, and it is not necessary that the material to be weighed therein shall be deposited in any particular portion of the pan in order to secure accuracy.

The knife edge or pivot of the scale-beam is sprung in between the arms into the bearings *f*, and thus firmly retained in position. The guards *g* prevent undue lateral play and escape of the said knife edge or pivot.

By removing the pan and unscrewing the base the scale may be packed in a very small box and thus be carried upon the person without inconvenience. When desired for use,

the parts are very readily and quickly assembled, and no preliminary adjustment of parts is required in order to secure accuracy, the only prerequisite to accuracy being a level surface upon which to rest the base *a*.

What I claim is—

1. A pocket prescription-scales composed of a base, a frame having integral therewith arms provided with bearings for the scale-beam, and also having an integral vibration-check for the said beam, and a scale-beam arranged within said bearings, and a pan freely suspended from the short arm of the said scale-beam, substantially as described.

2. The scales composed of a frame having integral therewith arms provided with bearings for the scale-beam and a vibration-check for said scale-beam, a base to which the frame is detachably secured, a scale-beam arranged in the bearings in said frame and extended into its vibration-check, and a pan freely suspended from said beam, substantially as described.

3. The frame *b*, having arms *d d* extended laterally therefrom at one end and turned up substantially at right angles thereto and parallel to one another, and provided with bearings for the scale-beam and with guards *g*, and a vibration-check, all constructed from a single piece of metal, substantially as described.

4. A scale-beam having its short arm formed by bending back the metal of the beam upon itself, and provided with a knife-edge for the scale-pan secured in the loop of the bent-back portion, and a pivotal knife-edge for the beam soldered to the beam at the end of the turned-over portion, substantially as described.

5. A scale-beam having its short arm formed by turning over the end of the metal of the beam upon itself, with the looped portion of said turned-over end depressed somewhat below the level of the face of the beam and provided with the knife-edge for the pan, whereby the active end of the knife-edge is brought into the same plane as the pivotal knife-edge of the beam, combined with said pivotal knife-edge, substantially as described.

6. The frame *b*, having arms *d d* extended laterally therefrom at one end and turned up substantially at right angles thereto and parallel to one another, and provided with bearings for the scale-beam, and a vibration-check, all constructed from a single piece of metal, substantially as described.

In testimony whereof I have hereunto set my hand this 24th day of June, A. D. 1889.

CALVIN H. FITCH.

Witnesses:
JOHN W. NORTON,
JOHN S. PIERCE.