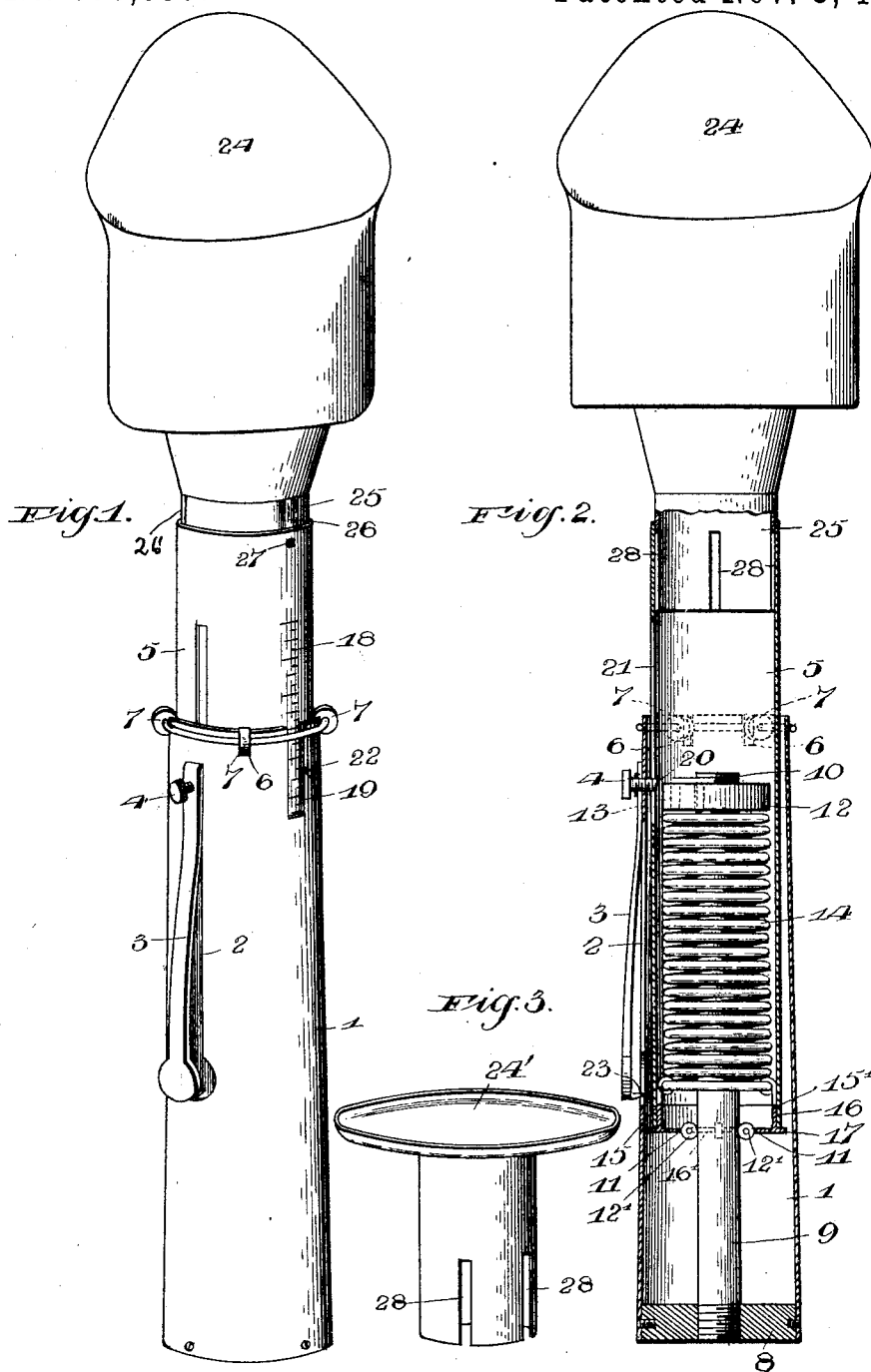


(No Model.)

J. W. HUNTER.
PORTABLE WEIGHING SCALE.

No. 570,553.

Patented Nov. 3, 1896.



Witnesses:

W. F. Hoyle.
A. B. Smith.

Inventor.

John W. Hunter,
By H. B. Williams.

Attorney.

UNITED STATES PATENT OFFICE.

JOHN W. HUNTER, OF TABOR, IOWA.

PORTABLE WEIGHING-SCALE.

SPECIFICATION forming part of Letters Patent No. 570,553, dated November 3, 1896.

Application filed July 2, 1896. Serial No. 597,854. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HUNTER, a citizen of the United States, residing at Tabor, in the county of Fremont and State of Iowa, have invented certain new and useful Improvements in Portable Weighing-Scales; and I do 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 appertains to make and use the same.

My invention has relation to improvements in weighing-scales for retail dealers, and the object is to provide a simple, cheap, and reliable hand or portable scale for this purpose; and to this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same figures of reference indicate the same parts of the invention.

Figure 1 is a perspective view of my improved portable scale as it appears in operation. Fig. 2 is a longitudinal section of the same.

1 represents a hollow cylindrical handle provided with a longitudinal slot 2, in the upper end of which is secured a depending spring-lever 3 by means of a thumb-screw 4. 5 is a tube which is of slightly smaller diameter than the inside of the handle 1.

The upper end of the handle 1 is formed with a series of recesses 6, in each of which is journaled an antifriction-roller 7, which forms a bearing for the tube 5.

8 is a disk secured in the lower end of the handle 1, and it is provided with a rigid central shaft 9, the upper end of which is screw-threaded at 10, to receive an adjustable circular nut 12, having a radial recess 13, in which is secured the upper end of a spiral spring 14, the lower end of which is secured in the integral ears 15 15' of the socket 16, formed with a circumferential projecting flange 17, on which the lower end of the tube 5 rests.

The wall surrounding the orifice 16', through which the shaft 9 passes in said socket, is formed with a series of radial recesses 11, in each of which is mounted an

antifriction-roller 12', which allows said socket to slide freely up and down on the shaft with little or no friction.

The outside of the tube 5 is provided with a vertical graduated scale 18, which may be read through the slot 19 in the upper end of the handle, and the end 20 of the thumb-screw 4 projects into a longitudinal slot 21 in the upper end of the tube 5, and prevents the latter turning in the hand, thereby keeping the scale 18 in the same vertical line with the slot 19 and the pointer 22. A toe 23, projecting inwardly from the lower end of the lever 3, when pressed inwardly, engages the flange 17 and prevents the tube 5 from being pressed downward in the handle. When the pressure is released from the lever 3, it springs outwardly, so that the toe 23 is released from the lower end of the tube and the latter is free to slide in and out of the handle.

24 is the removable scale pan or scoop, and it is provided with a cylindrical handle 25, having longitudinal grooves 26 26', one of which engages with a stud 27, secured to and projecting inwardly from the upper end of the tube 5, which prevents the handle of the scoop from twisting or turning when inserted in the open upper end of the tube 5.

28 28 are longitudinal slits or slots in the outer end of the handle of the scoop, which allows the solid portion to spring inwardly to reduce the diameter of said handle when it is inserted in the tube 5, and when so inserted the solid portion of said handle springs outwardly and holds the scoop in place.

The operation of the device is very simple, and is as follows: The handle 1 is grasped in the hand with the thumb pressing the lever 3 inwardly, so that its toe 23 engages the flange 17. This locks the tube 5 in the handle, and the scale may then be used as an ordinary scoop, the material to be weighed being caught up in the usual manner in the scoop or scale-pan 24'. The handle 1 is then restored to a perpendicular position and the thumb released from the lever 3, which in turn releases the tube 5, which settles down with the scoop and the material in it until the spring counterbalances the article to be weighed, the weight of which is read off on the scale 18 at the pointer 22 on the handle 1.

The scoop 24 is intended for use with such

articles as flour, sugar, and the like, while for solid articles, such as lard, butter, cheese, and the like, the pan 24' will be found more convenient.

5 Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as
10 clearly fall within the scope of my invention without departing from the spirit thereof, as, for instance, the scale, as shown, is intended for use with the right hand, but those who prefer to use it in the left hand can reverse
15 the scoop so that the groove 27' will engage the stud 26, making it a left-hand scoop.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

20 A portable scale and scoop combined, comprising the hollow cylindrical handle 1 having a longitudinal slot 2 in the upper end of which is secured a spring-lever 3 by a thumb-screw 4, having an inwardly-projecting end
25 20, the free end of said lever being provided with an inwardly-projecting toe 23, said handle being provided at its upper end with a longitudinal slot 19 and a series of recesses 6, in each of which is mounted a radially-

projecting antifriction-roller 7, a disk 8 se- 30
cured in the lower end of said handle and provided with a rigid central shaft 9, an adjustable screw-threaded nut 12 mounted on the screw-threaded end 10 of said shaft, and
35 provided with a recess 13, a spiral spring 14 encircling said shaft and having its upper end secured in said recess 13, a socket 16, provided with integral ears 15 15' to which the lower end of the spring 14 is secured, and
40 having a projecting flange 17 and a central orifice 16' and a series of radial recesses 11, in each of which is mounted a radially-projecting roller 12', in combination with the sliding tube 5 having its lower end secured in said socket 16, and provided with a longi-
45 tudinal slot 21, which receives the projecting end 20 of the thumb-screw 4, a graduated scale 18 and an inwardly-projecting stud 27, and the removable scoop 24 formed with a cylindrical handle 25, having a longitudinal
50 groove 26 and the longitudinal slits 28, substantially as and for the purpose set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOHN W. HUNTER.

Witnesses:

WM. MARSHALL,
R. PINKERTON.