W. C. PRITCHARD.

DASH POT.

APPLICATION FILED NOV. 30, 1912.

1,128,041.

Patented Feb. 9, 1915.

2 SHEETS—SHEET 1.

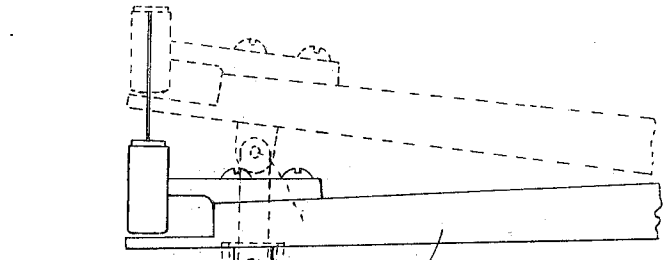


FIG 2

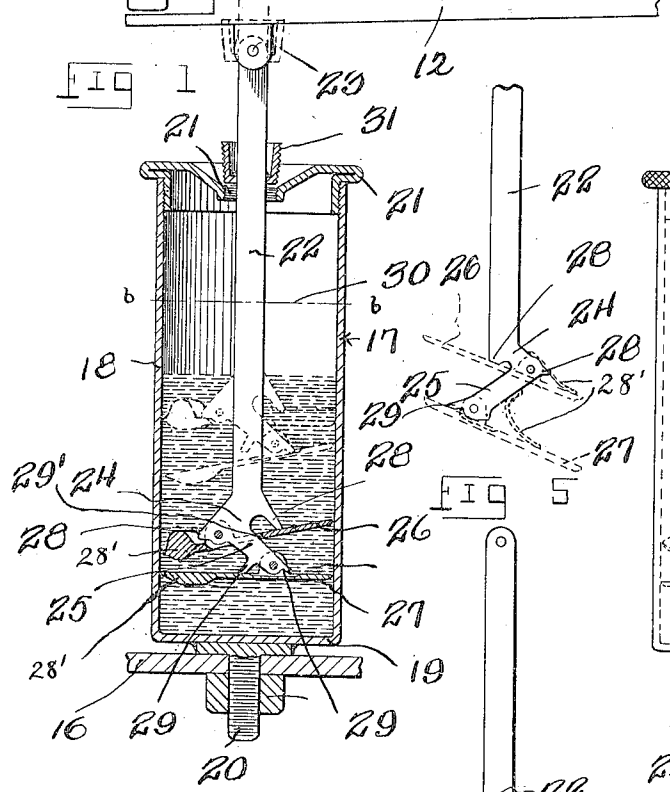
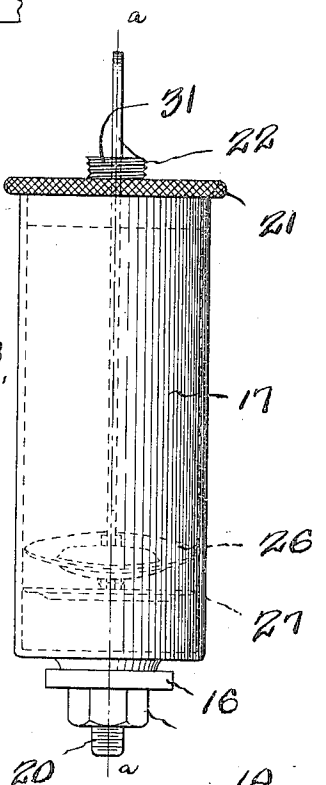


FIG 1

FIG 5



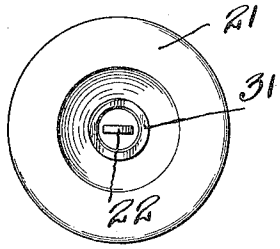


FIG 3

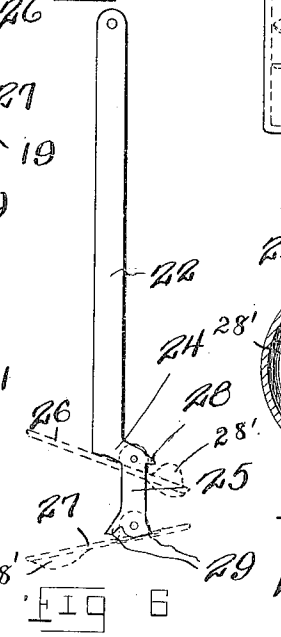


FIG 6

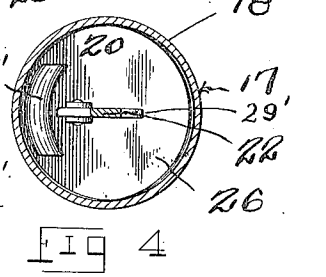


FIG 4

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2 SHEETS—SHEET 2.

FIG 7

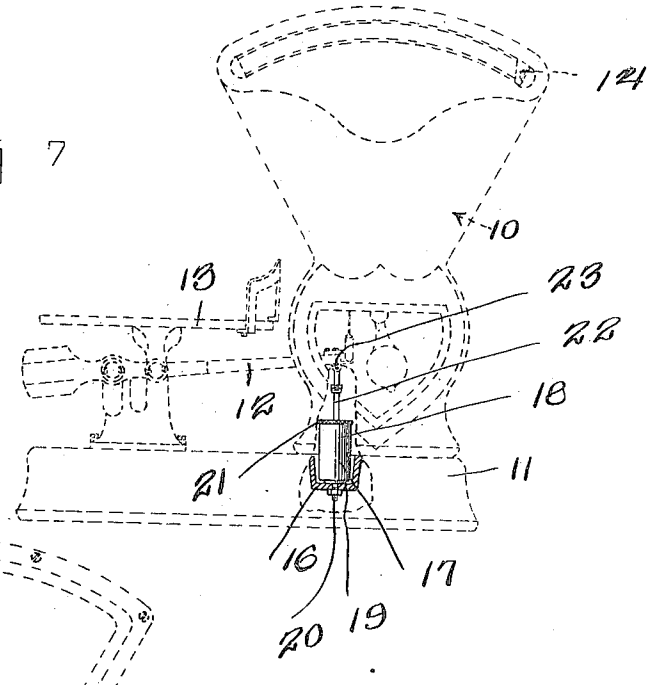
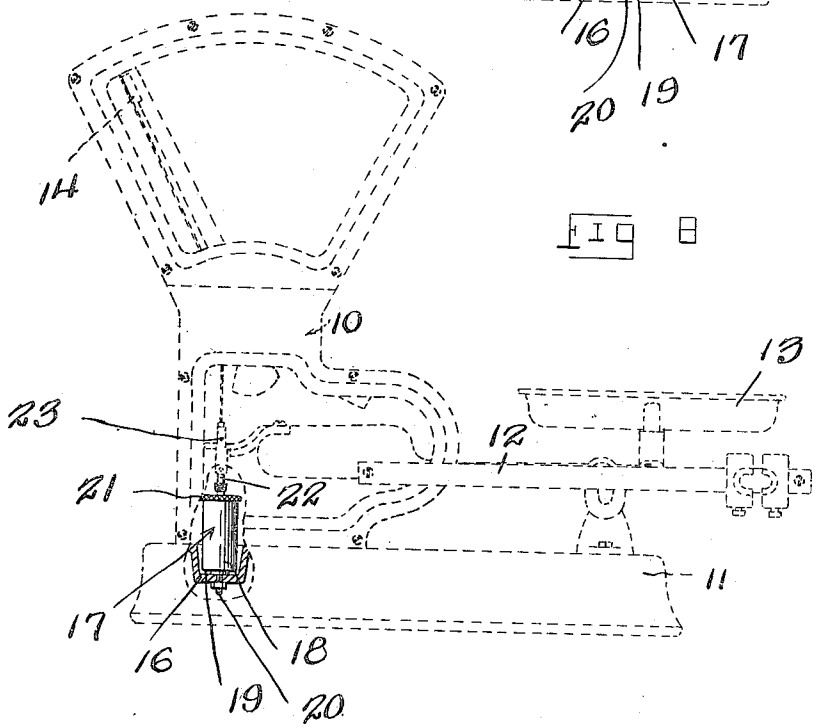


FIG 8



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UNITED STATES PATENT OFFICE.

WILLIAM C. PRITCHARD, OF LANCASTER, PENNSYLVANIA, ASSIGNOR TO NATIONAL STORE SPECIALTY COMPANY, OF LANCASTER, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

DASH-POT.

1,128,041. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed November 30, 1912. Serial No. 734,332.

To all whom it may concern:

Be it known that I, WILLIAM C. PRITCHARD, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Dash-Pots, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to new and useful improvements in dash pots for checking or controlling the vibration of the working parts of scales and other devices.

This invention relates to that class of devices in which a piston moved in a liquid (commonly oil or glycerin) is employed for retarding the movement of the plunger, and its object is to provide an automatic means for controlling the vibration of the working parts of the mechanism to which it is attached so as to eliminate any adjustment of the plunger which is ordinarily necessary due to the change in the consistency of the liquid employed due to changes in temperature.

In its construction, this device consists of one or more eccentrically pivoted pistons which are carried by a plunger, and are so mounted thereon as to permit only a limited movement.

A further object of this invention is to improve and simplify devices of this character rendering them comparatively simple and inexpensive to manufacture, reliable and efficient in use, and readily operated.

With these and other objects in view, this invention resides in the novel features of construction, formations, combinations and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:—

Figure 1, is a vertical longitudinal sectional view, taken on the line *a*—*a* of Fig. 2. Fig. 2, is a side elevation thereof. Fig. 3, is a top plan view thereof. Fig. 4, is a horizontal sectional view, taken on the line *b*—*b* of Fig. 1. Figs. 5, and 6, are views showing modified forms of plungers. Figs. 7, and 8, are views of different forms of scales, showing the dash pot applied.

Referring more particularly to Figs. 7, and 8, of the drawings by similar characters of reference, the numeral 10, designates generally, scales of conventional type which comprise the bases 11, and levers 12, mounted upon which are the platforms 13. The numerals 14, designate the indicators; while secured to the base 11, as at 16, is my improved dash pot 17. This dash pot 17, comprises a casing 18, which can be of any preferred contour, but preferably cylindrical and closed at its lower end by a bottom 19, from which projects a depending stud 20, for attachment to the said base 11.

The casing 18, is closed at its upper end by a screw-cap 21, which is formed at its depressed center with a concentric threaded opening, through which passes a plunger 22, which is pivoted as at 23, to the lever 12.

The lower end of the plunger 22, is bent at opposite angles as at 24, and 25; and pivoted eccentrically at the lower ends of these angular portions 24, and 25, are the pistons 26, and 27, which are limited in their tilting movement, respectively, by the lugs 28, and 29, at which are formed the terminals of the extension 24, and at the lower end and intermediate portions of the extension 25.

The pistons 26, and 27, are retained in substantially an angular relation and in a normal position by leaf springs or weights 28′ which are carried by the plunger 22. The upper piston 26, is slotted as at 29′ to permit of the passage of the plunger therethrough. This slot is of a size to engage the opposite edge of the plunger and thereby close the slot, preventing the passage of the fluid therethrough. These pistons 26, and 27, when at a horizontal position, fit the cylinder 18, sufficiently to give the desired control of the working parts. The resistance thus obtained may be decreased by holes in the pistons which will permit the oil or liquid to pass therethrough.

A threaded collar 31, is secured to the plunger 22, and adapted to be threaded into the opening of the cap 21. This obviously seals the fluid 30, against spilling when scales are being shipped.

The operation of the device is as follows:—When the dash pot is in a normal position, the piston or pistons hang in a position in angular relation to the walls of the dash pot tube or cylinder. In this position, these pistons are practically open, and when moved slowly or for a short dis-

tance, permit the free travel of the mechanism through the liquid.

In operation, a weight placed upon the platform 13, of the scale will have a tendency to move the plunger 22, in either direction, which motion will automatically close the pistons to a horizontal position, offering the required resistance of the moving parts through the liquid. As the scale lever or rocker arm 12, assumes a normal position with the weight on the platform, the plungers gradually settle, or are forced by a spring or weight 28′, to an open or normal position, which leaves the mechanism perfectly free and very sensitive.

With the pistons arranged as described, one opposed to the other, the action of the opposed piston is the same when the weight is removed from the platform which controls the mechanism when it returns to a position of repose or a normal position when no weight is on the platform.

The automatic workings of this device are brought about by the pistons being pivoted out of the center, which gives a greater area for pressure of the fluid on one side of the eccentrical pivot point.

From the foregoing disclosures, it will be manifest that a dash pot is provided, which will fulfil all of the necessary requirements of such a device.

It should be understood in this connection, that various minor changes in the specific details of construction can be resorted to within the scope of the appended claims without departing from or sacrificing any of the advantages of the invention.

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

1. In a dash pot for scales, the combination with a casing, a plunger therein, pistons eccentrically secured to the plunger, and lugs formed upon the plunger for limiting the tilting movement of the pistons.

2. In a dash pot for scales, the combination with a casing, a plunger therein, pistons pivoted eccentrically to said plunger, lugs for limiting the tilting movement of the pistons, and means for yieldingly forcing the pistons to a predetermined position.

3. In a dash pot for scales, the combination with a casing, a plunger therein, said plunger being formed with opposite angles at one end thereof, pistons pivoted eccentrically upon their opposite sides to the angular portions of the plunger, means for limiting the tilting movement of the pistons and means for yieldingly holding them in a predetermined position.

4. In a dash pot, the combination with a casing, of a plunger therein, pistons pivoted thereto, one of said pistons being slotted, said slot adapted to engage the plunger and close the same, a cap for the casing, said casing having a threaded opening therein, and a sleeve secured to the plunger and adapted to be threaded into the opening of the cap.

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

WILLIAM C. PRITCHARD.

Witnesses:
WM. J. COULTER,
JOHN J. THOMPSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."