

No. 829,018.

PATENTED AUG. 21, 1906.

F. KIEFER.
DRY MEASURER.
APPLICATION FILED SEPT. 29, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

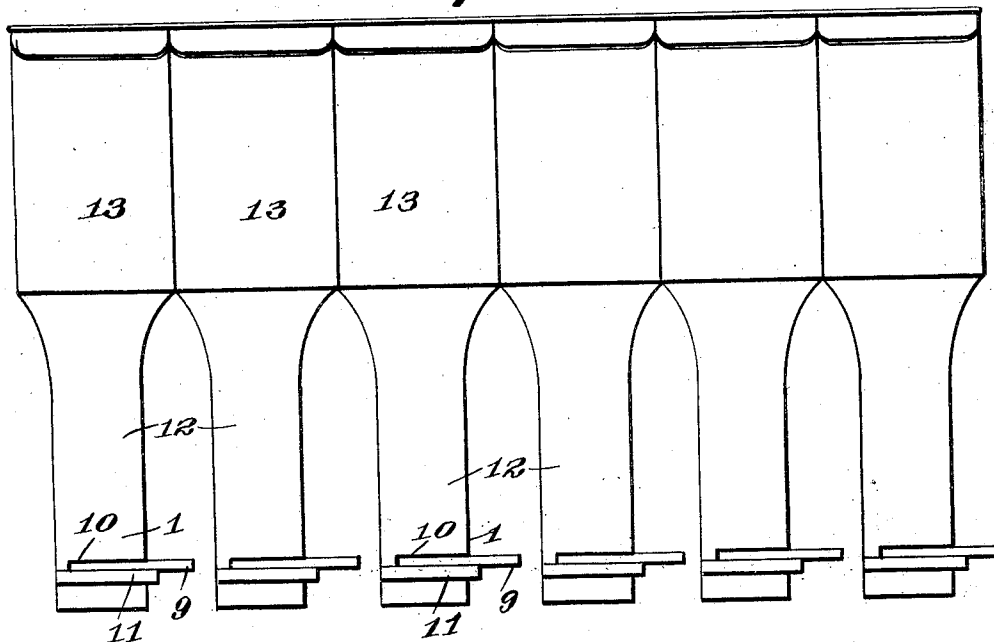
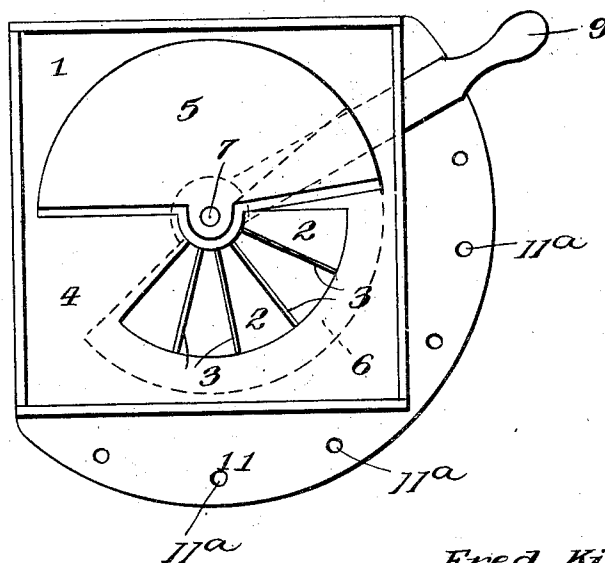


Fig. 2.



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To all whom it may concern:

Be it known that I, FRED KIEFER, a citizen of the United States, residing at Priceburg, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Dry Measurers, of which the following is a specification.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a front elevation showing the invention applied. Fig. 2 is a top plan view of the preferred embodiment of the invention. Fig. 3 is a perspective view of the construction shown in Fig. 2, partially broken away. Fig. 4 is a top plan view embodying a modification of the invention.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

This invention involves a novel form of machine designed particularly for use in grocery-stores or the like for vending groceries, such as meal, flour, sugar, tea, coffees, &c.

The object of the invention is to provide an effective substitute for weighing-scales, thereby facilitating the measuring operation, at the same time insuring the accuracy of measurement of the material vended by means of the invention.

Referring to the drawings and describing the preferred embodiment of the invention, the numeral 1 designates a hopper adapted to receive material in granular or similar form, and said hopper is provided with a mechanism by which the material can be vended in a predetermined quantity, as desired. The mechanism before referred to embodies primarily a measuring device arranged in the hopper 1 and embodying a plurality of compartments 2, divided from one another by partitions 3. The compartments 2 are designed to be of an ascertained capacity, so as to admit of ready determination of the quantity of material received therein and discharged therefrom. The capacity of all of the compartments 2 may be a desired maximum—such as two pounds, or three quarts, or the like—and the capacity of the various individual compartments may be predetermined with reference to the capacity of all of the compartments. The compartments 2 are

formed in a horizontal support 4 in the hopper 1, and arranged above and below the support 4 are cut-offs 5 and 6, respectively. The cut-offs 5 and 6 may be of semicircular form, as shown, or these cut-offs may be of other shapes, according to the number of the compartments 2 which will be closed by means thereof; but, as shown, the upper cut-off 5 is equal to or exceeds in size the combined surface area of the compartments 2, thereby enabling it to cover all the upper ends of all of said compartments and leave none of them open to receive the contents of the hopper 1. The cut-offs 5 and 6 are preferably revolvably mounted in the support 4, being connected for simultaneous movement by means of a journal member 7, arranged in a bearing 8, formed in the support 4 aforesaid. The cut-offs 5 and 6 are actuated by means of a handle 9, which is attached to the cut-off 6 in any suitable way. The two cut-offs before described are so arranged that as the upper cut-off closes the upper end of the compartment the lower cut-off will be arranged so that the lower end of said compartment will be open, and the above will be true with reference to the several compartments, as the movement of the upper cut-off with regard to that of the lower cut-off is such that as the upper ends of the compartments are opened to the hopper 1 by the upper cut-off the lower ends of such compartments are closed. To effect this operation, the cut-offs 5 and 6 are, as best seen in Fig. 2 in both full and dotted lines, arranged in substantially diagonal relations to each other, with one end overlapping a distance equal to the cross-sectional area of the respective compartments. Furthermore, as also best seen in said figure, each of the cut-offs is so related in size to the series of compartments that it may completely close all of the compartments at one end or the other of the latter. The hopper 1 is formed with a horizontal slot 10 in the sides thereof, and the handle 9 projects through this slot, so that it may be readily grasped by the operator in order to impart rotary movement to the cut-offs 5 and 6 in the actual use of the device. The handle 9 moves above a ledge 11, projecting outwardly from the hopper 1, and this ledge may be graduated by suitable indicating characters, which will readily indicate the distance which it is necessary to move the handle in order to open the compartments 2 and discharge the desired quantity of material which is wanted by a purchaser.

In the practical use of the machine before described the hopper 1 will be connected with a spout 12, leading from a bin or receptacle 13, which contains the bulk of the material which is being vended by use of the measuring device constituting the invention. In operation, should the purchaser desire to obtain a pound of the material in the receptacle 13 the operator grasps the handle 9 and moves the same until the mark "one pound" and the ledge or indicating-number "11" is reached. Movement of the handle to this point will have caused movement of the cut-off 5 to close the upper ends of one or more of the compartments 2, simultaneously open the lower ends of such compartments, and permit material therein to be discharged therefrom. The operation is the same in measuring out desired quantities of material, whether the basis of measurement be pounds or ounces or quarts or the like. The operator can readily hold a bag or similar receptacle below the hopper 1 to receive the material discharged therefrom, and the bag will contain the exact weight or amount of material which is desired by the purchaser.

The embodiment of the invention shown in Fig. 4 is similar to that before described, except that the cut-offs used above and below the compartments will be stationary, being denoted at 14 and 15, respectively. The compartments 2, however, are formed in a revolving member 16, arranged between the cut-offs 14 and 15 and mounted for revolution on any suitable vertical member as an axis. The cut-off 14 is provided with an inlet-opening 17 to permit material in the hopper 1 to pass into the compartments of the member 16, while the lower cut-off 15 is cut away to form an outlet-opening 19, through which the material is discharged on actuation of the member 16. The handle 20 is attached to the member 16 and projects through the slot 21 in the hopper, having its movement gaged by suitable characters on the ledge 11. The arrangement of the inlet and outlet openings of the cut-offs 14 and 15 is such that when the upper end of the compartment or compartments is open to the upper portion of the hopper 1 the lower end of such compartment or compartments is closed by means of the lower cut-off 15. The operation of the member 16 is such that movement thereof a predetermined distance will cause the upper ends of the compartments 18 to be closed by the cut-off 14, while the lower ends are opened by the cut-off 15, permitting discharge of the desired quantity of material

in a manner which will be readily understood. It is contemplated that the number of receptacles 13 may be arranged adjacent one another, as shown in Fig. 1, and the spouts 12, leading therefrom, will extend to a hopper, one of which is provided for each spout. The several receptacles 13 will contain the different commodities which are to be vended.

As one means for indicating the proper position to turn the handles 9 or 20 to discharge the desired quantity of the commodities contained in the compartments I may provide the ledge 11 with a suitable number of apertures 11^a, designed to receive a peg or the like, so that the peg may be placed in any one of the apertures, according to the quantity desired to be discharged from the device, and the handle will then be turned into engagement with the peg, as will be readily understood.

Having thus described the invention, what is claimed as new is—

A measuring-machine of the type described, comprising a hopper or casing adapted to receive the commodity to be measured, a measuring device arranged in the hopper and consisting of a plurality of radial stationary partitions forming compartments open at the top and bottom, two substantially diagonally opposite segmental cut-offs mounted respectively against the upper and the lower ends of said compartments and connected together for simultaneous movement, and one overlapping the other at one end a distance equal to the width of one of the compartments and the upper cut-off being of a size sufficient to cover simultaneously all of said compartments, whereby as the upper cut-off closes one or more of the said compartments at the upper end, the lower end of said compartments will be opened by the lower cut-off and whereby the entire series of compartments may be cut off or closed at their upper ends at the same time, and an actuating-handle for said cut-offs, the hopper being provided with a lateral slot for the free movement of said handle and being also provided with a projecting ledge formed with means for indicating the stopping-point of said handle at each of said compartments, as and for the purpose set forth.

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

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Witnesses:

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