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G. P. KEAN

1,886,106

DISPENSING DEVICE

Filed Jan. 30, 1932

Fig. 1.

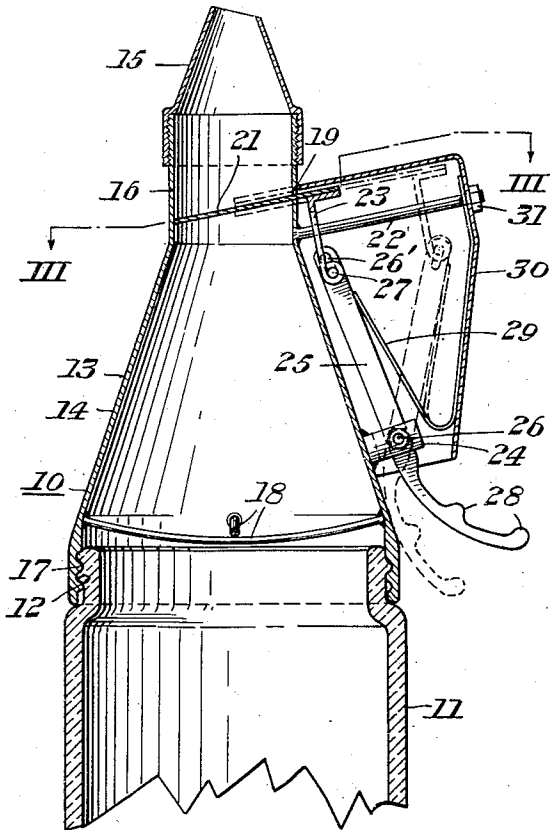


Fig. 2.

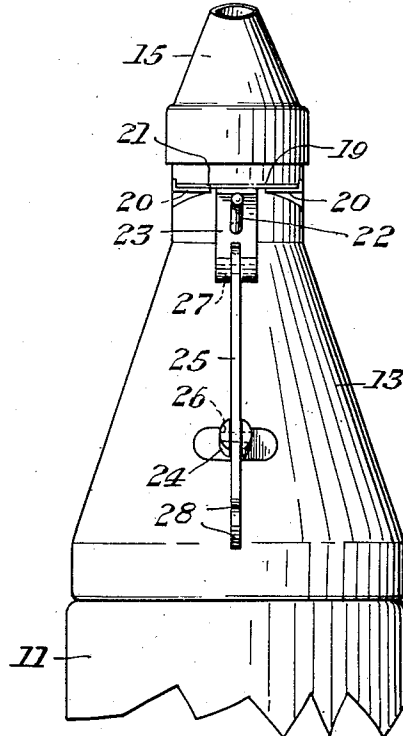


Fig. 3.

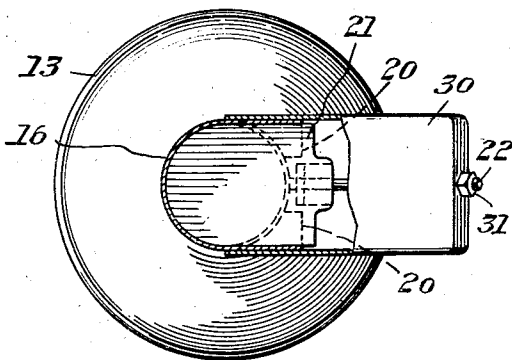
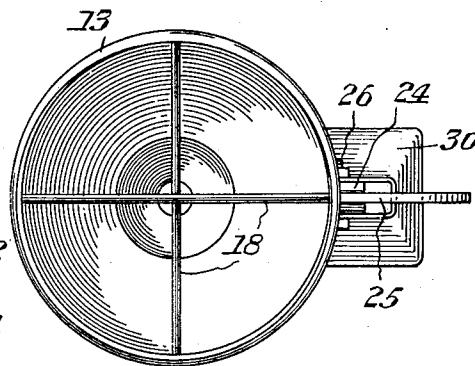


Fig. 4.



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UNITED STATES PATENT OFFICE

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DISPENSING DEVICE

Application filed January 30, 1932. Serial No. 589,956.

My invention relates to a device for dispensing liquids and solids and, in particular, to a device of this character which is suitable for use in restaurants, lunch counters, and the like.

Dispensing devices of the character in question as previously constructed have been characterized by numerous objections so that their use has not been general, even though the desirability of such devices is generally recognized. In the prior devices of this kind with which I am familiar, difficulty is experienced because of clogging of the spout or mouth of the dispenser. The control of the flow of material from the device, furthermore, is difficult and is largely a matter of accident. In addition, these devices as known heretofore have been difficult to keep clean and sanitary with the result that restaurant patrons object to their use.

I have invented a dispenser for solids or liquids which overcome the foregoing objections to present structures. All possibility of clogging or jamming of the material in the delivery spout is removed and a positive control of the flow of material at all times is afforded. The device can readily be cleaned and sterilized so that it may be kept sanitary with ease. The device is adapted for dispensing solids whether large or small, such as sugar or the small size crackers usually served with soup, or for liquids such as syrup or ketchup.

In accordance with my invention, I provide a dispensing device comprising a receptacle, preferably of glass, of a size and shape suitable to the article to be dispensed. The receptacle has a threaded mouth for receiving a dispenser cover or head. The latter comprises a cone threaded for cooperation with the receptacle. At the end of the cone, a tapering spout is mounted thereon by a tubular connecting portion. A sliding disc valve is adapted to reciprocate in guides for closing the tubular portion. An operating linkage is carried on the cone for withdrawing the valve. An extension of the operating mechanism facilitates operation of the valve by the forefinger, for example, of a hand holding the device. Further novel features and ad-

vantages of the construction will become apparent as the description thereof proceeds.

For a complete understanding of the invention, reference is made to the accompanying drawing illustrating a present preferred embodiment. It is to be understood, of course, that changes in the size, proportion and details of construction may be made within the scope of my broader claims.

In the drawing,

Figure 1 is a sectional view taken vertically through the axis of a dispensing device according to the present invention, certain details thereof being shown in elevation;

Figure 2 is a side elevation of the structure as would be seen by looking thereon from the right in Figure 2, with portions removed;

Figure 3 is a sectional view along the line III—III of Figure 1; and

Figure 4 is a bottom view of the dispensing head.

Referring in detail to the drawing, my dispenser, indicated generally at 10, comprises a receptacle 11 having a threaded mouth 12. The receptacle may be of any suitable material and of any desired size and shape, depending upon the material to be dispensed. I prefer glass or similar material, because of the ease with which it may be cleaned. A dispenser head or cover 13 comprises a cone shaped portion 14, a tapering spout 15 and a tubular connecting portion 16 therebetween. The lower rim of the cone 14 is threaded at 17 so that it may be screwed on the mouth of the receptacle 11. The cone 14 and the tubular portion 16 may be formed integrally and the spout 15 is threaded on the tubular portion 16. A grid 18, formed by crossed wires, extends over the lower end of the cone 14 for the purpose of preventing jamming of the material to be dispensed in the body of the cone. The grid tends to break up lumps or collections of the articles being dispensed so as to insure a smooth flow of material from the spout 15 at all times. Obviously, the grid 18 has utility only in connection with the dispensation of solids.

The tubular portion 16 of the head 13 is provided with a transverse slot 19 and guides 20 for receiving a flow controlling plate or

valve 21. The end of the plate is shaped to conform to the interior of the tubular portion 16 and to make a close fit therewith. A guide rod 22 extends radially from the head at a point adjacent the intersection of the tubular portion 16 and the cone 14. A finger 23 is secured to the lower face of the valve 21 and projects downwardly therefrom. The finger has a hole for receiving the rod 22 on which it is adapted to slide back and forth.

A bifurcated stud 24 is secured to the lower portion of the cone 14 and constitutes a bearing for a lever 25 hinged thereto on a pin 26. The lever 25 has an eye 26' which, with a pin 27 traversing the eye formed by the turned up end of the finger 23, constitutes a pivotal connection between the valve 21 and the lever 25. The lower end of the lever 25 curves outwardly and is provided with finger stops 28. The curvature and dimensions of the lower end of the lever 25 are such as to afford a convenient grip for the forefinger of the hand in which the dispenser is held. A leaf spring 29 bears against the lever 25 for maintaining the valve 21 closed. The stationary end of the leaf spring 29 is received on the rod 22 and bears against the inner surface of a cover 30 secured on the rod and against the cone 14 and tubular portion 16 by a nut 31.

Figure 2 shows the dispenser head with the pin 26, the spring 29, the cover 30 and the nut 31 removed. This figure shows the guides 20 projecting outwardly from the tubular portion 16 and the valve plate 21 slidably carried therein. As will be seen in Figure 4, the pin 26 projects through the sides of the cover 30 and forms an additional securing means therefor.

It will be apparent from the foregoing description that the invention constitutes a marked improvement upon dispensing devices of this character known heretofore. In addition to the advantages already pointed out, the construction of the valve is such that binding or jamming thereof in its guides is practically impossible. The valve 21 is guided not only by its guides 20 but also by the rod 22 so that it is always maintained in proper alignment for easy reciprocation. Smooth and easy operation of the valve by means of the forefinger engaging the lower portion of the lever 25 is, therefore, always possible. The valve 21 effects a positive control of the flow of material and sharply cuts off a stream of solid particles or liquid. The device is also of simple construction so that it can be manufactured at a relatively low cost. It is attractive in appearance, is not likely to get out of order and will, therefore, normally have a long useful life.

Although I have illustrated and described herein but one present preferred embodiment of the invention, it will be obvious that other embodiments can be made without departing

from the spirit of the invention or the scope of the appended claims.

I claim:

1. In a dispensing device, a spout, and a conduit leading thereto, a valve for said conduit and means for guiding said valve including guideways and a guide rod extending radially of said conduit, and a member secured to said valve and slidable on said guide rod.

2. In a dispensing device, a receptacle, a dispensing head removably secured thereto having a throat portion, a reciprocable slide for closing said throat portion, and guides for said slide comprising guideways and a guide-rod extending laterally from said throat portion, said slide having a portion reciprocable on said rod.

3. A dispensing head adapted to be removably secured to a receptacle, including a throat portion, a slide for said throat portion, a guide rod extending therefrom, a finger projecting from said slide and engaging said rod, and an operating lever pivoted to said head and connected to said finger for operating the slide.

4. A dispensing head for receptacles, comprising a conical portion having a cylindrical bottom threaded for removable engagement with a threaded receptacle mouth, a cylindrical portion surmounting said conical portion, a spout screwed on to said cylindrical portion, a valve member slidable in guides extending laterally from said cylindrical portion, and an operating lever for said member pivoted to said conical portion.

5. A dispensing head for receptacles, comprising a conical portion with a cylindrical bottom having means for removably engaging a receptacle mouth, a cylindrical portion above said conical portion, a removable spout on said cylindrical portion, and a gate slidable in guides extending laterally of said cylindrical portion.

In testimony whereof I have hereunto set my hand.

GERALD P. KEAN.