

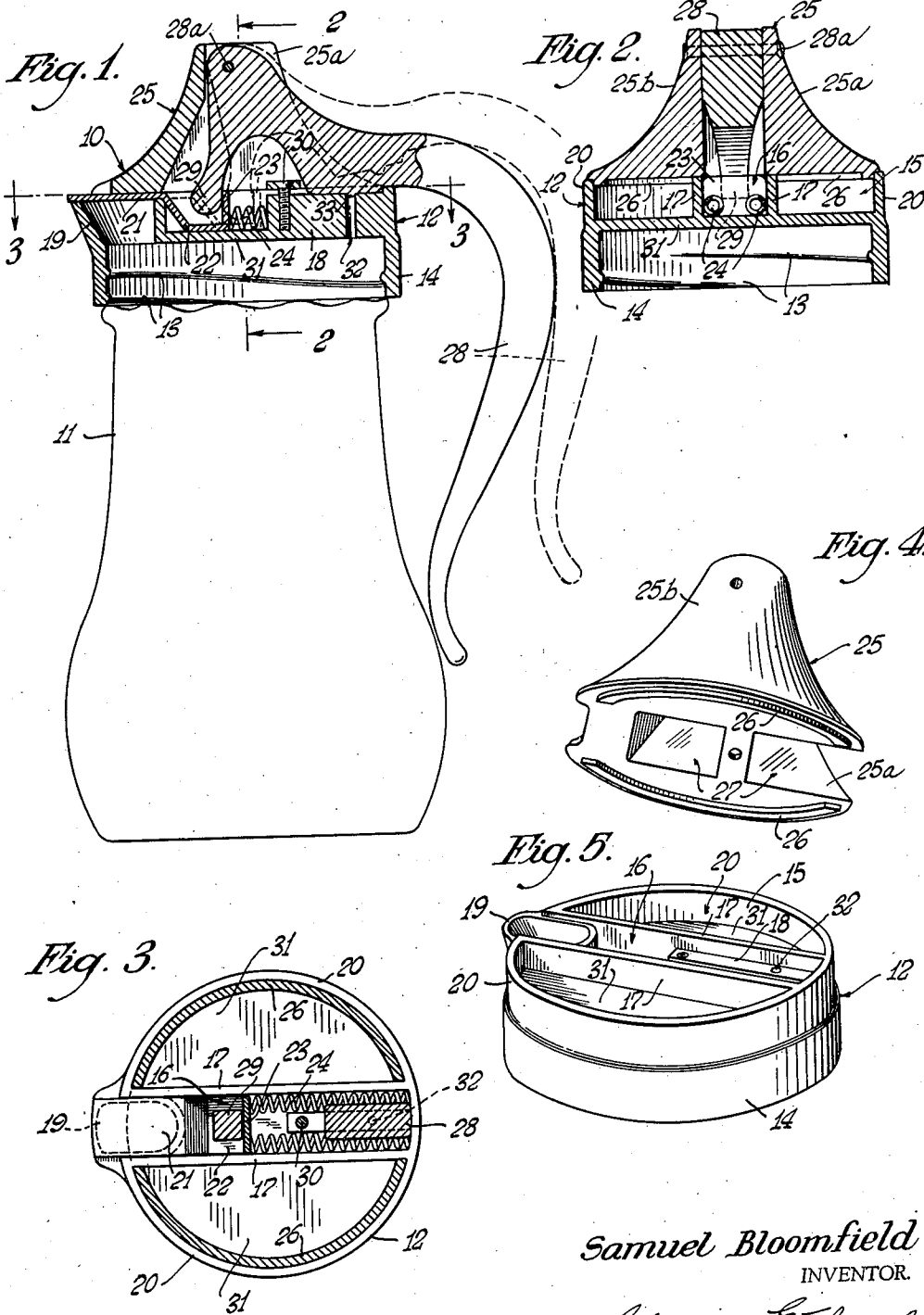
Sept. 1, 1942.

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2,294,594

DISPENSER

Filed Nov. 1, 1939



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2,294,594

DISPENSER

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Application November 1, 1939, Serial No. 302,337

3 Claims. (Cl. 65—31)

This invention relates to dispensing devices and particularly to a device for dispensing liquids in the nature of syrup and the like.

A principal object of the invention is the provision of a dispenser with a closure mechanism which is automatically opened when the device is lifted from its position of rest.

Other objects and advantages of the invention reside in the details of construction, as well as the coaction and arrangement of parts in the forms of the invention described hereinafter in view of the annexed drawing, in which:

Fig. 1 is an elevational view of a syrup dispenser with the dispensing mechanism shown partly in section;

Fig. 2 is a vertical section of the dispensing cap structure, looking in the direction of line 2—2 of Fig. 1;

Fig. 3 is a horizontal section of the dispensing cap along line 3—3 of Fig. 1;

Fig. 4 is a perspective view of the top section of the dispensing cap structure;

Fig. 5 is a perspective of the bottom or coupling section of the cap structure, and is complementary to Fig. 4.

As shown in Fig. 1, a preferred embodiment of the invention includes a dispensing mechanism or structure, generally indicated at 10, removably attached to the top of a liquid container 11. The dispensing mechanism includes a cap member 12 provided with means such as screw threading 13 (Fig. 2 also) for engagement with complementary attaching means at the mouth of the dispensing container or pitcher. The cap structure may be made of any material suitable for moulding, preferably metal, and includes a rim portion 14, on the interior wall of which is provided the threading 13, and which has an upper or top portion 15 with a groove or recess 16 running diametrically thereacross.

The groove or recess 16 is formed by opposite parallel wall portions 17 (Fig. 5 particularly) of the casting, there being an intermediate isolated projection disposed between the wall portions to provide a partition 18, the purpose of which will shortly appear. One end of the recess or groove terminates at a dispensing opening or spout 19, and the wall portions 17 are flanked by other recessed portions 20 in the casting.

As viewed particularly in Fig. 1, the closure means 21 is in the form of a strip of metal or other suitable material of a width adapted to fit into the groove 16 to reciprocate in sliding action back and forth therein into and out of closing relation to the dispensing opening or

spout 19, the closure strip having an offset portion 22 which fits down into the recess between the spout and the end of the partition 18. The offset part of the closure includes a vertical portion 23 (Figs. 1 and 3 particularly) which engages the ends of a pair of compression springs 24 disposed in the groove on opposite sides of the partition member 18 to urge the closure into normally closed position.

The dispensing structure is completed by the top section shown in Fig. 4 particularly, and which includes a complementary casting 25 having a pair of oppositely disposed arcuate ribs 26 on its bottom and adapted to fit snugly against the inner periphery of the recessed portions 20, the opposite ends of the ribs 26 respectively abutting the corresponding wall portion 17 to prevent turning movement of the top section 25 relative to the cap or bottom section 12 (see Fig. 2). The upper part of the top section 25 is tapered suitably and is slotted to provide opposite posts 25a and 25b constituting trunnions for the pivotal mounting of a handle. The bottom portion of the top section is cut away as at 27 to provide openings to facilitate movement of the handle member.

One of the novel aspects of the invention is the arrangement of the handle to open the closure when the dispenser is removed from its position of rest on a table or the like, and to this end the handle member 28 is pivotally mounted as at 28a between the posts 25a and 25b, it being observed that the pivotal axis 28a is extended transversely of the direction of reciprocation of the closure 21 and in a region above the latter. Handle 28 has a radially offset nose portion 29 (Fig. 1) which projects into the offset part 22 of the closure in a position to bear against the vertical offset 23 when the handle is pivoted in one direction from a position of normal rest, as illustrated in Fig. 1. The springs 24 in urging the closure 21 into normally closed position also cause the part 23 to bear against the nose 29 on the handle and move the latter into normal position.

The top section 25 is removably secured to the bottom or cap section 12 by a single screw 30 which threads into the partition member 18 and cooperates with the ribs 26 to hold the top section rigidly in position on the bottom section. The nose portion 29 on the handle projects through one of the cut-away portions 27 in the bottom of the top section for operative engagement with the closure.

The bottom section 12 is provided with an

integral web 31, which constitutes a floor, sealing off the recessed parts of the cap from the dispensing container upon which it is mounted, the spout portion 19, of course, communicating through the floor, and there being an air vent 32 communicating through the partition member 18 into the container to act as a breather in facilitating the free flow of liquids from the container. The under side of the handle is provided with a small nipple 33 which closes off the breather opening 32 when the handle is in normal position.

In the operation of the device, the dispensing structure, and particularly the cap portion 12 thereof, is threaded onto the top of the container as illustrated in Fig. 1, the container being intended normally to rest upon the surface of a table or the like with the handle in lowered position. If the handle is grasped and a directly vertical lifting movement applied thereto, there will be no relative pivotal movement between the handle and the cap structure, and hence no opening of the closure. In this manner the pitcher or other container may be freely moved about without opening the closure, and this results from the arrangement of the pivotal axis of the handle with respect to the closure and the radial closure operating projection 29 in the manner set forth. However, if, in addition to a directly vertical lifting movement, there is also applied to the handle a slight tilting effort to lower the spout portion 19 in pouring the contents of the pitcher or container, the force of gravity acting upon the container tends to resist the tilting effort, with the result that such effort causes the handle to pivot relative to the cap structure and withdraws the closure against the tension of its springs so that the liquid or other contents may flow from the container. As soon as a reverse tilting effort is applied to the handle, the container tends to assume its normally upright position and the springs 24 quickly urge the closure to closed position. It may be observed that the construction of the closure is such that it cuts across the opening of the spout in a manner which tends largely to prevent dripping.

The various advantages and objects of the invention may be accomplished by modifications of the particular embodiment specifically described herein, and it is intended that the appended claims shall include all equivalent arrangements fairly coming within their call.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In a dispensing unit for open top containers normally closed by a removable cover, a dispensing device including a cover member having a dispensing opening formed therein, a closure member arranged in said cover for slidable movement back and forth into and out of closing position relative to said opening, spring means arranged in said cover member and normally adapted to urge said closure member into closing position relative to said dispensing opening, a trunnion formed on said cover member above said closure member and providing an axis arranged transversely of the direction of move-

ment of the closure member, a handle pivotally mounted at the axis provided by said trunnion and adapted to rotate on said axis relative to the cover member, and an offset cam lever on said handle and extending radially from the pivotal axis therefor into operative engagement with said closure member whereby when said handle is grasped to lift the dispensing unit and a tilting effort is applied thereto to dispose the container in pouring condition, said container and handle will pivot relative to each other by force of gravity against the action of said spring to urge said closure member out of closing position relative to said dispensing opening.

2. In a dispenser, a dispensing cap structure including an annular cap constructed for attachment to a container and having a diametric groove in a horizontal plane one end of which terminates near a dispensing opening, a closure arranged to move back and forth in said groove into and out of closing relation relative to said opening, spring means disposed in said groove and normally urging said closure into closing position, a top member removably mounted on said cap, a handle mounted on said top member for pivotal movement about an axis transverse to the movement of said closure above the latter, said handle having an offset portion extending radially from said axis and operatively engaged with said closure to move the latter into open position when said handle is pivoted from a normal position away from said container, action of said spring means in urging said closure into normal position effecting movement of said handle into normal position as aforesaid, said handle including a hand grip extending downwardly adjacent said container to provide a lever whereby when tilting dispensing effort is applied to said hand grip the handle will be pivoted from a normal position away from said container against the action of said spring means for the purpose aforesaid.

3. In a dispenser, an upright container, a cover for the container, said cover including a dispensing opening at a side thereof, a closure mounted on said cover for movement back and forth in a horizontal plane into and out of closing position relative to said opening, handle means pivotally mounted on said cover for movement about an axis transverse of the direction of movement of the closure and at a level above the latter and the container, said handle means having a portion offset from its pivotal axis for operative engagement with said closure to move the latter into open position when the handle is pivoted in a certain direction from a normal position, means for yieldably urging said closure and handle means to dispose both of the same in a normal position in which said handle is lowered relative to said cover and container and the closure is in closed condition, tilting effort applied to the handle in normal condition for the purpose of tilting the container in dispensing action, being effective to pivot the handle relative to the cover and move the closure into open position.

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