April 4, 1944. B. F. HAMILTON ET AL 2,345,971

HOLDER FOR SIFTER-TOP CAN

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Fig. 1.

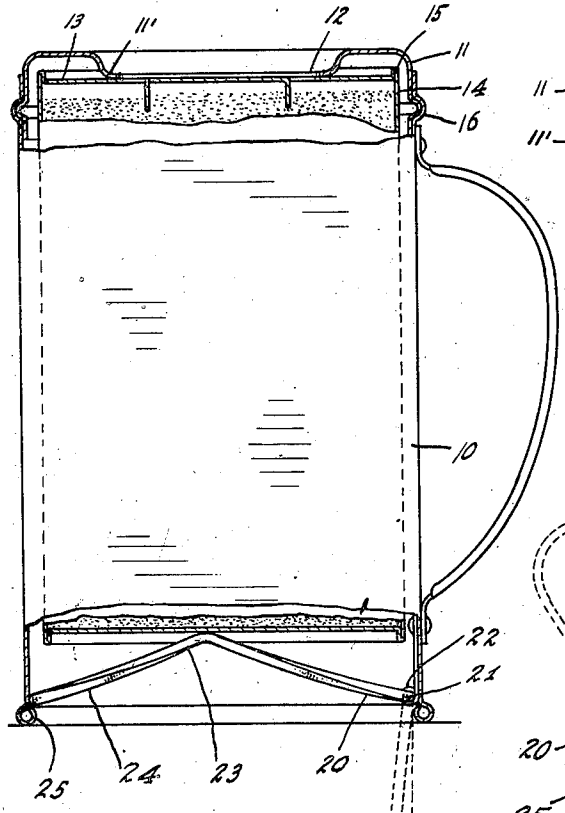


Fig. 2.

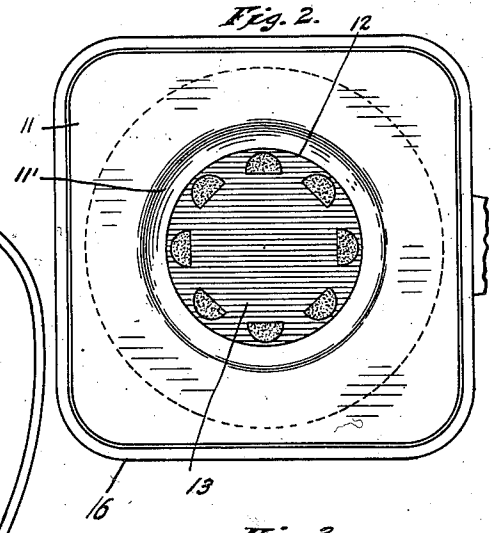


Fig. 3.

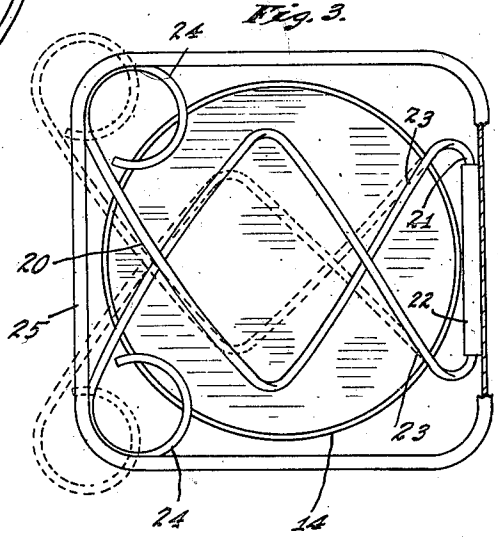
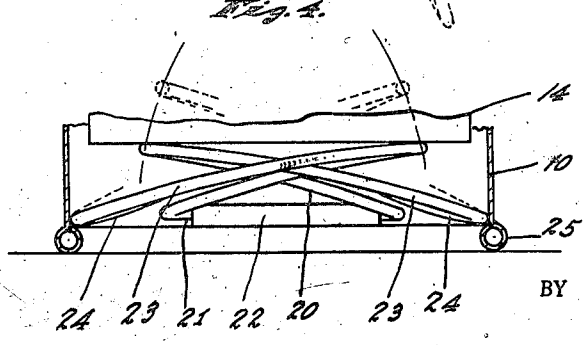


Fig. 4.



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HOLDER FOR SIFTER-TOP CANS

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5 Claims. (Cl. 221—61)

It is the object of our invention to produce a holder adapted to contain a can of scouring powder or other material dispensed or distributed by a sifting operation. More specifically, it is our object to produce a holder adapted to contain cans which, within limits, vary in size, to provide a holder which will not retain any water that might happen to enter it, and to provide a holder from which empty cans can readily be removed and into which full cans can easily be inserted.

In carrying out our invention, we form a shell of sheet-metal, making it somewhat larger in dimensions than the largest can which it is to receive and preferably making it generally square in cross-section. The holder is provided with a top, desirably in the form of a separate piece, which is permanently secured to the upper end of the holder-body and which is provided with a central opening large enough to expose all the sifter holes in the top of the can. To hold a can in place within the holder, we pivot on one side of the holder a spring-element adapted to be swung between a position in which it lies beneath a can and a position in which it lies outside of the holder to permit a can to be inserted or removed.

The accompanying drawing illustrates our invention: Fig. 1 is a side elevation of the holder with portions of the side wall thereof broken away; Fig. 2 is a top plan view of the holder; Fig. 3 is a bottom plan view; and Fig. 4 is a fragmental vertical section parallel to the front face of the holder.

The body 10 of the holder is formed of sheet-metal and is desirably generally square in cross-section. At the upper end of the holder-body 10 there is provided a top 11 which has a central opening 12 large enough to expose sifter holes in the top 13 of the can 14 which the holder is to receive. The material of the holder-top 11 at the periphery of the opening 12 is depressed, as indicated at 11' in Fig. 1, to engage the top 13 of the can 14 at a distance spaced inwardly from its periphery in order to provide clearance for the bead 15 at the upper end of the can. Conveniently, the top 11 and body 10 of the holder interfit with each other telescopically and are secured together, as by the formation of inter-engaging beads 16 extending throughout the periphery of the can-body.

To retain a can in position within the holder, we employ a retainer 20 formed of spring wire and adapted, when a can is in position in the holder, to extend across the open bottom of the latter and exert on the can 14 an upward pressure holding it in contact with the top 11. While the retainer 20 may take various forms, we prefer the form illustrated in the drawing. There the retainer is shown as formed of a single piece of spring wire having an intermediate portion 21 which is rotatably received in a suitable bearing 22 on the back wall of the holder-body 10. At the ends of the intermediate portion the wire is bent forwardly to form arms 23. As is clear from Fig. 3, each of the arms is bent into a V-shape with the depth of the V being considerably greater than half the length of the intermediate portion 21, so that the center portions of the arms overlap and the apices of the V's are spaced apart. At its free end, each arm 23 is formed into a ring 24 adapted to engage above a bead 25 at a front corner of the holder-body 10.

Each arm 23 is so formed that the distance across the open end of the V is considerably greater than the width of the holder-body, as indicated in dotted lines in Fig. 3, with the result that when the retainer is in place across the lower end of the holder-body each arm 23 will be stressed in its plane and the rings 24 will bear resiliently against the walls of the holder-body above the bead 25. The plane in which each V-shaped arm 23 lies is at an angle to the intermediate portion 21 as shown in Fig. 4, so that when the retainer is in place the apices of the V's will be materially higher than the intermediate portion 21 or the rings 24 and, with no can in the holder, will be spaced from the depressed portion 11' of the top 11 by a distance somewhat less than the shortest can the holder is to contain. Thus, when a can is in place, the plane of each arm will be rotated toward the horizontal, the wire will accordingly be stressed, and the apices of the V's will bear resiliently upward on the bottom of the can to hold the top of the can firmly in contact with the depressed portion 11' of the holder-top. The resilience of the arms, which permits depression of the apices of the V's in the manner just described, allows cans of different lengths to be received and firmly retained in the holder. Fig. 4 shows, in dotted lines, the position of the arms 23 when a relatively short can is in the holder.

To remove a can from the holder the thumb and one finger are inserted respectively into the rings 24 and such rings are forced diagonally inward of the holder to free them from engagement above the bead 25. Thereupon, the retainer can

be swung downwardly to the dotted-line position illustrated in Fig. 1 and the empty can removed. To put a new can in place in the holder, the can is inserted upwardly through the bottom of the holder with the retainer in the dotted-line position shown in Fig. 1, and the retainer is then swung upwardly into the full-line position illustrated in Fig. 1 with the rings **24** engaging above the bead **25** and with the apices of the V-shaped arms **23** bearing resiliently against the can-bottom and forcing the can upwardly to hold its top **13** firmly against the depressed center portion **11'** of the holder-top **11**.

While the two arms **23** act in common to retain a can in position, it is to be noted that each arm is in itself a retainer. It is further to be noted that since the point of engagement of each arm with the can-bottom is offset laterally from a line joining the ends of the arm the arm does not act as an arch in supporting the can and the weight of the can therefore has little if any tendency to spread the sides of the holder-body apart.

We claim as our invention:

1. In a holder for sifter-top cans, such holder having an open-bottomed body adapted to receive a sifter-top can, and a top provided with a central opening to expose the sifter holes in the sifter-top can, a resilient retaining member for holding the can upwardly against the holder-top, said retaining member being formed of a single piece of spring wire having an intermediate portion pivotally attached to one side of said holder-body near the bottom thereof and arms rigid with said intermediate portion and adapted to extend across the open-bottom of the holder body into association with the opposite side thereof, said holder body being provided with a shoulder above which the free ends of said arms engage, the distance of the free ends of the arms from said intermediate portion being greater than the width of the holder-body whereby the arms will be stressed when in position, each of said arms intermediate its ends being offset laterally and upwardly to provide portions bearing resiliently against the bottom of a can in the holder.

2. In a holder for sifter-top cans, such holder having an open-bottomed body adapted to receive a sifter-top can, and a top provided with a central opening to expose the sifter holes in the sifter-top can, a resilient retaining member for holding the can upwardly against the holder-top, said retaining member being formed of a single piece of spring wire having an intermediate portion pivotally attached to one side of said holder-body near the bottom thereof and arms rigid with said intermediate portion and adapted to extend across the open-bottom of the holder body into association with the opposite side thereof, said holder body being provided with a shoulder above which the free ends of said arms engage, each of said arms being V-shaped in plan and being so formed that their apices overlap and are higher than said intermediate portion and shoulder whereby to bear resiliently against the bottom of a can in the holder when the retainer is in position.

3. In a holder for sifter-top cans, such holder having an open-bottomed body adapted to receive a sifter-top can, and a top provided with a central opening to expose the sifter holes in the sifter-top can, a unitary retaining member formed throughout of resilient material for holding the can upwardly against the holder-top, said retaining member extending across the open bottom of said holder-body, one end of said retaining member being pivotally connected on a horizontal axis to one side of said holder-body, the opposite side of said holder-body being provided with an upwardly presented shoulder above which the adjacent end of the retainer is engageable, said retainer having intermediate its ends a laterally and upwardly offset portion adapted to bear resiliently against a can in the holder.

4. In a holder for sifter-top cans, such holder having an open-bottomed body adapted to receive a sifter-top can, and a top provided with a central opening to expose the sifter holes in the sifter-top can, a unitary retaining member formed throughout of resilient material for holding the can upwardly against the holder-top, said holder-body having near its lower end provisions engaging the ends of said retainer to retain it in position extending across the open bottom of the holder-body, at least one end of said retainer being disengageable from its associated provisions to permit displacement of the retainer, said retainer having intermediate its ends a laterally and upwardly offset portion adapted to bear resiliently against a can in the holder.

5. In a holder for sifter-top cans, such holder having an open-bottomed body adapted to receive a sifter-top can, and a top provided with a central opening to expose the sifter holes in the sifter-top can, a unitary retaining member formed throughout of resilient material for holding the can upwardly against the holder top, said retaining member extending across the open bottom of said holder-body, one end of said retaining member being pivotally connected on a horizontal axis to one side of said holder-body, the opposite side of said holder-body being provided with an upwardly presented shoulder above which the adjacent end of the retainer is engageable.

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