Sept. 26, 1944. J. E. VALENTINE 2,358,953

POWDER DISPENSER

Filed April 28, 1942

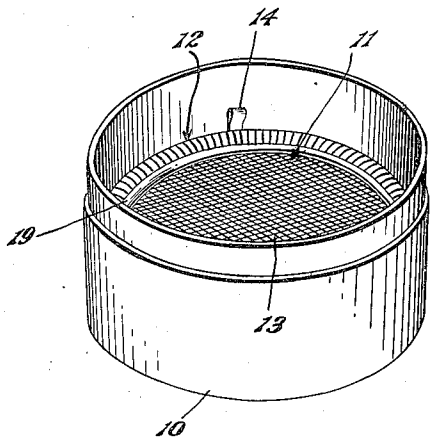
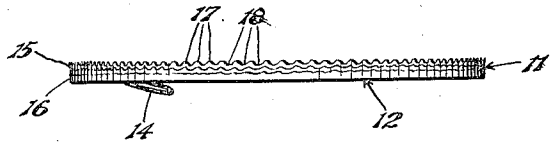


Fig. 1.

Fig. 2.



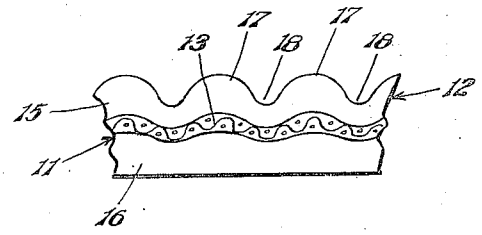


Fig. 3.

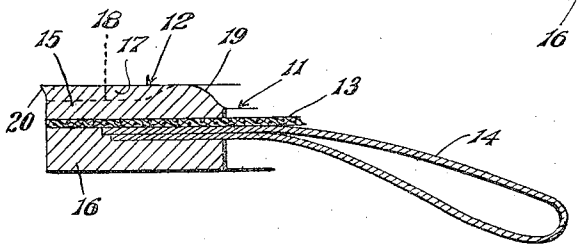


Fig. 4.

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Patented Sept. 26, 1944 2,358,953

UNITED STATES PATENT OFFICE

2,358,953

POWDER DISPENSER

Joseph E. Valentine, Plainfield, N. J.

Application April 28, 1942, Serial No. 440,784

1 Claim. (Cl. 222—205)

This invention relates to powder dispensers, and more particularly to that type of article as employed for the dispensing of talcum, face-powder, and the like.

Powders of the character indicated are available in various forms, that is, loose, in the cake, and otherwise, and the present invention is directed more especially to use of the loose variety by first applying a limited amount thereof to a powder-puff and then applying it to the person from the puff. Containers for the powder differ as to size and character, some being for bureau use and others of a more portable character for carrying in a lady's handbag. In any event, it is desirable to confine the powder to such degree that it will not spill or be present in such profuse form as to be objectionable. While the prior art is replete with mechanical dispensers, there have been but few of the follower type of screen sifters, and such as have heretofore appeared on the market have had drawbacks which it is not the purpose to here enumerate, it being sufficient to state that the present invention is directed to the accomplishment of purposes heretofore sought but not attained.

Among the objects of the invention, therefore, is to provide an improved sifter type of powder dispenser which will frictionally remain in place.

Another object is to provide a sifter-type powder dispenser which will follow down with the powder level and yet tightly engage the container wall so as to not readily be displaced away from the powder level.

Another object is to avoid stitching and accordingly be enabled to employ a more rigid character of sifter frame.

Yet another object of the invention is to obtain a most secure retention of the sifting mesh in the sifter frame.

Yet another object of the invention is to reduce the width of frame and correspondingly increase the area of the sifting web and at the same time have a structure which will present the desired rigidity and proper fit.

Additional objects of the invention will appear as the description progresses, both by direct statement thereof and by implication from the context.

In the accompanying drawing, in which like numerals of reference indicate similar parts throughout the several views,

Figure 1 is a perspective view of a sifter type powder dispenser in accordance with the present invention, showing the same in use in a container;

Figure 2 is an edge view of the said dispenser;

Figure 3 is a similar view but on a much greater scale and showing only a part of the dispenser; and

Figure 4 is a sectional view on a diametric plane normal to the dispenser and showing a part of the same next and including the frame and lifting tab.

In the specific embodiment of the invention illustrated in said drawing, the reference numeral 10 designates a container of appropriate size, shape and character for the powder to be dispensed. The particular container selected for the present showing is cylindrical, but other shapes may just as well be shown, as the invention is equally applicable to the various known and popular shapes of powder containers. The only limitation imposed upon the container is that it shall maintain uniformity of dimension throughout its height so that a sifter which fits when at one elevation will fit substantially as well at another elevation in the container.

For use in such a container as 10, the invention contemplates provision of a dispenser identified in general by numeral 11 and comprising essentially three parts, namely, a peripheral frame 12 the open area whereof has a sifting web or mesh 13 throughout, and a removing tab 14 secured to the frame. The contour of the frame is the same as the inside shape of the container and appropriately dimensioned so as to fit snugly around its entire periphery against the inside wall surface of the container.

The frame is preferably die-cut not only to give precision of size and shape, but to obtain a frame which is narrow and of appropriate rigidity and strength. A material is used, of which leather, rubber, plastics and the like are examples, which is strong and somewhat flexible although amply self-sustaining and capable of maintaining frictional contact throughout its periphery with the container wall and not readily deflected therefrom, and likewise amply self-sustaining so as to maintain itself substantially flat. Said frame is preferably composed of an upper section 15 and a lower section 16 which are separately die-cut and afterwards superposed one over the other, the inner and outer diametric dimensions of both preferably being the same so that said sections register precisely.

The sifting web or mesh 13 may be and preferably is a close-woven net of cotton or other suitable material which may be somewhat stiffened, if desired, by sizing or otherwise. The net, while preferred, is to be understood as il-

lustrative of any appropriate foraminous material the openings whereof are of appropriate dimension to permit powder to have a restricted freedom of passage therethrough such that tapping or rubbing with a puff is necessary to dispense the powder through said openings. The net is made or cut to the approximate contour and outer dimension of the frame, and is assembled therewith so the peripheral margin of the web is interposed between the sections of the frame and held thereto and the frame sections unified as a single frame, by a suitable adhesive. The adhesive is preferably one which is rendered adhesive upon application of heat thereto, and when so characterized, may, for brevity, be referred to as a thermo-adhesive. The invention is not, however, limited to use of a thermo-adhesive.

A loop of ribbon constituting tab **14** has its ends juxtaposed and inserted between the mesh and the lower frame section before bringing those parts together, the thickness of the ribbon being necessarily greatly exaggerated in the drawing. It is preferably applied so that the looped end extends radially inward with respect to the frame when applied, and to be properly used is passed under the frame section below where attached and then up at the outside of the frame next the wall of the container. Tension on the tab to remove the dispenser from the container will not tend seriously to separate the frame sections and web. The aforementioned adhesive by which the frame sections and web are secured, also secures the tab at the end portions of the ribbon comprising the same.

In manufacture, after cutting the frame sections and web as above described, the adhesive is applied and the several parts juxtaposed to each other in proper superposed relation, and all inserted in a female die of a size and shape corresponding to the outside diameter, size and shape of the dispenser. An upper or male die is then brought down with pressure, and at the same time heat is preferably applied, as by having an electrical resistance-wire heater in the upper or lower dies or in both. Furthermore the lower face of the upper die is by preference of a suitably roughened character, as by having an annular hollow where superposed next to the peripheral inner margin of the frame, and having radially beyond said hollow a circular series of radial depressions and ridges. The die will accordingly apply a deforming pressure by which the upper section is impressed with radial humps and depressions **17**, **18** respectively, extending outward from a circular ridge **19** next the inner periphery of the said section. The deformation, somewhat lessened in definition is transmitted to the underlying portion of the web and to the upper surface of the lower section of the frame, thereby mechanically interlocking the web between the frame sections in addition to the retention thereof by the adhesive. The deformation of the upper section with the radial humps and depressions extending to the outer periphery, tends to produce burrs **20** next the upper surface, and these burrs, by their position and shape, will greatly improve the grip of the frame upon the contacted wall of the container and will offer greater resistance to upward movement of the frame than to downward movement into the container. After the pressure and heat of the die has been effective to form the frame sections, web and tab into a unified dispenser, the upper die is raised, the lower die is swung open by virtue of vertically hinged halves, and the dispenser removed. It is then perfect in shape and size and will obtain a close fit in use around its entire periphery within the container for which it is made and can be used and reused without leaking or losing its shape or disintegrating as result of frictional wear between it and the container.

I claim:

A powder dispenser comprising superposed ring sections, a foraminous web marginally disposed between said sections, said sections being heat-united through the meshes of the marginal portion of the web, one of said sections being corrugated through said heat-uniting, and burrs formed with certain of the corrugations at their outer ends through said heat-uniting and located approximately equidistantly around the dispenser to frictionally grip the inner surface of the wall of a container.

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