Oct. 12, 1948.

G. D. RUNNELS

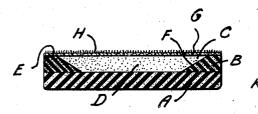
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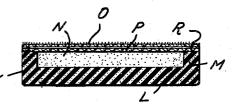
POWDER APPLICATOR

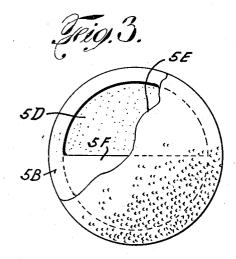
Filed Jan. 14, 1942

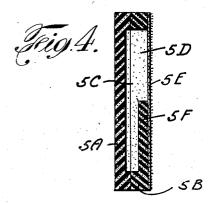
Trig.1.

Frig. 2.









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## UNITED STATES PATENT OFFICE

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## POWDER APPLICATOR

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8 Claims. (Cl. 15—131.F)

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My invention relates to powder applicators, and more particularly to those intended for use in applying face powder, skin rouge, and the like.

Self-dispensing powder puffs heretofore devised are open to several objections, such as the total or partial collapse of the puff or of the wiping surface as the supply of powder diminishes thus producing a consequent rumpling of the powder applying surface when the puff is used; the construction permits the escape of powder from other than the applying surface so that the errant powder gets on the hands or the clothes of the user, and such puffs have been too expensive to manufacture for wide public distribution.

It is one object of my invention to provide a 15 self-dispensing powder applicator in which the powder applying surface, in this case a porous fabric, is at all times maintained smooth and even until all the powder in the applicator has been used.

It is another object of my invention to provide a self-dispensing powder applicator made of a substantially non-porous material having a pocket open to one face, which pocket is closed by a porous fabric sealed to the body in such a way that powder escapes only from the fabric facing.

It is a further object of my invention to provide a self-dispensing powder applicator the body of which is made of a self-supporting, pliable material having an open pocket therein covered by more than one layer of porous fabric sealed to the body.

It is a still further object of my invention to provide a self-dispensing powder applicator made of sponge rubber and having a pocket in one face thereof in which the inner edge of the pocket is tapered inwardly to provide a flat backing for the porous fabric wiping surface as the applicator is bent in use.

Other and further objects of my invention will be apparent from this specification, taken in conjunction with the accompanying drawings, in which—

Figure 1 is a vertical section through one form of pewder applicator according to my invention; Fig. 2 is a vertical section through another form of powder applicator constructed according to my invention; and Figs. 3 and 4 are respectively plan and vertical sections of a still further modification.

It is obvious that the physical form of these applicators can be widely varied, the ones shown in the drawing being given merely by way of example of the principles and features of my invention.

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Referring to Fig. 1, the powder applicator comprises a flat bottom disc A on which is mounted a ring B. The ring is sealed to the disc and together they define a pocket C which is open at the top. The pocket holds the supply D of powder to be applied or dispensed. In the illustration both the disc and the ring are formed of sponge rubber, which is my present preferred material, but these parts may be made of any other pliable material such as leather, a textile padding, and similar materials; or they may each be made of a different material, and the disc may be less pliable than the ring. The rubber serves other advantages, as will presently appear. Also, I have found it desirable to have the exposed surfaces of the disc A and ring B provided with a substantially non-porous outer surface through which the powder cannot sift. One way to obtain such a surface is to have the disc and ring of molded rubber.

The ring C has a flat upper surface E, and the inner wall of the ring tapers inwardly and downwardly into the pocket from this surface E, as indicated at F. The angle of the taper may be selected as desired but I prefer to use an angle of less than 45° which I find provides a broad support for the wiping surface especially when the applicator is used on the irregular contours of the face, such as around the jaw bone and chin. The surface F may have other shapes which will accomplish the same purpose.

The open side of the pocket C is closed by a layer of porous fabric G which stretches across the open top and overlies the upper surface E of the ring B at least to the outer edge thereof. The fabric is secured in place by coating this surface E with a layer of suitable adhesive to seal the fabric G to the ring. This serves several purposes. The fabric G being applied to the ring while in its stretched condition insures that the fabric will at all times remain smooth and even regardless of how little powder there is in the pocket C. Again, the sealing of the fabric to the top of the ring prevents the escape of the powder around the edges of the ring and permits the escape of the powder through only the part of the porous fabric which is exposed over the pocket C. The fabric may be of any material suitable for the purpose, viz., permitting the powder to pass 50 through the same in the desired quantities as it is rubbed over the skin. For this purpose I prefer to use a rayon fabric having a woven back and a soft rayon pile H on the outer surface thereof, and which constitutes the wiping surface.

In the manufacture of the powder puff or ap-

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plicator of Fig. 1, pre-formed disc A and ring B are sealed together, a charge of powder D is put into the pocket C, adhesive is applied to the surface E and the stretched fabric G is pressed down upon the surface E to close the pocket and complete the powder applicator. In use, it is only necessary to wipe the fabric G over the surface to which the powder is to be applied and the powder will pass through the fabric evenly onto the surface. Inasmuch as there may be no escaping of the powder from any area except through that portion of the fabric covering the pocket C, the user can easily control the place and amount of the powder applied and no powder will fall on other areas than that to which the applicator is 15 applied. The applicator being made of flexible or resilient material it will readily accommodate itself to uneven surfaces during its uses.

Referring to Fig. 2, the body K of the applicator is molded in one piece, which provides the smooth, substantially non-porous outer surfaces desired. The body K comprises the base L and an upstanding peripheral ring M which define the pocket N. In cases where it is desired to apply only very small quantities of the powder, as is true with cheek rouge for example, the pocket N is closed by two superimposed layers of fabric O and P. I have found it of advantage to use both layers of the rayon pile fabric similar to that referred to above at Q, but this is not necessarily the case since a plain fabric could be substituted for the lower layer P.

In the manufacture of the powder applicator of Fig. 2 the rouge powder is placed in the pocket N, the two layers of fabric O and P are sewn together as indicated at R while the fabrics are stretched smooth, and then the bottom layer P is cemented or otherwise secured to the upper surface of the ring M so as to close the pocket N. The applicator will be used in the same manner as the applicator of Fig. 1 but by reason of the double layer of fabric, the powder will escape much more slowly. Of course, in place of the second layer of fabric P any other sifter partially closing the pocket N could be substituted.

Figs. 3 and 4 illustrate another form of applicator affording certain additional facility in the use of the applicator and also further protecting against the accidental escape of powder from other than the wiping surface. In the use of the form shown in Fig. 1, for example, there is sometimes a tendency for the user to bend the lower part of the applicator outwardly. This leaves the lower part of the wiping surface exposed so that powder therebehind might sift out and fall on to the clothes of the user

In Figs. 3 and 4 the applicator comprises a cupshaped base 5A to which is sealed an inverted cup shaped cover 5B, these two members defining a pocket 5C for the powder. The cover has an opening 5D in its face and near one side thereof. The opening is shown as somewhat semi-circular in shape but other shapes may be used, the plan here being to have the opening of the pocket occupy only a portion of the face of the applicator. A porous, soft pile fabric 5E is applied over the face of the applicator and the opening 5D. This may be sealed to the entire face, but it is desirable that it be sealed around the edges of the opening 5D, and the fabric need not cover the 70 entire face of the applicator.

In use, the user may grip the flat surface of the back 5A and the similar surface 5F of the face portion, bending the lower portion of the applicator outwardly (to the left in Fig. 4). This 75 fabric exposed over said opening.

will automatically give a slightly increased distributed pressure forwardly on the face opposite the opening 5D which is of aid in applying the powder. The straight bottom edge of the opening 5D also affords a straight powder applying edge also of advantage in use on the face without waste of powder.

It will be understood that while reference has been made to the use of an adhesive to secure the fabric to the powder container, any other means of sealing the parts together may be used that will also hold the fabric taut on the applicator at all times.

Other modifications may be made in the arrangement and location of parts within the spirit and scope of my invention, and such modifications are intended to be covered in the appended claims.

I claim:

I. In a powder applicator, a substantially non-porous flexible body having a pocket therein open at one face thereof and surrounded on the opposite face and the sides by said body, the pocket being for the reception of powder to be applied,
 a plurality of superimposed layers of a porous fabric having a soft pile outer face, the layers of fabric being stretched across the open face to close the same, and means sealing the layers of fabric to the body in their stretched condition so as to close the opening and the pocket against the escape of powder from the applicator except from the portions of the fabric that are exposed over the open face.

2. In a powder applicator, a body of pliable rubber of substantial thickness and having a portion
removed from one face thereof to form a pocket
with a rim of the rubber surrounding the pocket
at its sides, the pocket being for the reception
of powder to be applied, and a plurality of superimposed layers of porous fabric having a soft pile
outer surface, the fabric layers being stretched
across the pocket and sealed to the outer surface
of the rim to close the pocket against the escape
of powder except from the portions of the fabric
which are exposed over the open portion of the
pocket.

3. In a powder applicator, a disc, a ring of pliable material mounted on the disc and sealed thereto, and a pair of superimposed layers of porous fabric at least one of which has a soft pile outer surface, the layers of fabric being sealed to the rim so as to close the ring against the escape of powder except through that portion of the fabric exposed over the open portion of said ring.

4. In a powder applicator, a body of resilient material having a pocket therein, and a face portion, an opening through the face portion into the pocket, said opening being located remote from one edge of said body and adjacent an opposite edge thereof, and a porous, soft pile fabric stretched across the opening and secured to the body so as to close the opening against the escape of powder except through that portion of the fabric exposed over said opening.

5. In a powder applicator, a body of resilient material having a pocket therein, and a face portion, an opening through the face portion into the pocket, said opening being located remote from one edge of said body and adjacent an opposite edge thereof, and having a substantially straight bottom edge, and a porous, soft pile fabric stretched across the opening and sealed therearound so as to close the opening against the escape of powder except through that portion of the fabric exposed over said opening.

6. In a powder applicator, a body of pliable rubber of substantial thickness so as to be held in the hand when the applicator is in use and having a pocket formed therein which is open at one face of the body, the pocket being surrounded on its sides by a self-sustaining rim of the rubber and being for the reception of powder to be applied to the skin by the applicator, and a cloth having a soft pile outer surface, the cloth being stretched across the opening and sealed to the outer sur- 10 face of the rim so as to close the opening and the pocket against the escape of powder from the applicator, except from that portion of the cloth which is exposed over the opening, whereby application of the powder to the skin is readily con- 15 trolled by the user.

7. In a powder applicator, a body of pliable rubber of substantial thickness so as to be held in the hand when the applicator is in use and having a portion removed from one face thereof to form a pocket with a ring of the rubber surrounding the pocket at its sides, the pocket also having an inwardly and downwardly tapered side wall extending from the top of the ring to the bottom of the pocket, the pocket being for the reception of powder to be applied to the skin by the applicator, and a cloth stretched across the pocket and sealed to the outer surface of the ring to close the pocket against the escape of powder over the edges of the ring.

8. In a powder applicator, a disc of pliable material to be held in the hand when the applicator is in use, a ring also of pliable material mounted on the disc and sealed thereto to define a pocket for the reception of powder to be applied to the skin by the applicator, and a porous fabric having a soft pile outer surface, the fabric overlying and being sealed to the ring, the construction and arrangement being such that powder can escape only from the exposed portion of the cloth overlying said pocket.

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