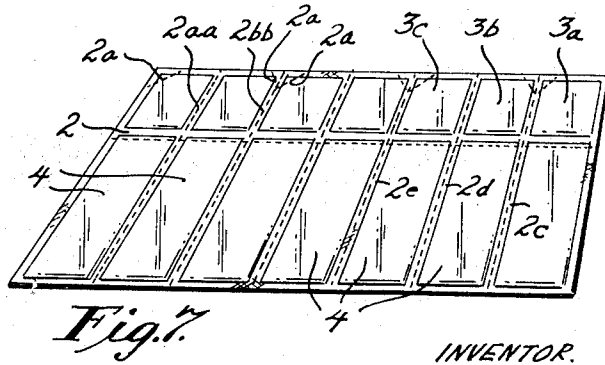
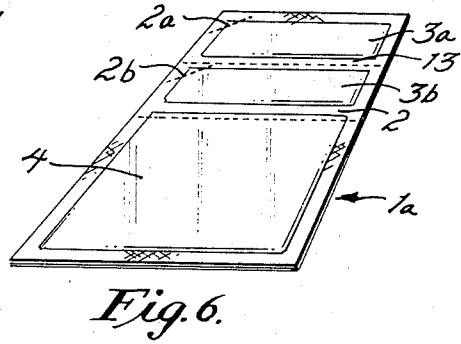
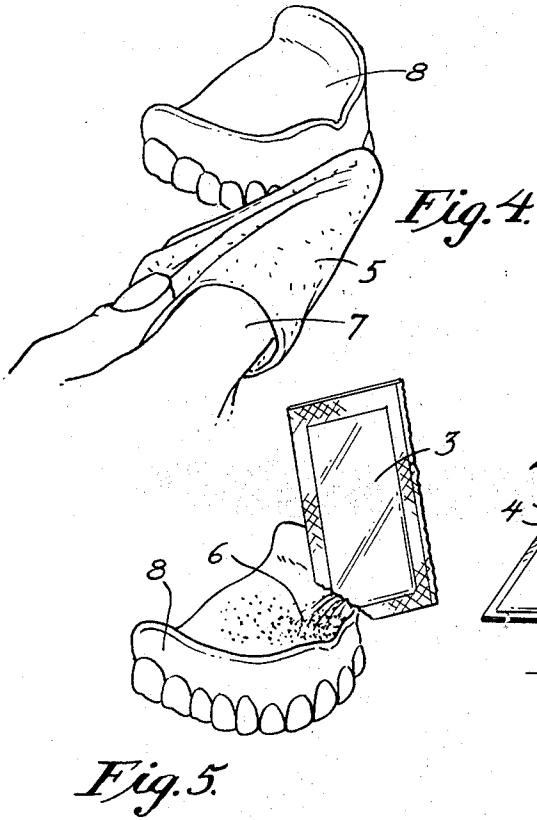
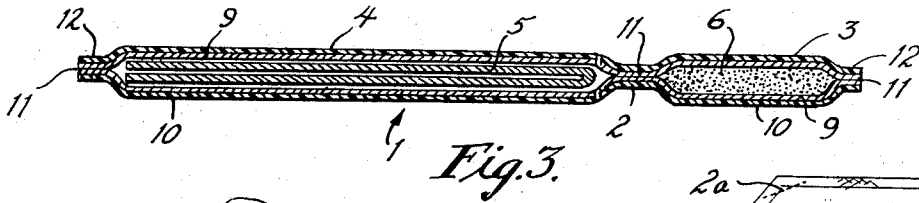
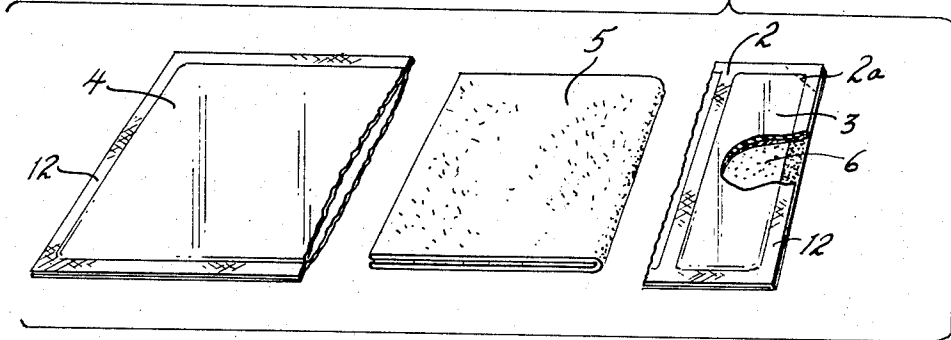
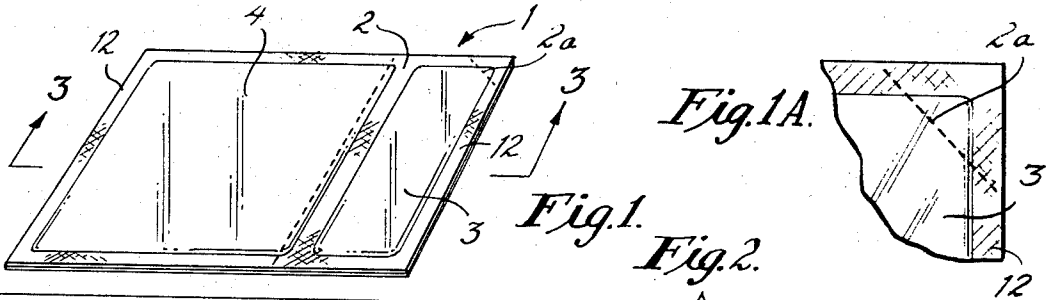


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DENTURE CARE PACKET INCLUDING A CLEANING
FABRIC AND ADHESIVE COMPOSITION
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3,534,887



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DENTURE CARE PACKET INCLUDING A CLEANING FABRIC AND ADHESIVE COMPOSITION

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6 Claims

ABSTRACT OF THE DISCLOSURE

A denture care packet of the disposable type which comprises a tearable compartmented envelope containing a finger-actuable cleansing fabric impregnated with a germicidally-effective cleansing agent in one compartment and a denture adhesive composition disposed in separate compartment of the envelope.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates to a disposable denture care packet which includes a means for cleansing and deodorizing a denture or a dental plate and a means for adhering a denture, i.e., a set of artificial teeth, in position in the mouth of the wearer.

Description of the prior art

A disposable or throw-away type packet containing implements for oral hygiene is known. One such packet is described in U.S. 2,512,001, wherein is disclosed a disposable toothbrush coated with a toothpaste and enclosed in an envelope.

SUMMARY OF THE INVENTION

The packet invention is directed to a disposable denture care packet advantageously adapted to the cleansing and deodorizing of dentures and dental plates and their conditioning for subsequent use in the mouth of the wearer. The invention comprises a tearable packaging envelope which is moisture-proof and which is internally divided into at least two compartments, one of which contains a fabric impregnated or saturated with a germicidally-effective cleansing solution and another compartment which contains a denture adhesive composition, preferably in the form of a powder.

BRIEF DESCRIPTION OF THE DRAWING

The invention is illustrated in the drawing wherein:

FIG. 1 is a perspective view of an unopened packet;

FIG. 1A is enlarged corner area of FIG. 1;

FIG. 2 is a partially opened packet;

FIG. 3 is a cut-away cross-sectional side view of the packet and its contents taken along the line 3-3 of FIG. 1;

FIG. 4 is a schematic illustration of cleansing of a denture;

FIG. 5 is a schematic illustration of treating a cleansed denture with adhesive powder;

FIG. 6 is a packet including two small compartments for adhesive powder; and

FIG. 7 is a multi-packet strip of packets.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The invention is described further with reference to the drawing wherein 1 is a sealed packet having a large compartmented portion 4. The packet has a compressed strip portion 2 which serves as a separator and tear strip along which the packet can be torn to separate the two

portions and to open each individually. Also or alternatively, the packet has a compressed or tear strip at one or two corners of compartment 3, along 2a, 2b along which the compartment can be torn to allow for the opening of this compartment. The compartmented portion 3 contains in its compartment a denture powder 6 of a formulation which is used as an adhesive for holding denture plates in place in the mouth of a denture wearer. This powder is dispensed through the opening provided along either tear strip as the portion of the packet is torn off.

The compartmented portion 4 contains in its compartment a sheet of fabric 5 of absorbent fibrous material, preferably a flannel or blotter type paper made of cellulose fibers. The fabric 5 is impregnated to saturation with a denture treating solution, not shown, and is used for purposes of oral hygiene, as will be described more fully below.

The packet 1 is assembled, for example, by using as the thermoplastic material 10, preferably a plastic material, e.g., polyvinylchloride or other vinyl plastic, used in manufacture of disposable packages, especially thin polyethylene sheeting, and an inner layer of moisture-proof and chemically-resistant metallic foil material 9. The foil material 9 preferably is silver, but may also be aluminum or other similarly suitably metal foil. The inner surface of the thermoplastic material 10 is preferably bonded at 13 as by heat sealing or by adhesion, to the outer surface of the foil material 9. The inner surface of the foil preferably is coated with a protective layer of thermoplastic material to protect the metal of the foil from chemical attack.

The packet 1 is assembled, for example, by using as the envelope material a two-ply composite sheet of which the foil material 9 forms the inner surface and the thermoplastic material 10, the outer surface. A pair of rectangular strips of the composite sheet are cut to appropriate size, for example about 3 by 4 inches, so that they will form a packet capable of readily enveloping a strip of the impregnated fabric 5, preferably folded over itself at least one time, in a large compartment and a quantity of powder 6, in a separate small compartment. The large compartment measures about 3 inches in height and about 2½ inches in width. The small compartment measures about ½ inch in height and about 3 inches in width. One piece of the composite strip is laid on a flat surface with the foil material 9 facing up. The fabric 5 and the powder 6 are placed on top of the foil material 9 with the powder 6 at one end of the sheet and the fabric adjacent to it but separated therefrom by a tear strip area 2, which is about ¼ inch in height and which extends from side to side of the fabric. A border area 12, about 1.4 inch in width, is provided all around the sheet. An adhesive for the foil material 9 is applied to the tear strip areas 2 and 2a and the border area 12. The second rectangular strip of composite sheet is laid over the first strip with the foil material 9 face down. The second sheet is pressed against the first sheet to adhere the two together along the tear strip area 2 and the border area 12. The edges of the packet can then be trimmed, if desired, for neatness. All of these sizes and measurements can, of course, be changed as desired.

Upon setting of the adhesive, the packet 1 of the invention is obtained with compartmented portion 3 containing the powder 6 and compartmented portion 4 containing the fabric 5, with the powder 6 and fabric 5 being tightly enclosed against leakage and against the atmosphere in the packet and separated from each other by the width of the tear strip area 2.

While the above assembly operation has been described as a hand operation for purposes of illustration, it is to be understood that the entire assembly by pro-

cedure can readily be carried out by known mechanical apparatus means which form no part of the invention. In such an operation, the border and tear strip areas can be heat-sealed or adhesively sealed in a known way.

The fabric 5 may be any absorbent material which is inert to the solution and which is sufficiently strong for rubbing purposes. A paper material is preferred, but cotton or even a synthetic fabric may be used.

The packet 1 of the invention has utility as a disposable means for practicing oral hygiene by a denture wearer. In the compartmented portion 4, the packet 1 provides a denture wearer with a denture-treating solution which is impregnated to saturation in fabric 5. The denture-treating means solution can be a known cleansing and deodorizing antiseptic solution which is stable under storage conditions in the packet, and which is present in and on the fabric 5 in a germicidally-effective amount and concentration. Preferably, it is a mixture of cetyl pyridinium chloride and domiphen bromide in sufficient distilled water to make up a germicidally-effective deodorizing solution for a denture.

The fabric is impregnated with the denture-treating solution in a known way, as by dipping it in, or spraying it with, the denture-treating solution.

In use, the packet 1 is torn open along the edge of the tear strip adjacent to the compartmented portion 4. The fabric 5 containing portion of the packet is thus opened without disturbing the powder 6. The fabric 5 is withdrawn from the compartment and is wrapped around, or supported by, the tip of a finger by the denture wearer. The denture plate which is to be cleaned is removed from the mouth of the wearer. The fabric 5 is rubbed thoroughly over all the surfaces of the denture plate to remove food particles and to freshen the condition of the surface by the antiseptic solution from the fabric 5.

Particularly when the denture plate is a full plate 8, it is often desirable to apply adhesive powder 6 to the portion of the plate which contacts the gums and roof of the mouth of the wearer. For this purpose, the remaining portion of packet 1 is further useful in providing in the already detached compartmented portion 3, an adhesive powder 6. This portion of the packet 1 is now torn open, preferably along tear strip 2a at the corner of compartment 3, or at any one of its other corners. The powder 6 is emptied from the compartment through the opening which performs the function of a spout onto the denture plate 8, e.g., as shown in FIG. 5, while the plate is still damp from the cleansing step. The denture is then inserted into the mouth of the wearer and secured to the gums and roof of the mouth by the adhesive powder. A full lower plate can be similarly adhered in place.

While any known adhesive composition for denture plates may be used to practice the invention, in paste or powder form, a preferred one is an adhesive powder of the composition generally used, for example, gelatin, pectin, and sodium carboxymethylcellulose.

The proportions of ingredients for the intended purpose as an adhesive are not critical. It is to be understood that the proportions can be varied relative to each other and that they can be used in any combination of parts by weight for making a composition effective as any adhesive in the human mouth.

The used fabric and empty compartmented portions can readily be discarded after use. The amount of adhesive composition in the compartment should be adequate to securely adhere a large denture. Thus, a quantity of about 0.5 to 2 ounces of the composition will usually be provided and will be adequate. However, more may be provided by making the compartmented portion 3 of the packet larger in size.

The packet 1 of this invention has the advantage that it provides an easy, effective, and convenient means and method for cleansing denture plates, whether full plates or partial plates, and for securing the cleansed plates in the mouth of a wearer. Advantageously this is done while

the wearer is away from home, for example, at the office, in a public washroom, in a motor vehicle, or anywhere where a few minutes of privacy can be obtained for this purpose. The packet is complete in itself and no other accessories are needed. The denture wearer thus gains self-confidence and the benefits of oral hygiene while avoiding the embarrassment and discomfort which would arise from wearing food contaminated dentures and dental plates until such time as he can return home.

The packet 1 has been described and discussed as a single unit; however, it will also be advantageous in some cases to provide a packet 1a as shown in FIG. 6 wherein two compartmented portions 3a and 3b with corner tear strips 2a and 2b are provided to contain two separate applications of adhesive denture powder 6.

Moreover, in another advantageous embodiment of the packet the compartmented portion 3 can be subdivided into a plurality of compartments 3a, 3b, 3c, for instance by tear strips 2c, 2d and 2e (the number of tear strips corresponding to the number of desired sub-compartments), these tear strips running in a parallel manner to strip 2. Suitable opening means are provided at the corners of each compartment, for instance, 2a.

This type of packet will be especially useful for the wearer of both upper and lower plates who requires a greater quantity of powder than one with only a single plate, or one or more of the compartments may be filled with other materials for oral hygiene.

Also, as shown in FIG. 7, the packet 1 can be made in strip form with the packets 3a and 3b and 3c and so on attached to each other by tear strip portions 2aa and 2bb. Each packet 3a can be detached and used as disclosed above. The direction of the tear strips of compartment 4 and of compartment 3 can be parallel to each other or they may be perpendicular to each other or assume any suitable direction relative each other, as may be desired to minimize the tearing force to be exerted. The tear strips for the openings are suitably placed at the corners of each compartment.

Additional improvements also can be made to the packet by making both the envelope and the fabric 5 of a material which is suitable for disposal into a septic tank or sewerage system without clogging the drain. Such materials are known and are available on the market. For example, a strong tissue grade of paper, made impervious on one side to the denture-treating solution by application of a thin coating of wax or plastic coating material, may be used for the envelope. A similar type of paper without the coating can be used for the fabric 5. After use, both the envelope and fabric 5 can be flushed down the drain, leaving no evidence of use which might embarrass a denture wearer.

Also, to facilitate opening of the packet, perforation marks may be scored into the envelope at the juncture of the compartmented portion 4 with the tear strip 2. Similarly, perforation marks may be scored diagonally at one corner of the compartmented portion 3.

The individual packets can be boxed for sales purposes. They also can be dispensed from coin-operated dispensing machines.

While the invention has been described for purposes of illustration with a preferred embodiment, it is to be understood that the illustration and description herein are by way of example and that modifications may be made therein while retaining all or some of the advantages and benefits of this invention, which is itself defined in the following claims.

I claim:

1. A disposable denture care packet comprising a sealed envelope comprising a plurality of sealed compartmented portions, at least one of which is large compared to the others and separated therefrom by a tear strip area portion, a fabric impregnated with a denture-treating solution, said fabric being contained in said large compartmented portion, a quantity of denture adhesive composition, said

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composition being contained in at least one other of said compartmented portions.

2. The dental care packet of claim 1 wherein the denture-treating solution comprises a germicidally-effective amount and concentration of an aqueous solution of cetyl pyridinium chloride and domiphen bromide.

3. The denture care packet of claim 1 wherein the denture adhesive composition comprises pectin, gelatin and sodium carboxycellulose in a combination of parts by weight effective for adhesive purposes in the human mouth.

4. A disposable denture care packet comprising an envelope sealed around the border and at at least one area intermediate its ends dividing said envelope into at least two sealed separated compartments, a fabric impregnated with a denture-treating solution in one of said compartments and a denture adhesive composition in the other, a tear strip in said one compartment along said intermediate sealed area whereby said one compartment can be opened for access to the fabric without opening the other compartment, and a tearstrip in said other compartment whereby said other compartment can be opened separately for access to the adhesive composition therein.

5. The article of claim 4 wherein the packet is substan-

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tially rectangular, said intermediate sealed area and said tear strip in said one compartment extend transversely of the packet from one side to the other, and said tear strip in said other compartment extends across one corner thereof to form a pouring spout.

6. The article of claim 4 wherein the packet is made of plastic and a protective metallic foil liner is positioned against the inner surface thereof.

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F. BARRY SHAY, Primary Examiner

J. N. ESKOVITZ, Assistant Examiner

U.S. Cl. X.R.

132—79; 206—47

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,534,887 Dated October 20, 1970

Inventor(s) Lillian Ginsberg

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the heading to the printed specification, line 4, "59 S. Munn Ave." should read -- 56 South Munn Ave. --.

Signed and sealed this 13th day of April 1971.

(SEAL)
Attest:

EDWARD M. FLETCHER, JR.
Attesting Officer

WILLIAM E. SCHUYLER, JR.
Commissioner of Patents