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V. E. CHANEY, JR

3,533,533

CLEANSING PACKET AND DISPENSING CONTAINER THEREFOR

Filed May 4, 1967

2 Sheets-Sheet 1

FIG-2

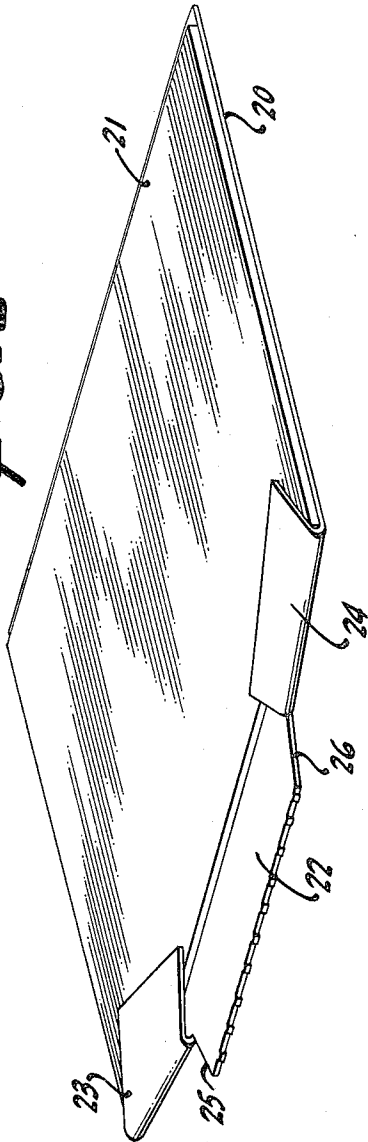
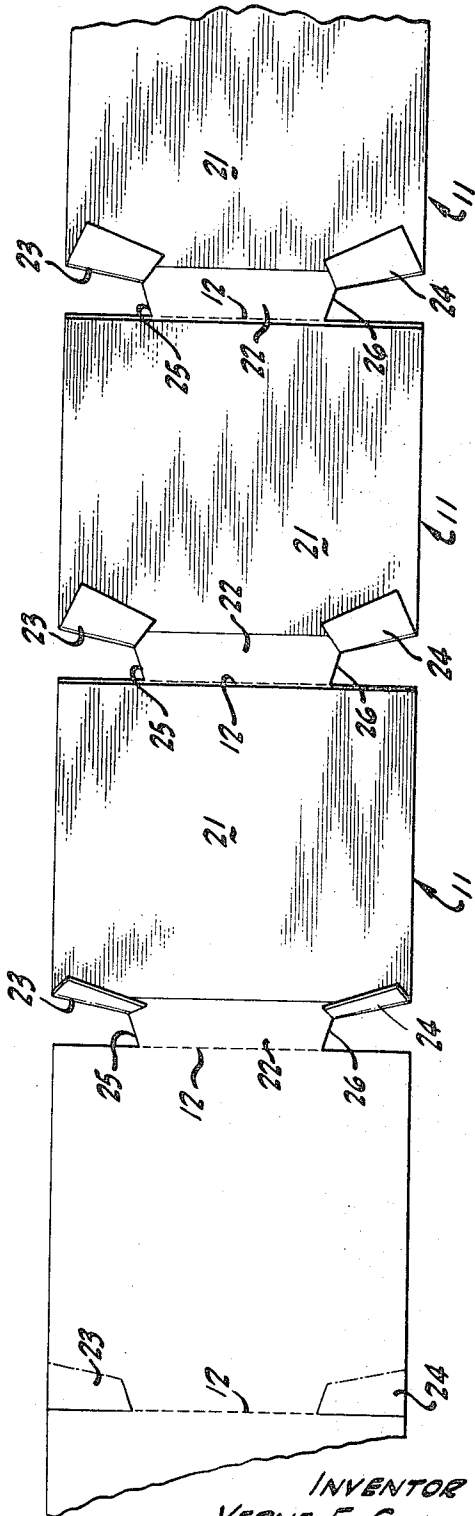


FIG-1



INVENTOR
VERNE E. CHANEY, JR.

BY

Stanley Dialos
ATTORNEY

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V. E. CHANEY, JR

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2 Sheets-Sheet 2

FIG. 3

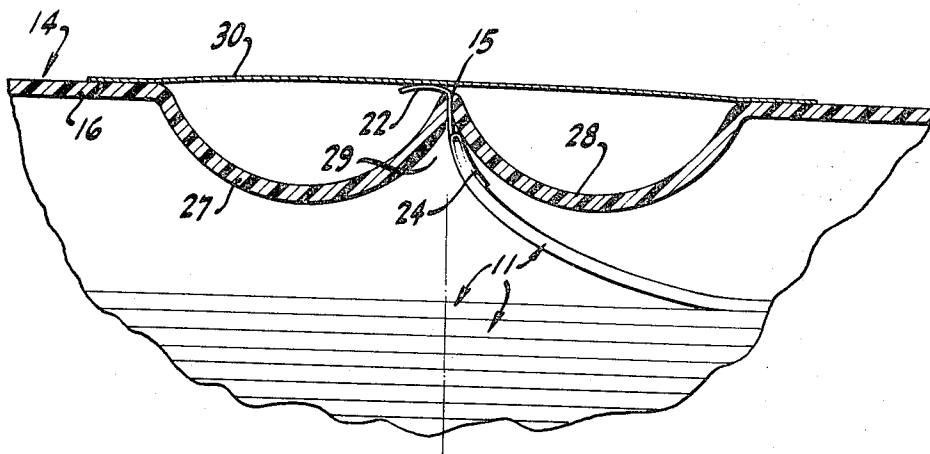
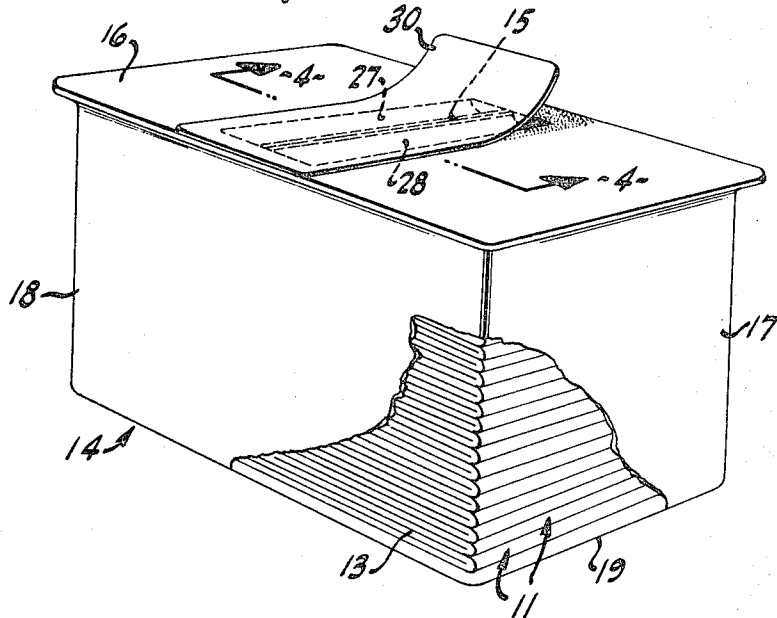


FIG. 4

INVENTOR
VERNE E. CHANEY, JR.

By *Stanley D. ...*

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3,533,533

CLEANSING PACKET AND DISPENSING CONTAINER THEREFOR

Verne E. Chaney, Jr., 1000 Chestnut St.,
San Francisco, Calif. 94109

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5 Claims

ABSTRACT OF THE DISCLOSURE

A package constituting a continuous strip of interconnected packets separable from each other along tear lines therebetween and being folded transversely along such tear lines to form an accordion-fold stack positioned within a dispensing container therefor. Each packet comprises an absorbent applicator sheet carrying a liquid or semi-liquid agent to be applied thereby to a body surface, and further comprises an outer overwrap or backing sheet of plastic material attached to the applicator sheet and providing pull tabs adjacent such tear lines. The dispensing container provides a narrow opening through which the strip of interconnected packets is withdrawn from the interior of the container, and the edges of such opening are resiliently biased toward each other into closing relation to minimize evaporation of such agent from and ingress of contamination into the interior of the container.

This invention relates to a package of cleansing packets and to a dispensing container therefor and, more particularly, it relates to a package comprising a plurality of separable packets interconnected in end-to-end succession so as to be withdrawn through a narrow dispensing opening in such container. The package and packets comprising the same have a wide range of uses especially in cleaning and treating skin surfaces, and are particularly advantageous for use in cleaning the anal region of humans in place of conventional toilet tissue.

An object, among others, of the present invention is to provide an improved package of the type described and an improved dispensing container especially useful in association with such package. The package includes a substantial plurality of individual packets interconnected in end-to-end succession to form a strip package from which each packet is readily separated for use. The container may be used to advantage with any relatively thin product separable into individual components which are interconnected one with another to form a substantially continuous succession thereof as, for example, the described package of packets. The container is provided with a dispensing opening defined by spring elements which bias the facing edges of the dispensing opening toward engagement with each other to form a substantial closure about the interior of the container, but which edges can spread apart owing to the resiliency of the spring elements to enable the product to be withdrawn through the opening.

Additional objects and advantages of the invention, especially as concerns specific features and characteristics thereof, will become apparent as the specification develops.

Embodiments of the invention are illustrated in the accompanying drawings in which:

FIG. 1 is a broken top plan view of a portion of a package-forming strip comprising a plurality of interconnected packets, the strip being shown partly in the steps of its formation;

FIG. 2 is a perspective view of one of the individual packets forming a part of the strip package illustrated in FIG. 1;

FIG. 3 is a perspective view of a dispensing container and package therein, which package constitutes an ac-

cordion-folded stack formed from an elongated strip of interconnected packets confined within the dispensing container, the sealing strip over the dispensing opening of such container being partially removed; and

FIG. 4 is an enlarged transverse sectional view through the dispensing opening of such container taken along the line 4—4 of FIG. 3.

The strip package embodying the present invention is illustrated in FIG. 1 and is seen to comprise a long or elongated strip of interconnected packets. The individual packets are each indicated by the numeral 11 and are connected in tandem succession one with another along tear lines 12 defined by lines of weakness, such as the perforations depicted. Accordingly, one packet 11 may be separated from the next adjacent packet by imparting a shearing force or tearing motion thereto along the intermediate tear line 12.

The elongated strip package formed by the separable but interconnected packets 11 may be folded upon itself in accordion pleats or folds along the respective tear lines dividing adjacent successive packets to develop a stack thereof. In FIG. 3, the package or stack is denoted in its entirety with the numeral 13 and is confined within a container 14 which has a dispensing opening 15 extending across the top wall 16 thereof. The container 14 further includes end walls 17, side walls 18, and a bottom wall 19 which, together with the top wall 16, define a compartment to receive the stack 13 therein.

Each packet 11 is a laminated or multiple-layer structure that includes an outer backing sheet or protective overwrap 20 and an inner laminate or applicator 21 of sheet material secured to the overwrap 20. As explained in copending patent application Ser. No. 626,781 filed Mar. 29, 1967, now Pat. No. 3,485,349, the applicator sheet 21 may be secured or attached to the backing sheet 20 throughout or along the contiguous surfaces thereof or along a sufficiently large number of spaced locations thereabout that the effect of a continuous securance is obtained. On the other hand, the applicator sheet may be secured along a restricted surface area thereof to the backing sheet, and the applicator sheet could be perforated or otherwise arranged so as to be removably secured to the backing sheet 20 in those instances where separation is desired.

Any suitable means may be employed to effect such securance of the applicator sheet 21 to the backing sheet 20 as, for example, an adhesive interposed therebetween, and the adhesive employed may be selected in accordance with the particular materials comprising the applicator and backing sheets, but generally stated, substantially any conventional pressure-sensitive, wax-or-resin type or conventional wet-type adhesive can be used so long as the adhesive bond is not destroyed by action thereon of the agent used to impregnate or wet the applicator sheet 21.

The backing sheet 20 may be a flat web withdrawn from a parent or supply roll thereof, and as such web is advanced along a predetermined path, the applicator sheets 21 are placed thereon at spaced-apart locations therealong. The applicator sheets 21 may be either wet or dry when placed upon the backing sheet 20 and secured thereto, depending upon the particular fabrication techniques employed. In the form shown, each applicator sheet 21 is substantially the same in transverse dimension as the backing sheet 20 but the applicator sheets are spaced apart so as to provide a section of backing sheet therebetween. This intermediate section is subdivided to form a central pull tab 22 bordered by flaps 23 and 24 along the transverse edge portions of the backing strip, which provide a portion of the intermediate section folded over the leading edge of the adjacent applicator sheet.

As is evident in FIGS. 1 and 2, the flaps 23 and 24 are formed by severing the backing strip 20 along lines of

severance 25 and 26 which are angularly oriented so as to diverge toward the transverse edges of the backing sheet adjacent the leading edge of the applicator sheet 21. The flaps 23 and 24 are then folded rearwardly into overlying juxtaposition with the applicator sheet 21 so as to provide a shield for protecting the leading edge thereof during removal of each packet 11 from the container 14, as will be described hereinafter, and the angular disposition of the flaps 23 and 24 is useful in this connection. As indicated in FIG. 1, the tear lines 12 and lines of severance 25 and 26 may be formed in the backing sheet prior to the applicator sheets 21 being placed thereon. The flaps are necessarily folded into engagement with the applicator sheets after such placement thereof, and they are desirably adhesively secured thereto.

Any suitable material may be used for the applicators 21 and, in the usual instance, a sheet-like cellulosic material may be employed. Quite evidently, whatever the material used it must be resistive to degradation or other deterioration resulting from the particular liquid cleansing agent employed to impregnate the same; and as respects impregnation, an absorbent material is advantageously selected for the applicators 21. In the usual case, a relatively flexible material is desirable and one that is soft and pliable so as not to abrade or otherwise irritate the anal region which the packet is especially adapted to clean with a skin cleanser, medicant or other skin-treating substance. In the same sense it is desirable for the surface of the applicator to be textured as, for example, by use of a creped or embossed paper so that the surface can pick up and retain foreign materials or substances that may be encountered along a skin surface traversed thereby.

The overwrap or backing sheet 20 is formed of a material which is not only resistive to degradation or deterioration resulting from exposure to the agent used to impregnate the applicator 21, but it also is moisture resistant and substantially impervious to penetration by such agent in order to resist leakage, evaporation or other loss thereof, and it further is substantially impervious to penetration by ambient air to protect such agent against contamination therefrom whenever, in each instance, the packets 11 are arranged in package form within the container 14.

Since the backing sheet 20 serves as a protective backing for the applicator 21, it should similarly be flexible to permit coextensive manipulation therewith. A number of materials having such characteristics may be used for the backing sheet as, for example, metal foil with or without a plastic coating, resin or other impregnated papers, plastic materials, and laminates comprising several layers of such materials. In a typical embodiment exceptionally advantageous for toilet tissue use, a substantially moisture impermeable and heat sealable material such as polyethylene or polypropylene is used.

The agent with which the applicator 21 is provided is moist and may range quite widely in composition and use, and in the usual case will be in a liquid or semi-liquid form. By way of example, when used for cleaning, the agent carried by the applicator 21 may be a liquid concentration of soap or detergent, a disinfectant such as alcohol, an astringent, or a medicant or medicant-type substance. Suitable impregnants are disclosed in U.S. Pats. No. 1,786,513 and No. 3,057,467.

As indicated hereinbefore, the packets 11 are especially adapted for use in cleansing the anal region of the human body without causing irritation by virtue of the emollient effect of the liquid cleansing agent carried by the applicator sheet 21. Also, infectious diseases resulting from improper cleansing of the anal region are minimized by such cleansing. At the same time, since the applicator sheet is attached to the overwrap or protective backing sheets, the hands of the user are protected from being soiled, particularly where the backing sheet is of plastic film.

As shown most clearly in FIG. 4, the top wall 16 of the container is deformed along the length of the opening 15 to define spring elements 27 and 28 which, in the form

shown, curve downwardly toward the interior of the container and have a concave configuration. The spring elements 27 and 28 curve inwardly toward each other and outwardly away from the interior of the container to form therebetween the elongated opening 15 which is in the form of a narrow slit adapted to be closed by engagement of such spring elements 27 and 28 along the facing edges thereof which define such opening. As the spring elements 27 and 28 merge toward each other, they form a converging mouth-like passage 29 within the interior of the container which guides the strip package into the opening 15.

The spring elements bias the facing edges forming the opening 15 toward abutment with each other, thereby tending to close the opening; but such spring element are resilient and thereby enable such facing edges to spread apart and permit passage therebetween of such strip package. In this respect, it may be noted that the flaps 23 and 24 provide areas of increased thickness along each packet 11 at the leading edge thereof, that is, the edge containing the tab 22. Thus, when a packet 11 is withdrawn through the opening 15, the flaps 23 and 24 force the spring elements 27 and 28 outwardly to enlarge the opening 15 transversely, thereby protecting the raw or uncovered leading edge of the absorbent sheet 21 as such edge passes through the opening 15 and serving also as a stop to designate to the user when a packet has approached opening 15 with the pull tab adjacent said packet projecting through the opening. The angular disposition of the flaps aids in this respect by providing initially only a limited engagement with the facing edges of the opening and thereafter restricting the extent of such engagement. After the flaps 23 and 24 move beyond the opening 15, the resiliency of the spring elements 27 and 28 close the same against the packet 11 moving therethrough.

As one packet 11 approaches a condition of complete withdrawal from the opening 15, the flaps 23 and 24 of the next successive packet 11 engage the facing edges of the spring elements 27 and 28 (i.e., they literally contact either one or the other of the spring elements depending upon the orientation of the strip package, and in the arrangement of FIG. 4, they engage the spring element 28) which tend to yieldingly resist movement of the next successive packet, thereby providing an indication that the preceding packet is clear of the container and may be separated from the package along the tear line 12.

The resiliency of the spring elements 27 and 28 which tends to close the opening 15 is advantageous in that it reduces evaporation of the agent used to wet or impregnate the applicator sheets 21 and also reduces contamination of the interior of the container by ingress of foreign materials through the opening. In order to further protect the strip package and interior of the container, especially during storage and transport thereof, a removable sealing strip 30 is desirably initially secured to the top wall 16 in overlying relation with the opening 15, and to remove the same it is peeled off by grasping one end as indicated in FIG. 3.

In the usual instance, the sealing strip 30 will extend over the spring elements 27 and 28 so as to engage the planar surface areas of the top wall 16 which border the spring elements. Any suitable sealing arrangement may be employed, and a transparent plastic material substantially moisture impervious and removably secured to the top wall, as by a pressure-sensitive adhesive enabling it to be peeled therefrom, can be used. Evidently, the entire container 14 could be enclosed within an overwrap which, if desired, could make unnecessary the requirement for the separate sealing strip 30.

The container 14 may be formed of any suitable material especially as concerns the end, side and bottom walls thereof which, for example, could be made of metal, plastic, paper, laminate compositions, etc., so long as the material or any protective coating on the interior thereof is impervious to and essentially unaffected by the particular liquid agents employed to wet the applicator sheets. Simi-

larly, the top wall 16 may be formed from a variety of materials and, where the spring elements 27 and 28 are formed integrally therewith, the material selected should be sufficiently stiff but yet resilient to provide the desired resiliency for the spring elements. Advantageously, the top wall is formed of integrally molded plastic material such as polyethylene, polystyrene or polyvinyl chloride which imparts inherent resiliency to spring elements 27 and 28 that are formed after slitting to provide opening 15. Such top wall is secured to the upwardly extending walls of the container in any conventional manner such as by an adhesive bond, or heat sealig.

The concave configuration of the spring elements 27 and 28 is advantageously employed in withdrawing each packet 11 from the container since it provides a finger-receiving receptacle and guide that facilitates grasping of the pull-tab 22 projecting outwardly through the dispensing opening 15. The concavity of the spring elements would have similar application should the product received within the container be other than the particular strip package comprising the packets 11 as, for example, a stack of facial tissue the individual sheets of which are interconnected one with the others, as by interfolding successive sheets.

When the packets are initially packaged in the container, the first of such interconnected packets is arranged with its pull tab 22 projecting through slit opening 15 as can be seen from FIG. 4, so that when sealing strip 30 is removed, access to the first pull tab 22 is readily had to remove the first packet from the next adjacent packet by tearing along line of weakness 12. Removal of a packet or a series of connected packets is effected while the next consecutive pull tab 22 on a packet within the container, projects through opening 15. Thus, a pull tab will always be accessible for pulling out the packet to which it is connected. After a packet is removed, the remaining packets in the container are sealed by the spring action of spring elements 27 and 28 against each other, and against a projecting pull tab to sealingly clamp the same thus minimizing contamination of the packets and precluding evaporation of liquid from the applicator sheets within the container.

While in the foregoing specification embodiments of the invention have been set forth in considerable detail for purposes of making a complete disclosure thereof, it will be apparent to those skilled in the art that numerous changes may be made in such details without departing from the spirit and principles of the invention.

What is claimed is:

1. In combination: a package comprising a plurality of individual packets separably interconnected with those adjacent thereto and together defining an elongated strip of packets disposed in end-to-end relation and being folded transversely intermediate adjacent packets to provide an accordion-fold stack for retention within a container therefor, each of said packets including a moisture impervious backing sheet and an absorbent applicator sheet positioned in juxtaposed relation therewith and being attached thereto, said backing sheet of each packet being of greater axial length than and having an edge portion thereof projecting beyond one transverse edge of the associated applicator sheets, such projecting edge portion of each backing sheet defining a pull tab for use in withdrawing the associated packet from such container and for interconnecting a plurality of said packets in tandem succession, the pull tabs each having a portion folded over the leading edge of an adjacent applicator sheet to provide a shield for protecting such edge and provide increased thickness, and being provided at spaced intervals therealong with lines of weakness respectively interposed between successive packets adjacent said pull tabs and defining tear lines along which one packet can be separated from another, and each applicator sheet carrying a moist cleansing agent for use on body surfaces; and a dispensing container for said package comprising a casing hav-

ing side, end, top and bottom walls joined to define a compartment receiving such package therein, one of said walls having a narrow dispensing opening therein defined along facing edges and through which said package is withdrawn, and said one wall having also a spring element connected with one such facing edge of said opening and resiliently biasing such one edge toward closing relation with the other such facing edge to confine an interposed pull tab portion of said package therebetween and seal the package within the container, and said facing edges of said dispensing opening being yieldable to permit said package to be withdrawn packet-by-packet from said container through said opening, the successive folded portions of said pull tabs providing stops to designate when a complete packet has been withdrawn through said opening.

2. The combination of claim 1 and further comprising a second spring element connected with the other of said facing edges of said dispensing opening, said spring elements being effective to resiliently bias the facing edges of said opening toward closing relation with each other, and in which each of said spring elements extends along the length of said dispensing opening and integrally forms the associated facing edge of said dispensing opening.

3. The combination of claim 1 in which said top wall of said container is formed of a relatively stiff material with each of said spring elements being formed integrally therewith, each of said spring elements having a concave configuration bowing downwardly toward the interior of said compartment and converging inwardly toward each other and outwardly away from the interior of said compartment to define a mouth-like passage facilitating withdrawal of said package through said dispensing opening.

4. The combination of claim 3 and further comprising a sealing strip removably secured to said top wall in covering relation with said opening to close the same.

5. A dispensing device comprising a container having a slit in a wall thereof providing a dispensing opening composed of a pair of spring elements integral with said wall and arcuately bowed inwardly of the container with facing edges thereof biased toward each other by the resiliency of such elements to maintain a pressure seal against material to be dispensed through said opening but allowing such material to be withdrawn between said edges; and a plurality of individual packets within said container separably interconnected and defining an elongated strip of packets disposed in end-to-end relation, said packets comprising absorbent applicator sheets each carrying a moist cleansing agent, and a moisture impervious backing sheet on which the applicator sheets are attached in spaced relationship to provide pull tabs between adjacent applicator sheets, each of said pull tabs having a line of weakness providing a tear line for separation of withdrawn packets, and each pull tab having a portion folded over the leading edge of an adjacent applicator sheet to provide a protecting shield for said edge and increased thickness whereby when a complete packet has been withdrawn through the opening it can be severed along the line of weakness with the pull tab of the adjacent packet within the container projecting through the opening and sealingly clamped by said spring elements to seal the remainder of said packets within the container.

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