April 2, 1968 R. C. FIELD 3,375,826

SANITARY NAPKIN STRUCTURE AND/OR SUPPORT MEANS THEREFOR

Filed July 16, 1964 2 Sheets-Sheet 1

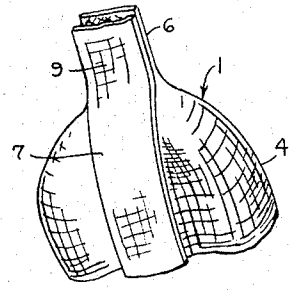


Fig.-2

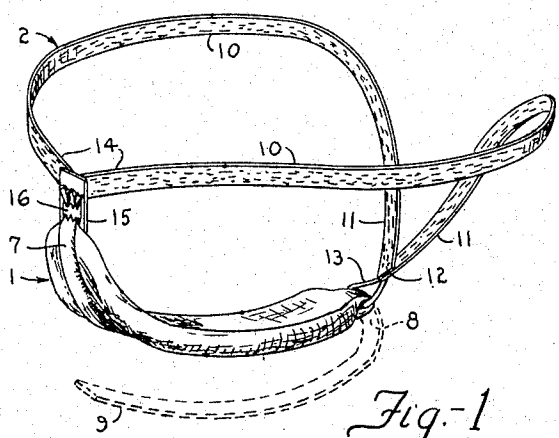


Fig.-1

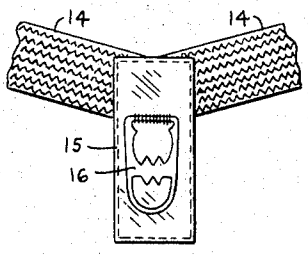


Fig.-4

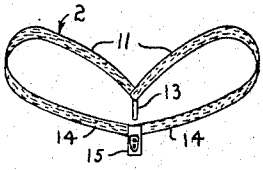


Fig.-3

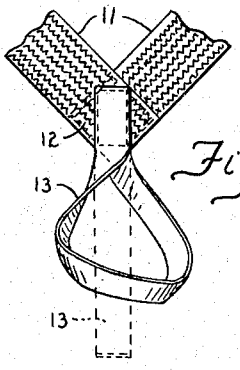


Fig.-6

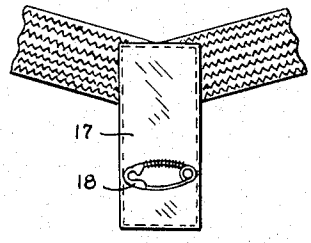


Fig.-5

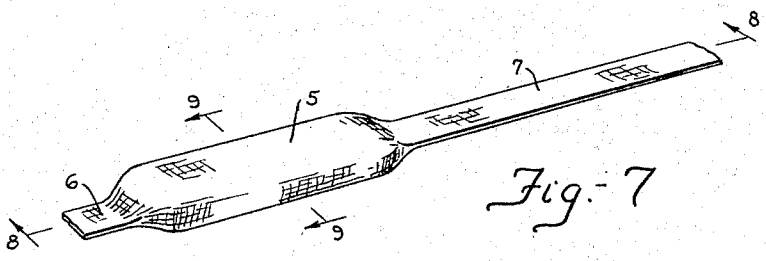


Fig.-7

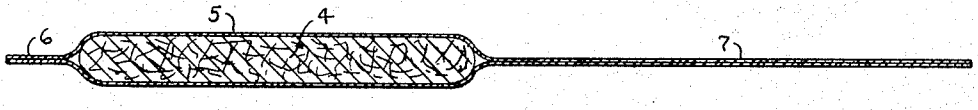


Fig.-8

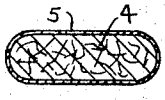


Fig.-9

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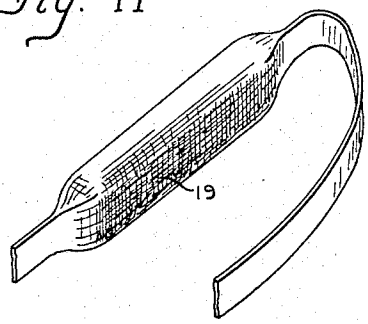
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SANITARY NAPKIN STRUCTURE AND/OR SUPPORT MEANS THEREFOR

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Fig.-11



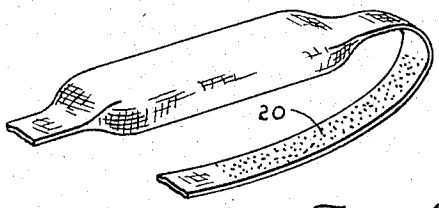


Fig.-12

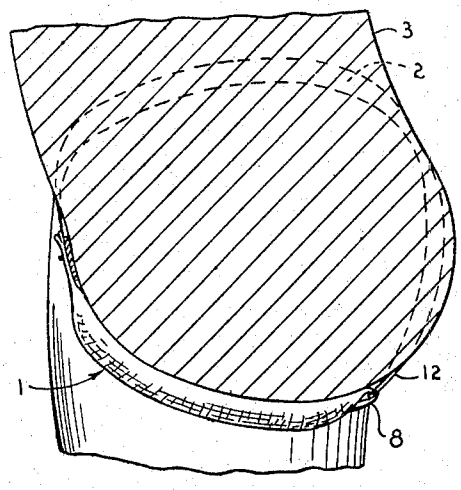


Fig.-10

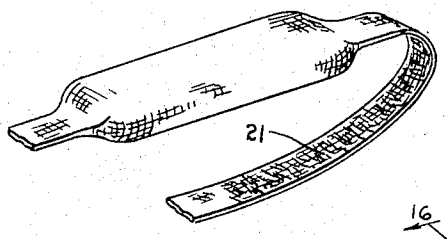


Fig.-13

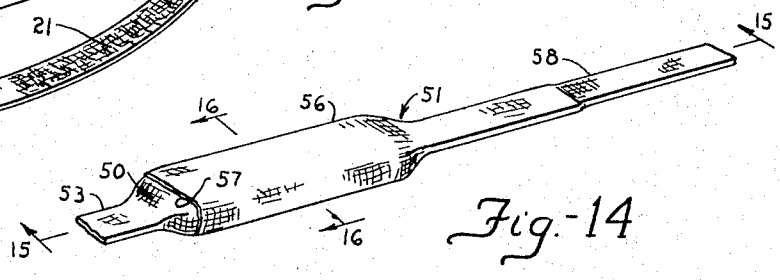


Fig.-14

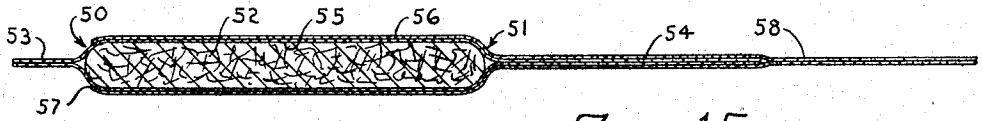


Fig.-15

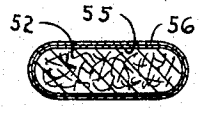


Fig.-16

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SANITARY NAPKIN STRUCTURE AND/OR SUPPORT MEANS THEREFOR

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Filed July 16, 1964, Ser. No. 383,161
15 Claims. (Cl. 128—289)

ABSTRACT OF THE DISCLOSURE

The invention is directed to a sanitary napkin having an elongated absorbent pad provided with a short tab and an extension which is of a length substantially corresponding to that of the pad and tab so that it may be folded under the pad with its free end disposed in juxtaposed relation to a free end of the tab.

The subject invention relates generally to means for promoting body hygiene and more particularly is directed to improvements in a sanitary napkin and/or supporting means therefor.

An important object of the invention is to provide a napkin structure which comprises an absorbent pad, provided with means, such as a frontal tab, and rear elongate means, such as a strap, which assist in facilitating attachment or connection of the napkin to a supporting or body encircling means, such as a belt, in a unique way.

More particularly, an objective of the invention is to provide a napkin of the above character in which the strap is preferably of a length greater than that of the pad so that a rear portion of the strap may be connected to means carried by back portion of a belt, and the tab and a free end of the strap may be connected to means carried by a frontal portion of the belt whereby to locate an underlying portion of the strap under the pad for supporting the latter in relation to an appropriate part of the anatomy.

Another object of the invention is to provide a reversible napkin, as above described, in which the pad of the napkin may be of a conventional thickness and width constructed from any material suitable for the purpose, and the tab and strap preferably constitute integral continuations of the fabric or material embracing or carrying the pad.

Further objects of the invention are to provide a napkin which, when properly supported in relation to the anatomy, offers advantages with respect to greater comfort, additional protection afforded by the underlying absorbent portion of the strap, stability, avoidance of bulging, and ease and speed of assembly and disassembly of the napkin with respect to a belt, as distinguished from conventional napkins and/or belts.

A significant object of the invention is to provide a napkin of the above description, in which the strap offers an arrangement whereby the napkin may readily automatically adjust itself in conforming relationship to a body through the agency of a slidable or adjustable connection with a unique belt.

A particularly important objective of the invention is to provide an improved napkin structure in which an underlying supporting portion thereof, such as the strap, constitutes an integral portion or a component part of the structure and is of such a character that the complete structure is rendered completely disposable after use.

A specific object of the invention is to provide a napkin of substantially the same general character above described, which is modified by providing an inner surface of the strap with an adhesive which assists in promoting adherence between the strap and an underside of the pad.

Another specific object of the invention is to provide a napkin of substantially the same general character as

described, which is modified by treating or impregnating an inner surface of the strap with a substance which is impervious to liquid whereby to offer greater protection to the wearer.

Another object of the invention is to provide means preferably in the form of a separate element or member which is comprised of receiving means, such as a container for receiving a portion of a conventional napkin and a strap constituting a continuation of the container for the purpose above described.

An additional object of the invention is to provide an adjustable resiliently flexible belt which is preferably generally preformed or contoured to the shape of a body and includes a relatively small front V-shaped portion and a relatively large rear V-shaped portion which carry means affording attachment or connection of the napkin thereto. More specifically, the front V-shaped portion preferably carries a depending portion to which the tab and the free end of the napkin may be attached and the rear V-shaped portion preferably carries a fastener, such as a loop or ring through which the strap of the napkin may be readily threaded for supporting the rear extremity of the napkin in a relatively low and inset or confined position in the crotch of the body in order to avoid any rear out-bulging of the napkin and fastener, the latter of which frequently results from the use of a conventional napkin. The loop at the rear V-shaped portion of the belt avoids use of the conventional pin or fastener which not only requires locking and unlocking or exacting manipulation at an awkward location, but occasionally causes injury and an unsightly appearance.

A further object of the invention is to provide a unique method or methods of assembling the napkin structure and belt.

Additional objectives and advantages of the invention will readily become apparent after the description hereinafter set forth is considered in conjunction with the drawings annexed hereto.

In the drawings:

FIGURE 1 is a pictorial view of a napkin and belt embodying one or more inventions and a mode of attaching the napkin to the belt;

FIGURE 2 is a view of a frontal portion of a napkin and means facilitating its attachment to a frontal portion of a belt;

FIGURE 3 is front view of the belt;

FIGURES 4 and 5 are portions of belts utilizing different means whereby a tab and strap of the napkin may be readily attached to frontal portions of the belts;

FIGURE 6 is a rear portion of a belt provided with means, such as a loop, whereby to facilitate attachment of the strap of the napkin thereto;

FIGURE 7 is a perspective view of the napkin employed in FIGURES 1 and 2;

FIGURE 8 is a longitudinal section taken substantially on line 8—8 of FIGURE 7;

FIGURE 9 is a transverse section taken substantially on line 9—9 of FIGURE 7;

FIGURE 10 is an elevational view showing the napkin and belt as applied to the crotch of a body;

FIGURE 11 is a modified form of napkin showing the underside of its pad provided with a protective coating which is moisture resistant or substantially impervious to liquid;

FIGURE 12 is a napkin showing an adhesive applied to an inner surface of a strap whereby to facilitate attachment of the strap to an undersurface of the napkin or pad;

FIGURE 13 is a view similar to FIGURE 12 showing a coating of material which is moisture resistant or impervious to liquid applied to an inner surface of a strap;

FIGURE 14 is a perspective view showing a member

adapted for attachment to a conventional napkin for converting it into a napkin structure substantially corresponding to the general shape or configuration of the preferred construction;

FIGURE 15 is a longitudinal sectional view taken substantially on line **15—15** of FIGURE 14; and

FIGURE 16 is a transverse section taken substantially on line **16—16** of FIGURE 14.

Referring first to the preferred designs and constructions exemplified in FIGURES 1 through 10 of the drawing, numeral **1** generally designates a napkin structure adapted for connection to an encircling means or belt generally designated **2** for disposition about the body of individual **3**.

More particularly, the napkin **1** is preferably comprised of an elongated absorbent pad **14** which is carried by or confined within a receiving means **5** preferably in the form of an enclosure or envelope of fluid pervious fabric. The pad and fabric are preferably constructed from any of the well known or conventional absorbent materials currently in use for such a product, but any material suitable for the purpose may be utilized. The pad is preferably made substantially rectangular in shape with rounded ends and uniform as to thickness, width and length, but these dimensions may be modified as desired.

The napkin is preferably provided with a relatively short continuation or flexible tab **6** at its fore or front end and with a relatively long continuation or flexible strap **7** at its rear end. The tab and strap may constitute integral continuations of the receiving means **5** and/or continuations of the pad **4**, whichever is desired from a manufacturing standpoint. It is to be understood that the portions **5**, **6** and **7** of the napkin may be constructed in different ways. For example, these portions may be made from a single sheet of rectangular material which is folded or wrapped into a generally tubular condition about the pad or may be of a sock-like character. It may be stated that, as worn, the receiving means **5** and tab **6** constitute an upper longitudinal portion of the napkin structure which carries the pad and that the strap **7** constitutes a lower longitudinal continuation of the upper longitudinal portion. The strap is adapted to be folded or turned back under the upper longitudinal portion to form a loop **8** at the junction between the receiving means and strap, as shown in FIGURES 1 and 10, and so that a free end **9** of the strap may be brought into abutting relation with the tab as illustrated in FIGURE 2, all of which will be more fully described subsequently. It will be observed that the tab and strap are preferably made relatively thin and narrow as compared to the thickness and width of the pad but, if desired, the strap may be made in any suitable length and width. For example, it may be made as wide as the pad or greater in width so that portions may be disposed in overlapping relationship. Attention is directed to the fact that the strap is preferably of a length which is substantially equivalent to the combined lengths of the pad and tab or is at least of a length sufficient to extend under the pad in supporting relation thereto when the napkin is correctly connected to the belt **2** as depicted in FIGURES 1 and 10.

The strap is preferably of such a size and flexibility that it will engage and readily adjust itself with respect to the resilient undersurface of the pad in a mode whereby to assist in supporting and conforming the pad to the crotch of the body and thereby promote comfort to the wearer.

The belt may be designed and constructed in various ways but, as illustrated herein, it is preferably generally preformed or contoured to embrace the waist of the body **3** and preferably made of elastic or resiliently flexible washable fabric material. It preferably comprises a pair of corresponding side portions **10** and back and front portions. If desired, the side portions may be provided with a pair of adjustable means in a conventional manner whereby the size of the belt may be readily varied. The back or rear preferably includes a pair of depending converging portions **11** which are joined to define a relatively large V-formation, the apex or location **12** of which is provided with a receiving means **13** preferably in the form of a depending flexible loop or ring constructed from a desirable strong and washable fabric. It will be observed that the ends of the converging portions **11** are preferably joined at right angles by stitching and that the loop is comprised of a strip of fabric having ends which are secured by stitching in superimposed relation against the inner side of the rear V-formation. The ends of the converging portions and ends of the loop are thus secured in a reenforced relatively thin flat condition. This factor and the use of an all fabric material structure at the V-formation is of considerable important as it avoids the use of metal fasteners, such as pins, which may cause injury and produce a bulge at the rear of the wearer. Obviously, it is not essential that the formations be exactly V-shaped, but it is desirable that at least the back of the encircling means depends so as to properly locate the receiving means **13**.

The front of the belt preferably comprises a pair of corresponding depending converging portions **14** which are preferably joined together to define an oblique V-shaped formation which is preferably located at a higher elevation than the back V-shaped formation. The front V-shaped formation is preferably provided with attaching means in form of a depending flexible washable pendant or tab **15**, as shown in FIGURES 1 and 4. It will be observed that the ends of converging portions **14** and an upper end of the pendant are preferably joined in a superimposed reenforced flat condition by stitching. The pendant carries a fastener or connector **16** of a conventional character whereby to facilitate connection of the tab **6** of the napkin and the free end of the strap **7** thereto as shown in FIGURES 1 and 10. Obviously, means other than stitching may be utilized to secure portions of the belt, receiving means and pendant assembled.

If desired, the frontal portion of the belt may be provided with a pendant or tab **17** which carries a safety pin **18** whereby to offer a different conventional means of attaching the tab and strap to the belt.

The napkin structure may be readily attached to the belt in different unique ways, as distinguished from conventional installations and/or methods. More particularly, one method, assuming that the belt has already been applied to the body of the wearer, is to pull forwardly on the rear V-shaped formation to locate the loop **13** in a position to facilitate insertion of the strap downwardly to the dotted line position shown in FIGURE 1 and upwardly into engagement with the underside of the pad, preferably at its medial area, in order that the free end **9** of the strap and the tab **6** may be brought into the juxtaposed relation as evidenced in FIGURE 2 for connection with the fastener or connector **16** carried by the pendant **15**. Obviously, it may or may not be necessary to stretch the rear formation forwardly as just described. As an alternative method of attaching the napkin structure to the belt, the tab **6** may be first connected to the connector **16**, after which the strap may be inserted downwardly through the loop and then brought upwardly in supporting relation with the pad to locate the free end of the strap in a position for final connection with the connector **16**. Obviously, the tab and strap may be attached to the connector or pin **18** in lieu of the connector **16**, depending on the type of connector employed.

Attention is directed to the fact that the strap assists in supporting and/or reinforcing the pad as well as promoting its conformance to the crotch of the body. The connection of the strap with the loop **13** is an adjustable or slidable one and allows the napkin structure to automatially adjust itself with respect to the back of the belt and to the crotch of the body. This adjustable connection also enables the upper and lower longitudinal portions of the napkin structure to automatically adjust

themselves with respect to one another or otherwise afford what may be termed a general balancing of such portions between the points or locations of suspension. Of further significance is the fact that the side portions of the belt curvingly merge with the converging portions **11** of the rear V-formation for the purpose of conforming the belt to the waist and buttocks and assist in locating the apex **12** of the formation in a relatively low and inset position with respect to the crotch of the body, the purpose of which is to prevent any bulging or protrusion at the rear of the wearer. Otherwise expressed, the converging portions smoothly engage the back of the wearer and cause a rear extremity of the napkin structure and the structure connecting it with the belt to be inset so that the back of an outermost garment will normally conform to the body without deformation, as distinguished from a conventional arrangement where some bulging usually occurs. The relatively thin compacted condition of the apex area of the belt, flexibility of the loop **13** and its connection with the strap also serves to promote conformity of the assembly to the crotch of the wearer. Furthermore, the strap and loop afford a unique arrangement whereby the strap may be readily inserted and removed from the loop and the strap provides additional absorbent protection to the wearer.

As above referred to and exemplified in FIGURES 11, 12 and 13, the napkin structure **1** may be modified to some extent. For example, as depicted in FIGURE 11, the undersurface of the receiving means and/or pad may be provided or treated with a material **19** which is moisture resistant or impervious to liquid in order to promote retention of any discharge in the pad or otherwise assist in providing a protective shield or guard for the wearer. This organization further assists in maintaining the strap in a dry condition whereby to promote its release from the loop **13**. As another example, as shown in FIGURE 12, an upper surface of the strap may be provided or treated with a readily releasable adhesive **20** whereby to assist in holding the strap detachably connected with the undersurface of the receiving means and/or pad. As a further example, as illustrated in FIGURE 12, the upper surface of the strap may be provided or treated with a material **21** which is moisture resistant or impervious to liquid in order to promote retention of any discharge in the receiving means and/or pad or otherwise assist in providing a protective shield or guard for the wearer.

FIGURES 14, 15 and 16 depict a modified napkin structure which substantially corresponds in size and shape to the napkin structure **1**. More particularly, the napkin structure disclosed in FIGURES 14, 15 and 16 comprises a conventional napkin generally designated **50** and an element generally designated **51**. The napkin **50** includes a pad **52** provided with a relatively short continuation or tab **53** at its fore end and an elongate continuation or tab **54** at its rear end. The tabs **53** and **54** may constitute integral continuations of a receiving means **55** which carries or receives the pad **52**. The element **51** preferably includes a receiving means **56**, preferably in the form of a container or pocket, which is open at its free end as indicated at **57** and an elongate continuation or extension providing a strap **58**. The receiving means **56** and the strap **58** are constructed so that the pad **52** and its receiving means **55** are housed in the receiving means **56** and the tab **54** is housed in the strap **58**. While frictional forces ordinarily would be sufficient to hold element **51** in place, the element **51** may be secured to the napkin **50** by any suitable means such as by an adhesive, tying or stitching, so that the element constitutes a means whereby a conventional napkin may be substantially converted to one embodying the subject invention. It is to be understood that the element **51** may be constructed into a generally tubular condition in various ways. For example, the element may be made from a rectangular piece of material which is folded into a tubular shape for substantially wrapping the conventional napkin **50** or, if desired, it may be of a sock-like character. With this unique organization, the receiving means **56** of the element adds some absorbent material to the pad **52** and receiving means **55** of the conventional napkin and adds reinforcement to tab **54** and strap **58** when brought into supporting relation with the pad **52** and/or receiving means **55**.

Having thus described my invention, it is obvious that various modifications may be made in the same without departing from the spirit of the invention and, therefore, I do not wish to be understood as limiting myself to the exact forms, constructions, arrangements and combinations of parts herein shown and described.

I claim:

1. A structure of the kind described comprising elongate fabric means of a length sufficient to enable folding the same at an intermediate location to provide substantially upper and lower longitudinal portions to form a absorbent pad secured to said upper longitudinal portion, of an encircling means for a human body, an elongate absorbent pad secured to said upper longitudinal portion and said longitudinal portions having free fore ends adapted for connection with a frontal portion of an encircling means, the combined lengths of said pad and fore free end of said upper longitudinal portion being substantially equal to the length of said lower longitudinal portion.

2. A structure for the purpose described comprising an absorbent pad, means at a fore part of said pad whereby the latter may be attached to a frontal portion of a substantially annular support therefor, and elongate means extending from a rear part of said pad for connection with a rear portion of the support and disposition under said pad for connection with said frontal portion.

3. A structure of the character described comprising elongate means having an upper longitudinal portion and a lower longitudinal portion joined to one end of said upper longitudinal portion and adapted to be folded thereunder, said longitudinal portions having free ends adapted to be brought together in a juxtaposed relationship, said joined end being adapted to receive a rear portion of an encircling means for a human body and said free ends being adapted for fixation to a frontal portion of such an encircling means for supporting the structure in relation thereto, and an elongated pad secured to said upper longitudinal portion for supporting engagement by said lower longitudinal portion.

4. In combination: encircling means for a human body, said encircling means being provided with a pair of opposed connector means, an elongate sanitary napkin structure comprising an upper longitudinal portion and a lower longitudinal portion joined to one end of said upper longitudinal portion connected to one of said connector means and extending under said upper longitudinal portion, said longitudinal portions having free ends connected to the other of said connector means whereby to support said napkin structure in a suspended position.

5. The combination defined in claim **4**, in which said back portion is provided with a depending V-shaped formation to which said one end of said elongate structure is adapted for attachment and said front portion is provided with a depending portion to which said free ends of said elongate structure are adapted for attachment.

6. In combination: encircling means for a human body, said encircling means having a back with a preformed depending substantially V-shaped formation provided with receiving means and a front provided with depending means, elongate structure having a pair of substantially coextensive upper and lower longitudinal portions joined at one end to form a loop which extends through said receiving means for support thereby, said longitudinal portions having free ends attachable with said depending means, and absorbent means carried by said upper longitudinal portion for at least partial support by said lower longitudinal portion, said receiving means and said

loop portion being adapted for disposition in a relatively low and inset position with respect to the crotch of the body when the encircling means and elongate structure are correctly applied thereto.

7. In combination: encircling means for a human body, said encircling means having front and back portions, elongate structure having a pair of substantially coextensive upper and lower longitudinal means joined at one end for attachment to said back portion and having free ends for attachment to said front portion, and absorbent means carried by said upper longitudinal portion for at least partial support by said lower longitudinal portion.

8. A method of attaching a sanitary napkin structure of a type having an elongate pad provided with a tab at one end and a strap of a length at least as long as the pad extending from its opposite end to an encircling supporting structure provided with a connector and receiving means spaced from the connector, which comprises inserting the strap through the receiving means, manipulating the strap in supporting relation to the underside of the pad, and then fastening the free end of the strap and the tab to said connector whereby to support said napkin structure in a suspended position relative to said supporting structure.

9. A method of attaching a sanitary napkin structure comprising an elongate absorbent portion provided with a tab at its fore end and a strap extending from its rear end to substantially annular supporting structure provided with front connector means and a rear receiving means, which comprises attaching the tab to the connector means, inserting the strap through the receiving means and in supporting relation to the underside of the elongate portion, and then attaching the free end of the strap to the connector means whereby to suspend the napkin structure from the annular structure.

10. A method of attaching a sanitary napkin structure having an elongate absorbent portion provided with a tab at its fore end and means extending from its rear end to substantially annular supporting means provided with a front connector means and a rear connector means which comprises, attaching the extending means to the front and rear connector means and the tab to the front connector means whereby the napkin structure may be supported in a suspended position with the extending means underlying the absorbent portion.

11. A method of applying a sanitary napkin structure to an encircling means for a human body in which the encircling means has a back provided with receiving means and a front provided with a depending portion and the napkin structure comprises an upper longitudinal portion provided with absorbent means and a lower longitudinal portion which is joined to said upper longitudinal portion by an intermediate portion and said longitudinal portions have free ends which comprises, manipulating said lower longitudinal portion whereby to adjustably locate said intermediate portion in said receiving means and then attaching said ends to said depending portion to position said lower longitudinal portion in supporting relation to the undersurface of said upper longitudinal portion and said absorbent means.

12. In combination: a sanitary napkin comprising an elongate absorbent portion provided with a short tab at one end and a long tab at its opposite end, an element provided with means substantially receiving within its confines said absorbent portion and with an extension in which said long tab of said napkin is secured, said extension of said element being of a length substantially equal to the combined lengths of said absorbent portion and said short tab.

13. An element adapted for use with a conventional sanitary napkin of the type which comprises an elongate pad, a short tab at one end and a long tab at its opposite end, said element being elongate and having receiving means at one extremity adapted to receive the pad and a pair of portions extending from the receiving means adapted to receive therebetween the long tab, said pair of extending portions being of a length greater than the length of the long tab.

14. The structure defined in claim 2, in which said absorbent pad and its fore part have length and these lengths when combined, substantially equal that of the length of said elongate means.

15. The structure defined in claim 2, in which said absorbent pad, its fore part and said elongate means are of a unitary construction.

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