Dec. 17, 1968 H. L. MARDER ETAL 3,416,157

DISPOSABLE BIB

Filed March 8, 1966

FIG. 1

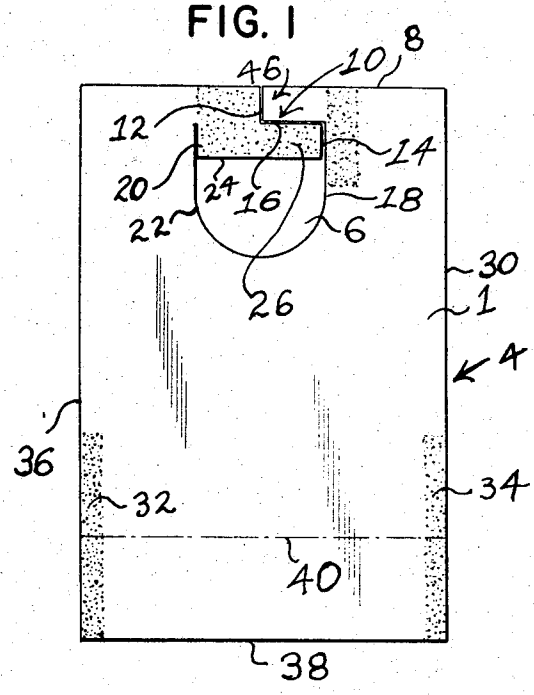
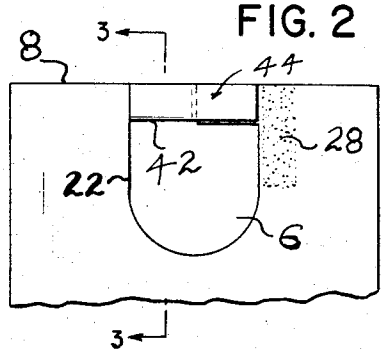


FIG. 2



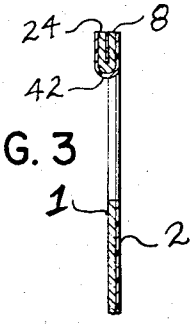


FIG. 3

FIG. 4

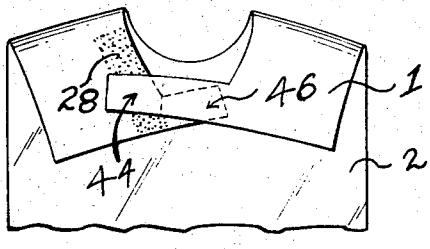


FIG. 5

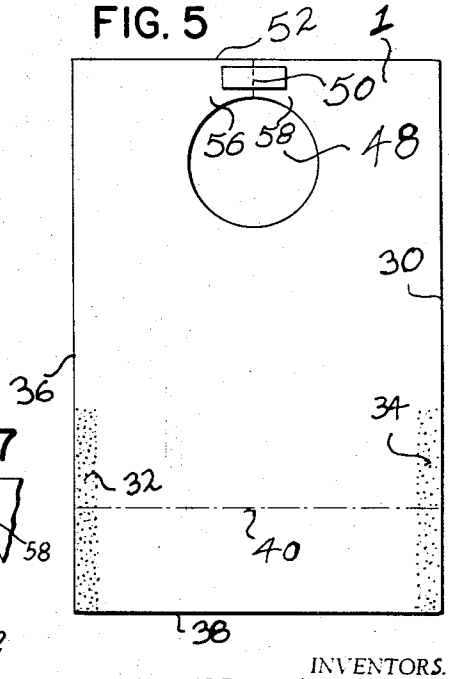
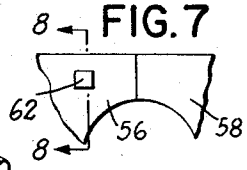


FIG. 7



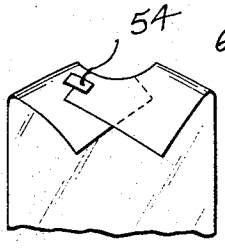


FIG. 6

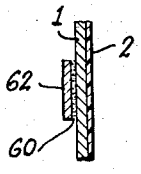


FIG. 8

INVENTORS.
HERMAN L. MARDER
GEORGE D. GRIPPO
WERNER O. TUNDERMANN

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DISPOSABLE BIB

Herman Lowell Marder, Plainfield, George Daniel Grippo, New Brunswick, and Werner Otto Tundermann, Colonia, N.J., assignors to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

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This invention relates to a bib and more particularly to a disposable bib which is useful in the same manner as the standard cloth bibs used on babies, patients and the like to protect clothing and undergarments especially while eating.

The conventional cloth bibs require washing after each use and this high frequency of soiling greatly adds to the already heavy laundry burden of the mother.

Paper bibs which can be discarded after use obviously have a tremendous advantage in time and effort which can be saved by the mother. Ordinary paper bibs however are far from satisfactory in their fit, and particularly with restless babies, in their protective capacity due to the ease with which they are torn.

Although there are on the market disposable baby bibs of improved strength characteristics which are constructed of more or less absorbent paper stock with or without a water repellent backing to prevent "strike through" of spilled foods and especially liquids, none has a closure that is quick and easy, and yet at the same time provides a sure and snug fit around the neck, which is so essential a feature for active babies.

It is a primary object of the present invention to provide a paper bib of outstanding strength characteristics and which can be secured to and around a baby to provide a sure and snug fit.

It is another object of this invention to provide a disposable paper bib of unique construction which, by virtue thereof, may quickly and easily be secured to a sure and snug fit around the neck of a baby.

It is still another object of the present invention to provide a disposable paper bib, especially useful for a baby, which is exceedingly durable but still inexpensive, and which can be adjusted to a quick and easy fit which is sure and snug and will insure the protection of the baby and the baby's clothing against spilled food and liquids.

It is still a further object of this invention to provide a disposable paper bib for a baby which can be fitted snugly and securely around the neck of the baby, and which is, nevertheless, readily removable.

It is still another further object of this invention to provide a disposable paper bib for a baby which is characterized by a snug fit and ready removability, but, nevertheless, is not likely to be disarranged or easily removed by the baby.

Other objects and advantages of the present invention will appear from the following description and drawings in which:

FIG. 1 is a plan view of a blank adapted to form the disposable bib of the present invention;

FIG. 2 is a fragmentary plan view of the neck portion of the bib in its ready to use form;

FIG. 3 is a sectional view taken along the line 3—3 of FIG. 2 and shows the two-layer structure of the bib body and the reinforced four-layer construction of the neck closure means;

FIG. 4 is a fragmentary view of the upper section of the bib showing generally the formation of the neck opening;

FIG. 5 is a plan view of a modified blank adapted to form a disposable bib of the present invention;

FIG. 6 is a fragmentary view of the upper section of the bib showing generally the formation of the neck opening using the modified blank of FIG. 5;

FIG. 7 is a fragmentary view of the upper section of the neck opening and securing means of another modification of the present invention;

FIG. 8 is a section along the line 8—8 of FIG. 7 and shows the spot adhesive and the protecting strip therefore on the base sheet.

With continuing reference to the accompanying drawings, wherein like reference numerals indicate like parts, the disposable bib of the present invention is generally constructed of a paper base material **1**, which is preferably any soft and absorbent tissue paper, which is provided with a water-resistant or water-repellent backing layer **2**. This backing layer **2** may be applied as a coating to the paper base or as a preformed film which is suitably adhered to the paper base. Adherence of the preformed film may be effected by any suitable adhesive, by spot gluing, by embossing techniques and/or by laminating with heat and/or pressure as done in conventional heat sealing operations.

The paper base material **1** may be a single ply of tissue paper or several plies which are prevented from delaminating by the coating or film **2** which is subsequently applied to form the composite structure from which the bib **4** is fabricated. Where the water-repellent layer **2** is applied as a coating, any suitable film-forming material may be employed such as a vinyl resin, cellulose derivative, e.g. cellulose acetate, ethyl cellulose, cellulose propionate, and the like, hydrocarbon wax or polymer, and the like. The coating may be applied from a suitable solvent, or solvent mixture and may contain the usual plasticizers and other additives such as odorants, germicides, pigments, etc. Alternatively, the coating may be produced from a hot melt. The production of hot melt coatings is well known in the art, and the particular manner of forming such a coating is neither critical nor forms any part of the present invention.

The second technique for producing the water repellent layer **2** is by laminating a preformed film of the selected material to the paper base **1**. The specific nature of the film material is not critical and may comprise any of the substances mentioned above as suitable coatings. As with the latter, the preformed film material may have incorporated therewith the same types of additive substances. While it has been mentioned that the nature of the film **2** is not critical, nevertheless it is preferred to employ a polyethylene or polypropylene film for the water repellent layer because of its overall admirable properties for this purpose.

Having selected the stock material for the disposable bib **4**, the fabrication of the latter is carried out as follows. The stock material is first cut to a predetermined generally rectangular shape, which may conveniently be, for example, a rectangle 11" x 16". A neck opening is then cut to produce a U-shaped opening **6** near the upper end **8** of the rectangular sheet. A cut line **10**, generally Z-shaped and comprising vertical cuts **12** and **14** and horizontal cut **16** is made with vertical cut **12** starting at the median point of the upper edge of the rectangular base sheet stock and terminating at the upper portion of the U-shaped opening **6**. It will be noted from FIG. 1 that the terminating vertical cut **14** is an upper extension of one side or leg **18** of the said U-shaped opening. A second vertical cut line **20**, parallel to and equal in length to vertical cut **14** is then provided as an upper extension of leg **22** of the U-shaped opening **6**. In the area bounded by cut lines **10** and **20**, and the upper edge of the U-shaped opening **6**, said upper edge being denoted by numeral **24**, there is then provided an adhesive coating **26**. The general shape of this adhesively coated area is that of an "L." A second adhesive layer **28** is applied as a vertical

strip beginning at the upper edge **8** of the rectangular sheet and extending downwardly a suitable distance below vertical cut **14**, and preferably to about the mid-point of leg **18** of the U-shaped opening **6**. While the strip **28** is depicted as contiguous with vertical cut **14** and leg **18** of the U-shaped neck opening, this is not essential although a preferable construction. A slight lateral displacement of adhesive layer **28** towards edge **30** may be resorted to without affecting the utility of the bib of this invention.

At the lower end of the rectangular sheet, there is further provided a means to form a pocket which is highly useful to perform several functions, among them being the prevention of spillage of food and liquids from the floor and a convenient repository for various and sundry items as desired. The means to form the pocket comprises two vertically extending adhesive strips **32** and **34** which are substantially contiguous with edges **36** and **30**, respectively. Each of the adhesive strips terminates at the lower edge **38** of the rectangular sheet. To form the pocket, the lower edge **38** is folded-over line **40**, which approximately bisects the length of the adhesive strips **32** and **34**.

To protect adhesive areas **26** and **28**, it may be desirable to cover them with a suitable and conventionally available release paper which can be readily removed before use of the paper bib. Adhesive areas **32** and **34** may also be covered similarly where it is desired to merchandise the bib to the ultimate user without the pocket already formed.

It may be desirable to merchandise the bib in the form shown in FIG. 2 wherein the neck closure means is represented in its finally constructed form. To effect this construction, the horizontal leg of the L-shaped adhesive area **24** is folded towards upper edge **8** so that edges **24** and **8** are contiguous. The fold line thus becomes edge **42**. In this form, it will be seen that tab **44** overlays tab **46** with the adhesive coating on tab **44** between the two tabs. Again, as described above, the adhesive areas which are exposed may be covered with a protective release lamina.

With the bib as heretofore described, it will be apparent that there has been provided a construction which permits a snug and secure engagement of the neck of a baby with the shoulders and upper body portions of the baby being excellently protected. Furthermore, by virtue of the neck closure construction, and as clearly depicted in FIG. 4, there is excellent conformance of the bib to any subject, and particularly a baby, and thereby insuring the best protection to the baby.

While the term "adhesive" has been used above to denote the material used in the areas **26**, **28**, **32**, and **34**, it is clear that this term is used in its generic sense, and that actually it is preferred to employ for these areas a material which is more technically delineated as cohesive in nature. Cohesives are a class of adhesive substances which stick only to themselves and have substantially no adhesion for other surfaces.

In the modification depicted in FIG. 5, the neck opening is shown as circular to provide a neck opening **48**. This cut-out section is spaced from the upper edge **52** and communicates therewith by means of cut line **50**. The provision of and construction for a pocket is similar in this modification to the one shown in FIG. 1.

To provide for effective, secure, and a snug fit there is employed an adhesive strip **54** which may take one of several forms in construction. The strip **54** may be fabricated from a pressure-sensitive adhesive paper having the usual protective release paper lamina. To utilize such an adhesive paper, a predetermined size for the strip **54** is selected and half of the release paper is removed. The exposed section of adhesive is then pressed firmly onto one of the tabs **56** or **58**. The other half of the strip **54** is left with its associated piece of release paper over the sticky adhesive surface. When the paper bib is to be used, the user has merely to peel off the said half section of release paper, conform the bib to the baby, draw the tabs **56** and **58** in overlapping relationship, and press the exposed sticky surface of the strip **54** in the proper position on the opposite tab to effect a quick, secure, and snug fit. The final result of this procerure, in so far as the general shape of the bib is concerned, is depicted in FIG. 6.

In place of the specific adhesive tab above described, there may be employed double-faced pressure sensitive adhesive materials.

In the still further modification shown in FIGS. 7 and 8, the general construction of the bib form of FIG. 5 is followed, except that the means to conform and secure the bib around the neck of a baby is modified. As will be noted by reference to the drawings, a single adhesive spot **60** is provided and this is protected by release paper **62**. The latter completely covers the adhesive to prevent any part of the bib or any other item from being prematurely adhered to adhesive spot **60**.

While each of the forms of the bib of the present invention as hereinbefore described provides for a snug and secure fit around the neck and excellent conformance thereby to the subject, and it is to be noted that this is achieved by virtue of the specific constructions and characteristics shown, the attainment of these ends results, among the various cooperative and coacting elements present in the bibs of the instant invention, to a large measure to the design and construction which is not restrictive of the position of the adhesive bonding. With each form of the bib of the present invention, it is manifest that this tremendous advantage gives rise to the flexibility in adjustability whereby the optimum in contouring and conformation to the subject results.

To illustrate by way of example only the dimensional characteristics of a suitable bib, the following is offered.

A 2-ply sheet of facial paper tissue is cut in the shape of a rectangle 11" x 16½". A 4" diameter circle is cut at the upper end of the sheet, with the center thereof located 5½" from the sides and 3¼" from the top edge. A cut is then made through the top along the center line into the 4" diameter hole. This creates the two flaps, e.g. **56** and **58** in FIGS. 5 and 7, to one of which flaps is then applied a strip of pressure sensitive adhesive paper, 2" x ¾". This adhesive paper, which initially has a release protective paper lamina over the sticky surface of the adhesive, is placed, pressed and firmly secured to one of the closure flaps as above described. This is done by removing about 1" of the release paper. The remaining 1" length of the strip, i.e. element **54**, still retains its half of the release paper until the bib is ready for use.

Instead of employing the closure means **54** to obtain the modification of FIGS. 5 and 6, one flap section e.g. **56** may be provided with a spot of adhesive **60**, the spot being a square having 1" sides, and a release lamina **62** to protect the adhesive as pointed out above. In this specific exemplification of dimensional features, the said adhesive spot **60** is placed so that its top edge is ¾" from the top edge of the sheet and its inboard edge, i.e. closest to cut line **50**, is about equal to the radius of the neck opening, which in this instance is 2", in distance from the cut line **50**.

While the above description has been substantially limited to what has been shown in the various figures in the drawings, it is clear that many modifications and variations in construction and materials may be made within the scope and spirit of the presently disclosed invention. Thus, the paper stock may be a paper tissue which has been treated to give added wet strength. The paper may be colored, printed, and/or embossed. It may be of various grades and thicknesses. Although a rectangular shape for the bib has been shown and described other equivalent shapes may be used as well. It is, of course, preferred that the paper that is used be soft and pliable with good drape and that it be non-irritating to the baby's neck.

The water-repellent layer may, as pointed out above, be any plastic, rubber, wax or the like material but it should not stiffen the bib or otherwise adversely affect the function and character of the bib paper stock.

Still further, while the various modifications of the baby bib of the present invention which are herein shown and described include a pocket at the bottom of the bib, and this form of construction and embodiment is by far the preferred one, nevertheless, it may be desirable to produce a bib without such a pocket, in which case, the resulting baby bib will feature the other aspects of the present invention and particularly the construction of the neck portion of the bib.

The adhesive strips **32** and **34** may be made from any conventional adhesive substances, especially where the pocket is preformed by the fabricator. Where the pocket is to be made by the user, it is preferred that the adhesive be of the cohesive type, i.e. stick only to itself. The length of the adhesive strips **32** and **34** will, obviously, vary, but in the illustrative constructions set out above, a suitabe strip would be one 6" in length and ¾" in width.

Still further, although the neck opening has shown in two modifications, other substantially equivalent shapes, e.g. oval, elliptical, etc., will function as well since the essential feature as herein disclosed is to have conformance around the neck of the baby.

Many other variations and modifications, in addition to those specifically enumerated above, may be made and will be readily apparent to one skilled in the art, and such variations and modifications are clearly within the spirit and scope of the present as well.

We claim:

1. A disposable paper bib comprising a generally rectangular paper base sheet having a water-resistant coating on one side thereof having a U-shaped neck opening at the upper end, but spaced from the top edge of said base sheet, said neck opening communicating with the top edge of the said base sheet by a cut line providing thereby two flaps adapted to be placed in an overlapping position said flaps formed by said cut comprising one L-shaped flap and one rectangular flap with said rectangular flap nested within said L-shaped flap when normally disposed in non-overlapping relationship, an adhesive coating on one entire surface of said L-shaped flap whereby said flaps may be overlapped and secured to provide a secure and snug fit around the neck of a wearer within said neck opening, said bib further provided with a pocket section which is intricately formed from the paper base sheet by folding the bottom section of the base sheet upon itself and adhesive coatings along the overlapped folded edges of the bib for securing said respective folded edges of the folded-over section to the base sheet.

References Cited

UNITED STATES PATENTS

2,172,162	9/1939	Gillette	2—49
2,580,388	1/1952	Allen	2—49
2,617,104	11/1952	Barager	2—49
3,001,646	9/1961	Cooper	2—49 X
3,146,464	9/1964	Burnett	2—49
3,328,807	7/1967	Strauss	2—49
3,332,547	7/1967	Rowe et al.	2—49 X

FOREIGN PATENTS

600,109	6/1960	Canada.

PATRICK D. LAWSON, *Primary Examiner.*

A. R. GUEST, *Assistant Examiner.*