Jan. 24, 1967 G. T. GRABLE 3,299,440

BIB

Filed Aug. 20, 1964

FIG. 1

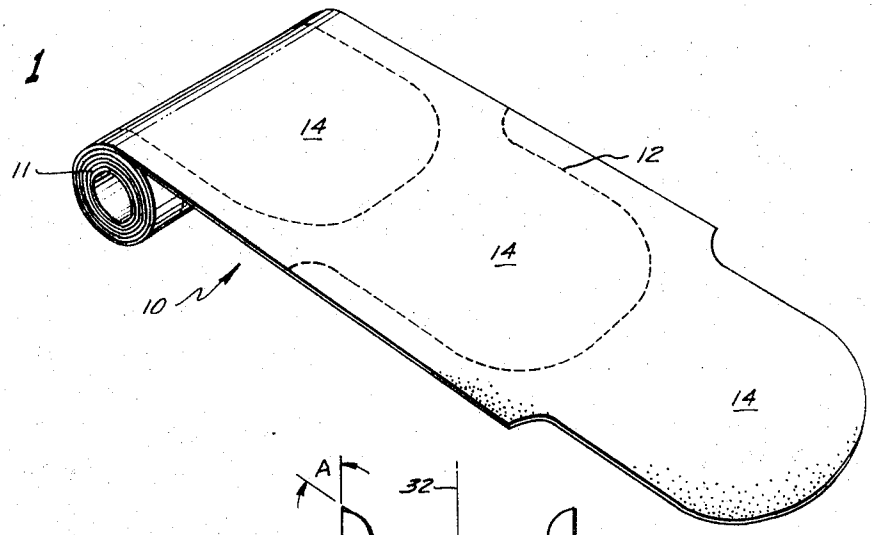


FIG. 2

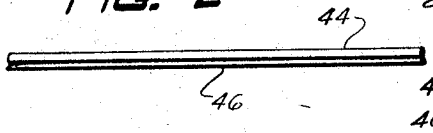


FIG. 4

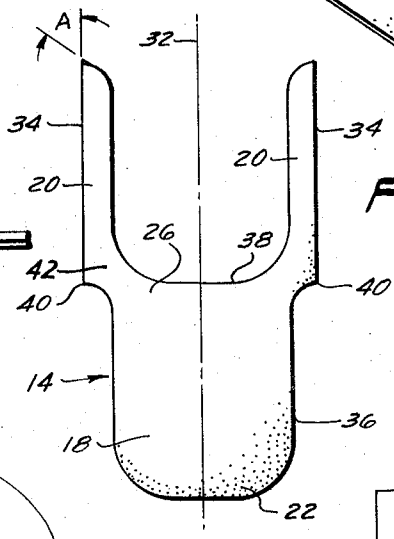


FIG. 3

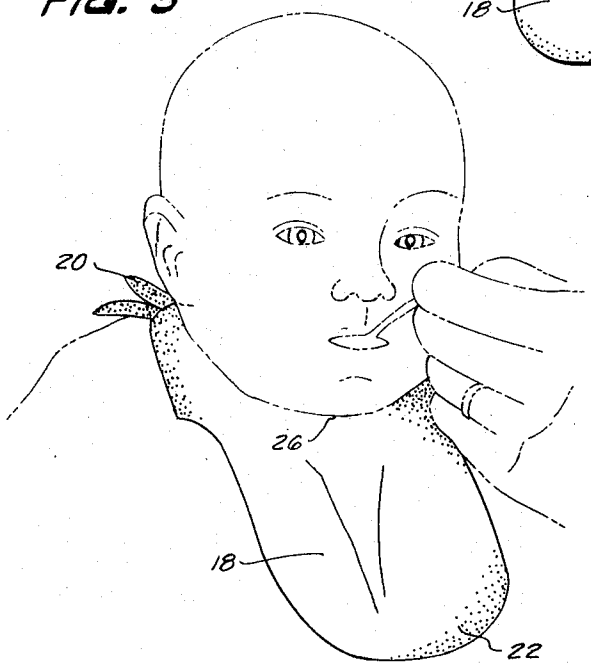
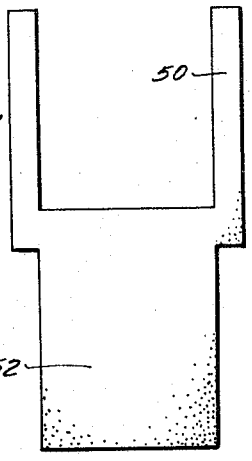


FIG. 5



INVENTOR.
GENE T. GRABLE

BY

LEON D. ROSEN,
ATTORNEY

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Gene T. Grable, 226 Mission Road, Corona, Calif. 91720

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3 Claims. (Cl. 2—49)

This invention relates to bibs and more particularly to improvements therein.

Bibs are often used on children to protect their clothing. It is sometimes convenient to provide disposable bibs, but they must be of low cost, compactly storable, sturdy, and convenient to use. This invention provides bibs having these and other desirable qualities.

Accordingly, one object of the present invention is to provide a disposable bib which prevents runoff of liquids falling thereon and yet protects the covered clothing.

Another object is to provide a disposable bib having fastening straps which may be easily and securely tied together.

Another object is to provide an easily and efficiently usable bib which is readily cut from a continuous strip of material without waste.

Another object is to provide a continuous strip of disposable bibs, from which individual bibs can be removed and easily used.

Another object is to provide a continuous strip from which individual bibs of sturdy construction can be removed.

Another object is to provide a continuous strip of easily fastened bibs which are of a shape which enables their protection of clothing with a minimum of material, and wherein all of the strip material is efficiently utilized.

The foregoing and other objects are attained by a bib comprising a first layer of absorbent material such as porous paper to prevent runoff of liquids spilled thereon and a thin second layer of an impermeable material such as a plastic to prevent liquids from penetrating to the clothing covered by the bib. The bib of the invention includes an apron portion and two straps, the space between the straps being of the same shape as the outside of the apron portion to enable the production of bibs from a continuous strip of material without waste. The bibs of this invention are easily fastened because the second layer thereof is generally of a deformable but somewhat resilient plastic material. Thus, when the bib straps are tied together, they form a knot which is not likely to undo itself.

The bibs of the invention are provided in a compactly storable and easily dispensed form by manufacturing them as a strip. The strip is as wide as each bib, and perforations are punched therein to define individual bibs. The user mereely tears along one perforation to remove one bib at a time from the roll. The bibs thus removed are ready for use without further tearing or manipulation, and are used merely by tying the resulting straps around the bib-wearer's neck.

The novel features that are considered characteristic of this invention are set forth with particularity in the appended claims. The invention itself, both as to its organization and manner of use, as well as additional objects and advantages thereof, will best be understood from the following description when read in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a rolled strip containing bibs, which is constructed in accordance with the present invention;

FIG. 2 is a partial edge elevation view of a bib constructed in accordance with the invention;

FIG. 3 is a pictorial view of a bib shown in use on a wearer;

FIG. 4 is a front elevation view of an individual bib such as one removed from the strip of FIG. 1; and

FIG. 5 is a front elevation view of another embodiment of a bib constructed in accordance with the invention.

Reference is now made to the drawings and particularly to FIG. 1 which illustrates a strip **10** of material partially wound on a roll **11**, the strip having perforation lines **12** which define individual bibs **14**. By tearing the strip 10 along a perforation line **12**, a single bib of the form shown in FIG. 4 is removed from the strip.

Each bib **14** of the type shown in FIG. 4 includes an apron **18** which serves to catch food, and two straps **20** which enable the fastening of the bib around the wearer's neck. The apron **18** includes a breast portion **22** which generally covers the breast or stomach of the wearer, and a neck portion **26** which is generally positioned against the neck of the wearer. The straps **20** depend from either side of the neck portion **26**, and extend parallel to each other.

The bib **14** is symmetrical about a centerline **32**. The outline of the bib may be defined as four edges. Two of these are parallel edges **34** which are the edges of the strip of material from which the bib is removed and which form outer edges of the straps **20**. An apron edge **36** extends between the edges **34** and around the breast portion **22**, thereby defining most of the apron **18**. An inner strap edge **38** extends between the edges **34** and forms inner edges of the straps **20** and part of the outline of the neck portion **26** of the apron. The shape of the apron edge **36** is geometrically congruent with the shape of the inner strap edge **38**. The congruency of the edges enables the bibs to be formed from a continuous strip of material without waste and/or to be packaged as a continuous strip of constant width as shown in FIG. 1.

Inasmuch as the inner edges of the straps **20** define the apron **18** and vise versa, the edges **36** and **38** are shaped so as to simultaneously optimize the shape of both the straps and the apron. The intersection **40** of the apron edge **36** and edge **34** would generally be a smooth, continuous line if it were not necessary to make the apron edge define part of another bib of the strap. However, the elimination of the corner at **40** would results in the extreme ends of the straps (on the next bib of the strip) being very narrow and of little strength; if the bib were tied at such narrow ends, the ends might tear. Accordingly, the straps **20** are provided with ends which are not extremely narrow; generally the angle A between the inner strap edge **38** and the edges **34** is at least about 30°.

The apron **18** is preferably shaped so that it is wide to protect large areas of clothing. Accordingly, the inner edges of the straps **20** are substantially parallel to the outer edges **34** throughout most of the length of the straps. At the base portions **42** of the straps, where the straps meet the neck portion **26** of the apron, the inner edge of the straps curve inwardly so as to form wide bases. The bases **42** of the straps generally receive the full shear and tension forces applied to the straps in pulling the bib snugly around the wearer's neck and tying it, so they are wide to prevent tearing. The rounding of the inner edges of the straps at the base **42** is also desirable to enable the bib to snugly fit the neck of the wearer. By placing the intersection **40** of the strap and apron edges approximately even with the portion of edge **38** which defines the apron neck portion **26** (i.e. the two intersections **40** of each bib and the middle of the inner strap edge **38** all lie on an imaginary straight line) the bases **42** of the straps are wide and therefore strong.

Generally the center portions of the straps **20**, which have almost parallel sides, are no wider than about one-eighth the width of the strip from which the bibs are formed. This enables the straps to easily be wrapped

about the wearer's neck and to be tied together. The straps may be narrower than this, but are then likely to tear.

The construction of the bib includes an absorbent top layer **44** and an impermeable bottom layer **46**, as shown in FIG. 2. The top layer **44** is of a paper towel material or the like to enable its absorption of liquid food spilled thereon, and to prevent the liquid from flowing or dribbling off the bib and onto the wearer's clothing. The impermeable layer **46** is of a thin impermeable material to prevent any liquid which is absorbed by the top layer **44** from penetrating to the covered clothing.

When the bib is tied around the wearer's neck, the knot must hold itself securely. Generally, straps of a paper-towel-like material will not hold together unless the tying knot is very tight. However, before a knot can be pulled tight, the material is likely to tear. It is found that the use of a deformable but resilient plastic backing layer **46** enables the straps to hold a knot well. When a knot is being pulled tight, the deformable plastic lies between the adjacent paper strap loops. As soon as the tension on the straps is released, the plastic springs back somewhat and holds together the paper portions which tend to separate. The plastic is largely deformed to the shape of the knot so it does not tend to undo the knot; however, the plastic expands laterally a small amount when the lengthwise tension on the straps is removed.

It has been found that a paper towel material of approximately six-thousandths inch thickness backed by a layer of Saran, a trademark for vinylidene chloride sheet material, manufactured by the Dow Chemical Company, Inc. of Midland, Michigan, of approximately one-half thousandth inch thickness, provides an easily tied bib construction. Polyethylene film and other plastic films having the deformable characteristics of Saran can also be used.

Although the embodiment shown in FIG. 4 is especially useful as explained hereinbefore, other shapes can be employed. The embodiment shown in FIG. 5, for example, has straps **50** and an apron **52** of a form which enables its production from a continuous strip without waste, and which can be packaged on a continuous strip or roll. This embodiment, however, lacks several of the advantages possessed by the embodiment of FIG. 4, which have been set forth.

The particular bibs described herein may be packaged as a continuous strip, but may also be packaged in stacks or in other manners. Additionally, other shapes of bibs may be employed which include only some of the features set forth herein. Thus, while particular embodiments of the invention have been described herein, the invention is not limited thereby, but is of the full scope of the appended claims.

I claim:

1. A blank for a plurality of bibs comprising:

a strip of flexible material having substantially parallel sides;

a plurality of perforation lines, each perforation line symmetrical about the centerline of said strip and extending between opposite edges of said strip;

first portions of said perforation lines, said first portions adjacent said strip sides and including parts defining angles of at least about 30° with the sides of said strip;

second portions of said perforation lines connecting with said first portions and extending substantially parallel with said parallel sides of said strip at a distance therefrom of less than about one-eighth the width of said strip; and

third portions of said perforation lines, said third portions connecting with said second portions and having parts extending through the center of said strip in a direction substantially perpendiculer to said parallel sides of said strip, said plurality of perforation lines spaced lengthwise along said strip at distances approximately equal to the lengthwise distance between the parts of said first portions of said perforation lines which define angles of at least about 30° with said sides of said strip and the parts of said third portions of said perforation lines which extend through the center of said strip.

2. A blank for a plurality of bibs comprising:

a strip of material having parallel sides;

a plurality of congruent perforation lines extending across said strip at evenly spaced intervals, each of said lines symmetrical about the centerline of said strip;

first portions of said perforation lines meeting said parallel sides at an angle of at least approximately 30°;

second portions of said lines connecting with said first portions and extending substantially parallel with said parallel sides of said strip; and

third portions of said perforation lines connecting with said second portions and forming a smooth arc-like shape which extends to the centerline of said strip and passes through the centerline of said strip at substantially a right angle thereto.

3. A blank for a plurality of bibs as defined in claim 2 wherein:

the points of intersection of said perforation lines with said parallel sides are approximately even with the intersection of said third portions of said perforation lines with said centerline of said strip.

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JORDAN FRANKLIN, *Primary Examiner.*

A. R. GUEST, *Assistant Examiner.*