

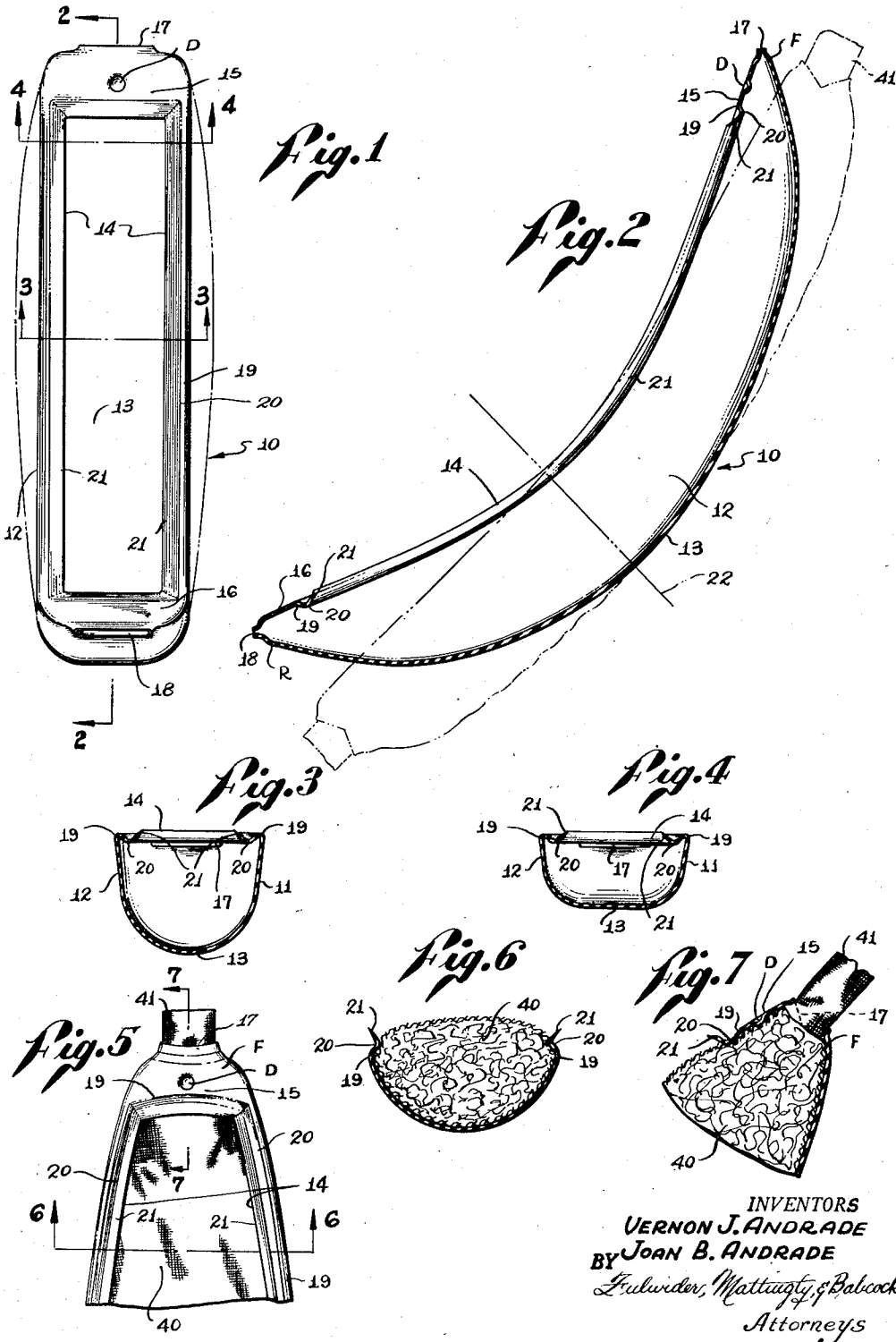
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HOLDER FOR SANITARY NAPKINS

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HOLDER FOR SANITARY NAPKINS

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This invention relates to sanitary napkin holders, and more particularly, to a vastly improved holder of this type which is integrally molded into a predetermined shape to fit the body and to hold the napkin securely while guarding against garment soilage due to excessive or abnormal menstrual flow.

This application is a continuation in part of our co-pending application Serial No. 155,064, filed April 10, 1950, for Holder for Sanitary Napkins.

The problem of providing a satisfactory cover or holder for sanitary napkins to avoid garment stains and soilage due to excessive menstrual flow is made more difficult because of the necessity for avoiding undue discomfort to the wearer and of providing an article which can be conveniently carried in the purse of the user ready for use upon demand.

Heretofore sanitary napkin holders have taken the form of a generally arcuate shaped pouch which supports a napkin and is simply maintained in position by suitable tie strings. These holders will generally conform to the body parts of the wearer by virtue of the supporting or fastening means, but as the napkin becomes saturated, the pouch holder will generally lose its shape and leakage about its edges is possible unless the holder is readjusted in position. Moreover, these sanitary napkin holders are generally bulky and uncomfortable to wear and is some instances additionally employ complicated strap arrangements to hold the napkin within the pouch.

It is a primary object of the present invention to provide a greatly improved sanitary napkin holder comprising a single integrally molded pre-shaped body which is light, easily portable, and which is so designed as to provide for maximum comfort for the wearer.

A further object is to provide a holder which will tend towards its preformed shape as saturation of the napkin therein occurs.

Another object is to provide a sanitary napkin holder which is designed at its aperture edges in a manner to securely hold the napkin in place and also to effect a seal with respect to the portions of the body with which the holder edges come in contact.

These and further objects of the present invention are attained by providing an integrally formed or molded holder of a suitable rubber or a suitable rubber-like material of moisture-resistant character, initially contoured to fit the contour of the parts of the body, while at the same time being of an extremely thin flexible wall section to accommodate shaping itself to the body without causing undue discomfort to the wearer. The holder is designed to support within it a napkin and to in turn be supported by the tie strings of the napkin which are held in place on the wearer. The initial molded shape or contour near the ends of the holder is such that the holder is distorted when the napkin is first fitted therein. As saturation occurs, the napkin loses its dry or springy characteristics and the holder thus tends to come back to its original form. This action causes the aperture edges which are designed with special sealing lips, to hug the wearer's skin and thereby increase the protection afforded.

A better understanding of the invention and its further features and advantages will be had by referring to the following detailed description taken in conjunction with the accompanying drawings in which:

Figure 1 is a top view of the napkin holder, the solid line position indicating its appearance in unstrained position or in its natural state before a napkin is inserted

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therein, and the phantom line indicating distortion of the holder when containing a dry napkin;

Figure 2 is a longitudinal cross-sectional view of the holder in the solid and phantom line positions as seen along the lines 2—2 of Figure 1;

Figure 3 is a transverse cross-sectional view as seen along the lines 3—3 of Figure 1;

Figure 4 is another transverse cross-sectional view as seen along the lines 4—4 of Figure 1;

Figure 5 shows an enlarged portion of the front end of the holder with a napkin inserted therein;

Figure 6 is a cross-sectional view as seen along the lines 6—6 of Figure 5; and

Figure 7 is a cross-sectional view of the end of the holder as seen along the lines 7—7 of Figure 5.

Referring to Figure 1, the preferred form of the napkin holder is illustrated as it would appear in its natural state when viewed from the top. The holder, designated generally by the numeral 10, comprises two side walls 11 and 12 and a bottom wall 13. As viewed from the side as in Figure 2, the holder is of a generally asymmetrical crescent shape from its front end F to its rear end R.

Referring again to Figure 1, there is provided an opening 14 substantially rectangular in shape, as viewed from the top, the narrow dimensions of the opening being defined by a front top end wall 15 and a rear top end wall 16. Slits 17 and 18 are provided in the front end F and rear end R, respectively, to permit the tie strings of a napkin to pass through the ends of the holder. As seen best in Figure 3, the edges of the rectangular opening or aperture 14 are defined by a main bearing ridge 19 and a molded edge portion in the shape of a V in cross-section, having an apex 20 and a lip 21 constituting the free leg of the V. As shown clearly in Figure 2, the slit openings 17 and 18 are also defined by this edge construction. Since it is extremely important in the present invention that the sanitary napkin holder be properly positioned, the front end of the holder is clearly designated by means of the dimple D as shown in Figures 1 and 2.

As pointed out in Figure 2, the holder is in the shape of a crescent-shaped trough which is asymmetric with respect to one of its transverse axes. The point of maximum transverse cross-sectional area is designated by the dot-dashed line 22 and it is seen that this point is closer to the rear end of the holder than the front end. The holder is thus designed such that the cross-sectional area will decrease at a greater rate towards the rear of the holder than towards the front of the holder. It is to be understood, in accordance with the present invention, that the holder as shown in solid lines is initially molded to assume this natural or unstrained state.

In the vicinity of the mid-point of the holder, the transverse cross-section, as shown in Figure 3, is defined by the arcuate shape of the side walls 11 and 12 and the bottom wall 13. In this figure, the edge portions of the aperture opening 14 are clearly shown. It is to be noted that the cross-sectional V construction of these edge portions in the initial molding results in a reinforcing bead at the apex 20 of the V, the free leg 21 comprising a thin lip tapering to a "knife edge" all about the periphery of the opening, the significance of which will be pointed out as the description proceeds. Figure 4 shows the configuration of the side walls 11 and 12 and bottom wall 13 at a point near the front end of the holder. It will be noted that the arcuate shape of the bottom wall 13 approaches a flattened configuration near the ends of the holder.

It is to be emphasized that this construction causes the napkin holder to assume the shape as indicated in Figures 1, 2, 3 and 4 when it is undistorted or in its natural state. This particular design has been carefully conceived, in accordance with the invention, to afford maximum comfort to the wearer and minimize any moisture leakage about the peripheral edges of the openings.

Referring to Figure 5, it will be seen that when a napkin 40 is inserted in the holder, the tie string 41 passing through the front end opening 17 as shown, the holder is distorted or flexed out as indicated by the phantom lines in Figures 1 and 2. This action is due to the fact that the napkin is initially inserted in a dry state and

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has a tendency to be somewhat more elastic than when moist.

From Figures 6 and 7 it will be apparent that the beaded portion of the edge at the apex 20 of the V construction will bear on the napkin 40 to hold it in place, the free leg of the V or thin lip 21 constituting a sealing means which fits comfortably against the wearer's skin. Because of the relatively expanded aperture area due to the distortion by the napkin 40, as shown by the phantom lines in Figure 1, the maximum protection is afforded during the initial stages of the menstrual flow. As the napkin 40 becomes saturated with moisture, however, it will tend to become less elastic and the natural state of the holder will tend to be resumed. This action results in the aperture opening 14 of the holder closing inwardly and the holder itself bowing inwardly from the phantom line positions shown in Figures 1 and 2, respectively, to the natural solid line positions, resulting in the holder aperture 14 hugging the wearer's skin and thereby minimizing any leakage about the peripheral edges.

There is thus a double safeguard provided. First, the unique edge construction consisting of the bead at the apex of the V and the thin lip 21 insures that an effective seal obtains. Second, the tendency of the holder to resume its natural state serves to maintain the sealing lip portions in contact as the napkin becomes saturated. It is also to be noted that the reinforcing bead adjacent the thin lips not only performs a function of reinforcement, but also aids in the functional performance of retaining the napkin in place, and in providing a bearing ridge along the side edges which in effect turns the thin lip lining of the main opening into an upwardly directed position for maximum effectiveness.

While we have shown and described a preferred embodiment of the invention, it will be apparent that it is

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capable of variation and modification from the particular forms selected for illustration so that its scope should only be limited by the scope of the claims appended hereto.

We claim:

1. A sanitary napkin holder of integral molded construction of rubber-like material having side and bottom walls forming a body of arcuate shape in mid-transverse cross-section with an opening at the top, said holder being asymmetrically concave from end to end, and each side of said body along said top opening being formed with an edge portion including a lengthwise bearing ridge, said edge portion being of a V configuration in cross-section, the free leg of the V forming a thin lip, and a bead at substantially the apex of the V.

2. A sanitary napkin holder of integral molded construction of rubber-like material, said holder having side and bottom walls forming a body of arcuate shape in cross-section with a top opening, said holder being concave from end to end at the open top thereof each side of said body along said top opening being formed with an edge portion including a lengthwise bearing ridge, said edge portion extending inwardly and downwardly and then inwardly and upwardly to form a thin lip and a bead on said edge portion at the junction of the downwardly and upwardly extending parts thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,217,014	Knieriem	Feb. 20, 1917
1,710,160	Gibbs	Apr. 23, 1929
2,015,631	Spanel	Sept. 24, 1935