Feb. 3, 1959 G. T. DUNN 2,871,859

SANITARY BELT ARRANGEMENT

Filed Dec. 22, 1955

Fig. 1.

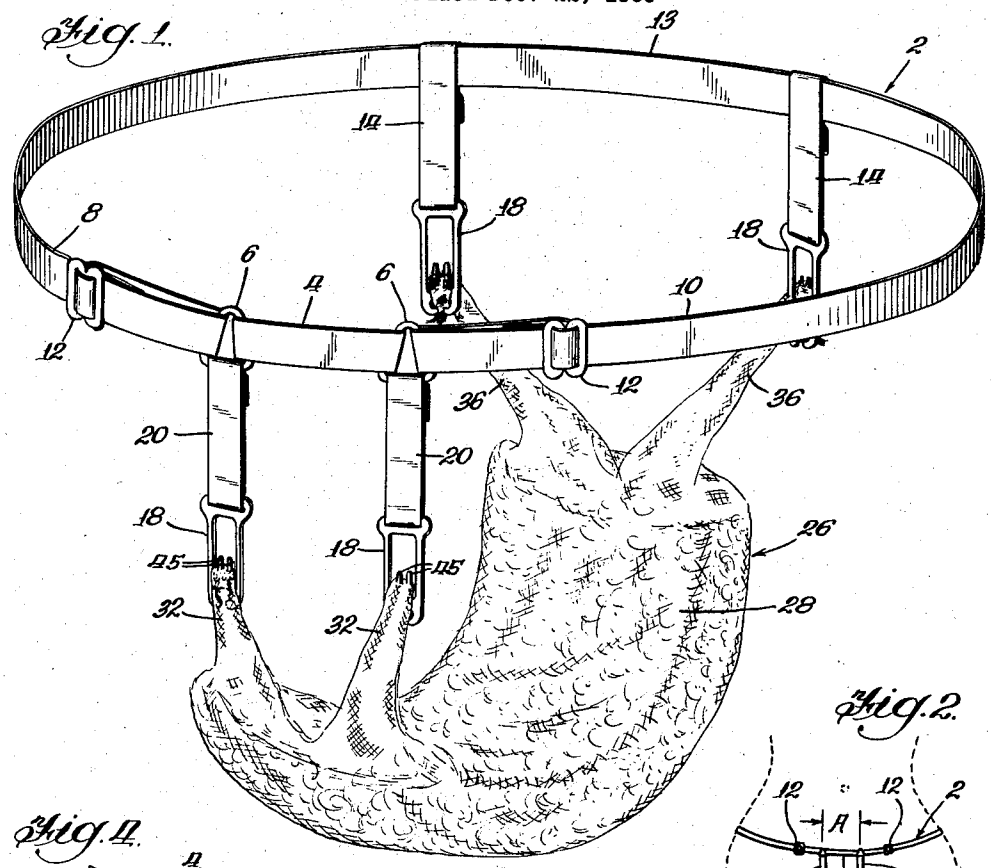


Fig. 2.

Fig. 4.

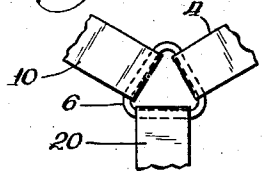


Fig. 5.

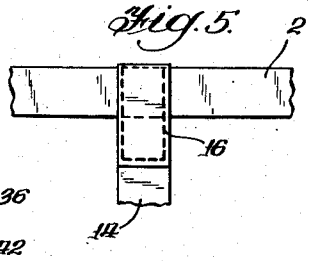


Fig. 7.

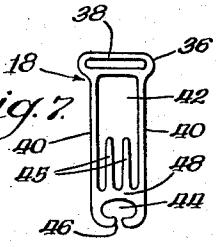


Fig. 3.

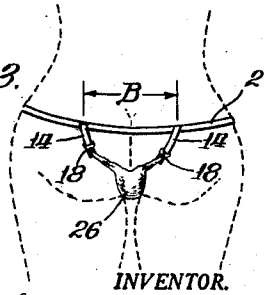
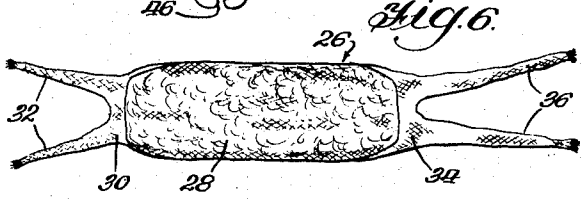


Fig. 6.



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SANITARY BELT ARRANGEMENT

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2 Claims. (Cl. 128—289)

The invention relates to an improved sanitary belt and particularly to a novel belt-napkin arrangement.

The sanitary belt-napkin arrangements in use today comprises a single strand, peripherally adjustable waist band having depending therefrom at diametrically opposed portions thereof, two strap members with appropriate buckles on their lower ends. A sanitary napkin comprising a central, elongated, relatively thick absorbent portion with relatively thin cloth-like stringer portions at opposite ends of the central portion, may then be secured to the buckles by appropriately fastening the opposed stringer portions to the respective buckles. Of course, with this prior art arrangement, the strap members, buckles and attached stringer portions are located centrally of the wearer's body as seen in front and rear views. Many women have found this arrangement to be unsatisfactory in that it tends to be extremely uncomfortable especially to those women who have a rather pronounced or protruding pelvic bone. Additionally, the necessary location of the rear buckle, because of the construction of these prior art belts, may cause discomfort to the wearer and it has been found that the wearer is frequently pinched when changing from a standing to a sitting position. It has also been found that these prior art arrangements tend to allow the entire napkin to roll into substantially cylindrical form, whereby a spillage of the bodily secretions results in soilage of undergarments and other clothing. In addition, the resultant rolling of the napkin into cylindrical form causes the gauze ends to roll into stringy lengths which irritate and chafe the anal and pelvic areas. Another source of dissatisfaction to the wearers of these prior art belts is the tendency to wad or bunch up at the points of connection between the depending straps and the napkin, which results in additional discomfort and unsightly bumps visible through the outside clothes of the wearer. Also, the single front and rear straps of prior art belt arrangements permit the dependent napkin to shift from a fixed position against the wearer's body, and to locate either mostly to the rear or the front of the body, thus also causing irritation and chafing from the attendant napkin ends to the anal and pelvic areas.

Accordingly, it is a primary object of the invention to provide a sanitary belt napkin arrangement which remedies the above difficulties.

It is an additional object of the invention to provide an arrangement of the type described, which maintains the napkin generally flat against the body of the wearer, thereby affording more comfort to the wearer, avoiding the heretofore mentioned spillage of bodily excretions and affording maximum spread of the central absorbent portion of the napkin resulting in increased contact area with the attendant quicker and increased absorption of the mentioned secretions.

It will further be understood that the herein disclosed arrangement lessens the possibility of one end of the napkin becoming detached with the attendant discomfiture and embarrassment. In addition, my novel arrangement tends to hold the napkin in a relatively fixed position on the body of the wearer during all bodily movements and prevents the napkin from folding especially when lying in a prone position during night time rest periods or when the wearer is bed-ridden, such as, during post operative or post obstetrical periods.

Among other objects and advantages of my novel invention, it will be appreciated that the arrangement locates the points of connection between the depending strap or tab members and the stringer portions of the napkin, on opposite sides of the vertical front to rear centerplane of the body whereby these points of connection are adjacent relatively soft indented, fleshy portions of the body of the wearer, thus alleviating certain of the discomforting features mentioned above as well as reducing the tendency of these points of connection to show through outer clothing. It will be appreciated that my novel arrangement avoids locating these points of connection at normally dominant bony areas where uncomfortable pressure or body pinching may result.

It is a more specific object of my invention to provide, as an article of manufacture, a novel sanitary napkin to be used in conjunction with the novel belt arrangement which offers easy and positive connection between the belt and the associated napkin.

These and other objects of the invention will become apparent in the course of the following description, and from an examination of the associated drawings, wherein:

Figure 1 is a perspective view of the complete arrangement,

Figure 2 is a front elevational view illustrating the arrangement in wearing position,

Figure 3 is a rear elevational view illustrating the arrangement in wearing position,

Figure 4 is a detail view illustrating the connection between the major run of the belt and the front depending tabs,

Figure 5 is a detail view illustrating the connection between the major run of the belt and the rear depending tabs,

Figure 6 is a detail view illustrating the construction of the napkin employed in the novel arrangement, and

Figure 7 is a detail view illustrating the connecting buckle.

Describing the invention in detail and directing attention to Figure 1, it will be seen that the arrangement comprises a major belt run **2** preferably constructed of relatively thin strip of elastic material. The front portion of the belt run **2** comprises a double folded and lock stitched, short segment of elastic material **4**, said short segment being threadably received, at the opposite ends thereof, in the spaced triangular members **6** (Figure 4). The opposite ends **8** and **10** of the major run **2** may be threaded through adjusting elements **12**, in the conventional manner, whereby said elements accommodate a variation in length of said major run **2** to fit persons of varying girth. The ends **8** and **10** are then threaded through the adjacent triangular elements **6**, folded and returned to the adjusting element **12** whereat they adjustably interlock therewith.

Along the rear portion **13** of the major run **2**, a pair of spaced depending straps or tabs **14** are positioned. The tabs **14** are preferably securely fastened to said portion **13** by stitching **16** or in any other suitable manner. A buckle **18** is fixedly mounted on the lower end of each rear tab **14**.

The front portion **14** of the run **2** is also provided with depending straps or tabs **20**, said tabs being fixedly connected to the triangular elements **6** as it best seen in Figure 4. Again the lower ends of the tabs **20** have buckles **18** mounted thereon. It will be understood that the tabs **14** and **20** are preferably formed of a non-elastic material

such as a cloth type twill tape, though it will be understood that other types of material may be used. It will also be noted that the front tabs **20** are spaced from each other a distance indicated by "A" in Figure 2, while the rear tabs **14** are spaced from each other a distance indicated by "B" in Figure 3. It will be apparent from said figures that the distance "A" is considerably less than the distance "B." I have discovered that this variation in spacing between the front and rear tabs immeasurably adds to the wearing comfort of the belt arrangement. The relatively large spacing of the rear tabs accommodates itself to the rather unconfined area of the rear portion of the body of the wearer, while the relatively narrow spacing of the front tabs readily accommodates itself to the rather confined area of the front portion of the body of the wearer. It will also be understood that the spacing of the front tabs is sufficient to position the connections between the front tabs and the napkin (hereinafter described) on opposite sides of the protruding central portion of the pelvic bone. In the preferred arrangement, the distance "A" may be approximately equal to or somewhat less than the transverse measurement of the associated napkin **26**, while the distance "B" may be greater than said transverse measurement.

Directing attention to Figures 1 and 6, it will be seen that a napkin **26** is provided with a central, relatively thick, absorbent portion **28**, said portion **28** having a greater longitudinal axis than transverse axis.

At the front edge of the napkin **26** a stringer **30** is provided, said stringer **30** preferably being a relatively thin flexible strip which may be a continuation of the gauze-like or plastic covering of the central portion **28**. As best seen in Figure 6, the stringer **30** is split longitudinally approximately centrally thereof to provide spaced, bifurcated securing elements **32**, the function of which will be hereinafter explained in detail.

The rear edge of the napkin **26** is likewise provided with a stringer **34**, said stringer **34** again preferably being a relatively thin flexible strip which may be a continuation of the gauze-like or plastic covering of the central portion **28**. Again the stringer **34** is longitudinally split to provide spaced bifurcated securing elements **36**. It will also be understood, that in conventional napkins the stringer **30** at the front of the napkin is somewhat shorter than the stringer **34** at the rear edge of the napkin.

In the assembled, wearable position of the arrangement, the elements **32** of the stringer **30** are threaded through and secured to the buckles **18** of the front tabs **20**, while the elements **36** are threaded through and secured to the buckles **18** of the rear tabs **14**.

Directing attention to **2** and **3**, which illustrate my novel arrangement in wearable position, it will be seen that the front tabs **20** exert a substantially vertical "pull" through the elements **32** to the front and outside edges of the central absorbent portion **28** of the napkin **26**. Additionally, the rear tabs **14** angle somewhat from the vertical and exert a pull through the elements **36** to the rear outside edges of the central absorbent portion of the napkin **26**. As a direct result of the plural connections here employed, forces are distributed through the central portion of the napkin primarily on diagonal lines extending across the portion and between the stringers **32** and **36** on opposite sides of the napkin. It will be appreciated that this arrangement, designed as it is to accommodate the unconfined areas of the rear portion of the body and the relatively confined area of the front portion of the body, serves to maintain the napkin **26** and especially the front and rear segments of the absorbent portion **28**, in a substantially flat position against the body of the wearer. This result of this arrangement is a considerable reduction or elimination of spillage of bodily secretions on undergarments and a quicker and more efficient use of the absorption qualities of the napkin, whereby irritation and chafing is substantially reduced and a potential source of personal embarrassment is eliminated.

Directing attention to Figure 7, wherein is illustrated the novel buckle I employ in my arrangement, it will be seen that the buckle comprises an upper portion **36**, which defines a slot **38** arranged to receive the lower end of the tabs **14** and **20** whereby the buckle may be secured to the tabs. Spaced arms **40** extend in parallel relationship from the portion **36** and define therebetween the aperture **42**. The arms **40** continue and at the extremities thereof are bent arcuately toward each other to define a lower aperture **44** having a narrow entrance opening **46** communicating therewith. A tie portion **48** connects the arms **40** intermediate the apertures **42** and **44**. A pair of somewhat pointed pin members **45** extend from the portion **48** into the aperture **42**.

To secure the elements **32** or **36** to the buckle **18**, the chosen element is first threaded through the aperture **42** and then moved toward the tie **48** to stake the element to the pin members **45**. The free end of the element is then folded and forced through the passage **46** into the aperture **44** whereat it is held in position. This connection is illustrated in Figure 1. It will be noted, however, that the stringers **32** and **36** may approach the buckle **18** from either side thereof, that is, the connection may be accomplished by inserting the particular stringer into either side of the associated aperture **42** or just the opposite as shown in Figure 1. I have found that this buckle arrangement offers positive securing means to prevent accidental detachment of the napkin from the belt.

Thus it will be seen that I have provided a novel sanitary belt-napkin arrangement that functions in an improved manner and remedies the mentioned difficulties found in the arrangements heretofor used. It will be understood that the invention is susceptible of various modifications without departing from the spirit thereof or the scope of the appended claims.

I claim:

1. In a sanitary belt, a relatively thin belt arranged to encircle the body of the wearer, a pair of spaced depending tabs directly secured to the front portion of the belt, a second pair of spaced depending tabs directly secured to the rear portion of the belt, buckles mounted on the lower end of each tab, and an absorbent napkin having opposed bifurcated end portions forming two flexible stringers on each end, each stringer being demountably connected to one of the buckles, said napkin having a normal transverse dimension, the spacing between the tabs on the front portion of the belt being approximately equal to or less than said transverse dimension, and the spacing between the tabs on the rear portion of the belt being substantially greater than said transverse dimension.

2. In a sanitary belt arrangement, a relatively thin supporting belt designed to encircle the body of the wearer a first pair of spaced depending tabs mounted on a front portion of the supporting belt; a second pair of spaced depending tabs mounted on a rear portion of the supporting belt; said pairs of tabs being in generally opposed relation being on said belt; an absorbent napkin comprising a central relatively thick, absorbent portion having linearly elongated side edges and relatively narrow end edges; a first pair of thin, flexible stringers extending from and connected to opposite portions of one of said end edges; a second pair of thin, flexible stringers extending from and connected to opposite portions of the other of said end edges; and means demountably connecting each of said stringers to respective depending tabs; said tabs and stringers being so formed and arranged that in wearable position the tabs and stringers on the front portion of the belt extending substantially parallel to each other and the tabs and stringers on the

rear portion of the belt are in generally converging angular relation to each other.

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