{0006}

According to the present invention, there is provided a disposable wearing article having a longitudinal direction and a transverse direction orthogonal thereto, including a front waist region, a rear waist region, a crotch region extending between the front and rear waist region, an annular elastic waist panel defining the front and rear waist regions, and a crotch member attached to the elastic waist panel so as to define parts of the front and rear waist regions and the crotch region.

{0007}

The features of the present invention resides in that the crotch member has a front end lying in the front waist region and a rear end lying in the rear waist region, liquid-impervious crotch inner and outer sheets, a liquid-absorbent structure extending in the longitudinal direction and laid on the side of the crotch inner sheet facing the wearer's skin, and a pair of lateral elastic regions formed by folding the crotch inner and outer sheets along respective fold lines extending in the longitudinal direction and bonding the folded crotch inner and outer sheets to front and rear ends of the crotch inner sheet by adhesive zones disposed on front and rear ends of the folded crotch inner and outer sheets, at least one of the front and rear ends ~~defines~~ has a non-bonded region in an intermediate

zone as viewed in the transverse direction of the crotch member and is attached to the outer surface of the elastic waist panel by the intermediary of a square U-shaped bonded region opening toward the crotch region; and the bonded region comprises opposite lateral zones located on the front or rear ends of the lateral elastic regions and an intermediate zone extending between the respective lateral zones in the transverse direction, the non-bonded region is formed in a region surrounded by the lateral zones and the intermediate zone, in an area defining the non-bonded region, a body waste retaining space is formed between the elastic waist panel and the crotch member.

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The present invention further includes embodiments as follows:

~~(1) The crotch member includes a pair of lateral elastic regions extending in the longitudinal direction on opposite sides of the crotch region, a liquid-absorbent structure extending in the longitudinal direction is provided on the inner surface of the crotch region, and the non-bonded region is defined in an area occupied by the liquid-absorbent structure between the pair of lateral elastic regions.~~

~~(2)~~ (1) Leakage-barrier sheets made of a liquid-impervious but moisture-pervious plastic sheet or a fibrous nonwoven fabric sheet are attached to the elastic waist panel in the regions corresponding to the non-bonded regions.

(2) Each of the lateral elastic regions is provided with a first leg elastic member extending in the longitudinal direction along an inner side edge of the associated lateral elastic region and a second leg elastic member disposed outboard of the first leg elastic member as viewed in the transverse direction and concavely curved inward in a middle zone of the crotch region, and the first and second leg elastic members are bonded to the lateral elastic region under tension.

Advantageous Effects of Invention}

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According to the present invention, the non-bonded region is defined in at least one of the front and rear waist regions

and the body waste retaining space(s) may be formed between the elastic waist panel and the crotch member. Such a unique arrangement ensures to prevent body waste having leached or flowed into these waist regions from leaking out of the wearing article.

{Brief Description of Drawings}

{Fig. 1}

Fig. 1 is a perspective view of a disposable diaper as

[Claim 1]

A disposable wearing article having a longitudinal direction and a transverse direction orthogonal thereto, the article comprising:

a front waist region;

a rear waist region;

a crotch region extending between the front and rear waist region;

an annular elastic waist panel defining the front and rear waist regions; and

a crotch member attached to the elastic waist panel so as to define parts of the front and rear waist regions and the crotch region, wherein:

the crotch member has a front end lying in the front waist region and a rear end lying in the rear waist region,

liquid-impervious crotch inner and outer sheets,

a liquid-absorbent structure extending in the longitudinal direction and laid on the side of the crotch inner sheet facing the wearer's skin, and

a pair of lateral elastic regions formed by folding the crotch inner and outer sheets along respective fold lines extending in the longitudinal direction and bonding the folded crotch inner and outer sheets to front and rear ends of the crotch

inner sheet by adhesive zones disposed on front and rear ends of the folded crotch inner and outer sheets,

at least one of the front and rear ends ~~defines~~ has a non-bonded region in an intermediate zone as viewed in the transverse direction of the crotch member and is attached to the outer surface of the elastic waist panel by the intermediary of a square U-shaped bonded region opening toward the crotch region; and

the bonded region comprises opposite lateral zones located on the front or rear ends of the lateral elastic regions and an intermediate zone extending between the respective lateral zones in the transverse direction,

the non-bonded region is formed in a region surrounded by the lateral zones and the intermediate zone,

in an area defining the non-bonded region, a body waste

retaining space is formed between the elastic waist panel and the crotch member.

~~[Claim 2]~~

~~The wearing article defined by Claim 1, wherein:~~

~~the crotch member comprises a pair of lateral elastic regions extending in the longitudinal direction on opposite sides of the crotch region;~~

~~a liquid-absorbent structure extending in the longitudinal direction is provided on the inner surface of the crotch region; and~~

~~the non-bonded region is defined in an area occupied by the liquid-absorbent structure between the pair of lateral elastic regions.~~

[Claim ~~3~~ 2]

The wearing article defined by Claim 1 ~~or 2~~, wherein leakage-barrier sheets made of a liquid-impervious but moisture-pervious plastic sheet or a fibrous nonwoven fabric sheet are attached to the elastic waist panel in the regions corresponding to the non-bonded regions.

[Claim 3]

The wearing article defined by Claim 1 or 2, wherein each of the lateral elastic regions is provided with a first leg elastic member extending in the longitudinal direction along an inner side edge of the associated lateral elastic region and a second leg elastic member disposed outboard of the first leg elastic member as viewed in the transverse direction and concavely curved inward in a middle zone of the crotch region, and

the first and second leg elastic members are bonded to the lateral elastic region under tension.