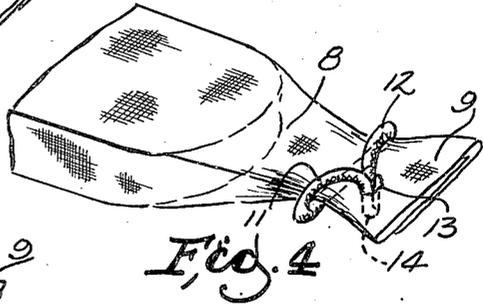
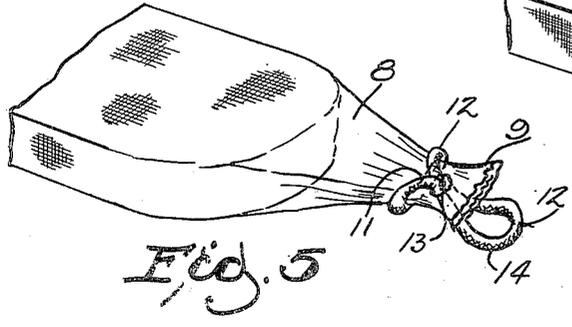
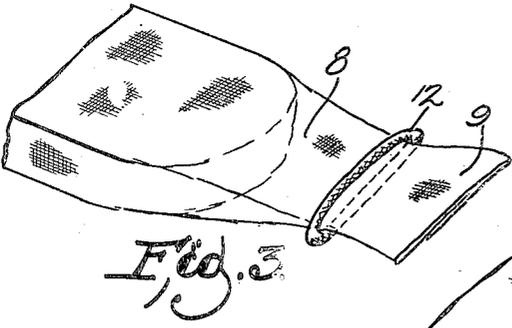
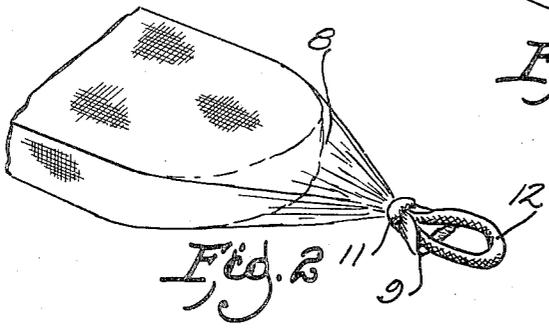
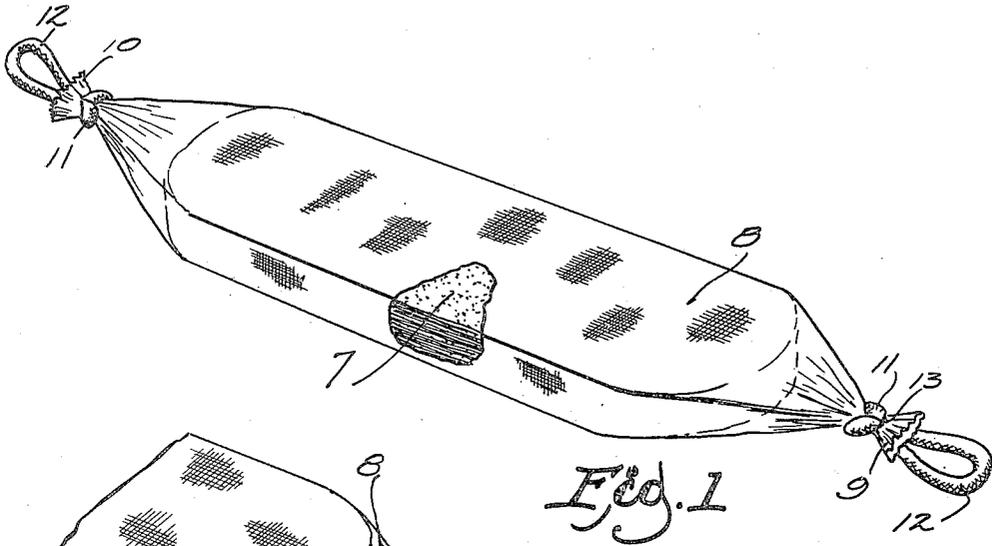


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SANITARY NAPKINS AND METHODS OF FASTENING  
ANCHORAGE LOOPS THERETO  
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## SANITARY NAPKIN AND METHOD OF FASTENING ANCHORAGE LOOPS THERETO

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7 Claims. (Cl. 128-290)

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This invention relates to improvements in sanitary napkins and method of fastening anchorage loops thereto.

It is a primary object of the invention to provide a loop-type anchorage for a sanitary napkin in a manner which will facilitate manufacture and reduce cost. In Europe, there is a preference for the provision of a fastening loop at each end of the sanitary napkin. However, as made, the loops tend to pull away from the gauze and, to provide a secure mounting for them, it is necessary to use extra strength or expensive fastening means or extra length of gauze. Accordingly, it is my object to provide a sanitary napkin construction in which anchorage loops are so fastened to the gauze as to be even more secure, as an anchorage means, than the gauze itself, and even to permit of material shortening of the gauze, with great savings in expense of manufacture.

In the drawings:

Fig. 1 is a view in perspective showing a completed sanitary napkin embodying my invention.

Fig. 2 is a fragmentary detail view in perspective showing, in inverted position, one end of the sanitary napkin of Fig. 1.

Fig. 3 is a detail view in perspective showing one end portion of a partially completed sanitary napkin to illustrate the first step in assembling the anchorage to the gauze wrapper thereof.

Fig. 4 is a view in perspective showing the parts in the second position which they occupy in the course of their assembly.

Fig. 5 is a view similar to Fig. 4 showing a third position of the parts in the course of their assembly.

The sanitary napkin pad 7 may be of any desired form, conventional or otherwise. The pad is illustrated as being enveloped in a gauze wrapper 8 whose ends 9 and 10 are gathered and engaged in the bights 11 of anchorage loops 12.

Since the entire body of gauze is gathered together and embraced in the bights of the loops, it is virtually impossible with any ordinary exercise of force to pull the loops free of the gauze. Tension exerted on the loops is communicated to all of the several strands of the gauze with substantial equality of distribution of stress.

The assembly is made in the following manner:

Each respective projecting end portion of the gauze wrapper, initially substantially flat as shown in Fig. 3, just as the wrapper has been applied to the pad, is passed through a correspondingly respective prefabricated annulus or

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loop 12. Preferably using a stylus or punch or other sharp implement, a hole 13 is now punched through the gauze wrapper as shown in Fig. 4 at a point intermediate the position of loop 12 (Fig. 3) and the free end 9 of the gauze. A portion of loop 12 is now folded at 14 and threaded through the aperture 13 as shown in Fig. 4. This forms the bight 11 and as a progressively greater portion of the loop 12 is pulled through the hole, the bight 11 is constricted upon the portion of the gauze wrapper which projects beyond the pad and begins to gather the wrapper as shown in Fig. 5. As soon as the loop has been pulled through the hole 13, the fold made at 14 is released and the loop expands on the other side of the hole. Continued tension on the loop draws the bight 11 snugly about the gauze to complete the attachment as shown in Fig. 1 and Fig. 2.

In the ordinary connection of a loop with a wrapper, the loop is passed through a hole in the wrapper and then one portion of the loop is drawn through another portion thereof. This imposes the entire tension of the loop upon those few threads of the wrapper which are immediately adjacent the hole therein. As distinguished from that construction, the device herein disclosed passes the bight of the loop completely around the wrapper and thus distributes to the entire cross section of the wrapper any tension imposed on the loop. Not only is this construction completely secure against pulling out but, as previously noted, because the bight is fastened to the portion of the wrapper which is toward the pad from hole 13, instead of toward the free end of the wrapper, it is possible to reduce very materially the length of wrapper required where this mode of attachment is employed. At the same time, the bight of the loop engages portions of the wrapper which have not been reduced in strength by the aperture 13.

I claim:

1. The combination with a sanitary napkin wrapper having a projecting end portion provided with an aperture, of an endless anchorage loop having a bight engaged about the wrapper at the side of the aperture remote from the free end of the wrapper, said loop thence passing through the aperture of the wrapper and exposed beyond the end of the wrapper for the mounting of the napkin.

2. In a sanitary napkin having a pad and a gauze wrapper provided with ends projecting beyond the pad and provided with apertures, the combination with such wrapper of endless anchorage loops connected with the respective

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wrapper ends, each such loop extending through a wrapper aperture and provided inside of the aperture with a bight encircling an unapertured portion of the wrapper and within which bight the encircled portion of the wrapper is gathered. 5

3. In a sanitary napkin comprising a pad and a fabric wrapper having an end portion projecting beyond the pad and provided with an aperture intermediate the extent of such end portion, the combination with such wrapper, of a prefabricated endless anchorage loop of annular form, said loop extending adjacent one face of the wrapper end portion to the aperture therein and provided with two strands extending through said aperture and thence in opposite directions about the entire end portion of the wrapper between the pad and the aperture and comprising a bight in which the end portion of the wrapper is gathered. 10

4. A method of attaching an endless anchorage loop to the projecting wrapper of a sanitary napkin, which method comprises passing the entire projecting end portion of the wrapper through the anchorage loop, forcing a predetermined portion of the loop directly through the wrapper between the initial position of the loop and the free end of the wrapper and continuing to draw the loop through the wrapper until the portion of the wrapper initially encircled by said loop is gathered under tension in a bight of the loop. 15

5. A method of attaching an endless anchorage loop to the projecting end portion of a sanitary napkin wrapper, such method comprising prefabricating an annular loop, passing the entire free end portion of the wrapper through the loop, aperturing the end portion of the wrapper between the loop and the free end of such portion, and passing a portion of the loop through the 20

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aperture to the opposite side of the wrapper and continuing to tension such portion until a bight of the loop encircling the wrapper gathers the end portion of the wrapper encircled thereby.

6. The combination with a sanitary napkin wrapper having a projecting end portion provided with an aperture, of an endless anchorage loop having a bight engaged about the wrapper, said loop thence passing through the aperture of the wrapper and having another bight exposed for the mounting of the napkin. 25

7. In a sanitary napkin comprising a pad and a fabric wrapper having an end portion projecting beyond the pad and provided with an aperture, the combination with such wrapper, of a prefabricated endless anchorage loop extending adjacent one face of the wrapper end portion to the aperture therein and provided with a bight having strand portions extending together through the aperture and thence in opposite directions to a juncture at the said face of the wrapper end portion, said bight encircling the wrapper end portion, and the said end portion being gathered within said bight. 30

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