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DIAPER CLIP

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Fig. 1.

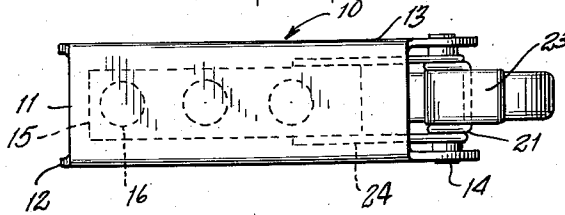


Fig. 2.

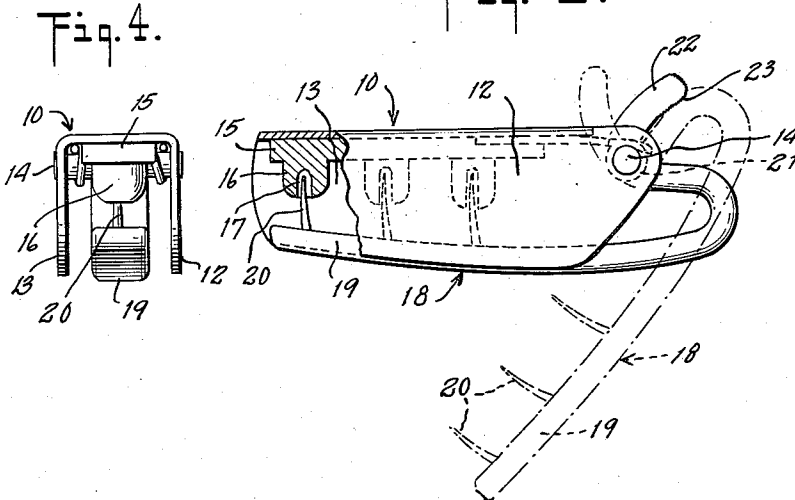


Fig. 4.

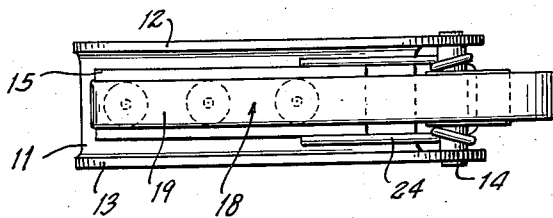
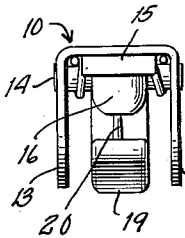


Fig. 3.

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DIAPER CLIP

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2 Claims. (Cl. 24—160)

This invention relates to a safety clip and more particularly to a safety clip used on infants' diapers.

The fastening of the ends of infants' diapers is generally accomplished by inserting the common safety pin through the layers of cloth. Because of the particular construction of the common safety pin, great care must be exercised to prevent the point from pricking or scratching the infants' bodies. Trouble is also frequently encountered when inserting the common safety pin through several layers of cloth which become bulky and wadded. The present invention overcomes these disadvantages and provides a safety clip which is simple to operate and inexpensive to manufacture.

One object of the present invention is to provide a safety clip which shields the pin points of the clip thus avoiding accidental pricking or scratching.

Another object of the present invention is to provide a safety clip which gathers in the diaper material and securely holds it within a shell.

A still further object of the present invention is to provide a safety clip which is capable of holding different thicknesses of diaper layers.

A still further object of the present invention is to provide a diaper clip that can be made of plastic material.

Additional objects and features of the invention include provision for structural details that involve the use of a minimum number of parts of small size and a resulting diaper clip that is trouble free and simple to operate.

With the above in mind, other objects and advantages will become apparent from the following description taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a top elevation view of the present invention;
Fig. 2 is a side elevation view of the present invention having a section removed and a dotted arm in forced position;

Fig. 3 is a bottom elevation view of the present invention; and

Fig. 4 is an end elevation view of the present invention.

Referring to Figs. 1 and 2, the preferred embodiment of the present invention comprises a longitudinal shell or housing member generally designated as 10. Said shell is provided with a substantially flat top section 11 having a pair of parallel downwardly extending integral walls 12. It is preferable that the corners 13 between said top section and said walls be rounded to avoid any sharp edges. As shown in Fig. 4, it is preferable that all sharp edges be avoided. Adjacent one end of each of said walls is an aligned aperture adapted to hold an interconnecting pin 14. Said pin is held within said apertures by any suitable means such as a tongue and groove connection or the like.

Extending downwardly from the bottom of said top section 11 and between said parallel walls 12 is an elongated pin receptacle bar 15, said bar extending from near one end of said top section to an area adjacent the pin aperture in the side walls of the other end of said top

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section. Longitudinally aligned along said bar is a plurality of short downwardly extending nipples 16, the bottom surface of each of said nipples having a centrally disposed upwardly extending aperture 17 adapted to receive a pin or the like. As shown in Fig. 2, it is preferable that the nipples 16 be an integral part of the pin receptacle bar 15 because of the added strength of the one piece construction. It is also preferable that the pin receptacle bar 15 be an integral downward extension of the top section 11 of shell 10. The number of nipples on said receptacle bar depends on the size of the entire device. The nipples should, however, be sufficiently spaced longitudinally from each other to provide an adequate area for accumulation of cloth or more particularly, the connected ends of a diaper. The apertures 17 in nipples 16 should be slightly larger than the pin for which they are constructed thus providing an area for the cloth which surrounds the pin when the pin registers with said apertures.

As shown in Figs. 2 and 3, the device is provided with a pivotal pin arm 18 between said parallel side walls 12. The arm member 18 is generally shaped like an S having an elongated longitudinal base portion 19 which pivots between said parallel side walls 12. Said base portion 19 of said arm member is provided with a plurality of upwardly extending pins 20 or the like which register with the apertures 17 in nipples 16 when said longitudinal base portion is within the parallel walls 12 of shell member 10. It is preferable that the pins be tooth-shaped, having a slight backward curvature and pointed at their tops. The backward curvature of the tooth-like pins prevents accidental outward pricking. The number of teeth affixed to the elongated longitudinal base portion 19 of arm 18 coincides with the number of nipples 16 extending downwardly from the receptacle bar 15. It is preferable that the pins be integral with the elongated longitudinal base portion 19. However, if a different material is used for said pins they may suitably be affixed to said portion as rivets or the like.

The S-shaped arm member 18 is provided with a bearing aperture 21 at its upper curvature. Said bearing aperture 21 cooperates with pin 14 whereby said arm member may be pivoted about said pin. The top section 22 of the S-shaped arm extends above the shell housing 10 and provides the arm with a lever or handle to assist in pivoting said arm as will hereinafter be described. The end of top section 22 of arm 18 may have corrugations 23 or the like to provide a suitable traction surface when said section is used as a lever.

To maintain the arm member 18 in a normally closed position whereby the pins 20 register with nipple apertures 17, the device is provided with a sear spring 24. Said spring cooperates with the inside of top section 11 and the back of the S-shaped arm member 18. It has been found that a simple wire spring is the most preferable kind of spring because of its simple construction and high biasing strength. However, other springs such as a coil spring would also be satisfactory.

When operating the device, the clip is held in one hand with the thumb and third finger pressing against the shell walls 12 while the other hand holds the ends of the diaper to be joined. Force is then exerted downwardly by the forefinger against the corrugated surface 23 on the upwardly protruding portion 22 of arm 18. Said force pivots said arm about pin 14 whereby the elongated longitudinal portion is rotated downwardly out of the parallel side walls 12 of shell 10. While maintaining the force on arm portion 22, the longitudinal base portion 19 is inserted between the body of the baby and the diaper folds with the tooth-like pins 20 pointing away from the baby's body and toward the shell 10. When the diaper is in the proper position, the force on arm

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portion 22 is slowly released, permitting the pins 20 to penetrate the diaper and draw it into the area within shell 10. To insure the registration of pins 20 in the nipple apertures 17, the clip may be squeezed, setting the pins through the diaper and into the nipple apertures thus locking the diaper in place and encasing the points of the pins. There is no danger of pricking the baby or the person applying the clip since the tooth-shaped pins have an inwardly angled curvature. When in place, the shell 10 imbeds itself in the diaper thereby diminishing any protruding bulkiness.

It is preferable that a plastic material be used in constructing the diaper clip of the present invention. A plastic construction would provide the necessary strength, it is well accepted by mothers and has the necessary production characteristics.

It can be seen from the above description that the present invention provides an improved diaper clip with distinct advantages not previously disclosed. Although the invention has been shown and described herein, it is understood that certain changes and additions may be made without departing from the spirit and scope of this invention.

I claim:

1. A diaper clip comprising an elongated longitudinal shell member having a substantially flat top section and downwardly extending side walls adapted for receiving diaper folds therebetween, said top section having a downwardly extending longitudinal receptacle bar, said bar provided with a plurality of downwardly extending nipples having centrally disposed apertures, a transverse bearing pin at one end of said shell member joining said side walls, a pivotal S-shaped arm member rotatably affixed to said bearing pin and having an elongated longitudinal bottom section movable into said shell member and an upwardly extending lever section disposed above said top section, said bottom arm section having a plurality of upwardly extending pins having a backward curvature, the points of said pins registering with

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said nipple apertures when said arm is within said shell, whereby said diaper folds are gathered up and firmly retained in said shell by said arm member, and spring means for maintaining said arm within said shell, said side walls having a length and width sufficient to substantially encompass a major portion of said bottom section when said arm is within said shell.

2. A diaper clip, comprising a shell member having a top section and downwardly extending side walls, bearing means carried by said side walls at one end thereof, a pivotal S shaped arm member rotatably mounted on said bearing means and having an upwardly extending lever portion disposed above said top section and having an elongated longitudinally extending bottom portion having a plurality of upwardly and rearwardly extending pins carried thereon, said top section having indentations formed on the underside thereof therein corresponding to the position of the points of said pins when said bottom portion of said arm is within said shell member, a resilient biasing means affixed to said arm member whereby said arm member is held within said side walls and said pins within said indentations, said bottom portion of said arm member having a width which is substantially less than the space between said side walls whereby diaper folds may be received between the sides of said bottom portion and said side walls, and said side walls having a length and breadth sufficient to substantially encompass a major portion of said bottom portion of said arm member.

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