

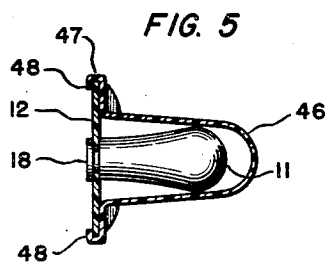
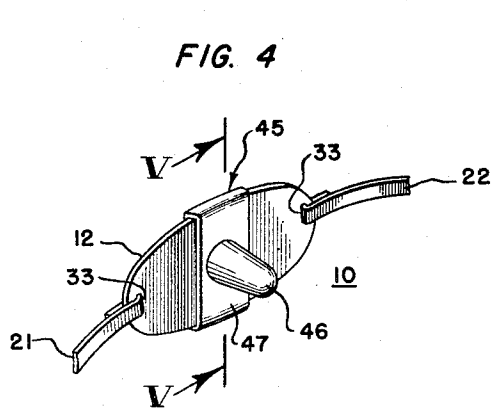
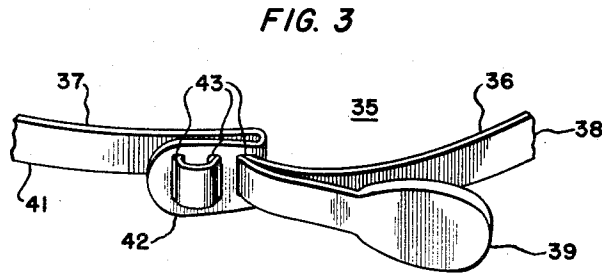
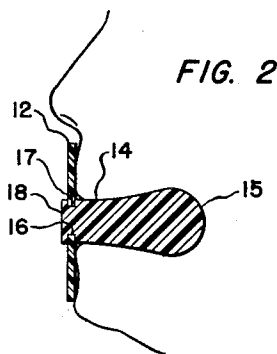
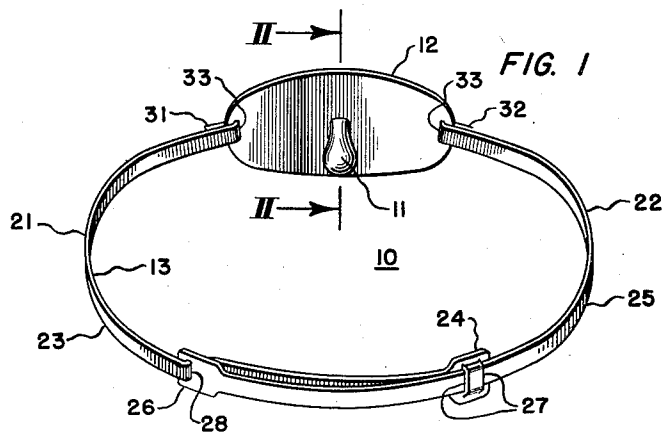
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PACIFIER

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PACIFIER

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This invention relates to new and useful improvements in pacifiers for infants.

An object of the present invention is to provide a pacifier of improved construction which embodies securing means for holding it in place while in use by an infant; which includes a guard portion of appropriate size which fits comfortably about the immediate area of the infant's mouth and properly locates the nipple portion of the pacifier, and which pacifier can be readily fitted upon and taken off an infant.

Another object of this invention is to provide an improved form of adjustably securable pacifier which is made of a pliable plastic material which is resistant to abrasion, offers no danger of injury to an infant's mouth and which may readily be sterilized, as by boiling.

Another object of the invention is to provide a pacifier of the character set forth which is simple in construction, durable, sanitary, comfortable, highly efficient and reliable in use, and inexpensive to manufacture.

Other objects and features of the present invention will be readily apparent to those skilled in the art from the following specification and appended drawing wherein is illustrated a preferred form of the invention, and in which:

Figure 1 is a perspective view of a pacifier in accordance with the present invention.

Figure 2 is sectional view taken along line II—II of Figure 1.

Figure 3 is partial perspective view illustrating a modified form of strap assembly.

Figure 4 is a perspective view of the present pacifier with a protective cover applied over the nipple portion; and

Figure 5 is a sectional view taken along line V—V of Figure 4.

Referring now with greater particularity to the drawing, a pacifier, constructed in accordance with the present invention, is illustrated therein and is indicated generally by the numeral 10.

Pacifier 10 comprises an elongated nipple 11, a guard plate 12 which serves as a support for the nipple 11, and an adjustable holding strap assembly 13.

Nipple 11 comprises a neck portion 14 and a bulbous end portion 15. Suitably formed in the exterior wall of neck portion 14, adjacent its outer extremity, is a peripheral groove 16 which serves in the attachment of nipple 11 to guard plate 12.

Nipple 11 is preferably formed of a suitable plastic material which may be a synthetic resin thermoplastic such as polyvinyl-chloride or vinyl-chloride acetate copolymer. However, the material employed may be gum rubber or any other commercially available pliable, resilient material which may be readily sterilized and will have no tendency to irritate or injure the infant's mouth.

Obviously the length of the nipple 11 and the general proportions thereof are so selected that the nipple can be readily accepted within the mouth of an infant without inconvenience to the infant and the infant may suck comfortably thereupon.

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Guard plate 12 is of generally elliptical shape in plan view and is substantially arcuate in longitudinal cross-section. Curving of the guard plate 12 longitudinally is afforded to adapt the guard plate to fit comfortably about the mouth of the infant when the nipple 11 has been accepted by the infant. Centrally of guard plate 12 there is provided an aperture 17 through which the neck portion 14 of nipple 11 is forced. The size of aperture 17 is such that material of the guard plate 12 in the area of the opening 17 extends into the peripheral groove 16 of neck portion 14 and encircles it. Guard plate 12 preferably is made of the same material as is nipple 11, this material preferably being a plastic such as a synthetic resin thermoplastic as above stated.

Nipple 11 after being fitted into aperture 17 of guard plate 12 may be fixedly secured or integrally attached in place by electronically welding, in which process flange 18 of nipple 11 is fused to the material of guard plate 12 in the area of aperture 17. Any suitable conventional electronic welding apparatus of course may be employed to provide high frequency electricity for fusing the material of the nipple 11 to the guard plate 12.

It is to be understood that the nipple 11 and guard plate 12 need not be made separately and thereafter welded together into a fixed unit, but, if desired, the nipple 11 and guard plate 12 may be molded as one integral piece.

Holding strap assembly 13 which secures pacifier 10 to an infant's head comprises two lengths of strap 21 and 22 preferably formed of the same plastic material as is embodied in the nipple 11 and guard plate 12. Strap 21 comprises a relatively narrow stem portion 23 and a relatively wide head portion 24 while strap 22 comprises a similarly relatively narrow stem portion 25 and a relatively wide head portion 26. Head portion 24 of strap 21 is provided with a pair of transverse slits 27 while head portion 26 of strap 22 has a single transverse slit 28 formed therein. The size of slits 27 and slit 28 is such that the narrow stem portion of the opposite strap may slidably fit therewithin. Straps 21 and 22 are assembled into a unit prior to being secured to guard plate 12. In this assembly the end 31 of strap 21 is threaded through the single slit 28 of strap 22 and the end 32 of strap 22 is passed through the pair of slits 27 of strap 21. After straps 21 and 22 have been assembled in interlaced relationship their ends 31 and 32 are passed through suitable openings 33 provided in the guard plate 12. As shown there are two openings 33 formed in guard plate 12, which openings are located at opposite ends of the guard plate 12. After the ends 31 and 32 have been passed through openings 33 they are affixed in place by being folded over and fixedly secured to the material of the stem portions 23 and 25 by electrical welding or in any other suitable manner.

Straps 21 and 22 are of sufficient length that they extend from this attachment to guard plate 12 at the area of the infant's mouth around to the back of its head and overlap somewhat in this area. By making the straps of sufficient length so that there is an overlap, adjustment may be effected in order to accommodate various head sizes. The interlaced arrangement afforded the present holding means 13 wherein the narrow stem portion 23 of strap 21 is passed through slit 28 of strap 22 and the narrow stem portion 25 of strap 22 is passed through the pair of slits 27 of strap 21 permits the holding means 13 to be adjusted to the size of the head of an infant. In the adjustment operation, it is necessary only to grasp the straps 21 and 22 and apply appropriate pulls thereto to enlarge or diminish the size of the head opening. After the holding means 13 has been adjusted to the size of the head of an infant it remains essentially in adjusted position by reason of the engagement between the mate-

rial of head portion 24 of strap 21 and the material of stem portion 25 of strap 22 which passes through slits 27 of head portion 24. However, the frictional force holding the straps 21 and 22 in adjusted position is not so great that an infant, if it should find the adjustment too tight, cannot effect a sliding apart of the straps to a comfortable size of head opening by twisting movements of its head.

In the use of pacifier 10 the nipple 11 is inserted into the mouth of the infant and the straps 21 and 22 adjusted to hold the pacifier 10 in place. Guard plate 12 which is shaped to conform generally to the curve of the infant's face in the area of its mouth prevents the nipple 11 from extending so far into the infant's mouth as to cause it to gag or choke.

A modified form of holding means for securing the pacifier 10 in position is illustrated in Figure 3 and is indicated generally by the numeral 35. Holding means 35 similarly to holding means 13 of the first embodiment comprises two lengths of strap which are here numbered 36 and 37. Strap 36 comprises a relatively narrow stem portion 38 and an enlarged head portion 39 while strap 37 comprises a relatively narrow stem portion 41 and an enlarged head portion 42. Both head portions 39 and 42 are thicker than their stem portions and may be about twice as thick. Head portion 39 of strap 36 is larger overall than head portion 42 and the latter head portion has three, or any other appropriate number of transverse openings 43 formed therein. These openings are of sufficient size that they readily receive the stem portion 38 of strap 36 and will receive head portion 39 when it is folded or doubled but will not permit return movement of the head portion 39 when head portion 39 remains flat; head portion 39 in its flattened condition thereby serves to retain the straps in connected assembly. As shown the head portion 39 is suitably threaded and returned through the openings 43 to effect an interlaced engagement between straps 36 and 37. The ends of straps 36 and 37 are secured to guard plate 12 in the same manner that the ends of straps 21 and 22 are secured in place. It is obvious that by appropriate pulls applied to the straps 36 and 37 they may be adjusted relative to one another to afford the proper head opening to fit the head of the infant.

Figure 4 illustrates the pacifier 10 fitted with a protective sanitary closure 45. Closure 45 comprises a housing portion 46 projecting from a flat base 47 which extends across the central portion of guard plate 12. Base 47 is provided with appropriately shaped locking flanges 48 at its opposite ends, which locking flanges 48 are adapted to fit around and engage the edges of the guard plate 12. Closure 45 may be made of any suitable plastic material having sufficient rigidity that locking flanges 48 do not flex too readily and will hold in place on the opposite edges of guard plate 12. Locking flanges 48 can be dislodged by a manual pull but normally act to prevent inadvertent slipping of the closure 45 from the pacifier.

The protective cover 45 is employed when pacifier 10 is not in use to prevent nipple 11 from becoming soiled after it has been sterilized.

While certain preferred embodiments of the invention have been specifically disclosed, it is understood that the invention is not limited thereto as many variations will be readily apparent to those skilled in the art and the invention is to be given its broadest possible interpretation within the terms of the following claims.

What we claim is:

1. An infant's pacifier comprising a nipple, a guard, said nipple being located generally centrally of said guard and projecting rearwardly therefrom, and securing means connected to said guard for holding the pacifier in position on an infant's head, said securing means comprising a plurality of lengths of strap having adjustable interconnection therebetween to permit variation in the size of the head opening defined by said securing means.

2. An infant's pacifier comprising a nipple composed of flexible plastic material, a guard composed of flexible plastic material positioned at an extremity of said nipple, and adjustable securing means connected to said guard for holding the pacifier in position on an infant's head, said securing means comprising a plurality of lengths of strap composed of flexible plastic material having an interconnection permitting relative movement therebetween.

3. An infant's pacifier comprising a nipple composed of flexible plastic material, a guard composed of flexible plastic material and being of generally elliptical shape, said nipple having an integral connection to said guard generally centrally thereof and projecting rearwardly therefrom, and adjustable securing means connected to said guard for holding the pacifier on an infant's head, said securing means comprising a pair of straps composed of flexible plastic material, said straps having an interconnection permitting relative movement therebetween.

4. An infant's pacifier comprising a nipple composed of flexible plastic material, a guard composed of flexible plastic material and being of generally elliptical shape, said nipple having an integral connection to said guard generally centrally thereof and projecting rearwardly therefrom, and adjustable securing means connected to said guard for holding the pacifier on an infant's head, said securing means comprising a pair of straps composed of flexible plastic material, said straps each comprising a relatively narrow stem portion and a relatively wide head portion, said head portions having at least one opening therein for slidable movement of the stem portions therewithin to effect an adjustable interconnection between said straps.

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