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DIGIT SUCKING DETERRENT

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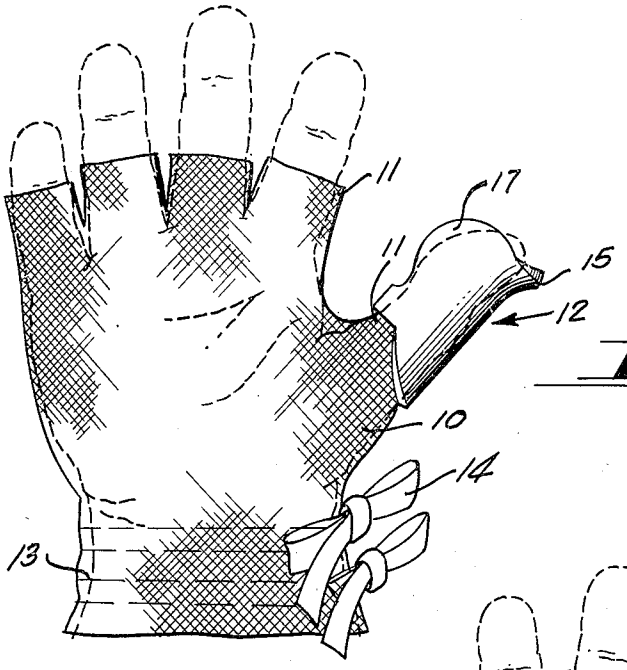


Fig. 1

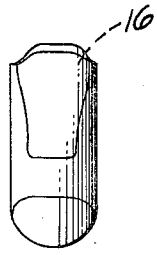


Fig. 3

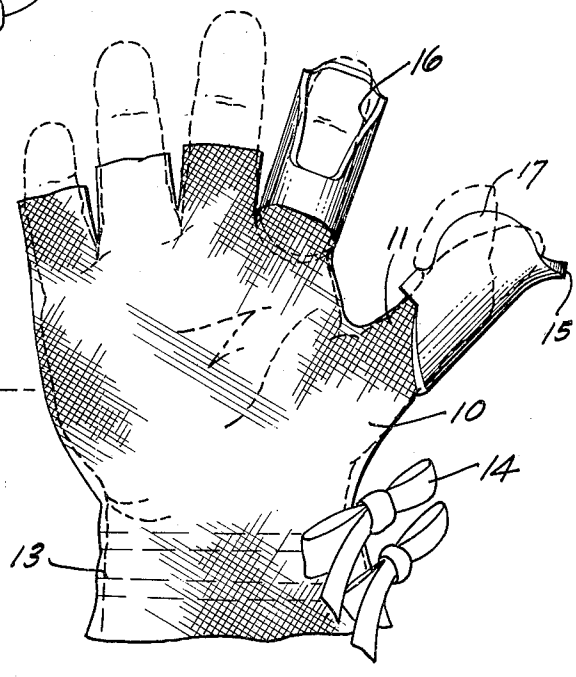


Fig. 2

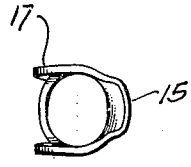


Fig. 4

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DIGIT SUCKING DETERRENT

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4 Claims. (Cl. 128—136)

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This invention relates to devices for weaning children from the habit of sucking their thumbs or fingers. Its general aim is to provide an improved mechanical deterrent the use of which will so discourage children addicted to this habit that the practice will almost immediately be abandoned.

The invention is based, among other things, on the fact that children who suck their thumbs or fingers do so from a constant desire to be at the nipple. In sucking their digits, therefore, children endeavor, first, to obtain the feel and fit of the human nipple and, second, to obtain moisture from the oral cavity containing the finger.

Accordingly, the invention aims to prevent the digits from being used as substitutes for the human nipple and further seeks to prevent the child from obtaining moisture from the sucked thumb or finger, regardless of the position in which the digit may be placed. At the same time, the invention contemplates a construction of digit-guard or shield which although fully effective for the above purpose, will enable the child to bend the finger freely while wearing same in order to enable him to readily pick up even the smallest objects. Concurrently, the invention envisions a guard which, once secured properly in place on the child's thumb or finger, cannot work loose or be moved by the child.

With these and other objectives in view, the invention, in one of its presently-preferred constructional examples, essentially comprises a multi-digit "stall" in the form of a mitt which can be securely fastened on the hand, one or more stubs of the mitt supporting a digit-encasing guard. Each of the guards comprises a tubular member somewhat oval in cross-section. The distal end portion is configured to prevent the digit from fitting either the roof of the mouth or the trough of the tongue so that the child cannot make it duplicate the feel and fit of a nipple. As the guard is oval in cross-section to loosely conform to the digit, the child if he attempts to work his digit into the guard with the flattened sides of the same engaging the opposite sides of the digit, finds that this maneuver merely results in the formation of an air channel extending along the opposite sides of the guard. Thus, if the child fits the digit sidewise into the guard, upon sucking he will only obtain air therefrom, instead of the desired moisture.

The guard is formed with an opening which extends unobstructed from the tip of the digit

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to at least the first joint thereof, allowing free bending of at least the first phalange of the digit, so that the child can readily pick up small objects, even when both the thumb and the index finger are encased.

The guard of the device is preferably molded of a light but durable and washable plastic, which, furthermore, can be of such a composition as to withstand sterilization temperatures. The mitt is now preferably formed of a knitted fabric capable of withstanding laundering.

Other features and advantages of the present invention will be apparent from the following description taken in connection with the accompanying drawing in which:

Figure 1 is a view of the inside of the right hand of a child showing in place thereon one form of the device of the present invention constructed to dispose the guard portion thereof on the thumb, the device being shown in full lines and the hand being shown in broken lines;

Figure 2 is a similar view showing another embodiment of the device of the present invention constructed to dispose the preventer portion thereof on a finger as well as the thumb.

Figure 3 is a side elevational view of the guard detached from the mounting means of the device; and

Figure 4 is a top plan view of the guard.

The article depicted essentially comprises a multi-digit-stub anchorage, such as the plural-digit "stall," a "mitt," or fingerless glove 10 having a plurality of stubs 11, and one or more sucking-inhibitors, such as the digit guards or shields 12. The component 10 may be fabricated for either hand and in many sizes and each of the guards may be removably mounted on its finger-stub to facilitate interchanging of the guards from finger to thumb or finger to finger, although it is preferred that they be permanently attached to their carrying stubs.

The mitt is preferably made of a light and porous but strong and washable fabric, such as a net material, although, if desired, a solid fabric may be employed. It includes an elongate wrist-portion 13, through which may be threaded a pair of ribbons 14 or the like members which may be tied in one of the types of knots that most children find impossible to untie. If desired, however, other fastening means that are difficult for a child to unfasten, such as hooks and eyes, may be utilized in lieu of ribbons.

The guards or shields 12 may be fabricated in various diameters and lengths and preferably consist of a tubular, or hollow elongate mem-

ber, adapted to at least partially surround a child's finger or thumb and having a length sufficient to extend at least from the knuckle to the finger tip. The tubular member forming the guard is oval in cross section to conform to the cross-sectional shape of the outer portion of a finger or thumb.

Each guard 12 is preferably molded of a non-frangible, shape-retaining, heat-resistant, but light and washable material, such as one of the methacrylate plastics. However, the invention contemplates the employment of other materials than plastics, and does not exclude such compositions as leather, pyroxylin or the like, since it is not necessary that the guard be absolutely rigid or transparent.

The outer, or back-of-the-hand, side of the tubular guard 12 extends at its lower or proximal end, farther down the digit than do the other sides. Its upper or distal end is flared outwardly and reflexed downwardly in such manner as to define a projection or lip 15.

The inner side of the guard is formed with an opening 16 extending from the distal end thereof to a point substantially midway between the ends of the guard. The side walls of the guard adjacent this opening are extended inwardly to form spaced inwardly convex protuberances 17. By virtue of this configuration, an encased digit is prevented from conforming to the roof of the mouth and the tongue since the lip 15 and the protuberances 17 space the digit from the roof of the mouth and the tongue respectively, at the same time exerting a mild irritating effect on the same. Hence, the child cannot obtain the fit of a nipple from his digit, and therefore cannot obtain moisture by the aid of his digit.

If, in order to obtain the feel and fit of a nipple so as to obtain moisture from sucking the digit, the child turns the guard-encased digit sidewardly to escape the mild irritation caused by the lip 15 and the protuberances 17, air will be drawn into the mouth through the channel defined by the inwardly extended walls forming the protuberances 17. Leading from the back of the mouth to the atmosphere, this channel precludes the formation of a vacuum in the mouth so that instead of sucking moisture, the child sucks air.

As the mitt is preferably formed of a net material which is flexible, the child may work the guard around the digit until the opposite flattened portions of the guard are engaging the opposite side surfaces of the digit. If the child should be able to so twist his digit in the guard he will find that two air channels are now formed extending longitudinally of the guard. Thus, with the guard so mounted to his digit, air will be drawn into his mouth when he attempts to suck the encased digit.

Accordingly, in no position of the digit can the child obtain moisture or the feel and fit of a nipple, and, being unable to accomplish his purpose, will abandon the habit sought to be eradicated.

There is illustrated in Figure 2 an embodiment of the present invention in which a guard 12 is mounted to the stub 11 for the index finger as well as to the stub through which the thumb projects when the mitt is worn by an infant. Guards may be secured to other stubs of a mitt than shown and it is to be understood that guards may be mounted to all stubs of the mitt if necessary in aggravated cases of the digit sucking habit.

It is to be particularly observed that the opening 16 is so disposed in the inner face of the guard as to leave the first phalange of the encased digit

unobstructed. As a consequence, the finger and thumb can be bent, at least as far down as the first joint, quite freely inwardly. Accordingly, the guard does not hamper the free use of the encased digit; in fact, even in extreme cases when the index finger and the thumb, as shown in Figure 2, are both encased, they can be readily bent to such an extent as to enable the child to pick up even relatively small objects.

It is to be definitely understood that the invention is by no means limited to the particular species shown in the drawings or described hereinabove, being in fact and in law susceptible of embodiment in any of the forms included within the scope of the annexed claims.

I claim:

1. A digit-sucking deterrent for infants comprising: a mitt adapted to be slipped onto the hand of an infant; at least one stub on said mitt for receiving a digit of the infant's hand; a tubular digit-receiving guard of substantially rigid material carried by said stub; said guard being longer on the outer side thereof and having an opening formed in the inner side extending longitudinally of the guard from the distal end to a point substantially midway of said longer outer side; the side walls of said guard being flared adjacent said opening to form spaced, inwardly projecting protuberances for holding the ball of the encased digit away from the surface of the mouth of the infant to form an air passage extending along the inside of the encased digit, said opening permitting the digit to be flexed inwardly while encased by said guard; and an outwardly projecting lip carried at the distal end of said longer outer side adapted to engage the interior of the infant's mouth.

2. A digit-sucking deterrent for infants, comprising: a mitt adapted to be slipped onto the hand of an infant; a stall carried by said mitt; a substantially tubular member; one end of said member being secured to said stall and forming a continuation thereof whereby a digit of an infant may be axially slipped through said stall and into said tubular member; a laterally extending lip carried by the free end of said member adapted to irritatingly engage the interior of the mouth when the infant inserts said member-encased therein; and a pair of protuberances carried by the wall of said member opposite said lip and laterally extending outwardly from said member and defining a slot of a width sufficient to permit the outer phalange of the digit to be flexed.

3. A device for inhibiting digit sucking by an infant, comprising: an elongate trough-like guard configured to fit longitudinally of an infant's digit; an annular element formed on said guard adjacent the proximal end thereof for embracing the digit and preventing relative lateral displacement of the guard and the digit; a lip at the distal end of the outer wall portion of said guard projecting outwardly substantially normal to said outer wall portion and adapted to irritatingly engage the interior of the mouth of the infant; and a longitudinal protuberance in the upper portion of each side wall of said trough-like guard adapted to contact the adjacent portion of the interior of the infant's mouth and space the digit therefrom to define therebetween an air passage extending substantially from end to end of said member.

4. In a weaning device of the category indicated: a digit-sucking preventer comprising a tubular member adapted to fit over a digit of an infant, the outer end of said member includ-

ing an outwardly flared terminal on its outer side defining a lip for irritatingly engaging the roof of the child's mouth and for preventing conformation of the roof of the child's mouth to the encased digit; and spaced protuberances on the side of said member opposite said lip defining therebetween a slot extending longitudinally of said member from the one end thereof to a point adjacent the opposite end thereof and forming an opening through which a part of an encased digit may be flexed.

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