Feb. 5, 1935. L. M. KLOHS 1,990,384

INFANT'S THUMB OR FINGER GUARD

Filed Jan. 19, 1934

FIG. 1.

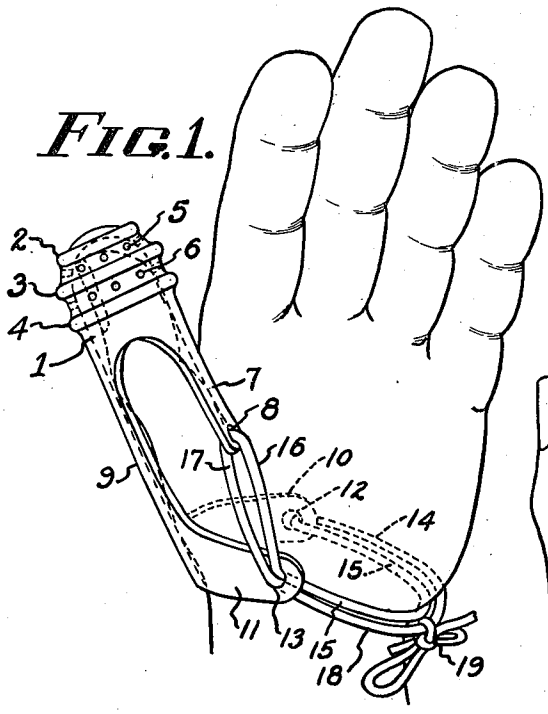
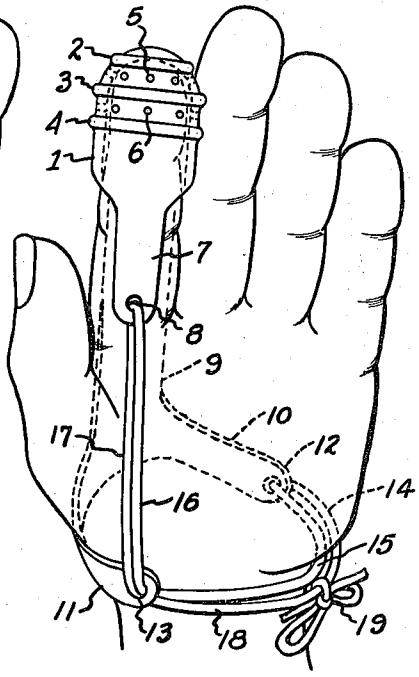


FIG. 5.



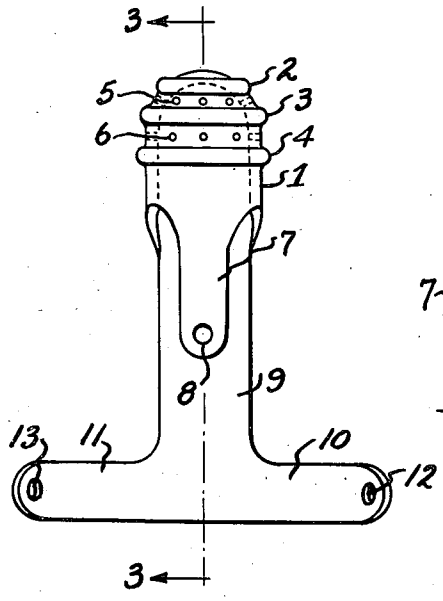


FIG. 2.

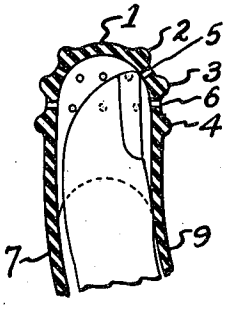


FIG. 3.

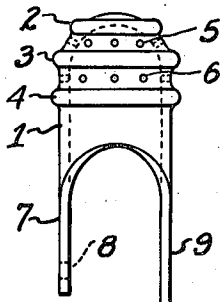
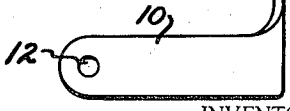


FIG. 4.



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INFANT'S THUMB OR FINGER GUARD

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6 Claims. (Cl. 128—133)

My invention relates to guards of the kind placed on an infant's thumb or finger to wean the infant of the habit of sucking the thumb or finger.

So far as I am aware, most devices for this purpose heretofore provided have been of metal or some such hard substance. If of a non-metallic hard substance, the device is liable to breakage, with exposure of sharp edges which may seriously injure the infant's mouth or hands. Where such devices have been made of non-metallic material not liable to breakage, they have been of material such as leather, which becomes soaked with saliva and is otherwise rendered unsanitary. The metallic devices are usually complicated in construction, and not the most suitable to come in contact with the infant's mouth, for reasons of sanitation and safety against laceration of the infant's mouth or hands.

It is an object of my invention to provide a simple, fairly durable, safe sanitary guard, of a material which is soft enough to avoid injury to the infant in any of the ways above mentioned. Such material may be rubber, of a firm yet flexible composition, hard enough to afford the necessary unpleasantness of contact with the mouth, but not so hard as to be injurious, especially in case of breakage, as for instance would be the case with what is known as hard rubber, or similar materials, such as molded phenolic condensation products and the like.

A further object is to provide the mouth-contacting part of an article of material of the character above mentioned, of such surface configuration as to add to the unpleasantness of mouth contact, to effectively discourage the habit, yet without liability of injury to the infant. Preferably, I provide perforations in the device which will prevent the formation of vacuum, thereby tending to preclude the habit-encouraging sensation derived from the resistance to the sucking action, such perforations being arranged in conjunction with the surface configurations in such manner as to be most effective while leaving the surface configurations fully effective in their function as above mentioned.

A further object is to provide a simple, yet most effective and durable formation of the device, by which it is readily secured to and detached from the infant's hand, and which will not be chafing or otherwise injurious or uncomfortable.

Other objects will appear in the course of the following description, illustrated by the accompanying drawing, in which—

Figure 1 is a perspective view of an infant's hand with my device applied to the thumb thereof.

Figure 2 is an elevation of the inner side of the device, in straightened condition.

Figure 3 is a vertical section of the device on the line 3—3 of Figure 2, also showing the thumb therein.

Figure 4 is a side elevation of the device.

Figure 5 is a perspective view of an infant's hand with the device, slightly modified, applied to a finger of the hand.

As I prefer to construct my improved guard, the body 1 is of cap or thimble form, fitting around the thumb and over the end thereof. Interiorly, this body portion 1 is smooth and formed to fit the thumb approximately, and not very snugly. Exteriorly, this body portion 1 is formed with a series of annular ribs 2, 3 and 4, extending around it, in succession from near the tip or outer end of the portion 1 about half-way down the length thereof. The length of this body portion 1 is such that it ends shortly above the joint of the thumb, or at least not so far extending therebelow as to interfere with the bending of the thumb. These ribs 2, 3 and 4 are of approximately semi-circular cross section, and the spacing between them is about that, or slightly more than, the width of the ribs. These ribs 2, 3 and 4, the top one 2 of which is the smallest, surrounding the reduced portion of the body 1 nearest the tip, provide a surrounding series of corrugations which not only are disagreeable to the touch of the infant's lips, but make it difficult for the lips to make effective sucking contact with the body 1, because of their circumferential extent.

In addition, I prefer to provide, in the spaces between adjacent ribs 2 and 3, and 3 and 4, circumferential series of perforations 5 and 6, respectively, entirely through the wall of the body 1. These prevent the formation of vacuum inside the body around the thumb, since the body 1, as previously mentioned, does not fit the thumb closely, and thus allows air to enter at its bottom around the thumb, which is idly drawn through the perforations, without resistance to the infant's efforts, so that the habit-satisfying sensation is precluded. The combination of these perforations, with the circumferential series of ribs 2, 3 and 4 above described, is especially effective in reducing the facility of sucking action; and the ribs, in addition, as before mentioned, are disagreeable without being injurious to the infant's mouth. The result is that the infant is weaned of the habit very readily by the use of my guard.

The means for fastening the guard on the hand, as I prefer to provide it, comprises the inner tongue or flap 7, integral with the lower edge of the body or cap portion 1 at a portion thereof whereby it is adapted to extend down along the inner face of the thumb, terminating about at the top of the heel of the hand, or at such a point as not to interfere with the bending of the thumb at its joint with the hand. In its lower end part this flap 7 has the aperture 8. Integral with the opposite lower edge or rim portion of the cap or body 1 is the outer flap 9, about twice as long as the inner flap 7, so as to reach down to the region of the wrist. At its lower end portion, this longer outer flap 9 has the two oppositely extending tongues 10 and 11, about equal in length and of such length that, with the width of the flap 9, the structure will extend a little more than half way around the wrist, when it is flexed. The end portions of these tongues 10 and 11 have apertures 12 and 13, respectively. Preferably, the entire structure above described, including the body or cap portion 1 and its ribs, and its flaps and tongues, is made of firm yet flexible rubber as previously mentioned, so that the attaching flaps and tongues may readily conform to the hand for securing the device on the hand by means of a single length of tape, string or the like passed through the apertures 8, 12 and 13.

As shown in Figure 1, this length of tape has its back free portion 14 passed through the aperture 12 of the tongue 10 lying at the back of the hand, a portion 15 passing from here around the inner side of the wrist and through the aperture 13 of the tongue 11 lying at the inner side of the hand, a portion 16 passing from here up to and through the aperture 8 of the inside short tongue or flap 7, a portion 17 passing from here down to and through the aperture 13 of the inner tongue 11 through which the tape previously passed, and finally, the free portion 18, passing around the inner side of the wrist and tied to the first mentioned free portion 14 at 19. This arrangement of the tape, permitted by the novel formation of the flaps and tongues of my device, is very readily made and tied, and it holds the device securely enough in place on the thumb, yet does not bind or hamper the natural movement of the infant's hand. In removing the guard, it is not necessary to unthread the tape from the apertures, but merely to allow it to slack, the free end parts 14 and 18 being left long enough to permit this.

In Figure 5 I show my guard applied to the index finger of the infant's hand, there being occasional cases of infants who have the habit of sucking a finger instead of the thumb. It will be understood that the guard may be applied to any of the other fingers in like manner. The guard body 1 and its details are as in the first example, and are indicated by the same reference numerals. The guard may differ in that the outer flap 9*a*, which passes down past the base joint of the finger, is longer, as indicated by the dotted representation of this flap in Figure 5, ending at the wrist region and having the opposite tongues 10*a* and 11*a*, with apertures 12*a* and 13*a*, respectively. The inner tongue or flap 7*a*, with its aperture 8*a*, is substantially the same as in the previous example. The tape is applied substantially the same as in the previous example.

It will be understood that modifications may occur, and that I am not limited to the precise disclosure herein, but claim:

1. An infant's thumb or finger guard comprising a cap-shaped body to fit around the thumb, having spaced annular outstanding ribs thereabout and perforations through the walls thereof between the adjacent ribs, and having a tongue extending down along the inner side of the thumb to the region of its joint with the hand, and a flap extending down along the outer side of the thumb to the region of the wrist, with tongues extending in opposite directions from this flap at least partly around the wrist, the end portions of these tongues and of said tongue at the inner side of the thumb having apertures, and a flexible element with a portion passed through the aperture of the flap tongue at the back of the wrist, leaving a free end portion thereat, then around the inner side of the wrist and through the aperture of the flap tongue at the front of the wrist, then up to and through the aperture of the tongue at the inner side of the thumb, then down to and through the aperture of said flap tongue at the front of the wrist, through which the element was previously passed, and then around the inner side of the wrist and tied to the aforementioned free end portion.

2. An infant's thumb or finger guard comprising a cap shaped body of material yielding to the tissues of the infant's mouth, formed to fit loosely around the infant's thumb or finger and having an outstanding relatively wide and low rib extending around its exterior surface, and having a row of perforations through its wall closely alongside said rib, and being formed to terminate adjacent the outermost joint of the thumb or finger, and means connected to said cap shaped body, to engage around the infant's hand, to hold said body in place in its loosely fitting relation to the thumb or finger.

3. An infant's thumb or finger guard comprising a cap shaped body of material yielding to the tissues of the infant's mouth, formed to fit loosely around the infant's thumb or finger and having a plurality of spaced outstanding relatively wide and low ribs extending around its exterior surface, and having a row of perforations through its wall between said ribs, and being formed to terminate adjacent the outermost joint of the thumb or finger, and means connected to the cap shaped body, to engage around the infant's hand, to hold said body in place in its loosely fitting relation to the thumb or finger.

4. An infant's thumb or finger guard comprising a cap shaped body of material yielding to the tissues of the infant's mouth, formed to fit loosely around the infant's thumb or finger and to terminate adjacent the outermost joint of the thumb or finger, said body having a flap of material similar to that of the body, extending from its termination adjacent said joint, down along the inner side of the hand to the region of the joint of the thumb or finger with the hand, and having a longer flap of said similar material extending from said termination down along the outer side of the hand to the region of the wrist, and means connected to the respective flaps and adapted to be secured around the wrist of the hand.

5. An infant's thumb or finger guard as set forth in claim 4, in which the longer flap has tongues extending in opposite directions from its lower end part, to lie at least partially around the wrist, said tongues being the parts of said

longer flap to which the means is connected for securing around the wrist.

6. An infant's thumb or finger guard as set forth in claim 4, in which the longer flap has tongues extending in opposite directions from its lower part, to lie at least partially around the wrist, the terminal portions of the shorter flap and of said tongues of the longer flap having apertures, and the means that is secured around the wrist comprising a flexible element with a portion passed through the aperture of the flap tongue at the back of the wrist, leaving a free end portion thereat, then around the inner side of the wrist and through the aperture of the flap tongue at the front of the wrist, then up to and through the aperture of the flap at the inner side of the thumb or finger, then down to and through the aperture of said flap tongue at the front of the wrist, through which the element was previously passed, and then around the inner side of the wrist and tied to the aforementioned free end portion.

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