

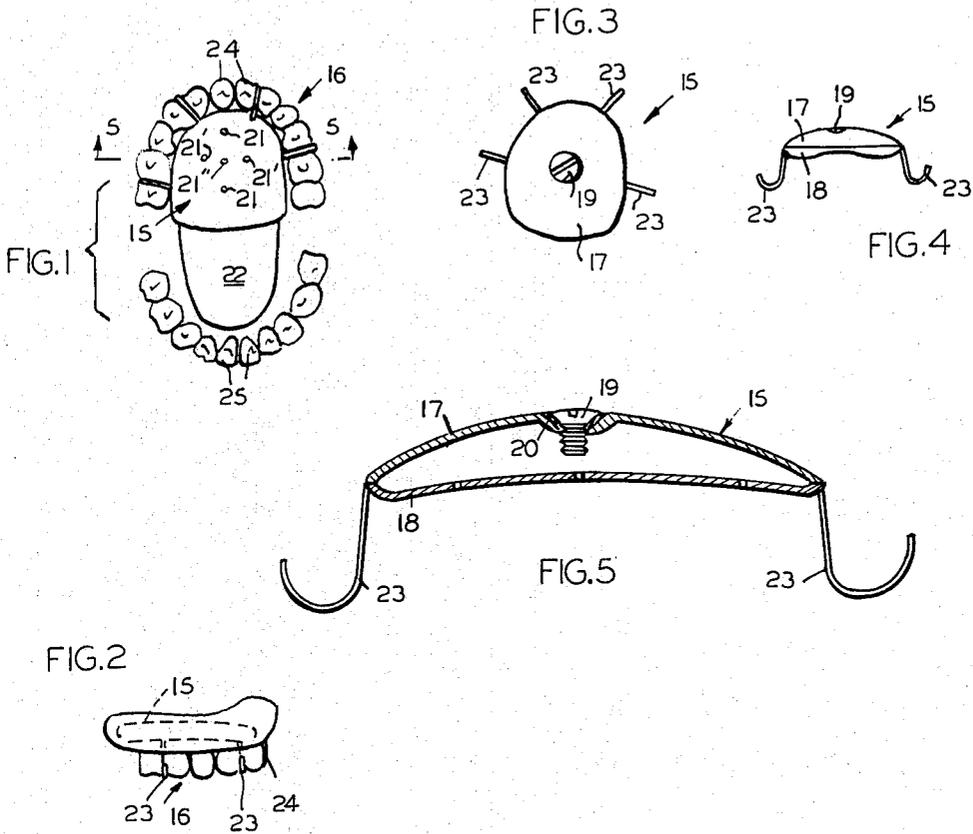
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M. WALLSHEIN

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THUMB-SUCKING AND TONGUE-THRUSTING DETERRING DEVICE

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INVENTOR,
MELVIN WALLSHEIN,
BY *Melvin Wallshein*
ATTORNEY.

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**THUMB-SUCKING AND TONGUE-THRUSTING
DETECTING DEVICE**

Melvin Wallshein, 8645 Bay Parkway, Brooklyn, N.Y.

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2 Claims. (Cl. 128-136)

The present invention relates to a device to deter a child from thumb sucking and tongue thrusting, and to provide such, is the principal object of this invention.

Essentially, this device offers the child a supply of concentrated aromatics or syrups within a tank worn in the manner of an upper denture up against the palate and held in place by hooks releasably attached onto the upper teeth. Sucking against a minute aperture in the bottom wall of the tank, brings minute quantities of stored liquid to the tongue where it is diluted by the saliva in the mouth. There is no discharge without such sucking action. When the thumb is in the mouth, it would close the aperture and when the tongue is thrust forward to be between the upper and lower incisors, sucking action is quite impossible. Hence, this new device plays psychologically on the child's whim to get to the sweets, for which there could be no thumb sucking or tongue thrusting to get tank contents.

Another object of this invention is to provide a device of the character described, to deter the practice of the objectionable habits mentioned, which is simple in structure, reasonably cheap to make, easy to install and remove and which is efficient in carrying out the purposes for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

In the accompanying drawing which is part of this specification, similar characters of reference indicate corresponding parts in all the views.

FIG. 1 is a view of a child's open mouth showing a thumb sucking and tongue thrusting deterring device embodying the teaching of this invention, attached to the upper teeth and bearing against the palate.

FIG. 2 shows a side view of the upper teeth and said device.

FIG. 3 is a top plan view of said device.

FIG. 4 is an elevational view thereof.

FIG. 5 is an enlarged section taken at line 5-5 in FIG. 1.

In the drawing, the numeral 15 designates generally a thin-walled tank which fits against the palate and the inner faces of the upper teeth denoted generally by the numeral 16, in a child's mouth. This tank may be made of plastic, as acrylic for instance, or of other suitable material, and comprise in form, that of an expanded envelope whose top wall 17 and bottom wall 18, are peripherally cemented. Said top wall has a filling opening with a removable closure as for instance the threadedly engaged screw 19 equipped with a gasket 20 to make the closure water-tight. The bottom wall has one or more minute apertures 21 through which liquid in the tank will not leak, but minute quantities thereof will pass upon good sucking action with the tongue 22 thereagainst. The tank is preferably releasably mounted by hooks 23 therefrom, for engagement with selected upper teeth, in the manner of suspending a denture.

The upper wall 17 may be made from a cast taken of the palate of the child who is to wear this device in its

mouth, or may be of a contour and size which would be adaptable for use for any age group and made of thermoplastic material worked hot into shape by suitable dies which latter method would also be used in making the bottom wall 18.

If the child wearing one of these devices would suck its thumb, such finger would block the tongue's access to a hole 21 or would cover the holes. If the child were to thrust its tongue 22, it would be in contact with the upper incisors 24 and the lower incisors 25. No sucking is possible during such tongue thrusting.

So to get to tank contents, the child must keep its thumb out of the mouth and not engage in tongue thrusting.

Since this device must also be suitable for use while the child is in bed, lying on its back or on a side, minute apertures 21' may be provided at each side of center in the bottom wall 18, in order to take care of the shift in the tank's contents after some of the supply therein has been depleted. But if the tank 15 is filled immediately before the child goes to bed, one central aperture 21'' would be sufficient. In all events, if more than one aperture exists through the bottom wall, the hole locations shall be near enough to each other to be covered by the thumb, if same is put into the mouth, and if there be but one aperture, the same shall happen. In constructions having more than one aperture, one will vent the other. Where the device has but a single aperture in the bottom wall of the tank 15, the gasket is omitted, and then reliance is had upon the looseness of fit of the screw 19 which permits passages of air into the tank, but allows no liquid therethrough.

There are incidents in therapy which require that mouth condition shall be non-acid. During the day, it is easy for the patient to rinse his mouth with a basic solution. To accomplish this at night while the patient is asleep, this device 15 may be used with any medicinal preparation and same can be made for the mouths of adults.

This invention is capable of various forms and applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiment shown herein shall be deemed merely illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific description herein to indicate the scope of this invention.

I claim:

1. In a device for deterring a child from thumb sucking and tongue thrusting, the combination of a tank having top and bottom walls connected together at the peripheries thereof thereby forming a chamber to contain a liquid; said tank being of a size so that it can be positioned wholly within the upper space in a child's mouth adjacent the palate and above the tongue, and means connected to and extending from said tank, adapted to extend to upper tooth structure in the mouth in which the tank may be placed, for releasably engaging said tooth structure whereby the tank can be positioned in said space, said bottom wall being provided with a minute aperture in its central region through which liquid will flow from said tank only by sucking action of the tongue at such aperture; said aperture being so positioned that it will be covered by the child's thumb when the thumb is entered into the mouth having the tank mounted

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therein; said tank being vented by another minute opening to its interior.

2. A device as defined in claim 1, wherein the bottom wall of said tank is provided with a plurality of such minute apertures at predetermined positions thereon so that all of them will be covered when the child's thumb is inserted in the mouth; any of said apertures being adapted to serve as the vent for said tank.

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RICHARD A. GAUDET, *Primary Examiner.*