

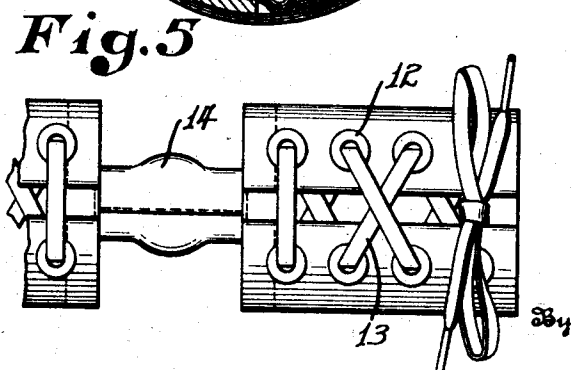
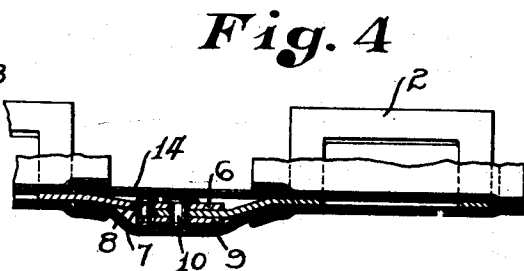
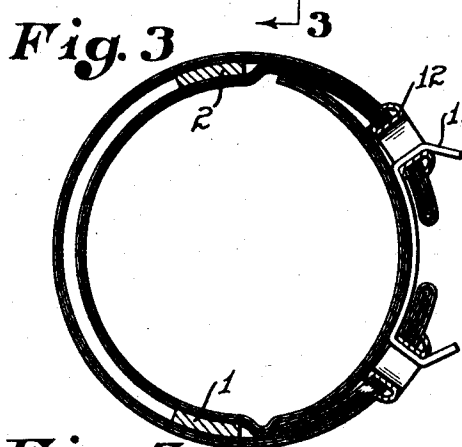
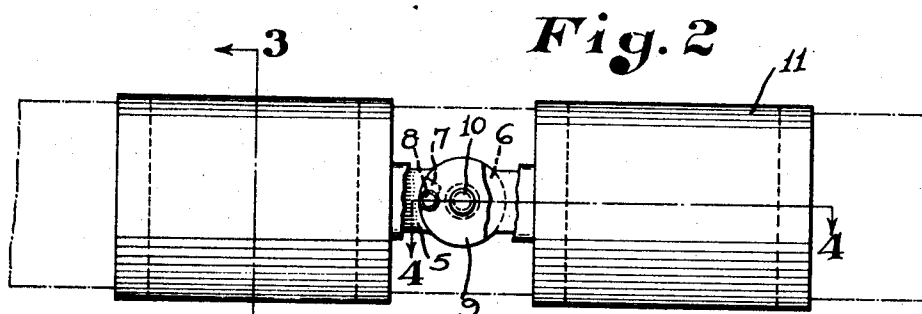
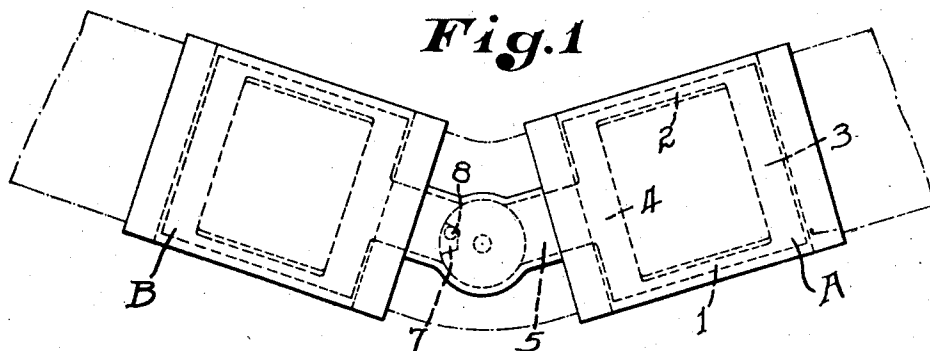
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THUMB SUCKING PREVENTER

Filed Jan. 5, 1929



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THUMB-SUCKING PREVENTER

Application filed January 5, 1929. Serial No. 330,509.

This invention relates to devices for preventing a baby from sucking its thumb or fingers, and an object is to provide a simple and efficient device of this character which may be readily and conveniently applied to the arm of an infant, and with which there is no liability of chafing the skin, but is so designed as to permit the natural movement of the arm up to a predetermined point sufficiently spaced from the head as to interfere with the infant placing its thumb or fingers in its mouth. Another object of this invention is to provide a new and improved device of the above character having the features of construction and arrangement hereinafter described.

An outstanding characteristic of this invention resides in the provision of a thumb-sucking preventer, which consists generally in a pair of sleeves, one of which is attached to the arm above the elbow and the other below the elbow. Connecting the sleeves there is a pivotal joint which is positioned substantially in line with the axis of the elbow joint, so that bending movement of the arm, simulating a hinge in its action, is imparted to the pivotal connection between the sleeves. Associated with the pivotal connection is a stop which limits the swinging or hinge-like movement of the arm toward the head, thereby enabling the infant to move its arm in a free and natural way up to a certain point where further movement is prevented so that the thumb cannot be placed in the mouth without assuming a forced and somewhat cramped or uncomfortable position.

For purposes of illustration, and not of limitation, one embodiment of the invention shown on the accompanying drawings, in which:

Fig. 1 is a side elevation of a thumb-sucking preventer, the arm of an infant being indicated by the dot and dash lines;

Fig. 2 is a side elevation showing the device straightened out and more clearly illustrating the hinge connection;

Fig. 3 is an enlarged transverse section on the line 3-3 of Fig. 2;

Fig. 4 is an enlarged section on the line 4-4 of Fig. 2; and

Fig. 5 is a side elevation of the device showing the lacing and the covering for the metal parts.

The illustrated embodiment of the invention comprises a device for preventing an infant from sucking its thumb and fingers, and as shown, consists of a pair of metallic frame members A and B, similarly shaped and constructed. Each member consists of side members 1 and 2 and end members 3 and 4. The end members 3 and 4 are curved in order to fit snugly against the arm above and below the elbow. Projecting from the end member 4 is an arm 5 curving slightly away from the plane of the end member 4 and terminating in a disc-like end portion 6. The end portion 6 of one of the arms 5 is formed with a slot 7, and projecting from the end portion of the other arm 5 is a rivet 8 extending into the slot 7. A plate 9 is disposed on one of the end portions 6, and a rivet 10 extends through the parts to provide a pivotal connection thereof. It is apparent that the slot 7 and rivet 8 limit the pivotal movement of the frame members A and B.

Although the above described pivotal connection and stop arrangement are extremely simple and practical, it is to be understood that other pivotal joints and stop arrangements may be used to advantage, and will be considered as embraced within the purview of this invention.

Enclosing the frame members A and B and the pivotal joint is a fabric covering 11, and, as shown in Fig. 3, the fabric consists of three plies of canvas, which is wrapped around the framework heretofore described in such manner that the infant's arm is separated from the metal parts to militate against liability of chafing or irritating the skin. As shown, the fabric material is folded inside of the frames, and then by a reverse fold is brought around the outside of the frames. By this arrangement a cuff or sleeve is provided which is adapted to be applied to the arm above and below the elbow joint, eyelets being provided in the sleeve to receive lacing 13 for holding the sleeve in position. The hinge connection heretofore described is also encased in a fabric covering 14, which con-

sists of a three-ply fabric strip folded about the joint and sewed to the adjacent portions of the sleeves.

In applying the above described device to the arm, one sleeve is applied above the elbow and the other sleeve is applied below the elbow. Owing to the curved shape of the frame members A and B, the device can be readily positioned, and preferably it is applied to the inner side of the arm so that the lacing can be conveniently adjusted on the outside. By "inner side of the arm", I mean the side of the arm toward the body when the arm is in the anatomical position, the arm being extended parallel to the side of the body with the palm facing forwardly. Instead of applying the device to the inner side of the arm it may be applied to the outer side, if desired.

By applying the device either to the inside or outside of the arm, the pivotal connection thereof is positioned substantially in line with the axis of the elbow joint so that hinge movement of the arm imparts substantially corresponding movement to the device. This provides for free and natural movement of the arm at all times, and operates only to limit the movement of the forearm toward the head so as to prevent the infant from placing its thumb and finger in its mouth.

From the above description, it will be apparent that the members connecting the cuffs or sleeves are disposed laterally in relation to the elbow point on either its medial or external surface when the arm is in anatomical position. When in this position, the axis of the movable joint of the two members coincides substantially with the axis of the natural hinge joint of the elbow.

Thus disposed and thus applied, in whatever position of flexion or extension the arm may assume, the cuff members remain at an equidistant position from the axis of the elbow joint and at the identical position, in relation to the enclosed parts of the arm, at which the cuffs were applied.

In prior devices, in which the attachment of the connecting members have been disposed to the back or the front of the elbow joint, it is apparent that there is an alternate pulling and thrusting force on the cuffs accompanying each flexion and extension movement of the arm. The resultant change in the longitudinal position of the cuffs in relation to enclosed tissues of the arm, accompanying each movement of the arm, is productive of an undesirable pull or rubbing action on the underlying skin.

In accordance with this invention, there is no liability of the sleeves rubbing, irritating or annoying the infant's skin, because the pivotal connection between the frame part is properly positioned with respect to the elbow, and does not interfere with the natural movement of the skin at the elbow. Failure

to provide for such movement has been one of the reasons for the lack of success on the part of similar devices heretofore proposed.

Although I have shown and provided a construction which is the best form known to me at this time, it is to be understood that numerous changes in details of construction and arrangement may be effected without departing from the spirit of the invention, especially as defined in the appended claims.

What I claim as new and desire to secure by Letters Patent is:

1. A thumb-sucking preventer comprising a pair of rigid plate members curved for partially embracing a side of the arm above and below the elbow respectively, flexible fabric cuff enclosing and secured to each plate member for holding the same in place on the side of the arm, a strap rigid with each plate member and extending therefrom longitudinally of the arm, a pivotal connection between the free end portions of said straps adapted to be positioned at the axis of elbow, and a stop associated with said pivotal connection for limiting the movement of said cuff members toward each other.

2. A thumb-sucking preventer comprising a pair of rigid plate members curved for partially embracing a side of the arm above and below the elbow respectively, a flexible fabric cuff enclosing and secured to each plate member for holding the same in place on the side of the arm, a strap rigid with each plate member and extending therefrom longitudinally of the arm, a pivotal connection between the free end portions of said straps adapted to be positioned at the axis of the elbow, a stop associated with said pivotal connection for limiting the movement of said cuff members toward each other, and a flexible fabric covering for said straps and pivotal connection.

3. A thumb-sucking preventer comprising a pair of rigid plate members curved for partially embracing the arm above and below the elbow respectively, said plate members being of skeleton form to reduce to a minimum the amount of rigid surface engageable with the arm, a flexible fabric cuff enclosing and secured to each plate member for holding the same in place on the side of the arm, a strap rigid with each plate member and extending therefrom longitudinally of the arm, a pivotal connection between the free end portions of said straps adapted to be positioned at the axis of the elbow, and a stop associated with said pivotal connection for limiting the movement of said cuff members toward each other.

In testimony whereof I have hereunto signed my name to this specification.

BERMAN S. DUNHAM.