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SAFETY HARNESS

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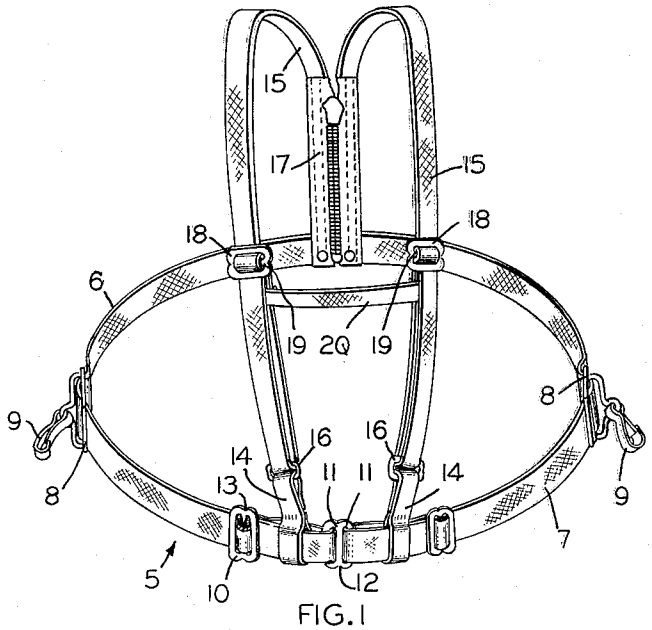


FIG. 1

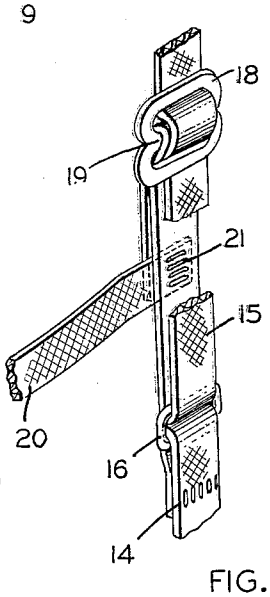


FIG. 2

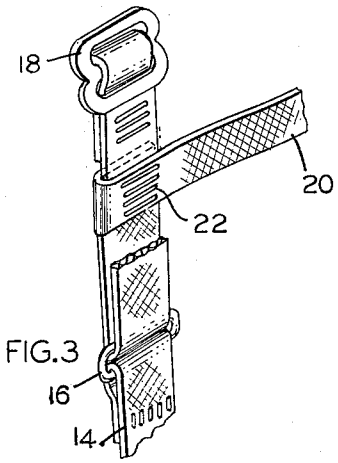


FIG. 3

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The present invention relates to safety harnesses for infants.

While the present invention is adapted for use with any safety harness, it is herein discussed primarily in connection with harnesses of the type comprising a body encircling belt having its ends in back and provided with shoulder straps having first and second sections. The front ends of the first shoulder sections are attached to the front part of the belt in spaced relationship while the rear ends of the second shoulder sections are attached to respective ones of the belt ends and detachably joined to each other with slide fasteners. The second sections of each such harness are interconnected by a breast strap. Harnesses that open in the back provide maximum security and are adapted to constructions ensuring adjustability enabling them to be properly fitted, providing for the secure attachment of auxiliary straps and preventing parts, that must move relatively to one another in effecting adjustments, from becoming disconnected.

One disadvantageous feature of back opening harnesses is that, particularly when constructed to afford maximum utility and to be of high quality, particularly when their slide fastener is disconnected, is that they are not sufficiently self-sustaining in shape. This factor is due, in part, to the fact that the material from which the belt and straps is made is flexible and, in part, to the slidable connections between the shoulder strap sections and the front part of the belt, the weight of attaching rings carried by the belt, the construction of belts from side sections joined at the front of the belt by links, and slidable connections between the first shoulder strap sections and the breast strap.

The objective of the present invention is to improve the construction of infants' harnesses, and particularly those of the back opening type having adjustable shoulder straps, by locking the ends of the breast strap to the connecting loops adjustably joining the shoulder strap sections. Such loops lengthen as the shoulder straps are shortened and shorten as the straps are lengthened. For that reason, the points of connection of the breast strap ends to the second shoulder strap sections are either proximate to the first shoulder strap sections on the outer part of the loops or remote therefrom on the inner portions of the loops, both locations being with respect to the shoulder straps when shortened.

This construction is of advantage in that a thus anchored breast strap gives the harness somewhat more form and enables economies in production to be effected particularly when the ends of the breast straps are stitched to the second shoulder strap sections together with the ends of the second strap sections that are doubled upon themselves about the bars of the connections through corresponding ones of which each second strap section has been slidably passed.

In the accompanying drawings, there is shown an illustrative embodiment of the invention from which the above and other objectives, novel features, and advantages will be readily apparent.

In the drawings:

FIG. 1 is a perspective view of an infant's harness, as seen from the front,

FIG. 2 is a fragmentary view, on an enlarged scale, illustrating one breast and shoulder strap connection, and

FIG. 3 is a like view of another breast and shoulder strap connection.

In the embodiment of the invention illustrated by the drawings, a belt is generally indicated at **5** and shown as comprising two sections **6** and **7**. Each belt section is passed through a slide **8** provided with a hook **9** for use in attaching auxiliary straps thereto. The two belt sections are joined at the front of the harness by passing the front end of each through a slide **10** and the appropriate one of the slots **11** of a connector **12** with its end looped about the central bar **13** of the slide **10** for that section and stitched to itself. By this arrangement, the belt sections **6** and **7** are securely and permanently joined at the front of the harness and both are adjustable.

Each of the two shoulder straps consists of a first section **14** and a second section **15**. One end of each first section **14** is looped through the looped end of an appropriate one of the belt sections and stitched to itself, thus to be slidably confined between the connector **12** and the proximate slide **10** and its other end is looped through a connector **16** and stitched to itself.

The rear end of each of the second shoulder strap sections **15** is permanently joined to the rear end of the appropriate belt section and detachably joined to the corresponding portion of the other shoulder strap section **15** by a slide fastener unit **17** and its front part is passed through a slide **18** and through the connector **16** and looped around the central bar **19** of its slide **18** and stitched to itself so that the shoulder straps are adjustable and their sections are permanently interconnected.

The two shoulder straps are interconnected by a breast strap **20** and, in accordance with the invention, its ends are stitched to the second shoulder strap sections. As illustrated by FIG. 2, each breast strap end may be disposed between the inner reach of the loop of a second shoulder strap section and the end thereof so that they may be united when that loop is stitched to itself as indicated by the rows of stitching **21**. The breast strap ends may, as illustrated by FIG. 3, be folded about and joined to the inner reach by separate stitching **22** and at other zones along the length thereof but close to the slide **18** so as to avoid unduly limiting shoulder strap adjustments.

By this construction, a harness is provided that is fully adjustable and that can only be opened at the back. At the same time, the stitched breast straps serve to render each harness sufficiently self sustaining as to shape so as to render it easier to arrange for putting it on an infant.

We claim:

1. In an infant's harness, a body encircling, adjustable belt having ends at the back, a pair of shoulder straps each composed of a first and a second section, the first sections of said shoulder straps being connected to the front of said belt, and the second sections being connected to the ends of said belt and detachably joined to each other, the front portions of said second shoulder strap sections each including a portion doubled upon itself to provide a loop, means permanently connecting the free end of each loop to the related second shoulder strap section for adjustment along the latter to vary the effective length of the second shoulder strap section, means connecting the loop of each second strap section and the related first strap section, and a breast strap locked to said second shoulder strap sections adjacent said free ends.

2. In an infant's harness, a body encircling, adjustable belt having ends at the back, a pair of shoulder straps each composed of a first and a second section, the first sections of said shoulder straps being connected to the front of said belt, and the second sections being connected to the ends of said belt and detachably joined to each other, the front portions of said second shoulder strap sections each including a portion doubled upon itself to provide a loop, means permanently connecting the free end of each loop to the related second shoulder strap section for adjustment

along the latter to vary the effective length of the second shoulder strap section, means connecting the loop of each second strap section and the related first strap section, and a breast strap locked to said second shoulder strap sections.

3. In an infant's harness, a body encircling belt, a pair of shoulder straps each composed of a first and a second section, the first sections of said shoulder straps being connected to said belt, the front portions of said second shoulder strap sections each including a portion doubled upon itself to provide a loop whose free end is underneath, means permanently connecting the free end of each loop to the related second shoulder strap section for adjustment along the latter to vary the effective length of the second shoulder strap section, means connecting the loop of each second strap section and the related first strap section, and a breast strap locked to said second shoulder strap sections adjacent said free ends.

4. In an infant's harness, a body encircling belt composed of two sections each including end loops and means connecting said end loops, a pair of shoulder straps each composed of a first and a second section, the first sections of said shoulder strap each including a permanently closed loop connected to said belt for adjustment therealong within the limits of an appropriate belt loop, the front portions of said second shoulder strap sections each including a portion doubled upon itself to provide a loop whose free end is underneath, means permanently connecting the free end of each loop to the related second shoulder strap section for adjustment along the latter to vary the effective length of the second shoulder strap section, means permanently connecting the loop of each second strap section and the related first strap section, and a breast strap locked to said second shoulder strap sections adjacent said free ends.

5. In an infant's harness, a body encircling belt, a pair of shoulder straps each composed of a first and a second

section, the first sections of said shoulder straps being connected to said belt, the front portions of said second shoulder strap sections each including a portion doubled upon itself to provide a loop, a slide for each second shoulder strap section including a pair of slots establishing a center bar, the front portion of each second shoulder strap section passing through the slots of the appropriate slide and the end of that portion encircling the center bar thereof and stitched to itself, means permanently connecting the loop of each second strap section and the related first strap section, and a breast strap, whose ends are disposed under said free ends and anchored by the stitching therethrough.

6. In an infant's harness, a body encircling belt including adjustable side sections, a coupling link loosely joining the free ends of said sections thereby to provide open belt ends at the back, a pair of shoulder straps each composed of a first section and a second section, the first section of said shoulder straps being connected to appropriate ones of said belt side sections adjacent said coupling said second sections being connected to appropriate ones of the belt ends and detachably joined to each other, the front portions of said second shoulder strap sections each including a portion doubled upon itself to provide a loop, means permanently connecting the free end of each loop to the related second shoulder strap section for adjustment along the latter to vary the effective length of the second shoulder strap section, means connecting the loop of each second strap section and the related first strap section, and a breast strap locked to said second shoulder strap sections.

References Cited in the file of this patent

UNITED STATES PATENTS

2,563,766	Weinstein et al.	Aug. 7, 1951
2,623,678	Law	Dec. 30, 1952
2,677,488	Prusan	May 4, 1954