

[54] INFLATABLE CRIB

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[51] Int. Cl. A47d 7/04, A47c 27/08

[58] Field of Search..... 5/93, 94, 348-350

[56] References Cited
UNITED STATES PATENTS

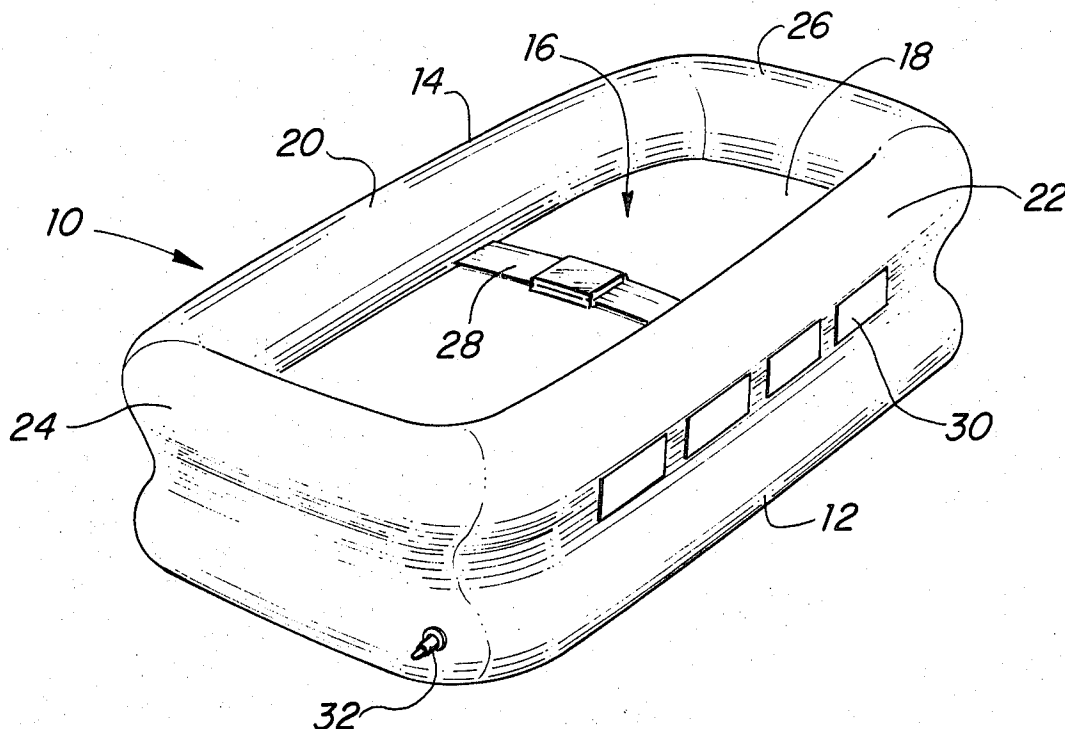
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[57] ABSTRACT

An inflatable crib comprising a base portion generally defining a mattress area; an inflatable wall portion attached to the base portion, and having an inner impervious member connected to and rising from the base portion at the periphery of the mattress area, and an outer impervious member spaced from the inner member when the crib is inflated; and an overhanging shoulder member attached to the wall portion and extending outwardly from the mattress area beyond the inner member for exerting a force on the wall portion downwardly and beyond the mattress area upon deflation of the wall portion.

15 Claims, 4 Drawing Figures



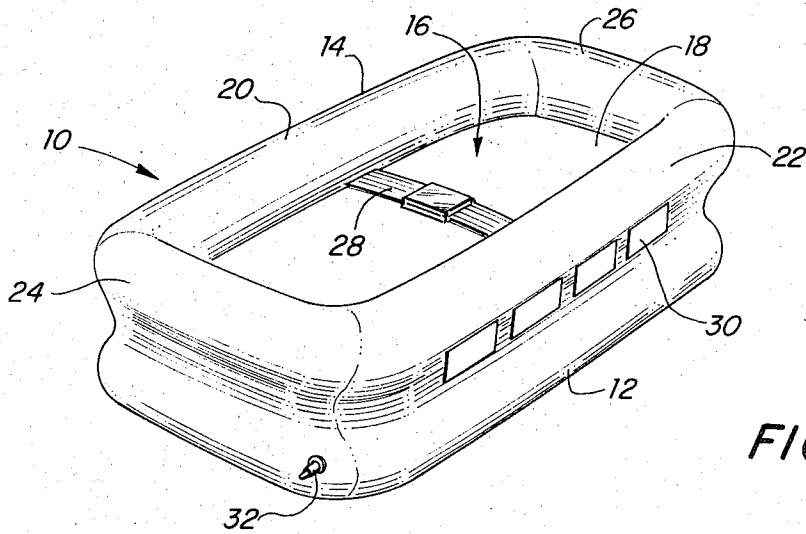


FIG. 1.

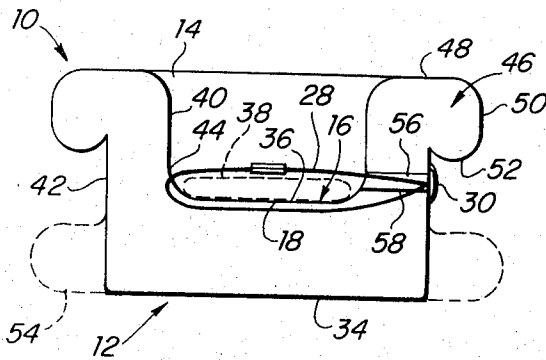


FIG. 2.

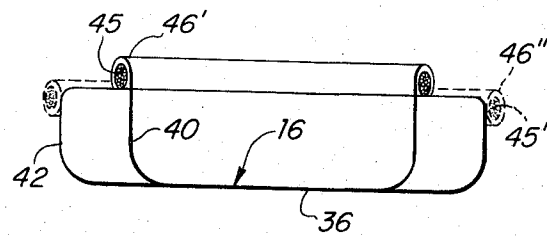


FIG. 2A.

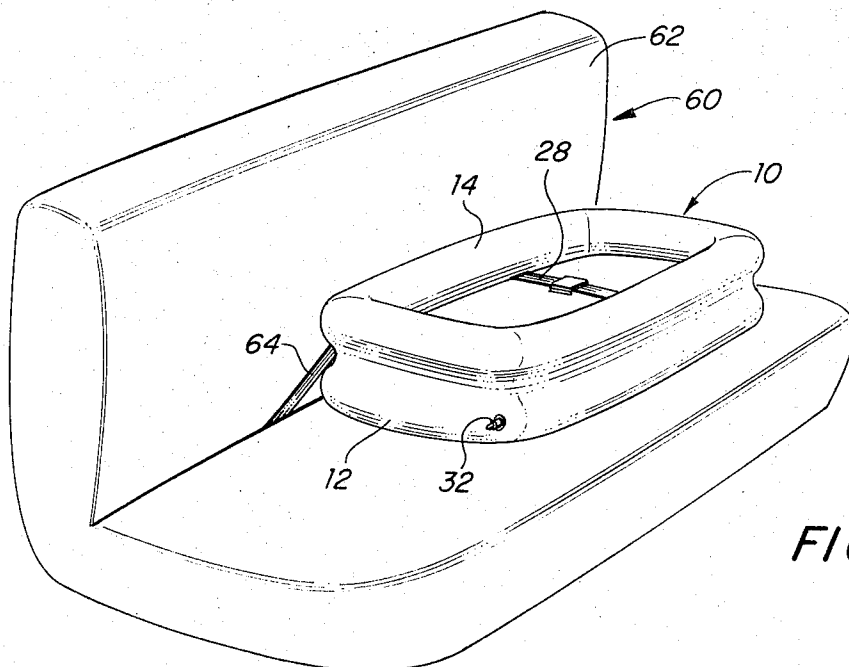


FIG. 3.

INFLATABLE CRIB

FIELD OF INVENTION

This invention relates to an inflatable crib.

BACKGROUND OF INVENTION

Conventional cribs made of wood, plastic and the like typically are heavy, cumbersome, not easily assembled and disassembled, not suited for use in an automobile and are difficult to transport. The attempt to overcome these and other problems with such cribs has resulted in the introduction of an inflatable crib. However such cribs generally are not well suited for use in a moving vehicle. Perhaps the greatest danger with such cribs is that upon puncture or loss of air for any reason the walls may collapse on the mattress area and may introduce a real danger of suffocation to the infant in the crib. This is a serious problem because these cribs are often formed with an air impervious plastic or similar substance which can envelop an infant and quickly stifle him. In addition such cribs often contain angular corners which can also present a suffocation hazard to the infant should his face become wedged in such a corner.

SUMMARY OF INVENTION

It is therefore an object of this invention to provide an improved, inflatable crib which is inexpensive, light, compact when not inflated, and easily erected and collapsed.

It is a further object of this invention to provide such a crib which is well suited to use in vehicles and which can be safely mounted therein.

It is a further object of this invention to provide such a crib which upon loss of air will not collapse toward the mattress area and which provides no corners in which an infant's nose and mouth can become wedged.

The invention features an inflatable crib having an inflatable base portion generally defining a mattress area and an inflatable wall portion attached to the base portion. The wall portion includes an inner impervious member connected to and rising from the base portion at the periphery of the mattress area and an outer impervious member spaced from the inner member when the crib is inflated. An overhanging shoulder member attached to the wall portion extends outwardly from the mattress area beyond the inner member and exerts a force on the wall portion downwardly and beyond said mattress area upon deflation of the wall portion.

DISCLOSURE OF PREFERRED EMBODIMENT

Other objects, features and advantages will occur from the following description of a preferred embodiment and the accompanying drawings, in which:

FIG. 1 is an axonometric view of an inflatable crib, according to this invention, in the inflated state;

FIG. 2 is a schematic, cross sectional view taken laterally through the inflatable crib shown in FIG. 1;

FIG. 2A is a schematic, cross sectional view similar to FIG. 2 showing alternate shoulder and base construction; and

FIG. 3 is an axonometric, diagrammatic view of the crib of FIG. 1 installed in an automobile and secured by a safety seat belt.

There is shown in FIG. 1 an inflatable crib 10 having a base portion 12 and wall portion 14. Wall portion 14 defines a mattress area 16 on the upper member 18 of base portion 12. Wall portion 14 may include four separate walls two longitudinal side walls 20 and 22 and two lateral side walls 24 and 26. A safety seat belt 28 extends laterally across the mattress area 18 at approximately the center thereof and is used for securing an infant in crib 10. Alternatively, two or more such safety straps may be used e.g., one across the chest and a second across the thighs of the child to prevent the child from being twisted loose upon a sudden stop. Loops 30 or other means for engaging an automobile safety seat belt may be provided on wall 22 or other part of crib 10 for providing a positive and safe installation for crib 10 when used in a moving vehicle. One or more valves such as valve 32 is provided to enable the crib 10 to be inflated and deflated. More than one valve is necessary when crib 10 is constructed with more than one separate airtight compartment; for example, the base portion and wall portion may be made of separate compartments. In addition each of the walls 20, 22, 24 and 26 may be made separate compartments.

Base portion 12, FIG. 2, includes a lower member 34 and upper member 18 which defines mattress area 16 which the infant is to occupy and which may be provided with a separate mattress 38. However, when crib 10 is inflated members 18 and 34 with the air between them constitute a firm and comfortable mattress. Wall portion 14 includes an inner member 40 attached to and rising from member 18 and an outer member 42 attached to and rising from lower member 34. Inner member 40 and upper member 18 may be joined in a junction 44 which is concave facing inwardly. The concave shape of junction 44 provides no corner or other nook into which the infant might wedge his nose and mouth and cause himself to be suffocated.

An overhanging shoulder 46 is attached to inner and outer members 40 and 42 and includes: a first section 48 which extends outwardly from the top of inner member 40; a second section 50 which extends downwardly from section 48 at least as far and perhaps farther than the top of outer member 42 and a third section 52 which extends from section 50 to the top of outer member 42. The presence of overhanging shoulder 46 extending outwardly from the mattress area 16 provides a safety feature to prevent an infant within crib 10 from being partially or wholly enveloped by wall portion 14 upon deflation of crib 10. Any loss of air which causes crib 10 to deflate also causes shoulder 46 to collapse but since shoulder 46 has an overhanging portion extending outwardly from the crib wall portion 14 would tend to be drawn outwardly away from the infant where it can not cover him or in any way cause him harm. When the crib is inflated it may be easily carried by gripping the shoulder portion 46, FIGS. 1 and 2, on any pair of opposite sides of crib 10 and using them as handles. Base portion 12 may be extended as far or even farther than the overhanging shoulder portion 46 in the lateral and longitudinal directions by the addition of peripheral portion 54 to lower the center of gravity of the crib and give it added stability.

Although base portion 14 and shoulder 46 are each illustrated in FIGS. 1 and 2 as inflatable parts, this is not a limitation of the invention. Base portion 14 may be a non-inflatable compartment filled with sponge rubber or other fiber material or need not be a com-

partment at all but rather a simple sheet of material or the like into which a mattress e.g., mattress 38 can be placed. Shoulder 46, too, need not be an inflatable compartment but may be a compartment filled with other materials. Further, shoulder 46 need not be formed as shown, it may take the form of a weighted means either continuous or in discrete pieces disposed on wall portion 14 outside of inner member 40 or beyond outer member 42. Such a shoulder 46' containing a weight element 45 is shown in FIG. 2A extending about the outside of inner member 40. Alternatively, shoulder 46'' containing element 45' may extend about outer member 42; and base portion 14 may be a simple sheet 36.

Safety belt 28 may be attached to the inside of outer member 42 proximate loops 30 or may be directly attached to outer member 42 to increase the security of the infant held within safety belt 28. Without this interconnection, safety belt 28 would be free floating and independent of the automobile safety seat belt which engages with loops 30. Loops 30 on outer member 42 may be interconnected with inner wall 44 by means of straps 56 and 58 in order to more firmly stabilize upper member 18 which is otherwise free to move or float within crib 10. The inflatable parts of crib 10 may be made of any air impervious material and fastened together by seams and seals which are well known in the art. Preferably the material will be non-toxic, non-inflammable, puncture resistant, washable, non-allergenic and have numerous other qualities compatible with use with an infant.

In use crib 10, FIG. 3, may be placed on a floor, bed or table or may be installed on a car seat 60 by placing wall 22 which contains loops 30 against the back 62 of the seat and running the auto safety belt 64 through loops 30 to securely hold crib 10 in place.

Other embodiments will occur to those skilled in the art and are within the following claims:

What is claimed is:

1. An inflatable crib comprising an inflatable base portion having an upper impervious member generally defining a mattress area and a lower impervious member spaced from said upper member when said crib is inflated and extending longitudinally and laterally beyond said mattress area, and an inflatable wall portion attached to said base portion and having an inner impervious member connected to and rising from said upper member at the periphery of said mattress area, an outer impervious member spaced from said inner member when said crib is inflated and connected to and rising from said lower member, and rising to a predetermined distance below said inner member, and an inflatable overhanging shoulder member attached to said inner and outer members and extending outwardly from each side of said mattress area and including a first section extending from said inner member outwardly beyond said outer member, a second section extending from the outer end of said first section, downwardly at least as far as the top of said outer member and a third section extending inwardly from the lower

end of said second section to the top of said outer member, and valve means for permitting inflation and deflation of said base and wall portions.

2. The inflatable crib of claim 1 in which the connection between said inner member and upper member forms a concave junction at the edge of said mattress area.

3. The inflatable crib of claim 1 further including means mounted on said outer member for attaching said crib to a safety seat belt.

4. An inflatable crib comprising a base portion generally defining a mattress area, and an inflatable wall portion attached to said base portion and having an inner impervious member connected to and rising from said base portion at the periphery of said mattress area, and an outer impervious member spaced from said inner member when said crib is inflated, an overhanging shoulder member attached to said wall portion and extending outwardly from each side of said mattress area beyond said inner member for exerting a force on said wall portion downwardly and beyond said mattress area upon deflation of said wall portion.

5. The inflatable crib of claim 4 in which said base portion is inflatable and includes an upper impervious member and a lower impervious member spaced from said upper impervious member when said base portion is inflated.

6. The inflatable crib of claim 5 in which said upper member is generally coextensive with said mattress area and said lower member extends longitudinally and laterally beyond said mattress area.

7. The inflatable crib of claim 4 in which said shoulder member is inflatable.

8. The inflatable crib of claim 7 in which each of said base portion, wall portion and shoulder member is inflatable.

9. The inflatable crib of claim 8 in which each of said base portion, wall portion and shoulder member is a separately inflatable compartment.

10. The inflatable crib of claim 4 in which the connection between said inner member and upper member forms a concave junction at the edge of said mattress area.

11. The inflatable crib of claim 4 further including means, mounted on said outer member, for attaching said crib to a safety seat belt.

12. The inflatable crib of claim 4 further including a safety seat belt extending laterally across said mattress area for holding an occupant in place in the crib.

13. The inflatable crib of claim 11 further including a safety seat belt extending laterally across said mattress area and connected to said means for attaching said crib to a safety seat belt.

14. The inflatable crib of claim 4 in which said shoulder member includes weighted means for preventing collapse of said wall portion onto said mattress area.

15. The inflatable crib of claim 4 in which said shoulder member extends beyond said outer member.

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