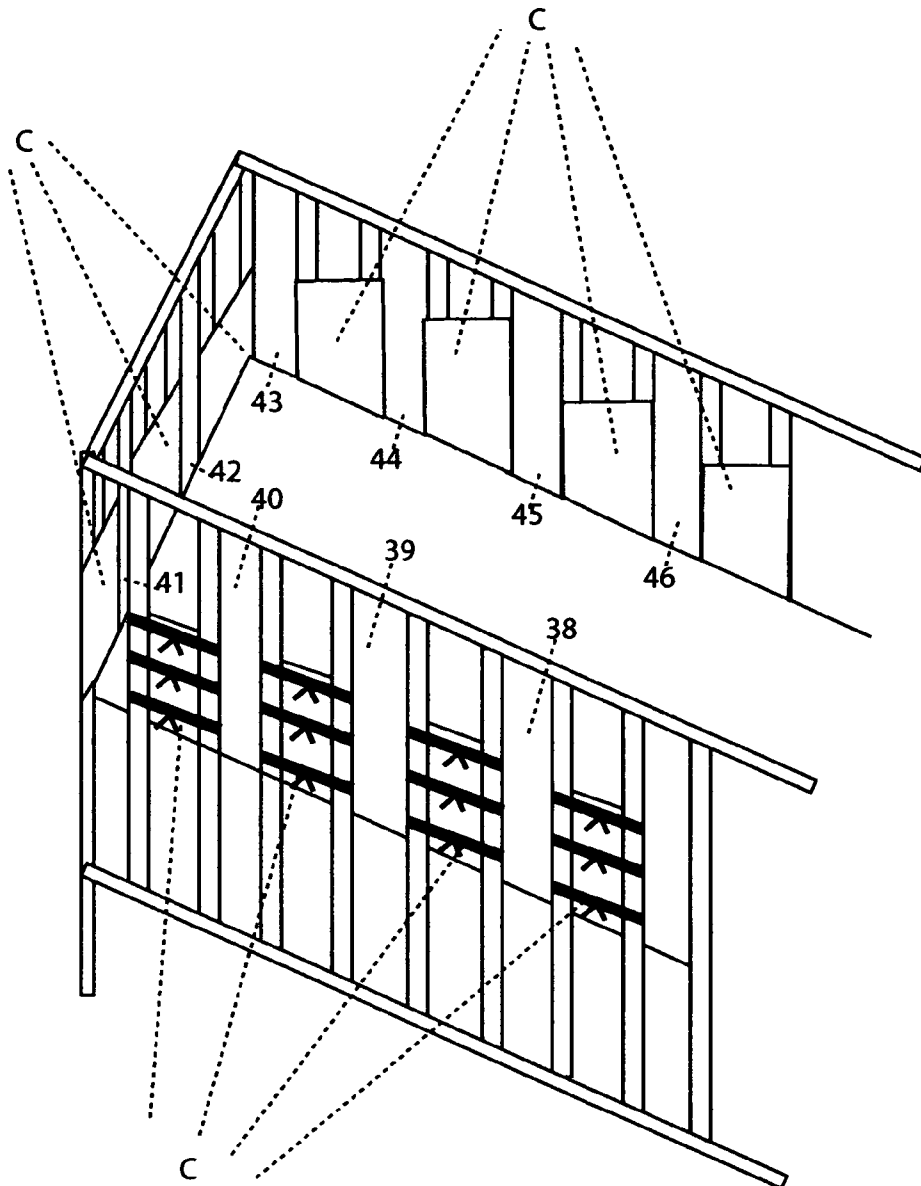


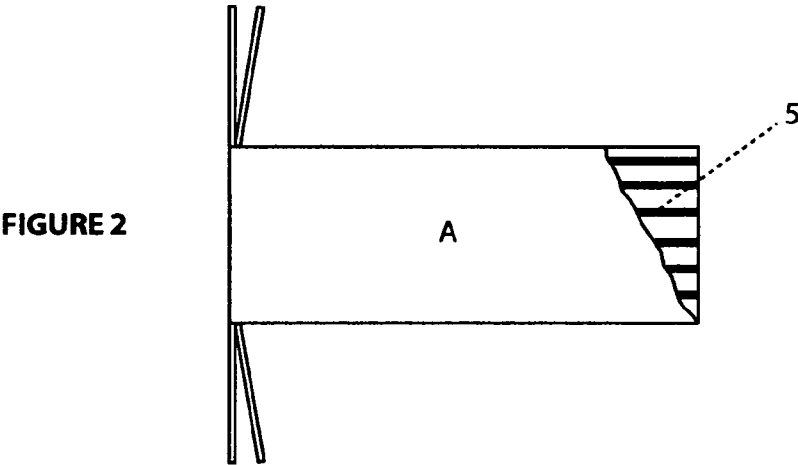
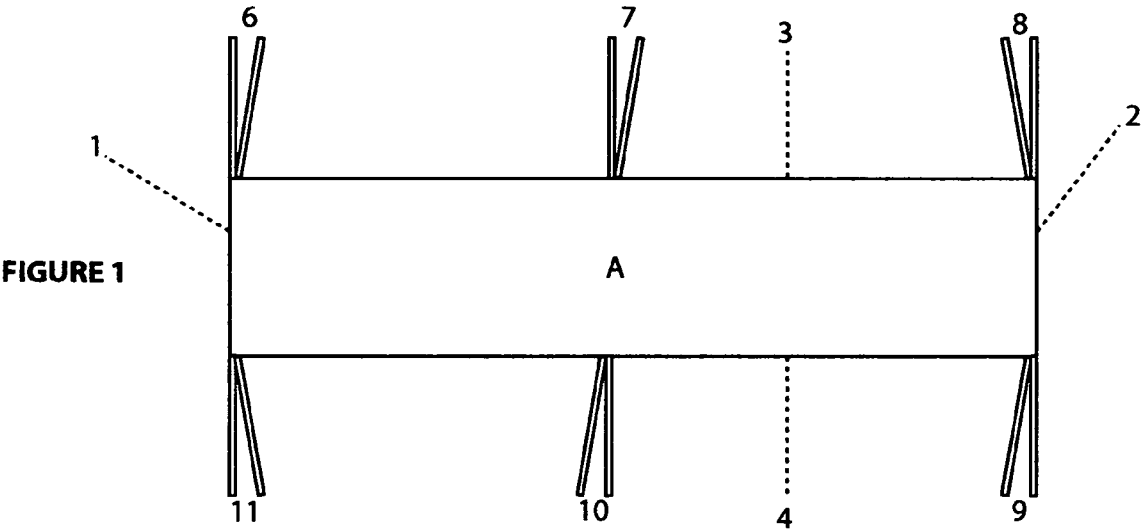


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(19) **United States**(12) **Patent Application Publication**
Bloom(10) **Pub. No.: US 2012/0291201 A1**(43) **Pub. Date: Nov. 22, 2012**(54) **CRIB SLAT BUMPER SYSTEM**(57) **ABSTRACT**(76) Inventor: **Sara A. Bloom**, Houston, TX (US)(21) Appl. No.: **13/111,125**(22) Filed: **May 19, 2011****Publication Classification**(51) **Int. Cl.**
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A protective bumper pad system for installation on a crib having a plurality of vertical slats spaced a distance apart in parallel laterally spaced relation includes a plurality of generally rectangular soft flexible bumper pads, each having top and bottom ends, two laterally opposed longitudinal sides, a width sufficient to extend between two adjacent laterally spaced apart vertical slats of the crib, and ribbon tie members having one end secured to a respective longitudinal side of the pad, and having a free end extending a distance laterally outward therefrom to extend over the two adjacent laterally spaced apart slats of the crib and be tied together. The pads are removably secured between alternating adjacent pairs of the slats to span and occupy a space between the pairs of the slats leaving an unobstructed open space between adjacent pairs of the slats through which air can flow.





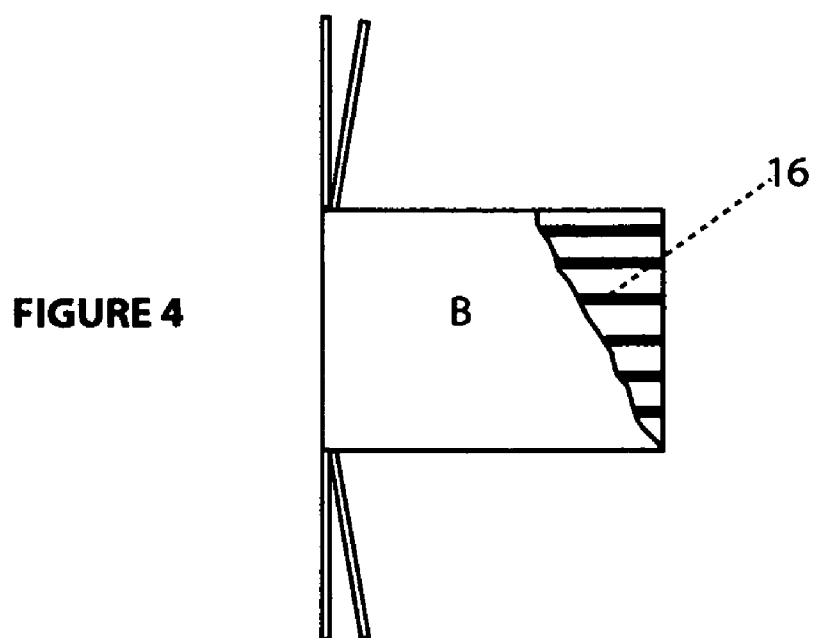
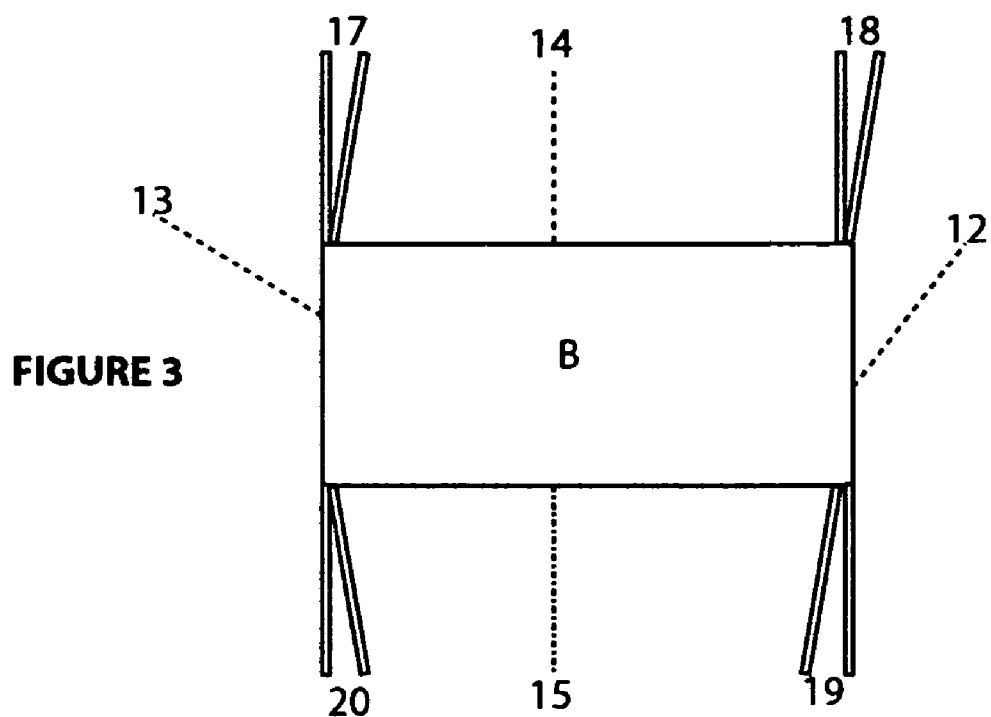


FIGURE 5

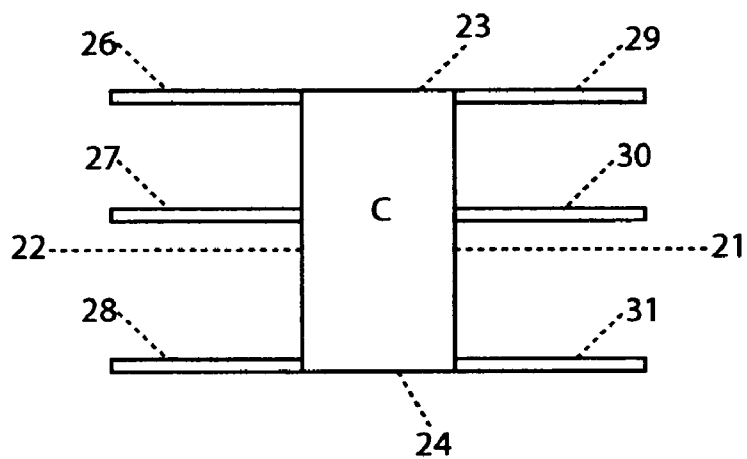


FIGURE 6

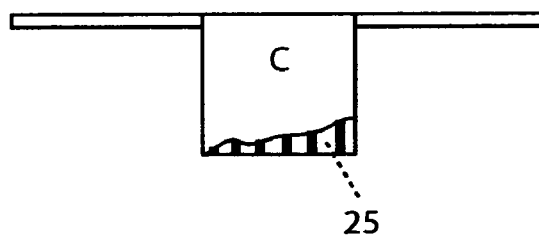


FIGURE 7

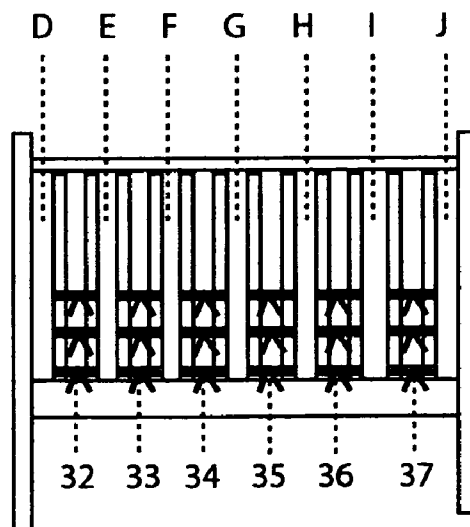
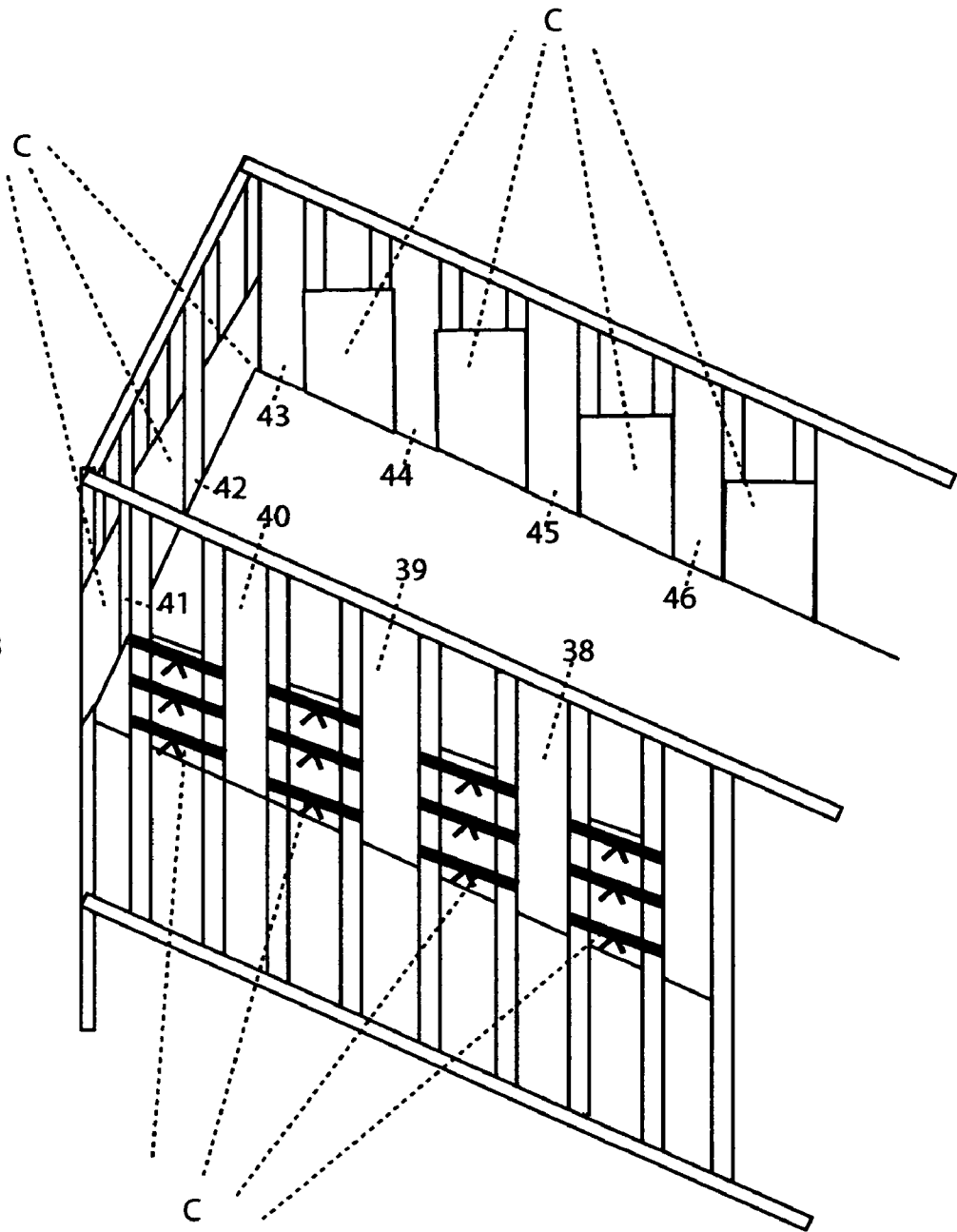


FIGURE 8



CRIB SLAT BUMPER SYSTEM

FIELD OF INVENTION

[0001] The present invention relates to the creation of a crib bumper system that provides a safe sleep environment for both infants and toddlers. This bumper system includes a four-piece bumper as well as crib slat bumpers. It is specially designed to take into consideration (1) the age of the baby sleeping in the crib; (2) airflow into the crib; and (3) protection of limb entanglement and bruising.

BRIEF SUMMARY OF THE INVENTION

[0002] The preferred embodiments of the present invention include (i) a four-piece standard bumper; and (ii) individual crib slat bumpers. The four-piece bumper is comprised of two (2) long, rectangular shaped, thinly padded objects standing 10-12 inches high, which have ties at the ends, to be used on the long sides of the inside of a crib, and two (2) shorter, rectangular shaped, thinly padded objects standing 10-12 inches high, which also have ties at the ends to be used on the shorter sides of the inside of a crib. The crib slat bumpers comprise a rectangular shaped, thinly padded object standing 10-12 inches high with three (3) evenly spaced ties on each vertical end of the crib slat bumper to be used to cover every two (2) consecutive slats on the inside of a crib. The four-piece standard bumper and the crib slat bumpers are to be used together to create a bumper system that is safe for an infant from birth up until they are ready to transition out of the crib.

[0003] As a result of the dangers associated with the current standard bumper regarding the lack of air flow and Sudden Infant Death Syndrome (SIDS) for infants under the age of one, and the dangers of limb entanglement when a bumper is not used, an alternative design was necessary in order to simultaneously protect a baby from SIDS and limb entanglement, while taking into account the age of the baby sleeping in the crib, as different safety measures are necessary for infants under the age of one versus toddlers over the age of one. The present invention has created a system that is interchangeable depending on the age of the baby sleeping in the crib. As a result, a caretaker does not have to waste money and buy different bumpers to protect their baby.

[0004] It is an object of this invention to provide an aesthetically pleasing bumper system that is safe for a newborn infant through their toddler years. It is a further object of this invention to provide a bumper system that will reduce the risk of SIDS by increasing air flow into a crib. It is a further object of this invention to decrease the re-breathing of carbon dioxide by an infant. It is a further object of this invention to provide crib slat bumpers that cover every two (2) consecutive crib slats at a time to further reduce the risk of limb entanglement. It is a further object of the invention to provide a bumper system that allows for air flow into the crib while still providing maximum coverage to prevent limb entanglement. It is a further object of this invention to provide ties on the crib slat bumpers to ensure the slat bumpers fit tightly around all different types and widths of crib slats.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. 1 is an illustrative view of the outer side of the long, rectangular bumper pad;

[0006] FIG. 2 is a cross-sectional view of the long, rectangular bumper pad;

[0007] FIG. 3 is an illustrative view of the outer side of the shorter, rectangular bumper pad;

[0008] FIG. 4 is a cross-sectional view of the shorter, rectangular bumper pad;

[0009] FIG. 5 is an illustrative view of the outer side of the crib slat bumper;

[0010] FIG. 6 is a cross-sectional view of the crib slat bumper;

[0011] FIG. 7 is an illustrative outer view of the bumper system configured for an infant under the age of one (1), showing the crib slat bumpers on the front of a crib; and

[0012] FIG. 8 is an illustrative inside view of the bumper system configured for an infant under the age of one (1), showing the inside of the crib.

DETAILED DESCRIPTION OF THE INVENTION

[0013] The preferred embodiments of the present invention include (i) a four-piece standard bumper; and (ii) a number of crib slat bumpers. Turning to FIG. 1, a long, rectangular pad A is shown with two (2) equal vertical sides 1 and 2 and two (2) equal horizontal sides 3 and 4. The depth 5 of the pad is minimal (see FIG. 2), but the padding used is firm enough to allow the pad to stand on one of its long sides. The entire rectangular pad shall be covered with a light fabric that is soft and breathable. Ties 6, 7, 8, 9, 10 and 11 are to be used to secure the pad to the inside of a crib.

[0014] Turning to FIG. 3, a shorter, rectangular pad B is shown with two (2) equal vertical sides 12 and 13 and two (2) equal horizontal sides 14 and 15. The depth 16 of the pad is minimal (see FIG. 4), but the padding used is firm enough to allow the pad to stand on one of its long sides. The entire rectangular pad shall be covered with a light fabric that is soft and breathable. Ties 17, 18, 19 and 20 are to be used to secure the pad to the inside of a crib.

[0015] Turning to FIG. 5, a smaller, rectangular pad C is shown with two (2) equal vertical sides 21 and 22 and two (2) equal horizontal sides 23 and 24. The depth 25 of the pad is minimal (see FIG. 6), but the padding used is firm enough to allow the pad to stand on one its short sides. The entire rectangular pad shall be covered with a light fabric that is soft and breathable. Ties 26, 27, 28, 29, 30 and 31 are to be used to secure the pad to every two (2) consecutive crib slats on a crib. This can generally be done by taking the opposing side ribbons, say 26 and 29, and tying them in a knot across two (2) consecutive crib slats on a crib.

[0016] To view one way the bumper system would look configured for an infant under the age of one, see FIG. 7, which shows six (6) rectangular pad C's, 32, 33, 34, 35, 36 and 37 covering every two (2) consecutive crib slats on a long side of the crib. Note the soft pad is on the inside of the crib and the ties wrap around every two (2) consecutive crib slats and tie on the outside of the crib. This allows for unobstructed air to travel into the crib through each open space D, E, F, G, H, I and J. The remaining three (3) sides of the crib would have the traditional rectangular bumper pads A and B. By offering traditional bumper coverage protection on the remaining three (3) sides of the crib, problematic issues such as limb entanglement and bruising can be avoided. Another way to use the bumper system is to repeat the same configuration of rectangular pad C's, as discussed above, on all sides of the crib. This provides maximum airflow into the crib and can be used with an infant that would benefit from maximum airflow.

[0017] For another view of the inside of such crib with the bumper system configured for maximum airflow, see FIG. 8, which shows numerous rectangular pad C's across all four (4) sides of a crib. This provides maximum airflow into a crib through the open spaces 38, 39, 40, 41, 42, 43, 44, 45 and 46.

[0018] Once an infant is past one year, and thus no longer susceptible to the risk of SIDS, the (2) long, rectangular pad A's and (2) shorter, rectangular Pad B's can replace the numerous pad C's configured around a crib. This configuration provides maximum coverage and protection from limb entanglement and bruising of a toddler.

[0019] As shown in FIG. 8, the present invention also contemplates just the use of the smaller, rectangular pad C's over every two crib Slat Bumpers within the entire crib for use with an infant from the age of 0 up to three (3) years.

[0020] Prior art has made attempts to create a bumper that would allow for air flow into a crib, however, the prior art fails in three manners. First, all prior art involving any sort of slat bumper contemplates the coverage of only one single crib slat at a time. With cribs having a potential of 36 individual crib slats, this leaves 40 open spaces between such cribs slats for an infant to get a limb entangled. Thus, it is almost a given that an infant will stick their arm, hand, foot or leg out of one of the 40 spaces. The present invention reduces the amount of open spaces from 40 to less than 20 (a 50% reduction) with the use of just the rectangular pad C's all around the crib, while still allowing for airflow into the crib. This dramatically reduces an infant's chance of serious injury through limb entanglement. Secondly, prior art fails to contemplate the use of ties, and instead focuses on metal fasteners or zippers. Ties that are 9 inches or less have been shown by the American Society of Testing and Materials to be safe on a bumper, while on the other hand, metal fasteners and zippers have a risk of containing levels of lead and other chemicals which at certain levels could be harmful to an infant, especially when an infant is spending 12-16 hours of the day in the crib. In addition, zips and fasteners have a risk of falling off and becoming choking hazards. Further, as every crib on the market has differing sizes of crib slats, the only way to ensure that a crib slat bumper is secure and tight against a crib slat is to be able to adjust the bumper depending on the size of the slat. Ties provide for this flexibility. Finally, prior art fails to take into consideration that after the age of one, an infant is no longer susceptible to the threat of SIDS and air flow into the crib is no longer an issue. However, a baby may stay in its crib well into his or her toddler years. This is when a full coverage standard bumper is essential as a toddler will be rolling around at night and bumping their head into the crib slats and sticking legs, arms and feet out of the crib slats. The present invention contemplates this by including full coverage bumper pieces to replace the crib slat bumpers when appropriate.

1-6. (canceled)

7. A protective bumper pad for installation on a crib having a plurality of vertical slats spaced a distance apart in parallel laterally spaced relation, comprising:

- a generally rectangular bumper pad formed of a soft flexible fabric outer cover enclosing a padding material, said bumper pad having vertically opposed top and bottom ends, two laterally opposed vertical longitudinal sides of equal length, and a width sufficient to extend between two adjacent laterally spaced apart vertical slats of the crib so as to span the space therebetween; and
- at least one pair of ribbon tie members each having one end secured to a respective one of said laterally opposed

vertical longitudinal sides of said bumper pad, and having a free end extending a distance laterally outward therefrom a sufficient distance to extend over the two adjacent laterally spaced apart vertical slats of the crib, the free ends of said pair of ribbon tie members being configured to be tied together in a manner permitting adjustment of a separation distance between said longitudinal sides, said at least one pair of ribbon tie members including a first pair of said ribbon tie members with each said ribbon tie member having one end secured to said bumper pad at an intersection of said top end and a respective one of said longitudinal sides of said bumper pad;

wherein said generally rectangular bumper pad is adapted to be removably secured between two adjacent laterally spaced apart vertical slats of the crib by said at least one pair of ribbon tie members so as to span and occupy the space between the two adjacent laterally spaced apart vertical slats of the crib.

8. The protective bumper pad according to claim 7, wherein said at least one pair of ribbon tie members comprises a second pair of said ribbon tie members with each said ribbon tie member having one end secured to said bumper pad at an intersection of said bottom end and a respective one of said longitudinal sides of said bumper pad.

9. The protective bumper pad according to claim 8, further comprising:

- a third pair of said ribbon tie members each having one end secured to a respective one of said laterally opposed vertical longitudinal sides of said bumper pad intermediate said top and bottom ends.

10. The protective bumper pad according to claim 7, wherein said bumper pad has a length in the range of from about 10 inches to about 14 inches, and a width in the range of from about 5 inches to about 6 inches.

11.-14. (canceled)

15. A method for padding a crib having a plurality of vertical slats spaced a distance apart in parallel laterally spaced relation while allowing airflow into the crib, comprising the steps of:

- providing a plurality of generally rectangular bumper pads each formed of a soft flexible fabric outer cover enclosing a padding material, each said bumper pad having vertically opposed top and bottom ends, two laterally opposed vertical longitudinal sides, and a width sufficient to extend between two adjacent laterally spaced apart vertical slats of the crib so as to span the space therebetween;

each said bumper pad having at least one pair of ribbon tie members each having one end secured to a respective one of said laterally opposed vertical longitudinal sides of each said bumper pad, and having a free end extending a distance laterally outward therefrom;

placing each of said generally rectangular bumper pads between alternating adjacent pairs of the laterally spaced apart vertical slats of the crib to leave an unobstructed open space between adjacent pairs of slats through which air can flow;

extending said free ends of said ribbon tie members over the immediately adjacent pairs of the laterally spaced apart vertical slats of the crib; and

tying the ribbon tie members together at a location along a length of the tie members effective to pull said longitudinal sides toward each other to create and maintain

tension on the bumper pad such that each pad spans and occupies a space between alternating pairs of the slats regardless of a lateral spacing between the slats.

16. The protective bumper pad according to claim **7**, wherein said at least one pair of ribbon tie members is characterized by a pair of ribbon tie members being connected to said bumper pad at a single location along one of said longitudinal sides of said bumper pad.

17. The protective bumper pad according to claim **7**, wherein said least one pair of ribbon tie members comprises a second pair of said ribbon tie members with each said ribbon tie member having one end secured to said bumper pad at an intersection of said bottom end and a respective one of said longitudinal sides of said bumper pad, and a third pair of said ribbon tie members each having one end secured to a respective one of said laterally opposed vertical longitudinal sides of said bumper pad intermediate said top and bottom ends;

wherein said at least one pair of ribbon tie members is characterized by a pair of ribbon tie members being connected to said bumper pad at a single location along one of said longitudinal sides of said bumper pad; and wherein said bumper pad has a length in the range of from about 10 inches to about 14 inches, and a width in the range of from about 5 inches to about 6 inches.

18. A system comprising:

a crib having a plurality of vertical slats spaced a distance apart in substantially parallel and laterally spaced relation to each other;

a protective bumper pad removably mounted on a pair of adjacent said slats of the crib, the bumper pad comprising:

a generally rectangular bumper pad formed of a soft flexible fabric outer cover enclosing a padding material, the bumper pad having vertically opposed top and bottom ends, two laterally opposed longitudinal sides, and a width between the opposed longitudinal sides being sufficient to extend between and at least partially cover each of a pair of adjacent laterally spaced apart vertical slats of the crib so as to span the space between the spaced apart vertical slats; and

at least one pair of ribbon tie members, each ribbon tie member having a free end and an opposite end secured to a respective one of the opposed longitudinal sides of the bumper pad, at least one said ribbon tie member extending from one said longitudinal side and at least one said ribbon tie member extending from an opposite said longitudinal side, said ribbon tie members extending toward each other from said opposed longitudinal sides and being tied together by a knot between the opposed longitudinal sides;

wherein a location of the knot on the ribbon tie members is adjustable to adjust a distance of separation between the opposed longitudinal sides to create and maintain tension on the bumper pad for slats regardless of a lateral spacing between the slats.

19. The system of claim **18** comprising a plurality of bumper pads, each bumper pad being attached to a respective pair of adjacent laterally spaced apart vertical slats, with spaces between alternate pairs of slats being free of a said bumper.

* * * * *