

May 26, 1970

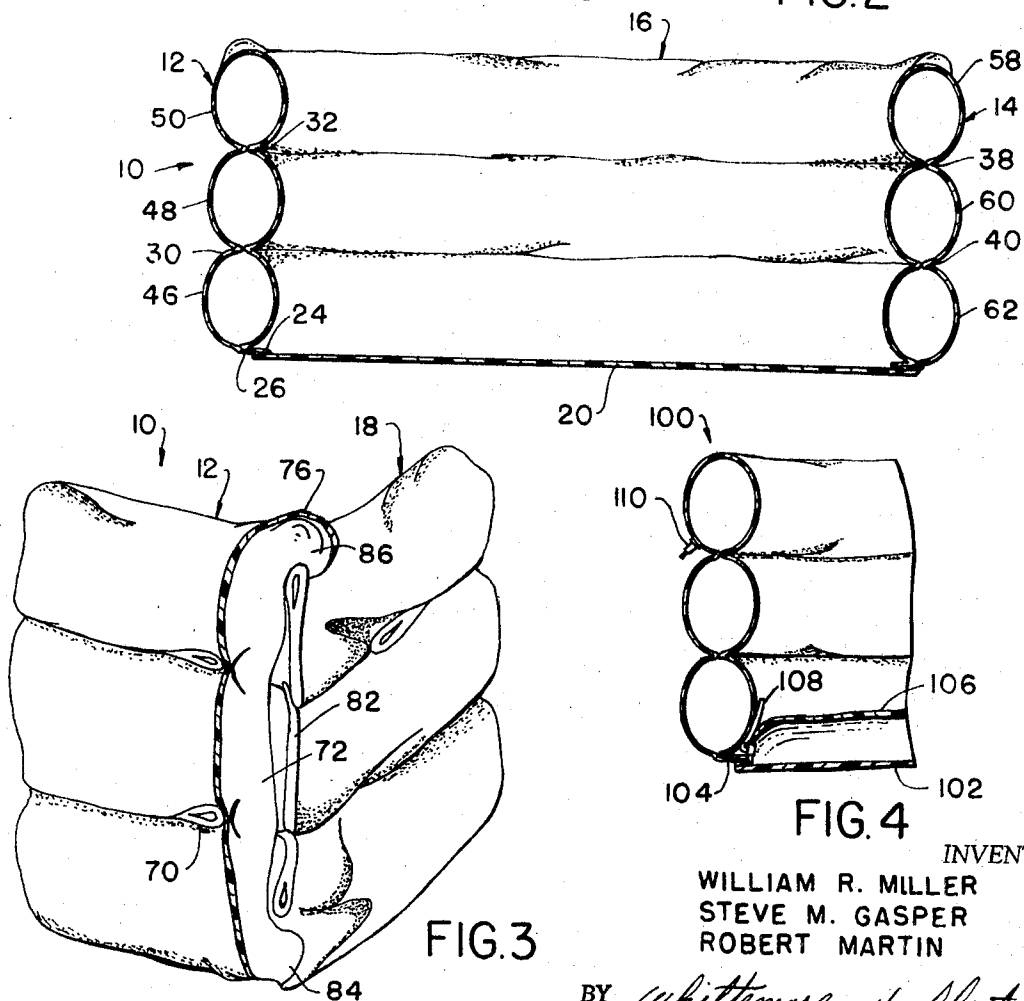
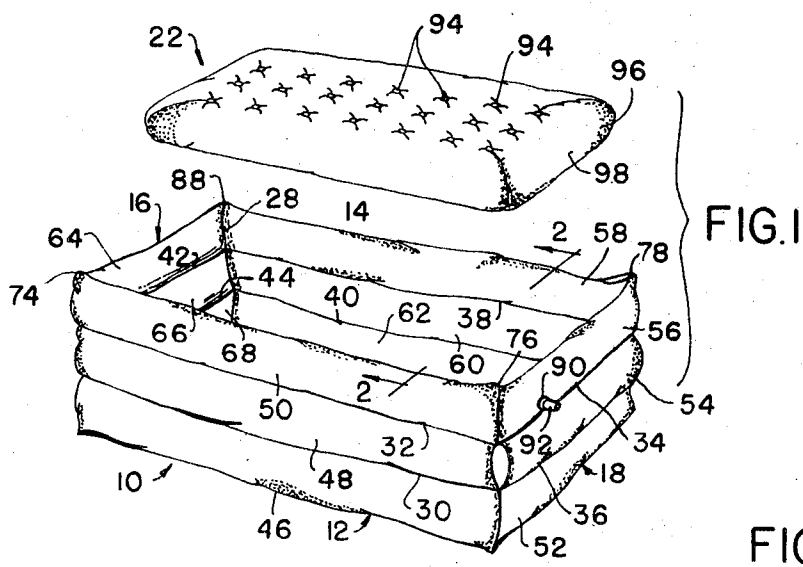
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3,513,489

BASSINETTE

Filed May 20, 1968

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

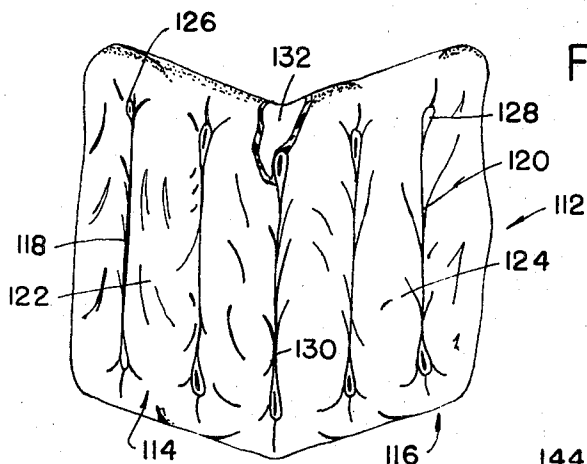


FIG. 5

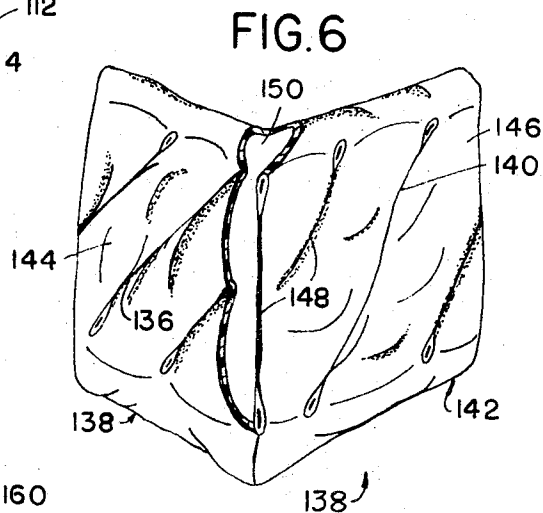


FIG. 6

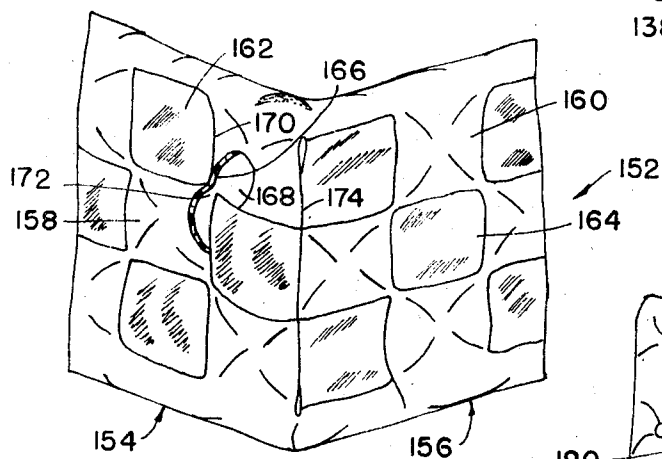


FIG. 7

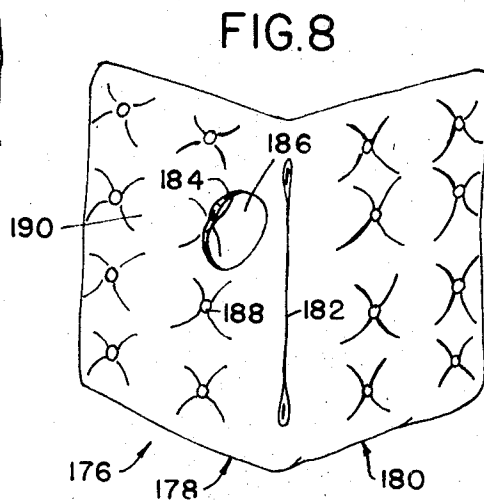


FIG. 8

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3,513,489

BASSINETTE

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Filed May 20, 1968, Ser. No. 730,573

Int. Cl. A47c 27/08; A47d 9/00

U.S. Cl. 5—98

9 Claims

ABSTRACT OF THE DISCLOSURE

A bassinette is provided having a flexible bottom wall and air-inflatable side and end walls. The side and end walls are heat sealed to the bottom wall and are formed of flexible plastic material. The side and end walls are double-layer structure which are heat sealed at various spaced apart locations to form separate air-retaining compartments. This results in a rib structure, making the walls self-supporting when inflated. All of the walls and the junctures thereof are fluid impervious so that the bassinette may be used to retain water for bathing a child. A vertical seal is provided at each corner of the bassinette. The side and end walls are made of a single sheet of plastic material. Therefore, one corner juncture comprises free marginal edges of the sheet and the seal at this juncture extends all the way from the top to the bottom to make the juncture fluid impervious. However, vertical seals at the other three corners terminate short of the top and bottom to thereby provide air communication between the adjoining walls. The heat seals in the side and end walls terminate short of the corners to provide air communication between the ribs. A single valve element is provided in one of the walls to inflate or deflate the entire bassinette.

BACKGROUND OF THE INVENTION

Conventionally, bassinettes have been constructed of a rigid material, such as wood, metal or plastic, for use solely as a cradle. Such devices have, of course, adequately served the purpose as will be attested to by the present world population. However, conventional bassinettes have suffered from the disadvantage of not being collapsible for storage purposes when not in use, or when they are to be transported along with a baby, for example, on a picnic outing or a visit to the house of a friend. Additionally, such bassinettes have served only a single purpose, that is, as a cradle.

The present invention provides a bassinette which is air-inflatable and may be deflated to a compact size for storage or transportation. Additionally, the bassinette is fluid-tight and non-absorbent and may therefore be used to bathe a baby.

SUMMARY OF THE INVENTION

The bassinette comprises a bottom wall having air-inflatable side and end walls formed of flexible material secured to the marginal edges thereof. The side and end walls each are double-layer structures. Each side and end wall comprises a plurality of separate air-retaining compartments. These compartments form a rib structure making the walls self-supporting when inflated. All of said walls and the junctures thereof are fluid impervious.

The side and end walls are formed of a single sheet of heat sealable plastic material overturned upon itself to form the double layer. Free marginal edges of the sheet appear at the bottom of the walls and a continuous heat seal is applied thereto to join these walls with the bottom wall in a fluid-tight connection. Free marginal

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edges also appear at one corner juncture and a seal extends from the top to the bottom of the bassinette to make this juncture fluid-tight. The air compartments are formed by heat sealing the side and end walls at various spaced apart locations. These seals terminate short of the corner junctures to provide vertical communication between the compartments. A vertical seal is provided at each corner other than the one previously mentioned. These vertical seals terminate short of the top and bottom to provide fluid communication between the adjoining walls. A single valve is provided for inflating or deflating the entire structure.

An air mattress is provided for reception within the bassinette. The mattress may be a separable unit of may be formed integrally with the bottom wall. If formed integrally with the bottom wall, a separate valve is provided for inflation and deflation thereof so that the side-walls may be inflated without inflating the mattress structure.

In the drawings:

FIG. 1 is a view in perspective of one embodiment of a bassinette in accordance with the present invention, illustrating a separable mattress unit;

FIG. 2 is a sectional view taken substantially along the line 2—2 of FIG. 1, looking in the direction of the arrows;

FIG. 3 is a view in perspective of one corner of the bassinette of FIG. 1, with portions broken away to illustrate the air passages provided for inflation of the bassinette;

FIG. 4 is a partial sectional view illustrating another embodiment of the invention in which a mattress element is formed integrally with the bottom wall;

FIG. 5 is a view in perspective of one corner of a bassinette illustrating vertical air compartments forming another embodiment of the invention;

FIG. 6 is a view in perspective of one corner of a bassinette illustrating diagonal air compartments forming another embodiment of the invention;

FIG. 7 is a view in perspective of one corner of a bassinette illustrating a checkerboard air compartment structure with alternate compartments being inflated and deflated forming another embodiment of the invention; and

FIG. 8 is a view in perspective of one corner of a bassinette illustrating a quilt-like wall structure forming another embodiment of the invention.

Referring to FIGS. 1-3 of the drawings, it will be noted that the bassinette 10 has a generally rectangular shape and comprises sidewalls 12, 14, end walls 16, 18, and a bottom wall 20. An inflatable mattress 22 is provided for insertion into the bassinette 10.

The entire structure is fabricated of a flexible plastic material, such as a vinyl plastic. The side and end walls 12, 14, 16, 18 are formed of a single sheet of plastic into a double-walled structure which is inflatable with air to erect the unit. The lower marginal edges 24, 26 of the sheet of plastic are overlapped, as will be noted in FIG. 2, and are heat sealed to the marginal edges of the bottom wall 20, the bottom wall comprising a single thickness of plastic. The remaining free marginal edges of the sheet of plastic are sealed at 28 from bottom to top at one corner 88 to thus make the entire unit air-tight.

The side and end walls are heat sealed along a pair of longitudinally extending, parallel spaced-apart seal lines 30, 32, 34, 36, 38, 40, 42, 44, to define three longitudinally extending inflated rib-like portions 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68. This rib structure provides rigidity for the walls so that they will remain in an undeformed upright position when inflated as illustrated in the figures. As will be noted in FIG. 3, each of these

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seals terminates in a rounded portion 70 short of the corners of the bassinette. The rounded termination points of the seals prevents tearing of the material. Termination of the seals short of the corners of the bassinette provides a vertical air passage 72, as will be seen in FIG. 3, for inflation and deflation of the bassinette.

A vertical seal is provided at each of the three corners 64, 76, 78. FIG. 3 is illustrative the seal at each corner. As will be noted, the seal 82 extends from a point adjacent to the bottom of the bassinette and terminates short of the top of the bassinette, thus providing a horizontal passage 84, 86 at both the top and the bottom of each of these corners between the side and end walls for the purpose of inflation and deflation of the bassinette. The seal 28 at the fourth corner 88 necessarily extends from the bottom to the top in order to make the unit air-tight. However, it is not necessary to have an air passage at this corner because the bassinette 10 is entirely inflated or deflated by passage of air around the corners 74, 76, 78. The provision of seals at the corners results in structural rigidity of the corners and provides a relatively sharply defined square corner as opposed to a rounded or bulged-out corner construction.

A valve 90 having an outwardly projecting stem 92 is provided in the upper rib 50 of the sidewall 12. The bassinette 10 may be inflated by manually blowing air through the valve stem 92 or by attaching an air pump or air cartridge thereto. The unit may be deflated for storage purposes by depressing the valve stem to release the air.

The mattress 22 is formed of a sheet of plastic material which is heat sealed in the shape of a rectangular pillow-like element. The top and bottom walls of the mattress are secured together by a plurality of weld buttons 94 to form a quilt-like structure. A valve 96 is provided in the end wall 98 for inflation and deflation of the mattress.

The bassinette 10 may be used without the mattress 22 for bathing a baby. It will be appreciated that the bassinette 10 is water-tight and non-absorbent. The mattress 22 may be placed in the bassinette and the bassinette then used for sleeping. The bassinette may, of course, be used without the mattress, the usual blankets being provided for the comfort of a baby.

The material of which the bassinette is constructed is relatively tough and resistant to puncture. However, should the side walls of the bassinette be punctured, they may be repaired with conventional repair patches suitable for repairing pinholes, small rips and tears, punctures and the like.

FIG. 4 illustrates a modified form of the invention. The bassinette 100 has a side and end wall construction substantially identical with that described in connection with the bassinette 10. However, an inflatable mattress is provided integrally with the bottom wall. As will be noted, the bottom wall comprises a first layer 102 of plastic material which is heat sealed to the flange portion 104 of the upstanding wall structure. A second layer 106 of plastic material is also heat sealed to the flange 104. The layer 106 is larger than the area between the side walls of the bassinette so that it may be deformed upwardly by air injected between the layers 102, 106, through a valve 108. When air is injected into the space between layers 102, 106, as illustrated in FIG. 4, the layer 106 rises and an air cushion is provided between the layers to thus form a mattress structure for a child's comfort. It will be noted that a separate valve 110 is provided for the upstanding wall structure. This permits the sidewalls of the bassinette to be erected without inflating the mattress structure. This may be desirable, for example, when the bassinette is to be used to bathe a baby.

FIGS. 5 through 8 illustrate four different wall constructions which may be used within the scope of the invention. FIG. 5 illustrates one corner of a bassinette 112 showing one sidewall 114 and one end wall 116. The

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side and end walls of the bassinette 112 are formed of a single sheet of plastic folded into a double-walled structure which is inflatable with air to erect the unit in a manner similar to the structure described in connection with FIGS. 1-3.

In FIG. 5, the side and end walls 114, 116 are heat sealed along vertically extending, parallel spaced-apart seal lines 118, 120, to define vertically extending inflated rib-like portions 122, 124. This rib structure provides rigidity for the walls so that they will remain in an undeformed upright position when inflated as illustrated. The seals terminate in rounded portions 126, 128 to prevent tearing of the material.

A vertical seal 130 is provided at three of the corners and a seal is provided at the fourth corner which extends from the bottom to the top making the bassinette airtight as in FIGS. 1-3. The unit is thus inflatable by means of a single valve. Air passes up and down the ribs 122, 124 and horizontally at the top and bottom of the side and end walls 114, 116 by virtue of the fact that the seals 118, 120 terminate short of the top and bottom. Air passage means are provided at the corners as illustrated at 132 to thereby provide communication between the walls.

FIG. 6 illustrates a bassinette construction 134 similar to that of FIG. 5, excepting that the seals 136 in the side walls 138 and the seals 140 in the end walls 142 extend in spaced apart parallel fashion diagonally with respect to the top and bottom of the bassinette. Diagonal ribs 144, 146 are thus formed. Vertical seals 148 are provided at three corners to provide air passage means 150 between the side and end walls. Again, air flows through the ribs 144, 146 and horizontally of the walls by virtue of the air space provided at the top and bottom thereof resulting from the seals 136, 148 terminating short of the top and bottom. The fourth corner of the bassinette is again sealed from top to bottom thus making the unit airtight while permitting inflation thereof by means of a single valve.

FIG. 7 illustrates a bassinette 152 in which the side walls 154 and end walls 156 comprise alternate inflated squares 158, 160, and non-inflated squares 162, 164. Again, the side and end walls are formed of a single sheet of plastic material overturned upon itself to form a double wall construction. Referring to the sidewall 154, it will be noted that the outer layer 156 is sealed to the inner layer 168 by virtue of rectangular heat seals 170. The zone within the heat seals 170 comprises the non-inflated squares. The corners of the heat seals do not meet and thus provide air passage means 172 between the inflated squares 158. Thus, the squares 158, 160 communicate with each other to permit inflation of the entire unit by means of a single valve. The usual corner seals 174 are provided at three corners with the fourth corner completely sealed as has been previously described. Air passage means are provided at the top and bottom of the walls by virtue of the seals being displaced therefrom and from side wall to end wall by virtue of the corner seals terminating short of the top and bottom.

FIG. 8 illustrates a bassinette 176 having quilt-like construction similar to the air mattress 22 illustrated in FIG. 1. In FIG. 8, the sidewalls 178 and end walls 180 are constructed of a single sheet of plastic material as previously described. The usual corner seals 182 are provided terminating short of the top and bottom of the bassinette 176.

As illustrated in the broken-away portion of the side wall 178, the outer layer 184 and inner layer 186 are secured together by plastic buttons 188 which are welded therebetween. The buttons 188 are spaced vertically and horizontally to define pillow-like rib structures 190 therebetween. Air communicates between the space between buttons 188 to inflate the rib structures 190. Again, air passage means are provided between the side walls 178

and end walls 180 by virtue of the seals 182 terminating short of the top and bottom of the bassinette.

What we claim as our invention is:

1. A bassinette comprising a bottom wall having air inflatable side and end walls formed of flexible material, said side and end walls each being permanently secured along opposite vertical marginal edges to each other and along the bottom marginal edge to the marginal edges of the bottom wall, the side and end walls each being double-layer structures, each side and end wall comprising a plurality of air-retaining compartments forming a rib structure making the walls self-supporting when inflated, said air-retaining compartments being formed by sealing the layers defining the side and end walls at vertically and horizontally spaced points, the spaced-apart seal points defining vertical and horizontal passageways for communication between the compartments, at least three of the adjoining side and end wall junctures being sealed along a vertically extending line, said vertically extending seals terminating short of the top and bottom of the walls to thereby provide communication between adjoining walls, and single valve means for inflation and deflation thereof, all of said walls and the junctures thereof being fluid impervious.

2. A bassinette as defined in claim 1, and further characterized in that the air-retaining compartments are formed by sealing the layers defining the side and end walls along horizontal lines, said seals terminating short of the junctures of the side and end walls to define vertical passageways for communication between the horizontally extending compartments.

3. A bassinette as defined in claim 1, and further characterized in the provision of a removable air-inflatable mattress within the bassinette on the bottom wall.

4. A bassinette as defined in claim 1, and further characterized in that said bottom wall is a double layer structure forming an air-retaining compartment defining a mattress, and separate valve means for inflation and deflation thereof.

5. A bassinette as defined in claim 1, and further characterized in that the air-retaining compartments are formed by sealing the layers defining the side and end walls along vertical lines, said seals terminating short of the top and bottom of the side and end walls to define horizontal passageways for communication between the vertically extending compartments.

6. A bassinette as defined in claim 1, and further characterized in that the air-retaining compartments are formed by sealing the layers defining the side and end walls along diagonal lines, said seals terminating short of the top and bottom of the side and end walls to define horizontal passageways for communication between the diagonally extending compartments.

7. A bassinette as defined in claim 1, and further characterized in that the air-retaining compartments are formed by sealing the layers defining the side and end walls in a checkerboard fashion with alternate continuous perimetral seals defining therewith non-inflated zones,

adjacent perimetral seals defining therebetween inflatable zones, the corners of adjacent perimetral seals being spaced apart to provide air passageways between the inflatable zones.

8. A bassinette as defined in claim 7, and further characterized in that the vertically extending seals at three corners of the bassinette terminate short of the top and bottom of the walls, a vertically extending seal provided at the fourth corner of the bassinette and extending from the bottom wall of the bassinette to the top of the bassinette to form a fluid-tight juncture whereby the entire bassinette may be inflated by a single valve means.

9. A bassinette comprising a bottom wall having air-inflatable side and end walls formed of flexible heat-sealable material secured to the marginal edges thereof, the side and end walls being formed of a single sheet of material turned over on itself to form a double-layer structure, free marginal edges of the sheet of material being located at the bottom of the bassinette and heat-sealed to the bottom wall by means of a continuous seal making the juncture of the side and end walls and bottom wall fluid-tight, the remaining free marginal edges of the sheet being located at the juncture of a side and end wall and being heat-sealed together from the bottom wall to the top of the bassinette to form a fluid-tight juncture, each side and end wall comprising a plurality of separate horizontally extending air-retaining compartments forming a rib structure making the walls self-supporting when inflated, said horizontally extending compartments being formed by horizontally extending heat seals sealing said double layers, each of said heat seals terminating short of the ends of the respective wall to thereby provide a vertical passageway for fluid communication between the horizontally extending compartments, and a vertically extending heat seal at each of the three remaining side and end wall junctures, said vertical seals terminating short of the top and bottom to thereby provide fluid communication between adjoining side and end walls, and a valve means in one of said side and end walls for inflation and deflation thereof, all of said walls and the junctures thereof being fluid impervious.

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