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May

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[54] **WATER BED FRAME**

[76] Inventor: **Marvin I. May,** 960 Second St., Hermosa Beach, Calif. 90254

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[21] Appl. No.: **402,464**

[52] **U.S. Cl.** ..... **5/348 WB,** 5/320

[51] **Int. Cl.** **A47c 27/08**

[58] **Field of Search** 5/345, 348, 349, 350, 348 WB, 5/322, 320; 297/452; 219/217

[56] **References Cited**

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773,828	11/1904	Titus	5/348 WB
2,849,729	9/1958	Goodey et al.	5/345 R X
3,126,229	3/1964	Dickerson	297/452 UX
3,585,356	6/1971	Hall	5/348 WB

Primary Examiner—Paul R. Gilliam
Assistant Examiner—Andrew M. Calvert
Attorney, Agent, or Firm—Harris, Kern, Wallen & Tinsley

[57] **ABSTRACT**

A water bed frame comprising a generally vertical, mattress confining, side wall member engageable by an edge of a water mattress and having adjacent the top thereof an inwardly projecting horizontal lip engageable with the edge of the mattress to provide a pressure lock between such lip and the mattress edge, which pressure lock serves to hold conventional bed sheets, and blankets if desired, in place. The lipped wall member is preferably a sectional insert disposed between the mattress edge and an upstanding outer side wall of the frame. The insert is preferably sectional and cooperates with the outer side wall to define a rectangle in the case of a rectangular mattress, and a circle in the case of a circular mattress. The insert sections are provided adjacent the bottoms thereof with fillets engageable with the mattress edge adjacent its bottom.

5 Claims, 10 Drawing Figures

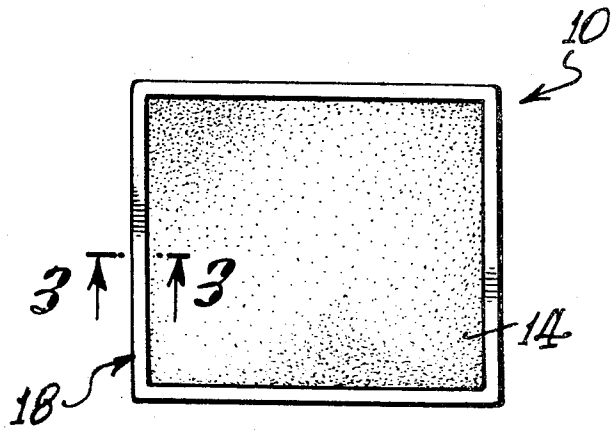


FIG. 1.

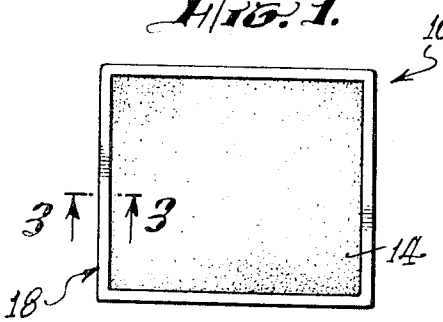


FIG. 2.

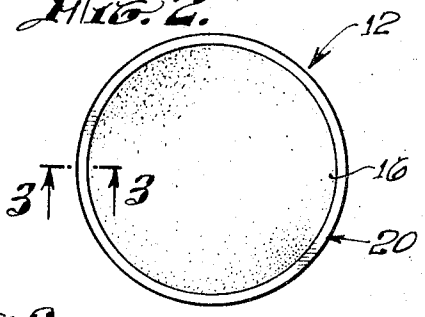


FIG. 8.

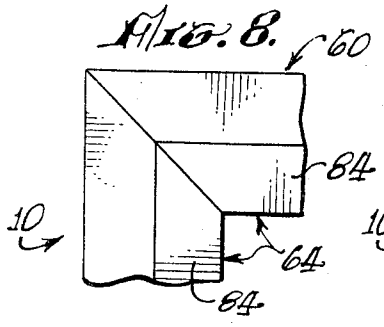


FIG. 9.

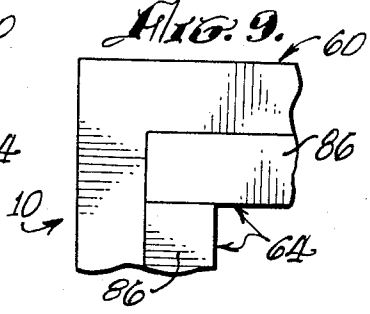


FIG. 10.

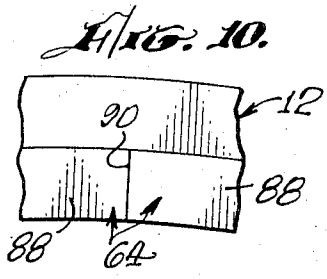


FIG. 3.

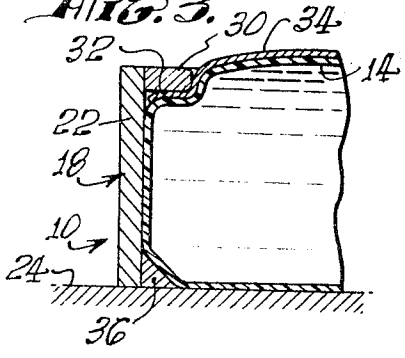


FIG. 4.

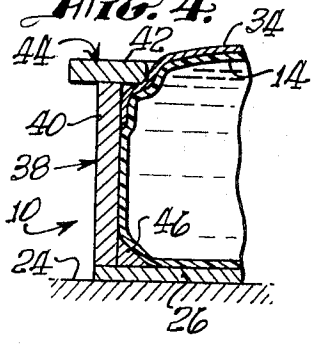


FIG. 5.

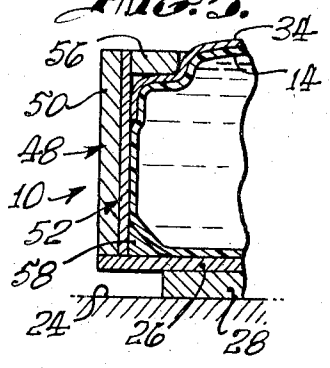


FIG. 6.

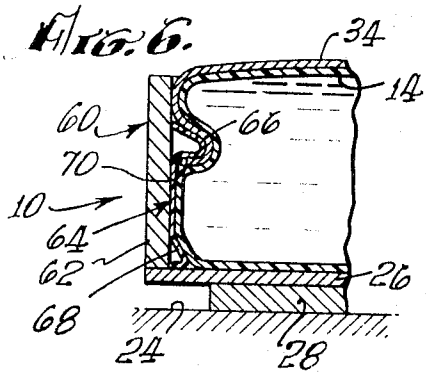
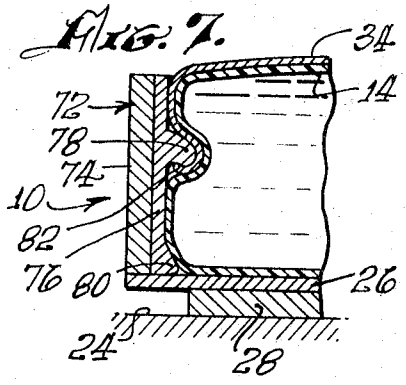


FIG. 7.



WATER BED FRAME

BACKGROUND OF INVENTION

The present invention relates in general to water beds and, more particularly, to a frame for confining a water mattress.

Prior art known to me which relates to water bed frames includes the following U.S. Pat. Nos.:

1,012,629	Greusel
1,051,560	Cowles
3,512,191	Wall et al.
3,585,356	Hall
3,689,949	Weinstein et al.

Prior water bed frames cannot utilize conventional, i.e., unfitted, bedding successfully because of the fact that the bedding works loose rapidly in response to the shifting of the water within the mattress caused by movements of a person or persons sitting or lying on the bed. The result is that the bedding, i.e., pad, sheets, blankets, and the like, quickly works loose around the edges of the mattress and becomes a disheveled mess.

Fitted bedding works satisfactorily with a conventional water bed frame, but is extremely difficult to install and remove because of the great weight of a water mattress.

The present invention relates to a water bed frame which overcomes the foregoing and other disadvantages of prior water bed frames.

OBJECTS AND SUMMARY OF INVENTION

With the foregoing background in mind, the primary object of the invention is to provide a water bed frame which does not require fitted bedding and which will securely lock the edges of unfitted bedding in place, irrespective of the movements of a person or persons utilizing the bed.

More particularly, the primary object of the invention is to provide a water bed frame having a side wall member which is engageable by the edge of the water mattress and which is so designed that it cooperates with the water in the mattress to provide a pressure lock for retaining the edges of unfitted bedding, the pressure lock increasing in intensity as the weight on the water mattress increases.

Still more particularly, the basic object of the invention is to provide a water bed frame which includes a generally vertical, mattress confining, side wall member engageable by an edge of a water mattress and provided adjacent the top thereof with an inwardly projecting horizontal lip engageable with the edge of the mattress to provide between such lip and the mattress edge a pressure lock for confining the edges of unfitted bedding. Viewed differently, the inwardly projecting horizontal lip provides therebeneath a cove which receives the edges of the pad, sheets, blankets, and the like, to retain them securely in place.

Preferably, the lipped wall member takes the form of an insert disposed between an upstanding outer side wall of the water bed frame and the mattress edge, which is another object of the invention. However, if desired, the lip mentioned can be formed directly on the outer side wall of the frame.

The invention is applicable to either rectangular or circular water mattresses. If the aforementioned lipped

insert is used, it is preferably sectional, being formed in four sections in the case of a rectangular mattress, and any convenient number of sections in the case of a circular mattress. With a rectangular mattress, the four sections may be mitered at the corners, or may simply overlap. In any case, the sections of the insert are disposed generally in end-to-end relation.

The invention is also applicable to a bottomless water bed frame which rests directly on the floor, or to a water bed frame having a bottom wall resting on the floor, or on a pedestal, legs, or the like.

Another important object is to provide the upstanding side wall member with a fillet adjacent the bottom thereof which is engageable by the mattress edge adjacent its bottom. This fillet eliminates any corner space around the bottom of the mattress edge and thus restricts the mattress in this area to prevent sloshing of the water in the mattress. Further, the fillet causes the weight of the mattress to act downwardly on the upstanding side wall member, thereby firmly retaining such member in place in the case of an insert or sectional insert.

The lipped and filleted wall member may be formed of any suitable material, such as molded or extruded plastic, wood, metal, or the like, the same being true in the case where the upstanding outer side wall of the water bed frame itself is the lipped and filleted member.

The foregoing objects, advantages, features and results of the present invention, together with various other objects, advantages, features and results thereof which will be evident to those skilled in the water bed art in the light of this disclosure, may be achieved with the exemplary embodiments of the invention illustrated in the accompanying drawing and described in detail hereinafter.

DESCRIPTION OF DRAWING

In the drawing:

FIG. **1** is a plan view of a rectangular water bed embodying the invention;

FIG. **2** is a plan view of a circular water bed embodying the same;

FIG. **3** is an enlarged, fragmentary sectional view, taken as indicated by the arrowed lines **3—3** of FIGS. **1** and **2**, and showing one embodiment of a water bed frame of the invention;

FIGS. **4, 5, 6** and **7** are views similar to FIG. **3**, but showing other embodiments of the invention;

FIGS. **8** and **9** are fragmentary plan views showing possible corner arrangements for sectional inserts of the invention in a rectangular water bed frame; and

FIG. **10** is a fragmentary plan view showing abutting insert sections in a circular water bed frame of the invention.

DESCRIPTION OF EXEMPLARY EMBODIMENTS OF INVENTION

FIGS. **1** and **2** of the drawing respectively show rectangular and circular water beds **10** and **12** including rectangular and circular water mattresses **14** and **16** disposed in rectangular and circular frames **18** and **20** of the invention. It will be understood, of course, that while the invention is shown as embodied in rectangular and circular water bed frames **18** and **20**, it may be embodied in frames of any desired configuration.

In vertical cross section, the water bed frames **18** and **20** are identical. Consequently, only the water bed frame **18** will be considered in detail.

Referring to FIG. **3** of the drawing, the water bed frame **18** is shown as comprising an upstanding outer side wall **22** which, of course, is rectangular, and which confines the water mattress **14.** In the particular construction illustrated, the frame **18** rests directly on a floor **24.** However, it may be provided with the bottom wall **26** shown in FIGS. **4, 5, 6** and **7,** and may also be provided with the pedestal **28** shown in FIGS. **5, 6** and **7.** It will be understood that various types of pedestals and/or legs, not shown, may be substituted for the particular pedestal **28** shown.

The upstanding side wall **22** of the water bed frame **18** is provided around its upper edge with an inwardly projecting horizontal lip **30** providing therebeneath a cove **32.** In use, the edge of the water mattress **14** fits into the cove **32,** and so does the edge of bedding **34** used in conjunction with the water mattress **14.** The bedding **34,** which is shown as a single layer for convenience, may comprise a pad, bottom and top sheets, one or more blankets, and the like.

With this construction, the pressure of the water in the mattress **14** holds the edge of the bedding **34** firmly in place within the cove **32.** More particularly, the water pressure creates a pressure lock forcing the edge of the bedding **34** against the inner edge and the under side of the lip **30** to hold the bedding firmly in place. This pressure lock is enhanced by the weight of a person or persons sitting or lying on the bed **10.** Actually, the greater the weight on the water mattress **14,** the more intense this pressure lock is, which is an important feature of the invention.

It will be understood, of course, that those portions of the bedding **34** comprising a pad and a bottom sheet are tucked between the water mattress **14** and the lip **30** along the sides, head and foot of the bed **10.** The top sheet and any blanket or blankets are, of course, tucked in only at the foot of the bed, or at the foot and along the sides of the bed, as desired.

Extending along the outer side wall **22** of the water bed frame **18,** and preferably secured thereto, is a fillet **36** which eliminates any corner space around the bottom of the mattress edge, and thus restricts the mattress in this area to prevent sloshing of the water in the mattress. Otherwise, the corners between the bottom of the water mattress **14** and the ends and sides thereof would not fit tightly into the corresponding corners of the water bed frame **18,** leaving slack which would permit sloshing of the water. The fillet **36** prevents this, which is an important feature.

FIG. **4** shows a water bed frame **38** which is very similar to the water bed frame **18,** and which includes an upstanding outer side wall **40** secured to the bottom wall **26.** In this case, the frame **38** is provided with an inwardly projecting horizontal lip **42** forming part of a member **44** which is secured to the top of the side wall **40** and which extends outwardly therefrom also to provide a seating space around the periphery of the water bed frame **38.** The lip **42** operates in the same way as the lip **30,** so that no further description is necessary. The water bed frame **38** also includes a fillet **46** corresponding to the fillet **36** and performing the same function.

Turning now to FIG. **5** of the drawing, illustrated therein is a water bed frame **48** which includes an upstanding outer side wall **50** secured to the bottom wall **26.** Inserted between the water mattress **14** and the side wall **50** is an insert **52** comprising a side wall member **54** having at the top and bottom thereof an inwardly projecting horizontal lip **56** and a fillet **58,** respectively. The lip **56** corresponds to the lip **30** and operates in the same way, so that no further description is required. The fillet **58** performs the same function as the fillet **36,** and performs the additional function of causing the weight of the edge of the water mattress **14** to hold the insert **52** down against upward movement due to movements of a person or persons on the water mattress **14.**

Referring to FIG. **6** of the drawing, shown is a water bed frame **60** which includes an upstanding outer side wall **62** secured to the bottom wall **26.** Disposed between the side wall **62** and the water mattress **14** is an insert **64,** which may be made of plastic, or any suitable material, provided adjacent its top with an inwardly projecting horizontal lip **66,** and adjacent its bottom with an inwardly projecting fillet **68.** The lip **66** and the fillet **68** perform basically the same functions as the lip **30** and the lip **36** described previously. In the case of the lip **66,** it projects downwardly, as well as inwardly, to provide an undercut cove **70,** which further enhances the pressure lock clamping the edge of the bedding **34** between the water mattress **14** and the insert **64.**

FIG. **7** of the drawing illustrates a water bed frame **72** having an upstanding side wall **74** secured to the bottom wall **76.** A molded or extruded plastic insert **76** is disposed between the side wall **74** and the water mattress **14,** and includes a lip **78** and a fillet **80,** the lip **78** providing an undercut cove **82** similar to the cove **70.** It is thought that the operation of this embodiment of the invention will be clear without further explanation.

It will be understood, of course, that the various lips and fillets shown in FIGS. **3** to **7** extend all the way around the corresponding water bed frames. In FIGS. **5** to **7,** the respective inserts **52, 64** and **76** are sectional and disposed at least generally in end-to-end relation. More particularly, in the rectangular water bed **10,** the inserts **52, 64** and **76** each comprises four sections respectively extending along the sides and ends of the corresponding water bed frame. FIG. **8** shows, for example, the sectional insert **64** as composed of insert sections **84** which are mitered at the corners of the frame **60.** FIG. **9** shows the insert **64** composed of sections **86** arranged in an unmitered relation, with an end of one section **86** abutting a side of another. This makes a very simple installation since no mitering is required. FIG. **10** shows the circular water bed **12** with the insert **64** of FIG. **6** divided into sections **88** arranged in end-to-end, abutting relation at **90.** As previously stated, the circular water bed **12** may be provided with any convenient number of the insert sections **88.** Similar considerations are applicable if the inserts **52** or **76** of FIGS. **5** or **7** are used.

The various inserts hereinbefore described have an important advantage in that they can be added to an existing bed without disturbing the ensemble of bed frame and filled mattress. Therefore, the old frame is not rendered obsolete, but the invention is added thereto. The installation requires no mechanical skill, no tools, no fastening devices or adhesives, and no altering of the structure. The nature of the invention does not impair

the design appearance since, when the inserts are in place, they are completely out of sight. The inserts are merely pushed into position between the mattress liner and the bed frame and remain stationary (no moving parts to wear). Releasing the bedding is easy. You merely press the mattress by any top edge downward as you pull out the bedding. The lock works on all liquid mattresses, or other liquid filled articles in frames.

Although exemplary embodiments of the invention have been disclosed for illustrative purposes, it will be understood that various changes, modifications and substitutions may be incorporated in such embodiments without departing from the invention as hereinafter claimed.

I claim as my invention:

1. In a frame for a water bed comprising a water mattress and bedding overlying the water mattress and depending over an edge thereof, the combination of:

a. a mattress confining, generally vertical, side wall member engageable by the edge of the water mattress; and

b. said wall member having adjacent the top thereof an inwardly projecting horizontal lip engageable with the depending edge of the bedding to provide a pressure lock between said lip and the edge of the bedding to hold the bedding in place.

2. A water bed frame according to claim **1** including an upstanding outer side wall, said wall member being an insert disposed between said outer side wall and the mattress edge, and said lip being below the upper surface of the water mattress and below the top of said outer side wall.

3. A water bed frame according to claim **1** including an upstanding outer side wall, said lip being on said outer side wall, which constitutes said wall member.

4. A water bed frame as set forth in claim **1** including a fillet on said wall member at the bottom thereof.

5. A water bed frame according to claim **1** including an upstanding outer side wall, said wall member comprising a plurality of inserts disposed in generally end-to-end relation and between said outer side wall and the mattress edge.

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