

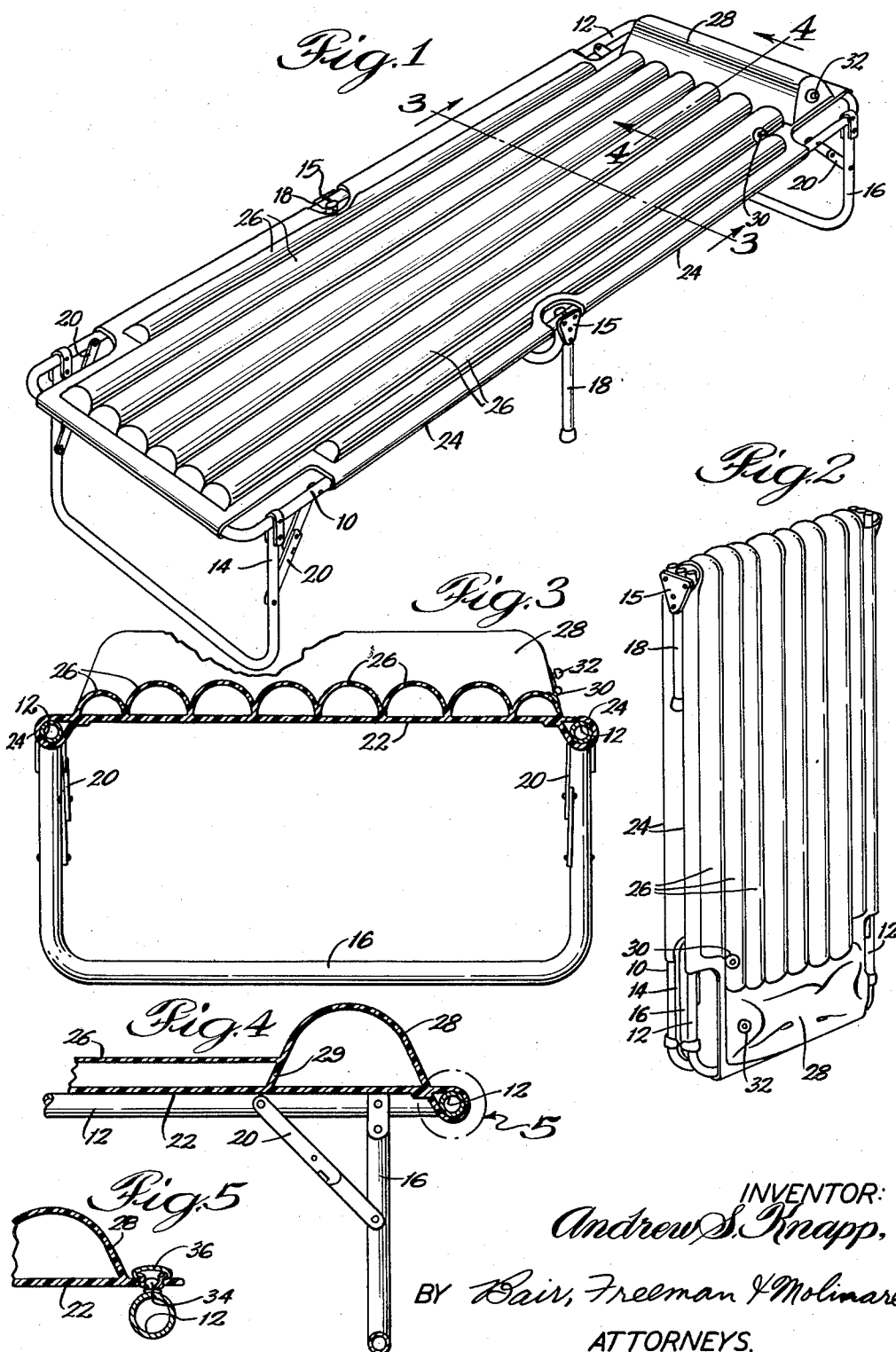
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FOLDING COT

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3,045,257

## FOLDING COT

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This invention relates to a folding cot and particularly one which combines therewith an inflatable air mattress and an inflatable pillow.

One object of the invention is to provide a combination folding cot and inflatable mattress wherein the mattress is part of the cot to assure that the frame and the mattress will always be available as a unit ready for instant use, the arrangement also being an obvious convenience from a handling standpoint as distinguished from separate cot and air mattress.

Another object is to provide a cot and mattress combination in which a relatively inflexible or hard backing for the mattress is provided and acts as supporting means, while resilient portions of the mattress are inflatable, thus providing an air mattress for comfort, an integral inflatable pillow being also provided if desired and forming part of the combination.

Still another object is to provide a covering for a cot frame which includes a relatively hard under sheet which may be of plastic woven fiber or a heavy vinyl sheet, and a suitable mattress portion of air retaining material such as light gauge vinyl which is inflatable to provide the desired resiliency for comfort when occupying the cot.

A further object is to provide an integral frame cover and air mattress that forms a permanent part of a folding cot, the mattress portion of which is inflatable when it is desirable to use the cot and deflatable when the cot is folded and stored, thus occupying less space than when in use.

Still a further object is to provide the frame cover or supporting sheet and the air mattress detachable with respect to the cot frame if desired.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my folding cot, whereby the objects above contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in detail on the accompanying drawing, wherein:

FIG. 1 is a perspective view of a combined folding cot, air mattress and air pillow embodying my present invention and showing it in the open position and inflated for use;

FIG. 2 is a perspective view of the cot of FIG. 1 showing it deflated and folded for storage or transport;

FIGS. 3 and 4 are enlarged sectional views on the lines 3-3 and 4-4 respectively of FIG. 1; and

FIG. 5 is a view similar to that portion of FIG. 4 within the circle 5 showing a modified construction.

On the accompanying drawing I have used the reference numerals 10 and 12 to indicate a pair of U-shaped frames made of tubular steel, tubular aluminum or the like and pivoted together by plates 15. U-shaped legs 14 and 16 are pivoted to the frames 10 and 12 and center legs 18 are secured to the plates 15 as disclosed in FIG. 1, the construction being conventional for folding of the cot frame 10-12-14-15-16-18 to the position shown in FIG. 2 for storage or transport. When the cot frame is in the unfolded position for use as in FIG. 1 braces 20 hold the legs 14 and 16 against collapse.

Heretofore, it has been the usual custom to cover the frame 10-12 with canvas or the like, and if an air mattress is desired for greater resiliency and comfort than afforded by the canvas alone, such air mattress was superposed as a separate element on the canvas.

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On the other hand, my construction comprises the provision of a relatively hard backing or under sheet 22 for support, and integral with or cemented thereto a flexible top in the form of an air retaining mattress portion 26 which may be fluted as shown and which is inflatable through a valve 30 shown in FIG. 1. The sheet 22 may be of plastic woven fiber or the like, or may be a heavy vinyl sheet with the air retaining mattress portion 26 of light gauge vinyl, and the sheet 22 preferably has tubular portions 14 formed along the sides and ends thereof to receive the frames 10 and 12 so that the frames and the sheet together with the air mattress form a unitary structure. Alternatively the sheet 22 may be provided with a series of spaced snap elements 36 to coact with snap elements 34 secured along the frames 10 and 12 as shown in FIG. 5. In this manner the air mattress and its supporting sheet are detachable relative to the cot frame.

The supporting sheet 22 may also be provided with a pillow section 28 as shown in FIG. 4 which is individually inflatable through a valve 32 (see FIG. 1), or a partition 29 shown in FIG. 4 may be omitted and the air mattress section 26 and the pillow section 28 inflated through a single valve.

By making the sheet 22 of relatively thick material, it is relatively inflexible and hard when stretched on the frames 10 and 12 and serves admirably as a support while the thinner gauge air mattress portion 26 and pillow 28 when inflated with air have the desired resiliency for comfort to the person reclining on the cot. Thus a very serviceable article for camping and the like is provided that is readily folded to a small size when not in use and provides maximum comfort when in use by reason of the possibility of inflating the combined cot frame cover and mattress as compared with a cover only of stretched canvas or the like.

Some changes may be made in the construction and arrangement of the parts of my folding cot without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may reasonably be included within their scope.

I claim as my invention:

1. A folding cot comprising a foldable frame and a relatively hard but flexible backing spanning said frame and foldable therewith, said backing having integral therewith and on the top thereof an inflatable mattress portion comprising material that is light and flexible relative to the material of said backing, said backing forming a planar wall for said mattress portion, and means for inflating said mattress portion.

2. A combination folding cot and inflatable air mattress comprising a foldable frame, a stiff supporting sheet fastened to and spanning said frame in tautly stretched condition, an air mattress fastened to said supporting sheet, said sheet forming a planar wall backing for said mattress and being of thicker material than the material of the remainder of said mattress, and means for inflating said mattress, said mattress being foldable with said frame and supporting sheet as a unit when said mattress is deflated.

3. A folding cot comprising foldable frame means defining, when unfolded, a generally rectangular, mattress supporting, foldable peripheral frame, a relatively hard but still flexible backing directly connected to all sides of said rectangular foldable peripheral frame and being foldable with said peripheral frame, an inflatable mattress portion formed integral with said backing on one side thereof, said backing forming a planar wall for said mattress portion, said mattress portion being of a material that is light and flexible relative to the material of said

backing, and means for selectively inflating said mattress portion.

4. A device as set forth in claim 3 wherein said backing is detachably connected to all sides of said rectangular, foldable, peripheral frame by manually releasable connectors. 5

5. A device as set forth in claim 3 wherein said backing is formed with tubular portions along all peripheral edges thereof, and the rectangular peripheral frame defining frame sides and frame edges which extend through said tubular portions to connect said backing to all sides of the rectangular, foldable, peripheral frame. 10

#### References Cited in the file of this patent

#### UNITED STATES PATENTS

1,382,531 Newborn ----- June 21, 1921

2,369,736

2,450,699

2,691,179

2,842,783

2,866,208

2,946,067

6,545/32

787,263

261,936

1,022,829

Hurt ----- Feb. 20, 1945

Veach ----- Oct. 5, 1948

Kann ----- Oct. 12, 1954

Druck ----- July 15, 1958

Vanderminde ----- Dec. 30, 1958

Wolshin ----- July 26, 1960

#### FOREIGN PATENTS

Australia ----- Mar. 16, 1933

France ----- July 1, 1935

Switzerland ----- Sept. 1, 1949

France ----- Dec. 24, 1952