

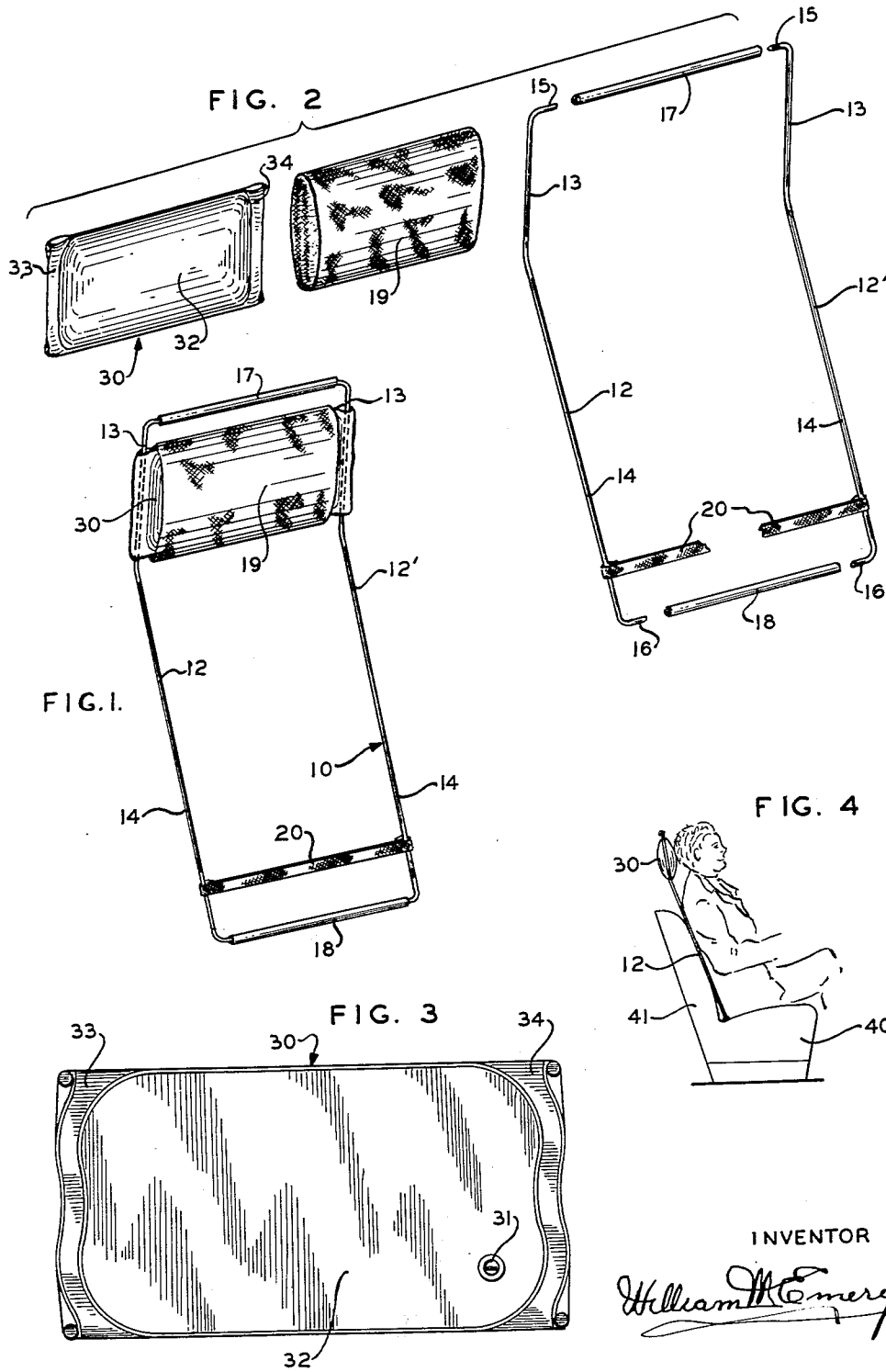
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HEAD RESTS

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3,129,975 HEAD RESTS

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My present invention refers to a head rest.

Objects of my invention include the providing of an inflatable and deflatable head rest, complete with a supporting collapsible frame composed of separable parts which are held together, at least in part, by the longitudinal shortening of the inflatable pillow when said pillow is inflated, so the frame will remain assembled as long as said pillow is inflated, but can be easily separated and compactly packed when the pillow is deflated. Another object is to provide a frame to position said pillow, having a generally upright section one portion of which rests against the back of the seat and the other portion at a slight angle thereto supporting the pillow so that when the assembly is turned one way it supports the head of the person sitting erect, such as the driver, and when turned around it is positioned to support the head of a slouched or relaxed person such as a sleeping passenger. Another object is to provide a tubular channel in the ends of the pillow in which the upright support rods may slide which channels will resiliently tighten when the pillow is inflated so that the pillow will remain in position after being raised or lowered for a shorter or taller user. These and other objects and their successful attainment will be obvious from the following specification, claims and drawings in which;

FIG. 1 is an orthographic view of my invention assembled,

FIG. 2 is an exploded view of FIG. 1, similarly positioned,

FIG. 3 is a plan view of the inflatable bladder shown deflated, and,

FIG. 4 shows my head rest in side view as it might be positioned in a conventional car seat or chair.

FIGURES 1 and 2 show a four-sided frame 10 composed of two upright support rods 12 and 12' having their upper portions 13 bent at a slight angle relative to their lower portions 14 and the ends of each rod 15 and 16 bent inward at right angles to said portions 13 and 14 respectively. Two plastic spacer tubes 17 and 18 respectively have longitudinal holes therein to receive and telescope ends 15 and 16. Elastic strap 20 holds lower ends 16 assembled with lower rod 12.

FIG. 3 shows an inflatable bladder 30 including valve 31, an inflatable section 32 and more or less serpentine, crooked, arcuate, or winding (said adjectives being considered equivalent) side tubes or channels 33 and 34, to form a sliding fit on rod portions 13. When section 32 is inflated, it takes the general form of a cylinder with rounded ends as viewed from the top and flat ends as viewed in FIG. 1. Obviously when this occurs and the film of the bladder tightens, the distance from tubes 33 and 34 contracts and the serpentine tubes tend to straighten or otherwise hug rod portions 13 enough to hold their relative positions while allowing a certain amount of sliding movement therebetween.

Rod portions 13 are assembled or slid into serpentine tubes 33 and 34 and thereafter ends 15 are bent at right angles.

A washable tubular cover 19 can be assembled over bladder 30 or removed whenever spacer tubes 17 and 18 and elastic strap 20 are removed, and the bladder 30 is deflated and is moved near ends 15.

The spacing between serpentine tubes 33 and 34 is such

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that when the bladder 30 is deflated it is just equal to the length of tube 17 plus the length of one of the right angle ends 15, so that when inflated the ends 15 will hold telescoped tightly into tubes 17, and will not disassemble until bladder 30 is deflated.

When deflated and disassembled, it is obvious that my head rest will fit into a small rectangular tube or carrying case when not in use or compact carton for mailing. Bladder 30 is folded in half and wrapped around rods 12 and 12' placed side by side.

When assembled and inflated a surprisingly rigid frame 10 results. Spacer tube 18 rests on the seat at the juncture of the seat 40 and the back 41, rod portions 14 being generally upright rest against the back 41. As shown in FIG. 4, upper rod portions 13 are bent slightly forward to accommodate a driver who sits upright and the bladder is raised on rod portions 13 to accommodate a tall person. It is obvious that if the frame 10 as shown in FIGS. 1 and 4 were reversed or turned around so that the upper section would be rearward instead of forward as shown, then the head rest would be suitable for a person who might be slouched or relaxed on the passenger's seat. If in either position the head contacting surface of bladder 30 is too far forward for comfort, this condition may be further adjusted by inflating or deflating the head rest, and the bladder 30 may be moved up or down on rods 13 to adjust for a taller or shorter person.

In any head rest used while motoring it is desirable, so far as possible, to minimize the transmission of road jars and car vibrations to the head or neck of the user. In this respect, my invention is very efficient because the rods 12 and 12' are small enough to be resilient, the vibrations must be transmitted laterally from them to the head through the medium of a flexible air chamber of adjustable softness, in a manner superior to a solid head rest closely attached to the top of the seat even though a certain amount of padding is used.

My head rest may be used in conjunction with any chair or seat back support especially where the height or angle of said support is insufficient to comfortably support the head or to back up the head for comfort or to avoid neck injury.

Accordingly, I claim:

1. A head rest comprising a substantially four sided frame including two upright support sections and at least one spacer member therebetween, interlocking means effective between said sections and said member, and an inflatable and deflatable bladder mounted on said sections toward one end thereof, said bladder, said upright sections and at least one of said spacer members being so proportioned and arranged that responsive to longitudinal contraction of said bladder due to inflation thereof said support sections are drawn together in a locking relationship with said spacer member in conjunction with said interlocking means.

2. A head rest comprising an upright frame suitable for positioning against the back of a seat and having upright support sections somewhat longer than the customary height of the backs of many conventional seats and cross spacer members therebetween and an inflatable bladder suitable for a head rest mounted on said sections toward one end thereof, said bladder, said upright sections and at least one of said cross spacer members being so proportioned and formed that responsive to the inflation of said bladder and the resulting longitudinal contraction thereof, said support sections are drawn together in a locking relationship with at least one of said cross spacer members determining the separation of said support sections.

3. A head rest comprising an inflatable bladder suitable for a head support, serpentine channels adjacent to

the ends of said bladder and integral therewith and upright support members suitable for sliding movement in said channels to regulate the height of said bladder on said upright support members, said serpentine channels being so shaped that responsive to the inflation of said bladder the serpentine channels will tighten around said upright members to increasingly resist relative sliding movement therebetween.

4. A head rest comprising an upright frame suitable for positioning against the back of a seat and including upright support members and an inflatable bladder suitable for a head rest, serpentine channels adjacent to either end of said bladder and integral therewith, suitable for the sliding reception of said upright members, said channels being so shaped that responsive to the inflation of said bladder said serpentine channels will tighten around said upright members to increasingly resist relative sliding motion therebetween while the bladder is inflated.

5. A head rest comprising an upright frame suitable for positioning against the back of a seat and having upright support sections somewhat longer than the height of the backs of many conventional seats, and at least one cross spacer section therebetween and an inflatable bladder suitable for a head rest slidably mounted on the higher portion of said upright sections, said bladder, said upright section and at least one of said cross spacer sections being so proportioned and formed that responsive to the inflation of said bladder and the resulting longitudinal contraction thereof, said sections are drawn together in an interlocking relationship maintained while said bladder is inflated and means integral of the bladder simultane-

ously operable and incidentally effective to resist relative sliding movement between the bladder and the uprights.

6. A head rest comprising two metallic support rods, and an inflatable pillow formed of two pieces of non-porous material peripherally sealed together and adapted to be inflated, said pillow when inflated and viewed toward any edge being equilateral along said seal with said seal line constituting the center line, non-inflatable tubes formed on opposite ends of said pillow by sealing said pieces of material together in the plane of said centerlines to snugly hold said metallic support rods, said pillow being arranged to provide a continuous column of confined air so proportioned and confined as to bring said rods closer together while being and until fully inflated and thereafter acting to resiliently space said rods apart at a substantially predetermined distance while resisting any tendency to force said rods closer together.

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