

Aug. 20, 1957

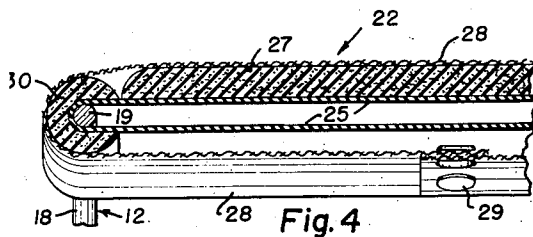
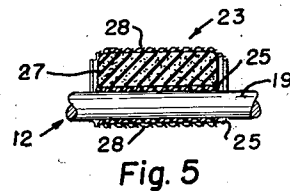
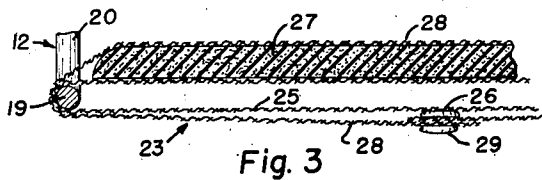
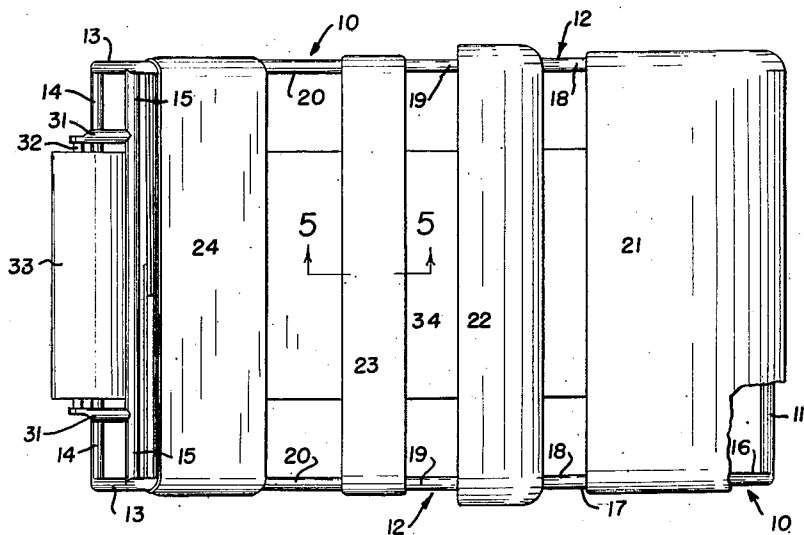
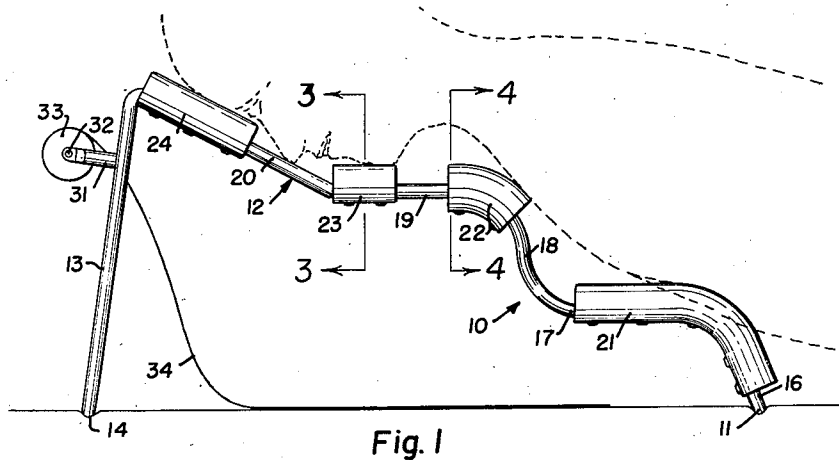
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2,803,022

HEAD AND UPPER BODY SUPPORT

Filed Dec. 17, 1954

2 Sheets-Sheet 1



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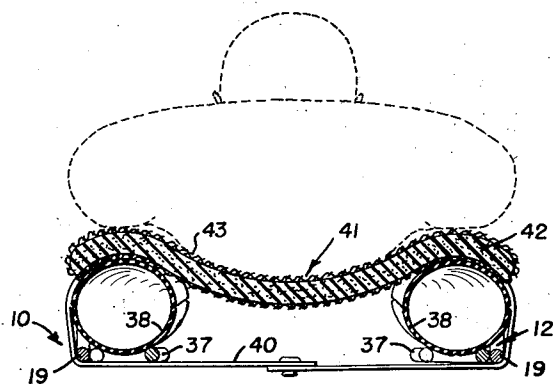
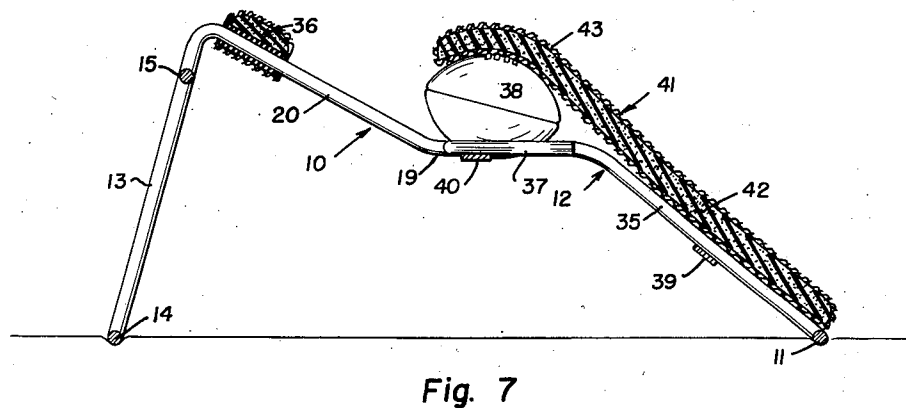
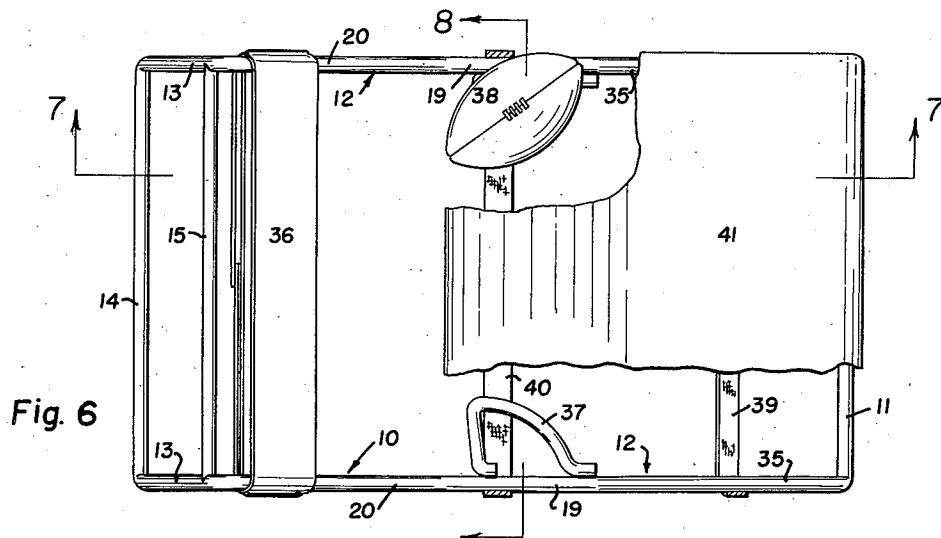
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2 Sheets-Sheet 2



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HEAD AND UPPER BODY SUPPORT

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5 Claims. (Cl. 5—327)

This invention relates to means for comfortably supporting the head of a recumbent person in various attitudes and particular dispositions, and more especially to such means as arranged to facilitate rest of the user while in a prone position with the face directed toward the surface supporting the body, and has as an object to provide a novel and improved head and upper body support susceptible of divers particular uses promotive of user ease and comfort.

A further object of the invention is to provide a novel and improved unitary, portable head and upper body support selectively and variously employable in diverse environments.

A further object of the invention is to provide a novel and improved construction and cooperative combination of elements constituting a unitary, portable head and upper body support.

A further object of the invention is to provide a novel and improved head and upper body support characterized by shiftable elements adjustable to suit the preferences and to accommodate the anatomical differences of various users.

A further object of the invention is to provide a novel and improved head and upper body support promotive of comfortable rest and refreshing sleep for those afflicted with asthma, hay fever, sinus infection or congestion, and the like.

A further object of the invention is to provide a novel and improved head and upper body support susceptible of economical production from readily-available materials, that is strong and durable in a light-weight construction, that is always ready for immediate use without preliminary manipulation, that is simple and convenient of maintenance in attractive condition of use, and that is efficient in attainment of the ends for which designed.

With the foregoing and other objects in view, my invention consists in the construction, arrangement, and operative combination of elements as hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation of a typical embodiment of the invention as arranged and positioned for practical use, broken lines in the view indicating one user rest attitude within the capacity of the improvement.

Figure 2 is a top plan view of the organization according to Figure 1, a portion of a covering member being broken away to disclose otherwise concealed relationships.

Figure 3 is a fragmentary, detail section, on an enlarged scale, taken substantially on the indicated line 3—3 of Figure 1.

Figure 4 is a fragmentary, detail section, on the same scale as Figure 3, taken substantially on the indicated line 4—4 of Figure 1.

Figure 5 is a fragmentary, detail section, on the same scale as Figure 3, taken substantially on the indicated line 5—5 of Figure 2.

Figure 6 is a top plan view of an alternative embodiment

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of the invention, portions of a covering member being broken away to disclose otherwise concealed relationships.

Figure 7 is a vertical section longitudinally through the organization according to and taken substantially on the indicated line 7—7 of Figure 6.

Figure 8 is a vertical section transversely through the organization according to and taken substantially on the indicated line 8—8 of Figure 6.

Occasions for the use of a comfortable, cushioned head support facilitative of rest and sleep of a user in the prone position, as well as in other, more usual positions, are numerous. Some invalids and certain convalescents benefit from, and may even require, rest on the ventral side of the body with the face directed toward the supporting surface, when such can be arranged without impairment of breathing and fatigue of the arms, and sufferers from afflictions tending to obstruct and congest the nasal passages, or to promote nasal discharges, frequently obtain much relief and needed rest when they can be made comfortable in a prone attitude. However, it is seldom comfortable to long maintain any particular rest position without change, and hence an important feature of any pillowing head support should be its availability for use in and to comfortably support a variety of user positions without the necessity for support adjustments and manipulations. Adapted to the use conditions and fully meeting the use requirements above noted, the instant invention provides a practical and unique head and upper body support employable with benefit and advantage in many situations.

In the organization of the improvement according to Figures 1-5 inclusive, the numeral 10 designates, generally, a rigid frame of particular and distinctive form wherewith the other members of the support are associated to complete a portable unit. The frame 10 is formed, as by bending and working an initially-straight length of appropriate rod or tubing, to provide a straight, transverse end member 11 adapted for engagement against a supporting surface in a length on the order of slightly more than one foot determinative of the width of the unit, duplicate side bars 12, hereinafter more particularly described, extending in spaced, parallel, identically-curved relation from the opposite ends of the member 11 in and to define planes perpendicular to the length of said member, straight legs 13 similarly terminating the respective side bars 12 in acute angular relation therewith and extending thence in the plane defined by the associated side bar, and a second straight, transverse end member 14 fixedly spanning between the ends of said legs 13 remote from their side bars in spaced, parallel relation with the end member 11. The end members 11 and 14 hence lie in a common plane thereby determined and are adapted to support the unit on and in upstanding relation from the surface of any appropriate resting place, such as a couch or bed, in which disposition, represented by Figure 1, the legs 13 upstand from the supporting surface at a slight inclination away from the vertical and toward the member 11 and the side bars 12 incline downwardly from the upper ends of said legs to their junction with the ends of said member. A strut 15 is fixed at its ends to the legs 13 adjacent the junction of the latter with the side bars 12 and spans therebetween in spaced, parallel relation with the end member 14 to maintain the spacing between the adjacent ends of said side bars as determined by the end members 11 and 14. The side bars 12 are identically curved in their respective vertical planes substantially as shown in Figure 1 and to provide a first portion 16 adjacent and perpendicular to the end member 11 which rises from said member at an inclination toward the strut 15 and merges arcuately into a straight second portion 17 parallel to and at an elevation slightly less than one-third the length of each leg 13 above the

plane common to the members 11 and 14, a third reversely-curved portion 18 connecting the second portion 17 with the adjacent end of a straight fourth portion 19 parallel to and at an elevation on the order of four-fifths the leg length above the plane of the members 11 and 14, and a straight fifth and final portion 20 closing at an upward inclination to the portion 19 between the latter and the upper end of the associated leg 13. With the legs 13 approximately ten inches long and the members 11 and 14 spaced apart some twenty-one inches, the purposes of the invention are effectively accomplished when the side bar portions 20 are each about seven inches in length and the portions 19 about four inches long.

Completing the unit for its intended uses and purposes in accordance with the principles of the invention, cushioned bands of flexible material are arranged in spaced relation longitudinally of the frame 10 to each span transversely thereof between corresponding portions of the duplicate side bars 12. In the arrangement according to Figures 1 and 2, a first such band 21 is provided in a width adapted to extend over and substantially cover the side bar portions 16 and 17 and is looped and secured over and to span between the said portions of each side bar 12 above and inwardly of the frame from the member 11 to provide support for the upper chest portion of a prone user; a second and narrower band 22 is similarly looped and secured in spaced relation with the band 21 over and to span between the junctions of the side bar portions 18 and 19 in a position of substantial alignment with and support between the shoulders of a prone user; a third and still narrower band 23 spaced from the band 22 is looped and secured over and to span between the side bar portions 19 adjacent the junction of the latter with the portions 20 in position to receive and support the chin of a prone user; and a final band 24, preferably somewhat wider than the adjacent band 23, is looped and secured over and to span between the side bar portions 20 adjacent the junction of the latter with the legs 13 and in consequent spaced relation with the band 23 to receive and support the forehead of the user. The bands 21, 22, 23 and 24 may be of any expedient construction and arrangement appropriate to provide comfortable, slightly-yieldable support for anatomical areas of the user therewith engaged, a simple and practical band construction being illustrated as including a strip member 25, which may be of fabric, rubber, or the like, arranged, as by means of fasteners 26, to be looped and secured about the side bar portions as above set forth, a cushioning pad 27, of sponge rubber or similar resiliently-yieldable material, carried by and substantially coextensive with the upwardly-exposed surface of each of the bands, and a fabric cover 28, readily detachable for laundering and replacement, as by means of fasteners 29, exteriorly enveloping and completing each band assembly. There being a possibility of some discomfort to a user because of engagement of shoulder areas against the side bar portions between which the band 22 extends, it is advantageous that each side bar be padded or cushioned at the junction of the portions 18 and 19, as by extension of the pad 27 of the band 22 across said side bar portions, or, as indicated in Figure 4, by the provision of generally-cylindrical, sponge rubber pads 30 embracing the said side rod portions within the envelope of the associated cover 28. Adjunctive to the primary uses and purposes of the unit above described, and of considerable practicality in many instances of unit use, arms 31 spaced apart along and fixedly outstanding in a common radial plane from the strut 15 detachably mount a spindle 32 in spaced parallelism with said strut for the revoluble support of a roll of tissue 33 thus disposed for extension of its web 34 inwardly of the unit between the legs 13 and along the surface supporting the unit in position to underlie any or all of the spaces between the bands 21, 22, 23 and 24.

As should be manifest, the unit assembly is made available for use simply by positioning the unit on any selected rest surface wherewith the members 11 and 14 engage to elevate the junctions of the legs 13 and side bars 12 above the surface at the position selected for the head of the user, in which disposition the unit accommodates a prone user with the forehead, chin, shoulder areas, and upper chest zone comfortably and yieldably supported as above set forth, with the nasal and oral passages directed downwardly through the open and unobstructed space between the bands 23 and 24 for drainage, if such be present, to the tissue web 34, with space for the accommodation of hands and arms between the supporting surface and the side bars 19, and with freedom to roll and shift, both laterally and longitudinally of the unit, as the ease and comfort of the user may direct. Should the user desire to rest on the side or back, the unit may be shifted longitudinally to position the bands 22 and 23, or the band 21, for supporting engagement with the user's head in the manner of conventional pillows of different elevation, thus qualifying the unit as a head and upper body support accommodative of a full range of body positions with convenience and comfort.

The alternative embodiment of the invention represented by Figures 6, 7 and 8 of the drawings differs in no material functional respect and but moderately in structural detail from that shown by the preceding views and hereinabove described. The alternative embodiment includes the frame 10 constituted from the end members 11 and 14, the side bars 12, the legs 13, and the strut 15 in substantial identity with the disclosure first described and distinguished from the latter only as to the curvature and interrelation of the several side bar portions. In the alternative embodiment, the side bar portions 19 and 20 are present in substantially the same arrangement and interrelation previously set forth, the only difference being perhaps a disposition of the portion 19 more nearly adjacent the plane of the end members 11 and 14 than is the case in the embodiment first described, and the side bar portions 16, 17 and 18 of the first embodiment are replaced by a single, straight, side bar portion 35 connecting at an upward inclination toward the legs 13 between ends of the member 11 and the ends of the portions 19 adjacent thereto. The cushioned band 24 of the first embodiment is substantially duplicated in the alternative construction by a band, pad and cover assembly 36 somewhat narrower than the band 24 engaged with and to span between the side bar portions 20 adjacent their junctions with the legs 13 and in position for engagement by the forehead of a prone user as hereinbefore set forth.

Distinguishing in structure from the embodiment first described, the alternative construction is characterized by stirrups 37 fixedly instanding from each side bar portion 19 in the horizontal plane common to said portions and domed cushions 38, illustrated as of pneumatic, miniature football type, supported upon and rising above said stirrups in position for engagement by the hollows inwardly adjacent the shoulders of a prone user. Manifestly, the cushions 38 may be of any desired appropriate form and construction, the oblate spheroid shape and pneumatic character of the illustrated such members being particularly well adapted for anatomically conformable, comfortable support of a user. With the shoulders of the user elevated and supported by the cushions 38 there is no real occasion for the chin-supporting band 23 of the first embodiment, hence in the alternative embodiment the latter band is eliminated and the bands 21 and 22 are replaced by a band 39 looped and secured over and to span between the side bar portions 35 parallel to and spacedly adjacent the end member 11 and a second band 40 looped and secured over and to span between the side bar portions 19 and the cushions 38 adjacent thereto in a manner to retain the said cushions upon their respective stirrups 37. Overlying said bands 39 and 40 in a width to extend over and between the side bars 12 and a length

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adequate to extend from the end member 11 to and over the band 40, a cushioned, sheet-like pad 41 constituted as a rather thick ply 42 of sponge rubber, or the equivalent, within a detachable fabric cover 43 is arranged in any expedient manner, as by attachment to the bands 39 and 40, for engagement by and the comfortable support of the areas of a user's body thereto applied when the unit is employed in any of the various particular associations with the human body within the capacity of the improvement.

As hereinabove elaborated, the improvement, in either of the illustrated embodiments, is employable to comfortably support a prone user for rest or sleep in a manner which in no way impairs or obstructs breathing, which accommodates vision applicable to reading or writing while in the prone position, and which facilitates free disposition of the user's arms in a variety of comfortable attitudes. In addition, either of the embodiments of the invention is available for use as a pillows for support of the head in dorsal and lateral positions of rest; a mere positioning of the unit on the supporting surface being the sole adjustment required to condition the improvement for any desired particular use.

Since changes, variations, and modifications in the form, construction, and arrangement of the elements shown and described may be had without departing from the spirit of my invention, I wish to be understood as being limited solely by the scope of the appended claims, rather than by any details of the illustrative showing and foregoing description.

I claim as my invention:

1. A head and upper body support comprising a rigid, skeleton frame unit formed with spacedly-parallel, transverse end members and spacedly-parallel side bars identically curved in planes perpendicular to said end members rigidly connecting between corresponding ends of the latter, said side bars being correspondingly inclined and stepped in their respective planes perpendicular to the associated end members to define a first plane radial of one of the end members at a moderate inclination to the plane common to said end members, a second plane adjacent and in angular relation with said first plane spacedly paralleling the plane common to said end members, a third plane radial of the other end member convergent toward said first plane at a steep inclination to the plane common to said end members and terminating well above said second plane, and a fourth plane connecting the spacedly-adjacent edges of said second and third planes in an upward inclination therebetween, and flexible bands looped over and secured about corresponding portions of and spanning in spaced, parallel relation transversely between said side bars.

2. A head and upper body support comprising a rigid, skeleton frame unit formed with spacedly-parallel, trans-

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verse end members and spacedly-parallel side bars identically curved in planes perpendicular to said end members rigidly connecting between corresponding ends of the latter, said side bars being correspondingly inclined and stepped in their respective planes perpendicular to the associated end members to like elevation of the bars adjacent one of the end members well above the zone of side bar connection with the other end member and to establish at least one plane parallel to and above the plane common to said end members spaced from the zone of maximum side bar elevation, and flexible bands looped over and secured about corresponding portions of and spanning in spaced, parallel relation transversely between said side bars.

3. The organization according to claim 2, wherein one of said bands is disposed to bridge between said side bars adjacent the zone of their maximum elevation in spaced, parallel relation with a band bridging between the side bar portions defining the plane parallel to that of the end members, whereby to provide altitudinally-spaced supports for the forehead and chin of a prone user separated by a space accommodative of the user's breathing facilities.

4. The organization according to claim 2, wherein a strut parallel to said end members rigidly connects between said side bars subjacent the zone of their maximum elevation and arms radially of said strut detachably and revolvably support a roll of tissue for extension of its web longitudinally of the frame unit.

5. The organization according to claim 2, wherein one of said bands is disposed to bridge between said side bars adjacent the zone of their maximum elevation in spaced, parallel relation with a band bridging between the side bar portions defining the plane parallel to that of the end members, whereby to provide altitudinally-spaced supports for the forehead and chin of a prone user separated by a space accommodative of the user's breathing facilities, a strut parallel to said end members rigidly connects between the side bars subjacent the zone of their maximum elevation, and arms radially of said strut detachably and revolvably support a roll of tissue for extension of its web longitudinally of the frame unit beneath the space separating said bands.

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