

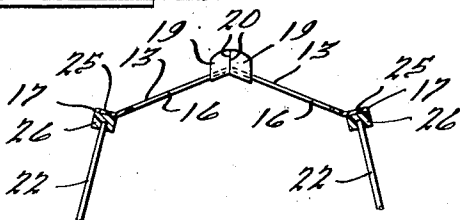
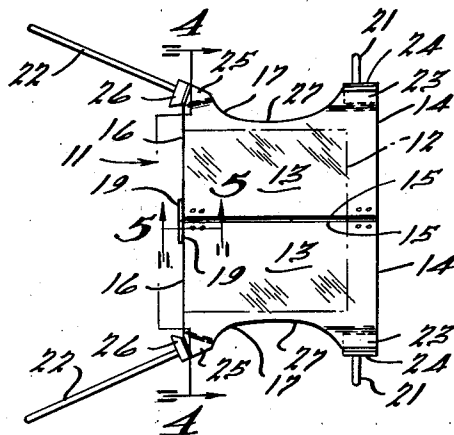
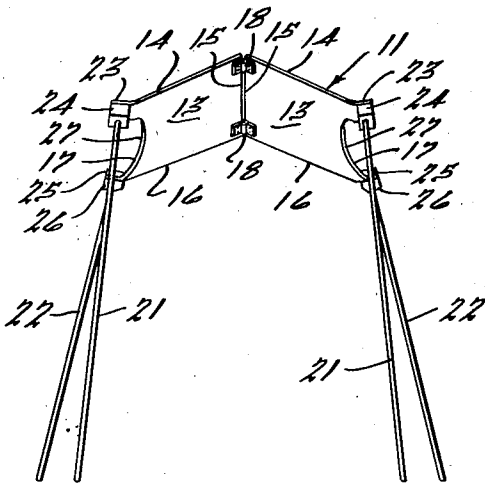
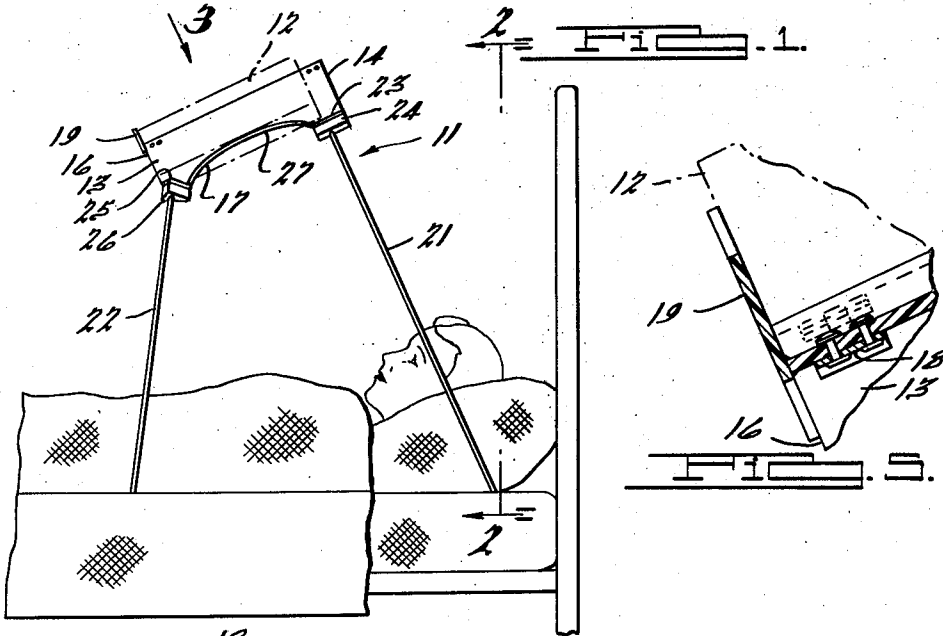
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READING STAND

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READING STAND

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7 Claims. (Cl. 45—82)

This invention relates to a reading stand particularly adapted to support a book, magazine or the like with the reading material facing substantially downwardly in position to be read by a person lying in an upwardly facing position.

Frequently, as a matter of choice or as a matter of necessity, the latter particularly in the case of bedridden invalids, persons are desirous of reading while lying abed. Maintaining a book, magazine or the like in a readable position while lying flat on one's back rapidly becomes a very tiring endeavor, especially when the muscles of the arm are weak from illness. Thus, it is readily apparent that a reading stand or reading material supporting structure would have great utility for those who desire to read while reclining. Solutions to the problem of supporting reading matter in an inverted readable position have been proposed in the prior art but the structures proposed have been either too bulky or too complicated for the purpose for which designed.

I have, in my copending application, Serial No. 538,909, filed October 6, 1955, now Patent Number 2,780,027, issued February 5, 1957, illustrated and described one highly satisfactory form of reading stand which provides a simple and lightweight structure for supporting reading matter in the desired manner. The structure illustrated therein is formed of a framework of lightweight metal rod stock. It is an object of the present invention to provide a reading stand operative to support reading material in an even more effective manner than my earlier structure and which is particularly adapted to be fabricated of a suitable plastic material. The plastic fabrication enhances the appearance of the reading stand although slightly increasing the cost of manufacture as compared to my earlier structure.

As in the case of my earlier invention, it is an object of the present invention to provide an improved reading stand of simplified and lightweight construction having a high degree of rigidity and stability.

Further objects and the features of construction embodied in the present invention to attain such objects will be apparent from the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference numerals designate corresponding parts in the several views.

Fig. 1 is a side elevation of the reading stand embodying the present invention and shown in functional position on a bed.

Fig. 2 is an elevation looking in the direction of the arrows 2—2 in Fig. 1.

Fig. 3 is a plan view looking in the direction of the arrow 3 in Fig. 1.

Fig. 4 is a sectional view taken substantially through line 4—4 of Fig. 3 looking in the direction of the arrows.

Fig. 5 is a sectional view taken substantially through line 5—5 of Fig. 3 looking in the direction of the arrows.

Before explaining in detail the present invention, it is to be understood that the invention is not limited in its

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application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being carried out in various ways. Also it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

In the drawing there is illustrated by way of example, a preferred embodiment of the reading stand, generally designated 11. The reading stand is adapted to support a book or the like 12 in an inverted or face down position a suitable distance above the upwardly directed eyes of the reader (see Fig. 1). Further, the reading stand 11 is adapted to support the book so that the plane of the reading matter is substantially parallel to the plane of the face of the reader, which, when the head is resting on a pillow, is tilted relative to the plane of the bed. More simply stated, the book is supported so that the upper edge thereof is somewhat higher than the lower edge.

The reading stand 11 comprises two symmetrical transparent rigid panels 13, preferably made of a shatterproof plastic material. The panels are substantially rectangular in shape. For purposes of description the edges or sides of each panel are identified as follows: top edge 14, inner side edge 15, bottom edge 16 and outer edge 17.

The two panels 13 are hingedly connected at their adjacent inner side edges 15 by suitable hinge means 18. The hinges 18 perform their usual function in that they permit the two panels 13 to be folded one against the other when the reading stand is to be stored. They also permit the panels 13 to be positioned so that they straddle the reader at an angle to each other. As best seen in Fig. 5, each panel 13 in normal operative position slopes downwardly from the apex of the triangle formed thereby at an angle of approximately 20° to the horizontal. At this approximate angle the average book, magazine or the like is supported in a reasonably open face position without undue stress being placed on the binding.

The angular relationship of the two panels 13 in their operative position is controlled by a pair of angle control members 19. The angle control members 19 comprise a pair of symmetrical plastic pieces cemented or otherwise securely fastened to the bottom edge 16 of each panel 13 adjacent the inner side edge 15 thereof. Each member 19 projects upwardly from the plane of the respective panel 13 to which it is attached. As best seen in Fig. 5, the vertical edge 20 of each angle control member 19 forms an obtuse angle with the plane of the respective panel 13. This obtuse angle is approximately 110° whereby, when the two vertical edges 20 are in abutting relation to each other, the panels are maintained in the desired angular relationship to each other. As was explained above, the panels are angularly inclined at about 20° to the horizontal, as viewed in Fig. 5.

The angle control members 19 project a sufficient distance above the planes of their respective panels 13 so as to provide an abutment adapted to prevent the book, magazine or the like from slipping off the panels 13 when the reading stand is in operative position.

The panels 13 are supported above the reader by suitable front legs 21 and rear legs 22, the latter being somewhat shorter than the former. The legs 21 and 22 may be made of any suitable material, wood dowel stock being particularly adaptable.

It will be noted that at the juncture of the top edge 14 and the outer side edge 17 of each panel 13, the panel is provided with an angularly related rectangular portion 23. To the underside of each portion 23, a rectangular block 24 is cemented, the block 24 being bored to receive one end of the leg 21. As viewed in Fig. 1, in this elevation the axis of each leg 21 is substantially perpendicular to the hinge axis of the hinge means 18.

The rear corners, the corners formed by the juncture of the bottom edge 16 and the outer side edge 14 of each panel 13 receive a somewhat different treatment. These corners are bent upwardly from the planes of the panels 13 to form substantially triangular angularly related portions 25. When viewed in side elevation as in Fig. 1, the angle of the plane of these corners or portions 25 is slightly in excess of that of a plane parallel to the plane of the bed. Each portion or corner 25 has a complementarily shaped block 26 cemented to the bottom face thereof. Each block 26 is bored to receive the end of a leg 22. The legs 22 are somewhat shorter than the legs 21, thus providing the angular tilt to the reading stand book supporting panels 13 as viewed in side elevation. The angular relationship of the corners or portions 25 of the panels 13 is such that the rear legs 22 are rearwardly and outwardly inclined relative to the front legs 21. As best seen in Figs. 1 and 2, all of the inside base angles, the angles of the legs 21 and 22 relative to the plane of the bed, are acute angles. Thereby, the legs 21 and 22 form a stable support for the book or the like supporting panels 13.

Preferably, the legs 21 and 22 are removable from their blocks 24 and 26, respectively, to facilitate the folding of the panels 13 for storage purposes.

It will be noted that the outer side edges 17 of the panels 13 are suitably cut away to provide curved indented edges 27. This is to make it easier for the reader to reach the book or the like when it is desired to raise the same slightly from the panels 13 to turn the pages.

It is believed readily apparent that the reading stand embodying the present invention is most suitable for its intended purpose. The transparent panels 13 provide clear and unobstructed visual accessibility to both open pages of the book, magazine or the like supported thereon. The book or magazine being read is quite solidly supported above the reader and is so supported that only the occasional lifting of the hands is required to perform a simple manipulation to turn the page. The spread base arrangement of the legs contributes to a high degree of stability for the reading stand.

I claim:

1. A reading stand for supporting reading material in an inverted open face position comprising a transparent support member having two angularly related sections, the line of intersection of said sections being higher than the side edges thereof, leg means attached to the underside of said support member, said leg means being proportioned to support said support member so that said line of intersection is at an angle to a base plane defined by said leg means whereby reading material straddling said line of intersection will be supported with its top edge higher than its bottom edge, and abutment means positioned to engage said bottom edge to maintain said reading material on said support member upper surface.

2. A reading stand for supporting reading material in an inverted open face position comprising a transparent support member having two angularly related plane sections, said plane sections sloping downwardly at substantially equal angles from the ridge thereof, leg means attached to the underside of said support member at the four corners thereof, said leg means being proportioned to support said support member so that said ridge is at an angle to a base plane defined by said leg means whereby reading material straddling said ridge will be supported with its top edge higher than its bottom edge, and abutment means positioned to engage said bottom edge to maintain said reading material on said support member upper surface.

3. A reading stand for supporting reading material in an inverted open face position comprising a transparent support member having two angularly related plane sections, said plane sections sloping downwardly at substantially equal angles from the ridge thereof, leg means

attached to the underside of said support member at the four corners thereof, said leg means being proportioned to support said support member so that said ridge is at an angle to a base plane defined by said leg means whereby reading material straddling said ridge will be supported with its top edge higher than its bottom edge, the base area within said leg means being greater than the projected area of said support member, and abutment means positioned to engage said bottom edge to maintain said reading material on said support member upper surface.

4. A reading stand for supporting reading material in an inverted open face position comprising a support member consisting of a pair of transparent panels, hinge means connecting said panels together at the inner edges thereof, angle control means effective to maintain each panel at a predetermined declivity relative to a plane through the hinge axis of said hinge means, leg means attached to the corners of said panels at the outer edges thereof, said leg means being proportioned to support said hinged panels so that said hinge axis is at an angle to a base plane defined by said leg means whereby reading material straddling said hinge axis will be supported with its top edge higher than its bottom edge, and abutment means positioned to engage said bottom edge to maintain said reading material on said support member.

5. A reading stand for supporting reading material in an inverted open face position comprising a support member consisting of a pair of transparent panels, hinge means connecting said panels together at the inner edges thereof, angle control means effective to maintain each panel at a predetermined declivity relative to a plane through the hinge axis of said hinge means, leg means attached to the corners of said panels at the outer edges thereof, said leg means being proportioned to support said hinged panels so that said hinge axis is at an angle to a base plane defined by said leg means whereby reading material straddling said hinge axis will be supported with its top edge higher than its bottom edge, the base area within said leg means being greater than the area of said support member projected on said base plane, and abutment means positioned to engage said bottom edge to maintain said reading material on said support member.

6. A reading stand for supporting reading material in an inverted open face position comprising a support member consisting of a pair of symmetrical transparent panels, hinge means connecting said panels together at the inner edges thereof, angle control means effective to maintain each panel at equal declivity relative to a plane through the hinge axis of said hinge means, a first pair of leg members, means located at symmetrically opposite corners of said panels each receiving one of said first pair of leg members, a second pair of leg members shorter in length than said first pair, means located at symmetrically opposite corners of said panels each receiving one of said second pair of leg members, the difference in length of said pairs of leg members causing said support member to be inclined so that said hinge axis is at an angle to a base plane defined by said leg members whereby reading material straddling said hinge axis will be supported with its top edge higher than its bottom edge, and abutment means positioned to engage said bottom edge to maintain said reading material on said support member.

7. A reading stand for supporting reading material in an inverted open face position comprising a support member consisting of a pair of symmetrical transparent panels, hinge means connecting said panels together at the inner edges thereof, angle control means effective to maintain each panel at equal declivity relative to a plane through the hinge axis of said hinge means, a first pair of leg members, means located at symmetrically opposite corners of said panels each receiving one of said first pair of leg members, a second pair of leg members shorter in length than said first pair, means located at symmetrically opposite corners of said panels each receiving

one of said second pair of leg members, the difference in length of said pairs of leg members causing said support member to be inclined so that said hinge axis is at an angle to a base plane defined by said leg members whereby reading material straddling said hinge axis will be supported with its top edge higher than its bottom edge, the base area within said leg members being greater than the area of said support member projected on said base plane, and abutment means positioned to engage said bottom edge to maintain said reading material on said support member.

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