

Oct. 11, 1955

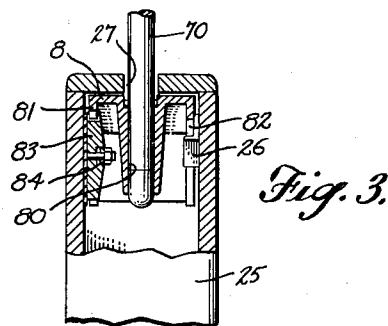
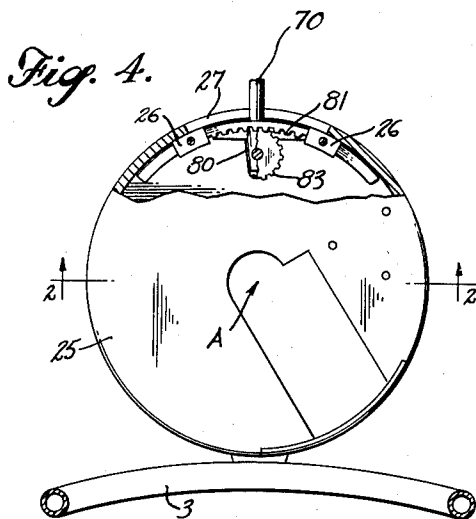
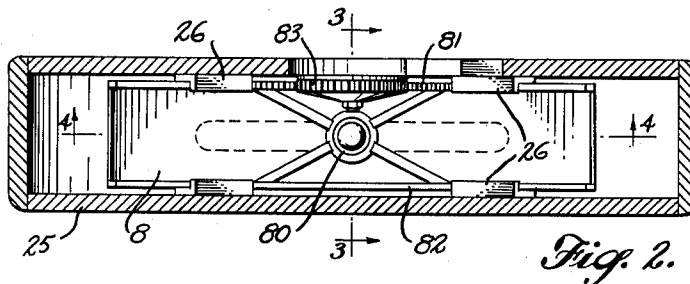
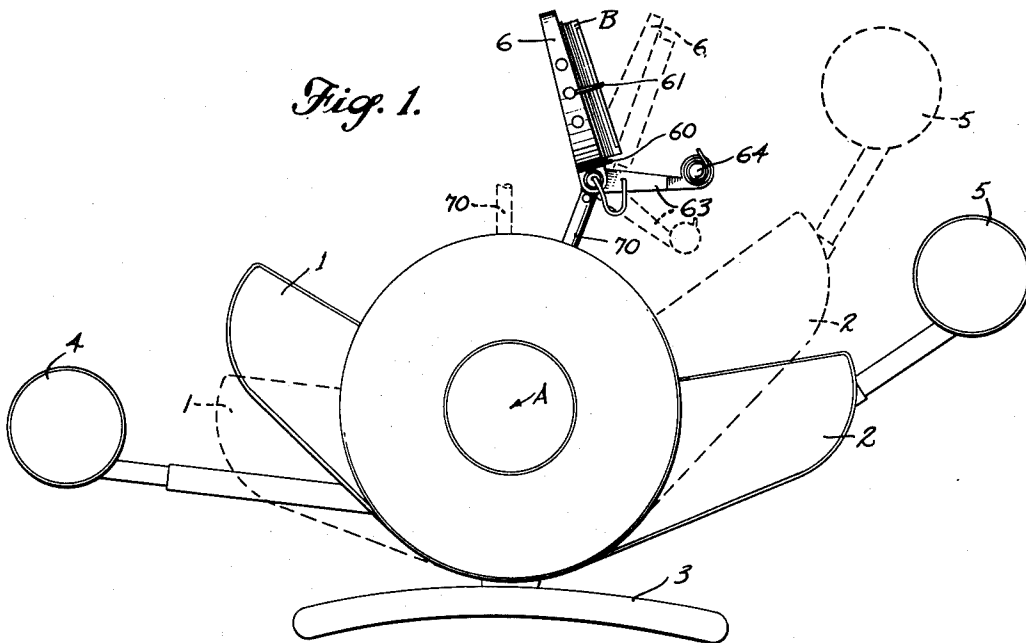
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2,720,251

COMBINATION CHAIR AND READING STAND

Filed July 11, 1950

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 5.

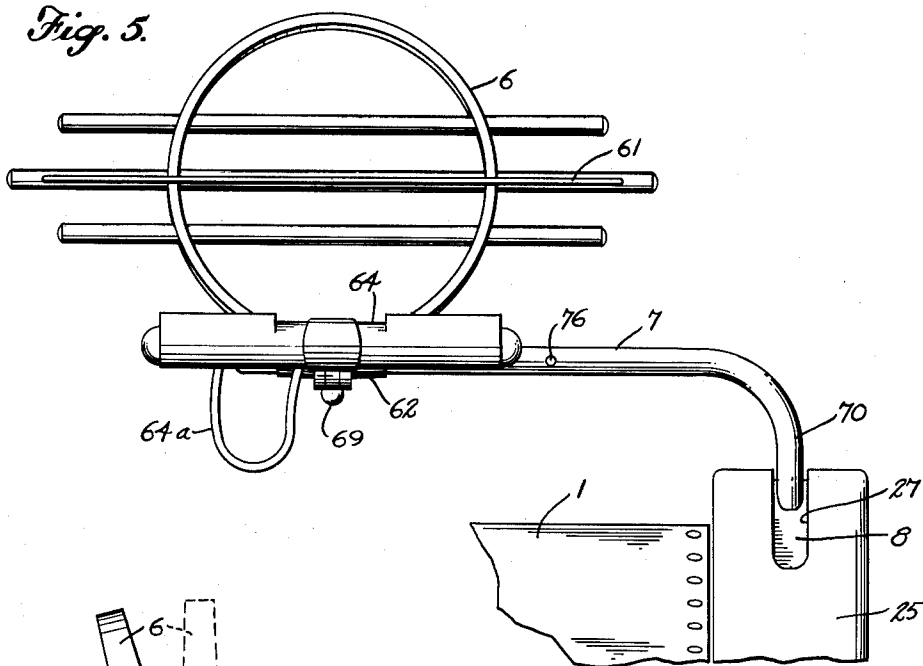


Fig. 6.

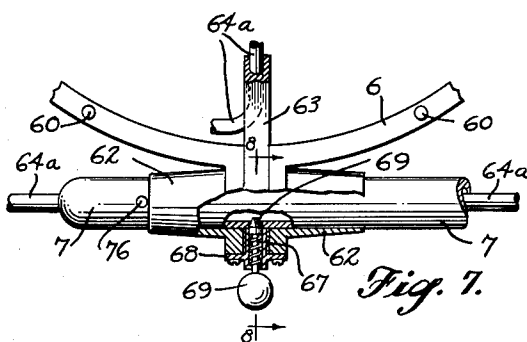
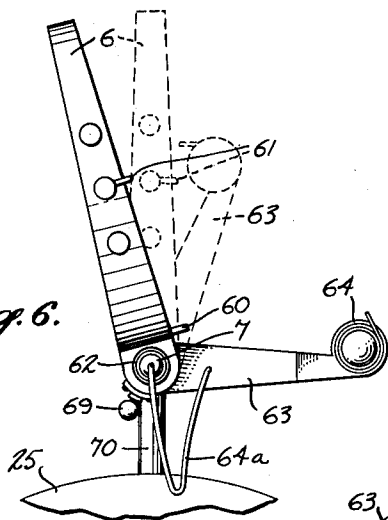


Fig. 7.

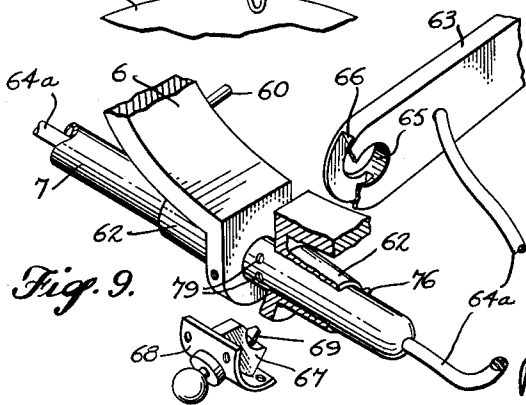


Fig. 9.

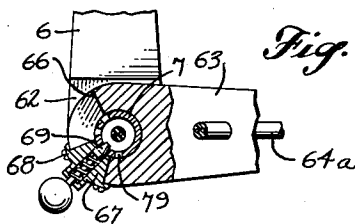


Fig. 8.

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## COMBINATION CHAIR AND READING STAND

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Application July 11, 1950, Serial No. 173,074

7 Claims. (Cl. 155—188)

Lounge chairs of the general type disclosed in my applications Serial Nos. 142,825, filed February 7, 1950, now Patent No. 2,655,199; 127,218, filed November 14, 1949, now Patent No. 2,684,708; 98,511, filed June 11, 1949, now Patent No. 2,668,581, include main body-supporting elements, the seat and the back respectively, which are adjustable angularly, and usually each independently of the other, about a transverse horizontal axis adjacent the rear edge of the seat, so that the seat and back may be adjusted between reclining positions wherein they are each substantially horizontal, into positions where one or the other is substantially upright. A legrest and a headrest, constituting auxiliary body-supporting elements, are normally provided, each being also adjustable angularly, and each being also adjustable normally for projection or retraction relative to the chair seat or back, as the case may be. Power mechanism to accomplish such adjustments may be such as is disclosed in my application Serial No. 166,426, filed June 6, 1950. This invention relates to a reading stand especially for the use and convenience of an occupant of such a lounge chair.

I realize that reading stands have been mounted heretofore upon, and employed in conjunction with, chairs, beds, and similar articles of furniture. Usually the part of such chair or the like whereon the reading stand is affixed, or from which it is supported, is fixed and immovable relative to the floor, except as the entire chair is shifted bodily. If any part of the chair is adjustable to any degree, it is so to only a minor degree, and its adjustment is with relation to the fixed part that supports the reading stand. The small degree of adjustment of the reading stand's position that might be desirable to adapt the reading stand and the reading matter it supports to any change of attitude of the occupant, such as he would accomplish while sitting in a nonadjustable chair, or be permitted by the relatively slight tilting of the chair's back, for instance, which might be effected by the known adjustable chairs, would be negligible. Adjustment of the reading stand heretofore has been principally to enable its stowage, or to enable it to be swung aside when the occupant tires of reading, or wishes to arise; other adjustment has been largely incidental to these latter ends.

Chairs of the type disclosed in the applications above provide for adjustment through an angle of approximately 90° of each of the seat, back, and side arms; of the seat and back each relative to the other, and of the side arms with one thereof—usually the back—relative to the other. There is little of the fixed floor-engaging frame, and that little is largely housed within the tiltable side arms, and inaccessible—besides being inappropriate—as a fixed support for a reading stand. It is necessary to mount the reading stand upon a chair part—the side arm, for example—which is itself adjustable through some 90°, and with relation to which the seat is adjustable through an additional 90°. Oftentimes the occupant will recline in a more or less horizontal attitude, and the reading stand must be capable of adjustment to locate its reading matter conveniently to an occupant so reclining (in effect, upside

down), or alternatively to the occupant when he is sitting upright. The adjustment of the chair part—the side arms, usually—whereon the reading stand is supported effects coincident adjustment of the reading stand, yet compensating adjustment of the latter to a somewhat changed line of vision of the occupant is required, as between a reclining and an upright position.

Because of the nature and wide range of adjustability of the chair parts associated in use with the reading stand, its mounting must provide for adjustments of a type and of a range not found necessary for reading stands which are supported on fixed chair parts. At the same time, the reading stand must have the capability of being adjusted, from any position of its wide range, to the several positions and for the same purposes which would be required of the previously known reading stands, so that it may be tilted towards or from the reader who occupies the chair, may be swung aside when not wanted, and may be adjusted about a transverse angle of adjustment, the better to accommodate it to the line of sight of the occupant as the latter is reclining or is sitting more nearly upright, or to accommodate those of shorter or longer reading range. Such a reading stand should have a hooded reading light associated with it which can be set, regardless of the position of adjustment of the reading stand itself, to illuminate the reading matter supported upon the latter, and which will retain this operative position during all the adjustments or movements of the reading stand itself. There should be provision to retain reading matter in place even though the same face downwardly. Likewise, such a reading stand should be of a nature capable of being dismounted, and folded into small compass, for it is the intention to store such a reading stand in the back, for instance, of the chair itself, which back may be hollowed out or formed as a closable compartment for the storage of such a reading stand.

The provision of a reading stand having the capabilities and advantages set forth above, and for use with chairs of the nature indicated, is the primary object of this invention. It is an object also to provide such a reading stand which shall be of a simple construction, capable of mounting upon an adjustable part of a lounge chair of the nature indicated.

With such objects in mind, and others as will appear as this specification progresses, the present invention comprises the novel reading stand and the novel combination and arrangement of the parts thereof relative to one another and relative to the parts of the chair, as is disclosed in the accompanying drawings in a presently preferred form of arrangement and assembly, and as will be more fully disclosed and claimed hereinafter.

Figure 1 is a general side elevational view of a chair incorporating such a reading stand, showing in broken lines and in full lines various typical positions of adjustment.

Figure 2 is a transverse sectional view through a chair side arm, substantially as indicated by the line 2—2 in Figure 4, being the more distant arm as seen in Figure 1.

Figure 3 is a sectional view, as indicated at 3—3 in Figure 2, and Figure 4 is in part a side elevational view and in part a sectional view along the line indicated at 4—4 of Figure 2.

Figure 5 is a general elevational view of the reading stand, the viewpoint being generally that of an observer stationed behind the chair, with parts in the general positions of adjustment shown in Figure 1.

Figure 6 is an enlarged side elevational view of the reading stand illustrated in the position it occupies in Figure 5.

Figure 7 is a detail view, partly in elevation and partly in axial section, illustrating the latching means for re-

taining the reading stand in a given position of adjustment.

Figure 8 is a detail sectional view of the latching means, taken substantially on the line 8—8 of Figure 7.

Figure 9 is a detail isometric view, with parts partly disassembled or in section, illustrating the pivotal adjustment mount for the reading stand back.

The chair, with which the reading stand is designed for use, may be of the type illustrated in one or more of my applications referred to above, and incorporates a seat 1 and a back 2 which are properly designated primary body-supporting elements, and which are adjustable angularly about a transverse axis of adjustment illustrated at A. A legrest 4 and a headrest 5 are supported, as are the seat and back, from a main frame 3, and the legrest and the headrest, constituting auxiliary body-supporting elements, are each adjustable angularly, and preferably, in addition, are adjustable for projection and retraction relative to the seat and back respectively. The mechanism by which such adjustments are accomplished and coordinated, and the mechanisms to effect the adjustments, are disclosed in my various applications, and it is not necessary to describe them here in detail. In addition to these chair elements, the chair includes a side arm 25, which preferably is secured to and is angularly adjustable with the back 2.

Because the various elements of the chair proper are adjustable into a great many different positions, individually and each relative to the others, it will be obvious that a reading stand, to be effective for use with such a chair, must also be adjustable with a chair element in the main, but must in itself be capable of independent adjustment.

The reading stand herein disclosed includes a back frame 6, the form and design of which may be varied to suit the taste of the designer—see my pending application Serial No. D-8,181, filed February 28, 1950—which is provided with a ledge 60, and a means, such as the yieldingly extensible or elastic cord 61, whereby to support a book B or other reading material in outspread position, whatever the attitude of the back frame 6. This back in the form shown includes a circular element and terminates at its lower portion in a pair of spaced ears or collars 62, which are slidably received upon a transversely extending supporting arm 7. This axial slidability is primarily for the purpose of lessening the over-all space required for storage of the reading stand, and its slidability lengthwise of the arm 7 is limited by engagement of the collars 62 with stops 76. The opposite end of the supporting arm 7 is directed downwardly, as indicated at 70, and is supported preferably from within the side arm 25, in a manner which will be described later.

A hooded reading light at 64, to which current is supplied by the leads at 64a, is mounted upon the outer or swinging end of a bracket 63, which is pivotably mounted at its inner end for bodily rotation about the axis of the supporting arm 7. In one position of adjustment, as shown in Figure 1, or in Figure 6 in full lines, the lamp, from below the line of vision, will illuminate the reading material supported upon the back 6, or in a folded position, as shown in dash lines in Figure 6, it will lie close to the back for storage. Stop means which will be described in detail shortly limit the movement of the bracket 63 to these two positions.

The inner or pivoted end of the bracket 63 is apertured at 65 to fit about the supporting arm 7, and the bracket is of a thickness to lie between the two spaced ears or collars 62. The bracket has shoulders 66 which constitute limit stops for the bracket, in cooperation with stop means 67 upon a bridge element 68. This bridge element is normally secured to each of the ears 62 to join them and to make the back rigid, and itself supports a spring-urged latch 69, which moves radially into and out of engagement with shoulders or holes 79, disposed

angularly about the supporting arm 7. However, it is preferred that these latch holes 79 be located in position for engagement by the latch 69 only when the back 6 as a whole has been shifted into its outermost position upon the supporting arm 7.

As has been stated, the supporting arm 7 terminates at one end in a downwardly directed portion 70, which at its lower end constitutes a foot revoluble about an axis disposed generally radially of the principal axis A. This foot is receivable within a socket 80, carried by a base 8. Preferably this base is arcuate in shape to fit closely inside the circumference of the chair's side arm 25, and for convenience of support and mounting it is flanged inwardly at its opposite edges, as indicated at 81 and 82. At least the flange at 81, however, is preferably formed as an arcuate rack. These two flanges are supported in arcuate guides 26 within the side arms 25, and a pinion 83 mounted within the side arm 25 is in mesh with the arcuate rack 81. Friction means 84, associated with its pivot, tend to retain the pinion in any rotated position, and thereby tend to retain the base 8 in any rotative position of adjustment. The chair arm 25 is circumferentially slotted, at 27, to accommodate such angular adjustment of the foot 70.

The reading stand, being mounted upon the side arm, is necessarily bodily adjustable in position about the axis A whenever the side arm and the back 2 are so adjusted. Thereby the reading stand follows the changing line of vision of the occupant to some degree. To adjust the reading matter more precisely to such line of vision in the new position, the reading stand can be tilted bodily about its own tilting axis, independently of tilting of the side arm (although the two axes may coincide, at A). Also the reading stand may tilt locally about the axis of the arm 7 into various positions, as determined by the latch 69 and holes 79. By combining the two latter tilting adjustments, each about a transverse axis, the reading matter can be shifted away from or towards the eyes of the occupant without appreciable change of attitude; a change of angle caused by one such adjustment can be neutralized by a reverse angular adjustment at the other such point. Such adjustments are indicated in Figure 1. If the occupant slouches down in the chair, tilting of the back 6 about the axis of arm 7 brings the reading matter into correct position.

If the chair's occupant desires to push the reading stand aside for the time being, as for instance when he desires to arise from the chair, he may do so by engaging it with his hand and rotating it about the upright or radial axis of the socket 80. Parts fit tightly enough that they will stay in a desired position of adjustment, or if need be means may be provided for increasing the frictional grip of the parts, or for retaining them positively in adjusted position. When thus pushed aside, the reading stand can be restored by reverse movement to its initial position when the occupant reseats himself. The socket 80 will be provided with electrical contacts for the leads 64a, to complete the circuit to the lamp at 64 upon insertion of the reading stand in its socket, but these details are not part of the present invention and are not illustrated herein.

When the reading stand is not required for use its foot 70 is removed from its radial socket 80; the collars 62 and the back 6 and the bracket 63 are slid along the supporting arm 7 to shorten the over-all transverse length; the foot 70 is rotated to lie alongside the end of the back 6, and the bracket 63 and its lamp are swung up close to the back 6 to flatten the assembly. By such condensation of its bulk it is made small enough that it can be stored in a compartment (not shown) within the chair's back 2, out of the way and out of sight, yet ready for use when wanted.

I claim as my invention:

1. In combination with a lounge chair which includes

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a body-supporting element angularly adjustable about a transverse axis of adjustment, a side arm mounted upon said body-supporting element for such adjustment therewith, a reading stand including a supporting arm directed, in use, transversely from said side arm over said body-supporting element, spaced from and generally parallel to the latter's axis of adjustment, a base mounted on the side arm to mount said supporting arm of the reading stand for conjoint angular movement about the transverse axis of adjustment, means supporting the base from the side arm for adjustment of the base angularly about the same axis of adjustment, but relatively to the side arm whereon the base is mounted, and means reacting between said base and its side arm to retain the base, and the reading stand supported thereby, in any given position of relative adjustment about such axis.

2. The combination of claim 1, including further a back constituting part of the reading stand, means supporting the back from the supporting arm for angular adjustment of the back about the supporting arm, and means reacting between the back and the supporting arm to retain the back in any of various positions of angular adjustment about said supporting arm.

3. In combination with a lounge chair which includes a body-supporting element angularly adjustable about a transverse axis of adjustment, and a side arm, a reading stand including a supporting arm directed, in use, transversely from such side arm over said body-supporting element, spaced from and generally parallel to such axis of adjustment, a base guided in said side arm for arcuate adjustment about the chair's axis of adjustment, friction means to retain said base in any such adjusted position, and means on the base to mount said reading-stand-supporting arm.

4. The combination of claim 3, wherein the base includes an arcuate rack, and the friction means including a pinion on the chair's side arm in mesh with said rack, and a member frictionally engaged with the pinion to restrain rotation of the same.

5. In combination with a main frame for support from the floor, a main body-supporting element of a chair, and means mounting the same upon said frame for tilting about a transverse pivot axis, a reading stand for sup-

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porting reading matter, a base pivotally mounted upon and tiltable with the chair's body-supporting element, and also for tilting relative to the latter independently of tilting of the body-supporting element about its tilting axis, and a member interconnecting said base and said reading stand for the support and tilting adjustment of the reading stand with and also with relation to the chair's body-supporting element, each about its tilting axis.

6. In combination with a main frame for support from the floor, a chair seat and a chair back, means mounting each thereof upon the frame for tilting, each independently of the other, about a transverse pivot axis, a reading stand for supporting reading matter in convenient position to an occupant of the chair, a base pivotally mounted upon and tiltable with the back, and for tilting also independently of and relative to the back about a transverse axis, means reacting between the back and said base to retain the base in its position of relative adjustment, and a member interconnecting said base and the reading stand, and supporting the reading stand in any given position of adjustment in accordance with the tilting of said base with and with relation to the back.

7. The combination of claim 6, wherein said pivotally mounted base is radially socketed, and said interconnecting member includes a post removably received in said socket.

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