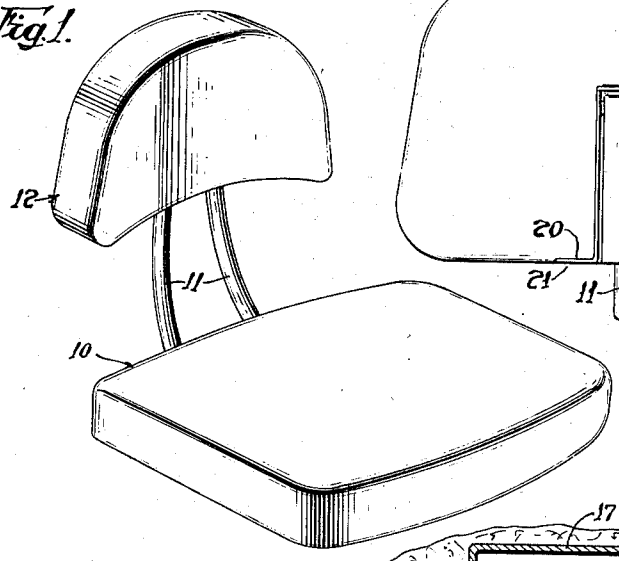
April 28, 1942. A. E. JONES 2,281,038

CHAIR

Filed March 18, 1940

Fig. 1.



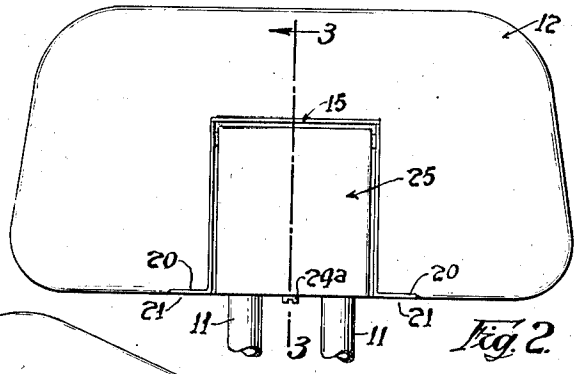


Fig. 2.

Fig. 5.

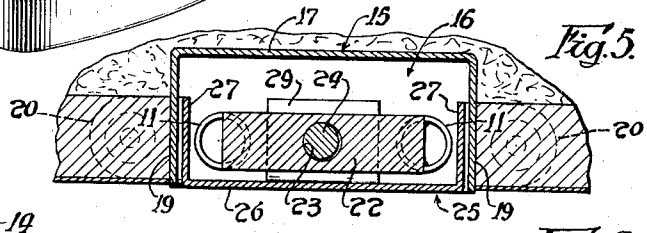


Fig. 3.

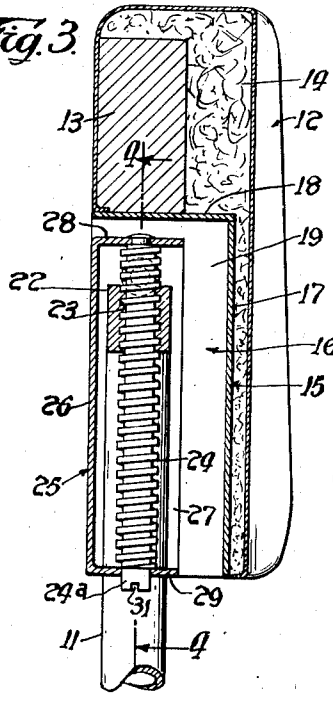
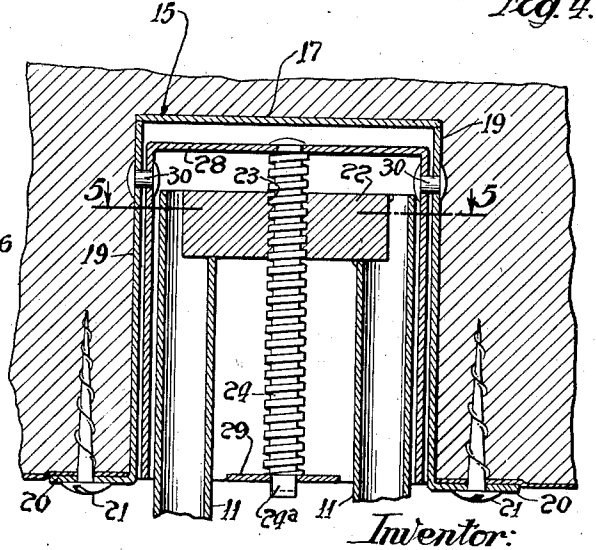


Fig. 4.



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2,281,038

CHAIR

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Application March 18, 1940, Serial No. 324,586

5 Claims. (Cl. 155—153)

This invention relates to improvements in chairs and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The chairs with which the present invention is more especially concerned are those employed in offices and similar establishments and include a backrest which may be adjusted vertically to dispose the same in that position above the seat best suiting the occupant.

One of the objects of the present invention is to provide a simple and efficient structure whereby the backrest may be adjusted quickly into the desired vertical position above the seat and which backrest will remain in the adjusted position without slippage until readjusted into another position.

Another object of the invention is to provide a vertical backrest adjustment structure of this kind wherein the parts involved are so disposed as to be substantially concealed from view, whereby the chair will better harmonize with other furniture with which it is used.

Again it is an object of the invention to provide a backrest adjustment structure of this kind which is free from squeaks and other objectional noises when in actual use and which is strong and rigid to resist such torsional stresses as may be imposed upon the backrest while in such use so that the backrest will not assume a twisted or warped position with respect to the associated seat.

The above mentioned objects of the invention, as well as others, together with the advantages thereof will more fully appear as the specification proceeds.

In the drawing:

Fig. 1 is a perspective view of a backrest structure embodying the invention when in one operative adjusted position with respect to the seat of the associated chair.

Fig. 2 is a view in rear elevation of the improved backrest structure and parts of the associated supporting arms or posts, on a scale enlarged over that of Fig. 1.

Fig. 3 is a vertical sectional view through the central portion of the improved backrest structure on a scale enlarged over that of Fig. 2, the plane of the section being indicated by the line 3—3 of Fig. 2.

Fig. 4 is another vertical sectional view through the improved backrest structure as taken on the line 4—4 of Fig. 3.

Fig. 5 is a horizontal detail sectional view through a part of the improved backrest structure as taken on the line 5—5 of Fig. 4.

Referring now in detail to that embodiment of the invention illustrated in the drawing, 10 indicates as a whole the seat of an office type of chair and 11 indicates a pair of substantially upstanding, laterally spaced arms or posts arranged at the rear of the seat to support a backrest 12 by means embodying the invention.

The backrest 12 includes a main supporting member 13 in the form of a wooden back piece and carries suitable upholstering or padding 14 at the front side thereof. In the central bottom portion of the member 13 is a recess in which is located a sheet metal casing 15. This casing forms a chamber 16 that opens through the rear face and the bottom edge of the backrest. Said casing includes a front wall 17, a top wall 18 and side walls 19. The side walls have bottom end ears 20 that extend laterally outward in opposite directions to be disposed beneath the back piece or supporting member 13 for attachment thereto by screws 21.

The top end of the posts 11—11 are operatively connected together by a nut-like cross head or bar 22 which has a vertical threaded opening 23 therein disposed centrally between said posts. In the present instance the posts 11 are shown as tubular and as having recesses in the inner sides at their top ends to receive the ends of the cross head 22 which are welded in place therein.

A coarse threaded screw member 24 is operatively engaged in the opening 23 in the cross head, with its top and bottom ends normally disposed above and below said cross head. The top end of the posts 11—11 and the cross head are disposed in an open front and bottom casing 25 that includes a rear wall 26 of a size substantially to close the open rear side of the casing 15. The casing 25 also includes side walls 27, a top wall 28 and a central tongue 29 at its bottom. The casing 25, which is of a depth from front to rear less than that of the casing 15, has its side walls disposed adjacent the side walls 19 of the casing 15 and are pivotally connected thereto as by the rivets or studs 30. The top wall 28 of the casing 25 is disposed above the cross head or bar 22 while the tongue 29 is located below said bar. The top end of the screw 24 is so engaged in the top wall 28 as to be turnable but incapable of a longitudinal movement with respect thereto. The bottom end 24a of said threaded member is reduced in diameter to bear in and extend through an opening in the tongue 29. In the bottom extremity of

said end is a cross slot 31 to receive a screw driver or other implement whereby the screw may be turned.

By turning the screw 24 in one direction or the other, it is threaded through the opening 23 in the cross head. As the casing 25 will move with the screw, due to its connection therewith as before described and as the backrest 12 is attached to said casing 25 as before described, it is apparent that the backrest will move upwardly and downwardly therewith. Thus by turning the screw 24, the backrest may be adjusted into the desired vertical position with respect to the seat. By reason of the pivotal connection 30 between the casing members 15 and 25 respectively, the backrest may rock to a limited extent under a leaning back pressure by the occupant of the chair. Should it be desired to inspect the condition of the parts within the casing 25, the backrest may be swung upwardly from the front, about the studs 30 as an axis into a horizontal position. This exposes the parts in said casing 25 to view.

As the cross head or bar 22 is fixed rigidly to the arms 11 and as a considerable portion of the screw 24 is engaged in said opening 23 in said cross head or bar, the bar 22 and the casing 25 can move relatively only in the direction of the length of the screw.

By reason of the engagement of the screw in the cross head, it is apparent that the chair as a whole may be lifted up by the backrest without causing a change in the adjusted position of said backrest.

When the backrest is in its normal vertical position with respect to the posts 11, nothing except the screw end 24*a* is apparent to indicate the adjustable nature of the backrest.

The parts are few in number and may be readily assembled so that the adjustable backrest adds but slightly to the cost of the chair of which it forms a part. There are no parts to squeak or rattle, even after a long period of use. The backrest may be readily adjusted by any one with the aid of a screw driver.

While in describing the invention I have referred in detail to the form, arrangement and construction of the parts involved, the same is to be considered only in the illustrative sense so that I do not wish to be limited thereto except as may be specifically pointed out in the appended claims.

I claim as my invention:

1. A chair embodying therein a substantially upright backrest supporting means comprising laterally spaced supporting members, a member connecting the top ends of said supporting members together and having a vertically extending threaded hole therethrough, a backrest member having a chamber opening through its bottom edge and in which the top end of said supporting members and said connecting member are disposed, a casing in said chamber and movable with said backrest, and including top and bottom portions, disposed above and below said connecting member, a screw having a threaded engagement in the threaded hole in said connecting member and operatively secured in the top and bottom portions of said casing so as to be turnable but not longitudinally movable with respect to casing, said screw having a part disposed below said bottom portion of the casing and formed for manipulation in turning said screw in one direction or the other.

2. A chair embodying therein a backrest provided with an open recess, a support secured at its lower end to the chair seat, with its upper end projecting into the recess, a pivoted closure for the recess carried by the support at its upper end, said closure having a flange at its top fitting within the recess and a tongue at its bottom, a screw swiveled at its upper end in the closure flange and its lower end rotatably mounted in the tongue, a nut secured to the support and with respect to which the screw is movable up and down, said nut having a threaded opening to receive the screw whereby upon rotation of the screw the nut will traverse the screw and the back be adjusted.

3. A chair embodying therein a backrest having a recess that opens through the bottom thereof, open bottom means mounted in said recess for a limited rocking movement about a horizontal axis, arranged longitudinally of the backrest, a support for the backrest and having its upper end disposed in operative relation with respect to said means, a nut-like member carried by said upper end of said support, and a screw having a threaded engagement intermediate its ends with said nut-like member and also having a swiveled connection with said means.

4. A chair embodying therein a backrest having a recess that opens through the bottom and the back thereof, open bottom means mounted in said recess for a limited rocking movement about a horizontal axis arranged longitudinally of the backrest and substantially closing the open back of the recess, a support for the backrest and having its upper end disposed in operative relation with respect to said means, a nut-like member carried by said upper end of the support, and a screw having a threaded engagement intermediate its ends with said nut-like member and also having a swiveled connection with said means.

5. A chair embodying therein a backrest having a recess that opens through the bottom and the back thereof, an open bottom means mounted in said recess for a limited rocking movement about a horizontal axis arranged longitudinally of the backrest and substantially closing the open back of said recess, a support for said backrest and including laterally spaced, generally upright members having their upper ends disposed in said means, a nut-like member connecting said upper ends of said generally upright members, and a screw having a threaded engagement intermediate its ends with said nut-like member and also having a swiveled connection with said means.

ARTHUR E. JONES.