Dec. 13, 1949 L. E. BLAZEY 2,491,154

ADJUSTABLE BACK REST

Filed Sept. 17, 1945

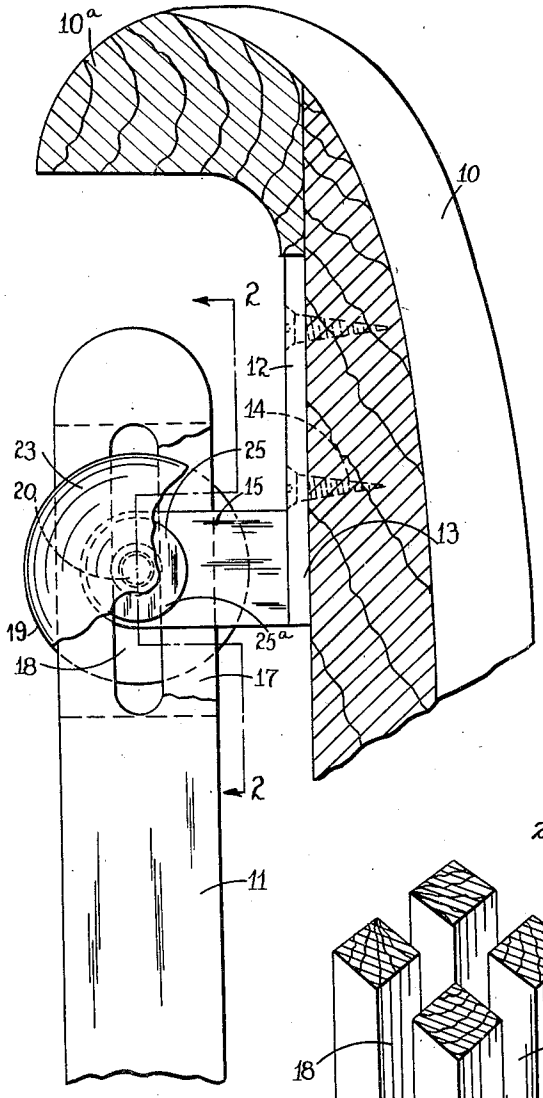


Fig. 1

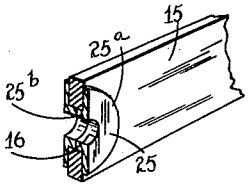


Fig. 4

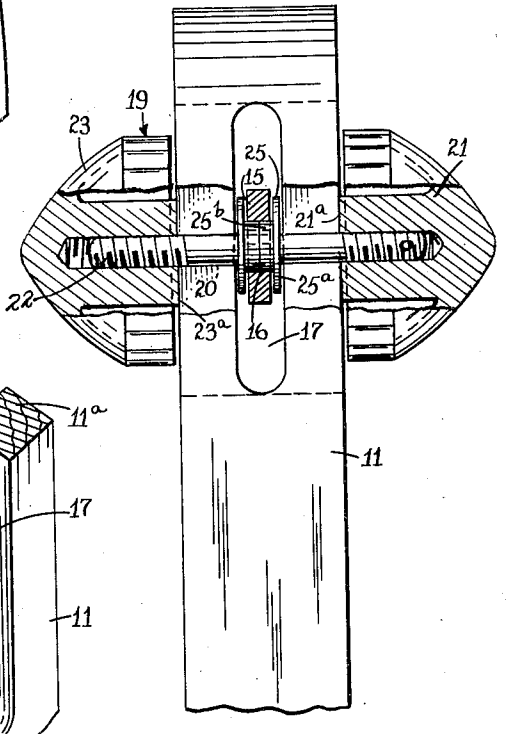


Fig. 2

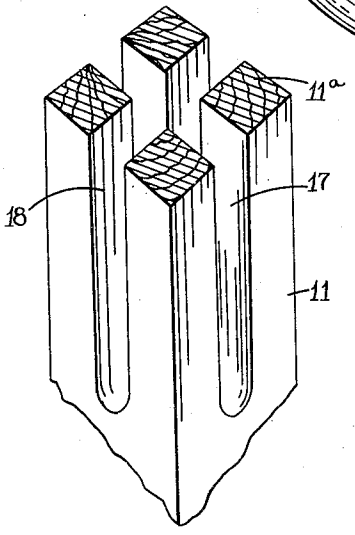


Fig. 3

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Patented Dec. 13, 1949 2,491,154

UNITED STATES PATENT OFFICE

2,491,154

ADJUSTABLE BACK REST

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Application September 17, 1945, Serial No. 616,899

3 Claims. (Cl. 155—156)

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This invention relates to back rests and as one of its objects aims to provide a back rest for a chair or the like and which is especially suitable for use on a stenographer's chair.

Another object of this invention is to provide a back rest which is vertically adjustable to different heights and for all of its height adjustments remains freely tiltable so as to accommodate itself to the back of the person using the same.

Still another object of the present invention is to provide an improved construction for a back rest of this character which is adjustable as to height and is also tiltable, and wherein the mounting means includes a clamping means for holding the back rest at the desired height and a pivot means which is substantially unaffected by the clamping pressure and permits self-adjustment of the back rest with respect to its angle of tilt.

A further object of the invention is to provide an improved construction of the character mentioned, in which the support for the back rest has intersecting slots which receive a clamping means and a pivoted mounting element and wherein the ability of the back rest to swing or tilt is substantially unaffected by the action of the clamping means.

Other objects and advantages of the invention will be apparent from the following description when taken in conjunction with the accompanying sheet of drawings, in which

Fig. 1 is an elevational view, partly in section, showing a back rest applied to a chair or the like and embodying the present invention.

Fig. 2 is a partial vertical sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a perspective view showing the construction of the support on which the back rest is mounted, and

Fig. 4 is a perspective detail view showing the shouldered washers used in the pivotal mounting for the back rest.

Further reference will now be made to the drawing for a more detailed description of the present embodiment of the improved back rest. As mentioned above and as shown in the accompanying drawing, the back rest is well suited for use on a stenographer's chair but is not limited to this particular use since it can be applied to or employed with various other forms of chairs and seats.

The improved construction of which the embodiment illustrated in the drawing represents one example, comprises in general, a back rest

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10 and an upright support 11 upon which the back rest is mounted. In this instance the support 11 is shown as being a single vertical post although the support may comprise a plurality of posts or any other structure suitable for supporting the back rest 10. When the support is a single upright post, as here shown, the post is connected to a chair seat or base (not shown) and extends upwardly at or adjacent the middle of the rear edge of the chair seat.

The back rest 10 may comprise any suitable form of back-engaging and supporting member and, as here shown, may be a transversely curved wooden member having a mounting bracket 12 attached thereto. The top portion of the back rest 10 may be in the form of a rearwardly curving projection 10a which overhangs the upper end of the post 11. The mounting bracket 12 preferably includes a plate portion 13 through which the screws 14 extend and a substantially flat lug or arm portion 15 which extends rearwardly from the back rest for cooperation with the post 11 and has an opening 16 in the outer end thereof.

The post 11 is here shown as being a wooden post of a substantially square or rectangular cross-section and having a pair of intersecting slots 17 and 18 formed therein adjacent its upper end. The slot 17 extends through the post from the front to the back thereof and lies substantially in the corresponding vertical midplane of the post. The slot 18 lies in the other vertical midplane of the post and extends through the post from one side to the other and the slots intersect each other for substantially their full length.

The back rest 10 is mounted on the post 11 with the flat lug or supporting arm 15 forming a pivoted mounting element which extends into the slot 17 and is retained therein by a clamping means 19 which includes a stem or bolt 20 extending through the slot 18 and through the opening 16 of the lug. The stem 20 is fixed to and carried by a head or clamping member 21 and has a threaded portion 22 at its other end. The stem is of a length such that when it is disposed in the slot 18 the threaded portion 22 will project beyond the opposite sides of the post. The clamping means also includes a nut or clamping member 23 which is applied to the threaded portion 22 of the stem 20.

The back rest 10 is vertically adjustable on the post 11 by shifting of the stem 20 of the clamping means 19 upwardly or downwardly to the slot 18 so as to locate the back rest at a height above

the chair seat which is most satisfactory to the person using the chair. It is desirable to be able to releasably clamp the back rest at such a desired elevation and this is accomplished by tightening the member 23 of the clamping means so as to cause the abutment portions 21*a* and 23*a* of the clamping members to clampingly engage the side faces of the post 11.

It is important that the back rest 10 be free to swing or tilt relative to the post 11 and that such swinging or tilting be substantially unaffected by the clamping pressure applied by the members 21 and 23. To this end the slot 17 is made of width materially greater than the thickness of the lug 15 and means is applied to the lug to prevent the clamping pressure from gripping the same in the event that the corner portions 11*a* of the post are sprung inwardly by the clamping pressure applied thereto. The means for inhibiting the application of clamping pressure to the lug 15 is here shown in the form of a pair of shouldered washers 25 having plate portions 25*a* disposed on opposite sides of the lug and stem or shoulder portions 25*b* extending into the lug opening 16 from opposite sides thereof.

As shown in Fig. 2 the washers 25 are mounted on the stem 20 of the clamping means 19 and the shoulder portions 25*b* are of a combined length such that they hold the plate portions 25*a* spaced apart a distance somewhat greater than the thickness of the lug 15. In the construction just described, the lug 15 will always swing or pivot freely on the stem 20 or the shoulder portions 25*b* regardless of the amount of clamping pressure applied by the members 21 and 23. This will result in the back rest 10 being always capable of tilting freely relative to the post 11 so that the back rest can adjust or accommodate itself automatically to the back of the person using the chair.

From the foregoing description and the accompanying drawing, it will now be readily understood that this invention provides an improved back rest construction for stenographers' chairs and usable also on various other forms of chairs and seats and wherein the back-engaging member is adapted to be adjusted as to height relative to the chair seat and to be clamped at the desired adjustment. It will also be seen that the improved construction embodies novel means permitting the back rest to tilt freely for adjustment to the back of the person using the chain and means for preventing the clamping action of the adjusting means from interfering with such desired free tilting of the back rest. Additionally it will be seen that the mounting means for the back rest is extremely simple since it embodies a minimum number of parts and there are no loose parts to become displaced or mislaid.

Although the improved back rest has been illustrated and described herein in some detail, it will be understood, of course, that the invention is intended to include all changes and modifications coming within the scope of the appended claims.

Having thus described my invention, I claim:

1. In a chair or the like, a support having a pair of intersecting slots therein, a back rest having a mounting element extending into one of said slots, clamping means extending through the other of said slots and through said mounting element and operable for applying clamping pressure to said support for holding said back rest at a desired location along said slots, said back rest being tiltable relative to said support by swinging of said mounting element on said clamping means, and means for preventing said clamping pressure from being applied to said mounting element so as to leave the latter freely swingable.

2. In combination, an upright chair post having a pair of intersecting slots extending therethrough, a back rest having a mounting lug projecting therefrom and extending into one of said slots, clamping means including a stem extending through the other of said slots and through said lug and operable for applying clamping pressure to said post for holding said back rest at a desired elevation thereon, said back rest being tiltable relative to said post by pivoting of said lug on said stem so as to be self-adjusting to the back of the person using the chair, and shouldered washer means for preventing said clamping pressure from being applied to said lug.

3. A back rest structure as defined in claim 2 in which said lug is flat and has an opening therein of larger size than said stem, said washer means comprising washers disposed on said stem at opposite sides of said lug and having shoulder portions extending into said opening of a length to prevent said clamping pressure from being applied to said lug.

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