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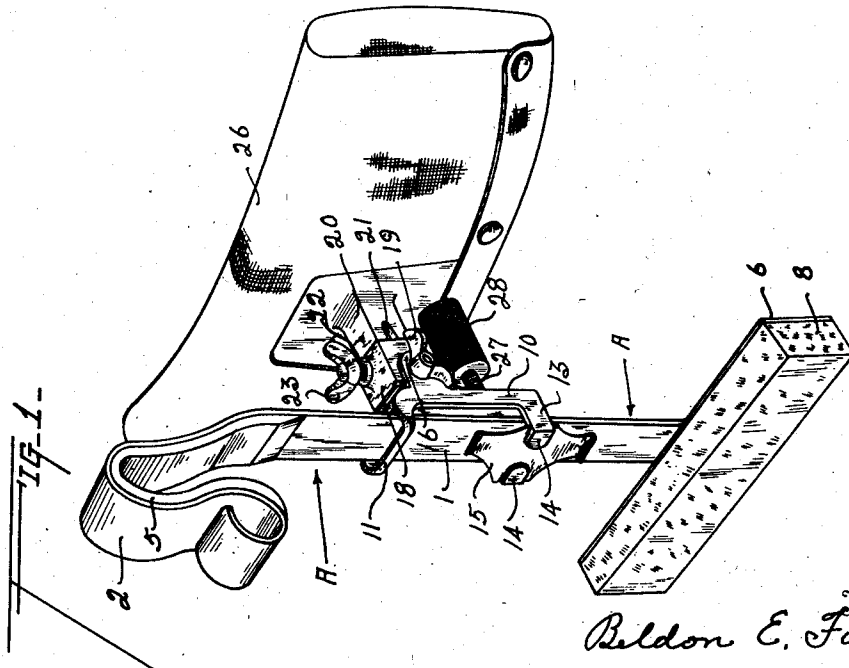
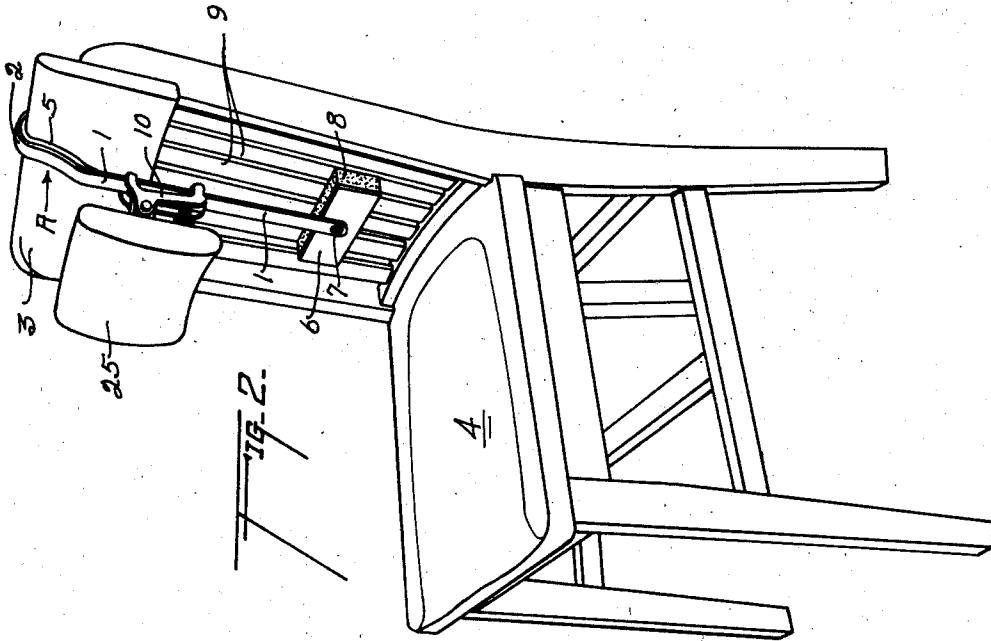
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2,304,349

AUXILIARY BACK REST

Filed April 17, 1939

2 Sheets-Sheet 1



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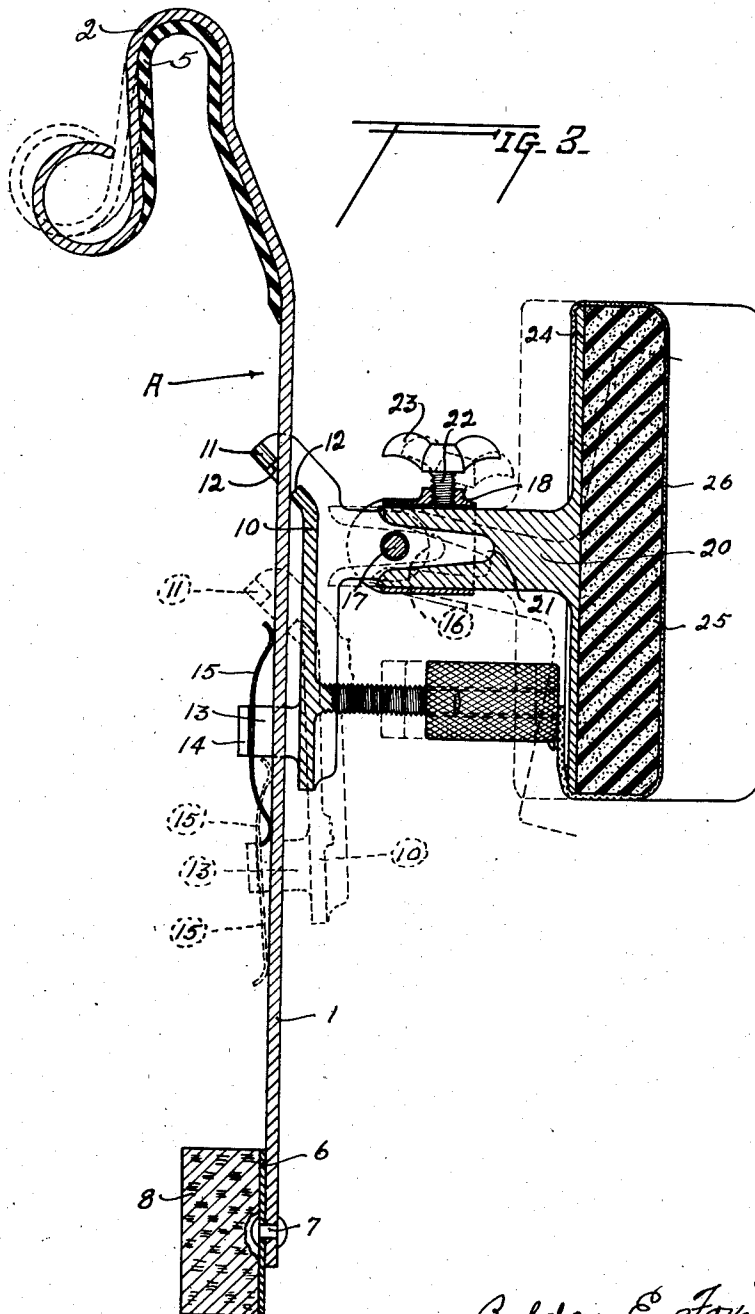
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## UNITED STATES PATENT OFFICE

2,304,349

## AUXILIARY BACK REST

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Application April 17, 1939, Serial No. 268,246

7 Claims. (Cl. 155—158)

The invention relates to auxiliary backs for seats, particularly chairs, and pertains more particularly to backs for contacting only the "small" of a person's back, such as is accomplished by "posture chairs" now most commonly used by stenographers, and others whose work requires them to remain seated over long periods of time.

Usual "posture chairs" are provided for the purpose of preventing "slumping," and accomplish their purpose by contacting only the "small" of a user's back. The back is therefore caused to assume an erect position and consequently fatigue is greatly decreased.

The prime object of the present invention is the provision of an auxiliary back rest which may be removably installed upon the backs of usual chairs, or other seats, and which will accomplish all of the desirable purposes of a usual "posture chair."

Posture chairs now being sold are somewhat expensive, and are consequently beyond the reach of many persons in actual need of them. It is therefore an object of the present invention to provide an auxiliary back which is comparatively inexpensive to manufacture, and by which any usual desk chair may be converted into a "posture chair" to all practical purposes.

Another object of the invention is the provision of an auxiliary back rest which is adjustable upwardly or downwardly to accommodate persons of different heights.

Further objects of the invention are: to provide a back rest of the class described which is tiltably adjustable; which is adjustable horizontally; which is attachable to chair backs of various types; which has a minimum of moving parts to become worn or get out of order; which has a presentable appearance; which is durable; and, which will be efficient in accomplishing all of the purposes for which it is intended.

In the drawings:

Figure 1 is a rear perspective view;

Figure 2 is a perspective view of the back rest operatively installed upon a usual straight backed chair; and,

Figure 3 is a side elevational sectional view of the device.

Like characters of reference designate like parts in all of the figures.

One practical embodiment of the invention is illustrated in the accompanying two-sheet drawings, wherein:

The reference character A indicates as a whole a supporting element which, in the present embodiment, consists of a strap 1 of spring steel. The upper portion of the support has its end bent to form a hook 2 for embracing an upper cross-member 3 of the back of a usual chair 4. The nether or inside face of the hook 2 is preferably covered by a rubber pad or sheet 5 which

is glued or otherwise attached thereto for protecting the cross-member 3. The lower end of the support 1 has a cross-arm 6 attached thereto by a rivet 7 or other suitable detent, and the cross-arm is preferably faced with a resilient pad 8 for contacting and bridging usual rungs or slats 9 of the chair back. The above enumerated elements constitute the complete support structure of the device, and may in some instances be altered somewhat in order to adapt them for installation upon over-stuffed chairs, automobile seat backs, and the like. However, it is pointed out that the hook 2 and the cross-arm 6 act jointly to prevent a twisting movement of the device with relation to any chair back upon which it may be installed.

As a means for contacting the small of a person's back, and supporting the same in an adjustable manner, the following described structure is provided.

An elongated bracket 10 is equipped at its upper end with a flange 11 which extends at approximately a forty-five degree angle from the body of the bracket, and the flange 11 is provided with a transverse through slot 12 of a sufficient length to receive the strap 1, and of a width slightly greater than the thickness of the strap. The lower end of the bracket has two parallel spaced legs 13 which project perpendicularly from its body to embrace the opposite side edges of the strap 1. The free ends 14 of the legs 13 are bent toward each other and over the rear face of the strap 1, and a leaf spring element 15 is interposed between the legs and the strap to normally urge the body of the bracket toward the strap 1.

As illustrated in dotted lines in Fig. 3, the lower end of the bracket 10 may be manually moved against the tension of the spring 15, away from the front surface of the strap 1, and when in this position, the bracket, together with the spring, may be slid vertically along the strap to various heights. When in its normal position with relation to the strap, the action of the spring 15 causes the opposite edges of the slot 12 in the flange 11 to impinge the front and rear surfaces of the strap, and thus prevent movement of the bracket 10 along the strap 1.

Adjacent its upper end, the forward face of the bracket 10 is equipped with two forwardly extending parallel spaced ears 16 which are alignedly perforated transversely to receive a pivot pin 17. A box-like element 18 is pivotally mounted between the ears 16 upon the pivot pin 17, and a wing-nut 19 threaded upon one end of the pin acts to compress the ears toward each other to impinge the box-like element 18 therebetween. This impingement acts to hold the element 18 against movement when it is adjusted to various arcuate positions with relation to the ears.

The box-like element 18 slidably receives a stem 20 which snugly fits therein, and which has aligned grooves 21 in its free end to pass over the pivot pin 17. A stud bolt or set screw 22, threaded through the upper face of the element 18, acts to retain the stem 20 in various positions within the element 18. The stud 22 is preferably equipped with a winged head 23. The end of the stem 20, opposite from that within the element 18, is attached to or made integral with an arcuate back rest plate 24, the forward face of which is covered by a resilient pad 25 for contacting a person's back. If desired, the pad 8 and cross-arm 6, and the pad 25 and plate 24 may be covered by a removable cloth cover such as illustrated in Fig. 1 and indicated by the reference numeral 26.

In the structure above described herein, it may be seen that movement of the stem 20 horizontally to various positions of adjustment within the element 18 makes it possible to vary the distance between the strap 1 and the forward face of the pad 25, in order to suit chairs of various depths of seat, or to accommodate persons of various girth. By adjusting the box like element 18 to various positions upon the pivot pin 17, the back rest is capable of accommodating chairs of different back slope or slant. In order to assist the wing nut 19 to hold the element 18 selectively positioned, and in order to support part of the thrust occasioned by contact of a person's back with the pad 25, the forward face of the bracket 10 is equipped with a perpendicularly extending threaded stem 27 and an elongated thrust nut or knob 28 which is adapted to bear against the rear surface of the back rest plate 24.

As above described, the bracket 10 is adjustable vertically along the strap 1.

It will therefore be apparent that the back rest is adjustable vertically, horizontally and tiltably, and may be retained in any and all of the various adjusted positions. It will also be seen that due to the inherent resiliency of the spring steel, the hook 2 may be installed upon chair backs having different thickness of cross-members 3.

It is further pointed out that when in its installed position upon a chair, the strap 1 is spaced from the rungs 9 of the chair back, and consequently, the strap may move slightly toward and from the rungs due to its resiliency. This gives the effect of a spring backed chair, which is a feature of most "posture chairs" of present design.

It is pointed out, that the relationship of the elongated bracket 10 with the supporting element A, is such that the pressure of a person's back against the back rest increases the binding effect of the edges of the slot 12 with the supporting element, and consequently, there is no chance of the back rest being inadvertently moved along the supporting element during the time a person is leaning against it. This feature permits the spring 15 to be constructed with only sufficient resilient strength to prevent inadvertent movement of the back rest, along the support, during the time no one is leaning against the back rest. The light weight spring 15 therefore permits the back rest to be moved adjustably along the support with less effort than would be needed if a heavy spring was required.

In order to accommodate the device to overstuffed chairs, and the like, it will of course be

necessary to change the form of the hook 2, and to provide two of them spaced apart to give a wider contact with the chair back. I therefore do not wish to limit myself only to the embodiment shown in the drawings and described herein, other than I am limited by the scope of the appended claims.

I claim:

1. As a sub-combination in an adjustable back-rest attachment for seats, a back-rest supporting bracket for adjustable disposition along a vertical support, including: a plate-like bracket having a rearwardly bent upper portion, said portion having a slot therein to slidably receive a vertical support strip; and resilient means for urging the lower end of said bracket toward said support so as to bind the slotted portion into frictional engagement with the support and prevent vertical movement of the bracket.

2. Organization as described in claim 1, and means carried by the bracket for pivotally supporting a back-rest.

3. Organization as described in claim 1, and: means carried by the bracket for pivotally supporting a back-rest; and means also carried by the bracket for supporting the back-rest at various distances from the support.

4. An adjustable back-rest attachment for seats including: a vertical support adapted to be attached to the back of a seat; a plate-like bracket having a rearwardly bent upper portion, said portion having a slot therein to slidably receive the vertical support; resilient means for urging the lower end of the bracket toward the support so as to bind the slotted portion of the bracket into frictional engagement with the support and prevent vertical movement of the bracket; and a back-rest carried by the bracket.

5. An adjustable back-rest attachment for seats including: a vertical support adapted to be attached to the back of a seat; a plate-like bracket having a rearwardly bent portion, said portion having a slot therein to slidably receive the vertical support; resilient means for urging one end of the bracket toward the support so as to bind the slotted portion of the bracket into frictional engagement with the support and prevent vertical movement of the bracket; and a back-rest carried by the bracket.

6. An adjustable back-rest attachment for seats including: a vertical support adapted to be attached to the back of a seat; a plate-like bracket having a laterally bent portion; said portion having a slot therein to slidably receive the vertical support; resilient means for urging one end of the bracket in a lateral direction with relation to the support so as to bind the slotted portion of the bracket into frictional engagement with the support and prevent vertical movement of the bracket; and a back-rest carried by the bracket.

7. An adjustable back-rest attachment for seats including: a vertical support adapted to be attached to the back of a seat; a plate-like bracket having a laterally bent portion; said portion having a slot therein to slidably receive the vertical support; means for urging one end of the bracket in a lateral direction with relation to the support so as to bind the slotted portion of the bracket into frictional engagement with the support and prevent vertical movement of the bracket; and a back-rest carried by the bracket.

BELDON E. FOX.