Dec. 5, 1933. H. E. SMITH 1,937,920

PAD FOR CHAIR AND SEAT BACKS

Filed May 18, 1931

Fig. 1.

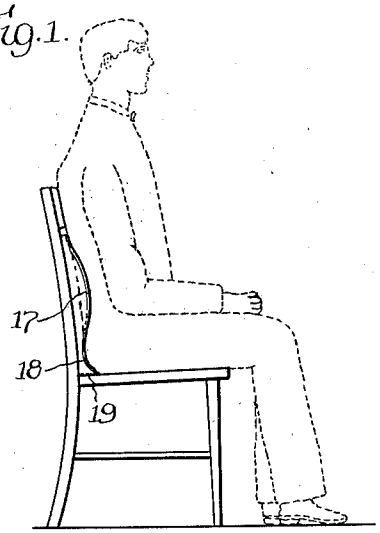


Fig. 2.

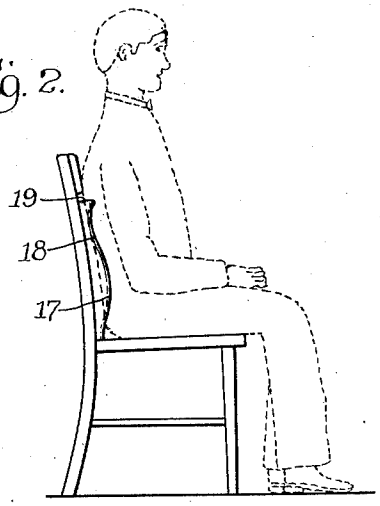


Fig. 6.

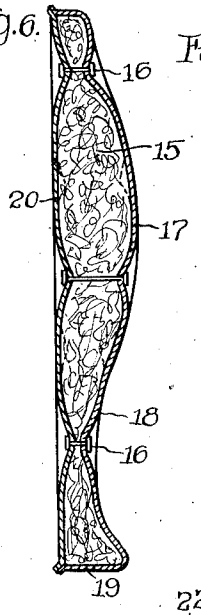


Fig. 4.

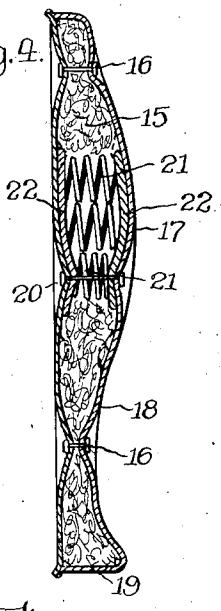


Fig. 3.

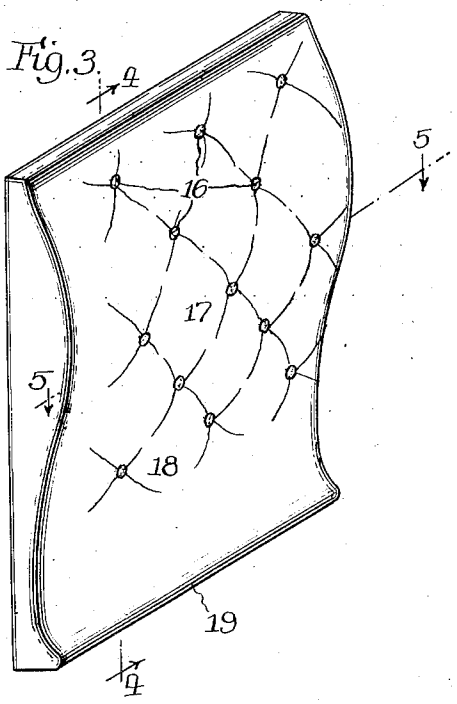
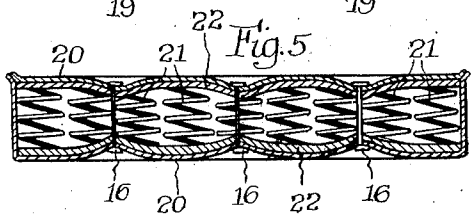


Fig. 5.



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1,937,920

PAD FOR CHAIR AND SEAT BACKS

Harry Elmer Smith, Chicago, Ill.

Application May 18, 1931. Serial No. 538,171

2 Claims. (Cl. 155—182)

This invention relates to chair and seat accessories, and has reference more particularly to cushions or pads designed to supplement the supporting action of the backs of chairs, sofas, automobile seats, and the like and afford greater ease and comfort to the occupant.

Pads or cushions of this character formed with a convex front surface designed to more or less perfectly fit the small of the back so as to form a direct support for the latter, have heretofore been proposed; but, so far as I am aware, none of these devices has been scientifically designed and constructed to secure maximum ease and comfort in use, or to be adaptable to persons of different lengths of back.

Accordingly, a leading object of the present invention has been to provide an improved form-fitting pad for the backs of chairs, automobile seats, etc., well designed to afford a comfortable back-rest especially for the small of the back and the buttocks of the occupant, regardless of the pitch or angle of the chair or seat back to which it is applied.

Another object has been to provide a pad of the character above described that shall be adaptable, by mere inversion thereof, to persons of less than average height or length of back.

Another object has been to provide a pad or cushion of the character specified designed to automatically adjust itself to the contour of the back of the user, and to afford a highly efficient cushioning effect.

Still other objects and attendant advantages of the invention will be apparent to persons skilled in the art from the following detailed description taken in connection with the accompanying drawing, in which I have illustrated two practical embodiments of the invention differing only in respect to pad filling, and in which—

Fig. 1 is a side view of a chair, with my improved pad applied to the back thereof, in connection with the human figure shown in dotted lines, lilustrating the form-fitting character of the pad.

Fig. 2 is a view similar to Fig. 1, showing how, by merely inverting the pad, it is well adapted to serve as a comfortable back-rest to a person of less than average stature or length of back.

Fig. 3 is a perspective front elevation of the pad.

Fig. 4 is a vertical section, taken on the line 4—4 of Fig. 3.

Fig. 5 is a horizontal section taken on the line 5—5 of Fig. 3.

Fig. 6 is a vertical section, similar to Fig. 4, illustrating a simpler pad filler.

Referring to Figs. 1 to 5 inclusive, the pad, in general, comprises a casing or slip of flexible material, such as canvas, burlap, leather or any other suitable material, and a yieldable resilient filler or stuffing therein. For the casing, leather is preferred on account of its being cooler in service, but the substance of which the casing is formed is immaterial. The casing is stuffed with any suitable soft or yieldable and more or less resilient filler 15 such, for instance, as hair, cotton, moss, sea grass, felt, or the like, and the front and rear sides of the pad are tied together by spaced lines of tufting indicated at 16.

A horizontal intermediate portion 17 of the pad is made of substantially greater thickness throughout its full width than the upper and lower horizontal portions, as best shown in Figs. 3 and 4, the front wall of this intermediate portion being rounded or convexed vertically to generally fit the concave of the back of the user, commonly known as the small of the back. This protuberant convex portion of the pad is preferably, and as shown, located somewhat above the vertical center of the pad, and directly therebeneath the front face of the pad is formed with a concave 18 that merges into a narrow foot portion 19 at the lower edge of the pad, which is sufficiently stiff to support the pad in upright position. As shown in Fig. 1, the protuberance 17 fits into the small of the back, while the concave 18 fits the buttocks, the foot 19 being stepped on the seat of the chair and its toe portion projecting to a slight extent beneath the buttocks.

The flexible casing or slip is designated as an entirety by 20, and the rear wall thereof, being flexible in all directions, readily adapts itself to the contour of the chair back when the occupant is leaning back on the pad.

As shown in Figs. 3 and 4, the thickened intermediate protuberant portion 17 of the pad is preferably additionally stuffed with several transverse rows of light coil springs 21, and where such springs are used, the ends of the springs will preferably be footed against felt or other mats 22 of sufficient thickness to effectively distribute the thrust of the springs so as to prevent anything like local or individual thrusts of the springs through the walls of the casing.

In Fig. 6, I illustrate a pad filling generally similar to that shown in Fig. 4, but omitting the springs 21 and mat 22, thus being somewhat cheaper to manufacture, and quite serviceable for the purposes of the invention.

In the event that the pad is to be used by a short or short-waisted person, the small of whose back lies somewhat lower than in the case of a person of average, or more than average, height, by simply inverting the pad, as shown in Fig. 2, the protuberance 17 lies somewhat lower, thus fitting and supporting the small of the back for such under-sized person; and, in such a case, the foot portion 19 forms a shoulder support.

Both forms of the invention and more especially the spring-filled form illustrated in Figs. 3 and

4, are, to a limited extent, self-adjusting to the curvature of the back of the chair occupant, by reason of the fact that the convex surface of the intermediate back-engaging portion 17 of the pad is yieldable not alone transversely, but to some extent up and down. Consequently, if the intermediate portion is a trifle low for the figure of the user, its lower portion will yield in an upward and rearward direction, thus causing the bearing surface to conform to the concave of the back; and, similarly, if it is slightly too high for the figure of the user, the upper part of the intermediate portion 17 will yield downwardly and rearwardly under the pressure of the portion of the back just below the shoulders, thus causing the intermediate portion to adjust itself to the curvature of the small of the back. Where, however, the pad is used by a tall or medium height person, it will be placed against the back of the chair in the position illustrated in Figs. 1, 3, 4 and 6; and where used by a short, stocky person, it will preferably be inverted, to bring the convex back-engaging portion lower, as shown in Fig. 2. The pad is thus usable with entire comfort by different persons possessing a wide range of height between shoulders and buttocks.

While the device is capable of use to afford increased ease and comfort of posture on all kinds of seating devices, it is especially useful to this end on automobile seats, the permanent upholstering of which in most cases is designed with but little thought to affording a comfortable and form-fitting support for the backs of the occupants.

In many pads of this type, the rear wall of the pad is a flat metal or wooden member that is, of course, rigid, and will fit only substantially flat chair backs. It will be observed that in the described construction the rear wall of the pad is flexible, so that it will automatically conform to the shape of the chair back, and hence is usable to advantage with chairs having transversely concave backs.

I claim:

1. A form-fitting, self-supporting cushion pad for application to the back of a seating device, said pad formed on one side thereof with a convex protuberant portion extending from side to side thereof and adapted to conform to the small of the back, a vertically concave portion beneath said protuberant portion adapted to conform to the buttocks, and a pad-supporting foot portion underlying said concave portion adapted to be stepped on the seat of the seating device.

2. A form-fitting, self-supporting cushion pad for application to the back of a seating device, said pad formed on one side thereof with a yielding convex protuberant portion of substantially uniform thickness extending the full width of the pad and adapted to support the small of the back, a vertically concave portion extending the full width of the pad below and parallel with said protuberant portion, and a forwardly projecting foot portion continuous with said concave portion and, with the latter, forming a support for the buttocks.

HARRY ELMER SMITH.