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M. R. HUTCHISON

2,156,629

SEAT

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Fig. 1

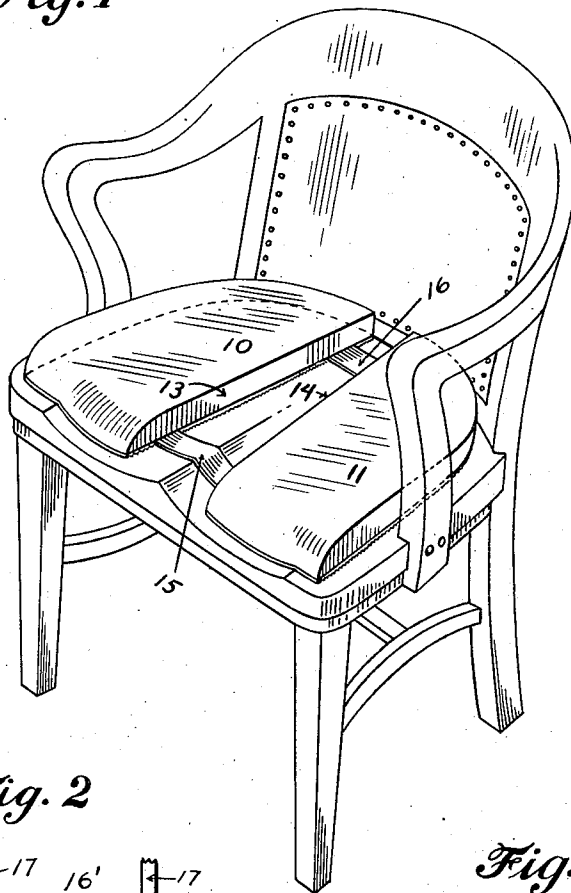


Fig. 2

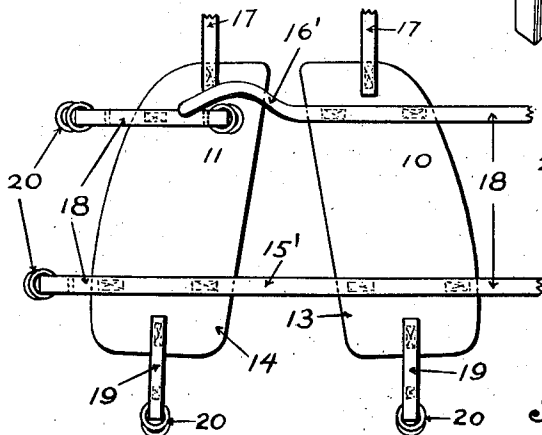


Fig. 3

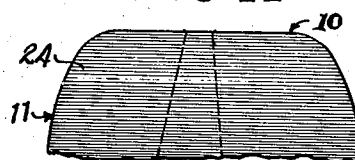
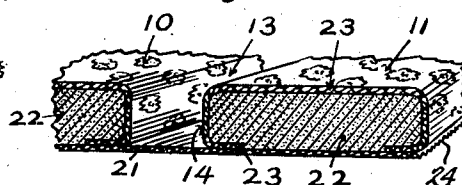


Fig. 4.

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SEAT

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7 Claims. (Cl. 155—182)

My present invention relates to seats and more particularly, to seats of the type generally referred to as chairs, stools, pads and the like.

I have learned, after extensive research and investigation, that parts of the human body, if subjected to undue, or abnormal abuse, will result in the creation of temporary, unnatural conditions, within the affected areas and, frequently, of permanent injury, as well. As is often the case, nature, in its endeavor to offset the temporary conditions, causes adjustments to be made in the affected tissues, or strives to protect the affected parts by the formation of tissues, which almost invariably result in permanent alterations or injury to the parts, unless the abuse is discontinued. For example, continued unnatural pressure on the prostate gland, in the male, may result in permanent injury to the gland and to the urethra, which it surrounds. The gland, being partly muscular and partly glandular, may become the source of great pain and discomfort if the muscular portions unduly are abused by excessive pressure, or the like. Such pressures may result in a thickening of the glandular portions and/or in the swelling of the entire structure, with the possible development of bladder and genital disorders. Another example is, the often experienced irritation of the sciatic nerve as a result of undue strains imposed thereon by the muscles of the gluteal and thigh regions of the body.

Again, it is well known that, when the circulation of the blood is decreased, the parts supplied by such decreased circulation are affected, even to the extent of permanent deterioration, as in severe cases. Unnatural constriction of the blood vessels causes, if prolonged by pressure of the muscles, disturbances in the parts supplied by such vessels.

I attribute a large percentage of such disorders to the unnatural posture of the human body, while sitting on the usual seats and, to the fact the standard designs of seats, in use today, do not properly support the tissues of the body, in engagement therewith and immediately associated therewith. Many tests and examinations, recently made by me, clearly indicate that such temporary or permanent conditions may be relieved, or eliminated, by the use of a seat made in accordance with the principles of my present invention, which principles I will hereinafter describe in detail and illustrate in the accompanying drawing attached hereto and made a part hereof.

In the drawing, Figure 1 is a perspective view of a conventional type of chair having positioned, thereon, a preferred form of my invention; Figure 2 is a rear plan view of a modified form; Figure 3 a cross-sectional view, in perspective, of another modified form of my invention; and

Figure 4 is a bottom plan view of a portion of the seat shown in Figure 3.

The pelvic region of the human body, particularly in middle aged and older people, is a frequent source of ailment or complaint, largely because of the many important glands and organs located within that zone. Because of the fact the average man, today, assumes a sitting position, for a greater percentage of his wakeful hours than before, the muscles, glands, vessels and organs, of the pelvic region, naturally are subjected to greater and prolonged stresses and tensions than before. This is particularly true in cases where the surface, on which he sits, is not designed properly to support those portions of the anatomy in contact therewith. Where a hard, flat surface is used, there is a tendency, on the part of the muscles, to flatten out, causing a pressure to be exerted upon the blood vessels, organs and nerves located within the area of the "crotch". In cases where a pad is used to afford a soft, resilient seat, the undesirable pressures and conditions, affecting the vessels and organs, often are accentuated, instead of being relieved as is generally believed to be the case.

I am aware that seat cushions and pads, of various types and designs, heretofore have been used in an attempt to counteract the conditions just described but, so far as I am aware, no attempt has been made to meet the conditions in the manner hereinafter described. For example, divided seats and pads have been sold, wherein two or more sections of resilient material are arranged parallel to the medial line of the supporting surface but my investigations clearly show that such devices often are more harmful than obtains when a solid cushion is used, because no support, at all, is given the tissues surrounding the end of the spine and to the organs and tissues surrounding and within that region. In those cases where a U shaped pad is resorted to, there is no material benefit derived over that obtained by the use of a solid pad.

As will be seen from the accompanying drawing, I propose to use a seat, consisting of two main supporting members, designated as 10 and 11, which may be composed of sponge rubber, or other suitable material, covered or not, as desired, with a suitable decorative material, such as velvet or the like. The two members, 10 and 11, have their edges cut, as illustrated, to conform, generally, to the shape assumed by those portions of the anatomy in contact therewith and to the general shape and design of seats and chairs in use today. In order properly to support the muscles and organs in the pelvic region and pressure against the end of the spine or coccyx, I arrange the two main seat members, 10 and 11, so that the edges, 13 and 14, are nearer together at the rear portion of the seat than at the front

edges thereof. In actual use, I have found that a preferred spacing of the seat requires a clearance of two inches at the rear, and four and one half inches at the front. This produces a pronounced V-shaped space, between the two members, with the bottom of the V at the rear.

By the arrangement, just described, I obtain a proper support for all portions of the body in contact with the seat, which results in a natural condition being maintained in said parts, during the sitting period.

When the body engages the two members, 10 and 11, the muscles of the thighs and the muscles of the hips, are flexed and/or compressed, causing only a slight pressure to be exerted on the tissues and glands associated therewith. If the pressure is not excessive, such as is caused by a natural posture or by a properly designed seat, the muscles, organs, etc., are not unduly affected but, if the pressure is excessive, or unnatural, as in the case of sitting on the old types of seats, a temporary condition of fatigue is created which, if not corrected, often results in permanent injury. For example, undue pressure of the affected muscles, against the prostate gland, may cause excessive pressure of the gland upon the urethra which it surrounds, possibly resulting in bladder and prostate gland disorders. Continued pressure may cause the glandular portions of the gland to swell and thicken, causing a permanent injury.

In the preferred form of seat shown in Figure 1 the straps 15 and 16 control the spacing between the seat members and fixedly hold the seat members spaced apart. The straps 15 and 16 are made of a material, such as heavily compounded rubber, which is rigid enough to prevent the two seat members from being displaced relative to each other.

In Figure 2, I illustrate a construction wherein the seat members, 10 and 11, are held together by flexible straps, 15' and 16', the rear strap being shown as being adjustable, to permit the user to adjust the distance, at the rear of the seat, to fit his individual requirements. It is obvious, however, that both straps, 15' and 16', could be made adjustable if desired. Suitable straps, 17, 18 and 19, and rings 20, or other suitable fasteners, are provided, to secure the seat members to the supporting surface.

Figure 3 illustrates, in cross-section, a modified construction, wherein the space between the edges, 13 and 14, is permanently fixed by means of a rubber, or other suitable material, member 21, which is secured by cement, stitching, or in any suitable manner, to the rubber pads, 22, and to the turned-in edges of the upholstering material, 23, as will be understood. The member, 21, may be smooth or corrugated, on one or both sides, as desired, to facilitate the attachment to the pads and to prevent undue movement on the surface upon which the seats are to be used. For example, the member 21 may be provided with the corrugations 24.

From the foregoing, it will be seen that I have evolved a new and novel seat for the support of the human body by which the body is supported in such a manner as to eliminate all undue pressures and tensions in the center thereof.

While I have illustrated and described certain embodiments of my invention, it is to be clearly understood that various modifications may be made in both the general form and design of the

seat members, as well as in the nature of the materials used and the manner of securing the members in their proper spaced relation, without departing from the spirit and scope of my invention.

I claim:

1. As an article of manufacture, a seat for the support of the human body comprising two spaced cushion members and means for securing said members in spaced relation, the space between said members being less at the rear than at the front of the cushions, and being sufficient at the rear to enable said members to comfortably support the body while avoiding pressure on the central portion of the pelvic region.

2. As an article of manufacture, a seat for the support of the human body comprising two spaced cushion members and means for securing said members in spaced relation, the space between said members being less at the rear than at the front of the cushions, and being sufficient at the rear to enable said members to comfortably support the body and great enough so that it will not be closed by the weight of the body on said members but will permit circulation of air between the two cushion members.

3. As an article of manufacture, a seat for the support of the human body comprising two spaced cushion members and means for adjustably securing said members in spaced relation, the space between said members being less at the rear than at the front of the cushions, and being sufficient at the rear to enable said members to comfortably support the body while avoiding pressure on the central portion of the pelvic region.

4. As an article of manufacture, a seat for the support of the human body comprising two spaced cushion members and means for securing said members to a supporting surface in spaced relation, the space between said members being less at the rear than at the front of the cushions, and being sufficient at the rear to enable said members to comfortably support the body while avoiding pressure on the central portion of the pelvic region.

5. As an article of manufacture, a seat for the support of the human body comprising two spaced cushion members and means for securing said members in spaced relation, the space between said members being less at the rear than at the front of the cushions, and being sufficient at the rear to enable said members to comfortably support the body while avoiding pressure on the central portion of the pelvic region, said securing means being corrugated with corrugations extending in a direction transversely of said space between the two cushion members.

6. A seat as defined in claim 1 in which the bottom of the seat is provided with frictional means to prevent displacement of said seat relative to a supporting surface therefor.

7. As an article of manufacture, a seat for the support of the human body comprising two spaced cushion members; and means for securing said members in spaced relation with the space between said members less at the rear than at the front of said seat, said space at the rear of the seat and the thickness of said cushions being sufficient to enable said cushions to support the body comfortably without pressure on the central portion of the pelvic region.

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