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2,538,880

CUSHION

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FIG. 1.

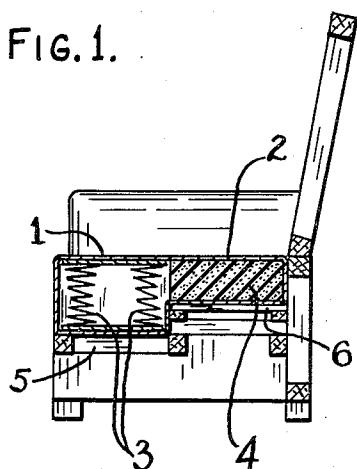


FIG. 2.

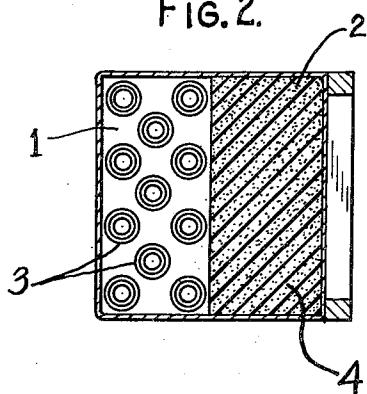
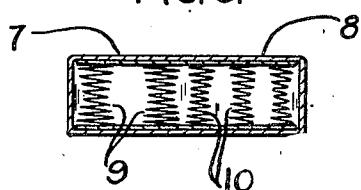


FIG. 3.



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## UNITED STATES PATENT OFFICE

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## CUSHION

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Application January 5, 1946, Serial No. 639,367  
In Brazil September 10, 1945

1 Claim. (Cl. 155—179)

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This invention relates to new and useful improvements in cushions and particularly to seat cushions for chairs, benches and the like.

Customarily, seat cushions are either of uniform resiliency throughout their surfaces or have certain areas, e. g. the front edge, less resilient than the inner seat portion which carries the main weight of the body. The last-mentioned type of cushion is used mainly to protect the edges of automobile seats or the like from breaking down or to tilt people back in their seats.

It is the object of my invention so to provide in a cushion areas of resiliency varying in inverse proportion with the weight of the parts of the body which normally bear against them. Thus whether the seating surface is horizontal, bulging, or tilted back, the forward edge will not bind the anterior part of the thigh as would be the case with a cushion having a relatively stiff edge or one which is uniformly resilient. Also, the area bearing the heaviest load being the least resiliency is less likely to break down than in conventional cushions.

The cushion constructed in accordance with my invention may be divided into two zones which extend throughout its width. The front zone comprises the area which bears the weight of part of the thigh and of the legs of a person in a normal sitting position and is the most resiliency. The back zone comprises the area which normally supports the greatest weight, and is the least resiliency.

The elastic material used in the cushion may be metal springs, sponge rubber or any other suitable resiliency substance. If the sponge rubber is used, the desired resiliency of the zones may be insured by selecting material of the proper specific density. For instance, the zone supporting the thigh and legs will have much lower specific density than the zone supporting the rest of the body.

The zones of varying elasticity may all be enclosed within a common covering, or they may be in individual, separate sections attachable by any conventional means to one another or within a frame.

Whether separable or not, the zones, especially the back zone, can be constructed to suit different types of people. For instance, a short heavy person would need a back zone of an elasticity lower with respect to the front zone than a tall thin person.

Typical embodiments of the invention will now be explained in connection with the drawings in which:

Fig. 1 shows a vertical cross section of a combination spring and sponge rubber cushion in a chair;

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Fig. 2 shows a horizontal cross section of a combination spring and rubber cushion; and

Fig. 3 shows a vertical cross section of a spring cushion.

Referring to Figs. 1 and 2, 1 is the front zone and 2 the back zone of a cushion. Springs 3 in zone 1 are more resiliency than sponge rubber 4 in zone 2. 5 and 6 are supports for the cushion secured to the frame of the chair.

Referring to Fig. 3, 7 is the front zone and 8 the back zone. Springs 9 in zone 7 are more resiliency than springs 10 in zone 8.

The cushion may be divided into more than two zones, and the zones need not be all of the same size. Also, the edge of the cushion may be reinforced and many other changes, which are described and suggested in my application Serial No. 639,366 relating to mattresses filed Jan. 5, 1946 herewith, and now Patent No. 2,504,352, granted April 18, 1950, may be effected without departing from the spirit of the invention as defined in the claim.

What I claim is:

In a resiliency seat cushion, means for vertically dividing the seat cushion into halves such that the front half supports the weight of the thighs and legs of a person in a normal sitting position and the rear half supports the weight of the rest of the body of a seated person, a top surface for said halves located in a single plane, bottom surfaces for the front and rear halves located in different planes, metal springs extending from the top surface to the bottom surface in the front half, sponge rubber extending from the top surface to the bottom surface in the rear half, said springs being of greater dimensional depth than the sponge rubber and said rubber having a specific density such as to make it less resiliency than the springs.

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