Dec. 31, 1935. LE ROY M. BICKETT 2,025,712

VENTILATED SEAT CUSHION

Filed Nov. 28, 1932

FIG. 1.

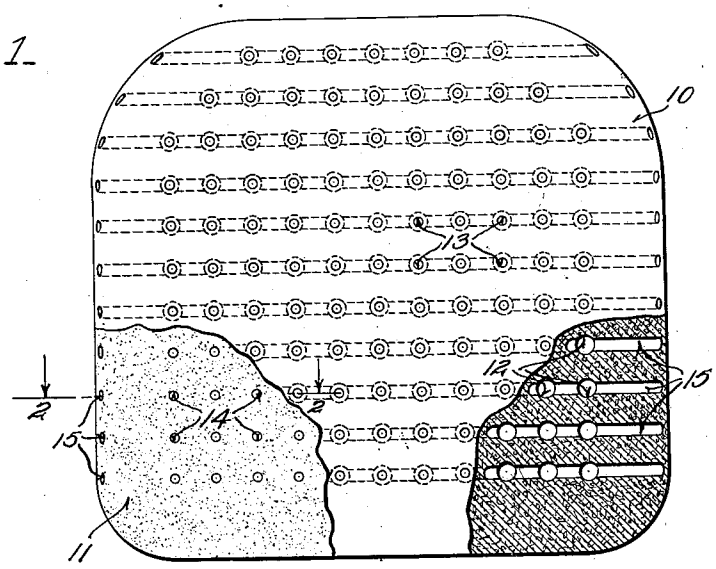


FIG. 2.

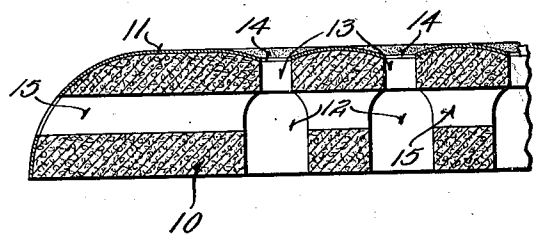
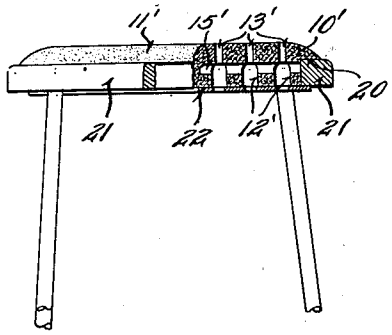


FIG. 3.



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VENTILATED SEAT CUSHION

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4 Claims. (Cl. 155—179)

This invention relates to ventilated seat cushions.

Seat cushions and pads of rubber or like composition are ordinarily uncomfortably warm. This objectionable condition results from what appears to be an inherent property of the material used, an inability thereof to carry away or dissipate the bodily heat absorbed from the user. No satisfactory remedy for this condition has heretofore been found in spite of the many earlier attempts to afford ventilation for such cushions.

One object of the present invention is to substantially obviate this objectionable condition by the provision of a ventilating system for such cushions so designed as to effectively dissipate the heat absorbed thereby. This I have accomplished by a cushion construction in which the bodily weight of the user is utilized to induce heat-dissipating air currents within the cushion.

Other more specific objects and advantages of the present invention will appear from the following description of two illustrative embodiments thereof.

In the accompanying drawing:—

Figure 1 is a top plan view, partly in section, of a seat cushion constructed in accordance with the present invention.

Fig. 2 is a fragmentary sectional view on a larger scale taken along the line 2—2 of Fig. 1.

Fig. 3 is a slightly modified form of seat cushion, embodying the present invention, and shown applied to a conventional stool.

The seat cushion shown in Figs. 1 and 2 comprises a slab 10 of relatively soft resilient material, such as sponge rubber, provided with a top covering 11 of leather, velour or other appropriate fabric, vulcanized or otherwise secured to the slab.

A multiplicity of inverted, cup-shaped cavities 12 are provided in the slab. Each cavity is preferably open bottomed, as indicated, and each communicates with one of a multiplicity of vent holes 13 formed in the top of the slab. In this instance the holes 13 register with perforations 14 in the covering 11, although the perforations 14 may be eliminated, particularly, if the porosity of the covering is such as not to materially interfere with the flow of air through the vent holes 13.

The cavities 12 are interconnected by a series of open-ended channels 15, which in this instance are shown extending crosswise through the cushion, although they may be formed so as to extend from front to rear or in both directions. The cavities 12 and channels 15 materially increase the softness of the cushion by permitting the same to yield more readily to the bodily weight of the user. Their more important function however is to provide a ventilating system through which air currents are induced to flow in the following manner.

It will of course be understood that when the user sits on the cushion the slab 10 is compressed and the degree of deformation varies at various points in the pad. As this deformation occurs, certain portions of the channels 15 and certain of the cavities 12 are compressed more or less, causing a displacement of the air therein. Then, as the bodily weight of the user shifts from time to time, causing corresponding changes in the degree of compression or distortion at various points in the cushion, a substantially continuous flow of air is induced throughout the cushion. Since the channels 15 are open to atmospheric air, these air movements induce air to enter, circulate through, and leave the cushion carrying with it the heat which it has absorbed from the cushion. In this manner the bodily heat absorbed by the cushion from the user is given up to and carried away by this continuously circulating air.

The seat cushion shown in Fig. 3 is similar in many respects to that hereinabove described in that it comprises a similar slab 10' of sponge rubber or the like having a multiplicity of cavities 12' interconnected by channels 15' which extend completely through the cushion. In this instance the slab 10' is provided with a peripheral top flange 20 designed to overlie the seat frame 21 of a conventional stool within which the slab 10' is seated. A perforated base plate 22 fixed to the under side of the frame 21 provides a support for the cushion. Since the frame 21 interferes somewhat with the admission and discharge of air through the ends of the channels 15' the perforations in the base plate 22 are arranged to freely admit and discharge air to and from the cavities 12' and through them to and from the channels.

The cushion shown in Fig. 3 is also provided with vent holes 13' in the top thereof, which register with the cavities 12', and is also provided with an appropriate top covering 11'.

Various changes may be made in either of the embodiments of the invention hereinabove specifically described without departing from or sacrificing the advantages of the invention as defined in the appended claims.

I claim:—

1. A cushion comprising a slab of sponge rubber having a series of horizontal relatively narrow

open-ended air channels formed in said slab and traversing the same and also having a multiplicity of enlarged upright chambers formed therein, each of said channels being intercepted by a plurality of said chambers.

2. A cushion comprising a slab of sponge rubber having a series of relatively narrow non-communicating open-ended air channels formed in said slab and extending substantially from edge to edge thereof and also having a multiplicity of enlarged upright chambers formed therein, each of said channels communicating with a plurality of said chambers.

3. A cushion comprising a slab of sponge rubber having a series of horizontal relatively narrow open-ended air channels formed in said slab and also having a multiplicity of enlarged chambers formed therein, said chambers extending downwardly through the bottom of said slab, and each of said channels being intercepted by a plurality of said chambers.

4. A cushion comprising a slab of sponge rubber having a series of horizontal relatively narrow air channels formed in said slab and extending therethrough and also having a multiplicity of enlarged upright chambers formed therein, said air chambers extending downwardly through the bottom of said slab and each having a vent hole in the top thereof, each of said channels being intercepted by a plurality of said chambers.

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