

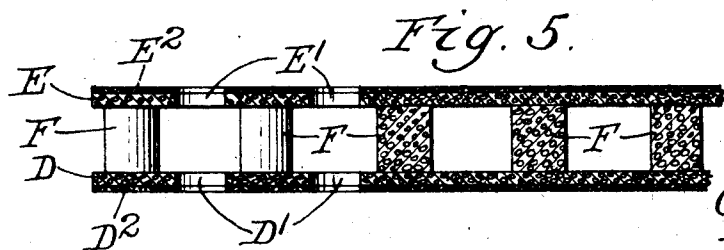
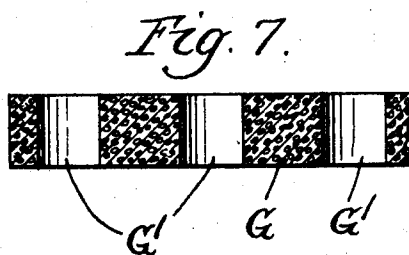
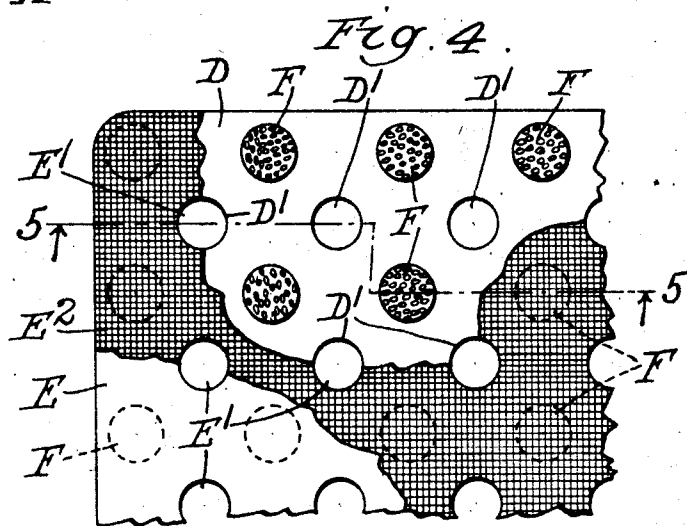
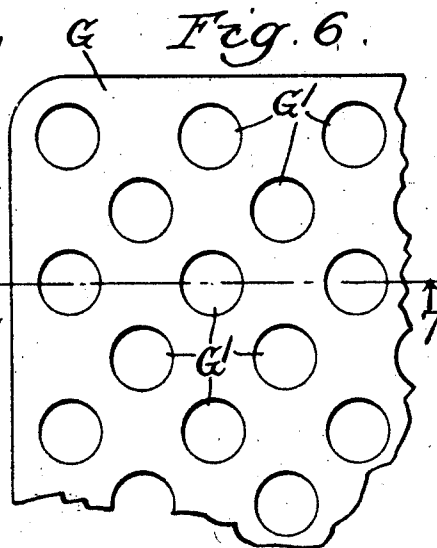
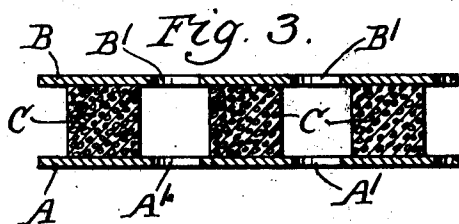
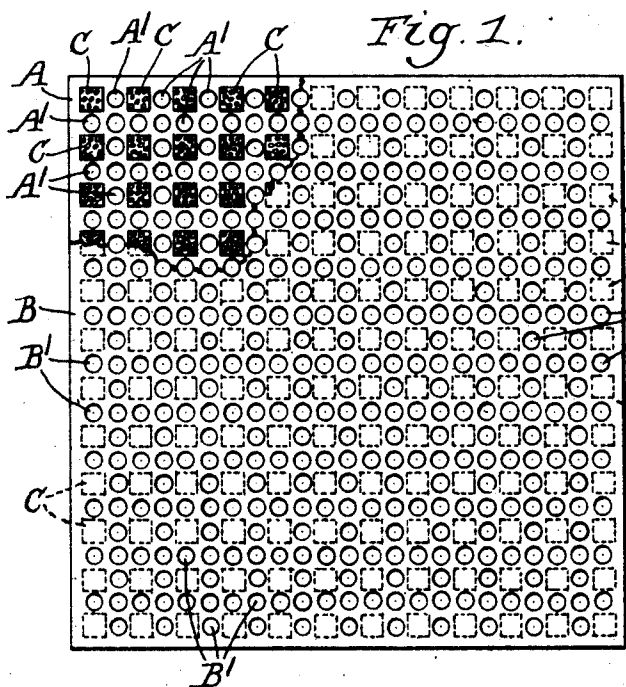
Aug. 30, 1932.

T. J. NELSON ET AL

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SEAT

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UNITED STATES PATENT OFFICE

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SEAT

Application filed August 8, 1930. Serial No. 478,861.

This invention relates to a seat or cushion member. It has for one object to provide a seat in which ventilation is provided. Another object is to provide a seat in which forced ventilation is provided. Another object is to provide a seat which will comprise a cushioning element and which will readily adapt itself to and constantly follow the contour of the user.

Other objects will appear from time to time in the specification and claims.

Figure 1 is a plan view of one form of our invention with parts broken away and parts in section;

Fig. 2 is a side or edge view of this form of the device;

Fig. 3 is a cross section taken on an enlarged scale on line 3—3 of Fig. 2;

Fig. 4 is a fragmentary plan view showing a modified form of the invention;

Fig. 5 is a section taken at line 5—5 of Fig. 4;

Fig. 6 is a plan view illustrating a further modified form; and

Fig. 7 is a sectional view taken at line 7—7 of Fig. 6.

Like parts are designated by like characters throughout.

In the form illustrated in Figures 1, 2 and 3, A is a sheet of material. It is preferably flexible and yielding and may, for example, be made of rubber. It is provided with perforations or openings A¹.

B is a similar sheet of material provided with openings B¹.

The openings A¹ are preferably placed opposite the openings B¹, but this is not an essential feature. Between the sheet A and the sheet B and fastened to each are supports C. They are spaced so that they do not cover or mask the perforations A¹ or B¹ and are permanently secured to the sheets A and B. In one form of the invention these sheets are of rubber and the supports C are of sponge rubber. A fabric or other covering material may

be mounted on the exposed face of the sheet A or B or both of them.

In the modified form shown in Figures 4 and 5, D is a lower sheet provided with perforations or openings D¹. In this case the sheet D may be of sponge rubber or of any rubber or of other material. It is shown in the drawing, however, as being made of sponge rubber. D² is a fabric covering fastened on the exposed side of the sheet D.

E is a sheet similar to the sheet D and similarly provided with openings or perforations E¹ and carrying on its exposed surfaces fabric covering E².

F—F are supporting members fastened to and joining together the two sheets D and E. They are spaced so that they do not mask or otherwise interfere with the openings D¹ or E¹.

In the modification shown in Figs. 6 and 7, a pad formed of a single sheet of sponge rubber G is shown. It is provided with perforations or openings G¹ which extend through it.

Although we have shown in our drawing an operative form of our invention, it is obvious that many changes in form, shape and arrangements of parts may be made without departing from the spirit of the invention. Particularly, the material of the cushion of our invention might be almost infinitely varied. For some purposes it is advisable to make the sheets of rubber; for some purposes they should be made of sponge rubber, and for still other purposes they might be made of material other than rubber such as fabric, leather or felt. The means which separate the two sheets from each other for some purposes should be made of sponge rubber, but other material might be used. Ordinary rubber, felt or leather might serve and all of these changes are within the contemplation of our invention.

The use and operation of this invention are as follows:—

In either of the forms shown in Figs. 1 to 5 inclusive, the device may be used as the only cushioning element or in addition to a cushioning element already in place, for example, with an automobile seat which is already provided with upholstery and springs, the device of our invention might be laid upon the seat and used as an auxiliary seat or cushion. It might also be laid against the back or two might be used so that an auxiliary seat and auxiliary back are provided. Since the upper and lower sheet which form the cushion are perforated, air can pass through them in a vertical direction, and since these sheets are separated and supported apart from each other by a plurality of supports such as the members C or F, air may circulate horizontally through the cushion and, of course, thus air may be drawn in through either of the openings A¹, B¹, D¹ or E¹, and may pass out along the edge of the cushion or vice versa. Thus, when a user is sitting on one of these cushions or leaning against one of these cushions, an air space is provided between him and the seat or back of the article of furniture which supports him, and thus at all times air may circulate freely about him. In addition to this, since the cushion is yielding and since the members which separate the two perforated sheets are yielding, if the user shifts his seat or position, some of the members such as C and F will be additionally compressed, thus bringing the two sheets closer together and serving to force or expel air laterally. When the user again shifts his seat, the sheets which have been forced toward each other are permitted to separate and thus air is positively drawn or sucked into the expanding space between the two sheets which now expand under the influence of members C or F once they are free to do so because of the shifting weight of the user.

In addition to the ventilating effect, because of the yielding and springy construction of the cushion, the device is constantly in a state of motion as the user moves or shifts his position, and where the cushion is used in an automobile this motion is increased due, of course, to the movement of the vehicle over the road, and so the device has a manipulating or massaging effect which prevents cramping and discomfort on the part of the user.

The cushion of our invention may be used in any association and in any location and in combination with any piece of furniture where its use seems advisable. While an important use is as an auxiliary cushion, such for example, as a cushion on an automobile seat, still it may be used as the only cushion.

We claim:—

1. In combination in a seat, a pair of perforated sheets and rubber members interposed between the sheets, said rubber mem-

bers positioned apart from each other and out of alignment with the perforations of said sheets, the exposed sides of said sheets provided with perforated fabric coverings the cushion remaining open and free to the air on its edges.

2. In combination in a seat, a pair of perforated sheets and sponge rubber members interposed between the sheets, said sponge rubber members positioned apart from each other and out of alignment with the perforations of said sheets, the exposed sides of said sheets provided with perforated fabric coverings the cushion remaining open and free to the air on its edges.

Signed at Chicago, in the county of Cook, and State of Illinois, this 6th day of August, 1930.

THEODORE J. NELSON.
CARL HUGO GERLOFSON.