March 6, 1951 S. KRONHAUS 2,544,506

TEMPERATURE CONDITIONED FURNITURE

Filed July 12, 1947

FIG. 2.

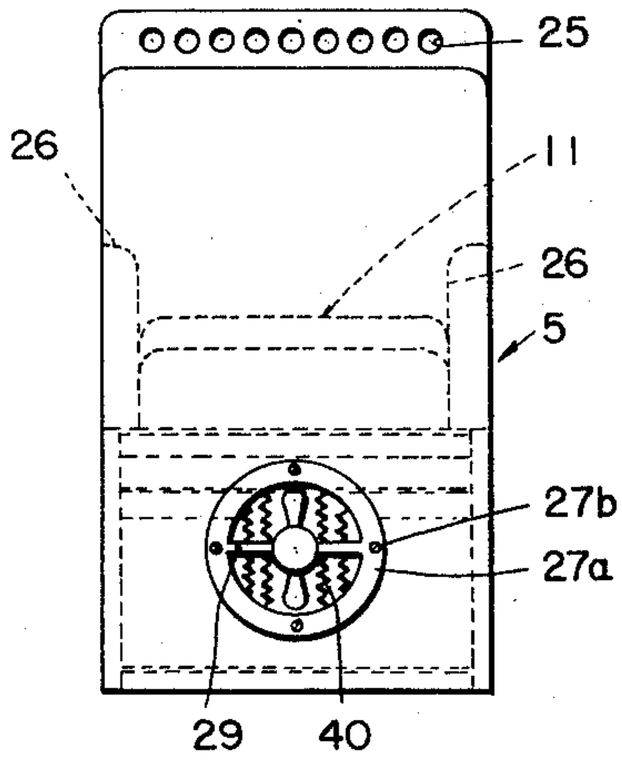


FIG. 1.

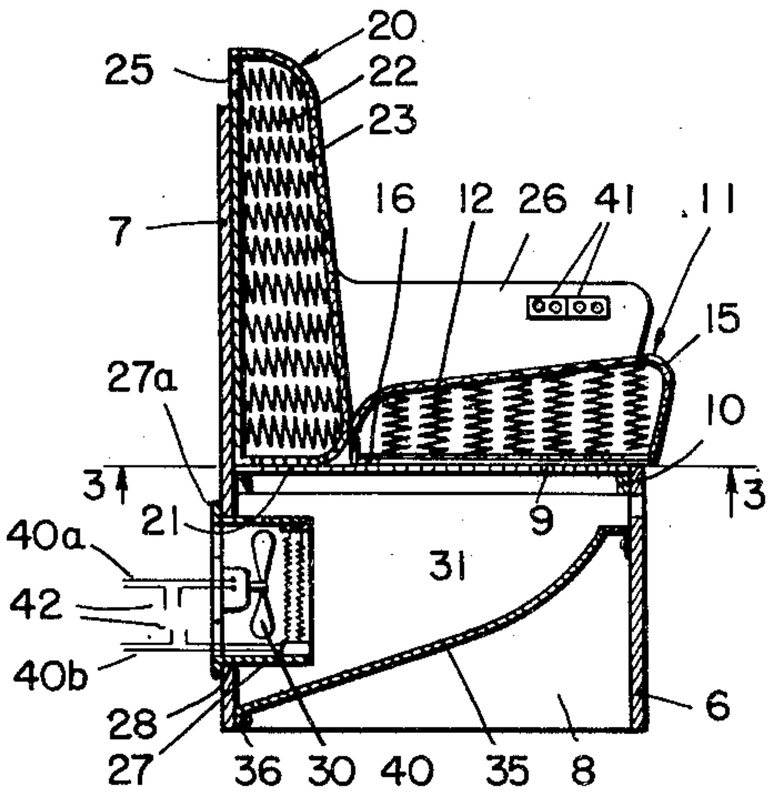
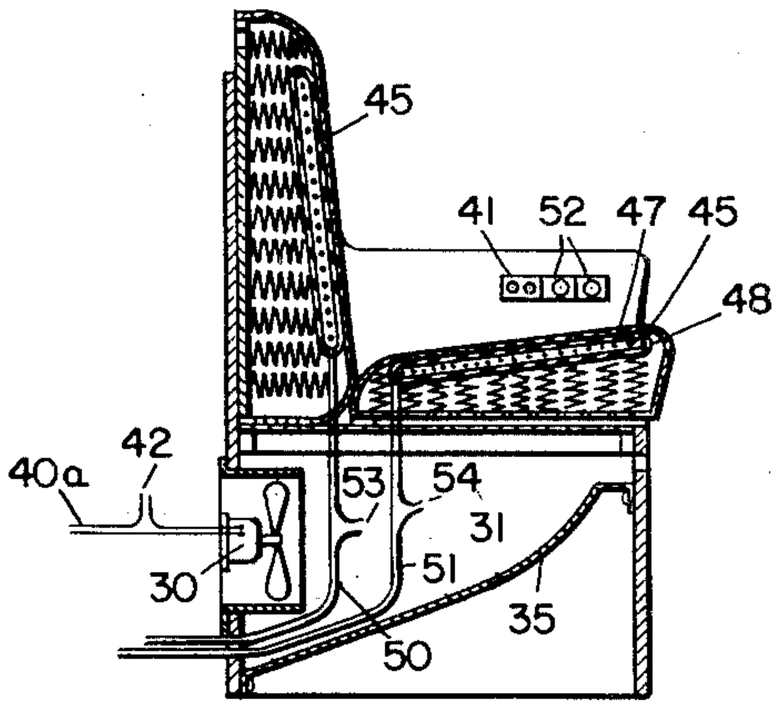
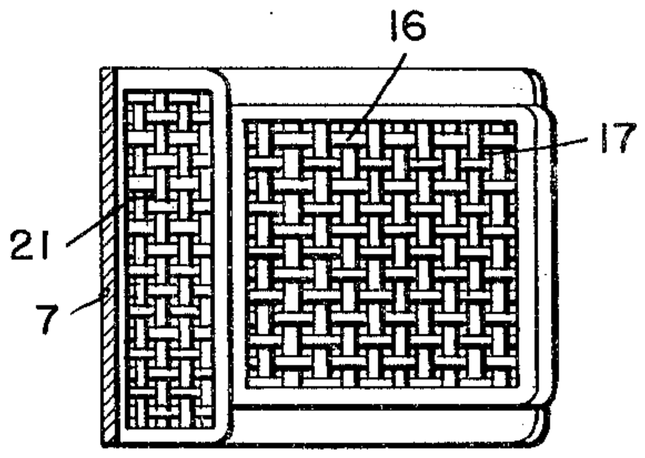


FIG. 3.

FIG. 4.





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UNITED STATES PATENT OFFICE

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TEMPERATURE CONDITIONED FURNITURE

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2 Claims. (Cl. 155—1)

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This invention has to do with articles of furniture and has, as a particular object, the provision of a chair, divan, settee or other article of furniture incorporating as an integral part thereof means for heating or cooling the cushions so that ideal localized temperature control and application may be obtained.

As is well known, in hot weather upholstery or cushioned chairs and the like become uncomfortable because the padding in the upholstery on which the occupant sits or against which the occupant leans, inhibits evaporation of perspiration and it is therefore an object of my invention to overcome this by circulating air through and beneath the upholstery.

Also in cold weather much of the heat of conventional heating systems is dissipated inasmuch as the heated air passes to the upper atmosphere in the room without the occupant of a chair or settee in the room obtaining any benefit of heat transfer to the body. It is therefore an object and accomplishment of my invention to overcome this by directly applying the heating medium through the upholstery of the chair, settee or the like occupied by the user.

Other and subordinate objects and advantages will appear hereinafter.

So that my invention may be fully understood, I shall now describe one of its applications and embodiments by reference to the accompanying drawings, wherein:

Fig. 1 is a medial vertical section of a chair embodying the invention;

Fig. 2 is a back elevational view of the chair;

Fig. 3 is a section taken on line 3—3 of Fig. 1; and

Fig. 4 is a view similar to Fig. 1 but showing a modified form of the invention.

Referring now to the drawings, Figs. 1 to 3, the numeral 5 generally denotes an article of furniture which may typify a chair, divan or settee, the specific article illustrated being a chair. It will be understood, of course, that within the broader aspects of the invention, by substantially the same construction the invention may be embodied in a divan or settee. Also, it will be obvious that the invention is not intended to be confined to the particularly illustrated construction of the chair per se, since the invention may be embodied in chairs and the like of other well known constructions.

The chair has an upright front wall 6, a relatively higher back wall 7 and side walls 8, forming a somewhat box-like frame.

As a foundation for the seat, crossed fabric

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webs 9 are mounted, being secured to the frame by strips 10, suitably secured to the frame.

The seat cushion, generally denoted 11, consists of coil springs 12 enclosed in a woven fabric envelope 15 whose underside 16 is loosely woven or formed of netting so as to provide air-passing openings 17.

The back rest cushion, generally denoted 20, has its bottom edge portion formed of loosely woven or net material so as to provide air-passing openings 21, the cushion likewise consisting of coil springs 22 enclosed in a woven fabric envelope 23. Air outlet openings 25 may be provided along the top portion of the back of the cushion, but those openings may be eliminated if the fabric of the seat cushion and back cushion is sufficiently loosely woven to permit proper passage of the air.

The end walls 8 of the frame have top extensions formed into arm rests 26.

In the back wall 7 of the frame, beneath the seat cushion, I provide a conduit 27 mounted in an opening 28 in the back wall, and in this conduit there is mounted, as by means of a spider 29, a motor driven fan 30 of conventional construction, positioned to draw air into an air chamber 31 formed by the side walls, the bottoms of the cushions 11, 20 and a deflector plate 35 which has flanged sides 36 suitably secured to the front and back walls of the frame. The conduit has a peripheral flange 27*a* on its outer end secured to the back wall as by screws 27*b*.

To heat the air drawn in through the conduits by the fan, I provide electrical heating coils 40. The electrical circuits 40*a*, 40*b* for the motor and coils have extensions 42 leading through a double control switch 41 so that an occupant of the chair may readily energize or deenergize either or both the motor and coils.

In the device of Fig. 4 the construction is the same as that before described and the parts are given like reference numerals, excepting only that in lieu of employing heating coils at the outlet of the conduit, I place in each seat cushion and back rest cushion a conventional electrically heated blanket 45. Each of these blankets is interposed between the outermost wall of the cushion and the springs and consists of heating coils 47 enclosed within a fabric cover 48 and suitably insulated. Since such electrically heated blankets are well known in the art it is unnecessary here to further describe them in detail.

The fan motor and the electrically heated blanket (Fig. 4) are connected with an electrical

source, not shown, by wire circuits **50**, **51**, respectively, which have extensions **53**, **54**, respectively, leading through a double switch **52** on the arm rests to permit control by an occupant of the chair.

In either of the embodiments of the invention described it will be apparent that cooled or heated air is applied directly to and through the cushions. In the case of the embodiment of Fig. 4, the air will pass over and through the blankets **45** before passing through the fabric cushion covering.

Other variations and modifications may be made within the scope of the appended claims.

I claim:

1. In an article of furniture, the combination of a body having an air chamber, a foraminated cushion support carried by the body in position exposed to said chamber, a pair of fabric covered cushions on the support, one disposed horizontally thereon to provide a seat and the other disposed upright thereon to provide a back rest, openings in the undersurfaces of the cushions exposed to said chamber through the support, a conduit in the body communicating at its inlet end with atmosphere and at its outlet end with the chamber, a power driven blower in the conduit disposed to deliver air under pressure from said inlet end to the chamber, and an electrically heated blanket mounted beneath the outer surface of one of the cushions.

2. In an article of furniture adapted for use as a seat, the combination of a body, a seat cushion supported on the body, an electrically heated blanket mounted in the cushion and blower means for circulating air under and through the cushion.

SEMEN KRONHAUS.

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