TWO PIECE SEATING FURNITURE CONSTRUCTION

Olaf Kuhlmann, Oelde, Westphalia, Germany, assignor,
by mesne assignments, to Consolidated Burris Interna-
tional, Ltd., Lincoln, N.C., a corporation of North
Carolina

Filed Oct. 24, 1967, Ser. No. 677,635
Int. Cl. A47C 7/54, 7/00, 7/02
U.S. Cl. 297—418

5 Claims

ABSTRACT OF THE DISCLOSURE

A seating furniture construction of synthetic foam
wherein a two piece assembly of lower and upper mono-
lithic bodies broadens the possibilities of design configura-
tion variation.

Presently available synthetic materials, such as poly-
styrene, polyurethane, polyester and the like, permit the
manufacture of plastic bodies such as furniture frames
having relatively large size, and reinforcing means may be
added to such bodies in order to obtain greater strength
and stability of shape. Such reinforcement, embedded into
a furniture frame, may additionally serve to connect the
formed body with a fabricated structural base.

While synthetic materials of the type described have
heretofore been employed in the manufacture of seating
furniture constructions, the characteristics of the materials
and the methods by which the materials necessarily must be
worked have heretofore limited the possible design con-
structions available. In particular, the molds which are
necessary to form plastic bodies such as furniture frames
of relatively large size are quite expensive to pro-
duce, and may have only a relatively short productive life
due to the fickleness of public taste in furniture design.
Further, when a furniture frame is designed for manu-
facture as a single piece, as has been done heretofore,
the design configuration most easily obtained is the now-
familiar dish, with little ease of variation in design con-
figuration.

It is an object of the present invention to provide a
construction for seating furniture, such as chairs and the
like, which will provide greater freedom of design and
require a minimum capital outlay for molds, to thereby
allow manufacturers to readily produce seating furniture
of pleasing designs other than the so-called dish shape.
In realizing this object of the present invention, the body
of a seating furniture construction is produced as upper
and lower monolithic bodies, shaped for nesting relation.
The lower body is constructed of rigid polyurethane foam
or other rigid elastomeric or plastomorphic foam to define
a well for receiving and supporting an occupant, while the
upper body is constructed of deformable or non-deform-
able rigid polyurethane elastomeric or plastomorphic foam
or both and for attachment to the lower body. The upper
body, in particular, may be readily adapted to different
design configurations while being shaped for nesting rela-
tion with a lower body of common configuration.

Some of the objects of the invention having been stated,
other objects will appear as the description proceeds,
when taken in connection with the accompanying draw-
ings, in which:

FIGURE 1 is a front elevation view of one form of
seating furniture construction in accordance with the
present invention;

FIGURE 2 is a side elevation view of the seating furni-
ture construction of FIGURE 1;

FIGURE 3 is a perspective view of the seating furni-
ture construction of FIGURES 1 and 2, exploded to more
clearly illustrate certain features thereof;

FIGURE 4 is a view similar to FIGURE 1, in section,
taken generally along the line 4—4 in FIGURE 2;

FIGURE 5 is a view similar to FIGURE 2, in section,
taken generally along the line 5—5 in FIGURE 1;

FIGURE 6 is a view similar to FIGURE 1 of a second
form of seating furniture construction in accordance with
the present invention;

FIGURE 7 is a view similar to FIGURE 2 of the seat-
ing furniture construction of FIGURE 6;

FIGURE 8 is a view similar to FIGURE 3 of the seat-
ing furniture construction of FIGURE 6;

FIGURE 9 is a view similar to FIGURE 4 of the seat-
ing furniture construction of FIGURE 6; and

FIGURE 10 is a view similar to FIGURE 5 of the seat-
ing furniture construction of FIGURE 6.

Referring now more particularly to the drawings, two
forms of seating furniture construction in accordance with
the present invention are there shown, in chair form, and
the features of the present invention will be described
with reference thereto. For purposes of facilitating the
description, like portions of the two seating furniture con-
structions illustrated respectively in FIGURES 1—6 and
6—10 are identified by like numerals, with prime notation
being employed for the second form shown in FIGURES
6—10. While chair forms have been chosen for purposes
of illustration, it is to be recognized at the outset that this
invention is also adaptable to multiple occupant seating
furniture constructions, and that the choice of chair forms
for illustration is not to be limiting.

The seating furniture construction of the present
invention includes a chair body generally indicated at 11
and comprising a monolithic lower body 12 of synthetic foam
material and a monolithic upper body 14 of synthetic foam
material. The lower body 12 includes a generally hori-
izontally extending base portion 15 defining an occupant
leg supporting surface and prefably has smoothly blended
side and back portions 16 extending upwardly from the
base portion. Together, the base portion 15 and the side
and back portions 16 of the monolithic lower body 12 de-
fine an occupant receiving well of predetermined config-
uration which opens at least upwardly and forwardly.
When the seating furniture construction is assembled and
placed in use, the base portion supports the body of the
occupant receiving well defined by the monolithic lower body 12 receives and somewhat en-
circles the hip and thigh portion of the body of the occu-
pant.

The monolithic upper body 14 includes side and back
portions 18 of predetermined configuration generally cor-
responding in size and outline to the configuration of the
base portion 15 and to the occupant receiving well defined
by the monolithic lower body 12. This configuration of
the monolithic upper body 14 is provided in order that the
upper body 14 will be received by and nest with the lower
body 12 when the upper body is superposed on the lower
body. When the bodies are thus superposed, the side and
back portions 18 of the upper body define occupant arm
and back supporting surfaces adapted to be engaged by
the arm and back of an occupant seated in the chair 11.
The monolithic upper body 14 further has downwardly ex-
tending portions 19 depending from the side and back por-
tions 18, for nesting within the monolithic lower body 12.
The depending portions 19 of the upper body 14 are set
inwardly from the main portion of the upper body to de-
line a ring shoulder surface 20 which rests upon the sub-
stantially planar upper surface 21 of the side and back
portions 16 of the lower body 12 when the upper body 14
is superposed upon the lower body.

In order to provide sufficient structural integrity and
rigidity to support an occupant in the chair 11, it is pre-
ferred that the monolithic lower body 12 be formed of a
substantially rigid synthetic foam material which is not readily deformable. Further, the monolithic upper body 14 may be formed either of a rigid foam such as that employed for the lower body 12 or of a resilient foam which will provide structural integrity for the chair body and be deformable to provide a cushioning effect for an occupant of the chair. Preferably, in order to provide additional cushioning for an occupant of the chair, a separate cushion member 22 is positioned on the planar load supporting surface of the lower body 12. Further, in order to provide additional support for the upper body 14, the depending portion 19 thereof has a height sufficient to extend downwardly into the occupant well defined by the lower body 12 and rest upon the upper surface of the cushion member 22.

In order to support the monolithic bodies 12 and 14 of the chair construction, support means such as a pedestal 24 is provided and secured to the lower body 12. Securement of the pedestal 24 to the lower body 12, and transfer of the loading forces involved, preferably is secured through the use of a reinforcing member 25 molded integrally within the monolithic body 12 (phantom lines in FIGURE 3). The pedestal member 24 is secured to the reinforcing member 25 and supports the monolithic bodies 12 and 14 of the chair 11 in position for use.

In order to assure that the monolithic bodies 12 and 14 are properly joined, and to prevent horizontal relative movement therebetween, this invention further contemplates the inclusion of a plurality of position locking key members 26 disposed in a corresponding plurality of pairs of vertically aligned pockets 28 formed in the opposing superposed surfaces of the monolithic bodies 12 and 14. Through the use of the locking key members 26, the necessary structural unity for the assembled chair construction is assured.

The design versatility of the present invention is best understood by brief comparison of the two forms of chair constructions illustrated in the drawings. It will be noted that the lower monolithic body 12' of the second chair 11' (FIGURES 6-10) is substantially identical to the lower monolithic body 12 of the first chair 11 (FIGURES 1-5). Distinctions between the two chairs 11 and 11' may be noted in the manner in which the lower monolithic bodies 12 and 12' are supported, in that the second chair 11' provides four legs 30 located at the four corners of the lower monolithic body 12'. Additionally, distinctions in outline configuration of the upper monolithic bodies 14 and 14' may readily be noted in that the arm rest portion of the second chair 11' are turned outwardly beyond the underlying side portions of the lower monolithic body 12'; and the back rest portion 18 rises substantially higher above the arm rest than is true in the more tub-like design configuration of the first chair 1. Thus, it is seen that a single lower body may readily be adapted to two distinctly different design appearance through the use of differently configured upper bodies. This versatility permits a saving in production costs in manufacture, as well as providing a designer with extended versatility in seeking desired design effects.

In the drawings and specification there have been set forth preferred embodiments of the invention and, although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation.

What is claimed is:

1. A seating furniture construction comprising:

   a lower monolithic body of rigid foam material and including a generally horizontally extending base portion defining a load supporting surface, said lower body defining an occupant receiving portion of predetermined configuration opening at least upwardly and forwardly, and an upper monolithic body of foam material superposed on said lower body and defining occupant back and arm supporting surfaces, said upper body including side and back portions of predetermined configuration generally corresponding in size and outline to said predetermined configuration opening at least upwardly and forwardly, and a plurality of position locking key members extending between and secured in said lower and upper bodies for securing said bodies against horizontal relative movement.

2. A seating furniture construction according to claim 1 wherein said monolithic upper body is of resilient foam which is deformable so as to form of said upper body an occupant cushion integral with the furniture construction.

3. A seating furniture construction according to claim 1 and further comprising:

   supporting leg means for supporting said monolithic bodies for seating use, and
   reinforcing means molded within said monolithic lower body and connected with said leg means for transferring force thereto from said foam.

4. A seating furniture construction comprising:

   a lower monolithic body of rigid foam material and including a generally horizontally extending base portion defining a load supporting surface, said lower body defining an occupant receiving portion of predetermined configuration opening at least upwardly and forwardly, and an upper monolithic body of foam material superposed on said lower body and defining occupant back and arm supporting surfaces, said upper body including side and back portions of predetermined configuration generally corresponding in size and outline to said predetermined configuration of said occupant receiving portion and having extensions depending from said side and back portions and nesting with said occupant receiving portion of said lower body, and
   means embedded in said upper and lower bodies for securing said bodies in superposed position and against horizontal relative movement.

5. A seating furniture construction comprising:

   a lower monolithic body of rigid foam material and including a generally horizontally extending base portion defining a load supporting surface, said lower body defining an occupant receiving portion of predetermined configuration opening at least upwardly and forwardly, and an open bottomed upper monolithic body of foam material separable from and superposed on said lower body and defining occupant back and arm supporting surfaces for cooperation with said load supporting surface in supporting a seated occupant, said upper body including side and back portions of predetermined configuration generally corresponding in size and outline to said predetermined configuration of said occupant receiving portion and having extensions depending from said side and back portions for nesting with said occupant receiving portion of said lower body and defining an open bottom for said upper body.

References Cited

UNITED STATES PATENTS

7,055,708 9/1963 Baerlann -------- 297--445
3,083,056 3/1963 Ward -------------- 297--452
3,101,218 8/1963 Baerlann -------- 297--455
3,175,863 3/1965 Hood ----------- 297--455
3,298,741 1/1967 Legard et al. ---- 297--421

CASMIR A. NUNBERG, Primary Examiner

U.S. Cl. X.R.

297--445, 458