

Aug. 1, 1961

K. DRAXLER
SECTIONAL SEAT

2,994,558

Filed March 27, 1957

3 Sheets-Sheet 1

fig. 1

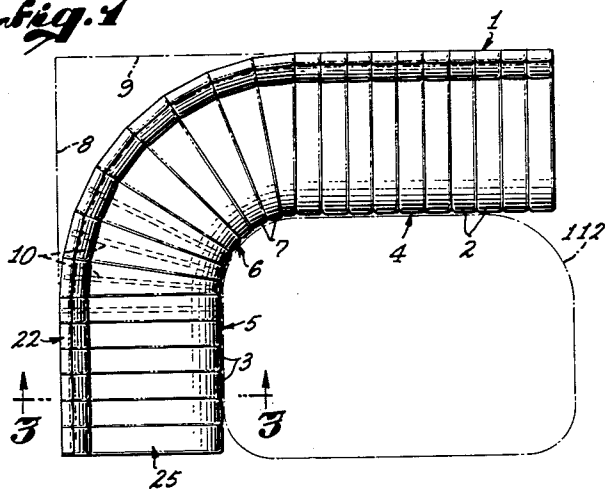


fig. 2

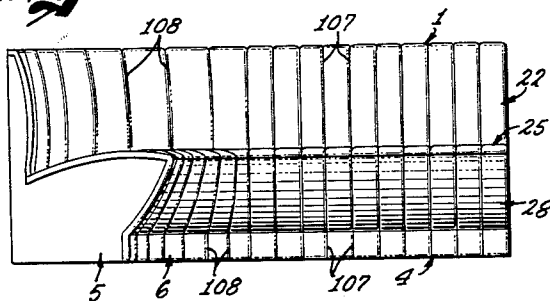


fig. 3

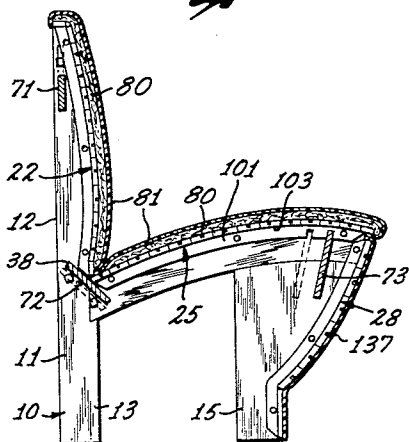
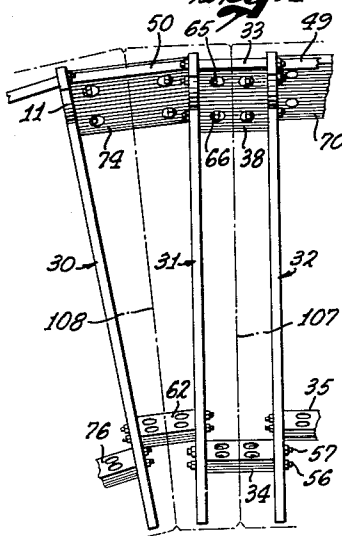


fig. 4



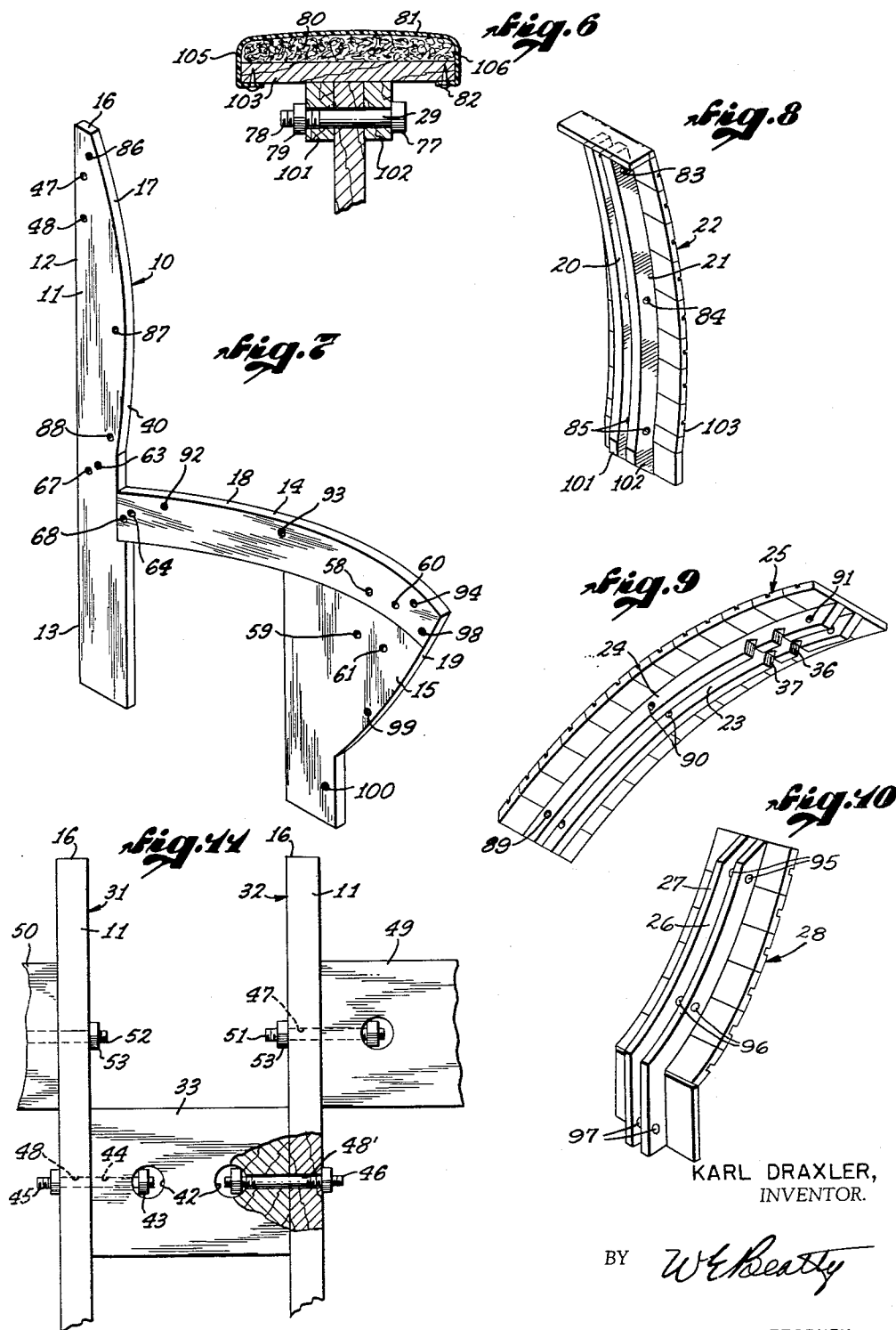
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3 Sheets-Sheet 2



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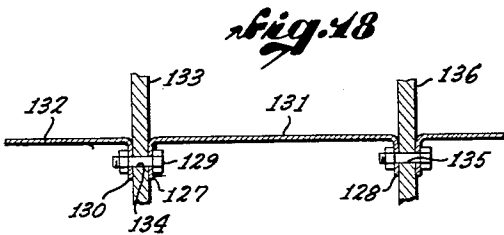
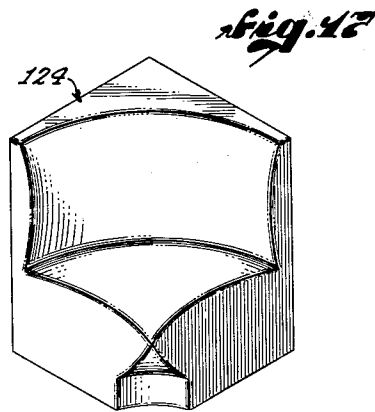
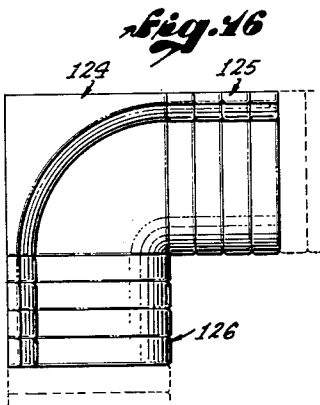
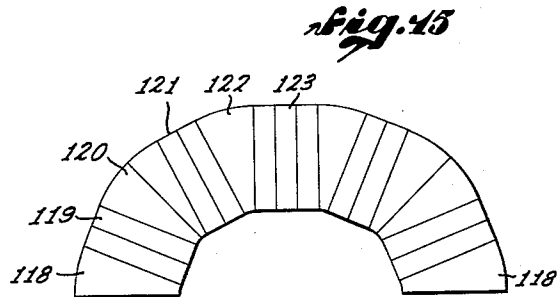
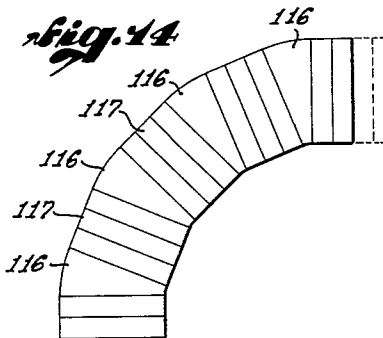
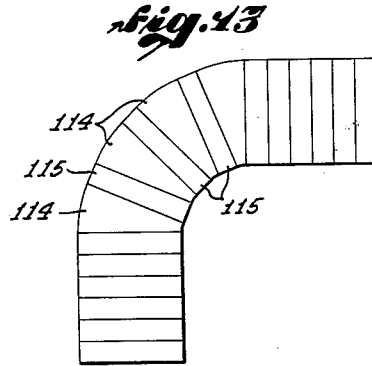
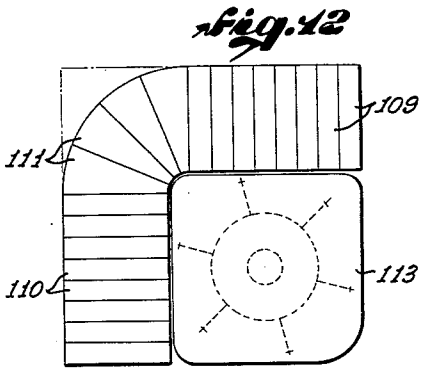
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K. DRAXLER
SECTIONAL SEAT

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3 Sheets-Sheet 3



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2,994,558

SECTIONAL SEAT

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4 Claims. (Cl. 297-446)

The invention relates to a sectional seat and more particularly to a device of this type which is readily adapted to fit nooks of different shapes and dimensions.

Heretofore, it has been customary to specially make a seat to fit a particular nook. According to the invention, the seat is made of vertical sections, and there may be two kinds, one with parallel sides for straightways, and a wedge shaped one for curved seats. It is thus possible to build up a seat which is straight, or curved, or any desired combination of straight and curves, according to the arrangement of the sections.

The invention thus eliminates the necessity of custom building nooks, placing them essentially in the category of furniture which can be packed and shipped in knocked down condition and assembled by the user.

It is thus possible to exchange a single damaged portion of the seat without replacing the whole seat, the upholstery being likewise sectional for assembly with frame sections.

For further details of the invention reference may be made to the drawings wherein—

FIG. 1 is a plan view of a nook having a sectional seat according to the present invention.

FIG. 2 is a view in elevation looking at the lower end of the seat in FIG. 1.

FIG. 3 is a sectional view on line 3—3 of FIG. 1.

FIG. 4 is an enlarged top plan view of the framework of the seat of FIGS. 1 to 3.

FIG. 5 is an enlarged view in elevation of the framework of FIG. 4. In both FIGS. 4 and 5, the sections at the right and at the left of the straight and wedged sections shown are broken away.

FIG. 6 is an enlarged section of view with parts broken away showing an upholstery section and its fastening means.

FIG. 7 is an enlarged view in perspective of the side piece of framework employed throughout the seats of all of the figures.

FIG. 8 is a view in perspective of the upholstery base for the back portion of the side piece in FIG. 7, FIG. 9 being a perspective view of the upholstery base section for the seat portion of the side piece in FIG. 7, and FIG. 10 being a perspective view of the upholstery base section for the lower front portion of the side piece of FIG. 7.

FIG. 11 is an enlarged view in elevation with parts broken away and partly in section showing filler blocks for fastening two side pieces as in FIG. 7 to extend parallel to each other for a straightaway seat, this type of filler blocks also appearing in FIGS. 4 and 5 which also show wedge shaped filler blocks for curved sections.

FIGS. 12 to 16 are schematic plan views showing various forms of seats which may be obtained by use of various combinations of straight or wedge shaped filler blocks.

FIG. 17 is a perspective view illustrating a unitary seat portion which may be employed to fill up the corner of a nook in place of the wedge sections of FIG. 12.

FIG. 18 is a sectional view of a modified spacer.

Referring in detail to the drawings, as shown in FIG. 1, the sectional seat 1 comprises a plurality of sections as indicated at 2, each having parallel sides for building up a straightaway seat portion, the sections like 2 appearing at one end of the seat with similar sections indicated at 3 at the other end of the seat, there being a plurality of sections like 2 forming a group indicated at 4, a plurality of sections like 3 forming a group indicated at 5.

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Intermediate the groups 4 and 5 is a group indicated at 6 and comprising a plurality of sections which are tapering or wedge shaped, as indicated at 7, being narrower at the front than at the back, enough sections like 7 being included to form a right angle turn if the seat 1 is to fit into a corner where the walls 8 and 9 are at right angles to each other.

For each of the seat sections, whether straight like section 2 or wedge shaped like section 7, is a seat frame section as indicated at 10 in FIG. 7, this frame section in the example shown being of wood although it may be of metal or other material. The frame section 10 includes an upright 11 which forms a back portion 12 and the back leg 13, the section 10 also including a seat portion 14 and a front leg portion 15, the portions 11 to 15 having an outwardly or upwardly facing edge 40 preferably of uniform width, which is easily accomplished if the side piece 10 shown in FIG. 7 is cut from boards or similar material of uniform thickness, this edge 40 extending from the top as indicated at edge portion 16, along the front of the back as indicated at edge portion 17, along the upper edge of the seat as indicated at edge portion 18 and along the front edge of the leg 15 as indicated at 19. The purpose of this is to receive the channel like 20 in the base 21 of the back upholstery section 22, which fits on edge portion 17, to receive the channel 23 in the base 24 of the seat upholstery section 25 which fits on the edge portion 18, and to receive the channel 26 in the base 27 of the front leg upholstery section 28 which fits on the edge 19. The manner in which the upholstery sections 22, 25 and 28 are held in place, preferably with removable fastening means like the bolt in FIG. 6 will be described in further detail later, after first considering the manner in which the frame side pieces like 10 are fastened together.

The seat frame section 10 in FIG. 7 is composed of structural elements which are somewhat board-like in being relatively thin, the structural elements or portions 11 to 15 fitting edge-to-edge as described above, resulting in a section indicated at 10 wherein such structural elements lie within parallel vertical planes which are spaced apart substantially the thickness of the structural material. The section 10 is vertical and extends edgewise between the front and back of the seat.

Referring to FIGS. 4 and 5, the side pieces like 10 in FIG. 7 are indicated at 30, 31 and 32. The side pieces 31 and 32 are shown as extending parallel to each other and are typical of each of the sections like 2 in the group 4 and also typical of the sections like 3 in the group 5 of FIG. 1. The side piece 30 extends in a vertical plane at an angle to the side piece 31 and this seat section is typical of the sections like 7 in the group 6 of FIG. 1. Whether the opposite side pieces of a given section are parallel or not depends upon the width of the spacers between these sections. As shown in FIGS. 4 and 5, the upper portion of the side pieces 31 and 32 are spaced apart by a spacing block 33, which may be of the same thickness as and sawed out of the same board or material used for making the side piece 10. The upper part of the front leg portion 15 and the front of the seat portion 14 of the side pieces 31 and 32 are spaced apart by a spacer block 34. The intermediate portion of the upright 11, at the rear of the seat, is spaced apart by a spacer block 38, at the location indicated at 72 in FIG. 3.

In the case of the wedge shaped sections like 7, the side pieces 30 and 31 are spaced apart by an upper spacer 50 and an intermediate spacer 74 which are relatively wide in a lateral direction and a spacer 62 at the front which is relatively narrow. As shown in FIG. 5, the spacers of adjacent tapered sections like 7 are also staggered as above described, for access to their fastening bolts, the spacer 50 being shown at a higher level

than the spacer 33, and the intermediate spacer 75 being shown at a higher level than the spacer 74, and the front spacer 62 being inset with respect to the similar spacer 76 of the next tapered section. Similarly, as shown in FIG. 4, the spacer 34 is shown at the front of and staggered with the spacers 62 and 35.

All of the spacers like 33, 34, 35, 38, 49, 50, 62, 70, 76 (FIGS. 3, 4, 5 and 11) and also 131, 132 (FIG. 18), are all of material which extends substantially in a straight line between the adjoining seat sections. The sections are spaced closer than the width of a seat for one person while providing a substantially continuous seat of a length to accommodate two or more persons.

The intermediate portion of the upright 11, at the top of the back leg 13 and at the rear of the seat portion 14 is provided with the rear spacer block 38. The spacer blocks 33, 34 and 38 are all of the same lateral width and have parallel ends if the side pieces like 31, 32 are to be supported parallel to each other. Provision is made for staggering adjacent ones of the spacer blocks in adjoining sections of the seat, to facilitate access to their fastening bolts.

The spacer block 33 is shown enlarged in FIG. 11 as having at each end thereof a through aperture like 42 to receive a nut 43, a bolt hole lengthwise of the middle of the block 33 as shown at 44 opening at its inner end into the recess 42 and opening at its other end at the middle of the end of the block, to receive a bolt 45. The companion bolt 46 at the other end of block 33 is similarly arranged. As shown also in FIG. 7, the side piece 10 has two transverse holes 47 and 48 so that the bolts like 45 and 46 may be passed through either the holes like 47, or the holes like 48, to stagger the bolts as above described. FIG. 11 shows the spacer 33 with its bolts extending through the hole 48 in side piece 31 and the aligned similar hole 48' in the side piece 32, while the adjoining spacer block 49 for the next straight section to the right and the spacer block 50 for the next tapered section to the left have their aligned bolts 51 and 52 extending through the aligned holes like 47, whereby the spaced block 33 is staggered with respect to the spacers 49 and 50 and the nuts like 53 for the respective bolts are all accessible.

The spacers like 34 have similar fastening means except that two bolts are provided at each end of the spacer, the bolts being shown in FIG. 5 at 54 and 55 at one end of the spacer and at 56 and 57 at the other end of the spacer, these bolts having nuts at their opposite ends as above described in connection with FIG. 11 and likewise, as shown in FIG. 7, having the choice of either holes like 58 and 59 to support the spacer in one position or holes 60 and 61 to support the spacer in a staggered position, for example as shown at the lower portion of FIG. 4 where spacer 34 is staggered with relation to spacers 62 and 35. Likewise, as shown in FIG. 7, the upright 11 and seat portion 14 have two pairs of holes of which one pair 63, 64 is adapted to receive the bolts like 65, 66 (see the upper part of FIG. 4), at one end of the rear spacer block 38 while the holes 67, 68 are adapted to receive the same or similar bolts with a rear spacer like 38 in staggered relation as shown at the next section to the right in FIG. 4 where rear spacer 70 is staggered with respect to 38 and also rear spacer 74 is staggered with respect to 38.

The staggered relation of the spacers like 33 and 49 of FIG. 11 is also shown in full and broken lines at 71 in FIG. 3, the staggered relation of adjoining rear spacers like 38 and 70 of FIG. 4 being shown in broken and full lines at 72 in FIG. 3 while the staggered relation of adjoining spacers like 34 and 35 is shown in broken and full lines at 73 in FIG. 3.

The seat upholstery section 25 has a notch like 36 to receive the upper edge of the spacer like 34, and also having a notch like 37 which would receive the upper edge of the staggered spacer like 35 so that the seat sec-

tion 25 is universal in that it may be applied to any one of the straight sections like 2 or 3.

The various upholstered pieces shown in FIGS. 8, 9 and 10 and as also shown by the typical section in FIG. 6 are removably mounted on each of the side pieces like 10 and 11 by bolts like 29 which have a head like 77 at one end thereof and the usual threads 78 for a nut 79 at the other end thereof. As shown in FIG. 6, these upholstered pieces may have suitable padding or a cushion 80 and a suitable cover 81 held on the base in a suitable manner, tacks 82 being employed for example if the base like 103 is of wood. The section shown in FIG. 10 is intended to be only covered with suitable material like cover 81 in FIG. 6, but without the padding shown in 80, FIG. 6, as such cushioning would not be needed here. This is shown at 137 in FIG. 3. Various materials and fastening means may be employed. The back section 22 has three sets of bolt holes indicated at 83, 84 and 85 which mate with the holes like 86, 87 and 88 in the back portion of the side piece. Similarly, the upholstery piece 25 has three similar holes 89, 90 and 91 which mate with the holes 92, 93 and 94 while the upholstery piece 28 has three holes 95, 96 and 97 which mate with the holes 98, 99 and 100. The holes in the above mentioned upholstery pieces extend through the members like 101 and 102 on which the base like 103 is mounted, the members like 101 and 102 being spaced apart to form a channel like 20, 23 or 26.

The width of the upholstery sections like 22, 25 and 28, with the upholstery thereon as indicated at 80 and 81 in FIG. 6 is so related to the width of the spacers between the side pieces like 30, 31 and 32 in FIG. 4, that the side edges like 105 and 106 in FIG. 6 of the upholstery pieces fit together in abutting relation as shown by the lines such as 107 for the straight sections and lines like 108 for the wedge sections. This is also shown by the corresponding dotted lines 107 and 108 in FIG. 4.

FIGS. 12 to 17 show various combinations of straight and wedge sections for the seat.

In FIG. 12, the straight sections 109 and 110 like sections 2 and 3 of FIG. 1 are provided at each end, while the corner has four wedge sections indicated at 111 instead of eight sections as shown in FIG. 1. The broken line at 112 in FIG. 1 represents a table which may be used with the seat of that figure while a sliding top table is indicated at 113 in FIG. 12.

In FIG. 13, the corner is made up of alternating wedge sections like 114 and straight sections like 115, four wedge sections and three straight sections making a right angle turn.

In FIG. 14, the corner portion of the seat is made up of a wedge section like 116 alternated with three straight sections as indicated at 117, four wedge sections and nine straight sections making a right angle turn.

In FIG. 15, a 180° turn is made with a wedge section like 118 at each end, with two straight sections 119 and two wedge sections like 120, two straight sections like 121, another wedge section 122, with a similar arrangement at the other side and with three straight sections 123 at the center.

In FIG. 16, instead of using four wedge sections as shown in FIG. 12, to make the right angle turn, the corner may be filled with a unitary seat member indicated at 124, with straight seat sections 125, 126 at each end thereof. The unitary seat member 124 at the corner may take the form shown in FIG. 17.

The seat frame sections like section 10 in FIG. 7 and sections 30, 31 and 32 in FIG. 4 are somewhat plane, being relatively thin in proportion to their over-all dimensions, and being of substantially uniform thickness throughout. Also, while various dimensions may be used for the spacers, it will be understood that their dimension in a horizontal direction is preferable substan-

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tially less than that of the width of a normal chair whereby the width of the upholstery sections as shown in FIG. 6 is such that it would take a plurality such as about four of such sections, each 4" wide, as a chair is not apt to be narrower than 16". The outer vertical surface of the end sections may have a suitable covering or upholstery not shown.

As shown in FIG. 18, the staggering of spacers previously described can be eliminated (and half of the bolts) by making the spacers out of sheet metal or the like as indicated at 131 and 132, with bent or upturned ends as indicated at 127 and 128, with a bolt and nut like 129 to clamp the adjoining ends like 127 and 130 of adjoining spacers 131 and 132 on opposite sides of the seat frame section like 133. One bolt like 129 thus serves to hold the adjacent ends of two spacers like 131 and 132 which avoids the necessity for offsetting adjoining spacers, with consequent reduction in the number of bolts required. In this case, for the straight seat section like the groups 4 and 5 in FIG. 1, the bolt hole 134 in spacer 133 is in alignment with all of the corresponding bolt holes such as hole 135 for the adjoining seat frame section 136.

Various other modifications may be made in the invention without departing from the spirit of the following claims. For example, the back portion and its spacers may be omitted.

Also, other types of cushioning may be used, such as a well known undulating spring, for greater softness, and of a type used in some chairs, automobile seats, etc.

I claim:

1. A sectional seat having a seating portion, said sectional seat comprising a plurality of frame sections of substantially uniform thickness throughout, each of said sections having a rear leg, back, seat and front leg structural element, said sections being spaced apart closer than the width of a seat for one person and having spacers fitting between adjoining sections at the top of adjoining back elements thereof and at the front and rear of the corresponding adjoining seat elements thereof, a plurality of said seat elements comprising the seating portion for one person, means securing said spacers in position, an upholstery section for each of said back, seat and front leg elements, said upholstery sections overhanging their respective elements in abutting relation, said upholstery sections each having an upholstery base having centrally disposed longitudinally extending members spaced apart forming a channel fitting the edge of the corresponding back, seat and front leg portion of each of said seat frame sections.

2. A sectional seat having a seating portion, said sectional seat comprising a plurality of frame sections of substantially uniform thickness throughout, each of said sections having a rear leg, back, seat and front leg structural element, said sections being spaced apart closer than the width of a seat for one person and having spacers fitting between adjoining sections at the top of adjoining back elements thereof and at the front and rear of the corresponding adjoining seat elements thereof, at least one of said seat elements comprising the seating portion for one person, means securing said spacers in position, an upholstery section for each of said seat elements, said upholstery sections overhanging their

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respective seat elements in abutting relation, said rear leg and back elements being integral and having a shoulder supporting an inner end portion of said seat element and said front leg element fitting under the lower front of said seat element, all of said elements fitting together between vertical planes spaced apart substantially the same distance as the thickness of said elements.

3. A sectional seat having a seating portion, said sectional seat comprising a plurality of frame sections of substantially uniform thickness throughout, each of said sections having a rear leg, back, seat and front leg structural element, said sections being spaced apart closer than the width of a seat for one person and having spacers fitting between adjoining sections at the top of adjoining back elements thereof and at the front and rear of the corresponding adjoining seat elements thereof, a plurality of said seat elements comprising the seating portion for one person, means securing said spacers in position, an upholstery section for each of said back and seat elements, said upholstery sections overhanging their respective back and seat elements in abutting relation, said upholstery sections each having an upholstery base and channel means comprising a centrally disposed longitudinally extending portion on the bottom of the base interfitting the edge portion of the corresponding back and seating portion of each of said seat frame sections, and means securing said interfitting portions in assembled relation.

4. A sectional seat having a seating portion, said sectional seat comprising a plurality of frame sections of substantially uniform thickness throughout, each of said sections having a seat structural element, said sections being spaced apart closer than the width of a seat for one person and having spacers fitting between adjoining sections at the front and rear of the corresponding adjoining seat elements thereof, a plurality of said seat elements comprising the seating portion for one person, means securing said spacers in position, an upholstery section for each of said seat elements, said upholstery sections overhanging their respective seat elements in abutting relation, said upholstery sections each having an upholstery base and channel means comprising a centrally disposed longitudinally extending portion on the bottom of the base interfitting the edge portion of the corresponding seating portion of each of said seat frame sections, and means securing said interfitting portions in assembled relation.

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