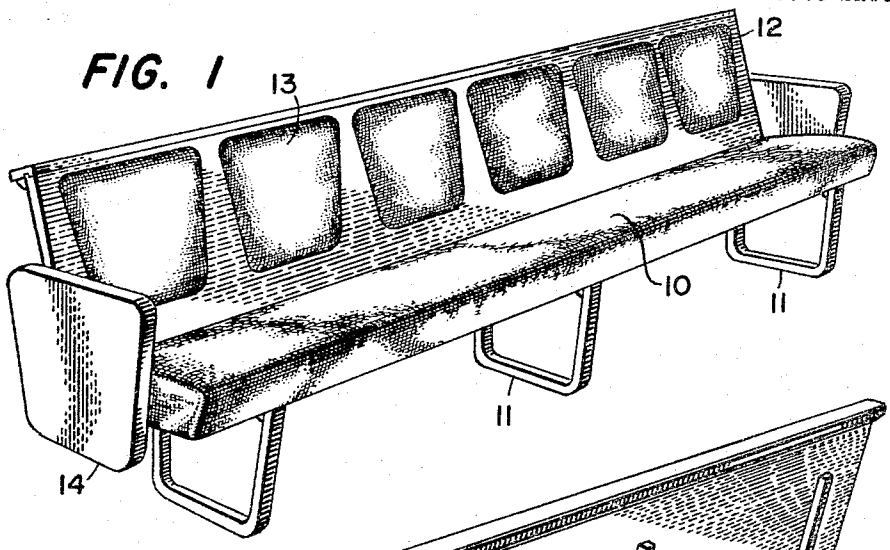
May 9, 1967 C. J. BARECKI ETAL 3,318,635

ROW SEATING

Filed May 9, 1966 4 Sheets-Sheet 1

FIG. 1



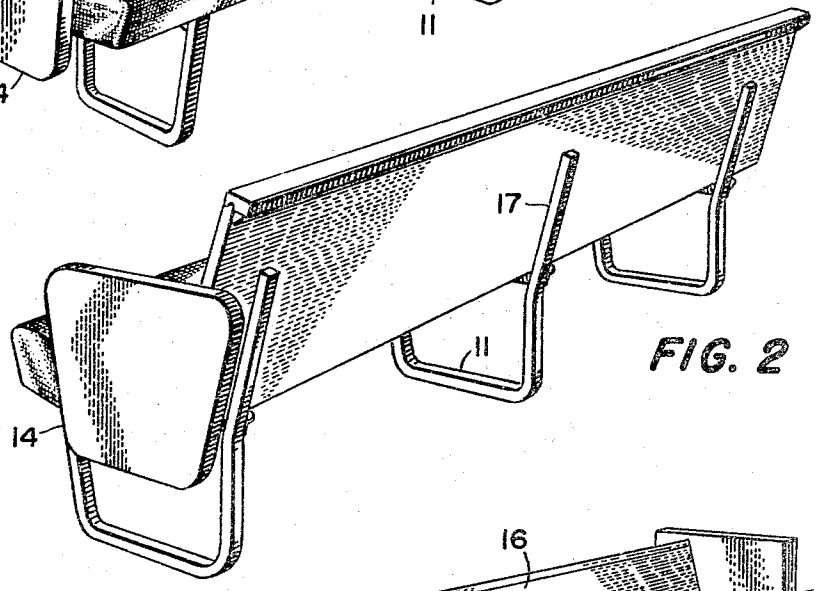




FIG. 2

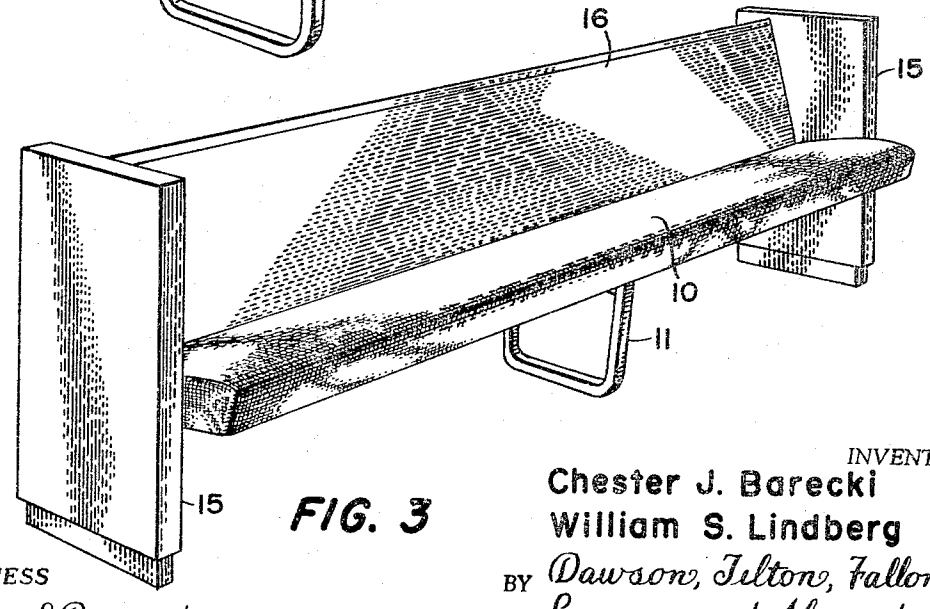



FIG. 3

INVENTORS
Chester J. Barecki
William S. Lindberg

BY Dawson, Tilton, Fallon, Lungmus and Alexander.
ATTORNEYS

WITNESS
Harry S Brown Jr.

May 9, 1967 C. J. BARECKI ET AL 3,318,635

ROW SEATING

Filed May 9, 1966 4 Sheets-Sheet 2

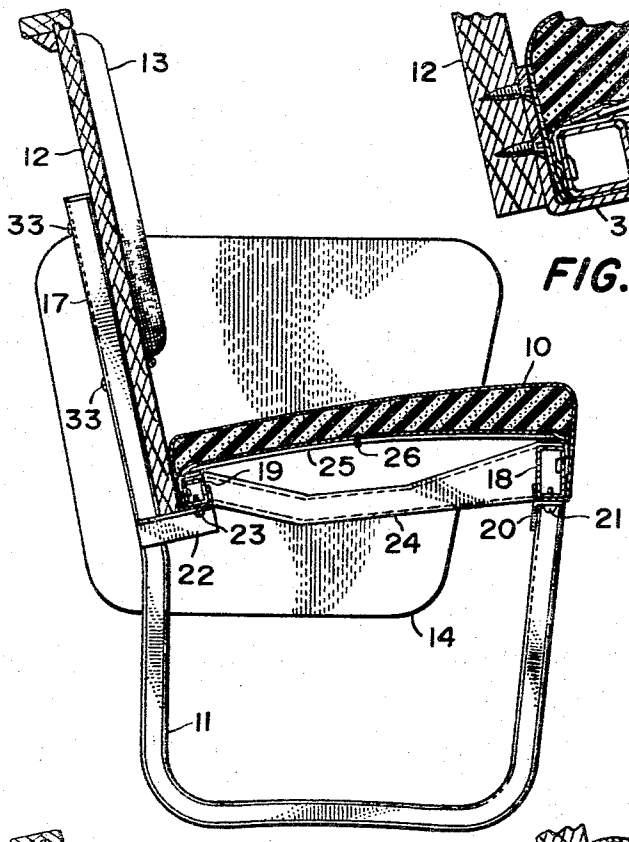



FIG. 6




FIG. 7

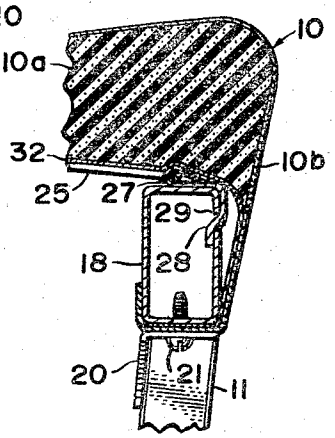



FIG. 8

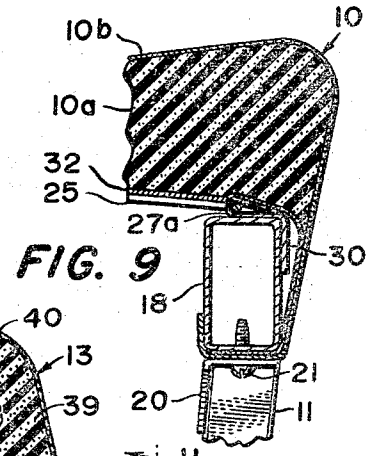



FIG. 9

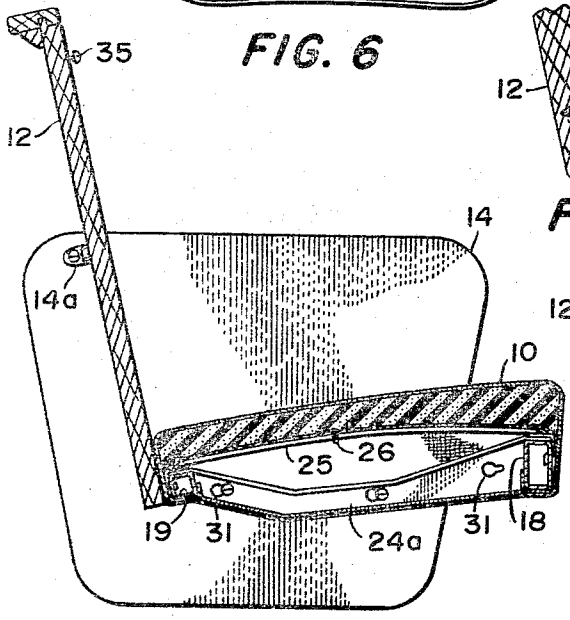



FIG. 10

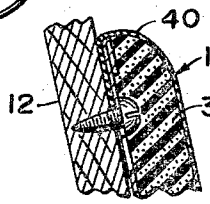



FIG. 11

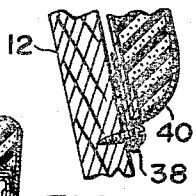



FIG. 12

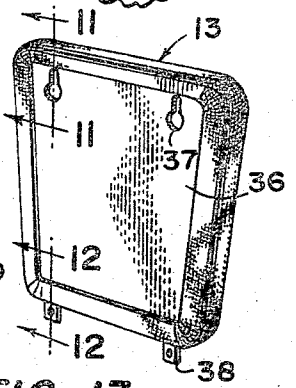



FIG. 13

INVENTORS
Chester J. Barecki
William S. Lindberg

WITNESS
Harry S. Brown Jr.

BY Dawson, Tilton, Fallon, Lungmus, and Alexander.
ATTORNEYS

May 9, 1967 C. J. BARECKI ET AL 3,318,635

ROW SEATING

Filed May 9, 1966 4 Sheets-Sheet 3

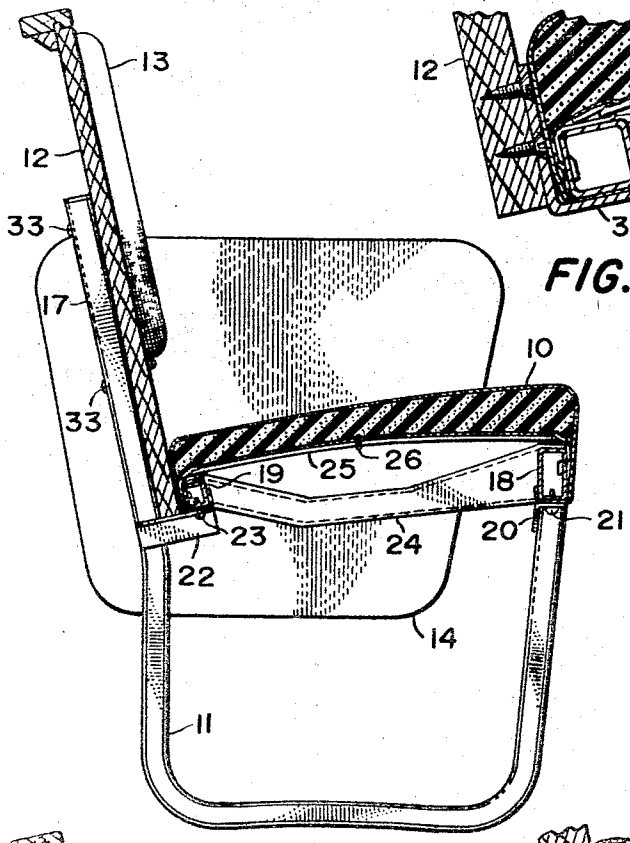



FIG. 6




FIG. 7

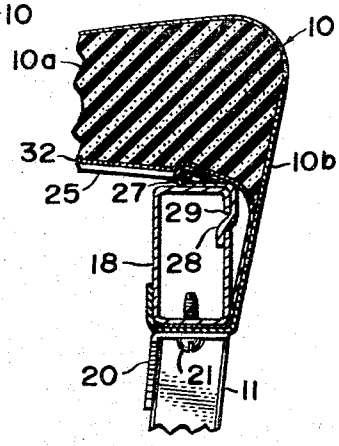



FIG. 8

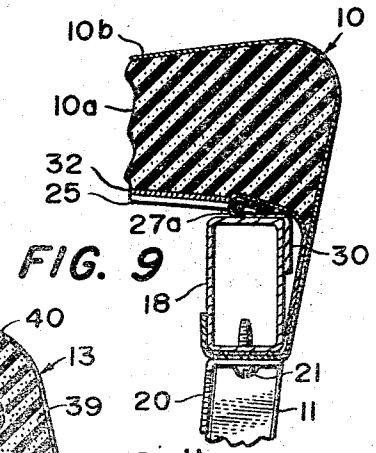



FIG. 9

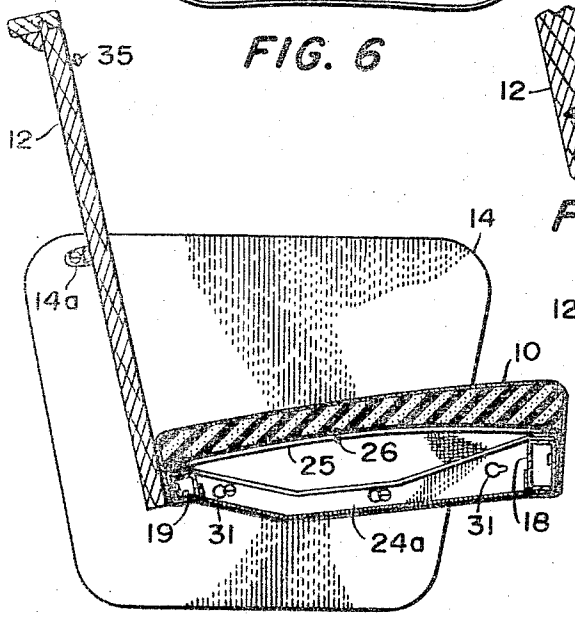



FIG. 10

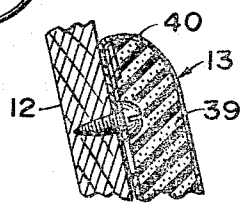



FIG. 11

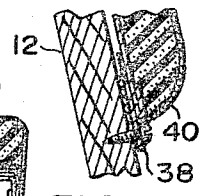



FIG. 12

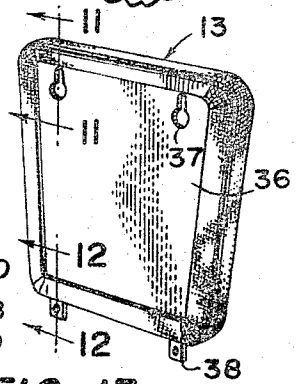



FIG. 13

WITNESS

Harry S. Brown Jr.

BY Dawson, Tilton, Fallon, Lungmus, and Alexander

ATTORNEYS

INVENTORS

Chester J. Barecki

William S. Lindberg

May 9, 1967 C. J. BARECKI ET AL 3,318,635

ROW SEATING

Filed May 9, 1966 4 Sheets-Sheet 4

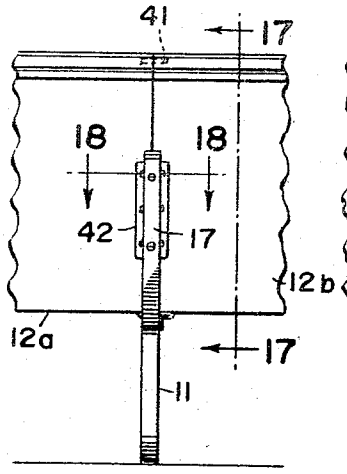



FIG. 14

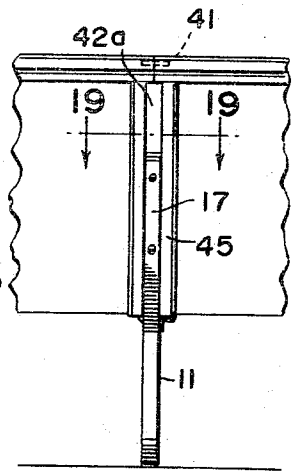



FIG. 15

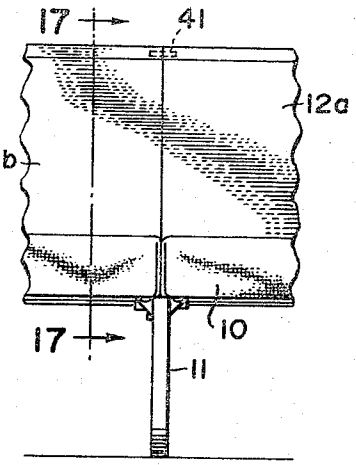



FIG. 16

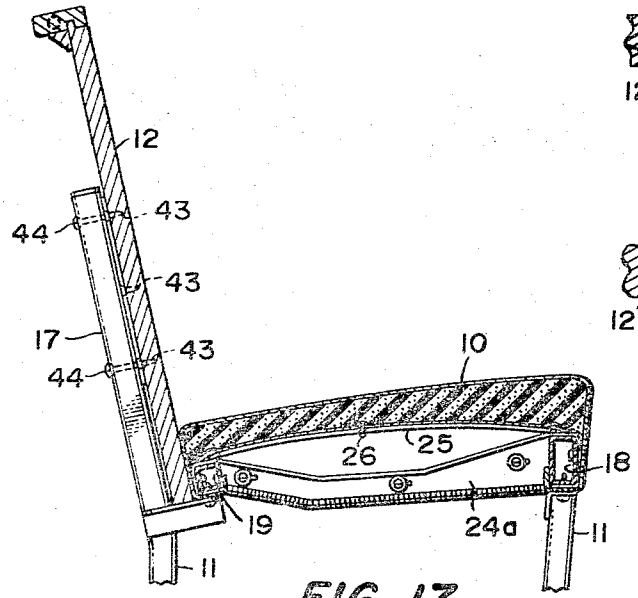



FIG. 17

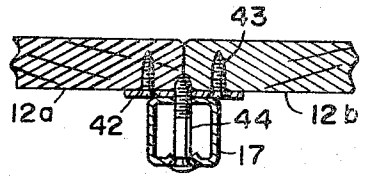



FIG. 18

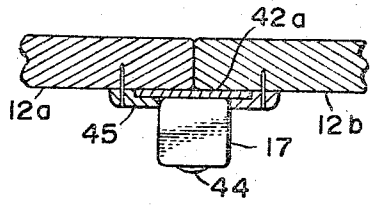



FIG. 19

INVENTORS
Chester J. Barecki
William S. Lindberg

WITNESS
Harry S. Brown Jr.

BY Dawson, Tilton, Fallon, Lungmus, and Alexander.
ATTORNEYS

United States Patent Office 3,318,635 Patented May 9, 1967



3,318,635

# ROW SEATING

Chester J. Barecki and William S. Lindberg, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey

Filed May 9, 1966, Ser. No. 548,686
4 Claims. (Cl. 297—446)

This invention relates to row seating, and more particularly to combination row seating in the form of cushioned pews, auditorium seats, and the like.

An object of the invention is to provide a novel form of row seating having important advantages. A further object is to provide an elongated seat structure providing a continuous cushion and seat back cushions. A still further object is to provide a sturdy seat structure in which U-shaped feet or seat pedestals are unified in a cushion-supporting frame structure while also supporting a common seat back within the frame body. A still further object is to provide in a church pew or auditorium row seat structure a novel frame and seat-supporting means with suspended ends and with the seat back integrated with the frame and support means. Other specific objetcs and advantages will appear as the specification proceeds.

The invention is shown in illustrative embodiments by the accompanying drawings, in which

FIG. 1 is a perspective view of a seat structure equipped with back pads and embodying our invention; FIG. 2, a view similar to FIG. 1 but showing the rear of the seat structure; FIG. 3, a view similar to FIG. 1 but showing a modified form of the seat structure in which floor-supported ends for the seat are provided and the back is flat and free of the individual pads; FIG. 4, a broken front view in elevation of the structure shown in FIG. 1; FIG. 5, a view similar to FIG. 4 but showing the rear of the seat structure in elevation and with one end of the seat structure broken away; FIG. 6, a detail sectional view, the section being taken as indicated at line 6—6 of FIGS. 4 and 5; FIG. 7, a detail sectional view, the section being taken as indicated at line 7—7 of FIG. 5; FIG. 8, a detail sectional view, the section being taken at line 8—8 of FIG. 6; FIG. 9, a view similar to FIG. 8 but showing a modified form of construction; FIG. 10, a vertical sectional view, the section being taken as indicated at line 10—10 of FIG. 4; FIG. 11, a detail sectional view, the section being taken as indicated at line 11—11 of FIGS. 4 and 13; FIG. 12, a detail sectional view, the section being taken as indicated at line 12—12 of FIGS. 4 and 13; FIG. 13, a perspective view of the rear portion of the individual back pad; FIG. 14, a broken rear view in elevation of a portion of a divided seat back showing the leg support structure at the line of division of the seat back; FIG. 15, a view similar to FIG. 14 but showing a modified form of means for joining the sections of the seat back; FIG. 16, a view similar to FIG. 14 but showing the front side of the seat structure in elevation; FIG. 17, a vertical sectional view, the section being taken as indicated at line 17—17 of FIGS. 14 and 16; FIG. 18, a detail sectional view, the section being taken as indicated at line 18—18 of FIG. 14; and FIG. 19, a detail sectional view, the section being taken as indicated at line 19—19 of FIG. 15.

In the seat structure shown in FIGS. 1 and 2, an elongated cushion body **10** is supported upon U-shaped seat bases or feet **11**. Supported rearwardly of the cushion **10** is a seat back **12** provided with individual back cushions **13** suspended from the ends of the seat structure or the seat ends **14**.

In FIG. 3 there is shown a modified form of the invention in which the seat ends **15** extend to the floor and



provide end supports for the seat frame. The back **16** is a plain flat back structure free of back cushions. A U-shaped support leg **11** extends between the supporting ends **15**. It will be understood that any number of support legs **11** may be employed.

In the preferred form of structure shown in FIGS. 1 and 2, the entire support for the seat is provided by the U-shaped leg members **11**. The leg members **11** are provided at their rear with a leg extension or upright **17** which extends to the rear of the seat back **12** to provide a support therefor. The detailed structure is shown best in FIGS. 6 to 10 inclusive and will now be described in connection with these figures.

Supported by the U-shaped leg structure **11** is a tubular front rail **18** and a tubular rear rail **19**. The front portion of leg **11** is provided at its top with a bracket **20**, and a screw **21** extends through the bracket and the tube **18** to secure the parts together. Welded to the rear portion of leg **11** is a forwardly-extending bracket **22** having a top flange through which a screw **23** extends to unite it with the rear rail tube **19**.

To rigidly unite the rails and thereby the top portions of the U-shaped leg **11**, we provide channel cross members **24** which are welded to the rails **18** and **19** and extend at spaced distances between the rails, as shown best in FIG. 4. The channel members **24**, which may be formed of steel or any suitable metal, are downwardly dished in their central portion, as shown best in FIGS. 6 and 10, to provide a flexing area into which the cushion above may move. The cushion **10** is shown supported by a convex spring suspension **25**. We prefer to employ serpentine, non-sagging type of springs having connecting clips **26** uniting them in a broad supporting spring body. The ends of the spring body **25** may be connected to the front and rear rails by the use of clips **27**, and the clips may be anchored to the rails by any suitable means. As illustrated in FIG. 8, the clip is bent at **28** and extended through an opening **29** in the front of the rail **18**.

In the illustration given in FIG. 9, the clip **27***a* has a front flat side **30** which is welded to the front of the rail **18**. In a similar manner, the spring body **25** may be anchored to the rear rail **19**.

In the assembly of the seat portion of the structure, we unite the rails with the cross beams or channels **24** to form a rigid frame assembly. The end cross channels **24***a* are provided with key-shaped openings **31** which are useful for securing the ends **14** thereon. The end **14** is further secured to the back **12** by a screw extending through the bracket **14***a*. The suspension spring structure **25** is secured in convex position, as shown in FIGS. 6, 8 and 10. The cushion body **10** may then be secured in position. The foam cushion body **10***a* is preferably molded at its bottom to a burlap or cloth material **32**, and the foam body is covered with a cloth cover **10***b*. We prefer to anchor both the cover **10***b* and the burlap **32** to the rails **18** and **19** by cementing them thereto, as shown best in FIGS. 8, 9 and 10.

With the cushion and frame structure assembly, as just described, the parts may be united to the U-shaped seat base **11**, as shown in FIG. 6. Screws **21** may be employed for uniting the front leg portion by means of the bracket **20** with the front rail **18**, and similarly by means of the forwardly-extending bracket **22** screws **23** may be employed for uniting such brackets with the rear rail **19**.

By means of the elongated and forwardly-extending bracket **22** which is welded to the rear portion of leg structure **11**, there is provided a slot or space between the rail **19** and the upright extension portion **17** of the leg body **11**. Into the slots thus provided between the uprights **17** and rear rails **19**, we extend the bottom portion of the seat back **12**, as shown best in FIG. 6. Screws

33 are passed through the leg extension 17 and into the seat back 12 to secure these parts together. In order to further unite the seat back 12 directly to the rear rail 19, we provide the seat back with suspension brackets 34 at intermediate points, as shown best in FIG. 7 and FIG. 4.

If the seat back 12 is to be provided with individual seat cushions 13, the back 12 is provided with screws 35 and the back cushions 13 are provided with metal plates 36 provided with keyhole openings 37 adapted to receive the screws 35. The lower ends of the metal plates 36 are provided with apertured tabs 38 through which screws may be passed to secure the cushions in place. The cushions may be formed in any suitable manner. We prefer to employ cushion bodies 39 enclosed by covers 40, the covers being extended behind the plate 36 before the cushion pads are secured in position, all as illustrated in FIGS. 11, 12 and 13.

In elongated church pews, it is necessary to employ a divided back which is shown in FIGS. 14–17 as back portions 12*a* and 12*b*. To unite the two portions, we provide a dowel 41, and we utilize the U-shaped leg extension 17 to bring it over the line of junction between the back parts 12*a* and 12*b*. A plate 42 is provided with spaced openings through which screws 43 are extended, as shown best in FIG. 16. The leg extension 17 is then secured to the plate 42 by means of thread-cutting screws 44. If desired, and for decorative purposes, a cover plate 45 may be employed, as shown best in FIGS. 15 and 19. The plate 45 is recessed to receive the connector plate 42 and decorative panel 42*a* thereabove, and the outer ends of the plate 45 are secured by small nails to the back parts 12*a* and 12*b*.

In FIG. 17, there is shown a portion of the modification set out in FIG. 3 wherein the back 12 consists of a plain flat body and with which back cushions are not employed.

In the foregoing structure, the U-shaped support leg structure with its upright extension 17 is buttressed against springing or yielding by the rigid cross channels 24 and 24*a*, while at the same time providing rails permitting sliding movement of the pews if this should be needed. Further, by anchoring the rear rail forwardly of the uprights 17, channels are provided in which the seat back is securely anchored and braced by the rail structure. While the tubular rail and leg structures may be of relatively lightweight metal, these members are united in an extremely sturdy structure by the rigid cross beams or channels 24 and 24*a*, and the entire frame thus provided is assembled in a sturdy interlock with the seat back 12.

While in the foregoing structure we have set out embodiments of the invention in considerable detail for the purpose of illustrating the invention, it will be understood



that such detals may be varied widely by those skilled in the art without departing from the spirit of our invention.

We claim:

1. In a row seating structure, a pair of spaced longitudinally-extending front and rear tubular rails, cross channel members secured at their ends to said tubular rails to provide a seat frame, leg support means secured to said front tubular rail and extending upwardly above said seat frame at the rear and spaced outwardly from said rear rail, bracket support means secured to said rear leg means and extending forwardly and to a point below said tubular rear rail and providing between said rail and said rear leg extension a back-support socket, a seat back supported within said socket between said rear rail and rear leg extension, and means for securing said rear rail to said bracket means.

2. The structure of claim 1 in which the bracket means is provided with a horizontal flange through which attachment members extend into the rear tubular rail.

3. In a row seating structure, a pair of spaced longitudinally-extending front and rear tubular rails, said rails being generally rectangular in cross section, cross channel members secured to said rails to provide a seat frame, a seat member carried by said frame, legs supporting said rails at an elevated position with the rear leg portion extended upwardly above said seat to provide a back support, bracket means carried by said rear leg portion extending forwardly and under said rear rail to provide a socket space therebetween, and a seat back supported between said rear leg extension and said rear rail on said bracket means.

4. The structure of claim 3 in which said bracket and front leg portion are provided with horizontal flanges adjacent the tubular rails and screw connector means extend through said flanges and into said rectangular rails.


**References Cited by the Examiner**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 2,248,413 | 7/1941 | Rathbun | 297—452 |
| 2,271,461 | 1/1942 | Musselman | 297—457 |
| 2,786,513 | 3/1957 | Hoven et al. | 297—444 X |
| 2,907,377 | 10/1959 | Hoven et al. | 297—444 |
| 3,006,689 | 10/1961 | Eppink | 297—457 |
| 3,012,818 | 12/1961 | Brown | 297—446 X |
| 3,037,814 | 6/1962 | Gardner et al. | 297—444 |
| 3,043,624 | 7/1962 | Mason | 297—303 |
| 3,065,030 | 11/1962 | Gegoux et al. | 297—445 |
| 3,154,345 | 10/1964 | Lambrecht | 297—445 X |
| 3,230,007 | 1/1966 | Spanger et al. | 297—457 X |


CASMIR A. NUNBERG, *Primary Examiner.*