W. W. DITTMAR.

METHOD OF FORMING A PEW.

APPLICATION FILED SEPT. 13, 1913.

1,140,964.

Patented May 25, 1915.

Fig. 1.

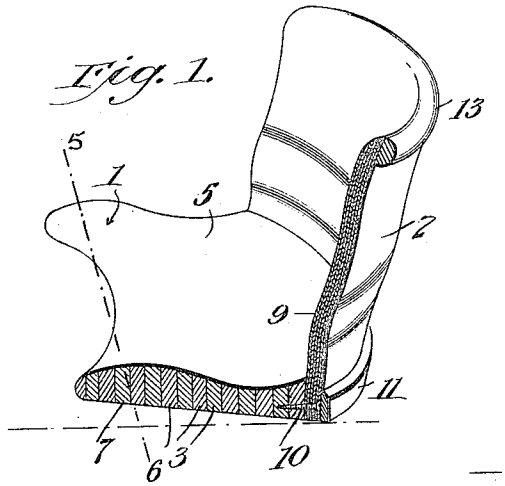


Fig. 2.

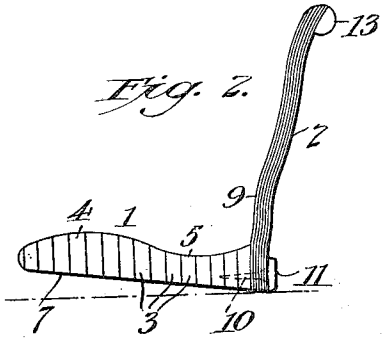
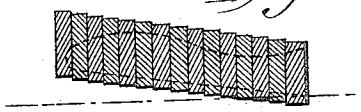


Fig. 4.



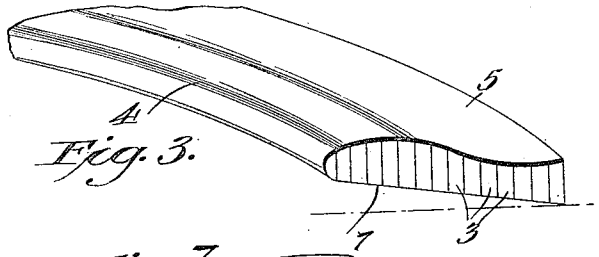


Fig. 3.

Fig. 5.

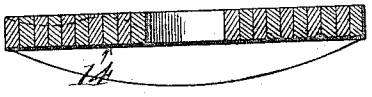


Fig. 7.

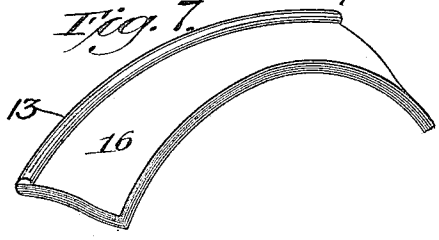


Fig. 6.

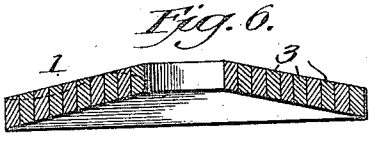


Fig. 8.

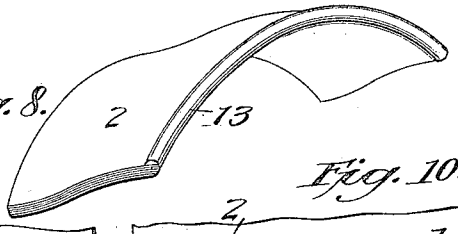


Fig. 9.

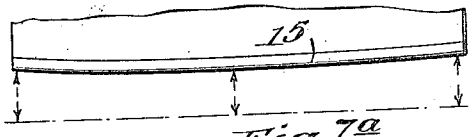
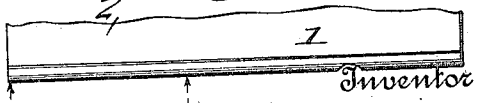


Fig. 10.



Inventor

W. W. Dittmar,

Witnesses

T. L. Mackesel

A. P. Wright.

Fig. 7a.

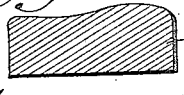
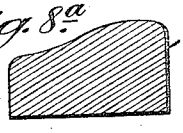


Fig. 8a.



E. B. Hoeting

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. DITTMAR, OF WILLIAMSPORT, PENNSYLVANIA.

METHOD OF FORMING A PEW.

1,140,964. Specification of Letters Patent. Patented May 25, 1915.

Original application filed March 20, 1912, Serial No. 685,088. Divided and this application filed September 13, 1913. Serial No. 789,640.

To all whom it may concern:

Be it known that I, WILLIAM W. DITTMAR, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Methods of Forming a Pew, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in method of forming church pews and more particularly to that class of pews which are curved longitudinally assuming the arc of a circle and comprises a division of my application for pew, filed March 20, 1912, Serial Number 685,088; the object being to improve the general construction of this class of pew whereby the same can be manufactured at a less expense and at the same time have many advantages.

The main object of the invention is to provide a pew in which the seat and back, when placed in position within the end pieces, will be at an equal distance throughout its entire length from the base line and the back which is formed with a single or a compound curve will have the convex portion at an equal distance from the top of the seat throughout its length. In pews of this character now in use, the curved seat is secured to the back in such a manner that it is necessary to trim the end portions of the back in order to provide a seat having a back of equal height throughout its length and to obtain the necessary or desired tilt to the seat; the back and seat after being formed are tilted when placed in position within the end pieces whereby the end portions of the curved seat are thrown upwardly at a greater height from the base or floor than the central portion of the seat. I obviate all of these difficulties by forming the seat dished in order to maintain an equal height from the base line and by forming the single or compound curved back on a form of such shape that the upper portion is constructed on a greater radius than the lower portion, the convex portion will be maintained at an equal distance from the upper face of the seat in order to fit the back of a person sitting therein.

In the drawings—Figure 1 is a perspective view showing a portion of a pew constructed in accordance with my invention; Fig. 2 is a transverse section through the same; Fig. 3 is a detail perspective view of a portion of a seat constructed in accordance with my invention; Fig. 4 is a transverse section through a seat showing the manner of forming the same dished by arranging sections from which it is formed in stepped relation to each other; Fig. 5 is a section as on line 5—6 of Fig. 1 through the seat of a circular pew constructed in the ordinary manner now in use tilted as required to get the proper inclination; Fig. 6 is a section on line 5—6 of Fig. 1 through the seat of a circular pew constructed in accordance with my invention showing the dish to the bottom which avoids the necessity for tilting the seat as it is built to the proper angle; Fig. 7 is a perspective view of a portion of a back constructed in the ordinary manner; Fig. 7ª is a section through the form on which the back, as shown in Fig. 7, is formed; Fig. 8 is a perspective view of the back constructed in accordance with my invention; Fig. 8ª is a section through a form upon which the construction of back, as shown in Fig. 8, is formed; Fig. 9 is a front elevation of a portion of pew constructed in the ordinary manner showing the seat at a greater height from the base at the ends than at the center; and Fig. 10 is a front view showing a seat constructed in accordance with my invention whereby the seat is maintained at an equal distance from the base throughout its length.

Like numerals of reference refer to like parts in the several figures of the drawings.

In the drawings, 1 indicates the seat and 2 the back of my improved construction of pew, the end pieces being omitted as they are formed in the usual manner. The seat 1 is curved longitudinally and is formed of a plurality of sections or strips 3 secured together by any suitable adhesive material in stepped relation as shown in Fig. 4 in order to obtain the desired dish to the seat as shown in Fig. 3 and after the seat is thus formed, it is shaped as shown by dotted lines in Fig. 4 to form the convex portion 4 and the concave portion 5 on its upper face and a straight portion 7 on its under face. If a seat constructed in this manner was carried out to form a complete circle and a transverse section taken through the same, it would assume the position shown in Fig. 6, that is, a dish would be formed so that the seat throughout its entire length would be at an equal distance from a horizontal or base line. The man-

ner of forming seats of this character now in use is shown in Fig. 5 and when the same is tilted, the outer end portions are thrown at a greater distance from the base line than the central portion.

The laminated back 2 is curved both vertically and longitudinally and is preferably formed five-ply which is bent vertically to assume a single or a compound curve upon a form 30 as shown in Fig. 8ª before the adhesive material employed for securing the plies together has hardened and it will be seen that the back has an upper portion struck on a greater radius than the lower portion which will give the desired tilt to the back without actually tilting the same, thereby saving the material from which it is formed as it is not necessary to trim the end portions as is the case with a back constructed as shown in Fig. 7 when used in connection with a seat as shown in Fig. 5. The compound curve of the back forms a convex portion 9 which will be maintained at an equal distance throughout its length from the top of the seat when the back is secured in position thereon and for securing the back to the seat, I employ fastening members 10 over which is arranged a facing strip 11, the upper edge of the back also being provided with a facing strip 13 as clearly shown in Figs. 1 and 2. After the back and seat have been secured together in this manner, they are ready to be placed in the end pieces and as shown in Figs. 1 and 2, and it is not necessary to tilt the back and seat as the desired dish has already been obtained, thereby saving a great deal of time in setting up a pew constructed in this manner.

The old form of seat 14 as shown in Fig. 5 cannot be set into the end pieces so that the same will be maintained at an equal distance from the base line throughout its length as it must be tilted to give the proper inclination and then will assume the position shown at 15 in Fig. 9; while in Fig. 10, I have illustrated the position a seat constructed in accordance with my invention will assume so as to be an equal distance from the base line throughout its length. In Fig. 7, I have shown a back 16 constructed on a form 31 as shown in Fig. 7ª in the manner now in use whereby it is necessary to tilt the same, while in Fig. 8, I have shown a back constructed in accordance with my invention, showing that the same is built with the desired tilt.

From the foregoing description, it will be seen that I have constructed a pew formed of a seat and back built with the desired inclination so as to conform to a person's back. It will also be seen that I have overcome the difficulties with pews curved longitudinally by constructing a pew in which the seat is at an equal distance from the base line throughout its length and a back in which the convex portion is at an equal distance from the upper face of the seat throughout its length.

I claim:

1. The method of forming longitudinally curved pews consisting of forming a seat of a plurality of strips arranged in stepped relation, such that a section on a line forming a chord to the longitudinal curve presents such strips as lying between two conelike surfaces concentric to the longitudinal curve of the seat and then shaping said strips to form a seat.

2. The method of forming laminated longitudinally curved pew backs consisting in securing the plies of said back together by an adhesive material, bending said back transversely upon curved lines before said adhesive material has hardened, with its edges struck on different radii, and then bending said back to a curve with the axis of which the lower edge portion of the back is parallel, while the mean contour of the transverse curvatures of the back is inclined thereto to about the proper rearward incline of the back of the completed pew to a horizontal plane.

3. The method of forming longitudinally curved pews consisting of forming the seat of a plurality of strips arranged in stepped relation, such that a section on a line forming a chord to the longitudinal curve presents such strips as lying between two conelike surfaces concentric to the longitudinal curve of the seat, then shaping said strips to form a seat having a curved face, and then securing to said seat, a back having its edges struck on different radii, and its bottom edge portion curved longitudinally to the curve of the back edge of the seat and parallel to the axis of said curve while the mean contour of the transverse curvature of the back is inclined to said axis to about the proper rearward incline of the back of a completed pew to a horizontal plane.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM W. DITTMAR.

Witnesses:
OLIVER J. DECKER,
HENRY P. DECKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."