April 14, 1942. E. L. JOHNSON 2,279,946

BENCH

Filed June 20, 1940 2 Sheets-Sheet 1

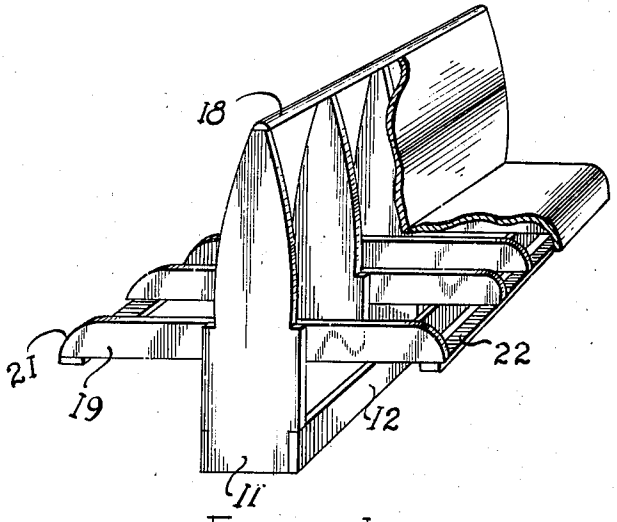


FIG- 1

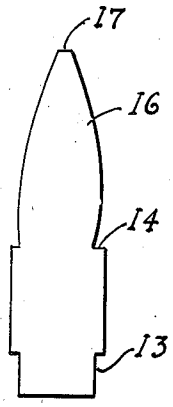


FIG-3

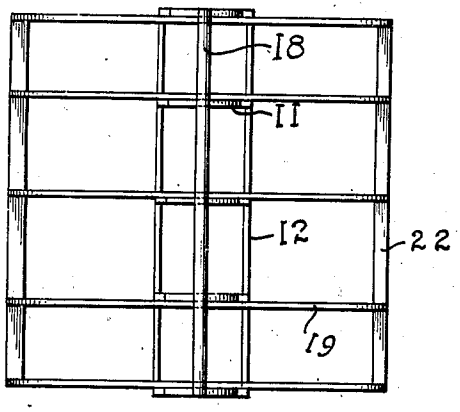


FIG- 2

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BENCH

Filed June 20, 1940 2 Sheets-Sheet 2

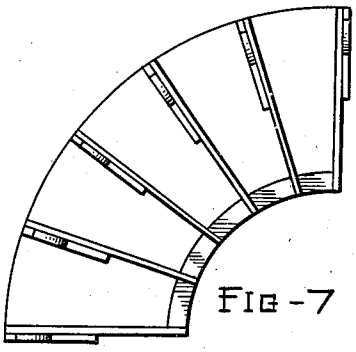


FIG-7

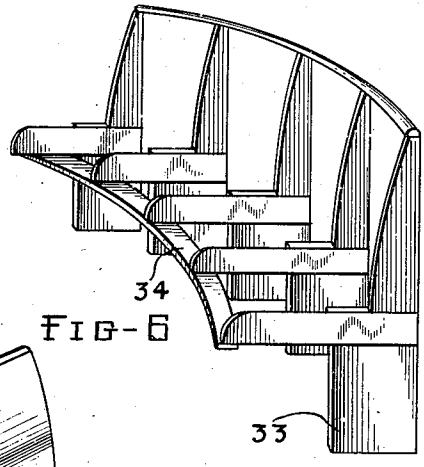


FIG-6

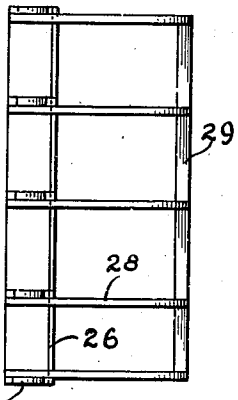


FIG-5

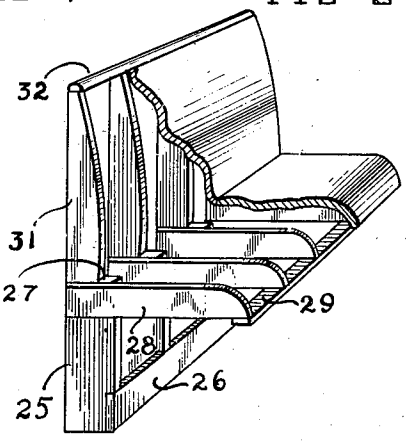


FIG-4

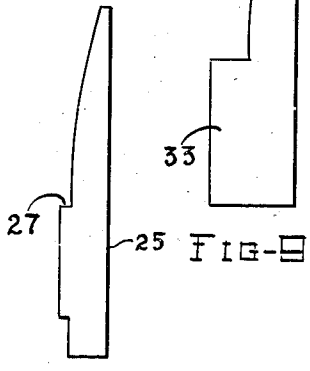


FIG-8

FIG-8

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Patented Apr. 14, 1942 2,279,946

UNITED STATES PATENT OFFICE

2,279,946

BENCH

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Application June 20, 1940, Serial No. 341,522

3 Claims. (Cl. 155—130)

This invention relates to improvements in benches and more particularly to benches of the type used in public gathering places, such as clubs and restaurants. The structural parts of the bench forming the subject matter of the invention are such that it may be erected as a double or back-to-back bench, as well as a straight or curved single bench.

Prior to this invention it has been the practice to fabricate benches of this type only as they were needed and in accordance with specific requirements. No attempt was made to standardize on any of the essential structural parts and, consequently, the manufacture of each bench or group of benches has been a special undertaking.

The present invention has for one of its objects the provision of duplicate structural parts that may be erected as double or back-to-back benches, as well as straight or curved single benches. Additionally, the invention makes possible the erection of benches without prior specific dimensional limitations being known. It is also an object of the invention to provide structural parts that may be fabricated in quantities and stored until required. In this manner, the manufacturing cost of bench parts is greatly reduced, erection simplified, and adaption of a bench to a variety of spaced limitations greatly facilitated. Furthermore, the structural parts may be designed to determine the contour of seat and back rest for greater convenience and comfort of users of a bench.

Other advantages and objects of the invention will be more fully understood from a consideration of the following specification taken in conjunction with the accompanying drawings; and in which

Figure 1 is a perspective view of a double seat bench in which is embodied one form of the invention, the seat and back being partially broken away to disclose the structural features;

Figure 2 is a plan view of the structure shown in Figure 1;

Figure 3 is an end view of one of the uprights;

Figure 4 is a perspective view of a single bench with the seat and back partially broken away to disclose the structural details of another form of the invention;

Figure 5 is a plan view of the structure of Figure 4;

Figure 6 is a perspective view of a slightly curved bench;

Figure 7 is a plan view showing the arrangement of structural parts when the bench follows a 90° turn; and

Figures 8 and 9 are end views of the uprights of the structures shown in Figures 4 and 6 respectively.

Reference is now had to the drawings wherein the numeral 10 is employed to designate the skeleton structure of a bench embodying one form of the invention. A plurality of uprights 11 form a part of the structure and may be spaced apart any desired distance, being secured in alignment by floor rails 12. The number of uprights, as well as their spacing, may be determined at the time of erecting the bench, being preferably controlled by the use to which the bench may be put, together with the space limitations therefor.

Inasmuch as the width of the uprights 11 constitutes the full width of the base of the bench, it may be found preferable to provide notches 13 for receiving the rails 12, substantially as indicated in the drawings. At a height slightly below seat level an upright is formed with a ledge or shoulder 14. In the modification under discussion two such shoulders are provided, since the bench is of double, or back-to-back type. The upper portion 16 commencing from the shoulders 14 is formed with convergingly curved edges that terminate in a flat surface 17. The particular curve of the edge of the portion 16 is of importance only insofar as it provides a desired curvature for the back rest applied thereto. The upper ends of the uprights are rigidly secured by means of a top rail 18 that fits on the surface 17.

A horizontal member 19, in the instant disclosure, is joined midway of its ends to each of the uprights 11. The member is so disposed that the upper edge thereof is flush with the shoulders 14 of the supporting upright. The ends 21 of each member 19 may be rounded to define the contour of the edge of a seat. Suitable tie slats 22 secure the free ends of the members 19.

A strip of veneer, plywood, pressed wood, or other somewhat flexible material 23 may be applied to the curved edges of the uprights 11. This strip commences at the rail 18 and terminates against the shoulders 14, being bound and finished in any conventional manner. A further strip 24 is applied to the upper edges of the members 19, commencing adjacent the shoulder 14 and terminating at the slat 22. The material utilized to provide the back and seat 23 and 24 to some extent controls the number and spacing of the uprights 11. For example, if the material of the back of the seat is substantial, fewer uprights and members 19 will be

needed in a bench of given length. However, if the material must be sharply curved at the seat edge as suggested in the drawings, such material will be of less thickness and strength and a greater number of uprights 11 and members 19 necessarily provided in a given length bench. The end uprights of the bench may be suitably anchored to the floor and the bench is ready for use. However, if it is desired to upholster the bench, suitable pads and covering may be applied to the back and seat and fastened thereto in any conventional manner.

Benches of the type described find particular adaptation when arranged at right angles to a wall and spaced to accommodate a table between adjacent benches. It is customary to permanently secure both the benches and table. Under such circumstances, the present structure provides adequate leg room beneath the seat for a person to readily maintain his balance when sliding into or out of place on the bench.

Reference is now had to the structure of Figures 4 and 6. Herein the bench is of a type adapted to be positioned flat against the wall. Uprights 25 are secured in spaced relationship by a rail 26 in a manner similar to that already described. Each upright is formed with a single ledge or shoulder 27. A member 28 forms a part of the seat and is permanently secured to the upright with the top edge flush with the shoulder 27. A tie slat 29 secures the free ends of the members 28. The upper portion 31 of each of the uprights 25 may be formed with a curved edge and terminates in a top connecting rail 32. Comparing Figure 1 and Figure 4, it will be noted that the structure of Figure 4 is substantially one-half that of Figure 1. In other words, the skeleton structure of Figure 1, if cut lengthwise through the middle, would produce two structures of the nature shown in Figure 4. Thus, if uprights 11 and members 19 were carried in stock by a manufacturer and it was desired to provide wall benches of the type shown in Figure 4, these members could be cut in half and utilized without other alterations.

Figure 6 discloses the condition where the uprights may be connected by curved rails 33 and tie slats 34 for the purpose of providing a bench that will follow a curved wall. A bench of the type of the invention is intended to be assembled at the place of installation and no previous information need be provided as to the curvature of the wall. Thus the bench as erected may be made to follow the wall contour. Carrying this thought further, Figure 7 illustrates the arrangement of uprights, seat members, rails, and ties when the bench is constructed to make a 90° turn.

It will be understood from the above description that the structural elements of a bench made in accordance with the invention facilitate standardizing the structural elements thereby greatly reducing the costs, eliminating dimensional errors by providing for erection at the time and place of installation, and making possible a varied treatment finish for different installations.

It is to be understood that although applicant has shown and described only a few of the many possible arrangements for benches of this type, together with one specific type of upright and seat member, the arrangement and structural details may be altered without department from the spirit and scope of the invention as defined in the hereunto annexed claims.

Having thus set forth my invention what I claim as new and for which I desire protection by Letters Patent is:

1. A bench of the class described comprising a plurality of spaced uprights, top and bottom rails having fitted engagement with and serving to secure said uprights in parallel spaced relationship, corresponding edges of said uprights being outwardly curved from the top rail to approximately seat level, members joined to said uprights at the lower ends of said curved edges and projecting horizontally beyond said uprights, said members terminating in somewhat rounded ends, sheet material engaged with the curved edges of said uprights and the top and front edges of said members to form a back rest and seat, and a tie slat joined to the under front edges of said members to secure said members in spaced relationship.

2. A bench of the class described comprising a plurality of spaced similar uprights, top and bottom rails connecting said uprights, shoulders in corresponding edges of said uprights at slightly beneath seat level, the edges of uprights above said shoulders being curved to a suitable back rest contour that terminates at said top rail, horizontally disposed members secured to said uprights with their upper edges flush with said shoulders, said members extending beyond said uprights to form seat supports, and sheet material joined to said uprights and said members, said material being sufficiently flexible to conform readily to the curved edges of said uprights.

3. A bench of the class described comprising a plurality of similar uprights, each of said uprights having a rectangular base portion and an upper portion with uniformly contoured edges converging in a relatively small flat top, rails joined to and spacedly positioning said uprights, one of said rails being positioned on the top of each upright and another of said rails being on the base portion, horizontal members joined midway of their ends to said uprights, means connecting the free ends of said members, and sheet material joined to the contoured edges of said uprights and said members whereby to provide opposed back rests and seats.

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