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3,188,138

CHAIR INTERLINKING UNIT

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FIG. 1.

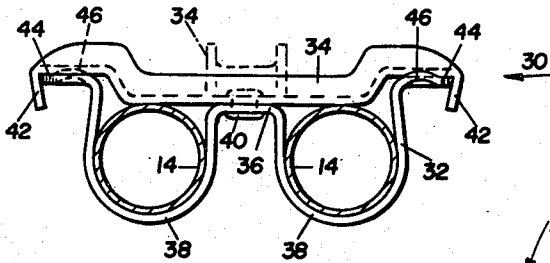
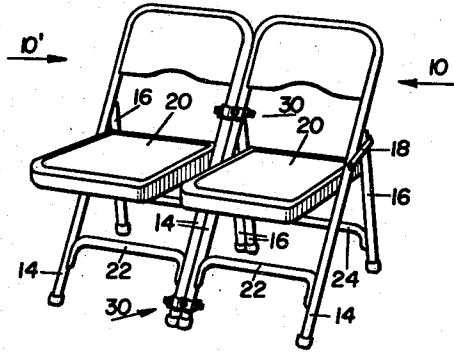


FIG. 2.

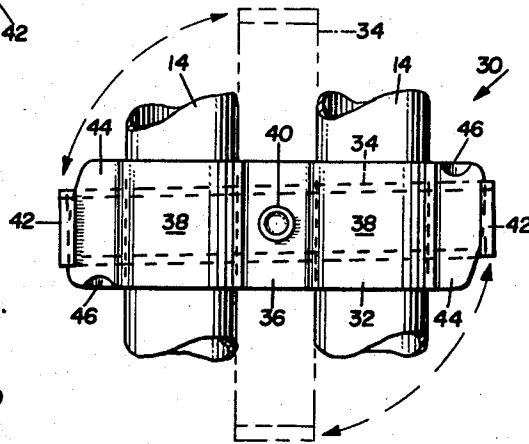


FIG. 3.

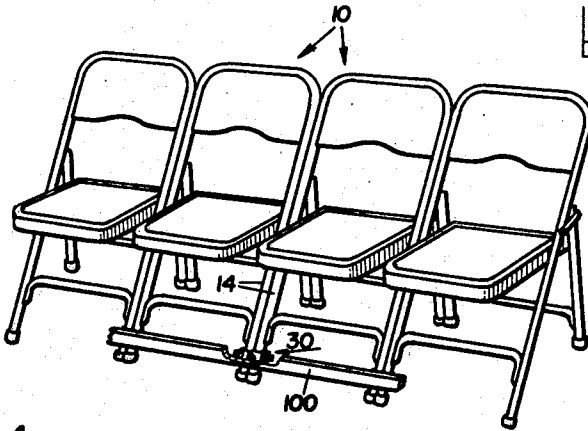


FIG. 4.

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**CHAIR INTERLINKING UNIT**

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1 Claim. (Cl. 297-248)

My invention relates generally to chairs and particularly to means for coupling chairs to present a gang or group thereof.

One of the primary objects of my invention is to provide in combination with chairs of the folding type, simple and effective means for linking a plurality of chairs together in such a manner as to insure their proper alignment.

More specifically, it is an object of my invention to provide improved means whereby the legs of a chair may be connected or linked with companion legs of an adjacent chair so as to maintain said legs in desired spaced relation and alignment.

Still another object hereof is to provide a device for holding a plurality of folding chairs, when arranged in a row for occupancy, in locked aligned relationship.

It is known that folding chairs when placed in rows soon become disarranged by the movements of the people occupying the same. In some cases a chair or chairs are removed from a row which obviously destroys the aligned relationship thereof. In any situation where folding chairs are utilized in large numbers, considerable confusion, and inconvenience results unless some means is employed for holding the chairs in situ.

Various means have been suggested for accomplishing this desired result, but all have involved the expenditure of great amounts of time and labor especially when it is necessary to arrange a large number of chairs, both when assembling the chairs in rows and when dismantling the same, and have proven quite expensive, and have involved the use of special tools, and/or skills for mounting the coupling means on or removing same from the chairs.

It is therefore an object of this invention, in one of its embodiments, to provide a readily attachable and demountable rigid cross bar adapted to engage the legs of adjacent folding chairs in such a manner as to lock a selected number of chairs, aligned side by side, into a single unitary row.

A further object of the invention relates to the simplified quick and efficient manner of applying the coupling means of the invention to a plurality of chairs and in removing the same therefrom without the use of tools, or other mechanical appurtenances.

These and numerous other objects and advantages will be more apparent from the following detailed description when considered in connection with the accompanying drawing, in which:

FIG. 1 is a perspective view of one form of chair coupling means embodying features of my invention in operative association with a pair of folding chairs;

FIG. 2 is an enlarged part sectional top plan view of the coupling means of FIG. 1 in operative association with a pair of tubular chair legs;

FIG. 3 is a front elevational view of the coupling means shown in FIG. 2; and

FIG. 4 is a perspective view of another form of chair coupling means of my invention in operative association with a row of folding chairs.

Referring now to the drawing more in detail wherein like numerals have been employed to designate similar parts throughout the various figures, it will be observed that my invention is particularly adapted for use in connection with folding chairs and in FIGURE 1 I have

designated a folding chair by the numeral 10 and a similar companion folding chair by the numeral 10'. The two chairs 10 and 10' comprise a group or gang and each comprises a pair of front legs 14 and rear legs 16 pivotally connected thereto as by a pivot link 18.

A seat 20 is pivotally mounted upon the legs 14 and 16 in known manner, and a cross brace or rung 22 extends horizontally between the pair of front legs 14 and a cross brace or rung 24 extends horizontally between the pair of rear legs 16.

A detailed description of the chairs is not essential for a clear understanding of the invention and these particular chairs are shown merely for the purpose of illustrating one practical application of the invention.

In order to effectively link or couple the adjacent legs 14 of the chairs 10 and 10', I provide a coupling or clamping means designated generally by the numeral 30. This clamping means is adapted to be similarly secured to the front or rear legs of the chair and for the purpose of explaining the function of the device, I will describe it in connection with the front legs 14.

The clamping device or coupling 30 comprises a forward or outermost clamp portion 32 and a rearward or innermost cam lock portion 34 pivoted thereto.

Clamp portion 32 may be readily stamped or otherwise formed from suitable sheet material and comprises an intermediate or web section 36 having a pair of identical curved sections 38 at its opposite ends, each adapted to partially encircle a leg 14 of the adjacent chairs 10 and 10'.

The curved sections 38 are so arranged that when the intermediate section 36 is positioned between the adjacent legs 14, the inner edges of the curved sections will resiliently bear against the peripheral surface of the chair legs.

Cam lock portion 34 is pivoted to clamp portion 32 as by a pivot pin 40 passing through web section 36 and through the cam lock portion which includes a pair of laterally offset ears or flanges 42, each disposed at opposite ends of the cam lock portion.

The length of the cam lock portion will be such that, in the locked position of the device, the flanges 42 are positioned outwardly of but in contact with a pair of cam lobes 44 which extend horizontally outwardly from each of the curved sections 38 of clamp portion 32, for purposes to appear.

When the clamping device is to be positioned upon a pair of chair legs, the cam lock portion is moved to a substantially vertical position, as shown in phantom lines in FIGS. 2 and 3, thereby permitting the curved sections 38 to be engaged with the chair legs, with the cam lock portion passing easily between the chair legs so as to be positioned rearwardly thereof, whereupon it may be swung to a substantially horizontal position, extending transversely between the chair legs, and contacting the rearward peripheral surfaces thereof.

In the closed or locked position of the device, the flanges 42 of the cam lock portion 34 embrace the outer edges of the cam lobes 44 of the clamp portion 32 thereby precluding further clockwise rotation of the cam lock portion.

An offset or dimple 46 is provided in each lobe 44 and serves to limit excessive movement of the cam lock portion in a clockwise direction, thereby precluding accidental jamming of the device.

In the embodiment of the invention shown in FIG. 4, I have shown a row of the folding chairs 10 held in aligned relation by an aligner bar 100 having a plurality of the clamping devices 30 fixed to its rear planar face as by welding or any other suitable means.

Aligner bar 100, which is arranged to extend transverse-

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ly across the chair legs, may be made of any desired material and may be of any desired cross-sectional shape.

Preferably, the bar 100 is rectangular in cross section and is of such a length as to extend completely across the row of chairs.

The bar will be welded to the curved sections of the clamp portion 32 of each clamping device 30, each of which is strategically positioned along the bar so as to confront a pair of adjacent front legs 14.

After positioning of the bar, the clamping devices are locked upon the legs by swinging the cam lock portion of each device into a horizontal position, as explained with reference to FIGS. 1-3.

It will thus be apparent that the aligner bar acts to positively hold the chairs 10 in their proper alignment and prevents accidental removal of a chair from the row or disarrangement of the entire row. It will also be obvious that by virtue of the extreme simplicity of the aligner bar and the clamping devices fixed thereto and the manner of attaching and demounting the same, a great saving in time and labor is achieved in assembling the chairs in groups of rows. While the bar has been shown of a length to connect together four folding chairs in a group or unit it is to be understood that the same may be made of any desired length for any desired number of chairs. In some cases suitable connecting means may be utilized for connecting together adjacent ends of lengths of cross bars to provide a single cross bar of great length.

From the foregoing it will be seen that my invention contemplates the provision of simple and durable means for coupling a plurality of chairs together and particularly for coupling chairs of the foldable type. The units 30 may be attached to the chair with a minimum amount of effort and skill and these parts may be manufactured by practicing conventional shop methods. The chairs need not be specially constructed in order to be equipped with my improved coupling device and my invention lends itself for use in connection with chairs of varied sizes and

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shapes. The described coupling elements are comparatively small in size and hence do not add any appreciable amount to the bulk of the chairs when coupled together.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

A chair interlocking unit for coupling together the adjacent legs of adjacent chairs comprising,

- (a) a clamp portion extending transversely across the chair legs on one side thereof,
- (b) a cam lock portion of a length substantially identical to that of the clamp portion pivoted to the clamp portion and normally extending transversely across the chair legs on the other side thereof,
- (c) inturned flanges at each end of the cam lock portion, and
- (d) cam lobes at each end of the clamp portion,
- (e) the cam lock portion being movable between a normal locking position wherein it extends transversely across the chair legs with the inturned flanges thereof frictionally engaging the outermost surfaces of the cam lobes of the cam lock portion, and an unlocking position wherein it extends parallel to the chair legs, with the inturned flanges thereof moved out of frictional engagement with the cam lobes.

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