June 15, 1937. A. D. KAHAN 2,083,997

UNIVERSAL METHOD OF SHELVING

Filed Aug. 2, 1935

Fig. 1

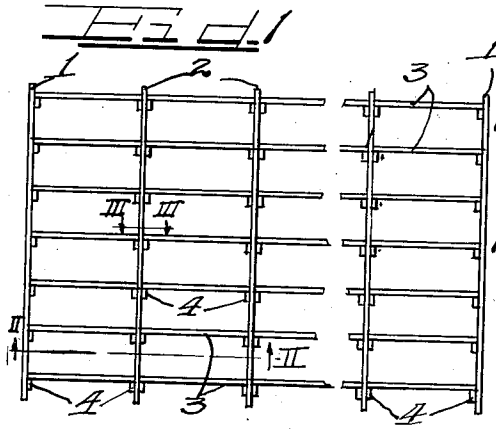


Fig. 7

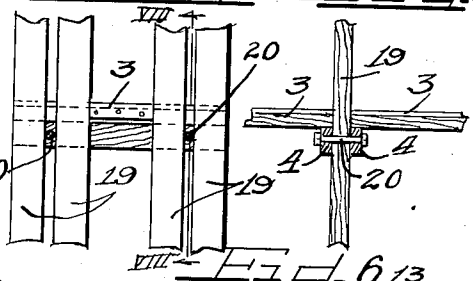


Fig. 8

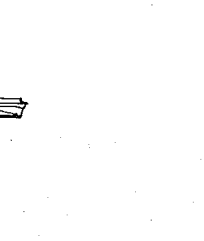


Fig. 6

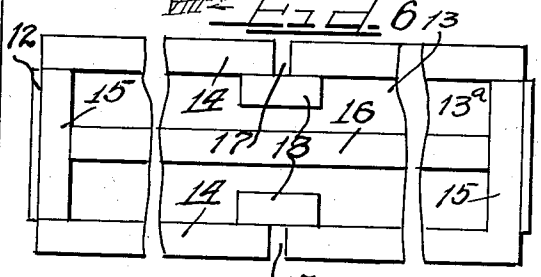


Fig. 2

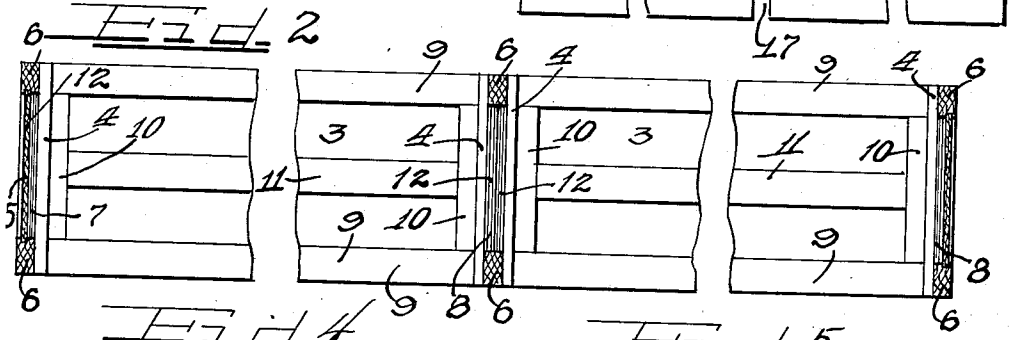


Fig. 4

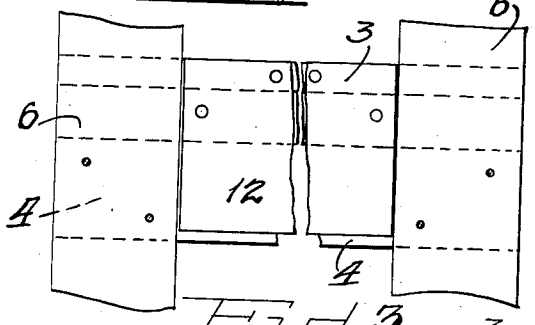


Fig. 5

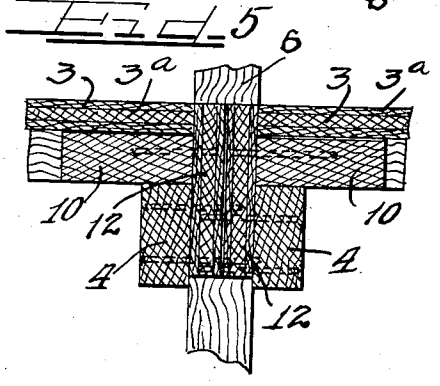
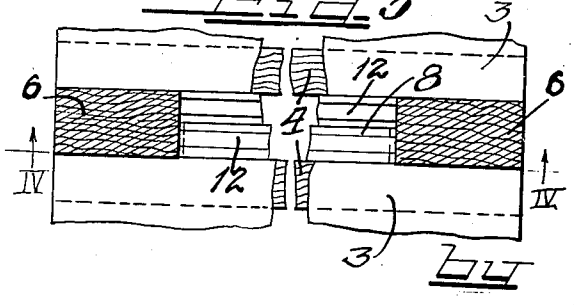


Fig. 3



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UNIVERSAL METHOD OF SHELVING

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Application August 2, 1935, Serial No. 34,349

3 Claims. (Cl. 211—148)

This invention relates to shelving and the method of making the same.

In the past, it has generally been the practice to construct wooden shelving in the building where it was desired. Such shelving was usually constructed from common lumber that was available. In the event that additions to the shelving were later required, it became necessary to secure further lumber and employ a carpenter. Frequently, the lumber used for such a purpose was not sufficiently strong and rigid with the result that the shelving would sag. Moreover, this old practice was more or less expensive.

It is an object of this invention to overcome the objections to the former practice of erecting shelvings in buildings and also to overcome the weakness occurring in such shelving. To this end, it is proposed to construct the shelving in a factory in such a manner that it can be readily shipped in unassembled form to a building and can be readily assembled by any novice without any carpentering work.

It is a further object of this invention to make such shelving so that sections may be added and interlocked to other sections, as desired, and in which the spacing between the shelves may be varied.

The invention comprises the novel structure and method hereinafter described and more particularly pointed out and defined in the appended claims.

In the accompanying drawing, which illustrates certain preferred forms of this invention and in which similar reference numerals refer to similar features in the different views:

Figure 1 is a broken elevational view of shelving involving this invention.

Figure 2 is an enlarged sectional view taken upon the line II—II of Figure 1, looking up in the direction of the arrows.

Figure 3 is an enlarged broken sectional view taken upon the line III—III of Figure 1, looking in the direction of the arrows.

Figure 4 is an enlarged broken view taken substantially upon the irregular line IV—IV of Figure 3.

Figure 5 is an enlarged fragmentary sectional view illustrating the manner of connecting the sections.

Figure 6 is an enlarged bottom plan view of a modified form of shelf.

Figure 7 is a fragmentary elevational view illustrating a slightly modified form of the invention with the rest upon the near side omitted.

Figure 8 is a sectional view taken upon the line VIII—VIII of Figure 7, with the near side rest added.

In accordance with this invention, there are formed a plurality of stanchion members. Shelf rests are then attached to the stanchion members with provision for receiving end tongues upon the shelves. Such provision may consist of a space in the rest or a space adjacent the lateral edge of the rest. Shelves with end or terminal tongues are then formed which preferably project beyond a face of the shelf. The shelves and stanchions are then assembled by placing the shelves upon the rests with the end tongues engaging lateral portions of the rests and serving to tie the stanchioned members together. Thus, the assembling is accomplished without the use of nails, screws, or other separate securing means.

In the drawing, there is shown certain embodiments of this invention which will now be described.

In Figure 1 which shows an assembled view, the reference character 1 denotes the end stanchion members of the shelving structure while the numeral 2 denotes the intermediate stanchion members. The shelves 3 are supported upon rests 4 glued or secured to the stanchion members, and these shelves cooperate with the rests 4 to tie the stanchions together without the use of nails or the like, as will later more fully appear.

The end stanchion members 1 preferably consist of a solid wall and may be formed from a panel consisting of a piece of plyboard 5 with upright wooden posts 6 secured to the ends thereof. The posts 6 are thicker than the plyboard so that the latter is spaced inwardly from the outer surface of the posts. The shelf rests 4 are glued or secured to the posts 6 whereby a space 7 occurs between the shelf rests 4 and the panel 5 for receiving terminal tongues upon the shelves, as will later appear.

The stanchion members 2 preferably consist of spaced posts 6 very similar to the posts 6 on the end members 1, with shelf rests 4 glued or secured thereto at suitable intervals corresponding to those on the members 1 and upon opposite sides thereof whereby a space 8 occurs between such pair of rests, as shown in Figures 2 and 4, adapted for receiving the tongues of adjacent shelves.

The preferred form of shelf 3 preferably consists of a plyboard 3a reinforced upon the bottom by marginal strips of wood 9 and 10 and a medial strip 11, as shown in Figure 2. Upon the ends of each shelf 3 are secured tongues 12 which preferably consist of plyboard. These tongues 12 may

be glued or nailed to ends of the plyboard 3 and the reinforcements 10, as shown more clearly in Figures 4 and 5. It will be noted that the tongues 12 of the end shelves 13 engage the space 7 between the rests 4 and the panel 5 and the space 8 between the rests 4 of the first intermediate stanchion 2, and serves to tie the two stanchions together. The shelves 3 between the first and second intermediate stanchions 2 which have their end tongues in the spaces 8 serve to tie the second intermediate stanchion to the first. In this manner, all of the stanchions are effectively tied together without nailing strips or other means. Likewise, it will be appreciated that the shelves are removably secured without any fastening means. The tongues 12 may be formed so that they frictionally engage in the slots or spaces 7 and 8. They are also slightly narrower than the shelves 3 in order to fit the slots or spaces 7 and 8, as is readily apparent from an inspection of Figure 4.

In Figure 6, there is shown a modified form of shelf 13 which is twice as long as the shelf 3. This shelf 13 may be constructed from a plyboard 13a reinforced upon its bottom by the marginal members 14 and 15 and the center member 16 which may be glued or secured to such bottom. This shelf is provided with lateral slots or notches 17 at the medial line of such a width as to receive the posts 6 of an intermediate stanchion. Upon the ends of the shelf 13 are fastened tongues 12 similar to the tongues upon the first described shelf. Suitable stop blocks 18 may be secured upon the bottom of the shelf at the inner ends of the slots 17 to act as bearing members against the posts 6. The shelf 13 may be assembled by engaging the slots 17 with the posts 6 of an intermediate stanchion and then lowering the same until the tongues 12 engage the spaces 7 and 8 behind the rests 4. The intermediate stanchion will be securely held in position by the slots 17, as is obvious.

In some instances, it may be desirable to vary the vertical spacing of the shelves. In such an event each stanchion may be constructed with two posts 19 upon each side, as shown in Figures 7 and 8. Each pair of posts 19 should be spaced apart sufficiently to admit a suitable bolt 20 therebetween which supports the shelf rests 4 that in turn support the shelves 3, as in the first form. It will be obvious that by loosening the bolts 20, the rests 4 may be raised and/or lowered and secured in different spaced relations.

From the foregoing, it will be appreciated that a novel shelving structure has been provided that can be readily assembled by a novel method without any separate securing means such as nails or screws, and in which the shelves serve to interlock the stanchions or tie the same together. A significant feature resides in the fact that the shelving structure can be assembled or disassembled by any novice without the necessity of an expert mechanic.

I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I, therefore, do not purpose limiting the patent granted hereon otherwise than is necessitated by the prior art.

I claim as my invention:

1. In a shelving structure, a pair of end posts, a panel secured between said posts and spaced from the inner sides of said posts, a shelf rest secured upon the inner sides of said posts, a plurality of pairs of intermediate posts, shelf rests secured upon opposite sides of each pair of intermediate posts and in the same horizontal plane as the shelf rests upon the end posts, a shelf resting at one end upon the shelf rest on the end posts and having a tongue engaging between such shelf rest and said panel and resting at its other end upon the nearside shelf rest upon the adjacent intermediate posts and having a tongue engaging substantially one half of the space between the shelf rests upon said adjacent intermediate posts, and a second shelf having a terminal tongue engaging the other half of said space.

2. In a shelving structure, end panel members having shelf rests and tongue receiving pockets between said rests and panel, intermediate stanchion members, each comprising a pair of end posts and shelf rests upon opposite sides of said posts, the shelf rests upon opposite sides of said posts forming tongue receiving pockets therebetween, and shelves upon said shelf rests, said shelves having terminal downwardly directed tongues that fill said pockets and serve to tie said stanchion members together and to tie the same to said end panel members.

3. An extensible shelving structure comprising an end panel member having means for removably anchoring shelves thereto, an adjacent stanchion member comprising spaced posts and shelf rests upon opposite sides of said posts, said shelf rests being arranged in horizontal parallel pairs defining tongue receiving pockets therebetween, shelves removably anchored to said end panel and supported upon the near side shelf rests on said stanchion, said shelves having terminal downwardly directed tongues that embrace said shelf rests and occupy substantially half of said pockets and tying said stanchion member to said end panel, a second similar stanchion member spaced from the first member, second shelves supported upon the far side rests upon the first stanchion member and having terminal tongues occupying the other half of said pocket whereby the tongues of adjacent shelves are in abutting relation and means for supporting the remote ends of said second shelves.

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