April 9, 1963 WONG KAM WAH 3,084,897

FRAME FOR RATTAN FURNITURE

Filed March 3, 1960 2 Sheets-Sheet 1

Fig. 1

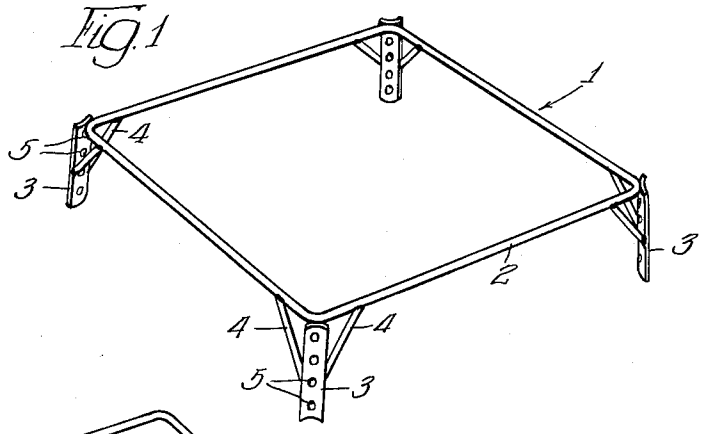


Fig. 2

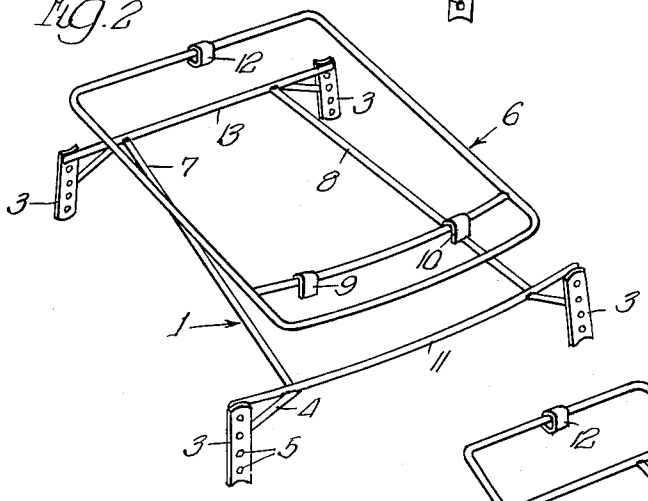
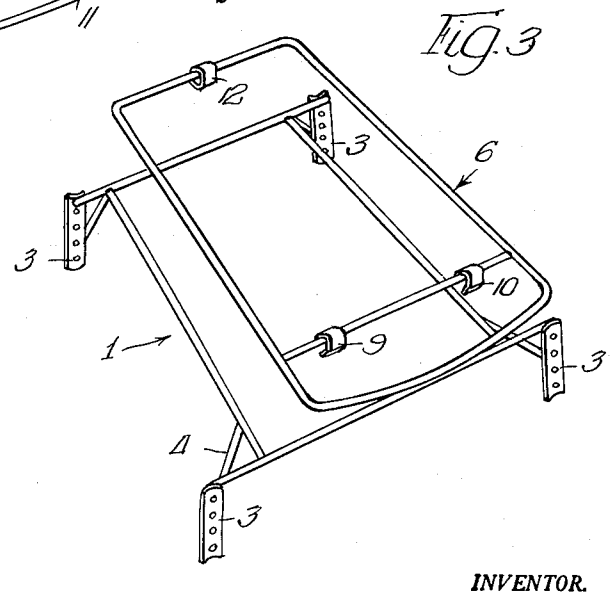


Fig. 3



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FRAME FOR RATTAN FURNITURE

Filed March 3, 1960 2 Sheets-Sheet 2

Fig. 4

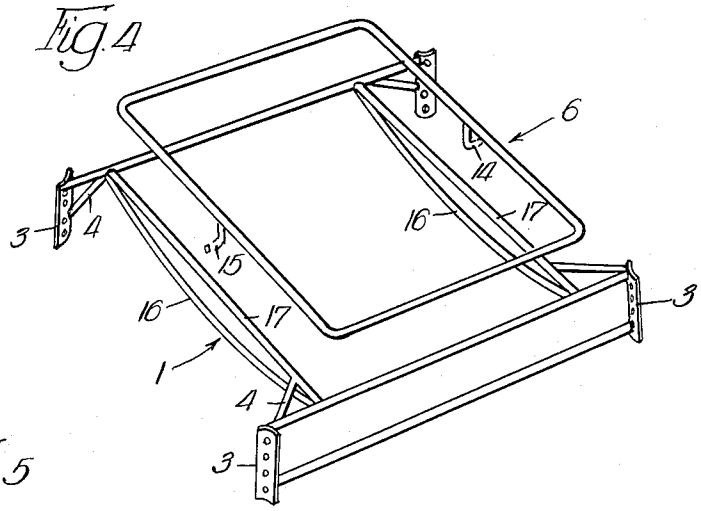


Fig. 5

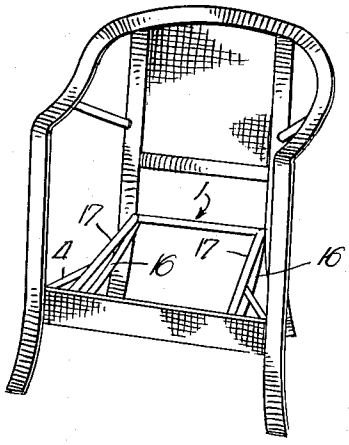


Fig. 6

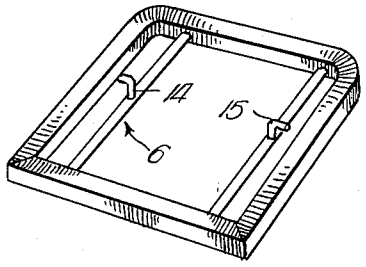


Fig. 7

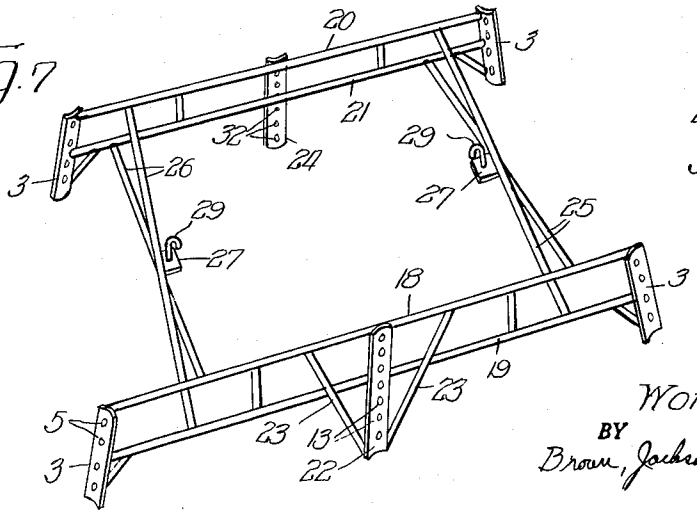
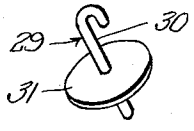


Fig. 8



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FRAME FOR RATTAN FURNITURE

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13 Claims. (Cl. 248—440)

This invention relates to articles of rattan furniture of the type having a part substantially horizontally disposed, for example, a chair seat or table top, which may be either fixed permanently to the main framework of the article, or may be removably attached thereto.

An inherent characteristic of rattan furniture previously proposed has been the large number of bracing and other struts which have been required, in order to ensure that sufficient rigidity is given to the finished article. This is so that strain imposed upon the article during use will not distort its shape. The nature of these articles, necessitating the provision of bracing struts, has caused many disadvantages. For example, when these articles are stacked for dispatch, they are normally nested together to take up the minimum space possible, and hithereto, these bracing struts have formed an effective bar against the close nesting of the articles. This is particularly relevant when it is remembered that the cost of transportation, and particularly in respect of ocean freight, is assessed by bulk and not by weight. Consequently, the closer together the articles can be nested, the less will be the cost of transportation of a given number of articles. Again, in order to achieve a rigid structure for the articles, a considerable number of bracing struts must be employed with consequent excessive use of materials in the manufacture of the articles, and time and labour costs in their production.

Also, during transportation of stacked articles, it is often the case that the bracing struts become broken with consequent defectiveness in the article on reaching its destination. These broken bracing struts may cause further damage to other articles in the stack by piercing the woven parts of these further articles. The woven parts of rattan articles, once broken, are extremely difficult to repair, and quite often the article has to be disassembled, at least in part, so as to replace the broken area.

It is the main object of this invention to provide articles of rattan furniture which overcome the above disadvantages, and at the same time retain the pleasant appearance of rattan furniture.

According to the persent invention there is provided an article of rattan furniture of the type specified, in which the main framework of the article includes a rigid frame, preferably metallic, about which the article is built, said frame serving as a support thus minimising the number of cross bracing struts and similar bracing means. Said substantially horizontally disposed part may include a further frame, preferably metallic about which said part is built, both said frames being interengageable and serving as supports for the article.

It will thus be appreciated that by the use of rigid frames, the number of bracing struts is minimised, and in particular the main bracing strut or struts which connect the legs of the article, may be dispensed with, and consequently closer nesting may be achieved of the articles when they are arranged in stacked relation for transportation. Also, because said horizontally disposed part is strengthened it may be used alone as a low seat.

In order to carry the invention into effect, several embodiments thereof will now be described by way of example only and with reference to the accompanying drawings in which:

FIG. 1 shows a frame constructed in accordance with the invention;

FIG. 2 shows a modified frame together with an associated inter-engageable further frame;

FIG. 3 is a modification of FIG. 2;

FIG. 4 is a further embodiment according to the invention showing two inter-engageable frames;

FIG. 5 shows an article of rattan furniture constructed according to the invention, having one of the frames shown in FIG. 4;

FIG. 6 is a further part of the article of rattan furniture shown in FIG. 5, having the other frame as part thereof as shown in FIG. 4.

FIG. 7 shows a frame for a further article of rattan furniture according to the invention; and

FIG. 8 is an enlarged view of a projection shown in FIG. 7.

Referring first to FIG. 1 which is designed essentially for incorporation in the building of a rattan table or stool, a rigid frame **1**, preferably of cast iron or other metal, although rigid plastics material may be employed, comprises a rod **2** bent in the form of a square and having welded, or otherwise affixed thereto, fastening means **3** arranged at each corner of the square. These fastening means **3** are supported by struts **4** welded thereto and also welded to the rod **2**. The fastening means **3** are also provided with a number of apertures **5** through which screws or nails may be inserted into the rattan or wooden framework of the article. Due to the channel formation of these fastening means **3** they will lie in close proximity to the legs of the article so that the binding material may be wrapped round the fastening means in the formation of the article.

The rigid frame **1** is fixed permanently to the main rattan or wooden framework of the article, and this minimises the number of cross bracing struts and similar bracing means which would otherwise have to be employed, in order that the article would have sufficient rigidity to withstand the strains imposed upon it during use.

FIG. 2 shows a further embodiment which is particularly useful in the construction of rattan chairs and comprises a rigid frame **1** and a further frame **6**. Frame **1** is for inclusion as part of the main rattan or wooden framework of the chair, and will lie substantially horizontal. Frame **6** is for inclusion as part of the seat of the chair and again will lie substantially horizontal. It will be seen that frame **1** is in substantially the same form as the frame shown in FIG. 1, although the two side members **7** and **8** taper towards each other as they approach the back of the chair. The frame **1** is provided with four fastening means **3** having holes **5** for attachment by screws or nails to the main rattan or wooden framework of the article.

Further frame **6** is substantially rectangular in form, and to achieve the inter-engagement between the two frames is provided with catch members **9** and **10** which resiliently engage the front bar **11** of frame **1**. These catch members **9** and **10** are vertically disposed and an

abutment 12 is provided at the other end of frame 6 in the form of an L-shaped member which engages the rear bar 13 of frame 1. This abutment 12 may, however, be in the form of a channel-shaped member for engagement with bar 13. The frame 6 forms part of the horizontally disposed part of the article, and this attachment in its inclusion as part of the seat will be described later in respect of the embodiment shown in FIGS. 4 and 6.

The embodiment shown in FIG. 3 of the drawings is a minor modification from that shown in FIG. 2, and again comprises two frames 1 and 6, the former for attachment to the main framework of the article, and the latter for attachment to the horizontally disposed seat part. Inter-engagement is achieved in the same manner as that described for FIG. 2 by the provision of catch means 9 and 10 and abutment 12. In this embodiment, however, the further frame 6 is tapered towards its rear part, this taper being equal to the taper of frame 1.

Referring now to FIG. 4 which shows a further modification, there is again provided two frames 1 and 6. However, in this embodiment inter-engagement between these two frames 1 and 6 is achieved by providing the latter with projections 14 and 15 which engage in slots formed by adjacent member 16, and member 17 of frame 1. This inter-engagement allows relative sliding movement between the two frames 1 and 6, the two members 16 and 17 of frame 1 being connected together near the front and rear parts of the frame.

FIGS. 5 and 6 show the manner in which the two frames 1 and 6 are included in the main rattan or wooden framework, and also the horizontal disposed seat part of the rattan chair. It will be seen from FIG. 5 that the attachment means 3 of frame 1 are surrounded by the binding of the chair these parts having previously been fixed to the chair legs by screws or nails. The slots formed by adjacent members 16 and 17 are substantially horizontal and are engaged by projections 14 and 15 of the seat portion. FIG. 6 shows how the frame 6 forms part of the seat and the manner in which projections 14 and 15 are disposed on the underside of the seat to engage within the slots formed by members 16 and 17.

FIG. 7 shows a metallic or other frame 1 for incorporation in the main framework of a rattan settee and includes parallel rods 18 and 19 which form a front support and parallel rods 20 and 21 which form a rear support. Fastening means 3 are provided as before having apertures 5 therethrough for fixing screws or nails.

Welded or otherwise affixed to the front support is a further fastening means 22 having apertures 13 said means being supported by struts 23 also welded to the front support. Also, welded or otherwise affixed to the rear support is a further fastening means 24 again having apertures 32.

The front and rear supports are joined by side supports 25 and 26 which are welded together at their centre portions and to plates 27. Each plate 27 has an aperture 28 therethrough for reception of a projection 29, shown more particularly in FIG. 8. As will be seen from FIG. 8 projection 29 consists of a shank 30 bent to form a hook and a collar 31 for retaining the projection within the aperture 28. The hook part engages the seat portion of the settee and holds it detachably in position.

It will be appreciated that the invention is not limited to the embodiments hereinbefore described, but may be modified as desired within the scope of the appended claims.

Having described my invention, I claim:

1. In rattan furniture construction, the improvement which comprises a horizontally disposed rigid main supporting frame about which the furniture is constructed, said rigid frame comprising a thin, narrow metal rod bent to define an essentially four-sided form, and vertically disposed channel fastening members welded to said rod outside the corners of said form to engage about the legs of said furniture, and inclined bracing struts welded at one end to each said channel fastening member and at their opposite ends to the metal rod, said channel fastening members having spaced apertures through which the legs can be secured to said fastening members.

2. In rattan furniture construction, the improvement which comprises a horizontally disposed rigid main supporting frame about which the furniture is constructed, said rigid frame consisting of a horizontally related narrow metal rod structure arranged to define a trapezoid the two non-parallel sides of which are convergingly disposed, vertically disposed channel fastening members welded to the rod structure outside the corners of the form to engage about the legs of said furniture, reinforcing inclined struts of short length secured between each said fastening members and a portion of the metal rod structure but outside the trapezoid, said channel fastening members having spaced apertures through which the legs can be secured to said fastening members, and said fastening members having sufficient length to provide vertical bearing contact with the said legs about which they are secured.

3. In rattan furniture construction, the improvement which comprises a rigid main supporting frame about which the furniture is constructed, said rigid frame comprising metal rods arranged to define an essentially four-sided horizontally disposed form having two parallel sides and two convergingly related sides and extensions outwardly of the corners of said form, and having vertically disposed metal channel fastening members secured to said extensions outwardly of the corners of said form which engage about the legs of said furniture, said channel fastening members having spaced apertures through which the legs are secured to said fastening members, said channel members closely fitting about the legs and having vertical bearing contact therewith, and binding material wrapped around at least said legs and the channel members fitting closely thereabout.

4. In rattan furniture construction, the improvement which comprises a rigid metal supporting frame about which the furniture is constructed, said rigid frame comprising a metal rod structure arranged to define a four-sided horizontal form having a pair of spaced parallel sides and a pair of spaced convergingly related sides and extensions outwardly of the four corners of said form, vertically disposed channel fastening members of metal welded to said extensions outwardly of the corners thereof to receive the legs of said furniture, and bracing struts each having one of their ends secured to a respective one of said channel fastening members and its other end to said four-sided horizontal form so as to lie outside the area of said four-sided horizontal form, said furniture construction including wooden legs and said channel fastening members closely fitting about said legs and having spaced apertures through which the legs are secured to said fastening members, and rattan wrapped about at least said legs including the channel fastening members closely fitting thereabout.

5. In rattan furniture construction, the improvement which comprises a first rigid main supporting frame about which the furniture is constructed, said rigid frame comprising a rod structure arranged to define a horizontal trapezoidal form the non-parallel sides of which are convergingly related, vertically disposed channel fastening members secured to the outside of said rod structure at spaced locations about said form to receive the legs of said furniture, said channel fastening members closely fitting about said legs and having spaced apertures through which the legs are secured to said fastening members, rattan wrapped about at least said legs including the channel fastening members closely fitting thereabout, a second rigid frame comprising a rod structure arranged to define a second horizontal form about which rattan may be wrapped, said second frame being separable from said first frame, and inter-engageable means carried by

the two frames whereby the two frames may be releasably locked with the second frame resting over the first frame.

6. In rattan furniture construction, the improvement which comprises a first rigid main supporting frame about which the furniture is constructed, said rigid frame comprising a metal rod structure arranged to define a horizontal form, vertically disposed channel fastening members secured to the outside of said rod structure at spaced locations about said form to receive the legs of said furniture, said channel fastening members closely fitting about said legs and having spaced apertures through which the legs are secured to said fastening members, rattan wrapped about at least said legs including the channel fastening members closely fitting thereabout, a second rigid frame comprising a further rod structure arranged to define a horizontal form about which rattan may be wrapped, said second frame being separable from said first frame and connection means carried by the second frame including stop means and resilient catch means to engage with said rod structure on opposite sides of said first frame whereby the two frames may be releasably locked with the second frame resting on the first frame.

7. In rattan furniture, the improvement which comprises a horizontally disposed rigid main supporting frame about which the furniture is constructed, said rigid frame including a first pair of generally parallel spaced metal rods, a second pair of convergingly spaced metal rods, said second pair of metal rods extending between said first pair of rods and joined at their opposite ends to said first pair of rods at points spaced inwardly of the ends of said first pair of rods, and vertically disposed channel fastening members welded to the outer sides of said first pair of rods adjacent the ends of said rods, said channel fastening members having spaced apertures through which the legs of said furniture may be secured to said fastening members.

8. In rattan furniture, the improvement which comprises a horizontally disposed rigid main supporting frame about which the furniture is constructed, said rigid frame including a first pair of parallel spaced metal rods and a second pair of convergingly spaced metal rods, said second pair of metal rods extending between said first pair of rods and joined at their opposite ends to said first pair of rods at points spaced inwardly of the ends of said first pair of rods, vertically disposed channel fastening members secured to the outer sides of said first pair of rods adjacent the ends of said rods, said channel fastening members having spaced apertures through which the legs of said furniture may be secured to said fastening members, and short bracing struts each having one end secured to a respective channel fastening member at a point below its securement to the first pair of rods, and having their opposite end secured to the supporting frame at a point spaced from the channel fastening member but outside the four-sided form defined by said two pairs of joined metal rods.

9. In rattan furniture, the improvement which comprises a pair of horizontally disposed rigid main supporting frames about which the furniture is constructed, one of said rigid frames including a pair of parallel spaced metal rods, a second pair of convergingly spaced metal rods, said second pair of metal rods extending between said first pair of rods and joined at their opposite ends to said first pair of rods at points spaced inwardly of the ends of said first pair of rods, vertically disposed channel fastening members welded to the outer sides of said first pair of rods adjacent the ends of said rods, said channel fastening members having spaced apertures through which the legs of said furniture may be secured to said fastening members, and reinforcing struts between a point low on each said fastening members and a point on the supporting frame spaced from said fastening members, and the other of said frames also being of metal rod construction and arranged to define a form of a size and shape which will rest on said first frame, and means carried on two oppositely disposed sides of said second frame for releasable engagement with one of said pairs of metal rods constituting the main supporting frame, said means constituting the sole connection between said two frames.

10. In rattan furniture, the improvement which comprises a pair of horizontally disposed rigid main supporting frames about which the furniture is constructed, one of said rigid frames including a first pair of parallel spaced metal rods, two further pairs of convergingly spaced metal rods, said further pairs of metal rods extending between said first pair of rods and joined at their opposite ends to said first pair of rods at points spaced inwardly of the ends of said first pair of rods, the rods of each of said further pairs defining an elongated space or slot therebetween, vertically disposed channel fastening members welded to the outer sides of said first pair of rods adjacent the ends of said rods, said channel fastening members having spaced apertures through which the legs of said furniture may be secured to said fastening members, and reinforcing struts between a point low on each said fastening members and a point on the supporting frame spaced from said fastening members, the other of said frames also being of metal rod construction and arranged to define a form of a size and shape which will rest on said first frame, and having oppositely disposed catch means depending therefrom for releasable engagement within the slots defined by each of said further pairs of metal rods of the first frame.

11. In rattan furniture, the improvement which comprises a pair of horizontally disposed rigid main supporting frames about which the furniture is constructed, the first of said rigid frames including a pair of parallel spaced metal rods, a second pair of convergingly spaced metal rods, said second pair of metal rods extending between said first pair of rods and joined at their opposite ends to said first pair of rods at points spaced inwardly of the ends of said first pair of rods, vertically disposed channel fastening members welded to the outer sides of said first pair of rods adjacent the ends of said rods, said channel fastening members having spaced apertures through which the legs of said furniture may be secured to said fastening members, and reinforcing struts between a point low on each said fastening members and a point on the supporting frame spaced from said fastening members, the second of said frames also being of metal rod construction and arranged to define a form of a size and shape to rest on said first frame, depending means carried on two opposite sides of said other frame for engagement with corresponding sides of the metal rods constituting the first frame, the depending means on at least one side of said second frame being of a resilient character so as to obtain a frictional connection between the two frames which may be released at the will of the user.

12. In rattan furniture, the improvement which comprises a pair of horizontally disposed rigid main supporting frames about which the furniture is constructed, the first of said rigid frames including a pair of parallel spaced metal rods, a second pair of convergingly spaced metal rods, said second pair of metal rods extending between said first pair of rods and joined at their opposite ends to said first pair of rods at points spaced inwardly of the ends of said first pair of rods, vertically disposed channel fastening members welded to the outer sides of said first pair of rods adjacent the ends of said rods, said channel fastening members having spaced apertures through which the legs of said furniture may be secured to said fastening members, said second frame also being of metal rod construction and of a rectangular size and shape to rest on said first frame, a pair of depending catch members on the forward side of said second frame and a depending abutment member on the rearward side of said second frame, said abutment member including a channel to receive the rearward rod of the first frame, and the catch

members on the forward side of the second frame being of a resilient character so as to releasably bear against the forward rod of the first frame when the second frame is properly positioned thereon with the rearward rod of the first frame caught by the channel of the depending abutment member.

13. In rattan furniture construction, the improvement which comprises a horizontally disposed rigid main supporting frame about which the furniture is constructed, said rigid frame comprising a thin, narrow metal rod-like four-sided form having vertically disposed channel fastening members welded to said frame adjacent the corners thereon but on the outside of said form to engage about the legs of said furniture, and inclined bracing struts

welded at one end low on each said channel fastening members and at their opposite ends to the metal form, said channel fastening members having spaced apertures through which means are passed to secure the legs to said fastening members.

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