

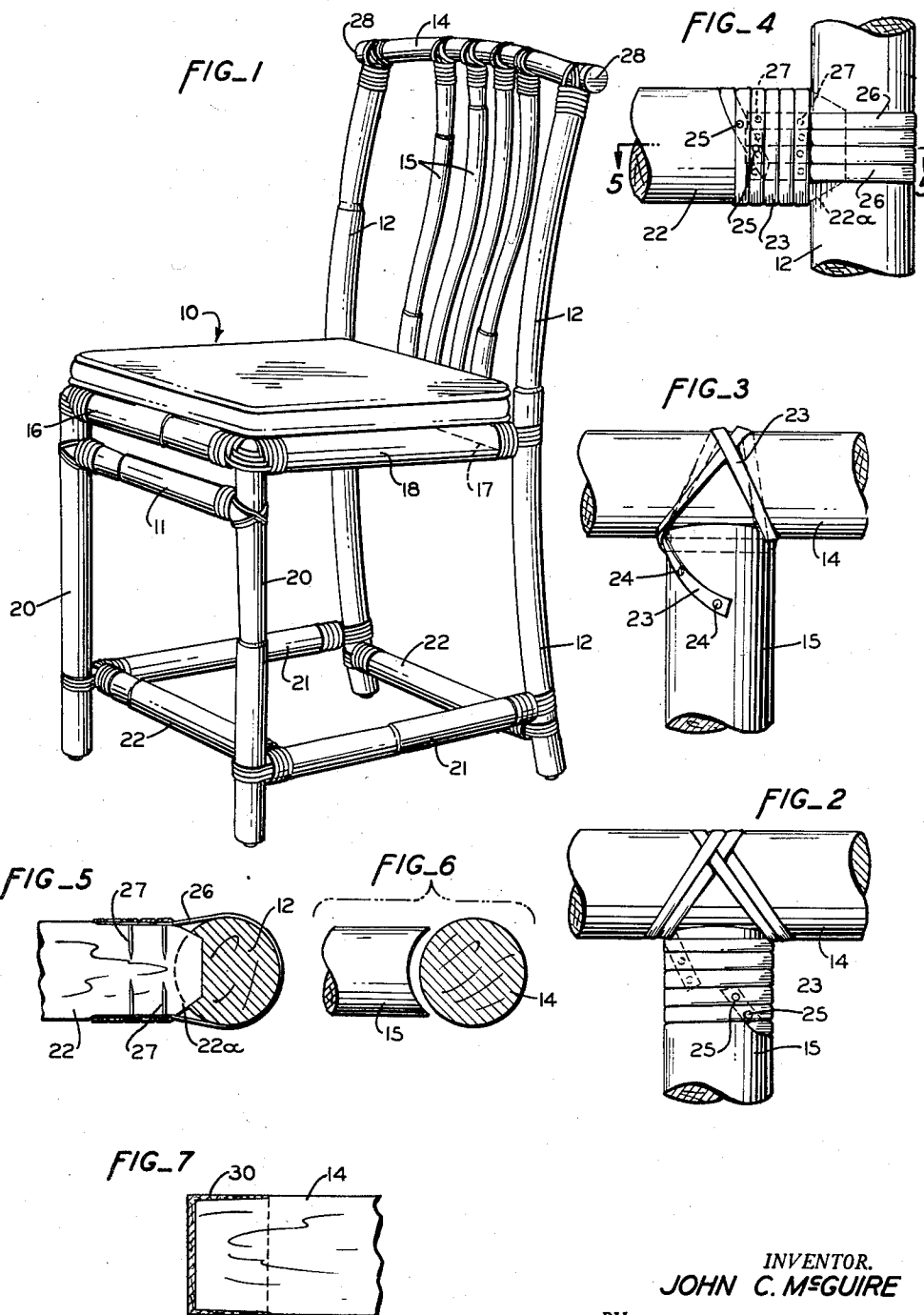
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METHOD OF MAKING RATTAN FURNITURE

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METHOD OF MAKING RATTAN FURNITURE

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The invention relates to improvements in the methods of making rattan furniture, and, particularly, is concerned with the method of making butt end-transverse joints and finished ends of rattan.

Rattan and wicker furniture have been well-known in recent years. Like many other types of furniture, each has had periodical cycles of favor. Principally both have been a light or natural color furniture for porches, solariums or the like. Much of the furniture has been bound over and over or wrapped with split reeds, rattan, willow, or other kind of vegetable fiber for both structural and decorative purposes. Equally well-known is the fact that as the furniture dried out in use, the wrapping split or threaded and eventually broke. Whenever break in the wrapping appeared, the piece of furniture became shabby and unkempt and was reason enough to discard it. Usually such furniture was not repaired. This was not because of any difficulty in making the repairs, but arose principally from human lethargy of not taking the trouble to have it done properly. The fact that the vegetable fiber wrappings were subject to drying, splitting, and threading has also had its effect upon the purchaser. Many who otherwise might have bought the furniture were deterred because of the known unsightly disadvantages.

In more recent years, a vine, known botanically as Calamus or Daemonorops, more commonly known as rattan, has been used as the basic structure for furniture and the like because of its great strength and lightness. However, the use of this material for furniture and similar structures has brought new problems.

It is well-recognized that rattan is made up of a bundle of longitudinal hollow fibers which make it very pliable and easy to form when steamed, and very strong and light in the formed shape when dry. The difficulty has been that the very structure which makes it have these qualities, also gives it a porous butt end so that no nail or screw will hold fast if driven or screwed in parallel with the fibers. In the construction of furniture using this material, therefore, the butt end joints were required to be braced and it has been traditional to bind the curved or angled braces into position with the brace ends parallel to the member which it abuts. Although the binding of these braces may be structurally strong enough to withstand the rigors of use, nevertheless it required extra pieces and also was subject to the same skinning and threading as before, with the ultimate unsightliness and breakdown of the bracing.

In modernizing the design and simplifying the furniture made of rattan, it is a requisite that much of the bracing be eliminated, in fact, all of it if possible.

There have been attempts to do this from time to time but the unfinished ends and the butt end-transverse joints have still made the problem acute.

There have been several attempts to solve the problem of making a good butt end-transverse joint with rattan, but each is either costly or a compromise. For

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example, in making a butt end joint it has frequently become the practice to use a dowel and then drive the nail or screw through the transverse member and into the dowel of the butt end. However, the doweling itself, in the constant use and movement of the chair, may work itself loose by compressing the hollow longitudinal fibers of the rattan, internally. In other instances, it has been the practice to fill the butt end and if it is exposed to leave it filled and if it is used to make a joint, then to drive a nail or screw through the transverse member and into the filled butt end. In any event, the joint or exposed butt end is not an attractive one and it, accordingly, has been customary to wrap these joints with rattan, reeds, willows, or other vegetable fibers in order to simulate the bound rattan or wicker joints which are familiar to everyone. These, however, are merely a vestigial decoration and perform no function with respect to the structure of the furniture or the joint, itself. Here again, it is subject to the disadvantages of skinning and threading, as well as cutting and breaking as the vegetable wrapping dries out. In many instances, as the chair is used, the bindings loosen so that they slip from side to side and become merely an annoyance.

It has been discovered that binding the joints with strips of rawhide according to the present invention will produce a structurally sound, firm joint, which requires no additional bracing. Rawhide, when wet, becomes pliable and will work quite as easily as reed, rattan, or any other vegetable matter. Rawhide has the property of shrinking upon drying. If the wrapping of the rawhide at the joints is made as tight as possible with the ends fastened and covered, the shrinking of the rawhide as it dries, will hold the joint together with a vise-like grip, which gets tighter and tighter as the binding dries and shrinks. It will be observed that the fibrous nature of rattan gives way to the transverse pressure of the shrinking rawhide and the porous longitudinal fibers tend to compress so that the rawhide embeds itself into the rattan. In this manner the rawhide is retained in self-made grooves which help to hold it in place.

It will be observed from this that the joints become stronger as they dry out and they are not subject to skinning, threading, or cutting in the process.

Accordingly, it is an object of the present invention to make durable, strong and pleasing rattan furniture and the like, without the customary intricate bracing and wrapping with rattan, reed, willow and other conventional vegetable binding material.

It is another object of the invention to provide a method of making butt end-transverse joints with rattan which are strong in and of themselves without the addition of rattan bracing, but braced in fact by the contraction of the rawhide binding, itself.

It is a further object of the invention to provide rattan butt end-transverse joints which are completely functional, as well as decorative and which will not be subject to skinning, threading and breaking of conventional vegetable fibers.

It is a further object of the invention to provide wrapping for rattan joints which not only produces an integrally strong joint, but one which has the power to countersink or embed itself into the fibers for permanent, nonslip engagement.

It is a further object of the invention to provide a finish for butt ends of rattan which requires no filling or metal covering.

It is also an object of the invention to provide bindings and wrappings of animal matter in the making of rattan furniture, which have substantial integrity and

which function and contribute to the strength of the joints as well as being decorative.

It is also an object of the invention to replace the vulnerable vegetable binding materials used in the past with a superior wrapping of rawhide which will gain the confidence of the buyer in its durability and practicality, and thus result in sales of rattan furniture to those persons who object to the conventional type of wrapping materials.

Further objects are to provide a method and a structure of maximum simplicity, economy and ease of assembly, and such further objects, advantages and capabilities as will fully appear and as are inherently possessed by the device and the invention described herein.

The invention further resides in the steps, the combination, construction and arrangement of parts illustrated in the accompanying drawings, and, while there is shown therein a preferred embodiment, it is to be understood that the same is merely illustrative of the invention and that the invention is capable of modification and change and comprehends other details without departing from the spirit thereof or the scope of the appended claims.

Referring to the drawings:

Figure 1 is a perspective view of a chair showing the completed butt end-transverse joints in a rattan chair.

Figure 2 is a fragmentary view showing a butt end-transverse joint on a larger scale, where the rattan transverse member is wound diagonally.

Figure 3 is likewise a fragmentary view on an enlarged scale, showing the manner of binding the rattan joint shown in Figure 2.

Figure 4 is a fragmentary view showing a rattan T joint with transverse bindings.

Figure 5 is a section taken on the line V—V of Figure 4, illustrating a doweled joint with transverse binding.

Figure 6 illustrates a coped T joint prior to wrapping.

Figure 7 is a fragmentary view in section showing the manner of treating and finishing a butt end of rattan.

Referring now more particularly to the drawings, and with particular reference to Figure 1, there is shown therein a completed chair 10 in which various types of bound butt joints are employed. Like reference numerals indicate like parts in the several views. The basic structure of the chair is rattan 11 of different sizes and lengths, and formed into different shapes. It comprises the normal frame, having back members 12 which extend to form the rear legs, a stop member 14 for the back and back supports 15. The seat has front and rear members 16 and 17, respectively, and identical side members 18. The front legs are members 20. The front and rear legs at either side are connected by braces 21 and these are in turn cross braced by members 22.

It will be observed that the butt ends of the back members 12 and the back supports 15, all have butt ends which are joined to the transverse back top member 14 as described herein. Likewise, all of the members are bound at their joining butt ends, similarly.

Referring now more particularly to Figure 2, there is shown a manner of securing the back members 15 to the back top 14. Although the top end of the member 15 may be squared off to make its juncture with the head member 14, it is desirable to recess or cope the butt ends to substantially fit the curvature of the head member 14, as shown in Figure 6. The finished joint is made by binding a single strip of wet, pliable rawhide 23, sufficient for the entire joint. As shown in Figure 3, one end of the rawhide strip 23 is secured to the abutting member 15 by nails 24. The nails 24 being driven at right angles to the fibers of the rattan, hold the end firmly. The length of wet rawhide is then pulled around, behind the head member 14, over and round it and may be interlaced for design purposes, as shown in Figure 2. It is obvious that the lacings can be one or any multiple thereof as desired. When the lacings are complete and

pulled tight at each turn, the end is then wound around the member 15 transversely of the axis thereof and over the free end of the rawhide with a suitable number of substantially parallel windings adjacent each other. The end is secured by taking the free end of the rawhide strip and working it under the last two, or more, turns of the binding and again bringing it to the surface and pulling it tight. Nails 25 are then driven through the last two outer windings and through the end to secure the same, and the end is then cut off at the juncture point between the next to last binding turn and its previous turn. The joint is bound as tightly as can be pulled at the time of binding and secured in the manner indicated, and when properly done, will produce a satisfactory structural joint as well as an artistic one.

However, as the rawhide dries, it will tend to shrink lineally, pulling the member 15 constantly into firmer engagement with the member 14. The shrinkage is with such force and strength that the rawhide 25 will compress the rattan fibers against which it is pressing, to the extent that the fibers will collapse, permitting the rawhide to countersink or embed itself in position so that its outer diameter approaches the outer diameter of the rattan itself. Thus, after the chair is in use and the drying is continued, the joint will tend to get stronger and stronger. The complete integrity of rawhide is well-known and that the same is not subject to skinning, threading, cracking, or breaking. In this manner, therefore, a strong, and increasingly strong joint is formed, using rattan as the basic structure, without the necessity of additional bracing.

Referring now to Figure 4 and the joint shown therein, the abutting member 22 is tapered at its end 22a to fit within a corresponding depression formed in the member 12. This joint alone would not be satisfactory as there is no means for satisfactorily securing this butt joint. When the two members are in place with the tapered butt end 22a in position in the recess in member 12, several short lengths 26 of rawhide, which have previously been wet and made pliable, are taken, wrapped around the member 12 and secured to the member 22 by means of nails 27 as shown in Figures 4 and 5. Several of these lengths of rawhide are preferably used, and, as shown in Figure 4, four such short lengths are bound and retained adjacent each other. Another piece of rawhide is then secured adjacent the joint so made and transverse to the member 22, and is wrapped with transverse turns over the ends of the short pieces 26. This wet rawhide is pulled as tightly as possible as each turn is made and at the end is brought up under the last two turns and secured with nails 25 in the same manner as described in connection with Figure 2. Here again, as the wet rawhide small pieces 26 dry and pull, they compress the fibers of the rattan member 12 and pull the joint tight. The nails 27 are kept from moving in their position by the transverse wrappings on the member 22, and, here again, as the rawhide turns dry and contracts, they compress the longitudinal cell structure of the rattan member 22 and hold the joint firm with a vise-like grip. It is obvious that any number of turns may be used as desired.

As has been indicated earlier, the butt ends of rattan are extremely coarse and it is difficult to make them presentable as a finished exposed butt end, such as the butt ends 28 on the top member 14 of Figure 1. In the past it has been customary to handle this in two ways. The first way was to fill or plug the butt ends 28, but this required using a different material which often did not have the finishing characteristics of the rattan itself, and, hence, was extremely noticeable. The other manner of handling this was more flashy and showy and consisted of a brass or metal cup placed over the end and secured with nails.

It has been found practical and desirable to use rawhide for accomplishing the finished ends. Accordingly, a sheet of rawhide when wet it readily formed into a cup

30, as shown in section in Figure 7. The cup 30 is placed over the raw end of the rattan member 14 and the skirt thereof cut to the desired length. As it dries, it also contracts, compressing the longitudinal fibers of the rattan so that it is held in position permanently, shrinking to a point where its outer diameter is substantially the same as that of a rattan member 14, itself. No nails or other unsightly means are required to hold it in position, as it gradually countersinks itself in place. It is apparent that this rawhide will take the same kind of finish as will the rawhide bindings. It is equally apparent that the rawhide end will withstand a great amount of wear and use without disfiguration or damage.

I claim:

1. The method of making rattan butt end structural joints for furniture requiring no separate bracing comprising the steps of shaping the butt end of a rattan member to conform substantially with the curved surface of a transverse rattan member to which it is to be joined securing the beginning end of a single binding strip of wet pliable rawhide on a rattan butt end adjacent the juncture with the transverse rattan member, wrapping said binding strip around said transverse rattan member alternately from one side of said butt end to the other, then wrapping the butt end with a series of adjacent substantially circumferential transverse turns, securing the finish end of said rawhide binding under the last turns of said series, and drying said rawhide to compress the longitudinal rattan fibers and embed itself transversely in both of the rattan members.

2. The method of making rattan butt end structural joints comprising the steps of coping the butt end of a rattan member to correspond substantially with the circumferential curve of a transverse rattan member and bringing the two members together, securing the beginning end of a single binding strip of wet pliable rawhide on the butt end adjacent the juncture with the rattan member to which it is to be secured, wrapping said binding strip around said rattan member alternately from one side of said butt end to the other, then wrapping the butt end with a series of adjacent substantially transverse turns and over the beginning end, securing the finish end of said rawhide binding under the last turns of said series, and drying said rawhide to compress the longitudinal rattan fibers and embed itself substantially transversely of the fibers of each of the rattan members.

3. The method of making rattan butt end structural joints comprising the steps of shaping the butt end of one rattan member to be received in a recess in the side wall of a substantially transverse rattan member to which it is to be attached, inserting said rattan shaped butt end within said recess, securing the beginning end of a single binding strip of wet pliable rawhide on a rattan butt end adjacent the juncture, wrapping said binding strip around said transverse rattan member alternately from one side of said butt end to the other, then wrapping the butt end

with a series of adjacent circumferential turns and over the beginning end, securing the finish end of said rawhide binding under the last turns of said series, and drying said rawhide to compress the longitudinal rattan fibers and embed itself transversely of the rattan fibers of each member.

4. The method of forming rattan furniture having butt joints bound with rawhide, which includes the steps of forming the rattan members for the butt joint, placing the butt end rattan member in position with the transverse rattan member to form the joint, winding wet rawhide thong tightly around the joint so that it encircles both rattan members, securing the finish end of said wet rawhide thong relative to the joint and drying the rawhide in the wound position, whereby the rawhide not only becomes a decoration, but continually secures itself in position by compressing the longitudinal fibers of each rattan member where it comes in contact therewith.

5. The method of forming rattan furniture having butt joints bound with rawhide, which includes the steps of forming the rattan members for the butt joint, placing the butt end rattan member in position with the transverse rattan member to form the joint, applying wet rawhide thong segments to one side of the butt member adjacent the joint, partially encircling the transverse rattan member with said segments and fastening the same to the opposite side of said butt member, winding a wet rawhide thong around said butt member adjacent the said joint and over the ends of said segments, securing the same in the wound position, and drying the rawhide, whereby the rawhide not only becomes a decoration, but continually secures itself in position by compressing the longitudinal rattan fibers of each rattan member where the rawhide comes in contact therewith.

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