TRADITIONAL ECOLOGICAL JOINTS USED IN MODERN FURNITURE CONCEPTS

ÎMBINĂRI ECOLOGICE TRADIŢIONALE FOLOSITE ÎN CONCEPTELE MODERNE DE MOBILIER

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Abstract. *Theoretical and practical research made on ecological concepts and Romanian traditional products from different areas of the country have brought to light the ideea of reinventing such concepts of products friendly to the ecosystem by means of their constructive nature, their technology and the materials used. This research underlines the ecological role of traditional types of wood joints and the possibility of adapting them to create new types of multifunctional furniture. These joints could be the base of various pieces of landscape furniture, created in a rustic as well as modern style.*
Key words: ecologic joints, tradition, design, wood

Rezumat. *Cercetările teoretice şi practice întreprinse asupra conceptelor şi produselor ecologice tradiţionale româneşti din diferitele zone ale României, au adus în prim plan ideea de a reinventa astfel de concepte de produse prietenoase cu mediul prin natura lor constructivă, tehnologică şi a materialelor folosite. Lucrarea evidenţiază rolul ecologic al îmbinărilor tradiţionale şi posibilitatea adaptării acestora în crearea unor noi tipuri de mobilier multifuncţional. Aceste îmbinări pot sta la baza unor variate piese de mobilier peisagistic, create atât în stil rustic, cât şi în stil modern.*
Cuvinte cheie: îmbinări ecologice, tradiţie, design, lemn

INTRODUCTION

Today's society is preoccupied with the respect towards nature, care for the environment and future safety. By respecting and applying the principles of eco - design, this paper presents aspects in approaching the design of ecologic products through material, technologies and jointing systems. It also deals with analyzing product concepts and characteristic joints by means of traditional Romanian technologies (belonging to certain geographic areas), re-shaped so as to correspond to modern requests (Pralea Jeni, 2009).

These joints represent the basis of various landscape furniture, created not only in a rustic style, but modern at the same time.

MATERIAL AND METHOD

The methods used for obtaining this material consist in theoretical and experimental research, visits to museums, interviews with persons involved in the eco-designing area, curators, etc. After conducting certain studies based on the design

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and the making of eco-furniture in series, the conclusion drawn is that in order to produce this type of eco-furniture, one must come back to the lifestyle specific to the Romanian people. (Pralea Jeni, 2009; Pralea Jeni, Sficlea Magda, 2010)

Furthermore, in order to go deeply into this type of study the first thing imposed is studying the object's origin, in this case the type of furniture and the means by which it was initially processed. (Pralea Jeni, 2009)

The aim of the many researches was the study of Romanian traditional objects, the methods by which they were crafted and the concept types which could be borrowed in order to produce contemporary furniture in an ecological manner. Thus the Romanian traditional objects can offer alternatives for the types of joints used presently in the furniture industry. These joints are made with the aid of metal elements, which can be replaced with traditional joints which entirely made from wood. Romanian traditional objects give the possibility of creating, by interpreting as well as adapting certain elements, joints and solutions, contemporary ecologic furniture.

Fig. 1 – Examples of traditional wood joints (The Wood Museum in Campulung Moldovenesc, Suceava) (Photo-designer Ilarion Constantin Balan)

RESULTS AND DISCUSSIONS

In order to produce eco-furniture there are some essential aspects which should be underlined , such as fixed and removable joints which represent part of the ensemble of a piece of furniture. Wood joints represent innovative methods of assembling, or setting up two or more wooden elements for the purpose of fixing and forming an element/subset/whole set. These joints can be fixed or removable. Removable joints are made with nails and screws or they can by entirely made of wood, such as the wooden spigot type joint or the wedge joint. The fixed joints are made as a whole element without the possibility of removal. In this category we can also mention the finger joint, the dovetail joint or any other which implies the use of adhesives. (fig. 1, fig. 2).

The furniture elements include types of joints which ease assembling the parts which form the furniture. Different types of grip, swinging (trim), sliding or closure are used. Presently these elements are made of metal, called fittings. The research undergone had the aim of eliminating the metal elements and replacing them with wooden ones (fig. 3). In the case of more complex fitting, there is the eagerness to come up with an ecologic solution of replacement.

Fig. 2 – Examples of fixed (immovable) joints (The Wood Museum in Campulung Moldovenesc, Suceava) (Photo designer Ilarion Constantin Balan)

Fig. 3 - Examples of removable joints (The Wood Museum in Campulung Moldovenesc, Suceava) (Photo designer Ilarion Constantin Balan)

The wooden ring type joint is one of the most frequently used for the production of wooden containers. These objects are made from caved boards placed in a circle. The grip and fastening of these are made with the help of a wooden ring, this being the best option of wood fastening. The ring (fig. 4) is made of elastic fibered wood (wicker, sage) and is processed by soaking, thus enlarging its flexibility. After bending by mould (casting), it is clipped by overlapping the two heads, provided with wooden structures which have the role of fastening the ring (in popular terms these called buffers), and after it is let out to dry the ring acts as a vise, thus the result of fastening the walls. This type of joint gives the object impermeability.

Fig. 4 – Examples of wooden ring type joints (The Wood Museum in Campulung Moldovenesc, Suceava; Ethnographic Parc ”Romulus Vuia”, Cluj Napoca) (Photo designer Ilarion Constantin Balan)

Fig. 5 – 3Dimensional exemplification of the joint type

The fixed tenon joint (fig. 6) can be found not only in objects of reduced size, but also in large ones. This joint if formed by the main part (which is crossed by the spigot) in which a second element is overlapped (the base of the joint). The main part is fastened onto the other wooden base with a wooden spigot. To this category one might add the fastening with nails as well. The two types however differ one from another in many respects. In the case of the wooden spigot joint, the spigot pierces the cut part while in the case of the nail type joint, the sectioned part is not fully imbedded. Both types of joints are removable, except for the joint made with nails, in the case when they are glued with adhesive or sectioned at the level of the part in which they were pressed, removal and/or replacement thus being impossible.

Fig. 6 – Examples of the wooden spigot type joints (The Wood Museum in Campulung Moldovenesc, Suceava, Village Museum, Suceava; Ethnographic Parc ”Romulus Vuia”, Cluj Napoca) (Photo designer Ilarion Constantin Balan)

Fig. 7 – 3dimensional exemplification of the joint type

As for the old types of wooden spigot joints, they have been today redesigned – built on the same principles, but adapted to today’s requirements (fig. 7).

The wedge joint (fig. 8) is mostly common to items of household use; this type of joint is not removable and in most cases it is used to fasten two wooden parts (fig. 9). In some parts of the country this type of joint was overlapped with the dovetail joint with the purpose of strengthening its resistance. This consists of introducing the wooden arrow into a cavity which has a profile, which is part of the dovetail joint, this way creating a stronger one.

Fig. 8 – Examples of wooden spigot joints (Ethnographic Parc ”Romulus Vuia”, Cluj Napoca) (Photo designer Ilarion Constantin Balan)

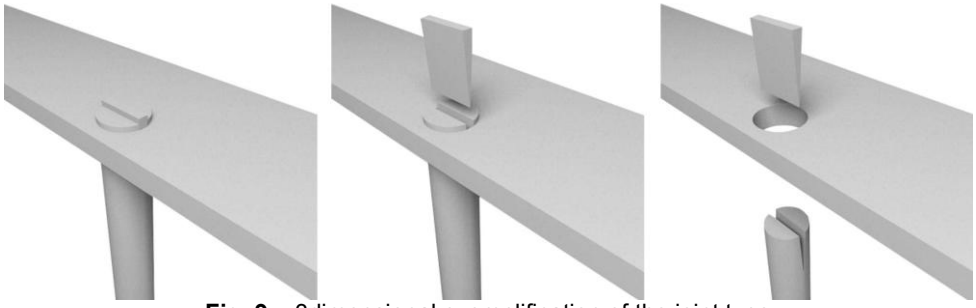

Fig. 9 – 3dimensional exemplification of the joint type

The overlapped spigot type of joint (fig. 10), due to the complex procedure of making (fig. 11) is rare in comparison with other types of joints. In most cases, this type of joint is used in interior furniture. It is also encountered in the making of different types of trunks and it is rarely used for other types of objects.

Fig. 10 – Examples of overlapped spigot joints (The Wood Museum in Campulung Moldovenesc, Suceava; Ethnographic Parc ”Romulus Vuia”, Cluj Napoca) (Photo designer Ilarion Constantin Balan)

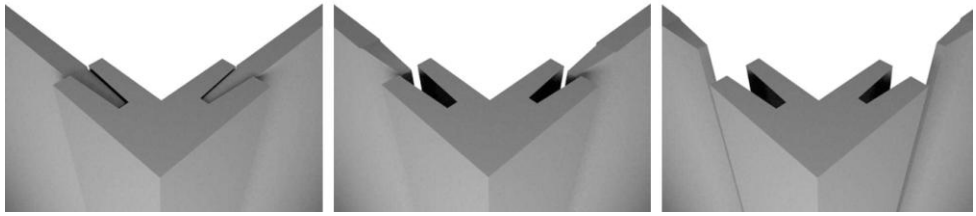

Fig. 11 – 3dimensional exemplification of the joint type

CONCLUSIONS

The advantages of using wooden joints in the process of making furniture are ones of ecological nature as well as economic and aesthetic. The ecological aspect is supported by the fact that the details are made entirely of wood; therefore the furniture is 100% eco.

From an economic point of view, wood is cheaper and the remains resulted after the fabrication process can be recycled (for example in the making of smaller elements which will become part of the joints).

Aesthetically, using wood gives a nice classy touch to the furniture. These joints could be the base of various pieces of landscape furniture, created in a rustic as well as modern style.

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