

[54] **METHOD OF MANUFACTURING
MOULDED ARTICLES OF WOOD
PARTICLES WITH COVER SHEETS**

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156/59, 62.2, 182, 288, 212, 214; 264/119,
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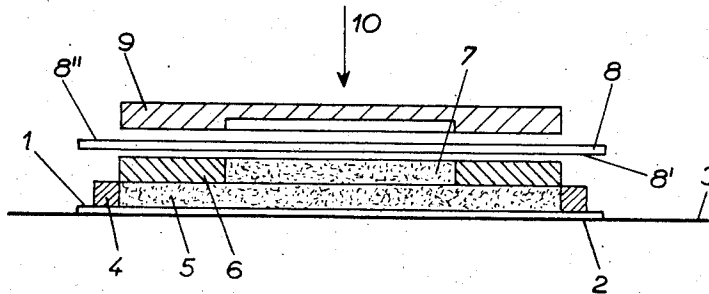
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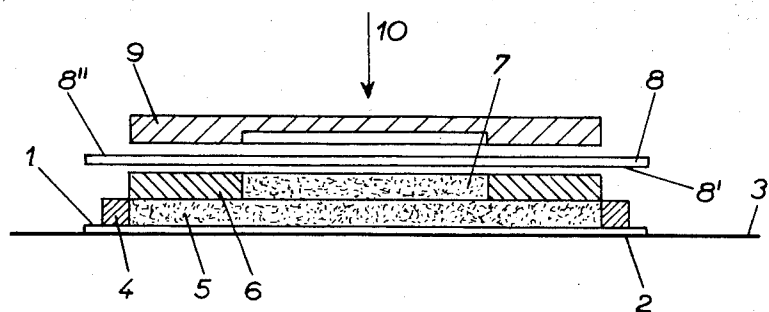
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[57] **ABSTRACT**

The disclosure is of a method of manufacturing ornamental relief panels or other moulded articles, characterised in that it comprises the steps of coating a surface of a cover sheet (for example a veneer), placed on a support, with an adhesive without water, placing on this surface a first pre-moulding element, filling the latter with particles of wood previously dried and impregnated with adhesive without water, lightly compressing these particles, placing upon the first pre-moulding element a second pre-moulding element, likewise filling the latter with particles of wood lightly compressed in sequence, removing the two pre-moulding elements, placing upon the articles of wood an adhesive-covered surface of a second cover sheet (for example a second veneer), and finally covering the assembly with a definitive mould and subjecting it in a press to regulatable pressure and temperature.

2 Claims, 1 Drawing Figure





METHOD OF MANUFACTURING MOULDED ARTICLES OF WOOD PARTICLES WITH COVER SHEETS

INTRODUCTION AND BACKGROUND OF THE INVENTION

The present invention relates to the manufacture of articles, especially of wood, comprising reliefs or sculptures.

The known manufacture of such articles is actually effected by the sculpture of the reliefs or designs or other formations directly in the solid wood.

It goes without saying that such a manufacture, more or less as a craft, is of a very high net cost. Moreover, the articles thus manufactured, by reason of their constitution of solid wood, are notably subject to the atmospheric conditions. This is the case more especially for those articles which are subject to heat and/or humidity.

In order to alleviate these disadvantages, the invention has for its aim a method of manufacture of moulded articles effected by means of particles of wood enclosed between two supports formed for example by cover sheets of veneers of wood or by leaves of base paper.

BRIEF SUMMARY OF THE INVENTION

The invention provides a method of manufacturing moulded articles, characterised in that it comprises the steps of coating a surface of a cover sheet (for example a veneer), placed on a support, with an adhesive without water, placing on this surface a first pre-moulding element, filling the latter with particles of wood previously dried and impregnated with adhesive without water, lightly compressing these particles, placing upon the first pre-moulding element a second pre-moulding element, likewise filling the latter with particles of wood lightly compressed in sequence, removing the two pre-moulding elements, placing upon the particles of wood an adhesive-covered surface of a second cover sheet (for example a second veneer), and finally covering the assembly with a definitive mould and subjecting it in a press to regulatable pressure and temperature. The temperature and pressure are functions dependent upon the thickness of the article to be made.

BRIEF DESCRIPTION OF THE VIEW IN THE DRAWING

The single FIGURE of the accompanying drawing shows, by way of non-limitative example, in a diagrammatic view in section, the different elements necessary for the making of an article in conformity with the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Thus, as illustrated, the method of manufacture of moulded articles made of particles and of cover sheets or veneers of wood comprises the following operations:

After a previous drying of the particles of wood, in order to eliminate all traces of humidity, these latter are impregnated with adhesive without water, which adhesive is likewise applied to one of the surfaces 1 of a veneer of which the other surface 2 rests upon a support plate 3.

Upon the adhesive-coated surface 1 of the veneer is placed the first frame or pre-moulding element 4 which is filled with particles of wood 5 treated, that is to say impregnated or coated with adhesive.

The depth of this first frame or pre-moulding element 4 is a function of the smallest thickness of the finished article.

After a light compression of the particles of wood contained in the first element 4 one places upon this latter the second frame or pre-moulding element 6, which is likewise filled with particles of wood 7, which are also lightly compressed.

Next the two frames or pre-moulding elements 4 and 6 are removed, and upon the particles of wood is placed the adhesive-coated surface 8' of a veneer 8, and upon the surface 8' without adhesive of the veneer 8 is placed the definitive mould 9, on the lower surface of which in contact with the veneer 8 are provided the reliefs which are to be provided on the finished article.

This assemblage is then placed in a press (not shown) acting in the direction of the arrow 10.

By way of example, for the manufacture of a moulded article according to the method of the invention, with depths of relief of a maximum of 12 mm. and a minimum of 8 mm. with two veneers of a thickness of 0.8 mm, the pre-moulding elements 4 and 6 will have respectively a depth of 32 mm. and 16 mm, whilst the pressure will be of the order of 25 kilograms per square centimeter at a temperature in the region of 140° centigrade.

By way of modification, the veneer utilised may be covered, before or after the manufacture of the moulded article or in the course of manufacture, with an "overlay," it may likewise be impregnated with resin such as melamine, polyester or analogous resins.

According to a further modification of the invention the wood veneer can be replaced by one or more sheets of basic paper, which are likewise impregnated with resin, covered with a decorative paper and with an "overlay" leaf.

The method of the invention can be utilised more particularly for the economic manufacture of moulded articles reproducing reliefs of all kinds.

Particularly interesting applications may be the manufacture of door panels, furniture panels, or other decorative panels for walls, ceilings, or the like.

This method can likewise find an application in the manufacture of complete doors ready to be mounted, as well as in such partitioning elements, notably in the building trades, in the manufacture of coffins, and so on.

What is claimed is:

1. A method of manufacturing molded articles decorated in relief, comprising coating a surface of a cover sheet with adhesive without water, placing on the coated surface of the cover sheet a first mold having a mold cavity having an open top and an open bottom, filling the first mold with particles of wood previously dried and impregnated with adhesive without water, lightly compressing these particles in the first mold, placing upon the first mold a second mold having an open top and an open bottom but having a mold cavity smaller than the mold cavity of the first mold, thereafter filling the second mold with particles of wood previously dried and impregnated with adhesive without water, lightly compressing the particles in the second

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mold, removing the first and second molds, placing on the particles of wood an adhesivecovered surface on a second cover sheet, placing the assembly thus produced in a press having a central decorative relief that bears against the exposed side of said second cover sheet, and subjecting the assembly in said press to heat

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and pressure thereby to produce an article having the appearance of a sculptured panel.

2. A method as claimed in claim 1, in which said pressure is about 25 kg. per square cm. and said heat is at a temperature of about 140°C.

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