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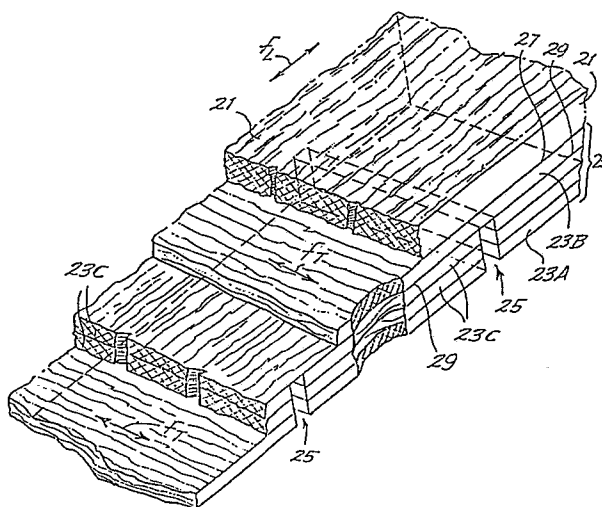
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⑤④ **A process for forming floor boards on a plywood base and a board thus realized.**

⑤⑦ The board for wooden floors consists of an upper layer (21) with viewable face, mostly of valuable wood, matched with a lower layer (23) having plywood construction; the valuable layer making up the viewable face, has a longitudinal fibres pattern and the lower plywood layer has transverse grooves (25) being thus at right angles to the fibres pattern of the upper layer (21); the external sheets (23A, 23B) of this lower plywood layer have their fibres at right angles to those of the valuable layer (21) and therefore, parallel to the grooves (25).



DESCRIPTION

The invention refers to a development of the prior patent No. 9456 A/84 filed by the same inventor on 11 July 1984.

According to this prior patent, a board for wooden floors is made up of an upper layer with viewable face, mostly of valuable wood, matched with a lower layer having a plywood construction and thus with sheets having the fibres pattern both orthogonal and parallel to that of the valuable layer; the valuable layer - intended to form the viewable face - has a longitudinal fibres pattern and the lower plywood layer has transverse grooves being thus orthogonal to the fibres pattern of the upper layer.

According to the present invention, the lower layer has the fibres patterns of the external sheets or thicknesses perpendicular to those of the upper valuable layer and, therefore, parallel to the grooves.

In a possible embodiment, the lower plywood layer has five sheets or thicknesses, the intermediate thickness and the two external ones of said lower plywood layer having fibres being transverse in respect to those of the upper valuable layer.

According to another feasible embodiment, the lower plywood layer has the two outer thicknesses or sheets with

a fibres pattern transverse in respect to that of the upper valuable layer, and the intermediate sheet - single or double - with a fibres pattern parallel to that of the upper valuable layer.

The proposed solution is particularly suitable for boards being relatively wide in respect to their length.

The above mentioned transverse grooves may be deeply cut to involve at least most of the thickness of the lower layer. More particularly, the grooves may have a width of the order of at least 3 mm and such a depth as never to penetrate the upper layer and not to indent the adhesive veil which unites the valuable wood board to the lower plywood layer.

In case of boards having mounting joints, the side cogs and slots for the installation joint are formed in the lower plywood layer.

The prior patent relates also to a process for realizing the above mentioned wood boards for floors, having advantages as for rapidity and economy in the production.

According to the present invention, the process for realizing the above described boards for floors and, especially, relatively short and wide boards, comprises: making a multi-layer panel to form a structure of plywood type; matching said panel with a plurality of elements

made of a material - mostly valuable - intended to form the upper layers of the boards, said elements being spaced between them and with the fibres patterns orthogonal to those of the outer layers of the plywood panel; making grooves - mostly by a milling operation - in the lower layer, parallel to the fibres patterns of the outer plywood layers and, therefore, perpendicular to the fibres pattern of said elements; and the separating operation to create the boards and the operation to form the joint cogs and slots.

The invention will be better understood by following the description and the attached drawing which shows a practical non-limitative exemplification of the same invention. In the drawing:

Fig.1 shows a perspective view of a board according to a first modified embodiment, with cutaway parts and without joints; and

Fig.2 shows a much enlarged and fragmentary cross section of a board according to a second embodiment, with five-layer plywood.

According to the drawing, a floor board is made up of an upper layer 21 of valuable wood and a lower layer 23 consisting of two external plywood sheets 23A, 23B, and two intermediate sheets 23C. The fibres pattern of the layer 21 and of sheets 23C is longitudinal, that is,

lying in the direction FL of the board length; the fibres pattern of sheets 23A and 23B is orientated in the transverse direction FT. In the drawing, the cross sections taken on planes perpendicular to the fibres are conventionally squared and the cross-sections parallel to the fibres pattern show a wide, wavy hatching. In the plywood layer 23 (23A, 23B, 23C, 23C), transverse grooves 25 are cut out parallel to the direction FT and suitably spaced apart for the function already pointed out. The depth of the grooves does not go beyond the glueing surface 27 between 21 and 23B, and may also not go beyond the glueing surface 29 between 23B and 23C.

The boards have rib projections 30 and channel recesses 32 - shown only in Fig.2 - to form the joints. Both the projections and the channels are formed from the layer 23.

Fig.2 shows a five-layer plywood, a central layer 23E being interposed between the thicknesses or sheets 23C; the sheet or thickness 23E has the fibres pattern parallel to that of thicknesses 23A and 23B.

The preparation of the above described material is similar to that pointed out in the above mentioned prior patent.

It is understood that the drawing shows an

exemplification given only as a practical demonstration of the invention, as this may vary in the forms and dispositions without nevertheless coming out from the scope of the idea on which the same invention is based.

C L A I M S

1. A board for wooden floors, consisting of an upper layer with viewable face, mostly of valuable wood, matched with a lower layer having a plywood construction and thus with sheets having the fibres pattern both orthogonal and parallel to that of the valuable layer, the valuable layer intended to form the viewable face having a longitudinal fibres pattern and the lower plywood layer having transverse grooves being therefore orthogonal to the fibres pattern of the upper layer, characterized in that the lower layer has external sheets or thicknesses with fibres patterns perpendicular to those of the upper valuable layer and thereby parallel to the grooves.

2. Board for floors according to the preceding claim, characterized in that the lower plywood layer has five sheets or thicknesses, the intermediate thickness and the two external ones of said lower plywood layer having fibres pattern transverse in respect to that of the upper valuable layer.

3. Board for floors according to claim 1, characterized in that the lower plywood layer has the two external sheets or thicknesses with fibres pattern being transverse to that of the upper valuable layer, and the intermediate sheet or thickness - single or double - with a fibres pattern

being parallel to that of the upper valuable layer.

4. Board for floors according to claims 1 to 3, characterized in that the grooves have such a depth as to involve most of the thickness of the lower plywood layer.

5. Board for floors according to claims 1 to 4, characterized in that the grooves have a depth of the order of at least 3 mm and such a depth as never to penetrate the upper layer and so as not to indent the adhesive veil which unites the board to the lower plywood layer.

6. Board according to claims 1 to 5, characterized in that the side clogs and slots for the installation joint are formed in the lower layer.

7. Board for wooden floors, as described and illustrated and for the specified purposes.

8. A process for producing wood boards for floors according to claims 1 to 7, especially relatively short and wide boards, characterized in that it comprises: making a multi-layer panel to form a structure of plywood type; matching said panel with a plurality of elements made of a material - mostly valuable - intended to form the upper layers of the boards, said elements being disposed spaced apart from each other and with the fibres patterns orthogonal to those of the external layers of

the plywood panel; making grooves - mostly by a milling operation - in the lower layer, parallel to the fibres pattern of the external layer of the plywood panel and hence perpendicular to the fibres patterns of said elements; and the separating operation to create the boards and the operation to form the joint cogs and slots.

9. Process as described and illustrated, and for the specified purposes.

