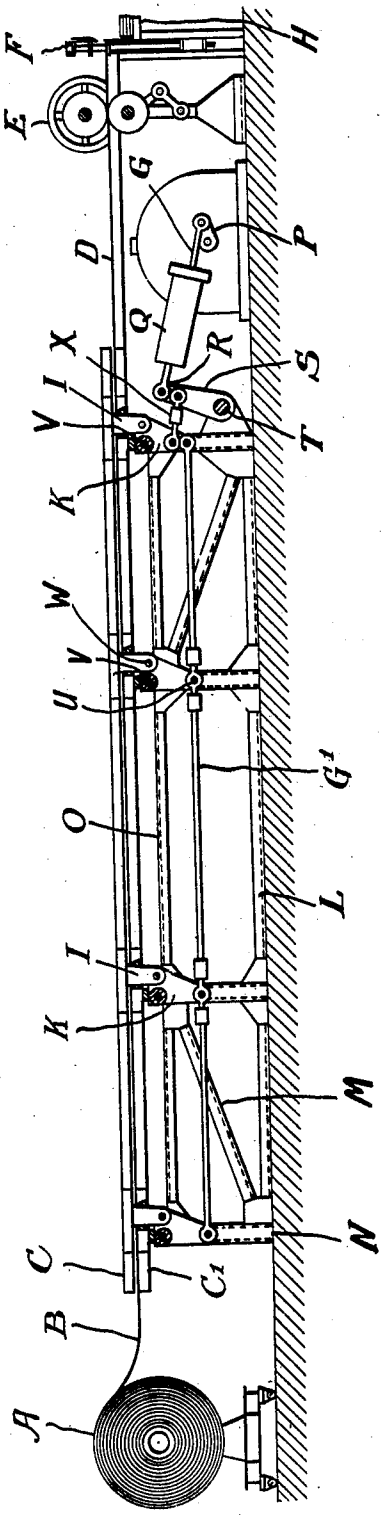
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MANUFACTURE OF DRIED WOOD VENEER

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MANUFACTURE OF DRIED WOOD VENEER

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This invention relates to a method of producing wood veneer of any width by feeding the wet veneer band formed to a drying device in a direction rectangularly to the course of the fibers.

Dried veneer is, as a rule, produced by means of a drying device comprising a number of pairs of drying plates, the individual drying plates being mechanically moved towards, and away from, each other. The plates correspond in size to that of the veneer sheets to be dried, and as the dimensions of the plates for structural reasons must be kept down, the drying devices in common use can handle only veneer sheets of a limited size.

It has further been proposed already to arrange a number of such drying devices one behind the other and to cause the individual systems to carry out lateral motions in order to convey the veneer sheets through the various systems from one end of the machine to the other. However, a machine of this kind is capable only of conveying the veneer sheets in the longitudinal direction of their fibers while the width of the sheets to be dried by the machine is still dependent on the width of the drying plates. As is known to those skilled in the art the length of wood veneer covers the extension in the direction of the fibers and the width corresponds to the dimensions measured vertically to the direction of the fibers. The length thus refers to the length of the log from which the veneer is formed and may amount up to four meters.

The invention aims at producing wood veneer of any width by passing the veneer band, in contrast with the veneer sheet, through the drying device transversely to the direction of fibers.

Methods of drying veneer bands are known already according to which drying is effected by means of a plurality of superposed heating rollers about which the veneer has to be guided. As long as the veneer is wet it can be conveniently placed around a roller, but as soon as it begins to dry it becomes brittle and forms cracks when so applied. It has been tried to protect thin veneer against splitting by passing thin layers of paper through the rollers together with the veneer to glue them on to the latter, but it has been found that paper strips glued to dried veneer cannot prevent breaking and splitting or cracking, not to mention the cost involved in applying and removing the paper. It is impossible, according to practical tests made, to dry, for instance, in this manner a veneer having a thickness of 3 millimeters without exposing it to fracture or splitting in the drying device.

According to the invention, these drawbacks are overcome by drying the veneer band between two plane heating plates of known type which are moved towards and away from each other and between which the veneer is passed transversely to its direction of fibers. This method permits a simple and clearly arranged construction of the drying device which is easy to operate. Furthermore, if the conveying rolls for passing the veneer through the heating plates as well as the cutting device are disposed in the plane of the heating plates, the veneer band can be fed to the cutting device without curvatures or bends and behind the drying device a cooling path or bed may be provided on which the dried, hot veneer band can be cooled off so as to permit its piling or further use immediately after cutting.

One form of apparatus which, according to the invention, can be used for carrying out the method is illustrated in the accompanying drawing.

Referring to the drawing, A is a roll on which the veneer coming off from a log is wound. The roll A may of course be dispensed with and the veneer taken directly from the peeling machine. B is the veneer which is passed between the two heating plates C, C' heated by steam, hot air or electricity. Compared with the plates used in the ordinary drying devices, the heating plates C, C' are quite long, up to 5 meters or over, because the longer the plates, the more quickly the veneer can be passed between them. In the known types of driers of this class employing always a large number of superposed heating plates the latter have a maximum length not exceeding 3 meters.

As described in detail below, the heating plate C is intermittently raised and lowered so as to press the wet veneer, the raising of the plate permitting the vapors developed to escape. Behind the plates C, C' a cooling bed D is provided consisting, in the embodiment shown, of a grate, though it might be constructed in the form of a cooled plate or the like and be equally efficient. On the cooling bed D the hot veneer is cooled down to such a degree that it can be touched by hand. While the veneer lies on the cooling bed, defective parts may be marked for subsequent removal by the cutting device F.

E are conveying rollers actuated by hand or machine and penetrating the grate or cooling

bed D. The top roll E is provided with a hand wheel, in the embodiment shown, which can be turned by the operator according to the degree of drying effected which can be ascertained by observing whether or not steam is developed in a visible manner at the end of the plates C, C'. The nature of the conveying device forms no part of the invention. F is a cutting device comprising the lower companion blade and an upper cutter block which can be moved up and down by hand. H is the delivery table whose length may be adapted to the width of the veneer desired.

By means of the crank P driven in any suitable manner the draw bar G is reciprocated and, by means of an interposed braking cylinder Q, acts on the piston rod R of the latter which is articulated to the lever S disposed at T on the frame of the machine and engaging with the rod X the lever K rotatably arranged at V on the machine frame. A draw bar G^1 connects the four levers K shown which are thus moved to and fro on the rotation of the crank P. To the other arm of the levers *k* are articulated the members I at W and secured with their upper ends to the plate C which is thus raised and lowered when the crank P is turned, the contact between the plate C and the veneer being timed and controlled by the adjustment of the braking cylinder Q.

One of the essential features of the method is that the veneer is continuously passed between the plates C according to the degree of drying ascertained by observation.

L indicates the lower frame portion, M are transverse braces, N are vertical supports and O is the upper frame portion.

The device functions as follows:

The veneer band B coming from a roll or directly from the peeling machine is passed between the heating plates C, C^1 by hand or by means of suitable devices, not shown, when the plates are in opened position, and drawn between the rolls E which do the further feeding of the veneer B gradually according to the opening and closing of the plates. The rolls E are, as shown, driven by hand, or, not shown, mechanically, i. e. by the member G, and their speed is regulated so that the portion of the band B coming out of the drier has attained the desired degree of dryness. The band B then passes on to the cooler D and the cutter F. The veneer sheets can be piled and used directly after being cut.

I claim:

1. A device for producing dried veneer, comprising a peeling device separating an endless band of wood transversely to the course of its fibers from a trunk, intermittently moved transporting means for carrying the band away, heatable plates on both sides of said band, driving means for moving said heatable plates so as to cause said plates to press the band when stationary between them for a predetermined time, and cutting means for separating the band into individual dried veneer plates.

2. A device for producing dried veneer, comprising means for introducing an endless band of wood transversely to the course of its fibers, intermittently moved transporting means for carrying the band away, heatable plates on both sides of the band, driving means for moving said heatable plates so as to cause said plates to press the band when stationary between them for a predetermined time, and cutting means for separating the band into individual dried veneer plates.

3. A device for producing dried veneer, comprising means for introducing an endless band of wood transversely to the course of its fibers, intermittently moved transporting means for conveying the band, heatable plates disposed on both sides of the band of wood and acting as ventilating drier therefor, driving means for moving said heatable plates so as to cause said plates to press the band when stationary between them for a predetermined time, and cutting means for separating the band into individual dried plates.

4. A device for producing dried veneer, comprising means for introducing an endless band of wood transversely to the course of its fibers, intermittently moved transporting means for conveying the band, heatable plates on both sides of the band, said plates being plane and disposed partly above and below the band to be dried, driving means for moving said heatable plates so as to cause said plates to press the band when stationary between them for a predetermined time, and cutting means for separating the band into individual dried veneer sheets.

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