

# ALIEN PROPERTY CUSTODIAN

## PRESSED SLABS OF WOODEN MATERIAL AND PROCESS OF MANUFACTURING THE SAME

Richard Schweizer, Hamburg, and Adolf Menger,  
Krefeld-Uerdingen, Germany; vested in the  
Alien Property Custodian

No Drawing. Application filed December 12, 1940

Various processes are already known for manufacturing pressed slabs of wooden material as follows: for instance chopped wood, sawdust or wooden chips, if necessary with simultaneous use of similar materials and addition of a binding agent, are placed, according to the thickness and size desired of the slabs, between press plates provided with a frame or not and then pressed.

Said manufacture of pressed plates has, however, the drawback that the material can only be distributed in a uniform manner whereby it may be possible that on pressing a slab of an irregular thickness or density is produced. Particularly it often happens that within the press material hollow spaces are formed by which, as is natural, the strength of the slab is reduced. Furthermore plates of an irregular density may show an irregular distribution of the percentage of moisture; stresses within the slab and the slab becoming warped in consequence thereof are due to the afore-named fact.

The present invention has for its object a process of manufacturing pressed slabs of wooden material according to which the afore-said drawbacks of the known processes are avoided. The process resides in the following: instead of directly pressing the chopped material, preferably coarsely chopped wood, such as coarse shavings or chopping waste, if desired in admixture with similar materials, e. g. straw, cobs of maize or Indian corn stalks, vulcan fibre and so on, and a binding agent to plates of a thickness ready for use, it is first pressed to essentially thicker pieces, such as logs or beams which are then separated so as to form slabs of the desired thickness. On pressing the chopped material which is suitably performed in a mould corresponding to the desired dimension of the log or beam, the material and the binding agent which has, if required, been added are readily distributed in a regular manner by suitable means, for instance by agitating the mould, perhaps by means of a special shaking device.

The separating of the logs or beams simultaneously allows of testing the surface resistance of

the individual slabs obtained; slabs which resist the mechanical stress of separation also guarantee a satisfactory resistance in the further course of their treatment. The slabs manufactured according to the hitherto known processes may, however, show drawbacks which without the same or a similarly strong strain are not recognizable before the further treatment.

For some purposes it is advisable to glue two or several logs or beams with one another and then to separate them preferably perpendicular to the straight-glued joint.

As binding agents there are suitable all the binding agents useful in the treatment of wood, particularly the glues of artificial resins, such as urea formaldehyde glue or phenol formaldehyde glue, glues on the base of polyvinyl compounds, furthermore glues made of animal or vegetable products, such as bone-glue, glue from hides, from leather waste, casein glue, blood albumen glue, starch or vegetable albumen.

The plates manufactured according to the process of the present invention are especially suitable among others as intermediate layers for slabs.

The following example illustrates the invention, the parts being by weight:

A mixture consisting of 95 parts of an aqueous solution of 65 per cent strength of a condensation product of urea and formaldehyde, 1 part of ammonium chloride and 4 parts of urea is added to 1,000 parts of wooden chips. The whole is thoroughly mixed and the mixture is then poured into a press mould of a length of 2 meters, a breadth of 1 meter and a height of 1 meter and pressed for 6 hours at 20° C. The pressing then possesses a sufficient resistance so that it may be removed from the mould. After a subsequent storage for 24 hours the logs obtained may be separated by sawing to plates having for instance a thickness of 2 cm; they are especially suitable as slabs.

RICHARD SCHWEIZER.  
ADOLF MENGER.