

PUBLISHED
MAY 11, 1943.
BY A. P. C.

A. SCHUMANN
BUILDING PLATE
Filed Jan. 31, 1940

Serial No.
316,636

Fig. 1

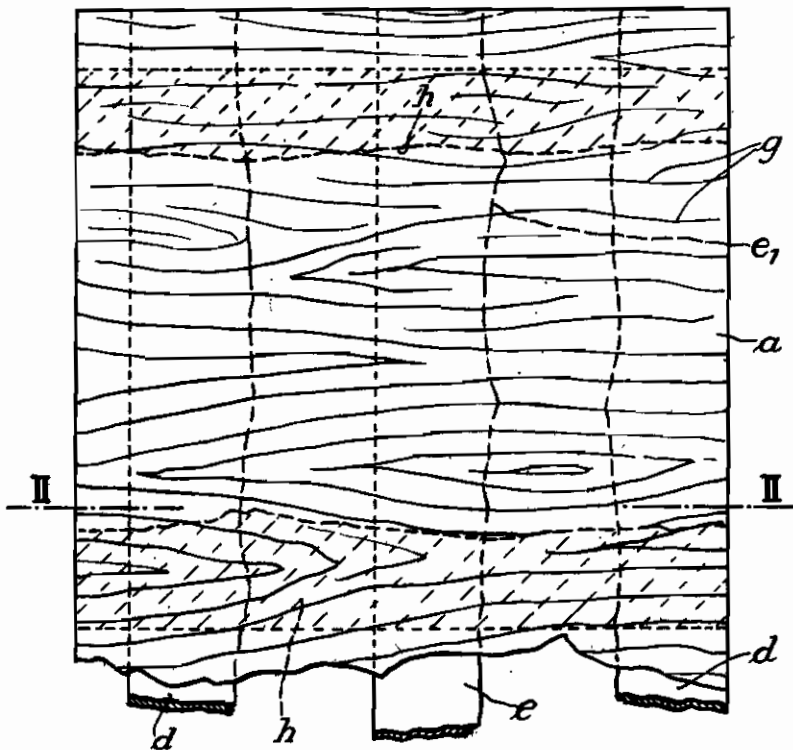
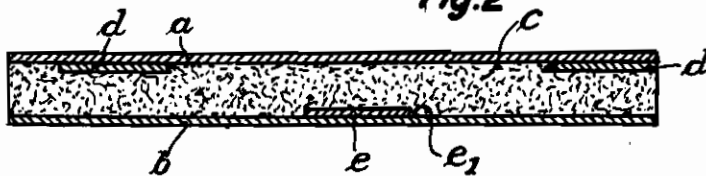


Fig. 2



Inventor,
A. Schumann
By:
Glascop, Downing & DeWolf
Attorneys.

ALIEN PROPERTY CUSTODIAN

BUILDING PLATE

Artur Schumann, Kustrin-Neustadt, Germany;
vested in the Alien Property Custodian

Application filed January 31, 1940

Plates for building purposes are known which consist of an armouring and of a filling substance, the armouring being encased inside the filling substance. The known plates are not always advantageous because, owing to the position of the armouring in the neutral fibre of the cross section, the resistance against bending is not high enough. If the armouring consists of iron, for example iron wires or wire netting, the plate cannot be cut and planed, and it can be nailed only to a limited extent and is also expensive.

These disadvantages are obviated by increasing the bending strength in arranging thin plates of veneer wood on both sides of the filling substance, which consists of saw dust with a binding medium, for example gypsum, and in attaching, for example, gluing, waste wood strips, preferably waste veneer wood strips, to the mentioned plates of veneer wood, in this way forming the armouring. The waste wood strips are arranged so as to cross the fibres of the veneer plates. The preparation of the plate according to the invention is comparatively simple. As only waste wood strips of a low value are used, for example waste ledges, veneer wastes or the like, which are obtained in squaring timber, the cost of making the plate is comparatively low. Of course, veneers may be used instead of the waste wood strips, in which case, however, the cost of making the plate according to the invention will not be as low as when using ordinary waste strips.

The subject of the invention is illustrated by way of example in the accompanying drawing in which:

Fig. 1 is a plan view of a plate according to the invention, and

Fig. 2 is a cross section of the plate on the line II—II of Fig. 1.

In the drawing, *a* and *b* indicate thin wood layers, preferably veneer plates, *c* is a filling substance, *d* and *e* are waste wood strips (waste veneer strips) spaced at a distance from each other.

According to the invention, the waste wood strips *d* and *e* are glued on to the veneer plates *a* and *b*. This is done so that the waste wood strips cross the direction of the fibres of the veneer plates. The direction of the fibres of the veneer plate *a* is indicated at *g* in Fig. 1. Thus, each of the veneer plates *a* and *b* is highly strengthened by the waste wood strips glued on.

According to the invention, two veneer plates with glued on waste wood strips are combined to form a building plate by means of a filling substance consisting principally of saw dust. As binding medium for the saw dust and at the same time as means for combining the two veneer plates, for example cement, gypsum, bitumen, asphalt, artificial resin, albumen, casein, waterglass, dextrine, light cements and the like are used. A building plate made in this way may be readily sawed, planed, nailed or worked in any other way.

The arrangement of the waste wood strips is made, as will be seen from the drawing, so that the waste wood strips of the plate *a* alternate with the waste wood strips of the plate *b*, leaving corresponding spaces.

The building plate according to the invention is made in the following way:

First the veneer plate *b*, for example, is placed with the waste veneer strips *e* at the top on a support, and then the filling substance *c*, mixed with the binding medium, is applied in a thick layer of, for example, 1 to 2 cm. height. Then, the veneer plate *a* is placed with the waste veneer strips *d*, which are glued on to the plate, upon the filling substance, and the whole is pressed together. An important advantage in using waste strips consists in the fact that these have at least one rough or uneven edge, as indicated at *e*₁, whereby a particularly tight and fast anchoring of these waste strips in the filling substance is obtained.

Instead of single veneer plates *a* and *b*, it is, of course, possible to use several veneer plates glued together, so-called plywood plates, which, however, raises the cost of making the building plate.

If, for special purposes, the tensile strength of the building plate in the direction of the fibres *g* of the veneer plates *a* and *b* should not be sufficient, there may be arranged waste veneer strips in the middle of the plate in the direction of the fibres *g*, as indicated at *h*.

The building plate according to the invention is suitable for many purposes, such as walls, wall panels, ceilings, furniture parts and the like, and, besides its cheapness, it has the advantage of being very strong and highly resistant to weather influences. It does not become distorted and may be easily polished.

ARTUR SCHUMANN.