

Jan. 23, 1934.

E. E. HEINEMAN

1,944,237

LAMINATED LUMBER AND METHOD OF MAKING THE SAME

Filed Feb. 1, 1932

FIG. 1 -

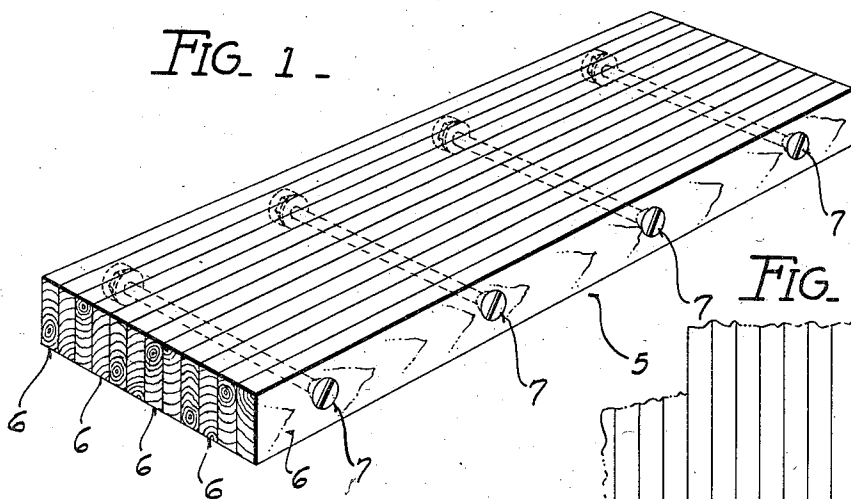


FIG. 5 -

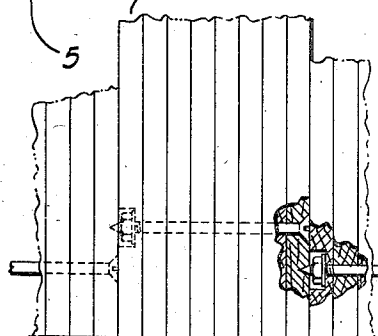


FIG. 2 -

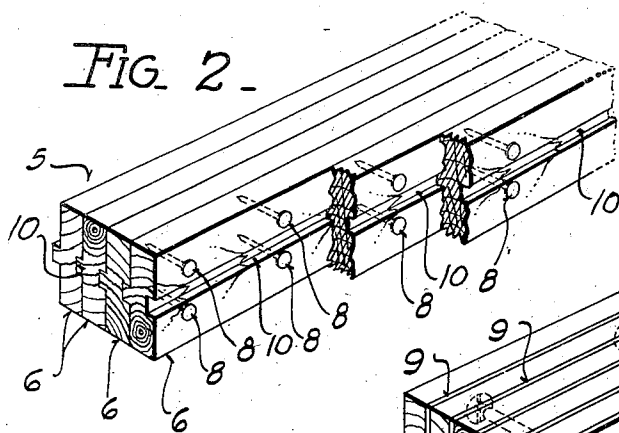


FIG. 3 -

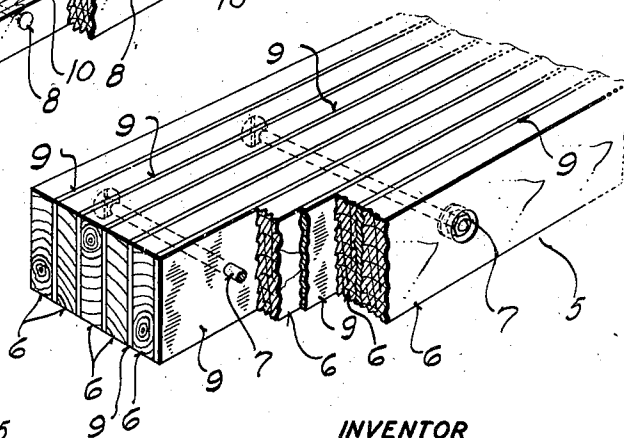
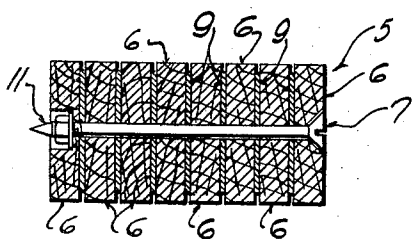


FIG. 4 -



INVENTOR

Edgar E. Heineman

BY

Sh. Milton Jones.

ATTORNEY

UNITED STATES PATENT OFFICE

1,944,237

LAMINATED LUMBER AND METHOD OF
MAKING THE SAME

Edgar E. Heineman, Merrill, Wis.

Application February 1, 1932. Serial No. 590,202

4 Claims. (Cl. 20—91)

This invention relates to laminated planking or lumber and has as an object the provision of finished laminated units not subject to warping and suitable for a wide variety of uses and having great resistance to surface wear.

A more specific object of this invention resides in the provision of units of laminated planking which are built up of a plurality of substantially flat boards disposed side by side so that the edge grain of the individual boards forms the surface of the units.

Another object of this invention resides in the provision of planking of the character described which comprises connected sections in flat engagement with metal plates interleaved therebetween so as to increase its strength and also its resistance to surface wear.

And a further object of this invention is to utilize the bolts or other connecting elements which hold the individual sections together, to secure the adjacent plank units against relative shifting.

With the above and other objects in view which will appear as the description proceeds, this invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawing, several complete examples of the physical embodiment of this invention are illustrated constructed according to the best modes so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of a unit of planking constructed in accordance with this invention;

Figure 2 is a detail perspective view illustrating a slightly modified manner of forming the planking of this invention;

Figure 3 is a detail perspective view illustrating the manner in which metal plates are interleaved between the adjacent sections;

Figure 4 is a cross section view taken through a plank unit having metal plates interposed between its adjacent board sections with the tie bolt pointed to engage the next adjacent unit and illustrating its condition prior to completion; and

Figure 5 is a top plan view of a plurality of units illustrating the manner of using the tie bolts to secure the units against relative shifting.

Referring now more particularly to the accompanying drawing, the numeral 5 represents a laminated plank unit embodying this invention. The unit consists of a plurality of substantially flat boards, the width of which governs the thickness of the plank unit and the thickness and number of which governs the width of the plank unit.

The individual sections or flat boards 6 are stacked side by side and are secured together by through-bolts 7 as illustrated in Figure 1, by nails 8 as depicted in Figure 2, or in any other suitable manner; and if desired the faces of the individual boards may be coated with glue, or other binders and/or fillers prior to being assembled. When bolts are used to tie the sections together, the heads and nuts are preferably countersunk so that the plank units may be placed edge to edge.

During the assembly of the individual boards it is not necessary that they be of exactly the same width for after the plank unit is completely assembled, it is passed through suitable machinery to give both sides a smooth even surface, or one or both surfaces may be given any desired surface configuration for special purposes.

Where the planking is to be used for interior floors, for which it is particularly well adapted, it is obvious that a very novel appearance may be obtained by assembling boards of different wood, or of different colors or shades.

In instances where extreme strength and exceptionally tough wearing surfaces are desired, as where the planking is to be used for railroad crossings and similar installations subjected to excessive wear, the wood boards or individual sections may be interleaved with metal plates 9, as illustrated in Figure 3.

In this embodiment of the invention the boards are preferably of greater width than the metal plates during assembly, as illustrated in Figure 4, so that the plank may be passed through a planer and the projecting edges of the boards dressed down close to the side edges of the metal plates, and if a smooth surface is desired, the plank may be further finished by passing it through an abrading machine capable of acting upon metal as well as wood.

While the individual boards or sections have been described as flat they may be formed with a tongue and groove interlocking connection 10 as illustrated in Figure 2, to increase the rigidity of the completed unit.

Where two or more plank units are to be employed side by side, the tie bolts 7 may have their ends pointed and protruding from the adjacent

side surface of the unit as at 11, in Figures 4 and 5. The protruding pointed ends of the bolts thus bite into the next adjacent unit and serve to hold the units against relative shifting.

- 5 From the foregoing description taken in connection with the accompanying drawing, it will be readily apparent to those skilled in the art to which an invention of this character appertains, that the laminated planking of this invention
10 provides a convenient outlet for lumber which otherwise is very often considered waste and that comparatively wide units may be built up in this manner without danger of warping.

- It is also apparent that the finishing of the
15 faces of the completed planking after assembly results in a very desirable smooth surface and greatly reduces the cost of laying floors and similar surfaces where the hard wearing qualities of the edge grain of lumber is desired, as the plank-
20 ing may be manufactured and sold in finished units at a lower cost to the user than that of buying the individual parts and assembling them on the job.

What I claim as my invention is:

- 25 1. The hereindescribed method of forming a plank which consists in stacking a plurality of substantially flat boards of approximately common width with a plurality of metal plates of
30 less width than the narrowest boards interposed between certain of the flat boards, securing the assembled boards and metal plates together, cutting down the opposite edges of the individual
35 boards to substantially the edges of the metal plates, and passing the plank through an abrading machine to further reduce the width of the individual boards to the exact width of the metal plates.

2. A laminated plank unit comprising, a plurality of substantially flat boards disposed side by side with their faces engaging and their edges forming the sides of the plank unit, means for
80 securing the plurality of individual boards together, and means formed directly on the securing means and protruding from one edge of the plank unit for engagement with an adjacent object to hold the plank unit against relative shifting with respect to said adjacent object.

3. A laminated plank unit comprising, a plurality of substantially flat boards disposed side by side with their faces engaging and their edges forming the sides of the plank unit, tie bolts for
85 securing the individual boards together, and points formed on the ends of the tie bolts and protruding from the edge of the plank unit to bite into an adjacent unit and thus secure the units against relative shifting.

4. A laminated plank unit comprising a plurality of individual boards disposed side by side with their faces in engagement and their edges providing the opposite sides of the plank unit, bolts
90 extending through the assembled individual boards to secure the same together, said through bolts having their heads countersunk within the plank unit, nuts threaded on the bolts and countersunk in recesses to lie beneath the plane of the adjacent edge of the plank unit, and sharp
95 points formed on the bolts outwardly of the nut and projecting beyond the plane of said edge of the plank unit for engagement with an adjacent object to secure the plank unit against relative shifting with respect to said object.

EDGAR E. HEINEMAN.

40

45

50

55

60

65

70

75

80

85

90

95

100

105

110

115

120

125

130

135

140

145

150