L. A. DEUTHER.

COMPOSITE BOARD.

APPLICATION FILED JUNE 30, 1909.

961,432. Patented June 14, 1910.

Fig. 1.

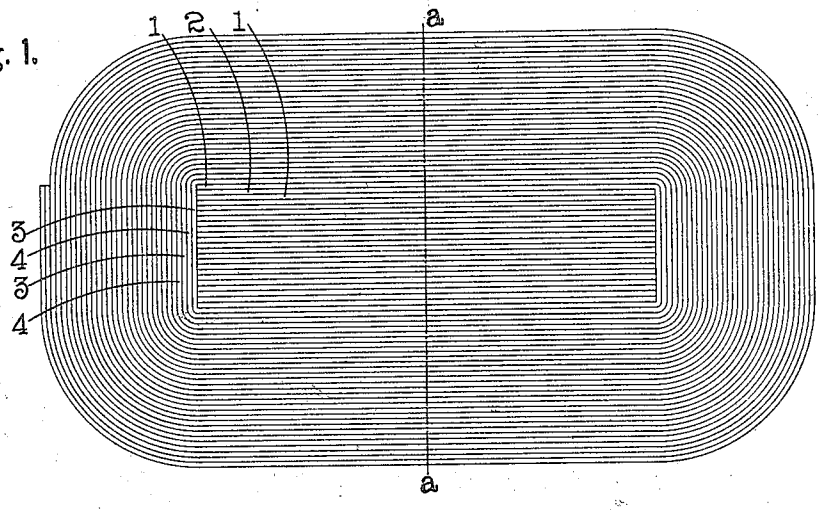


Fig. 2.

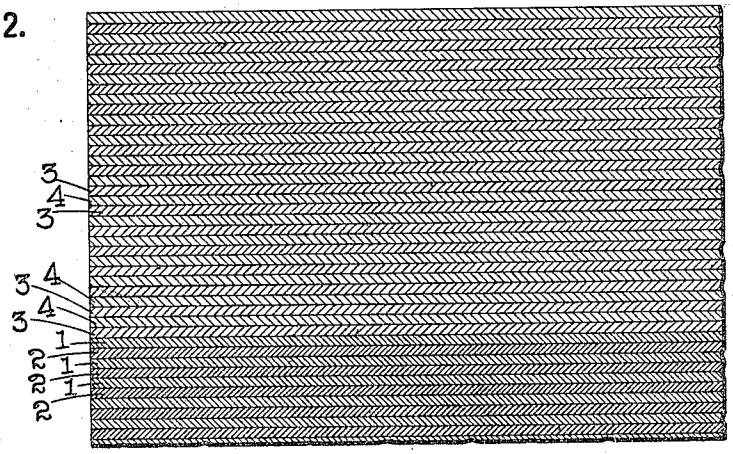


Fig. 3.

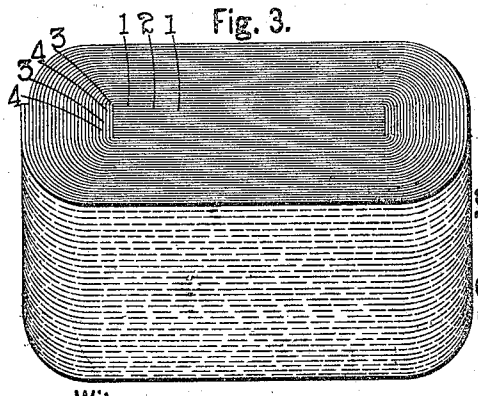
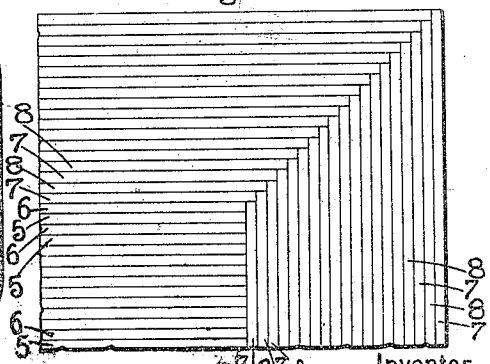


Fig. 4.



Witnesses.

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COMPOSITE BOARD.

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To all whom it may concern:

Be it known that I, LORENZ A. DEUTHER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a certain new and useful Improvement in Composite Boards, of which the following is a specification.

This invention relates to improvements in composite boards which are utilized as flooring, table tops and for other purposes and which consists of a series of laminæ having their faces or sides superimposed on and secured to each other and their edges exposed to form the opposite sides or faces of the composite board.

The object of the invention is to produce a board of this character in such manner and of such material that it will not warp, nor split with ordinary usage and will be cheaper in construction as well as stiffer and stronger and more ornamental than any ordinary board formed from one section of wood.

The invention also relates to certain details of construction which will be hereinafter described and claimed, reference being had to the accompanying drawings, in which,—

Figure 1 is an end view of a block of the composite board. Fig. 2 is an enlarged fragmentary transverse section on line *a a*, Fig. 1. Fig. 3 is a perspective view of a block of the composite board showing the manner in which the boards are cut therefrom. Fig. 4 is an enlarged fragmentary end view of a different form of the composite board.

In referring to the drawings in detail like numerals designate like parts.

Two forms of this improved composite board are illustrated in the accompanying drawings and will be hereinafter described.

In the form shown in Figs. 1, 2 and 3, which has rounded corners, an inner core which is composed of laminæ or layers of wood and paper 1 and 2 is fitted within an outer portion. The laminæ of the inner core are fitted in alternate arrangement with their sides or faces in contact and secured together and extend in a straight direction. The object in interposing layers of paper between the layers of wood is not only to cheapen the cost of production of the composite board but also to stiffen and strengthen the board and to prevent warping, the paper serving as a filler to separate the wood laminæ. The outer portion is wound around the inner core in alternate spiral layers and consists of two strips of paper and wood 3 and 4. The grain of the wood in the laminæ 1 runs longitudinally of the layers so that it may be bent readily around the corners without splitting. The wood of which the outer spiral layers is composed is preferably cut in curved or spiral cuts from a suitable log so that it will be in one continuous piece and it is bent around the inner core at substantially right angles to its cut so that the grain will extend longitudinally of the layers as heretofore specified. This form of board is constructed by first forming the core, then winding the outer spiral layers around the core, then cutting the laminated formation, which is comparatively long, into sections of suitable thickness to form the boards.

In the form shown in Fig. 4 which is of a rectangular or square form, the inner core is formed of alternate straight laminæ of paper and wood 5 and 6 and alternate straight outer laminæ of paper and wood 7 and 8. The outer laminæ are arranged so that they lap at their ends as shown in Fig. 4, and are in four sections, two side sections and two end sections which surround the inner core. The laminæ or layers are secured together by glue or other suitable adhesive with their edges exposed to constitute the faces or sides of the completed board. While laminæ of paper are preferably employed in conjunction with the wood layers, they might be dispensed with or other suitable material might be used in lieu thereof.

The boards are cut with a suitable saw from the solid block as shown in dotted lines in Fig. 3, each line representing a cut. In this manner a very thin board of exceeding stiffness and strength and which will not warp or shrink is produced.

I claim—

1. A board composed of a series of laminæ of wood and paper superimposed in alternate arrangement and having their sides or faces secured in contact and their edges exposed to form the sides of the board.

2. In a composite board an inner core composed of a series of straight laminæ of wood and paper superimposed in alternate arrangement and an outer portion surrounding the inner core and also composed of a series of laminæ of wood and paper superimposed in alternate arrangement.

3. In a composite board an inner core

composed of a series of straight laminæ of wood and paper superimposed in alternate arrangement and an outer portion surrounding the inner core and also composed of a series of laminæ of wood and paper superimposed in alternate arrangement; said laminæ having their sides secured together in contact and their edges exposed to constitute the sides of the board.

LORENZ A. DEUTHER.

Witnesses:
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George A. Neubauer.