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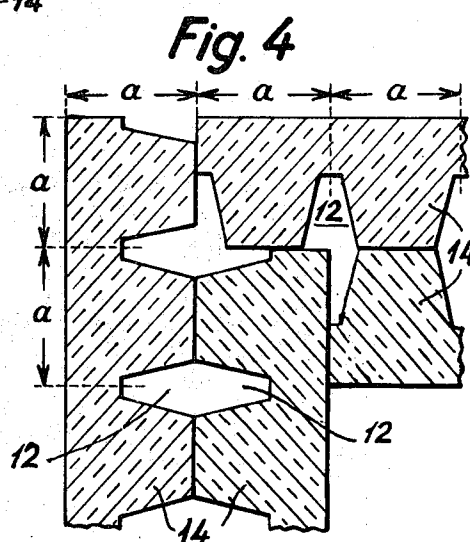
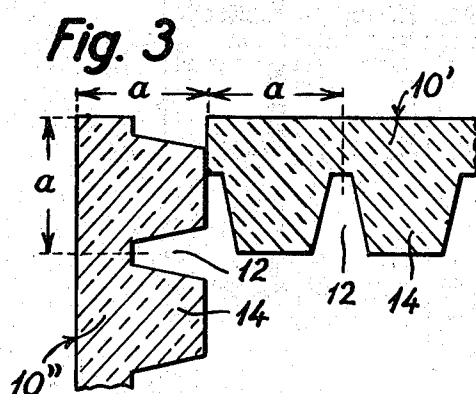
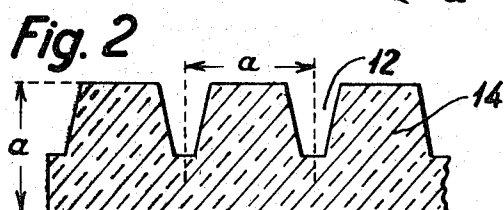
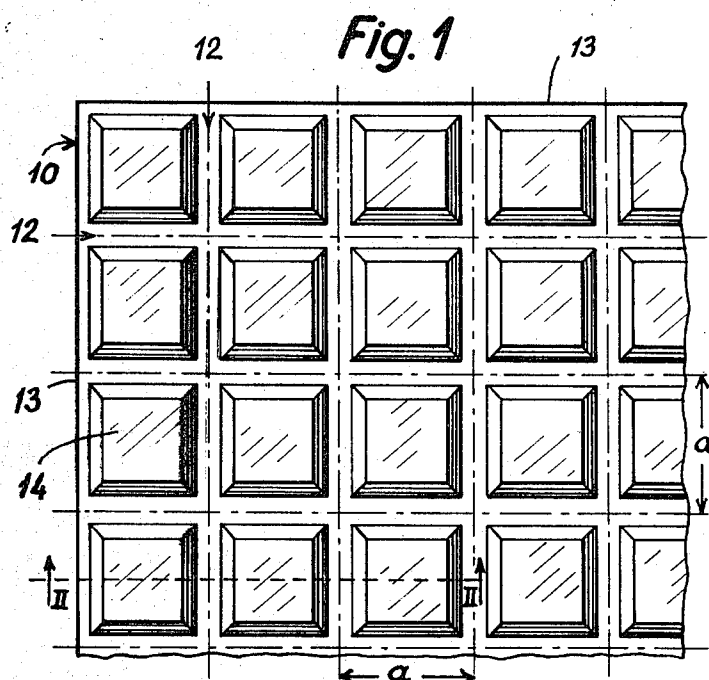
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3,527,004

BUILDING BOARD FOR BUILDING HOUSE MODELS ON A MODULE SYSTEM

Filed Nov. 15, 1966

3 Sheets-Sheet 1



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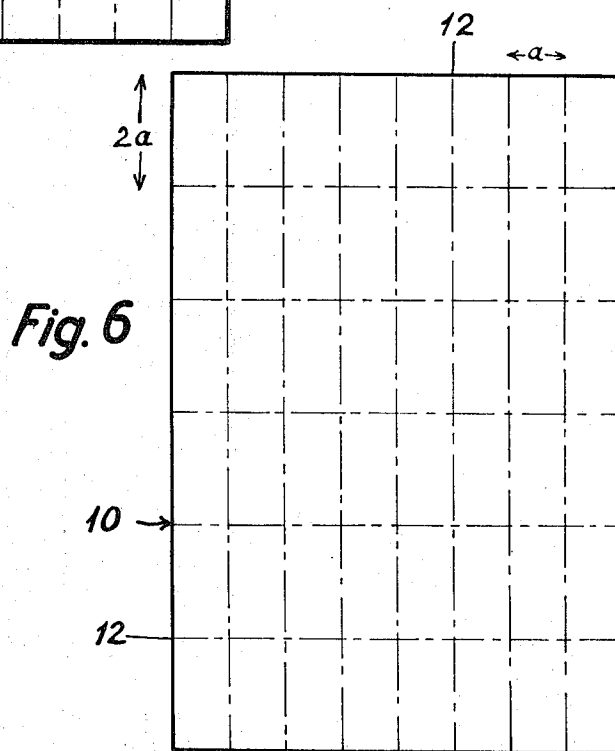
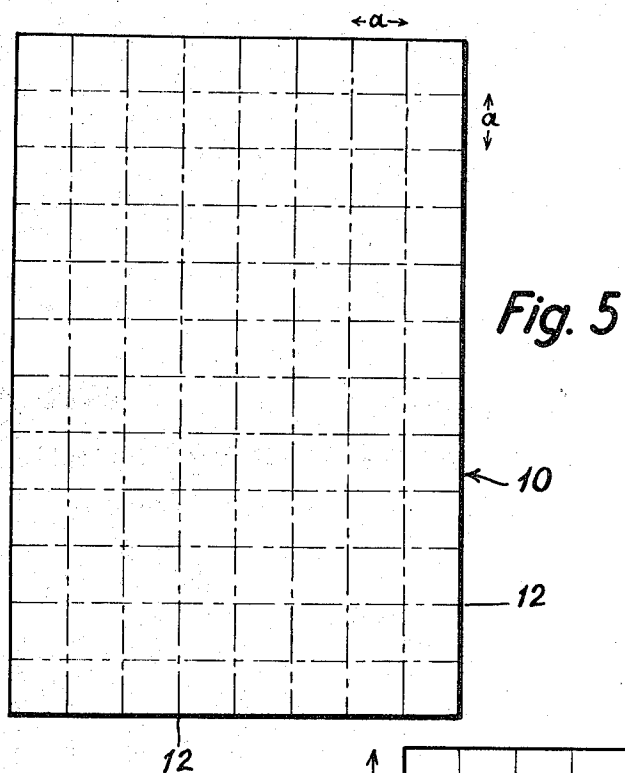
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BUILDING BOARD FOR BUILDING HOUSE MODELS ON A MODULE SYSTEM

Filed Nov. 15, 1966

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Sept. 8, 1970

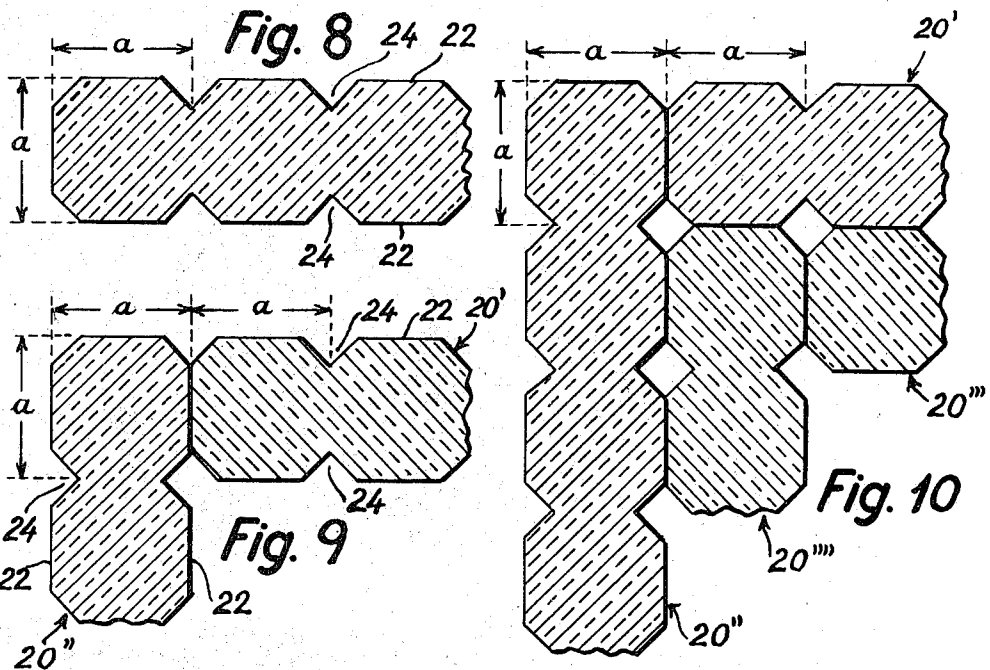
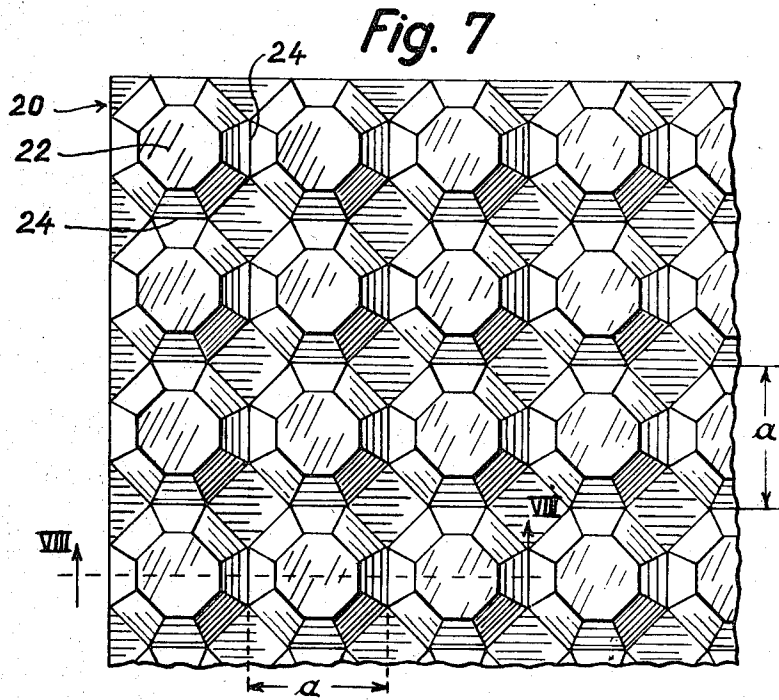
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BUILDING BOARD FOR BUILDING HOUSE MODELS ON A MODULE SYSTEM

Filed Nov. 15, 1966

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3,527,004

BUILDING BOARD FOR BUILDING HOUSE MODELS ON A MODULE SYSTEM

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Filed Nov. 15, 1966, Ser. No. 594,537

Claims priority, application Denmark, Nov. 19, 1965,
5,967/65

Int. Cl. A63h 33/06; E04c 2/30

U.S. Cl. 52—98

1 Claim

ABSTRACT OF THE DISCLOSURE

A building board used in making models, such board being divided by grooves extending in the two main directions of the board in accordance with a module system. The parts of the board when so divided are directly usable to make models entirely to scale. The parts are assembled into models by adhering them together thus avoiding any additional fastenings.

It is an object of the invention to provide a building board, which can easily be divided in a way so as to obtain individual parts which can readily be used as elements when constructing perfectly realistic models of contemplated or projected houses, so that their appearance is reproduced exactly in respect to scale as well as to the nature of the surface.

It is a further object of the invention to provide a building board which can easily be divided by means of simple hand tools.

The invention is characteristic in that on one of its sides the board is divided by rectilinear tracks for a dividing tool into an oblong rectangular pattern or into a quadrangular pattern, the smaller side or the side of the pattern being equal to the module, and that the ratio of the thickness of the board to the module is an integer, preferably one.

A model is usually produced from a number of boards, pieces being cut therefrom by means of a knife or a pair of scissors with the tracks as guides for the tool, which pieces may constitute an element, such as a wall or the roof of the house, possibly together with whole boards, the individual parts being glued or welded together at their edges, e.g. when lying on a plane support. The division of the boards into the module makes it possible merely by counting the number of modules to introduce the correct measurements for the elements and implicitly for the whole model. As houses normally have rectangular corners, and the walls are rectangular, the pattern indicated by the invention affords a perfect guidance for the division of the boards, and as the pattern includes the module, the module system is automatically adopted. The system is not broken at the corners of the house, even if e.g. the edge of a side wall should join an adjacent end-wall, because on account of the chosen thickness of the end-wall board the edge will add one or more modules which may be subtracted from the opposite edge of the end-wall in the dividing process.

If it is desired to reproduce the outer wall surfaces of the house realistically by means of the boards only, one side of the board may be designed in relief according to the desired outer surface, e.g. as a brick wall, a wall of cement building blocks, a facing of boards or strips of wood or a roof surface of tile, the colour of the board moreover corresponding to the colour of the surface. In this way an imitation is effortlessly produced, which is more correct than when produced by painting.

If the building board consists of a plastic material and is produced by extrusion in a mould, the mould will be

more simple and cheap if the tracks are formed of grooves between a rectangular net of upright, round projections. The reason is that such projections can be obtained by drilling or end milling in the mould.

Some preferred embodiments and arrangements of building boards according to the invention will now be explained in more detail, reference being had to the drawing wherein

FIG. 1 shows a corner of one embodiment of the said board,

FIG. 2 is a cross section through same on the line II—II in FIG. 1,

FIG. 3 is a cross section of a corner of a house model, produced from two boards according to the invention,

FIG. 4 shows a similar corner in cross section, produced from double boards,

FIGS. 5 and 6 show on a smaller scale and partly schematically a board with a square pattern and a board with an oblong rectangular pattern, respectively,

FIG. 7 shows a corner of another embodiment of the board according to the invention,

FIG. 8 shows a cross section taken on the line VIII—VIII in FIG. 7,

FIG. 9 shows an arrangement of two boards formed in accordance with FIG. 7 and making a corner similar to that of FIG. 3, and

FIG. 10 shows an arrangement of four boards formed in accordance with FIG. 7 and making a corner similar to that of FIG. 4.

The shown board, denoted with the numeral 10 in FIGS. 1, 5 and 6 and with the numeral 20 in FIG. 7 may be produced from impact-resistant plastic material, e.g. polystyrene, by extrusion.

At its front side the board 10, FIG. 1, is divided into a square pattern by means of grooves 12 extending in two directions at right angles to one another, said directions being parallel with the edges 13 of the board. The grooves 12 define projections 14 having a square ground plane, which said projections are shaped as truncated pyramids. As appears from FIG. 2, the distance a between the grooves is equal to the thickness of the board.

The grooves 12 are so deep and the subjacent material so thin that the board can easily be divided by cutting with a knife or scissors along the grooves, which moreover constitute tracks for the tool.

When two boards 10' and 10'' are placed together to a rectangular corner, so that an edge of one board 10' rests against a side of the other board 10'', the module division, which is equal to a , see FIG. 3, is not broken.

The side of the boards facing in the opposite direction of the projections 14 is made in relief, which is not shown on the drawing. In this way it is possible to obtain in the outer wall surfaces of the model an exact reproduction of the outer wall surfaces of the projected house. If the same is desired for the inner wall surfaces, two boards are used for each wall, which are placed together as shown in FIG. 4 so that the projections 14 face each other. The module division is not broken in this case either.

FIGS. 5 and 6 show the full outline of boards, and the grooves are indicated in dot-and-dash line in square and standing rectangular pattern, respectively.

The latter is expedient if e.g. the relief on the back indicates a brick wall, as the joints between the bricks must be kept horizontal, and this direction must be perceptible from the grooved side, also after the board has been divided. The size of the boards may be adjusted to a standard format. In the embodiment shown in FIG. 6 the broad side of the pattern is twice a .

FIGS. 7–10 show a board 20, both the surfaces of the board being divided into a regular pattern by means of truncated pyramids 22 having a regular octagonal ground

plane. The said projections 22 are positioned in rows extending at right angles to each other, and they are arranged in such a way that a groove 24 of substantially V-configuration is defined between the sides of two adjacent projections facing each other. The grooves 24 are arranged flush with each other in two directions extending at right angles to each other. Also in this embodiment the module division *a* is observed.

FIG. 9 shows two boards 20' and 20'' placed together in a similar way as shown in FIG. 3, and FIG. 10 shows an assembly of boards similar to that shown in FIG. 4 and comprising four boards 20', 20'', 20''' and 20'', respectively.

If the roof of the house inclines, the inclination is determined on the model when the board is divided, e.g. by tangency to the angle, corresponding modules being counted in the horizontal and vertical directions. In this case the dividing line cannot follow the grooves but may e.g. be fixed by means of a ruler.

When the individual cut-out parts have been assembled, possibly together with whole boards, to form the elements of the house, including side walls, end-walls, partitions and roof, the apertures for windows and doors are cut. As they are supposed to be included in the module system, the grooves may also in this case serve as tracks for the dividing tool. When use is made of the board material indicated in the foregoing, the elements may be assembled by welding, the edges of the elements having first been softened by means of a solvent, e.g. trichlorethylene. In the same way the elements may be assembled to form the finished model.

The elements may consist of another material than plastic material, e.g. of a suitably thick plate material from which the elements are cut or punched and wherein the tracks and the relief are produced by stamping.

What is claimed is:

1. A building board for building house models based on a module, said board having two opposite surfaces extending substantially parallel to the main plane of the board, a number of grooves being provided in the material of the board at at least one of said surfaces and arranged along rectilinear lines extending at right angles to each other, said grooves having an outwardly diverging wedge shaped cross section, the portions of the board limited by said grooves thus forming truncated projections, the width of said grooves at the widest part thereof being a minor fraction of the thickness of said board, the bases of said grooves having a restricted width forming tracks for a tool for cutting through the body of the board in back of said groove bases between said projections, the said projections together with said grooves defining a pattern, the smallest side of the pattern being equal to said module, and the board having a thickness, the ratio of said thickness to the said module being an integer whereby on separation of elements of said board through the bases of said grooves the separated elements may be assembled at right angles while retaining said modular arrangement.

References Cited

UNITED STATES PATENTS

1,910,844	5/1933	Little	52—314 X
2,066,964	1/1937	Desagnat	52—314 X
2,117,934	5/1938	Bemis	52—234
2,224,351	12/1940	Kaye	52—98 X
2,607,972	8/1952	Rust	46—19 X
3,119,154	1/1964	Moore	46—19 X

PRICE C. FAW, Jr., Primary Examiner

U.S. Cl. X.R.

46—30; 52—105, 284, 314