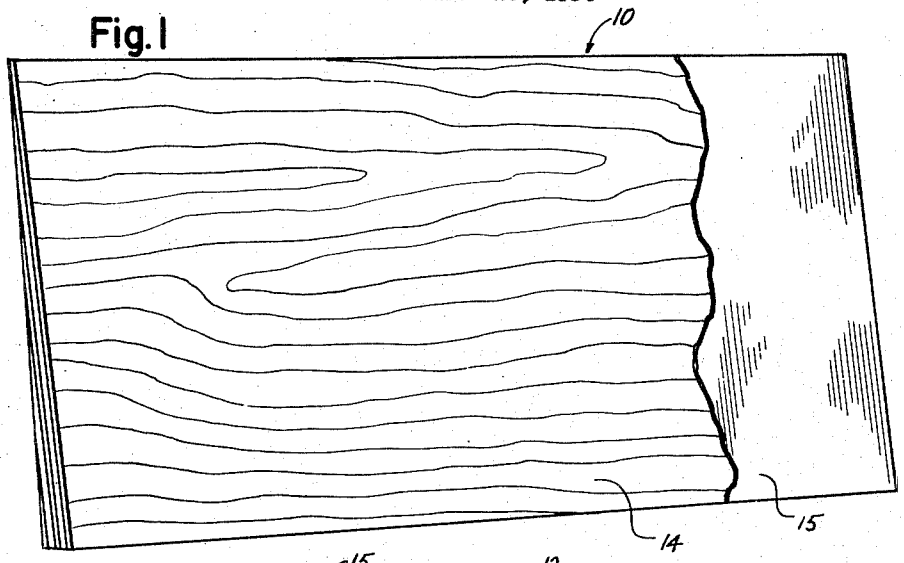
May 27, 1958 R. E. WALTON 2,835,932

BEVELED PLYWOOD SIDING

Filed March 23, 1954

Fig. 1



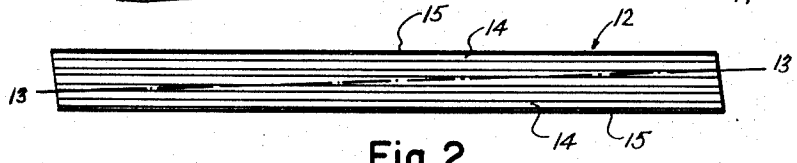


Fig. 2

Fig. 3

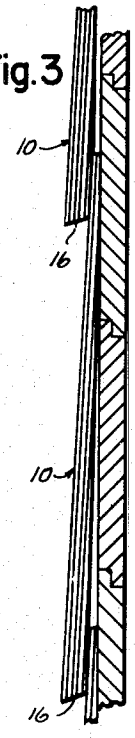


Fig. 4

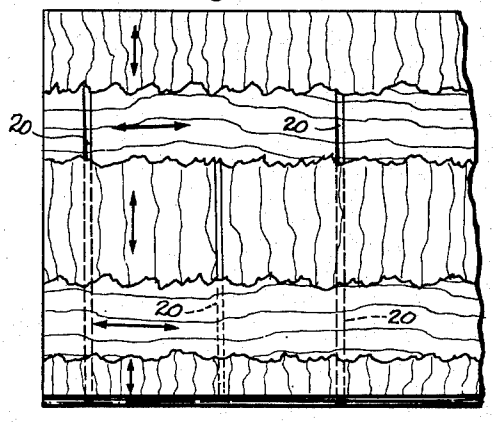


Fig. 5

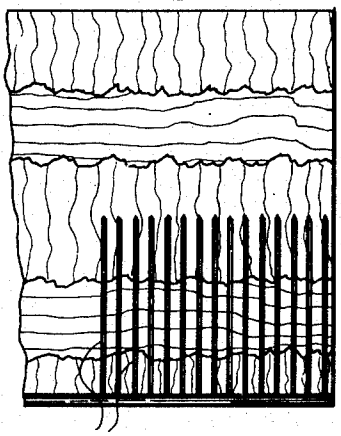
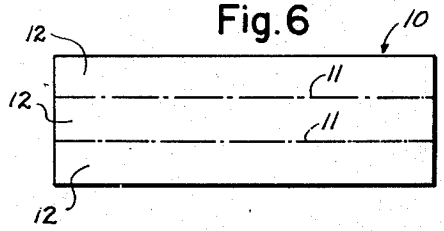


Fig. 6



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BEVELED PLYWOOD SIDING

Richard E. Walton, Everett, Wash., assignor to Walton Plywood Company, Inc., a corporation

Application March 23, 1954, Serial No. 418,017

4 Claims. (Cl. 20—5)

This invention relates to wooden siding as used in the building of homes, and the like. More particularly, it has reference to beveled siding made from plywood that is manufactured in accordance with present day practice, and wherein the grain of the wood of successive veneer plies extends at right angles to each other, preferably transversely and longitudinally of the pieces of siding.

It is the principal object of this invention to provide a novel and improved beveled siding made from plywood panels which possess certain new features and advantages. Furthermore, to provide siding from boards or planks of plywood by the diagonal and lengthwise sawing of the said boards or planks, thus to provide from each, two like pieces of beveled siding, each of which pieces will have an outer surface ply that is smooth and untouched by the diagonal cutting operation.

It is a further object of the present invention to provide beveled plywood siding in the manner above stated wherein the thin edges of the pieces are of plural ply thickness with grain of the plural plies crossed, thus to provide substantially greater strength and to assure against splitting, warping or breaking off of the feather edge.

Another object of this invention is to provide panels of bevel siding of such size and dimensions that will permit greater utility or coverage of a wall surface for a given quantity of siding.

A further object of the invention resides in the specific manner in which the individual planks or boards of plywood are formed and then sawed to provide the beveled pieces of siding and in the manner in which the sawed pieces are applied to a wall in overlapped relationship.

Yet another object of the invention is to manufacture beveled, plywood siding of the present character that embodies novel details of construction that provide for ventilation when applied to a wall surface.

In accomplishing the above mentioned, and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a piece of plywood siding embodied by the present invention.

Fig. 2 is an end view of a plywood board, or plank from which siding of the present kind is to be made, indicating by a dot and dash line thereacross, the plane of the diagonal cut for dividing the board to form two like pieces of siding.

Fig. 3 is a vertical section through a wall showing the overlapping of the edges of the siding as applied to the wall.

Fig. 4 is an inside face view of one of the pieces of beveled siding indicating the direction of grain of the successive plies.

Fig. 5 is an inside face view of a panel that is grooved for ventilation.

Fig. 6 is a face view of a panel of plywood at much reduced scale, indicating by dash lines therealong, where the panel can be sawed to provide three boards therefrom, each adapted to be divided to provide two pieces of siding.

Referring more in detail to the drawings:

The present siding can be made economically from plywood panels of the kind now extensively manufactured and comprising a plurality of thin plies of wood veneer, glued together with the grain of the wood of the successive plies alternatively directed crosswise and lengthwise of the panels. Such panels are generally made four feet wide and eight or twelve feet long, but such dimensions need not be strictly adhered to. A plywood panel such as that designated in Fig. 6 by numeral **10**, can be longitudinally divided for example, as along the two dash lines **11**, to form three plywood planks or boards **12** of equal width, or likewise, it can be divided to provide more or less boards of equal width. Present-day practice is to so cut the panels as to form strips 12, 16, 18, 20 or 24 inches wide.

Plywood panels now being used for the present purpose comprise seven veneer plies united under heat and pressure with a thermo-setting resin or glue. The outside or surface plies thereof are preferably disposed with the grain of the wood directed lengthwise of the panel. With the exception of the face plies, the exact thickness of the successive plies is of no particular significance but at present, it is practical and desirable to use opposite surface forming plies that are 3/32" thick. Next within these surface plies, are plies that art 5/32" thick, then within them are plies that are 3/32" thick, and there is a central or core ply that is 5/32" thick; the overall thickness of the finished panel being approximately 7/8". If desired, panels ranging in thickness from 1/2" to 1 1/2" could be used.

It is to be understood that a five ply veneer may also be used and that the particular number of plies is not a controlling or important feature of my invention. It is important that the opposite face plies be relatively thin or approximately 3/32" thick for reasons which will hereinafter become apparent.

To form the present beveled siding pieces, the planks or boards, as produced by the longitudinal dividing of the plywood panels, are diagonally divided in the plane of the dot-dash line **13** shown in Fig. 2.

It is of significance that this diagonal cut be definitely located so that the thin edge of the two pieces of siding thus formed will comprise more than one ply in thickness. Preferably the diagonal cut is so made as to leave the thin or feather edges of the two pieces of siding approximately two plies in thickness. At least, the thin edge of a piece should be one and one-half plies in thickness. By so cutting the panel, or board, two like pieces of siding are formed, each with an outer surface ply **14** that is smooth, and with its grain extending lengthwise thereof and parallel to the surface. All glue joints, through which the diagonal cut is made will be on that side designated as the inside of the pieces and therefrom when the siding is applied to a wall as in Fig. 3, these joints or glue lines are not exposed to weather.

If it is desired, the plywood panels **10** may, before cutting, be surfaced with a thin layer of plastic skin made from phenolic resins and cellulose fibers. The plastic skin is bonded strongly to the panel by the application of heat and pressure so that the wood itself will fail before the plastic surface is delaminated. A plastic impregnated paper may also be used and applied in a similar manner.

Such surface layers 15 have been shown on the opposite surfaces of the plywood plank 12 in Fig. 2 and also such a coating has been shown to cover a portion of the piece of siding shown in Fig. 1.

It is preferred also, in cutting the planks or boards from plywood panels, that the dividing cuts 11 through the panel will be so inclined that the edges of the pieces will be beveled as at 16, and particularly to provide that the butt end surface will have a slight outward and downward slope when the pieces are applied to a wall. Thus the lower edges of the outer plies will overhang and water will drip easily therefrom and not run to the inside edge; the beveling of the butt edge being shown in Fig. 3.

It is also desirable to provide the pieces of siding with ventilating channels whereby air can be admitted to their under sides when applied to a wall. One way of providing such ventilation is to slightly space the edges of adjacent pieces of veneer which form the inner plies, thus to provide what are referred to as core gaps; such gaps, 20, have been shown in Fig. 4. These gaps, as provided between plies, form channels which open to the lower or butt edges of the siding, and to the inside surface of the piece as seen in Fig. 3. Such gaps may be located at desired intervals in the various inside plies.

Another way to provide ventilation is to transversely groove the inside surfaces of the beveled pieces, as een at 25 in Fig. 5. In this grooving, the grooves should terminate about mid-way between the longitudinal edges of the piece so as not to weaken the thinner edge portion.

The present siding differs from that shown in U. S. Patent No. 2,390,087 in that it is made from panels of standard plywood, and while in its manufacture it is divided through several of the inside plies, it still presents an outer surface ply that is of full thickness throughout. The sheathing of the above patent is made by dividing of a plural ply panel wherein the center veneer ply is of approximately three times the thickness of the surface plies and is the only one that is cut in the diagonal dividing to provide the two pieces of beveled sheathing. Then, in the use of these beveled pieces, the sawed surfaces are those that are exposed to the weather.

As previously indicated, it is desirable to produce a bevel siding with substantial thickness at its butt or thick end. Such thickness is exposed and gives an appearance of greater strength and also creates a greater shadow line which is believed to be a desirable feature denoting quality and a more pleasing effect. So as to accomplish this objective from a ¾", ⅞" or 1" piece of plywood and yet to maintain a plurality of plies on the thin or feather edge, it is preferred to make the face or surface veneers relatively thin or approximately 3/32" thick. With such construction, it is possible to form the bevel siding with a thin edge and still maintain the plural ply thickness and also maintain substantial thickness at the butt end.

Beveled siding made from plywood panels as herebefore described has another novel and important advantage in that the width of the siding may be substantially greater for example 18", 20" or 24". Siding of such width permits greater utilization or coverage with a given board foot quantity. It will be understood that the siding is overlapped when applied to a wall. The conventional overlap is 2" but may be 1½" to 2½". With such overlap 25% of an 8" board is covered up or 20% of a 10" board. However, with a 24" board, less than 10% is covered so that 10% less siding is required to cover a given wall area. This fact will make possible a substantial saving in cost and there being only one half the number of boards to handle and align will increase the speed of application, and the resulting proportion of savings in labor costs. Ordinary wood siding is manufactured at widths substantially less than actually ordered. In other words, 10" width wood siding is actually only approximately 9½" wide and 8" only 7½", etc. This plywood siding is preferably full width to within 1/32", plus or minus, which accentuates the savings to the consumer as mentioned above.

In the following claims, the term "commercial plywood" is used to designate that kind of plywood that is made up of plies of wood, alternately laid with the grain of the wood at right angles to each other, and the plies glued together. Ordinarily the grain of the wood of surface forming plies extends lengthwise of the panels, and the panels from which the siding is made is approximately ⅞" thick and comprises seven plies.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent is:

1. A bevel siding made from a laminate of at least three plies of substantially equal thickness wherein the grain of each ply runs at right angle to the next adjacent plies, said siding having a butt edge of substantial thickness extending longitudinally thereof and a feather edge, the thickness of which is greater than one ply, extending parallel to said butt edge and spaced therefrom, an outer surface ply of uniform thickness throughout its length and width, an undersurface ply of tapered thickness extending from the butt edge toward said feather edge and terminating intermediate the parallel edges, a plastic skin bonded to said outer ply and providing a uniformly smooth surface and sealing the face of said outer ply.

2. A bevel siding made from a glued laminate of at least five relatively thin veneer plies wherein the grain of each ply runs at right angle to the grain of the next adjacent plies, said siding including a butt edge extending longitudinally thereof and including at least three plies, a feather edge parallel to and spaced from said butt edge and including more than one ply, an outer surface ply of uniform thickness, an under surface which includes portions of at least two plies wherein the exposed grain of such plies runs at right angle one to each other and the outer ply of said under surface forms a portion of said butt edge and tapers toward said feather edge and terminates intermediate the parallel edges, and a plastic skin on said outer surface ply sealing the face thereof.

3. A bevel siding made from seven ply plywood wherein the grain of each ply runs at right angle to the grain of the next adjacent plies, said siding including a butt edge extending longitudinally thereof and a feather edge spaced from and parallel to the butt edge, said butt edge including at least four plies and said feather edge including at least two plies, an outer surface ply of uniform thickness extending to the full length and width of the siding, an under surface which includes portions of at least three plies with the exposed grains of such plies running at right angle one to each other, each of said plies which are exposed on the under surface having an edge thereof which forms a portion of the butt edge and the under surface plies being tapered from the butt edge toward the feather edge, so that at least two of said under surface plies terminate intermediate the parallel edges and in spaced relation to each other, and a plastic skin on said outer surface ply sealing the face thereof.

4. A bevel siding made from a glued laminate consisting of five relatively thin veneer plies wherein the grain of each ply runs at right angles to the grain of the next adjacent plies, said siding having a butt edge extending longitudinally thereof and including the full thickness of three of said plies and at least the partial thickness of the fourth ply, said siding also including a feather edge parallel to and spaced from said butt edge and including more than one full ply, said siding having an outer surface ply of uniform thickness, and an undersurface which includes portions of the remaining four plies, said undersurface being tapered from the butt edge to the feather edge with respect to the outer surface of said outer ply so as to expose the glue lines between adjacent plies on such undersurface such that the several plies thus exposed have their grains running

at right angles to each other to minimize warping and bellying, said exposed glue lines and the corresponding edges of the plies constituting the undersurface lying generally parallel to the butt and feather edges but intermediate the same and with the several exposed glue lines being in relatively uniformly spaced relationship to each other between the butt and feather edges, and a plastic skin on the outer surface ply sealing the outer face thereof.

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