

Sept. 29, 1942.

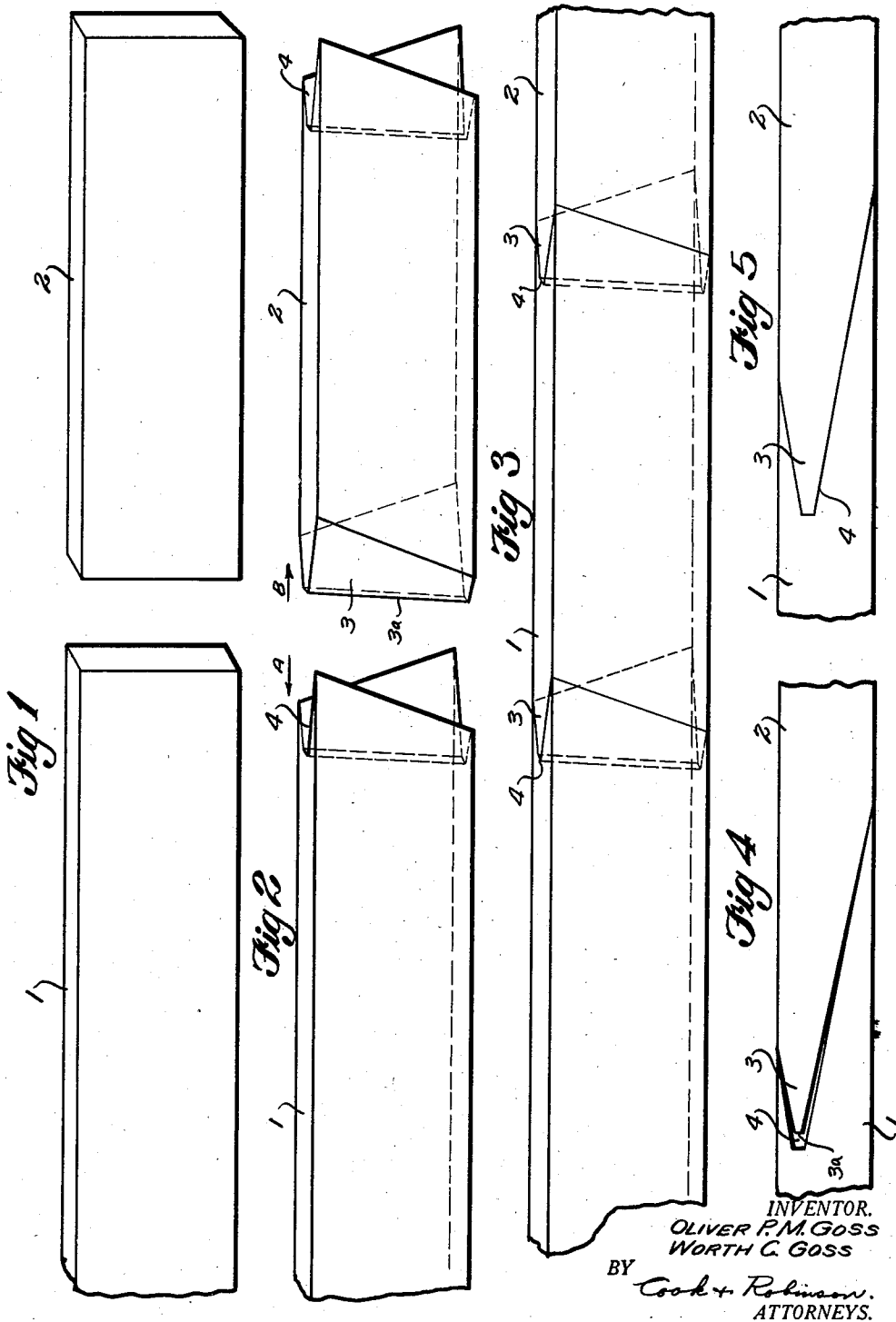
O. P. M. GOSS ET AL

2,297,353

LUMBER

Original Filed Aug. 2, 1937

2 Sheets-Sheet 1



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Fig 9

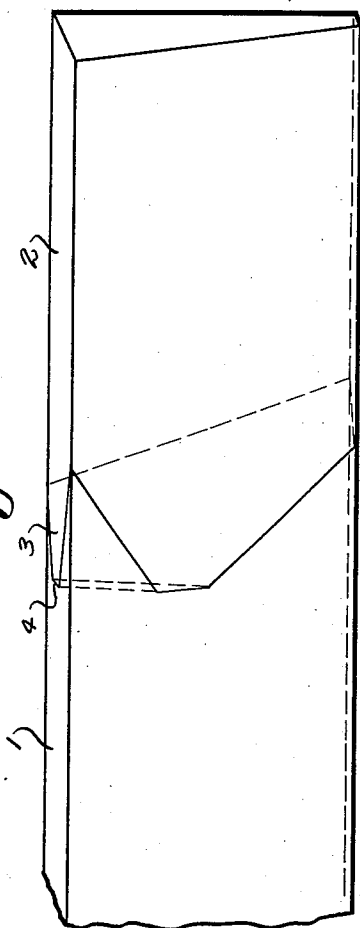


Fig 10

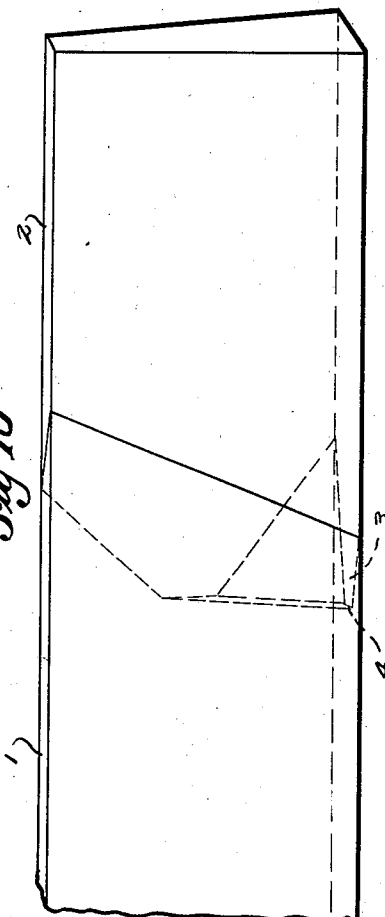


Fig 7

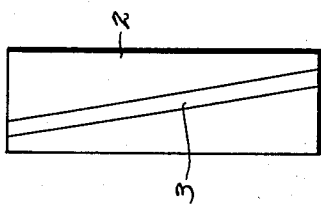


Fig 6

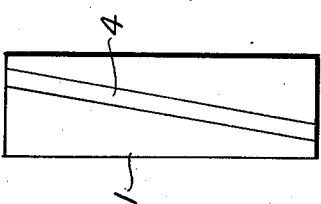
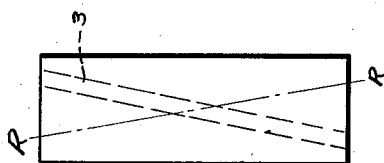


Fig 8



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UNITED STATES PATENT OFFICE

2,297,353

LUMBER

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Original application August 2, 1937, Serial No.
156,864. Divided and this application June 5,
1939, Serial No. 277,372

3 Claims. (Cl. 20—91)

This invention relates to lumber, and more particularly to the fabricating of wood pieces, trimmings and the like which ordinarily are disposed of as waste material, into boards from which beveled siding lumber of commercial 5 lengths can be manufactured; the present application being a divisional part of our application filed August 2, 1937, under Serial No. 156,864.

It is the principal object of this invention to provide fabricated lumber for the manufacture of 10 beveled siding.

It is also an object of the invention to provide a piece of beveled siding from board pieces so joined together that the base, or wider edge, will be connected by a tongue and groove joint 15 which extends into a lap joint at the narrower edge of the piece.

Other objects of the invention reside in the specific way in which the ends of board pieces are prepared to form tongue and groove connecting joints, and whereby, in the resawing of the boards thus formed, the joined pieces embodied in the siding will be effectively and securely 20 united.

Other objects of the invention reside in the details of construction of the boards, as will be hereinafter described.

In accomplishing these objects of the invention, we have provided the improved method and details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Fig. 1 is a perspective view of two short wood pieces prior to their being joined to form a board for the manufacture of beveled siding 25 therefrom.

Fig. 2 is a view showing the tongue and groove forming operations on the pieces preparatory to joining them together.

Fig. 3 is a view of the prepared pieces after being joined together according to this invention.

Fig. 4 is a detail, showing the joint as formed by pieces brought together and before pressure has been applied to seat the tongue in the groove and illustrating the difference in the angle of the side surfaces of the tongues and of the grooves to insure tightness of the joint when the parts are pressed together.

Fig. 5 is a similar edge view of the board with 30 the joint closed by end pressure.

Fig. 6 is an end view of a board piece formed with a groove, as seen when looking in the direction of arrow —A— in Fig. 2.

Fig. 7 is an end view of a wood piece formed 35

with a tongue, as seen when looking in the direction of arrow —B— in Fig. 2.

Fig. 8 is an end view of a board, illustrating the diagonal or angular direction of the tongue and groove joint and the angular line of resawing crossing the joint whereby to form the two pieces of beveled siding from the board, each with a tongue and groove joint in the base edge of the piece.

Figs. 9 and 10 show, in perspective, two pieces of siding formed from a board and particularly illustrating the joints whereby the pieces are connected.

Referring more in detail to the drawings—

The present invention contemplates the use of short lengths of material which may be either waste, or trimmings in the saw mill, and which, as such, are not generally suitable for use as commercial lumber. While the kind of wood 40 used in the manufacture of the present siding is of no particular consequence, the invention is well adapted to the making of siding from cedar or pine pieces; it being contemplated, in accordance with the present method, that the short pieces shall be prepared at their ends for joining, then joined by end pressure after an application of glue, the board then surfaced and finally resawed to form two pieces of beveled siding therefrom.

It will be here stated that it is now common practice to make beveled siding from boards, for example, one inch thick and six inches wide, by sawing the boards lengthwise into two pieces along a line that is inclined with reference to 45 the opposite sides of the board, so as to form the two pieces of beveled siding. The present method contemplates resawing the boards in this same way, but after they have been made up by the joined short lengths of material.

In Fig. 1 of the drawings, we have shown board pieces 1 and 2 prior to their being joined together, and in Fig. 2, these same pieces are illustrated as having been prepared for joining. The preparation of the pieces comprises forming each piece at one end with a tongue 3, and at its other end, with a groove 4. The tongues are of wedge shape, as seen best in Figs. 4 and 5, and are of substantial taper and formed with square cut end surfaces 3a. The opposite side surfaces 50 of the tongues are flat and converge in symmetrical angles with reference to the sides of the board to form a rather elongated tongue, and the square cut end edge of the tongue extends along a line that is inclined with reference to the planes of the opposite side surfaces of the

piece, as will be best understood by reference to Fig. 7, which shows the tongue inclined so that at the top edge of the board it is quite close to one side, and at the bottom edge, it is quite close to the other face. Thus the tongue is inclined toward the diagonal line of the piece. The grooves are likewise inclined toward the diagonal in the ends of the boards so that when a tongue on the end of one piece it fitted into a groove in the end of another piece, the side surfaces of the two board pieces will be flush and in alignment.

In order that the tongue and groove joint thus formed may be made tight, it is preferred that the tongue be slightly less tapered than the side walls of the groove, so that, when brought together without pressure, the joint will be left slightly open at the base of the groove, as seen in Fig. 4, and providing that end pressure must be brought against the pieces to seat the tongue in the groove, as in Fig. 5, and that this seating of the tongue will cause a slight outward springing of the portions of the joint at opposite sides of the groove and these will maintain an inward pressure against the tongue. Prior to seating the tongue in the groove, glue of a suitable character is applied to the surfaces so that the parts will be permanently secured together upon the setting of the glue.

After the pieces have been joined together, the boards are surfaced in the usual manner by passing them through planers, which leaves their opposite sides and edge surfaces perfectly smooth. Then, upon resawing, the lumber is in condition for commercial use.

Assuming that board pieces of the character shown in Fig. 1 are provided at their ends with the tongues and grooves, as described, and that they are then joined together to form boards of practical length, these boards, which are rectangular in cross section, may then be passed through the resawing machines and split lengthwise, each along a line as designated by the line R—R in Fig. 9. Since this line of the resaw is inclined at the same angle, but opposite to the inclination of the tongue and groove joints so that they cross each other as noted in Fig. 8, it is apparent that the resawing will thus form the two pieces of beveled siding of exactly the same size, and it provides that the base, or wider edge of each piece of siding, will contain the tongue and groove connections. The top edges of the siding boards will contain the lap joint connections. However, since this narrow edge, in use of the lumber, is always nailed beneath the lower edge of the next higher board, there is not any necessity for a tongue and groove connection.

Siding of various widths and thicknesses may be formed in the same way as above described by the use of board pieces of different widths and thicknesses.

It is desired here to point out that applicants are making no claim to the manufacture of beveled siding merely by resawing boards of rectangular cross section, but the present invention is based upon the resawing of boards which are formed from pieces of material joined together by tongue and groove joints, so related to the resaw cut that when the two bevel siding boards are formed, the pieces comprised in each board will have tongue and groove connections in the base or wider edges thereof.

The present method provides for the economical manufacture of bevel siding from what are

ordinarily waste pieces of material, and by reason of the character of the joints, the relationship of the resaw cut, and the gluing of the pieces together, provides a product that is satisfactory in every respect and compares favorably with what is known as first grade, long length lumber.

Having thus described our invention, what we claim as new therein and desire to secure by Letters Patent is—

1. A board of beveled siding having flat inside and outside surfaces, in planes inclined relative to each other to produce a board with a narrow top edge surface and a wider bottom edge; said board comprising a plurality of board pieces joined end to end; each joint comprising a tapered tongue of substantial length projecting endwise from the end of one piece and lying in a plane that is inclined inwardly relative to the inside face, from the base edge of the piece and merging into the plane of the inside face of the board, and the other piece being formed in its end with a complementary groove containing the said tongue, and corresponding in dimensions and inclination to the tongue; said joint providing a joining line at the outside surface of the piece that is inclined in the longitudinal direction of the board from its top to bottom edge, and providing a tongue and groove joint at the base edge surface and a diagonal lap joint at the top edge surface.

2. A board of beveled siding having flat inside and outside surfaces in planes inclined relative to each other to produce a board with a narrow top edge and a relatively wide bottom edge surface; said board comprising a plurality of pieces joined permanently together end to end by joints which comprise, at each joint, a tapered tongue of the full width of the piece from face to face projecting endwise from the end of one piece and inclined inwardly from the base edge toward the inside face of the board, and having its opposite side surfaces intersecting the outside and inside surfaces of the board from top to bottom edges, and the other piece having a complementary groove corresponding in dimensions, taper and inclination to the tongue, and in which the tongue is fitted and secured; said joint providing a joining line at the outside surface of the piece that is inclined in the longitudinal direction of the board from its top to its bottom edge, and providing a tongue and groove joint at the base edge surface and a diagonal lap joint at the top edge surface.

3. A board for the manufacture of beveled siding having inside and outside surfaces in parallel planes and comprising board pieces joined permanently together, end to end, by joints, each of which comprises a tapered tongue of substantial length projecting endwise from the end of one piece and extending from edge to edge of the board, and a complementary groove in the end of the other piece in which the said tapered tongue is fitted and secured; said tongue and groove joint being inclined relative to said inside and outside faces and symmetrically spaced therefrom, whereby on resawing of the board along a plane that is equal in inclination, but opposite the inclination of the tongue and groove joints, two pieces of siding of equal dimensions will be provided, and each will have its pieces joined by a tongue and groove joint at its wider edge.

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