May 23, 1933. J. R. FORD 1,910,326

READY CUT BUILDING CONSTRUCTION

Filed Dec. 29, 1931 2 Sheets-Sheet 1

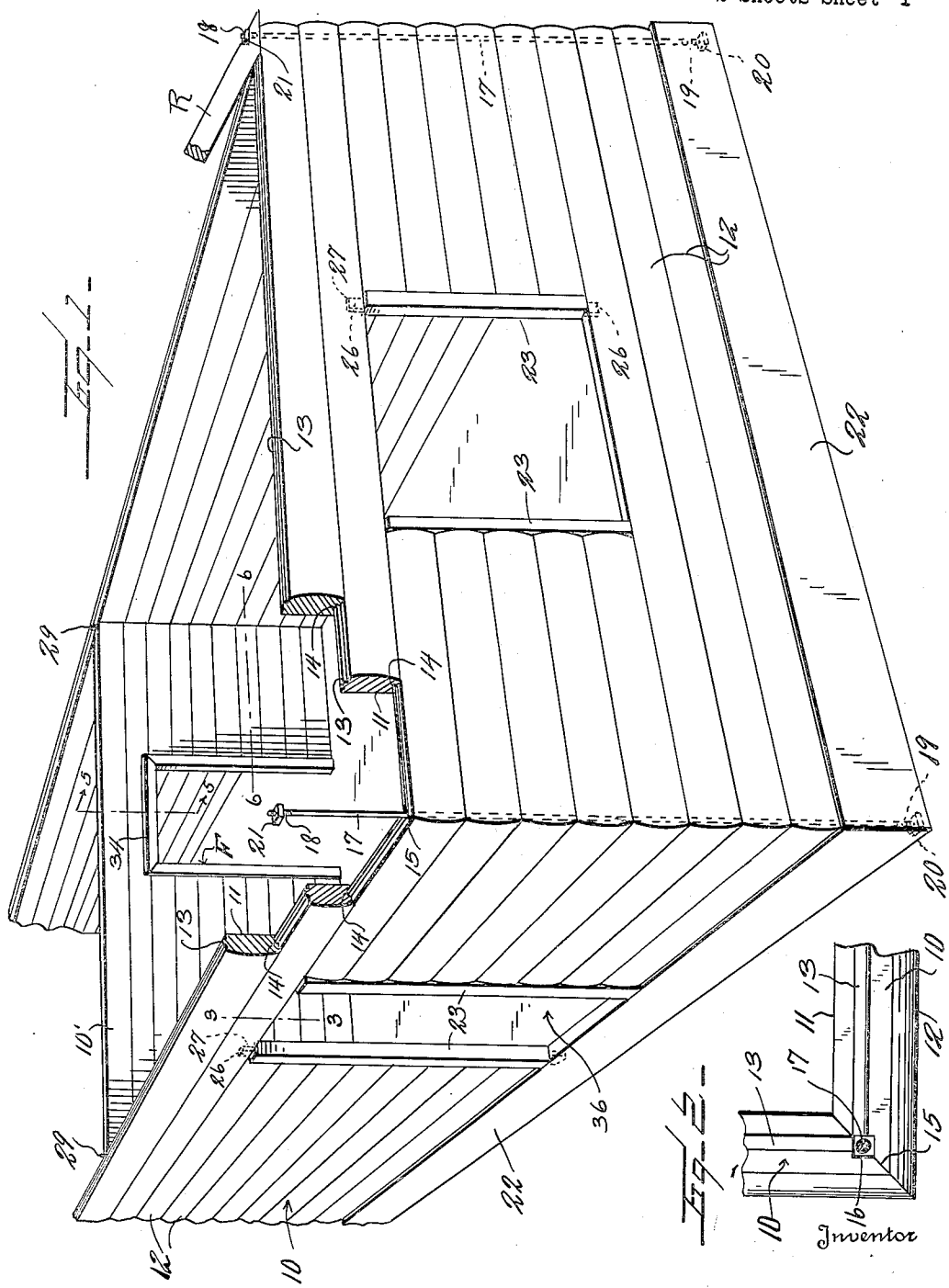


Fig. 1.

Fig. 2.

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Fig. 3.

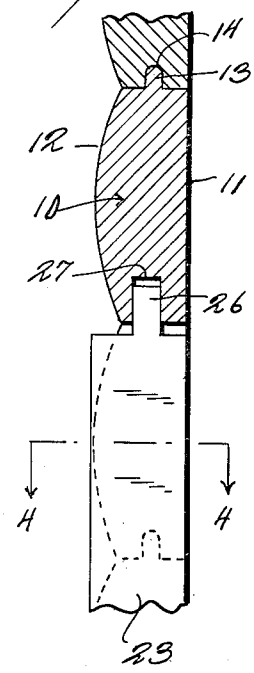


Fig. 4.

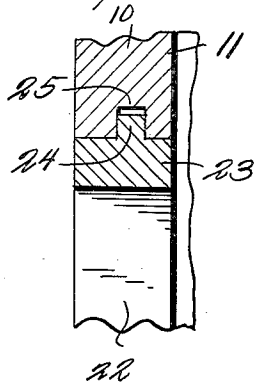


Fig. 5.

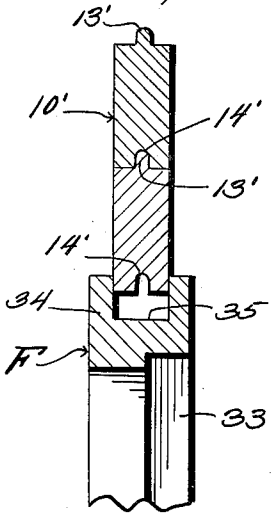


Fig. 6.

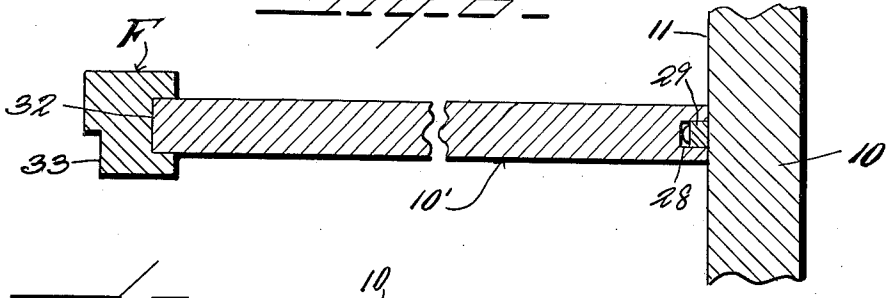


Fig. 7.

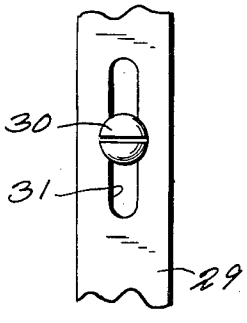
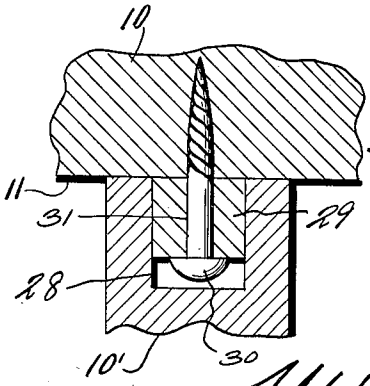


Fig. 8.



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UNITED STATES PATENT OFFICE

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READY CUT BUILDING CONSTRUCTION

Application filed December 29, 1931. Serial No. 583,716.

This invention relates to building constructions, and more particularly to an improved type of construction by which the material may be ready cut at the mill.

An object of this invention is to provide a building construction wherein the usual studding and general framing may be eliminated thereby reducing the cost of the building while producing a building which is weather-tight and will withstand the strains produced by wind or the like.

Another object of this invention is to provide a building construction wherein the component parts thereof are permitted to expand or contract without opening the joints, the horizontal portions of the walls being maintained in weather-tight condition by gravity and by locking means engaging the corners of the building.

A further object of this invention is to provide a ready cut building construction wherein the cost of constructing the building is reduced by not only eliminating the conventional studding but also by eliminating most of the nails used to secure the siding and interior wall finish to the studs and also eliminating the labor involved in nailing the siding to the studs and the labor involved in putting into position the interior wall finish.

A still further object of this invention is to provide a construction of this kind wherein the interior partition walls may be secured to the exterior walls in such a manner as to permit expansion and contraction of the boards while maintaining a tight joint between the various boards forming the walls.

The invention further comprehends the provision of a siding construction which has the exterior appearance of logs or the like while the interior boards are smooth and due to the absence of studding, an interior finish may be applied directly to the inner face of the side wall members.

The above and various other objects and advantages of this invention will in part be described in and in part be understood from the following detailed description of the present preferred embodiment, the same being illustrated in the accompanying drawings, wherein:—

Figure 1 is a detail perspective view of a building partly broken away constructed according to the preferred embodiment of this invention;

Figure 2 is an enlarged fragmentary plan view of a corner of the building;

Figure 3 is a sectional view partly in detail taken on the line 3—3 of Figure 1;

Figure 4 is a sectional view partly in detail taken on the line 4—4 of Figure 3;

Figure 5 is a sectional view partly in detail taken on the line 5—5 of Figure 1;

Figure 6 is a sectional view taken on the line 6—6 of Figure 1;

Figure 7 is an enlarged fragmentary side elevation of one of the removable tongue members or splines for supporting the inner wall;

Figure 8 is an enlarged sectional view showing the manner in which the removable tongue or spline disclosed in Figure 7 engages and supports the inner wall.

Referring to the drawings wherein like numerals of reference designate corresponding parts throughout the several views, the numeral 10 designates generally a board of elongated construction which is provided with an inner flat face 11 and an outer curved face 12, the curvature of the face 12 being transversely of the length of the board so that when a plurality of these boards 10 are superimposed one upon another, the effect will be of a log construction. These boards are siding members 10 are provided along one longitudinal edge thereof with a tongue 13 and at the opposite longitudinal edge with a groove 14, which tongue and groove construction is conventional in board construction.

In order to provide means by which a person unskilled in the art of building or setting up cabins, houses or the like may put together a suitable building, I have made these boards 10 of suitable length and have mitered the end portions thereof which abut angular end portions of an adjacent or adjoining wall, as shown at 15, and the abutting mitered sections 15 may be suit-

ably nailed, screwed, or otherwise fastened together. Preferably, these boards 10 are superimposed in series one upon another, and due to the nailing of the corners of the boards one to another, it is not necessary to nail the boards together at points intermediate the ends thereof.

The mitered corners 15 of the boards 10 are also provided with a dado or right angle cut 16 disposed intermediate the edges of the mitered portion 15 and positioned in a vertical position so that when the boards 10 are placed one upon another, a substantially square channel or opening will be provided within the corner formed by the abutting boards 10. A securing member or tie rod 17 having a threaded upper portion 18 and a threaded lower portion 19 is disposed within this channel or dado 16, and a nut 20 may be threadably mounted on the lower end portion 19 of the tie rod 17 and a similar nut 21 threadably positioned on the upper end of this tie rod so as to firmly clamp the siding members 10 together against vertical movement and against horizontal movement. The lower end portion 19 of the tie rod 17 extends through the joint of abutting sill members 22 and the upper end 18 may extend through roof rafters or the like so as to firmly secure the frame of the roof onto the upper edge portion of the side walls of the building. In the drawings, the roof construction or frame has been shown in fragmentary form and designated R. The lower end portions of the rafters R are preferably cut out a slight degree so as to receive the nut 21 and so that no portion of the tie rod 17 will extend above the upper edge portion of the rafters R.

In order to provide means for forming suitable openings such as doorways or windows in the building comprised of the board members 10, I have provided vertical posts, generally designated as 23, which comprise an elongated member substantially rectangular in cross section and provided along one edge portion thereof with a tongue 24 which is adapted to engage in a groove 25 provided in the ends of the siding members 10 at the point at which the opening is desired to be formed. Each end of these posts or opening members 23 is provided with a tenon 26, and the board 10 forming the upper or lower horizontal edge portion of the opening is provided with a mortice 27 to receive the tenon 26, and this tenon 26 is constructed relatively shorter in length than the depth of the mortice so as to permit shrinkage of well members 10 without opening the joints, or causing any bow in the wall members over the opening.

It will be obvious, from the foregoing, that a building constructed of the board members 10 will be self-supporting and will not require any studs or other supporting members so as to hold the building in upright position and the joints between the adjoining boards 10 will be maintained in weather-tight condition through the use of the tongue and groove construction. The inner face 11 is planed off relatively smooth so as to form an interior finish or wall to which any suitable finish in the form of paint, varnish or wall paper may be directly applied.

In order to provide means by which the interior partition walls may be readily attached to the exterior walls formed by the boards 10, I have provided interior boards 10′ which are constructed somewhat similar to the outer siding members 10 with the exception that the opposite faces of the inner wall board members 10 are in parallel relation to each other, whereas the outer face of the boards 10 is curved so as to simulate log cabin construction. These boards 10′ are provided with the tongue 13′ and groove 14′ so that they can be superimposed one upon another. The thickness of these boards 10′ is such that a relatively thick wall will be provided although I, of course, do not wish to be limited to any particular thickness for these inner wall members 10′.

The ends of the board members 10′ are provided with vertically disposed grooves 28 for engagement about a vertically disposed supporting bar or spline 29 which is secured to the inner surface of the outer wall boards 10 by means of screws 30 or the like. Preferably, these strips 29 are rectangular in cross section and are provided with elongated slots 31 within which these screws or bolts 30 are positioned so that the strips 29 can readily expand longitudinally. The strips 29 may be provided with any desired number of slots 31 depending only upon the length of the strips 29 and the number of securing members 30 which it is desired to use in fastening these strips 29 to the outer wall members 10. Preferably, the vertical strips 29 are of hard wood, whereas the inner wall members 10′ are of a relatively soft wood but I, of course, do not wish to be limited to any particular kind or quality of wood to be used either with the outer wall members 10, the inner wall members 10′ or the strips 29.

In order to provide suitable openings such as doors or the like in the inner wall or partition members 10′, I have provided frame members generally designated as F, which are substantially rectangular in cross section and provided along one edge thereof with a longitudinally extending groove 32 for receiving an end portion of one of the inner wall members 10′. Preferably, the width of the groove 32 is equal to the thickness of the inner wall members 10′ although I, of course, do not wish to be limited to

any particular width of groove 32 or thickness of the boards 10'. The frame members F are also provided with a rabbeted portion 33 within which an edge portion of a door or the like may engage.

In the construction of a door frame F, it is only necessary to provide two vertical frame members and an upper horizontal frame member each of which has the abutting edge portions thereof mitered so that a door frame of pleasing appearance will be provided. These frame members F may be nailed or otherwise secured to the edges of the boards 10' and in the case of the upper frame member 34, the groove 35 therein is relatively deeper than the groove 32 in the side frame members so that shrinkage of the wall members 10 may be permitted without opening the joints or causing any bow in the wall members over the opening on account of the opportunity thus afforded for the wall member 10 over the opening to contract or expand within the groove 35. In the construction of a building of this kind, it will, of course, be understood that the usual joists or the like will be provided for supporting the floor 36, which construction does not form a part of this invention and a detailed description thereof is, therefore, considered unnecessary.

In the construction of a building using board members formed according to the present embodiment of this invention, the boards 10 forming the outer side walls are suitably cut at the factory with the usual tongue 13 and groove 14 in the opposing edges and the inner surface 11 is planed off relatively smooth so as to form a smooth finish when the boards 10 are placed edge to edge. The ends of the boards 10 extending to the corners of the building are mitered, as at 15, and provided with a vertically extending groove or dado 16 so that a vertically extending opening or channel will be provided in which the tie rod 17 will be positioned. The boards 10 may be superimposed one upon the other and secured together at the corners by means of nails, screws or the like, and when the side wall has been constructed, the securing nuts 20 or 21 may be tightened so as to hold the respective tiers or series of boards 10 in tight relation to each other.

It is, of course, understood that the roof rafters R will be secured to the tie rods 17 before tightening of the nuts 21. In superimposing the respective tiers of boards 10, one upon the other, the frame strips 23 for the outer doors or windows will be placed in the mortises 27 and the tongues 24 of these strips 23 engaged in the vertically extending grooves 25 provided in the ends of the boards 10 about the desired opening. These frame members 23 may be nailed or otherwise secured to the boards 10, but this is not at all necessary, as the tenons 26 will securely hold these frame members 23 against removal. It is preferable, however, that the frame members 23 be not nailed, so that shrinkage or expansion may be taken care of.

It will be obvious that the side walls formed by the outer siding members 10 may be suitably cut so as to form any desired height of building and that the building may rise above one story without unduly taxing the lower portions of the building. The inner siding members 10' may be secured at any desired point within the interior of the building by placing the vertically disposed tongue or strip member 29 at any desired point on the inner face of the side or end walls.

It is, of course, understood that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:—

1. A ready cut building construction comprising a plurality of elongated boards superimposed one upon another in edgewise position and having a tongue on one edge and a groove on the opposite edge, said board having a groove intermediate the side faces of the board, a locking member engageable in said groove having threaded tightening means at one end whereby to cooperate with the tongues and grooves in maintaining the superimposed boards in superimposed position and preventing vertical shifting of the boards.

2. A ready cut building construction comprising a plurality of elongated boards superimposed one upon another in edgewise position, each of said boards having a tongue on one edge thereof and a groove on the opposite edge, certain of said boards having an end portion thereof mitered and provided with a groove extending parallel with the side faces of the board, vertically disposed means engaging in said groove between the abutting ends of adjacent boards, and threaded tightening means engaging said latter means for holding the boards in vertically disposed position.

3. A ready cut building construction comprising a plurality of elongated boards mounted in superimposed position one upon another, said boards having one face thereof smooth and having a tongue along one edge thereof, and a groove on the other edge, vertically disposed locking means engaging the ends of abutting corner boards for maintaining the boards in vertically disposed position, and tightening means engaging the

locking means for holding the boards in edge abutting relation.

4. A ready cut building construction comprising a plurality of elongated boards having one face thereof smooth and positioned in superimposed relation one upon another, said boards having a tongue along one edge thereof and a groove in the opposite edge whereby to provide a weather-tight joint between the boards while permitting expansion thereof under weather conditions, a metallic locking member having threaded end portions engaging the ends of abutting angularly related boards, and nuts engaging the ends of the locking member whereby to hold the boards against vertical movement while permitting horizontal expansion thereof.

In testimony whereof I hereunto affix my signature.

JAMES R. FORD.