No. 669,591. Patented Mar. 12, 1901.

F. C. PENNEY.

WOODEN BUILDING CONSTRUCTION.

(Application filed June 30, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig 1

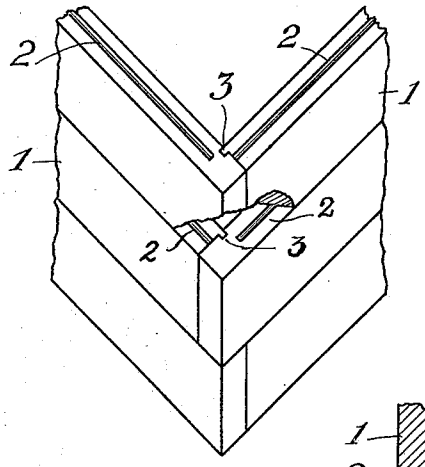


Fig 2

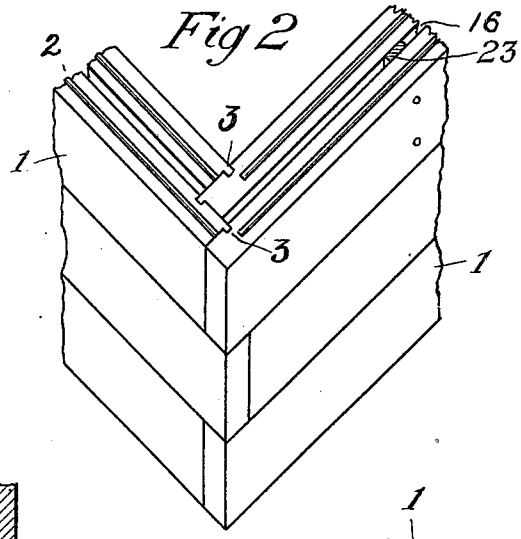
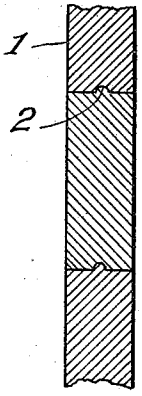


Fig 3



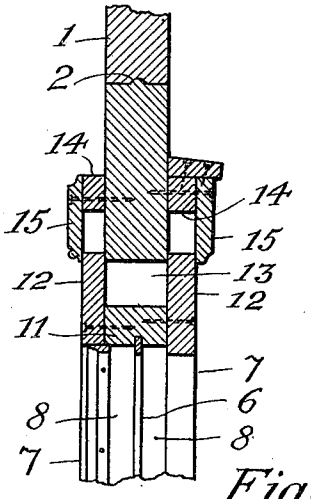


Fig 4

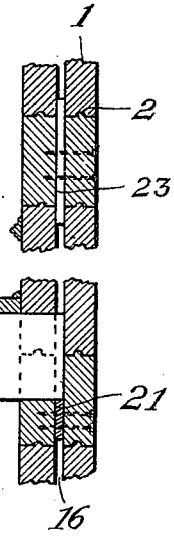


Fig 6

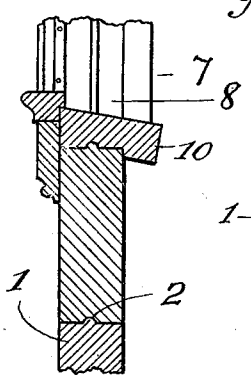
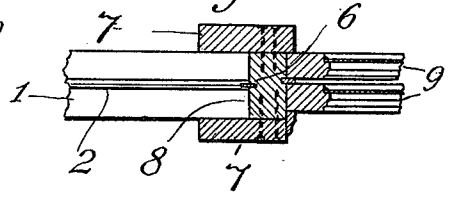


Fig 5



Witnesses
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Frederick C. Penney
By P. H. Gunckel
his Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 669,591. Patented Mar. 12, 1901.

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(No Model.) 2 Sheets—Sheet 2.

Fig 7.

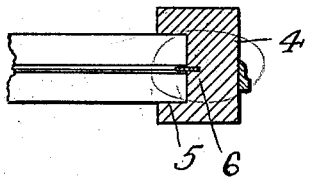


Fig 8

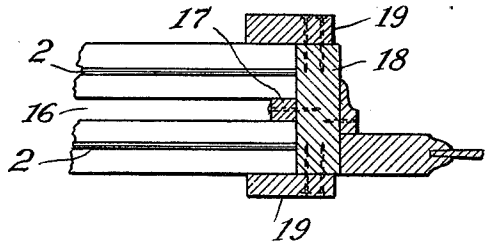


Fig 10

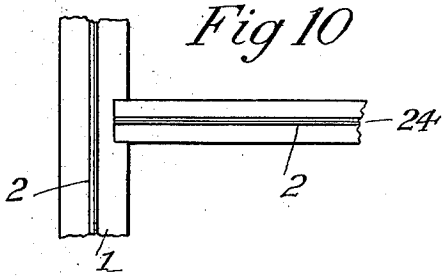


Fig 9

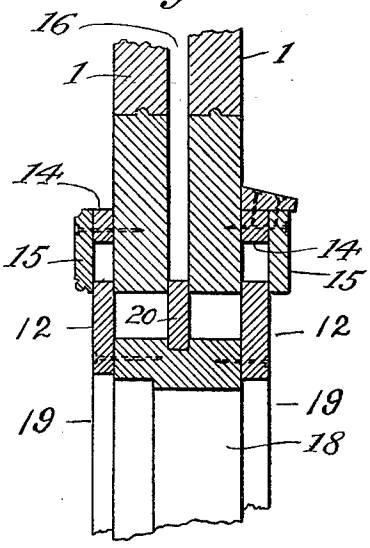


Fig 11.

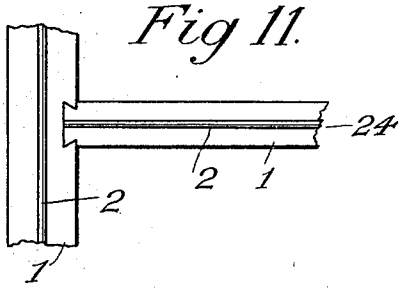
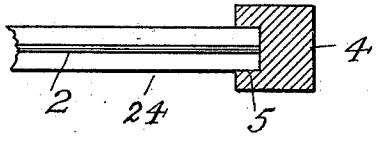


Fig 12



Witnesses
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Inventor
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By P. A. Gunckel
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C

UNITED STATES PATENT OFFICE.

FREDERICK C. PENNEY, OF MINNEAPOLIS, MINNESOTA.

WOODEN-BUILDING CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 669,591, dated March 12, 1901.

Application filed June 30, 1900. Serial No. 22,117. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK C. PENNEY, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Wooden-Building Construction, of which the following is a specification.

My invention relates to the construction of buildings of wood; and its principal objects are to simplify construction, save material, reduce the cost, and obviate the bad effects of shrinkage.

My improvements are illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of the corner of a building, showing the manner of uniting a single course of siding. Fig. 2 is a similar view showing the manner of uniting double courses of siding. Fig. 3 is a vertical section of a portion of the siding, showing the tongue-and-groove joint. Fig. 4 is a vertical section of a portion of a double wall and illustrates also the manner of supporting the floor-joists. Fig. 5 is a horizontal and Fig. 6 a vertical section of a part of a wall and window. Fig. 7 is a horizontal section of a door-post and portion of the siding. Fig. 8 is a similar view showing a double wall. Fig. 9 is a vertical section illustrating the arrangement of a door-frame in the double-wall construction; and Figs. 10, 11, and 12 show the manner of joining partitions to the main walls and to the door-frames.

As indicated in the drawings, the building is constructed without the usual posts, studs, &c., and its walls, composed of siding, are united at the corners and are self-supporting. The siding-boards 1 are built up from a sill or other base edge on edge and their edges united by tongue-and-groove joints 2. At the corners the boards of the side and end of the building have their ends alternately overlapped, as shown in Figs. 1 and 2, and the overlapping boards have transverse grooves in which are inserted corresponding tongues 3, projecting from the inner edges of the ends of the overlapped boards, and these joints are glued together, making a continuous rigid frame-housing. For ordinary buildings siding of a thickness of two or three inches has been found desirable in practice.

In a single-wall structure the door-posts 4 have vertical grooves 5, in which the ends of the siding fit as closely as practicable without preventing movement, so that the walls may slip in the grooves in settling. To preserve practically air-tight slip-joints between the ends of the siding-boards and door-frames, thin strips 6, of metal or other material, are inserted in kerfs cut in the board ends and door-frames, as illustrated in Fig. 7. A similar construction is used in preserving air-tight joints between the siding and window-frames, as illustrated in Fig. 5; but in the latter case the ends of the siding need not enter grooves in, but merely abut, the frames. Jambs or facing-pieces 7 are nailed to both sides of the upright members 8 of the window-frames to cover the joints, so that the settling of the walls will not affect the window-frames or windows 9.

The window-sills 10 are seated on and secured to the siding; but the top members 11 of the window-casings are free from the siding and have secured to them horizontal facing-strips 12, the upper edges of which overlap the lower edge of the siding above, so that the latter may settle without coming in contact with the frame-piece 11. The spaces 13, provided between the tops of the window-frames and the lower edges of the siding, should be proportioned to the probable degree of shrinkage, varying with the kind and condition of lumber used. To the siding over the windows are fastened horizontal strips 14, to which in turn are secured horizontal facing-boards 15, which overhang the facing-pieces 12, to preserve practically-tight joints during the varying degrees of settling.

If the siding is set in two courses to form double walls, it is desirable that they be sufficiently separated to provide a suitable air-space 16 between them. In these spaces upright wooden strips 17 are secured to the door-posts 18, which latter are in this instance of proper width to permit the ends of both courses of siding to abut them and be flush with their sides, and to the latter jambs 19 are secured, so that ways are provided between the strips 17 and jambs 19, in which the siding may slide.

On the top of the door-frames are fastened the lower edges of relatively wide strips or

tongues 20, arranged in the opening 16 between the courses of siding above, and there is an arrangement of overlapping parts (12 and 15) similar to those just described in connection with the windows of the single-wall structure for producing slip-joints, and a similar construction is employed for the windows in the double-wall building.

In a two-story structure at the second floor the air-spaces 16 are closed by filling-pieces 21, to which both courses of siding may be nailed, and thereby prevented from lateral movement. The end portions of the floor-joints 22 are seated on the filling-pieces 21, as well as on the top of the inner course of siding, and the two courses of siding may be nailed to filling-strips 23 at such intervals as required to keep them from spreading.

The partition-walls 24 are laid up in the same manner as the siding and the boards tongue-and-grooved together in the same way. Their union with the siding-walls is by means of a vertical groove in the latter, into which the partition end fits with a slip-joint, as shown in Fig. 10. To prevent spreading, a dovetail joint (shown in Fig. 11) may be used. The joint of the partition with an inner door-frame is made by fitting the end of the partition in a vertical groove in the frame, as shown in Fig. 12.

In the construction of buildings in the manner set forth it is unnecessary to use seasoned lumber, for the boards of the walls being united may shrink and settle independently of the door and window frames and partitions, the slip-joints, with the latter, permitting the necessary movement without opening, and a warm and comparatively tight house can be built with little labor and at a low cost.

Having described my invention, what I claim is—

1. In combination in a wooden building, walls composed of boards set edge on edge and united by tongues and grooves, and having their ends at the building-corners permanently united; and door and window frames with which such walls are joined by slip-joints, substantially as set forth.

2. In a wooden building, walls composed of boards set edge on edge and united by tongues and grooves and having their ends at the building-corners alternately overlapped and secured together by tongues on the inner edges of the overlapped boards entered in grooves in the overlapping boards, in combination with posts for doors and windows provided with vertical grooves in which the adjacent portions of the walls are fitted to slip, substantially as set forth.

3. In a building of wood, walls of boards secured together, posts for a door or window having vertical grooves in which the adjacent portions of the wall are fitted to slip, and slidable, overlapping pieces connecting the heads of a door or window with the wall above it, substantially as set forth.

4. In a wooden building, walls composed of boards set edge on edge and having their ends at the building-corners alternately overlapping and secured together by tongues on the inner edges of the overlapped boards entered in grooves in the overlapping boards, substantially as set forth.

5. In a wooden building, walls composed of boards secured together edge on edge and having kerfs in their ends, in combination with frames for doors or windows having corresponding kerfs, and thin strips of material fitted in such kerfs, substantially as set forth.

In testimony whereof I have hereunto set my hand this 19th day of June, 1900.

FREDERICK C. PENNEY.

In presence of—
A. L. WHELAN,
P. H. GUNCKEL.