

1,027,266.

Witnesses 29
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Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

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BUILDING CONSTRUCTION.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES O. MCGAVIC, citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Building Construction, of which the following is a specification.

This invention relates to the construction of portable or knock-down buildings and more particularly to the construction of the columns, siding, rafters and joists, and the manner of assembling these elements of the building.

One aim of the invention is to provide a novel form of column so constructed that the sections thereof may be readily and quickly assembled without the use of bolts or like fastening means to clamp the siding boards of the structure.

Another aim of the invention is to so construct the columns as to permit them to be readily and quickly assembled with the rafters and joists of the structure.

A further aim of the invention is to provide a novel connection between the joists and parts of the structure.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a vertical sectional view through the structure embodying the invention; Fig. 2 is a horizontal sectional view on the line 2—2 of Fig. 1; and Fig. 3 is a view similar to Fig. 2, illustrating a slight modification; Fig. 4 is a perspective view of a portion of one of the column sections; Fig. 5 is a similar view of a portion of the other column section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

In the drawings, the form of column shown in Figs. 1 and 2 consists of two sections, one indicated by the numeral 1 and the other by the numeral 2, the section 1 being formed or provided upon one face

with spurs 3 extending in two vertical series, one series located at each side of a series of openings 4 formed through the section. These openings 4 have their upper end-walls beveled as at 5 so that a wedge-shaped web 6 is formed at the upper end of each of the openings. The section 2 of the column is formed with grooves 6' resulting in tongues 7, one of the said tongues extending along the grooved face of the section at each vertical edge. The said grooved face of the section 2 is formed with a number of lugs 8 having integral upwardly projecting wedge-shaped tongues 9, these tongues being spaced from the said face of the section. In assembling the sections 1 and 2 the section 1 is disposed against the section 2 with the lugs 8 projecting through the openings 4 and the said section 1 is then dropped into position with the wedge-shaped web 6 of the section 1 fitting between the tongues 9 of the lugs 8 and the face of the section 2 upon which the lugs are formed. When so assembled the section 1 will be held firmly against the section 2 and the siding boards of the structure will be firmly clamped at their ends between the said sections.

The siding boards above mentioned are indicated by the numeral 10 and each board is formed at each of its ends, in one face, with a groove 11. The boards are disposed at their ends between the sections 1 and 2 of the column with the tongues 7 of the section 2 fitting in the grooves 11 in the said boards and the spurs 3 biting into the side of the board opposite the side in which the groove 11 is formed.

In the form of column shown in Fig. 3 of the drawings, one section thereof, indicated by the numeral 12 and corresponding to the section 2 of the first described form of column, is formed in the face from which the lugs 8 project, with rabbets 13, each having an inclined wall 14. The other section of the column indicated by the numeral 15 and corresponding to the section 1 of the previously described form is flat and is formed with openings 16 corresponding to the openings 4 of the said section 1. In

fact, the sections 1 and 15 are structurally identical except that the section 15 is not provided with the spurs 3. In using this latter form of column, the siding boards indicated by the numeral 17, are dovetailed at their ends to fit between the inclined wall of the rabbets of the section 12 and the side portions of the section 15. The rafter-plate of the structure is indicated by the numeral 18 and is formed with an opening 19 and the said rafter-plate rests upon a top-plate 20 at the upper end of the section 2 or 12 of the first or last described forms of column. This top-plate is formed or provided with an upwardly projecting threaded stud 21 which projects through the opening 19 and through the rafter 19' disposed upon the rafter-plate and upon which is threaded a nut 22 bearing upon the upper side of the rafter 19' and holding the latter firmly in place upon the top-plate.

At its lower end, the section 2 or 12 of the first or last described form of column is provided with a foot-plate 23 having a downwardly projecting threaded stud 24 which fits through an opening 25 formed in a joist-plate 26 upon which joist-plate the foot-plate 23 rests. A nut 27 is threaded upon the stud 24 and bears against the under side of the joist-plate 26. One of the sills of the structure is indicated by the numeral 28 and mortised in the sill is a nut 29. The sill is formed with an opening 30; the joist-plate 26 is formed with an opening 31, and the foot-plate 23 has an opening 32. All of the openings register and a bolt 33 is fitted through the registering openings and is threaded through the nut 29. This bolt serves to firmly join the joist-plate and foot-plate to the sill 28.

From the foregoing description of the invention it will be readily understood that the elements of the structure may be readily and quickly assembled and when assembled will constitute a substantial and rigid structure, and it will be further understood that while the siding boards are firmly clamped at their ends between the sections of the columns, the use of bolts or like securing elements to hold the column sections assembled is not necessary.

Having thus described the invention what is claimed as new is:—

1. In building construction, a column consisting of a section formed with lugs having each an upwardly and inwardly projecting bevel, and a section formed with openings to receive the lugs, one wall of each opening being inclined to seat against the beveled face of the respective lug, the sections having their side portions spaced.

2. In building construction, a column consisting of a section formed with a lug having a portion spaced from the said section,

and a section having a wedge-portion removably fitted between the lug and the said first mentioned section, the sections having their side portions spaced.

3. In building construction, a column consisting of a section formed with a lug having an upwardly projecting wedge-shaped tongue spaced from the said section, and a section having an opening to receive the lug, one wall of the opening being inclined and arranged to seat between the said wedge-shaped tongue and the face of the first mentioned section, the sections having their side portions spaced.

4. In building construction, a column consisting of a section formed with a lug having a portion spaced from the said section, a section formed with an opening receiving the lug and with a wedge-portion removably fitted between the lug and the first mentioned section, the sections having their side portions spaced, a siding board fitting between the spaced portions of the section and formed with a groove, and a tongue upon one section fitting in said groove.

5. In building construction, a column consisting of separable sections having their side portions spaced, a siding board fitted between the spaced portions of the sections and formed with a groove, a tongue upon one section fitting in the groove in the siding board, and a spur upon the other section biting into the side of the board opposite that in which the groove is formed.

6. In building construction, a column, and rafter and joist plates, said plates being formed with openings, a foot-plate at the lower end of the column disposed upon the joist-plate and having a threaded stud projecting through the opening in the joist-plate, a nut threaded upon the stud and bearing against the under side of the joist-plate, a top-plate at the upper end of the column, the rafter-plate resting upon said top-plate and the said top-plate being formed with a threaded stud projecting through the opening in the rafter-plate, a rafter disposed upon the rafter-plate, and a nut threaded upon the stud and bearing against the upper side of the rafter.

7. In building construction, a joist-plate, a sill supporting the joist-plate, a column, a foot-plate at the lower end of the column and formed with a threaded stud projecting through the joist-plate, a nut threaded upon the stud, a nut mortised in the said sill, the sill, joist-plate and foot-plate being formed with registering openings alining with the opening in the nut, and a bolt inserted through the openings and threaded into the nut and having its head bearing upon the said foot-plate.

8. In building construction, a column, a top-plate at the upper end of the column, a

threaded stud projecting from the upper
face of the top-plate, a rafter-plate dis-
posed upon the top-plate and formed with
an opening receiving the stud, and a nut
5 threaded upon the said stud and adapted to
bear against the upper face of a rafter
upon the rafter-plate.

In testimony whereof, I affix my signa-
ture in presence of two witnesses.

CHARLES O. MCGAVIC. [L. s.]

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents
Washington, D. C."
