Aug. 12, 1924. 1,504,527

J. E. STEGALL

BUILDING CONSTRUCTION

Filed Jan. 23, 1923 2 Sheets-Sheet 1

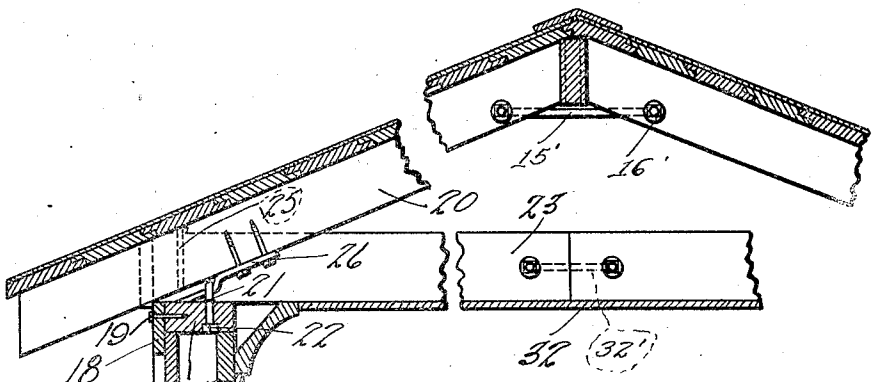


Fig. 1.

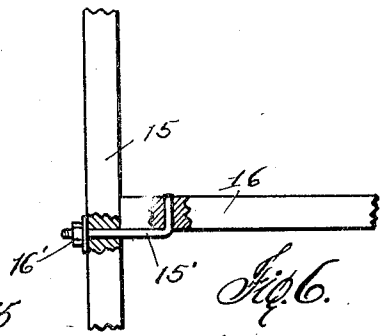


Fig. 6.

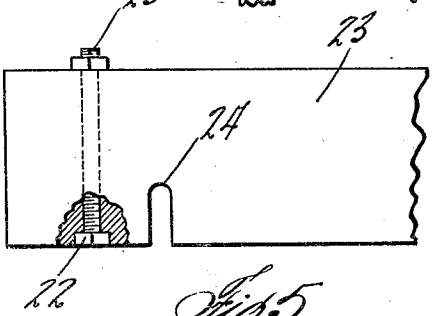


Fig. 5.

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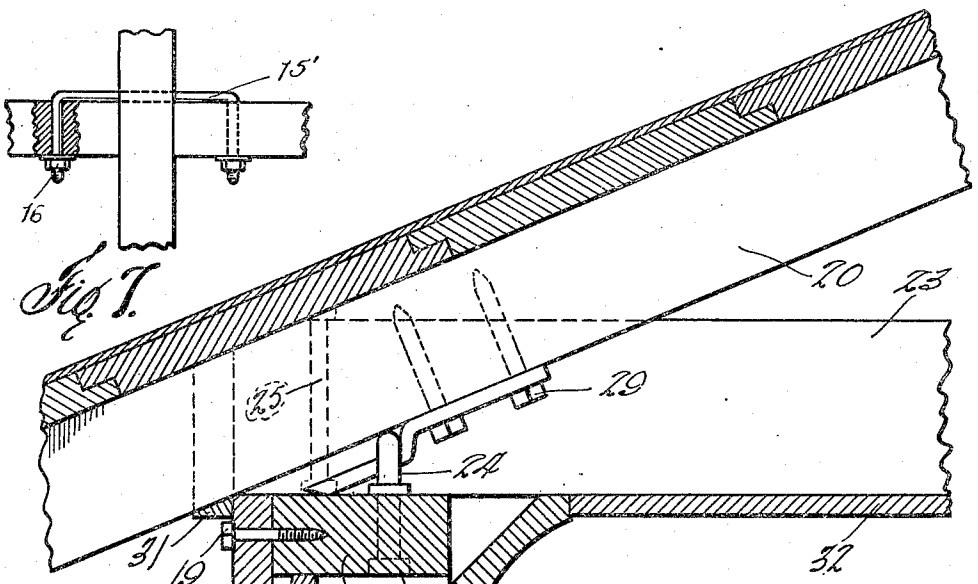


Fig. 1.

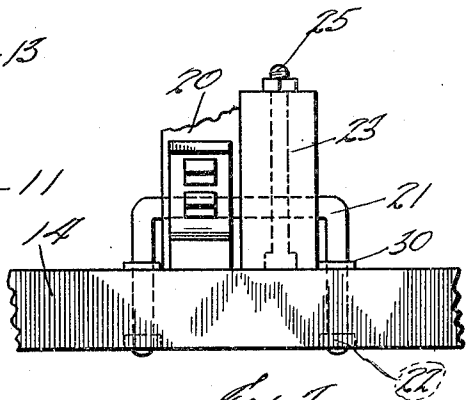


Fig. 3.

Fig. 2.

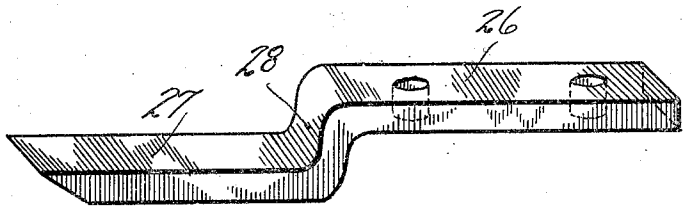


Fig. 4.

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Patented Aug. 12, 1924. 1,504,527

UNITED STATES PATENT OFFICE.

JACK E. STEGALL, OF TULSA, OKLAHOMA.

BUILDING CONSTRUCTION.

Application filed January 23, 1923. Serial No. 614,362.

To all whom it may concern:

Be it know that I, JACK E. STEGALL, citizen of the United States, residing at Tulsa, in the county of Tulsa and State of Oklahoma, have invented certain new and useful Improvements in Building Constructions, of which the following is a specification.

This invention relates to new and useful improvements in building construction.

The object of the invention is to provide a sectional house structure in which the parts may be bolted together, thus eliminating nails so that the parts may be more readily salvaged.

A further object is to provide a structure in which a minimum number of bolts or lag screws are required, thus making for expediency in erecting and disassembling as well as simplicity and reduction in the boring and penetration of the timbers.

An important object of the invention is to provide a fastening between the roof and side wall of a detachable nature, whereby the parts are interlocked and the side wall held against bulging and the roof from spreading, yet said wall and roof being readily separated when it is desired to dismantle the building.

A further object is to provide a roof rafter, ceiling, joist, and plate fastening including means for interlocking the rafter with the plate and engaging the ceiling joist, so that spreading and bulging are eliminated and the use of bolts and the like dispensed with to a large extent; the parts however being readily disengaged without removing screws, bolts or nails.

A still further object is to provide means for connecting the joints and other timbers in such a manner as to make for a ready assembling and disassembling without damage to the timbers.

A construction designed to carry out the invention will be hereinafter described together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings, in which an example of the invention is shown, and wherein:

Fig. 1 is a vertical sectional view thru a house constructed to employ my invention,

Fig. 2 is an enlarged sectional detail showing the roof fastening,

Fig. 3 is an elevation of one of the slip joists,

Fig. 4 is a perspective view of the keeper,

Fig. 5 is a detail of one end of one of the ceiling joists,

Fig. 6 is a detail of the sill and floor joist fastening, and

Fig. 7 is a detail of the rafter fastening.

In the drawings the numeral 10 designates a side wall section which may be of any suitable construction. The side wall may be composed of several of these sections fastened together in a suitable manner.

The section illustrated comprises in general upright studs 11, an outer siding 12, an inner wall covering 13 and a top plate 14. The section is fastened to an end sill 15 and floor joists 16 which may rest upon a mud sill 17. The floor joists are fastened to the sill 15 by an angle bolt 15′ having its short leg passing thru the joist and its long leg extending thru the sill 15 and the siding 12 and fastened by a nut 16′, as is shown in Fig. 6. At the upper end of the section a finishing strip 18 is fastened to the plate by a lag screw 19.

Inclined roof rafters 20 rest upon inverted U-bolts or stirrups 21 passing thru the plate and fastened by nuts 22 countersunk into the under side of the plate. These bolts extend upwardly from the plate and have their widths disposed transversely of the rafters and longitudinally of the plate. Each bolt is wide enough to support a rafter and receive a ceiling joist 23 contacting with the side of the rafter. Each joist has a notch 24 in its under side near its outer edge for receiving said bolt, whereby said joist may rest upon the plate 14. A bolt 25 extends vertically thru the end of the joist to prevent splitting of the same.

On the under side of each rafter is mounted a keeper 26 having an offset finger 27 and a shoulder 28. The keeper is punched with holes to receive lag screws 29 which are screwed into the under side of the rafter. The keeper in each case engages under the top of the bolt 21 which latter receives the shoulder 28. The finger 27 passes thru the bolt and has its free end beveled so as to slide over the plate when the rafter is being placed. The bolt 21 has washers or collars 30 formed thereon and resting on the plate so as to prevent the downward displacement

of the bolt when the latter is loaded. Between the rafters is mounted a frieze strip 31 which overhangs the strip 18.

It will be seen that when the side wall sections 10 have been erected that the ceiling joist 23 may be placed with their notches 24 on each end engaging over the bolts 21, whereby the sections on opposite sides are tied together and prevented from bulging or spreading outwardly. The ridge member having been placed, the upper ends of the roof rafters 20 are set thereinto after the lower portions have been slid over the bolts 21 and the fingers 27 engaged in said bolts. The weight of the roof will hold the rafters in place and each bolt 21 is just wide enough to accommodate a rafter and a joist.

For fastening the ridge ends of the rafters together, or for fastening ends of the ceiling or floor joists together, I may use a yoke-bolt 32' having its angular ends passed transversely thru the ends of the timbers which are to be connected and fastened by nuts 33.

By this arrangement no lag screws, bolts or nails are required to fasten the side wall sections, the ceiling joists and the roof rafters together and the parts may be readily disassembled without injury. It is evident that the ceiling 32 may be fastened to the joists and sections suitably formed. It is not considered necessary to go into the details of the house construction as this permits of considerable variation.

Various changes in the size and shape of the various parts together with modifications and alterations may be made within the scope of the appended claims.

What I claim, is:

1. In a building construction, the combination of a side wall having a plate at its top, a plurality of spaced fastening members mounted on the plate, ceiling joists engaging said members and resting on said plate, roof rafters, and keepers carried by said rafters and engaging said fastening members for uniting the side walls and the rafters, said joists holding the side walls against spreading.

2. In a building construction, the combination of a side wall having a plate at its top, a plurality of inverted U-shaped bolts fastened in said plate and extending upwardly therefrom, ceiling joists notched to fit over said bolts and rest upon the plate, roof rafters extending over said bolts, and keepers fastened to the under sides of the rafters and having fingers engaging in said bolts.

3. In a building construction, an upright side wall, a fastening element at the upper end of the wall, a roof rafter removably engaged on said wall, a keeper carried by the rafter and inserted in said element, and a ceiling joist having a notch engaging said fastening element at the side of the rafter and resting on the side wall.

4. In a building construction, side wall, ceiling joist and roof rafter fastening, an inverted elongated U-shaped bolt, and a keeper having an offset finger engaging in said bolt and a shoulder engaging said bolt, the bolt extending laterally from under the rafter for receiving the notched under side of a ceiling joist.

5. In a building construction, a side wall section, an upright fastening member at the top of the section, a ceiling joist having its outer end detachably engaging the fastening member, a roof rafter resting on said fastening in juxtaposition to the joist, and a metal keeper fastened to the under side of the rafter and engaging in said fastening for holding said rafter in position and uniting the same with the side wall section.

6. In a building construction, a side wall section, floor joists, a floor bolt for securing each floor joist to the wall section, an upright fastening member at the top of the section, a ceiling joist engaged with the fastening member, a roof rafter resting on said fastening member, a metal keeper carried by the rafter and engaging the fastening member, a yoke bolt for fastening the ridge end of the rafter to another rafter, and other yoke bolts fastening the sections of the joists together.

In testimony whereof I affix my signature.

JACK E. STEGALL