

March 4, 1930.

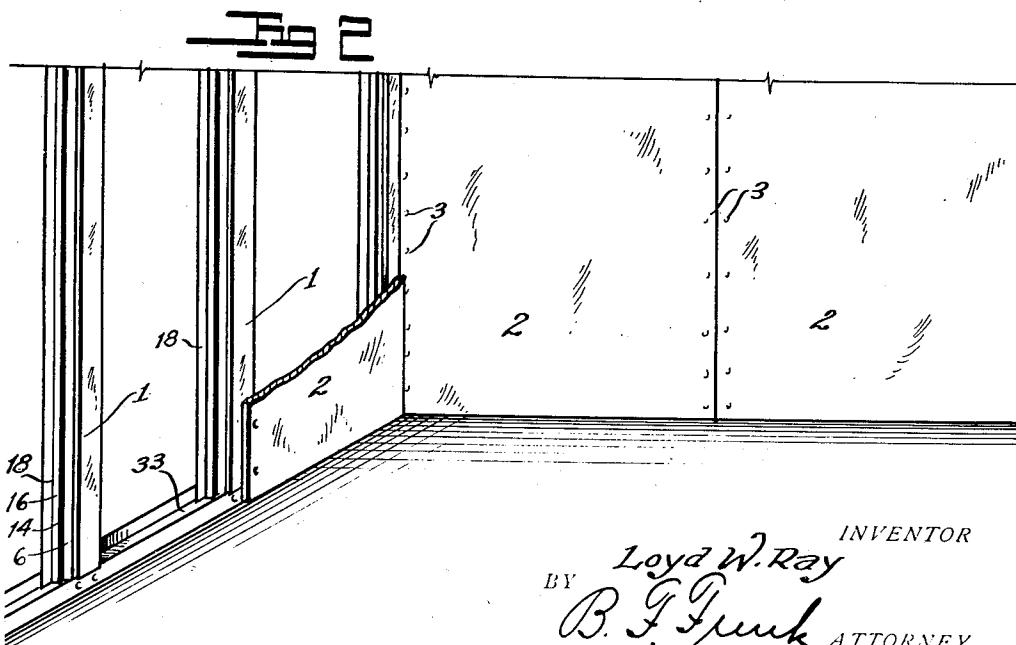
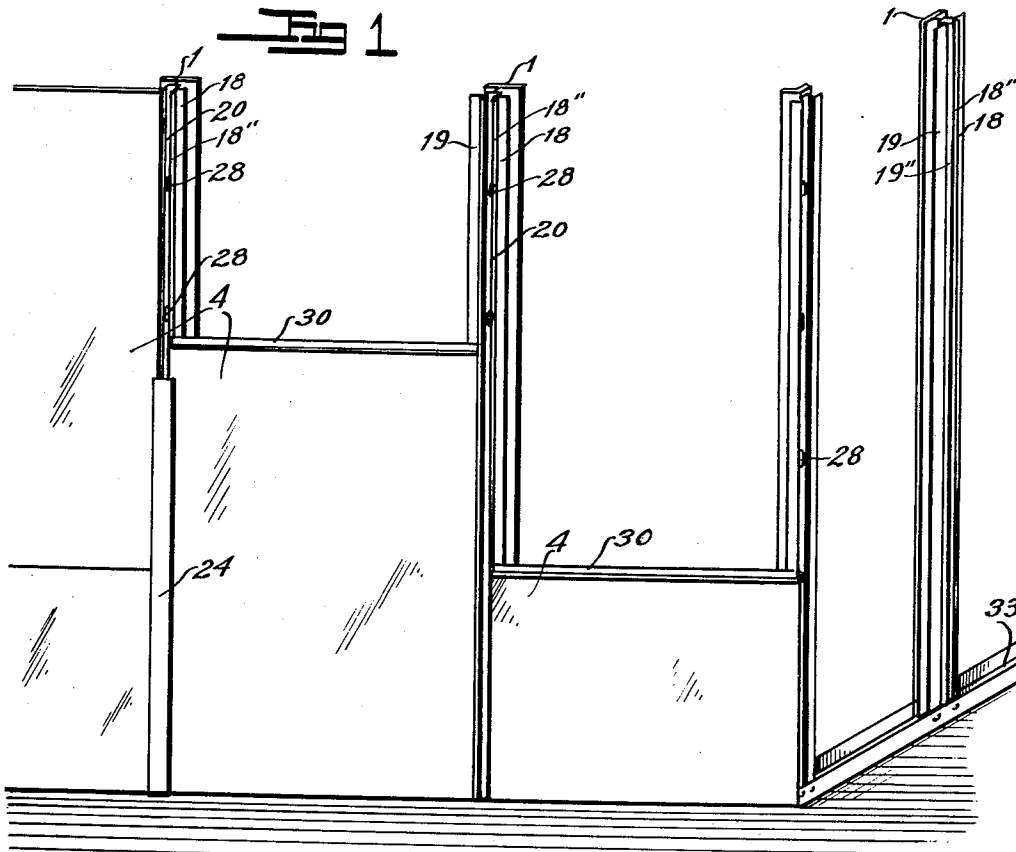
L. W. RAY

1,749,648

STRUCTURAL BUILDING

Filed April 29, 1929

3 Sheets-Sheet 1



INVENTOR
Lloyd W. Ray
BY B. F. Funk ATTORNEY

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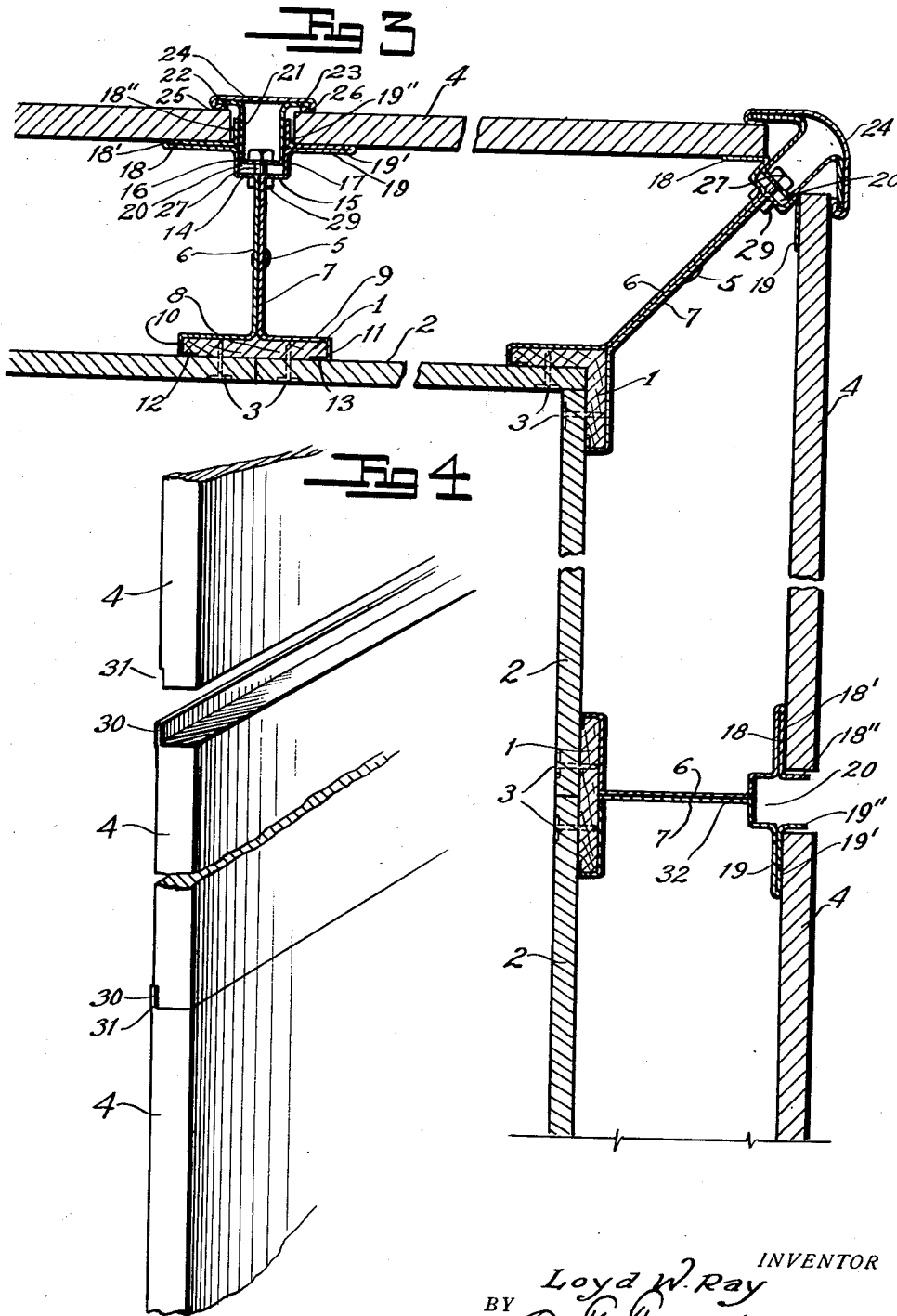
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STRUCTURAL BUILDING

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3 Sheets-Sheet 2



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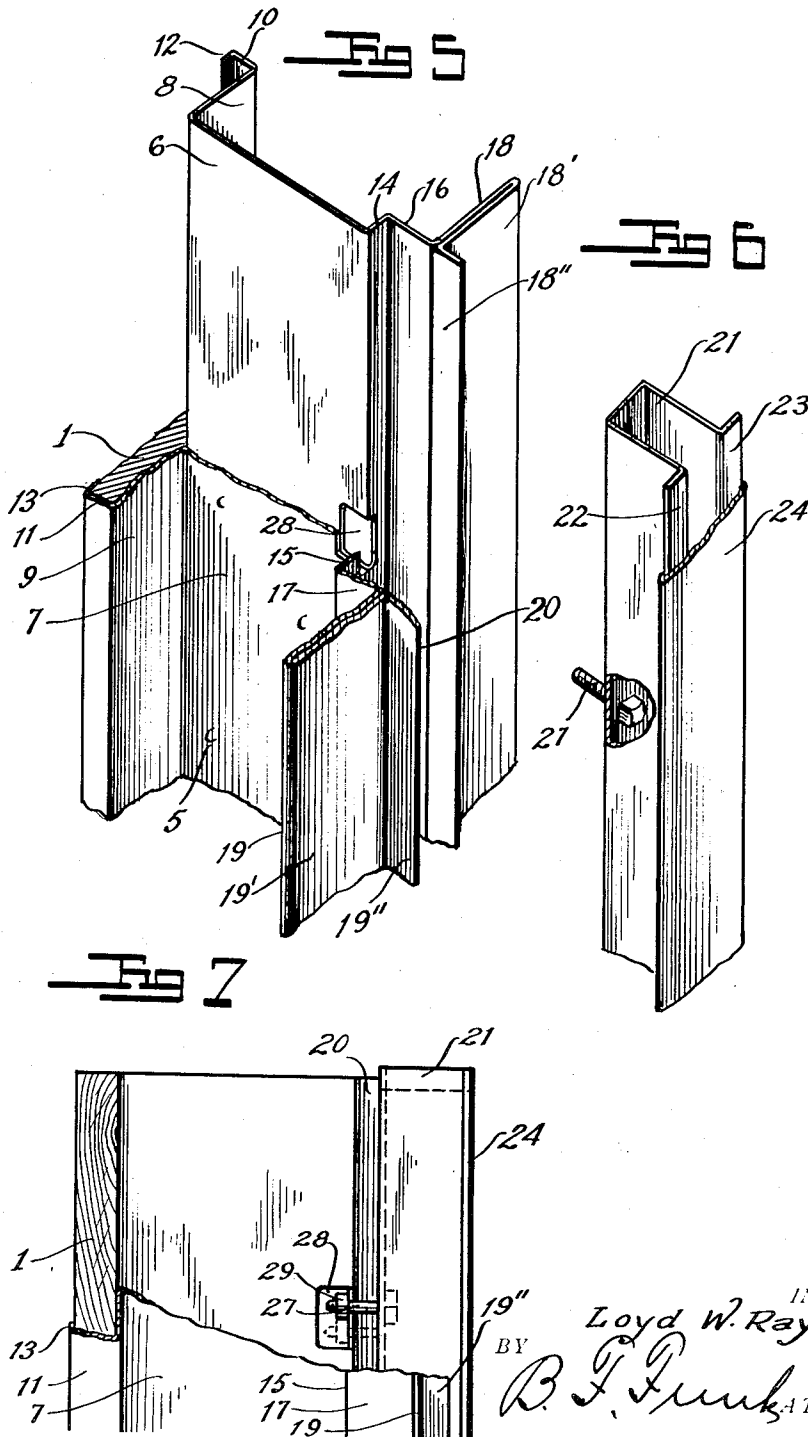
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STRUCTURAL BUILDING

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3 Sheets-Sheet 3



INVENTOR

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UNITED STATES PATENT OFFICE

LOYD W. RAY, OF WICHITA, KANSAS, ASSIGNOR TO THE WHITE CASTLE SYSTEM, INC.,
A CORPORATION OF KANSAS

STRUCTURAL BUILDING

Application filed April 29, 1929. Serial No. 358,808.

This invention relates to building structures and particularly to means for fastening the outside wall panels to the inside wall panels so that the structure can be fabricated at a central plant and be conveniently set up whenever desired without the necessity of cutting and fitting. The invention also contemplates the provision of means for taking down the building and reassembling the same whenever desired. To this end, the invention consists in certain novel studding and wall clamping means, all of which will be specifically described hereinafter, reference being had to the accompanying drawings in which:

Fig. 1 is an outside fragmentary perspective view of a building constructed in accordance with my invention.

Fig. 2 is an inside fragmentary perspective view of a building constructed in accordance with my invention.

Fig. 3 is a cross-sectional view through one corner and parts of two sides.

Fig. 4 is a fragmentary perspective view of the wall panels.

Fig. 5 is a fragmentary perspective view of the the studding.

Fig. 6 is a fragmentary perspective view of one of the wall clamps and

Fig. 7 is an elevational view through one of the clamps and part of the studding.

In carrying out my invention, I provide an anchor strip 1 to which the inside panels 2 may be secured by means of nails 3 or other suitable fastening devices. The studding between the inside panels 2 and the outside panels 4 is, except for the corners, made in the following manner. Two metal sheets are secured together by spot welding as indicated at 5 or other suitable means to provide intermediate web portions 6 and 7. The two web portions are bent outwardly at their inner edges as indicated at 8 and 9 and then at right angles to the portions 8 and 9 as indicated at 10 and 11, then parallel to the portions 8 and 9 as indicated at 12 and 13 to form a box-like receiving end with the portions 12 and 13 overlapping the anchor strip 1. This holds the anchor strip so that the wall panels 2 may be fastened thereto by the nails

3. The outer edges of the sheets or the webs thereto are bent outwardly as at 14 and 15 and then forwardly as at 16 and 17, then outwardly as at 18 and 19, then back parallel to parts 18 and 19 as at 18' and 19' and then outwardly as at 18'' and 19'' to provide lips as will be explained hereinafter. The space 20 receives a clamping strip 21 which is in the form of a channel, the side flanges of which are bent outwardly as at 22 and 23 to receive a finish strip 24, the edges 25 and 26 of which are bent around the flanges of the channel to hold it in place. The channel-shaped clamping strip is received in the recess 20 and it carries bolts 27 which pass through the wall of the recess and into the cut-away portion or opening 28 so that a nut 29 can be fastened on each bolt 27 to draw the movable clamping strip or jaw 21 toward the flanges or jaws 18 and 19 to clamp the panels 4 between them.

It is to be observed that the clamping strips are located between the vertical edges of the panels 4 and that the strips extend the height of the wall so that a tight joint is made between the edges of the outer panels 4. It will also be observed that the outer panels are provided with upstanding lips 30 on the inside of the panel which overlaps the edges 31 of the panels 4 to seal the horizontal joints. In Figure 3 I have shown the parts all assembled on one side and on the opposite side at 32, the outer clamping strip is removed for the sake of clearness. At the corners, the studding and clamping strips are constructed substantially in the same way as for the flat surfaces except that the flanges are at suitable corner angles. It will also be observed that the opening 28 (see Fig. 7) is long enough to allow for vertical adjustment of the clamping strip and the bolt whenever such adjustment is desired.

It will be seen that the studding with its channeled or box-like inner edge and its channeled outer edge can be formed at the factory. The complementary clamping members, as well as the inner and outer walls, can all be shipped in a knock-down position and readily assembled on the lot where the building is to be erected. When it is desired to take

down the building, it will be necessary only to withdraw the nails 3 from the inner panels and loosen the bolts and remove the outer clamping members.

5 The facing strip 24 can be colored or enameled with any suitable finish and since this is the only exposed part of the studding and clamping assembly, it will not be necessary to finish the remaining parts since they are
10 hidden between the inner and outer walls. In actual practice it has been found that the studding and clamping members, constructed in accordance with my invention, would adequately brace the building, it being understood, of course, that the studding is to be
15 tied in by suitable sills or other cross braces 33 (see Fig. 1) which may be removably fastened thereto in any convenient manner.

Any moisture passing the clamp will be
20 trapped within the space between the flanges 18" and 19" so it cannot pass to the inside of the outer wall. It is to be noted that the flanges 18" and 19" are shorter than the thickness of the outer wall so that their outer
25 edges will not contact with the clamps when the clamps are drawn into clamping positions. The corner studding constructions are like the side studding constructions except that the parts 18', 19', 18" and 19" are
30 omitted.

What I claim and desire to secure by Letters-Patent is:—

1. A studding for buildings comprising two sheets having their middle portions fastened together in parallel relation, the
35 respective edges of the sheets having nailing strip engaging portions, wall clamping receiving portions, in combination with a nailing strip in the nail strip receiving portions, an adjustable wall engaging clamp and
40 means for drawing the wall engaging clamp toward the clamp receiving portions.

2. A studding for buildings comprising two sheets having their middle portions fastened together in parallel relation, the
45 respective edges of the sheets having nailing strip engaging portions, wall clamping receiving portions, in combination with a nailing strip in the nail strip receiving portions, an adjustable wall engaging clamp, means
50 for drawing the wall engaging clamp toward the clamp receiving portions, said means comprising bolts with heads in the clamps and nuts on the ends of the bolts.

3. A studding for buildings comprising a
55 flat intermediate portion, a nailing strip carried by one edge of the studding, wall engaging flanges at the edge of the studding and a wall clamping member adjustably carried by the flanged portion of the studding.
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4. A studding for buildings comprising a flat intermediate portion, a nailing strip carried by one edge of the studding, wall engaging flanges at the edge of the studding,
65 a wall clamping member adjustably carried

by the flanged portion of the studding, the clamping member comprising a channeled member and a finish strip carried by the member.

5. A studding for buildings comprising a
70 member having a flat intermediate wall spacing portion, a nailing strip carried by one edge of the studding, a clamping member carried by the other edge of the studding to clamp the outer wall of the building between
75 the studding and the clamping member, and draw screws connecting the clamping member to the studding.

6. A studding for buildings comprising a
80 member having a flat intermediate wall spacing portion, a nailing strip carried by one edge of the studding, a clamping member carried by the other edge of the studding to clamp the outer wall of the building between
85 the studding and the clamping member, and draw screws connecting the clamping member to the studding, said draw screws having vertical adjustment with respect to the studding.

7. A studding for buildings comprising a
90 flat spacing member, a nailing strip receiving portion on one edge of the studding to lap over the edges of a nailing strip, outwardly disposed flanges at the other edge of the studding and a wall clamping member adjustably fastened to the second mentioned edge
95 of the studding having portions substantially parallel with the flanges.

8. A studding for buildings comprising a
100 relatively flat intermediate portion, means on one edge of the studding for attaching the inner wall of the building, a channeled portion at the other edge of the studding having outwardly disposed flanges, a flanged clamping member having a portion receivable within the channel and means for drawing the clamping member toward the flanged
105 edge of the studding.

In testimony whereof I affix my signature.

LOYD W. RAY. 110

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