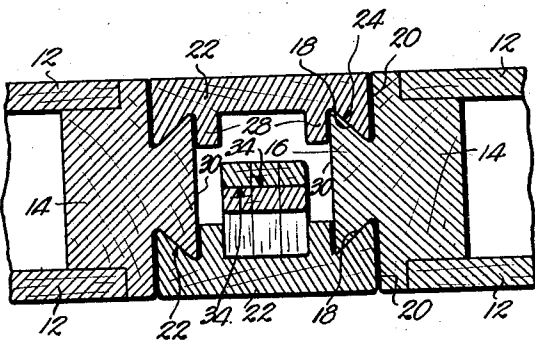
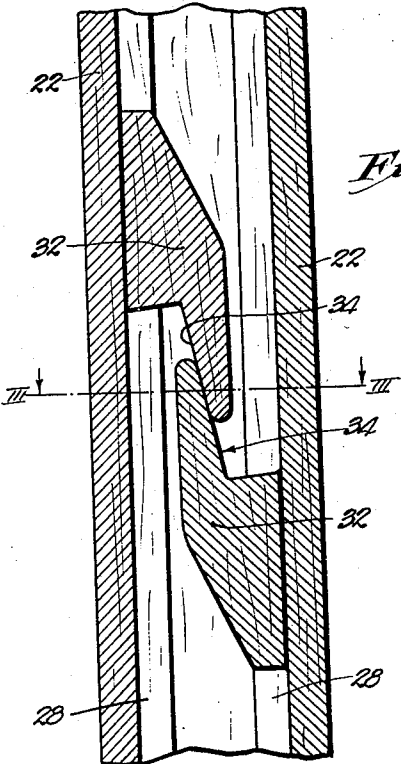
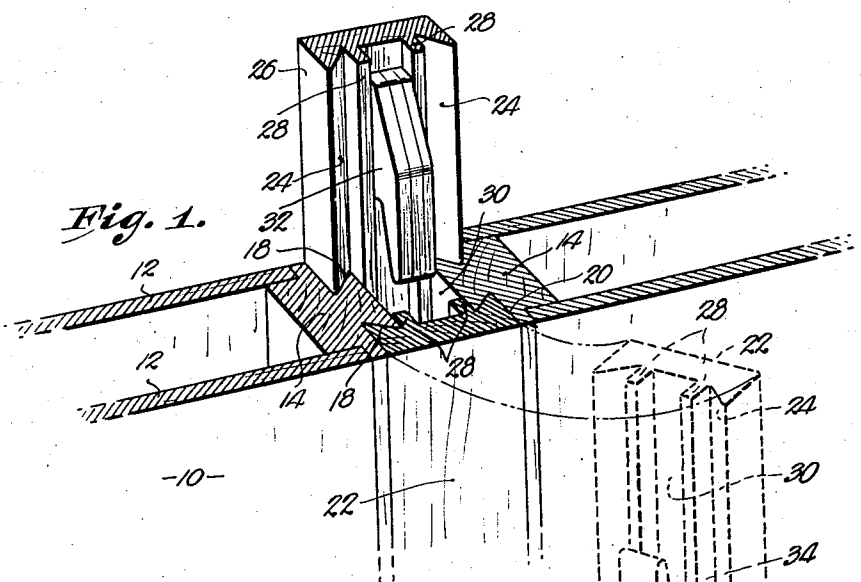


Nov. 9, 1948.

R. L. HADEN
INTERLOCKING BUILDING UNITS
Filed July 21, 1944

2,453,221



INVENTOR.
Raymond L. Haden
BY *Paul Young*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,453,221

INTERLOCKING BUILDING UNITS

Raymond L. Haden, Kansas City, Mo., assignor,
by direct and mesne assignments, of one-half
to Emile S. Guignon, Jr., Kansas City, Mo., and
one-half to Albert R. Jones, Mission Hills, Kans.

Application July 21, 1944, Serial No. 545,947

1 Claim. (Cl. 20—4)

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This invention relates to portable building structures of the character employing a plurality of units held together by parts of the building bearing some of the load thereof, and capable of assembly and disassembly for shipment or removal from place-to-place.

One of the important objects of the instant invention is to provide building structure of the portable type with novel, unique and durable means for securing together the planar building units to create a wall or the like and to cause the interlocking parts to perform the function of one of the main building components after the same have been moved into operative relation to the units.

This invention has for a further object to provide a building structure comprising a plurality of planar units arranged in edge-to-edge relation with a sectional studding or the like at the adjacent edges of the units to serve as a load bearing part of the building as well as means for maintaining the edges of the units in alignment and in place as a part of the building wall.

Other objects of the invention include the specific manner of forming adjoining edges of building units; the way of employing a sectional studding to serve as means for holding the units together; and the way in which the adjoining edges of the building units and the associated studding sections are contoured to be complementary with each other and thereby function without specially designed interlocking fingers to not only draw the sections of the studding together upon relative longitudinal movement thereof, but to clamp the adjacent edges of the building units in place and to draw the units toward each other as the aforesaid movement occurs.

Other objects of the invention, including the manner in which the component parts of the assembly contemplated cooperate to provide a rigid and desirable structure will appear during the course of the following specification, referring to the accompanying drawing, wherein:

Fig. 1 is a perspective, sectional fragmentary view of a building unit made in accordance with the present invention.

Fig. 2 is enlarged fragmentary longitudinal sectional view through a portion of the sectional studding at the interlocking elements thereof; and

Fig. 3 is a cross sectional view taken on line III—III of Fig. 2, looking in the direction of the arrow.

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The parts of sectional buildings which comprise the walls, floors, ceilings and partitions thereof, are desirably formed to permit shipping in flat condition to the point of erection. It is further desirable to provide sectional buildings with parts that serve as the main elements of the building and that are rugged in construction and durable in character.

Building units broadly designated by the numeral 10 are fabricated at the factory from sheets of material 12 substantially four by eight feet in size around the marginal edges whereof is disposed a frame 14, the stretches whereof are designed as illustrated in Figs. 1 and 3.

Sheets 12 are preferably set into frame 14 as illustrated, and the outer face of frame 14 has a bead 16 integral therewith and dove-tail in transverse cross section. This dove-tail form presents a downwardly and inwardly inclined shoulder 18 along each longitudinal edge of bead 16 and a shoulder 20 that lies in a plane perpendicular to the major plane of unit 10. When units 10 are erected in edge-to-edge relation, beads 16 are opposed and spaced apart as clearly shown in Figs. 1 and 2.

When units 10 comprise a building wall, sections 22 combine to form a load bearing studding serving not only the purpose of supporting a load but that of locking together the adjacent edges of units 10. The inner faces of sections 22 are contoured as illustrated in Fig. 3, to be complementary with the contour of that part of frame 14 which is to be engaged.

Inclined shoulders 24 are disposed to engage shoulders 18 of frame 14 and the longitudinal edges 26 of sections 22 are spaced slightly from shoulders 20 to receive caulking compound or the like, not here shown. Any sealing mastic may be used between shoulders 20 and 26 to preclude weathering of the parts between the outer faces of the wall as a whole.

A pair of beads 28 extend longitudinally along the inner face of each section 22, parallel with each inclined shoulder 24 and one side of these beads 28 lies against the outer face 30 of dove-tail bead 16.

Interlocking elements 32 on each section 22 are designed as shown in Fig. 2. Each element 32 is in the form of an undercut finger disposed longitudinally of the section 22, of which it is a part, and the frictionally engageable, inclined faces 34 of each element 32 approaches the inner face of its section 22 as its base is neared. Thus, longitudinal movement of sections 22 in one direction will draw the parts above described to-

gether in a rigid, interlocked condition. Relative longitudinal movement of sections 22 in the opposite direction will cause fingers 32 to leave the overlapped position and allow complete disassociation of the sections 22, as illustrated in dotted lines of Fig. 1. These sections 22 combined to form a studding capable of supporting a tremendous load for the frame 14 of each adjacent unit 10 cooperates at the zone of juncture to likewise present a vertical column.

Fingers 32 lie between the edges of proximal units 10 and between sections 22. When the fingers are in tight engagement, the inclined shoulders 18 and 24 are drawn together with fingers 32 therebetween but in spaced relation to faces 30 where the locking function will not receive interference.

All parts of the members above described and illustrated may be made of wood and constructed at a mill from where the entire sectional building may be shipped to the point of use. Positioning of the joint structure in a vertical or horizontal plane, or at an angle to either, will not affect its efficiency. The parts may be compactly loaded for transportation.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

In a building structure, a plurality of units arranged in edge-to-edge relation to form a wall; longitudinal beads on the abutting edges of the units, said beads being dove-tail in transverse cross section; a pair of spaced-apart studs at the adjacent edges of the units, said studs each being contoured along their inner faces to be complementary in form to the beads; and interlocking elements confined between the said studs and the beads of the adjacent units for drawing the said studs together and into clamping rela-

tion with the said beads comprising overlapping fingers integral with each of said studs and arranged in pairs on the inner faces thereof, said fingers having inclined, engageable surfaces the engageable surfaces of the fingers on one stud being inclined downwardly and away from the stud and the engageable surfaces of the fingers on the other stud being inclined upwardly and away from the other stud and being movable to and from each other and to and from the interlocked position upon relative longitudinal shifting of the said studs, said contour of the inner faces of the studs including a pair of spaced longitudinal ribs, said fingers extending from the studs between said ribs, said ribs being interposed between the fingers and proximal faces of the beads for holding the fingers in alignment when the studs are shifted the ribs engaging the fingers and beads.

RAYMOND L. HADEN.

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