J. W. WARNER AND H. H. WEEMHOFF.

BUILDING CONSTRUCTION AND JOINT.

APPLICATION FILED APR. 13, 1917.

1,362,764. **Patented Dec. 21, 1920.**

2 SHEETS—SHEET 1.

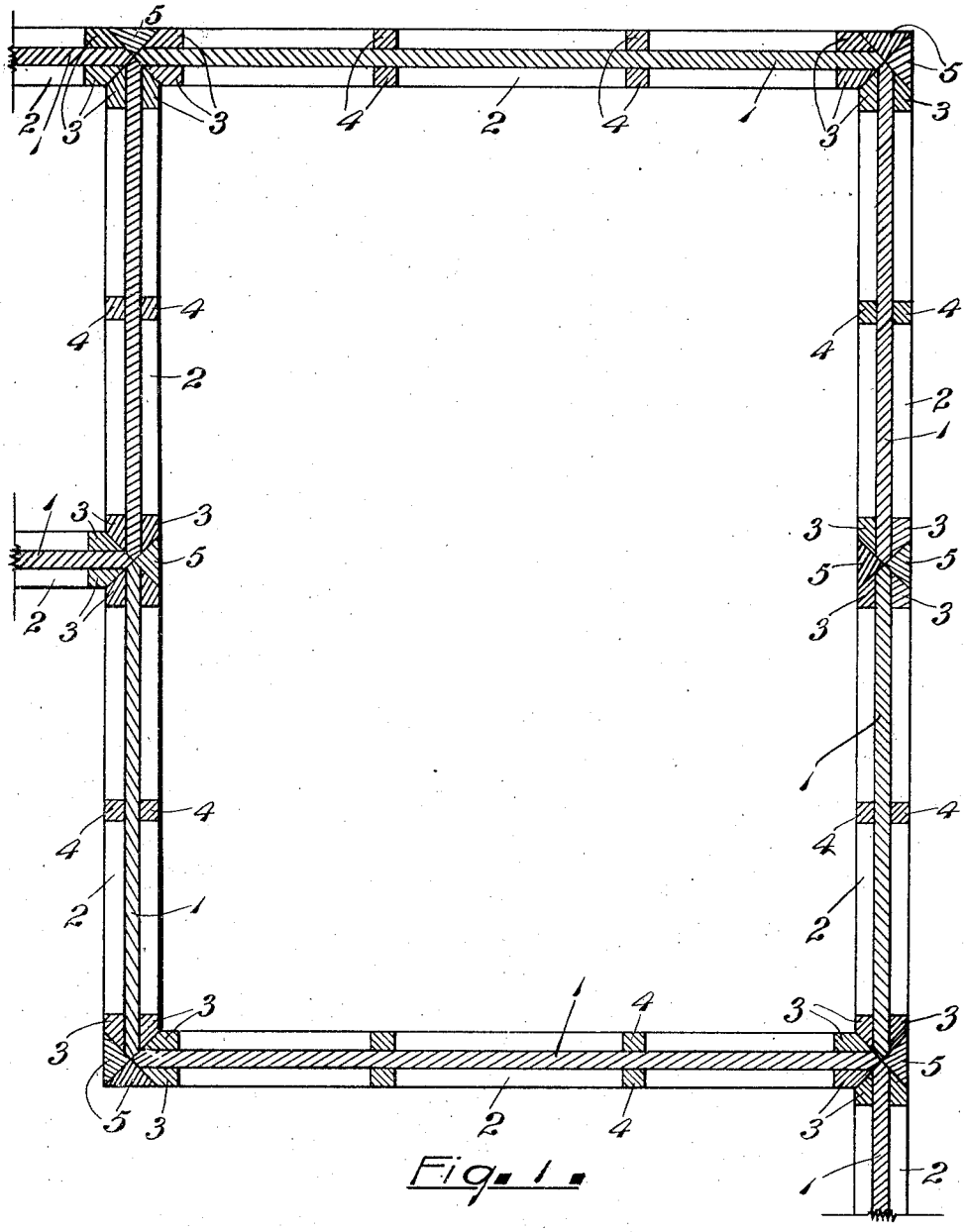


Fig. 1.

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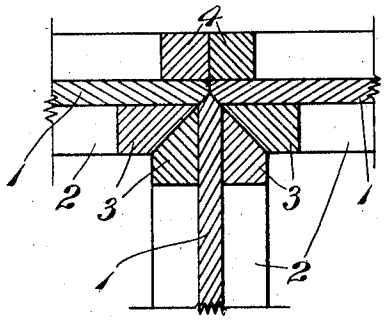


Fig. 5.

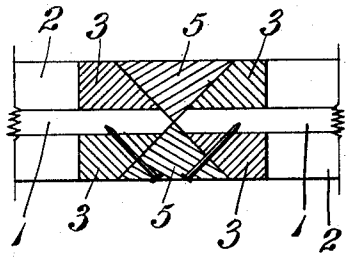


Fig. 4.

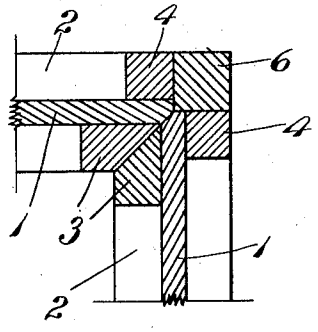


Fig. 7.

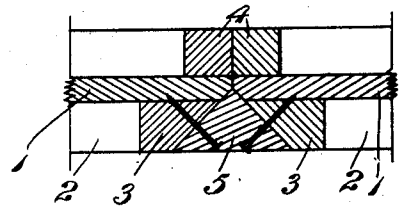


Fig. 6.

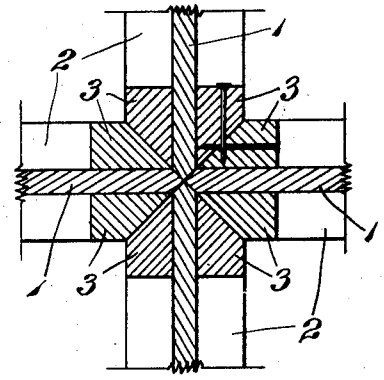


Fig. 2.

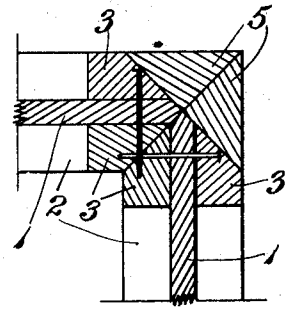


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOSIAH WILBUR WARNER AND HARVEY H. WEEMHOFF, OF GRAND RAPIDS, MICHIGAN; SAID WEEMHOFF ASSIGNOR TO SAID WARNER.

BUILDING CONSTRUCTION AND JOINT.

1,362,764. Specification of Letters Patent. Patented Dec. 21, 1920.

Application filed April 13, 1917. Serial No. 161,825.

To all whom it may concern:

Be it known that we, JOSIAH WILBUR WARNER and HARVEY H. WEEMHOFF, citizens of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Building Construction and Joint; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable other skilled in the art to which it appertains to make and use the same.

This invention relates to a building construction, and has especial reference to a sectional building construction in which sections of standard dimensions may be utilized and joined together to form a building, the invention also including a very novel and unique form of joint, whereby adjacent ends of sections either in alinement with each other or positioned at right angles to each other may be securely joined together to form a permanent and substantial frame for a building readily adapted to receive the outer covering and also an inner lath and plaster covering. It is a primary object and purpose of our invention to produce a section, a plurality of which may be used in the construction of a building, and with which substantially any design of building plan may be carried out and rooms of substantially any size may be made so long as the length and width of the room is some multiple of the length of the section. A further object of the invention consists in the provision of sections of standard lengths the ends of each section containing elements which come to a point and the sides of which are disposed substantially at an angle of 45 degrees to the length of the section and at 90 degrees to each other, whereby the juncture of any two or more sections is had at such point which is a section length from all other ends of sections which come together at such point. Various other objects and purposes of our invention will appear as understanding of the construction is had, preferred forms of which are shown in the accompanying drawings, in which:—

Figure 1 is a horizontal section illustrating the method of joining together a plurality of sections in carrying out a house plan.

Fig. 2 is an enlarged section illustrating the juncture of four sections at a single point.

Fig. 3 is a similar sectional view showing the formation of a corner where two sections are disposed at right angles to each other.

Fig. 4 is a similar view illustrating the method of joining together two sections positioned in alinement.

Fig. 5 is a similar view in which sections of modified structure are used for the outer walls of a building while the preferred type of section is used for the cross walls or partitions therein.

Fig. 6 is a view similar to Fig. 4, showing said modified form of sections and their connection when located in alinement and,

Fig. 7 shows the corner construction of the modified form of section.

Like reference characters refer to like parts throughout the several views of the drawings.

In the construction of each section a central web 1 is used which may be made of boards or the like, said web being located above a bottom plate 2, it being apparent that the upper end of the section may be provided with a similar plate. At each end of the web 1 and at each side thereof vertical strips 3 are secured in any desired manner. Each of these strips has an end face thereof disposed at an angle substantially of 45 degrees to the length of the section as shown, and said faces of the two strips 3 at the end of any section are disposed at an angle of substantially 90 degrees to each other. And the end of web 1 is also cut to come to a point with sides in alinement with said sides of the strips 3 so that a substantially complete right angle is formed at the end of each section. The section length is the distance between the pointed ends of the web. It is also understood that the base 2 may be similarly cut at its ends. Between the ends of the sections other strips 4 of the same thickness as the strips 3 are secured to the web to form supports for the outer and inner coverings to the sections when used in a building.

The sections as thus described may be of any standard length as desired and are used to make the outer walls of the house as many as is necessary being placed in alinement for each side of the house. When thus placed in alinement the pointed adjacent

ends of sections come together leaving triangular spaces at each side of the point in which fillers 5, as shown in Fig. 4, triangular in cross section and of a shape to set within said spaces are fitted one at each side of the sections. The fillers are secured by means of nails as shown in Fig. 4 driven at right angles to the plane of the ends of the structures 3 thus making a very firm and rigid connection as is obvious.

At a corner made where the sides of a building come together the inner angular sides of the sections fit one against the other as shown in Fig. 3 and the corner is completed by two of the triangular fillers 5 which may be nailed or other wise permanently secured in the position shown.

If it is desired at the end of any section in the outer walls of the house to run a transverse partition, all that is necessary is to leave out the filler strip 5 on the inside of the wall and insert the end of a section as shown in Fig. 1 and secure it in place in any suitable manner. The partition may be indefinitely extended in length by joining sections end to end or it may cross another partition running at right angles thereto whereupon a joint like that illustrated in Fig. 2 is made four of the sections fitting together at their ends as shown.

In a construction of the character described it will be noted that the sections are joined together. The outer surface of fillers 5, ends, strips 3 of the sections, and intermediate strips 4 between the ends are in the same plane whereby sheathing or other suitable covering may be nailed to complete the outside of the house. In addition it will also be noted that at any corner where two or more of the sections are disposed at right angles to each other, the end strips 3 provide nailing surfaces for lath being in the same plane with the surfaces of the inside intermediate strips 4 as best shown in Fig. 1. The sections are adapted for use in constructing practically all plans of buildings so long as the length or width of the building or of any room therein is some multiple of the length of the section. And, it is, of course, apparent that the sections may be of different length so as to practically supply every dimension of building or of rooms therein which may be desired.

For the outer walls of the house a slight modification may be made in the construction of the sections whereby only an inner strip 3 having a face disposed at 45 degrees to the length of the section is used on the inner sides of the section while on the outer face of these sections at each end thereof a strip 4 is placed. This permits the insertion of partitions at right angles to the length of the sections and at the meeting ends thereof as shown in Fig. 5 and also the joining of said sections in alinement by means of a single filler 5 as indicated in Fig. 6; while the corner, shown in Fig. 7, is completed by an upright 6, square in cross section. For partitions, however, this modified form of section is not practical and the partition is of the first type of section described.

By use of our invention a building may be much more cheaply and economically constructed than heretofore and without the necessity of employing skilled and high priced labor. Furthermore during those times of the year when little actual outdoor building is done the sections may be constructed and stored and thus be available for use when the rush season of building begins. It will be understood that the sections may be of various designs, that is certain sections may include window or door frames or the like built in them or otherwise constructed to make proper openings for doors, windows and the like in the building. The sections may be of any desired height for rooms of different heights, and for houses of more than one story, it is necessary only to complete the first story, placing the joists above the first story and completing the upper stories in the same manner. The sections in fact are universally adapted for practically all types of building construction and through them a building can be quickly and easily made with a minimum of labor expense. It will also be understood that the sections are adapted for use in the building of silos, tanks, roofs and fences and various other similar structures and that any suitable material may be used either wood or steel or the like.

We claim:—

1. In a building construction of the character described, a section comprising a vertical web, and strips secured at each side of the web at each end thereof, the ends of said strips being cut at substantially an angle of forty five degrees to the length of the web and lying substantially at an angle of ninety degrees to each other, substantially as described.

2. In a building construction of the character described, a section including a vertical web and a vertical strip at each end of the web on the inner side thereof, the end faces of said strips being cut at an angle to the length of the section and each making an acute angle of substantially forty five degrees with the sides of the web, substantially as described.

In testimony whereof we affix our signatures.

JOSIAH WILBUR WARNER.
HARVEY H. WEEMHOFF.