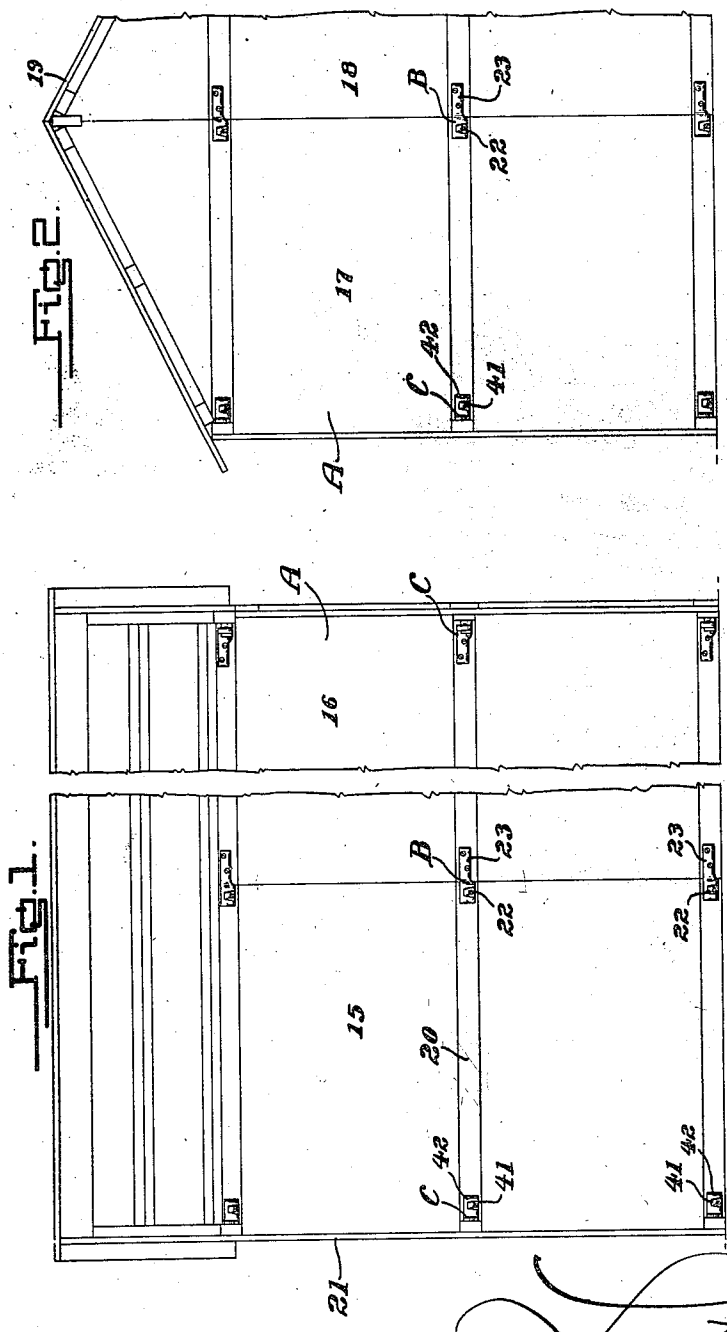
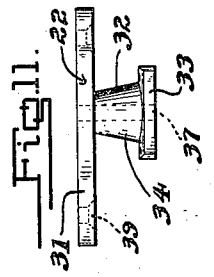
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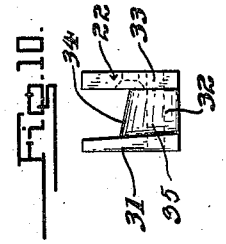
E. L. OAKES

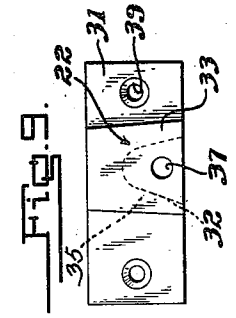
JOINT FOR PORTABLE SECTIONAL BUILDINGS

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Inventor
E. L. Oakes

By Lancaster and Allwine
Attorneys

Oct. 30, 1923. 1,472,490

E. L. OAKES

JOINT FOR PORTABLE SECTIONAL BUILDINGS

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Fig. 3.

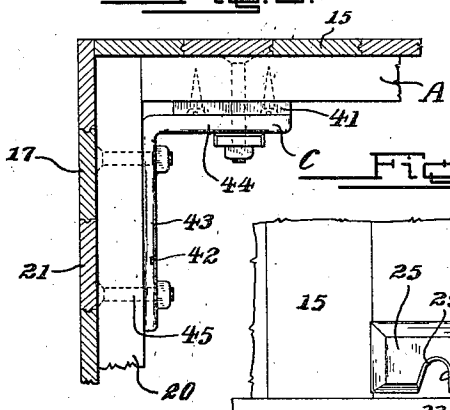


Fig. 4.

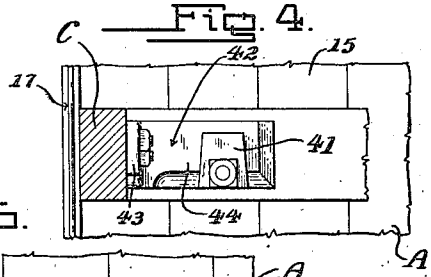


Fig. 5.

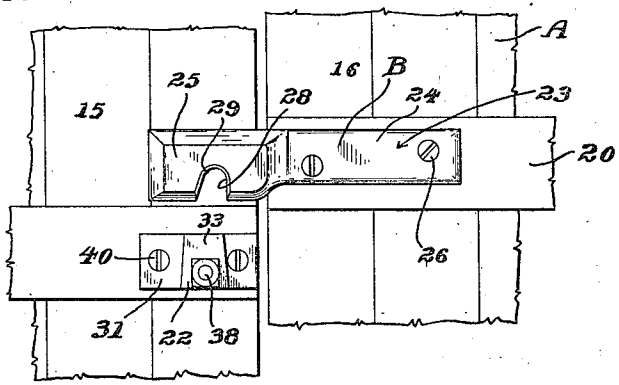


Fig. 13.

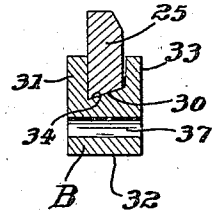


Fig. 6.

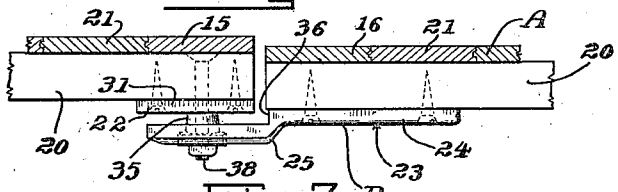


Fig. 7.

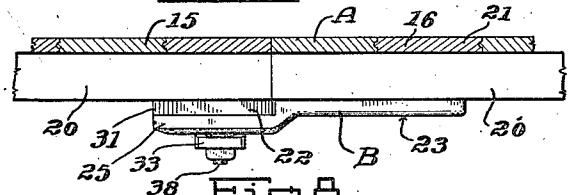


Fig. 8.

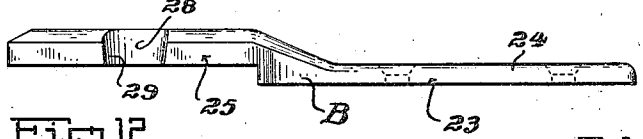
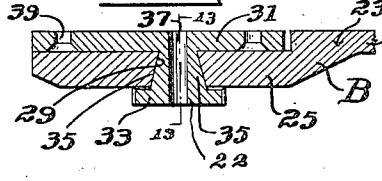


Fig. 12.



Inventor
E. L. Oakes.

By Lancaster and Allwine
Attorneys

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UNITED STATES PATENT OFFICE.

EMMETT L. OAKES, OF AKRON, OHIO, ASSIGNOR TO THE SUPERIOR BUILDING COMPANY, OF AKRON, OHIO, A CORPORATION OF OHIO.

JOINT FOR PORTABLE SECTIONAL BUILDINGS.

Application filed February 24, 1922. Serial No. 538,976.

To all whom it may concern:

Be it known that I, EMMETT L. OAKES, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Joints for Portable Sectional Buildings, of which the following is a specification.

This invention relates to portable buildings of the sectional knock down type, and the primary object of the invention is the provision of novel means for connecting the sections of the building together, whereby the sections can be quickly and easily assembled and held rigidly in position against movement in relation to each other.

Another object of the invention is the provision of novel connection members for sections of portable buildings which are permanently connected to the sections and which are so constructed that the members will be automatically brought into alignment and into engagement with one another, the connecting members precluding the possibility of movement of the sections when the same are in their set-up form and permitting the sections to be conveniently laid one upon the other, so that the same can be easily moved from one place to another and so that the same will occupy a minimum amount of space.

A further object of the invention is to provide a novel fastening device, which is particularly adaptable for use in connection with portable garages of the sectional type, the said connecting members permitting the convenient handling of the sections and thus allowing the sections to be readily carried to the place where a building is to be erected.

A still further object of the invention is to provide a novel connecting means for the sections of portable buildings, in which the companion members are so formed in relation to each other that during the moving of the sections into place, the companion members of the connecting means will tend to automatically draw the sections toward each other and into alignment with one another, the companion members of the connecting members having their meeting faces inclined to bring about said movement of the sections of the building in relation to one another.

A still further object of the invention is to provide an improved fastening device for sections of portable building constructions of the above character, which is durable and efficient in use, one that is simple and easy to manufacture, and one which can be permanently secured to the sections of the building at the time of manufacture thereof.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed and illustrated in the accompanying drawings, forming a part of this specification, in which drawings:

Figure 1 is an elevation of one section of a portable building having the improved connecting means for the sections thereof incorporated therewith looking toward the interior thereof.

Figure 2 is a fragmentary transverse section through a portable building showing the improved fastening or coupling members connected therewith.

Figure 3 is an enlarged fragmentary horizontal longitudinal section through a corner of a sectional portable building, showing one of the corner locking members in place.

Figure 4 is an enlarged fragmentary vertical section illustrating one of the corner fasteners or coupler members in place.

Figure 5 is an enlarged fragmentary elevation of the inner face of the building, showing a pair of sections being placed in position and illustrating the position of the companion fastening or connecting members in relation to one another.

Figure 6 is an enlarged fragmentary horizontal longitudinal section through a sectional building showing a pair of sections being moved in position in relation to one another, the fastener members being shown in plan.

Figure 7 is a similar view showing the sections in their assembled position in relation to each other.

Figure 8 is an enlarged fragmentary bottom plan view of one of the members of the connecting or coupling devices.

Figure 9 is a side elevation of the companion member of one of the fastening or connecting devices.

Figure 10 is an end elevation of the said companion member of one of the fastening or coupling devices.

Figure 11 is a top plan view of the said companion member of the coupling device.

Figure 12 is an enlarged fragmentary longitudinal section through one of the coupling or connecting devices showing the companion members in their assembled position.

Figure 13 is an enlarged detail transverse section through one of the coupling or connecting members taken on the line 13—13 of Figure 12.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A indicates a sectional portable building construction; B, the connecting or coupling devices for connecting the sides of the building together; and C, the connecting or coupling devices for connecting the corners of the building together.

The building A, as shown, includes side sections 15 and 16 and end sections 17 and 18 and a roof section 19. The roof section 19 can be secured to the sections 15, 16, 17 and 18 in any preferred manner after the side and end sections have been placed in their set up positions. While I have only shown two side sections and two end sections, it is of course, to be understood that there may be as many of these sections as is desired according to the size of the building.

Each of the sections include the studding 20 and the siding 21, which can be secured thereto in any preferred manner. As shown the siding 21 is formed of tongue groove board, but it is to be understood that the same can be formed of weather board, or of metal or the like.

The means B is utilized for connecting the sections together which lie in direct alignment such as the sections 15 and 16 and the sections 17 and 18.

The fastening or coupling device B comprises the companion connecting members 22 and 23. The member 22 is in the nature of a keeper, while the member 23 is in the nature of a latch, and the member 23 comprises a connecting shank 24 and the locking head 25. This shank can be bored or drilled for the reception of fastening elements 26, which are adapted to be inserted into the studding 20 for holding the member 23 in correct position. The lower edge of the head 25 is provided with an inwardly extending notch 28 for the reception of the keeper 22 and this notch 28 has the walls thereof shaped in such a manner as to permit the bringing of the sections with which the companion members 22 and 23 are associated toward one another and into alignment if the same are not placed in correct relation to one another. One wall of the notch 28 is provided with an outwardly and downwardly inclined surface 29, which extends toward the free edge of the head 25 and all of the walls of the notch 28 incline inwardly as at 30 toward the rear face of the head 25.

The companion section 22 which forms the keeper for the section or member 23 includes an attaching plate 31 which has formed centrally thereon the outwardly extending stud 32, the outer end of which can be provided with a retaining plate 33. The outer surface of the stud 32 is inclined inwardly and downwardly toward the attaching or face plate 31 as at 34 and this inclined surface conforms to the inclination 30 of the walls of the notch 28, and it can be seen that when the inclined surfaces 30 of the notch 28 engages the inclined faces 34 of the stud 32, the sections will be moved laterally in relation to one another so as to bring the same into perfect alignment. The outer surface of the stud 32 can also be angled or inclined downwardly as at 35 and this inclined surface is adapted to conform to the inclination of the inclined wall 29 of the notch 28. Thus it can be seen that when the inclined wall 29 engages the inclined surface 35, that the companion sections or members 22 and 23 will be brought toward each other and thus bring the sections 15 and 16 or 17 and 18 of the building toward each other and into intimate tight contact. If desired, the head 25 may be offset slightly from the shank of the latch 23 as at 36, so as to form means for receiving the companion keeper portion of the coupling device. The stud 32 is provided with a transverse bore 37, which is adapted to receive a retaining bolt 38. This retaining bolt 38 is of course extended through the studding 20 before the siding 21 is placed in position, and it can be seen that after the siding 21 is placed in position that the retaining bolt will be hidden from view. If desired, the face plate 31 on each side of the stud 32 may be provided with countersunk openings 39 for the reception of fastening elements, such as screws 40, which will hold the face plate 31 in a horizontal plane against swinging movement on the stud bolt 38.

While the plate 33 prevents accidental movement of the companion portions 22 and 23 of the connecting coupling devices B in relation to one another, it is to be understood that in case this plate became broken through any cause, that the inclination of the surfaces 30 and 34 will tend to hold the head 25 into intimate contact with the face plate 31, and thus the companion members of the connecting devices will not come apart.

The coupling member C for connecting the corners of the building together consists of companion sections 40 and 42. The section 41 constitutes the keeper section and is constructed exactly the same as the member 31 of the coupling device B and is secured in

position in the same manner and thus the description of this member is deemed superfluous.

The companion member 42 constitutes the latch section and is constructed substantially the same as the member 23, with the exception that the shank portion 43 extends in angular relation to the head 44. As shown the shank 43 extends substantially at right angles to the head 44, but it is to be understood that the same can be placed at any desired angle so that sharper or wider angles can be made. The head 44 is constructed identically the same as the head 25, so that the sections will be brought into intimate contact with each other and shifted laterally. As shown the shank 43 is connected by bolts 45 which are extended through the studding 20 before the siding 21 is placed in position.

In assembling the sections 15, 16, 17, and 18 together, it is merely necessary to place the sections containing the keepers 22 and 41 in position and then slide the sections containing the latch sections 23 and 42 in position as heretobefore described and which will bring all of the sections into tight engagement with one another.

The connecting coupling devices B and C can be formed in any desired manner, but it is preferred to cast the same as this is found to be the cheapest construction.

From the foregoing description, it can be seen that the improved device has been provided for connecting the sections of a building construction together, to effectively bring the sections into intimate contact with one another, and into alignment with one another.

Changes in details may be made without departing from the spirit or scope of this invention; but,

I claim:

1. A coupling device for the sections of a portable sectional building construction including a pair of companion members, one of said members including an attaching face plate, an outwardly extending stud, and a retaining plate formed on the outer end of the stud, the other companion member including an attaching shank and a head, said head offset from the shank substantially the thickness of the said attaching face plate, and said head arranged to fit between the attaching plate and the retaining plate, the lower end of the head having a notch formed therein to receive said stud.

2. A coupling device for connecting the sections of a portable sectional building together comprising a pair of companion members, one of the members including an attaching face plate, a stud, and a retaining plate carried by the stud disposed in parallel relation to the face plate, the other member including an attaching shank and a head, for normally fitting between the attaching face plate and the retaining plate, the head having an inwardly extending notch formed therein, the walls of the notch and the outer surface of the stud being inclined to permit the members to be moved endwise toward each other and laterally toward each other.

3. A coupling device for sections of a sectional portable building comprising a pair of companion locking sections adapted to be secured to companion sections of the building, one of the sections including an attaching face plate, an outwardly extending stud and a retaining plate disposed in parallel relation to the attaching plate, the outer surface of the stud being inclined inwardly toward the attaching plate, the other companion member including an attaching shank and an angularly disposed head, the head having a notch formed therein extending inwardly from the lower edge thereof, the walls of the notch being inclined rearwardly toward the rear face of the head to conform to the inclination of the stud, whereby the head may be moved laterally toward the attaching plate when the members are moved into engagement with each other.

4. In a coupling device for the sections of portable building constructions a pair of companion members, one of the members including an attaching face plate, a laterally extending stud, and a retaining plate disposed in parallel relation to the attaching face plate, the outer surface of the stud being inclined rearwardly, the other companion member including an attaching shank and a head, the head having a notch formed therein extending inwardly from the lower edge of the head for receiving the stud, the walls of the notch being bevelled inwardly toward the rear face of the head, one wall of the notch being inclined downwardly and toward the forward free edge of the head, the last mentioned inclined wall being adapted to engage the inclined surface of the stud for drawing the members endwise toward each other.

5. A coupling device for removably connecting adjacent pairs of sections of a portable sectional building construction together consisting of a keeper section including an attaching face plate, a stud, and a retaining plate, the stud having transverse bore for the reception of a retaining bolt, the face plate having openings therein for reception of retaining screws, the stud having its surface inclined toward the face plate, a latch section including a shank, and an angularly disposed head, the head having an inwardly extending notch arranged to receive the stud.

EMMETT L. OAKES.