March 29, 1927.

J. C. TRUEMPER

1,622,746

PORTABLE BUILDING

Filed Nov. 25, 1924

3 Sheets-Sheet 1

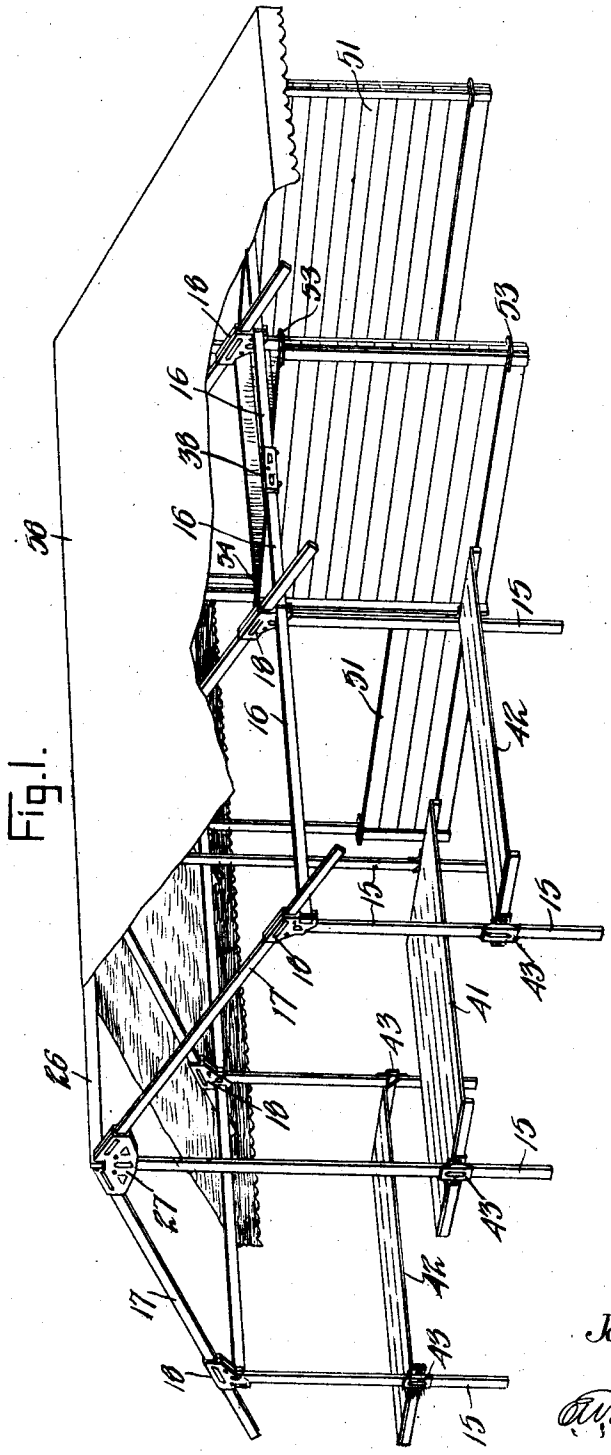


Fig. 1.

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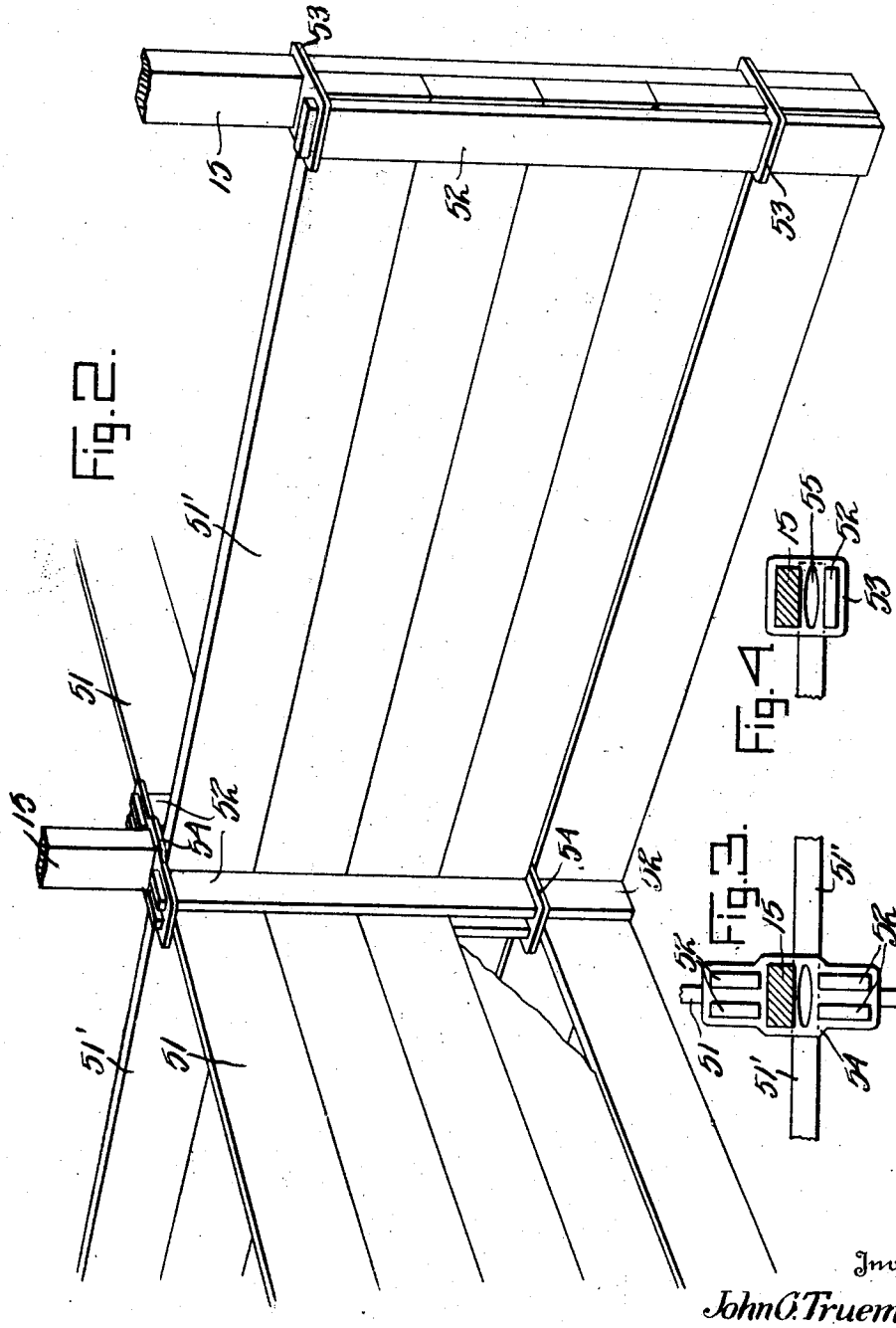


Fig. 2.

Fig. 4.

Fig. 3.

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Fig. 5.

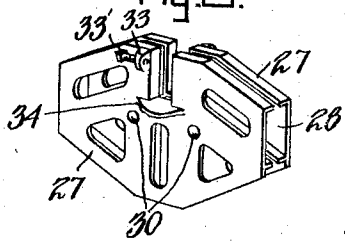


Fig. 6.

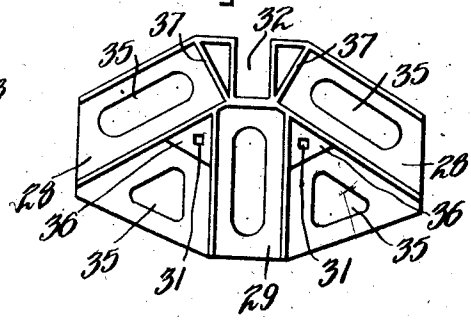


Fig. 7.

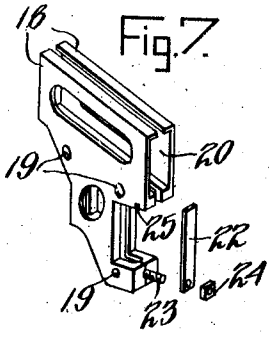


Fig. 8.

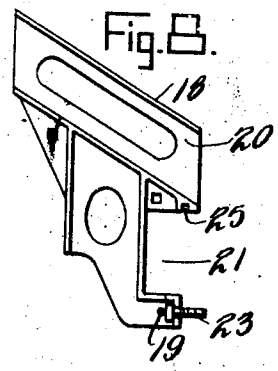


Fig. 9.

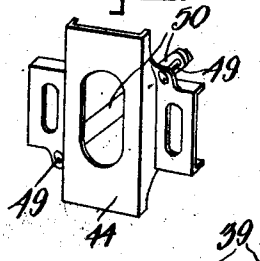


Fig. 10.

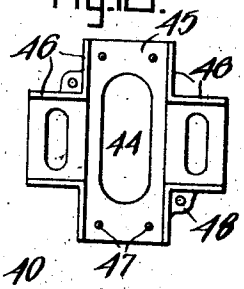
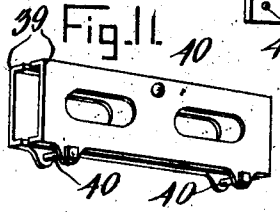


Fig. 11.



Inventor

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Attorney

Patented Mar. 29, 1927. 1,622,746

UNITED STATES PATENT OFFICE.

JOHN C. TRUEMPER, OF INDIANAPOLIS, INDIANA.

PORTABLE BUILDING.

Application filed November 25, 1924. Serial No. 752,204.

My said invention relates to portable buildings and it is an object thereof to provide a building intended primarily for temporary use to take the place of tents. This building is well adapted to be used at places where large numbers of people meet for a brief period such for example as fairs, camp meetings and the like. As compared with tents it has the advantage that it takes up relatively little room since its use does not necessitate the use of spreading guy ropes and pegs but it takes up only the space covered by the actual structure, i. e. a space corresponding to the area of the roof of the device so that where space is limited it can all be put to beneficial use.

A further object of the invention is to provide a temporary building, the parts of which are held together without the use of screws, nails or other fastening devices such as would injure the constituent elements entering into the construction of the building.

A further object of the invention is to provide means whereby the parts of the building may be quickly assembled or dissembled and put into condition for shipping or storage.

Referring to the accompanying drawings which are made a part hereof and on which similar reference characters indicate similar parts,

Figure 1 is a perspective of a structure of the character described with parts of the roof omitted,

Figure 2, a fragmentary perspective of the structure shown in Figure 1 on an enlarged scale,

Figures 3 and 4, details of joints between the rigid parts of the construction,

Figure 5, a perspective of a metallic structure used for holding together parts of the building adjacent the ridgepole,

Figure 6, an elevation showing the inner side of one of the castings,

Figure 7, a perspective of a metallic structure used adjacent the eaves of the building,

Figure 8, an elevation showing the inner side of one of the castings in Figure 7,

Figure 9, a perspective of a metallic structure shown in Figure 1,

Figure 10, an elevation of the inner side of a casting shown in Figure 9, and

Figure 11, a perspective of an element shown in Figure 1.

In the drawings reference character 15 indicates uprights preferably of wood, forming parts of the building which is the subject of my invention. The outer rows of these uprights are joined together by beams 16 at their upper ends and are also joined to rafters 17 by means of structures which are preferably metallic and each of which is composed of a pair of castings or stampings 18 which are preferably made out of aluminum and which may be made by die casting or in any other convenient or desirable manner.

The two castings are joined together in the manner illustrated in Figure 7 by means of bolts 19. Each of the castings has a groove or trough at 20 with opposed ridges which provide between them a space for a rafter 17. Each casting also has an angular opening at 21 to receive a beam 16 which is held in place by means of a metallic bar or plate 22 secured to the casting 18 by a bolt 23 fitting in an opening between the adjacent edges of the castings 18 near their lower ends. The bolt has a head (Fig. 8) in a hollow space between the castings by means of which it is held in place and has a nut 24. A notch 25 receives the upper end of the bar 22 and serves with the bolt to hold it securely in place.

The members of the central row of uprights 15 are of course longer than those of the outer rows and these members are secured to the upper ends of the rafters and to the ridgepole 26 by means of metallic structures shown in Figures 5 and 6 and each comprising a pair of castings 27 arranged in face to face relation with ridges on their inner faces forming grooves at 28 to accommodate the rafters 17 and also forming a vertical recess at 29 to receive the upright 15. The castings 27 are secured together by means of bolts 30 extending through the openings 31. At their upper sides spaces 32 are left to accommodate the ridgepole and lugs 33 are provided at one or both sides of the space with setscrews 33′ to secure the ridgepole in place. Outwardly extending horizontal shelves are also provided at 34 for convenience in supporting the ridgepole while it is being brought into the final position. The contour of the parts may vary and it may be remarked as to the metallic structures generally that the ad-

jacent faces are hollowed out where they might be solid if desired and that apertures are made through their walls at such points as 35 in Figure 6. At the points where special strain falls on the parts as for instance about the bolt holes the walls may be thickened for reinforcement as indicated at 36 in Figure 6. Ribs as 37 (Fig. 6) may also be provided for strengthening the castings at desired points.

The beams 16 need not necessarily extend the entire distance between two adjacent uprights 15 and where they fail to do so I have provided structures such as illustrated at 38 (Figures 1 and 11). Each of these structures comprises a pair of side members 39 which, as above explained, may be die-cast or otherwise formed, preferably out of metal and which are held together by bolts 40. Each of the castings 39 comprises a pair of side members 39 which, as above explained, may be die-cast or otherwise formed, preferably out of metal and which are held together by bolts 40. Each of the castings 39 comprises a trough-like structure having a beam and two sides projecting therefrom to meet those of the other and form between them a clamp adapted to be forced by the bolts 40 into rigid engagement with the ends of a pair of beams 16 whereby the beams are held rigidly in abutting relation with each other.

The left-hand end of the portable building shown in Figure 1 is illustrated as being made up as a dining room or lunch room with a table 41 and benches 42 at each side thereof. The table is supported on two of the uprights 15 by means of structures 43 such as are illustrated in detail in Figures 9 and 10. Each of these devices consists of a cruciform casting 44 with a back 45 and angular ribs 46 extending out far enough to accommodate an upright 15 which ordinarily will consist of a piece of lumber of the size known as a 2x4. The back 45 of the casting 44 is provided with inwardly-directed pointed lugs 47 adapted to be forced into the wood of an upright 15 whereby the parts are enabled to sustain the weight of persons sitting on the benches and the weight of the food, etc. placed on the table. In the angles between the arms of the cross lugs 48 are located which are adapted to receive bolts 49. These bolts at their other ends engage a cross-bar 50 at the other side of the upright 15. When the nuts are drawn down on the bolts the lugs 47 are forced into the uprights for the purpose above explained and the parts 44 and 50 assume a clamping relation with respect to the uprights.

The right-hand end of the rear portion of the structure of Figure 1 is shown as being divided into rooms by means of partitions consisting of boards 51, 51', the boards 51' being thicker than those at 51. These boards are held in proper relation to the uprights 15 by means of bars 52. To secure these various parts together firmly without use of nails or screws so as to avoid damage to the lumber I have provided binding plates of two sorts shown respectively at 53, Figure 4, and 54, Figure 3. The plates 53 are intended for use in joining a single set of boards or planks to an upright 15 and for this purpose are provided with openings adapted respectively to receive an upright 15 and a thinner bar 52, the dimensions being varied of course to suit the particular circumstances. In Figure 4 I have shown the binding plate as provided with a central aperture 55 to reduce the weight.

The binding plate 54 (Fig. 3) is provided with an opening to receive an upright 15 and smaller openings to receive the bars 52. The smaller openings are arranged in pairs at opposite sides of the upright and are spaced apart in a manner to space the bars 52 and leave room between them for the boards 51'. The boards 51 form partitions running lengthwise of the structure and the boards 51' which are somewhat thicker are used for transverse partitions. In such case a space is left at one side of the upright 15 between the upright and the bars 52 corresponding to the thickness of the boards 51' and the plate 54 is formed accordingly, with an interval between the central aperture and the apertures at one side wider than the interval at the opposite side of the central aperture.

It will be seen from the foregoing that all the parts may be fastened together without any unnecessary damage to any of them so that the building may be knocked down for transportation from one fair ground or camping ground to another with a minimum of damage to the materials and with maximum speed. When put up it is strong and comparatively rigid. The partitions by which it is divided into separate compartments enable it to be used as a temporary dwelling, when the rooms can be furnished temporarily as sleeping rooms, living rooms, etc., or they can be used for booths for the display of merchandise and many other uses will occur to those skilled in the art. When used for such purposes the outer open side may be closed at night or in inclement weather by a canvas curtain or the like. The partitions and other subsidiary elements can be quickly changed about so as to vary the aspect of the building. The roof 56 may be of canvas which can be secured in any convenient manner.

It will be obvious to those skilled in the art that my device may be modified in various ways without departing from the spirit of the invention and therefore I do not limit

myself to what is shown in the drawings and described in the specification, but only as indicated in the appended claims.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:

1. A portable building comprising a knock-down framework made up of imperforate individually rigid parts, and metallic clamping devices for securing said parts together at the joints, substantially as set forth.

2. A portable building comprising a knock-down framework made up of individually rigid parts, and coupling means quickly detachable from all of said parts for securing said parts together at the joints, substantially as set forth.

3. A portable building comprising a knock-down framework made up individually rigid parts, and quickly-detachable metallic plates adapted to be clamped together for securing said parts therebetween said plates providing recesses for said parts, substantially as set forth.

4. A portable building comprising a knock-down framework made up of individually rigid parts, and quickly-detachable metallic plates having apertures for surrounding adjacent frame members and adapted to be clamped together for securing the parts therebetween, substantially as set forth.

5. A portable building comprising a knock-down framework made up of individually rigid parts, and quickly-detachable metallic plates having mating ridges on their adjacent faces forming recesses to receive parts of the frame members, substantially as set forth.

6. A portable building comprising a knock-down framework made up of individually rigid parts, quickly-detachable metallic plates having mating ridges on their adjacent faces forming recesses to receive parts of the frame members, and means to lock said frame members in place in said recesses, substantially as set forth.

7. A portable building comprising a knock-down framework made up of individually rigid parts said framework including spaced rigid uprights, articles of furniture extending from one to another of said posts, and detachable plates for securing such articles to said uprights, substantially as set forth.

8. A portable building comprising a knock-down framework made up of individually rigid parts including a plurality of uprights and rafters, and pairs of detachable clamping plates securing them together certain of said plates providing matching spaces open at one side to receive a horizontal roof-beam, substantially as set forth.

9. A portable building comprising a knock-down framework made up of individually rigid parts, knock-down partitions made up of individually rigid parts, upright frame members at one side of a partition, a bar at the other side, and a perforated plate embracing said upright and said bar the perforations being spaced to leave room for the partition, substantially as set forth.

10. A portable building comprising a knock-down frame-work made up of individually rigid parts of varing sizes, and means for securing the parts together comprising fastening elements having means for frictionally holding each rigid part in fixed relation said means being adapted to be loosened to release all of the individual parts to permit them to be withdrawn, substantially as set forth.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana this 22nd day of November, A. D. nineteen hundred and twenty-four.

JOHN C. TRUEMPER.