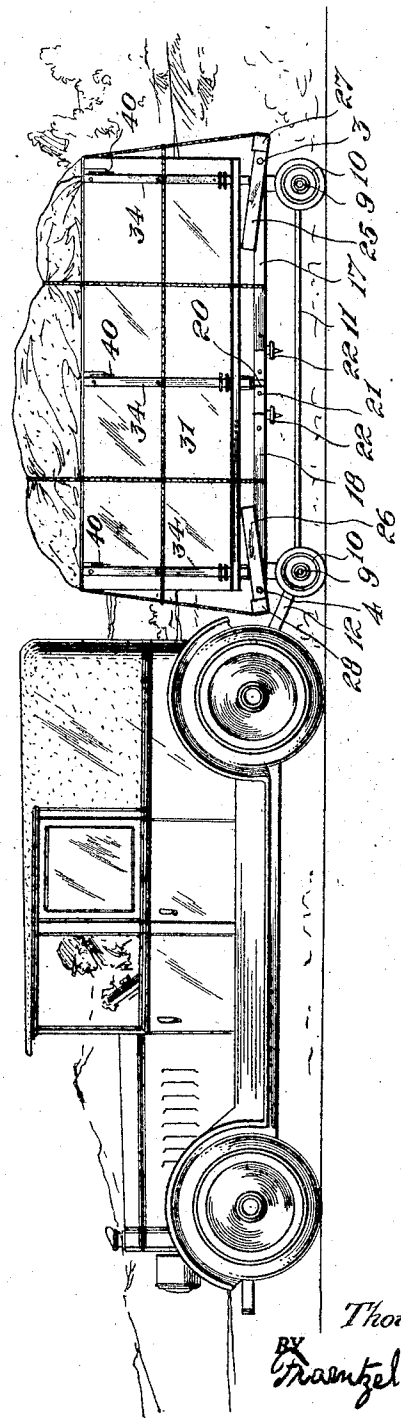
May 17, 1927. T. C. COLT 1,629,150

KNOCKDOWN OR FOLDABLE BUILDING

Filed Oct. 2. 1924 6 Sheets-Sheet 1

Fig. 1.



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KNOCKDOWN OR FOLDABLE BUILDING

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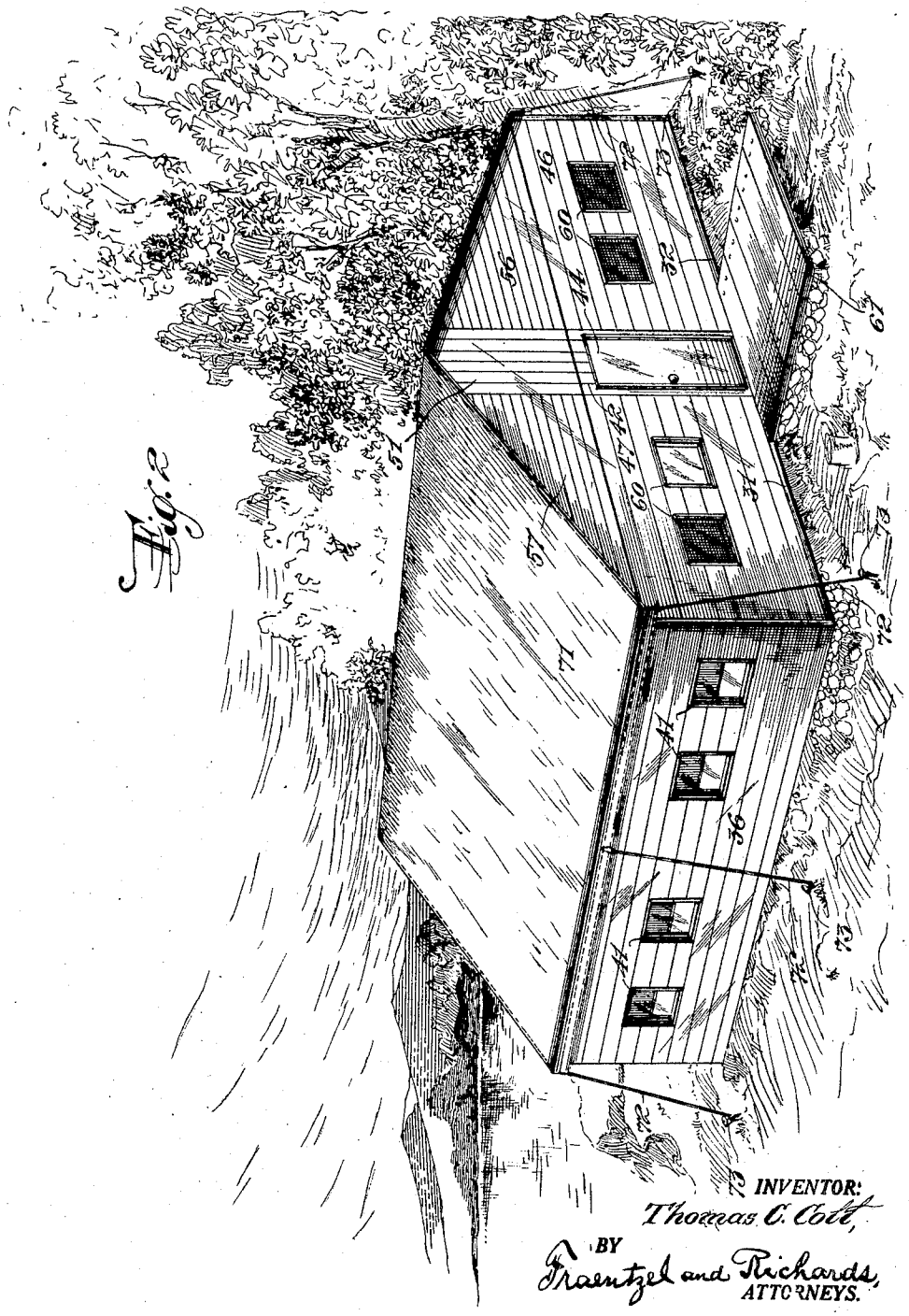


Fig. 2.

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KNOCKDOWN OR FOLDABLE BUILDING

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Fig. 12

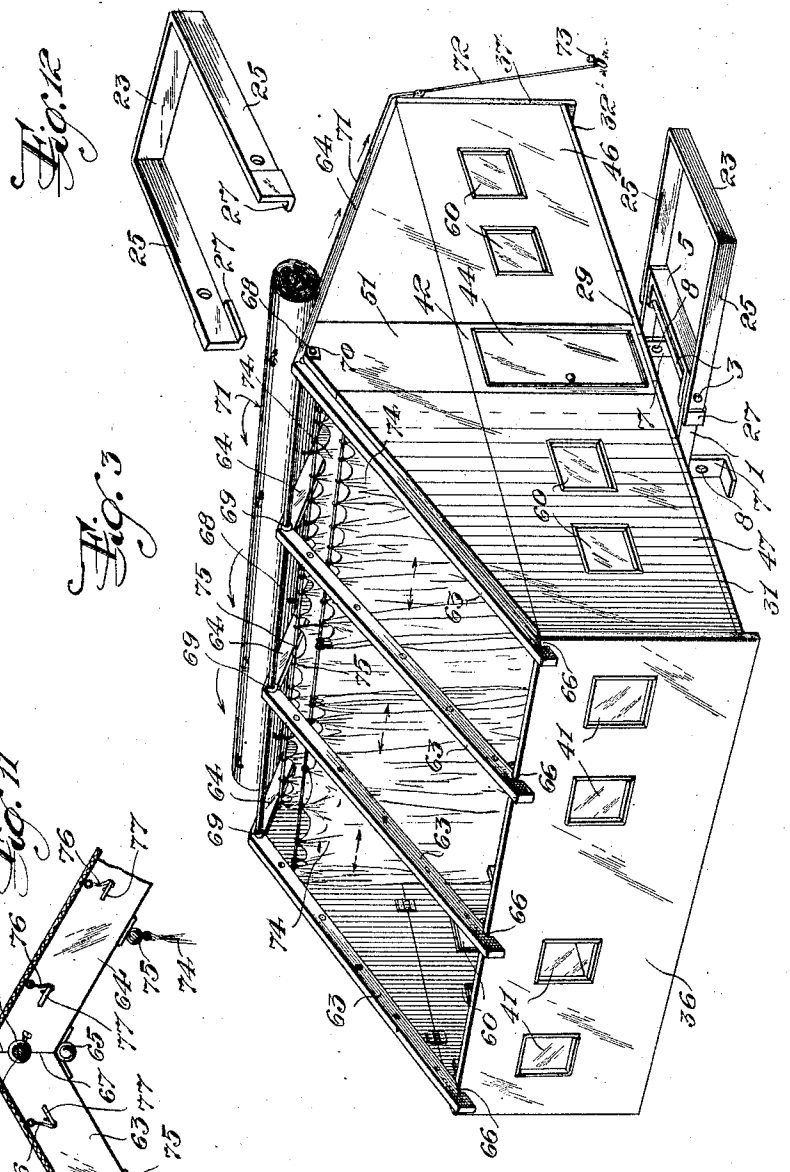


Fig. 3

Fig. 11

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KNOCKDOWN OR FOLDABLE BUILDING

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Fig. 10

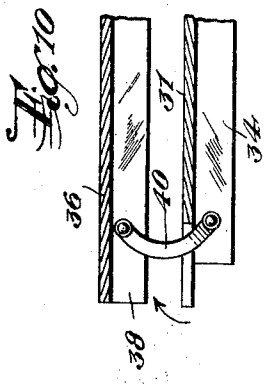


Fig. 9

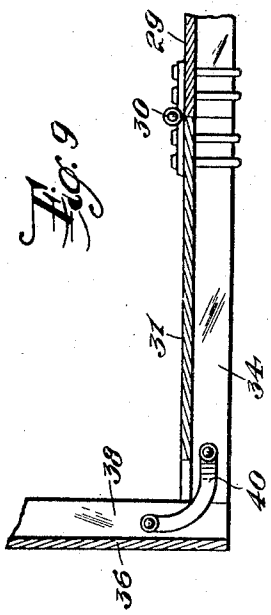
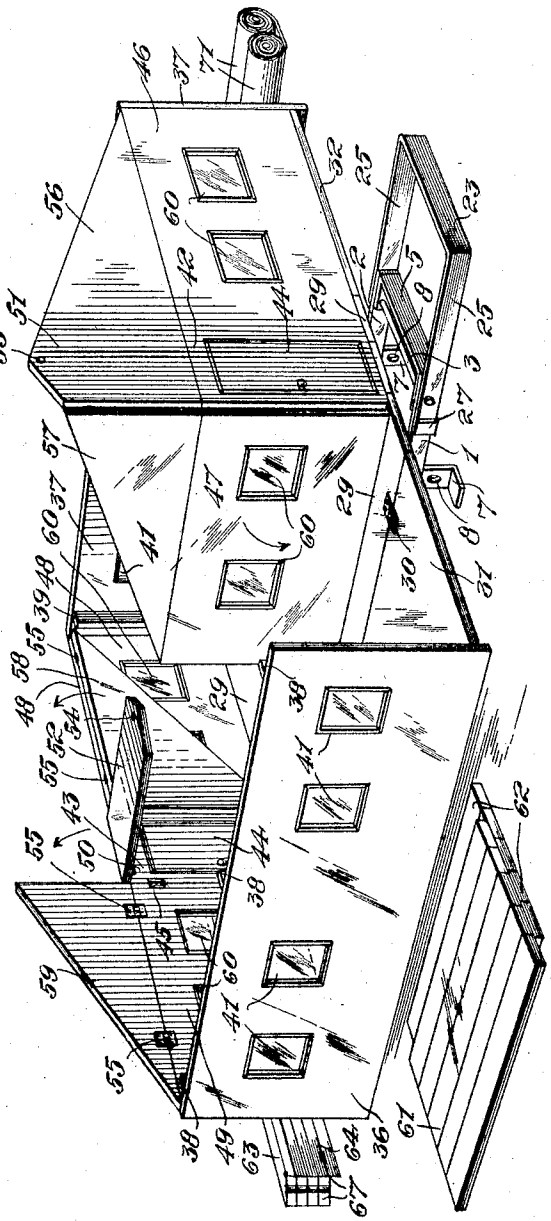


Fig. 4



INVENTOR:
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KNOCKDOWN OR FOLDABLE BUILDING

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Fig. 6.

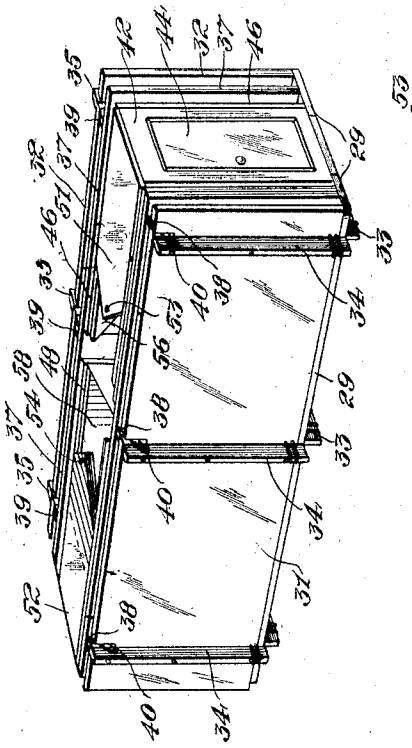
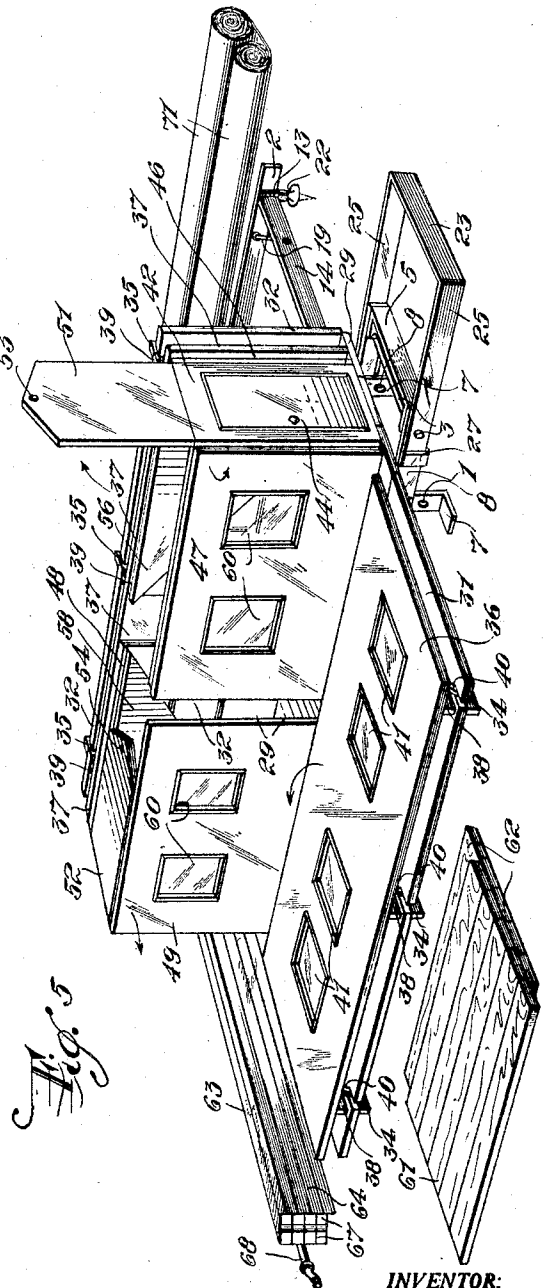


Fig. 5.



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KNOCKDOWN OR FOLDABLE BUILDING

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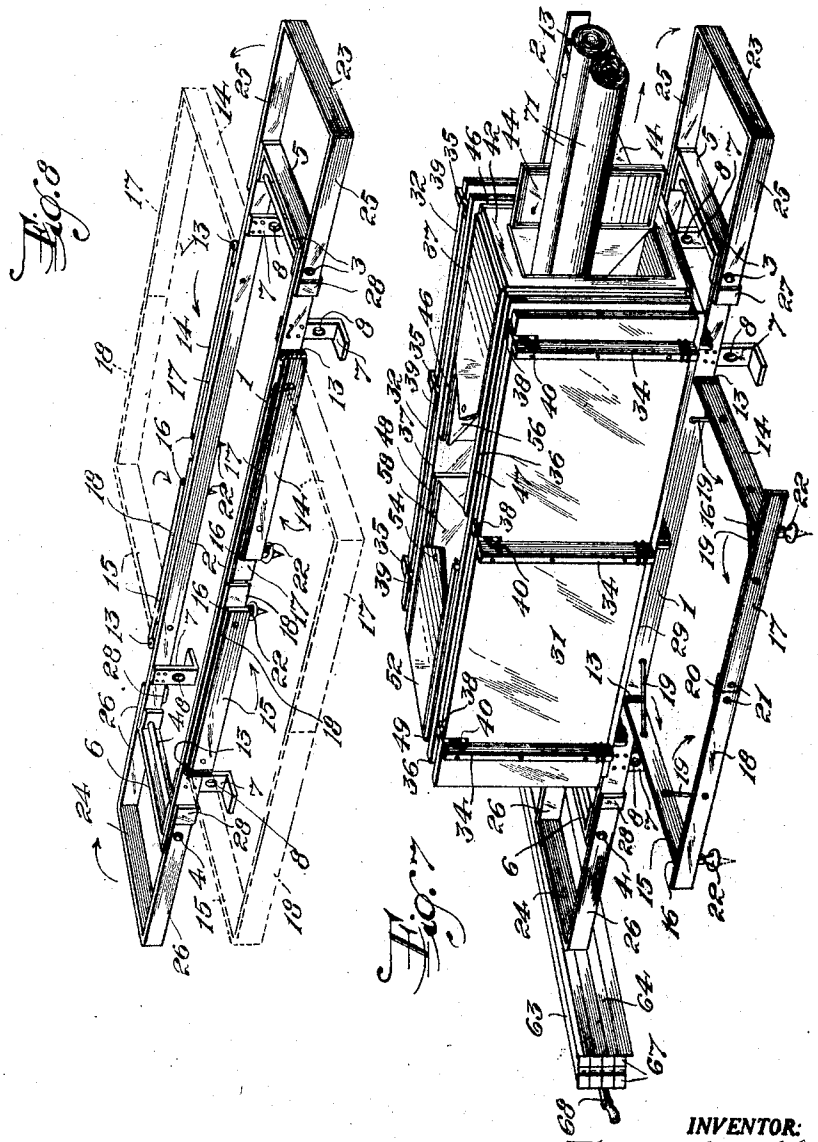


Fig. 8

Fig. 7

INVENTOR:
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Patented May 17, 1927. 1,629,150

UNITED STATES PATENT OFFICE.

THOMAS C. COLT, OF ORANGE, NEW JERSEY.

KNOCKDOWN OR FOLDABLE BUILDING.

Application filed October 2, 1924. Serial No. 741,197.

This invention has reference, generally, to improvements in buildings; and, the present invention relates, more particularly, to building-structures of the foldable or collapsible type, usually in the form of the bungalow style, the various members of the building, when not in use, being foldable in a manner, so as to make up a package of minimum size, and thereby to provide a package which may be readily carted about, and which is especially useful to campers, automobilists, and the like.

The present invention, therefore, has for its principal object to provide a novel and simply constructed assemblage of the various members of a building-structure, connected in such a manner, so that the various building-members are readily foldable to produce a small package, for easy and safe transportation, and the members being easily and quickly brought into their operative co-operation, to provide a comfortable building of the bungalow style, which is admirably adapted for camping and similar purposes.

Other objects of the present invention not at this time more particularly enumerated will be clearly understood from the following detailed description of the present invention.

With the various objects of the present invention in view, the said invention consists, primarily, in the novel foldable or collapsible building hereinafter set forth; and, the said invention consists, furthermore, in the novel arrangements and combinations of the various devices and parts, as well as in the details of the construction of the said parts, all of which will be more fully described in the following specification, and then finally embodied in the clauses of the claims, which are appended to and which form an essential part of the said specification.

The invention is fully illustrated in the accompanying drawings, in which:—

Figure 1 is a view of the folded or collapsed members of a building-structure embodying the principles of the present invention, showing the package thus produced attached as a trailer to the rear of an automobile.

Figure 2 is a perspective view of the foldable or collapsible building, the members of which are shown set up to provide a building ready for occupancy; Figure 3 is a similar view of the building, with its removable roof-covering being placed in position upon the removable and foldable rafters of the structure; and Figures 4 and 5 are perspective views of the foldably connected members of the building, illustrating the manner of bringing the said members into their respective positions to produce the building. Figure 6 is a perspective view showing the various members of the building-structure in their folded relation, when not in use; Figure 7 is a similar view of the structure, some of the members of which are represented in their unfolded or opened-out relation to the remaining folded members of the structure; and Figure 8 is a perspective view of the lower frame-work or base of the building-structure.

Figures 9, 10 and 11 are sectional views of certain of the foldable members of the structure; and Figure 12 is a perspective view of either the front or rear porch-structure, forming parts of the said lower frame-work or base.

Similar characters of reference are employed in all of the said above described views, to indicate corresponding parts.

Referring now more particularly to Figure 8 of the drawings, in which is illustrated the lower frame-work or base of the building-structure, the reference-characters 1 and 2 indicate a pair of longitudinally extending supporting bars preferably of metal, of desired length, which have suitably connected with their respective ends, by means of rods 3 and 4, or other suitable fastening means, ⊔-shaped end-members 5 and 6, also preferably made of metal, all assembled so as to provide a main frame of a rectangular configuration. Suitably secured to the said supporting bars 1 and 2 are downwardly extending supports, as 7, the said supports being preferably provided with holes 8, in which may be journalled suitable rods or axles 9, with which are connected wheels or rollers 10, substantially as illustrated in Figure 1 of the drawings. For stability, the said rods or axles 9 may also be suitably connected by means of stay-rods or bars 11, and one of said rods or axles 9 may also have connected therewith a suitably formed coupling means 12 for trailing purposes, as will be evident from an inspection of said Figure 1. Suitably hinged, as at 13, to the outer faces of the said supporting bars 1 and 2, are folding members 14 and 15, to the free end-portions of which are hinged, as at 16, other folding

members 17 and 18, the various members being arranged in such a manner, so that they may be folded upon one another, and against the main supporting bars 1 and 2, as indicated in Figure 8 of the drawings, or they may be brought into an extended and supporting relation, as indicated in dotted outline in said Figure 8, or as shown in Figures 5 and 7 of the drawings. If desired, when thus extended, removable stay rods 19 may be employed, and at their abutting end-portions the respective folding members 17 and 18 may be separably connected by means of connector-plates 20 and bolts 21. If desired, the said folding members 17 and 18 may also be provided with suitably formed foot-pieces or supports, as 22. Foldably connected with the respective ends of the said main supporting bars 1 and 2, preferably by being journalled upon the end-portions of the respective-rods 3 and 4, are the side-members 25 and 26 of frames 23 and 24, the said side-members 25 and 26 being provided at their free ends with angle-plates 27 and 28, or other suitable means, serving to maintain a supported relation of the said frames 23 and 24 to the main supporting frame, formed by the members 1, 2, 5 and 6, as will be clearly evident from an inspection of Figures 3, 5, 7 and 8 of the drawings.

Referring now more particularly to Figures 2, 3, 4, 5, 6 and 7 of the drawings, in which is shown, more especially, one general arrangement of foldably connected elements comprising the flooring, the sides, and the front and rear walls of the building, the flooring consists of a main central section 29 made up of any suitable number of longitudinally extending floor-boards, with which are foldably connected by means of hinges 30, or similar means which permits folding, other side-sections 31 and 32, which are also made up of any suitable number of longitudinally extending floor-boards. The floor-boards of the main central section 29 are suitably re-enforced by laterally extending floor-beams 33, and in a similar manner, the said side-sections 31 and 32 are correspondingly re-enforced by laterally extending floor-beams 34 and 35. The reference-characters 36 and 37 indicate the respective longitudinally extending side-walls of the building, said walls being made up of the usual clap-boards, or they may be of beaver-board, or concreted metal lath, or any other suitable material, as will be evident. These side-walls are also suitably re-enforced by an arrangement of bars or posts, as 38 and 39, which are respectively hingedly connected with the ends of the respective floor-beams 34 and 35 by means of hinge-straps 40, substantially as shown in Figures 9 and 10 of the drawings, or other suitably constructed means of pivotal connection, which will permit of a folding relation of the said side-walls 36 and 37 upon the floor-sections 31 and 32. If desired, the said side-walls 36 and 37 may be provided with suitably placed windows 41. At the marginal ends of the said main central floor-section 29, are vertically disposed members 42 and 43, said members being provided with door-openings in which are suitable hinged doors 44. Foldably connected with the vertical edges of the said members 42 and 43, by means of hinges 45, or other suitable means of connection, are end-wall sections 46 and 47, connected with the member 42, and end-wall sections 48 and 49, connected with the member 43. Also foldably connected with the upper marginal edge-portions of the respective vertical end-members 42 and 43, by means of hinges 50, or other similar means, are a pair of gable-members 51 and 52, the said members being respectively provided near their peaks with holes or perforations 53 and 54 for the purposes to be presently set forth. As shown, there are also connected with the upper marginal edges of the respective end-wall sections 46 and 47, and 48 and 49, by means of hinges 55, or other similar means, triangularly shaped end-members, as 56, 57, 58 and 59. If desired, the several end-wall sections 46, 47, 48 and 49 may also be provided with windows 60. Suitable platform-sections 61 and 62 are also provided, which are adapted to be placed upon the extended frame-members, 5, 25 and 23, and 6, 26 and 24, as will be evident from an inspection of Figure 2 of the drawings. The various end-wall sections 42, 43, 46, 47, 48 and 49, and the various members 51, 52, 56, 57, 58 and 59, may be made up of the usual clap-boards, or they may be of beaver-board, or concreted metal lath, or any other suitable material, as will be understood.

In connection with the various members of the building just described, there is employed with the set-up members, see Figure 3 of the drawings, a suitable number of removable rafters, each rafter consisting as will be seen from said Figure 3 and from Figure 11, of a pair of members 63 and 64, suitably foldably connected by means of a hinge 65, or other similar means, and preferably notched at their free end-portions, as at 66, for supporting the opened-out rafters upon the upper marginal edges of the longitudinally extending side-walls 36 and 37, as shown. The abutting edge-portions 67 of the rafter-members 63 and 64 are suitably cutaway so as to provide openings near the apexes of the opened-out members 63 and 64 for reception of a longitudinally extending ridge-rod 68, the respective ends of which extend into and through the holes 53 and 54 in the members 51 and 52, suitable locking collars 69 and nuts 70 being employed with said rod for maintaining the rafters in the raised and fixed relation to

the various opened-out sections or members of the knock-down building, as will be evident. It will be understood, however, that in lieu of the said collars and nuts, any other readily applicable fastening or securing means may be employed.

The roof of the building, when set up, is preferably a roll of canvas, as 71, or other similar material, which is easily arranged over the set-up rafters, and then usually held in place by means of guy-ropes 72, suitably attached to the roll 71 and to stakes 73, or the like, as will be evident from an inspection of Figures 2 and 3 of the drawings. Compartments within the building may be produced by suitably placed curtains 74, suspended from rods 75, suitably and removably attached to the rafter-members 63 and 64. Additional means for holding the roof-covering down upon the rafter may be provided in the form of hooks 76 and eyes 77, substantially as shown in Figure 11 of the drawings.

Having in the foregoing set forth one general arrangement and combination of the various foldable elements comprising my novel form of knock-down or collapsible building, the manner of bringing the folded elements into their opened-out and set-up relation so as to produce the completed building will be clearly understood from an inspection of the several figures of the drawings, and any further description of the same is therefore deemed unnecessary, it being evident that the invention consists, primarily, in the main supporting unit or foundation, the members of which are made of metal and which is first set up, as shown in Figure 8, and upon which is placed the folded elements or members of the building-unit, indicated in Figure 6 of the drawings, as shown in Figure 7 of the drawings, the various members of the building-unit thereupon being unfolded and opened out, as indicated in Figures 5, 4, 3 and 2 of the drawings.

When it is desired to take down the building, this is easily and quickly done, the various devices and parts being quickly brought into their repacked relation, for transportation and for storing purposes.

Of course, I am aware that changes may be made in the general arrangements and combinations of the various foldable elements and their parts, as well as in the details of the construction of the same, without departing from the scope of the present invention as set forth in the foregoing specification, and as defined in the clauses of the claims which are appended thereto. Hence, I do not limit my present invention to the exact arrangements and combinations of the several devices and parts, as described in the said specification, nor do I confine myself to the exact details of the construction of the said parts as illustrated in the accompanying drawings.

I claim:—

1. A knock-down building comprising, a foldable foundation frame; a collapsible superstructure comprising a series of floor, side wall and end wall sections hingedly interconnected together, and superstructure being adapted for separable supported connection with said foundation frame; a series of collapsible rafter elements having means to separately connect their free ends with the erected side wall sections of said superstructure; a longitudinal ridge rod detachably engageable with the peak ends of said rafter elements; and a detachable roofing means adapted to be supported by said rafter elements and said ridge rod.

2. A knock-down building comprising, a foldable foundation frame; a collapsible superstructure comprising a series of floor, side wall and end wall sections hingedly interconnected together, said superstructure being adapted for separable supported connection with said foundation frame, a series of collapsible rafter elements having notched free ends to detachably engage the upper edges of the erected side wall sections of said superstructure; a longitudinal ridge rod, said rafter elements having means to receive interconnecting engagement of said ridge rod therewith; and a detachable roofing means adapted to be supported by said rafter elements and said ridge rod.

3. A knock-down building comprising, a main foundation frame having hinged at its sides foldable sections to open outwardly into the plane thereof; a series of floor, side wall and end wall sections hingedly interconnected together so as to be movable at will into erected or collapsed relation, said floor sections having reenforcing floor beams to detachably interlock with said main foundation frame and its foldable sections; a plurality of rafter elements arranged in pairs the members of which are hinged together at their adjoining peak ends, and the same having notched free end portions to interlock with the upper edges of the erected side wall sections; a longitudinal ridge rod detachably engageable with the peak ends of said pairs of rafter members; and a detachable flexible roofing member adapted to be supported by said assembled rafter elements and said ridge rod.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 26th day of September, 1924.

THOMAS C. COLT.