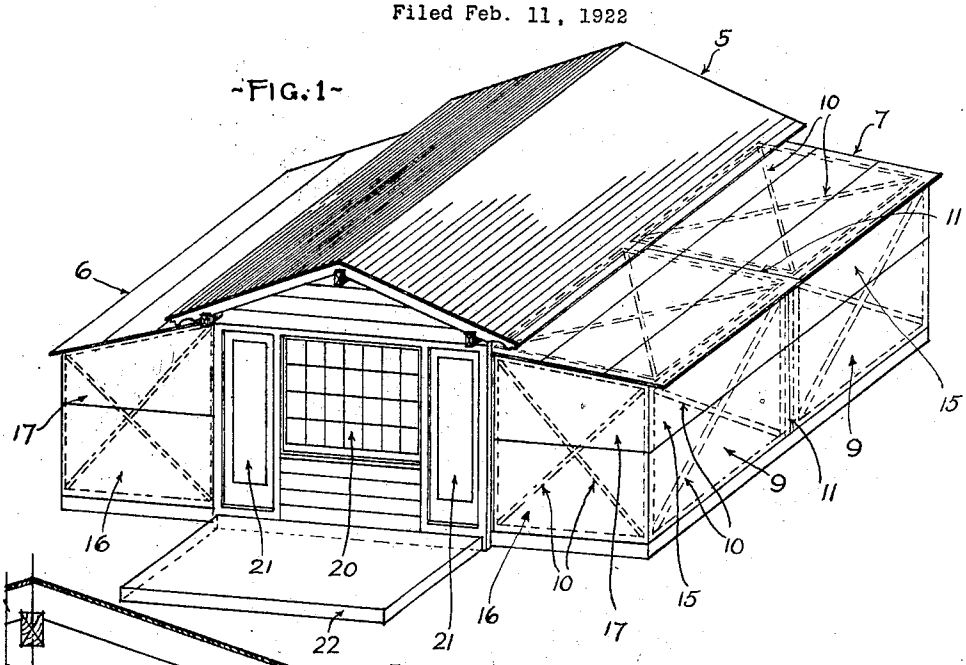
June 17, 1924. 1,498,173

G. L. KELLEY

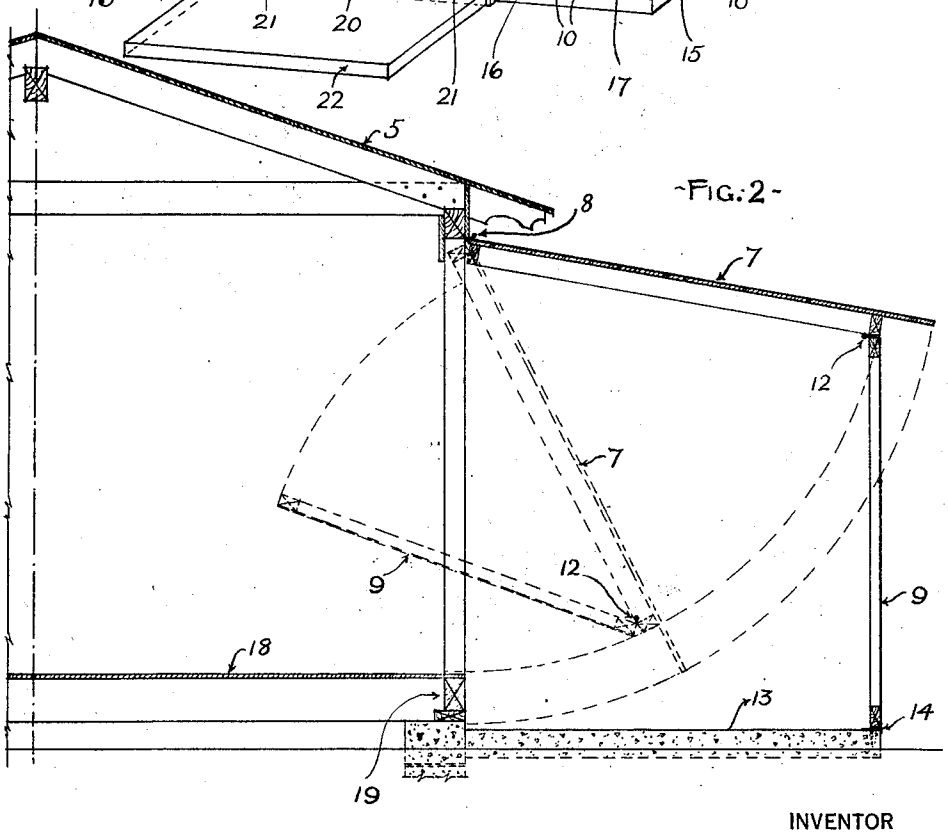
BUILDING STRUCTURE

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-FIG. 1-



-FIG. 2-



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UNITED STATES PATENT OFFICE.

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BUILDING STRUCTURE.

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To all whom it may concern:

Be it known that I, GEORGE L. KELLEY, a citizen of the United States, and resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Building Structures, of which the following is a specification.

This invention relates generally to building structures and has more particular reference to a construction especially adapted for buildings which are to be occupied seasonally or only at intervals.

The principal objects of the invention are to provide a building structure of the general type indicated which can be erected at a relatively low cost, which can be readily expanded or extended at will to increase the housing or storage space afforded, and which can be as readily condensed, for greater protection against the elements or against intruders, into a single compact unit during idle or unoccupied periods.

The invention consists in the provision of a building structure including a main room unit the walls of which are hinged near their upper margins to be swung outwardly and upwardly to form roof elements for extension room units whose outer walls are formed by wall units preferably hinged to the roof elements referred to in such a way as to take a vertical roof-supporting position when the roof elements are swung to their roof forming positions.

Other features of the invention include the use of light-weight materials both to restrict the cost of construction and to permit the manipulation of the extension elements with a minimum expenditure of energy and strength. An important feature resides in the use of fabric or other translucent material for a portion of the extension side walls in order to admit light to the interior of the structure and restrict the use of windows.

Still other features of the invention will be referred to hereinafter.

In the drawings, in which a preferred form of the invention has been selected for illustration,

Figure 1 is a view in perspective of a building structure embodying the invention.

Figure 2 is a view in vertical section of a portion of the building, showing details of construction.

Referring to the drawings for a more particular description, in Figure 1 is shown a building structure including a central unit 5 of a relatively fixed and permanent character, and flanking wings or units 6 and 7 of a collapsible or knock-down character which can be opened out or unfolded to extend or expand the size of the structure as a whole, or folded up to leave only the unit 5, in accordance with fluctuations in the desirability for expansion or contraction of housing or storage space.

The central unit 5 of the building structure described is preferably built in permanent formation in so far as the roof, front end wall, and the flooring is concerned, the two side walls 6 and 7 and, when desired, the other end wall being so constructed that the wall-forming members can be swung outwardly and upwardly about a hinge joint 8 to the full-line position indicated in Figures 1 and 2 to form roof members for room units forming on the central or permanent unit 5.

The roof members 7 are supported in their raised position by means of the wall members 9 which are preferably hinged near the outer extremity of the roof members and which are brought into a vertical position when the roof is raised, as is also indicated in Figures 1 and 2 of the drawing. The members 9, in the folded-down position of the roof members, occupy positions folded up against what is then the inner faces of the side walls of the central unit 5. In Figure 2 of the drawing there is indicated in dotted lines the path of movement through which the members 7 and 9 are moved to their two principal positions.

As has been already indicated the roof members 6 and 7 and the wall members 9 are preferably formed of light-weight material for the double purpose of restricting the cost of the construction and of affording a structure which can be readily lifted and placed in position without calling in the services of a gang of workmen. At the same time the roof and the wall members are made amply rigid and strong for the purpose by the use of diagonal struts and braces as at 10, so that no sacrifice of essential strength is made to obtain a light-weight construction capable of being easily manipulated.

I further increase the flexibility of construction, in addition to facilitating the lift-

ing of the parts into place, by dividing the relatively elongated roof members 6 and 7, and the corresponding wall members 9, into two portions or areas of substantially equal length, as at 11 in Figure 1. By this arrangement I make it possible to utilize the whole of the extension space provided, or only one-half of such space, as circumstances may require, the remaining half of the section being permitted to remain in its folded-up condition.

Preferably the side wall members 9 are hinged, as at 12, to the roof members 7, this construction permitting the wall members to be used as props for lifting the roof members to place and then serving as supports for the roof members as well as serving as outer wall members for the extension units. I find it convenient to form a floor 13 of concrete or other impervious material for the extension units, since this portion of the flooring is exposed to the weather when the extension room units are folded up, as in the winter months when the structure is used as a sea-shore cottage. In a preferred form of the invention an angle iron 14 forms a suitable butt plate on which the wall member 9 rests, and also acts as a flange to prevent movement of the wall member off the edge of the floor 13.

In order to admit sun-light into the extension units, I preferably form the upper portion 15 of the walls 9 of tent cloth, duck, or other translucent material which is weatherproof and which at the same time, allows light to pass therethrough. I find that this construction provides an ample amount of soft desirable light and does away with the expense, weight, and mechanical defects of ordinary windows.

The end walls 16 of the extension units are preferably also formed of a light-weight construction similar to that forming the side walls 9, and with the upper portion 17 formed of light-transmitting material in the same manner. The end walls 16 are preferably bodily removable but they may also be hinged to the roof members or to the central unit 5, if desired. The side walls 9 may also be formed to be bodily removable but the hinged construction shown is preferred.

Many modifications of the construction described and illustrated are possible within the field covered by the invention, it being kept in mind that means are provided for extending at will the housing or storage space afforded by a building structure, and on the other hand, for folding or reducing a building to a compact form representing only a fractional part of its normal size during periods when the building is wholly or partially unoccupied.

The permanent central unit 5 may be provided with a wooden floor as at 18 raised a sufficient distance above the extension floors 13 to permit the overhang of the roof to engage the side of the sill without touching the floor 13. The central unit 5 may be provided at its front end with a large window 20 and doors 21 as shown, or an extension room may be provided at the front also. Preferably a platform or uncovered porch floor is provided at 22, this feature forming no part of the invention. The wall at the other end of the unit 5 may be treated in any desired manner. It may be fitted to form an extension room, or a fire-place and chimney may be built therein, or windows and a door may be included as desired.

It will be seen that a low-cost housing structure has been provided that is capable of a considerable expansion, either temporary or permanent, for any desired purpose.

What I claim as my invention is:

1. In a permanent building structure having an overhanging roof, a main side wall member hinged to the main body portion beneath the overhang of the roof, a supplemental wall member formed of light-weight material and hinged to the main side wall member adjacent the lower extremity thereof, said supplemental wall member being adapted to be folded in vertical position against the inner face of the main side wall member, a permanent floor structure adjacent the side wall of the permanent building structure whereby said main side wall member may be swung outwardly to provide a roof over said floor structure, and means at the outer edge of the floor structure for engaging with the free extremity of the supplemental wall member to provide an extension to said building structure.

2. In a permanent building structure having an overhanging roof, a main side wall member hinged to the main body portion beneath the overhang of the roof, a supplemental wall member formed of light-weight material and hinged to the main side wall member adjacent the lower extremity thereof, said supplemental wall member being adapted to be folded in vertical position against the inner face of the main side wall member, a permanent weather-impervious floor structure adjacent and outside the side wall of the permanent building structure, said floor structure being formed at a lower level than the level of the floor of the permanent building structure, the lower end of said main side wall member being arranged to cover the vertical wall between the two floor levels and the hinged connection between the supplemental and main wall members being arranged to take a position above the main floor level, and the weather impervious floor structure having means along its outer edge forming a seat for the free end of the supplemental wall structure.

GEORGE L. KELLEY