

Jan. 17, 1950

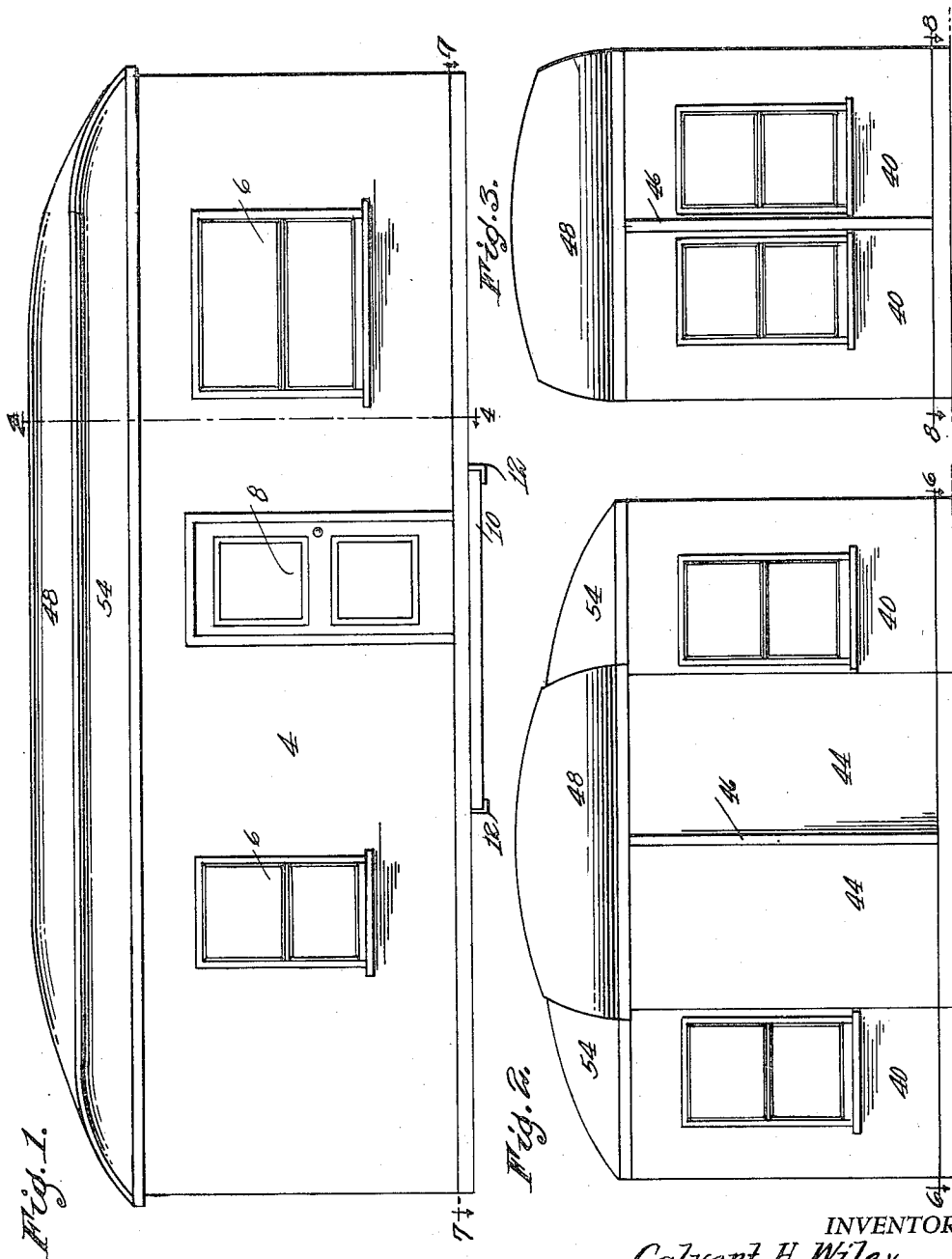
C. H. WILEY

2,494,680

COLLAPSIBLE PORTABLE HOUSE

Filed Dec. 3, 1946

5 Sheets-Sheet 1



INVENTOR
Calvert H. Wiley
BY Victor J. Evans & Co.

ATTORNEYS

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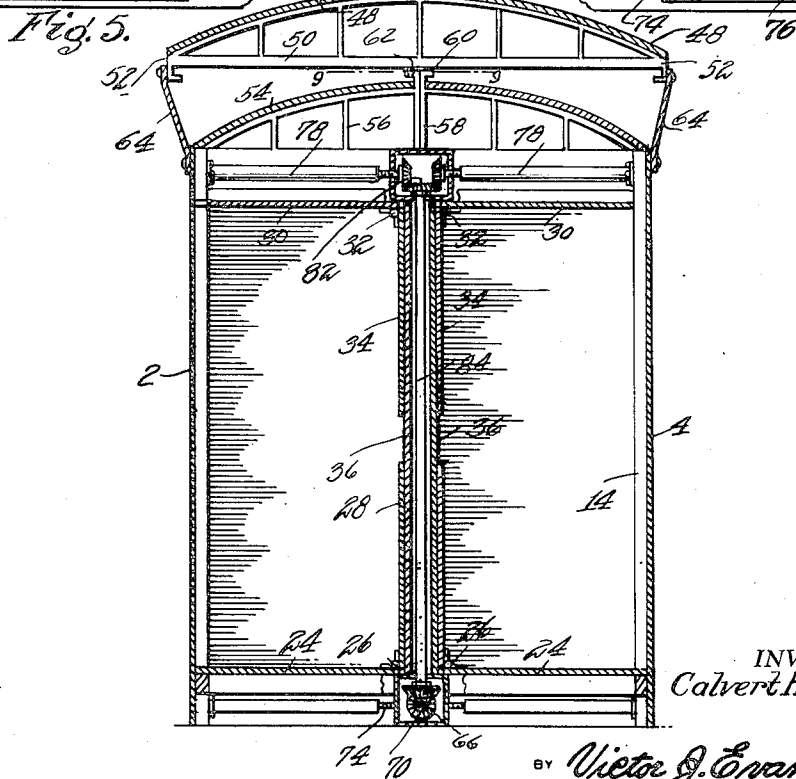
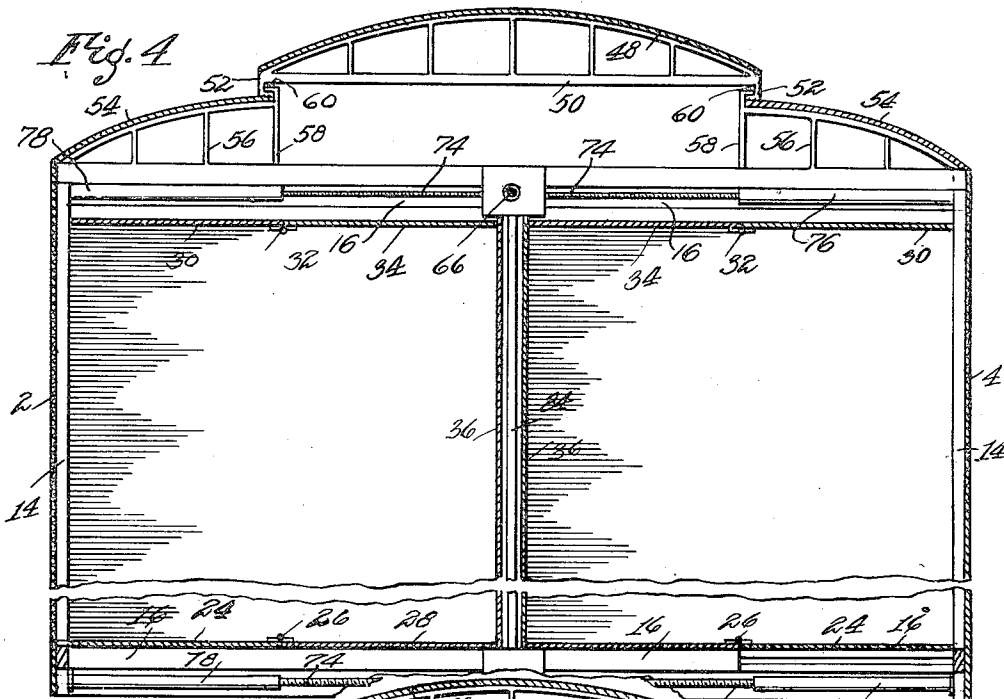
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INVENTOR.
Calvert H. Wiley

BY Victor J. Evans & Co.

ATTORNEYS

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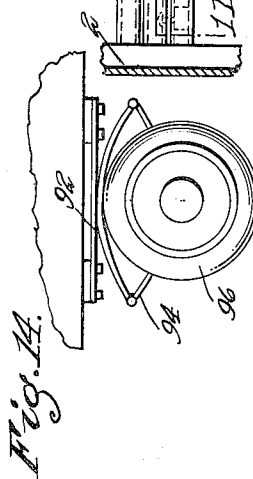
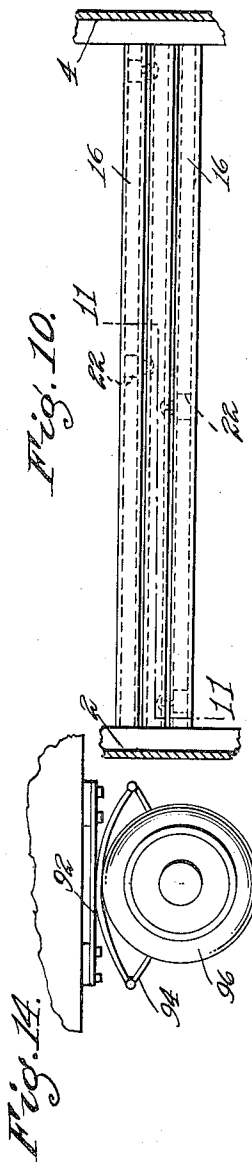
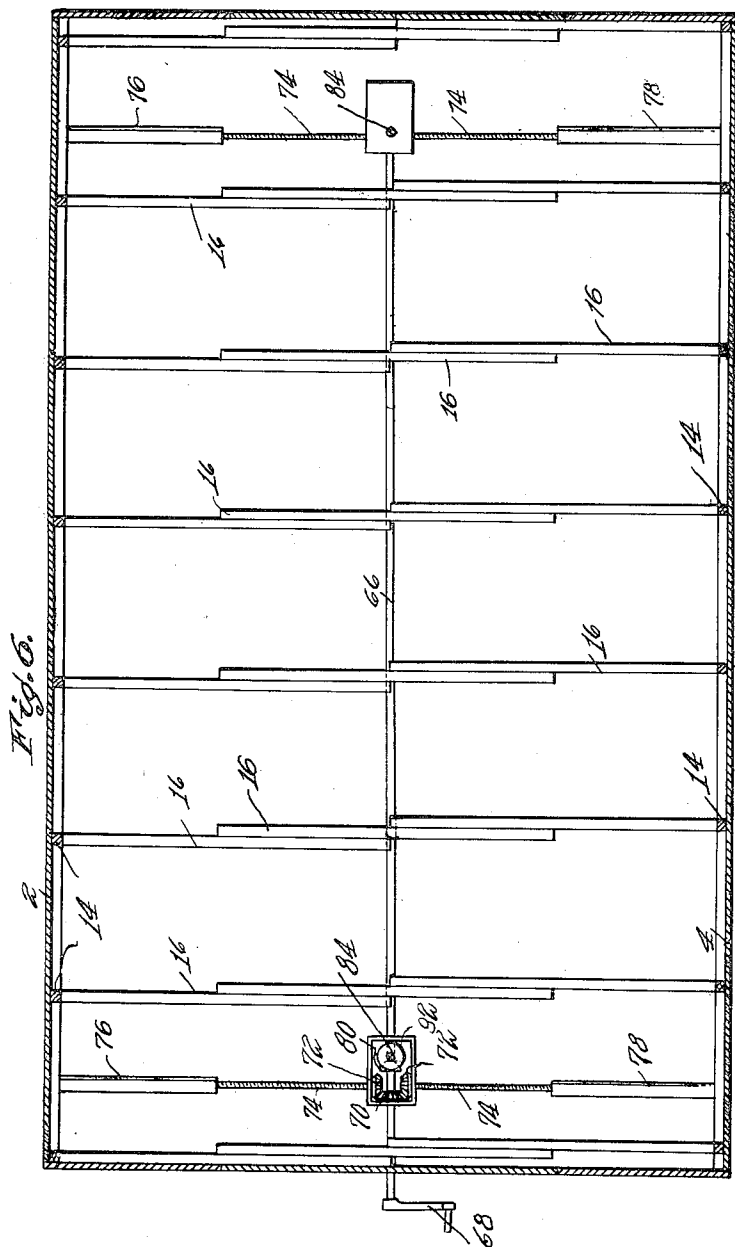
C. H. WILEY

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INVENTOR.
Calvert H. Wiley.

BY *Victor J. Evans & Co.*

ATTORNEYS

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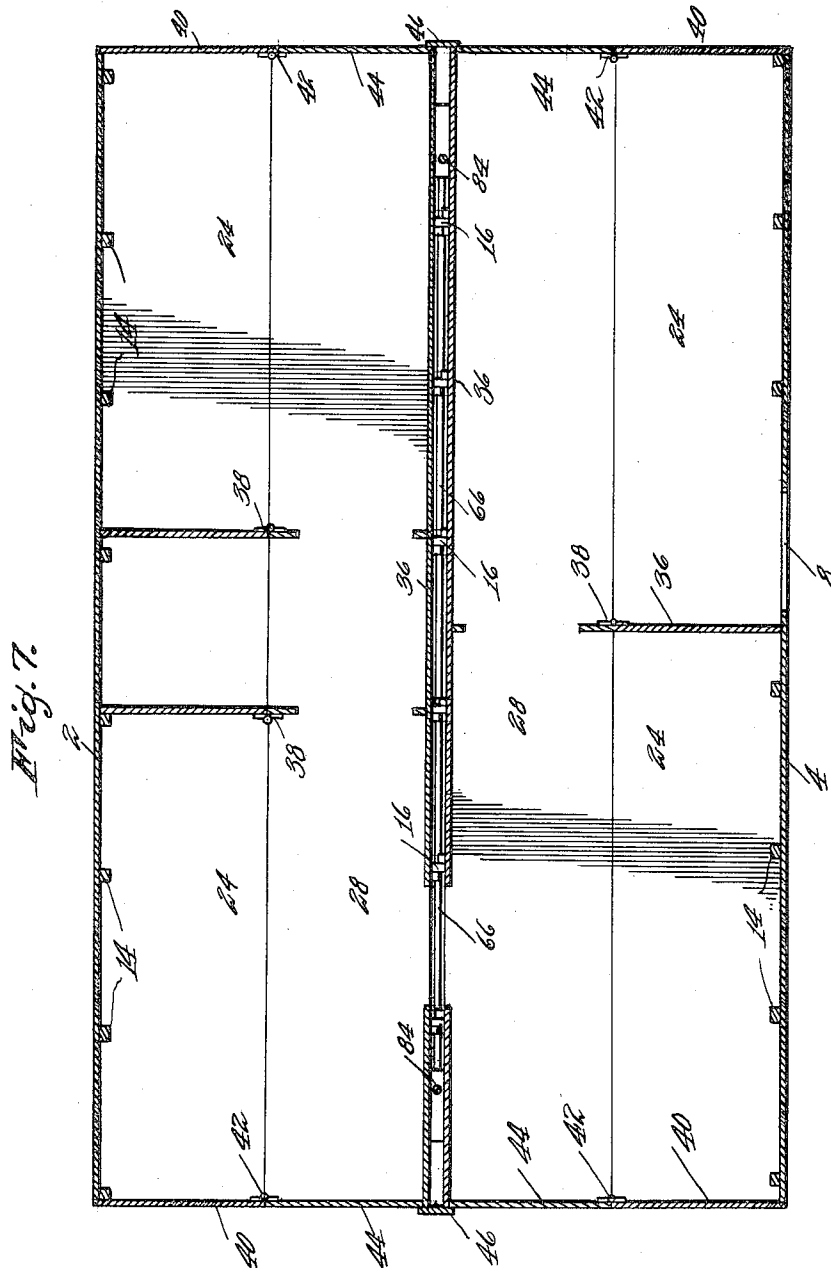
C. H. WILEY

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INVENTOR.
Calvert H. Wiley.
BY Victor J. Evans & Co.

ATTORNEYS

Jan. 17, 1950

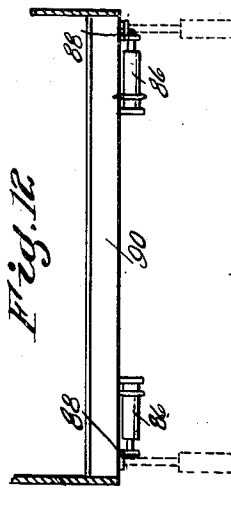
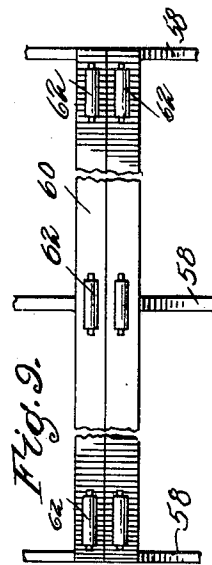
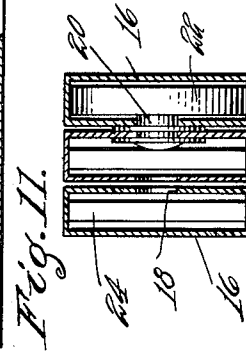
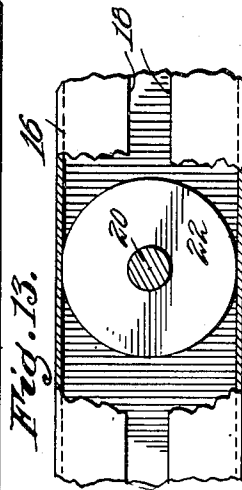
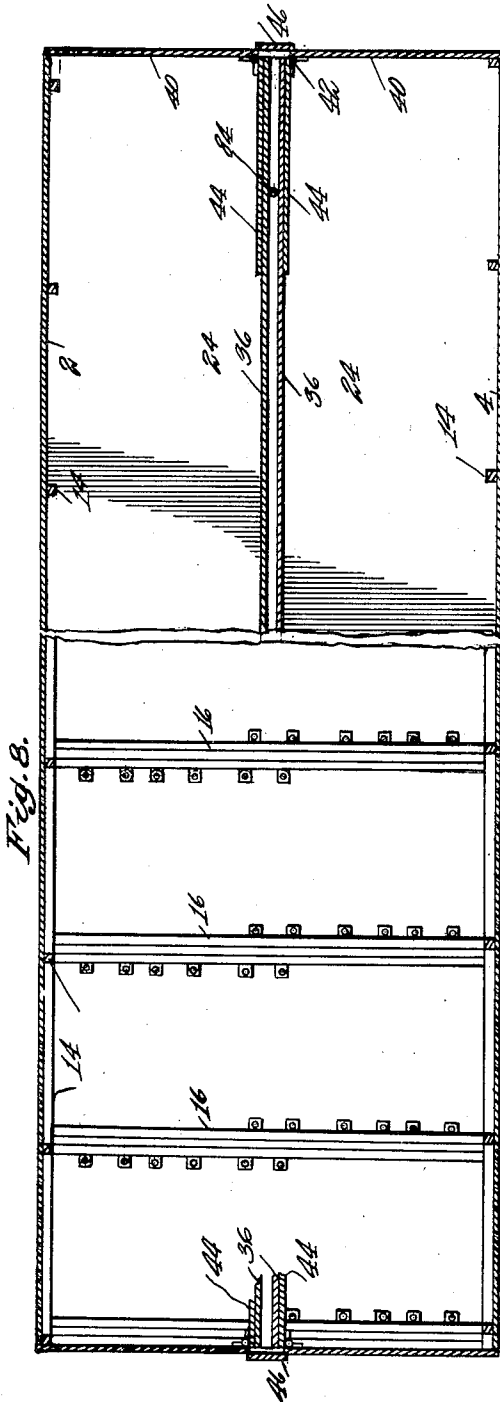
C. H. WILEY

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COLLAPSIBLE PORTABLE HOUSE

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5 Sheets-Sheet 5



INVENTOR
Calvert H. Wiley

BY *Victor J. Evans & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE

2,494,680

COLLAPSIBLE PORTABLE HOUSE

Calvert H. Wiley, Tulare, Calif.

Application December 3, 1946, Serial No. 713,614

3 Claims. (Cl. 20—2)

1

My present invention relates to an improved collapsible portable house and more especially to a house which does not require dismantling or disassembling but may with facility and ease be reduced in size so that it may be transported to the erection site and then expanded to conventional size.

In carrying out my invention I utilize extensible stringers and joists with sectional roof and floor so that by the operation of a single mechanical device the house may be contracted in size for the mounting of wheels or for mounting upon a wheeled carrier.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention according to the best mode I have thus far devised, but it will be understood that various changes and alterations may be made in the exemplified structure within the scope of the appended claims.

In the drawings:

Fig. 1 is a side elevational view of the house of my invention.

Fig. 2 is an end elevational view of the house expanded.

Fig. 3 is a similar view of the house contracted.

Fig. 4 is a transverse vertical sectional view at line 4—4 of Fig. 1.

Fig. 5 is a similar view with the side walls retracted.

Fig. 6 is a horizontal sectional view at line 6—6 of Fig. 2.

Fig. 7 is a horizontal sectional view at line 7—7 of Fig. 1.

Fig. 8 is a horizontal sectional view at line 8—8 of Fig. 3.

Fig. 9 is a horizontal view at line 9—9 of Fig. 5.

Fig. 10 is a top plan of one extensible joist.

Fig. 11 is a cross section through the sliding sections of the joist at line 11—11 of Fig. 10 and with the rollers of one of the side sections of the joist omitted to facilitate illustration of the construction thereof.

Fig. 12 is an elevational view of the jack devices for elevating and lowering the house.

Fig. 13 is a detail view of the roller support for the extensible joists.

Fig. 14 is a view of the wheel mount for use in transporting the house from place to place.

Referring now to the drawings, I have illustrated the present preferred embodiment of my invention as comprising side walls 2 and 4 having windows 6 and door 8. A porch platform 10 is slidably supported in stirrups 12. The walls 2 and 4 of suitable material are carried by studs

2

14 and the joists for floor and ceiling consist of hollow frames rectangular shaped in cross-section having sliding sections 16 with slots 18 in the inner sides of the side sections and in both sides of the intermediate section through which pass the axles 20 for rollers 22. The joists include intermediate sections with front and rear side sections and the rollers 22 are positioned in the front and rear side sections and journaled in the intermediate sections. Strips 24 close the ends of the frames and limit the movement of the rollers. The joists are extensible and contractible to bring the walls 2 and 4 in adjusted relation.

The floor consists of fixed panel sections 24 to which are hinged at 26 folding sections 28 and the folding sections are swung up to the position of Fig. 5 when the house is to be contracted.

The ceiling is composed of similar construction including fixed sections 30 having hinges 32 for folding sections 34.

Wall partitions 36 may be located as desired and the lateral partitions are hinged at 38 to permit the retraction of the walls 2 and 4.

The end walls include fixed sections 40 having hinged at 42 folding sections 44 fitting, when extended, against abutments 46.

The roof comprises a fixed section having cover 48 with trusses 50 and internally grooved flanges 52, and laterally movable side sections having covers 54 and trusses 56. Plates 58 at the inner ends of the side sections are flanged at 60 and carry rollers 62 that travel on the under surfaces of the trusses 50 and when extended the flanges 52 and 60 interlock. When retracted, covers 54 enclose the space between the fixed roof and the movable side sections.

To effect the retraction and expansion of the structure I employ a main shaft 66 suitably journaled and formed with a crank 68 exterior of the house. Gears 70 on the shaft mesh with gears 72 on threaded shafts 74 in the telescoping sleeves or tubes 76 and 78 so that rotation of the shafts 74 will, depending upon the direction of rotation, retract or extend the sides of the house, the outer ends of the sleeves being secured to walls 2 and 4.

For ease of operation, a gear 80 on shaft 66 drives gear 82 on vertical shaft 84 which is connected to telescoping assemblies identical to the lower assembly.

With the parts arranged in this manner the side walls with the associated sections of the floor and ceiling beams are extended or retracted by turning the crank 68 which rotates the threaded shafts 74 in the internally threaded sleeves 76 and 78. As the side walls approach the limit of

3

their outward movement the flanges 60 pass into the grooves of the flanges 52 providing a sealed roof joint at both sides and the hinged sections of the floor, ceiling, end walls and partitions are opened to the position illustrated in Figures 4 and 7 whereby the house is set up ready for use.

Jacks 86 are pivotally supported at 88 on the lower house frame members 90 and may be actuated to elevate the house to be placed on a carriage for moving. Alternately, there may be attached by frames 92 and springs 94, wheels 96 so that the house may be transported from place to place over the highway.

From the above description it will be apparent that the house of my construction may with facility and ease be retracted or reduced in width for ease of transportation, and after reaching its destination the walls may be extended, together with the folding floor and ceiling, and extensible roof, and the house is then ready for use.

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

1. In a collapsible portable house having continuous rigid side walls, the combination which comprises spaced extensible floor and ceiling joists including intermediate and front and rear side hollow sliding sections of rectangular shape in cross section and including rollers positioned in the said front and rear side sections and journaled through axles in the adjoining sides of the said intermediate sections, said front and rear side sections having slots in the inner faces thereof in which the said axles are positioned, transversely disposed threaded shafts journaled in the house in fixed positions above the ceiling and below the floor, sleeves threaded on said threaded shafts with the outer ends thereof fixedly attached to the said side walls, outer floor sections secured in fixed relation to and carried by movable sections of the said floor joists and attached to the said side walls, inner folding floor sections hinged to the said outer floor sections, outer ceiling sections secured in fixed relation to and carried by movable sections of the said ceiling joists and connected to the said side walls, inner folding ceiling sections hinged to the said outer ceiling sections, outer end panels secured to the ends of the said side walls, inner folding end panels hinged to the said outer end panels, a fixed centrally disposed continuous roof section spaced above the floor section and having continuous depending flanges with grooves in the inner surfaces extended downwardly from the opposite edges thereof, side roof sections mounted on movable sections of the said ceiling joists and extended inwardly and upwardly from the upper edges of the said side walls, said side roof sections having upwardly and outwardly extended flanges on the inner ends thereof that fit in the grooves of the depending flanges of the said centrally disposed roof section, and a fixed longitudinally disposed centrally positioned partition extended through the said house.

2. In a collapsible portable house having continuous rigid side walls, the combination which comprises spaced extensible floor and ceiling joists including intermediate and front and rear side hollow sliding sections of rectangular shape in cross section and including rollers positioned in the said front and rear side sections and journaled through axles in the adjoining sides of the said intermediate sections, said front and rear side sections having slots in the inner faces thereof in which the said axles are positioned, trans-

4

versely disposed threaded shafts journaled in the house in fixed positions above the ceiling and below the floor, sleeves threaded on said threaded shafts with the outer ends thereof fixedly attached to the said side walls, outer floor sections secured in fixed relation to and carried by movable sections of the said floor joists and attached to the said side walls, inner folding floor sections hinged to the said outer floor sections, outer ceiling sections secured in fixed relations to and carried by movable sections of the said ceiling joists and connected to the said side walls, inner folding ceiling sections hinged to the said outer ceiling sections, outer end panels secured to the ends of the said side walls, inner folding end panels hinged to the said outer end panels, a fixed centrally disposed continuous roof section spaced above the floor section and having continuous depending flanges with grooves in the inner surfaces extended downwardly from the opposite edges thereof, side roof sections mounted on movable sections of the said ceiling joists and extended inwardly and upwardly from the upper edges of the said side walls, said side roof sections having upwardly and outwardly extended flanges on the inner ends thereof that fit in the grooves of the depending flanges of the said centrally disposed roof section, a fixed longitudinally disposed centrally positioned partition extended through the said house, and transversely disposed intermediate partitions having outer sections secured to the said side walls and folding inner sections hinged to the inner edges of the said outer sections.

3. In a collapsible portable house having continuous rigid side walls, the combination which comprises spaced extensible floor and ceiling joists including intermediate and front and rear side hollow sliding sections of rectangular shape in cross section and including rollers positioned in the said front and rear side sections and journaled through axles in the adjoining sides of the said intermediate sections, said front and rear side sections having slots in the inner faces thereof in which the said axles are positioned, transversely disposed threaded shafts journaled in the house in fixed positions above the ceiling and below the floor, sleeves threaded on said threaded shafts with the outer ends thereof fixedly attached to the said side walls, common means for rotating said threaded shafts including a driving shaft terminating at one end of the house, outer floor sections secured in fixed relation to and carried by movable sections of the said floor joists and attached to the said side walls, inner folding floor sections hinged to the said outer floor sections, outer ceiling sections secured in fixed relation to and carried by movable sections of the said ceiling joists and connected to the said side walls, inner folding ceiling sections hinged to the said outer ceiling sections, outer end panels secured to the ends of the said side walls, inner folding end panels hinged to the said outer end panels, a fixed centrally disposed continuous roof section spaced above the floor section and having continuous depending flanges with grooves in the inner surfaces extended downwardly from the opposite edges thereof, side roof sections mounted on movable sections of the said ceiling joists and extended inwardly and upwardly from the upper edges of the said side walls, said side roof sections having upwardly and outwardly extended flanges on the inner ends thereof that fit in the grooves of the depending flanges of the said centrally disposed

5

roof section, a fixed longitudinally disposed centrally positioned partition extended through the said house and transversely disposed intermediate partitions having outer sections secured to the said side walls and folding inner sections 5 hinged to the inner edges of the said outer sections, said side walls and end panels having windows therein.

CALVERT H. WILEY. 10

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