(No Model.)

C. H. LEONARD.

PORTABLE STORM HOUSE.

No. 436,668. Patented Sept. 16, 1890.

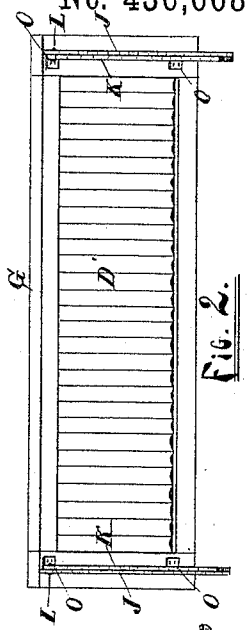


Fig. 2.

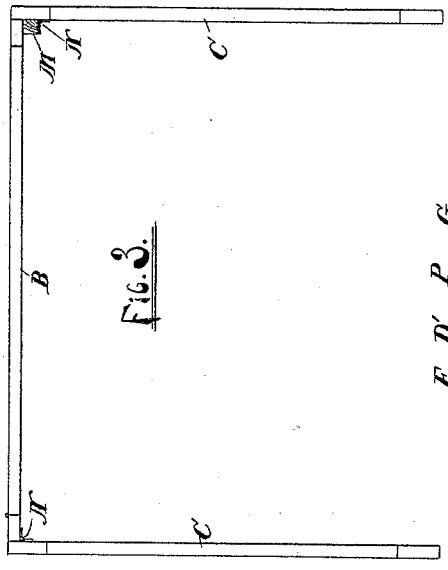


Fig. 3.

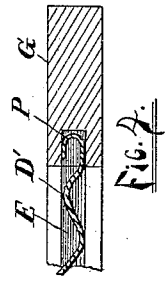


Fig. 4.

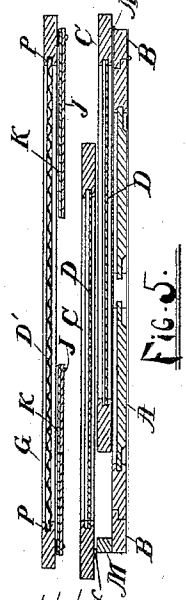


Fig. 5.

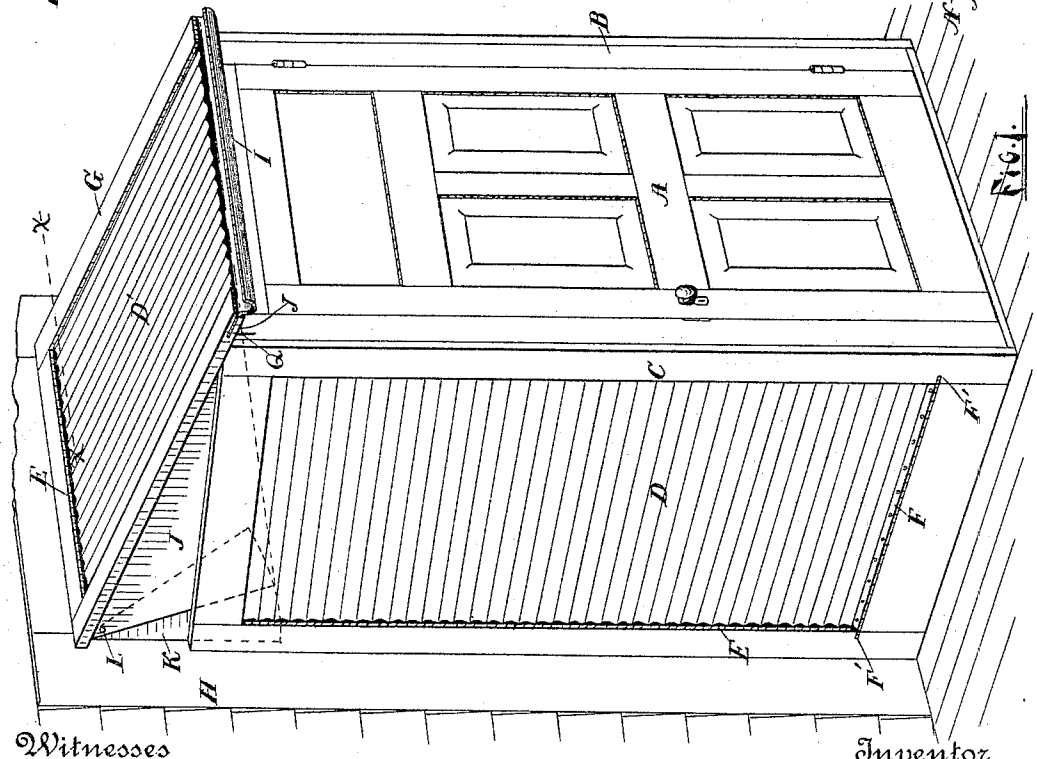


Fig. 1.

Witnesses

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UNITED STATES PATENT OFFICE.

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PORTABLE STORM-HOUSE.

SPECIFICATION forming part of Letters Patent No. 436,668, dated September 16, 1890.

Application filed August 31, 1889. Serial No. 322,520. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. LEONARD, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Portable Storm-Houses, of which the following is a specification.

The nature of my invention relates to a portable structure composed of a series of panels hinged together in such a manner that they may be set up and attached to form a portable building, and is peculiarly adapted to use in the construction of storm-houses or houses which are attached to buildings for the purpose of protecting such buildings from cold in winter, the objects of the invention being to construct a cheap, substantial, and portable structure which can be readily set up and attached together or set up and attached to a building, and readily removed and folded for the purpose of transportation or storage. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my invention when applied as a storm-house to cover the outer door of a building. Fig. 2 is a rear elevation of the roof and half gables of the building when the roof is raised in position shown in Fig. 1. Fig. 3 is a plan view of the base of the building. Fig. 4 is a sectional view of a portion of the roof on line *x x* of Fig. 1, designed to show the method of inserting the edge of the metallic panel within the wooden grooves of the side frame of the roof; and Fig. 5 shows the structure folded together ready for shipment or storage.

Similar letters refer to similar parts throughout the several views.

C represents the side frame, which in the example of my invention shown in the drawings contains or incloses a metallic panel, preferably made of corrugated iron and shown in the drawings by D. It will be understood that while but one panel is shown a similar panel is found on the opposite side of the structure.

B is the frame-work which supports the door, which door is shown by A.

In attaching the structure to a house but three sides are used, the house, which is shown in the drawings by H, forming the fourth side.

The attachment to the house may be by means of hooks, bolts, or any well-known attachment.

G represents the frame-work of the roof, which frame-work is provided with a groove in the side next to the house, which receives what I shall term the "upper" end of the metallic panel D'. This groove is shown by E. The sides of the frames are each provided with a groove which receives the edges of the metallic panels. The panel is bent at its edges so as to form a channel or gutter for the water to pass away and so as to prevent any water from leaking through at the point where the metallic panel is connected to the side frame. The form of the groove or bent portion of the channel which rests in the side grooves is shown in Fig. 4 by P.

At what I shall term the "lower" end of the roof I provide a channel or gutter I, designed to carry off the water which is received from the roof.

In order to adapt the structure to different houses, so that it may cover outer doors of different heights, I construct the roof somewhat longer than the length of the sides, and form the half-gables in the following manner: I provide two plates, preferably of metal, which are shown in the drawings by J. These side plates pass through grooves in the front frame, the position of the grooves being shown in the drawings by Q. The plates J are approximately triangular in shape and of sufficient width at the point next to the building to which my structure is applied to allow the roof to be raised at that side, so as to form a steep incline.

In applying my structure to the outer door of a building, the roof is raised at the side next to the building, so that it is above the top of the door of the house. It is then pushed backward, so as to be in contact with the building, and locked in that position by any suitable means. The plates J form the half-gables of the storm-house. It will be observed, however, that in raising the roof and placing it against the side of the house

it would leave an opening which it would be impossible to cover by any adjustment of the plates J, which opening would be above the frame C and next to the building to which my structure is applied. In order to cover such opening, I use two of the plates shown in the drawings by K, which are pivoted to the plates J at L. The plates K drop down so as to form a covering to such opening and thereby complete the structure. By this construction of the roof, adapted to slide longitudinally, and the side plates J and K, I am enabled to adapt my house to buildings having doors varying greatly in height and still have a perfect-fitting storm-house.

The side walls and what I shall term the "front" wall, or wall which contains the door, are hinged together, the hinges being shown by N N. One of the hinges N is attached to the block M, in order that one side will fold flat upon the other side, the construction being shown fully in Fig. 5. The side plates J are hinged to the roof, and the plates K are pivoted to the side plates J. The hinges which attach the plate J to the roof are shown in Fig. 2 by O. This enables me to fold the side plates J and K close against the under side of the roof, as shown in Fig. 5.

The corrugated panels can be made of any suitable metal, and the corrugations may be large or small, and if found desirable these metal plates may be painted or finished in any other suitable manner.

F is a part of the iron panel which overlaps the lower part of the wooden frame to allow the water which may drip down along the panel to pass off freely. The side edges of the part F may engage lateral recesses in the frame C, as shown at F′, Fig. 1.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. A portable storm-house consisting of the front frame provided with a door, the side panel-frames hinged to the front frame to fold thereupon, one upon the other, and the sliding roof-panel frame, having a plate J hinged to it at each side to form gables and close the space between the upper ends of the side panel-frames and the roof-panel frame, substantially as described.

2. In a portable structure, the roof-panel frame having its sides provided with grooves, in combination with the metallic roof-panel having its edges bent into water-channels which are located within the side grooves of the roof-panel frame, substantially as described.

3. In a portable storm-house, the combination of a vertical front frame and vertical side panel-frames with a roof-panel frame, having at the sides the hinged plates forming gables which close the space between the upper ends of the side panel-frames and the roof-panel frame, substantially as described.

4. In a portable storm-house, the combination of a vertical front frame and side panel-frames with a roof-panel frame having at the sides the hinged plates forming gables to close the space between the upper ends of the side panel-frames and the roof-panel frames, and a plate pivoted to the inner end of each hinged gable-plate and swinging therewith against the roof-panel frame, substantially as described.

5. In combination with the upright walls of a storm-house, a roof adapted to be raised and lowered and slid bodily upon said walls and provided with plates forming the gables of the storm-house, substantially as described.

6. The combination, with the upright walls of a storm-house, of a movable roof having side plates adapted to move with the roof, and having the ends of such plates near the lower end of the roof fitted into and adapted to move in grooves in the upright walls, substantially as described.

7. In a portable storm-house, the combination, with the roof-panel frame G, of the half-gable plates J, hinged to said frame, and the supplemental plates K, pivoted to the plates J, substantially as described.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

CHARLES H. LEONARD. [L. S.]

Witnesses:

HUGH E. WILSON,

EDWARD TAGGART.