(No Model.) 2 Sheets—Sheet 1.

# C. H. LEONARD.

## PORTABLE HOUSE.

No. 451,733. Patented May 5, 1891.

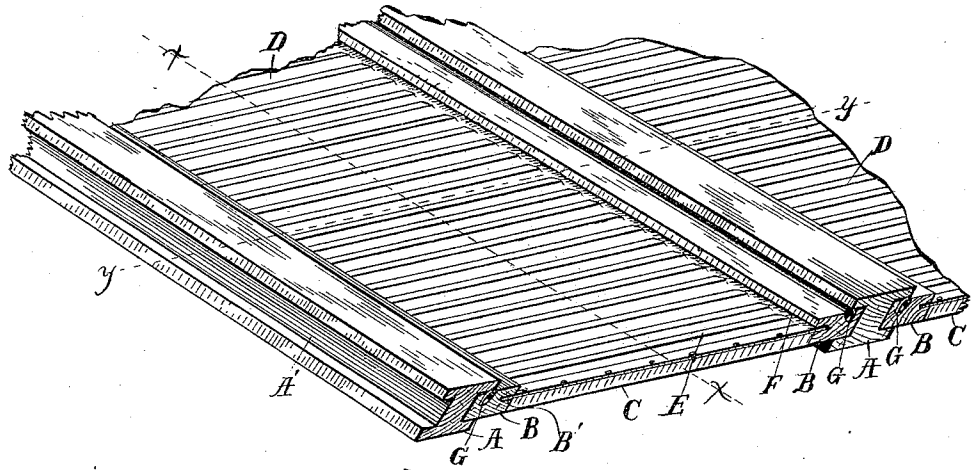



Fig. 1.

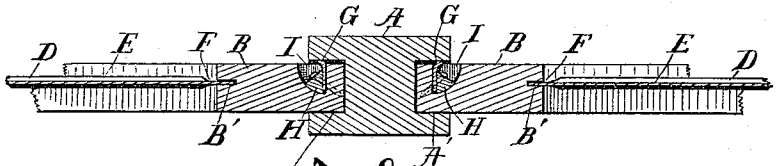



Fig. 2.

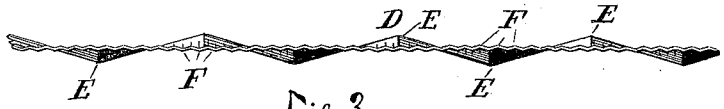



Fig. 3.

WITNESSES.

Claud A. Buchanan

Charles H. Tufts.

INVENTOR

Charles H. Leonard.

BY

Moulton & Rogers

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

# C. H. LEONARD.

## PORTABLE HOUSE.

No. 451,733. Patented May 5, 1891.

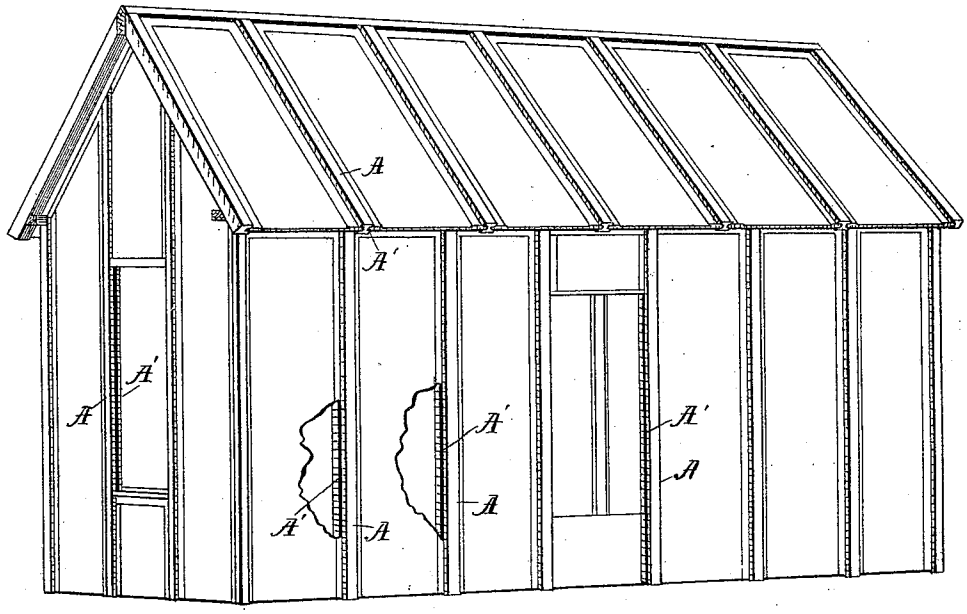



Fig. 2.

WITNESSES:

Lois Moulton
Charles W. Tufts.

INVENTOR
Charles H. Leonard
BY
Moulton & Rogers.
ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

CHARLES H. LEONARD, OF GRAND RAPIDS, MICHIGAN.

## PORTABLE HOUSE.

SPECIFICATION forming part of Letters Patent No. 451,733, dated May 5, 1891.

Application filed July 1, 1890. Serial No. 357,395. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. LEONARD, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Metallic Panels for Panel Structures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to metallic panels for panel structures having a frame-work constructed of posts grooved at the sides to receive said panels, and is adapted, especially, to portable or detachable structures of various sorts, more especially to such as are described in Letters Patent No. 419,859, issued to me January 21, 1890, wherein the construction consists, essentially, of a series of detachable rafters and a series of detachable studs and a series of detachable panels constructed of corrugated sheet metal, and my object is to provide a means of constructing such structures with weather-tight joints; and it consists in the construction, combination, and arrangement of parts hereinafter described, and particularly pointed out in the claims, reference being had to the accompanying drawings, wherein—

Figure 1 represents a detached detail or section of a portion of a structure, showing the method of attaching my improved panel; Fig. 2, a section of same on the line *y y*, Fig. 3, an edge view of the sheet-metal panel parallel with the line *x x*, and Fig. 4, a perspective of a structure embodying my invention.

Like letters of reference indicate like parts in each of the several figures.

A A represent posts forming the side frames for the panels and having longitudinal side grooves A′ for engaging the sides thereof, and B represents the stiles of the panels engaging the grooves. The panel-frame consists of the stiles B and cross-bar C, to which the sheet metal D is secured. The edge of the stile B is provided with a longitudinal groove B′, the size of an ordinary saw-kerf. The sheet metal D has corrugations E, and the edge of each sheet has integral smaller corrugations F of such pitch as to take up the slack metal, prevent buckling, and make a parallel edge, which is adapted to be received into the groove B′, leaving between the wood and metal interstices, which are filled with paint or cement to make a water-tight joint. The side of stile B near the opposite edge is provided with another longitudinal groove I, in which is placed upon edge a strip of rubber or other flexible material G, which projects above the surface of B and engages the side of the groove A′, and is secured in place by strips of wood H, (triangular in cross-section,) suitably nailed. It it is obvious that this construction and arrangement will afford a water-tight joint, and that it is particularly adapted to the construction of roofs, for the reason that the water will follow the groove I to the eaves, and that the bearing of the edge of G upon the side of the groove A′ will prevent leakage.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A metallic panel for paneled structures, having a sheet-metal plate D, having its main portion corrugated, as shown, and its marginal portion corrugated with folds of lesser size, but in greater number, to form an edge of less diameter, adapted to enter a narrow groove or saw-kerf, and a frame having bars or stiles B B, having narrow grooves B′ B′, in which said corrugated edge is placed, substantially as and for the purposes set forth.

2. In paneled structures having a frame-work constructed of posts grooved at their sides to receive the panels, a corrugated sheet-metal panel consisting of corrugated sheet-metal plate D, having its main portion or body corrugated, as shown, with folds of a certain size and its marginal portion corrugated with folds of lesser size, but in greater number, to form an edge of less diameter, and arranged within a frame having bars or stiles B B, having narrow grooves B′ B′, in which said corrugated edge is placed, said

bars being also slotted longitudinally, as shown, and provided with strips of rubber or other suitable material G, secured within said slots and having their edges projecting and engaging said grooved posts to form a tight joint between said frame and post, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. LEONARD.

Witnesses:
DENNIS L. ROGERS,
LUTHER V. MOULTON.