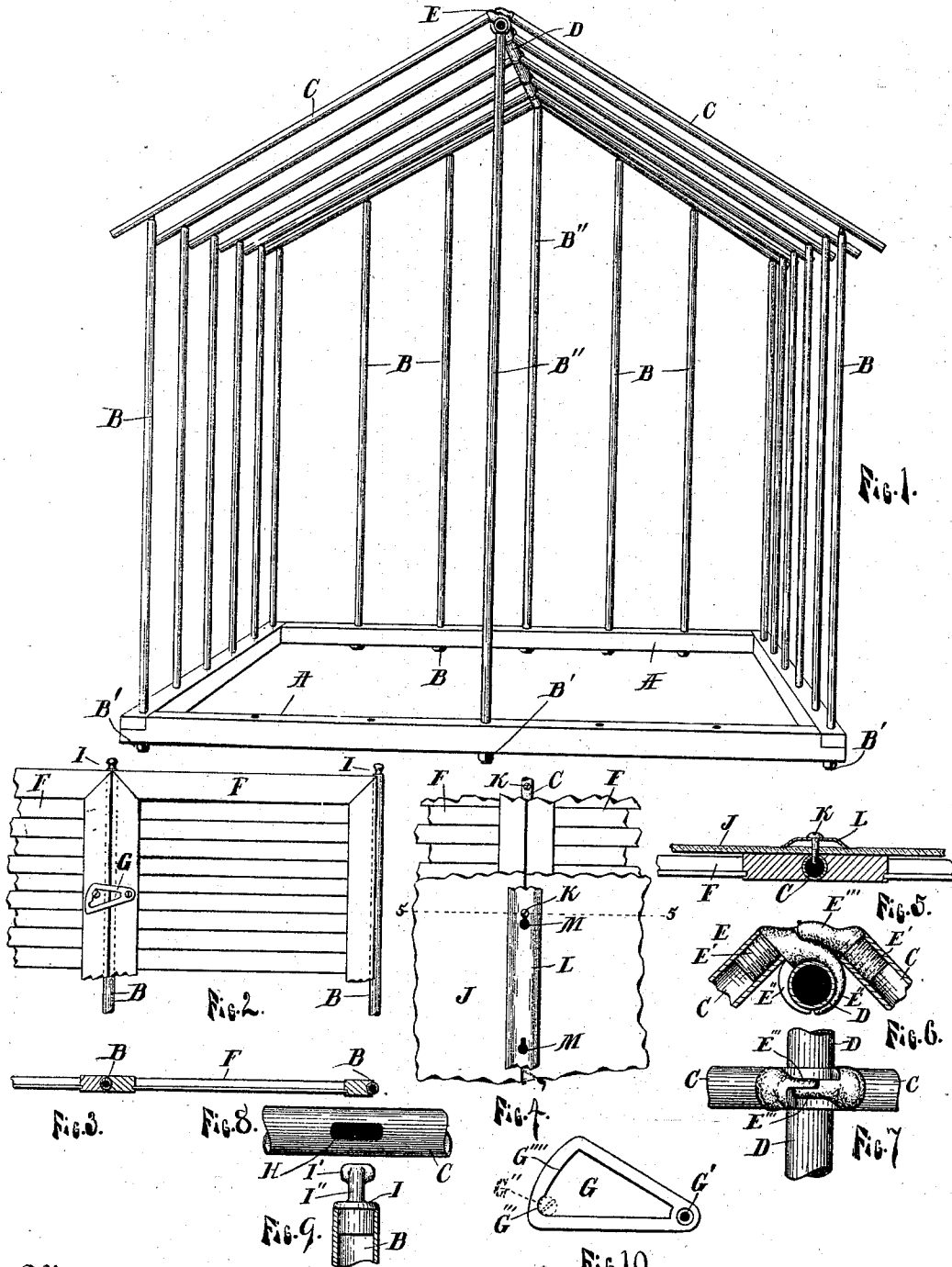


(No Model.)

C. H. LEONARD.
PORTABLE HOUSE.

No. 552,533.

Patented Jan. 7, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES H. LEONARD, OF GRAND RAPIDS, MICHIGAN.

PORTABLE HOUSE.

SPECIFICATION forming part of Letters Patent No. 552,533, dated January 7, 1896.

Application filed June 7, 1895. Serial No. 552,046. (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 Portable Houses; 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 improvements in portable houses, and its object is to provide the same with certain new and useful features, hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the tubular iron framework of my improved house with the front studding removed; Fig. 2, a detail of the panels; Fig. 3, a cross-section of the same; Fig. 4, a detail of the metallic batten-strip, showing the application of the same; Fig. 5, a section of the same on the line 5 5 of Fig. 4; Fig. 6, a detail of the castings, which lock the rafters to the ridge-pole, in side elevation; Fig. 7, a detail of the same in plan view; Fig. 8, a portion of a rafter, showing the slot to receive the stud-fastening; Fig. 9, a detail of the stud-fastening; and Fig. 10 a detail of the panel-fastening.

Like letters refer to like parts in all of the figures.

A are the sills of the house, and B are the tubular iron studs which pass through said sills and have nuts B' on their ends, which nuts engage the under side of said sills.

C are rafters of the same material as the studs, which rafters are locked to the ridge-pole D by the castings E. Said castings are provided with hooks E'', which pass each other to the right and engage the ridge-pole at opposite sides, encircling the same; and at the top of said castings are provided the lugs E''', which engage and pass each other to the left. Said castings are thus interlocked, and as they are secured to the rafters by means of the shank E' said rafters are thus locked to each other and to the ridge-pole. To secure the studs to the rafters, oblong slots H are cut in said rafters and in the ends of said studs are secured fastenings I consisting of oblong

heads I' attached to said studs by necks I''. By putting said heads into said slots and turning the studs to bring the heads transversely to said slots the rafters will be locked to said studs. The studs or posts B'' which support the ridge-pole are secured to said pole in like manner.

The panels F are preferably made of wood, consisting of an outer frame and a central portion of siding. In the sides of said frames are grooves to receive the studs and rafters. Said grooves are of such depth that when the panels are in place their edges meet and the studs and rafters are covered, said paneling presenting a continuous inner and outer surface. To tie said panels together, a fastening G is used, which consists of a triangular-shaped casting pivoted at G' to one panel and engaging a screw G in the other panel. The edge G''' engages the shank of said screw, and said edge being eccentric to the pivot G', when the fastening is forced downward, the panels will be pulled toward each other. A notch G''' allows the head of said screw to pass.

The panels comprising the roof are the same as the side panels and are secured to the rafters in the same manner. Over these panels are secured strips of suitable roofing material J, the same width as said panels, and the seams covered by the metallic batten-strips L. Screws K project from the rafters far enough to enter the openings M in the batten-strips and allow their heads to engage the outer surface when said batten-strips are moved longitudinally, and the shanks of said screws enter the slots leading from said openings M. The edges of said strips are turned downward and when they are secured in place as described said edges press into the roofing material and form water-tight joints.

By using hollow iron tubing I get a light and durable frame easily taken apart and set up, and by grooving the panels to receive the studding and rafters instead of grooving the rafters and studding to receive the panels, as heretofore, said frame is entirely obscured, leaving a continuous paneled surface at both sides. Securing the studs to the rafters, interlocking the hooks on the ridge-pole, and fastening the house to the sills by the lock-nuts binds all parts together and secures a light yet very strong and durable frame.

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

1. The combination with ridge pole and
5 rafters, of a casting secured to one end of
each rafter, said castings having hooks to en-
gage the ridge pole and being relatively so
constructed that they will interlock in pairs
and thereby secure the rafters together in
10 pairs, substantially as described.

2. The combination of the rafters and a
ridge pole, of a casting secured to one end of
each rafter, each of said castings having a
hook projecting from one side and a lug at
15 the top, the hooks of a pair of castings being
constructed and arranged to pass each other
at one side of the castings and to engage op-
posite sides of the ridge pole, and the pairs
of lugs being arranged and constructed to in-
20 terlock with each other and thereby lock the
rafters together in pairs, substantially as de-
scribed.

3. A rafter having a threaded end and pro-
vided with a casting for securing it to a ridge
25 pole and to another rafter; said casting em-
bodying a threaded shank by which it is se-
cured to said rafter, a hook to engage the
ridge pole, and a lug constructed to interlock
with a similar lug of the casting on another
30 rafter.

4. In a portable house, the combination
with the panels, of a fastening means there-
for, consisting of a triangular fastener on one
panel and a headed projection on the other
35 panel to be engaged thereby, said triangular

fastener being pivoted at one end and having
an opening with its forward edge eccentric
to the pivot and a notch in said forward edge,
substantially as described.

5. The combination of sills, tubular studs, 40
panel frames having grooves to receive said
studs, and a fastening pivoted at one end to
one panel and having the inner edge of its
other end eccentric to and engaging a screw
secured to the other panel, substantially as 45
described.

6. A roof for a portable house, embodying
a ridge pole, rafters secured thereto, panel-
frames having grooves to receive said rafters,
panels secured to said frame, roofing mate- 50
rial of substantially the same dimensions as
said frames, secured thereto and covering said
panels, batten strips overlapping the joints,
and fasteners for the batten strips, extend-
ing between the pairs of panel frames into 55
said rafters, substantially as described.

7. In combination with the roof of a port-
able house, batten strips adapted to cover the
seams in said roof and having downwardly
turned edges, and openings, and slots, and 60
screws projecting from said roof and adapted
to engage said slots, substantially as de-
scribed.

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

CHARLES H. LEONARD.

Witnesses:

CHAS. J. POTTER,

LUTHER V. MOULTON.