

(No Model.)

3 Sheets—Sheet 1.

A. CHASE.
PORTABLE BUILDING.

No. 469,638.

Patented Feb. 23, 1892.

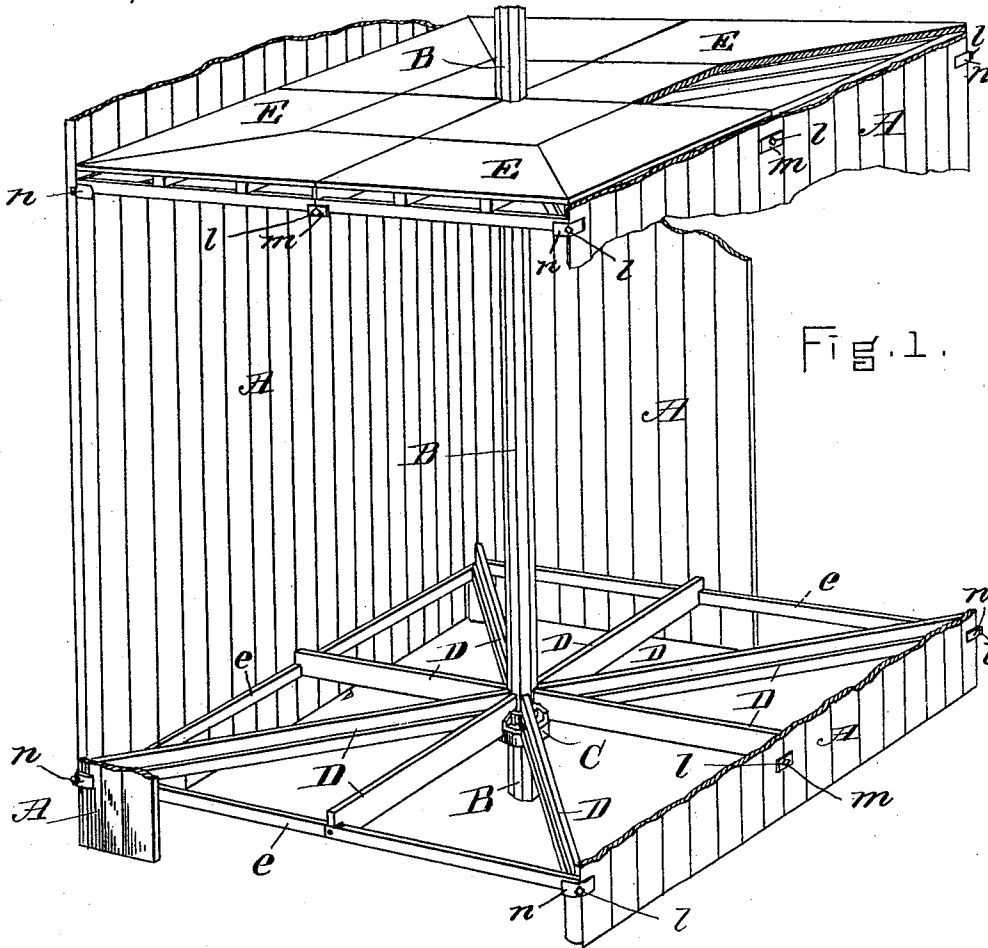
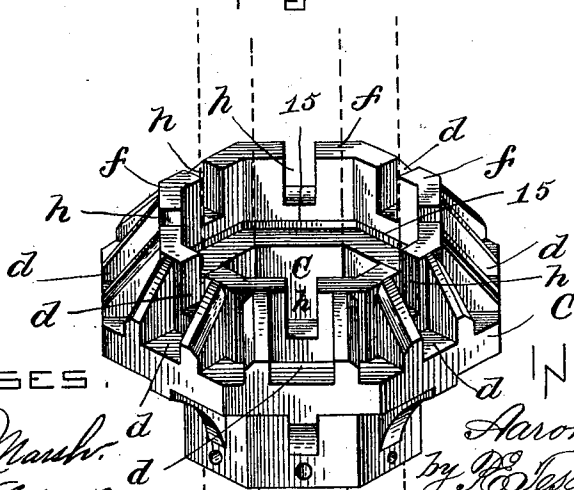


Fig. 1.

Fig. 4.



WITNESSES.

Henry Marsh
Harry H. Allen

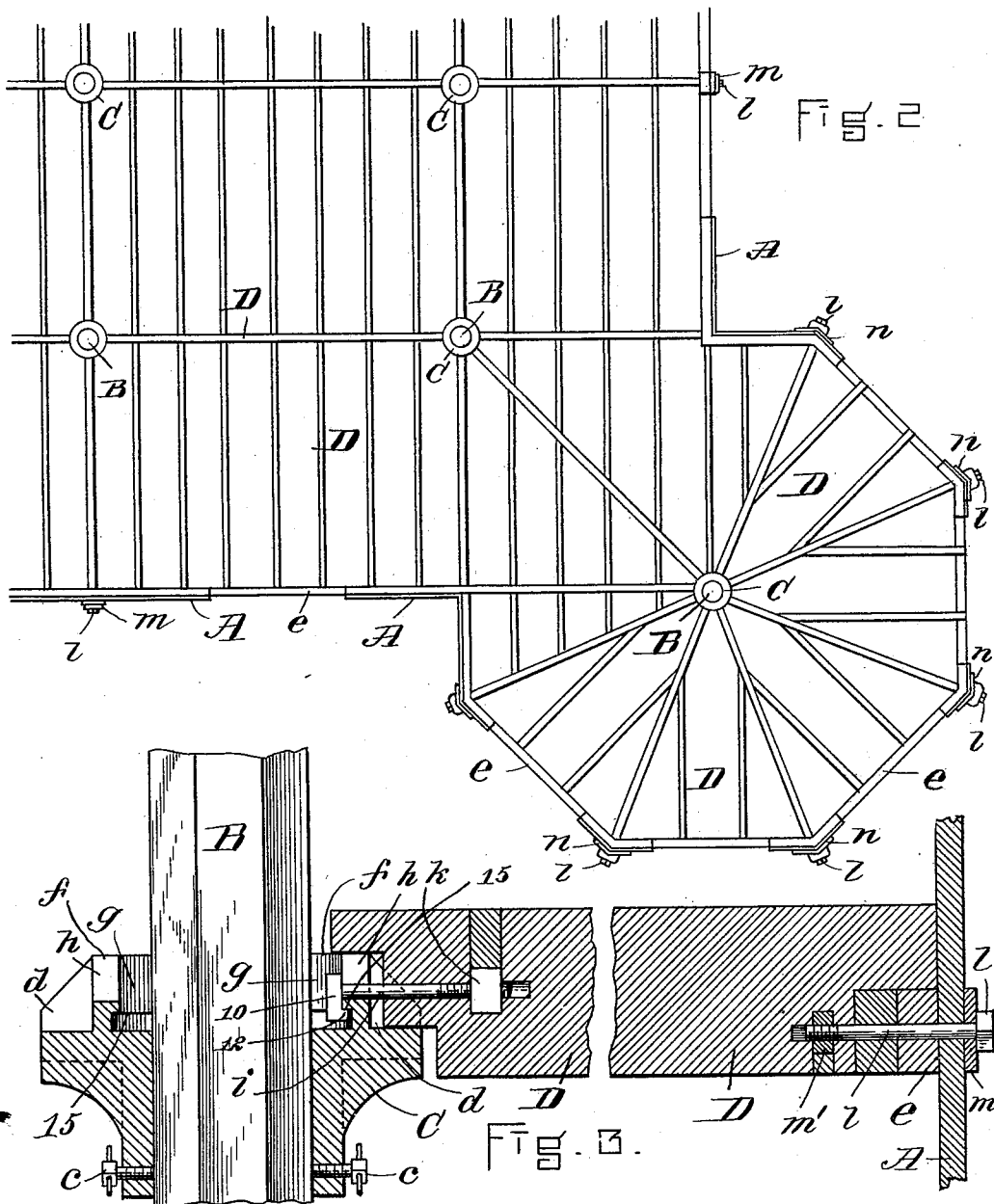
INVENTOR.

Aaron Chase
by R. B. Schenck
Att'y

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WITNESSES.

Henry March.
Harry H. Allen.

INVENTOR.

Aaron Chase
by J. E. Schenck
Att'y

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3 Sheets—Sheet 3.

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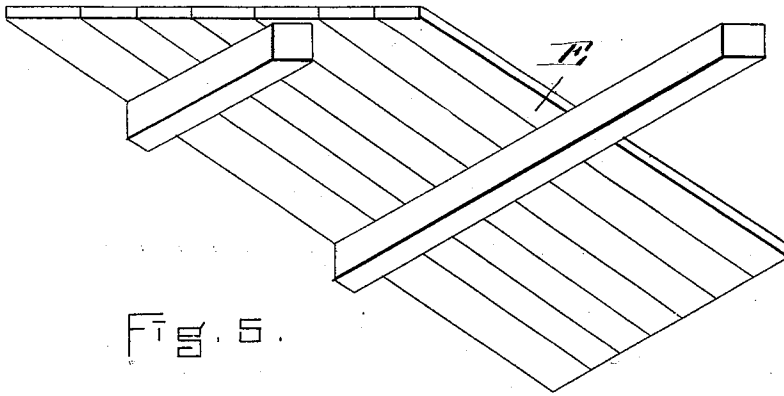


Fig. 5.

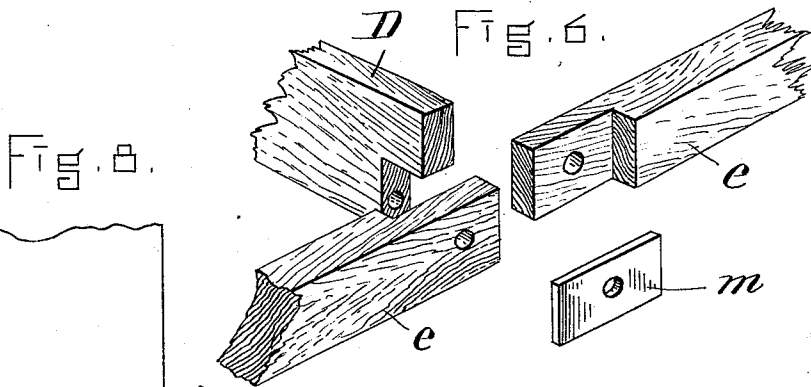


Fig. 6.

Fig. 8.

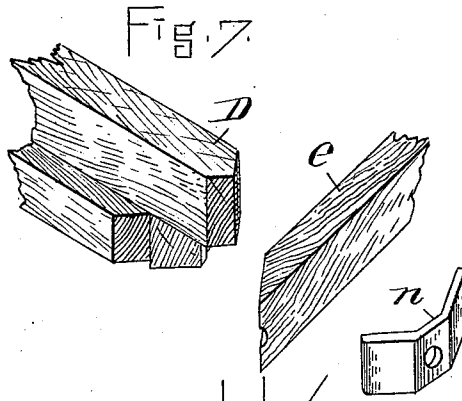
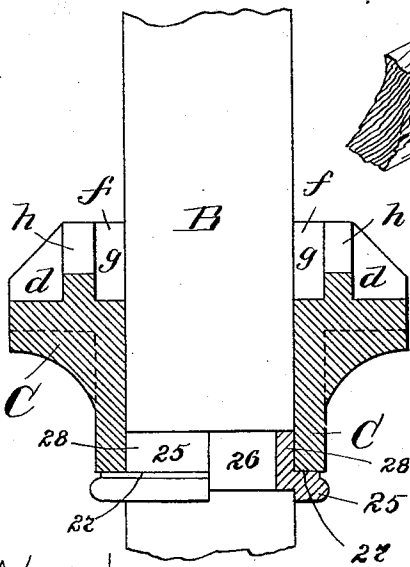


Fig. 7.

WITNESSES

Henry Marsh
Harry H. Hiken

INVENTOR.

Aaron Chase
by *P. B. Teschemacher*

UNITED STATES PATENT OFFICE.

AARON CHASE, OF WALTHAM, MASSACHUSETTS.

PORTABLE BUILDING.

SPECIFICATION forming part of Letters Patent No. 469,638, dated February 23, 1892.

Application filed May 8, 1891. Serial No. 392,093. (No model.)

To all whom it may concern:

Be it known that I, AARON CHASE, a citizen of the United States, residing at Waltham, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Portable Buildings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a portion of a portable building embodying my invention. Fig. 2 is a portion of a floor plan of a building constructed in accordance with my invention. Fig. 3 is a sectional view through the girder-supporting hub or collar surrounding the central vertical post, one of the outer or side walls and one of the girders extending from said hub to the wall. Fig. 4 is a perspective view of the vertically-adjustable girder-supporting hub detached from the post. Fig. 5 is a view of a section of the flooring. Figs. 6 and 7 are details representing the manner of forming the joints where two ledges or two plates are brought together at the junction therewith of the end of a girder. Fig. 8 is a sectional detail representing the central hub supported on its post in a manner differing somewhat from that shown in Fig. 3.

My invention has for its object to provide a cheap and substantial portable building which can be easily set up or taken down when required, and in which the girders and outside walls are so braced and tied or bound together and to a central post as to stiffen and strengthen the structure.

To this end my invention consists in the combination, with a central post, of a hub or collar vertically adjustable thereon, whereby it may be secured at any desired height, said hub having sockets arranged around its periphery to receive and support the ends of the girders which are interlocked with the said hub by means of joint-bolts projecting from the ends of the girders and engaging with slots or notches in said hub, the opposite ends of the girders resting on suitable ledges or supports and being secured in place by screw-bolts passed through the side walls from the outside of the building into the adjacent ends of the girders, as hereinafter more fully set forth and claimed.

In the said drawings, A represents the outer or side walls of a portable building, centrally within which is placed a vertical post B of sufficient length to extend to the ridge of the roof, the rafters (not shown) being secured thereto in any suitable manner. The bottom of the post B is set into the ground or immovably fastened in place in any suitable manner.

Upon the post B and adapted to be adjusted vertically thereon is placed a heavy hub or collar C, composed of cast-iron and preferably made of polygonal form, its central aperture corresponding in shape to that of the post which it encircles, and said hub being secured, when adjusted to the desired height, by means of set-screws or bolts *c* passing through the hub into the post, as seen in Fig. 3, or the hub may rest upon a collar 25, made in two halves or sections and fitted into an annular groove 26, made in the post for its reception, as seen in Fig. 8, said collar having a shoulder 27, forming a rest or stop for supporting the hub, which fits over and encircles the upper part 28 of the collar 25, thereby holding it firmly in place upon the post. This hub or collar C, which in the present case is of octagonal form, is provided with a series of sockets *d*, into which are fitted the ends of the floor-girders D, which extend out radially from the hub to the side walls A of the building, where they rest upon suitable ledges *e*. The hub is also provided with a vertical flange *f*, which sets off from the post B, leaving a space *g* between the two, as seen in Fig. 3, this flange having a series of angular slots or notches *h*, one opposite the center of each socket, into which are hooked the heads of the joint-bolts *i*, which project from the inner ends of the girders D, the screw-threaded shanks of said bolts engaging with nuts *k* mortised into the wood, as seen in Fig. 3, the girders being in this manner firmly and securely locked to the central hub. The heads 10 of the bolts *i* are preferably formed with a lip 12, which, after the head is hooked into the slot, catches under a shoulder 15 of the hub, as seen in Fig. 3, and thus prevents the girder from being lifted after it is locked in place.

The outer ends of the girders D, which rest on the ledges *e* and abut against the outer or

side walls A of the building, are rigidly secured in place by joint-bolts *l*, which are passed through from the outside of the walls A and enter the outer ends of the girders, the screw-threaded shanks of said bolts engaging with nuts *m'*, mortised into the wood, as seen in Fig. 3. The heads of these bolts are screwed up to a firm bearing against metal plates *m n*, the latter *n*, (seen in Figs. 1, 2, and 7,) which are fitted to the corners of the building, being angle-plates. By thus securing the inner ends of the girders to a common central post and locking them thereto in a manner to resist longitudinal strain and securing the outer walls of the building to the opposite or outer ends of said girders by headed joint-bolts passing through from the outside, as described, it will be seen that the walls on all sides are firmly tied and braced together and to the central vertical post, whereby the entire structure is stiffened and strengthened throughout, while the simplicity of the construction renders it easy to set up or take down the building, as may be desired.

Another great advantage incident to my construction is that the central hub C, being made adjustable vertically on the post, can be easily secured in any desired position, according to the height at which it is desired to place one floor above another. Where a large building is to be put up, any desired number of vertical posts provided with hubs C, adjusted to the level or levels of the floor or floors may be employed, the girders extending out radially from said hubs to the outer walls, as seen in Fig. 2, there being as many hubs on each post as there are floors to the building, and in this manner the building can be constructed of any shape or dimensions desired.

In buildings having only a lower floor—such as auditoriums, chapels, &c.—the posts may be provided with additional hubs placed thereon at any desired height and having braces extending outward therefrom either horizontally or at an angle to the walls or other parts of the building to give additional strength and stiffness, and where said braces are to be extended at an angle from the post the sockets of the hub will be properly made to accommodate their ends.

The sills and plates are properly fitted and jointed together wherever required in the manner shown in Figs. 6 and 7 and secured by means of the joint-bolts *l* to facilitate the putting up or taking down of the structure. The floors are also made in sections E, Fig. 5, adapted to fit upon the girders D, the latter having supporting-ledges wherever required, and the sides of the building may be made in

removable sections or pieces of any suitable or convenient size.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a portable building, the combination, with a vertical post, of the hub or collar vertically adjustable thereon, whereby it may be secured at any desired height, and girders extending radially from said hub or collar to the side walls and having their inner ends supported by and interlocked with said hub and their outer ends secured to the side walls by bolts passing through from the outside of the same, whereby the walls are tied and braced together and to the central post, substantially as set forth.

2. In a portable building, the combination, with the post B, of the hub or collar C, vertically adjustable thereon and having sockets *d*, arranged around its circumference, and a vertical flange *f*, setting off from the post and provided with slots or notches *h*, and the girders D, supported at their inner ends in the sockets *d* and provided with joint-bolts *i*, adapted to enter the slots *h* and interlock the inner ends of said girders with the hub, the outer ends of said girders being secured to the side walls of the building by joint-bolts having their heads screwed up to washer-plates on the outside of said walls and engaging with nuts mortised into said girders, substantially as set forth.

3. A portable building having one or more vertical posts provided with hubs or collars vertically adjustable thereon and side walls tied to said vertical posts by radial girders D, interlocked with said hub or collar by hooked connections at their inner ends and secured at their outer ends to the side walls by bolts engaging with nuts mortised into said girders and having their heads screwed up to flat metal plates on the outside of the building, and angular plates at the corners of the same, substantially as set forth.

4. The combination, with the post B, having an annular groove 26, of the sectional collar 25, adapted to fit within said groove 26 and provided with a shoulder 27, and the hub C, fitting over the upper portion of the collar 25 and resting upon the shoulder 27, whereby said collar 25 is held in place upon the post, and the hub at the same time supported at the desired height, substantially as described.

Witness my hand this 4th day of May, A. D. 1891.

AARON CHASE.

In presence of—

P. E. TESCHEMACHER,
HARRY W. AIKEN.