J. A. MEADEN & A. J. FILKINS.

PORTABLE METAL BUILDING.

APPLICATION FILED APR. 20, 1914.

1,202,402.

Patented Oct. 24, 1916.

2 SHEETS—SHEET 1.

Fig. 2

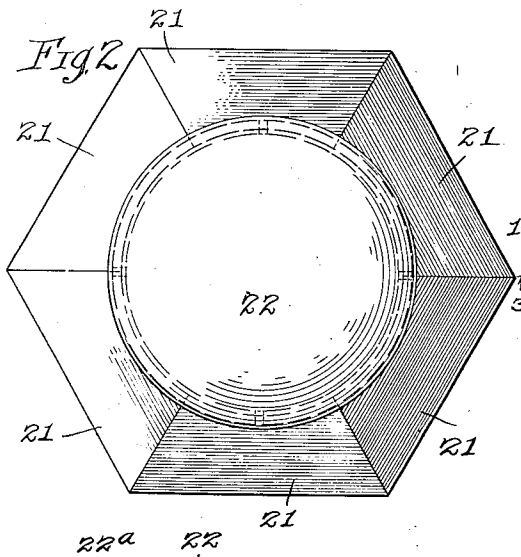


Fig. 4

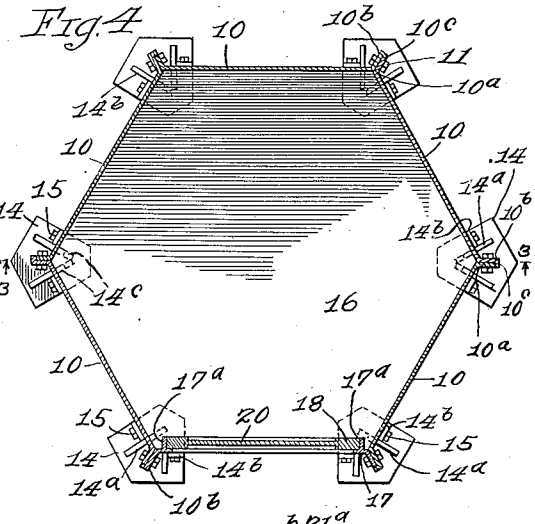


Fig. 1.

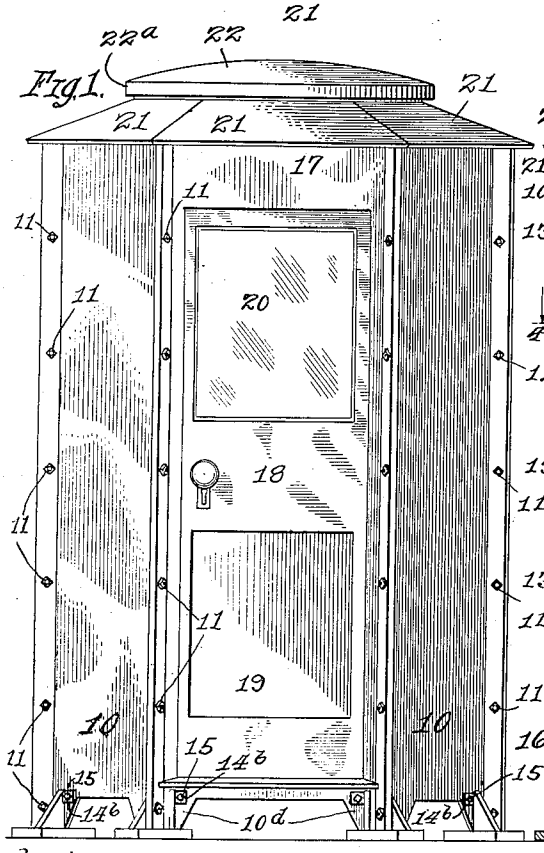
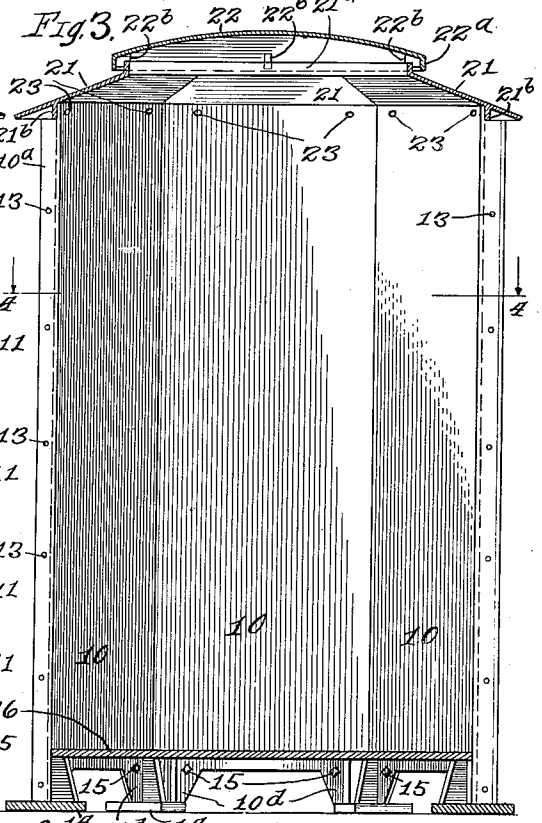


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 5.

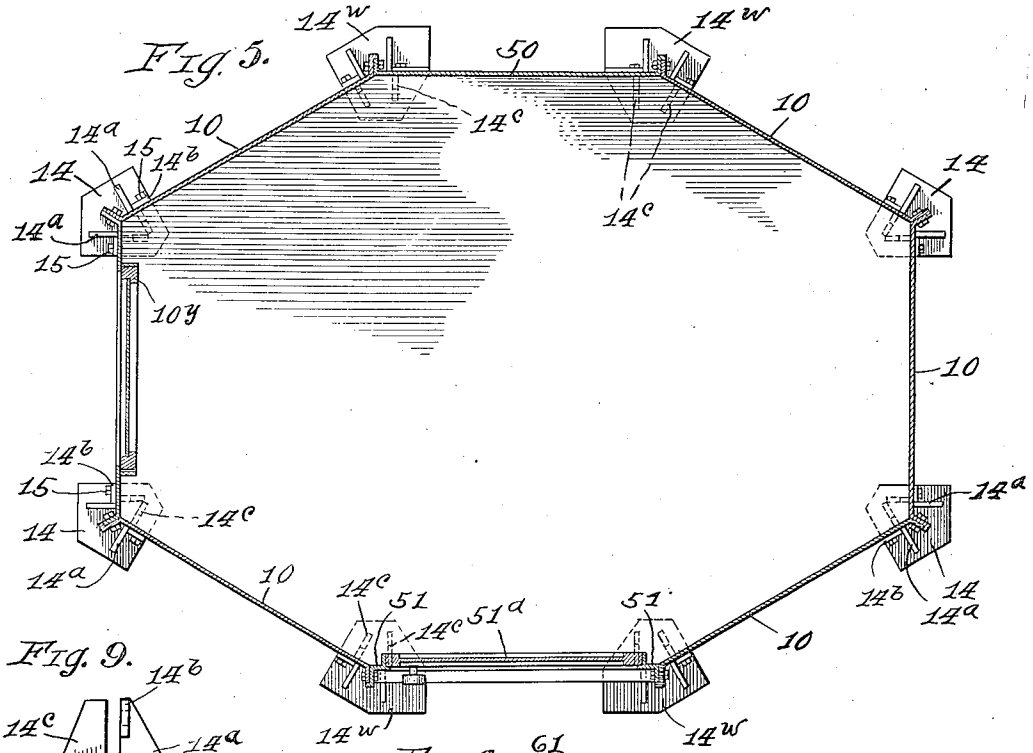


Fig. 9.

Fig. 6.

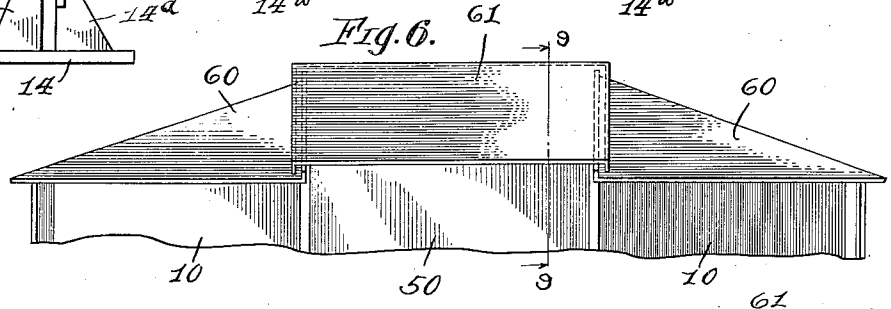


Fig. 7.

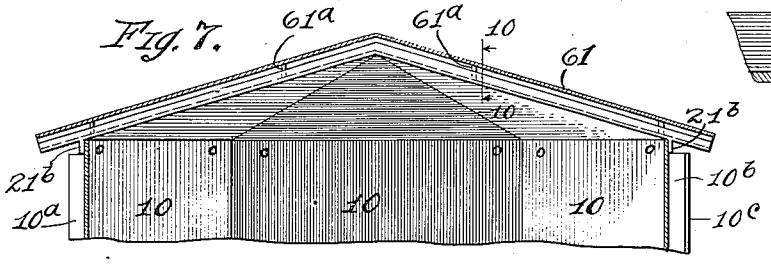
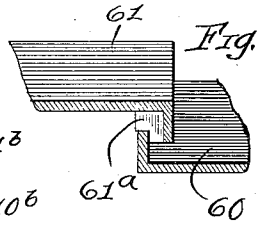


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN A. MEADEN, OF CHICAGO, AND ARTHUR J. FILKINS, OF WINNETKA, ILLINOIS, ASSIGNORS TO PAUL DICKINSON INCORPORATED, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PORTABLE METAL BUILDING.

1,202,402. Specification of Letters Patent. Patented Oct. 24, 1916.

Application filed April 20, 1914. Serial No. 833,333.

To all whom it may concern:

Be it known that we, JOHN A. MEADEN, residing at Chicago, in the county of Cook and State of Illinois, and ARTHUR J. FILKINS, residing at Winnetka, in the county of Cook and State of Illinois, both citizens of the United States, have invented certain new and useful Improvements in Portable Metal Buildings, of which the following is a specification.

The invention relates to portable metal buildings of the type particularly applicable for use as small out-houses for various purposes, as for example, telephone booths along lines of railroads and for any purpose whatever where it is desired to employ substantial and durable portable buildings of a type that is sanitary, easily erected and practically indestructible, and possessing great qualities of resistance to attacks of the elements.

A further object of the invention is to provide an improved portable building of the described character which shall be made up of a large number of duplicate sections, thus making a saving in the number of different designs of sections to be required in erecting any building of specific design, and greatly reducing the cost of manufacture of such sections because such duplications being duplicates may be made from the same patterns.

It is a further object of the invention to provide an improved design of portable building that may be constructed of cast iron, as this material possesses great advantages over any known material on account of its enormous strength, economy to manufacture and on account of its peculiar property of resisting the oxidizing effect of exposure to the elements and corroding effects of various acid-laden gases and liquids which is particularly the case when such outbuildings are used for toilet purposes.

Buildings of cast iron construction are also found to be peculiarly adapted for outhouses in which it is designed to store inflammable materials as oils, not only because the cast iron is not inflammable, but because it is non-absorbent. Cast iron buildings of the improved construction herein shown are also found to be exceedingly durable and economical because the cast iron is not so readily attacked by the corroding effects of the atmosphere as is steel and various other well known forms of building material, and consequently does not require as much expense on account of the application of protective materials such as paints and the like.

In order that such buildings may possess the characteristics described, it is also an object of my invention to provide for such buildings an improved roof construction, also of cast iron requiring no other protective covering in order to make the building thoroughly waterproof and produce a roof covering of great durability.

It is a further object of my invention to provide in a building of sectional cast or gray iron construction improved means for supporting the building on the ground or other desired foundation, and it is among the objects of the invention to provide an improved combined floor and foundation detachable from the walls of the building for purposes of transportation.

It has heretofore been suggested and practised in the construction of fireproof buildings to construct such buildings throughout of fireproof material as concrete, but buildings of this integral construction of concrete and metallic reinforcing means are obviously so heavy that ready transportation or moving of such buildings is almost out of the question; and it is among the chief objects of the present invention to produce a durable fireproof building which may be easily erected or dismantled for purposes of transportation.

Other objects of the invention will appear from the following description, which is directed to the preferred embodiment of the invention shown in the drawings and finally pointed out more particularly in the appended claims.

In the said drawings: Figure 1 is a front elevational view of a building constructed in accordance with our invention; and Fig. 2 is a top plan view thereof. Fig. 3 is a vertical sectional view through the roof and base of a building of the form shown in Figs. 1 and 2, one-half of the walls thereof being removed. Fig. 4 is a horizontal sectional view on line 4—4 of Fig. 3. Fig. 5 is a horizontal sectional view of a modified form of the building shown in Figs. 1 to 4 inclusive, the latter being octagonal in form by the addition of certain wall sections and

certain roof sections. Fig. 6 is an elevation view of the roof and the adjacent upper portions of the walls of the form of the invention shown in Fig. 5; and Fig. 7 is a vertical sectional view on line 9—9 of Fig. 6. Fig. 8 is a detail sectional view on line 10—10 of Fig. 7, looking in the direction indicated by the arrows. Fig. 9 is a detail elevational view of the metallic foundation plate.

In Figs. 1 to 4 inclusive we show our improved building of hexagonal form, the walls being formed of six substantially duplicate plates of cast or gray iron. Five of these six plates may be of identical construction, while the sixth or door plate is cut away in the manner indicated in Figs. 1 to 4 to permit the use of a door. It will be apparent that considerable economy is secured by constructing five of these wall plates as indicated by the reference character 10 from the same pattern. These plates 10 are provided along their longitudinal edges with flanges, the flange on one edge being indicated by the reference character 10^a, while on the diameterically opposite edge there is a flange 10^b, which is similar to the flange 10^a, except that it is somewhat longer and is provided at its extreme outer edge with an overlapping portion 10^c formed at right angles to the body 10^b, thus adapting the flange portions 10^b, 10^c when joined to flange 10^a to form a substantially closed or watertight joint. The construction just described of these flanged plates is plainly shown in Figs. 4 and 5. Any suitable means may be employed for locking the flanges of the plates 10 together, but that preferred by us is threaded bolts and nuts as indicated in the drawings and designated by the reference character 11. These retaining bolts pass through holes formed in the flanges 10^a and 10^b, as indicated at 13, Fig. 3. The wall plates 10 are formed at their lower extremities with short legs or extensions, as indicated at 10^d, Figs. 1 and 3, which latter are supported upon foot plates designated generally by the reference character 14, Fig. 9, and being provided with extensions 14^a extending upwardly and provided with angular brackets 14^b adapted to receive retaining bolts, as indicated at 15, Figs. 1, 3 and 4. The extensions 14^a, 14^b are preferably on the outside of the plates when assembled as shown in the drawings and on the interior of the walls formed by the assembled plates cast integrally with the foot plates 14 and spaced apart from the extensions 14^a a sufficient distance to allow the metallic walls to be interposed therebetween and the uprights 14^c provided with blunt upper extensions as shown in Figs. 3 and 9. These extensions 14^c on the interior of the building are adapted to support the building floor, which may be in the form of wood, plate metal or other suitable flooring material and indicated by the reference character 16, Figs. 3 and 4. While a building of the form shown in Figs. 1 to 4 inclusive may be made of five duplicate plates 10, the sixth side of the building will require a similar cast iron wall plate perforated to have a door opening, as shown by the plate 17, Figs. 1 and 4, which is a substantial duplicate of the wall plates 10 except for the door opening therein surrounded by the inwardly projecting flange 17^a, shown only in Fig. 4. The door plate 17 is provided with the flanges 10^a and 10^b, as in the construction of the plates 10. Any desired form of door, preferably fireproof, may be utilized in connection with the invention, and obviously if more than one door is required another one of the side plates 10 would be replaced by a plate 17 having a door opening. In Fig. 1 a door is shown being indicated by the reference character 18, the lower panel thereof at 19, and the the upper panel at 20. One or more of the panels 19, 20 may be of glass or suitable transparent material to admit light, or if desired one or more of the plates 10 may be provided with openings for windows, which may be closed by transparent window material of any desired construction.

An important feature of the invention of the form of Figs. 1 to 4 inclusive, is the cast iron roof construction, consisting of the six segmental peripheral plates designated by the reference character 21 and shown most clearly in Figs. 1 and 2. These plates 21 are all duplicates and are preferably cast integrally as shown, and for ventilating purposes are not constructed to extend to the center of the roof, but are cut away so that when assembled they form a central opening, which may be surrounded by an upwardly turned flange portion, as indicated at 21^a Fig. 3. This flange 21^a serves to protect the interior of the building from the ingress of moisture during storms and the opening is covered by dome plate 22, circular in form to cover the said opening and having a depending flange 22^a, and its outer extremity extending on the exterior and spaced apart from the flange 21^a, providing a ventilating passageway between the roof portions 21 and 22. The dome plate 22 will be provided with a plurality of inwardly extending lugs as indicated at 22^b, by which it is supported upon the flange 21^a of the roof plates 21. The roof plates 21 and the dome plate 22 being of cast iron will be sufficiently heavy to cause them to be retained upon the top of the building by gravity without any necessary fastening means, although bolts for securing the plates to the walls of the building or for securing the dome plate to the roof plates 21 may be employed if desired, and in order to support the section plate 21 of the roof it is

preferred that depending flanges 21^b be provided on the plates 21 for registering with the extreme upper ends of the plates 10, and retaining bolts as indicated at 23 and shown in Fig. 3, may be employed to secure the roof plates to the walls.

In Figs. 5 to 9, inclusive, we show how the flanged cast iron side plates of the form indicated by the reference character 10, Figs. 1 to 4 inclusive, may be utilized in forming buildings of elongated octagonal form. For example, as illustrated in the horizontal sectional view Fig. 5, six of the plates 10 may be employed and by the insertion of similarly formed additional plates as indicated by the reference characters 50 and 51, an eight-sided building may be formed utilizing six of the plates 10, one of which may be provided with a window, as indicated at 10^y, at the same time utilizing four of the metallic foundation plates or feet 14, necessitating the use only of four additional foundation plates 14^w of slightly different construction to meet the changed relation between the plates 10 and the plates 50 and 51, the latter of which differs from the plate 50 only in that it is provided with an opening for the door 51^a. When a building of the form shown in Figs. 6 to 8, inclusive, is desired to be erected it will obviously require cast iron roof plates of a modified design over the plates shown in Figs. 1 to 4 inclusive, and a convenient construction is that illustrated in Figs. 6 and 7, in which the roof is shown formed of three separate sections as indicated at 60 and 61, there being two of the roof sections 60 employed and one of the section 61. The middle section 61 is preferably supported some distance above the sections 60 by means of cast projections 61^a, shown in Fig. 8, for the purpose of affording a ventilating space between the roof sections. For the purpose of securing the sections 60 and 61 to the walls of the building flanges may be formed thereon similar to the flanges shown on roof plates 21, Fig. 3, and as shown also in Fig. 7.

In order that the invention may be understood, the preferred embodiment has been shown and described; but it is not desired to be limited to the exact details, for it will be apparent that persons skilled in the art may make many modifications without departing from the purpose and spirit of the invention.

We claim:

1. A portable building comprising a plurality of metal foot pieces having spaced upwardly extending projections thereon; a plurality of plates secured together at their vertical edges forming the walls of the building and having depending supporting projections thereon extending between the upwardly extending projections of the foot pieces; and means securing the depending projections of the side wall plates to certain of the upwardly extending projections of the foot pieces.

2. A knock-down building comprising a plurality of iron plates secured together and forming the walls of the building, each of said iron plates being provided at its lower extremity with projections extending downwardly beyond the main body of the plates, metallic foot-pieces coöperating with the downwardly projecting portions of said plates and comprising bottom plates having spaced upwardly extending projections thereon, said projections being spaced apart to receive the projections on the said iron plates comprising the building walls, the projections on the foot-pieces normally within the building walls being projected upwardly beyond the upper extremities of the downwardly projecting members of the iron wall plates, and being adapted to support the floor of the building.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 16th day of April, A. D. 1914.

JOHN A. MEADEN.
ARTHUR. J. FILKINS.

Witnesses:
ARTHUR L. SPRINKLE,
CHARLES H. SEEM.