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(30) Priority:

(54) **BUILDING**

(54) **BATISSE**

1 This invention relates to an improved construction of
2 portable building, which has for its object cheapness of
3 construction and facility of setting up or taking down.
4 A further object is to use the sheets of which the build-
5 ing is constructed in their original shape and form so
6 that neither is impaired or destroyed thus enabling them
7 to be employed for any other purpose for which said sheets
8 are used.

9 I attain this end by the construction shown in the
10 accompanying drawing in which :-
11 Fig.1 is a view in elevation - partly in section - of the
12 improved building.
13 Fig.2 is a view in plan thereof also partly in section.
14 Fig.3 is a broken view in elevation - on an enlarged scale
15 showing the essential features of the construction of the
16 roof.
17 Fig.4 is a view in section of the junction piece it is
18 preferred to use for connecting the sheets, and
19 Fig.5 is a view in section showing an alternative form of
20 roofing or lining sheet.

21 Throughout the views similar parts are marked with
22 like letters of reference.

23 The wall of the building - which is of circular shape
24 is composed of a series of panels each of which consists
25 of a sheet a of corrugated iron or steel said panels
26 being arranged with the corrugations running vertically
27 which enables the sheets to flex automatically during
28 erection to conform to the desired circular shape.

29 The edges of the adjacent sheets are coupled together
30 either by overlapping them and fixing them to one another

1 by means of bolts or screws, or by means of a junction piece
2 which consists of two strips b & b of corrugated sheet metal
3 rivetted together along their longitudinal centre lines
4 with distance pieces b¹ between them so as to form longi-
5 tudinal grooves b² at each edge as shown in Fig. 4.

6 To preserve the circular shape of the wall of the
7 building rings or hoops c & c¹ of angle iron are run round
8 both the top and the bottom of said wall, said hoops or
9 rings being each made up of a series of similar segmental
10 parts which are fixed to one another to complete the hoop
11 or ring by means of fish plates d. The hoops or rings are
12 fixed to the sheets a by means of screws or gutter bolts.

13 The roof consists of a series of flat roofing sheets
14 e and lining sheets f of sector shape each having corru-
15 gations or grooves e at their edges which engage the raf-
16 ters h the edges of the adjacent sheets overlapping one
17 another. The rafters are secured to the upper ring or
18 hoop c by providing lugs a¹ on the fish plates d employed
19 to fix the segments of said ring or hoop together between
20 which each rafter fits and is secured in place by a nail
21 or spike passing through holes in lugs and in the rafter.
22 The rafters are supported at their upper ends by engagement
23 with a centrally arranged ventilating stack n the preferred
24 construction being to form in the lower part of said stack
25 two series of radially arranged holes n¹ & n², the ^{latter} ~~former~~
26 to receive a hook h² on the under edges of the rafters and
27 the ~~latter~~ ^{former} to receive projection h¹ on the upper edges
28 thereof as shown in Fig. 3.

29 To enable the roofing and lining sheets to be rap-
30 idly assembled it is sometimes convenient to provide for a

1 limited amount of transverse elasticity in said sheets
2 which end is attained by forming a single fold or corruga-
3 tion e^2 in the length of the sheet at or about the centre
4 thereof, as shown in Fig. 7, said corrugation being pref-
5 erably of relatively greater depth than width. This cor-
6 rugation may also be graded from one end of the sheet to
7 the other.

8 Both the roofing sheets e and the lining sheets f
9 are secured to the rafters when same are of wood by means
10 of screws or nails.

11 If metal rafters are employed they are preferably
12 made out of strips of sheet metal rolled over at the edge
13 to form enlargements for the corrugations or grooves at
14 the edges of the plates to engage with. In this case
15 the sheets are fixed to the rafters by suitable bolts.

16 It will be appreciated that by using flat sheets
17 for the panels of the wall there will be considerably
18 economy in space in packing for transport.

I CLAIM :

1 1. A portable building of circular shape comprising a
2 series of corrugated metal sheets, means for joining said
3 sheets together at their edges to form the vertical wall,
4 segmental hoops or rings at the upper and lower edges of
5 the wall, means for fixing said hoops or rings to the
6 sheets forming the wall, a central ventilating stack, a
7 series of rafters lying between said stack and the hoop
8 or ring at the upper edge of the wall of the building,
9 means for fixing said rafters to said stack and hoop, a
10 series of sector shaped roofing sheets supported by said
11 rafters and having grooves at their edges adapted to over

1 limited amount of transverse elasticity in said sheets
2 which end is attained by forming a single fold or corruga-
3 tion e^2 in the length of the sheet at or about the centre
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4 segmental hoops or rings at the upper and lower edges of
5 the wall, means for fixing said hoops or rings to the
6 sheets forming the wall, a central ventilating stack, a
7 series of rafters lying between said stack and the hoop
8 or ring at the upper edge of the wall of the building,
9 means for fixing said rafters to said stack and hoop, a
10 series of sector shaped roofing sheets supported by said
11 rafters and having grooves at their edges adapted to over

12. lap one another and to engage the rafters on their under-
13 sides, and means for fixing said sheets to said rafters.

1 2. A portable building of circular shape comprising
2 a series of corrugated metal sheets arranged with their
3 corrugations running vertically, means for fixing the edges
4 of said sheets together, hoops or rings at the upper and
5 lower edges of the wall, each formed of a series of simi-
6 lar segments, means for fixing said hoops or rings to the
7 sheets forming the wall, a central ventilating stack, a
8 series of rafters lying between said stack and the hoop or
9 ring at the upper edge of the wall of the building, means
10 for fixing said rafters to said stack and said hoop, a
11 series of sector shaped roofing sheets supported by said
12 rafters each having a groove at its radial edges by which
13 the sheets engage and overlap and by which they engage the
14 rafters, a series of lining sheets each having a groove
15 at its radial edge by which the sheets overlap and by
16 which they engage the rafters on their under sides, and
17 means for fixing said sheets to said rafters.

1 3. A portable building of circular shape comprising
2 a series of corrugated metal sheets arranged with their
3 corrugations running vertically, means for fixing the
4 edges of said sheets together, hoops or rings at the upper
5 and lower edges of the wall, each formed of a series of
6 similar segments, means for fixing said hoops or rings to
7 the sheets forming the wall, a central ventilating stack,
8 a series of rafters lying between said stack and the hoop
9 or ring at the upper edge of the wall of the building.

10 means for fixing said rafters to said stack and said hoop,
11 a series of sector shaped roofing sheets supported by said
12 rafters each having a groove at its radial edges by which
13 the sheets engage and overlap and by which they engage
14 the rafters and a central fold or corrugation, a series of
15 lining sheets each having a groove at its radial edges by
16 which they engage the rafters on their under sides and a
17 centrally located fold or corrugation, and means for
18 fixing said sheets to said rafters.

1 4. In a portable building of circular shape the
2 combination of a series of corrugated metal sheets, of
3 means for fixing the edges of said sheets together, to
4 form a wall, of hoops or rings at the upper and lower edges
5 of the wall each formed of a series of similar segments,
6 of fish plates for fixing said hoops or rings to the
7 sheets forming the wall and carrying vertically arranged
8 lugs, of a central ventilating stack having two rows of
9 holes or perforations, of a series of rafters lying between
10 said stack and the hoop or ring at the upper edge of the
11 wall of the building, the lower ends of said rafters fitt-
12 ing between the lugs carried by the fish plates employed
13 to fix the segments of the upper hoop or ring together
14 and fixed to said lugs by transverse pins and the upper
15 ends of said rafters being provided with hooks and pro-
16 jections adapted to engage the holes in the central stack,
17 of a series of sector-shaped roofing sheets having a groove
18 at each edge, said groove being adapted to overlap the
19 groove of the adjacent sheet and to engage one of the
20 rafters and a single centrally arranged fold or corruga-
21 tion, and of means for fixing said sheets to said raf-

1 5. In a portable building of circular shape the com-
2 bination of a series of corrugated metal sheets, of means
3 for fixing the edges of said sheets together to form a
4 wall, of hoops or rings at the upper and lower edges of
5 the wall each formed of a series of similar segments, of
6 fish plates for fixing said hoops or rings to the sheets
7 forming the wall and carrying vertically arranged lugs,
8 of a central ventilating stack having two rows of holes
9 or perforations, of a series of rafters lying between
10 said stack and the hoop or ring at the upper edge of the
11 wall of the building, the lower ends of said rafters fit-
12 ting between the lug carried by the fish plates employed
13 to fix the segments of the upper hoop or ring together
14 and fixed to said lugs by transverse pins and the upper
15 ends of said rafters being provided with hooks and pro-
16 jections adapted to engage the holes in the central stack,
17 of a series of sector-shaped roofing and lining sheets
18 having a groove at each edge adapted to overlap the
19 groove of the adjacent sheet and to engage one of the raf-
20 ters and a single centrally arranged fold or corrugation,
21 and of means for fixing said sheets to said rafters.

1 6. In a portable building of circular shape the
2 combination of a series of corrugated metal sheets, of
3 junction pieces adapted to engage the edges of said sheets
4 comprising two strips of corrugated sheet fixed together
5 along their longitudinal centre lines with suitable dis-
6 tance pieces interposed, of hoops or rings at the upper
7 and lower edges of the wall each formed of a series of
8 similar segments, of fish plates for fixing said hoops or
9 rings to the sheets forming the wall and carrying verti-
10 cally arranged lugs, of a central ventilating stack

11 having two rows of holes or perforations, of a series
12 rafters lying between said stack and the hoop or ring
13 the upper edge of the wall of the building, the lower
14 of said rafters fitting between the lug carried by the
15 fish plates employed to fix the segments of the upper
16 hoop or ring together and fixed to said lugs by trans
17 pins, the upper ends of said rafters being provided with
18 hooks and projections adapted to engage the holes in
19 central stack, of a series of sector-shaped roofing or
20 lining sheets having a groove at each edge adapted to
21 overlap the groove of the adjacent sheet and to engage
22 one of the rafters and a single centrally arranged fan
23 or corrugation, and of means for fixing said sheets to
24 said rafters.

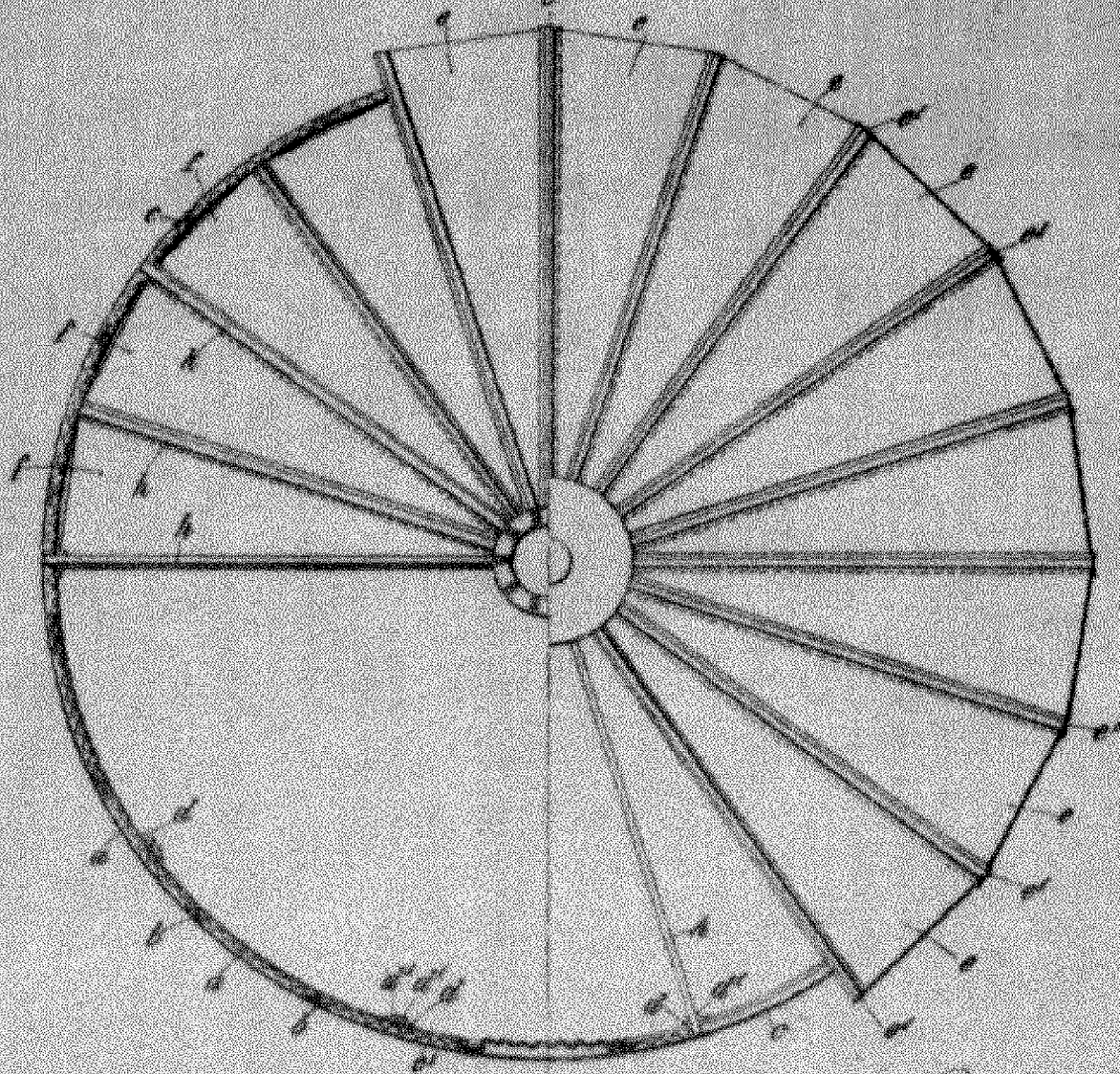
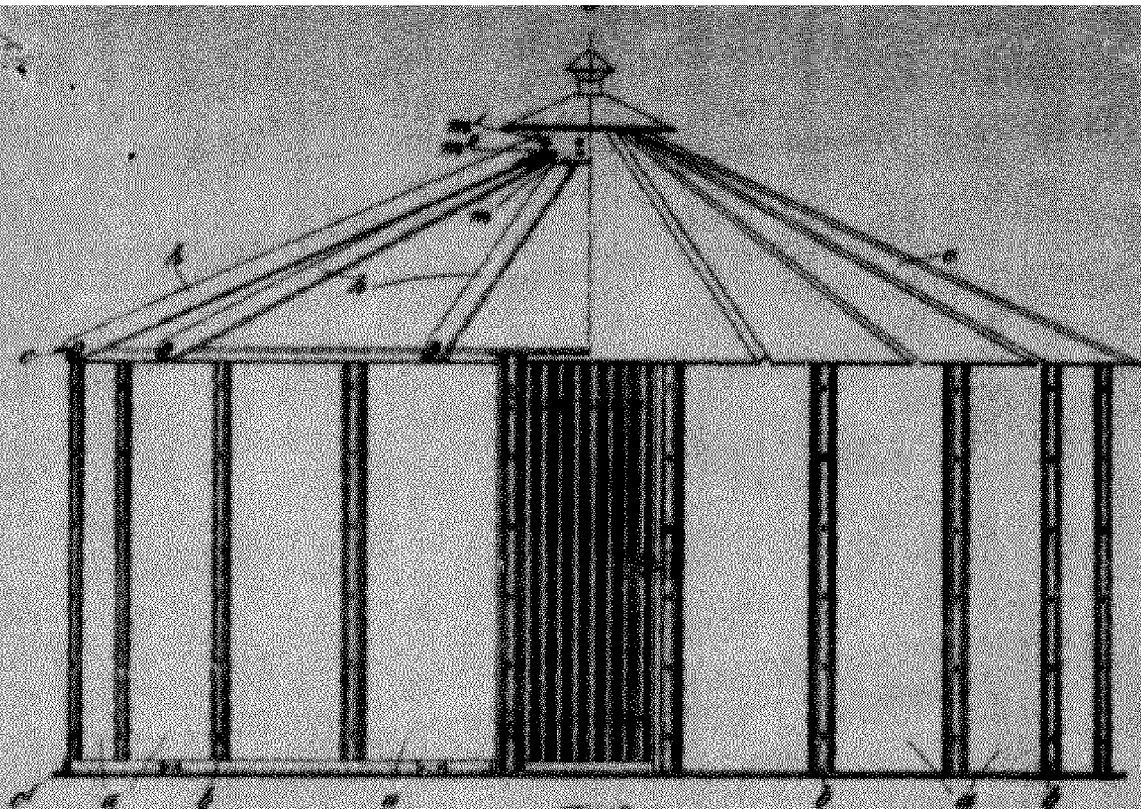
Signed at Concord New Hampshire this 13 day of August 1904
John H. Norman

In the presence of

Robert D. Phillips

Kenneth D. Phillips

to the 1/2 of the above said



Designed by the Messrs. L. & C. in the preparation of the design for the
 Lighthouse 18th March 1849

R. Langton
 R. B. Phillips

Phillips

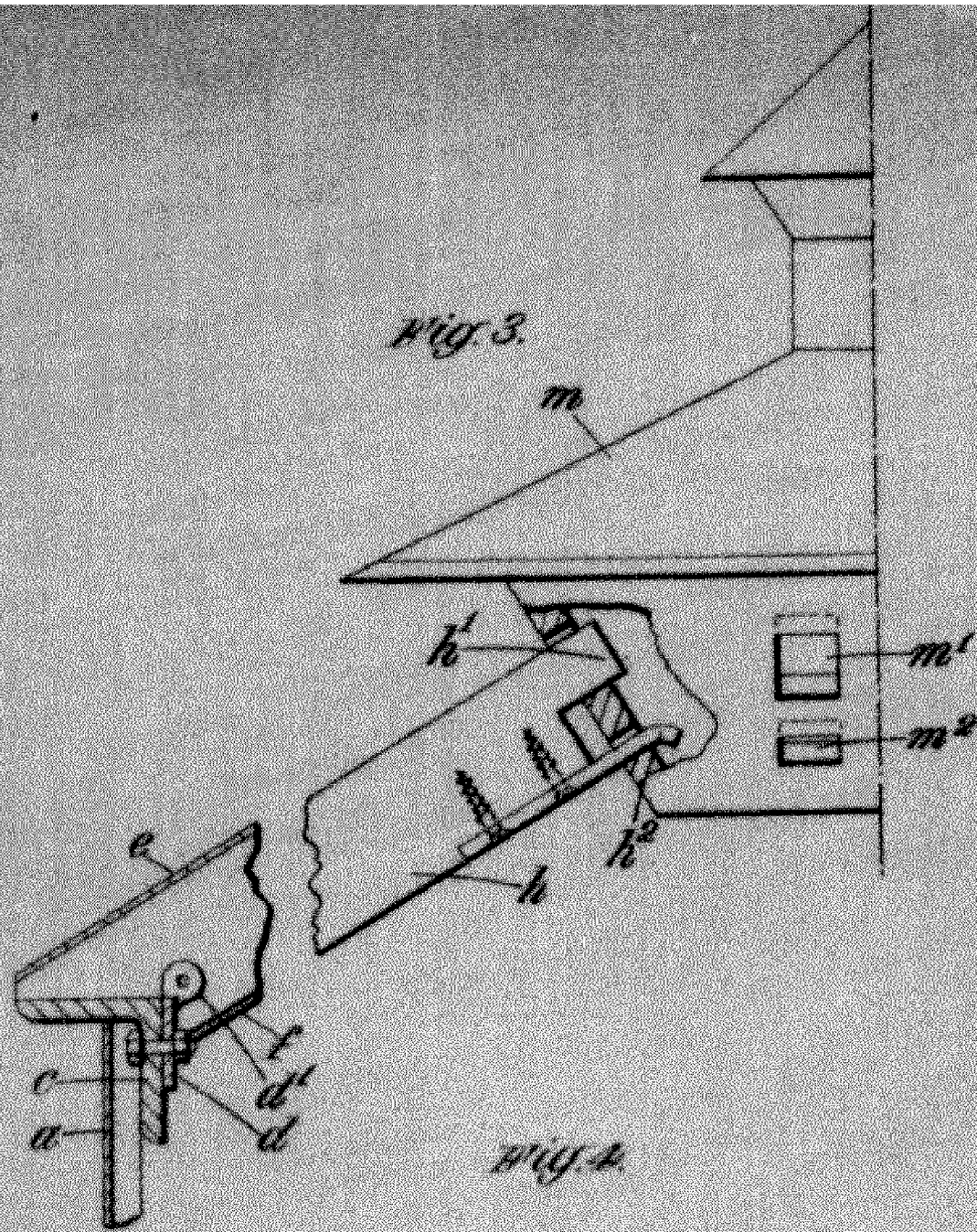


Fig. 3.

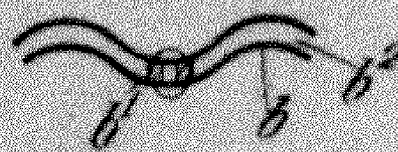


Fig. 4.

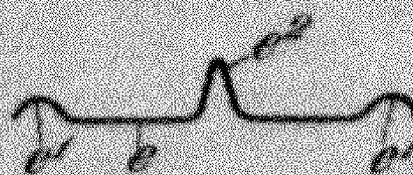


Fig. 5.

Exhibited in the drawings of a mechanical apparatus for use in a
London 18th March 1919

R. Langton
A. S. Phillips

R. H. Niven
Phillips