United States Patent [19]

Roessl

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[45] **Jan. 2, 1973**

[54] **DWELLING**

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[52] **U.S. Cl.** **52/27,** 52/237, 290/55

[51] **Int. Cl.**.....**F03d 11/04**

[58] **Field of Search** 290/44, 55; 52/237, 82, 27, 52/173

[56] **References Cited**

UNITED STATES PATENTS

446,028	2/1891	Smith	52/80
493,355	3/1893	Erickson	52/245
942,884	12/1909	Buckwalter	52/85
1,734,245	11/1929	Distefano	290/55
2,154,897	4/1939	Grant	52/80
2,373,207	4/1945	Touhey	290/44
2,431,111	11/1947	Du Brie	290/55 X
2,667,589	1/1954	Levrero	290/55
3,255,560	6/1966	McClenahan	52/82
3,295,265	1/1967	Hida	52/237

FOREIGN PATENTS OR APPLICATIONS

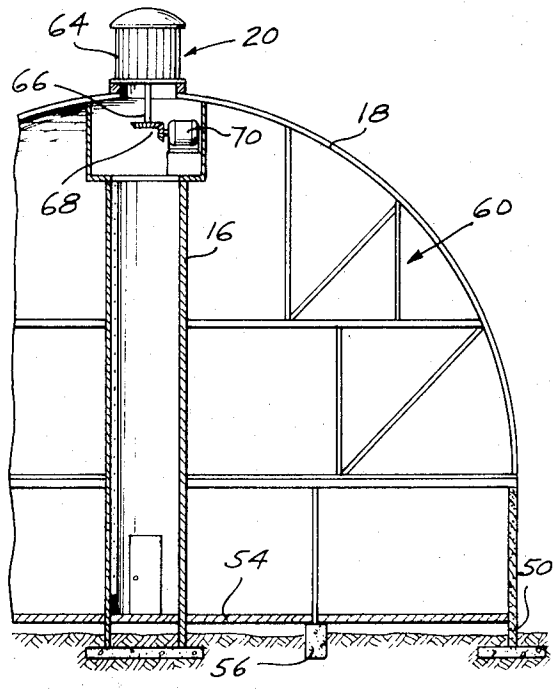
1,017,902	1952	France	52/237

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[57] **ABSTRACT**

A dwelling comprises a cylindrical outer wall and an inner partition wall coaxial with a central pier in the form of a hollow column. Radially extending from the central pier to the inner partition wall are further walls to define several closed rooms. Between the outer and inner partition walls are partitions to provide separate living areas. A domed roof is supported by the central pier and extends to the outer wall. On the domed roof is a cupola including a wind-driven rotor which drives a generator supported by the central pier.

1 Claim, 9 Drawing Figures



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SHEET 1 OF 3

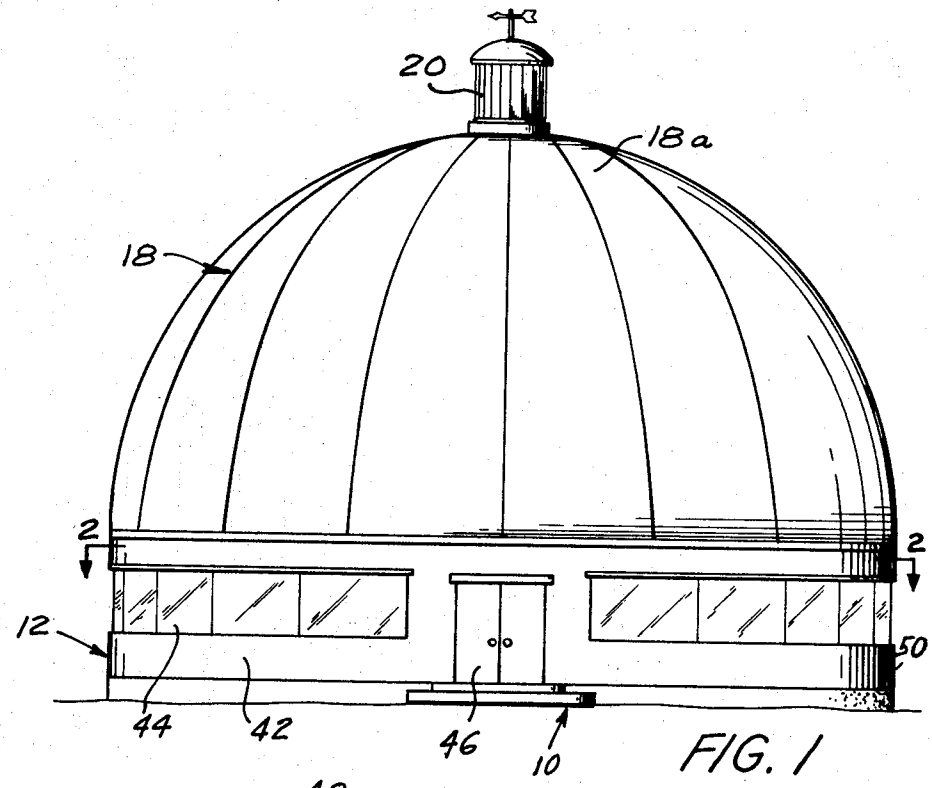


FIG. 1

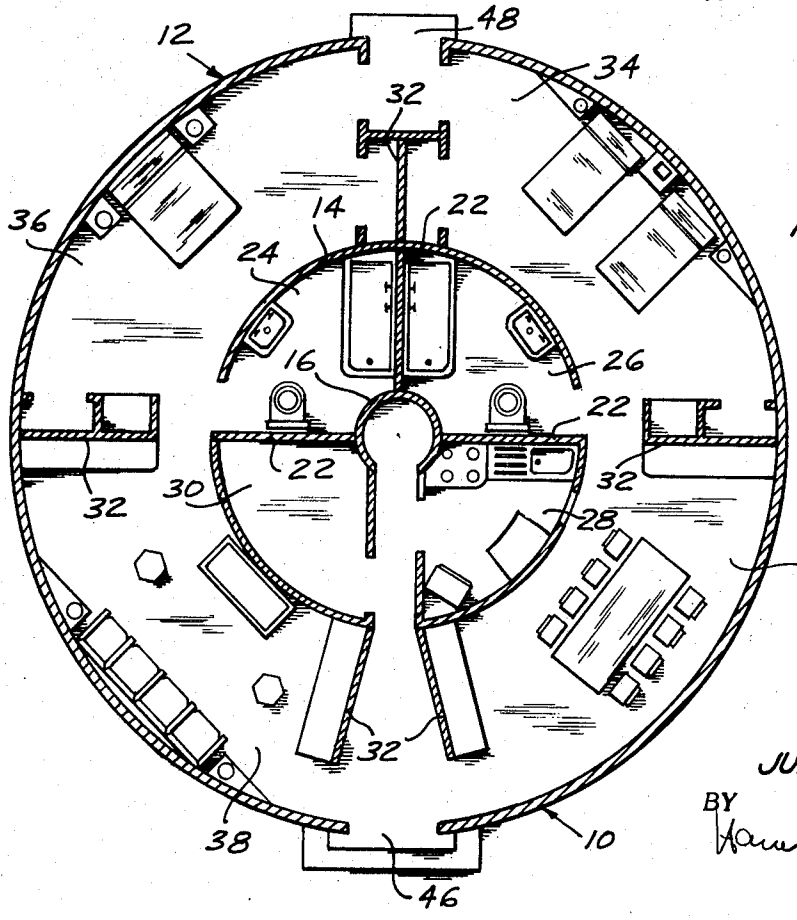


FIG. 2

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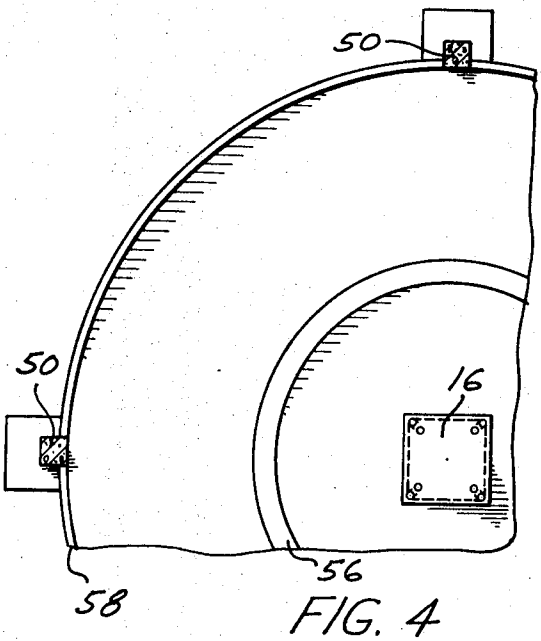


FIG. 4

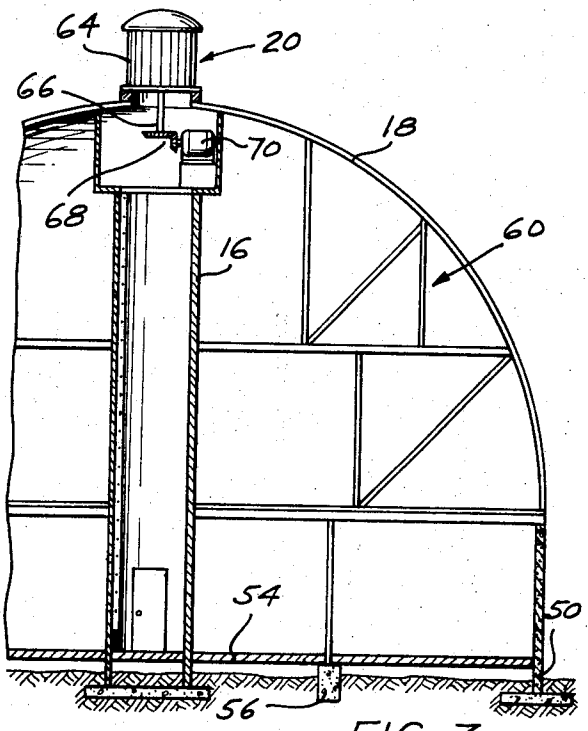


FIG. 3

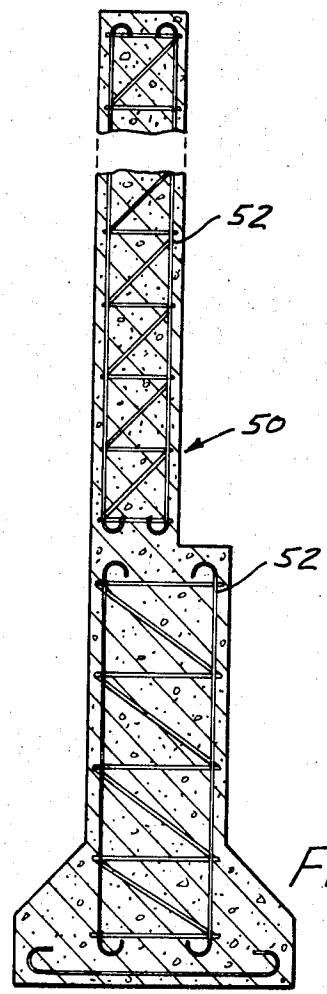


FIG. 6

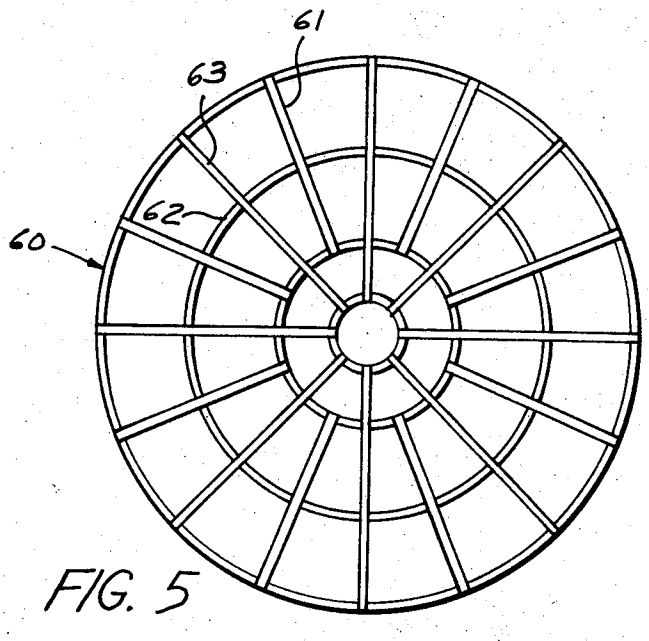
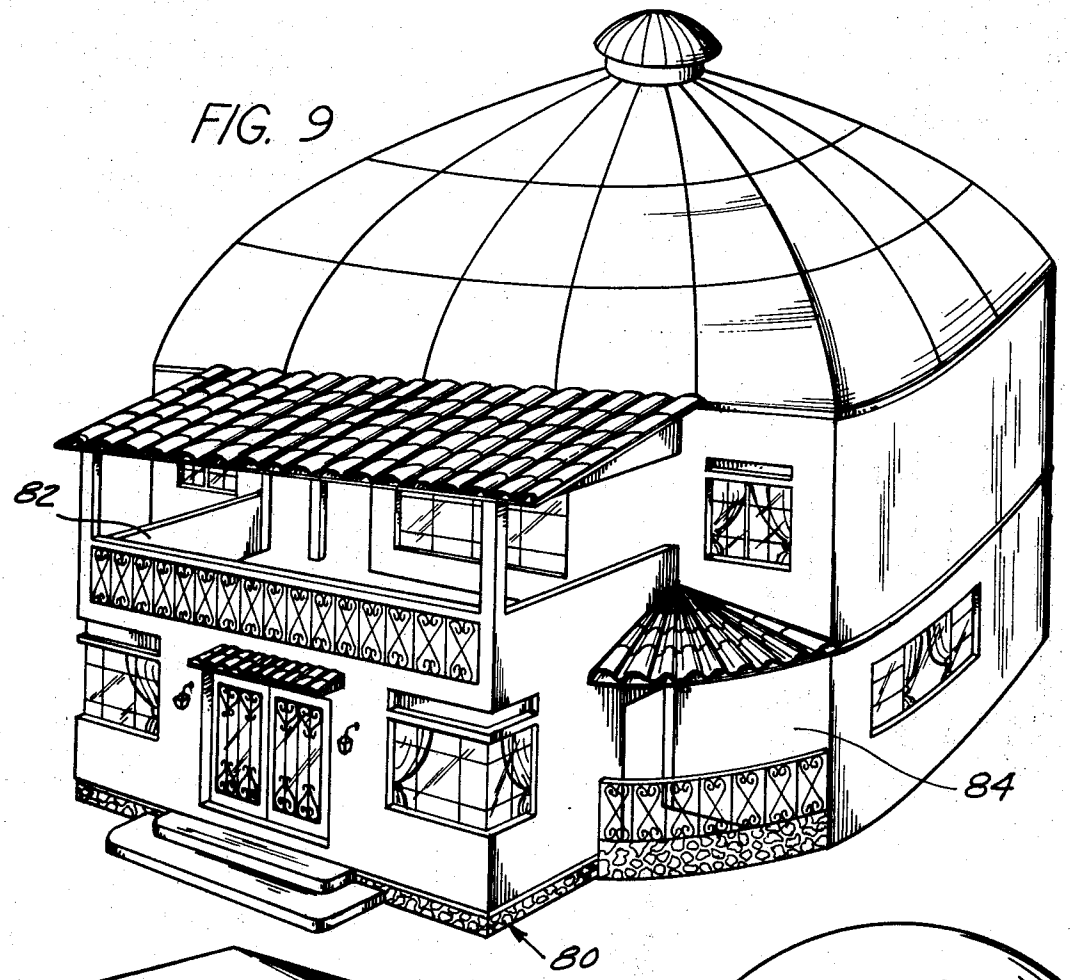


FIG. 5

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FIG. 9



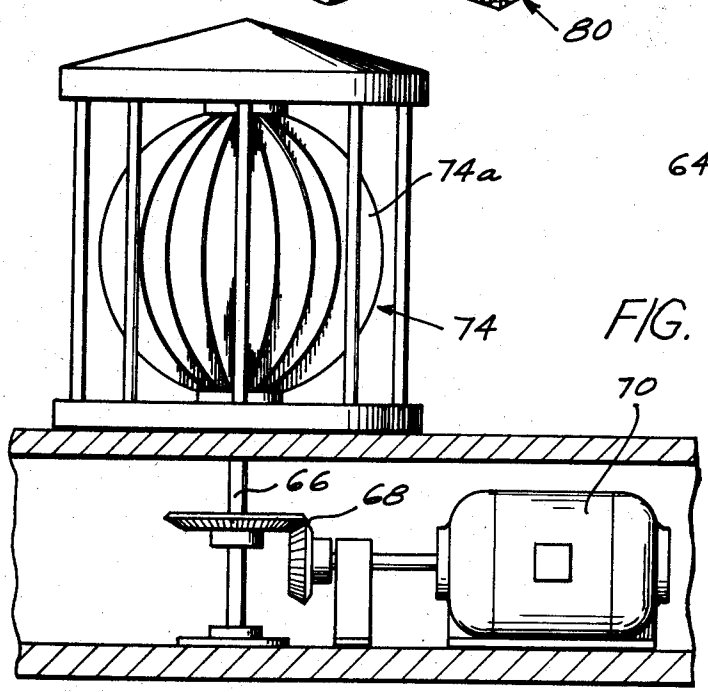


FIG. 8

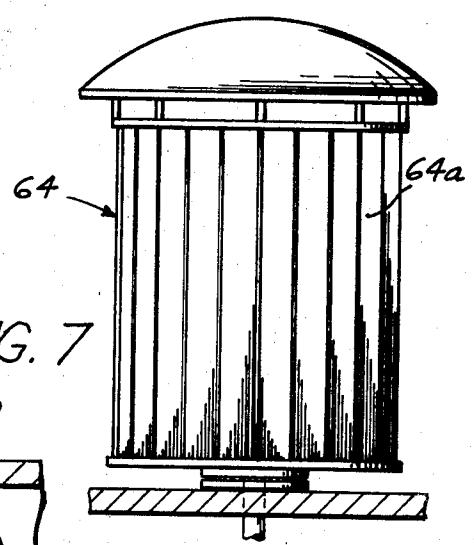


FIG. 7

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DWELLING

This invention pertains to dwellings and more particularly to low-cost houses.

BACKGROUND

In most underdeveloped countries, there is a great need for housing. However, the presently available housing is often flimsy or primitive in order to keep the cost of the housing as low as possible. There is therefore a great need for housing which is well built and comfortable but relatively inexpensive.

THE INVENTION

It is accordingly an object of the invention to provide such housing.

It is another object of the invention to provide a relatively low-cost dwelling which has its own source of electricity and is thus self-contained with respect to its power supply.

SUMMARY OF THE INVENTION

Briefly, the invention contemplates a dwelling comprising a substantially cylindrical outer wall and a substantially cylindrical inner partition wall both coaxial with a central pier, preferably in the form of a hollow column. A plurality of closed rooms primarily for use as utility areas are defined by radial walls extending between the central pier and the inner partition wall. Living regions are defined in the space between the outer and inner walls by radial partitions. The dwelling is enclosed by a domed roof supported by the central pier and extending to the outer wall.

DETAILED DESCRIPTION OF THE INVENTION

Other objects, features and advantages of the invention will be apparent from the following detailed description of the invention when read with the accompanying drawing which shows by way of illustration and not limitation, dwelling utilizing the invention.

In the drawing:

FIG. **1** is a front elevation of one embodiment of a dwelling in accordance with the invention;

FIG. **2** is a sectional view taken along the line **2**—**2** of FIG. **1** to show the floor plan of the dwelling;

FIG. **3** is a fractional sectional elevational view of the dwelling to show construction details;

FIG. **4** is a portion of the foundation plan;

FIG. **5** shows structural details for supporting the domed roof of the dwelling;

FIG. **6** is a vertical sectional view of an outer pier column;

FIG. **7** is an elevational side view of the vaned rotor on the cupola;

FIG. **8** shows a variation of the rotor and generator; and

FIG. **9** is a perspective view of a deluxe version of the dwelling of FIG. **1**.

The dwelling **10**, as shown in FIGS. **1** and **2** includes an outer wall **12** of substantially cylindrical cross-section surrounding an inner wall **14**, also of substantially cylindrical cross-section. Wall **14** is a partition wall which in turn is coaxial with a central hollow pier **16** supporting a domed roof **18** having a cupola **20**.

Radially extending between central pier **16** and inner wall **14** are walls **22** which divide the area within inner wall **14** into a number of closed rooms. Rooms **24** and **26** are shown as bathrooms including the usual plumbing facilities such as a bathtub, a wash basin and a toilet. Room **28** is shown as a kitchen having a sink, a stove and other suitable kitchen appliances and furniture. Room **30** can be a laundry room. Any other suitable utilization of rooms **24**, **26**, **28** and **30** is, of course, within the scope of the invention.

Radial partitions **32** extending either from outer wall **12** or inner wall **14** divide the annular space between walls **12** and **14** into different living regions. In particular, there is shown a master bedroom **34**, a guest bedroom **36**, a living room **38** and a dining room **40**. The number and the location of walls **32** may obviously be selected in accordance with the specific living requirements of the user of the house.

Outer wall **12** comprises curtain wall portions **42** pierced by windows **44** and front and rear doors **46** and **48**, and outer piers **50** (see FIGS. **1**, **3** and **6**). A typical outer pier **50** as shown in FIG. **6** in detail, is made of concrete, preferably reinforced with steel rods **52**. The inner and outer side walls and the partition walls may be constructed of concrete molded in situ, or of prefabricated slabs. Other suitable building material, such as so-called adobe, wood, brick or fieldstone may, of curse, also be used.

The floor **54** (FIG. **3**) is supported by a foundation comprising circular concrete forms **56** and **58** (FIG. **4**), and footings for the piers **16** and **50**.

The dwelling **10** is covered by a domed roof **18** which is supported via a network **60** of braces **61**, trusses **62**, and struts **63** connected to central pier **16**. The surface of roof **18** is formed from a plurality of sectors **18***a* (FIG. **1**) of sheet metal or the like.

On the top of domed roof **18** and supported by central pier **16** is cupola **20** (FIG. **3**). Cupola **20** includes a vaned rotor **64** (shown in greater detail in FIG. **7**), comprising a plurality of rectangular laminae **64***a* extending vertically to catch wind blowing in any direction. As the rotor **64** rotates it drives shaft **66** which is connected via a conventional gearing **68** to a generator **70**. The electrical output of the generator may be used to feed batteries (not shown) which supply electricity for the dwelling **10**. A variation of the electrical power supply system is shown in FIG. **8**, the prime difference being in the geometry of the vaned rotor. In particular, vaned rotor **74** employs arcuate shaped vanes **74***a*.

As is apparent, the house as shown is completely self-contained with respect to its power requirements. The generator power can be used for heating, air conditioning, pumping water from a well, cooking, washing, etc. Of course, it can also be connected to an outside independent power supply such as a public main.

The basic dwelling **10** can be varied by modifying its external appearance. Thus, FIG. **9** shows a deluxe dwelling **80** which can include a balcony extension **82** and a roofed patio **84**. Other variations are possible and are only limited by the imagination of the architect.

Due to its structure, the dwelling of the invention is highly resistant to seismic shocks and the impact of the forces of wind.

While the invention has been described in detail with respect to certain now preferred examples and embodiments of the invention, it will be understood by those

skilled in the art, after understanding the invention, that various changes and modifications may be made without departing from the spirit and scope of the invention, and it is intended therefore, to cover all such changes and modifications in the appended claims.

What is claimed is:

1. A dwelling comprising in combination:

a substantially cylindrical outer wall, said substantially cylindrical outer wall including a plurality of spaced outer piers of concrete reinforced with steel rods interconnected by the outer wall and including window and door openings;

a central pier;

a substantially cylindrical partition wall coaxial with said substantially cylindrical outer wall and said central pier;

a plurality of radial walls extending from said central pier to said substantially cylindrical partition wall to define a plurality of closed rooms;

plumbing facilities in at least some of said closed rooms;

a plurality of radial partitions, some of said radial partitions extending from said substantially cylindrical outer wall toward said substantially cylindrical partition wall, other of said radial partitions extending from said substantially cylindrical partition wall toward said substantially cylindrical outer wall to define a plurality of living regions;

a domed roof supported by said central pier and extending to said substantially cylindrical outer wall;

a cupola member on said domed roof and supported by said central pier, said cupola member including a vaned rotor freely rotatable about the axis of said central pier, said vaned rotor having vanes which are substantially planar laminae having an arcuate periphery and which are in different vertical planes extending about the axis of said central pier; and

an electric generator within said central pier, and means for connecting said vaned rotor to said electric generator so that when said vaned structure is rotated by wind from any direction said electric generator is energized.

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