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Description

This invention relates to a multi-storey building structure with habitable space which in the horizontal section comprises a central core and a plurality of wings in the form of spokes extending radially outwardly from said central core.

A building structure of said kind is known from FR—A—679826. It discloses a multi-storey tower comprising a central core and three wings which are disposed in equal distances as seen circumferentially leaving spaces therebetween which serve as terraces. The wings in the different storeys have an angular offset with respect to each other such that the habitable area of a storey is situated above the terrace of the storey below. Therefore, there is no open sky above the terraces. Further, there is a space between the core and the apartment areas so that with the terraces open to the periphery of the structure there is formed a kind of venturi near the core which is intended to create a forced natural ventilation of the structure.

It is obvious that with respect to energy saving this structure is in no way efficient. Furthermore, there is a drawback that the terraces are rather dark as they receive light only from the window-like openings at the periphery of the building structure.

Other multi-level habitable buildings of polygonal or cylindrical form with radially extending divisions which may extend from a central core are known from US—A—4,136,492, US—A—1,991,695 and US Design Patent 208090. Their common aspect is that they do not comply with the problems of energy saving.

It is commonly known that most heat exchange in a building takes place at the periphery thereof. Buildings as those described in US—A—2,154,897 and US Design Patent 216424 clearly have a very large external surface area in proportion to that enclosed, and, hence, are rather energy inefficient. Such structures are designed in order to improve viewing access to the outdoors.

It is therefore the general object of the present invention to provide a building structure of the above mentioned type having enhanced viewing exposure and which is at the same time energy efficient, at least to the extent that the ratio of external surface area to enclosed space is relatively small.

This object is attained by the characterising features of patent claim 1. Further embodiments of the invention are subject matter of further claims.

The horizontal section of the building comprises a central core with useable or habitable area or wings extending radially outwards from the central core in the manner of spokes of a wheel. The number of wings may vary according to the particular use of the building and the details of the design.

The invention may be realised as a multi-storey glassed-in tower which may be cylindrical in form. However, not all the wings need to be of the

same length. Thus, the horizontal section may be oval or oblong, for example, rather than circular. Moreover, the exterior walls joining the outer ends of successive wings may be planar rather than arcuate causing the horizontal section to be polygonal. Other modifications are possible in which some exterior walls are arcuate and others planar.

The atria are formed by the spaces between the facades of the useable spaces within the wings and the perimeter walls joining the outer ends of successive spokes.

The invention provides a building structure with a maximum visible exposure of the habitable space both to environmentally controlled atria and also to the outdoors through the exterior glass walls of the atria.

Ideally, the full expanse of one of the atria should be visible from each of the rooms or enclosed areas in the spokes through the glassed-in walls of the facades. There should also be a relatively wide-angled view of the outdoors from within any given habitable room through the glass perimeter wall of the associated atrium. It is a general objective of the invention that the habitable area will have such views of the atria and outdoors.

The ratio of the length of the peripheral wall of an atrium to the total length of the facades adjoining is obviously closely related to the angle between the two facades of a particular atrium and to the number of spokes.

It is important, especially when the habitable area is used for dwelling accommodation, such as apartments or condominiums, that the visual exposure of each dwelling unit as seen from the other units facing on the same atrium be kept to a minimum for the sake of privacy. In order to do this the portion of each dwelling unit facing on the atrium should be oblique to the corresponding portion of all the other units. Clearly this requires that the number of wings be small, preferably three.

It is desirable to have a balcony or veranda on the side of each habitable unit. This allows full advantage to be taken of the view of the atrium and the outdoors. Also, when partitions are provided between adjoining balconies privacy is further enhanced.

There are already known various building structures which have one or more atria adjoining exterior walls thereof. Any such structures which are known to the applicant provide a view of the atria only from a very limited portion of the habitable area of the building let alone of the outdoor space beyond. In determination of the merits of the present invention it is of prime importance to note the advantages which accrue from the geometric configuration and topology of the structure employed. In relation to this particular aspect of the invention the elements with which it deals are:

1. The geometry of the habitable space;
2. The geometry of the exterior envelope; and
3. The total projection of the building in relation

to the ground.

The synergistic effect of applying the spoked wheel-atrium concept to the three aforesaid elements is to produce the maximum possible simultaneous exposure of the facades of the habitable space to space within the atria and to the outdoors. This very advantageous effect is produced whether the exterior envelope of the building takes a cylindrical, an oblong or a polygonal form.

The periphery of the building structure of the instant invention is normally either equal to or less than π times the diameter. Were the perimeter glass shield which encloses the atria removed the length of the facades which would be exposed to the exterior would be greatly increased; typically, the external surface of the building then would be increased by 2 to 3 times.

An energy study has been carried out to determine the air conditioning and heating requirements of building structures of the present invention having 4 and 5 wings with the requirements of a conventional rectangular building of modern design. The results of this study are very favorable in that the energy expenditure is similar to that of a conventional building of the same habitable area. An average additional expenditure of approximately 12% would be necessary for the atria whereas the volume of the atria is much greater than 12% as compared with the habitable area. Thus in addition to the extraordinary climate offered by the atria is the fact that the structure is very energy-efficient.

On sunny days a large proportion of the energy needed to heat the portions of buildings not exposed to the sun can come from the sun heating the favored atria. The energy may be recuperated in water to permit easy transfer to the opposite side of the building.

In order to minimize energy losses from the atria during the night and in sunless periods it is desirable to increase the thermal resistance of the atrium walls.

In accordance with the broader aspect of the invention there is provided a unique building structure with habitable space which in horizontal section comprises a central core and a plurality of wings in the form of spokes extending radially outwardly from said central core, characterized in that at least some successive ones of said wings are connected by associated peripheral walls to form a plurality of enclosed atria each disposed between an associated pair of wings, and said atria being circumferentially disposed around said central core.

There is also provided in accordance with a further aspect of the invention a building structure with habitable space which in horizontal section comprises a central area and a plurality of radially-extending wings in the form of spokes surrounding said central area each of said wings having outer end wall and a pair of side walls extending in a generally radial direction, each of said side walls having at least one transparent portion characterized in that

the inner ends of two side walls of each successive pair of wings are joined to form in horizontal section a shallow U;

a transparent circumferential wall extends between the ends of each pair of joined side walls to enclose thereby an atrium;

the walls of the shallow U's are so constructed and oriented in relation to one another as to provide from within the habitable space, through any one of the transparent portions of the side walls, a view of substantially the whole area of the adjoining atrium and a broad view of the outdoors through the transparent circumferential wall while providing only an oblique view of other portions of the same U thereby substantially minimizing the visual exposure thereof.

In addition to the aforementioned functional and other practical advantages of the building structure of the invention deriving from the combination of spoke-wheel habitable area and enclosed atria is the fact that the design has considerable aesthetic merit. Not only does it provide a pleasing view from within the habitable areas within the wings but it also has an attractive external appearance.

Other objects, advantages and features of the invention will become apparent from the following description of exemplary embodiments thereof taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a perspective view of an embodiment of the invention; with portions of the roof omitted to better illustrate the internal structure;

Fig. 2 is a plan view of an embodiment of the invention having a cylindrical shape;

Fig. 3 is a plan view of an embodiment of the invention having wings of equal length, the outer peripheral walls of the atria being planar;

Fig. 4 is a plan view of an embodiment of the invention having an oblong configuration in horizontal section.

Fig. 5 is a plan view of a further embodiment of the invention.

Fig. 6 is a plan view of a portion of the embodiment of Fig. 5 showing portions of a habitable unit bordering on an atrium.

The embodiment illustrated in Fig. 1 contains 6 wings 1 extending radially from a central area and having located between each successive pair of wings an atrium 2 enclosed by a glassed-in wall 3. The wings as shown in Fig. 1 are all of the same length and the exterior walls of the atria comprise circular arcs providing an overall cylindrical outline. The central area in accordance with Fig. 1 contains an additional atrium. However, it will be understood that this is not an essential feature of the invention. As will be explained in the following, the central area may be utilized for various other purposes.

It will also be understood that while the atria, including the central one, which are shown in Fig. 1 as being open at the top are in actual practice covered by a roof which may advantageously take the form of a skylight.

Each atrium has a horizontal section in the form

of a sector of a circle bounded on the sides by facades 5 of the associated wings. The walls of the facades normally are of glassed-in construction to provide an optimum view from the habitable area within the wings of the adjoining atrium and also of the outdoors through the transparent peripheral wall of the atrium.

Fig. 2 shows a horizontal section of an embodiment of the invention which is very similar to that of Fig. 1 except that it contains five wings rather than six. Each of the walls 3 and 5 bordering an atrium are of glass.

Within and around the circumference of the pentagonal central area 20 in Fig. 2 is a continuous passageway 21 which provides access in turn to each of the areas within the spokes. The area enclosed by passageway 21 consists mainly of a pentagonal atrium 22 covered by a skylight 23. Also, located within the atrium 22 are elevator shafts 24 with access from passageway 21.

Each of the wings contains a central longitudinal passageway 25 extending from passageway 21 to the outer end of the spoke where a stairway 26 is located.

On either side of passageway 21 are rooms 27, each having one end wall forming a portion of a facade.

Fig. 3 shows a horizontal section of an embodiment which differs from that of Fig. 2 only in that the peripheral walls 30 of the atria are planar giving the horizontal section of the building a generally polygonal shape.

Fig. 4 is an example of a variant of the building structure of the invention in which the wings are of different lengths causing the horizontal section as illustrated to have an oblong shape. Here it will be noted that the peripheral wall 40 of one atrium is arcuate whereas the other peripheral walls of the other atria are planar.

The embodiment illustrated in Figs. 5 and 6 is an open concept containing three wings which provides a broad view of one of the atria as well as of the outdoors from each of the habitable units. This embodiment is particularly adapted for living accommodation such as apartments or condominiums but may also be used for offices or hotels.

Surrounding the central area as shown in Fig. 5 are three radially-extending wings 50 which surround the central area. The wings contain a plurality of separate habitable units 51, 52, 53, 54, and 55 arranged in such a way that each of the five habitable units faces onto one of the three atria. The sides of each two circumferentially successive wings which extend generally in a radial direction join a unit 53. Thus these sides form a series of facades stretching around the inner side of each atrium in the shape of a shallow U in horizontal section. Where the facade of each unit is planar the shallow U then takes the form of a segment of the circumference of a polygon.

The arrangement of Fig. 5, besides providing a broad view of the adjoining atrium and of the outdoors is particularly advantageous in enhancing privacy among the units which look out on a

given atrium. This is so because of the very small difference in angular direction between the facades of successive units facing the atrium. Thus only a very oblique view of the facade of any unit is seen from other units of the group facing on the same atrium.

Fig. 6 shows a portion of the five habitable units fronting on an atrium. The facades are seen to include balconies 57 from which the view of the atrium and the outdoors may be more fully enjoyed. Sliding glass doors 56 provide access to each balcony. A screening partial wall 58, which may include plants or flowers on the side of the balcony facing the atrium together with opaque partitions at the ends of the balcony further enhance privacy.

Although some of the disclosed embodiments include an atrium in the central area such an atrium is not an essential feature of the invention. In most cases it will be desirable to utilize the central area for services such as elevators and/or for heating and air-conditioning equipment.

It is desirable to provide a means to circulate air between the atria and other portions of the building structure. This is advantageous since the atria may be expected to receive heat from sunlight and hence such circulation of air will be beneficial in helping to heat the habitable area. Alternatively, as previously noted, it may be found to be advantageous to transfer energy from one portion of the structure to another by the circulation of water.

It will be understood that the described embodiments are exemplary only. Many other variations of the structure are possible. For example, it is not essential that the facades of a particular wing be parallel to one another. The invention includes all such variations as would occur to one skilled in the art and is delineated not by the preceding examples but solely by the appended claims.

Claims

1. A multi-storey building structure with habitable space which in horizontal section comprises a central core (20) and a plurality of wings in the form of spokes (1) extending radially outwardly from said central core, characterized in that circumferentially successive ones of said wings are connected by associated peripheral walls (3) to form a plurality of enclosed atria (2) each atrium being disposed between an associated pair of said wings, and said atria being circumferentially disposed around said central core, each of said peripheral walls containing at least one transparent portion whereby both one of the atria and space external to the building are visible from each of the wings.

2. A building structure as claimed in claim 1 further characterized in that each of said wings has an outer end wall (50) extending circumferentially and said peripheral walls are connected to outer end walls of said plurality of said successive wings.

3. A building structure as claimed in claim 1

further characterized in that each of said wings has an outer end wall extending circumferentially, the outer end walls of all said successive wings being joined by associated peripheral walls whereby the entire structure is circumferentially enclosed by said peripheral walls and said end walls.

4. A building structure as claimed in claim 3 further characterized in that each of said wings has a pair of sides extending in a generally radial direction, each of said sides comprising a facade bordering on an associated one of the atria and containing at least one transparent portion whereby the atria may be viewed from within the wings.

5. A building structure as claimed in claim 1, 3 or 4 further characterized in that said peripheral walls are arcuate in horizontal section.

6. A building structure as claimed in claim 1, 3 or 4 further characterized in that said peripheral walls are planar.

7. A building structure as claimed in claim 1, 3 or 4 further characterized in that said peripheral walls comprise glass.

8. A building structure as claimed in claim 1, 3 or 4 further characterized in that said building structure is a multi-storey tower in which the storeys have no angular offset with respect to each other thereby providing multi-storey atria.

9. A building structure as claimed in claim 3 further characterized in that the external surface of said building structure is substantially cylindrical.

10. A building structure as claimed in claim 3 further characterized in that the external surface of said building structure is oblong in horizontal section.

11. A building structure as claimed in claim 10 further characterized in that the perimeter of said building structure in horizontal section is not substantially greater than π times the diameter.

12. A building structure as claimed in claim 11 further characterized in that the perimeter of said building structure in horizontal section is not substantially greater than π times the average diameter.

13. A building structure as claimed in claim 1, 3 or 4 further characterized in that means is provided to promote heat exchange between at least one of the atria and the habitable space.

14. A building structure as claimed in claim 3 further characterized in that the external surface of said building structure is substantially polygonal in horizontal section.

15. A building structure as claimed in claim 14 further characterized in that the atria when exposed to sunlight act as heat reservoirs to provide heat which is made available to other areas within the structure.

16. A building structure as claimed in claim 1, 3 or 4 further characterized in that said central core contains service facilities for the structure.

17. A building structure as claimed in claim 1, 3 or 4 further characterized in that said central core comprises an atrium.

18. A building structure as claimed in claim 1 further characterized in that each wing has a central passageway (25) extending radially therealong and a plurality of rooms (27) on each side of said central passageway.

19. A building structure as claimed in claim 18 further characterized in that said central core has a circumferential passageway (21) communicating with each of the passageways of the wings.

20. A building structure as claimed in claim 4 further characterized in that each of said sides extending in a generally radial direction comprises glass.

21. A multi-storey building structure with habitable space which in horizontal section comprises a central area (20) and a plurality of radially-extending wings in the form of spokes (1) surrounding said central area each of said wings having an outer end wall (50) and a pair of side walls (5) extending in a generally radial direction, and each of said side walls having at least one transparent portion characterized in that

the inner ends of two side walls of each successive pairs of wings are joined to form in horizontal section a shallow U;

a transparent circumferential wall (3) extends between each pair of joined side walls to enclose thereby an atrium; and

the walls of the shallow U's are so constructed and oriented in relation to one another as to provide from within the habitable space, through any one of the transparent portions of the side walls, a view of substantially the whole area of the adjoining atrium and a broad view of the outdoors through the transparent circumferential wall while providing only an oblique view of other portions of the same U thereby substantially minimizing the visual exposure thereof.

22. A building structure as claimed in claim 21 further characterized in that one of the circumferential walls extends between the outer ends of the pair of joined side walls forming each shallow U thereby to form together with the end walls of the wings a substantially circular exterior enclosure.

23. A building structure as claimed in claim 21 further characterized in that a plurality of dwelling units (51, 52, 53, 54, 55) adjoin each of the shallow U's each dwelling unit having a transparent area providing a view of the associated atrium and of the outdoors.

24. A building structure as claimed in claim 21, 22 or 23 further characterized in that each of the side walls of the wings comprises a facade (5) having a balcony and a decorative screening means.

Revendications

1. Structure de bâtiment à étages multiples dotée d'un espace habitable qui comporte en coupe horizontale un noyau central (20) et un ensemble d'ailes ayant la forme de rayons (1) s'étendant radialement vers l'extérieur depuis

ledit noyau central, caractérisée en ce que lesdites ailes se succédant sur une circonférence sont reliées par des parois périphériques associées (3) formant un ensemble de patios enclavés (2), chaque patio se trouvant entre une paire associée desdites ailes, et lesdits patios étant disposés sur la circonférence autour dudit noyau central, chacune desdites parois périphériques comportant au moins une section transparente, à la fois l'un des patios et l'espace extérieur au bâtiment étant ainsi visibles de chacune des ailes.

2. Structure de bâtiment selon la revendication 1 caractérisée en outre en ce que chacune desdites ailes comprend une paroi d'extrémité externe (50) s'étendant sur toute la circonférence, et en ce que lesdites parois périphériques sont reliées aux parois d'extrémité externe de l'ensemble desdites ailes successives.

3. Structure de bâtiment selon la revendication 1 caractérisée en outre en ce que chacune desdites ailes comprend une paroi d'extrémité externe s'étendant sur toute la circonférence, les parois d'extrémité externe desdites ailes successives étant réunies par des parois périphériques associées, l'entière structure étant ainsi entourée sur toute sa circonférence par lesdites parois périphériques et lesdites parois d'extrémité.

4. Structure de bâtiment selon la revendication 3, caractérisée en outre en ce que chacune desdites ailes comporte une paire de côtés s'étendant généralement radialement, chacun desdits côtés comprenant une façade adjacente à l'un des patios associés et comportant au moins une section transparente, les patios pouvant ainsi être vus depuis l'intérieur des ailes.

5. Structure de bâtiment selon la revendication 1, 3 ou 4 caractérisée en outre en ce que lesdites parois périphériques ont une forme d'arc en coupe horizontale.

6. Structure de bâtiment selon la revendication 1, 3 ou 4, caractérisée en outre en ce que lesdites parois périphériques sont planes.

7. Structure de bâtiment selon la revendication 1, 3 ou 4, caractérisée en outre en ce que lesdites parois périphériques comportent des vitres.

8. Structure de bâtiment selon la revendication 1, 3 ou 4, caractérisée en outre en ce que ladite structure de bâtiment est une tour à étages multiples dans laquelle les étages ne comportent pas de déport angulaire les uns par rapport aux autres, constituant ainsi des patios à étages multiples.

9. Structure selon la revendication 3, caractérisée en outre en ce que la surface extérieure de ladite structure de bâtiment est sensiblement cylindrique.

10. Structure selon la revendication 3, caractérisée en outre en ce que la surface extérieure de ladite structure de bâtiment est oblongue en coupe horizontale.

11. Structure de bâtiment selon la revendication 10, caractérisée en outre en ce que le périmètre de ladite structure de bâtiment en coupe horizontale n'est pas sensiblement plus grande que π fois le diamètre.

12. Structure de bâtiment selon la revendication 11, caractérisée en outre en ce que le périmètre de ladite structure de bâtiment en coupe horizontale n'est pas sensiblement plus grande que π fois le diamètre moyen.

13. Structure de bâtiment selon la revendication 1, 3 ou 4, caractérisée en outre en ce qu'un moyen est prévu pour permettre un échange de chaleur entre au moins un des patios et l'espace habitable.

14. Structure de bâtiment selon la revendication 3, caractérisée en outre en ce que la surface extérieure de ladite structure de bâtiment est sensiblement polygonale en coupe horizontale.

15. Structure de bâtiment selon la revendication 14, caractérisée en outre en ce que les patios se comportent comme des accumulateurs de chaleur lorsqu'ils sont exposés aux rayons de soleil en vue de fournir la chaleur disponible aux autres zones de la structure.

16. Structure de bâtiment selon la revendication 1, 3 ou 4, caractérisée en outre en ce que ledit noyau central comporte des installations d'entretien de la structure.

17. Structure de bâtiment selon la revendication 1, 3 ou 4, caractérisée en outre en ce que ledit noyau central comporte un patio.

18. Structure de bâtiment selon la revendication 1, caractérisée en outre en ce que chaque aile comporte un passage central (25) s'étendant radialement le long de celle-ci ainsi qu'un ensemble de pièces (27) de chaque côté dudit passage central.

19. Structure de bâtiment selon la revendication 18, caractérisée en outre en ce que ledit noyau central comporte un passage circonferenciel (21) communiquant avec chacun des passages des ailes.

20. Structure de bâtiment selon la revendication 4 caractérisée en outre en ce que chacun desdits côtés s'étendant généralement radialement comporte des vitres.

21. Structure de bâtiment à étages multiples dotée d'un espace habitable qui comporte en coupe horizontale une zone centrale (20) et un ensemble d'ailes s'étendant radialement et en forme de rayon (1) entourant lesdites zones centrales, chacune desdites ailes étant pourvue d'une paroi d'extrémité externe (50) et d'une paire de parois latérales (5) s'étendant généralement de manière radiale, et chacune desdites parois latérales comportant au moins une section transparente, caractérisée en ce que

les extrémités internes de deux parois latérales de chaque paire d'ailes successives sont réunies de manière à former, en coupe horizontale, un U peu profond.

une paroi transparente circonferencielle (3) s'étend entre chaque paire de deux parois latérales réunies afin d'entourer ainsi un patio, et

les parois du U peu profond sont conçues et orientées les unes par rapport aux autres de manière à offrir depuis l'intérieur de l'espace habitable, au travers de l'une quelconque des sections transparentes des parois latérales une

vue sur sensiblement toute la zone du patio adjacent et une large vue sur l'extérieur à travers la paroi transparente circonférencielle tout en offrant une vue oblique sur d'autres sections du même U, minimisant ainsi sensiblement son exposition visuelle.

22. Structure de bâtiment selon la revendication 21, caractérisée en outre en ce qu'une des parois circonférencielles s'étend entre les extrémités externes de la paire de parois latérales réunies formant chaque U peu profond, formant ainsi avec les parois d'extrémité des ailes une enclave extérieure sensiblement circulaire.

23. Structure de bâtiment selon la revendication 21 caractérisée en outre en ce qu'un ensemble d'unités d'habitation (51, 52, 53, 54, 55) sont contigües à chacun des U peu profonds, chaque unité d'habitation étant pourvue d'une zone transparente offrant une vue sur le patio associé et sur l'extérieur.

24. Structure de bâtiment selon la revendication 21, 22 ou 23 caractérisée en outre en ce que chacune des parois latérales des ailes comporte une façade (5) dotée d'un balcon et d'écrans décoratifs.

Patentansprüche

1. Mehrstöckige Gebäudekonstruktion mit bewohnbarem Raum, die im Horizontalschnitt einen mittigen Kern (20) und eine Mehrzahl von Flügeln in der Form von Speichen (1) aufweist, die sich radial auswärts von dem mittigen Kern erstrecken, dadurch gekennzeichnet, daß in Umfangsrichtung aufeinanderfolgende der genannten Flügel durch zugehörige Umfangswände (3) verbunden sind, um eine Mehrzahl von umschlossenen Atrien (2) zu bilden, wobei jedes Atrium zwischen einem zugehörigen Paar genannter Flügel angeordnet ist und die genannten Atrien in Umfangsrichtung um den genannten mittigen Kern angeordnet sind, jede der genannten Umfangswände wenigstens einen transparenten Abschnitt aufweist, wodurch sowohl eines der Atrien und der Raum außerhalb des Gebäudes von jedem der Flügel aus sichtbar sind.

2. Gebäudekonstruktion nach Anspruch 1, weiterhin dadurch gekennzeichnet, daß jeder der Flügel eine äußere Endwand (50) aufweist, die sich in Umfangsrichtung erstreckt, und daß die Umfangswände mit den äußeren Endwänden der Mehrzahl aufeinanderfolgender Flügel verbunden sind.

3. Gebäudekonstruktion nach Anspruch 1, weiterhin dadurch gekennzeichnet, daß jeder der Flügel eine äußere Endwand hat, die sich in Umfangsrichtung erstreckt, die äußeren Endwände aller aufeinanderfolgenden Flügel miteinander durch zugehörige Umfangswände verbunden sind, wodurch die Gesamtkonstruktion in Umfangsrichtung durch die Umfangswände und die genannten Endwände umschlossen ist.

4. Gebäudekonstruktion nach Anspruch 3, weiterhin dadurch gekennzeichnet, daß jeder der genannten Flügel ein Paar von Seitenwänden auf-

weist, die sich in einer im wesentlichen radialen Richtung erstrecken, wobei jede der Seitenwände eine Frontseite aufweist, die an ein zugehöriges der Atrien angrenzt und wenigstens einen transparenten Abschnitt aufweist, wodurch das Atrium von innerhalb der Flügel einsehbar ist.

5. Gebäudekonstruktion nach Anspruch 1, 3 oder 4, weiterhin dadurch gekennzeichnet, daß die Umfangswände im Horizontalschnitt bogenförmig sind.

6. Gebäudekonstruktion nach Anspruch 1, 3 oder 4, weiterhin dadurch gekennzeichnet, daß die Umfangswände eben sind.

7. Gebäudekonstruktion nach Anspruch 1, 3 oder 4, weiterhin dadurch gekennzeichnet, daß die Umfangswände Glas enthalten.

8. Gebäudekonstruktion nach Anspruch 1, 3 oder 4, weiterhin dadurch gekennzeichnet, daß die Gebäudekonstruktion ein mehrstöckiger Turm ist, in welchem die Stockwerke keinen Winkelversatz zueinander aufweisen, um dadurch mehrstöckige Atrien zu bilden.

9. Gebäudekonstruktion nach Anspruch 3, weiterhin dadurch gekennzeichnet, daß die Außenfläche der Gebäudekonstruktion im wesentlichen zylindrisch ist.

10. Gebäudekonstruktion nach Anspruch 3, weiterhin dadurch gekennzeichnet, daß die Außenfläche der genannten Gebäudekonstruktion im Horizontalschnitt länglich ist.

11. Gebäudekonstruktion nach Anspruch 10, weiterhin dadurch gekennzeichnet, daß der Umfang der Gebäudekonstruktion im Horizontalschnitt nicht wesentlich größer als π mal dem Durchmesser ist.

12. Gebäudekonstruktion nach Anspruch 11, weiterhin dadurch gekennzeichnet, daß der Umfang der Gebäudekonstruktion im Horizontalschnitt nicht wesentlich größer als π mal dem Durchschnittsdurchmesser ist.

13. Gebäudekonstruktion nach den Ansprüchen 1, 3 oder 4, weiterhin dadurch gekennzeichnet, daß eine Einrichtung zur Begünstigung des Wärmeaustauschs zwischen wenigstens einem der Atrien und dem bewohnbaren Raum vorgesehen ist.

14. Gebäudekonstruktion nach Anspruch 3, weiterhin dadurch gekennzeichnet, daß die Außenfläche der Gebäudekonstruktion im Horizontalschnitt im wesentlichen polygonal ist.

15. Gebäudekonstruktion nach Anspruch 14, weiterhin dadurch gekennzeichnet, daß die Atrien, wenn sie dem Sonnenlicht ausgesetzt sind, als Wärmespeicher wirken, um Wärme zu liefern, die den anderen Bereichen innerhalb der Konstruktion verfügbar gemacht ist.

16. Gebäudekonstruktion nach Anspruch 1, 3 oder 4, weiterhin dadurch gekennzeichnet, daß der mittige Kern Dienstleistungseinrichtungen für die Konstruktion enthält.

17. Gebäudekonstruktion nach Anspruch 1, 3 oder 4, weiterhin dadurch gekennzeichnet, daß der mittige Kern ein Atrium enthält.

18. Gebäudekonstruktion nach Anspruch 1, weiterhin dadurch gekennzeichnet, daß jeder Flü-

gel einen mittleren Durchgang (25), der sich radial längs desselben erstreckt, und eine Vielzahl von Räumen (27) zu jeder Seite des zentralen Durchgangs aufweist.

19. Gebäudekonstruktion nach Anspruch 18, weiterhin dadurch gekennzeichnet, daß der mittige Kern einen in Umfangsrichtung verlaufenden Gang (21) aufweist, der mit jedem der Durchgänge in den Flügeln in Verbindung steht.

20. Gebäudekonstruktion nach Anspruch 4, weiterhin dadurch gekennzeichnet, daß jede der sich im wesentlichen in radialer Richtung erstreckenden Seiten Glas enthält.

21. Mehrstöckige Gebäudekonstruktion mit bewohnbarem Raum, die im Horizontalschnitt einen mittigen Bereich (20) und eine Mehrzahl von sich radial erstreckenden Flügeln in Form von Speichen enthält, die den mittigen Bereich umgeben, wobei jeder der Flügel eine äußere Endwand (50) und ein Paar von Seitenwänden (5) enthält, die sich im wesentlichen in radialer Richtung erstrecken, und jede der genannten Seitenwände wenigstens einen transparenten Abschnitt aufweist, dadurch gekennzeichnet, daß

die inneren Enden der zwei Seitenwände von jeweils aufeinanderfolgenden Flügelpaaren miteinander verbunden sind, um im Horizontalschnitt ein flaches U zu bilden;

eine transparente Umfangswand (3) sich zwischen jedem Paar miteinander vereinigter Seitenwände erstreckt, um dadurch ein Atrium zu umschließen; und

die Seitenwände des flachen U so gestaltet und in bezug aufeinander so orientiert sind, daß sie von innerhalb des bewohnbaren Raumes durch jeden der transparenten Bereiche der Seitenwände eine Sicht über im wesentlichen die gesamte Fläche des anstoßenden Atriums und einen breiten Blick durch die transparente Umfangswand nach außen gestatten, während sie nur einen schrägen Blick anderer Abschnitte desselben U ergeben, um dadurch diese der Einsicht nur minimal auszusetzen.

22. Gebäudekonstruktion nach Anspruch 21, weiterhin dadurch gekennzeichnet, daß eine der Umfangswände sich zwischen den äußeren Enden des Paares miteinander verbundener Seitenwände, die jedes flache U bilden, erstreckt, um zusammen mit den Endwänden der Flügel eine im wesentlichen kreisförmige äußere Umhüllung zu bilden.

23. Gebäudekonstruktion nach Anspruch 21, weiterhin dadurch gekennzeichnet, daß eine Mehrzahl von Wohneinheiten (51, 52, 53, 54, 55) zu jedem der flachen U's gehören, von denen jede Wohneinheit einen transparenten Bereich aufweist, der einen Blick auf das zugehörige Atrium und nach außen gestattet.

24. Gebäudekonstruktion nach Anspruch 21, 22 oder 23, weiterhin dadurch gekennzeichnet, daß jede der Seitenwände der Flügel eine Fassade (5) mit einem Balkon und einer dekorativen Abschirmeinrichtung enthält.

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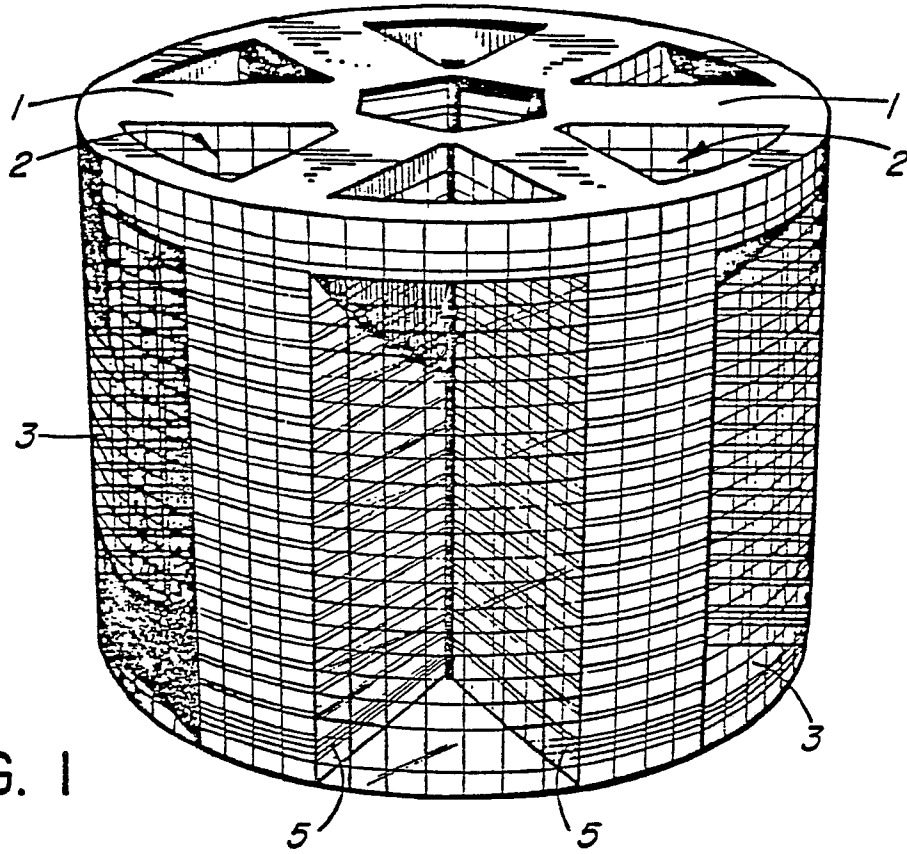


FIG. 1

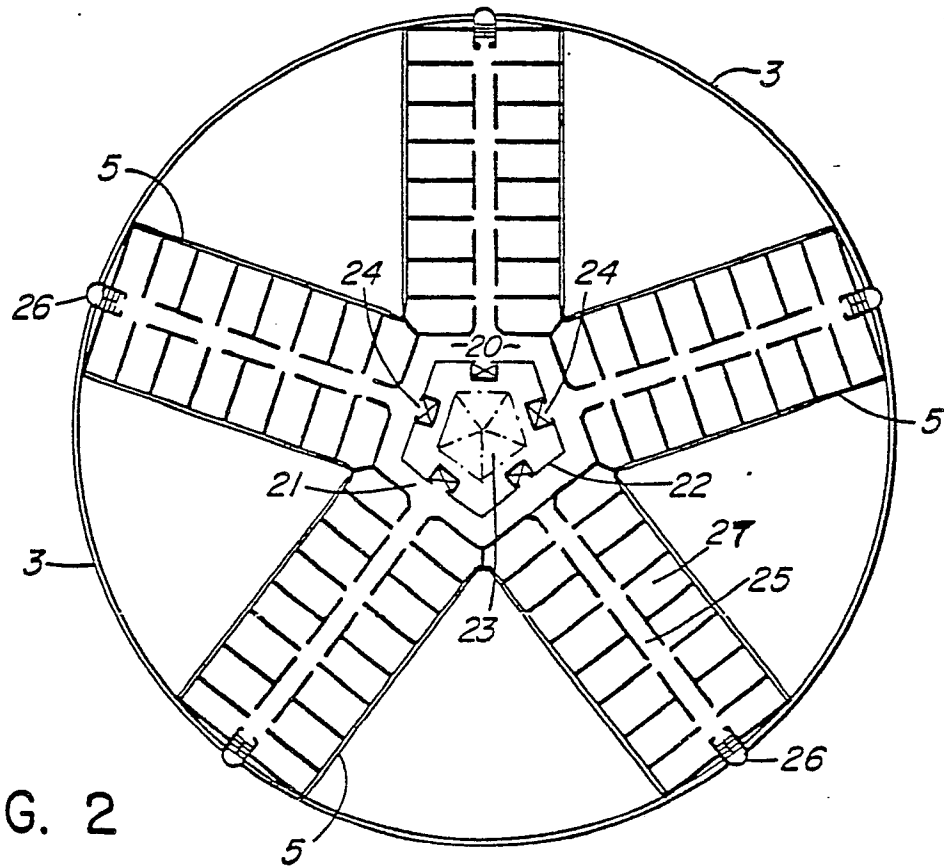


FIG. 2

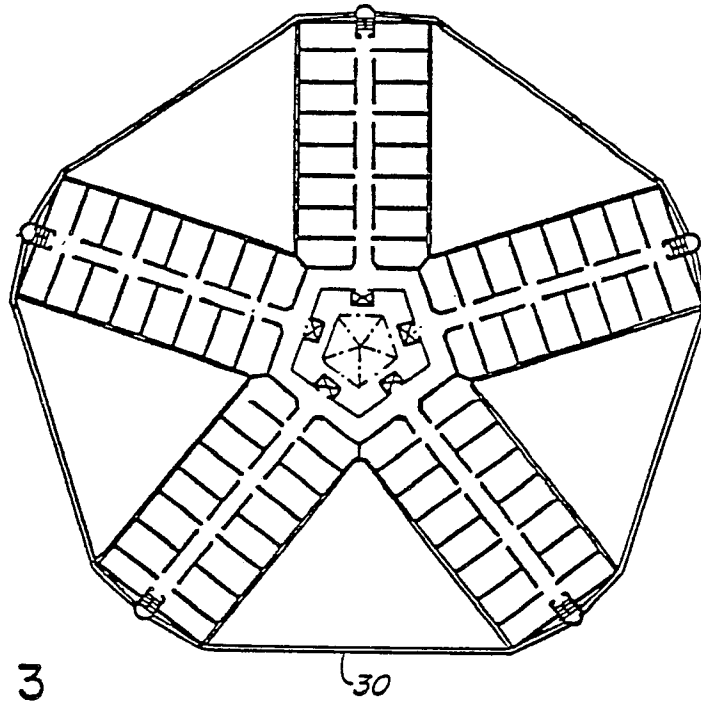


FIG. 3

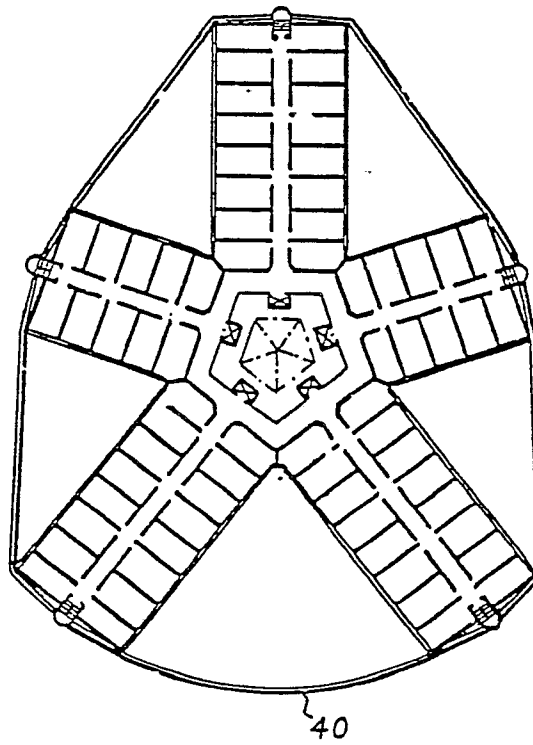


FIG. 4

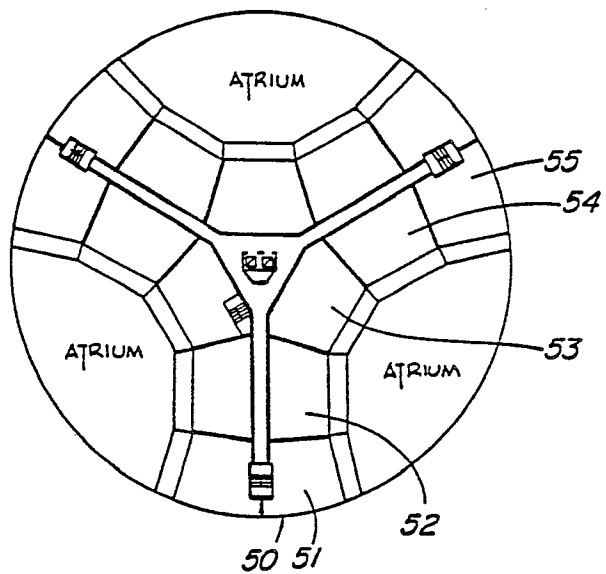


FIG. 5

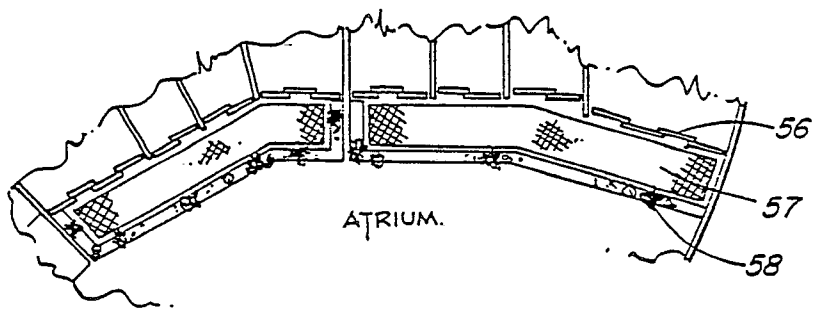


FIG. 6