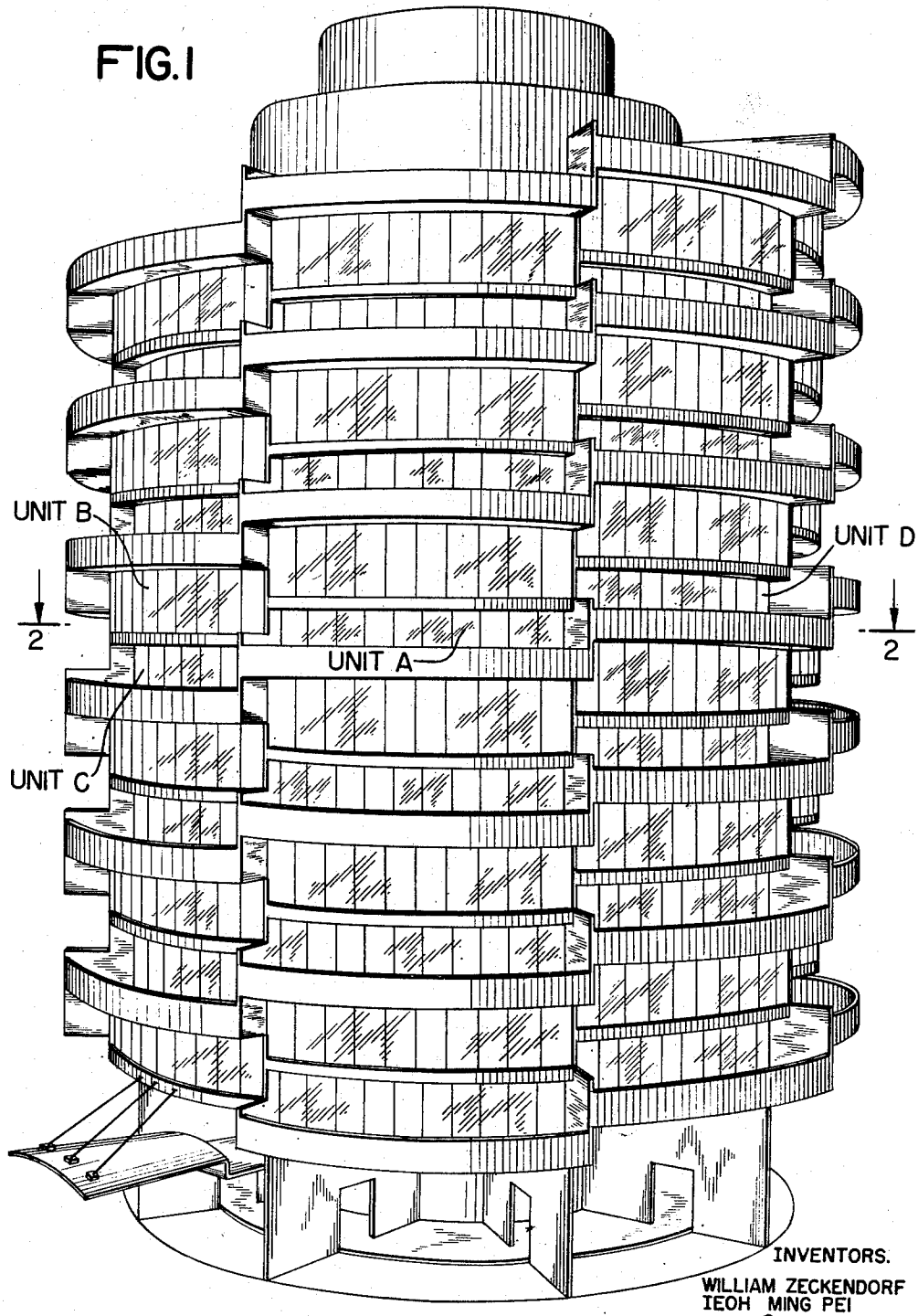
Jan. 11, 1955 W. ZECKENDORF ET AL 2,698,973

MULTISTORY BUILDING STRUCTURE

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FIG. 1



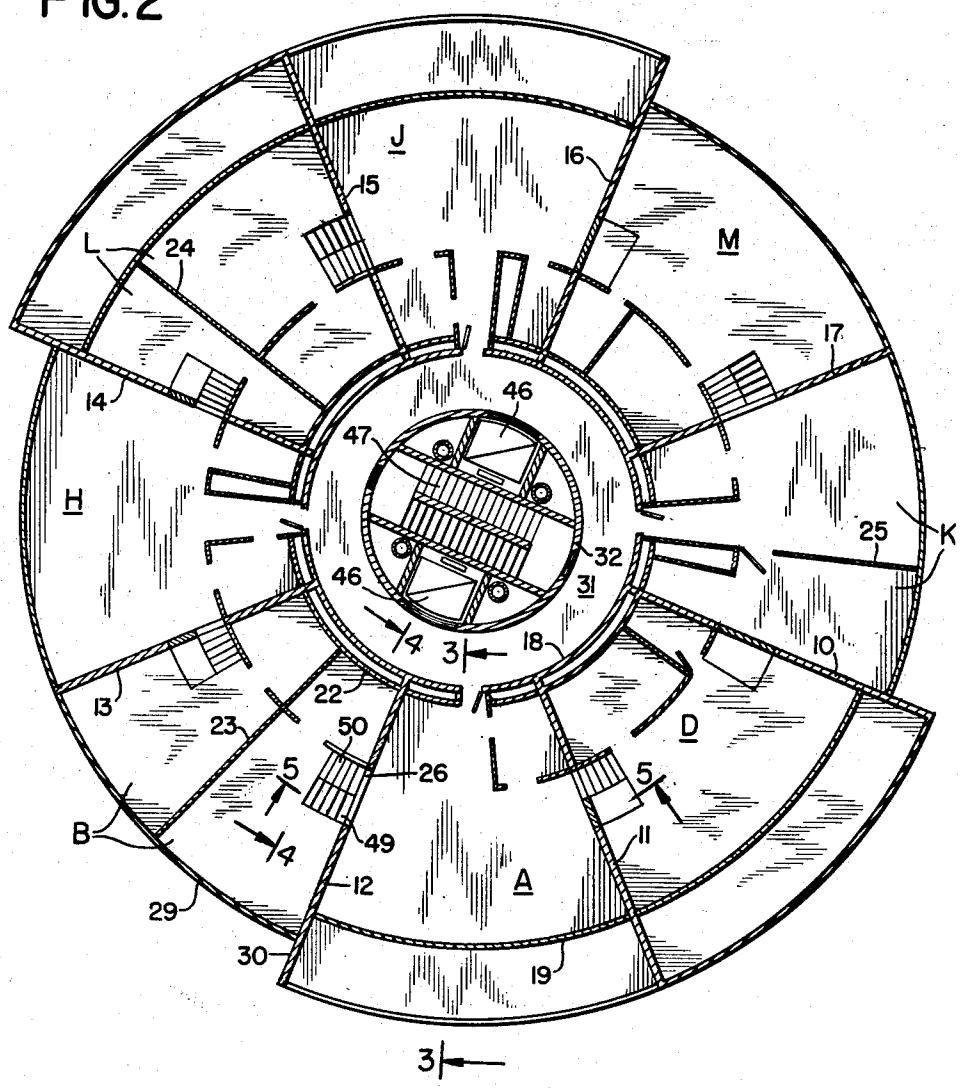
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MULTISTORY BUILDING STRUCTURE

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FIG. 2



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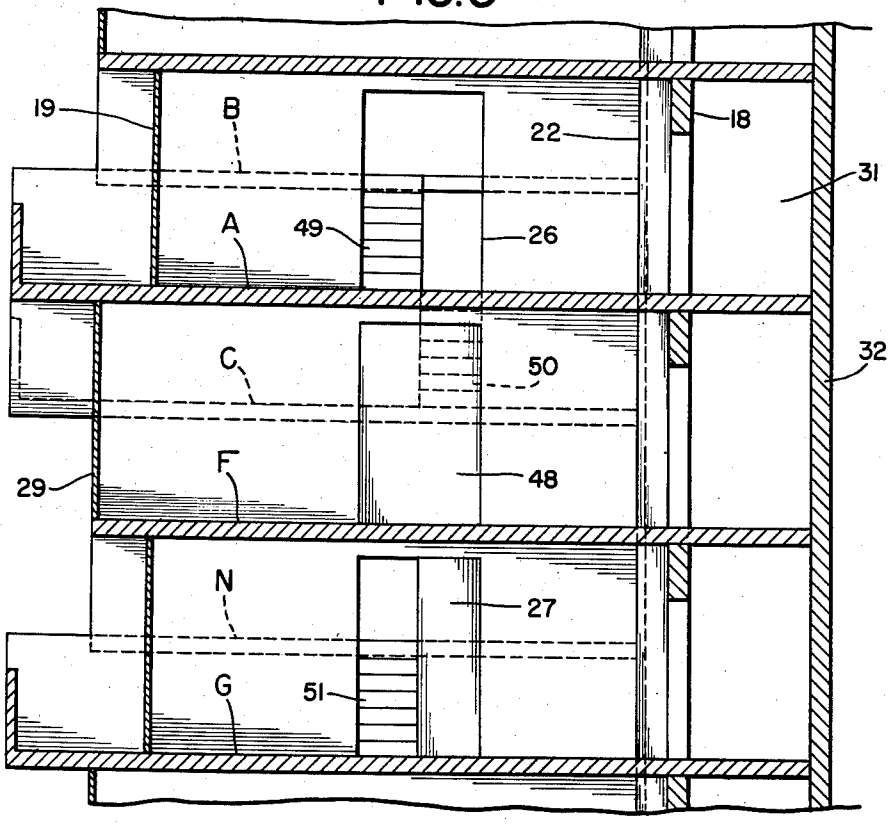
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MULTISTORY BUILDING STRUCTURE

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FIG. 3



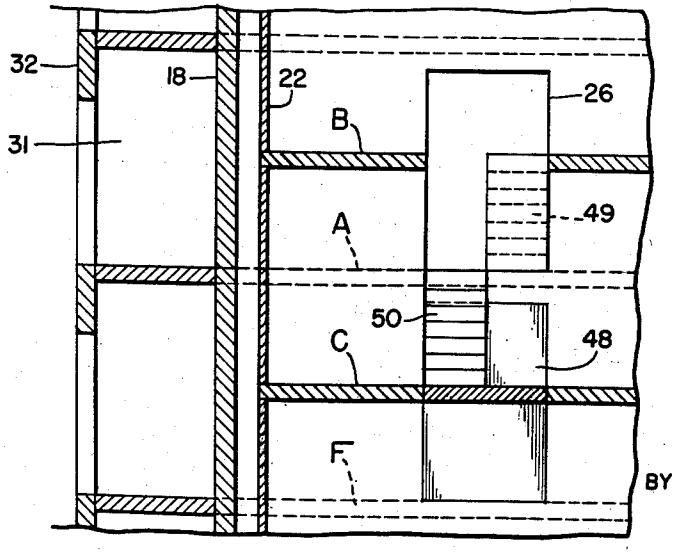


FIG. 4

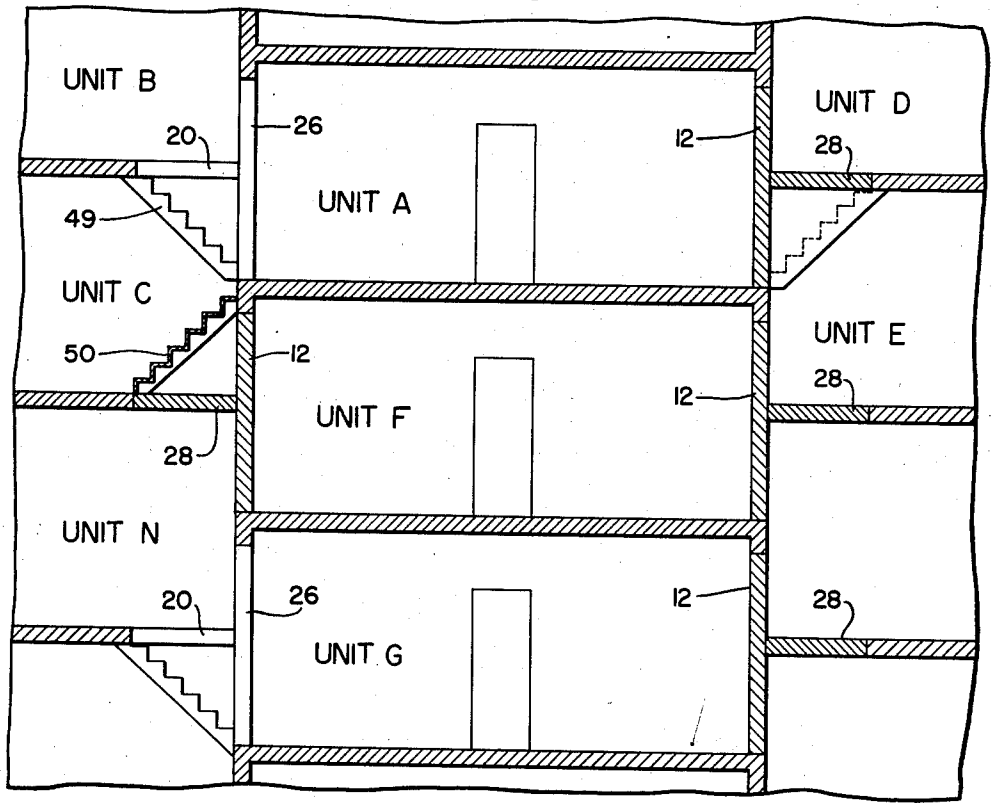
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MULTISTORY BUILDING STRUCTURE
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FIG.5



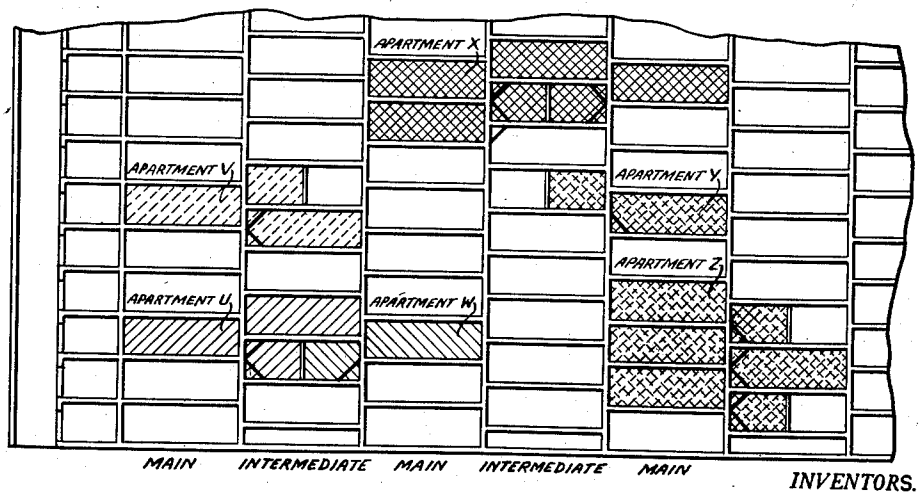


FIG.6

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FIG. 7

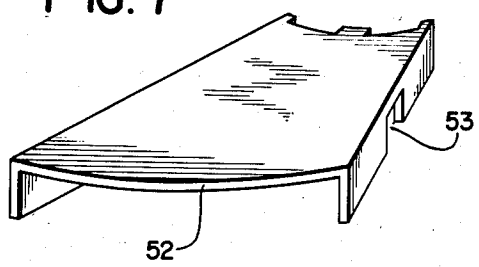


FIG. 8

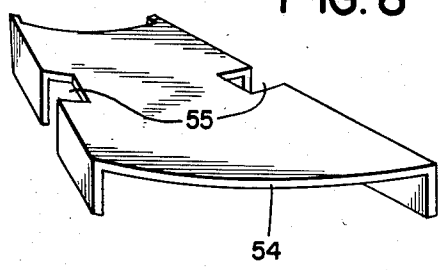
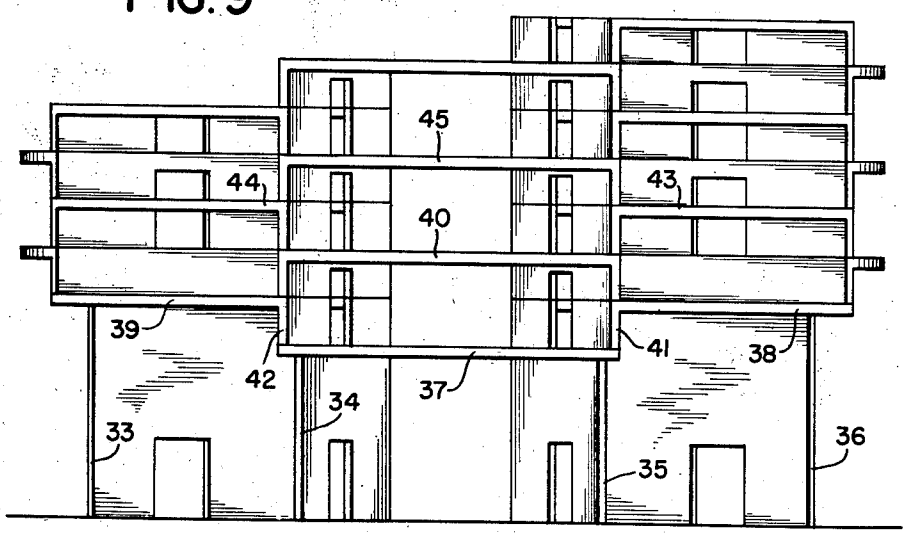


FIG. 9



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FIG. 10

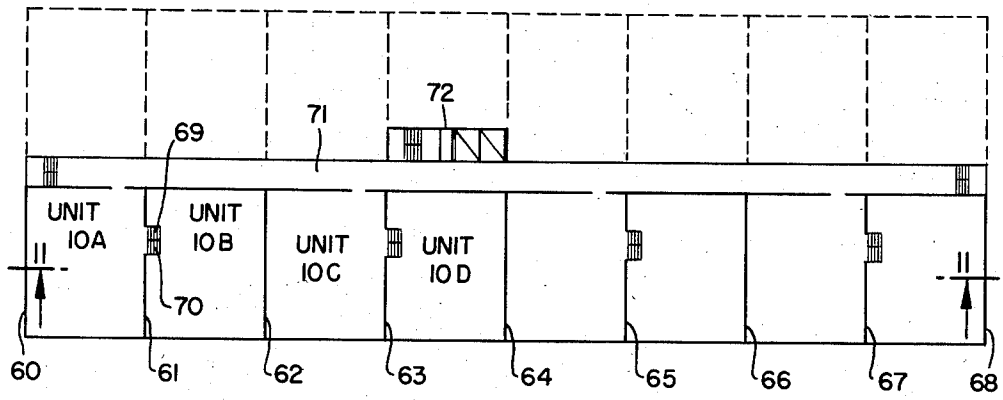
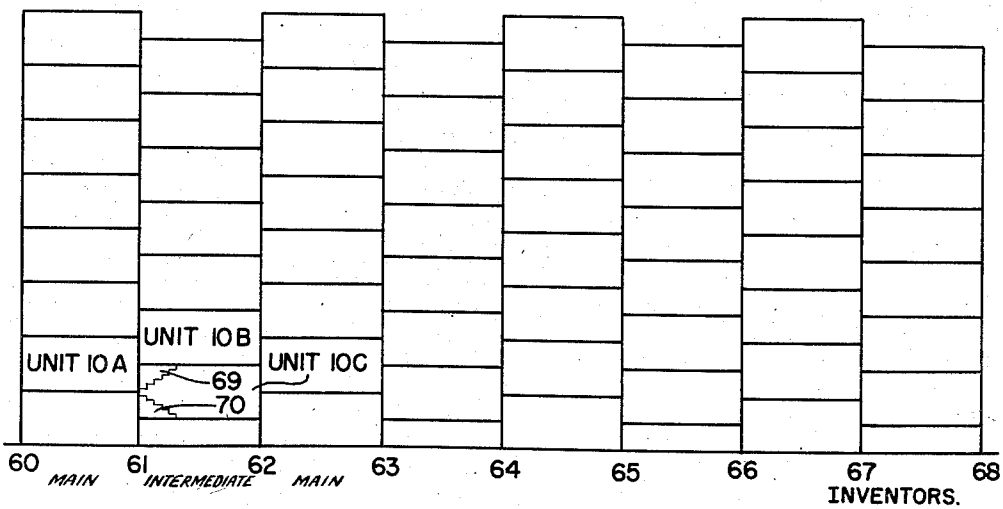


FIG. 11



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United States Patent Office 2,698,973
Patented Jan. 11, 1955

2,698,973

MULTISTORY BUILDING STRUCTURE

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Application December 22, 1949, Serial No. 134,456

11 Claims. (Cl. 20—1.1)

This invention relates to building construction, and particularly to a multi-story structure type that is characterized by a novel arrangement of the floors of the adjacent units of space in such structure by which maximum flexibility in the utilization of the entire space within the structure is provided, and further characterized by the centralization of the utilities with respect to the units to be served thereby, thus effecting economies in construction.

In structures of the multiple dwelling type heretofore built, it has been customary to arrange all rooms of an apartment upon the same floor except in so-called duplex apartments in which the rooms of each apartment are divided into two groups, one of which occupies space in the building immediately above or below and substantially in vertical alignment with the space occupied by the other group of rooms, with a stairway connecting the groups, such, for example, as the structure shown in the patent to Tullgren, No. 1,896,734, dated February 7, 1933. The space arrangement in the structure there shown does not lend itself to the most efficient use of the available space for the reason that the space requirements of a tenant can be met by the adjustment of space along vertical lines only. The inability to effect adjustment in other directions imposes a limitation upon the use of the available space in the structure which obviously affects the efficiency of use of such space.

One of the objects of the present invention is to obtain the maximum flexibility in the use of the available space within a building structure, and that desired end is attained by locating each floor of one vertical group of occupancy units at a level substantially midway between the levels of the floors of two such units in the vertical group of units adjacent thereto so that by the use of suitably spaced openings between the units access may be had between any given unit in one vertical group and the two units in each of the two vertical groups adjacent thereto.

The term "occupancy unit," as employed herein, means a spatial section of a building structure, the level of the floor of which is uniform throughout the space of the section.

Another object of the invention is to minimize the construction cost of providing the various utilities and services required in each of the occupancy units in a multi-story structure, such as, for example (but without limitation), a multiple dwelling structure, which is effected through the provision in such a structure of a centralized core in which are located the public stairways, elevators, all utilities such as air conditioning ducts, pipes, etc., required by such units, and also a corridor at each of the main levels of the structure through which access may be had to the several main occupancy units.

Another object of the invention is to minimize the construction cost of such a structure by employing prefabricated or precast inverted U-shaped structural units the preferred size of each of which is sufficient to form one-half an occupancy unit in a multi-story structure, each structural unit being so designed and proportioned that when a multiple of such units are arranged in the manner hereinafter fully described, the sidewalls of the units will be in alignment and will form the sidewalls of an occupancy unit one full story in height.

Other objects of this invention will be apparent from the following description when read in connection with the attached drawing of which

Fig. 1 shows in perspective a circular building divided

vertically into a plurality of sectors and each sector divided horizontally into a plurality of occupancy units, the floor level of any given unit being one-half story higher than the level of one of the units in an adjacent sector and one-half story lower than the level of another of the units in the same adjacent sector;

Fig. 2, which is a cross-sectional view of the structure shown in Fig. 1 looking downward from a plane passed through the structure along the line 2—2, shows the arrangement of the space in the core of the structure, the spacing of the occupancy units with respect to the core, the mode of access between the core and the main occupancy units, and also between the main units and the intermediate units adjacent thereto;

Fig. 3 is a transverse, vertical view along the line 3—3 of Fig. 2 in the direction of the arrows, showing, in fragmentary form, the relative floor levels of the corridors of the core and the occupancy units of the structure and also showing the wall openings between adjacent units and the use of panels by which such openings may be closed when access to an adjacent unit is unnecessary;

Fig. 4 is a transverse, vertical view along the line 4—4 of Fig. 2, showing, in fragmentary form, the relative floor levels and the openings provided in the walls as viewed in the direction opposite to that of Fig. 3;

Fig. 5 is a vertical curvilinear view along the line 5—5 of Fig. 2, looking toward the core of the structure;

Fig. 6 is a development of the circular structure shown in Fig. 1 showing various combinations of the occupancy units or parts of such units to provide the space requirements for the tenants of the apartments;

Figs. 7 and 8 show prefabricated or precast units that may be employed in the construction of a circular type of building such as that shown in Fig. 1;

Fig. 9 is a front elevation of a circular structure formed by assembling prefabricated or precast units of the type shown in Figs. 7 and 8; and

Figs. 10 and 11 are the plan view and a vertical cross-section, respectively, of a building of rectangular form in which this invention is embodied.

While this invention will be described in its application to a building of circular form and also to one of rectangular form, it is to be understood that such forms are merely illustrative and not to be construed as a limitation of the scope of the invention, since it is applicable to a multi-story building of any external shape or form.

The circular building shown in Fig. 1 is divided by walls into a plurality of sectors, for example, 8 or 12, all of which are preferably but not necessarily of the same angular size since by such standardization economies in construction may be effected. The dividing walls may be constructed by pouring concrete upon the spot during the erection of the building, or they may be formed by assembling prefabricated or precast units such as, for example, those shown in Figs. 7 and 8, each of which is a truncated sector of a circular structure. Those structural units, and the mode of assembling them to form occupancy units, which is shown in Fig. 9, will be described hereinafter.

The dividing walls 10 to 17, inclusive, are radial and, as shown in Fig. 2, extend from the circular interior wall 18 to the circular exterior wall 29 of the building, with a further extension at alternate levels to provide the sidewalls of terraces at those levels as shown in Figs. 1 and 2. The walls 10 to 17, inclusive, not only divide the structure into a plurality of sectors, but serve also to support the floors thereof. The walls 23, 24 and 25 are intended merely to partition the dwelling units in which they are placed and afford no support to the structure.

Referring to Fig. 5 which is a view along the curved line 5—5 of Fig. 2 looking toward the center of the structure, it will be seen that each sector into which the circular structure is divided by the vertical walls, 10 to 17, inclusive, is divided horizontally by the floors of the structure, thus forming the occupancy units of the structure. The distance between the levels of the floors of those units is uniform for all sectors, but, as is clearly shown in Fig. 5, the floors of the units in adjacent sectors are not at the same level as they are in the conventional type of building, but are staggered,

the level of the floor of a unit of one sector being above one floor of a unit in an adjacent sector and below the floor of another unit in said adjacent sector by an amount equal to one-half the distance between the levels of successive floors in each sector. For example, the level of the floor of unit A is above the level of the floor of unit C by an amount equal to one-half the distance between the levels of the floors of units B and C. Likewise, the level of the floor of unit A is below the level of the floor of unit B by the same distance. The level of the floor of unit D is at the same level as that of the floor of unit B, and, similarly, the floors of units C and E are at the same level. By staggering the floor levels in this manner the space of the two units on each side of any given unit, such as unit A, is rendered readily available for connection to that unit whenever additional space is required in connection with unit A.

As shown in Fig. 2, four occupancy units, viz., A, H, J and K are connected directly with the circular corridor 31 which is one of a plurality of corridors that surround that portion of the core of the building in which are located the elevators 46, stairways 47, and other utilities, and those units will hereinafter be referred to as the main occupancy units. The other units shown on Fig. 2, viz., B, L, M and D, which have no direct connection with any circular corridor of the building will be referred to hereinafter as intermediate occupancy units. Those units which are one-half story above units A, H, J and K are intended for use with the latter units and are connected by means of interior stairways. The manner in which the connection of intermediate and main units is effected is as follows:

During the course of constructing the building, openings would be provided in the dividing walls 10, 11, 12, etc., the width of which openings would be such as to permit the installation of two stairways, if desired, one leading to the floor of the higher intermediate unit and the other leading to the floor of the lower intermediate unit in the adjacent sector. When passage between a main and an intermediate unit is not required, the openings would be closed by panels, such as 48, shown in Figs. 3 and 4, that would conform in size to the openings and also would conform in decoration with that of the walls into which the panels would be fitted. When it is desired to connect a main unit, such as unit A, with intermediate units, such as B and C, the panel would be removed from the opening and stairs such as 49 and 50 would be provided, each leading to one of the adjoining intermediate units. The panels used in closing the openings in the walls would preferably be made in sections so that when only one stairway between units is required it will not be necessary to remove the entire panelling but only so much thereof as is necessary for the single stairway. Thus, as shown in Fig. 3, where a single stairway 51 leads from unit G to unit N, only one-half of the panel is removed, the section 27 remaining in position.

To provide for possible future connections between main and intermediate units it is necessary not only to provide openings in the vertical walls but also to provide openings in the floors of intermediate units to which the stairs extend. Such an opening is indicated by 20 in Fig. 5 where stairs extend from the main unit A to the intermediate unit B and also where the stairs from the main unit G extend to the intermediate unit N. When access to the adjacent units is not required, the floor openings may be closed by a panel, such as 28, inserted in the opening which will provide continuity of the surface of the floor of the unit and also continuity of ceiling of the unit immediately below.

The flexibility afforded by a structure of the type described herein in which the floor levels in adjacent sectors are staggered, is clearly shown in Fig. 6, which illustrates some of the various combinations of occupancy units that may be readily formed in such a structure to meet the requirements of tenants. The apartments thus formed range in size from 1½ to 5 units, but combinations may be formed of a smaller or a greater number of such units. Each of the apartments U and V consists of one main unit and 1½ intermediate units. Each of the apartments W and Y consists of one main and one-half intermediate units. Apartment X includes 3 main units and the space of 2 intermediate units, one of which is divided, and shows the possibility of expanding not only laterally, but also vertically in order to provide the space requirements of a tenant. Apartment Z comprises the equivalent of 5 units, 3 of which are main units, and it also illustrates the possibility of expanding vertically as well as laterally.

While entrances have been shown in Fig. 6 only to those main units at the left hand side of the figure, it is to be understood that all main units have similar access to corridors.

Figures 10 and 11 show the application of the fundamental principles of this invention to a rectangular type of building structure. The structure is divided into a plurality of sections by the walls 60 to 63, inclusive, and the levels of the floors in the adjacent sections are staggered in the same manner as the floors of the circular type of structure hereinbefore described. By suitable openings in the walls, access to the adjacent units, such as 10A, 10B and 10C may readily be provided by stairs such as 69 and 70. Corridors, such as 71, extend the full length of the structure at all main levels and the main occupancy units such as 10A, 10C, etc., are connected to a corridor which in turn is connected to the access-well 72 containing the elevators, public stairways and certain utilities. The intermediate occupancy units, such as 10B, 10D, etc., have no direct connection with a corridor, their connection being indirect, that is, through the main units to which they are connected by interior stairways such as 69 and 70. The structure shown by the solid lines in Fig. 10 may be enlarged by the addition of the sections shown in dotted lines, which sections would be connected to the corridors 71 and the access-well 72, and the floors of the additional sections would also be staggered as shown in Fig. 11.

Another novel feature of this invention resides in the use of prefabricated or precast units (hereinafter referred to as preformed units) which, when designed and proportioned and arranged in the manner presently to be described, will form a structure embodying the staggered floors which is one of the fundamental principles that characterize this invention.

As shown in Figs. 7 and 8, a plan view of a preformed unit for a circular building has the form of a truncated sector of a circle, and a vertical cross-section of such unit has the form of an inverted U. The side walls of such U-shaped unit follow the radial lines of the circular building in the construction of which the preformed units are to be employed. The units are so proportioned that the height of the sidewalls is uniform throughout the length of the truncated sector, and in magnitude, equal to one-half of the height of an occupancy unit of the building to be formed by using such structural units. The length of the sidewalls of a unit for a circular building, such as represented by Figs. 1 and 2, would be of such magnitude as to extend from the circular interior wall 18 to the exterior surface 29 of the building as shown in Fig. 2, except where terraces are provided in which case a portion of the sidewall would extend to the extremity of the terraces. Each of the units shown in Figs. 7 and 8 has in the floor thereof, at the rear, i. e., the narrow end of the unit, a recess which, when the units are in position, as shown in Fig. 9, will form the annular space in which the air-conditioning ducts, water and other pipes are placed to provide those services to the several occupancy units. While each structural unit is shown as being formed in a single piece, it will, of course, be understood that it can be constructed in a plurality of pieces suitable in size to be readily handled.

The preformed units may be of several types which may differ in design and proportions depending upon whether the units are to be used in forming the main occupancy units or the intermediate occupancy units of the completed structure.

When precast or prefabricated units are employed in the construction of such a building, openings similar to those shown in Figs. 2 to 5, inclusive, must be provided in each of the preformed units during the process of forming such units, which openings must be so located that when the units are assembled in the manner shown in Fig. 9, the opening in the wall of one unit will be in alignment with the opening in the wall of the unit with which it coacts so as to form full openings similar to those shown in Figs. 2, 3, 4 and 5.

One type of preformed unit, designated 52, which is intended to form part of a main occupancy unit, is shown in Fig. 7. It is provided with openings in both side-

walls of the unit, one of which, designated **53**, is shown in one sidewall, which openings constitute part of a full sized opening such as that indicated by **26** of Fig. 5 in the dividing wall of the completed structure.

Another type of preformed unit, designated **54**, which is shown in Fig. 8, is designed to form part of an intermediate occupancy unit. In that type of unit there are not only openings in both sidewalls, similar to the opening shown in Fig. 7, but also openings, designated **55**, in the floor of the unit. When the openings in the sidewalls of the preformed units of the types shown in Figs. 6 and 7 are located at the same distance from the inner end of the unit, the sides of the openings will be in alignment when one wall of the unit of Fig. 7 is superimposed upon a wall of Fig. 8 in the manner shown in Fig. 9. The provision of openings in the walls and the floors of the preformed structural units prepares for the placing of stairways to connect the occupancy units when so desired.

Not only may the preformed units differ in shape or in the position of the openings, that is, whether in the sidewalls or in the floor, but all units may not have the same radial length. Certain of the main occupancy units, such as units A and J, shown in Fig. 2, have terraces connected therewith, and in those units the floor extends beyond the exterior wall **19** of the unit to form the floor of the terrace. In other main dwelling units, such as H and K, in which terraces are not provided, the floors of the units terminate at the exterior wall of the unit, as is indicated by **29** in Fig. 2. It is desired to point out that the exterior wall may be radially farther from the center of the building than the exterior wall **19** of units A and J, as shown in Fig. 2, or the exterior walls of all units may be at the same radial distance from the center.

The manner in which structural units, such, for example, as those shown in Figs. 7 and 8, are employed in the construction of a circular building, is shown in Fig. 9, which is a front elevation of such a building. The structural units by which the occupancy units are formed rest upon a base which may be formed in various ways, for example, by erecting a plurality of walls 33, 34, etc., with floors such as **37**, **38**, etc., supported thereby as shown in the drawing. Upon the completion of the base, the structural units would be moved into position so that they will be superimposed and thereby form occupany units of the structure. Thus, as shown in Fig. 9, when unit **40** is correctly positioned, its right-hand sidewall will rest upon the floor **38** and will be in line with the flange **41** thereon; similarly, the left-hand sidewall of unit **40** will rest upon the floor member **39** and will be in line with the flange **42** thereon. Thereupon, units 43 and 44 would be placed in position, with one sidewall of each of those units resting upon unit **40** and the other sidewall of each resting upon other units. With the placing in position of unit **45**, four occupancy units will be completed, each of which is a full story in height and is provided with openings to afford access to other units in an adjacent sector as described fully hereinbefore.

Although no specific means have been shown for holding in aligned position the sidewalls of the superimposed units, it is to be understood that any conventional construction means may be employed. Since the building is circular in form, the units would, of course, resist pressure that would tend to dislodge them once they have been placed in position.

Another novel feature of this invention resides in the centralization of means for supplying the many and varied services required by and common to all occupancy units of the structure, and a centralized arrangement for furnishing these services is shown in Fig. 2. In the space within the circular wall **32** are located the elevators and public stairways for all apartments within the building. Surrounding that space and between walls **32** and **18** are corridors at each of the main levels by which access is had to the main occupancy units of the structure. Adjacent to the wall **18** of the structure is a plurality of spaces, such as **22**, that extend vertically through the structure and in which are located all air conditioning ducts, pipes for water and other purposes, and also means to supply other services required in each of the apartments. The plurality of spaces, such as **22**, constitutes what may be termed the service-ring of the structure to which all occupancy units have access and by which those units may be readily supplied with whatever services are required by the use to be made of such units. Thus, regardless of the use to which the increased space is to be put by the tenant, that whether as a bedroom with a bathroom connected therewith, or a dining room with a kitchen, the facilities for supplying air conditioning, water, and all other necessary services are readily available. As shown in Figs. 2, 3 and 4, the space **22** is continuous across the rear end of each intermediate occupancy unit such as units B, L, etc., but in the main occupancy units, such as A, E, etc., which open onto the corridor **31**, the duct space **22** is necessarily divided at the entrances to the units. That arrangement lends itself to flexibility in the use of the space in the structure because with each increment of living space in the building there is available an increment of service space fully equipped with mechanical connections for air conditioning, water and other services.

In the air conditioning practice contemplated in a building in which this invention is embodied, regardless of the form or shape of the building, the conditioned air would preferably be projected into each occupancy unit from a supply duct opening into the unit at the rear end thereof, with a return duct similarly located which greatly simplifies the duct arrangement. In the circular form of building there is a further advantage in that only four thermostatic controls would be required, one for each of the cardinal points of the compass to control the temperature of the air in the occupancy units located within a quadrant. Furthermore, by virtue of the centralization of the ducts for air-conditioning within the so-called service-ring of a building of circular form, which ring is adjacent to the rear end of each occupancy unit, long lateral runs of ducts in each unit are unnecessary and thereby economies are effected in construction that are not attainable in the conventional type of rectangular building.

In the foregoing description, the invention has sometimes been described in its application to a structure of the multiple dwelling type. It should be understood that the reference to a residential type of structure is merely illustrative and not a limitation upon the field of use of the invention since obviously it is applicable to structures intended for commercial, industrial or other uses. Also, in the foregoing description and in Fig. 2, the exterior wall in certain units, such as A and D, is at a shorter radial distance from the center of the structure than is the exterior wall in unit B. The arrangement of the exterior walls at different radial distances is purely a matter of design, not of necessity, and, accordingly, if desired, the exterior walls of all units could be in alignment. The provision of large terraces, such as are shown in Fig. 2 in connection with units A and D, has the effect of making each apartment a penthouse apartment.

The arrangement of the occupancy units at staggered half-levels provides for the most efficient use of the space within the building since expansion of space to meet a tenant's requirements may be effected in horizontal as well as vertical directions. The provision of what may be termed a mechanical core of the structure, in which are located the elevators, public stairways, ducts, pipes and wires to furnish the various services required by the occupancy units, lends itself to economies in construction as does also the employment of radial reinforced concrete walls, instead of columns. Furthermore, the use of a standard unit or module makes it possible to effect standardization of parts such as wall panels, bathroom and window units.

While this invention has been described as embodied in particular forms, it is not to be construed as so limited since it is capable of embodiment in other forms and may have other applications within the spirit and scope of the appended claims.

What is claimed is:

1. A multi-story building structure comprising, in combination, exterior walls, vertical dividing walls sectionalizing the structure, each section of which has therein a plurality of floors, the floors of one section being located substantially midway between those in each contiguous section, the said dividing walls having therein openings and stairways connected therewith directly connecting the floors of the contiguous sections.

2. A multi-story building structure, the horizontal cross-section of which is substantially circular, comprising, in combination, an exterior circular wall, an interior circular wall, a plurality of vertical dividing walls extending along radial lines of the circular structure between said circular walls to divide the structure into a plurality of sectors, a plurality of floors, the floors in each sector dividing each sector into a group of vertically aligned occupancy units of one sector being midway between the level of the floors of each adjacent sector, and means defining selectively openable and closable passageways through said vertical walls to provide direct communication between the occupancy units in each sector and the occupancy units in a sector adjacent thereto.

3. A building structure as defined in claim 2 further characterized by the provision of open passageways in said vertical walls and stairs at each open passageway connecting a floor of one sector to one or more floors of an adjacent sector.

4. A multi-story circular building structure divided vertically by walls into a plurality of segments each having therein a plurality of horizontally disposed floors providing a group of vertically disposed occupancy units, each of said segments having the horizontal cross-sectional form of a truncated sector of the circular structure, the level of the floor of each occupancy unit in a segment being substantially midway between the levels of the floors of the units in each adjacent segment, each occupancy unit having a selectively closable and openable passageway in at least one of its vertical walls through which an occupant in that occupancy unit may pass didectly into the adjacent occupancy unit in the next adjoining segment.

5. A sectionalized multi-story circular building structure having therein a plurality of groups of vertically disposed occupancy units each unit having vertical walls and a horizontally disposed floor and having the horizontal cross-sectional form of a truncated sector of the circular structure, the levels of the floors of the units in each vertical group of units being midway between the levels of the floors of the next adjacent vertical groups of units, said structure having a centralized public access facility and a plurality of public corridors at alternate floor levels within said structure each of which provides passage between said facility and those units whose floor is at the same level as that of a corridor, and means providing openings in said vertical walls to accommodate stairways for direct access from the floor levels in one vertical group of units to the adjacent floor levels of the units in an adjacent vertical group of units.

6. A circular building structure having therein a plurality of occupancy units substantially identical in size but arranged so that the floor levels of adjacent units are spaced apart by a distance equal to one-half the height of a unit, the said structure having a centralized public access facility and a plurality of corridors each connected to said access facility and to those occupancy units, the floors of which are at the same level as that of a corridor, to provide a passageway between the facility and the occupancy units thus connected, and means within the units to provide passage between those units which are at a corridor level and those units adjacent thereto.

7. The method of constructing a circular building structure divided by radially disposed vertical walls into a plurality of sector shaped segments in which the level of the floor in each sector shaped segment is midway between the floor levels in each adjacent sector shaped segment which consists in forming inverted U-shaped structural units each being in horizontal cross-section a truncated sector of said structure, each unit having a top member and side members, each side member of a unit being one-half story in height, and positioning said units so that each inverted unit will rest upon two inverted units spaced apart at such angular distance that each side wall of the supporting and supported units will lie in the same plane to form occupancy units one story in height.

8. A multi-story building structure, circular in cross-section, having an outer and an inner circular wall and a plurality of vertical dividing walls dividing the structure into a plurality of truncated sectors, each forming a space unit, the floors of each sector being staggered with respect to the floors of each adjacent sector by a distance equal to one-half the height of one story, a centralized public access facility located within the area enclosed by the inner wall and a plurality of public corridors also located within said area and connected to said facility, the successive corridors being spaced apart vertically by a distance equal to the height of one story and connecting to the said public access facility only those space units at alternate floor levels.

9. The structure defined by claim 8 further characterized by the inclusion of a stairway connected with an opening in the wall between a space unit at the said alternate floor level and a space unit adjacent thereto and at an intermediate floor level to provide a passageway between said units.

10. A multi-story building structure having a plurality of vertical dividing walls dividing the structure into a plurality of sections each containing a plurality of vertically aligned space units each one story in height, the floors in each section being offset with respect to those in each adjacent section by a distance equal to one-half the height of one story thereby providing a plurality of floor levels spaced apart a distance equal to one-half the height of a space unit, a public access facility located within said structure and a plurality of public corridors connected with said public access facility, the successive corridors being vertically spaced by a distance equal to the height of one story and connecting to the said public access facility only those space units at alternate floor levels, and means including openings in the vertical walls of said space units and stairs at said openings to provide direct access from the space units in one section to adjacent space units in the next adjacent section.

11. A multi-story building structure, the horizontal cross-section of which is substantially circular, comprising, in combination, an exterior substantially circular wall, an interior wall, a second interior wall positioned adjacent to the first interior wall but separated therefrom, a plurality of vertical dividing walls extending along radial lines of the structure between the first mentioned interior wall and the exterior wall to divide the structure into a plurality of sectors, each sector having a plurality of horizontally disposed floors to divide that sector into a group of vertically disposed occupancy units, alternate sectors of said structure providing main occupancy units and the sectors between said alternate sectors providing intermediate occupancy units, the floors in said sectors having the main occupancy units being located midway between the floors in said sectors having the intermediate occupancy units, the space between the two interior walls forming a utility hatchway adjacent to each of said sectors to provide utility services thereto, said structure having a cylindrical core containing public access facilities and a plurality of corridors at the floor levels of said main occupancy units connecting the public facility core to said main occupancy units.

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