

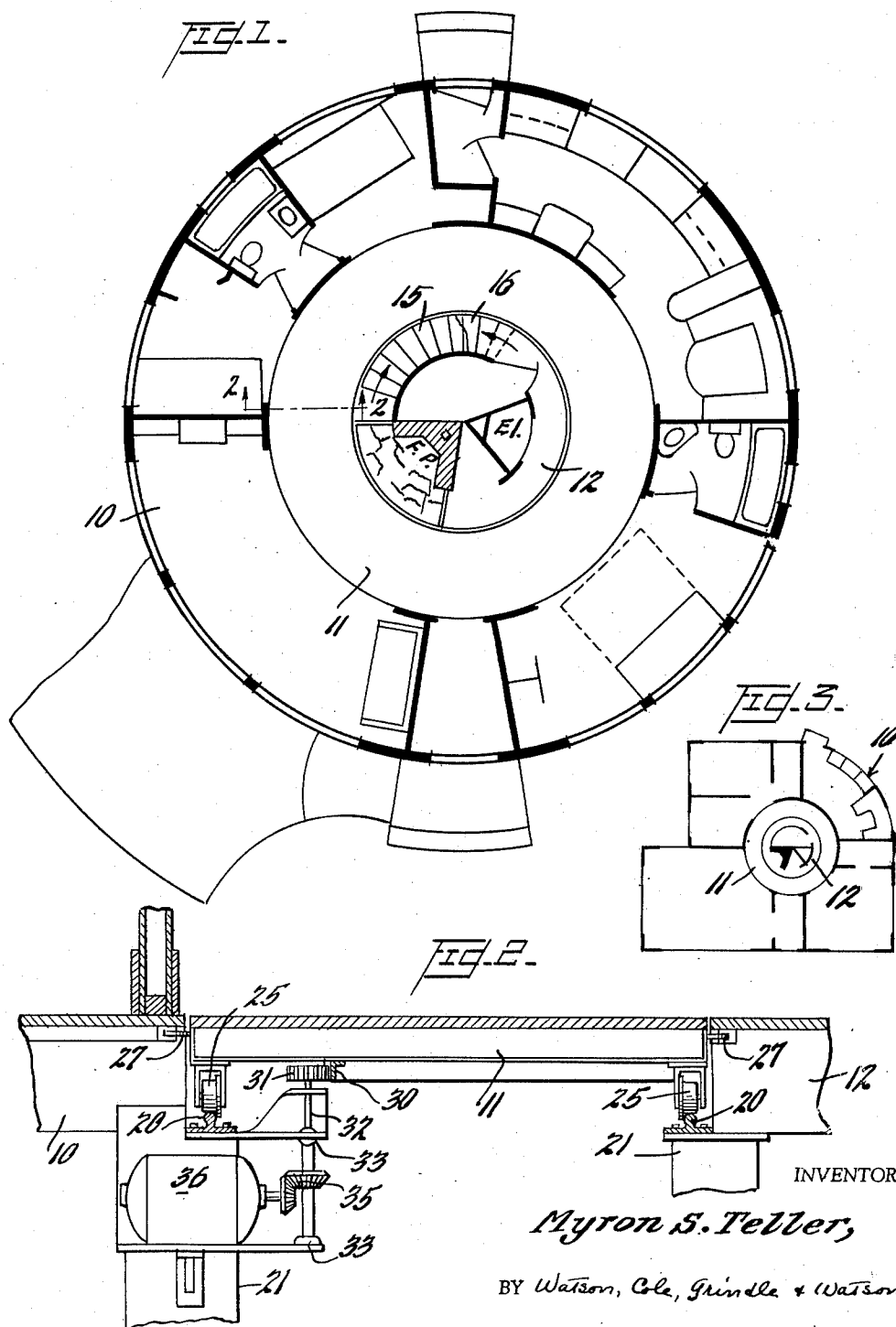
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M. S. TELLER

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BUILDING STRUCTURES AND ROTARY TRANSPORTATION PLATFORM THEREIN

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BUILDING STRUCTURES AND ROTARY TRANSPORTATION PLATFORM THEREIN

Myron S. Teller, Kingston, N. Y.

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2 Claims. (Cl. 20—1)

This invention relates to improvements in dwelling and like structures and has for its primary object the incorporation, in one or more floors of the building, of a rotatable annular section or platform, substantially flush with the adjacent stationary portions of the floor, the platform serving as the floor of a circular hall or passageway. Mechanism is provided whereby rotation of the platform by a prime mover, for instance an electric motor, may be started and stopped at will. Thus an occupant of the building, desiring to move from one room to another on the same floor, may move into the circular hallway, and on manipulation of suitable control devices, effect rotation of the platform and thus be transported to a position adjacent another doorway opening into a selected room.

While my invention finds utility in various types of buildings, it is chiefly useful in residences occupied by one or more infirm persons, the effort required to move from one room to another being thereby minimized.

In the preferred embodiment of my invention, illustrated and described herein, the floor plan is essentially circular and comprises a stationary central section, which may be utilized for fire place, closet, utility room, and stairs affording access to the floors below and above, or for suitable elevators as may be desired, and an annular outer stationary floor area having a depth, measured radially, of a single room. The rotatable platform or hallway floor is disposed between the inner and outer stationary floor sections, whereby access to any room from any other room in the outer section may be had merely by moving onto the platform, each room being preferably provided with a door opening directly onto the platform. However, it will be appreciated that the principle of the invention may be applied to other building structures and to dwellings in which the floor plan is, at least externally, of the more conventional rectangular design.

Further objects and features of the invention will be apparent from the following description taken in connection with the accompanying drawings, in which:

Figure 1 is a schematic plan view of the floor of a dwelling embodying the invention;

Figure 2 is a vertical section taken substantially on line 2—2 of Figure 1, and

Figure 3 is a schematic plan view on a reduced scale of a modification.

In order to simplify the description of the invention and to promote an understanding of the principles involved, reference is made herein to a specific embodiment which is described in detail. It will nevertheless be appreciated that no limitation of the scope of the invention is thereby intended, such modifications and alterations as fall within the purview of those skilled in the art to effect being contemplated as part of the invention.

In Figure 1 of the drawing is shown a floor plan following the usual practice in architectural design to the end that the construction may be illustrated more simply

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and in a manner more readily understood by those working in the field of the invention. It will be observed that the floor structure is circular in outline and comprises, as hereinbefore indicated, an outer section 10 and an intermediate section 11, each of which is annular, and a central circular section 12. The sections 10 and 12 are stationary, and although the arrangement of the several rooms into which the section 10 is divided, and the utility of each room is indicated by legends, it will be understood that the invention is not limited to the arrangement illustrated, which is merely suggestive as having enhanced functional value in a dwelling embodying the principles of the invention. Similarly, although I have illustrated the central section 12 as affording, inter alia, stairways 15 and 16 leading to the floors above and below, it will be appreciated that this arrangement is subject likewise to wide modification and, as hereinbefore suggested, the illustrated central section 12 may be constituted in part or in whole by an elevator, whereby access to other floors, preferably of similar design, may be had. The essence of the invention resides in the provision of means supporting the annular intermediate section or circular hall 11 for rotation about a central vertical axis, in combination with power means selectively operable to effect rotation thereof, when and to the extent desired.

In Figure 2 of the drawing, in which is illustrated only a portion of the floor shown in Figure 1, there is represented schematically the supporting and driving means for the rotary section 11 of the floor. These may comprise inner and outer annular tracks 20 carried on a plurality of support members 21, such as concrete piers or iron posts, which are circularly arranged and which may also serve as partial supports for the central stationary section 12 and the outer stationary section 10 of the floor. The rotatable platform 11 is provided at its lower side, at points spaced circumferentially along the inner and outer peripheral portions thereof, with rollers 25 riding on the tracks 20 and supporting the weight of the platform 11. Preferably the upper surfaces of the sections 10, 11, 12 are substantially flush, defining a common horizontal plane, and only slight radial spacing obtains between the adjacent sections; lateral displacement of the section 11 may be resisted by guide wheels 27, mounted on vertical axes in the sections 10 and 12 and engaging the outer peripheral portion of the annular section 11.

Secured to the lower side of the section 11 is a toothed annulus 30. Meshing with the annulus 30 is a pinion 31 secured to a shaft 32, mounted for rotation in bearings 33 carried on one of the support piers 21 and driven through bevel gearing 35 from an electric motor 36; the gear ratio is selected to drive the section 11 at a suitable speed.

It will be appreciated that the details of mounting and driving the intermediate rotatable platform form no part of the invention, excepting in combination with other component elements essential to the invention, and may be varied widely.

As will be seen from the floor plan of Figure 1, the rotating platform section 11 is accessible through openings or doors from each of the rooms of section 10. The central section 12 may be open adjacent the rotating platform section 11, excepting for the usual hand rails adjacent the stairs, although this may, as hereinbefore suggested, be modified considerably without sacrificing the benefits of the invention.

The motor 36 may be energized by any conventional electrical control circuit, such, for instance, as the circuit commonly employed in passenger operated electric elevators, control panels being located at a convenient

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point adjacent the opening or door to each room in the outer section 10, for instance on the wall which defines the inner periphery of the stationary section 10. Thus an occupant desiring to move, for example, from the living room to the kitchen, is only obliged to step or otherwise move from the living room onto the section 11, and select and operate a control button or the like bearing an appropriate legend, whereupon the rotating section 11 will convey him to a position alongside the opening or door into the kitchen, at which point the rotating section 11 will stop.

As in control mechanisms for automatic elevators, safeguards may be provided to prevent accident when more than one person is using the platform; thus initiation of movement of the platform may be prevented, by suitable design of the control circuit, while any person is moving on or off the platform 11 and until the opening or door is entirely cleared by such person. Again, if two persons are concurrently on the platform 11 and have operated controls designed to stop the platform at two different doors, the platform 11 will stop at each door in sequence, movement being prevented until the doors are cleared in each instance. The analogy to automatically controlled elevators is evident, and the illustration of such controls, which have long been entirely conventional, is unnecessary to an understanding and practice of the invention.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

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1. In a building structure, a floor having a stationary circular inner section, a revolving annular section surrounding said inner section, and a stationary outer section surrounding said annular section, means supporting said annular section for rotation about a central vertical axis, and power actuated mechanism operable to rotate said annular section, said outer section being partitioned to provide a plurality of separate rooms having doorways opening onto said annular section, whereby an occupant of the building may be conveyed from one to another of said rooms on said annular section.

2. In a building structure, a floor having a stationary circular inner section, a revolving annular section surrounding said inner section, and a stationary outer section surrounding said annular section, means supporting said annular section for rotation about a central vertical axis, and power actuated mechanism operable to rotate said annular section, said outer section being partitioned to provide a plurality of separate rooms having doorways opening onto said annular section, whereby an occupant of the building may be conveyed from one to another of said rooms on said annular section, and means associated with said inner section affording access to a floor on another level.

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