

Aug. 28, 1945.

G. H. BURROWS

2,383,445

APARTMENT BUILDING STRUCTURE

Filed July 3, 1944

2 Sheets-Sheet 1

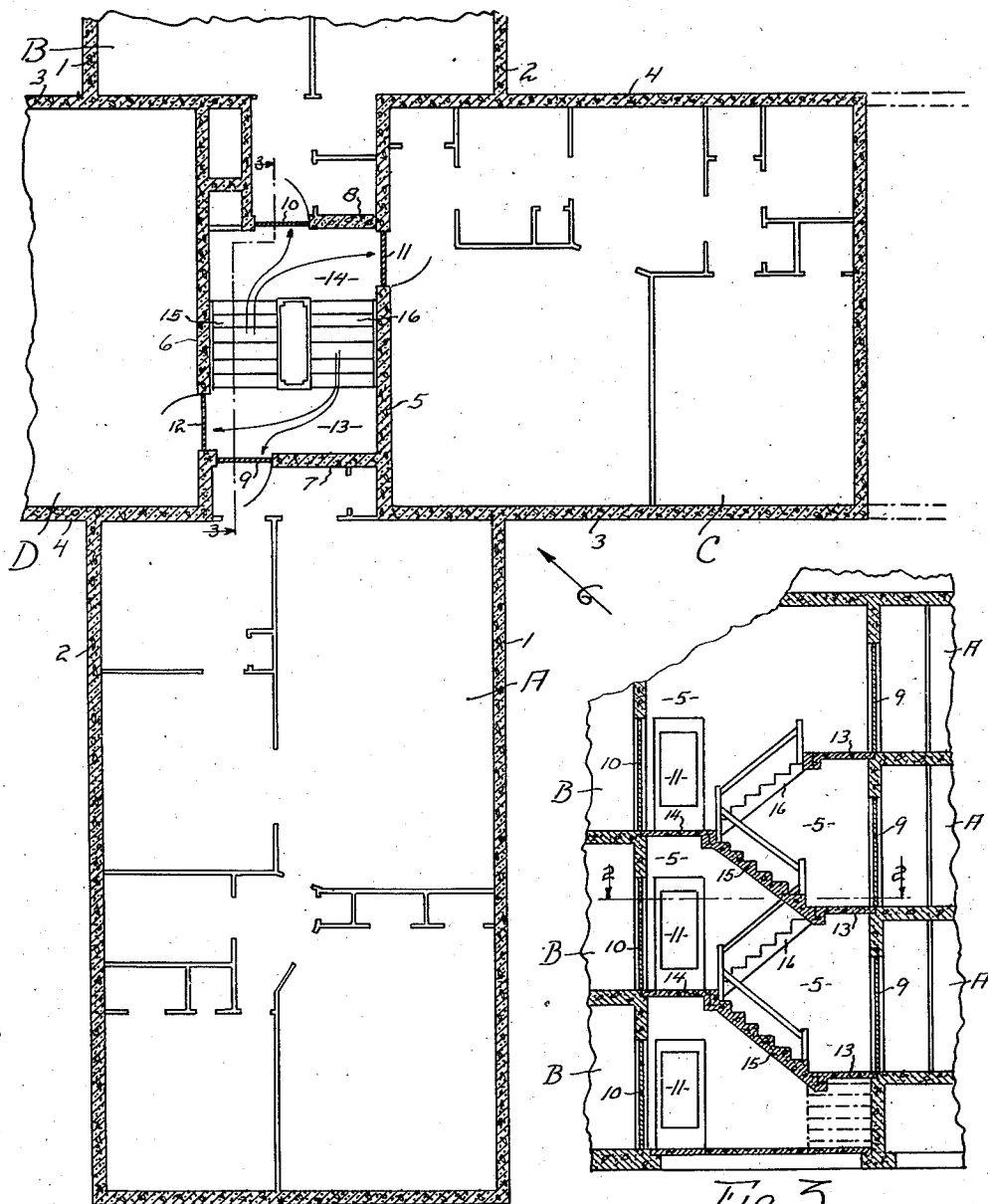


Fig. 2

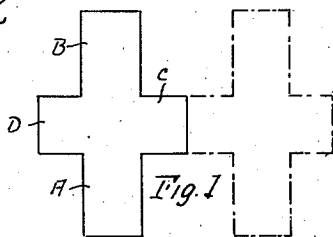


Fig. 1

Fig. 3

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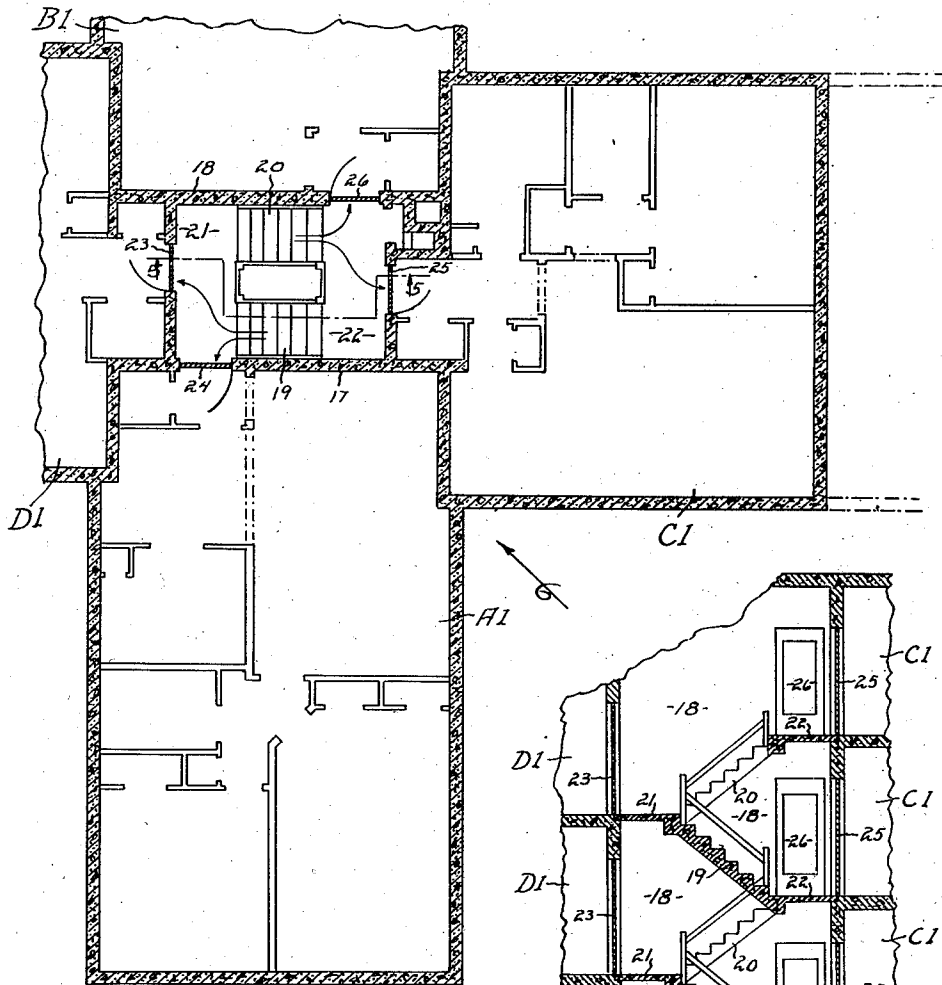


Fig. 4

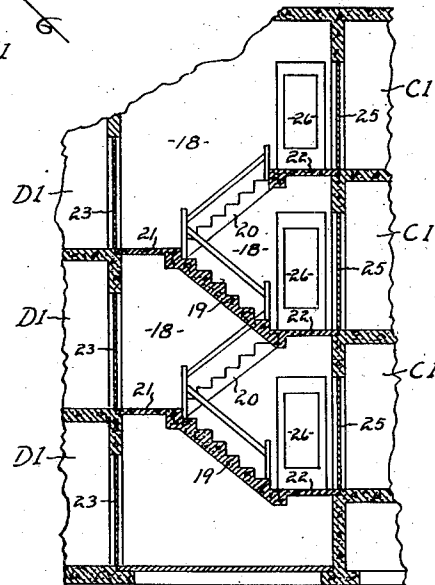


Fig. 5

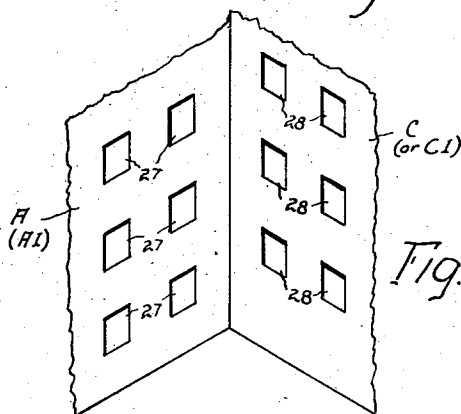


Fig. 6

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APARTMENT BUILDING STRUCTURE

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1 Claim. (Cl. 20—1.1)

This invention relates to building structures and particularly to multi-storied structures in which access to the different floor levels is had by stairways.

The invention has particular application to buildings of the apartment dwelling class, in which apartments or suites of rooms are provided on different floor levels; and will be described herein as embodied in that class of structure; although as will become apparent hereinafter, the invention is applicable to building structures of other classes and for other uses.

In the obvious and well-known type of structure of this class, a stairway is provided leading, say upwardly, from each floor to the next one above it, and with a landing at the top of the stairways; the landing communicating with a number of apartment suites all on the same floor level. The stairway may be, and usually has been, in two half-flights, with a connecting landing between them, whereby the stairway, to save space, may wind around in a rectangular stair well.

In order to provide the maximum of exposure to the outside air for light and ventilation, various floor plan arrangements of the several suites on each floor have been proposed; but such improved floor plan arrangements have required that the entrances or entrance doors to the several apartments on each floor, be at a considerable distance from the top of the stairway leading up to that floor; and the landing at the top of the stairway has therefore had to be extended in length and direction to serve the several doorway entrances; and this has resulted in increased cost of the structure as a whole not merely because of the increased size of the landings, but particularly because of the increased plan area taken up by the stairways and landings.

The present invention has for its objects, among other things, the provision of an improved floor plan arrangement for a plurality of suites at each floor level, each having the maximum of outside exposure; and the provision of an improved arrangement of stairway flights and landings leading to the suites; by which the stairway flights and landings take up the minimum of plan area, with a corresponding reduction in the overall plan area of the building and reduction of its cost, and by which a greater degree of privacy as among the several suites is provided.

Other objects will be apparent to those skilled in the art to which the invention appertains.

The invention is fully disclosed in the following description taken in connection with the accompanying drawings, in which:

Fig. 1 is a view illustrating the general plan form of a building unit in which the invention may, to advantage, be embodied; the plan form of the unit being, as shown, in the form of a cross; and, as indicated in broken line, the size of the structure as a whole may be increased to any desired extent by joining one cross form unit integrally to another;

Fig. 2 is a view illustrating an embodiment of the invention and showing one plan arrangement of four apartments or suites, in the cross form unit referred to, and showing an arrangement of stairway flights and landings therefor; and the view may be considered as referred to the plane 2—2 Fig. 3;

Fig. 3 is a fragmentary sectional view taken from the plane 3—3 of Fig. 2;

Figs. 4 and 5 are views generally similar to Figs. 3 and 4 but illustrating another embodiment of the invention;

Fig. 6 is a fragmentary perspective view taken in the direction of the arrow 6 of Fig. 2 or of Fig. 4.

Referring to Figs. 1, 2, and 3, in general the plan of the building unit provides for four apartments, or suites of rooms, A, B, C, and D. The suites A and B may if desired be identical in size and room arrangement (although reversed with respect to each other) and therefore only the suite A has been completely shown; and the suites C and D may likewise be identical, the suite C only being shown; this in order that the view may be of correspondingly larger scale in the drawings. The suites A and B are, as shown, larger than the suites C and D, to provide a choice of rental values. It is believed that it will be clear from the drawings that each of the suites has substantially full outside exposure on three sides.

The side walls 1 and 2 of the suites A and B join the side walls 3 and 4 of the suites C and D respectively, at intermediate points of the latter, whereby the inner end walls 5 and 6 of the suites C and D respectively, may be as close together as possible for the purposes to be described; and these walls 5 and 6 are preferably parallel. Joining the walls 5 and 6 are walls 7 and 8.

The entrance door to the suite A is at 9 in the wall 7; and the corresponding entrance door to the suite B is at 10 in the wall 8; and the entrance door to the suite C is at 11 in the wall 5; and the entrance door to the suite D is at 12 in the wall 6.

A stairway landing 13 is on the level of the suites A and D, and entrance to these suites

through the doors 9 and 12 is had from this landing 13. A landing 14 is on the level of the suites B and C, and access to the doors 10 and 11 of these suites is had from this landing 14.

By reference to Fig. 3, it will be seen that the floor plan arrangement of Fig. 2 is provided in what may be called a three storied structure with three suites B, one above the other, each having an entrance door 10; and three suites C, one above the other as indicated by their entrance doors 11; and that the suites B and C are on the same floor level, their entrance doors being served by the landings 14—14; and that there are three suites A, one above the other, each having an entrance door 9 served by a landing 13, and that while the suites D and their doors 12 are not shown in Fig. 3, it is indicated in Fig. 2 that the landings 13 serve the entrance doors 12 to the suites D, and that therefore the suites A and D are on the same floor level.

It is to be observed, however that, as shown in Fig. 3 taken in connection with Fig. 2, all of the suites in each story are not on the same floor level but that the floor level for the suites B and C is half way between the floor level of the suites A and D; or in other words, that each of the landings 14 is one half of a story higher or lower than each of the landings 13. A single half-flight stairway 15 connects each landing 13 with a landing 14, a half story above it; and a single half-flight stairway 16 connects each landing 14 with a landing 13, a half story above it.

In further elucidation of this structure, it may be said that a person going up one half flight 15 to a landing 14 can have access to the suites B and C by their entrance doors 10 and 11; and upon going up another half flight 16 from the landing 14 to the landing 13, can have access to the suites B and C through their entrance doors 9 and 12; this being indicated by the arrows leading from the stairs in Fig. 2.

One of the results of this structure is that, as shown in Fig. 2, each half-flight of the stairway communicates with two landings, one at its top and one at its bottom; and that each landing serves two suites; and that the length of each landing is no greater than the combined width of the stairway half-flights, and the width of each landing (for example the landing 14) is no greater than necessary for a person to walk on it and enter the door 11; whereby the plan area taken up by the landings and the stairway flights is reduced to the minimum. Another result is that as in Fig. 2, the area defined by the walls 5, 6, 7, and 8 and containing the said arrangement of landings and half-flight stairways, is at the center of the unit whereby the suites may extend outwardly away from this center and have three side exposures as referred to.

Another way to identify the elements of the above described structure is to say that at a central portion of the structure is a plurality of stairway landings in two opposite groups; those of one group being one above the other and at levels a full story apart; and those in the opposite group likewise being one above the other and at levels a fully story apart; and the levels of one group of landings being only half a story above those of the other group; the landings of one group being connected respectively to the corresponding landings of the other group, by stairway half-flights, and each landing giving access to the entrance doors of a plurality of apartments on its own level.

In Figs. 4 and 5, I have illustrated another em-

bodiment of my invention, the principles of which are substantially the same as those in the form of Figs. 2 and 3, and accordingly, a brief description thereof, it is believed, will suffice. First, referring again to the form of Fig. 2, it will be observed that the walls 5 and 6 between which the stairway flights 15 and 16 are disposed, constitute the inner end walls of the side apartments C and D. Now, in the form of Fig. 4, the corresponding walls 17 and 18 between which stairway half-flights 18 and 19 are disposed, constitute the inner walls of longitudinally aligned apartments A1 and B1. The form of Fig. 4, therefore may in some cases be preferred particularly when the apartments are in general smaller than those of the form of Fig. 2. Fig. 4 taken in connection with Fig. 5 shows that at the upper ends of successive half-flights 19—19 are landings 21—21 at levels a full story apart; and at the upper ends of half-flights 20—20 are landings 22—22 a full story apart; but that the levels of the landings 21 are only a half story apart from the levels of the landings 22. The landings 21 communicate through entrance doors 23 and 24 with apartments D1 and A1; and the landings 22 communicate through entrance doors 25 and 26 with apartments C1 and B1.

Except for the fact that in Figs. 4 and 5 the direction of the stairway half-flights is transversely of the cross form plan, whereas in the form of Fig. 2 they are longitudinally thereof, and except for the consequent alternate arrangement of the walls of the apartments, the structure of Figs. 4 and 5 is the same as that of Figs. 2 and 3, and the principles embodied in both are the same.

The particular arrangement of rooms shown in the several suites constitutes no part of the present invention and their indication in the drawings may be considered diagrammatic.

Referring again to the drawings, Figs. 2 and 3 (and Figs. 4 and 5), it will be seen that, as shown and as described above, the floor level of each suite A (or A1) is a half story above or below the floor level of each suite C (or C1); and that the floor level of each suite B (or B1) is a half story above or below the floor level of each suite D (or D1).

For this reason, an occupant, in, say, suite A, looking out through the windows of his suite on the side toward the suite C, cannot see through the windows of the suite C; and similarly an occupant in suite C cannot see into suite A; and occupants in suites B and D cannot see into each other's suites. By arranging the rooms in the pair of suites A and C, and in the pair of suites B and D, so that those rooms in which privacy is most desirable are at adjacent sides of these pairs of suites, a greater degree of privacy is provided, due to the staggered floor levels above described, than would otherwise be possible. The windows in the suites have not been shown in Figs. 2 to 5 inclusive, but this relation of the windows is shown in the fragmentary perspective view Fig. 6, the view being considered as taken in the direction of the arrow 6 of Fig. 2 or Fig. 4, and wherein, as shown, the windows 27—27 in suite A (or A1) are, in each story, at levels half way between the levels of the windows 28—28 in suite C (or C1).

I claim:

A multi-story multi-apartment building structure having a vertical walled stairway well of rectangular cross-sections at the center of the structure and comprising opposite side walls and opposite end walls; a succession of single half story

alternate stairway flights at the opposite sides of the well and extending in width from one side wall to the other; a vertical succession of landings at each end of the well a full story apart; the landings at one end of the well being each a half story above the landings at the other end; each landing being common to the top of one stairway flight and to the bottom of the next successive flight; the stairway flights and the landings extending from one end wall to the other; a multi-storied tier of apartments outside each of the opposite side walls of the well and a multi-

5 storied tier of apartments outside each of the opposite end walls; communications from each of the landings that are at one end of the well, through the end and side walls of the well, respectively, directly into two laterally adjacent apartments at the level of those landings; and communication from each of the landings that are at the other end of the well; through the end and side walls of the well, respectively, directly into the two laterally adjacent apartments at the level of those landings.

10 GEORGE HOWARD BURROWS.