July 12, 1932. H. L. MYERS 1,867,374

TOY HOUSE

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Fig. 1.

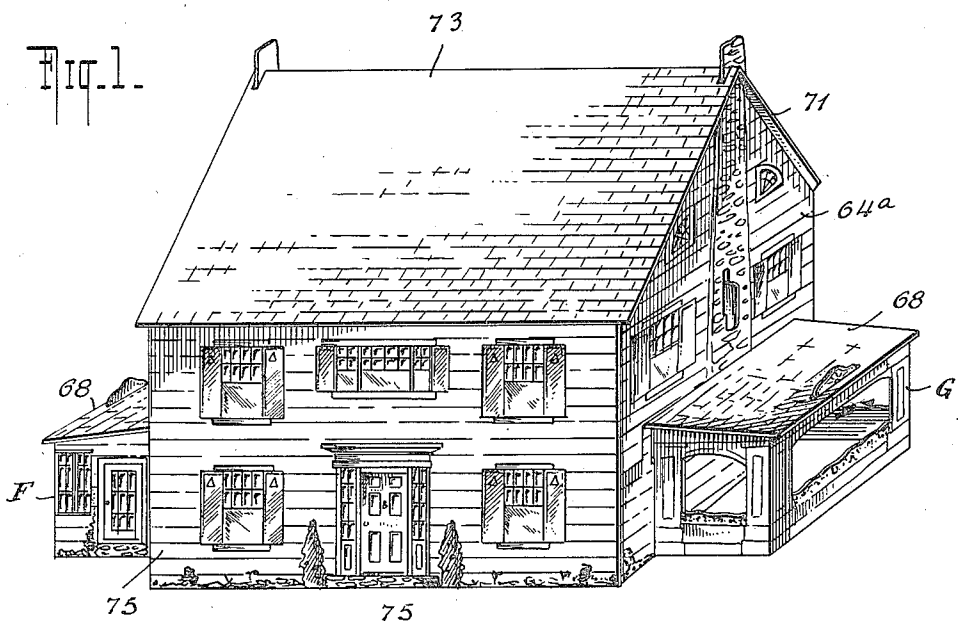
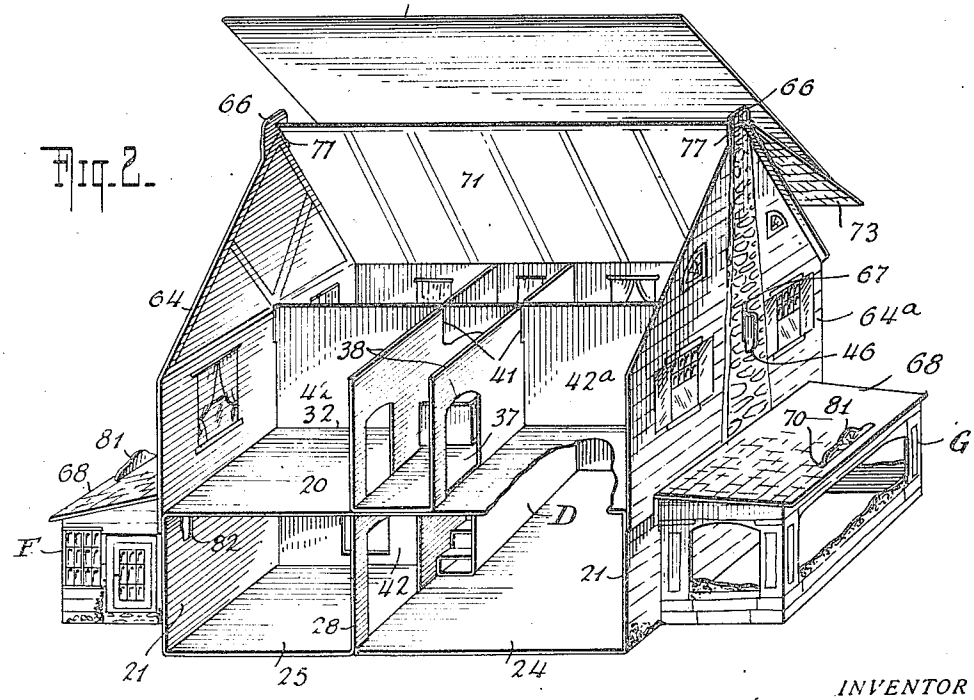


Fig. 2.



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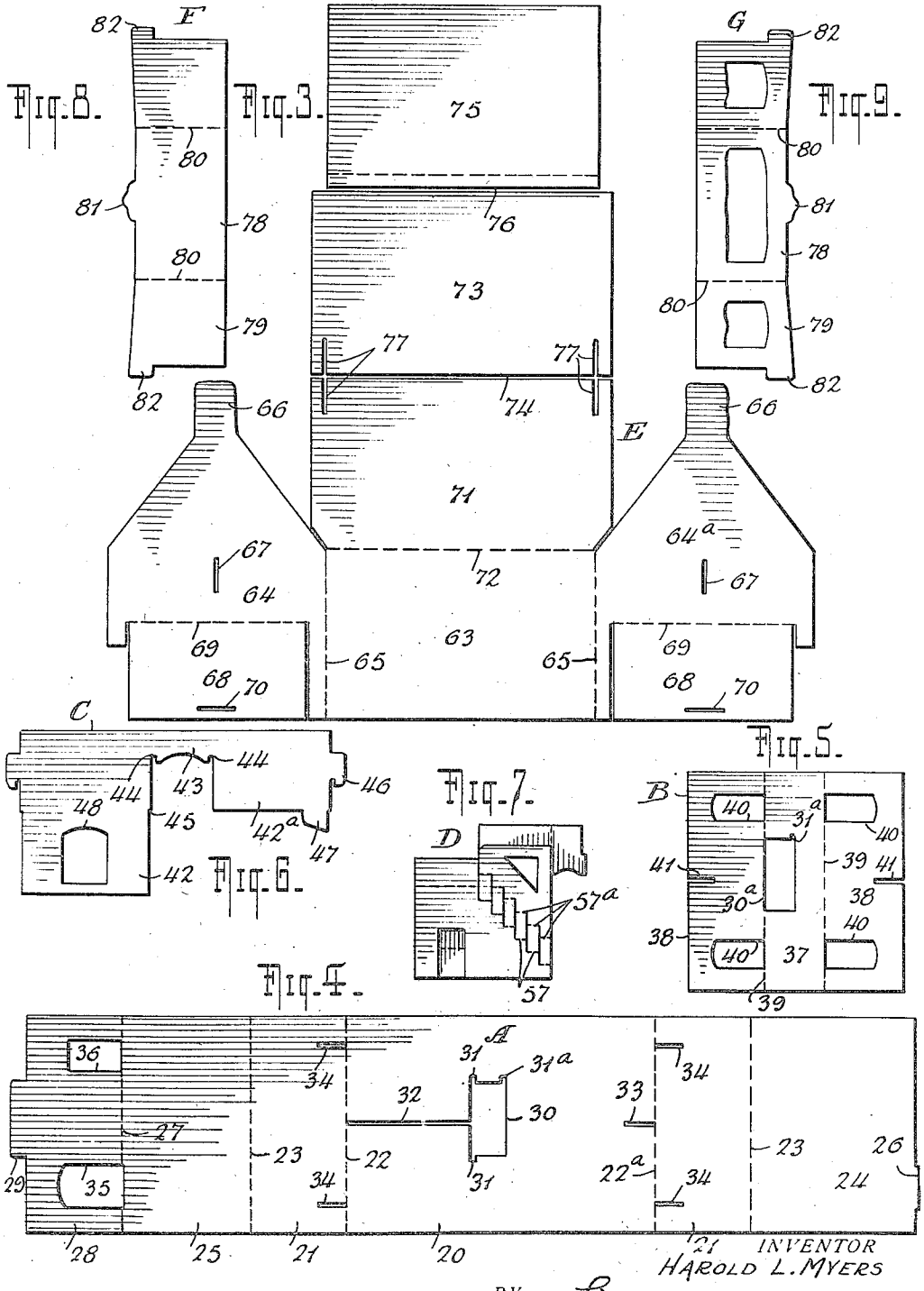
BY Fitch & Kehlenbeck

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TOY HOUSE

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Fig. 10.

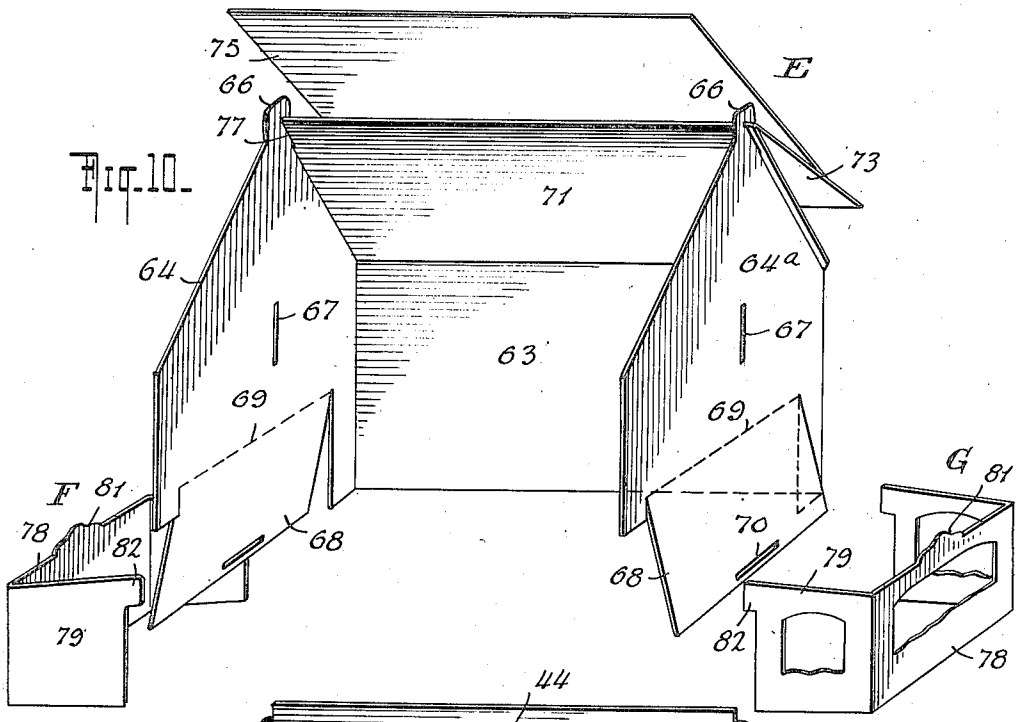


Fig. 13.

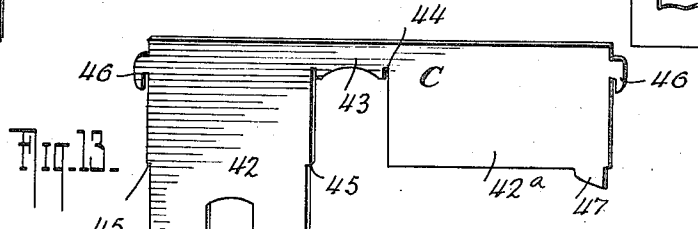


Fig. 12.

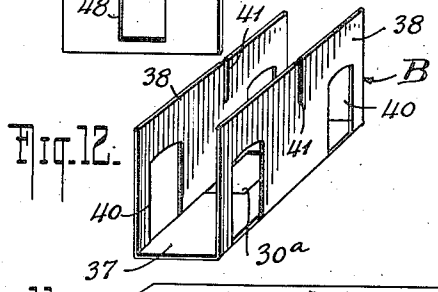


Fig. 14.

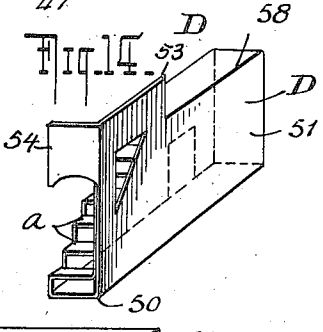
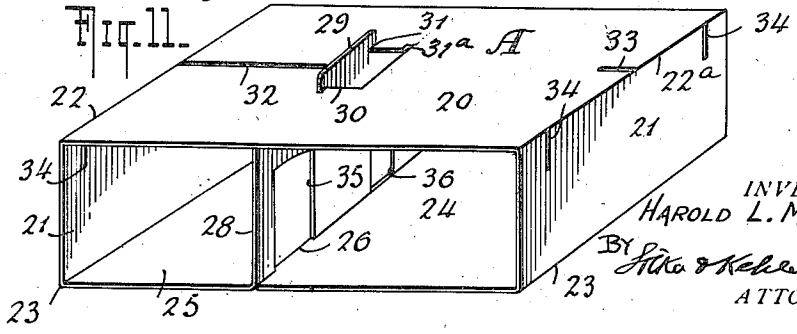


Fig. 11.



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Fig. 17.

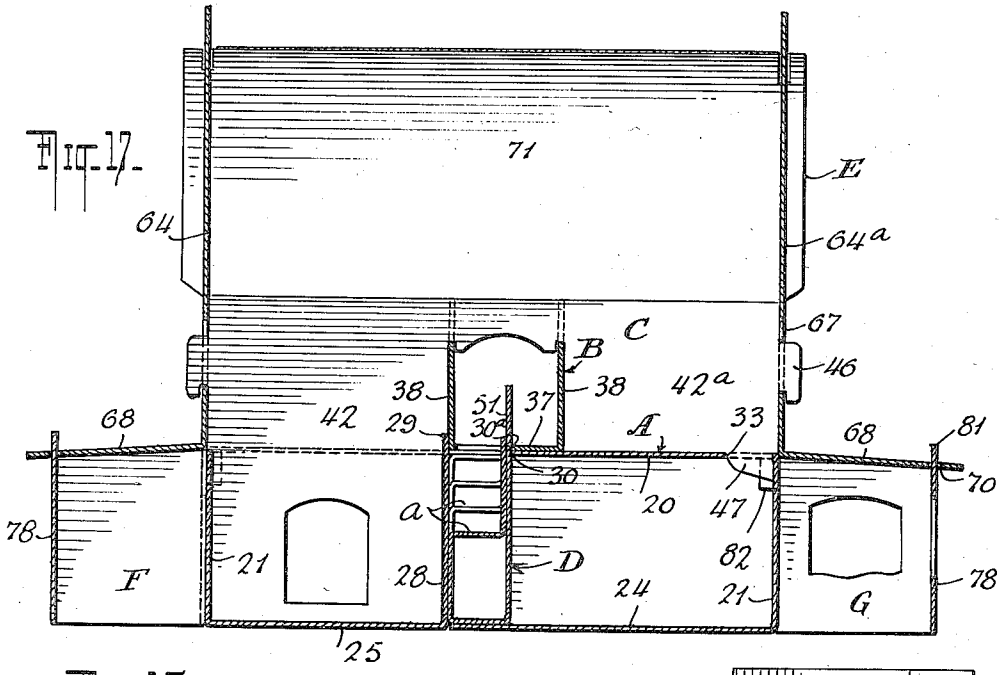


Fig. 15.

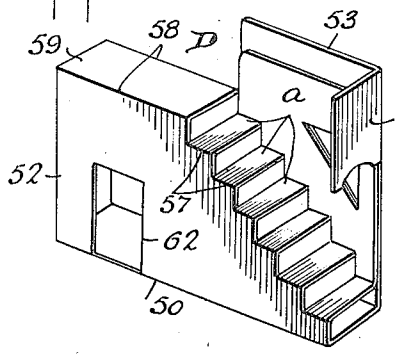
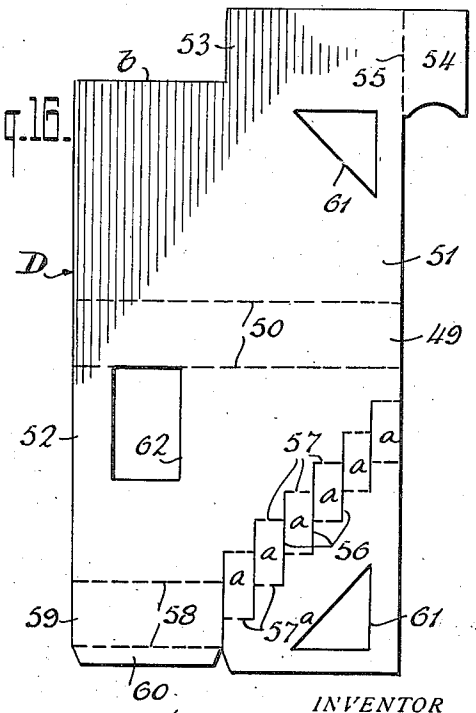


Fig. 16.



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UNITED STATES PATENT OFFICE

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TOY HOUSE

Application filed May 1, 1931. Serial No. 534,197.

My invention relates to toy houses and more particularly to that type thereof commonly known as doll houses, and has for its object to construct such a house of cardboard or equivalent material, in a manner to permit the house to be folded or collapsed into compact form when not in use, and to be easily set up and assembled to constitute a replica of a conventional cottage or other building. The invention contemplates further the provision of a toy house in which a plurality of rooms or equivalent divisions are contained all of which are accessible for play purposes. Other objects will appear from the description hereinafter, and the features of novelty will be pointed out in the claims.

In the accompanying drawings, which illustrate an example of the invention without defining its limits, Fig. 1 is an exterior perspective elevation of a doll house embodying the novel features; Fig. 2 is a perspective view showing the roof and one wall of the house in a folded position in which the interior parts of the house are accessible; Figs. 3 to 9 inclusive are views of the blanks or sections which form the several parts of the house; Figs. 10 to 14 inclusive are views showing said blanks or sections in positions ready to be connected to set up the house; Fig. 15 is a perspective view of a folding stairway forming part of the invention; Fig. 16 is a face view of the blank from which said stairway is constructed; and Fig. 17 is a longitudinal section of the house shown in Fig. 1.

In the illustrated example the toy house is shown in the form of a conventional dwelling, and consists of a plurality of sections of cardboard or other suitable material capable of being folded into shape and fitted together to form the several floors, rooms and other divisions included in the dwelling. While the novel arrangement is particularly adapted for the construction of toy dwellings, it is not restricted thereto and the drawings and following description are accordingly to be construed as including equivalent combinations which, when set up, constitute replicas or other types and classes of buildings.

The main or lower portion of the house is formed from the blank or section A shown in Figs. 4 and 11, which consists of a main panel 20 and auxiliary panels 21 foldably connected therewith along score lines 22 and 22ª; the panels 21 in turn are foldably connected along score lines 23 with additional panels 24 and 25, the panel 24 being provided at its free edge with a projection 26 and the panel 25 being foldably connected along a score line 27 with a partition panel 28 having a tab 29 projecting from its free edge, as shown in Fig. 4. The main panel 20 is formed with an opening 30 which, in the finished house becomes a stairwell, and is provided with notches 31 and 31ª, the purpose of which will be more fully referred to hereinafter. In addition to the above, a slot 32 is cut in the main panel 20 so as to extend from the opening 30 to the score line 22, said slot serving to accommodate a partition member in the manner to be set forth in detail further on in the description. A short slot 33 is cut in the main panel 20 in registry with the slot 32 and extending from the score line 22ª, while additional short slots 34 are cut in the panels 21 so as to project from the score lines 22 and 22ª in registering pairs as shown in Fig. 4. It will be understood that the arrangement of the slots 32, 33 and 34 may be changed to meet the requirements of the building which is to be exemplified by the toy house and in some cases may be all or partly omitted. In the present case the partition panel 28 is provided with a main opening 35 and a minor opening 36 both representing door openings in the finished house, the opening 35, in the illustrated example, being in linear registry with the projection 26 of the panel 24.

When setting up the toy house, the section A is folded to the condition shown in Fig. 11; that is, the auxiliary panels 21 are folded on the score lines 22 and 22ª to positions at right angles or perpendicular to the main panel 20 and the panels 24 and 25 are folded on the score lines 23 into parallel relation with the main panel 20, the partition panel 28 having been folded on the line 27 to a position perpendicular to the panel 25. The tab 29 is passed through the opening 30 and fitted into the notches 31 and the pro-

jection 26 is fitted into the lower end of the door opening 35 so that the parts are firmly held in the form of a rectangular tube divided transversely by the partition panel 28.

In the present case, the upper floor of the house is divided into a hall and several rooms by means of a cardboard hall section B shown in Figs. 5 and 12. This section B consists of a central panel 37 and two side panels 38 foldably connected therewith along score lines 39. The central panel 37 is provided with an opening 30^a having a notch 31^a corresponding to and adapted to register with the opening 30 and the notch 31^a of the section A; the side panels 38 in turn include door openings 40 and slits 41, the latter terminating at the free edges of said panels 38 and being located so as to register lineally with the slots 32 and 33 of the section A.

In setting up the toy house, the section B is folded to the position shown in Fig. 12, in which the side panels 38 extend at right angles to the panel 37, and in this position is set upon the section A with the opening 30^a in registry with the opening 30.

The upper floor of the house chosen for purposes of illustration is further divided by a partition section C shown in Figs. 6 and 13. This section C consists of a flat sheet of cardboard or other suitable material cut to form a major member 42 and a minor member 42^a connected by a cross member 43, preferably of ornamental outline and provided with notches 44. At intermediate points in registry with each other, the major member 42 is formed with shoulders 45 and further includes a locking hook or tab 46 which projects from the free edge of said member 42 and is duplicated at the free edge of the member 42^a; a tab 47 projects from the lower edge of the member 42^a, and a door opening 48 is provided in the member 42, as shown in Figs. 6 and 13.

When the toy house is to be set up, the section C is put in place by passing the member 42 downwardly through the slit 30 until the shoulders 45 arrest such movement; in this position the member 42 extends between the partition panel 28 and the one end panel 21 and divides the lower floor of the toy house into two rooms on one side of said partition panel 28, which rooms communicate with each other through the door opening 48, as shown in Fig. 2; at the same time the member 42^a and the upper portion of the member 42 divide the upper floor of the house into additional rooms on each side of the hall section B. When the section C is fully in place, the cross member 43 will be located in the notches 41 of the section B and the latter will be fitted into the notches 44 of the section C; at the same time, the tab 47 will project into the slot 33 of the section A so that the sections A, B and C are firmly fixed in place.

The toy house in its illustrated form further includes a collapsible stair section D shown in Figs. 7, 14, 15 and 16. The blank form in which this stairway is constructed is shown in Fig. 16 and consists of a sheet of cardboard or other suitable material cut to form a bottom panel 49 foldably connected along score lines 50 with staircase panels 51 and 52. The panel 51 is continued to provide a rail member 53, which includes a rail flap 54 foldable on a score line 55 for the purpose to be more fully set forth hereinafter, while the panel 52 is formed with a plurality of spaced slits 56 located in staggered relation and having their opposite ends terminating at score lines 57 and 57^a, which extend between each pair of slits 56 to provide a plurality of stair panels *a*, as shown in Fig. 16. Spaced parallel score lines 58 extend from the one terminal slit 56 to the free edge of the panel 52 to form an auxiliary panel 59 and a glue flap 60 foldable on said score lines 58. To increase the effect of a bannister the panels 51 and 52 may be provided with corresponding openings 61 of triangular or other predetermined shape adapted to register with each other in the assembled condition of the stair section D. In the illustrated example the panel 52 is further provided with a door opening 62.

To bring the stair section D into condition for use in the toy house, the panel 52 is folded on its score line 50 into surface engagement with the panel 51 with the openings 61 in registry with each other, as shown in Fig. 7. That part of the panel 52 which includes the opening 61 is then glued to the panel 51, the gluing extending up to the score lines 57^a, but not beyond the same to the stair panels *a*; at the same time, the glue flap 60 is folded over the edge *b* of the panel 51 and glued to the rear surface thereof.

In the setting up of the toy house, the stair section D is placed in position by first folding back the rail flap 54 and then passing the rail member 53 and folded flap 54 from below upwardly through the stairwell formed by the openings 30 and 30^a, the rail member 53 fitting into the notches 31^a. When this upward insertion has been completed the section D is unfolded on the score lines 50, 57 and 57^a, and 58, to form the flight of stairs shown in Figs. 14 and 15, and the rail flap 54 is folded to the position shown in said figures and so as to extend between the rail member 53 and one side panel 38 of the section B. In the final position of the section D the stairway rises adjacent to and in contact with the partition panel 28 of the section A, and the panel 49 lies beneath and in engagement with the panel 20 of said section A. The effect is thus one of a rising flight of stairs and a rearwardly extending hall which communicates with one of the rooms on the lower floor of the house through the door opening 61.

In addition to the parts so far described, the toy house includes a section E illustrated in Figs. 3 and 10 and consisting of a rear wall panel 63 and side wall panels 64 and 64ª foldably connected with the panel 63 along score lines 65; the side wall panels 64 and 64ª which constitute the side walls of the toy house taper upwardly to define the roof lines and terminate in upwardly extending projections 66 shaped to represent chimneys. The side wall panels 64 are provided with vertical slots 67, and are further slit to form porch roof panels 68 foldable on score lines 69, said panels 68 including horizontal slots 70, as shown in Figs. 3 and 10. The roof of the toy house consists of a panel 71 foldably connected with the panel 63 along a score line 72, and a panel 73 foldably connected with the panel 71 along a folding line 74; the latter is preferably taped to provide a hinge on which the panel 73 may be folded back upon the panel 71 for the purpose to be more fully set forth hereinafter. A front wall panel 75 is foldably connected with the panel 73 along a folding line 76, which preferably is also taped to provide a hinge on which the panel 75 may be folded upon the panel 73. The panels 71 and 73 are slotted at 77 to provide slots extending in opposite directions beyond the hinge line 74 for the reception of the chimney projections 66 in the completely set up condition of the house.

In setting up the house, the section E is folded about the section A to bring the rear wall panel 63 across the back thereof and the side wall panels 64 and 64ª into positions at right angles to said panel 63 in engagement with the end panels 21 of said section A, the locking hooks 46 of the section C being passed through the slots 67 to lock the section E in place. The roof panels 71 and 73 are then folded over and into engagement with the upper edges of the side wall panels 64 and 64ª, the chimney projections 66 extending through the slots 77, and the front wall panel 75 automatically folding into place to close the front of the house and complete the main structure thereof.

The illustrated form of the toy house further includes two outside end sections F and G shown in Figs. 8, 9 and 10 and constructed to represent a sun porch and an open porch respectively. The sections F and G comprise central panels 78 and end panels 79 foldably connected with the central panels 78 along score lines 80, the central panels being each provided with lugs 81 and the side panels with projections 82.

The sections F and G are placed in position beneath the porch roof panels 68 by folding the end panels 79 to the positions shown in Fig. 10 and inserting the projections 82 into the slots 34 of the section A; the roof panels 68 are then folded down upon the sections F and G with the lugs 81 projecting through the slots 70 to complete the structure.

It will be understood that all of the various sections constituting the house are suitably decorated exteriorly and interiorly to carry out the intended effect, for instance, as shown in Figs. 1 and 2, in which the dwelling includes two end porches, and interiorly is divided into a living room, dining room and kitchen on the first floor and three bed rooms, a bathroom and a centre hall on the second floor, with a stair case giving access from the living room on the first floor to said hall on the second floor.

To make the setting up of the toy house clear and easily understood, the following brief resumé will be of assistance. The first step is to fold and secure the section A to the position shown in Fig. 11, after which the sections B and C in the manner indicated in Figs. 12 and 13 are connected with the section A; at this stage it is preferred to set the stair section D in place by passing it upwardly through the stair well 30, 30ª in the manner previously set forth. The section E is then folded about the combined sections A, B, and C and fixed in place by means of the locking hooks 46 and slots 67, after which the roof panels 71 and 73 and the front wall panel 75 of the section E are folded into position. The setting up of the house is completed by adding the porch sections F and G and fixing them in their intended position by means of the panels 68 with the co-operation of the slots 70 and the lugs 81, and the projections 82 with the slots 34. In this condition, the house of the illustrated example presents the appearance shown in Fig. 1.

When access to the interior of the house is desired, the panels 75 and 73 are folded back to the position shown in Figs. 2 and 10, which may be readily done and does not interfere with the rigidity of the house structure. In this position of the parts, the house presents the appearance shown in Fig. 2 in which it is clearly indicated that all of the rooms included in the dwelling on both floors are readily accessible for play purposes and for the introduction of suitable and appropriate toy furniture. By simply folding the panels 75 and 78 back to their normal positions, the toy house is quickly restored to the closed condition shown in Fig. 1.

From the above, it is clear that the house is firmly locked together in its assembled condition and is safe against any of the ordinary impacts developed during play; at the same time, the house is capable of being quickly dismantled and knocked down to compact form for shipping and storage purposes, the parts of said house, when dismantled, all being flat units which are easily handled and stored. The house in whatever form it may be constructed is inexpensive and attractive to the child as a plaything, and comprises in-

terlocking and easily assembled sections which co-operate to provide a solid, rigid structure.

It will be noted that the top panel of the section A constitutes the ceilings of the rooms on the first floor, and the floors of the rooms on the second story of the house, thus reducing the arrangement to the greatest simplicity. The use of portions of the sides of the house to provide roofs for the two end porches, and the collapsible stairway and bannister construction are novel features which add to the simplicity of the constructions. This is true also of the folding roof and front wall arrangement whereby access to all of the rooms and all interior parts of the house is greatly facilitated.

Various changes in the specific forms shown and described may be made within the scope of the claims without departing from the spirit of the invention.

I claim:—

1. A collapsible toy house comprising a plurality of collapsible interior sections detachably connected with each other to form the interior divisions of the house, an external collapsible section, including foldable side walls foldable about said interior sections to form the exterior of the house, a collapsible porch section detachably connected with said interior sections to simulate a porch, and a porch roof panel forming part of one of said foldable side walls and foldable out of the plane thereof and relatively thereto into connection with said porch section to form the roof thereof.

2. In a collapsible toy house, an interior section consisting of a plurality of panels foldably connected with each other and adjustable relatively to each other to form a partitioned rectangular horizontal tube adapted to provide the interior floors, ceiling and room walls, and at least a portion of the outer walls of the toy house, and means comprising inherent parts of said panels whereby the latter are detachably locked in position.

3. In a collapsible toy house, an interior section consisting of a main panel arranged to divide the house into an upper and lower floor and provided with a notched opening simulating a stairwell, auxiliary panels foldably connected with said main panel and foldable to positions perpendicular thereto to constitute parts of the side walls of the house, additional panels foldably connected with said auxiliary panels and foldable into parallelism with said main panel to form the bottom floor of the house, a partition panel foldably connected with one of said additional panels and foldable to a position at right angles thereto, said partition panel extending between said additional and main panels, to partition the lower floor of the house into rooms, and a tab on said partition panel arranged to project through and fit said notched opening for fixing said panels in position.

4. In a collapsible toy house, an interior section consisting of a main panel constituting a ceiling and provided with a notched opening simulating a stairwell, auxiliary panels in permanent hinged connection with said main panel and foldable to positions perpendicular thereto to constitute upright walls, additional panels foldably connected with said auxiliary panels and foldable into parallelism with said main panel to form the floors of said interior section, a partition panel foldably connected with one of said additional panels and foldable to a position at right angles thereto to constitute a room partition, and a tab on said partition panel arranged to project through and fit said notched stairwell opening for fixing said panels in position, said main panel including a slot extending from said notched opening to the folding line of one of said auxiliary panels, a hall section resting upon said main panel and consisting of a central panel and two side panels foldably connected therewith and foldable to positions at right angles to said central panel, the latter being provided with a stairwell opening adapted to register with the stairwell opening of said main panel, and said side panels having slits terminating in open ends at the free edges thereof, and a partition section adapted to be fitted into the slits of said hall section and to extend on opposite sides thereof to provide room divisions above said interior section, said partition section being arranged to project downwardly through the slot of said main panel to form a transverse partition beneath the latter between said partition panel and one of said auxiliary panels whereby said interior section both above and below said main panel is subdivided to provide upper and lower rooms, and a collapsible stair section arranged to be fitted into said stairwell to simulate a stairway communicating with the space above said interior section.

5. In a collapsible toy house, an interior section consisting of a main panel constituting a ceiling and provided with a notched opening simulating a stairwell, auxiliary panels in permanent hinged connection with said main panel and foldable to positions perpendicular thereto to constitute upright walls, additional panels foldably connected with said auxiliary panels and foldable into parallelism with said main panel to form the floors of said interior section, a partition panel foldably connected with one of said additional panels and foldable to a position at right angles thereto to constitute a room partition, and a tab on said partition panel arranged to project through and fit said notched stairwell opening for fixing said panels in position, said main panel including

a slot extending from said notched opening to the folding line of one of said auxiliary panels, a hall section resting upon said main panel and consisting of a central panel and two side panels foldably connected therewith and foldable to positions at right angles to said central panel, the latter being provided with a stairwell opening adapted to register with the stairwell opening of said main panel, and said side panels having slits terminating in open ends at the free edges thereof, and a partition section adapted to be fitted into the slits of said hall section and to extend on opposite sides thereof to provide room divisions above said interior section, said partition section being arranged to project downwardly through the slot of said main panel to form a transverse partition beneath the latter between said partition panel and one of said auxiliary panels whereby said interior section both above and below said main section is subdivided to provide upper and lower rooms, and a collapsible stair section arranged to be fitted into said stairwell to simulate a stairway communicating with the space above said interior section, locking tabs projecting from said partition section, an exterior section consisting of a rear wall panel and side wall panels foldably connected therewith and provided with slots adapted to fit over the locking tabs of said partition section to enclose said interior section and form the exterior rear and side walls of said house, chimney projections on said side wall panels, roof panels foldably connected with said rear wall panel and with each other and provided with slots arranged to fit over said chimney projections, and a front wall panel foldably connected with said roof panels and arranged to form the front wall of the house.

6. In a collapsible toy house, a collapsible exterior section consisting of a plurality of foldably connected panels arranged to form the side walls, front and rear walls, and roof of said house, an independent porch section consisting of a plurality of foldably connected panels adapted for attachment to a predetermined part of the house to simulate a porch, and a porch roof panel constituting a part of one of the upright walls of the house and foldable relatively thereto for connection with said porch section to form the roof thereof.

7. In a collapsible toy house, a stair blank consisting of a bottom panel, stair case panels foldably connected therewith, and continued to form bannister panels, a rail member forming part of one of said staircase panels, a rail flap foldably connected with said rail member, the other staircase panel being provided with a plurality of parallel slits in staggered relation and folding lines extending transversely between said slits to constitute a flight of stairs, an auxiliary panel foldably connected with said other staircase panel, and a glue flap foldably connected with said auxiliary panel.

8. In a collapsible toy house, a stair section comprising stair case panels connected with each other in surface engagement along a line defined by score lines arranged in staggered relation opposite to and spaced from correspondingly arranged score lines, one of said panels being formed with a plurality of parallel slits extending between said score lines to define the treads of a flight of stairs, a bottom panel, and an auxiliary panel both connected with said stair case panels along score lines, said panels being foldable relatively to each other on said score lines to adjust said treads into the form of a stair case.

9. In a collapsible toy house, a stair section comprising stair case panels connected with each other in surface engagement along a line defined by score lines arranged in staggered relation opposite to and spaced from correspondingly arranged score lines, one of said panels being formed with a plurality of parallel slits extending between said score lines to define the treads of a flight of stairs, a bottom panel, and an auxiliary panel both connected with said stair case panels along score lines, said panels being foldable relatively to each other on said score lines to adjust said treads into the form of a stair case, the connected portions of the panels constituting bannister and rail members, and a rail flap foldably connected with said rail member.

In testimony whereof I have hereunto set my hand.

HAROLD L. MYERS.