

Sept. 24, 1946.

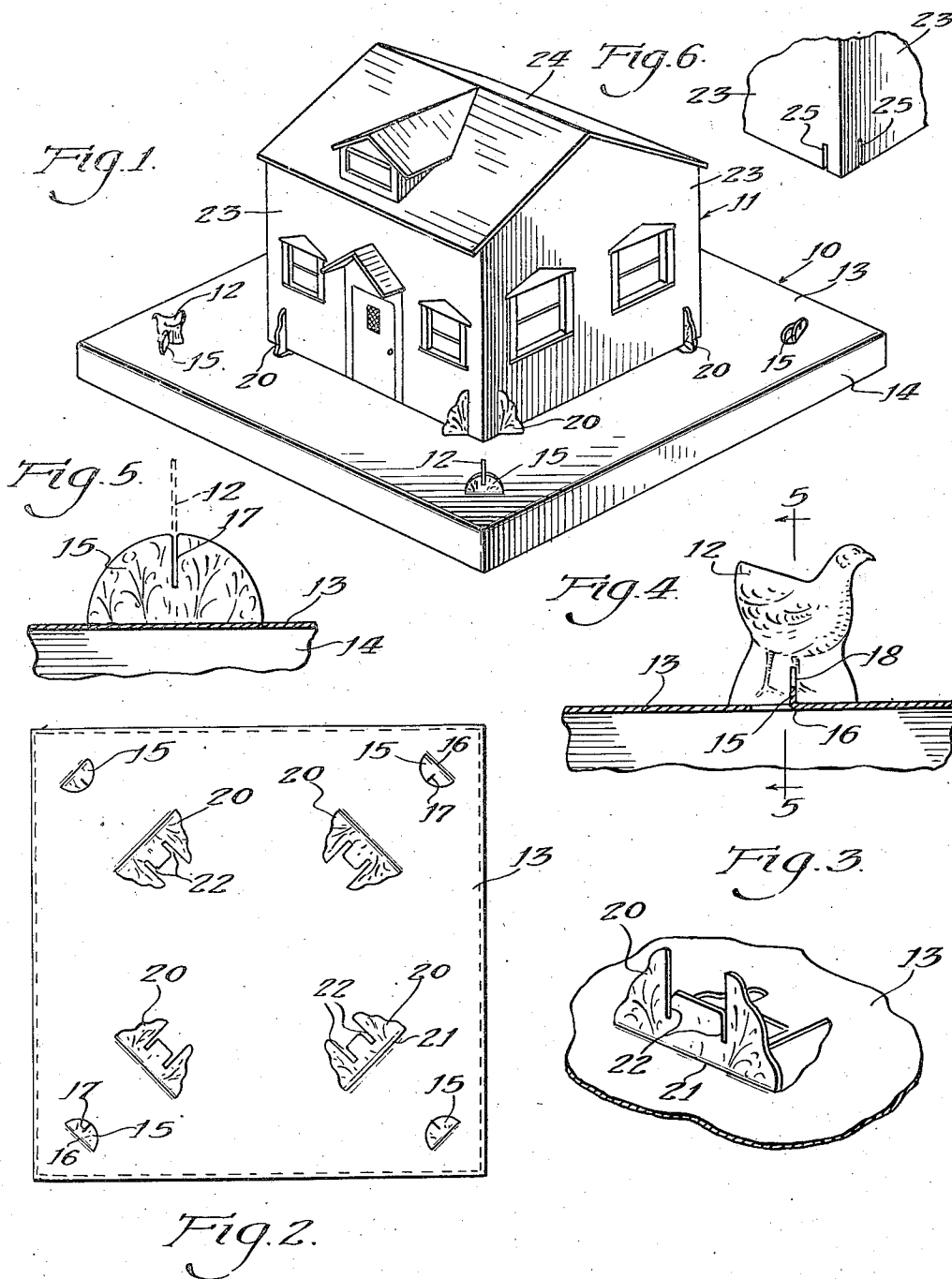
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2,408,272

STRUCTURAL TOY

Filed March 5, 1945

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 1.

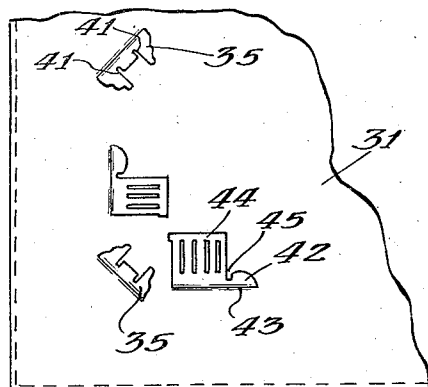


Fig. 8.

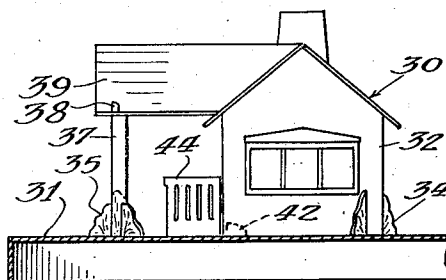


Fig. 12.

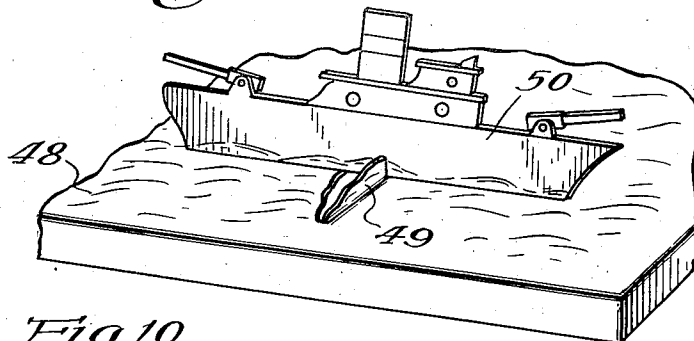


Fig. 9.

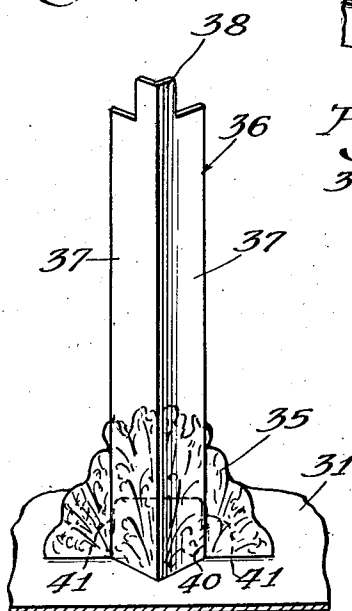


Fig. 10.

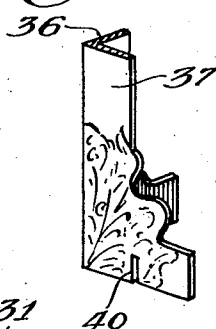
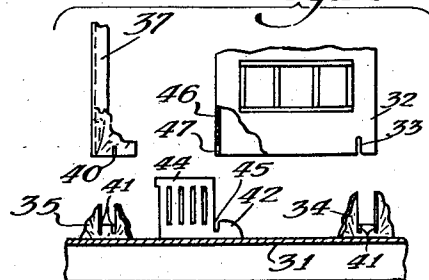


Fig. 11.



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UNITED STATES PATENT OFFICE

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STRUCTURAL TOY

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5 Claims. (Cl. 46—30)

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This invention relates to structural toys composed of bendable or flexible but relatively stiff sheet material such as paperboard or the like bodied plastic film or sheet material including composites or laminates thereof, resin impregnated fibrous sheet material, and the like, and which are generally sold packaged in kits or parts in cut out form ready to be assembled by a child, an example being toy houses and pertinent or decorative components.

It is an object of the present invention to provide novel means for positioning and supporting such sheet material toy elements in a stable manner on a supporting base, by interlocking means provided on the supporting base and the toy element to be erected thereon.

Another object is to adapt a container box section in which the sheet material toy elements are packaged, with novel means for interlockingly engaging the toy elements so that they may be securely positioned thereon and whereby the box section provides a firm, relatively rigid supporting base, and an assembly component.

Another object is to provide a sheet material supporting base for the assembly and erection thereon of toys of the class described, including integral hinged tabs adapted for interlocking engagement with a toy element, the tabs being generally contoured and decorated to form a graphic component of the interengaged toy element.

Other objects relate to details of construction, arrangement of parts and the advantages thereof which will be apparent from a consideration of the following specification and drawings, wherein:

Fig. 1 is a perspective view of a toy house in assembled and erected position illustrating my invention.

Fig. 2 is a plan view of the mounting base employed for the erection of the toy house of Fig. 1.

Fig. 3 is a fragmentary perspective detail view of the mounting base of Fig. 2, showing one of the dual-slotted tabs in elevated position.

Fig. 4 is a fragmentary section of the assembly of Fig. 1, illustrating in front elevation a toy component in erected engagement with a tab.

Fig. 5 is a view similar to that of Fig. 4, viewed on the line 5—5 thereof.

Fig. 6 is a fragmentary perspective detail view of a lower corner of the toy house of Fig. 1.

Fig. 7 is a fragmentary plan view of a supporting base of modified detail.

Fig. 8 is an elevation of a toy house erected on the supporting base of Fig. 7.

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Fig. 9 is a fragmentary perspective detail view illustrating a standard employed in the assembly of Fig. 8.

Fig. 10 is another fragmentary perspective view of the standard of Fig. 9.

Fig. 11 is a fragmentary diagrammatic elevation illustrating the method of forming the assembly of Fig. 8.

Fig. 12 is a fragmentary perspective detail view of another toy component erected on a container section supporting base.

Referring to the drawings, and particularly Figs. 1 to 6, the reference numeral 10 generally indicates a supporting base having erected thereon, in interlocking slotted engagement, toy elements such as the doll house generally indicated as 11, and one or more objects 12. In accordance with the preferred embodiment of the invention, the base 10 is an inverted container box section, which may be the box in which the toy element components are packed in knockdown condition, the container box section being of paper board and composed of the main face panel 13 and the perpendicular side flanges 14. The employment of the inverted container section as the mounting and supporting base provides a firm support whereby the erected toy elements may be conveniently transported as a unit without danger of becoming disrupted.

For the purpose of supporting in firmly erected position, accessory toy elements such as that illustrated at 12, the panel 13 is provided with one or more tabs 15 cut from the panel 13 and remaining in integral hinged engagement therewith at the fold line 16, these tabs being further provided with a slot 17 adapted to extend and open upwardly when the tabs 15 are elevated from the plane of the panel 13. The objects to be engaged by the tabs 15 are provided with a slot 18 extending and opening to the lower marginal edge, the width and depth of the slots 17 and 18 being limited so as to provide mutual frictional engagement of the interengaged components, that is the tab 15 and the toy element 12, and to thereby cause each other to be mutually maintained in erected position perpendicular to the face of the panel 13.

In accordance with the preferred embodiment of my invention, the tabs 15 are generally contoured and decorated to provide graphic components of the interengaged object. In the specific illustration, Figs. 4 and 5, the tab 15 may be decorated to illustrate grass to blend both with similar grass-like decoration on the face

panel 13 and to harmonize with the supported objects such as the chicken 12.

The panel 13 is further provided with one or more tabs 20 cut therefrom and remaining in integral hinged engagement therewith at the fold line 21, these tabs 20 being further provided with the dual slots 22—22. The lateral end portions of the tabs 20 are contoured and decorated to generally indicate shrubbery so as to blend with and form a graphic component of the decorations contained on the face of the panel 13 and the supported toy house 11.

The toy house 11 comprises a plurality of side walls 23 in side edgewise meeting angular relationship to each other. It will be understood that these side walls 23, which are supplied in knock-down form, may each be of a separate section and adapted to be joined at their side edges by means of conventional tabs and slots, not illustrated, or in the alternative, when for example a toy house is composed of four side walls, they may be supplied in a pre-joined form although collapsed, or they may be formed in contiguous panels requiring only two of them to be joined to form the hollow rectangle. The roof portion 24, may also in a conventional manner be supplied in separate knock down form and joined to the side walls 23 by means of tabs and slots, or any other desired or convenient means, not illustrated, and not forming a part of the present invention.

For the purpose of supporting the toy house 11 on the base panel 13, and for the purpose of enabling it to be erected thereon in firm, interlocking slotted engagement with the tabs 20, the side walls 23 are each provided with slots 25 of limited depth and width extending to their lower marginal edges adjacent their convergent side edges. An angularly arranged pair of side walls 23 are engaged with a tab 20 in a manner whereby an adjacent pair of slots 25 receive a tab 20, and the dual slots 22 of the latter engage the two convergent edges of a pair of side walls 23, and as illustrated, the tab 20 extends at an oblique intersecting angle to the pair of side walls 23 and in firm, interlocking slotted engagement therewith.

In the illustration of the simple form of construction of Fig. 1, four such dual slotted tabs 20 may be provided, one for each corner of the house, and to thus form a firm interlocking support for the four side walls 23 of the toy house, only two being illustrated. The tabs 20 further harmoniously blend with the toy house to form a graphic component thereof, and of the surrounding surface of the base panel 13 which is also decorated.

Referring to Figs. 7 to 11, a modified design of toy house generally indicated as 30, is shown in erected and supported position on the panel 31 of an inverted paper board container box section. Similar to the form previously described, the side walls of the toy house, at an angular conjugation of two side walls 32, may be provided with downwardly opening slots 33 for interlocking slotted engagement with one or more dual slotted tabs 34, cut from and elevatable from the plane of the supporting panel 31.

This panel 31 may be additionally provided with additional dual slotted tabs 35 for the purpose of interlocking in slotted engagement supplemental toy elements such as one or more angular standards or columns generally indicated as 36 and composed of the two face portions 37 which meet in side edgewise angular relationship to each other. The upper end of the standard 36

may be provided with a suitable tongue 38 for engagement in conventional manner with the canopy 39. The side panels 37 of the column 36 are each provided with slots 40 opening to their lower marginal edges adapted to receive a tab 35 and conversely to be received by the dual slots 41 of the tab 35 to provide firm, interlocking, slotted engagement with each other, and to maintain each other in mutually erected perpendicular relationship to the plane of the supporting base panel 31.

For the purpose of providing intermediate support for the walls of the toy house 30, without necessarily requiring the obliquely extending dual slotted tabs in each of the four corners of the house, I may employ the decorative single slotted tabs 42 cut from the face of the panel 31 and in integral hinged engagement therewith at the fold line 43. These tabs 42, in the manner previously indicated, may be generally contoured and decorated to provide graphic components of the toy assembly, in this case the tabs 42 having enlarged component portions 44 in the form of a simulated fence or gate. The tab 42 is formed with a slot 45 of limited width and depth for reception of the side wall 46 at the slot 47 thereof and for cooperative slotted interlocking engagement, the slot 47 opening to the lower marginal edge of the wall 46 at its conjugation with the side wall 32.

For the purpose of further illustrating the employment of a container box section for the supporting of objects thereon in interlocking slotting engagement by means of tabs adapted to form graphic components of the toy element and/or the supporting base, Fig. 12 illustrates an inverted container box section, the face panel 48 thereof being provided with a hinged tab 49 cut from the face panel 48 and elevatable from the plane thereof, this tab 49 being generally contoured and illustrated to simulate a wave and to form a graphic component of the face of the panel 48, which may be decorated to illustrate water, and to form a graphic component of the toy boat 50 supported on the panel 48, and in slotted interlocking engagement and mutually erected relationship with the wave tab 49.

It will be understood from the foregoing that various other forms of toys and toy components in addition to those specifically illustrated, may be mounted in firm interlocking slotted engagement on the face panel of a container box section in the manner and by the means hereinbefore described and illustrated.

I claim as my invention:

1. In a structural toy, a sheet material base panel and a sheet material toy component comprising two faces in side-edgewise meeting angular relationship to each other constructed and arranged to be supported in upright position on said panel, said toy element faces being each formed with a slot opening to their lower marginal edges adjacent their convergent side edges and said base panel comprising a tab in hinged engagement therewith and elevatable from the plane thereof for projection within an adjacent pair of said slots at an oblique intersecting angle to said faces.

2. In a structural toy, a paperboard or the like bendable, relatively stiff sheet material base panel and a sheet material toy component comprising two faces in side-edgewise meeting angular relationship to each other constructed and arranged to be supported in upright position on said panel, said toy element faces being each

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formed with a slot opening to their lower marginal edges adjacent their convergent side edges and said base panel comprising a tab in hinged engagement therewith and elevatable from the plane thereof formed with a pair of upwardly extendible slots, said tab being adapted to be projected within an adjacent pair of slots in said element faces at an oblique intersecting angle to said faces for interlocking slotted engagement therewith.

3. In a structural toy, a paperboard or the like sheet material base panel and a sheet material toy component comprising two faces in side-edgewise meeting angular relationship to each other constructed and arranged to be supported in upright position on said panel, said toy element faces being each formed with a slot opening to their lower marginal edges adjacent their convergent side edges and said base panel comprising a tab in hinged engagement therewith and elevatable from the plane thereof formed with a pair of upwardly extendible slots, said tab being adapted to be projected within an adjacent pair of slots in said element faces at an oblique intersecting angle to said faces for interlocking slotted engagement therewith, said tab being shaped and decorated to form a graphic complement to an intergaged toy component.

4. A structural toy comprising a supporting

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base composed of a paperboard container box section, a sheet material toy element in edgewise elevated position on the face thereof comprising a pair of surface panels in side-edgewise angular meeting relationship each formed with a downwardly opening slot adjacent their convergent side edges, and tab means cut from and in integral hinged engagement with the face of said box section and formed with a pair of upwardly opening slots, said tab means extending at an oblique intersecting angle to said pair of surface panels of the supported toy element and being in interlocking slotted engagement therewith.

5. A structural toy comprising a supporting base composed of a paperboard or the like container box section having dual-slotted tab means cut from and in integral hinged engagement with the face panel thereof for supporting in interlocked erected position thereon a toy house wall and the like elements having a pair of surface panels in side-edgewise meeting angular relationship, said surface panels being each formed with a downwardly opening slot adjacent their convergent side edges for joint reception and interlocking engagement with one of said tab means at an oblique intersecting angle to said faces.

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