May 8, 1945. C. J. McCOY 2,375,425

TOY STRUCTURE

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FIG. 1

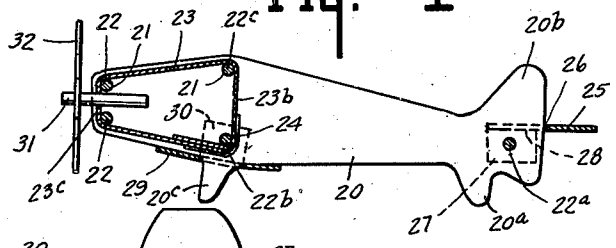


FIG. 2

FIG. 3

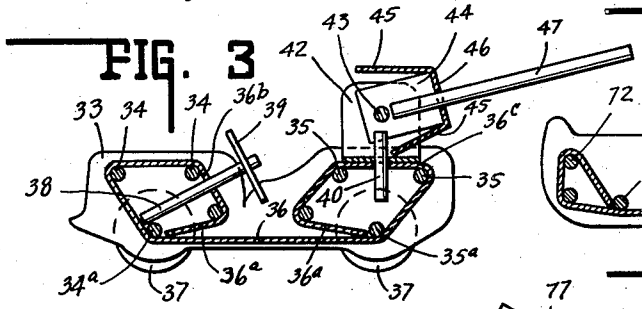


FIG. 7

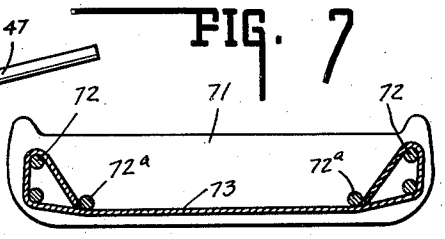


FIG. 4

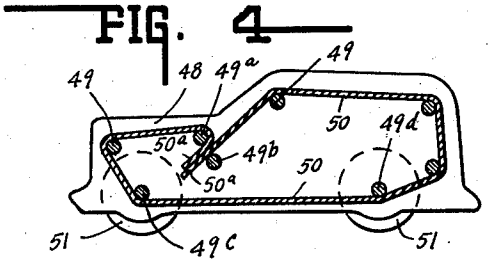


FIG. 8

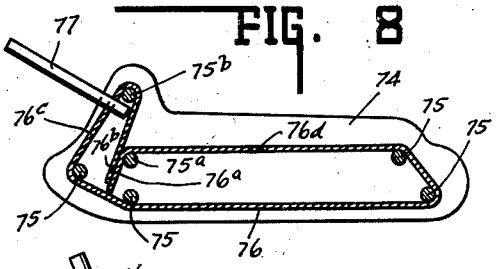


FIG. 5

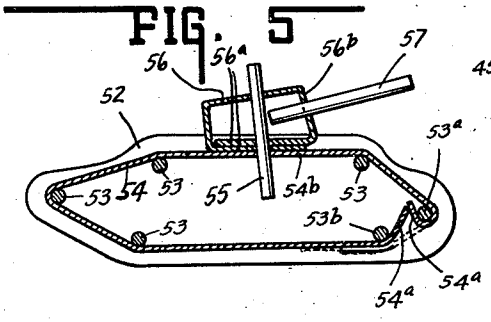
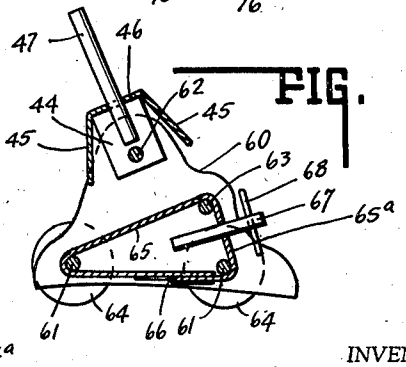


FIG. 6



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FIG. 9

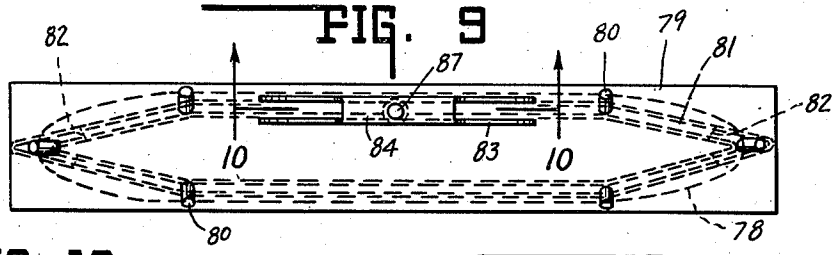


FIG. 10

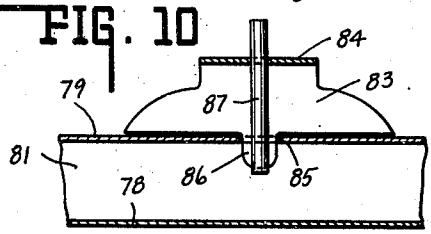


FIG. 11

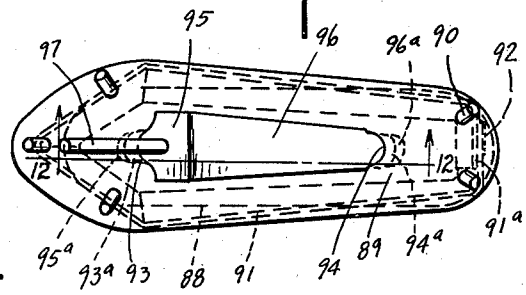


FIG. 12

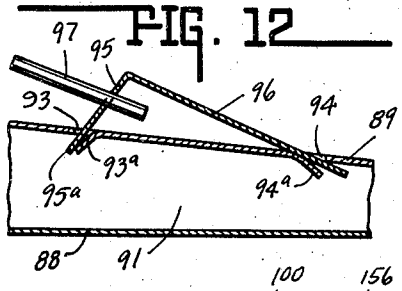


FIG. 13

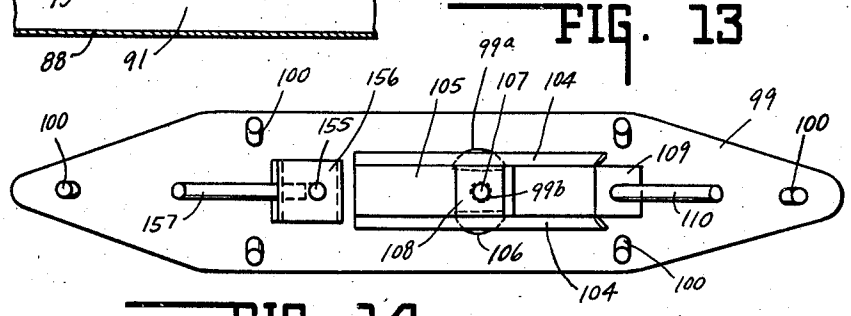


FIG. 14

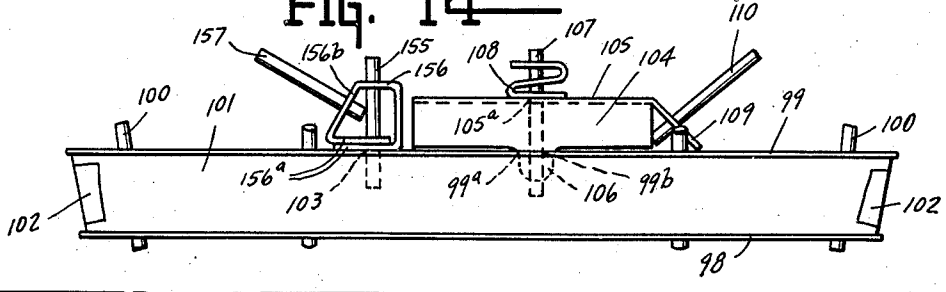


FIG. 15



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2,375,425

UNITED STATES PATENT OFFICE

2,375,425

TOY STRUCTURE

Curtiss J. McCoy, Indianapolis, Ind.

Application April 19, 1943, Serial No. 483,554

14 Claims. (Cl. 46—17)

This invention relates to toys of simulated service type, which may be vehicle, vessel or plane character.

The chief object of this invention is to provide a toy of the desired character which includes peg means of wood or like character for frictional connection of parts, two or more comparatively rigid paper board members, each of the desired outline and connected together by such peg means frictionally seating in apertures in the board members, and elongated paper board means that envelope a plurality of such peg means to form a body arrangement, such as a fuselage representation of a plane, the hull of a boat and the chassis of a vehicle.

The board composing the board members and elongated board means, and if desired the peg means, is of kraft paper board stock, i. e. solid, and approximately of the caliber of light cardboard. Same is provided in blank sheet form that is suitably printed for outline and other part representation and die cut to outline and for peg receiving apertures.

The blank sheet may be further provided with apertured disc portions that, when removed, represent wheel members. Such a blank may be further provided with portions suitably apertured, slitted, etc., to form plane wing and/or elevator parts and suitably printed or ornamented. The blank may be further provided with apertured and creased portions forming gun mount, turret, superstructure and the like representations, the apertures of which may receive peg means simulating guns or stacks.

From the foregoing, it is obvious that the basic invention may take many respresentative forms, only a few of which are herein illustrated and described. Furthermore, since in the toy art it is old to die cut a stiff sheet of cardboard having a registered printed outline, etc., and pressure separate same from the blank sheet and then fold wings for sustaining such silhouette type toy in erect relation, and further to form from such a blank a toy representation and fold same into toy form with integral parts interlocked to maintain such form, the formation of the parts of this invention from blanks is not illustrated herein, and the foregoing two types or toy formations therefrom, is expressly disclaimed as outside the scope of this invention, as broadly outlined hereinbefore.

Other objects and special features of this invention will be set forth more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawings and the following specification and claims:

In the drawings,

Fig. 1 is a central sectional view through an aeroplane embodiment of the invention.

Fig. 2 is a top plan view of the former.

Fig. 3 is a central sectional view of a representation of a command or machine gun equipped vehicle, the gun thereof being vertically and horizontally traversable.

Fig. 4 is a similar view of an ambulance or light truck embodiment.

Fig. 5 is a similar view of a gun equipped, land tank embodiment.

Fig. 6 is a similar view of a mobile anti-aircraft gun structure.

Fig. 7 is a similar view of a landing barge embodiment.

Fig. 8 is a similar view of a cannon equipped amphibian tank representation of the invention.

Fig. 9 is a top plan view of an airplane carrier embodiment of the invention.

Fig. 10 is a vertical sectional view of same taken on line 10—10 of Fig. 9 in the direction of the arrows to illustrate more fully the carrier superstructure and stack representation.

Fig. 11 is a top plan view of a smaller, gun equipped, naval vessel.

Fig. 12 is a central sectional view thereof taken on line 12—12 of Fig. 11 and in the direction of the arrows.

Fig. 13 is a top plan view of a larger naval vessel representation, such as a battleship, a cruiser, or destroyer.

Fig. 14 is a side sectional view thereof.

Fig. 15 is an enlarged perspective view of a paper board form of peg suitable for use in lieu of wood pegs or dowels in most instances illustrated in the previous figures.

Since but three embodiments of those herein illustrated may be claimed herein, those shown in Figs. 1 and 2, Fig. 3 and Figs. 13 and 14 are elected in preference to others, since the same appear to incorporate much of what is included in the other disclosures.

In Figs. 1 and 2 of the drawings, 20 indicates two spaced board members representing the sides of an airplane embodiment. While herein shown substantially parallel, such need not be the case. These are apertured at 21 to receive peg means 22, herein illustrated as of wood, similar to wood match stock, although, as shown in Fig. 15, same may be made of a creased strip of board material or a multiple fold formation of same, it being understood that when inserted

in apertures 21, the peg, if it expands frictionally, locks in the aperture. The wood peg also is frictionally engaged in such apertures when the wood peg is utilized.

An elongated strip 23 of paper board of the desired length and width then encompasses the several beforementioned peg means or a part of the same to form the cabin part of the representation. The adjacent ends may be secured together by a small lapping strip 24 of gummed paper or so-called "Scotch" tape.

Both members 20 include at one end depending tail skid representation portions 20*a* and upwardly extending rudder representation portions 20*b*. A wing or elevator representation portion 25 is slit at 26 and formed thereby and slit transverse thereto are the ear portions 27 integral with portion 25 at the hinge creases 28. The parallel portions 27 are apertured and straddle members 20. The rearmost peg means 22*a* extends therethrough and the result is a vertically tiltable elevator representation.

Near the forward end of members 20 is a sheet portion 29 in the form of a wing representation. It is provided centrally with an H-shaped slit arrangement that forms two parallel ear portions 30 suitably apertured to seat upon peg means 22*b*. Members 20 are straddled thereby. The spacing is such, thus differing from the clearance at the rear end of members 20, that wing 29 bears upon the adjacent bottom edge of members 20 so that wing 29 is relatively fixed.

Of course, this wing may be positioned above members 20 in like manner when the fuselage is to be of suspended, instead of the supported type. In this case the peg means 22*c* would constitute the wing connection. Since strip 23 is between members 20 at peg means 22*b* and 22*c*, the ears 30 are positioned exteriorly of members 20. Ears 27 are similarly positioned wherefore the modification indicated at 23*a* and by dotted lines is possible. Whenever desired and practicable these ears may be positioned between members 20.

Whenever it is desired to provide a propeller representation one peg means 31 may extend through forward portion 23*c* and mount on the forward end, an apertured propeller outlined piece of board 32. Whenever desired the other portion of the elongated strip 23 may be apertured and mount a peg means to simulate a cannon or machine gun, or same may mount a gun and mount representation as hereinafter described and illustrated for the vehicular forms of this invention, for example.

Reference will now be had to one such embodiment to-wit, that shown in Fig. 3. Herein the two spaced members 33 may be of suitable outline and include the desired ornamentation for simulating the side elevation of a command and armored car. Herein two groups of peg means 34 and 35 are provided which extend through members 33 which herein are parallel. An elongated strip 36 of space width herein extends below the two lowermost of the peg means 34*a* and 35*a* and each end wraps around the adjacent group as shown. The free end 36*a* in each case terminates adjacent and bears upon strip 36 between peg means 34*a* and 35*a*. This constitutes a second form of connection and is a substitute for the tape 24.

Each of said peg means 34*a* and 35*a*, externally of the member 33, mounts an apertured disc 37 which is suitably decorated to represent a wheel of the desired type. The rearward portion 36*b* of the forward portion of the wrap-around strip is centrally apertured to receive a peg means 38 which projects upwardly and rearwardly, like a steering wheel post, and upon the exposed end is mounted a steering wheel representation in the form of an apertured disc 39.

Upper portion 36*c* is centrally apertured to receive a peg means 40 and a U-shaped piece of paper board has its intermediate portion 41 centrally apertured to also receive said peg means. The two ears 42 are apertured to receive a peg means 43 which mounts ears 44 of a U-shaped member having intermediate armor plate shield simulating portions 45 and central portion 46 apertured to receive an elongated peg means 47 simulating a cannon. This gun mount and gun simulation is horizontally traversable about the axis of pivot 40 and vertically traversable about the axis of pivot 43.

Reference will now be had to Fig. 4 wherein there is illustrated an ambulance or light delivery truck embodiment of the invention. In this figure, 48 indicates the two spaced board members of the desired outline and decoration united by peg means 49. The elongated strip 50 encompasses these peg means and the ends 50*a* abut each other and extend between two adjacent peg means 49*a* and 49*b*. This constitutes a third form of elongated strip lock and is broadly similar to that shown in Fig. 3.

Of course, if desired, the strip 50 could have its adjacent ends positioned at the lowermost rear end and tape united. In that event the strip would pass downwardly from peg means 49*a* and thence under peg means 49*b* and thence upwardly and rearwardly to the closest peg means 49.

The lowermost peg means 49*d* and 49*c*, as in Fig. 3, herein at each end mount a centrally apertured disc simulating a vehicle wheel 51.

In Fig. 5, to which reference is now had, there is disclosed a land tank embodiment of the invention. Herein two board members 52 of an outline corresponding to a side elevation of a land tank and suitably ornamented or printed to conform thereto are connected in spaced relation by peg means 53. The elongated strip 54, encompassable peg means and the adjacent ends 54*a* after passing peg means 53*a* and 53*b* interlock as shown, similar to the connection illustrated in Fig. 4, in turn a modification of that shown in Fig. 3. If desired, the two ends may either abut or lap each other between the peg means 53*a* and 53*b* and be secured together by the tape connection as indicated at 24 in Figs. 1 and 2, or by dotted lines in Fig. 5.

Herein top portion 54*b* is apertured to receive peg means 55. A short piece of board is arranged as indicated at 56 with lapping ends 56*a*, and the peg means 55 extends therethrough. One portion 56*b* is apertured to receive peg means 57 thus simulating a gun mount and a gun upon the tank proper. Whenever desired this type may be substituted in Fig. 3 for the gun and mount illustrated therein and obviously that illustrated in Fig. 3 can be substituted on the tank for that illustrated in Fig. 5.

Reference will now be had to Fig. 6. Herein a pair of board members 60 support two wheel supporting peg means 61 and at least a pair of superposed peg means 62 and 63. The first mentioned peg means support on their exposed ends the apertured discs 64 simulating wheels. The elongated strip of board 65 herein encompasses peg means 61 and 63 and the adjacent ends lap

each other and are secured together by the tape 66.

The upper peg means 62 pivotally supports a gun mount and gun similar to that shown in Fig. 3 and similar numerals herein indicate like parts. Note that in each the gun member 47 at its inner end may bear upon the gun mount pivot forming peg means. Herein the portion 65a of the strip is centrally apertured to receive peg means 67 upon which is mounted a wheel simulating apertured disc 68, this wheel arrangement being of either steering or gun traverse control simulating type as desired.

Reference will now be had to Fig. 7 wherein a landing barge is illustrated. It includes the spaced members 71 of suitable outline and suitably ornamented. Peg means 72 in two triangular groups connect said members together. The elongated strip 73 at each end passes over the two end peg means and then extends inwardly and downwardly and bears against the peg means 72a and may contact the strip. In this respect the similarity to elected Fig. 3 will be obvious.

Reference will now be had to Fig. 8 wherein an amphibian tank is illustrated and in which 74 indicates the two spaced members of desired outline and ornamentation and 75 indicates the connecting peg means. The strip 76 passes about the several peg means 75. Herein end 76a is downwardly directed after passing over peg means 75a. The end 76b after passing over peg means 75b is downwardly directed and bears on end 76a. In this respect the strip connection is similar to that illustrated in Fig. 4, in turn a modification of that shown in Fig. 3. Herein the forward portion 76c of strip 76 is centrally apertured and receives the gun simulating peg means 77. The upper portion 76d of the strip may mount, if desired, either gun and mount illustrated in Fig. 3 or Fig. 5.

Reference will now be had to the vessel embodiments of the invention. Attention will first be had to Figs. 9 and 10 wherein one board member 78 constitutes the bottom of a hull and the other board member 79 constitutes the top or deck of the hull. Since this vessel simulates an aircraft carrier, the upper member is of appreciably greater area than that of the lower member. Each of said members is suitably apertured adjacent its borders and peg means 80 are seated therein and adapted at their lower ends to bear upon a suitable support and the peg means incline upwardly and outwardly.

Between said members and encompassing the several peg means is the strip 81. This may be singular or in two pieces. When singular the connection is made by tape 82 at one end of the ship and if two pieces are utilized, connections are made at opposite ends as shown at 82.

Two strips are more convenient, but not necessary. The convenience resides in accurately shaping same to closely contact the outwardly inclined peg means, since in the hull construction same are not parallel as in the prior embodiments. However, for claim purposes, "a strip" is intended to include each of the singular strips of Figs. 1 to 8, inclusive, and the strip means of this form as well.

A U-shaped piece of board of suitable outline and ornamentation, each half simulating a superstructure, includes the base portions 83 and the intermediate connecting portion 84. The upper member 79 is apertured at 85 and the extensions 86 on bases 83 lockingly seat therein. This anchors the superstructure to the top or flight deck. A peg means 87 extends upwardly through a central aperture in the intermediate portion 84 and extends through aperture 85 and may serve to wedge the extensions 86 in the aperture. This peg means simulates a stack terminating above the superstructure of the simulated aircraft carrier.

Reference will now be had to Figs. 11 and 12 where a sub chaser or like smaller naval vessel simulation is illustrated. Herein 88 indicates the hull bottom simulating member, 89 the top or deck simulating member and 90 the outwardly and upwardly inclined peg means. Herein, see Fig. 12, the members are not parallel, but the deck is pitched downwardly toward the stern end. This effect is attained by having the strip 91 (and herein singular in character) widest at its mid-portion and progressively narrower towards its ends which are lapped as at 91a and secured together by the tape 92.

The deck member 89 herein is apertured fore and aft at 93 and 94 by depressing portions 93a and 94a downwardly and toward the adjacent end of the hull. A generally U-shaped board length (particularly V-shaped in elevation) herein includes a shorter and more vertically directed portion 95 with extension 95a extended into aperture 93 and frictionally locked therein, and an integral longer and more horizontal portion 96 with extension 96a similarly extended into aperture 94 and frictionally locked therein. Portions 95 and 96 are crease hinge-connected and portion 95 is apertured and frictionally seats peg means 97 simulating a gun.

Reference will now be had to Figs. 13 and 14 wherein a larger naval vessel simulation is illustrated. Herein the bottom and top or deck forming members 98 and 99, respectively, as before are of dissimilar size and the peg means 100 are inclined outwardly and upwardly. Like the aircraft carrier form, the strip 101 herein is of two pieces connected together at each end of the ship by the tape 102. The term "strip" applies thereto as heretofore set forth relative to Figs. 9 and 10. The deck is apertured as at 103 and a gun mount similar to that illustrated in Fig. 5 is applied. The same numerals used therein but increased by 100, accordingly, are herein utilized. The gun and mount illustrated in Fig. 3 may, of course, with equal facility be substituted therefor.

In Figs. 13 and 14 there is illustrated a U-shaped piece of board suitably outlined and decorated as desired. It includes the sides 104 or base portions and the top or intermediate portion 105. The deck member 99 herein is provided with a pair of apertures 99a, each of which lockingly receives a locking tongue extension 106 of the side 104. The deck member 99 and the intermediate portion 105 are each apertured at 99b and 105a and peg means 107 projects through both. This form accordingly slightly differs from the aircraft carrier form.

Herein the upper end of peg means 107 may pass through a multiple folded piece of board 108 simulating smoke emanating from the simulated stack 107. The U-shaped member includes at its forward edge of its top portion a downwardly and forwardly directed flap portion 109 apertured to seat peg means 110 therein, same simulating another gun.

It will be observed that in all of the embodiments of the invention shown in Figs. 1 to 8, inclusive, all of the pegs that in effect constitute framing pegs are or may be fully concealed by the elongated band means, the sole exception being the peg means 72a in Fig. 7, and as illus-

trated the alternative peg means **22***a* in Fig. 1 and peg means **69** in Fig. 6. The foregoing statement only refers to the intermediate portion of the peg means, which are included in the frame work.

Naturally, it is to be understood that in all the foregoing instances whenever and wherever desired and required the band means is to be prescored. Also, it is to be clearly understood that whenever the band means is operatively associated with the peg means the former can be so tautened in its connection as to increase the frictional resistance between the plate members and the peg means, thereby resulting in a tight rigid arrangement, whereas the peg means and the two plate members previous to band means application thereto may have been somewhat loosely or sloppily connected.

It will also be observed that in the majority of instances the free ends of the band means when not tape connected exert an outward pressure, so that a spring force is exerted to yieldingly lock the band means in position.

While the invention has been illustrated and described in great detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. A service toy of plane, boat or vehicle simulating type, comprising a pair of spaced, comparatively thin paper board members, a plurality of pins extending through said members and retaining same in assembled relation, and elongated paper board means positioned exteriorly of said pins and spacing the members apart for service toy simulation.

2. A service simulating toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the members being vertically positioned and the lowermost portion of the board means lying above the lowermost edge of said members.

3. A service simulating toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the members being vertically positioned and the lowermost portion of the board means lying above the lowermost edge of said members, and apertured board discs carried at the opposite ends of certain of said pins for simulating vehicle wheels.

4. A service simulating toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the members being vertically positioned and the lowermost portion of the board means lying above the lowermost edge of said members, and a simulating board wing with spaced integral portions projecting transversely thereof and parallel to and in abutting relation to the members, one of said pins extending through both spaced portions and the members.

5. A service simulating toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the members being vertically positioned and the lowermost portion of the board means lying above the lowermost edge of said members, and a simulating board wing with spaced integral portions projecting transversely thereof and parallel to and in abutting relation to the members, one of said pins extending through both spaced portions and the members, the wing projecting rearwardly of the members and pivoted relative thereto for elevator purposes.

6. A service simulating toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the members being vertically positioned and the board means lowermost portion lies above the lowermost edge of said members, and a simulating board wing with spaced integral portions projecting transversely thereof and parallel to and in abutting relation to the members, one of said pins extending through both spaced portions and the members, the members adjacent the wing mounting having a straight edge portion, the wing adjacent thereto having appreciable width for facial contact with said edge portions.

7. A service simulating toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the members being horizontally positioned for boat simulation, the elongated board means being of endless character for hull simulation, the lower ends of certain of the pins serving as supports for said toy.

8. A service simulating toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the members being horizontally positioned for boat simulation, the elongated board means being of endless character for hull simulation, the lower ends of certain of the pins serving as supports for said toy, the upper board member being of greater area than the lower member, and the pin spacing in the latter being less than that in the upper member.

9. In a service simulating toy the combination of U-shaped board means, and a dowel pin operatively associated therewith.

10. A combination, as defined by claim 9, wherein the dowel pin extends through the midportion of the U-shaped board means.

11. A combination, as defined by claim 9, wherein the dowel pin extends through the midportion of the U-shaped board means, and other pin means extending through the sides of the U-shaped board means for pivotally supporting the U-shaped board means, the first mentioned dowel pin simulating a gun.

12. A combination, as defined by claim 9, wherein the dowel pin extends through the midportion of the U-shaped board means, and other pin means extending through the sides of the U-shaped board means for pivotally supporting the U-shaped board means, another U-shaped board means, the last mentioned pin means pivotally connecting both U-shaped means together, and a third pin means in the midportion of the second U-shaped means serving as a pivotal support for both U-shaped means.

13. A service toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the board means having its ends terminating adjacent each other and interengaging adjacent a pin for locking association.

14. A service toy of plane, boat or vehicle simulating type comprising a pair of spaced board members, a plurality of pins extending through said members, and elongated board means positioned exteriorly of said pins and spacing the members apart for service toy simulation, the board means ends being positioned adjacent another portion of the board means in juxtaposition with a pin for locking association.

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