

Dec. 12, 1939.

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2,183,443

BOOK TOY

Filed June 27, 1938

2 Sheets-Sheet 1

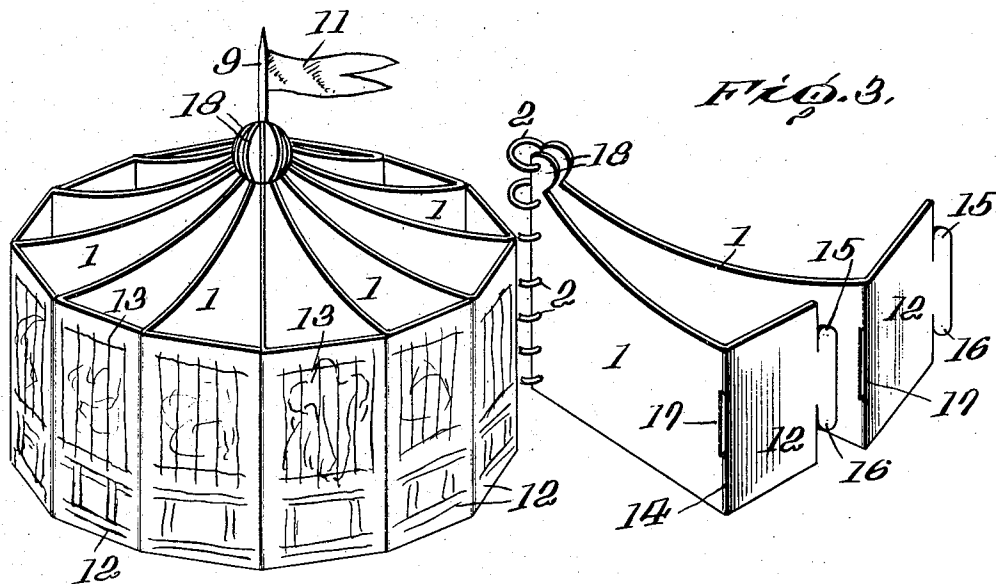
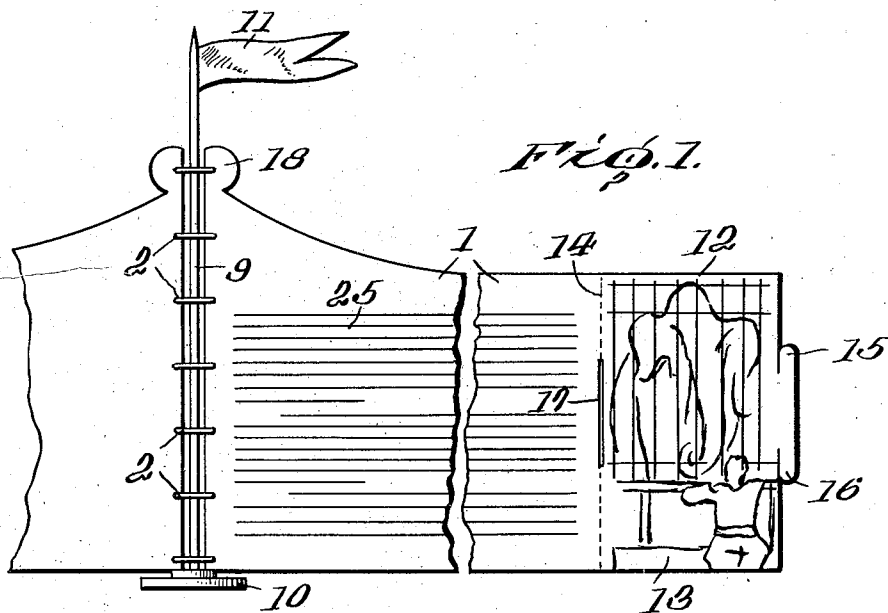


FIG. 2.

FIG. 3.

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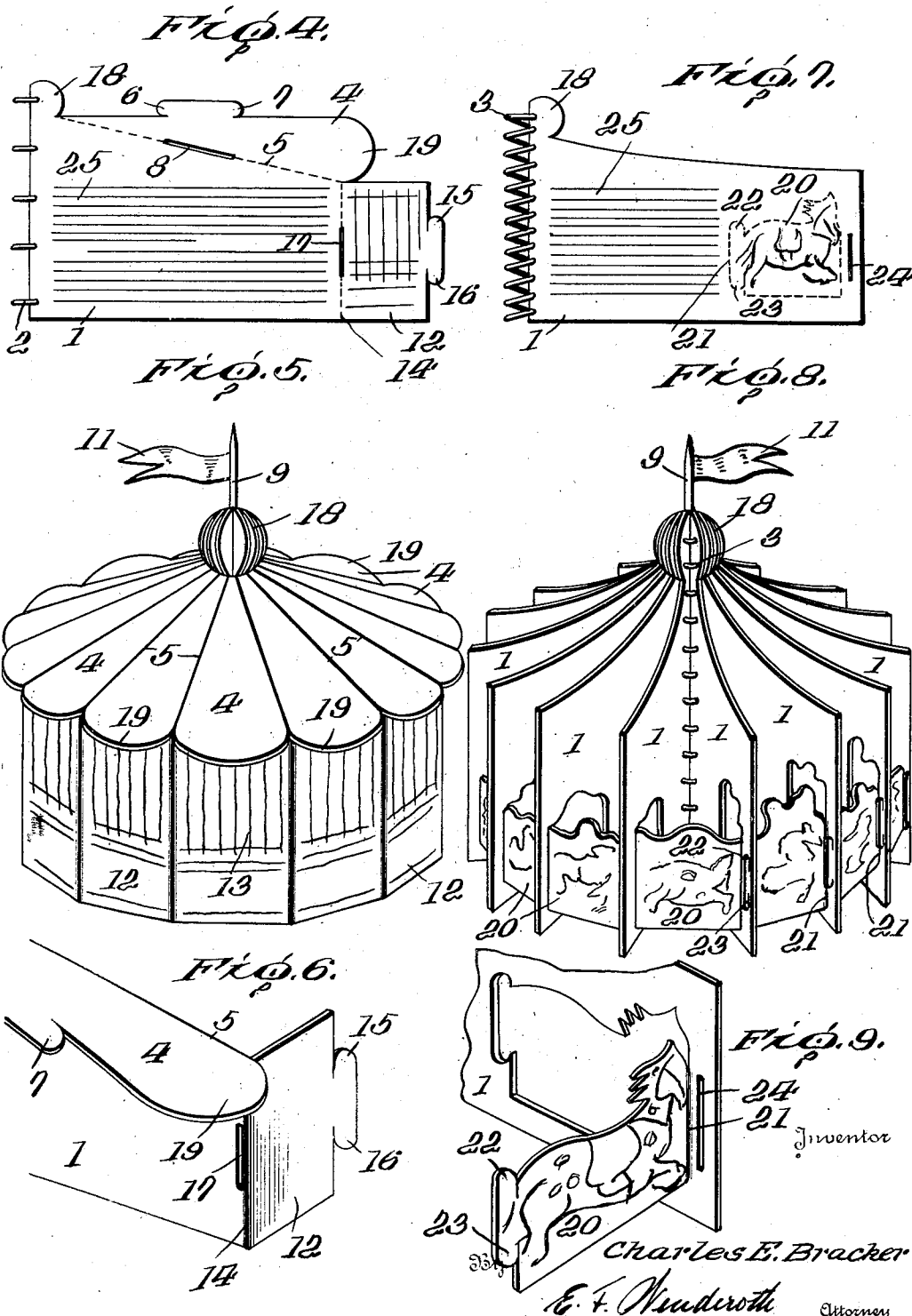
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BOOK TOY

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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BOOK TOY

Charles E. Bracker, New York, N. Y.

Application June 27, 1938, Serial No. 216,128

3 Claims. (Cl. 46—12)

This invention relates to educational toys.

More particularly, the invention relates to improvements in the book type of toys; which toys can be expanded from a collapsed or book-like condition into an assembled, upstanding toy. In the form of the invention preferred at present and illustrated in this application, the invention is embodied in devices simulating the conventional carousel or circus tent, respectively.

The general objects of the invention are to produce a simplified and unique construction of a book toy which can be assembled, from a folded or book-like condition, into a final, completed toy; and to assemble the toy so that some form of animation can be imparted thereto.

Another object is to produce a book toy which can be assembled into a device capable of rotation.

Yet another object is to produce a book toy in which the leaves thereof are cooperable with each other, when the toy is assembled, to impart both rigidity and a realistic appearance thereto.

With the above and other objects in view, which latter will be apparent from the following discussion, the invention consists of a book toy embodying the novel and improved features, constructions and combination of parts hereinafter described and particularly pointed out in the claims, the advantages of which will be readily understood and appreciated by those skilled in the art.

The invention will be clearly understood from the accompanying drawings including constructional views of several constructions embodying the essential details of the invention in its preferred form, and from the following detailed description of said drawings.

In the drawings,

Fig. 1 is an elevation showing the book toy with its leaves open, ready for assembly, and mounted for rotation on a spindle and base;

Fig. 2 is a perspective view of one example of the invention, the toy being completely assembled;

Fig. 3 is a fragmentary perspective view, showing in detail the manner of assembly according to one exemplification of my invention;

Fig. 4 is a fragmentary elevation, showing a single leaf having both top and side tab-bearing members, with one form of binding;

Fig. 5 is a perspective view of an assembled toy, constructed from leaves according to Fig. 4;

Fig. 6 is a fragmentary perspective view, illustrating one manner of folding the tab-bearing

members of Fig. 4 so as to adapt them for cooperation with adjacent tab-bearing members;

Fig. 7 is a fragmentary elevation, similar to Fig. 4, but depicting a modification in which a cut-out is provided in leaf, foldable along a line, and having tabs at its free end for insertion in a slit in an adjacent leaf. This view also illustrates a second form of binding;

Fig. 8 is a perspective view showing a toy assembled, using the leaves of Fig. 7; while

Fig. 9 is a fragmentary perspective view, illustrating the manner of folding the tab-bearing member of Fig. 7, so as to adapt it for cooperation with adjacent tab-bearing members.

In Fig. 1 one of a plurality of leaves 1 is depicted. While these leaves may vary slightly, one from the other, in coloring and characters depicted thereon, they are broadly of like size and configuration, as is evident from Figs. 2 and 8. Because of this similarity of size, these sheets or leaves can readily be superposed one on the other, and in such position, their overall dimensions are such that they have generally the compass and shape of a book. Along a like edge or all the leaves, preferably one of the shorter edges, the several leaves are secured together by a suitable binding. While this binding may take any convenient form, it is desirable and even necessary that the several leaves have a comparatively wide range of angular movement or play within its binding, and for this reason I prefer to use a binding about which the leaves can be swung through a wide arc, or even be rotated. One form of such binding may for example be constituted by the rings 2, in Figs. 1, 3 and 4, which is what I hereinafter term a ring binding; while another form of such securing means is constituted by the spiral binding 3 of Figs. 7 and 8. In either case, the leaves are substantially completely rotatable about the binding.

Each leaf 1 has one or more foldable tab-bearing or similar members mounted thereon, foldable into planes approximately at right angles to the planes of the several leaves. It is of course obvious that to assemble the toy from its book-like or rest position, the book is first stood on end, whereupon the several leaves are separated, i. e. moved apart around the binding, and the tab-bearing members folded or bent. These tabs may be folded either forwardly or rearwardly of the corresponding leaves, whereupon the tabs are bent very slightly and then inserted in corresponding slits of the immediately adjacent leading or trailing leaf, as the case may be.

In Fig. 1 it will be seen that if desired, and in

order to impart the possibility of rotation to the assembled toy as a unit, a spindle 9 is provided, cooperating with and supported in a suitable base 10. If desired, the spindle 9, illustrated as extending freely through the binding and projecting at the top end thereof, may carry some suitable attention-provoking display, such as a banner or the like 11.

In Fig. 1, the leaf 1 is shown as having a tab-bearing member 12 at the free side edge thereof, which member 12 is foldable or bendable into a plane approximately at right angles to the planes of the leaves 1, and which may carry any suitable ornamentation, either plane, bas-relief, or the like, such as the picture 13. This member 12 may be secured to the leaf 1 in any desired manner, but I prefer to form it integral therewith. The member 12 is foldable along the line 14, which may be scored, if desired. Tabs 15 and 16 are formed on members 12, and are adapted to fit in cooperating slits formed in the adjacent leaves or tab-bearing members. Purely by way of illustration, the members 12 are shown in Fig. 3 as being folded forwardly, preparatory to the insertion of the tabs into the corresponding slits. With equal facility, the members 12 could be folded rearwardly and assembled at that time. When the tabs are inserted into the corresponding slits the toy is at once assembled into a unitary, rigid whole. If the spindle 9, which may of course be omitted if desired, is employed, the device may be rotated, and this motion, together with the gay colors employed, gives rise to a pleasing and realistic simulation of a carousel or circus tent, as illustrated in Fig. 2, for example.

Referring to Fig. 2, it will be noted that the members 12, disposed as they are on the side edges of the leaves 1, give rise, when assembled, to a toy having a closed front.

In each of Figs. 1-3, the leaves 1 are shown as each carrying on its top inner edge an upstanding, approximately semi-circular protuberance 18. As can be seen from Fig. 2, the composite effect of these protuberances is that of a crowning dome or ball.

It is also to be noted from Fig. 3 that the use of side members 12 alone gives rise to a toy having no top or bottom members. This deficiency is partially overcome by an expedient such as is illustrated in Fig. 4, where a tab-bearing member is shown at 4, secured in any desired manner to the upper edge of the leaf 1, but shown as being formed integral therewith and as being part thereof. This member 4 is illustrated as being foldable in either a forward or rearward direction along the line 5. In Fig. 6, purely by way of example, the member 4 is folded to the rear. Tabs 6 and 7 are secured on the member 4, and a slit 8 is provided at a suitable location on each leaf 1 or member 4, to receive the tabs on the adjacent leaf.

This member 4 cooperates with the tab-bearing members 12, which are substantially identical with those of Figs. 1 through 3. Also purely by way of example, these members 12 are shown as being folded forwardly in Fig. 6. It is obvious that the directions of folding of these members 4 and 12 could readily be reversed, or if desired, both could be folded in the same direction, either forwardly or rearwardly. When so folded, the tabs 6 and 7 are ready to be inserted in the slot 8, and the tabs 15 and 16 are ready to be inserted in the slit 17, of the adjacent leaf 1. Evidently the use of top and side members 4 and 12

gives rise to an assembly more rigid than that of Fig. 2.

In the assembly view of Fig. 5, it will be seen that the general effect is that of a tent or the like, closed at top and sides.

To carry out the illusion of a gaily caparisoned tent, the outermost edge of member 4 may extend beyond the limits of leaf 1, and may be suitably contoured, as according to a curve at 19 in Figs. 4-6 inclusive. From Fig. 5 it will be seen that these curved projections give an umbrella or clover-leaf effect to the assembled toy.

If desired, a suitable flooring could be provided for the toy. Although not illustrated, it is obvious that a suitable tab-bearing or similar member could be secured in desired manner to the bottom edge of the leaves 1, which would then be slitted to receive the tabs thereof. When the toy was then assembled, suitable flooring would automatically be formed. It is evident that it is by no means necessary that the tab-bearing members be secured to the leaves throughout the lengths of the edges to which they are secured. Pleasing variations can be produced by securing the members along only a portion of the lengths of the leaves, etc., and I contemplate any of the myriad variations which will readily occur to the investigator.

In each of the embodiments of my invention referred to so far, the tab-bearing members have been described as appendages secured in desired manner to the edges of the leaves. It is apparent that these members may take the form of cutouts, struck from the leaves themselves, and while the line of fold may still be approximately at the outer edge of the leaf, it may advantageously be disposed well within the margins of the leaf, to increase the number of effects which are possible. These cutout portions may have any desired combination of configuration, size and coloring. In Figs. 7-9 inclusive, an example of this embodiment of my invention is illustrated. In the leaf 1 is depicted any desired animal or other figure 20, and this figure 20 is cut along its margins from the leaf 1, with the single exception of the line 21, along which the figure is folded into a plane approximately at right angles to the plane of the leaf 1. Tabs 22 and 23 are formed on the figure 20, cooperating in previously described manner with the slit 24 of an adjacent leaf. The effect of the final assembly, as may be seen from Fig. 8, is more nearly that of the conventional merry-go-round or carousel, the figures 20 being located within the outer confines of the assembly. While the figures or animals 20 are shown as cut out and folded from the leaves 1, it is obvious that without departing from the spirit of my invention, the animals or other representations may be formed separate from the leaves 1 and secured thereto in any desired manner.

While I have shown tabs and slits as the securing means of my preferred embodiments, other self-contained and releasable securing means are also contemplated.

It will be noted that a device according to my invention, in addition to being a toy is also a book and may be used and read as any other book. Each page or leaf which is provided with descriptive printed matter or story, as shown at 25, on that portion of the leaf or page is not folded over.

It is to be understood that the invention is not limited to the particular constructions and arrangement of parts of the illustrated embodiments of my invention, but that the invention

may be embodied in other forms within the scope of the claims.

The shorter end of the leaf or page which instead of being sharply folded as in Figs. 1-6 inclusive on a definite line, may merely be bent and the tabs secured in the slit of the adjacent page or leaf.

Having explained the nature and objects of the invention and having specifically described constructions embodying the invention, what is claimed is:

1. A book toy, comprising a plurality of leaves of broadly like size and configuration, capable of being extended from and collapsed to book form at will, and superposed when in book form one on the other, a common binding at all times along similar side edges of the several leaves, and on which binding each leaf is separately, independently and directly mounted in such manner as to be rotatable completely thereabout, through more than 360°, members on said leaves, foldable into planes approximately at right angles to the planes of said leaves, and means on said members, cooperating with adjacent leaves, for removably securing said members, when folded, to said adjacent leaves, for spacing the leaves a proper distance from each other, and for fixing the assembly when the leaves are opened and assembled into the shape of a toy.

2. A book toy, comprising a plurality of leaves of broadly like size and configuration, capable of being extended from and collapsed to book form at will, and superposed when in book form one on the other, a common binding at all times along similar side edges of the several leaves, and on which binding each leaf is separately, independently, and directly mounted in such manner as to be freely rotatable, without bind-

ing, completely thereabout, through more than 360°, and so that said binding directly carries the load of each leaf, and tab-bearing members on desired ones of the free edges of said leaves, foldable into planes approximately at right angles to the planes of said leaves, adjacent leaves having slits therein, for receiving and securing the tabs of corresponding tab-bearing members, when the said leaves are opened from their closed position and assembled into the shape of a toy.

3. A book toy capable of complete rotation, comprising a plurality of leaves of broadly like size and configuration, capable of being extended from and collapsed into book form at will, and superposed when in book form one on the other, a common binding at all times along similar side edges of the several leaves, and on which binding each leaf is separately, independently, and directly mounted in such manner as to be freely rotatable, without binding, completely thereabout through more than 360°, tab-bearing members on said leaves, foldable into planes approximately at right angles to the planes of said leaves, adjacent leaves having slits therein, for receiving and securing the tabs of corresponding tab-bearing members, when the said leaves are opened from their closed position and assembled into the shape of a toy, said members, when the tabs which they bear are secured in the corresponding slits, serving as the members for spacing the leaves a proper distance from each other and for imparting rigidity to the structure, a spindle extending loosely through said binding, and a base on which said spindle is mounted, the leaves together with the binding being freely rotatable about said spindle, the binding being of construction which will not bind against said spindle.

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