Oct. 15, 1940. L. E. ELLIOTT 2,218,394

TOY

Filed Sept. 5, 1939 3 Sheets-Sheet 1

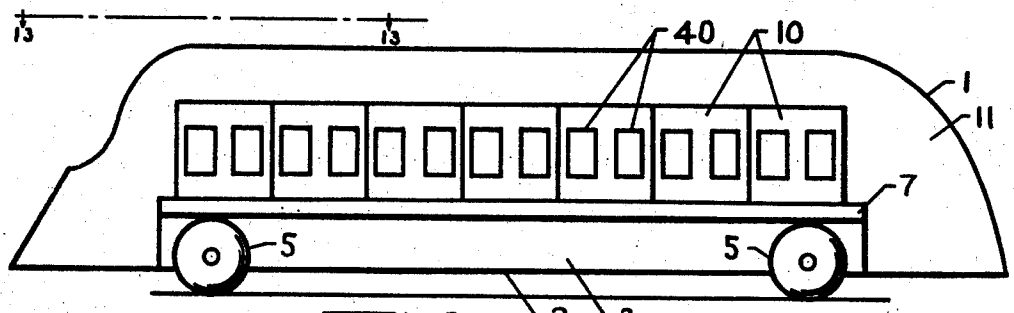


Fig-1

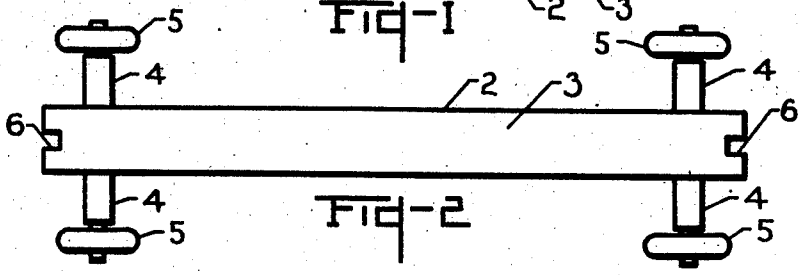


Fig-2

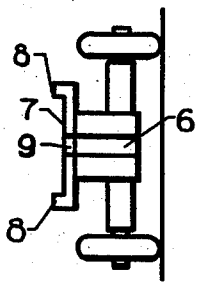


Fig-3

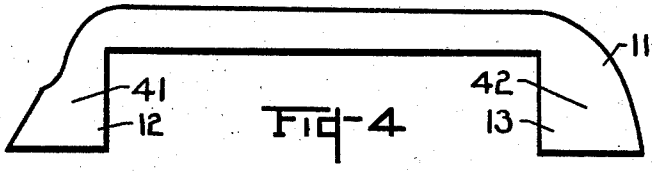


Fig-4

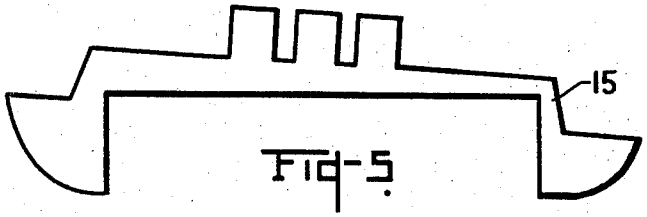


Fig-5

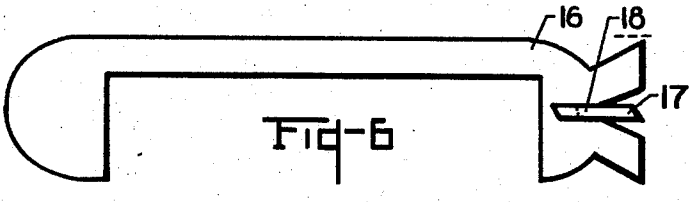


Fig-6

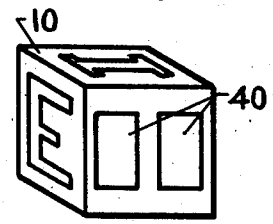


Fig-8

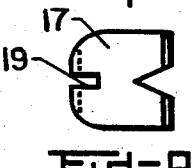


Fig-9

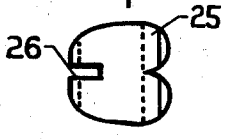


Fig-10

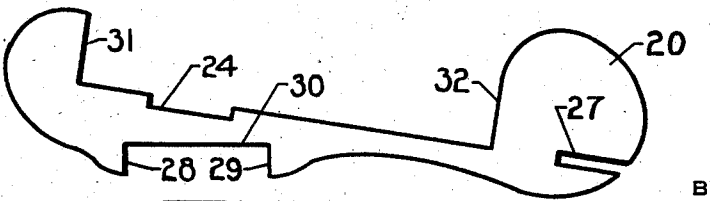


Fig-7

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TOY

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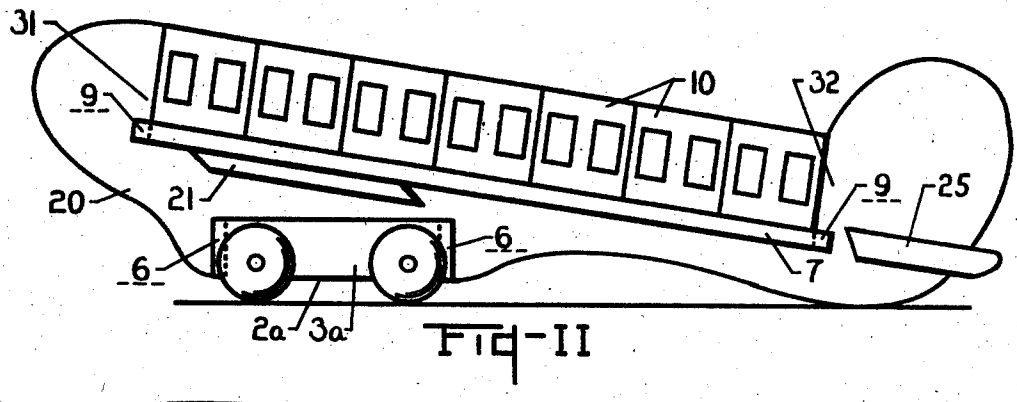


FIG-11

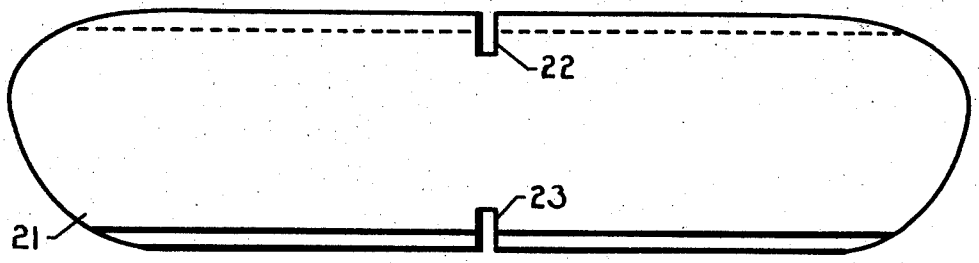


FIG-12

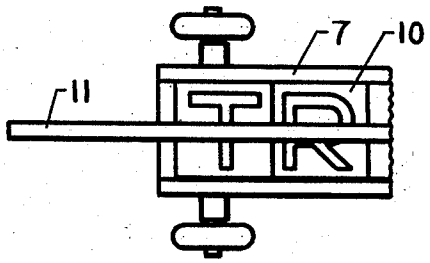


FIG-13

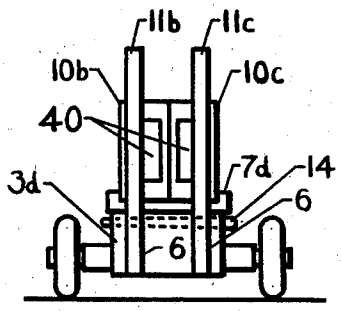


FIG-14

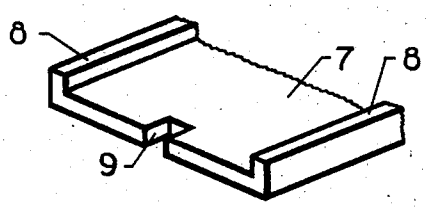


FIG-15

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Oct. 15, 1940. L. E. ELLIOTT 2,218,394

TOY

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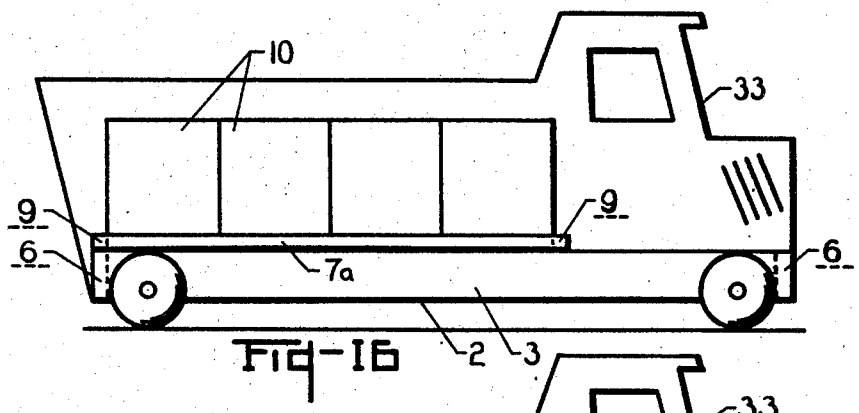


Fig-16

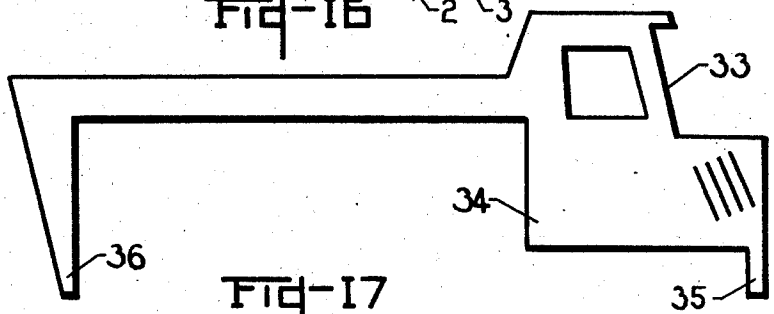


Fig-17

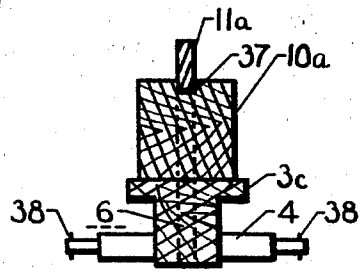


Fig-18

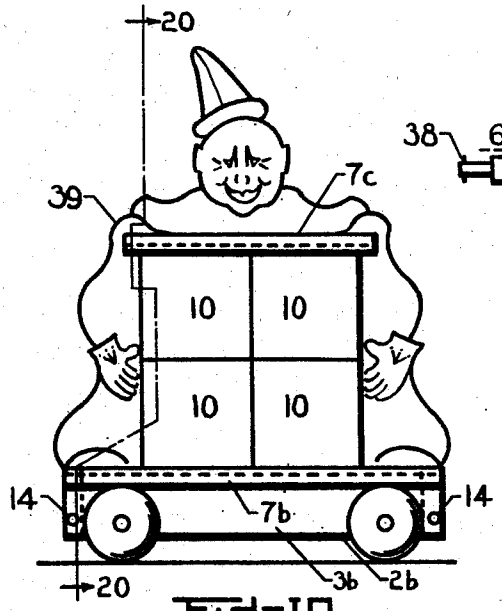


Fig-19

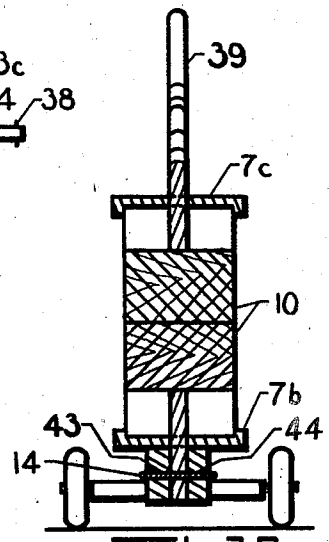


Fig-20

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Patented Oct. 15, 1940

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UNITED STATES PATENT OFFICE

2,218,394

TOY

Lyle E. Elliott, Battle Creek, Mich.

Application September 5, 1939, Serial No. 293,322

11 Claims. (Cl. 46—26)

The present invention relates broadly to toys, and in its specific phases to wheeled toys of convertible construction.

Many forms of structural-type toys are on the market. Of these, a few are of convertible type, but in order to convert them from one object to another, it is necessary to substantially or completely disassemble same and then rebuild by reassembling the individual parts of the toy-set in different order, arrangement, and form. None of such convertible toys are capable of being converted from one specific object to another by the substitution of a new member for one member of the original assembly. The accomplishment of this is one of the principal objects of the present invention.

Another object is to provide a toy, and in its specific phases a wheeled toy, with interchangeable silhouette members for converting the toy from one form to various other forms.

Another object is to provide toy blocks, a supporting member for same, and silhouette members cooperating in interchangeable manner therewith.

Another object is the provision of means for assembling from standardized parts, including blocks and silhouette members, different forms of vehicles, objects, and the like which are well-known and attractive.

Another object is to provide such a structural toy of standardized parts, including blocks and silhouette members, which can be easily assembled by a child or amateur in proper realistic combinations and is easily disassembled or altered without the necessity of using tools.

A further object is to produce a toy wherein the blocks used in assembling same may carry, in addition to pictures, numbers, and the alphabet, indicia representing windows or portholes to produce a more realistic appearance where the toy has been assembled to represent a streamline rail car, steamship, or the like.

A further object is to provide a structural toy having a wheeled wagon, a tray with blocks mountable thereabove, and a silhouette member cooperating with these items to give the whole assembly the appearance of a definite object such as a truck, dirigible, monoplane, or the like.

A further object is to provide means for locking the assembly of blocks, silhouette member, et cetera into a stable unit.

A further object is to produce a toy of the character herein described which is relatively inexpensive to manufacture.

Further objects and advantages of the invention will appear as the description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims, the annexed drawings and the following description setting forth in detail certain means for carrying out the invention, such disclosed means illustrating, however, but several of various ways in which the principle of the invention may be used.

In said annexed drawings:

Figure 1 is a side elevational assembly view of one form of the present invention representing a streamline bus or rail car.

Figure 2 is a top view of the wagon shown in side view as part of Figure 1.

Figure 3 is an end view of the wagon shown in Figure 2, and on which a tray has been mounted.

Figure 4 is a side view of the silhouette member used in the assembly shown in Figure 1.

Figures 5 and 6 illustrate silhouette members usable in the place of the streamline bus or rail car silhouette member of Figure 4 so as to convert the assembly shown in Figure 1 respectively to simulate a steamship or dirigible.

Figure 7 shows a silhouette member usable for constructing a toy monoplane.

Figure 8 illustrates one form of block usable with the present invention.

Figure 9 illustrates one form of tailpiece usable with the dirigible silhouette member of Figure 6.

Figure 10 illustrates one form of tailpiece usable with the monoplane silhouette member of Figure 7.

Figure 11 is a side elevational assembly view of one form of the present invention representing a monoplane.

Figure 12 is a top view of the wing of the monoplane shown in Figure 11.

Figure 13 is a top view of one form of the present invention as viewed at line 13—13 of Figure 1.

Figure 14 is an end view of one form of the present invention illustrating the use of a pair of silhouette members.

Figure 15 is a fragmentary perspective view of the end of a preferred form of symmetrically constructed block tray.

Figure 16 is a side elevational assembly view of one form of the present invention representing a truck.

Figure 17 is a side view of the silhouette mem-

ber of the truck shown in the assembly view of Figure 16.

Figure 18 is a partially sectioned end view of one form of the present invention illustrating the use of grooved blocks held in place against sidewise displacement by means of the silhouette member.

Figure 19 is a side elevational assembly view of another form of the present invention representing a clown pull toy with two courses of blocks, one superimposed on the other.

Figure 20 is a partially sectioned assembly view of one form of the present invention as taken along the line 20—20 of Figure 19.

Structural toys, which have building blocks as a part thereof, have long been considered beneficial to a child's welfare because they are amusing to play with, educational, act to familiarize the child with various objects, and also train him in positioning the blocks and other parts of the toy. To take advantage of this, the arrangement of the present invention was devised wherein a plurality of blocks and other parts, including silhouette members, may be assembled to produce a stream line rail car, steamship, dirigible, truck, et cetera, each of which may be converted from one to the other by a simple substitution of parts.

Referring more particularly to the drawings, the stream line bus or rail car 1 shown in Figure 1 utilizes in preferred construction a wagon 2 having a frame 3, axle 4 (Figure 2), and wheels 5. The ends of the frame 3 are provided with notches 6, the use of which will be hereinafter described. Mounted on the frame 3 of wagon 2, in preferred construction, is a tray 7 having upwardly flanged side edges 8 (Figures 3 and 15). The ends of the tray are provided with notches 9, the use of which will be hereinafter described.

Blocks 10 are preferably mounted on tray 7 in assembling the toy, and held against sidewise displacement by means of the upwardly flanged side edges 8. Tray 7 may be made of various lenghts to accommodate different numbers of blocks, and one convenient size, as is shown in Figure 1, involves the use of a tray sufficiently long to hold seven blocks which completely fill the space from the inner end of notch 9 at one end of tray 7 to the like inner end of notch 9 at the other end of the tray. The use of seven blocks permits the placing of the full alphabet on same, while leaving two opposite side panels on five of the blocks and two opposite side panels and one end panel on the two end blocks to carry window or porthole indicia 40 which makes the final assembly have a more realistic appearance of the article being depicted by the assembly. There is, however, no particular limitation to the use of seven blocks, since obviously more or less blocks could be used without departing from the spirit of the present invention. To complete the assembly, tray 7 carrying blocks 10 is placed on frame 3 (Figure 1) of wagon 2 with notches 9 of the tray coinciding with and acting as a continuation of notches 6 in the end of the wagon frame. Silhouette member 11 (Figure 4) is then slipped into place as shown in Figure 1 with the inner corners 12 and 13 of the legs 41 and 42 of the silhouette member 11 passing into and engaging notches 6 and 9 at the respective ends of the wagon frame 3 and tray 7 to hold the whole in assembled position. The silhouette member 11, which makes the assembly of Figure 1 take on the appearance of a streamline bus or rail car, is thus held in upright position by means of notches 6 and 7 and gives the finished assembly a realistic appearance when viewed from any side. At the same time, the silhouette member bears against the top of blocks 10 to releasably hold same in position on tray 7. The assembled toy may be used in this form if desired, although it is not limited thereto, and the silhouette member 11 may be fastened in place on frame 3 of the wagon 2 in conventional manner to fixedly hold blocks 10 in place so that if the toy is upset or accidentally given a hard bump, it will not come apart. This may be accomplished, for instance, by providing each end of the frame 3 of the wagon with a suitable cross-opening 43 passing through notch 6. Silhouette member 11, under these circumstances, is likewise provided with a corresponding opening 44 making possible the anchoring of the silhouette member 11 to frame 3 by means of a suitable pin 14 (Figures 14, 19, and 20) or the like.

To convert the streamline bus 1 of Figure 1 into a steamship, it is only necessary to remove silhouette member 11 and substitute therefor the steamship silhouette member 15 of Figure 5. On the other hand, if it is desired to convert the stream line bus of Figure 1 into a dirigible, it is only necessary to substitute the dirigible silhouette member 16 of Figure 6 for the silhouette member 11 of Figure 1. To give the dirigible silhouette 16 a more realistic appearance, it may be provided with a horizontal tailpiece 17 (Figures 6 and 9). To facilitate the assembly of the tailpiece 17 on dirigible silhouette member 16, the latter is provided with a notch 18 and the tailpiece 17 with a cooperating notch 19. The simple convertible feature of the present invention is thus one of the major advantages of the present toy over the previously used toys.

To form the monoplane of Figure 11, a wagon 2*a*, preferably of like construction to that shown in Figure 2 but with a shorter frame 3*a*, is used. Removably mounted on this wagon 2*a* is monoplane silhouette member 20 (Figure 7) which for realistic appearance is provided with a removable wing member 21 (Figure 12) provided with cross notches 22 and 23 at its midpoint, the portion of the wing between these notches being adapted to fit and fill notch 24 (Figure 7) in monoplane silhouette member 20. To further increase the realistic appearance of the monoplane silhouette, it may be provided with a removable tailpiece 25 (Figures 10 and 11), the latter having a notch 26 adapted to engage notch 27 of silhouette member 20. In mounting the monoplane silhouette member 20 on wagon 2*a*, edges 28 and 29 of the notch 30 thereof will engage notches 6 in the ends of wagon 2*a* to hold the monoplane silhouette member 20 in upright position relative thereto. The body portion of the monoplane utilizes tray 7 and blocks 10 assembled in the same manner shown in Figure 1. To complete the assembly of the monoplane, tray 7 carrying blocks 10 is slipped into place on the upper edge of the monoplane silhouette member 20 with edges 31 and 32 thereof engaging notches 9 in tray 7 to hold same in a horizontal position, as shown in Figure 11.

In constructing the truck assembly shown in Figure 16, the same wagon 2 shown in Figure 1 may be used. A shorter tray 7*a* provided with notches 9 in its ends is used in this construction and same preferably carries a smaller number of blocks 10, for instance four as shown. The truck silhouette member 33 in this case is used in the same manner as shown and described in connec-

tion with Figure 1 with the exception that it engages notches 6 in the ends of wagon frame 3 and notches 9 in the ends of tray 7a in modified manner, so far as the front end of the truck is concerned. Here corner 34 of truck silhouette member 33 engages groove 9 at one end of the tray 7a, while the inner corner of extending member 35 engages notch 6 in the corresponding end of wagon frame 3. At the rear end of the truck, the lower portion of leg 36 of truck silhouette member 33 engages notches 9 and 6 of tray 7a and wagon frame 3, the same as described in connection with Figure 1. The use of a short tray 7a for blocks 10 in connection with the truck assembly gives a more realistic appearance, although the invention is not limited to such a short tray, since obviously the tray could be as long as shown in Figure 1 without varying from the principles involved in the present invention. The use of a short tray, however, illustrates one mode of offset joining of a tray to the frame of the wagon by means of a silhouette member, and demonstrates the adaptability of the invention to changes which effect the mechanical features, as well as the realistic appearance of the toy.

Instead of using a flanged edge tray to hold blocks 10a against sidewise displacement, the latter may be provided with a groove 37 adapted to receive the under edge of a silhouette member 11a as shown in Figure 18, the ends of the silhouette member being fastened to the ends of wagon frame 3, for instance, as has been hereinbefore described. The wheels 5 shown on the wagons illustrated in Figures 1, 2, 3, 11, 13, 14, 16, 19, and 20 may be held fixedly in place or for rotation on axle 4 by means of keys 38 (Figure 18) or the equivalent.

Where it is desired to have double decked courses of blocks, this may be accomplished, for instance, as is shown in Figures 19 and 20. The wagon 2b is provided with a tray 7b on which the lower course of blocks 10 rest, as has been hereinbefore described. The upper course of blocks 10 are likewise provided with an inverted tray 7c thereabove. Both trays 7b and 7c are preferably provided with notches 9 at each end as shown in Figure 15 in connection with one end of the tray, the ends of which are preferably symmetrical. The placing of the clown silhouette member 39, or the like, as shown in Figure 19 wherein it extends over the top of the assembly and engages the notches in the ends of tray 7c and the notches in the ends of tray 7b and wagon frame 3b acts to hold the whole assembly in unit form.

Instead of a single silhouette member, a plurality of same may be used if desired for the obtaining of some special effect. Where more than one silhouette member is to be used, it is preferable to employ a wider wagon frame 3d (Figure 14). In accordance with the present invention, this wagon frame 3d would be notched at both ends as would be tray 7d to receive the inner corners of the legs of silhouette members 11b and 11c at each end thereof. The use of multiple silhouette members also permits the use of more than one course of blocks mounted side by side on the tray, for instance, as is shown in Figure 14, where the two courses of blocks 10b and 10c are mounted on tray 7d. The silhouette members used for various constructions of the present invention may be formed from wood, sheet plastic material, hard rubber, metal, or any other equivalent material, the cross-hatching used in the drawings being intended to diagrammatically illustrate the use of any of these forms of material.

Other modes of applying the principle of my invention may be employed instead of those explained, change being made as regards the article herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A toy which comprises a frame member, blocks carried thereby, interchangeable silhouette members fitting said frame, and cooperating parts on said silhouette members and frame for releasably holding same in position after assembly.

2. A toy with blocks and supporting means therefor, and a plurality of interchangeable silhouette members for converting said toy so as to simulate different objects, said silhouette members and the supporting means for said blocks having cooperating parts for releasably holding same in position after assembly.

3. In a toy, a plurality of blocks lying end to end in a row, a supporting member therefor, and a silhouette member which is longer than the total length of said row of blocks, said silhouette member being adapted to contact the outer ends of said row of blocks and at the same time engage the ends of said supporting member.

4. In a toy, a plurality of blocks lying end to end in a row, a tray therefor, a wheeled supporting member, and a silhouette member which is longer than the total length of said row of blocks, said silhouette member being adapted to contact the outer ends of said row of blocks, and at the same time engage the ends of both said tray and wheeled supporting member.

5. In a toy, a tray with upwardly flanged side edges, a plurality of blocks lying end to end in a row on said tray between said upwardly flanged side edges, a wheeled supporting member, said tray and supporting member being provided at each end with corresponding vertical grooves, and a plurality of interchangeable silhouette members for converting said toy so as to simulate different objects, each of said silhouette members being adapted to engage with the grooves in the end of said tray and wheeled supporting member so as to hold the particular silhouette used in upright position relative thereto.

6. In a toy, a tray with upwardly flanged side edges, a plurality of blocks lying end to end in a row on said tray between said upwardly flanged side edges, a wheeled supporting member, said tray and supporting member being provided at each end with corresponding vertical grooves, and a plurality of interchangeable silhouette members for converting said toy so as to simulate different objects, each of said silhouette members having an upper portion and depending legs at each end thereof, said legs being substantially parallel and adapted to engage with the grooves in the end of said tray and wheeled supporting member so as to hold the particular silhouette used in upright position relative thereto while the inner face of said upper portion of the silhouette member rests on the upper edge of said blocks.

7. In a toy, a plurality of blocks mounted in two courses, one superimposed on the other, a tray below the lower course of blocks, said tray being provided with means for holding said lower course of blocks against sidewise movement,

a tray above the upper course of blocks, said tray being provided with means for holding the upper course of blocks against sidewise movement, a supporting means for said trays and blocks, and a silhouette member adapted to engage the ends of said trays and join same to the said supporting member while holding the blocks in place.

8. In a toy, a tray, a plurality of blocks mounted side by side in two courses on said tray, a supporting member for said tray, a plurality of interchangeable silhouette members usable at least one at a time to convert said toy so as to simulate different objects, and means at the ends of said tray and supporting member adapted for engagement with said silhouette member to hold same in presecribed position relative thereto.

9. In a toy, a plurality of blocks in a row, a supporting member for said blocks, a silhouette member providing an object outline for said assembly of blocks and supporting member, and means for locking said silhouette member and supporting member together.

10. In a monoplane toy, a tray with upwardly flanged side edges, a plurality of blocks lying end to end in a row on said tray between said side edges, a supporting member, and a monoplane silhouette member which is longer than the total length of said row of blocks, said silhouette member being adapted on one edge to engage the ends of said tray to hold same in position while contacting the outer ends of said row of blocks, and on the other edge to engage the supporting member.

11. In a monoplane toy, a tray with upwardly flanged side edges, a plurality of blocks lying end to end in a row on said tray between said upwardly flanged side edges, a wheeled supporting member, a monoplane silhouette member having a wing member and a tailpiece, the upper edge of said silhouette member being adapted to engage a groove in each end of said tray to hold same in position while extending upward above said tray at the ends of the row of said blocks, the lower edge of said silhouette member being adapted to engage a vertical groove in each end of said wheeled supporting member.

LYLE E. ELLIOTT.