Nov. 14, 1950 L. M. HOLMES 2,529,692

KNOCKDOWN WHEELED TOY

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Fig. 1.

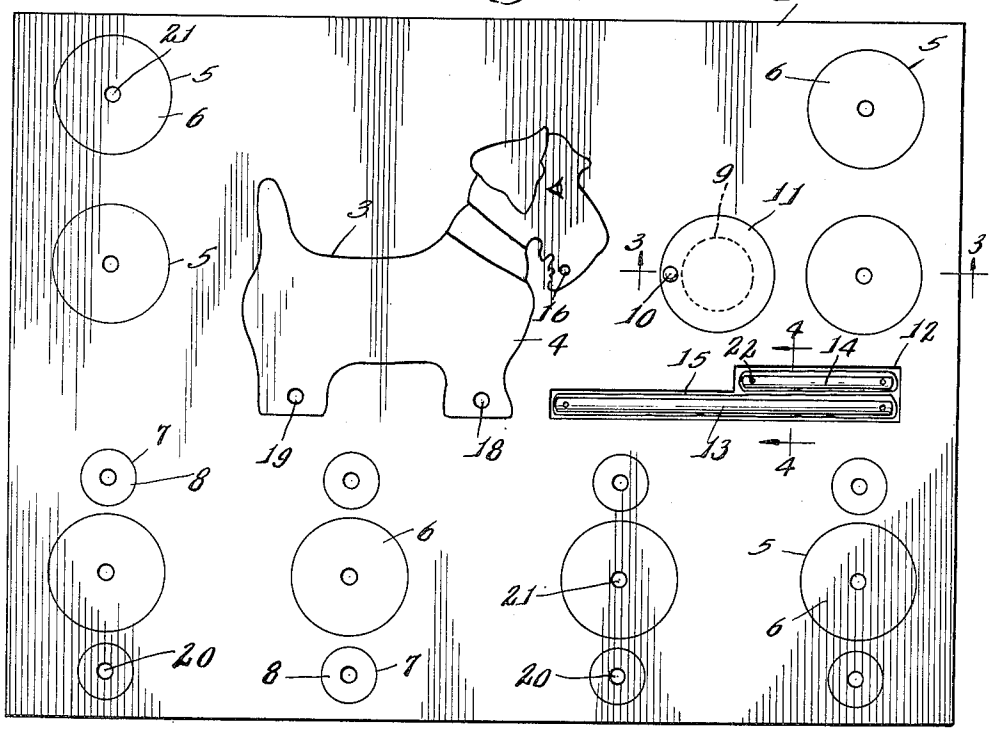

Fig. 2.

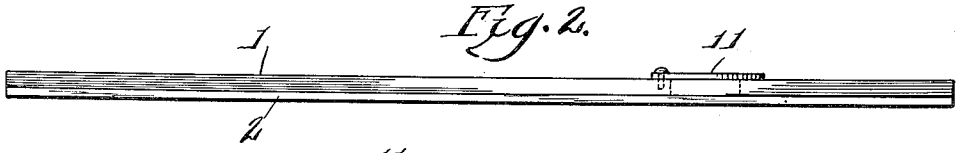

Fig. 3.

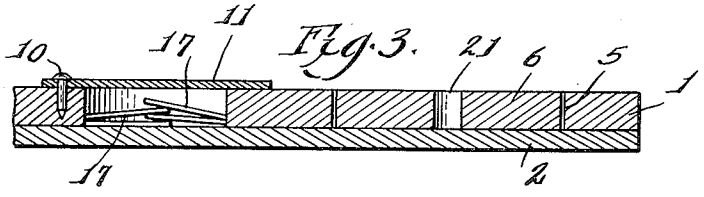

Fig. 4

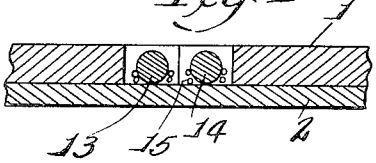

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Fig. 5

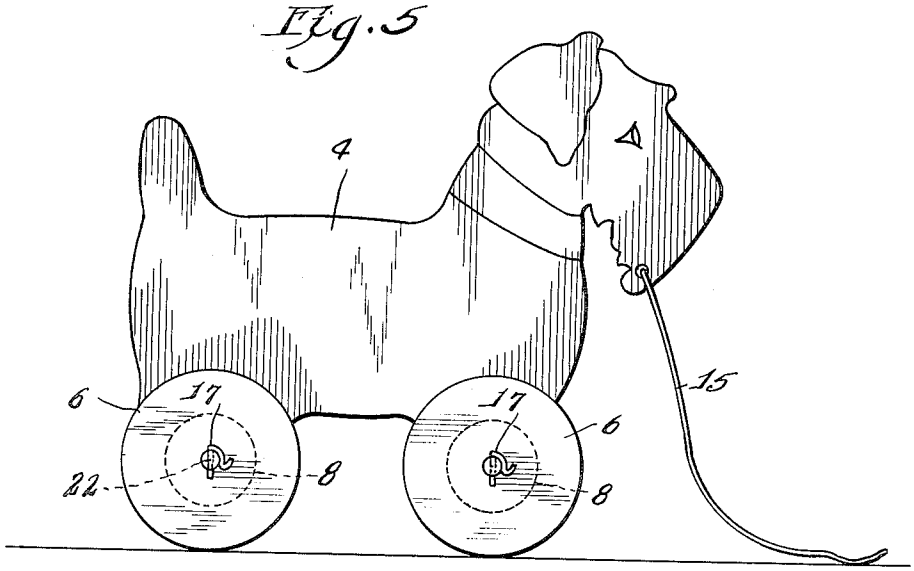


Fig. 6.

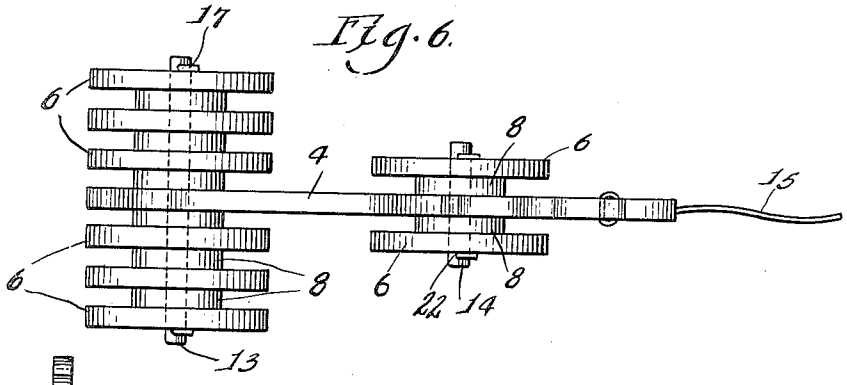


Fig. 7.

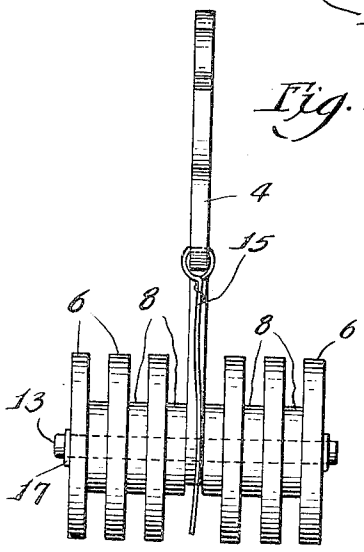
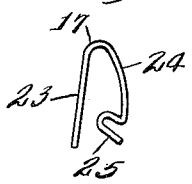


Fig. 8.



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UNITED STATES PATENT OFFICE

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KNOCKDOWN WHEELED TOY

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Application November 5, 1945, Serial No. 626,689

2 Claims. (Cl. 46—22)

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This invention relates to a toy and more particularly to a toy for use in homes, nursery schools and the like, to encourage the ability of concentration in young children.

All children are interested in pull toys, and particularly those of the type requiring selection and assembling of parts, which interest is accentuated by the successful production of a toy that may be played with. By the present invention I have provided a toy of the type referred to, which will give the child real enjoyment as well as be instructive in character.

Among the objects of my invention are: to provide a novel and improved toy; to provide a toy device that will be simple to build and use and at the same time stimulate ingenuity and afford the child real enjoyment; to provide a toy device that is flat and compact and may be used for making toys representing different animals, birds, or other objects, and a plurality of which toy devices before assembling of the toy may be stored in flat envelopes or boxes in small space and be available for use at different times to afford the pleasure of newness; to provide a front board member having openings of various shapes and a fixed backing board to removably hold cut-out pieces in the openings, and which cut-out pieces if desired may be die stamped out or cut out by a jig-saw from the front board so as to be capable of being inserted into and removable from said openings after the backing board has been fixed thereto to form bottoms for the openings; to provide removable in-lays of animal or other shaped objects and accessory parts, to enable the child to build a useful and stable toy, and enable training the child to put the parts neatly back into the board after disassembling the toy; and such further objects, advantages and capabilities, inherently possessed by my invention, as will later more fully appear.

In the drawings:

Fig. 1 is a top plan view of a toy device embodying my invention before assembly of the toy.

Fig. 2 is a bottom edge view of Fig. 1.

Fig. 3 is an enlarged fragmentary transverse section on the line 3—3 of Fig. 1.

Fig. 4 is a fragmentary enlarged section on the line 4—4 of Fig. 1.

Fig. 5 is an enlarged side elevation of a toy constructed from the parts shown in Fig. 1.

Fig. 6 is a top plan view of the toy shown in Fig. 5.

Fig. 7 is a front elevation of the toy shown in Fig. 5.

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Fig. 8 is a detail view in side elevation of the locking pin for holding the wheels on the axles.

In the form of my invention shown in the drawings, and referring to Fig. 1, my invention comprises a front board member 1 having a plurality of openings die-cut therein, or cut out by a jig-saw or otherwise as desired, and back of which front board is fixed by gluing, nailing or using any other suitable fastening means desired, around the four edges of the rear face of the front board, a backing board 2 which serves to form bottoms for said openings. The front board 1 and backing board 2 will be of any suitable stiff material such as "Masonite," composition board, cardboard, wood or other suitable material of sufficient stiffness. In the form shown in the drawings there is cut out from the body of the front board before the backing board is fixed thereto an opening 3 of any desirable outline such as that of an animal, a bird or other object 4, it being understood that when this object 4 is cut out it is made smaller than the opening 3 to provide sufficient space around the edges of the object to permit it to be readily removably inserted in the opening 3, particularly after the backing board has been fixed to the rear face of the front board to serve as a bottom for the opening.

There are also formed in the front board by die or jig-saw cutting or otherwise as desired, a number of circular openings 5, so that the objects 6 cut out from said circles, or otherwise provided, will constitute wheels for the toy, which wheels will be removably inserted in the openings. In the front board there are also provided a plurality of small circular openings 7 within which are removably mounted small disks 8 to form spacers, for spacing the wheels 6 apart during assembly of the toy. As will be understood these spacers 8 will be removably positioned in openings 7. Also formed to extend through the front board is an opening 9 of circular or other desired form having swingably mounted thereabove by a pin 10, a cover 11. Front board 1 is also provided with an elongated opening 12 of any desired shape, to receive axle members 13 and 14, and a pull string 15 for attachment through hole 16 in the forward part of the body portion 4 of the toy. These axle members and string are removably positioned in opening 12 so that they may be removed therefrom during construction of the toy when required. Opening 9 is to receive a plurality (not less than 4 in the form of toy shown in the drawings) of locking pin members 17 for locking the wheels and spacers on the axles

during assembly of the toy. These locking pins are shown in Figs. 3, and 5 to 8, and the axles and string of opening 12 are shown in Figs. 1, 4, 5, 6 and 7.

The toy object 4 is, at spaced locations in the bottom, formed with holes 18 and 19 to receive the front and rear axles 14 and 13 respectively therethrough. In assembling the toy, which as stated may have a body portion of any desired shape, the child first takes the body portion 4 from opening 3, inserts the front axle through hole 18 and the rear axle through hole 19, placing upon the axles one upon each side of the body portion a spacer 8. The child next takes from its opening in the board 1 a wheel 6 and places this over the axle next to the spacer, continuing this for as many wheels and spacers as are desired. It will be understood that each of the spacers has a central hole 20 and each of the wheels 6 has a central hole 21, through which holes the respective axles extend, to permit rotation of the wheels on the axle and the placing of these parts thereon.

As seen in Fig. 5 the particular toy illustrated is a dog, and, as will be understood in Fig. 6, there are provided two front wheels spaced laterally from the body portion by spacers 8, and six rear wheels spaced from each other and from the body portion by similar spacers. This construction affords a stable toy by reason of the rear wheels being spaced apart from each other and extending a substantial distance laterally of the toy. When the axles, which may be of any length desired, are filled to the proper extent with wheels and spacers, there will be applied through holes 22 in the ends of the axles, locking pins 17 (one in each end), which locking pins as seen in Fig. 8 are provided with a straight arm 23 to be inserted through the hole in the axle, and an upwardly curved arm 24 having at its forward end a cam member 25 whose inner edge is sufficiently close to the arm 23 that, due to the resiliency of arm 24, this cam will ride over the outer surface of the axle while the pin is being applied thereto and after passing over the rounded surface of the axle will spring inwardly toward arm 23 so that these locking pins will not be lost out of the axle holes, and will require a slight pull by the child to remove them from the axle when disassembling the toy.

From the above it is seen that I have provided a toy device of great attraction to a child, and one that will not only give the child considerable enjoyment but will be instructive in cultivating in the child ingenuity and concentration. These toy devices may be, when in the form shown in Fig. 1, inserted in flat envelopes, which may be stored away, and when the child becomes tired of playing with one particular toy shape, its parts may be disassembled and returned to the board, which may be put away in its envelope and a new envelope and filled board of another object taken out which will further stimulate the child's interest because of newness. By having a number of these envelopes the child may from time to time have and construct a new toy without becoming unduly tired of the old toy.

While in the particular device shown for illustrative purposes only, there are provided in the front board 1, and in the assembled toy of Fig. 6, eight wheels and eight spacers it will be understood that any other number of wheels and spacers may be used as desired and any other number assembled upon the toy in the particular grouping desired, instead of the particular arrangement shown in Fig. 6. This gives considerable latitude to the child in assembling the toys, and all that is necessary to change the number of wheels and spacers is to provide axles of the desired length.

I claim:

1. An in-lay toy device, including: a stiff composite board made up of a front board having openings therethrough and a stiff backing board secured to said front board and forming a permanent bottom for each of said openings, one of said openings being of the outline of a body portion of a toy, others of said openings being of the shape of a wheel disk, others being of the shape of spacers, one of said openings being of elongated shape, and another opening having a movable cover; a body portion of a toy removably seated in its respective opening; a plurality of wheel disks removably seated in their respective openings; a plurality of spacers removably seated in their respective openings; axle members and a pull string removably seated in the elongated opening; and locking pins for engaging an axle member to secure the wheels and spacers thereon, said pins being removably contained in the opening with the movable cover, whereby a child may remove the parts from the several openings and assemble them to form a toy to be pulled by the pull string, said body, wheel disks and spacers being of such size and shape as each to fit one of the openings.

2. A toy device of the character described including: a front board having a plurality of openings of the shape of toy parts, at least one of said openings having the outline of an animal, others of said openings being of the size and shape of a wheel, and others of said openings being of the size and shape of a spacer; a rigid non-frangible backing board immovably secured to the front board and forming a permanent bottom for each of said openings so that toy parts may be removed from and replaced in said openings as desired; a toy piece of the peripheral outline of said animal, removably mounted in said one of the openings; a wheel part removably mounted in each of the wheel openings; and a spacer part removably mounted in each of the spacer openings, said toy piece, wheels and spacers being of such size and shape as each to fit one of said openings, whereby said toy piece, wheels and spacers may be stored in said toy device and removed when desired for assembling into a toy.

LYDIA M. HOLMES.

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