

- [54] **DEVICE FOR IMPROVING A CHILDS MANUAL DEXTERITY AND FINGER COORDINATION**
- [76] Inventors: **Marjorie Crocker Gilligan**, 163 Brewster Road, Massapequa, N.Y. 11758; **Robert C. Le Porte**, 2095 Great Neck Road, Copiague, N.Y. 11726
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Primary Examiner—Richard J. Apley
Assistant Examiner—R. T. Stouffer
Attorney, Agent, or Firm—Blum, Moscovitz, Friedman & Kaplan

[57] **ABSTRACT**

A therapeutic device for improving a child's manual dexterity and finger coordination is provided and includes an enclosure having a fanciful configuration, a fanciful exterior simulating a human or living creature such as an animal, a bird and the like, and which receives in its interior the respective digits and hand of the child. The enclosure is provided with an opening through which the respective digits and hand of the child are received. A mechanism is operatively connected to the enclosure for manipulatively animating at least a portion of the enclosure for mimicking an act or condition of the human or creature simulated. The mechanism is interiorly located within the enclosure and is manipulable by the coordinative operation of at least two digits of the child's hand.

1 Claim, 4 Drawing Figures

[56] **References Cited**

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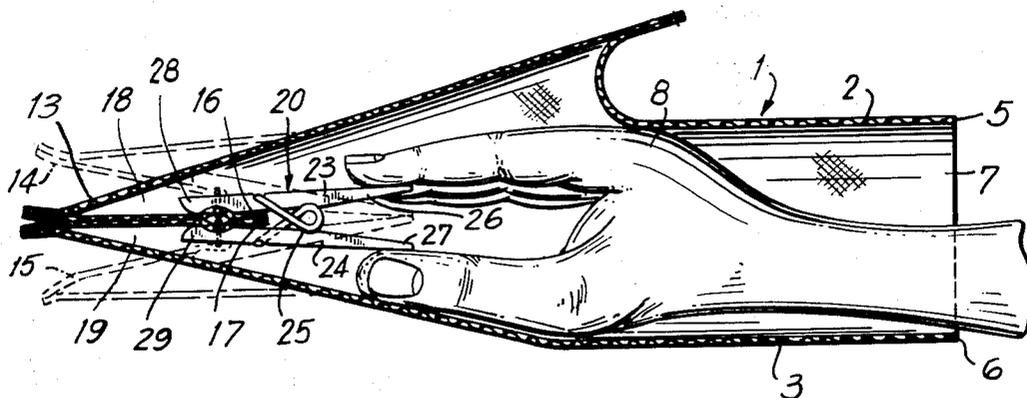


FIG. 3

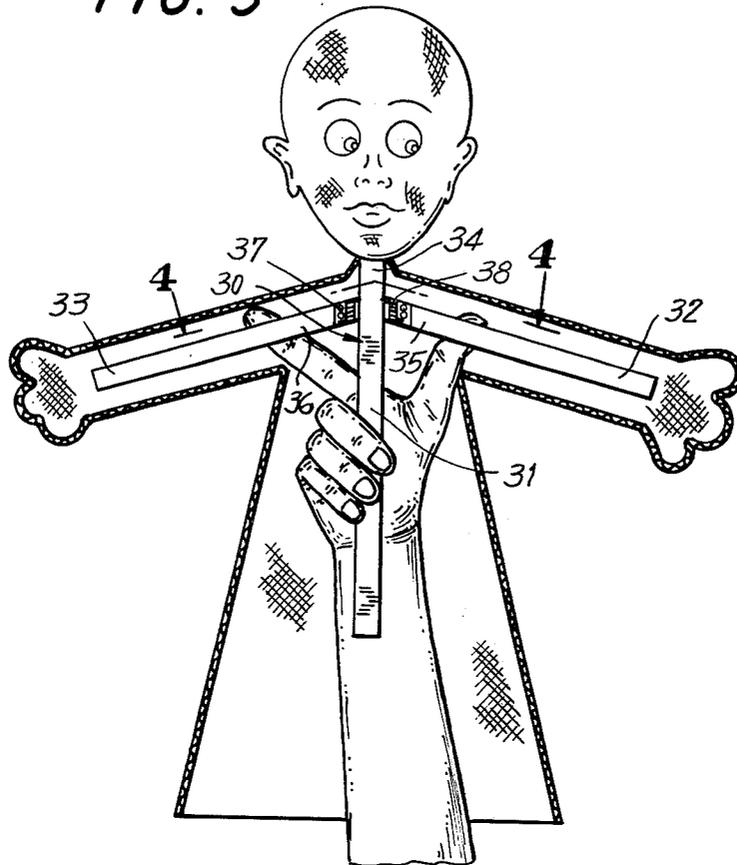
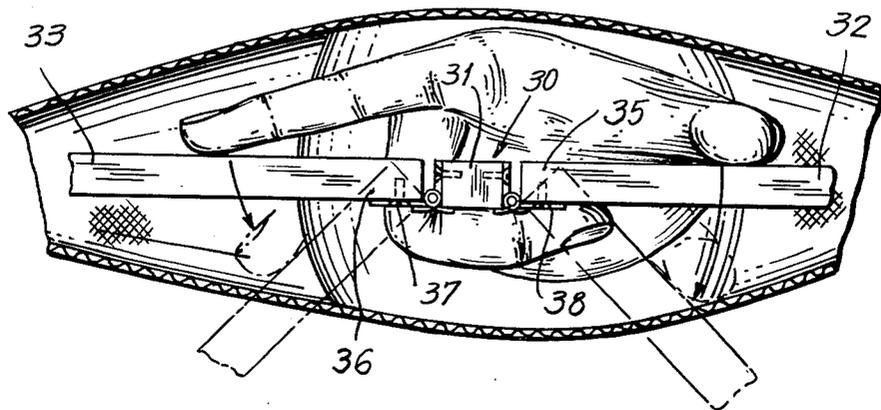


FIG. 4



DEVICE FOR IMPROVING A CHILDS MANUAL DEXTERITY AND FINGER COORDINATION

BACKGROUND OF THE INVENTION

This invention relates to a therapeutic device. More particularly, this invention relates to a device for improving a child's manual dexterity and finger coordination.

There are known methods and devices for improving the manipulative skills and finger coordination of children, particularly preschool children. However, these prior methods and devices neither challenge the intelligence of the child, tax the child's imagination nor entertain the child. When a child practices his manipulative skills with a device of conventional construction, the child soon becomes bored because there is no sustained entertainment value in such devices. Such conventional devices do not present to the child any imaginative or creative problem which he may solve, and the entertainment and attention-sustaining value of such conventional devices is undesirably deficient.

SUMMARY OF THE INVENTION

Generally speaking, in accordance with the invention, a therapeutic device for improving a child's manual dexterity and finger coordination is provided which includes an enclosure having a fanciful configuration, a fanciful exterior simulating a human or living creature such as an animal, a bird and the like, and which receives in its interior the respective digits and hand of the child. The enclosure is provided with an opening through which the respective digits and hand of the child are received. A means operatively connected to the enclosure is provided for manipulatively animating at least a portion of the enclosure for mimicking an act or condition of the human or creature simulated. The operative means is interiorly located within the enclosure and is manipulable by the coordinative operation of at least two digits of the child's hand.

In one particular embodiment of the device, the enclosure has an exterior birdlike appearance and the operative means is interiorly connected to the enclosure for operating a simulated beaklike appendage with which the enclosure is provided. The beaklike appendage may be operated by simultaneously flexing a pair of pivotably connected members connected to the interior of the enclosure.

In another particular embodiment of the device, the enclosure has an exterior humanlike appearance and has a body including a head, a torso and at least one limb simulating an arm which may be animated by applying finger pressure to the operative means. The operative means includes a guide member longitudinally arranged in the enclosure interior having an end connected to the simulated head. When the enclosure is provided with a pair of arm-like limbs, a pair of members extending laterally through the limbs are coaxially arranged and rotatably connected to the guide member. Each member of the pair is hingedly connected to the guide member and is discretely rotatively displaceable between first and second positions for thereby selectively animating that limb through which the member laterally extends.

Accordingly, it is an object of the invention to provide a therapeutic device for improving a child's manual dexterity and finger coordination which has entertainment value for the operator.

Another object of the invention is to provide a therapeutic device wherein animation occurs when a pair of rotatively connected members are simultaneously flexed.

A further object of the invention is to provide a therapeutic device which may be animated by rotatively displacing discrete hinged members.

A further object of the invention is to provide a therapeutic aid which provides the operator with a high level of entertainment and has an attention-sustaining capability.

Still other objects and advantages of the invention will in part be obvious and will in part be apparent from the specification.

The invention accordingly comprises the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the constructions hereinafter set forth, and the scope of the invention will be indicated in the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

For a fuller understanding of the invention, reference is had to the following description taken in connection with the accompanying drawings, in which:

FIG. 1 is a top plan view of one embodiment of the device constructed in accordance with the invention;

FIG. 2 is a sectional elevational view of the embodiment illustrated in FIG. 1;

FIG. 3 is a front elevational view of another embodiment constructed in accordance with the invention; and

FIG. 4 is a sectional view of the embodiment illustrated in FIG. 3 taken along the line 4—4.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to FIGS. 1 and 2, the device depicted includes an enclosure 1 comprising panels 2 and 3 which are stitched together along the line 4 to provide a hollow enclosure. Panels 2 and 3 have respective unseamed end walls 5 and 6 which define an inlet 7 for the operator's hand 8. Winglike appendages 11 and 12 are mounted on respective end walls 9 and 10 and are correspondingly aligned. The mounting may, for instance, comprise inserting opposed wings 11 and 12 between unseamed panels 2 and 3 and stitching panels 2 and 3 together along seam line 4, in forming enclosure 1, with respective wings 11 and 12 therebetween. The enclosure as fabricated simulates a bird and is provided with a head portion, a body portion and winglike appendages.

The head portion includes beaklike appendage 13, which consists of articulate, configured overhanging portions of respective layers 2 and 3 and discrete layers 14 and 15 connected to the respective overhanging portions along respective marginal seam lines. Interior end walls 16 and 17 of respective layers 14 and 15 are free end walls unconnected to their respective overlying enclosure layers. The connection between each of layers 14 and 15 and their respective layers 2 and 3 defines a pair of discrete interior pockets 18 and 19 which accommodate operative means 20, hereinafter discussed in detail. The head portion may be provided with a satisfactory simulated contour by doubling the length of layer 2 between the points A and B. The head portion of the enclosure may be provided with a pair of eyes 21 and 22 to complete the simulation.

As best seen in FIG. 2, when means 20 is coordinately operated, as by digits of the hand of the operator, beaklike appendage 13 may be opened.

Operative means 20 includes resilient spring bar members 23 and 24 and torsion spring 25. Spring bar 23 is fastened, for instance, by a tack to layer 14, and spring bar 24 is similarly fastened to layer 15. Thus, each spring bar member is fastened to a respective underlying layer 14 and 15 of beaklike appendage 13. As heretofore explained in detail, each of layers 14 and 15 is connected to a respective overlying layer 2 or 3 to provide a pocket for accommodating respective spring bar members 23 and 24 of operative means 20. Torsion spring 25 is provided with opposed ends which are fixedly connected to respective spring bars 23 and 24. Torsion spring 25 normally biases ends 28 and 29 of the respective spring bars into a closed position for thereby normally biasing beaklike appendage 13 into a closed position. The hand 8 of an operator may be inserted into the enclosure through inlet 7. Ends 26 and 27 of respective spring bars 23 and 24 may be firmly grasped between the operator's fingers, and spring bars 23 and 24 may be rotatively displaced by the finger pressure exerted upon their respective ends 26 and 27 for thereby concomitantly rotatively displacing ends 28 and 29 of the respective spring bars, whereby beaklike appendage 13 may be opened. The body of torsion spring 25 provides a fulcrum for spring bars 23 and 24 connected thereto. Normally, beaklike appendage 13 may be opened by grasping respective ends 26 and 27 of spring bars 23, 24 between the thumb and forefinger. However, while it may be necessary to grasp an end of one of the bars with the thumb, other digits or fingers may be alternately used to grasp and apply pressure to the end of the other spring bar.

Thus it will be observed that the device has a toylike appearance and operates like a hand puppet. It therefore has an appearance and mode of operation which appeal to children, particularly preschool children. While the device has significant entertainment value, it also has a therapeutic function. The device may be manually operated to open the bird's beak by coordinately grasping ends 26 and 27 of the respective spring bars between the thumb and one other digit and simultaneously flexing the ends together. When the finger pressure is released, the simulated beak reassumes a closed position. The device may be successively operated by flexing the operative means between the thumb and a different digit for each operational sequence.

Referring now to FIGS. 3 and 4, the embodiment therein depicted simulates a human. The device is provided with a head, a pair of limbs simulating arms and a torso. The device may be fabricated by suitably fastening a dress or other simulated apparel to the head of the device. Finger pressure may be applied to operative means 30 to independently gesticulate either or both simulated limbs of the device. Operative means 30 is housed by the dress for the device and includes a guide member 31 and a pair of lateral extensions 32 and 33 rotatably connected thereto. Each of extensions 32 and 33 extends interiorly through a simulated arm with which the device is provided. An end 34 of guide member 31 is fixedly connected to the simulated head, and respective ends 35 and 36 of extensions 32 and 33 are hingedly connected thereto, for instance, by hinge spring connectors 37 and 38.

To operate the device, the operator inserts his hand upwardly through the open bottom of the dress for the

device and grasps guide member 30 between fingers and palm while placing thumb and index finger, respectively, on the rearward sides of lateral extensions 32 and 33, respectively. Either or both lateral extensions may be rotatively displaced by applying thumb or index finger pressure thereto. When the pressure is released, the lateral extensions reassume their normal or usual position as determined by spring connectors 37 and 38.

This device has unusual appeal for small children, particularly preschool children, because of its attractive appearance and its hand-puppet-type operation. However, the device is designed to improve manipulative and coordinative skills of its operator, and it requires a high level of dexterity to operate. Thumb and index finger must operate independently to rotate discrete limbs of the device, while remaining fingers must grasp the device against the operator's palm for a successful operational sequence to occur.

Devices within the scope of the invention may be fabricated of conventional materials. For instance, the embodiment shown in FIGS. 1 and 2 may have an enclosure fabricated of felt or a similar material. Operative means 20 may be of wood and metal construction. For example, spring bar members 23 and 24 may be of wood, and preferably polished wood, and torsion spring 25 may be a helically wound metal spring. The embodiment shown in FIGS. 3 and 4 may be provided with a felt dress and the head therefor may be fabricated of any suitable plastic material. Operative means 30 may be fabricated of wood and metal. For instance, guide member 31 and lateral extensions 32 and 33 may be fabricated of wood, and preferably polished wood, and hinge spring connectors 37 and 38 may be metal. The most preferred materials utilized for fabricating the device are nonflammable and nontoxic.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained, and since certain changes may be made in the above constructions without departing from the spirit and scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

What is claimed is:

1. A therapeutic device for improving a child's manual dexterity and finger coordination, comprising an enclosure having a fanciful configuration, and a fanciful exterior simulating a living creature, said enclosure being interiorly arranged to receive and accommodate the respective digits and hand of the child, said enclosure having a closed end and an open end through which the respective digits and hand of the child are received, and means operatively connected to said enclosure for simultaneously manipulatively animating contiguous portions of said enclosure for mimicking an act or condition of said creature simulated, said means being interiorly located within said enclosure and fixedly connected thereto overlying said manipulable contiguous portions thereof, said means being manipulable by the coordinative operation of at least two digits of the child's hand, said means comprising a first lever member operatively connected to one of said contigu-

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ous portions, a second lever member operatively connected to another of said contiguous portions, and a pressure-responsive biasing means for pivotably connecting said first and second lever members, said first and second lever members being simultaneously reciprocable between first and second positions about a sub-

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stantially common fulcrum for thereby selectively animating said contiguous portions of said enclosure to which said first and second lever members are respectively connected.

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