Dec. 17, 1935. J. G. BAKER 2,024,135

FIGURE TOY

Filed Aug. 31, 1935

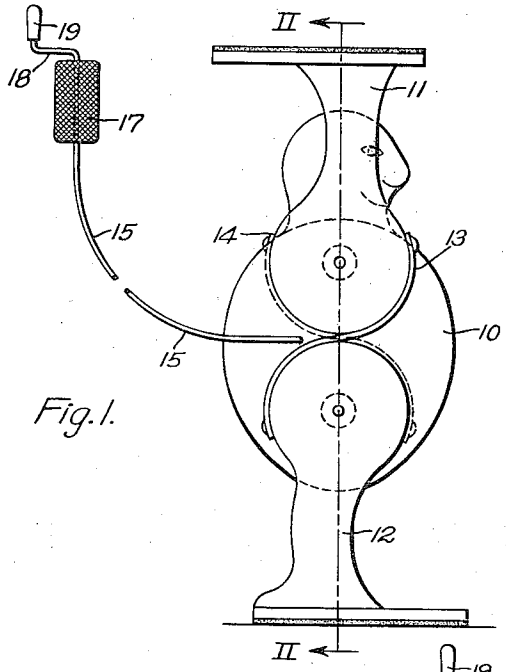

Fig. 1.

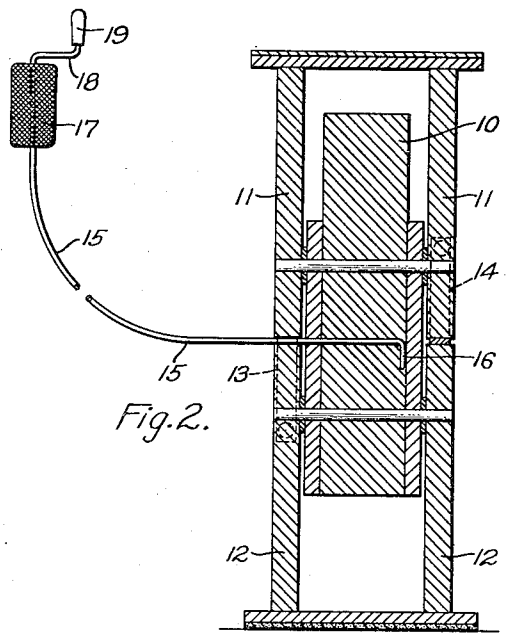

Fig. 2.

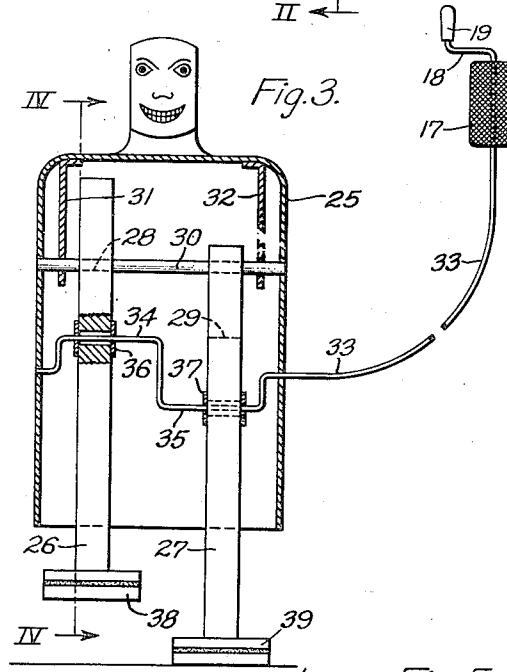

Fig. 3.

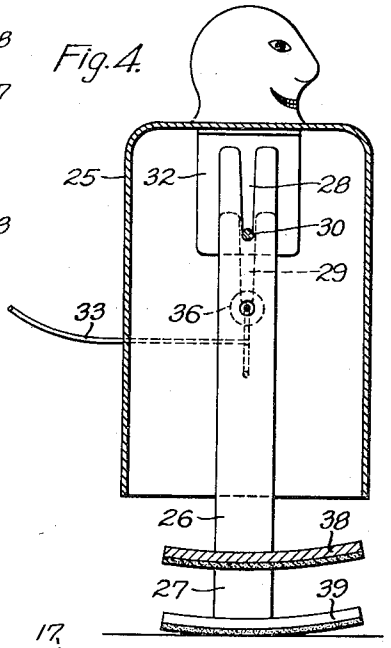

Fig. 4.

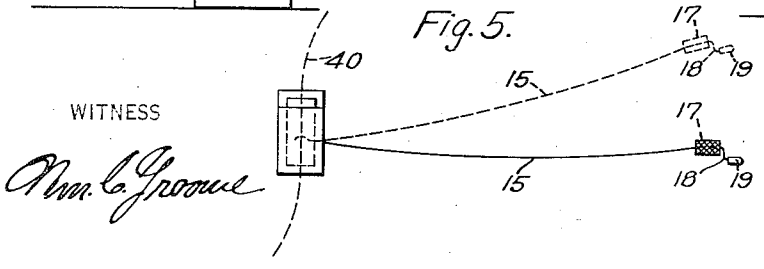

Fig. 5.

WITNESS

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UNITED STATES PATENT OFFICE

2,024,135

FIGURE TOY

John G. Baker, Pittsburgh, Pa.

Application August 31, 1935, Serial No. 38,760

18 Claims. (Cl. 46—130)

My invention relates, generally, to figure toys, and it has particular relation to toys of the walking or somersaulting type, such as shown in my copending application Serial No. 7372, filed February 20, 1935, of which this application is a continuation-in-part.

In my copending application, I have shown a figure toy which is provided with a torso or body member to which are pivotally attached arm and leg members. The arm and leg members are interconnected by oppositely disposed inextensible spring strips, which not only serve to cause a predetermined movement of the arm and leg members relative to the torso or body member, but also serve to effect a tumbling action of the toy, on the application of a suitable force to it, as for example, to the body member.

In order to make figure toys of this type more attractive, it is desirable to provide for remotely operating them. The remote operating means should not only provide for moving the toy along a floor or the like, but also should provide for guiding it.

It is an object of my invention, generally stated, to provide a figure toy and driving and guiding mechanism therefor which shall be simple and efficient in operation and which may be readily and economically manufactured.

The principal object of my invention is to provide for remotely operating a figure toy.

An important object of my invention is to provide for simultaneously operating and steering a figure toy.

Another important object of my invention is to provide a single means whereby a figure toy of the tumbling or walking type may be operated and steered.

Another object of my invention is to provide a flexible means for remotely operating and guiding a figure toy of the tumbling or walking type.

Still another object of my invention is to provide a figure toy of the walking type.

Other objects of my invention will, in part, be obvious and, in part, appear hereinafter.

My invention, accordingly, is disclosed in the embodiment hereof shown in the accompanying drawing and comprises the features of construction, combination of elements, and arrangement of parts, which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the appended claims.

For a more complete understanding of the nature and scope of my invention, reference may be had to the following detailed description, taken in connection with the accompanying drawing, in which:

Figure 1 is a view, in side elevation, of a figure toy to which a remotely operable driving and guiding mechanism may be attached;

Fig. 2 is a sectional view, taken along the line II—II of Fig. 1;

Fig. 3 is a view, in front elevation, of a walking type of figure toy which is remotely operable, certain parts being broken away in order to more clearly illustrate the invention;

Fig. 4 is a sectional view taken along line IV—IV of the figure toy shown in Fig. 3, certain parts being broken away to more clearly illustrate the invention; and

Fig. 5 is a diagrammatic top plan view of either of the figure toys illustrated herein, showing how the remote operating means may be employed to guide the toy along a desired path.

Referring now particularly to Fig. 1 of the drawing, the reference character 10 designates a torso or body member of a figure toy having arm members 11 and leg members 12 pivotally mounted thereon. The arm and leg members are interconnected by means of oppositely disposed spring strips 13 and 14. The deails of construction of the figure toy shown in Fig. 1 are fully set forth in my aforesaid copending application and, therefore, no further detailed description thereof will be given herein.

It is desirable to provide for applying a torque to the body member 10, in order to operate the figure toy along a floor or the like in a tumbling or step-by-step fashion. For this purpose, I have provided a wire 15, which may be secured, as at 16, against rotation inside of the body member 10. At the other end of the wire 15 a guide member 17 is provided to permit the wire being held in one hand while it is being rotated by means of a crank 18, having a crank handle 19, with the other hand. The guide member 17 not only provides a bearing support for the remote end of the wire 15, but it also permits the application thereto of a guiding or steering action, which will be described hereinafter.

Referring now particularly to Figs. 3 and 4 of the drawing, it will be observed that a figure toy of the walking type is there shown, to which the remote operating mechanism is particularly adaptable. As there shown, the figure toy comprises a torso or body member 25 having leg members 26 and 27 mounted therein. The leg members 26 and 27 are provided, respectively, with slots 28 and 29 which are arranged to move past a guide pin 30 that may be secured to the

body member 25 and held in place by means of support or stiffening members 31 and 32. The stiffening members 31 and 32 may be secured to the body member 25 by any suitable means.

In order to operate the figure toy, a wire 33, similar to the wire 15, is provided having at its remote end the guide member 17, crank 18 and crank handle 19. The inner end of the wire 33 terminates in the form of oppositely disposed cranks 34 and 35, which are arranged to pass through suitable bearing members 36 and 37 that are located in the leg members 26 and 27. The wire 33 may be, as illustrated, rotatably mounted in the body member 25. On rotation of the crank 18, the leg members 26 and 27 are caused to be successively raised and lowered and, at the same time, due to the action of the cranks 34 and 35, a slight forward or reverse movement is given thereto, depending upon the direction of rotation of the wire 33. As a result, the figure toy is caused to move either forward or backward, as the case may be. It will be observed that the leg members 26 and 27 terminate in comparatively large-sized foot members 38 and 39, respectively. The foot members 38 and 39 may be so proportioned and provided with beveled or curved under surfaces, the center of curvature being above the center of gravity of the figure toy, as to permit the figure toy to be properly balanced during walking.

In order to operate either of the modifications of the figure toys shown in Figs. 1 and 3, the crank 18 may be rotated. Considering the figure toy shown in Fig. 1, the rotation of the crank 18 will cause a corresponding rotation of the wire 15 and of the body member 10. As a result, the figure toy will be caused to tumble or somersault, or move in a step-by-step fashion, as the arm members 11 and the leg members 12 are successively moved into engagement with the floor. The modification of the toy shown in Fig. 3 may be operated along the floor merely by rotating the crank 18. The leg members 26 and 27 and the foot members 38 and 39 will be successively raised, moved in a forward or a reverse direction, and lowered to cause the device to walk.

In order to steer the figure toy along a desired path, for example, the path 40 shown by the dotted lines in Fig. 5 of the drawing, a slight torque or twisting movement may be applied by means of the guide member 17. I have found that this guiding action may be readily effected if the guide member is held in a position substantially parallel to the vertical axis of the figure toy. The guide member 17 may then be inclined in either a forward or a reverse direction to cause the figure toy to follow the curved path 40, as the case may be. In Fig. 5 of the drawing, I have shown an alternative position of the wire 15, for the purposes of illustration, to indicate that it is unnecessary to have a fixed relationship between the position of the crank 18, or the guide member 17, and the figure toy. It will be apparent that there is considerable latitude in the relative positions between the operator and the figure toy, while still permitting satisfactory operation of the figure toy. Thus, if the guide member 17 is caused to assume that orientation which results in no moment about the vertical axis of the toy, there will be no tendency for it to deviate from a straight path on operation of the crank 18. In order to control the direction of travel of the toy without necessitating a change in the position of the operator, the orientation of the guide member 17 may be changed in such a manner as to produce a moment about the vertical axis of the toy in the desired direction. On rotation of the crank 18 simultaneously with the change in the orientation of the guide member 17, the toy may be caused to move along any desired path at a speed depending upon the rate at which the crank 18 is turned.

With regard to the construction of the wire 15, or the wire 33, I have found that it is desirable to use about a number 12 gauge spring steel wire in order to provide the proper degree of torque transmitting characteristics, and also to permit the application of the guiding or steering action to the figure toy. It will be understood, however, that other sizes and types of wires may be used to provide for the remote operation of the toy.

Since certain further changes may be made in the foregoing construction and different embodiments of the invention may be made without departing from the scope thereof, it is intended that all matter shown in the accompanying drawing or set forth in the foregoing description shall be interpreted as illustrative and not in a limiting sense.

I claim as my invention:

1. A figure toy comprising, in combination, a body member, leg members movably mounted on said body member, remotely operable means for imparting a torque to the toy to cause it to move across a floor or the like, and crank means at the remote end of said means to permit the application thereto of operating torque.

2. A figure toy comprising, in combination, a body member, leg members movably mounted on said body member, a single means for imparting a torque to said toy and simultaneously therewith a steering action to operate it along a desired path, and crank means at the remote end of said means to permit the application thereto of operating torque.

3. A figure toy comprising, in combination, a body member, leg members movably mounted on said body member, remotely operable means for imparting a torque to the toy to cause it to operate in a step-by-step fashion across a floor or the like, and crank means at the remote end of said means to permit the application thereto of operating torque.

4. A figure toy comprising, in combination, a body member, leg members movably mounted on said body member, a flexible wire operatively connected to the toy to permit the application of torque thereto and simultaneously therewith a steering action to operate it in a step-by-step fashion along a desired path, and crank means operatively connected to the remote end of said wire to provide for the application of operating torque thereto.

5. A figure toy comprising, in combination, a body member, leg members movably mounted on said body member, a wire operatively connected to the toy to permit the application of torque thereto for causing it to operate in a step-by-step fashion across a floor or the like, and crank means at the remote end of said wire to permit the application thereto of the operating torque.

6. A figure toy comprising, in combination, a body member, leg members movably mounted on said body member, a flexible wire operatively connected to the toy to permit the application of torque thereto and simultaneously therewith a steering action to operate it in a step-by-step fashion along a desired path, crank means at the remote end of said wire to permit the application

thereto of the operating torque, and guiding means also located at said remote end to permit the application of the steering action.

7. A figure toy comprising, in combination, a body member, arm and leg members movably mounted on said body member, resilient means disposed to hold said members in predetermined relation, and remotely operable means for imparting a torque to said body member.

8. A figure toy comprising, in combination, a body member, arm and leg members movably mounted on said body member, resilient means disposed to hold said members in predetermined relation, and a single means for imparting a torque to said body member and simultaneously therewith a steering action to operate the toy along a desired path.

9. A figure toy comprising, in combination, arm and leg members movably mounted on said body member, resilient means disposed to hold said members in predetermined relation, and a wire secured against rotation to said body member to permit the application of torque thereto for causing relative movement of said members.

10. A figure toy comprising, in combination, a body member, arm and leg members movably mounted on said body member, resilient means disposed to hold said members in predetermined relation, and a flexible wire secured against rotation to said body member in such manner as to permit the application of torque thereto for causing the toy to perform somersaults.

11. A figure toy comprising, in combination, a body member, leg members pivotally and slidably mounted thereon, crank means for successively operating said leg members to cause the toy to move in a step-by-step fashion across a floor or the like and means for remotely operating said crank means.

12. A figure toy comprising, in combination, a body member, leg members pivotally and slidably mounted thereon, and remotely operable crank means for successively operating said leg members and simultaneously therewith applying a steering action to the toy to operate it in a step-by-step fashion along a desired path.

13. A figure toy comprising, in combination, a body member, leg members slidably mounted on said body member, crank means interconnecting said body and leg members and disposed on rotation to cause the toy to move in a step-by-step fashion across a floor or the like, and a wire having driving connection with said crank means for imparting torque to said crank means.

14. A figure toy comprising, in combination, a body member, leg members slidably mounted on said body member, crank means interconnecting said body and leg members and disposed on rotation to cause the toy to move in a step-by-step fashion across a floor or the like, and remotely operable means for rotating said crank means.

15. A figure toy comprising, in combination, a body member, leg members slidably mounted on said body member, crank means interconnecting said body and leg members and disposed on rotation to cause the toy to move in a step-by-step fashion across a floor or the like, a flexible wire operatively connected to said crank means whereby said crank means can be rotated to cause said step-by-step movement, and crank means at the remote end of said wire to permit the application thereto of operating torque.

16. A figure toy comprising, in combination, a body member, a pair of leg members slidably mounted on said body member, and a flexible wire terminating at one end in a pair of oppositely disposed cranks for interconnecting said body and leg members and on rotation to cause the toy to move in a step-by-step fashion and at the other end in a single crank to permit the application of operating torque thereto.

17. A figure toy comprising, in combination, a body member, leg members movably mounted thereon, foot members disposed at the lower extremities of said leg members having curved under surfaces to permit uniform operation of the top, crank means for successively operating said leg members to cause the toy to move in a step-by-step fashion across a floor or the like, and means for remotely operating said crank means.

18. A figure toy comprising, in combination, a body member, leg members movably mounted thereon, foot members disposed at the lower extremities of said leg members having curved under surfaces to permit uniform operation of the toy, crank means for successively operating said leg members to cause the toy to move in a step-by-step fashion across a floor or the like, and a flexible wire operatively connected to said crank means whereby said crank means can be rotated to cause said step-by-step movement.

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