Feb. 10, 1953 G. WEISS 2,627,700

JUMPING PUPPET

Filed April 3, 1947

FIG. 1

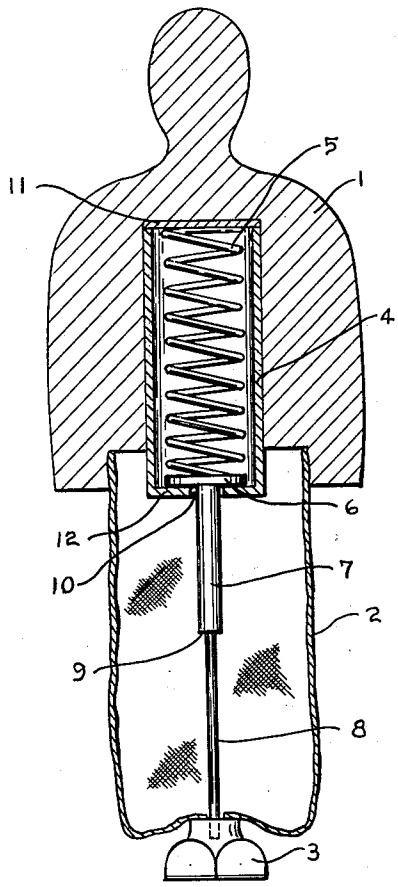


FIG. 2

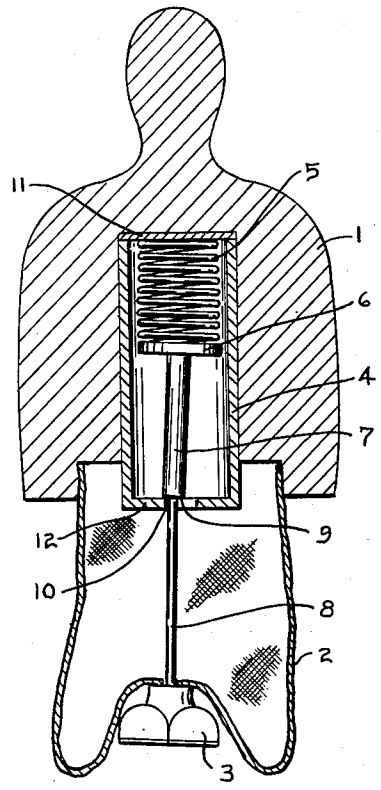


FIG. 3

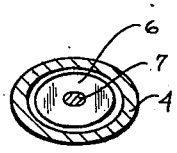


FIG. 4

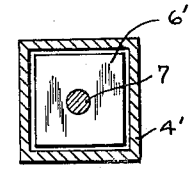
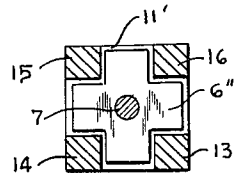


FIG. 5



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JUMPING PUPPET

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4 Claims. (Cl. 46—129)

1

This application relates to a jumping toy. More particularly it relates to a jumping puppet which is adapted to jump when jarred or dropped.

An object of this invention is to produce a mechanical jumping toy which need not be confined in a box.

Another object of the invention is to produce an easily constructed jumping puppet which leaps into the air when dropped on its feet.

The novel features characteristic of this invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and its method of operation, together with additional objects and advantages thereof, will best be understood from the following description of specific embodiments, when read in connection with the accompanying drawings, in which:

Figure 1 is a cross-sectional view of a jumping puppet in expanded position.

Figure 2 is a cross-sectional view of the device of Figure 1 but in a cocked position.

Figure 3 is a cross-sectional view of a spring holder.

Figure 4 is a cross-sectional view of a modified type of spring holder.

Figure 5 is a cross-sectional view of another modified type of spring holder.

The puppet of this invention comprises a body portion 1 which may conveniently be the representation of the trunk of any animal or a person, a flexible skirt portion 2 which is collapsible as shown in Figure 2, and a pair of feet or pedal portion 3.

Attached to the trunk of the toy in any convenient way is a spring holding means 4 which has side walls, an end 11 against which the base of a spring 5 is adapted to press, and another end portion 12 containing an orifice 10 through which the shafts 7 and 8 are adapted to move. The shaft 8 is attached at its lower part to the pedal portion 3 and contains an enlarged portion 7 at its upper part. Where the shafts 7 and 8 come together there is formed a shoulder 9. The orifice 10 in the bottom of the container 4 is somewhat larger than the shaft 7. The upper part of the shaft 7 contains a piston 6 adapted to hold the end of the spring 5.

The device is operated as follows. The pedal portion 3 is compressed against the action of the spring 5 until the shoulder 9 is above the orifice 10 of the spring container 4. The pedal portion 3 is pushed to one side so that the shoulder 9 catches on the inside of the orifice 10.

2

The puppet is now in cocked position. Any slight jarring such as that caused by dropping the puppet for a few inches so that it lands on the feet 3 will knock the shoulder 9 away from the orifice 10 and cause the spring 5 to act against the feet 3 so that the puppet jumps high into the air.

In the manufacture of the puppet it is preferred to make the pedal portion 3 of relatively light material because this portion of the puppet comes to rest momentarily when the puppet is dropped and if too heavy will develop a considerable amount of inertia.

Since the height to which the puppet will jump also depends upon the weight of the other parts, the body is also preferably made of light material, such as plastic or light metals. The spring holder 4 may also be made of plastic.

The spring container 4 is primarily for the purpose of keeping the spring in line and it can be a tubular device of any shape, such as round, oval, polygonal, or it may be a framework of rods. It is preferable, however, to make the holder 4 of noncircular shape so that the feet 3 will not rotate with respect to the trunk 1 of the puppet.

Three possible shapes for the spring container 4 are shown in Figures 3, 4 and 5. In Figure 3 the spring container 4 is made oval in cross-section. In Figure 4 the spring container 4' is rectangular in cross-section and the piston 6' is of similar shape. In Figure 5 the spring is supported by four frame members 13, 14, 15 and 16 which are attached to a top 11' and to a similarly constructed bottom (not shown). The piston 6'' of Figure 5 is made in the shape of a cross. Any shape of piston which will prevent rotation of the feet with respect to the spring container is preferable.

In place of the shoulder 9 the rod 8 may be notched to catch on the orifice 10. The shoulder 9 can also be replaced by a projection on the rod 8.

The skirt 2 may be united to the pedal portion and to the body in any suitable way, such as by cementing or by sewing. The skirt 2 is preferably made of fabric but it may be made of other flexible material, such as rubber.

The spring 5 may be placed between the bottom of the trunk portion and the pedal portion if desired. Bendable legs may be added between the feet and the trunk of the body so that in the cocked position the figure appears with the knees bent.

In another very practical modification a spring

which is normally in compressed position is held on the trunk at the lower end and is attached to the rod at its upper end so that in cocking the toy the spring is expanded and in "firing" the spring pulls rather than pushes the parts apart.

If desired the shaft or rod 8 can be omitted or replaced by two coacting elements, one on each portion of the device, which are adapted to catch and interlock loosely so that they can be released on a slight jar. The spring may also be placed attached directly to the body and the feet and be of such a size as to substantially fill the skirt portion between the body and the feet.

Although certain specific embodiments of this invention have been shown and described, it will be understood that many modifications thereof are possible. This invention, therefore, is not to be restricted except insofar as is necessitated by the prior art and by the spirit of the appended claims.

I claim:

1. A mechanical toy shaped as a unit object of animative type, said toy comprising a trunk portion and a pedal portion connected together and movable relative to each other for setting and actuating the toy, said trunk portion including a spring supporting container extending in the vertical axis of the portion and dimensioned to permit spring expansion, the container having a lower planar face formed with an axial opening, said pedal portion attached to an elongated element extending in a vertical axis and having an integral downwardly facing shoulder approximately midway of its length, the shoulder being dimensioned to freely pass through the opening of the planar surface of the container, the upper end of the element having a flat member of greater diameter than said opening, said member being positioned within the spring supporting container underlying the spring therein, said toy being positioned in cocked position by movement of the element to compress the spring with the movement of sufficient length to place the shoulder above the plane of the upper face of said opening then moving the element laterally to position the shoulder in overlying relation to the margin of such upper face of the opening and then relieving the spring pressure sufficiently to place such shoulder under frictional engagement with such margin, the foot of the pedal portion providing the toy supporting face, said cocked toy being tripped by jarring the assembly sufficient to release the shoulder from cocked position to thereby permit sudden spring expansion with consequent bodily leap vertically of the toy.

2. A toy as in claim 1 characterized in that the pedal portion element is attached to an elongated

shaft having a cylindrical upper portion and a cylindrical lower portion of differing diameters, both cylindrical portions being movable through such container opening, the upper cylindrical portion presenting the greater diameter to thereby produce the downwardly facing shoulder.

3. A toy as in claim 1 characterized in that the trunk and pedal portions are connected by a fabric element depending from the trunk portion and loosely enclosing the elongated element to thereby permit freedom of toy expanding movement by spring action in response to tripping of the cocked toy while maintaining the elongated connecting element concealed.

4. A mechanical toy shaped as a unit of animative type, said toy comprising a trunk portion and a pedal portion, said trunk portion having a cavity, said cavity having an upper wall and a lower wall having a wall opening which communicates with said cavity and which has a vertical axis, and a spring positioned within said cavity and being compressible along said axis, said pedal portion being located beneath said trunk portion and having an elongated shaft which extends along said axis slidably through said opening and into said cavity, said spring being positioned between the upper wall of said cavity and the upper end of said shaft, said shaft having means to prevent said shaft from leaving said opening, and also having a mid-way downwardly facing shoulder, said pedal portion being laterally movable within said opening to permit positioning of the shoulder upon the upper marginal side of said wall opening to thereby permit the toy to be cocked by such positioning and with the spring compressed preliminary to animation of the toy and with the toy at rest on a definite support, said positioned and cocked toy being rendered active for animation effects by falling from such support through a short distance to contact the pedal portion with a firm surface and thereby jar the shoulder from its marginal position, the resultant release of the spring compression and the resistance of such surface being cooperative to cause the toy to be rapidly and bodily raised from such surface to simulate a leaping action.

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