Oct. 27, 1953 E. F. WIDEMAN 2,656,646

ANIMATED JUMPING TOY

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Fig. 1

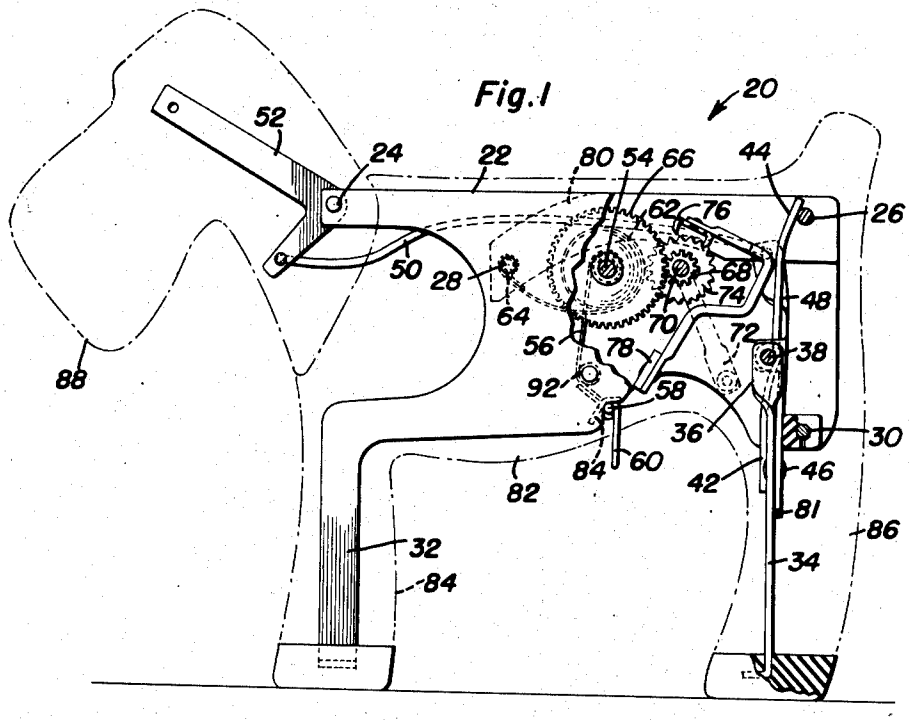


Fig. 2

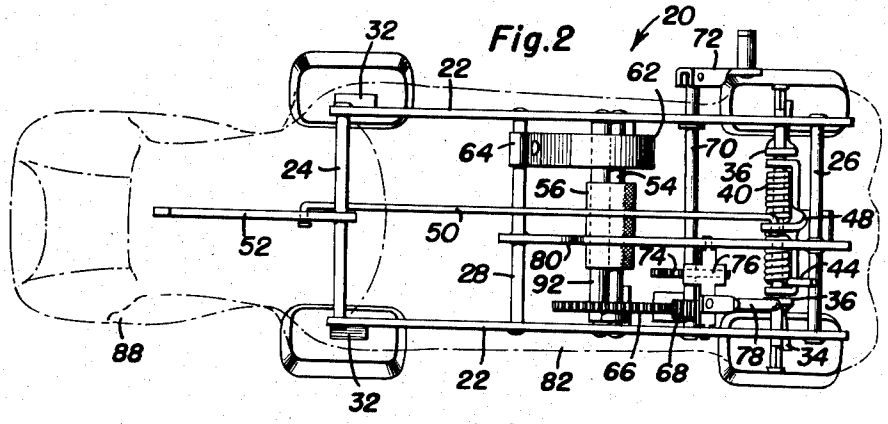
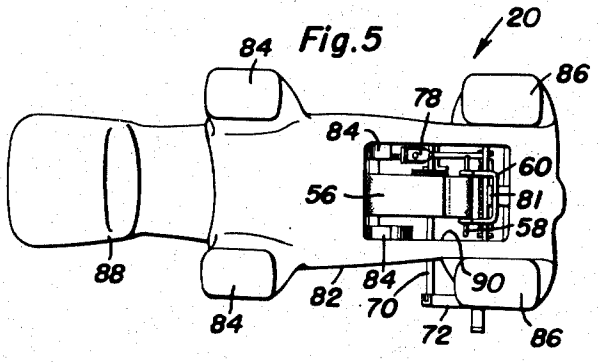


Fig. 5



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Fig.4

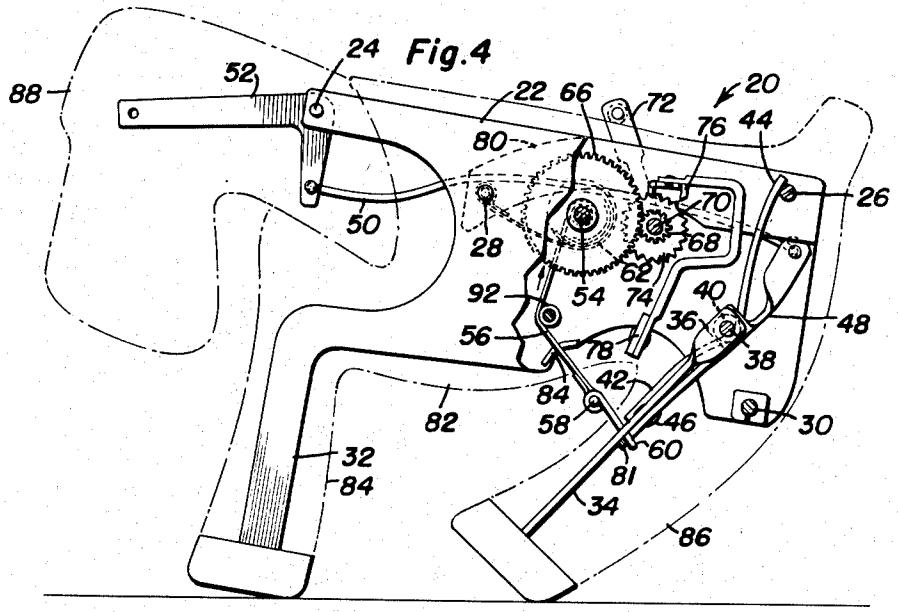


Fig.6

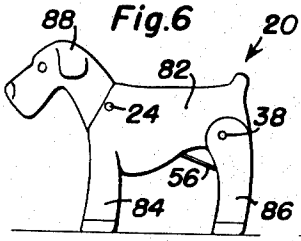


Fig.7

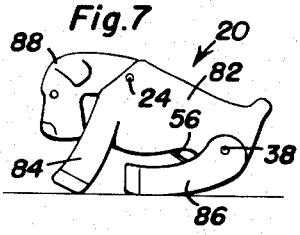


Fig.3

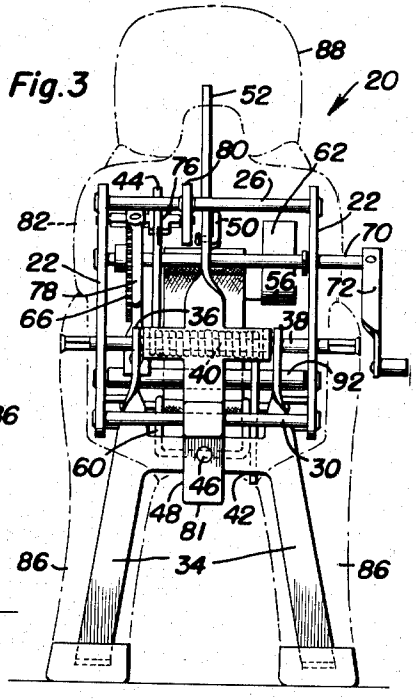


Fig.8

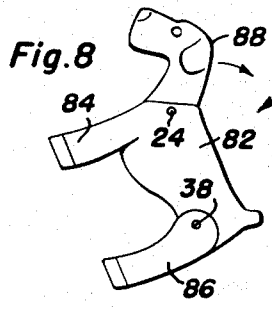


Fig.9

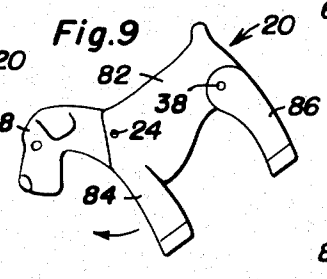
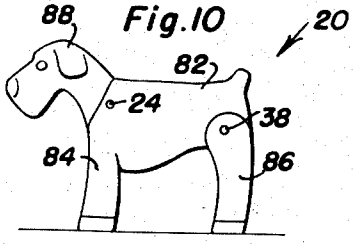


Fig.10



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ANIMATED JUMPING TOY

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Application January 9, 1952, Serial No. 265,579

4 Claims. (Cl. 46—134)

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This invention relates to new and useful improvements and structural refinements in animated toys, particularly a toy which simulates the appearance of a dog or some other similar animal, and the principal object of the invention is to provide a highly amusing and entertaining toy of this type which is capable of reclining from an upstanding position and thereafter performing a reverse "somersault" so as to eventually land on four legs in a standing position.

An important feature of the invention, therefore, resides in the provision of means, operatively connected to the rear legs of the toy animal, for facilitating the performance of the reclining and subsequent somersaulting operation, while another feature of the invention lies in the provision of means for operatively connecting the head of the toy animal to the rear leg unit, so that the head is lowered when the animal reclines and is raised when the animal is standing.

Some of the advantages of the invention reside in its simplicity of construction, in its efficient operation and in its adaptability to economical manufacture.

With the above more important objects and features in view, and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is an elevational view of the toy, partly broken away to reveal its construction, the outline of the body of the toy being shown by dotted lines;

Figure 2 is a top plan view of the invention as shown in Figure 1;

Figure 3 is a rear elevational view thereof;

Figure 4 is a side elevational view, similar to that shown in Figure 1, but illustrating the toy animal in the course of reclining;

Figure 5 is an underside plan view of the entire invention, and

Figures 6, 7, 8, 9 and 10 are diagrammatic side elevational views illustrating the various steps in the performance of the toy.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the invention is embodied in an animated toy designated generally by the reference character 20, this preferably being in the form of

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a dog or some other similar animal. The actual external covering of the toy will be hereinafter mentioned, but in the meantime, attention is directed to the mechanism of the toy. This mechanism is contained between a pair of transversely spaced plates 22 which constitute the main body portion of the toy and are secured together by a plurality of cross rods 24, 26, 28, 30, the plates 22 having downward extensions constituting a pair of rigid front legs 32.

The rear legs are in the form of a substantially U-shaped inverted rear leg unit 34 which is provided with a pair of upstanding ears 36 for pivotal mounting on a transverse shaft 38, carried by the plates 22. The rear leg unit 34 is swingable from a downwardly extending standing position as shown in Figure 1 to a forwardly extended sitting position as shown in Figures 4 and 7, but resilient means are provided for urging the leg unit 34 to its standing position, these means consisting of a coil spring 40 positioned on the shaft 38 between the ears 36 and having one end portion 42 thereof in abutment with the leg unit 34, as shown. The other end of the spring 40 abuts the cross rod 26 as indicated at 44.

The rear leg unit 34 has secured thereto by a fastener 46 an upstanding arm 48 which, in turn, has pivotally connected thereto one end of a connecting rod 50. This rod extends forwardly between the side plates 22 and is connected to a bellcrank 52 mounted for oscillatory movement on the cross rod 24.

A winch shaft 54 is rotatably mounted in the plates 22 and has windable thereon a flexible element in the form of a tape 56, the free end of which is provided with a cross rod 58 and a loop 60. The winch shaft 54 also carries a spiral spring 62, one end of which is secured to the shaft 54 while its other end is anchored as at 64 to the cross rod 28. The arrangement is such that when the shaft 54 is rotated so as to unwind the tape 56, the spring 62 is wound, and vice versa.

A gear 66 is secured to the shaft 54 and meshes with a pinion 68 on a shaft 70, the latter being journaled in the plates 22 and carrying a hand crank 72 at one end thereof. An escapement mechanism is provided for the shaft 70, the same consisting of an escapement gear 74 affixed to the shaft 70 and engaged by a suitable rocker unit 76, provided with a pendulum member 78. The rocker unit 76 is suitably journaled for oscillation in one of the plates 22 and an intermediate panel 80 which is interposed on the rods

26, 28 between the two side plates 22, as is best shown in Figure 2.

The aforementioned loop 60 is engageable with a tongue 81 constituted by a portion of the aforementioned arm 48 which projects downwardly from the rear leg unit 34, but when the rear leg unit is in its fully reclined or sitting position as shown in Figure 6, the loop 60 becomes automatically disengaged from the tongue 81 and the end portions of the cross rod 58, drawn inwardly by the tape 56, are received by a pair of concave seats or stops 84 secured to the plates 22.

The entire mechanism of the toy is covered by suitable external covering comprising a main body portion 82 integral with a pair of front legs 84 which contain the leg members 32 therein, while the rear leg unit 34 is covered by similar leg members 86, pivoting about the end portions of the aforementioned shaft 38. Moreover, the aforementioned bellcrank 52 carries a head 88 as shown.

When the invention is placed in use, the crank 72 is first rotated so as to simultaneously wind the spring 62 and unwind the tape 56, thereby facilitating engagement of the loop 60 with the tongue 81 when the toy is in its standing position as shown in Figures 1 and 6.

The spring 62 is substantially stronger than the spring 40 and when the crank 72 is released, the mechanism, controlled by the escapement 74, 76, 78, will commence to haul the tape 56 on the winch shaft 54 by the action of the spring 62, thus pulling the rear leg unit 34 forwardly against the action of the spring 40 as shown in Figure 4, until an ultimate sitting or reclining position is reached, as illustrated in Figure 7.

As soon as this position is attained, the loop 60 will automatically slide off the tongue 81 and the spring 40, tending to force the rear leg unit 34 to its initial standing position, will cause the entire body of the toy to swing upwardly with the shaft 38 as an axis, so that the toy as a whole will perform a reverse "somersault" as illustrated in Figures 8 and 9, ultimately landing on all four legs, as shown in Figure 10. Thereupon the device will be in readiness for the next cycle of operation.

It is to be noted that by virtue of the connecting rod 50, the animal toy will lower its head 88 while reclining, but will automatically raise the head when returning to its standing position.

It will be noted that the body covering 82 is provided at the underside thereof with an opening 90, through which the tape 56 may be withdrawn to engage the loop 60 with the tongue 81. After leaving the winch shaft 54, the tape passes around a guide roller 92 journaled between the plates 22.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

1. An animated toy comprising a hollow body and a pair of rigid front legs thereon, a rear leg unit pivoted to said body and swingable from a downwardly extended standing position to a forwardly extended sitting position, resilient means for urging said rear leg unit to the standing position, power driven means provided in said body and connected to the rear leg unit for drawing the rear leg unit to the sitting position against the action of said resilient means, and means for automatically disconnecting said power driven means from the rear leg unit when the latter is drawn to the sitting position.

2. An animated toy comprising a hollow body and a pair of rigid front legs thereon, a rear leg unit pivoted to said body and swingable from a downwardly extended standing position to a forwardly extended sitting position, resilient means for urging said rear leg unit to its standing position, a clockwork mechanism provided in said body, a winch in said body operatively connected to said clockwork mechanism and including a flexible tape element connectible to said rear leg unit for drawing the latter to the sitting position against the action of said resilient means, and automatically releasable means for connecting said tape element to said rear leg unit, said last mentioned means being separable from said leg unit when the latter is in its sitting position.

3. The device as defined in claim 2, together with a head pivotally mounted on said body and swingable from a raised to a lowered position, and means operatively connecting said head to said rear leg unit, whereby the head may be lowered when said leg unit is in the sitting position.

4. The device as defined in claim 2 wherein said last mentioned means comprises a loop provided on said tape element, together with a tongue provided on said rear leg unit, said loop being releasably connected to said tongue.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
871,701	Jeckert	Nov. 19, 1907
2,297,759	Fornas	Oct. 6, 1942