Nov. 7, 1961 O. W. BERBERICH 3,007,280

TREADLE-ACTUATED TOY

Filed Aug. 12, 1959

Fig. 1.

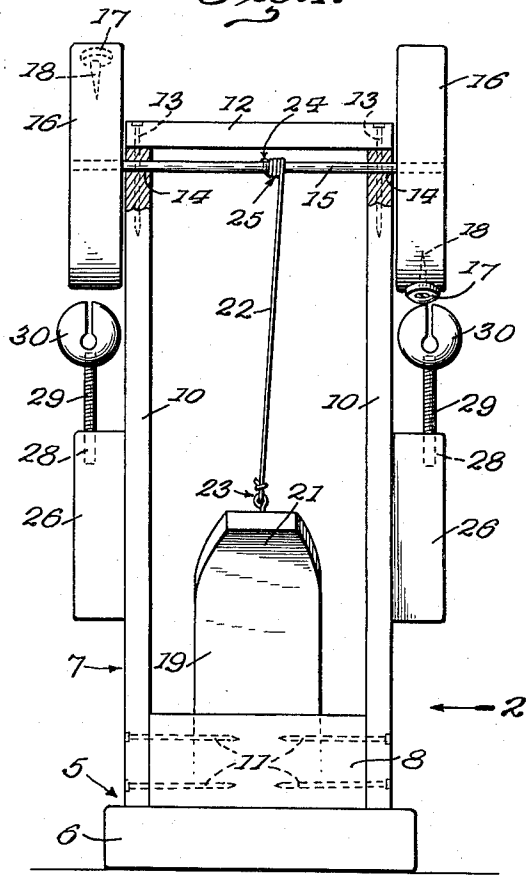


Fig. 3.

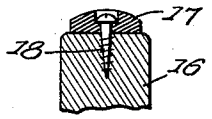


Fig. 2.

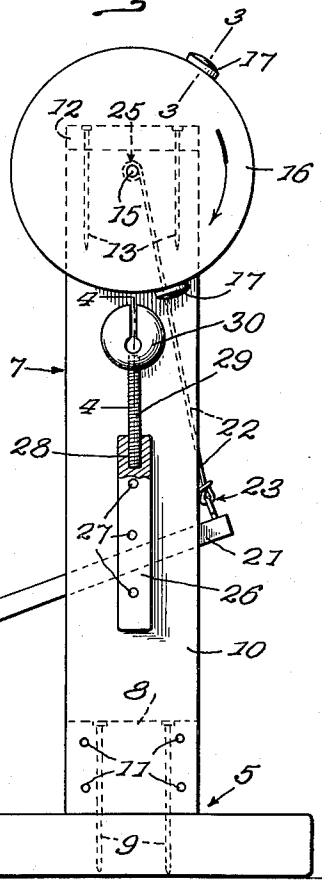
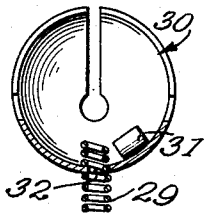


Fig. 4.



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TREADLE-ACTUATED TOY

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This invention aims to provide an exceptionally simple and inexpensive treadle-operated toy, yet one which will give a great deal of amusement.

Another object is to provide a novel toy comprising a spinner including a shaft and at least one flywheel thereon, treadle-actuated means for rapidly spinning said spinner alternately in opposite directions, and amusement means actuated by said spinner.

A further object is to provide the amusement means in audible form.

A still further object is to provide the amusement means in the form of one or more bells and to provide tappets on the flywheel or wheels to strike and operate the bell or bells.

A further object is to provide novel spring means for yieldably mounting each bell in the path of the tappet or tappets cooperable therewith.

A still further object is to so connect each bell with its mounting spring that the bell may be adjusted to extend a greater or lesser distance into the path of the cooperating tappet or tappets, thereby controlling the emitted sound as desired.

A still further object is to provide a toy having a spring arm carrying a hollow bell which contains a floating clapper slug, and to provide means for alternately bowing said spring arm and releasing it, causing loose shaking of said clapper slug and resultant repetitious striking thereof against the bell.

Yet another object is to provide a novel toy which may be inexpensively and expeditiously manufactured and may therefore be profitably marketed at a reasonable price.

With the above and other objects in view, as will be presently apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly claimed.

In the drawings, like characters of reference indicate like parts in the several views and

FIGURE 1 is an end elevation of the toy, partly broken away and in section;

FIGURE 2 is a side elevation, as indicated by the arrow 2 of FIGURE 1 partly broken away and in section; and

FIGURES 3 and 4 are enlarged detail sectional views on lines 3—3 and 4—4 of FIGURE 2, respectively.

The construction shown will be rather specifically described, but attention is invited to the possibility of making variations.

A frame 5 is provided having a base portion 6 and an upwardly projecting portion 7. The base portion 6 is of flat, horizontally elongated, rectangular form and has a rectangular block 8 nailed at 9 (in FIGURE 2) upon one of its ends. Two vertical bars 10 are nailed at 11 to the ends of the block 8, and a crown bar 12 is nailed at 13 upon the upper ends of said bars 10, said bars 10 and 12 constituting the upwardly projecting frame portion 7. The upper ends of the bars 10 have horizontally alined openings 14 formed therethrough.

A shaft 15 extends through the bearing openings 14, and flywheels 16 are secured on the ends of said shaft at the outer sides of the bars 10, said shaft and flywheels cooperating in forming a spinner. Each flywheel 16 is provided with a peripheral tappet 17 secured thereto by a screw 18. Conventional faucet washers are preferably utilized for the tappets 17.

An elongated treadle 19 is hinged at 20 to the end of

the base 6 remote from the bars 10, and the free end 21 of said treadle 19 extends between but is out of contact with said bars 10. A flexible line 22 extends upwardly from the free treadle end 21 to the shaft 15, is secured at 23 to said treadle, and is secured at 24 to said shaft. The upper end of this line 22 is wound at 25 on the shaft 15 when the free end 21 of the treadle 19 occupies a raised position, as shown. When the treadle 19 is depressed, the line 22 unwinds from the shaft 15 and in so doing, rapidly spins said shaft and the flywheels 16. After complete unwinding of the line 22, the shaft 15 and flywheels 16 continue to spin by momentum and consequently the line 22 is reversely wound on the shaft 15, again raising the treadle 19 in readiness for re-depression. Successive depressions of the treadle 19 will therefore keep the spinner 15, 16 rapidly spinning in opposite directions.

Two blocks 26 are nailed at 27 (FIGURE 2) against the outer sides of the bars 10, below the flywheels 16, and the upper ends of said blocks 26 have sockets 28 formed therein. The lower ends of spring arms 29 are secured in the sockets 28, and the upper ends of said spring arms 29 carry hollow bells 30 each containing a floating clapper slug 31 (FIGURE 4). The bells 30 are in the paths of the tappets 17.

Whenever a tappet 17 strikes the cooperating bell 30, it will bow the bell-carrying spring arm 29 and then release it, whereupon said spring arm will spring to and fro and shake the bell 30 and clapper slug 31, causing the latter to repetitiously strike and sound the bell.

Each spring arm 29 is in the form of a coiled spring, and the upper end of this spring is threaded through an opening 32 (FIGURE 4) in the lower side of the associated bell 30. This connection between arm 29 and bell 30 permits adjustment of the bell a greater or lesser distance into the path of the cooperating tappet 17. Thus, the extent to which the spring is bowed and the vigor with which it springs to and fro may be controlled, and, consequently, the volume of sound emitted from the bell may be controlled as desired.

Operation

Depression of the pedal 19 causes rapid spinning of the spinner 15, 16 in the direction due to the unwinding of the line 22 from the shaft 15. The spinner then continues to spin by momentum and this winds the line reversely on the shaft 15. This again raises the treadle in readiness for depression and when such depression is performed, the spinner will be rotated reversely from the direction in which it was first turned. Thus, repeated depressions of the treadle 19 will drive the spinner alternately in opposite directions, and during such driving, the tappets 17 cause operation of the bells 30.

The toy may be rapidly and inexpensively manufactured from readily available wood, wire nails, springs and bells, and may therefore be profitably marketed at a reasonable price.

Attention is again invited to the possibility of making variations.

I claim:

1. A top comprising a horizontally elongated base, two upright bars secured at their lower ends to one end of said base and held in fixed laterally spaced relation the upper ends of said bars having horizontally alined bearing openings, an elongated treadle longitudinally overlying said base and hinged to the end thereof remote from said bars, said treadle having a free end between said bars, a shaft extending through the aforesaid bearing openings, flywheels secured on the ends of said shafts and disposed at the outer sides of said bars, a flexible line extending upwardly from said free end of said treadle to said shaft and secured to both said treadle and shaft,

said line being wound around said shaft and being operative to unitarily spin said shaft and flywheels alternately in opposite directions as said treadle is actuated, two bells mounted on said bars under said flywheels, respectively, and tappets on said flywheels to strike said bells.

2. The toy of claim 1, in which two vertical coiled springs carry said bells, respectively, and blocks secured to said bars and having sockets in which the lower ends of said springs are secured.

3. The toy of claim 1, in which two vertical coiled springs carry said bells, respectively, and blocks secured to said bars and having sockets in which the lower ends of said springs are secured, said bells having openings into which the upper ends of said springs are adjustably threaded.

4. A foot operated toy comprising a base, a pair of spaced uprights extending transversely of the plane of said base, a foot treadle having one end pivotally attached to said base and the opposite free end thereof extending between said uprights, a shaft rotatably mounted on said uprights above said treadle, a flywheel fixedly secured to said shaft, a flexible line having one end fastened to the free end of said treadle and the other end fastened to said shaft, said line being wound around said shaft when said treadle is in raised position, whereby when said treadle is depressed said line will unwind to rotate said flywheel and said flywheel will be given momentum to thereby rewind said line on said shaft and reposition said treadle in raised position, and amusement means operated by the rotation of said flywheel.

5. A foot operated toy comprising a base, a pair of spaced uprights extending transversely of the plane of said base, a foot treadle having one end pivotally attached to said base and the opposite free end thereof extending between said uprights, a shaft rotatably mounted on said uprights above said treadle, a flywheel fixedly secured to said shaft, a flexible line having one end fastened to the free end of said treadle and the other end fastened to said shaft, said line being wound around said shaft when said treadle is in raised position, whereby when said treadle is depressed said line will unwind to rotate said flywheel and said flywheel will be given momentum to thereby rewind said line on said shaft and reposition said treadle in raised position, and amusement means operated by rotation of said flywheel, said amusement means comprising a sounding device in engagement with said flywheel.

6. A foot operated toy comprising a base, a pair of spaced uprights extending transversely of the plane of said base, a foot treadle having one end pivotally attached to said base and the opposite free end thereof extending between said uprights, a shaft rotatably mounted on said uprights above said treadle, a flywheel fixedly secured to said shaft, a flexible line having one end fastened to the free end of said treadle and the other end fastened to said shaft, said line being wound around said shaft when said treadle is in raised position, whereby when said treadle is depressed said line will unwind to rotate said flywheel and said flywheel will be given momentum to thereby rewind said line on said shaft and reposition said treadle in raised position, and amusement means operated by the rotation of said flywheel, said amusement means comprising a bell mounted adjacent said flywheel and a tappet on said flywheel intermittently engaging said bell.

7. A foot operated toy comprising a base, a pair of spaced uprights extending transversely of the plane of said base, a foot treadle having one end pivotally attached to said base and the opposite free end thereof extending between said uprights, a shaft rotatably mounted on said uprights above said treadle, a flywheel fixedly secured to said shaft, a flexible line having one end fastened to the free end of said treadle and the other end fastened to said shaft, said line being wound around said shaft when said treadle is in raised position, whereby when said treadle is depressed said line will unwind to rotate said flywheel and said flywheel will be given momentum to thereby rewind said line on said shaft and reposition said treadle in raised position, and amusement means operated by the rotation of said flywheel, said amusement means comprising a bell mounted on a resilient element adjacent said flywheel and a tappet on said flywheel intermittently engaging said bell.

8. A toy comprising a frame having a base portion and an upwardly projecting portion, a spinner mounted on said upwardly projecting portion and including a horizontal shaft and a flywheel thereon, a treadle hinged to said base portion for depression from a raised position, a flexible line extending upwardly from said treadle to said shaft and secured to both said treadle and said shaft, the upper end of said line being wound around said shaft to cause said line to rapidly spin said spinner when said treadle is depressed; whereby, upon complete unwinding of said line from said shaft, the momentum of said spinner will cause reverse winding of said line on said shaft, thereby re-raising said treadle in readiness for redepression; and amusement means actuated by said spinner, said amusement means including a bell, and a spring yieldably mounting said bell and secured to said upwardly projecting frame portion, said flywheel having a tappet to strike said bell.

9. A toy comprising a frame having a base portion and an upwardly projecting portion, a spinner mounted on said upwardly projecting portion and including a horizontal shaft and a flywheel thereon, a treadle hinged to said base portion for depression from a raised position, a flexible line extending upwardly from said treadle to said shaft and secured to both said treadle and said shaft, the upper end of said line being wound around said shaft to cause said line to rapidly spin said spinner when said treadle is depressed; whereby, upon complete unwinding of said line from said shaft, the momentum of said spinner will cause reverse winding of said line on said shaft, thereby re-raising said treadle in readiness for re-depression; and amusement means actuated by said spinner, said amusement means including a bell having an opening and a coiled spring yieldably mounting said bell and having one of its ends threaded adjustably into said opening, and means securing the other end of said spring to said upwardly projecting portion, said flywheel having a tappet to strike said bell.

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