Aug. 3, 1954 H. G. FISHER ET AL 2,685,148

MUSICAL TRUNDLE TOY

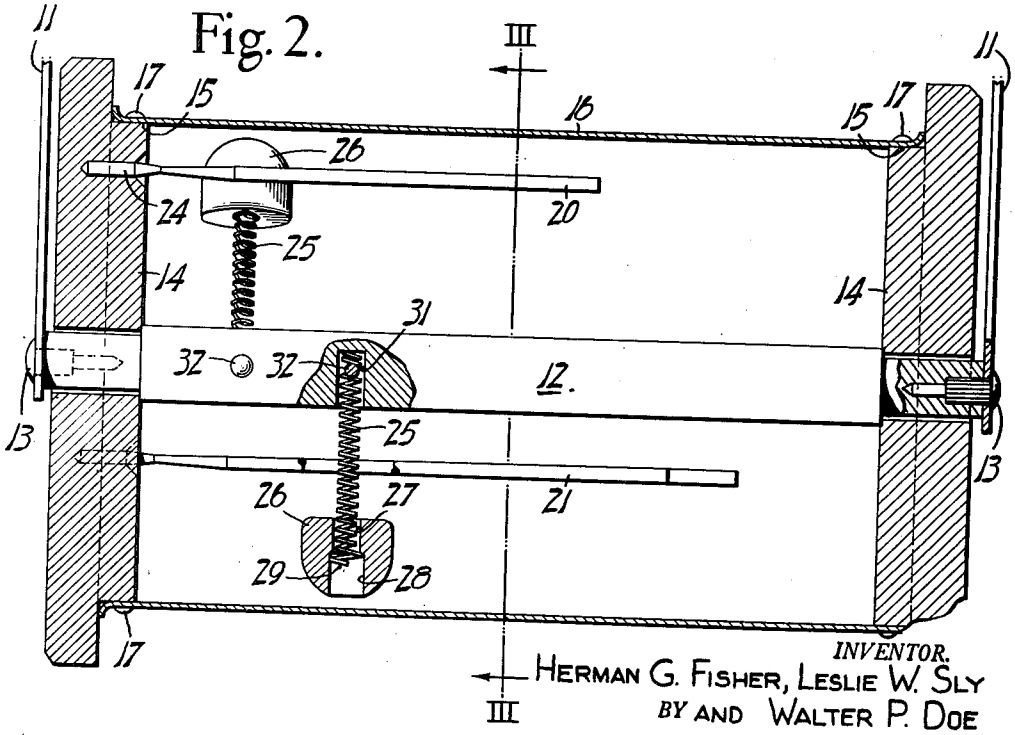
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2 Sheets-Sheet 1

Fig. 1.



Fig. 2.



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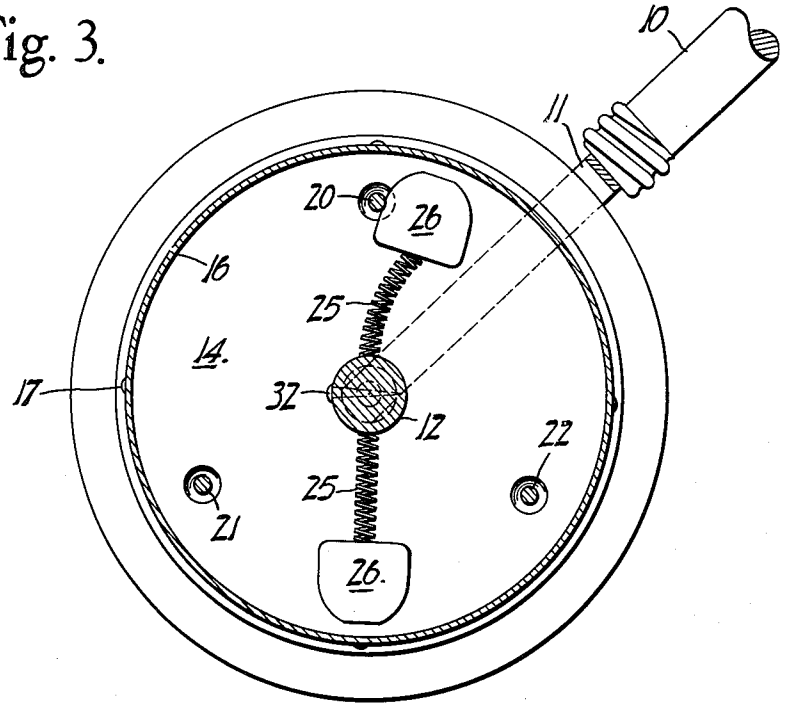
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Fig. 3.



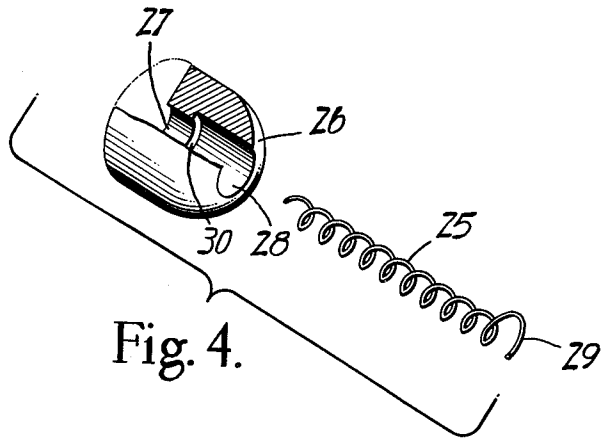


Fig. 4.

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MUSICAL TRUNDLE TOY

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2 Claims. (Cl. 46—114)

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This invention relates to action toys, and more particularly to improvements in push-pull toys of the type embodying musical sound producing means actuated in response to rolling of the toy over a floor surface or the like.

One of the objects of the invention is to provide an improved toy of the type having a rotating barrel portion carrying musical tines therein and a positionally fixed axle device extending through said barrel portion and carrying tine strikers of improved form.

Another object of the invention is to provide in a musical sound producing toy an improved tine striker and mounting arrangement therefor.

Other objects and advantages of the invention will appear from the specification hereinafter.

In the drawing:

Fig. 1 is a perspective view of a toy embodying the invention;

Fig. 2 is a sectional view through the rotating barrel portion of the toy;

Fig. 3 is a fragmentary section taken along line III—III of Fig. 2; and

Fig. 4 is a perspective, with portions in section, showing, in disassembly, constructional elements of a tine striker device of the invention.

The invention is illustrated in the drawing as being embodied in a toy including a handle 10 terminating in a fork device having opposite legs 11—11. The legs 11—11 engage opposite ends of an axle member 12 which may be conveniently fabricated in the form of a wood turning; the connections between the legs 11—11 and the axle 12 being conveniently provided by means of serrated nails 13—13 whereby the axle 12 is positionally fixed relative to the handle 10.

The barrel portion of the toy is illustrated to comprise a pair of circular heads 14—14 which may also be conveniently fabricated in the form of wood turnings centrally bored so as to slip-fit for free rotation upon the opposite ends of the axle 12 prior to connection of the handle legs 11—11 to the axle 12. The heads 14—14 are turned to reduced diameters as indicated at 15 so as to provide ledges to receive the opposite ends of a cylindrical sheet metal collar 16 which may be conveniently fastened to the heads by means of tacks 17 so as to complete the barrel structure which is free to rotate upon the axle 12.

Musical tines as indicated at 20, 21, 22 are mounted to extend in cantilever fashion from suitably drilled portions of one of the head members 14, as indicated at 24 (Fig. 2); the tines 20, 21, 22 being of different lengths and/or of different note producing characteristics and arranged

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in spaced relation about the axle 12, as shown in Fig. 3.

The tine striker devices of the invention each comprise a stem portion 25 which comprises a coil spring and a head portion 26 which may be conveniently fabricated in the form of a wood turning or a plastic molding, or the like. In any case the head portion 26 is formed with a bore as indicated at 27 (Fig. 4) and a larger diameter counterbore as indicated at 28, and the spring member 25 is selected to be of an outside diameter substantially equal to the diameter of the smaller bore portion 27 of the head. However, as shown in Figs. 2 and 4 prior to assembly of the parts one of the end convolutions of the spring member 25 is stretched out and diametrically enlarged, as indicated at 29, so as to match the diameter of the large counterbore portion 28 of the head member. Then, to assemble the striker device the small end of the spring 25 is first inserted through the counterbore portion 28 and then through the smaller bore portion 27 of the head member, until such time as the enlarged spring portion 29 slides into the head member and against the shoulder portion 30 thereof which is formed at the juncture of the bores 27—28. Preferably, the spring section 25—29 are both so dimensioned as to snugly fit into the corresponding bore portions 27—28 of the head member 26, so that when the parts are relatively assembled there is no tendency for them to become accidentally disengaged.

The inner end portion of the spring 25 is then slip-fitted into a suitably drilled socket 31 (Fig. 2) formed in the axle member 12 for mounting the striker member in position to extend radially from the axle. A locking pin 32 is then driven transversely through the axle so as to pin the inner end of the spring to the axle member. Thus, it will be appreciated that as the toy is pushed or pulled along a floor surface or the like the barrel portion thereof will rotate relative to the axle 12 about which it fits and thus bring the tine members 20, 21, 22 successively into hammering contact with the striker heads 26. Inasmuch as the striker heads 26 are supported by means of the springs 25, the tines impinge against the striker heads with musical sound producing effects, and then carry the striker heads around with them until such time as the striker springs assume such curvatures that the striker heads slip under and escape from the tines. The springs then cause the striker heads to snap back toward their original positions at which time they come into hammering contacts with the next successive tines which are being carried by the rotat-

ing barrel heads, thus again producing musical sounds.

Thus, it will be appreciated that by reason of the construction and arrangement of the invention the striker heads impinge against the musical sound producing tines in improved manner. Also, it will be appreciated that the component parts of the invention are susceptible to fabrication by simple and inexpensive manufacturing processes; and that although only one form of the invention has been shown and described in detail it will be apparet to those skilled in the art that the invention is not so limited but that various changes may be made therein without departing from the spirit of the invention or the scope of the appended claims.

We claim:

1. A musical toy comprising a handle, forks at an end of said handle projecting from opposite sides thereof, an axle extending horizontally between said forks, fasteners securing said forks to opposite ends of said axle and holding the axle against rotation relative to the forks, a barrel device rotatable about said axle and having end heads formed with central openings through which ends of the axle loosely pass and a cylindrical sleeve extending between peripheral portions of the heads in concentric spaced relation to the axle and at each end firmly secured to a head, said barrel device being freely rotatable about said axle, elongated rods of metal within said sleeve constituting musical tines extending from one of said heads toward the other head in spaced relation to said axle and said sleeve and being spaced from each other circumferentially of the head, and a plurality of hammers carried by and extending radially from said axle and spaced from each other circumferentially of and longitudinally of the axle, each hammer consisting of a helical spring having an inner end portion fitting into a socket formed in the axle radially thereof and secured by a pin embedded in the axle and passing through the socket transversely thereof and between convolutions of the spring, and a hammer head carried by the outer end of the spring and formed with an axially extending bore into which the outer end portion of the spring fits, the outer end portion of the bore being enlarged and forming an annular shoulder intermediate the length of the bore and the outer convolution of the spring being enlarged and bearing against the shoulder and maintaining the hammer head upon the spring, the heads of the hammers being disposed in the path of movement of said tines as the tines move with the barrel and revolve about the axle and individually and successively move into striking contact with the hammer head to flex the springs transversely and

then release the hammer heads and allow swinging movement of the hammer heads by vibrating action of the springs into striking contact with the times.

2. A musical toy comprising a handle, forks at one end of said handle projecting from opposite sides thereof and carrying an axle extending horizontally between the forks and held against rotation relative to the forks, a barrel rotatable about said axle and having heads formed with central openings through which ends of the axle loosely pass and a cylindrical sleeve extending between the heads in concentrc spaced relation to the axle and secured at opposite ends to the heads for turning therewith, elongated metal rods within said sleeve constituting musical tines carried by and extending from one head toward the other head and spaced from each other circumferentially of the head, and a plurality of hammers carried by and extending radially from said axle and spaced from each other circumferentially of the axle, each hammer consisting of a helical spring fitting into a socket formed in the axle and firmly secured therein with a portion of the spring projecting from the axle radially thereof, and a hammer head carried by a free end portion of the spring and formed with an axially extending bore passing entirely through the hammer head and through which the free end portion of the spring passes, said spring being firmly held in the bore and maintaining the hammer head upon the spring, the heads of the hammers being disposed in the path of movement of said tines so that the tines moving with the heads and about the axle individually and successively strike the hammer heads to flex the springs and then release the hammer heads and allow swinging movement of the hammer heads by vibrating action of the springs into striking contact with the tines.

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