June 11, 1946. S. G. GREENWOOD 2,401,866

TOY

Filed April 9, 1945

Fig. 1

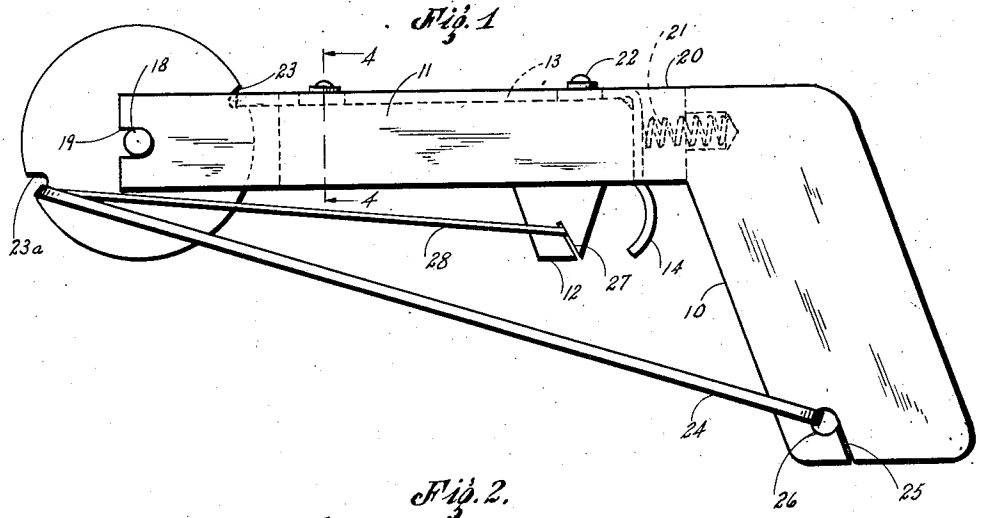


Fig. 2.

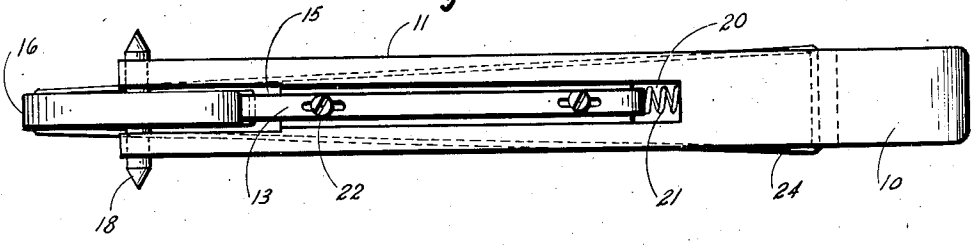


Fig. 3.

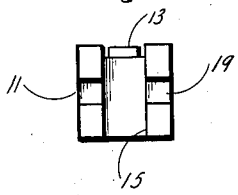


Fig. 4.

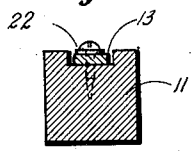
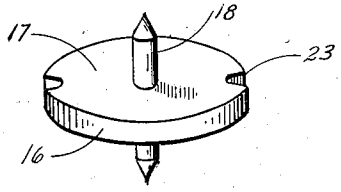


Fig. 5.



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TOY

Samuel G. Greenwood, Oshkosh, Wis.

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12 Claims. (Cl. 46—72)

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This invention relates broadly to amusement devices and more specifically to improvements in tops and spinning mechanism therefor.

One of the objects of the invention is to provide an amusement device for a child comprising a toy pistol and a top, the pistol being designed to effect the propulsion of the top while rolling on its circumferential edge, as a ball played in the game of bowls; the rotation or normal spinning operation of the top about its major axis, or a forward rolling movement of the top, while spinning counter the direction of translation, and the return thereof after the inertia of the force impelling the forward movement has been spent.

Another object of the invention is to construct a top which may be assembled in the spinning device, irrespective the position of presentation of the notches in the top relative to the latch in the spinning device.

Another object of the invention is to construct the spinning device in configuration of a pistol which is designed to effect the propulsion of the top in a prescribed direction when the pistol is held in its normal operative position.

Another object of the invention is to provide a supporting structure for a top which is designed to facilitate the ready attachment of the elastic spinning element thereon into operative engagement with the top.

Another object of the invention is to provide a toy pistol having a primary and secondary spinning element therein, which are organized for conjoint or independent use in the spinning operation.

Further objects of the invention reside in the provision of a toy which is susceptible of diversified use, harmless in the hands of a child, novel of structure and attractive of appearance.

Other objects and advantages more or less ancillary to the foregoing and the manner in which all the various objects are realized will appear in the following description, which considered in connection with the accompanying drawing, sets forth the preferred embodiment of the invention.

Referring to the drawing:

Fig. 1 is a side elevational view of the improved toy illustrating the top in launching position for rolling;

Fig. 2 is a plan view thereof;

Fig. 3 is an end elevation of the muzzle of the pistol;

Fig. 4 is a transverse section through the barrel of the pistol, the section being taken on a plane indicated by the line 4—4 in Fig. 1; and

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Fig. 5 is a view in perspective of the improved top.

Referring first to Fig. 1, the pistol or spinning device comprises generally a handle 10 having a barrel 11 mounted thereon, a trigger guard 12 on the lower face of the barrel and a latch bar 13 mounted for operative control through a trigger 14. The free end of the barrel is formed with a longitudinal slot 15 for the reception of a disc 16 constituting the body of the top 17. The spindle 18 of the top is seated in a shallow slot 19 disposed in the end of the barrel in transverse relation to the slot 15.

The trigger and latch bar are preferably constructed as an integral structure, the trigger depending from the inner end thereof and projecting through a vertical slot 20 intermediate the handle and barrel. The trigger is urged into abutting engagement with the outer end of the slot by a spring 21 seated within the slot. The body of the latch bar is fabricated for the reception of screws 22 seated in upper face of the barrel and organized to guide the bar longitudinally and also restrain vertical movement thereof.

The top, as will be seen in Fig. 5 comprises the disc 16 having the spindle 18 disposed in the center thereof in normal relation thereto. The circumferential edge of the disc is formed with diametrically opposed notches 23 adapted for engagement with the end portion of the latch bar 13. The notches are of uniform size and configuration, the side walls thereof being designed to be in a plane substantially parallel to the latch bar when the spindle 18 is mounted in seated engagement in the slot 19. It will be noted that this construction will facilitate the operative engagement of the latch with the notch irrespective the position of the disc when introduced into the slot 15.

As will be seen in Fig. 1, the latch bar is disposed above the medial axis of the slot 19, hence when the disc is mounted in place with the latch engaged in the contiguous notch the opposed notch will be disposed below the center of the disc.

The lower end of the handle is drilled for the support of an elastic endless band 24 which is of suitable length, when drawn taut, to facilitate the engagement of the looped end thereof over the shoulder defined by the lower wall of the notch 23—*a*.

Since the latch is mounted above the medial axis of the slot 19 the diametrically opposed notch 23—*a* will be disposed below the center of the disc

when the top is mounted in the spinning device with the latch adjusted in its operative position, hence when the elastic band is engaged with the notch 23—*a* a tensile force will be imposed upon the outer edge of the disc which will effect the rotation thereof upon withdrawal of the latch.

The handle is formed with a kerf 25 communicating with the drilled opening 26 to facilitate the assembly of the band 24. The kerf is preferably formed to prevent the passage of the band therethrough while in its unstressed form but accommodate the entry thereof while under tension. The trigger guard 12 is formed with a similar kerf 27 for the support of a secondary elastic band 28 which, when tensioned may be engaged with the notch 23—*a*, to supplement the effort of the band 24, or if desired, for use independent thereof.

In operation the toy may be used for play in a game of skill such for example as the game of ten pins. In pursuit of such a game the spinning device is gripped in the manner in which a pistol is customarily held, the top mounted thereon as shown in Fig. 1, the pistol lowered to a point slightly above the surface upon which the target is mounted, then with a slight arcuate movement of the arm towards the objective, the player may pull the trigger and put the top in play. In this maneuver as the top is dislodged from the slot 18 it will fall on the circumferential edge of the disc and roll forwardly under the impetus of the spinning movement imparted thereto through the sudden release of the elastic band. The amusement afforded by the top may be greatly enlarged by dislodging the top from the pistol during a combined twisting and swinging movement of the player's hand. In the exercise of such technique the top may be rolled in an arcuate path, or in a straight line veering to the right or left before it reaches the target.

The spinning device may also be used to effect the forward rolling translation of the top and the return thereof by holding the pistol upside down and dislodging the top while swinging the spinning device forwardly. In this event the disc will roll on the circumferential edge thereof until the force imparted through the swinging movement is overcome by spinning inertia of the top. Since the spinning rate of the top is relatively high the disc will remain in equilibrium throughout the entire flight thereof.

A still further utility of the toy resides in the use thereof in spinning the top about the medial axis of its spindle. In this operation the pistol is held in a horizontal plane, i. e. with the spindle of the top in a vertical position. In practice it has been found that the top may be successfully operated when dropped an appreciable distance, for example, a distance equal to the waist height of the player. It has also been found that due to the ease and speed of assembly a number of tops may be put into operation, successively, before the first player to play comes to rest.

Although the foregoing description is necessarily of a detailed character, in order that the invention may be completely set forth, it is to be understood that the specific terminology is not intended to be restrictive or confining, and that various rearrangements of parts and modifications of detail may be resorted to without departing from the scope or spirit of the invention as herein claimed.

I claim:

1. A toy comprising a disc having a pair of diametrically opposed notches in the circumferential edge thereof, a spindle therein, a top supporting member having slots therein for the reception of said disc and said spindle, a latch in said member engageable with one of the notches in said disc, means for retracting said latch, and a contractile element in said member engageable with the opposed notch in said disc.

2. A toy comprising a disc having a pair of diametrically opposed notches in the circumferential edge thereof, a spindle therein, a top supporting member having a slot therein for the reception of said disc and a pair of transversely disposed slots for the reception of said spindle, a latch in said member superjacent said pair of slots engageable with one of the notches in said disc, mechanism for the retraction of said latch, and an elastic band on said member engageable with the other notch in said disc.

3. A toy comprising a disc having a pair of diametrically opposed notches in the circumferential edge thereof, a spindle therein, a top supporting member, having a bifurcated end portion with transverse slots in the furcations thereof, said spindle being seated in said slots, an elastic band on said member tensively engaged with one of the notches in said disc, and a spring pressed latch disposed on said member above said slots and engaged with the opposed notch in said disc.

4. A toy comprising a disc having a pair of diametrically opposed notches in the circumferential edge thereof, a spindle therein, a top supporting member having a vertical slot therein for the reception of said disc and transverse slots for the reception of said spindle, a contractile element on said member tensively engaged with said disc below the center thereof, a latch bar on said member engaged with the disc above the center thereof and a trigger associated with said latch for the retraction thereof.

5. A toy comprising a disc, a spindle therein, a frame having slots therein for the support of said spindle, a contractile loop on said frame tensively engaged in straddled relation with a circumferential portion of said disc below the center thereof and a spring pressed latch on said frame engaged with a circumferential portion of said disc above the center thereof to restrain the rotation of the disc.

6. In combination with a top embodying a disc having a spindle therein, a spinning device therefor comprising a top holding member having a slot therein for the reception of said disc and recesses therein for the support of said spindle, a depending handle on said member, a contractile element supported by said handle and detachably engaged with the edge of said disc below the center thereof, a latch on said member detachably engaged with the edge of said disc above the center thereof, said handle being disposed in paraaxial relation to said slot, whereby said disc will be supported in a vertical plane when the handle is gripped in a normal holding position.

7. A toy embodying a top and a spinning device therefor, said top comprising a disc having a pair of diametrically opposed notches in the circumferential edge thereof, and a centrally disposed spindle protruding equi-distant from the opposed faces of the disc, said spinning device being formed in configuration of a gun and comprising a barrel having a disc receiving slot in the end thereof and transverse slots for the reception of the spindle of the top, a latch bar on said barrel superjacent the spindle receiving slots, a trigger depending from said latch bar and protruding through said barrel, a handle for said barrel disposed in aligned relation with said disc

receiving slot, a rubber band mounted on said handle adapted for tensive engagement with one of the notches in said disc and a spring intermediate said latch bar and said handle for urging the bar in interlocked relation with the other notch in said disc.

8. A spinning device for a disc type top comprising a holder configured in the form of a gun, a barrel thereon having recesses therein for the reception of the top, a spring pressed latch on said barrel engageable with the top to restrain rotation thereof, a handle connected with said barrel an endless rubber band supported by said handle with the strands thereof in spaced relation with each other, said band being tensively engaged with the top at a point below and diametrically opposite said latch and with the strands thereof separated by the said walls of the disc.

9. A spinning device for a disc type top comprising a holder configured in the form of a pistol, a barrel thereon having slots in the free end thereof to accommodate the pivotal support of said top, a bar mounted for longitudinal reciprocative movement on said barrel, one end of said bar being engaged with the peripheral edge of said top, a trigger depending from the opposite end of said bar, a pistol grip depending from said barrel and a looped tension element engaged in straddled relation with the peripheral edge of the top at a point below dead center thereof.

10. A device for rolling a disc with a transverse

spindle therein comprising a supporting member having slots in the end thereof for the reception of the spindle in the disc, a handle on said member arranged to support the disc in a vertical plane, an endless elastic band tensively looped over the edge of said disc and slidable means on said member engageable with the disc to restrain the action of said elastic means.

11. A toy embodying a mechanism for rolling a disc with a fixed axle therein comprising a disc holder having recesses in the end thereof for the reception of the axle, means on said holder for the support thereof in a position in which the axle of said disc is parallel with the surface upon which it is to be rolled, a rubber band engaged with the peripheral edge of the disc below the horizontal center line thereof and retractive means in said holder engaged with the peripheral edge of the disc above the horizontal center line thereof to restrain rotative movement of the disc.

12. In combination with a top embodying a disc and a transverse fixed axle, a device for rolling said disc upon the peripheral edge thereof comprising a holder having recesses in the end thereof for the reception of said axle, a handle on said holder arranged to support the disc in a vertical plane, a rubber band on said handle tensively engageable with the forward edge of said disc below the center thereof and a latch on said holder engageable with the rearward edge of said disc above the center thereof.

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