Oct. 12, 1937. H. D. PENNEY 2,095,284

GAME TOY

Filed June 19, 1936

Fig. 13.

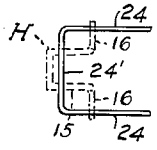


Fig. 2.

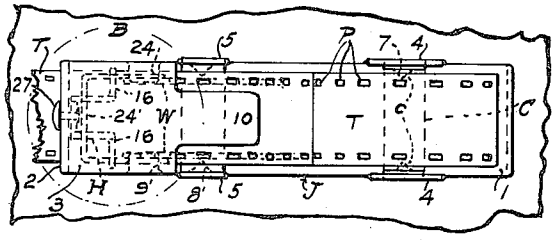


Fig. 3.

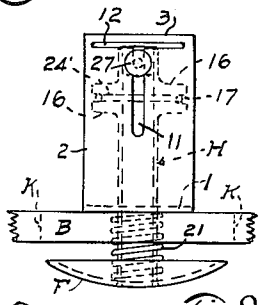


Fig. 1.

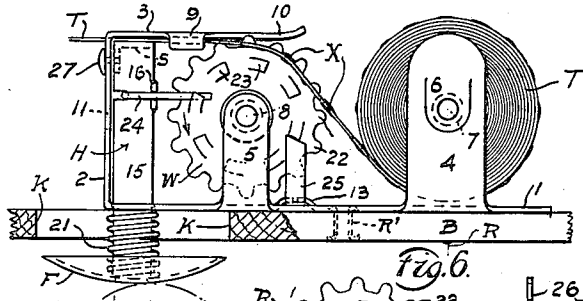


Fig. 8.

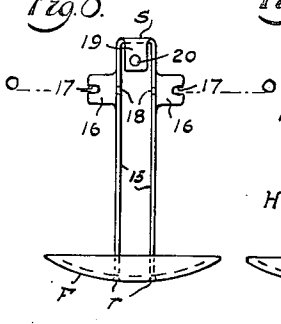


Fig. 9.

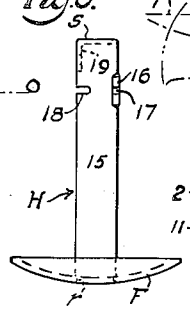


Fig. 6.

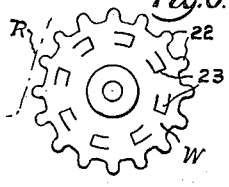


Fig. 7.

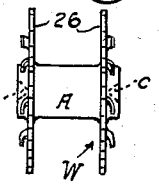


Fig. 4.

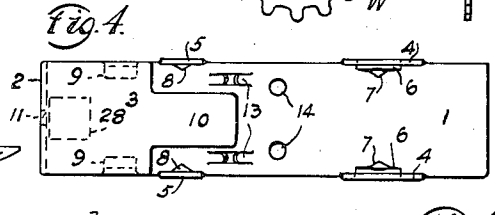


Fig. 10.

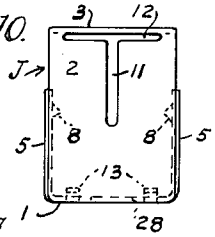


Fig. 5.

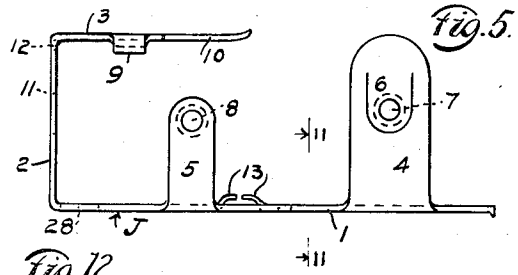


Fig. 11.

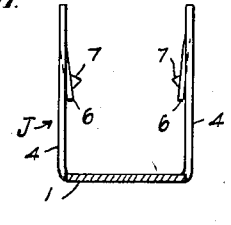
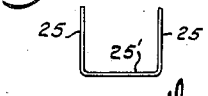


Fig. 12.



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GAME TOY

Harold D. Penney, Pelham, N. Y., assignor, by mesne assignments, to Wertheim & Paul, Inc., New York, N. Y., a corporation

Application June 19, 1936, Serial No. 86,053

10 Claims. (Cl. 273—97)

The present invention has for its object an improvement in game toys and more specifically relates to a striking toy in which a paddle, having a detonating mechanism and a target button, has a resilient captive ball attached thereto, whereby by striking the paddle against the ball, upon the rebound of the ball, causes the detonating means to fire a paper percussion cap, when a bull's-eye stroke is made upon the target button by the ball.

A further advantage is in the provision of means whereby the target button not only fires a cap, on a strip of caps, but also automatically feeds another cap to detonating position, upon the firing of the preceding cap.

Another advantage is in the provision of means for carrying a plurality of detonating caps, in a rolled magazine strip, and also in the provision of means for automatically feeding the firing caps to and past the detonation point, step by step.

The foregoing and other features of advantage will be apprehended as the description herein proceeds, and it will be obvious that many changes may be made in the structure herein, to accomplish the desired ends, without departing from the spirit hereof or the scope of the appended claims.

In the drawing,

Fig. 1 is a slightly enlarged view, in side elevation, of the present device, mounted upon the paddle, with the paddle shown fragmentarily;

Fig. 2 is a plan view of Fig. 1;

Fig. 3 is an end elevation of Fig. 1;

Fig. 4 is a plan view of Fig. 1;

Fig. 5 is a view in side elevation of the main frame of the device;

Figs. 6 and 7 are side and front views, respectively, of the firing strip feeding sprocket;

Figs. 8 and 9 are front and side views of the firing plunger;

Fig. 10 is an end view of Fig. 5;

Fig. 11 is a sectional view, taken on line 11—11, Fig. 5, looking in the direction of the arrows;

Fig. 12 is a side view of the spring feeding pawl of the feeding sprocket; and

Fig. 13 is a plan view of a spring wire latch or detent.

The paddle B, upon which the percussion device is mounted is preferably made of a thin wooden board, and is shaped somewhat like a tennis racquet or a paddle such as is used in battledore and shuttlecock. Only enough of the paddle is shown in the accompanying drawing to illustrate the mode of mounting the device thereto.

The device comprises a main frame, as shown in Figs. 4, 5, 10 and 11, preferably made out of a single sheet metal stamping, generally denoted as J, and which is provided with a bottom plate 1, an upstanding, right angled end plate 2, and a percussion plate 3, integral with end plate 2 and at right angles thereto, plate 3 being also parallel with the bottom plate 1.

The percussion plate 3 is provided with two opposed inturned lugs 9—9 on its opposite side edges, as in Figs. 1, 4 and 5, there being a clearance between the adjacent faces of the lugs and the under face of percussion plate 3, in order to act as guides for threading the paper firing cap strip T therethrough and to hold the cap strip in detonating position against the percussion plate 3, as illustrated in Fig. 1. The end plate 2 is provided with a T-shaped slot 11—12, Fig. 10, the portion 12 of the slot also acting as a strip guide for the strip T to be threaded therethrough as shown in Fig. 1. The strip T is thus guided and held on opposite sides of the cap detonating position.

The slotted portion 11 of end plate 2 acts as a guide for the reciprocating, detonating plunger H, which is shown in its cap detonating position in Fig. 1.

The detonating plunger 11 is preferably made of sheet metal and comprises a bell shaped striking head F, which is welded or otherwise affixed to one end of the plunger H, as at *r*, *r*, Fig. 8, the latter being U-shaped, and at the joined opposite detonating end S, is provided with a down turned lug 19, having a hole 20 thereon, Fig. 8, to fixedly receive therein a headed guide pin 27, Figs. 2 and 3, which is fitted to slide in slot 11, thereby to guide the detonating plunger H at its detonating end. The bottom plate 1, of the frame is provided with a rectangular perforation 28, shown dotted in Fig. 4, which is in alinement with the slot 12 of side plate 2, and into which perforation 28 is slidably fitted the rectangular post portion 15, adjacent the plunger head F, to guide the head end of the detonating plunger. A coiled compression spring 21, is fitted between the frame bottom 1 and the head F of the plunger, as disclosed in Fig. 1, whereby the detonating plunger is normally and constantly stressed to keep it in the dotted lower position F', Fig. 1. The paddle portion B at this point is provided with an aperture K, through which the spring 21 and the head end of the plunger operatively extend.

The sides 15—15 of plunger H, Figs. 8 and 9, near the detonating end, are provided with op-

posed, outflaring lugs 16—16, which have open ended slots 17—17 in their outer ends. The opposite edges of the sides 15—15, as in said figures, are provided with open ended slots 18—18. The slots 17—17 and 18—18 are located in a common plane as indicated by the dot and dash line O—O, Fig. 8. These four open ended slots comprise a four point support, for operatively holding a resilient U-shaped spring wire by pass latch 24—24'—24, Figs. 1 and 13, for operating a strip feed wheel, generally denoted by W, Figs. 1, 6 and 7, the slots receiving therein the said latch, the connecting portion 24' resting in slots 18—18 of the plunger H, and the side arms 24—24 resting in the slots 17—17 of said plunger, this being disclosed in Fig. 13, and shown dotted in Fig. 2. The arms 24—24 are so held in operative position, when in assembly as in Figs. 1 and 2, as to span the outside faces of the sprocket W, and to be engageable with feeding ratchet teeth 23, which are stamped out of the sides of the sprockets 26, as shown in Figs. 1, 6 and 7.

When the plunger H, is in the non-operative position, shown dotted in Fig. 1, and is pushed to the full position shown therein, to detonate a cap, the arms 24—24, being resilient, by-pass the opposed adjacent outstanding ratchet teeth 23, and when the plunger returns to normal position under the influence of spring 21, the arms or latches 24—24 rotate the sprocket W in the direction of the adjacent arrow, Fig. 1, and thus give the sprocket W a strip feeding motion.

The bottom portion 1, of the frame is provided with two alined sets of raised ears 13—13, Figs. 1, 4 and 5, under which is slipped the base 25' of a U-shaped detent spring latch shown in side elevation in Fig. 1, and in front elevation in Fig. 12. The latch is made, preferably, of thin flat spring steel and has two upstanding arms 25—25 extending from the base 25', with the upper ends of said arms being slightly angled to contact with the edges of the latch teeth 23, as disclosed in Fig. 1.

This later detent also spans the sprocket flanges 26 and cooperates with feed pawl 24—24'—24 to prevent back rotation of the sprocket, when the pawl moves upwardly to engage the next adjacent feed tooth 23.

As disclosed, reciprocation of the plunger H, rotates the sprocket wheel W, step by step. The sprocket is operatively held for rotation by two flat, side bearing posts 5—5, Figs. 1, 4 and 5, which are blanked out from, and bent up at right angles to the bottom plate 1, the rounded ends of said posts, having indented cone like bearing portions 8—8, which engage with cone like indents C—C in the hub A of the sprocket wheel W and to which hub the toothed flanges 26—26 are affixed, as shown in Fig. 7. The posts, being somewhat resilient, permit of springing the sprocket wheel into operative relation therebetween, for rotative support thereby.

The bottom plate 1, has located, adjacent to the sprocket wheel mounting, a magazine roll support, in the nature of two integral, upstanding opposed and alined lugs 4—4, Figs. 1, 4 and 5, which are located at right angles to the bottom 1, and on the opposite side edges thereof, and each lug is provided with a partially blanked out and inthrust tongue, 6, Fig. 11, to provide a resilient, opposed, compressive firing strip roll bearing, said tongues having indented cone-like bearing centers 7—7, which engage in the ends of a wooden center of the continuous, rolled cap strip T, not shown, but understood.

As thus constructed, an empty cap strip center may be removed and replaced by a continuous, full roll, by springing the empty center out and springing a full roll between the bearing tongues 6—6.

The rolled cap strip T is provided along its outer edges as at P, Fig. 2, with sprocket holes, which are pitched to suit the pitch of the teeth on sprocket wheel W, and with the roll T in position, as shown in Fig. 1, the strip is threaded from the bottom of the roll, over the sprocket W and through the guide lugs 9—9 and guide slot 12.

The detonating cap portions X of the paper strip are so spaced that when one of detonating portions X are immediately adjacent the detonating ends S of the plunger H, that when a cap is fired by the movement of the plunger, the return movement thereof brings a fresh detonating portion X into the detonating position.

The apparatus may be attached to the paddle B, by means of rivets R, or the like, being passed through apertures 14—14 in the frame bottom 1, Fig. 4, and through alined holes in the paddle B.

The paddle B has attached thereto, at any convenient point, a captive rubber ball D, shown dotted, Fig. 1, the ball being suitably connected to the paddle by a rubber strand R, also shown dotted.

In operation the ball is batted away from the paddle and upon rebound the player tries to cause the ball to strike the plunger head F, and thus detonate a cap, which constitutes a merit in play. The player may also try to bat the ball upon the plunger and again catch it on the plunger on the rebound constituting a double merit in play.

Having thus described the invention what is claimed is:

1. A game apparatus including in combination a bat having a plunger mounted thereon, said plunger being normally forwardly extended and including a stem having a front ball striking head and a striking back end, said end being passed through the bat, the latter being provided with an aperture; a rigid frame fixedly mounted on the back of said bat and having a plate disposed opposite said end for holding a percussion cap, said end being normally spaced from the cap, whereby when said head is struck against a ball said plunger may be repelled so as to strike said end against the cap for exploding the latter.

2. A game apparatus including in combination a bat having a plunger mounted thereon, said bat having therein an aperture, said plunger being normally forwardly extended and including a stem having a front ball striking head and a striking back end; a rigid frame fixedly mounted on the back of the bat and extending partly over said aperture so as to provide a bearing for the stem, said frame having a plate spaced from said end for holding a percussion cap, whereby when said head is struck against a ball the plunger may be repelled so that said striking end may explode the cap.

3. A percussive sounding device for a game apparatus comprising in combination a bat having a plunger mounted thereon, there being an aperture in the bat for the stem of the plunger, said plunger being normally forwardly extended and having a front ball striking head and a flat back end striking face, said device having a frame rigid with the back of the bat, said frame providing bearings for the stem and having a flat face opposite the first face and normally spaced

therefrom, and means for holding a percussion cap on said plate so that when a ball is struck by said head the plunger may be repelled whereby to explode the cap between said faces.

4. A percussive sounding device for a game apparatus comprising in combination a bat including an aperture and having a plunger operatively mounted thereon, said plunger being normally extended and having a front ball striking head, the rear end of said plunger being formed as a hammer and passed through the aperture; said device having a frame rigid with the back of the bat, said frame providing an anvil opposite the hammer; a sprocket wheel mounted on the frame for stepping movement in one direction, a perforated flexible strip having thereon spaced percussion caps, there being one cap on the anvil and there being teeth of the wheel in associated perforations, so that when the plunger is moved backwardly on striking a ball the cap may be exploded by the hammer, and sprocket wheel operating means carried by said plunger, so that as the latter moves forwardly said wheel may be revolved one step, whereby to advance a new cap to said anvil.

5. A percussive sounding device for a game apparatus comprising a bat, said device having a frame mounted on the bat and including a reciprocable plunger, said frame having a portion forming an anvil and the plunger being normally extended forwardly to space its inner end from the anvil, said end forming a hammer; a perforated flexible strip having thereon spaced percussion caps and there being one cap on the anvil; a sprocket wheel having peripheral teeth certain of which are disposed in perforations of the strip, said wheel including opposite side teeth having radially disposed surfaces facing in one rotary direction; means for operating said wheel, said means having a two-armed spring member mounted on the plunger, there being one arm on each side of the wheel, so that as the plunger moves backwardly to cause the hammer to explode the cap, said arms may springingly slip over opposed side teeth on one side of the transverse vertical center of the wheel, the arms being then engaged on the surfaces of the teeth last mentioned whereby as said plunger returns or moves forwardly said arms may be effective to rotate the wheel one step for advancing a new cap to the anvil, and spring clips rising from said frame on the opposite side of said center for engaging certain of said surfaces of the side teeth whereby to hold the wheel after each stepping movement.

6. A game device operated by a captive ball comprising in combination a plunger including a stem and having a front head forming a correct striking zone, said stem having a back striking end; a bat to which the ball is tethered and having a flat face surrounding said head, the plunger being reciprocally mounted on the bat; means mounted on the back of the bat and forming a bearing for said stem, said means having a plate spaced from said back end for holding a percussive cap, so that when a correct stroke is executed, said zone being struck against the ball, the plunger may be repelled whereby said back end may then be effective to explode the cap.

7. A game device according to claim 6, wherein the plunger is spring operated to urge it forwardly after each stroke; a strip of material carrying said cap and there being successive caps following the first cap, and means operated by said plunger on each forward stroke thereof for advancing said strip whereby to cause a new cap to be alined with said striking end.

8. A game device comprising in combination a bat including a flat face and having a relatively large aperture passing therethrough; a ball tethered in said face; a plunger comprising a stem including a back striking end and having a normally forwardly extended, wide ball striking head, said head being in registry with the aperture; means mounted on the back of the bat and forming a bearing for said stem, said means having a portion forming an anvil, the latter being opposite to and normally spaced from said striking end; a perforated traveling strip having thereon spaced percussion caps, there being one cap on the anvil, so that when said head is struck against the ball the plunger may be urged backwardly whereby said striking end may explode the cap on the anvil; and means operated by said plunger on the return stroke thereof for advancing said strip to place the next cap on the anvil, said latter means including a sprocket wheel the teeth of which are engageable in the perforations of the strip.

9. In a game apparatus comprising a perforated strip of percussion caps and including a bat having thereon a captive ball and a plunger, said plunger being repellable by the ball for detonating one cap on each repelling stroke; means for advancing said strip so as to move subsequent caps thereof into detonating position, said means including a sprocket wheel the teeth of which are engageable in the strip perforations; said plunger having thereon a side arm; and side teeth on said wheel whereby the latter may be rotated one step each time the plunger returns, said arm being engageable with the side teeth.

10. In a game apparatus adapted for operation in combination with a strip of percussive caps comprising a bat having a ball tethered thereto and including a ball operated plunger, the plunger being normally forwardly disposed and being repellable by the ball to detonate the caps successively, said strip having perforations therein; means for advancing said strip so as to move subsequent caps thereof into detonating position, said means including a sprocket wheel the teeth of which are engageable in the perforations; said plunger having thereon side spring arms, said arm being adapted to slide over part of the wheel on the repellant stroke of the plunger; and side teeth integral with said wheel and having working surfaces facing in one rotary direction, whereby each time the plunger moves forwardly said arms may engage certain of said surfaces, substantially as and for the purpose set forth.

HAROLD D. PENNEY.