AERIAL PROJECTILE GAME COMPRISING A TARGET HAVING MEANS RESPONSIVE TO NOT BEING HIT

Fig. 1

Fig. 2

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Filed June 27, 1966, Ser. No. 560,655
7 Claims. (Cl. 273—101)

The present invention relates generally to games, and more particularly to a game for children having consider-
able play value resulting from individual player participa-
tion as well as from the manner in which the participation of the players is coordinated in an overall plan or method of playing the game.

The play value of a game is a function of the general method of playing the game, and also of the excitement and suspense inherent in the activities required of the players in playing the game. Thus, the general plan or method of playing the game should be appealing to the players, and the specific activities required on the part of the individual players should also heighten the players' interest. Further, where circumstances affecting the playing of the game are continually changing, this usually also promotes and enhances the play value thereof. Despite a continuing effort in the toy industry to produce games having the foregoing and other desirable attributes, very few such games are produced. This undoubtedly is due to the difficulty inherent in the task itself, and also due to the further requirement that the game be capable of being economically produced and also meet other such commercial requirements.

Briefly, it is an object of the present invention to pro-
vide a child's game having considerable play value and also lending itself to conventional techniques and methods of economical mass production. Specifically, it is an object to provide a child's game having a contemplated method of play which is appealing to children and wherein the players are further continually required to perform certain activities during the playing of the game which promote a high level of interest in the players at all times. A child's game demonstrating features and objects of the present invention includes a rotatably mounted main toy figure having a mouth opening and an arm pivotally mounted therein. During the playing of the game, the arm is capable of movement from a raised cocked position into an at-rest position simulating the striking of one of plural additional toy figures circumferentially spaced about the main toy figure and each defining a playing sta-
tion. The game further includes means whereby a player can selectively stop the main toy figure adjacent one of the secondary toy figures and simultaneously therewith initiate the operation of mechanisms for starting the raised arm in movement from its raised cocked position into the at-rest position thereof. The player, however, at the playing station to which the main toy figure is directed has an opportunity, dependent upon his skill, of taking appropri-
ate action which, if successful, results in disabling the arm from movement from the raised cocked position. This general plan of play is continually repeated in the playing of the game so that different players at the different playing stations thereof are placed in the circumstances of having the opportunity of disabling the movement of the arm on the main toy figure, all of which keeps each of the players active in the playing of the game and main-
tains a high level of interest in the players.

The above brief description, as well as further objects, features and advantages of the present invention, will be more fully appreciated by reference to the following de-
tailed description of a presently preferred, but nonetheless illustrative embodiment in accordance with the present invention, when taken in conjunction with the accompany-
ing drawings, wherein:

FIG. 1 is a front elevational view of a child's game demonstrating features of the present invention and illus-
trating the relative locations of a toy figure and catapult means thereof;

FIG. 2 is a plan view of the child's game further illustrating the respective relative locations of the parts thereof;

FIG. 3 is an elevational view, in section taken on line 3—3 of FIG. 2, illustrating internal features of construc-
tion of the toy figure, and also the movements of said fig-
ure and of one of the catapult means in full line and phan-
tom line perspective;

FIG. 4 is a plan view, in section taken on line 4—4 of FIG. 3, illustrating a preferred mechanism for causing rotation of the toy figure about its longitudinal axis;

FIG. 5 is a partial sectional view, taken on line 5—5 of FIG. 3 and looking in the direction of the arrows, illus-
trating further details of construction of a latching me-
chanism engaging with a depending portion of the toy figure;

FIG. 6 is a partial plan view similar to FIG. 5, but showing the latching mechanism disengaged or unlaunched from the depending portion of the toy figure;

FIG. 7 is a partial sectional view on an enlarged scale and taken on line 7—7 of FIG. 6, illustrating further details of construction of said unlatching mechanism; and

FIG. 8 is an elevational view, partially in section, illus-
trating the path of movement of a moving part of the toy figure in full line and phantom line perspective, and also illustrating the contemplated means for selectively controlling the movement of this moving part.

Reference is now made to the drawings and in particu-
lar to FIGS. 1, 2 wherein there is shown a child's game, generally designated 10, demonstrating features and ob-
jects of the present invention. As a major component, the
game 10 includes a molded toy figure 12, which in the
illustrated embodiment has the shape and appearance of a
tiger, and which is appropriately mounted for rotational movement R about its longitudinal axis centrally of a
molded base member 14. Circumspherically spaced about the
toy figure 12 in the four corners of the molded base
14 are catapult means, herein individually and collective-
genally designated 16. Among other features, the toy
figure 12 includes a large opening 18 at a location simulat-
ing the mouth of the animal, and a pivotally mounted
element 20 simulating one of the front limb members 20a
of the animal engaging a club 20b. Referring to FIG. 8,
and as will be described in greater detail subsequently
herein, the movable element 20 has a raised cocked posi-
tion as shown in full line in FIG. 8 and is movable there-
from through a path of movement P into an at-rest posi-
tion shown in phantom perspective wherein the club 20b
simulates striking a toy figure 22 of the catapult means
16 occupying a position facing the mouth opening 18 of
the toy figure 12. The contemplated method of playing
the game 10, however, and the construction of the major
components of this game is to provide this method of play
has provision for stopping the downward movement of the
element 20 before it can obtain the position striking the
toy figure 22. To achieve this, a player must success-
fully operate the catapult 16 such that an object 24, shown
in FIG. 8 in its progressive positions of movement along a
path C, is catapulted through the mouth opening 18 into the interior of the toy figure 12. Once inside the toy
figure 12, the object 24 (which may be an ordinary
marble) is effective in jamming the internal mechanism
to prevent movement of the element 20 from the cocked
position thereof in which it simulates striking the toy figure 22.

Reference is now made to the structural features em-
bodied by the toy figure 12 which produces the functioning thereof in the manner which has just been generally described. The toy figure 12 will be understood to be a conventional plastic article of manufacture produced by an appropriate molding process and having an appropriate shape and features to simulate an animal, in this case a horse, including a head 12a having the mouth opening 18 therein, a body 12b, and hind portions 12c also functioning as a base for the figure 12. As best shown in FIGS. 3, the base 12c has circumferentially spaced projections 12d which are engaged in circumferential openings in a base member 26 mounting the toy figure 12 in an appropriate upright position, the base member 26 including a flat supporting surface 26a having a peripheral downwardly turned skirt 26b. The molded base 14 has a wall 14a bounding a centrally located opening 14b which accommodates the skirt 26b, the wall 14a then extending beneath the skirt 26b and the figure 12. At a point coinciding with the center of the base 14 the wall 14a has an integrally molded upstanding pin 14c which is accommodated in a depending hub 26c, and which enables rotational movement of the figure 12 about the axis of the pin 14c which coincides with the longitudinal axis of the figure 12.

The manner in which the toy figure 12 is propelled in rotation can best be understood by a comparison of FIGS. 3 and 4. The lower end of the hub 26c is formed with circumferentially spaced teeth 26d serving as a gear and in meshing engagement with teeth 28a provided at one end on a pivotally mounted lever 28. A finger grip 28b is provided on an accessible end of the lever 28 which extends through a slot 30 in the molded base 14. A helical spring 32 is attached rearwardly of the lever pivot, as at 32a, and at its other end is attached to a pin 32b on the lower wall 14a of the molded base 14 as illustrated in FIG. 4. Normally the lever end 28c is clear of the teeth 26d, but is placed in meshing engagement therewith in response to pivotal movement of the opposite end 28b in a clockwise direction. While partaking of this movement, the spring 32 is extended. When the lever 28b is then released, the meshing end 28c is urged in movement by the spring 32, returning the lever 28 to the clearance position of FIG. 4 and causing spinning or rotation of the figure 12 on the pin 14c.

Reference is again particularly made to FIGS. 5 and 6 wherein is shown supported on the underside of the base support 26a and thus rotating in unison therewith, a trip plate 34. The connection of the trip plate 34 to the support 26a is provided by circumferentially spaced depending projections 36 which engage about the periphery of the trip plate 34, holding the trip plate 34 against the support 26a while permitting limited relative movement therebetween. The extent of such movement is determined by the spacing between a pair of projections 36 circumferentially spaced about the support 26a and each pair of which straddles a radial extension 34a of the trip plate 34. The normal position for the trip plate 34 is that position shown in FIG. 5 which is established under the urgency of a spring 40 connected at one end, as at 40a, to one of the radial extensions 34a and at the other end to a pin 40b dependent from the underside of the support 26a. As may be best appreciated by a comparison of FIGS. 3, 4, with FIGS. 5, 6, 6, operable at each of the four corners of the molded base 14 is a trip lever 42 pivotally mounted, as at 42a, and having an end 42b accessible through an opening in the molded base 14 so that the lever 42 can be conveniently depressed by a player. The other end of the lever 42 terminates in a turned-up extension 42c which in response to pivotal lever movement is projected into the path of rotation of the radial extensions 34a of the trip plate 34. When any one of the levers 42 is actuated, the extension 42c on such lever thus moves into a position in which one of the radial extensions 34a encounters the extension 42c and causes rotation of the trip plate 34 to cease. Immediately thereafter, the rotation of the toy figure 12 mounted on the support 26a also is terminated, but not before the momentum of rotation carries the support 26a slightly out of line until the projections 38 thereof abut the then stationary radial extensions 34a. This slight relative movement between the trip plate 34 and the support 26a is adequate for unlatching an engaged portion of the toy 12, and is effective to set in motion the functioning thereof which could result in the pivotal movement element 28b moving from its cocked raised position into its lowered at-rest position.

As may be best appreciated by a comparison of FIGS. 3, 5, 6, the portion of the toy figure 12 which is unlatched by relative movement of the trip plate 34 and support plate 26a, as just described, consists of a pin 44 depending from the support 26a in a movable part 46 within the body 12b of the toy 12, the pin 44 extending through the plate 26a and through a notch 34b in the trip plate 34. A notch 44a in the free end of the pin 44 (see in particular FIG. 5) is adapted to engage an edge bounding the notch 34b when said edge snaps into place within the notch 44a under the urgency of the spring 40. This engagement of the pin 44 with the trip plate 34 occurs in the extreme raised position of the element 20, in which position, as will be described in greater detail subsequently, the pin 44 is projected into its lowermost position presenting the notch 44a for engagement with an edge of the slot 34b. When, however, one of the radial extensions 34a abuts a lever end 42c which has been pivoted into the path of rotation thereof, the sudden stop of the trip plate 34 while the support plate 26a continues slightly in rotation results in the pin 44 being carried by this slight rotation of the support 26a in a direction which unlatches the pin 44 from the then stationary trip plate 34. When this occurs, a controlled raising movement occurs in the internal movable part 46 which mounts the pin 44, this movement being under urgency of the spring 48 connected at one end to the part 46 and at the other end to a fixed point on the inner surface of the toy body 12b.

Tracing the movement of the part 46 to the movement of the element 20, attention is directed in particular to FIG. 1 wherein it is shown that an upper end 46a of the part 46 is connected to a crank section 50a of a shaft 50 appropriately journaled for rotation transversely of and at the upper end of the toy body 12b. An end 50b of the shaft 50 is extended into the housing of the toy limb 20a and is appropriately connected thereto, as at 50c. By a comparison of FIGS. 1 and 3 it can be best appreciated that upward movement of the part 46 under the urgency of the spring 48 will result in the cranking of the shaft 50 in rotation and the lowering of the element 20 from the raised position shown in these figures to the lowered position shown in phantom perspective in FIG. 8.

In accordance with the present invention, however, the lowering movement of the element 20 as just described does not immediately occur upon the unlatching of the pin 44 from the trip plate 34. This is for the reason that attached to the lower end of the part 46 adjacent to the pin 44 is a conventionally constructed suction cap 52 of an appropriate elastomeric material. As is generally understood, the suction cap 52 when pressed firmly against a smooth surface area such as is provided in a medial location on the support plate 26a is capable of maintaining a suction hold on the surface 52a which, however, is ultimately overcome by the spring 48 acting in opposition thereto. Thus, the functioning of the cap 52 provides a necessary time delay in the movement of the element 20 from its raised cocked position to its lowered at-rest position. Further in accordance with the present invention, it is contemplated that during this time delay that one of the players of the game 10 will have the opportunity of utilizing one of the catapult mechanisms 16 to catapult a marble 24 or similar item into the mouth opening 18, and if successful in this place-
ment of the marble 24 being able to jam the movement of the moving part 46 so that the at-rest position of the element 20 is not achieved. To this end, the toy body is provided with an inclined wall 54 at the lower end of the mouth opening 18 which directs the rolling marble 24 positioned within the mouth opening 18 into a confined passageway formed between another wall 54a and a front wall 46b formed on the part 46. The facing walls 54a and 46b are shaped to engage the marble 24 so that the at-rest position of the moving part 46 is effective to project the marble 24 into a raised position. In this raised position, the player can effectively press down on the flattened surface 58e of this leg until abutment thereof against the toy figure 22, as at the stop surface 22a. Although the leg 58e thus comes to an abrupt stop, the marble 24 is carried by momentum out of the holding structure 58d and is catapulted through a path of movement C towards the mouth opening 18 and, depending on the skill of the player, can be successfully made to enter this opening and attain the operative position previously described jamming further movement of the internal movable part 46. Assuming that this jamming position for the marble 24 is achieved, by merely pivoting the arm 20 back into a raised position and to the fullest extent possible with the cap 52 firmly pressed against the surface 52a, such as is shown in FIG. 3, the space between the walls 46b and 54a is increased to the dimension D1 thereby causing the release of the jarring marble from between these walls and the rolling of this marble out of the opening 56 and into an accessible position on the toy base 12c. The toy 10 is then in a condition for the playing procedures described herein to be repeated and performed by each of the players.

A latitude of modification, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What is claimed is:

1. In a game having a plurality of playing stations and playing pieces at each station thereof, a figure mounted at a central location relative to said plurality of playing stations including an movable arm and having an open mouth, an actuating mechanism operatively connected to said movable arm and including time delay means for causing said arm to move into engagement with one of said playing pieces upon activation of said actuating mechanism said playing pieces comprising object catapulting means adapted and dependent upon the skill of a player to cause the catapulting of an object into the mouth of said figure, means responsive to an object being received within said open mouth and operable to abort said actuating mechanism to thereby disable said arm from moving into contact with said playing piece, means to cause rotation of said figure, means at each of said playing stations and operable under the control of the player therefor for causing said figure to stop in a position directed toward a particular playing station, and means responsive to the stopping of the rotation of said figure for initiating operation of said actuating mechanism.

2. A game comprising a rotatably mounted toy figure having a mouth opening into the interior thereof, an arm pivotally mounted on said figure, actuating means disposed within the interior of said figure operatively connected to said arm and normally functioning to allow pivot movement thereof, plural playing stations circumferentially spaced about said toy figure, first means operatively connected to cause rotation of said toy figure past said playing stations, a second means operable at each of said playing stations to stop the rotation of said toy figure adjacent one of said playing stations and means responsive to the stopping of said rotation to operate said actuating means to initiate pivotal movement of the arm on said figure into a predetermined position relative to said one playing station,
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7 and catapult means at each playing station for propelling an object through said mouth opening into a position within the interior of said toy figure effective to disable said normal functioning of said actuating means.

3. A game according to claim 2 including time delay means operatively connected to said actuating means to cause an initial delay in the operation thereof.

4. A game according to claim 2 wherein said actuating means includes a movable member and wall structure on the interior of said toy figure defining a passageway therebetween having communication with said mouth opening, whereby an object received within said mouth opening is effective to enter within said passageway and thereby jam said member against movement to cause the disabling of the normal functioning of said actuating means.

5. A game according to claim 4 wherein said actuating means further includes a cocking mechanism operatively connected to said pivotally mounted arm and effective to maintain said arm in a cocked raised position, a latch operatively connected to releasably engage said cocking mechanism for maintaining an operative position thereof providing said cocked position of said arm, and latch-tripping means operatively connected to selectively disengage said latch from said cocking mechanism and to simultaneously stop rotation of said figure adjacent one of said playing stations.

6. A game according to claim 5 including a time delay means operatively mounted on said movable member of said cocking mechanism and effective to delay the movement thereof for a predetermined time interval after said latch is disengaged from said cocking mechanism, whereby a player at said one station is afforded the opportunity of propelling an object through said mouth opening during said predetermined time interval.

7. A game according to claim 6 wherein said time delay means comprises a suction cup.

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