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3,495,828

TOY APPARATUS INCLUDING PROJECTILE PROJECTING APPARATUS MOUNTED IN A SCREEN FOR PIVOTAL MOVEMENT

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Filed Sept. 1, 1967, Ser. No. 664,986

Int. Cl. A63b 65/12

U.S. Cl. 273—101

6 Claims

ABSTRACT OF THE DISCLOSURE

A toy apparatus including first and second target area-screen assemblies located in proximity to each other with each of the assemblies having a horizontal sheet disposed to receive small targets, which sheets are located between vertical screens on the assemblies, which screens extend around the edges of the horizontal sheets other than the edges of said sheets immediately adjacent each other; said assemblies each having a projecting apparatus mounted in the vertical screen, which projectile projecting apparatus is removable in order to permit the horizontal sheet and the screens to be folded flat for storage.

This invention relates to toy apparatus and more particularly to toy apparatus having a projectile project apparatus mounted in a screen for pivotal movement.

Briefly, the present invention relates to a game wherein targets, such as for example, toy soldiers, are located in positions opposite to each other. The game includes two assemblies each having a target area adapted to receive the above mentioned targets. Also, each of the assemblies have a vertical primary screen in which is located a projectile projecting apparatus. The primary vertical screen is of sufficient size that a person can crouch behind it and the major portion of his body would be obscured by the screen. The primary screen is further defined by a peephole through which the person can look, and there is provided on the side of the screen facing the opponent, a pictorial representation of an item such as, for example, a tank. Additionally, each assembly includes sidewall sections which extend from the primary screen section laterally and forwardly for the purposes of: providing support for the vertical screen which is hingedly mounted to the horizontal sheet; limiting the travel of projectiles which have been fired by an opponent toward target areas in front of the screen and sidewalls, i.e., acting as a backstop; and giving the game an additional air of authenticity by battlefield scenery depicted on the sidewall sections.

Additionally, as will be explained, each of the assemblies are particularly constructed such that they may be easily folded to a flat condition for storage purposes—thus affording considerable space savings.

Moreover, although it is contemplated that the assemblies will be normally used in pairs, a single device could be used. However, in such case, there would not be the advantage of the "backstop" effect of the sidewall sections since the projectiles would be projected away from the sidewalls. However, the person still would have the feeling of firing a gun from, for example, a tank.

With the foregoing in mind, it is a major object of this invention to provide a new, entertaining toy apparatus having a screen of sufficient size that a person may crouch behind it and view through a peephole in the screen at objects which he is shooting at in order to feel more a part of the scene.

Another object of this invention is to provide a lightweight toy apparatus having a vertical screen and structure which is sufficiently large to obstruct the view of the

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bulk of a person's body crouched behind the screen, and yet the apparatus can be easily folded into a flat, compact package for storage purposes.

A further object of this invention is to provide an improved toy apparatus having a screen with a barrel, through which projectiles are shot, mounted on a vertical screen, and having provision for loading a projectile projecting device at a position behind the screen.

It is still another object of this invention to provide toy apparatus including a pair of target area-screen assemblies located in opposition with the target area of each assembly being located between the screens so that the screens will terminate the flight of the projectiles after they have passed through the target area.

It is still another object of this invention to provide an improved toy apparatus having substantial size when set up, and yet which can be folded into a flat, compact package for storage.

It is a still further object of this invention to provide a toy apparatus of relatively large size, and yet, the cost of manufacturing the apparatus is very low.

A still further object of this invention is to provide toy apparatus which can be used in a wide variety of ways to entertain the user.

Other and further objects of this invention will become apparent in the detailed description below in connection with the attached drawings wherein:

FIGURE 1 is a plan view of a pair of target area-screen assemblies incorporating the present invention;

FIGURE 2 is a frontal view of one of the target area-screen assemblies in FIGURE 1, as seen from line 2—2 in FIGURE 1;

FIGURE 3 is a frontal view of the other target area-screen assemblies in FIGURE 1, as seen from line 3—3 in FIG. 1;

FIGURE 4 is an enlarged fragmentary partial cross sectional view of one form of the projectile projecting apparatus of the present invention;

FIGURE 5 is a small view of one target area-screen assembly at an initial step of folding the assembly to a storage position;

FIGURE 6 is a view of the assembly disclosed in FIGURE 5 at a point in the folding process wherein the assembly is more near the storage condition than in FIGURE 5;

FIGURE 7 is a view of the assembly shown in FIGURE 5 at a point in the folding process where the parts are more near the storage condition than in FIGURE 6;

FIGURE 8 is a view of the assembly disclosed in FIGURE 5 folded into the storage condition; and

FIGURE 9 is an enlarged fragmentary cross sectional view, taken along line 9—9 in FIGURE 1, disclosing details of the manner of joining the lower edge of the primary vertical screen with the rear edge of the horizontal sheet.

Referring now to FIGURE 1, there is shown a first embodiment of the present invention. In this figure there are shown a first target area-screen assembly, indicated generally by the arrow 10, and a second target area-screen assembly, indicated generally by the arrow 11. The first assembly 10 includes a first target area, indicated generally by the arrow 12, while the assembly 11 has a second target area, indicated generally by the arrow 13 disposed immediately adjacent the first target area. On the sides of the target areas 12 and 13 located away from the corresponding target area, there is provided screens having projectile projecting apparatus, indicated generally by the arrows 14 and 15, while a plurality of toy soldiers 16 are located in the second target area 13 and a plurality of toy soldiers 17 are disposed in the first target area 12.

In use, the screen sections located around the periphery of the target areas, are of sufficient sizes to stop projectiles which have passed through the respective target areas. Also, at the center portion of the screen—the point at which the projectile projecting apparatus 14 and 15 are located, the screen is of sufficient height that a person can crouch behind the screen and view through the peephole in the screen. Accordingly, the invention will be described on the basis that the target areas of each respective assembly 10 or 11 is located in front of the screen, while the person is located behind the screen. Also, each assembly 10 and 11 will be described with reference to the left side and right side as they would be viewed by a person crouching behind the center portion of the screen. It should be understood, however, that in this specification and the appended claims, the use of words such as “front” and “rear” are merely for establishing the relativity between the parts of the apparatus, and it is not intended that the invention be limited to the apparatus only when it is in a certain position.

In the first embodiment, it is preferred that the target area 12 be located above a horizontal sheet. As mentioned above, and as will be described in further detail below, the apparatus is of fairly large size since the apparatus must be of sufficiently large size to obstruct the view of the user. Therefore, it is important that special provision be made in order that each assembly 10 and 11 may be folded into a small compact size. To this end, the above mentioned horizontal sheet has a main section 20 of the predetermined width with a left section 21 (as viewed from the right in FIGURE 1) extending laterally to the left from the main section 20. The left section 21 is hingedly secured to the main section 20 by a hinge 22 which is preferably a cloth hinge. The hinge will be described further below. The left section 21 is further defined by a diagonal edge 24 with side edge 25 extending parallel to the hinge 22. At its right side, the main section 20 has a right section 26 extending laterally from hinge 27 which joins the main section and the right section together. As in the case of the left section 21, the right section 26 is provided with a diagonal edge 28 extending from the inward side of the right section to side edge 29 of said right section.

As mentioned previously, the person using the apparatus, or assembly, crouches behind a screen of the assembly and fires a projectile projecting device which extends through the screen. Referring now to FIGURE 3, as well as FIGURE 1, the screen portion of the assembly 10 will be described in further detail. Firstly, there is provided at the rear edge of the main section 20, a primary vertical screen 33 extending upwardly with an upstanding section 34 forming the upper part of the primary vertical screen. The upstanding portion 34 is shaped and painted as the turret of a German tank. This section 34 has a peephole 35 therein through which a person can view. By way of example, the screen 33 can be approximately 15 inches high to the bottom of the section 34, and the section 34 can be another 14 or 15 inches high. Additionally, the screen 33, and therefore the section 20, can be about 2 feet wide. Therefore, a person can crouch behind the screen with little, if any, of his body being viewable by a person at the operative position of the assembly 11.

Extending from the left side of the vertical screen 33 is a left diagonal wall section 37 joined to the screen by a hinge 38. Also, a left side wall section 39 is joined to the left diagonal wall section 37 by means of a hinge 40. On the right hand side of the primary screen 33, there is located a right diagonal wall section 42 joined to the screen by a hinge 43 and extending at about a 45° angle to the plane of the primary screen as in the case of the left diagonal wall section 37. Similarly, as in the case of the left side wall section 39, there is provided a right side wall section 45 joined to the right diagonal wall section 42 by means of a hinge 46. These hinges will be described in further detail below.

It will be noted that the wall sections 37, 39 and 42 and 45 provide several important functions. Firstly, these screens, which are preferably about 15 inches high, are disposed around the target area 12 so that any projectiles fired by the apparatus 15 and passing through the target area 12 will be stopped by the screen formed by the above mentioned wall sections. Additionally, the wall sections are high enough so that they will obstruct the view of a person behind the screen. Thirdly, it can be seen that the wall section extend laterally and forwardly from the primary vertical screen 33, and therefore, these sections provide a reliable support for the vertical screen. Additionally, there can be painted on the wall sections 37, 39, 42, and 45, by way of example, battleground scenes—which scenes will lend to the authenticity of the game. The same is true as to paintings on the horizontal sheet sections 20, 21, and 26.

Referring now to FIGURE 4, a preferred embodiment of the projectile projecting apparatus will be described in detail. In the preferred embodiment, the sections 20, 21, and 26, as well as the screen 33 and the wall sections 37, 39, 42, and 45 are made of cardboard as this material is relatively inexpensive. Similarly, the upstanding section 34 is made of cardboard. The section 34 is provided with a hole 48 therethrough which has a reinforcing grommet 49 glued to the rear face of the section and extending through the hole 48 to provide additional support. Extending through the hole 48 is a barrel 51 having at its rear end 52 an annular radial flange 53 for a purpose to be described. The front end 54 of the barrel 51 extends forward of the upstanding section 34 a substantial distance, and a passage, or bore, 55 extends axially the length of the barrel 51.

For reasons to be described, it is desired that the barrel 51 be easily removed from the assembly. Therefore, a low cost connection of the barrel to the section 34 is afforded by making the hole 48 sufficiently larger than the barrel 51 that the barrel can pivot about its rear end. Additionally, the flange 53 and a O-ring 57 function to limit the forward and rearward movement of the barrel 51. Yet, the barrel 51 can be quickly removed.

It is desired that during the time the game is being played, the barrel 51 continues to extend out from the front of the screen 33, since the barrel of a cannon on a tank always extends forward from the turret of the tank. And, as shown, the front side of the screen 33 and the upstanding section 34 are painted in the shape of a tank.

It is important to note that the apparatus 14 includes a projectile projecting device 59 which is substantially similar to the spring-loaded pistol which shoots suction-cup darts. More particularly, the device 59 includes a handle 60 with a trigger 61 near the junction of the handle and a barrel section 62 of the device. Within the device 59, there is located an unnumbered spring which can be “cocked” by forcing a projectile 65 rearwardly into the barrel section 62. Then, by pulling the trigger 61, the projectile 65 is projected.

With this assembly, the barrel 51 is continuously extending from the front of the primary screen 33. However, the device 59 can be loaded “inside the turret” by withdrawing the device from the barrel 51 and loading the projectile 65 into the device. Then, the barrel section 62 is reinserted into the bore 55 of the barrel 51 sufficiently that the barrel 51 can be pointed in the direction that is desired to fire the projectile 65. At that point, the operator will pull the trigger 61 and the projectile 65 will exit the barrel. Since the device 59 is essentially a common spring-loaded pistol, the assembly 14 has a very low cost. Additionally, at such times as it is desired, the device 59 can be used completely independently of the other apparatus—thus affording additional, desirable flexibility.

As mentioned previously, the structure is rather large. Accordingly, it is very important that the structure can be folded into a compact package. Referring now to the FIGURES 5 to 8 the folding process will be described in

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detail. Firstly, the barrel 51 must be removed from the upstanding section 34 in the manner described above. Then, the right section 26 is folded at the hinge 27 over onto the main section 20, and the left section 21 is similarly folded at the hinge 22. See FIGURE 5. Then, the left side wall section 39 is folded at hinge 40 to a position engaging the diagonal wall section 37, and both sections are folded at hinge 38 to the position shown in FIGURE 6 laying against the screen 33. Additionally, the right side wall section 45 is folded at hinge 46 to a position engaging the right diagonal wall section 42 as shown in FIGURE 6. At that time, the wall sections 42 and 45 are folded at the hinge 43 to the position shown in FIGURE 7, and the screen 33 with the wall sections are folded to the position shown in FIGURE 8. As can be seen, the unit forms a very compact package in the condition shown in FIGURE 8.

In order to permit the structure to be folded as disclosed in the FIGURES 5 to 8, hinges must be provided. Referring now to FIGURE 9, the hinges will be described in more detail with reference to one type of hinge which could be used between lower edge 69 of the vertical screen 33 and rear edge 70 of the section 20. More particularly, the hinge can take the form of a cloth strip having an anchor section 72 on one side of the strip and an anchor section 73 on the other side of the strip with a flexible intermediate portion 74 therebetween. The anchor sections 72 and 73 are secured to the respective edges 69 and 70. It will be noted that the intermediate portion, or section, has a considerable width. This is because, as can be seen in FIGURE 8, the hinge thus formed must be wide enough to accommodate the fact that—in the storage position—there are six layers of cardboard between the section 20 and the screen 33. The hinges 22, 27, 38, 40, 43, and 46 can be similarly formed by a flexible cloth tape. However, naturally, only the hinges 43 and 38 need have extra length in the intermediate section of the hinge material.

Referring back to FIGURES 1 and 2, the assembly 11 is substantially the same as the assembly 10 except that the screen section is shaped as an American tank as will be described. The assembly 11 has a horizontal sheet made up of a main section 80 with a left section 81 and right section 82 joined to the main section by hinges 83 and 84. As in the case of the assembly 10, the left section 81 has a left diagonal edge 85 and a left side edge 86 while the right section 82 has a right diagonal edge 87 and a right side edge 88.

The same as the screen, or wall section, in the assembly 10, the assembly 11 is provided with a primary vertical screen 90 having an upstanding portion 91 thereon. In this case, the upstanding portion 91 is shaped like an American tank to correspond with the picture depicted on the remaining portion of the front of the screen 90. The upstanding portion 91, i.e., the turret portion, has a peephole 92 therethrough through which a person can view, and additionally, the projectile projecting apparatus 15 extends through a hole in the section 91. The projectile projecting apparatus 15 is substantially the same as the apparatus 14 as is the manner of mounting the barrel of the apparatus 15. Therefore, these items will not be shown in detail.

As in the case of the assembly 10, it is preferred that wall, or screen means, extend from either side of the screen 90 to form a backstop to stop projectiles coming from the apparatus 14. To this end, there is a left diagonal wall section 94 joined to the screen 90 by a hinge 95 and extending along the diagonal edge 85 to a position where the wall section is joined to a left side wall section 96 by a hinge 97. Similarly, a right diagonal wall section 99 is joined to the right side of the screen 90 by a hinge 100 and extends along the edge 87 to a point where it joins with right side wall section 101 by means of a hinge 102. The horizontal sheet sections, and the wall sections, and the hinges are the same as in the assembly

10 in order that the assembly 11 can be folded as the assembly 10. Therefore, these items will not be described in detail.

Although, only a few embodiments of the present invention have been shown and described in detail, it will be apparent to those skilled in the art that such is by way of illustration only and numerous changes may be made thereto without departing from the spirit of the present invention.

We claim:

1. Toy apparatus comprising:

a vertical primary screen of sufficient height and width that it will obscure the view of the bulk of a person crouched behind the screen;

a target area disposed in front of said screen arranged to receive targets;

and a projectile projecting apparatus pivotally mounted on said screen, said projecting apparatus including: an elongated barrel having an axial opening through which projectiles may pass, said barrel being pivotally mounted to said screen and extending from said screen toward said target area a substantial distance;

and a projectile projecting device, said projectile projecting device being removably received at least part way into said barrel.

2. The invention set forth in claim 1 wherein:

there is printing on the target area side of said screen depicting a turret from which said barrel extends like a cannon mounted within said turret.

3. The invention set forth in claim 1 wherein:

said screen has a predetermined width;

a horizontal sheet in front of said screen on which there is located a target area, said horizontal sheet has a main section having a rear edge of a length equal to the width of said screen and joined to the bottom edge of the screen and having left and right sections, said left and right sections each being joined to said main section along an edge of the main section extending at substantially a right angle to said rear edge of said main section, said left and right sections each extending laterally from the edge at which each is joined with said main section and terminating in a laterally disposed side edge portion; hinge means joining said left and right sections with said main section for permitting each of said side sections to be folded over on top of said main section;

and backstop screen means extending generally along the side edges of said left and right sections, said backstop screen means upstanding from left and right sections a substantial distance so as to stop projectiles hitting the backstop screen means from a direction in front of the target area;

and a plurality of targets movably positioned on said target area on said horizontal sheet.

4. The invention set forth in claim 1 including:

a first horizontal sheet hingedly secured to a bottom edge of said vertical screen;

a second vertical primary screen;

a second horizontal sheet hingedly secured to a bottom edge of said second vertical screen;

front edges on the front of each of said horizontal sheets being located in proximity to each other such that the sheets are located between the vertical screens;

a plurality of first targets movably positioned on said first horizontal sheet;

a plurality of second targets movably positioned on said second horizontal sheet;

a projectile projection device pivotally secured to said second vertical screen for projecting projectiles at said first targets located on said first horizontal sheet.

5. The invention set forth in claim 4 wherein:

each of said horizontal sheets has a main section extending the width of the associated vertical primary screen, each said main section being hingedly secured at a rear edge to said vertical screen and having left and right edges extending at a right angle to the edge where said main section and said vertical screen join;

left and right side sections hingedly secured to said main section along said left and right side edges respectively.

6. The invention set forth in claim 1 wherein said primary vertical screen has an upstanding section and said projectile projecting apparatus is pivotally mounted on said upstanding section, and said upstanding section has therethrough an opening located at a position just above the position at which said projectile projecting apparatus is located, said opening being adapted to permit a person located behind the screen to view targets in front of the screen, said opening extending only a small distance upward and terminating a substantial

distance below the upper edge of the screen which substantial distance is several times greater than the height of the opening, said opening being only a small fraction of the width of the primary screen.

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U.S. Cl. X.R.

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