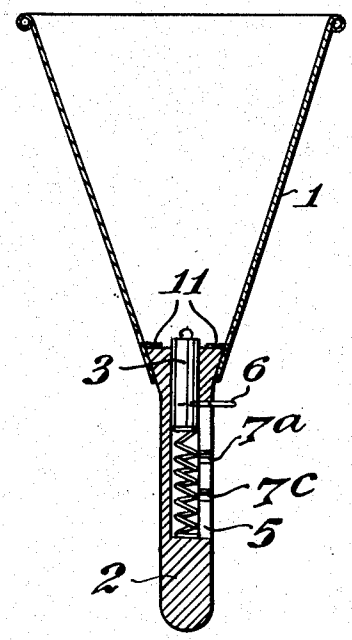
Nov. 11, 1952 A. GERHOLD 2,617,651

SPRING OPERATED PROJECTOR CATCHER

Filed March 22, 1949

FIG. 1.



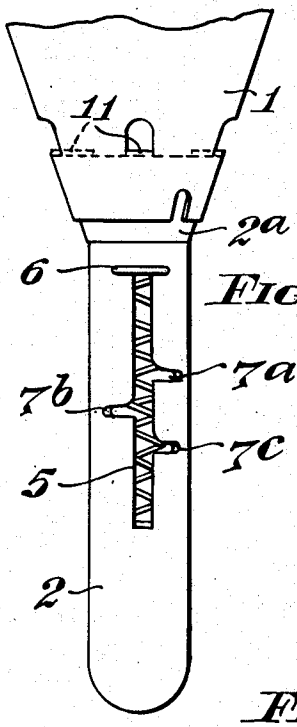
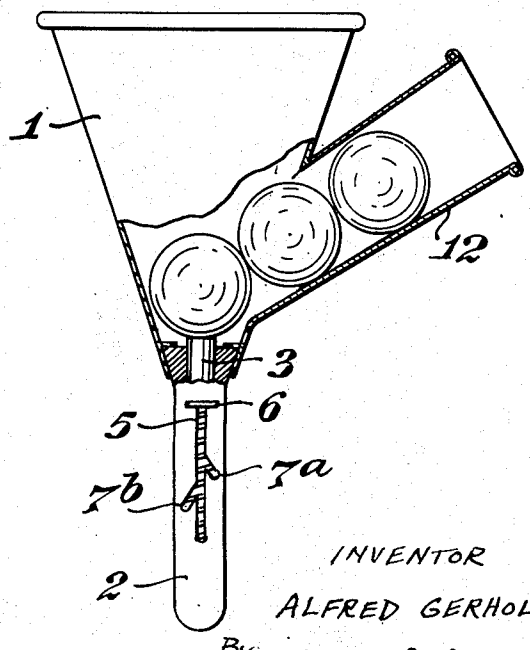


FIG. 2.

FIG. 3.



INVENTOR
ALFRED GERHOLD
By Emory L. Groff
ATTORNEY

Patented Nov. 11, 1952 2,617,651

UNITED STATES PATENT OFFICE

2,617,651

SPRING OPERATED PROJECTOR CATCHER

Alfred Gerhold, Westcliff-on-Sea, England

Application March 22, 1949, Serial No. 82,769
In Great Britain February 3, 1949

2 Claims. (Cl. 273—96)

1

This invention relates to a game appliance and in particular to an appliance for playing a cup and ball game. The primary object of the invention is to provide an apparatus in which the ball is propelled from the cup by means of a spring and in which the spring tension can be regulated by the user to suit requirements, the appliance being of simple and cheap construction.

A further object is to provide a compact ball game playing appliance which can be fabricated easily and simply, and in which the handle is simply attached to the cup, thereby enabling the appliance to be packed for transport with the handle detached.

With the above and other objects which will be apparent from the following specification in view, reference is now made to the accompanying drawings illustrating by way of example only, various preferred forms of appliance constructed in accordance with the present invention.

In the drawings:

Figure 1 is a view in section of one arrangement for giving adjustable tension to the spring;

Figure 2 is a view of a fragment thereof in elevation at right angles to Figure 1 to an enlarged scale;

Figure 3 is a view partly in section of another construction.

In the drawings, the apparatus includes a cone-like cup 1, which in the form shown in Figs. 1 2 and 3 is preferably of metal and a hollow handle or stem 2 preferably of wood, said handle or stem receiving therein the plunger 3 and its driving spring 4. A slot 5 is made through the wall of the handle 2, through which the stem of the screw eye 6 or similar member for hand operation projects. This slot is provided with a number of recesses such as 7a, 7b, 7c, extending inwardly from the edge of the slot as shown. With this arrangement the eye can be drawn down by hand, and by turning same to pivot about the axis of the plunger, the shank can be retained in any selected one of the recesses, thereby providing a means whereby the spring pressure can be adjusted. Thus, if the shank is lodged in the recess 7a, the spring 8 is loaded lightly and upon the turning of the eye in the opposite direction to clear the shank from the recess, the spring drives the plunger to impel the ball from the cup with a force which depends on the distance the eye is drawn down. If the shank is lodged in recess 7c, upon its release the ball will be impelled a greater distance than if the shank is lodged in recess 7a or 7b. The recesses which

2

may be disposed in staggered relation in opposite edges of the slot as shown or in the same edge allow for adjustment of the stressing or compression of the spring.

These recesses are in the form of slots and parallel sided and may be disposed at a right angle to the axis of the handle, although the said slots 7 may be of any suitable shape to allow the shank of the member 6 to enter therein and be released. Thus, the upper edge of each slot 7 may curve upwardly as it approaches the edge of the slot 5 (Fig. 2). This allows the shank to be released easily as a slight movement of the shank from the inner part of the slot outwardly will result in the pressure of the loaded spring assisting in the release of the shank from an engaged recess.

In another arrangement shown in Figure 3, the slots may be inclined downwardly and inwardly so that by exerting a downward pressure on the member 6 and a pressure to the right for example, the shank will drop in the slot 7a, whilst if the downward pressure is accompanied by a pressure to the left, the shank will drop in the slot 7b. With this arrangement the desired slot is easily engaged, and the piston 3 is driven upwardly by the spring simply by releasing the member 6.

The cone may be attached to the collar by adhesive, pins or like means, or, and preferably as shown, the cone and collar are formed integrally from a suitable material by moulding. The stem or handle part may also be formed by moulding. This provides an article of a robust nature and one in which the cone can be removed from or replaced on the stem easily and conveniently. This facilitates the packing of the apparatus when not in use or during transport. Any suitable quickly engaging and separating means however, such as bayonet slot and pin may be employed.

In the form illustrated in Figures 1, 2 and 3, the cone is fixed to the handle by stamping out lugs 11, which lugs are pressed over on to the top or end of the handle 2, after said handle has been placed in position by inserting same into the cone from the mouth, the flared end 2a of the handle fitting into the narrow end of the cone. This also enables the handle to be attached to the cone in a simple manner.

In the form illustrated in Figure 3, the cone has a tubular or hollow part 12 extending from its wall. This part 12 serves as a magazine and holds two or more balls. With such an arrangement, the balls can be shot successively from the

cone. It will be understood that this magazine can equally well be used with the constructions shown in the other figures, and also the inclined slots can be used without a construction employing a magazine.

I claim:

1. A game appliance, comprising, a funnel-shaped cup, a handle including a shank having a conical head, said handle being united with the funnel by placing the shank through the small end thereof until the conical head engages the mating area of the funnel, lugs stamped out from the funnel wall and bent inwardly to engage the top of said conical portion to hold the handle in place, said handle having an axial bore extending inwardly from the end secured to the cup, said handle also having a longitudinal slot communicating with the bore and the sides of said slot provided with angularly disposed recesses, a plunger slidable in said bore, spring means for forcing one end of the plunger from the handle to project into the cup, a hand operated member secured to the plunger and having a portion projected from the handle through the slot to be selectively engaged with at least one of said recesses.

2. A game appliance, comprising, a funnel-shaped cup, a handle including a shank having a conical head, said handle being united with the funnel by placing the shank through the small end thereof until the conical head engages the mating area of the funnel, means carried by and projecting inwardly from the funnel wall to engage the top of said conical portion to hold the handle in place, said handle having an axial bore extending inwardly from the end secured to the cup, said handle also having a longitudinal slot communicating with the bore and the sides of said slot provided with angularly disposed recesses, a plunger slidable in said bore, spring means for forcing one end of the plunger from the handle to project into the cup, a hand operated member secured to the plunger and having a portion projected from the handle through the slot to be selectively engaged with at least one of said recesses.

ALFRED GERHOLD.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
930,918	Barry	Aug. 10, 1909
1,123,549	Keenan	Jan. 5, 1915
1,615,266	French	Jan. 25, 1927
2,097,106	Stewart	Oct. 26, 1937