Aug. 1, 1939. W. R. PRICE 2,167,775

GAME DEVICE

Filed April 1, 1939

Fig. 1

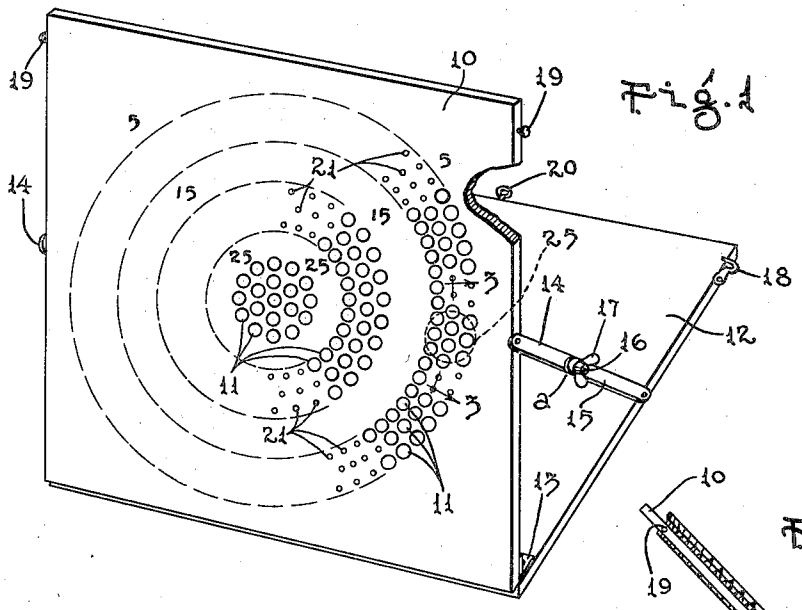


Fig. 2

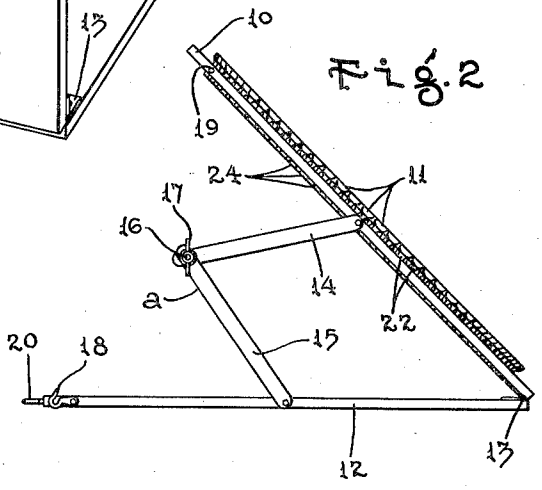
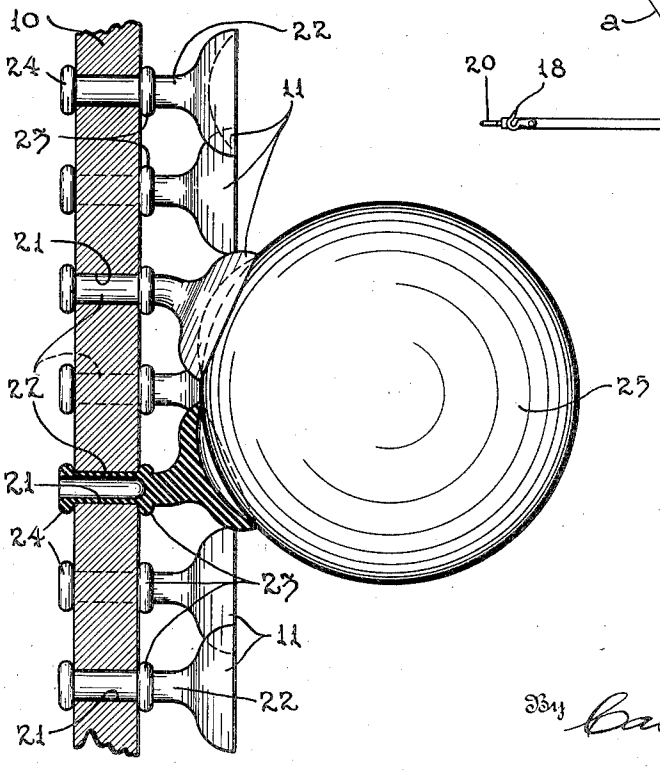


Fig. 3



Inventor

Walter R. Price

By Cowell & Lagaard

Attorneys

Patented Aug. 1, 1939 2,167,775

UNITED STATES PATENT OFFICE

2,167,775

GAME DEVICE

Walter R. Price, Minneapolis, Minn.

Application April 1, 1939, Serial No. 265,454

13 Claims. (Cl. 273—102)

My invention relates to improvements in game devices.

An object of the invention is to provide an improved game device of simple, durable and inexpensive construction including a target adapted to catch and hold a projectile cast thereagainst, a feature of the invention being to supply a construction whereby the projectile will be automatically released form the target after being held thereby for a time, another feature being to provide a construction whereby the return of a ball-like projectile is initiated when the projectile, after being caught by the target, is released.

Another object of the invention is to provide a target equipped with vacuum cups for catching and holding a projectile, a further feature of the invention being to provide a simple and practical arrangement for the mounting of said cups.

A still further feature of the invention resides in so mounting the vacuum cups that the impact of a projectile against a cup is cushioned and the recoil thereof damped.

An additional feature resides in the disposition of the cups in beds occupying areas on the target of different evaluation.

A still further object of the invention resides in supplying a target with a bed of vacuum cups in which the cups are so arranged that one or more thereof will be impinged by the projectile directed against the bed and will conform with and adhere to such projectile.

A feature of the invention lies in supplying a target with a number of beds of vacuum cups and in spacing the beds apart so that the projectile employed cannot impinge cups in different beds at one and the same time.

With the foregoing and other objects in view, which will appear in the following description, the invention resides in the novel combination and arrangement of parts and in the details of construction hereinafter described and claimed.

In the accompanying drawing, Fig. 1 is a perspective view of an embodiment of my invention; Fig. 2 is a side elevational view of the structure shown in Fig. 1, and Fig. 3 is a detail sectional view taken as on the line 3—3 of Fig. 1, said view illustrating a portion of the target backing and a number of the vacuum cup members mounted thereon, two of said members being portrayed as gripping a ball-like projectile.

Reference being had to the drawing, wherein similar parts are designated by similar reference characters, it will be seen that the illustrated embodiment of my invention includes a target proper which consists of a rectangular board or backing 10 bearing outwardly facing vacuum cups 11, such backing having a mounting therefor including a rectangular base board 12.

The board constituting the backing 10 is hingedly connected to the base board 12 by hinges 13 and is adjustably held in various inclined positions with respect to said base board through the medium of a pair of folding braces *a*, one at either side of the structure. Each brace *a* comprises a pair of links 14 and 15, the former being pivotally connected to the backing 10 and the latter similarly connected to the base board 12. A bolt 16 pivotally connects together the links 14, 15 of each folding brace *a* and applied to such bolt is a wing nut 17 which clamps the two links together at their junction and renders the brace rigid in various positions of the backing 10 relative to the base board 12. With said folding braces *a* fully extended, the backing 10 occupies a position at right angles to the base board 12 and when said braces *a* are completely folded, the backing 10 lies flush against said base board 12. With said backing 10 and base board 12 thus folded together, they may be so held in such relationship by tie means supplementing the braces *a* and consisting of hooks 18 on the base board 12 and pins 19 on the backing 10 with which said hooks cooperate.

A hanger eye 20 screwed into the base board 12 provides means for supporting the backing 10 in upright position through the medium of the suspended base board, when the backing 10 is folded thereupon. Support of the backing 10 in an upright position is also attained by fully extending the folding braces *a* and resting the base board 12 upon a floor, table or other horizontal surface and in such disposition of said base board, the backing 10 may be fixed at any desired angle between the vertical and the horizontal, as will be readily comprehended.

The board forming the backing 10 is apertured by a number of bores 21 extending therethrough, there being one bore for each vacuum cup 11. These vacuum cups 11 are of pliant rubber and have integrally formed stems 22 with spaced annular shoulders 23 and 24 thereon. With a stem 22 fitted in an aperture or bore 21 in the backing 10, the one shoulder 23, adjacent to the cup 11, bears against the front face of the backing 10 and the second shoulder 24, remote from the cup and at the end of the stem 22, bears against the rear face of said backing 10. The end portions of said stems 22 may be hollow, as shown in Fig. 3. In applying the stems 22 to the apertures 21 in the backing 10, the shoulders 24 are,

of course, distorted in threading said stems into place. It is to be noted that the shoulders **23** on the stems **22** are somewhat removed from the bodies of the cups **11** and that those portions of said stems between said shoulders **23** and the cups proper are capable of being flexed or bent to a considerable extent (Fig. 3), and it is to be further noted that the lips of the cups **11** normally lie in coplanar relationship.

The vacuum cups **11**, as shown, are arranged in beds covering concentric areas on the backing **10**. These beds or areas may be respectively evaluated, the values "5", "15" and "25" being indicated in the drawing, as applied to the three beds of cups therein shown.

Preferably, the cups **11** in each bed are arranged in such near proximity to each other that two or more of such cups will be impinged by the projectile directed against such bed. Preferably, the projectile will have a spherical surface for contact with the cups, such, for example, as the ball-like projectile **25** shown in Fig. 3. The cups **11** proper and the stems **22** thereof being flexible, the former readily conform to the surface of the impinging projectile and grip and hold the same for a time depending, among other things, upon the gripping efficiency of the cups, the relative smoothness of the surface of the projectile, the force of the impact and the relation of the projectile and impinged cup at impact. It is to be noted that a cushioning effect is produced, under impact, by the cup material and that of the stems **22** on the cups **11**. This cushioning effect minimizes the tendency of the projectile to rebound and, further damping the recoil, is the resilient extensibility of the stems **22** from the shoulders **24** at the rear face of the backing **10** to the cups **11** proper. These features enhance for an appreciable time the assured holding of a projectile gripped, through vacuum, by a cup or cups.

The different beds of cups **11** are spaced apart sufficiently to preclude the concurrent gripping of the employed projectile by cups in adjacent beds. Owing to this provision, no question can arise concerning the particular area or bed of cups upon which the projectile has become implanted.

The particular angularity chosen for the backing **10** will usually depend upon the distance through which the projectile is to be cast toward the target. In positions of the backing **10** inclined from the vertical, said backing will provide a downwardly sloping way for initiating the return to the thrower of a ball-like projectile which has been intercepted by the target, the return progress of the projectile being delayed, of course, in the event that the projectile has been gripped by a cup **11** and, in such event, until it is released from such cup.

During the interval that a projectile is gripped and held by a vacuum cup **11**, the value of the cast may be accurately ascertained and, upon the release of the projectile, the target will be automatically cleared. Advantage may be taken of the interval of time during which the projectile is gripped and held by the target by employing game rules requiring the implanting of one projectile on the target before the implanting of a second projectile thereon can be counted. Obviously, a variety of rules may be employed for the varied use of the present game device to test the skill of players and to provide entertainment for them and for the observers.

Changes in the specific form of my invention, as herein disclosed, may be made within the scope of what is claimed without departing from the spirit of my invention.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In a target, a backing, a bed of resilient vacuum cups thereon, one or more of the cups being adapted to be impinged by a projectile directed against said bed and, upon such impingement, to conform with and adhere to the surface of the projectile.

2. In a target, a backing, a bed of resilient vacuum cups, each having a resilient stem mounted on said backing, the body or bodies of one or more of the cups being adapted to be impinged by a projectile directed against said bed, said cups, upon such impingement, being adapted, through the same and the stems thereof, to conform angularly with the surface of the projectile and to adhere thereto.

3. In a target, a backing, spaced beds of resilient vacuum cups thereon, one or more of the cups in each bed being adapted to be impinged by a projectile directed thereagainst and, upon such impingement, to conform with and adhere to the surface of the projectile.

4. In a target, a backing, beds of resilient vacuum cups thereon, one or more of the cups in each bed being adapted to be impinged by a projectile directed thereagainst and, upon such impingement, to conform with and adhere to the surface of the projectile, said beds being spaced apart to preclude the concurrent adhesion to the projectile of cups in different beds.

5. In a target, a backing, means thereon adapted to catch and hold a projectile, said means comprising a plurality of resilient vacuum cups, each cup being adapted to adhere to the surface of the projectile upon impingement thereby.

6. In a target, a backing, means thereon adapted to catch and temporarily hold a projectile, said means comprising a plurality of resilient vacuum cups, each cup being adapted to adhere, for a time, to the surface of the projectile upon impingement thereby.

7. In a target, a backing, means thereon adapted to catch and hold a projectile, said means comprising a plurality of resilient vacuum cups, each cup being adapted to adhere to the surface of the projectile upon impingement thereby, certain of said cups occupying an area of one evaluation on said backing and other cups occupying another area thereon of a different evaluation.

8. In a target, a backing, means thereon adapted to catch and hold a projectile, said means comprising a plurality of resilient vacuum cups having resilient stems mounted on said backing, each cup being adapted to grip the surface of the projectile upon the impingement of the cup thereby and the stem of the cup being adapted to cushion the impact and damp the recoil of the gripped projectile.

9. In a target, a backing, means thereon adapted to catch and hold a projectile, said means comprising a plurality of resilient vacuum cups having stems mounted on said backing, each cup being adapted to grip the surface of the projectile upon impingement thereby, the stems of the cups being resiliently extensible and adapted to damp the recoil of the projectile gripped by their respective cups.

10. In a target, a backing formed with a plurality of apertures therein, means associated with said backing and adapted to catch and hold a

projectile, said means comprising a plurality of resilient vacuum cups, each thereof being adapted to grip the surface of the projectile upon impingement thereby and each cup having a resilient stem thereon received in one of the apertures in said backing, each stem having spaced shoulders thereon, one engaging the backing at its forward side and the other engaging said backing at the rear side thereof.

11. In a target, a backing, means at certain localities thereon adapted to catch and temporarily hold a ball-like projectile, said means comprising a plurality of resilient vacuum cups, each cup being adapted to adhere to and, for a time, grip the surface of the projectile upon impingement thereby, a mounting for the backing adapted to support the same in an inclined position, said backing providing return means along which the projectile may roll after being released from the grip of a cup.

12. In a target, a backing, means thereon adapted to catch and temporarily hold a ball-like projectile, said means comprising a plurality of resilient vacuum cups, each cup being adapted to adhere to and, for a time, grip the surface of the projectile upon impingement thereby, a mounting for the backing adapted to support the same adjustably in various inclined positions, said backing providing return means along which the projectile may roll after being released from the grip of a cup.

13. In a target, a backing formed with a plurality of apertures therein, means associated with said backing and adapted to catch and hold a projectile, said means comprising a plurality of resilient vacuum cups of rubber having integrally formed stems, each cup being adapted to grip the surface of the projectile upon impingement thereby, the stem of each cup being adapted to be received in one of the apertures in said backing, each stem being tubular and having spaced shoulders thereon, one engaging the backing at its forward side and the other engaging said backing at the rear side thereof.

WALTER R. PRICE.