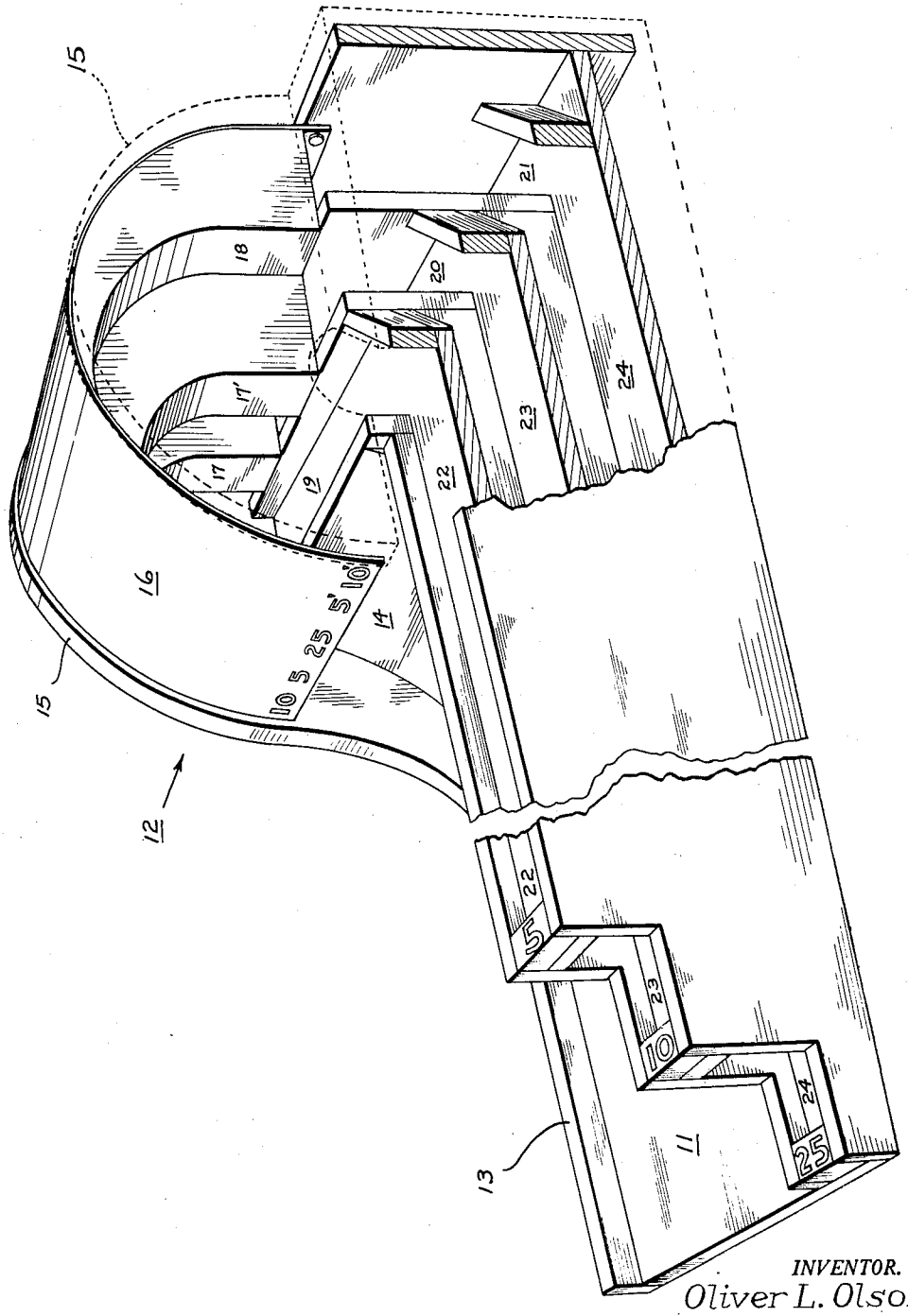
July 4, 1950 O. L. OLSON 2,513,667

GAME APPARATUS

Filed Jan. 10, 1949



INVENTOR.
Oliver L. Olson
BY Eugene D. Farley
Atty.

Patented July 4, 1950 2,513,667

UNITED STATES PATENT OFFICE

2,513,667

GAME APPARATUS

Oliver L. Olson, Camas, Wash.

Application January 10, 1949, Serial No. 70,055

3 Claims. (Cl. 273—95)

1

The present invention relates to a game of the class wherein a marble or larger ball is propelled down an alley or runway into one of several zones, whereupon it is returned to the front of the alley.

It is the general object of the invention to provide a game of skill and chance adapted to afford amusement when built on a small scale and played with marbles, and to afford both amusement and physical exercise when constructed on a larger scale and played with balls of relatively large size.

The manner in which the foregoing and other objects of the invention are accomplished will be apparent from the accompanying specification and claims, considered together with the single figure of the drawing, the same being a perspective view of the game of the present invention, partly broken away better to show its construction.

Broadly stated, the game described herein comprises an alley or runway adapted to be traversed by a ball and terminating in a chamber divided longitudinally into zones. At the rear of each zone is a deflector or stop designed to arrest the motion of the ball. The stops in the various zones are differentially spaced, some being closer to the alley than others. Below the chamber are a plurality of ball return chutes. These are adapted to receive the ball after it strikes one of the stops, and are spaced apart laterally by a distance substantially equal to the difference in spacing of the stops. Hence the chute in which the ball is returned will be determined by the particular stop it strikes after traversing the alley.

Referring now more particularly to the drawing:

It will be apparent that the game of the present invention comprises the alley 11 which leads into the chamber indicated generally at 12. Both alley and chamber may be constructed of any suitable material, and as indicated above may be of relatively small size if use of the game as a parlor game with marbles is contemplated, or of relatively large size if it is contemplated playing it on a larger scale. A retaining wall is provided on each side of the alley, one of these being indicated at 13. The alley preferably is substantially smooth and level throughout the greater portion of its length, but is inclined upwardly at its terminal portion, i. e. at the end leading into the chamber 12. The inclination preferably is arcuate, as shown at 14.

The chamber 12 is bounded by a pair of end plates, 15, 15 and a roof 16. The latter preferably is arcuate with the forward end overlapping

2

the upwardly inclined end of the alley, the direction of curvature of the roof being the reverse of that of the alley. Sufficient space is provided between alley and roof, however, to permit passage of a ball of the desired size.

Within the chamber are a plurality of stops 17, 17' and 18. These are adapted to be struck by a ball entering the chamber and to deflect it downwardly. Each stop preferably has an arcuate substantially planar inner face which merges with the arcuate inner surface of the roof 16. The stops are differentially spaced with respect to the end of the alley, so that they divide the chamber into longitudinal zones of varying depth. In the embodiment illustrated in the drawing, the two stops indicated at 17, 17' are relatively close to the end of the alley and hence the zones behind the numerals 5, 5', as numbered on the roof of the chamber, are relatively shallow. On the other hand the stop 18, and a corresponding stop of identical construction and location, but on the opposite side of the chamber (behind the stop 17 and not shown), are somewhat farther removed from the end of the alley and hence the zones numbered 10, 10' are of somewhat greater depth. Still another stop, which may comprise the inner surface of the roof 16 between the stops 17, 17' is still farther distant from the end of the alley, and hence the zone 25 which it bounds is of still greater depth.

It will be apparent that the stops 17, 17', 18 and the one corresponding to stop 18 in zone 10 may be formed as separate units and attached to the roof or otherwise supported. Alternatively, they may be formed integrally with the roof, as where the latter is cast from plastic or other suitable molding material. In the latter case they may be considered as being part of the roof, since they are segments thereof of varying thickness.

Below the chamber 12, and forming its floor, are a plurality of ball receiving guideways or chutes. These are disposed transversely with respect to the alley and are spaced apart at a distance corresponding substantially to the spacing of the stop members. Each of the receiving chutes preferably is at a level different from that of the others, the levels becoming progressively lower toward the back of the chamber for a reason which will appear hereinafter. Hence a ball deflected by one or the other of the stops will be directed into the corresponding receiving chute. If deflected by the stop 17 or 17', in the zones 5 and 5', the ball will be received by the chute 19; if deflected by the stop 18 in zone 10' or the corresponding stop (not shown) in zone 10 on the op-

posite side of the chamber, it will be received by the chute 20; and if it strikes against the intermediate stop, which may be the inner surface of the roof, in zone 25, it will drop into receiving chute 21.

The receiving chutes 19, 20 and 21 lead into the ball return chutes 22, 23 and 24 respectively, which are disposed alongside the alley and are parallel thereto. In the event that the receiving chutes are all on the same level, then the corresponding return chutes may be placed side by side substantially in horizontal alignment with each other. If, as is preferred, however, the receiving chutes are at progressively lower levels, then the return chutes may be placed one above the other in vertical alignment, thus lending compactness to the device. Whether vertically or horizontally aligned, the return chutes and the receiving chutes with which they connect have a gentle downward slope so that a ball contained therein will return by gravity to the front of the alley.

The manner of playing the game will be apparent from the foregoing description of its construction. A marble or ball is propelled along the alley 11 and up the inclined portion 14. If propelled with sufficient force, it will meet the overhanging roof 16 and, held by centrifugal force, will travel along the inner surface thereof until it encounters one of the stops at the rear of the chamber. If it has entered zones 5 or 5' of the chamber, it will be deflected by stop 17 or stop 17' into receiving chute 19, whence it will be conveyed to the front of the alley. However, if it has entered squarely zone 10 or 10', it will strike against stop 18 or the corresponding stop on the opposite side of the chamber, and drop into chute 20. In order to do so, however, it must travel with sufficient momentum to hurdle chute 19. If it is not propelled swiftly enough, or if it does not squarely enter one of zones 10 or 10', but glances off stop 17 or stop 17', it will drop into chute 19 rather than chute 20.

If the ball enters zone 25, it will follow the curvature of the roof and be deflected into receiving chute 21 and thence into return chute 24. This obviously presents a more difficult problem than that met in either of the other two situations, since in order to reach chute 21 the ball must skip chute 20 as well as chute 19, into one of which it will drop if not propelled with sufficient momentum, or if it strikes against a corner or sidewall of any of the stops.

In computing the score, the magnitude of the latter is made commensurate with the difficulty of achieving it. Hence balls entering chute 21 via zone 25 may be scored as 25; those entering chute 20 via zones 10 or 10' may be scored 10; and those entering chute 19 via zones 5 or 5' may be scored as 5. There thus is provided a game of skill and chance, affording both entertainment and recreation to the participants.

Having now described my invention in preferred embodiments, I claim as new and desire to protect by Letters Patent:

1. A game comprising an alley adapted to be traversed by a ball and having an upwardly directed arcuate terminal portion leading within a chamber, on said chamber an arcuate roof the forward portion of which overlaps the arcuate terminal portion of the alley, the arc of the roof being in a reverse direction to that of the alley, within the chamber a plurality of longitudinal zones the rear walls of which are defined by a plurality of differentially spaced deflectors having faces merging with the arcuate inner surface of the roof, and a plurality of spaced ball receiving guideways disposed beneath the chamber, the spacing of the guideways being such that upon traversing the deflector in one of the zones, the ball will be directed into the corresponding guideway and return to the front of the alley.

2. A game comprising an alley adapted to be traversed by a ball and having an upwardly directed arcuate terminal portion, a chamber at the rear of the alley, on the chamber an arcuate roof the forward portion of which overlaps the arcuate end of the alley, within the chamber a plurality of longitudinal zones, in each zone a stop defining the rear wall thereof, the inner face of the stop being arcuate and merging with the arcuate inner face of the roof, the stops in the various zones being spaced differentially with respect to the alley, a plurality of ball receiving chutes disposed transversely of the chamber, each chute being adapted to receive the ball as it is deflected by its respective stop, and disposed longitudinally of the alley a plurality of ball return chutes each of which is connected with one of the ball receiving chutes and therefore is adapted to return the ball to the front of the alley.

3. A game comprising an alley adapted to be traversed by a ball and having an upwardly curved terminal portion, a chamber at the rear of the alley, on the chamber a curved roof the forward portion of which overhangs the curved end of the alley, within the chamber a plurality of longitudinal zones, in each zone a stop defining the rear wall thereof, the inner face of each stop being substantially planar and curved to merge with the curved inner surface of the roof, the stops in the various zones being spaced differentially with respect to the alley, a plurality of ball receiving chutes disposed transversely with respect to the alley and stationed at predetermined levels within the chamber below the stops, each chute being adapted to receive the ball as it is deflected from the stops thereabove, and a plurality of downwardly sloping ball return chutes disposed longitudinally of the alley in vertical alignment with each other and connected with the ball receiving chutes to enable return of the ball to the front of the alley.

OLIVER L. OLSON.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
175,254	Oberly	Mar. 28, 1876
1,531,880	Ritter	Mar. 31, 1925
2,173,865	Swenson	Sept. 26, 1939