

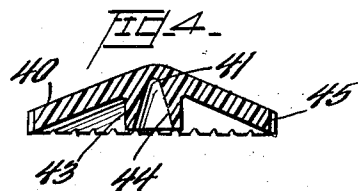
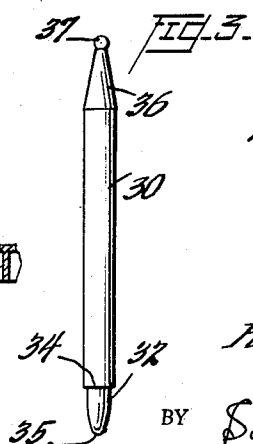
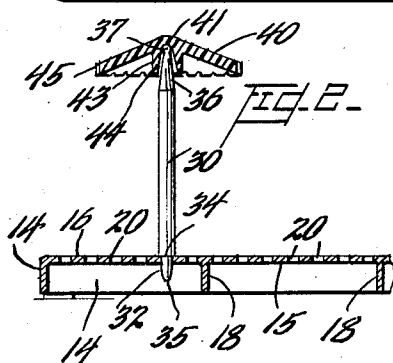
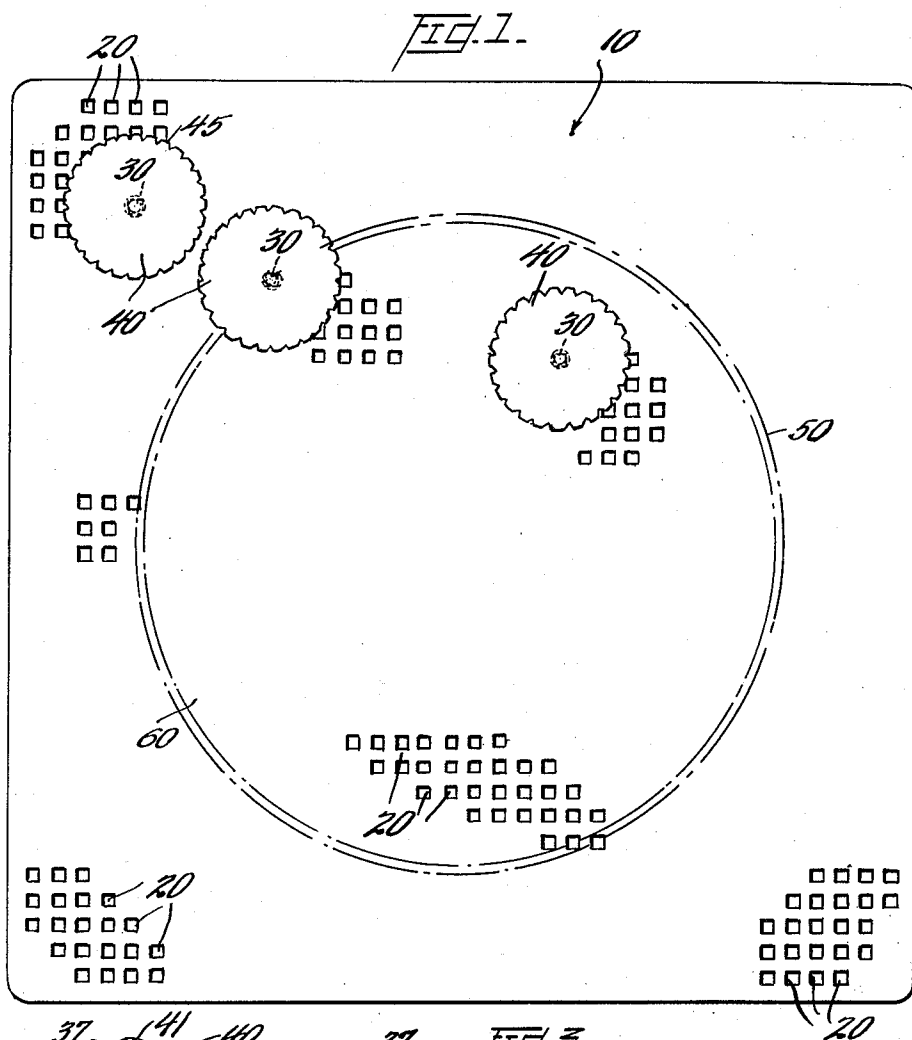
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GAME APPARATUS

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1

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GAME APPARATUS

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2 Claims. (Cl. 273—130)

This invention relates to game apparatus.

The principal object of the invention resides in the provision of a novel form of game apparatus which combines, in use thereof, the exercise of manual dexterity as well as mental skill, and at the same time affords an exciting degree of amusement and a high order of interest to the players.

A further object of the invention is to provide a game apparatus of the aforesaid character, which may be constructed at relatively low cost and with relatively few and simple component parts.

Another object of the invention is to provide game apparatus of this character suitable for use by, and as amusing and interesting to, adults as it is for children.

Still another object of the invention resides in the provision of a game apparatus of this character, especially designed for uniquely challenging the mental agility and manual dexterity of the players.

With the foregoing and other objects in view, the invention, broadly stated, comprises playing pieces for positioning on a suitable playing surface, the pieces including a number of relatively elongated pins or post-like members, each constructed at one end thereof for placement in vertical position on the playing surface, and each constructed at the other end thereof for cooperative engagement with one of a corresponding number of separable disc members, the latter each being constructed in such manner as to be capable of a relatively long-lasting spinning motion, when engaged with such opposite ends of the post-like members.

By constructing the playing pieces in this manner, and providing a sufficient number of such posts and disc members, there is afforded, in accordance with my invention, an apparatus capable of use as a highly interesting and exciting game when played, either by children or adults, with the objective of placing and retaining on the playing surface as many as possible of the posts with the discs all in simultaneous spinning movement thereon.

More specifically, according to the embodiment of the invention herein illustrated and described, the playing surface may be in the form of a suitable size board, provided with a multitude of relatively closely-spaced holes for receiving and firmly holding one end of each of the post members, the latter each having their opposite ends formed with a bearing surface, preferably of frusto-spherical shape, and the disc members each being in the form of cones which are relatively shallow (i. e., having a diameter at the base three to five times its axial dimension), and which have interiorly at the apex thereof a hollow portion suitably shaped for engagement with and spinning movement on the bearing surfaces of the posts.

Preferably, the game is played according to suitable scoring rules predicated upon the number of such discs the players are able to place and keep spinning all at the same time on the playing surface during each round of play of the game. Since this will depend primarily upon the manual adeptness or dexterity of the individual

2

players participating, in causing successive ones of the discs to spin on their posts and in placing the posts with their spinning discs in position at desirable locations on the playing surface, a high order of interest is achieved by the players in developing their individual skill in those respects for attaining a winning score; at the same time, much amusement is afforded to the players and observers, by reason of the frequent occurrence of errors, mishaps, or other incidents during play, which give rise to ending a player's turn or round, as may be provided in the rules for play. Several appropriate sets of rules of play and scoring, which I have found suitable and highly entertaining when used in connection with the apparatus of my invention, are set forth in detail herebelow.

The invention, its objects and advantages, will more readily appear from the detailed description below and from the accompanying drawings, in which:

Fig. 1 is a plan view of one preferred embodiment of the invention;

Fig. 2 is a view, partly in elevation and partly in cross-section, showing one of the posts and its companion spinning disc in place on the playing surface, the latter being shown only fragmentarily.

Fig. 3 is a view, in elevation, showing the preferred form of a post member constituting one of the playing pieces of the apparatus; and

Fig. 4 is a view, in vertical cross-section, showing the preferred form of disc member constituting one of the playing pieces of the apparatus, constructed for use with the post-member of Fig. 3.

Referring in detail to the drawings, the numeral 10 indicates generally the playing surface of my apparatus. In the preferred form illustrated, the playing surface comprises a board of suitable dimension and of desirable shape. Thus, as shown, the board may be square-shaped, although obviously it may be of other rectangular, or of circular or other geometric shape. In the square shape shown, the board may suitably be say nine to twelve, or even more, inches square.

The board, constituting the playing surface, is preferably made from a plastic material, such as a suitable mixture of polystyrene and acrylonitrile or like resin. It will be obvious, however, that the board may be made of wood, metal or other suitable material.

The board may be of any suitable cross-sectional dimension and contour. In the preferred form, as will be seen from Fig. 2, the board comprises a portion 12 normally extending in a horizontal plane and having at each of its bounding edges a downwardly extending flange or rim 14, extending preferably at an angle of 90° to the portion 12, the upper or playing surface of the board being indicated at 16.

The board is preferably provided on its lower surface 15 with spaced parallel ribs 18 extending longitudinally and transversely of the board, these ribs being joined at their ends to the respective transverse and longitudinal peripheral flanges or rims 14. The ribs 18 are desirably of a slightly lesser height than the flanges 14. The ribs 18 as well as the flanges 14 are preferably formed integrally with the portion 12 of the board. The flanges 14 serve to support the portion 12 in spaced relation to the surface of a table or like firm base upon which the board may be placed.

When the board is composed of a resin plastic, for example of the type above-mentioned, it may readily be produced by conventional methods of injection moulding. In specific terms, for purposes of illustration herein, the moulding die may be formed so that the portion 12 will have a thickness of approximately 0.075 inch, the flanges 14 will have a height of approximately 0.375 inch and a thickness of approximately 0.090 inch, and the ribs 18

will have a height of approximately 0.25 inch and a thickness of approximately 0.070 inch.

The portion 12, constituting the playing surface, is provided with a multiplicity of apertures 20, preferably square in outline, and dimensioned for firm but detachable engagement therein of the post-like playing pieces hereinafter described. The apertures may be arranged in longitudinally and transversely extending rows, and at desired distances from one another in each row. The spacing of the apertures 20 from one another may conveniently, in the case, for example, of a board which is 12 inches square, be 0.35 inch on centers, the apertures themselves being approximately 0.15 inch square.

The form and arrangement of the apertures 20 are, in accordance with the invention, such as to enable any one of them to receive and firmly hold in vertical position (see Fig. 2) but in detachable engagement, any one of a plurality of the post-like members 30, three of such being indicated in the plan view of Fig. 1.

As will be more clearly seen from Figs. 2 and 3, the members 30 each preferably takes the form of an elongated post or pin, circular in cross-section and having the lower portion thereof formed with a reduced, somewhat tapered stem 32, forming an annular shoulder 34 at a distance above the slightly blunted lower end or tip 35 of the post, less than the height of the flanges 14 of the board 12.

The diameter of the stem 32 is such in relation to the dimensions of the apertures 20 in the board as to enable the stem to be readily inserted by a player in any of the apertures under relatively slight manual pressure, until the shoulder 34 is brought into contact with the upper surface 16 of the board.

In terms of specific illustration, with a board having square apertures 20 which measure approximately 0.15 inch square, the cross-sectional diameter of the posts 30 may be approximately 0.20 inch, and the cross-sectional diameter of the stems 32 adjacent the shoulders 34 may be approximately 0.15 inch, tapering downwardly to approximately 0.11 inch diameter at the lower end thereof, the length of the stem portion being say 0.22 inch.

The opposite end portion of each post 30 is preferably tapered axially, as indicated at 36, and is formed at its outer end with a bearing surface 37 which preferably is of frusto-spherical shape. The diameter of the frusto-spherical bearing surface 37 may conveniently be 0.050 inch.

The over-all length of the posts 30 may be, say, 2½ to 3½ inches, and they are, as in the case of the board 10, preferably formed from a plastic material such as of the type above mentioned. However, as will be apparent, they may, if desired, be made from wood, metal, or other material. If desired, when the posts are made from wood or plastic or other material of a character that does not lend itself readily to the provision of a bearing surface 37 of low frictional resistance, the bearing member 37 may be a separate member made from material having a suitably low coefficient of friction, such as polished steel, which may be fused or otherwise fixedly secured to the outer end of the tapered portion 36.

In conjunction with the posts 30 there are provided, in accordance with the invention, a plurality of disc-like members 40 which, together with the posts, constitute the playing pieces of the apparatus. Each of the members 40 may be made of the same material as the posts 30 and is constructed for cooperative engagement with any of the posts for enabling the members 40 to be manually given a relatively long-lasting spinning motion when seated on the bearing surface 37 of any of the posts.

To that end, the disc-like members are each formed on one face thereof with an axially located seating surface 41 configured and dimensioned complementarily to the bearing surface 37 of the posts.

In the preferred embodiment shown in Figs. 2 and 4 each of the members 40 takes the form of a relatively

shallow cone whose base diameter may be, say, one and one-half to two inches, and about 3 to 5 times its height at the axis of the cone. This preferred form of the disc accordingly resembles the canopy of an open umbrella.

In this embodiment, the interior face of the cone is formed with a hub portion 43 extending axially inward with respect to the apex of the cone a distance preferably somewhat less than the length of the tapered portions 36 of the posts, the inner wall 44 of the hub tapering inwardly and terminating at the seating surface 41. The peripheral edge of the discs are preferably scalloped as indicated at 45.

Thus, when any of the discs 40 is placed on one of the posts 30 with the surface 41 seated on the bearing surface 37 of the latter, and is given a fairly vigorous spin, it will continue to spin thereon for a substantial length of time, governed mainly by the vigor and deftness of the manual effort employed to start it spinning, as well as by the characteristics of frictional differential between these surfaces and the aerodynamic momentum created at the inner, cone-shaped face of the disc.

This cooperative action between the posts 30 and disc members 40 may accordingly be made the function of the playing pieces for a game apparatus of the character above referred to.

Thus, by utilizing a plurality of such posts and a corresponding number of such disc members, a highly entertaining game involving manual dexterity and considerable mental skill will be provided when the players endeavor to position on a playing surface, such as the apertured board 10, as many as possible of the posts with the discs spinning simultaneously thereon, and to keep any of the thus positioned discs from ceasing their spinning motion, as well as to avoid knocking any of the spinning discs from a post while the player is in the act of positioning on the playing surface another of the posts with its disc spinning thereon.

As already indicated above, any appropriate rules of play and of scoring by the players may be adopted, predicated upon the success achieved by the individual players in placing and retaining as many as possible of the spinning discs in place on the playing surface and all simultaneously spinning thereon.

The following may be taken as illustrative of such rules.

Rules of play

Assuming the playing surface is in the form and size of the board as above described, and that there are provided as one complete set of playing pieces, say nine posts and nine discs as above described, the board will be placed at a convenient distance in front of the players.

The posts and discs are placed by each player loosely in the most handy arrangement in front of him as he may regard most conducive to his picking them up individually with the greatest facility.

The player picks up one post, places a disc on the bearing surface thereof, spins the disc, and then places the post with its spinning disc in any one of the apertures of the board.

The player then picks up a second post, places a disc on its bearing surface, spins the disc and places the post and disc in any other aperture in the board, continuing to do this with the other posts and discs, one after another, until as many as possible of the nine posts and their spinning discs are placed in position on the board.

If during the process of putting any of the posts with a spinning disc on the board, any disc falls off any post, or if any spinning disc already on the board stops spinning, the player is finished for that round. All the posts and discs are then removed from the board and the next player takes his turn and proceeds likewise.

If a player picks up a post and spins a disc on it so that it falls off the post before he places the post in one of the apertures of the board, the player is finished for that round.

5

Any one or more of the spinning discs already on the board and seen by the player to be slowing up may be given another spin or spins by the player as often as he wishes, at any time during his round, so long as he does not remove the post from the board or does not jar or otherwise cause any disc to fall off any post.

So long as all discs previously in place on the board continue to spin simultaneously, player can continue to place more posts with spinning discs on the board, but finishes his round when any of the discs stop spinning or fall off their posts.

Posts with spinning discs may be placed in any of the apertures in the board, according to the judgment of the player, for gaining a maximum score.

Scoring—Example I

No points are credited for player's score in any round until at least three spinning discs have been placed on the board in that round.

If the player in any round places less than 3 spinning discs on the board, he suffers a penalty of say 30 points from his score for each disc of the first 3 which is not kept spinning. For instance, if the player has only two spinning discs before the round is ended by the rules of play above stated, he loses 30 points from his score; if he has only one spinning, he loses 60 points; and if he has none spinning, he loses 90 points.

After the player succeeds in placing three spinning discs on the board, the player receives a score of 30 points, plus the following scores for additional spinning discs placed on the board before the player finishes his round:

	Points
4th spinning disc -----	25
5th spinning disc -----	35
6th spinning disc -----	45
7th spinning disc -----	60
8th spinning disc -----	80
9th spinning disc -----	125

A total of say 1500 points may be established as the winning score.

Scoring—Example II

In order to lend even more exciting interest to the game, in terms of the skill and judgment of the players, the playing surface, such as the board described above may be provided with suitable means or indicia marking off a limited area or zone thereof wherein it would be more difficult for the players to succeed in placing all of the posts with their discs all in simultaneous spinning motion, and the scoring rules may provide for suitable premium or bonus points in accordance therewith.

Thus, there is shown by way of illustration in Fig. 1, a relatively large circle 50 centrally of the board, defining a limited or premium area 60. The circle may be imprinted on the surface of the board, or may be in the form of an upstanding rib or the like, either as an integral part of the board or as a separate, detachable member. As will be apparent, the area 60 may, if desired, be of square or other outline in lieu of the circular outline shown.

With such an arrangement on the playing surface, the rules of play may be the same as above stated, with the addition, however, that each player, in any of his rounds of play, may elect to place the spinning discs in the premium zone 60. Likewise, the scoring rules may be the same as stated under Example I above, with the proviso that after a player succeeds in placing three spinning discs on the board, he will receive certain premium or bonus points for additional spinning discs located within zone 60, in addition to the 30 points according to the scoring rules of Example I.

Thus, the scoring system may, in the instance of the present example, provide that if the player has succeeded in thus placing the first three spinning discs in apertures

6

located within zone 60, he will receive premium points, as follows:

	Points
4th spinning disc -----	50
5th spinning disc -----	75
6th spinning disc -----	100
7th spinning disc -----	150
8th spinning disc -----	200
9th spinning disc -----	325

In this instance, a higher total number of points than suggested under Example I, say a total of 2000, may desirably be established as the winning score.

Also, in this instance, the scoring rules may provide that after a player has succeeded in placing the first three or more spinning discs consecutively in bonus zone 60, he may place subsequent ones, in the same round of play, outside of zone 60, but in such case is to receive for such subsequent ones only the regular values or points as set out under Example I.

As will now be evident from all the foregoing, the invention provides a game apparatus constructed and designed in such manner as to offer uniquely challenging opportunities to the players for the exercise of mental skill and manual dexterity.

Still additional challenges may be imposed, however, by incorporating additional features in the form or design of the component parts above described. For example, in lieu of the uniformly spaced apertures 20 in the board, as illustrated, these apertures may be non-uniformly spaced from one another in all or only selected ones of the several rows thereof; or, instead of being arranged in longitudinal and transverse rows, they may be positioned along concentric circles of uniformly or non-uniformly increasing radii.

Again, for example, the posts 30 may differ from one another in color, and the disc members 40 be of corresponding colors, to enable the adoption of supplemental scoring rules by which the player would receive bonus or premium points if he succeeds, in any round of play, in utilizing discs of the colors corresponding to the colors of the posts on which the player has placed them in spinning motion.

Although the invention has been herein illustrated and described with reference to a playing surface in the form of a portable playing board, it will be apparent that the invention may be embodied in playing pieces comprising a suitable number of posts having bearing surfaces as above described at one end thereof, and a corresponding number of disc members capable of spinning motion thereon as described, the other end of the posts being pointed or otherwise suitably formed for easy insertion thereof in any relatively penetrable base. Thus, the posts and discs may be made of sufficient size to be used in accordance with the invention, as an outdoor game, using as the playing surface therefor an area of suitable size marked off in any convenient fashion on level ground or lawn, the tapered or pointed lower ends of the posts being merely forced manually into the ground.

Having thus described in detail certain embodiments of the invention, it will be understood that these are intended and are to be considered merely illustrative thereof, and that numerous variations or modifications may be adopted or resorted to, without departing from the spirit of the invention or the scope of the appended claims.

What I claim is:

1. A game apparatus comprising a playing surface formed with a multiplicity of spaced apertures, a plurality of elongated post members, and a plurality of disc members, each of said post members terminating in a frusto-spherical bearing surface at one end thereof, each of said disc members being in the form of a relatively shallow cone and having a hollow hub extending interiorly thereof, the inner wall of the hub terminating adjacent the apex of the cone in a seating surface complementary to said bearing surface of the post members so as to enable

any of said disc members to be given spinning movement on said bearing surface of any of the post members, the opposite end of each of the post members being shaped for firm but readily detachable insertion in any of said apertures.

2. A game apparatus comprising, in combination, a playing surface formed with a multiplicity of apertures therein, a plurality of elongated post members, and a plurality of discs, one end of each of said post members being formed with a reduced portion enabling the member to be firmly but detachably positioned in any of said apertures, the opposite end of each said post member terminating in a frusto-spherical bearing surface, each of said discs being in the form of a shallow cone and having a hub extending interiorly of the apex of the cone, said hub being formed adjacent the apex with a seating surface having a contour complementary to the bearing surface of said post members.

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