

- [54] **MATHEMATICAL TIDDLY-WINK APPARATUS**
- [76] Inventor: **Emerson F. Martyn**, 1807 Prospect St., LaSalle, Ill. 61301
- [22] Filed: **May 13, 1974**
- [21] Appl. No.: **469,336**
- [52] U.S. Cl..... **273/95 E; 35/31 A; 273/139**
- [51] Int. Cl..... **A63b 71/02**
- [58] Field of Search..... **273/95 E, 95 F, 139, 152 R, 273/101, 126 R; 35/31 A**

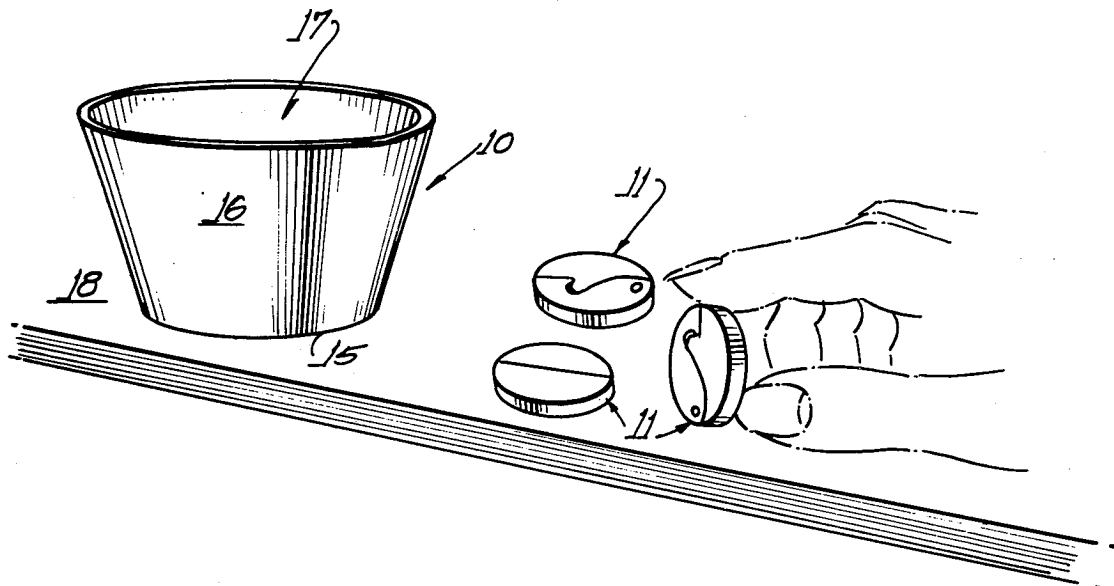
- [56] **References Cited**
- UNITED STATES PATENTS**
- 1,597,419 8/1926 Anderson..... 273/152 R
- 3,429,572 2/1969 Mars ..... 273/95 E
- 3,493,230 2/1970 Curzon ..... 273/139
- FOREIGN PATENTS OR APPLICATIONS**
- 16,215 11/1888 United Kingdom ..... 273/95 E

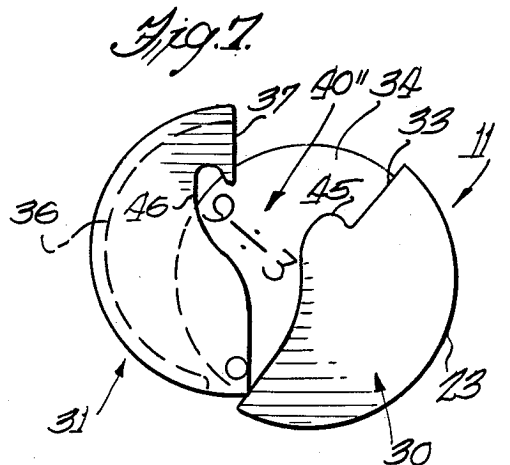
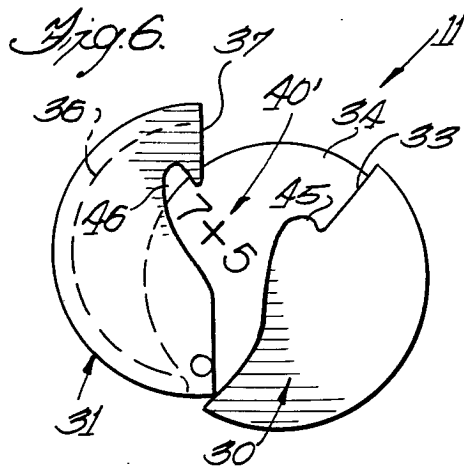
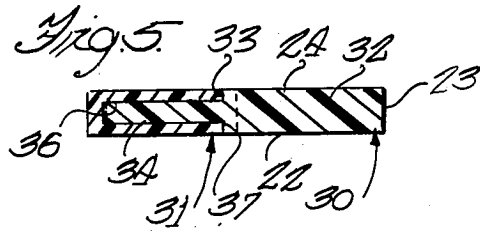
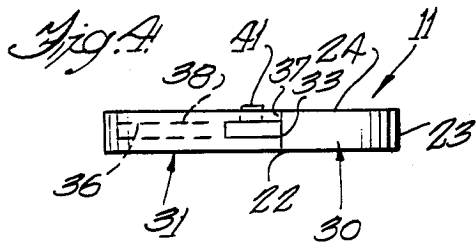
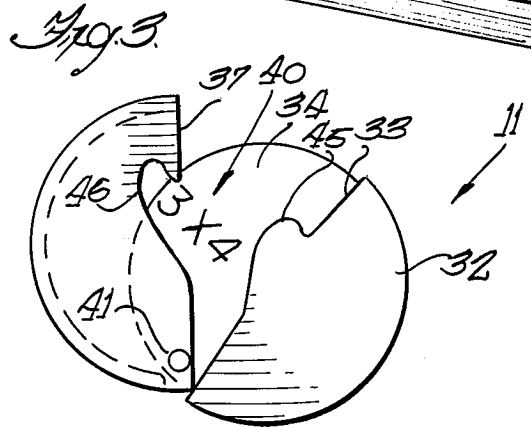
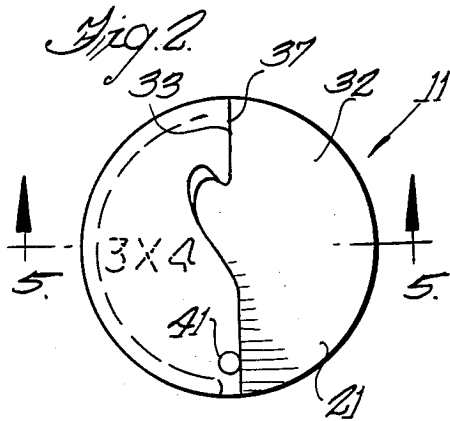
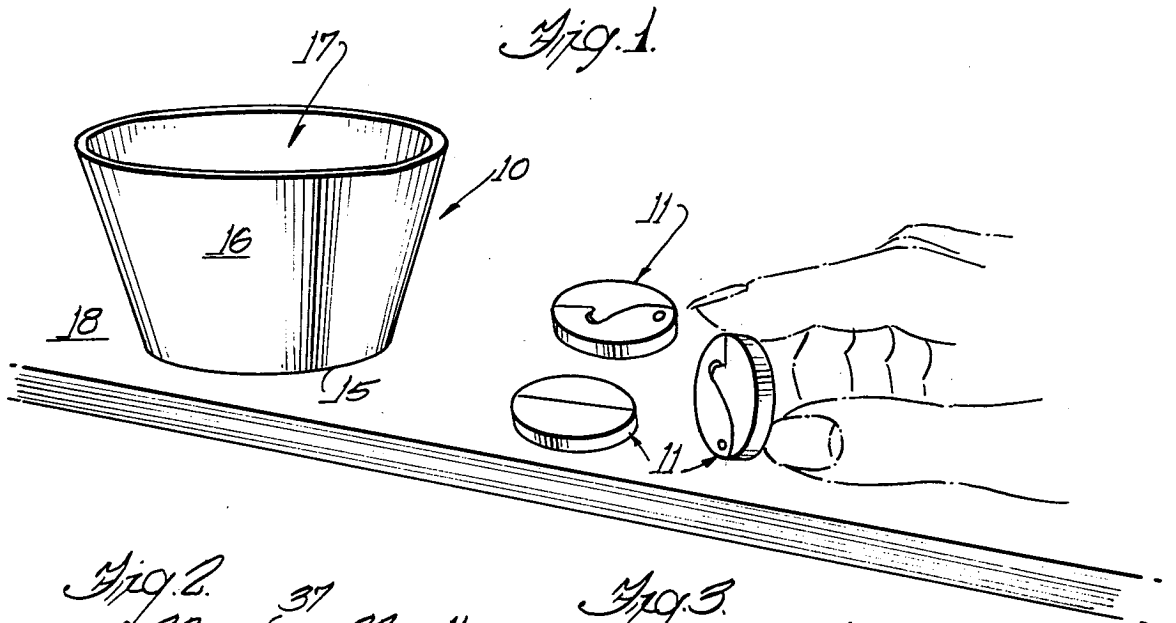
*Primary Examiner*—Anton O. Oechsle  
*Assistant Examiner*—Marvin Siskind  
*Attorney, Agent, or Firm*—National-Patent-Services, Inc.

[57] **ABSTRACT**  
 A tiddly-wink type of game having a plurality of flat circular discs with the discs arranged in sets of like

colors for differentiating the discs of each player, each disc being bisected along a diametric cord to define a first part and a second part, the first part being semi-circular in configuration and having a semi-circular recess defined interiorly thereof, each section part being semi-circular and having projecting outwardly therefrom in confronting relationship a semi-circular projection of a size and configuration adapted to fit within said recess of said first part, the projection having a mathematical multiplication or addition formula imprinted thereon which must be solved by a player and which is hidden in the recess until the disc is opened by the player, the first and second parts being pivotally connected together at one end thereof, and there being formed in confronting edges of the first and second parts complementary projection and slot openings for detachably retaining the parts together to define a circular form while being readily detached to permit exposure of the projection from its recess, the game being played by each player shooting each of his discs in turn in an attempt to get the discs into a container provided therefor, the winner of the game being determined by each player then recovering each of their own discs which they successfully shot into the container and opening the discs to expose the mathematical formulas with the winner being the player having the highest score as indicated by adding the player's mathematical formulas together.

**1 Claim, 7 Drawing Figures**





## MATHEMATICAL TIDDLY-WINK APPARATUS

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

This invention relates generally to games and more particularly to a novel tiddly-wink type of game which is of an educational value and which involves both luck and skill to determine the winner.

#### 2. Description of the Prior Art

The game of tiddly-winks has long been enjoyed by individuals of all ages as a competitive type of game, but as there is no educational or learning experience from the game, such individuals soon bore of the same with the game eventually being discarded or stored away for future use. While variations of the game have been developed in the prior art, such variations all suffer from one or more disadvantages as not retaining the interest of the players for extended periods of time, relying heavily on luck rather than skill, involving merely the counting of the pieces in the container to determine the winner, and the like.

### SUMMARY OF THE INVENTION

The present invention recognizes the enjoyment of players in playing tiddly-winks initially as to the general means of projecting the players' discs into a container, and provides a novel improvement of the game in that each disc is provided with a hidden mathematical formula such that after a player has taken his turns at flipping discs into the container, the player removes those discs from the container which he was successful in flipping thereinto and opens the discs at which time the player must solve the mathematical formula therein with the winner being the individual having the highest mathematical score of all solved formulas such that the winner of the game may not necessarily be the winner with the most discs in the container, and furthermore, should an individual not be able to solve the mathematical equation of the discs then the disc is discarded and does not count for the individual such that both skill and luck along with educational learning and improvement is required for a player wishing to be the winner.

It is a feature of the present invention to provide a tiddly-wink type of game wherein the person with the most accumulated points, rather than the person with merely the greatest number of discs in the container, is declared the winner.

A further feature of the present invention provides a tiddly-wink type of game that is simply for a child to learn and play and educational in the play thereof.

Still a further feature of the present invention provides a game that may be adequately played by either a single player or any number of players in competition with each other.

Among further features and advantages of the present invention is the provision of a game which may be readily manufactured at a relatively low cost and by simply manufacturing methods due to its relative simplicity of construction; one which is easy to use and reliable and efficient in operation; one which is of a rugged and durable construction; one which is aesthetically pleasing and refined in appearance; and one which is otherwise well adapted to perform the services required of it.

Other features and advantages of this invention will be apparent during the course of the following description.

### BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings forming a part of this specification, and in which like reference characters are employed to designate like parts throughout the same:

FIG. 1 is a perspective view of the game in play;

FIG. 2 is a top plan view of a playing disc in the closed position;

FIG. 3 is a top plan view of a disc in the open position;

FIG. 4 is a front elevational view of the playing disc;

FIG. 5 is a cross-sectional view taken along Line 5—5 of FIG. 2;

FIG. 6 is a top plan view of a playing disc having an addition formula imprinted thereon; and

FIG. 7 is a top plan view of a playing disc similar to FIG. 6 but having a division formula imprinted on the disc.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail there is illustrated a preferred form of an Add and Multiply in a Wink game constructed in accordance with the principles of the present invention and which is comprised of a cup like receptacle 10 and a plurality of playing discs 11 with the discs being provided in sets of from eight to ten discs for each player with the sets being of different colors or decorative designs for distinguishing the discs of different players.

The receptacle 10 is cup-shaped and has a base 15 with outwardly diverging side walls 16 defining a disc receiving compartment 17 therebetween and which is adapted to be rested on a suitable supporting surface 18 with the players taking turns in attempting to shoot their respective discs 11 into the receptacle compartment 17 in the conventional manner of tiddly winks.

Each disc is of a flat circular body member 21 having a flat bottom surface 22, side wall surfaces 23, and a flat top surface 24. The disc is divided diametrically in half into a first member 30 and a second member 31. The member 30 is of a substantially circular configuration in that it has a first half 32 which is of the normal thickness of the disc and which terminates at the diametric edge 33 from whence the thickness of the disc is reduced inwardly from both the top and bottom surfaces 24 and 22 respectively to define a second half 34 projecting outwardly from the diametric edge 33 and which has a diameter less than the diameter of member 32.

Section 31 is of a semi-circular configuration having the full thickness of the disc and which is provided with a horizontally extending semi-circular recess 36 defined therein and opening outwardly of the diametric edge 37 thereof and of a size and configuration to completely receive member 34 therein when diametric edge 37 is adjacent diametric edge 33 and the disc is in the closed position.

The halves 30 and 31 of the disc are pivotally connected together adjacent one end edge thereof by a rivet 41 extending therethrough normal to the plane of the disc such as seen in the drawings. Embossed or imprinted on a surface of projecting half 34 is indicia 40 representing a mathematical formula which, as seen in FIG. 3, is a multiplication formula of "3 × 4", this formula being hidden in recess 36 when the disc is closed

and with the formula being exposed to view when the disc is opened. Other formulas may be imprinted on the disc to vary the play of the game, such as in FIG. 6 reference numeral 40' designates an addition formula of "7 + 5" while in FIG. 7 a division formula is represented by reference numeral 40'' of "9 ÷ 3."

For retaining the disc in the closed position the diametric edge 33 is provided with a diagonally extending projection 45 and the diametric edge 37 is provided with a complementary recess 46 adapted to resiliently engage the projection to detachably retain the sections together when the disc is closed and yet permit an individual to readily separate the halves 30 and 31 of the disc by dislodging projection 45 from recess 46 to thus open the disc and expose the mathematical formula on the projection member 34.

In the play of the game, the first objects of the players is to attempt to shoot all of their discs or winks 11 into the container compartment 17 in tiddly-wink manner and after all players have taken their turns then each player removes their respective winks which they successfully shot into the container from the container compartment and then opens each wink to expose the mathematical formula imprinted thereon. Each player must then work the mathematical formula to arrive at the correct solution thereto, after which the player must add all of the solutions of the formulas together to obtain the player's final score. The winner of the game is the player having the highest mathematical score such that the player with the most winks in the container is not necessarily the winner as a player with a lesser number of winks may win who may have a higher score due to the mathematical formulas of his particular winnings which were successfully deposited into the receptacle container. Further, it is to be understood that for any formula which the player can not successfully solve, that the player must discard that wink and it does not count toward the player's score since the player was unable to arrive at the correction solution. The game may be provided with winks having all multiplication formulas, all mathematical addition formulas, all mathematical division formulas, or any combination thereof with the only requirement being that each set of winks be provided with the exact duplicate type of formulas such that each player has an equal opportunity to win.

It is to be understood that the form of this invention herewith shown and described is to be taken as a preferred example of the same, and that this invention is not to be limited to the exact arrangement of parts shown in the accompanying drawings or described in this specification as various changes in the details of construction as to shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention, the scope of the novel concepts thereof, or the scope of the sub-joined claims.

Having thus described the invention, what is claimed is:

1. An add and multiply in a wink game of the tiddly-wink type comprising, in combination:
  - a receptacle of an inverted truncated conical configuration having a flat bottom surface, an open top surface, and conical side walls;
  - a compartment defined interiorly of said side walls above said bottom surface and having access thereto through said open top end of said receptacle;

a plurality of identically shaped and configured sets of flat circular disc members, each set of disc members having a like number of disc members provided therein;

each of said sets of disc members are of a different color to clearly differentiate the sets from each other to distinguish the set of one player from the set of any other player;

each of said disc members consisting of a first member and a second member which is pivotally connected to said first member and movable relative thereto between a closed position defining with said first member a circular flat shaped disc, and an open position pivoted away from said first member and exposing an otherwise hidden portion of said first member;

said first and second members being defined generally along a diametric line of said disc member; said first member including a semi-circular section having the full thickness of said disc member and terminating at said diametric edge;

said hidden portion of said first member formed integrally with said semi-circular section and being of a lesser thickness than said first section and a lesser diameter than said first section to form a semi-circular projection disposed within the plane of said first section having its base formed at said diametric edge of said first section and projecting outwardly therefrom;

said second member being of a semi-circular configuration and terminating along a diametric edge disposed in abutting juxtaposition with said diametric edge of said first member when said second member is in the closed position;

said second member provided interiorly thereof with a semi-circular recess opening out of said diametric edge, said recess lying in the plane of said first member hidden portion and being of a size and configuration to completely receive said semi-circular hidden portion of said first member therein to completely cover the same when said second member is in a closed position relative to said first member;

a rivet extending through adjacent corner edges of said second member and said hidden portion of said first member to pivotally join said first and said second members together for relative rotation thereabout between said disc open position and said disc closed position;

a diagonally outwardly projecting flange member formed integrally with said first section of said first member along the diametric edge thereof on both sides thereof and projecting outwardly therefrom and co-planar with said diametric edge in a manner to overlie a segment of said hidden portion;

a complementary shaped recess extending diagonally into said second member from each of said diametric edges thereof and adapted to be brought into registration with said diagonal projection to engage the same for retaining the disc member in said closed position while permitting manual manipulation of the disc in a manner to separate said projections from said recesses to open the disc member pivotally about said rivet pin to expose said hidden portion;

indicia representing a mathematical formula imprinted on both a face surface and a back surface

5

of said hidden portion of said first member and visibly only when said second member is open to expose said hidden portion;  
 said disc members of each set of disc members having the same mathematical formulas imprinted thereon as the disc members of each other set of disc members so that each player is provided with a set of disc members having the same set of mathematical formula indicia thereon;

10

15

20

25

30

35

40

45

50

55

60

65

6

whereby said disc members in the closed position may be slipped into said receptacle and then opened for the player to solve the mathematical formula thereon, after which the disc members may again be closed for later use thereof in a manner not adversely effecting or destroying said disc member.

\* \* \* \* \*