United States Patent

Wheelock

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[45] **Apr. 25, 1972**

[54] BOARD GAME APPARATUS

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[52] **U.S. Cl.**.....**273/134 AE,** 46/240, 273/134 AA

[51] **Int. Cl.**.....**A63f 3/00**

[58] **Field of Search**.....273/1, 130, 131, 134, 135, 273/136, 139; 46/140; 35/45

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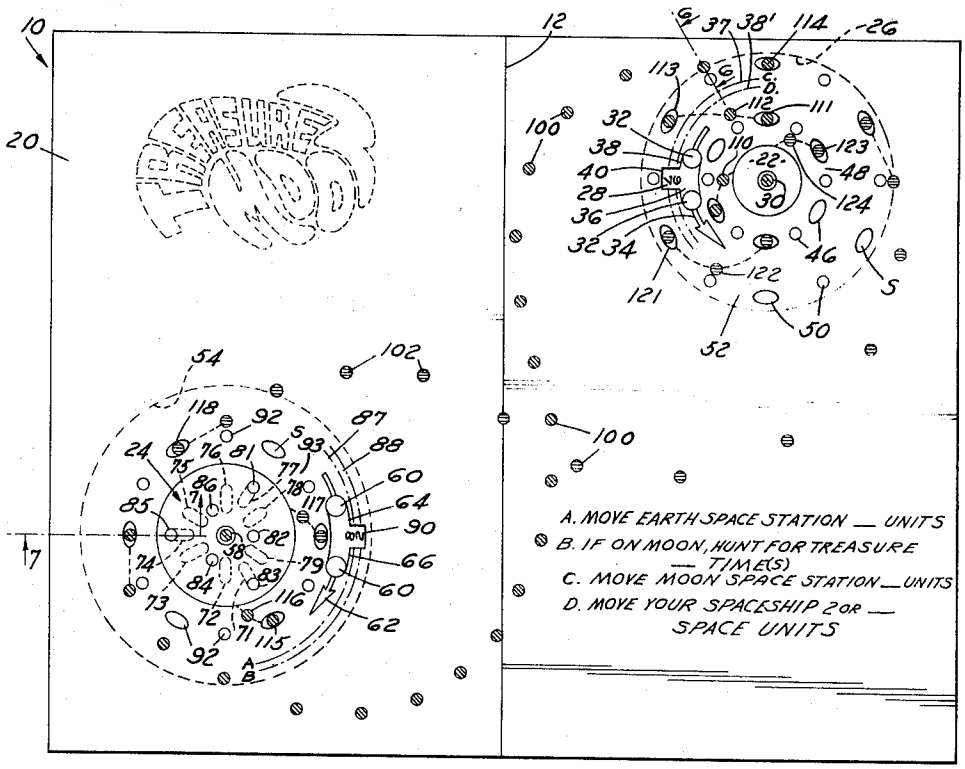
Primary Examiner—Delbert B. Lowe

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[57] **ABSTRACT**

A game board having representations of two celestial bodies such as the earth and the moon on its top surface, and having tokens representing space stations for orbiting the two celestial bodies, as well as tokens simulating spaceships adapted to link up with the space stations and to travel from one celestial body to the other. Rotatable disks carry slugs under the board surface. The tokens are attracted to the slugs by magnetism so as to move with the slugs in orbits around the celestial bodies. The disk associated with the moon is constructed to receive members representing buried treasure.

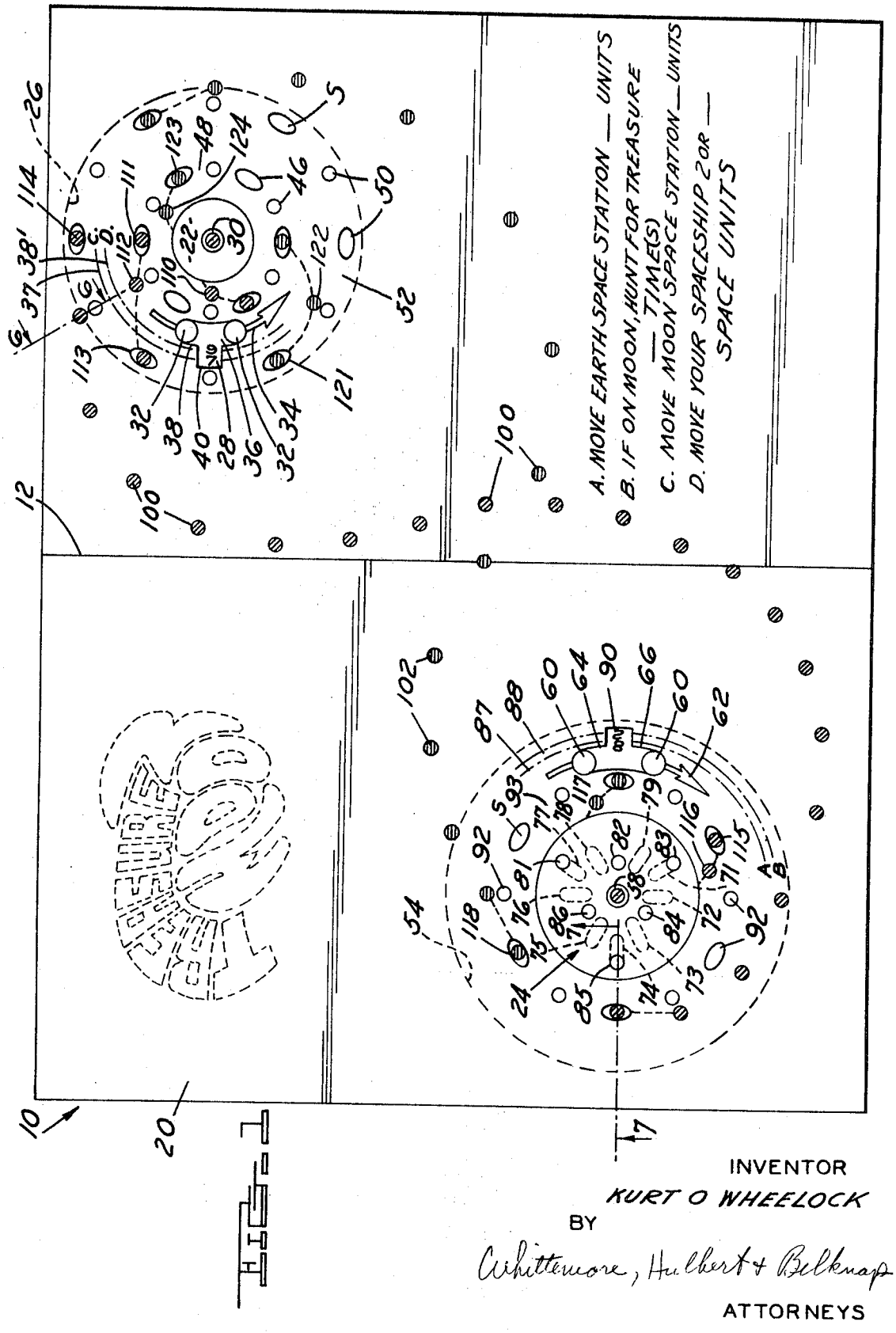
9 Claims, 7 Drawing Figures



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SHEET 1 OF 2



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FIG. 2

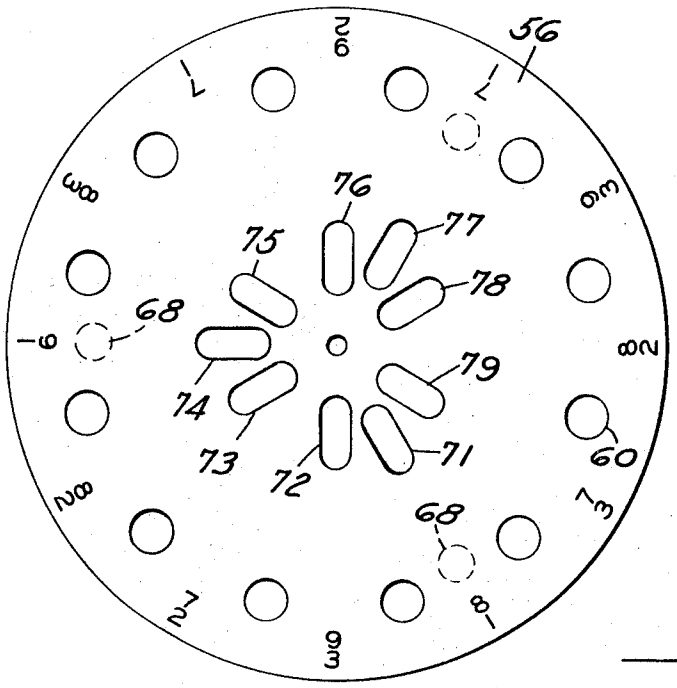


FIG. 7

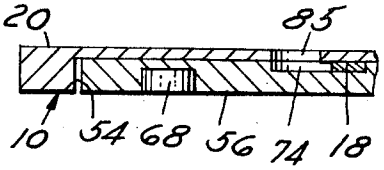


FIG. 3

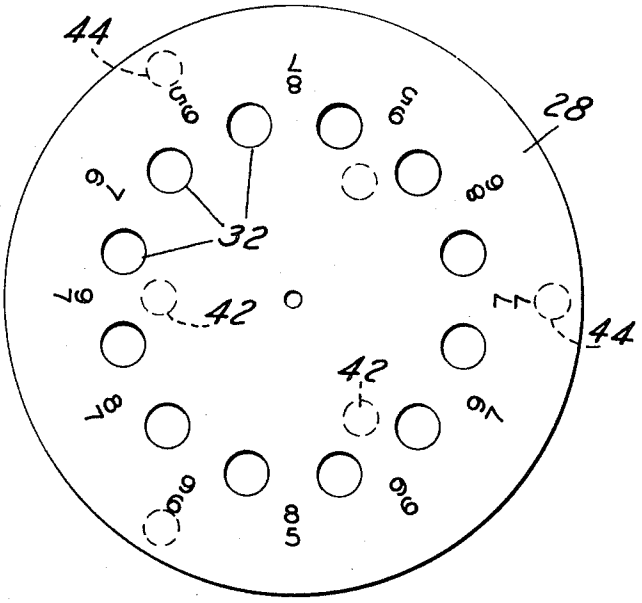


FIG. 4

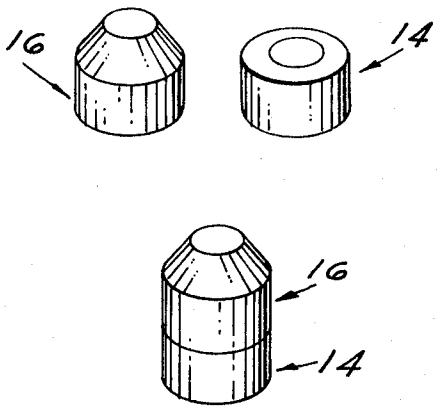


FIG. 5

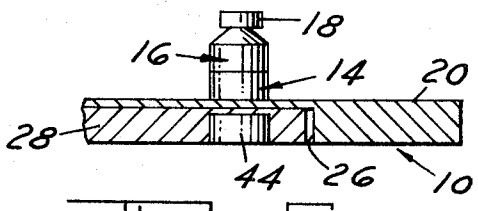


FIG. 6

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BOARD GAME APPARATUS

SUMMARY OF THE INVENTION

One object of this invention is to provide a space game having tokens representing space stations and spaceships.

Another object is to provide a space game having means for hiding buried treasure on one of the celestial bodies represented on the game board.

Another object is to provide a game board having a rotatable member provided with a slug of material beneath the surface of the board, and a token movable over the surface of the board and attracted by magnetism to the slug so as to move with the slug in a circular path.

Another object is to provide a game board having a representation of a celestial body on its surface, a rotatable member having a slug of material beneath the upper surface, and a token representing a spaceship or a space station movable over the surface of the board and attracted by magnetism to the slug so as to move in a circular path with the slug in an orbit around the celestial body.

Another object is to provide a game board having first and second rotatable members with command indicia associated with the first member and dependent upon the angular position of the first member to determine the movement of the second member.

Another object is to provide a game board in which the first member has an annular series of numbers for determining the increments of rotation to be given to the second member depending upon the angular position of the first member.

Another object is to provide a game board having a rotatable member under the representation of a celestial body provided with slots for receiving tokens representing buried treasure, and in which the upper surface of the board has holes adapted to register with the slots in order to permit the tokens to be inserted into and withdrawn from the slots.

Another object is to provide a game course comprising a plurality of place units over which a token representing a game piece is adapted to move in sequence, and means for varying the length of the course.

Other objects and features of the invention will become more apparent as the description proceeds, especially when taken in conjunction with the accompanying drawings, wherein:

FIG. **1** is a top plan view of a game board constructed in accordance with my invention.

FIG. **2** is an enlarged detail view of the rotatable member or disk associated with the moon.

FIG. **3** is an enlarged detail view of the rotatable member or disk associated with the earth.

FIG. **4** illustrates in perspective tokens representing a space station and a spaceship.

FIG. **5** shows the two tokens of FIG. **4** in a stacked relationship with the spaceship on top of the space station.

FIG. **6** is a fragmentary sectional view taken on the line **6**—**6** in FIG. **1**.

FIG. **7** is a fragmentary sectional view taken on the line **7**—**7** in FIG. **1**.

Referring now more particularly to the drawings, the game board is generally designated **10** and in this instance comprises a rectangular board of cardboard or like material which may have a center fold line **12** for folding the two halves of the board together when it is not being used. **14** designates magnetic tokens representing space stations, **16** designates magnetic tokens representing spaceships and **18** designates tokens of permeable material representing pieces of treasure.

The upper surface **20** of the game board **10** has indicia representing two celestial bodies in spaced relation to one another. In this instance the celestial body **22** is the earth and the celestial body **24** is the moon. It will be understood that such representations of the earth and the moon may be merely two-dimensional pictorial representations not raised above the surface **20** of the game board.

There is a circular recess **26** in the undersurface of the board which is concentric with the earth **22**. A flat circular rotatable member or disk **28** is disposed in the recess **26** in concentric relation with the earth **22**. A fastener **30** passing through the center of the earth and through the center of the disk **28** supports the disk for rotation in the recess.

The disk **28** has a series of equally spaced holes **32** arranged in a circle concentric with its center. A person playing the game may insert his finger into one of the holes **32** to rotate the disk **28** in the direction of the arrow **34**. As seen in FIG. **1**, there is a window **36** in the upper surface of the game board which has an arcuate portion **38** that overlies the circular series of holes **32** and is of a length equal to the distance between the remote edges of any two adjacent holes in the series. Obviously a person may insert his finger through the window into a hole **32** and index the disk **28** an increment of rotation equal to the distance between the holes **32**.

The disk **28** also has an inner series of numbers and an outer series of numbers arranged in circles concentric with its axis of rotation. The numbers in each of the two series are spaced from one another the same angular distance as the holes **32**. As will be understood from FIG. **1**, two numbers, one in each series of numbers, are visible in a radial extension **40** of the window **36** in any indexed position of rotation of the disk. There is a command indicia on the surface of the game board associated with each series of numbers. Associated with the inner series of numbers is the following command indicia C: "-Move moon space station_____units." Associated with the outer series of numbers is the command indicia D: "Move your spaceship 2 or_____space units." The command indicia C and D are shown for convenience in the lower right corner of the board, but in actual practice will be printed in arcs indicated by dotted lines **37** and **38'** so that the numbers on the disk **28** appear in the blank spaces.

The disk **28** has embedded in it three equally angularly spaced slugs **42** located on a circle concentric with the axis of rotation of the disk **28**. The disk **28** also has three additional slugs **44** embedded in it in equal angularly spaced relation on a larger circle concentric with the axis of rotation of the disk **28**. The slugs are of a permeable material so as to be attracted to the magnetic tokens **14** and **16**. Actually the slugs could also be magnets.

There is a series of dots and ovals **46** spaced equal angular distances from one another in an inner orbit **48** pictorially represented on the upper surface of the game board around the earth **22**. The orbit **48** overlies and coincides with the circle traced by the slugs **42** carried by the rotatable disk **28**. There is also a series of dots and ovals **50** represented pictorially on the upper surface of the game board in equal angularly spaced relation in an outer orbit **52** around the earth. The orbit **52** overlies and coincides with the circle traced by the slugs **44**. The angular distance between the dots and ovals **46** and between the dots and ovals **50** is equal to the angular distance between holes **32**.

The game board has a circular recess **54** in its undersurface beneath the moon **24**. A flat circular rotatable member or disk **56** is disposed within the recess **54** in concentric relation to the moon **24**. A fastener **58** passing through the center of the moon and through the center of disk **56** supports the disk **56** for rotation on its axis.

The disk **56** has a series of equally angularly spaced holes **60** arranged in a circle concentric with its axis of rotation. The disk **56** may be rotated in the direction of the arrow **62** by the insertion of a finger into one of the holes **60**. As seen in FIG. **1**, there is a window **64** in the top surface of the game board which has an arcuate portion **66** overlying the circle of holes **60**. The portion **66** of the window is of a length equal to the distance between two adjacent holes **60**. A player may insert his finger through the window into one of the holes **60** and index the disk **56** an increment of rotation equal to the distance between two adjacent holes **60**.

The disk **56** has three slugs **68** embedded in it in equally angularly spaced relation on a circle concentric with its axis of

rotation. Like slugs **42** and **44**, slugs **68** are of a permeable material so as to be attracted to the magnetic tokens **14** and **16**. Actually slugs **68** could also be magnets.

The disk **56** has a plurality of elongated radially extending slots or tunnels **71–79** adapted to receive tokens **18** representing buried treasure. The upper surface of the game board has a plurality of holes **81–86** through the representation of the moon **24**.

The arrangement of tunnels **71–79** and holes **81–86** in the present instance is such that in certain indexed positions of the disk **56** none of the tunnels registers with any of the holes. However, in the next indexed position of the disk **56** the holes **82, 84,** and **86** register with the inner ends of the tunnels **72, 75,** and **78**. In the next indexed position, the holes **81, 83,** and **85** register with the outer ends of tunnels **71, 74,** and **77** and in the next indexed position the holes **82, 84,** and **86** register with the inner ends of tunnels **73, 76,** and **79**. The holes **81–86** are large enough to permit the tokens **18** representing buried treasure to be inserted into the tunnels in disk **56** and to be withdrawn therefrom through the holes without interference.

The disk **56** has inner and outer series of numbers equally angularly spaced from one another and arranged in concentric circles, as shown in FIG. **2**. The numbers in each series are spaced from one another angularly the same distance as the holes **60**. As will be understood from a consideration of FIG. **1**, two numbers, one in each series of numbers, are visible in a radial extension **90** of the window **64**, in each indexed position of the disk **56**. There is a command indicia on the surface of the game board associated with each series of numbers. Associated with the inner series of numbers is the following command indicia A: "Move earth space station_____units." Associated with the outer series of numbers is the command indicia B: "If on moon, hunt for treasure_____time (s)." The command indicia A and B are shown for convenience in the lower right corner of the board, but in actual practice will be printed in arcs represented by dotted lines **87** and **88** so that the numbers on the disk **56** appear in the blank spaces.

The top surface **20** of the game board has a series of equally angularly spaced dots and ovals **92** pictorially represented in a circular orbit **93** about the moon. The orbit **93** coincides with and overlies the circle traversed by the slugs **68** upon rotation of the disk **56**. The angular distance between the dots and ovals **92** is equal to the angular distance between the holes **60**.

A series of dots **100** extend in an S-shaped path from the outer orbit **52** around the earth to the orbit **93** around the moon, and a series of dots **102** extend in an S-shaped path from the orbit **93** around the moon back to the outer orbit **52** around the earth. The orbital dots and ovals **46, 50,** and **92** may be considered space units over which the space stations and spaceships pass in sequence from one to the next as the game is played. The dots **100** and **102** are also space units which the spaceships move over in sequence from one to another during their travel to and from the moon.

The following rules are suggested for players or "astronauts" who wish to play the game.

A. How to Become the Winning Astronaut

By traveling to the moon; picking up one treasure, and returning to earth more times during the game than any of the other astronauts.

B. How to Prepare for Blast-Off

1. Take one of the space stations **14** and place it near the earth **22** on the oval marked S. This earth space station will be moved by magnetic attraction around the earth in the orbit **52** by a slug **44** when disk **28** is turned. Disk **28** should be moved in the same direction as the arrow **34** until the earth space station **14** goes around the earth and once again lands on the same oval S. The space station **14** will move from one space unit **50** to the next in sequence each time the disk **28** is indexed, and in each indexed position of the disk **28** the space station will stop on a space unit **50**. The disk **28** is moved by a finger inserted in a hole **32**, and is indexed one increment of rotation by moving the hole **32** from one end of the arcuate portion **38** of window **36** to the other.

2. Place the nine moon treasures underneath the moon **24** in the following way: Look on the moon **24** and pick out the six lunar holes **81–86** where the treasures will be buried. After locating the six lunar holes, the disk **56** is turned in the direction of arrow **62** until no tunnels **71–79** appear where the lunar holes are. Then, disk **56** is turned until three of the tunnels appear at three lunar holes. One token **18** representing treasure is placed in each of these holes and should be pushed into the tunnels out of sight with the finger or by gently stroking the moon **24** near the hole with a spaceship **16** so that the treasure is magnetically drawn into the tunnel and away from the hole. The disk **56** is again moved until three more tunnels appear at the second set of three holes. One treasure is placed in each of these tunnels just as before. The disk is again moved until three more tunnels appear at the first set of three holes. One treasure is placed in each of these tunnels. There are nine different tunnels and each now holds one treasure.

3. Another space station **14** is placed near the moon **24** on the oval marked S. This moon space station moves by magnetic attraction around the moon in an orbit **93** by a slug **68** when the disk **56** is moved. This disk **56** is moved in the same direction of the arrow **62** until the moon space station goes around the moon and once again lands on the same oval marked with an S. The space station will move from one space unit **92** to the next in sequence each time the disk **56** is indexed, and in each indexed position of the disk **56** the space station will stop on a space unit **92**. Each astronaut may now pick out a spaceship **16** and blast off. The disk **56** is indexed one increment of rotation at a time by inserting a finger in a hole **60**, in the same manner as disk **28**.

C. How to Blast-Off

Each astronaut waits until it is his turn and then carries out Space Commands A, B, C, and D. They are printed on the board on the arcs **37, 38', 87, 88** near the moon **24** and near the earth **22**. The first astronaut's turn now beings. First Astronaut: Read Space Command A and index disk **28** and hence the earth space station **14** the number of space units shown in the window **36**. Each dot or oval is one space unit. Skip Space Command B until on the moon and ready to hunt for treasure. Read Space Command C and index disk **56** and hence the moon space station **14** the number of space units shown in the window **64**. Read Space Command D; place spaceship **16** anywhere on earth; and move the spaceship either two space units or the number of space units shown in the window **36**. Count the dot **110** nearest the earth as space unit one. First Astronaut: Your turn is over; however, your spaceship will not stay where it is now. It will be attracted by one of the slugs **42** and will move in an orbit around the earth from one space unit to the next when the space station and disk **28** move. Second Astronaut: Your turn begins now. Read Space Command A and index the disk **28** and hence the earth space station the number of space units shown in the window **36**. Skip Space Command B until on the moon and ready to hunt for treasure. Read Space Commands C and D and carry them out in that order. Second Astronaut: Your turn is over; however, however, your spaceship will also be attracted by one of the slugs **42** and will move in an orbit around the earth from one space unit to the next when disk **28** and hence the space station moves.

D. How do the Spaceships Get to the Moon?

When it is your turn to carry out Space Command D follow the dots **111, 112,** and **113** and try to move your spaceship from the inner orbit **48** of the earth to its outer orbit **52**. You can only move your spaceship in the same direction as shown by the arrow **34**. In other words, you cannot move backwards. If your spaceship has passed the space unit **111** that leads to the outer orbit, then you must go around the earth again until you position your spaceship so that you will move out on the dots **111, 112,** and **113** and on to the outer orbit **52** when it is your turn to move under Space Command D. When you are in the earth's outer orbit **52**, link-up with the earth space station **14**; then separate from the space station on your next turn; and try to position your spaceship to move beyond the outer

orbit on Space Command D. If your spaceship has passed space unit **114** that leads to dots **100**, then you must go around again before you can proceed on dots **100**. Once you are following the dots **100** leading away from the earth and towards the moon you are on your way to the moon; and you have made a "Trans-lunar Injection."

E. How to Position a Spaceship in Orbit so that It Can Get to the Moon

Each time it is your turn, very carefully note where your spaceship is immediately after you have carried out Space Command D. Has your spaceship moved to a different part of the orbit or has it ended up within one or two space units of where it was the last time you carried out space Command C? If your spaceship hasn't moved much then you should take the other choice available to you when carrying out your Space Command D. Sometimes you are better off to decide on just moving your spaceship two space units; at other times, moving your spaceship the number of space units shown in the window will move your spaceship out of orbit. There is no set rule to help you decide which Space Command D to carry out. After a while you will be able to sense what to do.

F. How Does an Astronaut Land on the Moon?

By going into lunar orbit; linking-up with the moon space station; separating from the space station on his next turn; and positioning his spaceship so that on Space Command D he can move his spaceship from dot **115** to dot **116** closest to the moon and then on the moon. Of course, if he has orbited past dot **115**, he must go around again before he can follow dots **115** and **116** to the moon. The spaceship must always go in the same direction as the arrow **62**.

G. After Landing on the Moon, How does this Astronaut Find Treasure?

After landing on the moon, the astronaut waits for his next turn before hunting for treasure. Astronaut on moon: Carry out Space Command A. Then read Space Command B to find out how many times you can hunt for treasure. If the number one (1) appears in the window you can hunt for treasure in one (1) lunar hole. When the number two (2) or three (3) appears in the window hunt for treasure in two (2) or three (3) lunar holes. Most of the time you will be able to see tunnels underneath the moon by looking into the lunar holes. Sometimes, however, no tunnels will appear and you will not be able to hunt for treasure at all until it is your next turn. The easiest way to hunt for treasure is to look in a lunar hole to see where the tunnel leads, and stroke the moon near the hole with your spaceship so that the treasure is magnetically drawn out of the tunnel and into the hole where it can be picked up by your spaceship. You can only carry one treasure at a time on top of your spaceship.

H. How Does Spaceship Blast Off from the Moon?

As soon as you find treasure carry out Space Command C and then Space Command D. Count the dot **117** nearest the moon as space unit one. Follow the dot **117** back into orbit around the moon.

J. How to Get Back to Earth

By linking up with the moon space station in lunar orbit; separating from the space station on your next turn; and positioning your spaceship in the moon's orbit so that you will move from dot **118** back to earth via space units **102**. If you orbit past dot **118**, you must go around again before you can proceed from dot **118** and follow dots **102** back to earth. You have now made a "Trans-earth Injection."

K. How to Land on Earth

By going into the earth's outer orbit; linking up with the earth space station; separating from the space station on the next turn; going into earth's inner orbit via dots **121** and **122**; and moving from dot **123** in the inner orbit to dot **124** nearest the earth and landing on earth. Again, if you orbit past dot **121** you must go around again before you can proceed to the inner orbit, and if you orbit past dot **123** you must go around again before you can land on earth.

L. When Back on Earth what Happens?

Take off the treasure from the top of the spaceship and start back for another. Whoever gets the most treasures wins. You don't have to use all nine treasures. You can play shorter games by putting seven, five, or even three treasures on the moon.

What I claim as my invention is:

1. A game board having first and second rotatable members adapted to be indexed in increments of rotation, said second member having operating means responsive to rotation thereof, said game board having means associated with said first member providing a number station, said first member having a series of numbers movable past said number station upon rotation of said first member, and incomplete command indicia for governing the indexing of said second member, said command indicia being provided on said game board and positioned adjacent said number station so as to be completed by the number displayed thereat.

2. The structure defined in claim **1**, wherein said first member has operating means responsive to rotation thereof, said game board has means associated with said second member providing a number station, said second member having a series of numbers movable past said second-mentioned number station upon rotation of said second member, and incomplete command indicia for governing the indexing of said first member, said command indicia being provided on said game board and positioned adjacent said second-mentioned number station so as to be completed by the number displayed thereat.

3. A game board having an upper surface, a rotatable member beneath said upper surface having slots adapted to receive game tokens representing buried treasure, for example, and a plurality of holes in said upper surface, certain holes registering with certain slots in a predetermined rotative position of said rotatable member to permit said tokens to be inserted into or removed from said slots through said holes, other holes registering with other slots in another rotative position of said rotatable member to permit said tokens to be inserted and removed as aforesaid, and in still another rotative position of said rotatable member, none of said holes and slots being in register.

4. The structure defined in claim **3**, wherein said holes are formed in a pictorial representation of a celestial body on said upper surface, and tokens simulating space vehicles, said second mentioned tokens being magnetically attracted to said first mentioned tokens.

5. A game board having a plurality of space units spaced apart from one another over a game course, a token representing a game piece movable from space unit to space unit over said course, some of said space units within said course being arranged in a closed loop, a second token representing a space station and with which said first-mentioned token is adapted to be linked, means for orbiting said second token from space unit to space unit within said closed loop, and means for releasably linking said first-mentioned token to said second token so that said first-mentioned token will orbit with said second token from space unit to space unit within said closed loop, whereby said second token becomes in effect a moving space unit to vary the length of the course traversed by said first-mentioned token.

6. The structure defined in claim **5**, said closed loop being circular, said orbiting means comprising a rotatable member beneath said game course rotatable on an axis coinciding with the center of said closed loop, said orbiting means having a slug to which said second-mentioned token is magnetically attracted and movable along the path of and beneath said closed loop upon rotation of said rotatable member.

7. The structure defined in claim **6**, including means for indexing said rotatable member angular distances corresponding to the angular distance between the space units.

8. A game board having an upper surface, a representation of a celestial body on said upper surface, a member rotatable on an axis coinciding with the center of said body and having beneath said upper surface a series of angularly spaced slugs

arranged in a circle concentric with the axis of rotation of said member and having a radius greater than the radius of said body, tokens movable over said upper surface and magnetically attracted to said slugs so as to move in an orbit around said body upon rotation of said rotatable member, a representation of a second celestial body on said upper surface spaced from said first-mentioned body, a second member rotatable on an axis coinciding with the center of the second body and having beneath said upper surface a second series of angularly spaced slugs arranged in a circle concentric with the axis of rotation of said second member and having a radius greater than the radius of said second body, second tokens movable over said upper surface and magnetically attracted to the slugs in the second series so as to move in an orbit around said second body upon rotation of said second rotatable member, said board having on its upper surface means in each orbit representing space units spaced equal distances from one another, means representing a line of spaced apart space units connecting said orbits, and means for indexing each rotatable member increments of rotation equal to the spacing between the space units in the associated orbit.

9. A game board having an upper surface, a representation of a celestial body on said upper surface, a member rotatable on an axis coinciding with the center of the body and having beneath said upper surface a series of angularly spaced slugs arranged in a circle concentric with the axis of rotation of said member and having a radius greater than the radius of said body, tokens movable over said upper surface and magnetically attracted to said slugs so as to move in an orbit around said body upon rotation of said rotatable member, said board having on its upper surface means in said orbit representing space units spaced equal distances from one another, means for indexing said rotatable member increments of rotation equal to the spacing between said space units, said indexing means comprising finger holes formed in said rotatable member in a circle adjacent the periphery thereof, the angular distance between said holes corresponding to the angular distance between said space units, and a window in said board overlying the circle of holes and of a length approximating the distance between two adjacent holes.

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