United States Patent [19]

Vogel

[11] **3,764,146**

[45] **Oct. 9, 1973**

[54] **GAME PLAYING PIECES**

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[22] Filed: **Feb. 1, 1971**

[21] Appl. No.: **111,238**

Related U.S. Application Data

[63] Continuation-in-part of Ser. Nos. 659,627, Aug. 10, 1967, Pat. No. 3,588,114, and Ser. No. 817,116, April 17, 1969, Pat. No. 3,697,076.

[52] **U.S. Cl.**.. **273/137 AB,** 273/137 R, 273/137 W, 273/152.1, 273/152.2

[51] **Int. Cl.**..... **A63f 1/02,** A63f 3/00

[58] **Field of Search**..... 273/137, 131

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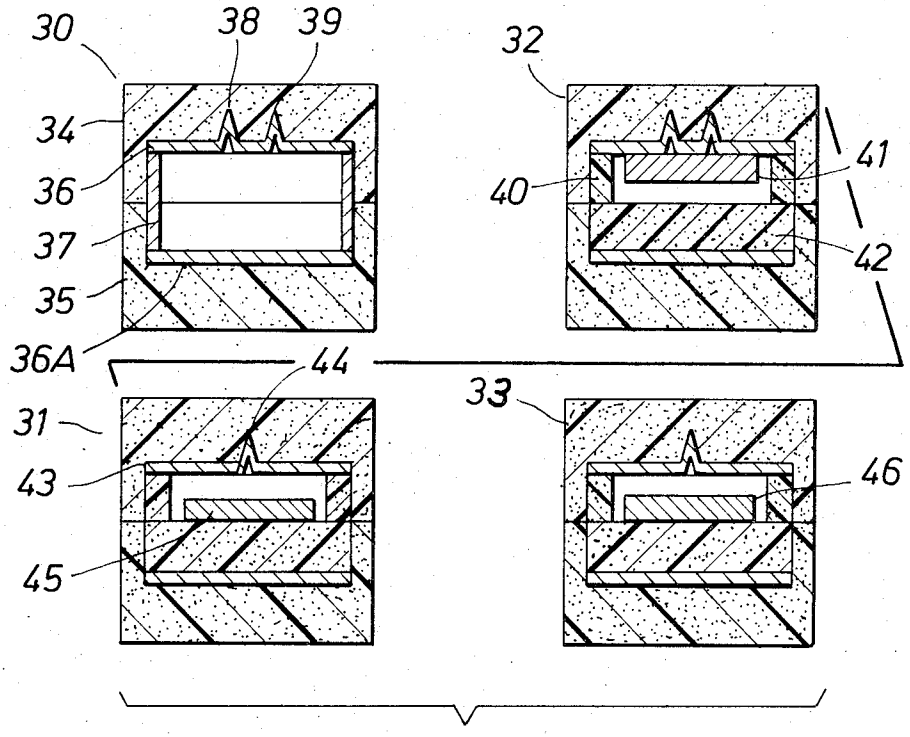
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Primary Examiner—Delbert B. Lowe

[57] **ABSTRACT**

A group of nine or more playing pieces each bearing a different combination of indicators. Some of the indications produced are visually perceivable at all times; others are of such nature as to be perceivable by only one player at a time at his option . The pieces are provided in sufficient number that several kinds of games can be played with them. A first embodiment provides differently colored pieces which have different weights. The colors are visible to all, but the weights are perceived by only one player at a time , by lifting. A second embodiment provides differently colored pieces covered with a soft material within which are objects tactually recognizable by pushing with the finger and also objects recognizable by weight . A third embodiment provides differently colored pieces having hard faces of similar appearance which yield to the pushing finger only on certain pieces . The pieces also contain objects recognizable by their weight . A fourth embodiment comprises pieces made by sandwiching yieldable material between hard plates each having a hole therein. Tactually recognizable objects are imbedded in the material near certain of the holes and also objects recognizable by their weight. A fifth embodiment comprises cards having a number imprinted on one side only and a color which is imprinted on both sides.

17 Claims, 17 Drawing Figures



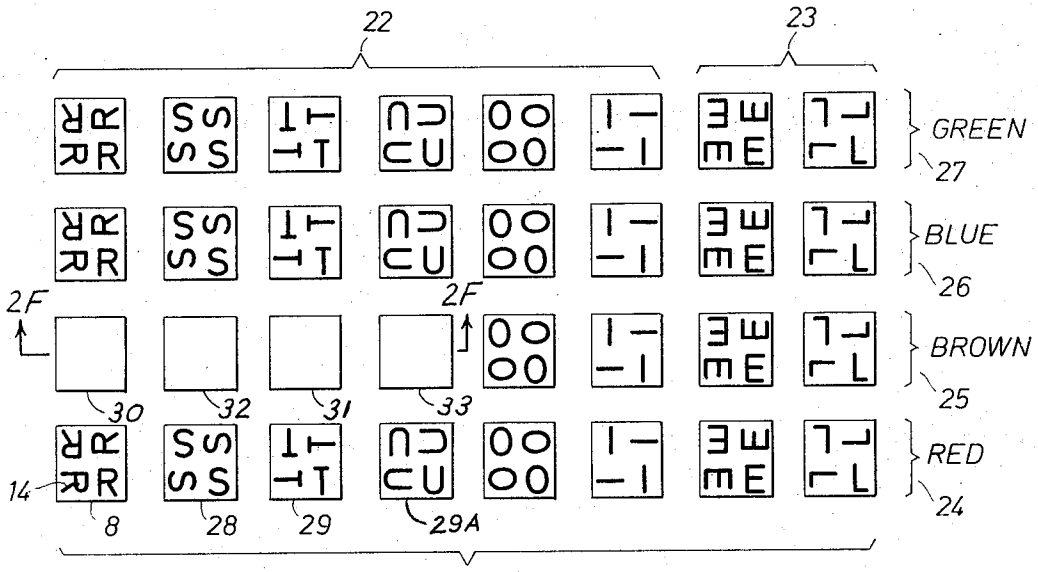


FIG. 2E

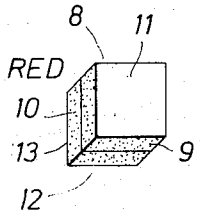


FIG. 2A

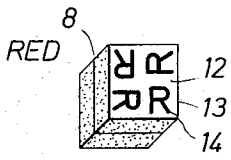


FIG. 2B

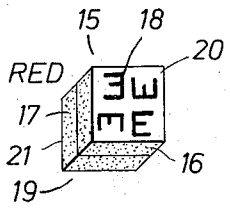


FIG. 2C

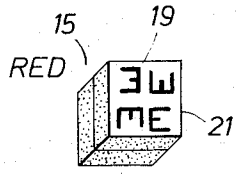


FIG. 2D

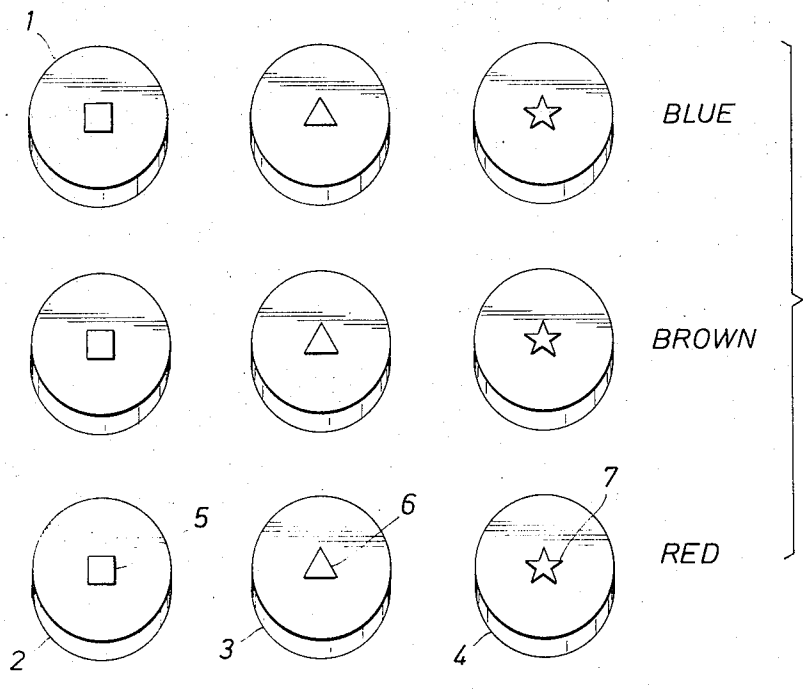


FIG. 1

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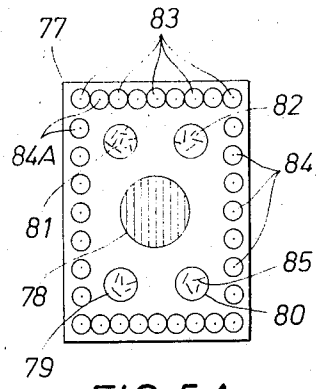


FIG. 5A

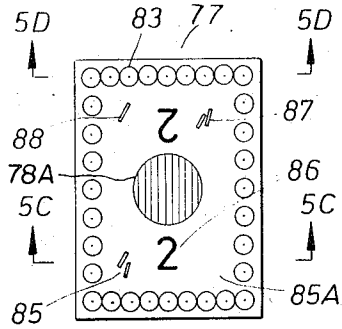


FIG. 5B

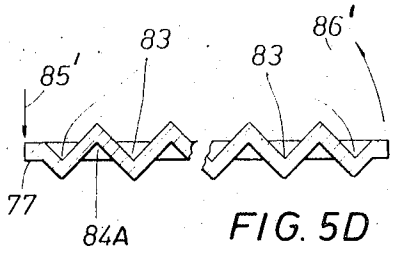


FIG. 5D

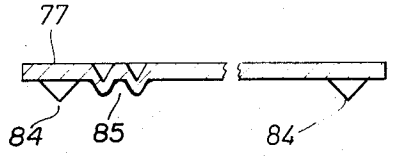


FIG. 5C

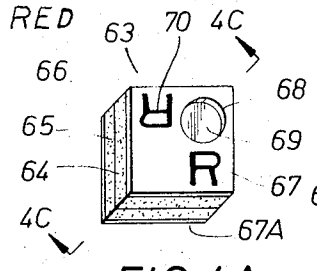


FIG. 4A

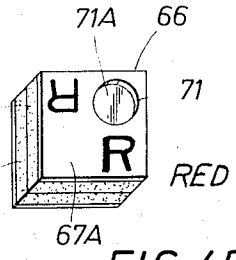


FIG. 4B

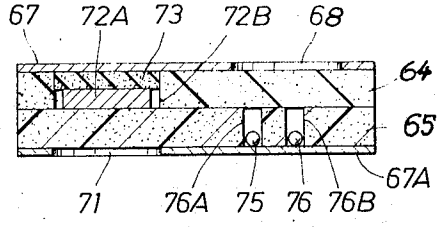


FIG. 4C

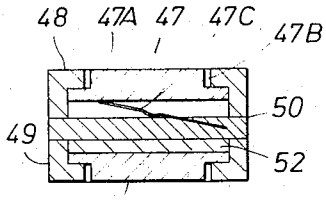


FIG. 3B

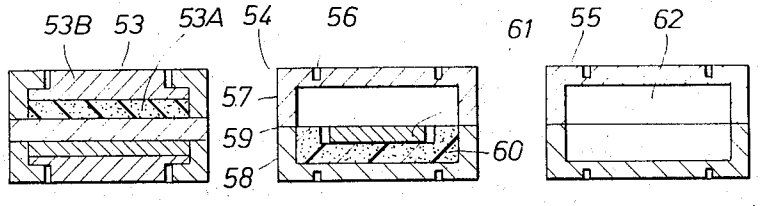


FIG. 3C

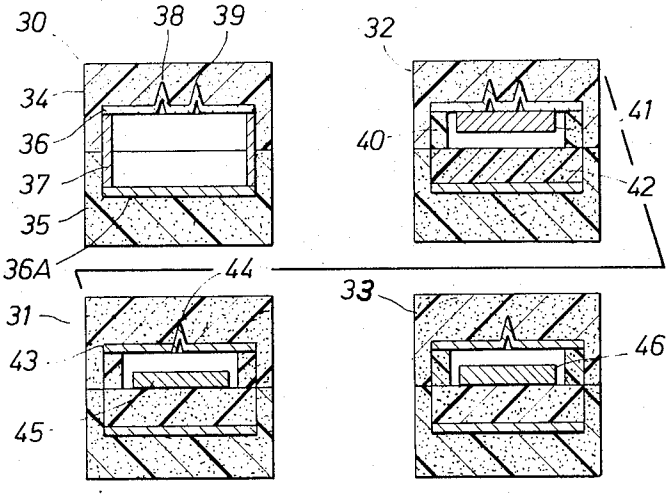


FIG. 2F

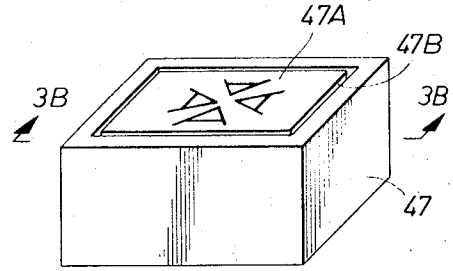


FIG. 3A

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GAME PLAYING PIECES

CROSS-REFERENCES TO RELATED APPLICATIONS

This application is a continuation-in-part of application Ser. No. 659,627 filed Aug. 10, 1967, now U.S. Pat. No. 3,588,114, and of application Ser. No. 817,116 filed Apr. 17, 1969, now U.S. Pat. No. 3,697,076. Application Ser. No. 817,116 is in turn a continuation-in-part of application Ser. No. 659,627.

DESCRIPTION OF THE PRIOR ART

A common element in many known games is in effect the attempted pre-identification of a combination of indications not yet determined or the attempted identification of a combination of pre-determined indications which are concealed. Such attempted pre-identification or identification is generally based on pure guess, logical inference, or a combination of guessing and logic.

For example, in games with dice, the players in effect attempt to pre-identify which indicia or combinations of indicia will come up on a throw. There is always a chance that something will go awry with the throw and it must be repeated.

This difficulty is avoided in games wherein a player draws one of several shuffled cards which bear different indicia turned face down and thus concealed. In such games the arrangement of cards is unknown to the players. Thus a combination of indications may be determined before one of the players guesses as to its nature. Problems such as occur with misthrown dice are avoided. Moreover, games with predetermined indications seem to interest some persons more than do dice games. However, it is to some degree inconvenient to invert a card type playing piece in order to reveal a concealed indication thereon.

In addition, the use of existing types of playing pieces leaves something to be desired as to the variety and dramatic impact of indications produced during play.

SUMMARY OF THE INVENTION

The above disadvantages of prior art playing pieces are overcome by the present invention which has as its general and main objective to provide apparatus offering convenient means for concealing and then automatically and substantially instantly revealing indications producible by one or more moveable playing pieces. This objective is achieved by providing one or more moveable pieces formed so as to reveal a hidden indication upon the application of manual force to one or the other of two different regions on the piece or pieces. The piece or pieces are constructed in such a way as to provide no prior conclusive visual indication of the specific indication to be produced.

An additional objective of the invention is to provide playing pieces of enhanced interest. This is achieved by providing pieces which produce indications of such nature as to be dramatic, novel, varied, transient, covert or overt. These characteristics are inherently associated with different aspects of the means provided for achieving the general objective outlined above.

According to a different aspect of the invention a still further objective is to provide a set of indicium bearing pieces which may be arranged in a pattern initially concealed but increasingly revealed during the progress of a game. This is achieved by providing a group of pieces

comprising nine or more members. Each member bears a first indicium formed to be readily observed by all players of a game and a second indicium formed to be readily observed by a single player at his option. The first indicium is from a set of three different indicia and the second indicium is from a set of three still different indicia.

In what is considered the best of the preferred embodiments, the playing pieces are provided as forty eight cubes, each colored all over with one of four different distinctive colors. There are twelve of each color. Six pieces of each color bear respectively different symmetrically duplicated letters of the alphabet, on one side only. The other six pieces of each color bear six still different letters, except for one, which are symmetrically duplicated on two opposite sides.

The outer parts of the cubes are formed of soft yieldable material. Imbedded within the material are hard parts bearing protuberances of different kinds which are not visually perceptible but which may be covertly observed by pushing down upon the soft material with a finger. In addition, within 40 of the pieces there are sound producing indicia. These may be overtly perceived by pushing upon the piece. Certain of the pieces bear indicia perceivable only kinesthetically. The pieces are adjustable by orientation as to the indications they will produce, but give no visual indication of their orientation. The various indicia are placed within and upon the pieces in such a way as to reveal bit by bit additional information as to the identity of the individual piece. Various interesting games can be played by following agreed upon rules governing successive steps of covertly and overtly observing indicia within and upon the pieces.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view illustrating playing pieces provided in a first embodiment of the invention, wherein some pieces are heavier than others.

FIG. 2A is a perspective view of a red playing piece according to a second embodiment, the piece having a letter imprinted on one side only.

FIG. 2B is a perspective view of the piece of FIG. 2A where the piece has been inverted.

FIG. 2C is a perspective view of another red playing piece of the second embodiment, where the piece bears a letter imprinted on two opposite sides.

FIG. 2D is a perspective view of the red piece of FIG. 2C, where the piece has been inverted.

FIG. 2E is a plan view of representative ones of the playing pieces according to the second embodiment.

FIG. 2F is a cross section view of four of the playing pieces of FIG. 2E, namely: four of the pieces which are shown inverted in FIG. 2E with respect to most of the others. Internal construction of the pieces is illustrated.

FIG. 3A is a perspective view of a playing piece according to a third embodiment.

FIG. 3B is a cross section view of the piece of FIG. 3A.

FIG. 3C is a cross section view of three other pieces according to the third embodiment.

FIG. 4A is a perspective view of a playing piece according to a fourth embodiment.

FIG. 4B is a perspective view of the piece of FIG. 4A where the piece has been inverted.

FIG. 4C is a cross section view of the piece of FIG. 4A.

FIG. 5A is a plan view of a playing piece according to a fifth embodiment.

FIG. 5B is a plan view of the piece of FIG. 5A where the piece has been inverted.

FIG. 5C is a cross section view of the piece of FIG. 5B on a larger scale.

FIG. 5D is another cross section view of the piece of FIG. 5B on a larger scale.

DESCRIPTION OF SPECIFIC EMBODIMENTS

Referring to FIG. 1, there is here illustrated the organization of a group of playing pieces according to a first embodiment of the invention and the construction of the pieces. The pieces illustrated are short cylinders and bear indicia which may be concealed from all players. They are especially suited for games played by more than two persons, being provided in such a way that pieces assigned to each of several players may be identified respectively by distinctive colors. They are provided in four colors: red, brown, blue, and green. Only three colors are shown for illustrative purposes in the figure. Four groups of thirty six pieces are provided. Each group is of a different color. 12 pieces of each group are of lead; 12 are of brass; and 12 are of aluminum. The lead pieces each have imprinted on one face only a square; the brass pieces each have imprinted on one face only a triangle; and the aluminum pieces each have imprinted on one face only a star. These geometrical indicia may be used as indicia of rank where the lowest rank is the square, the intermediate rank is the triangle and the highest rank is the star.

Corresponding to the geometrical indicia, the respective pieces are either very heavy, moderately heavy, or light, because they are constructed of the metals of different weights named above. Lead is the heaviest, brass is of intermediate weight, and aluminum is the lightest. The appearances of all pieces are identical on those faces opposite the geometrical indicia described, except for color differences between the four groups of 36.

FIG. 1 shows a group of nine of the pieces at 1, considered to be a minimum number for playing certain games. The individual pieces as at 2, 3, and 4 are of lead, brass, and aluminum as shown in the figure. All the lead pieces have squares imprinted as at 5; all the brass pieces have triangles imprinted as at 6; and all the aluminum pieces have starts imprinted as at 7. The geometrical indicia are on one face only of each piece. One group of three differently imprinted is red over their entire outer surfaces; another is brown; and a third is blue. The remaining pieces, making a total of 144, comprise twelve times duplication of the pieces shown in FIG. 1, plus a group of green pieces identical with the red pieces except for color.

In playing games, the pieces may be turned face down so that the geometrical indicia are invisible. Then a player may identify a piece by covertly testing it; for example, by lifting it. If it is very heavy, he knows it is of lead and therefore has a square on the hidden side. He already knows its color, since this is on both sides of the piece. By testing is meant any operation upon a playing piece which will reveal some concealed information about it.

Perception by lifting is associated with muscle reaction and nerve reactions associated therewith. Such perception is referred to herein as kinesthetic perception and indications so perceived are referred to as kinesthetic indications. Such indications are provided by playing pieces having different weights. Such indications are referred to herein also as covert indications, meaning that they are perceived in general by a single person at any one instant.

Visual indications, as produced by visibly imprinted colors or geometrical symbols, are generally overt, though they may be covert. As used herein, the word overt means perceived by several persons simultaneously. A visual indicium may be covertly observed , as in the case of the geometrical indicia on the piece of FIG. 1, when it has been placed face down and thus concealed. This covert observation is carried out by carefully lifting the piece and looking at its lower surface without allowing it to come into the field of him of any player other than the one making the covert observation or test.

The pieces illustrated in FIG. 1 are each capable of producing overt and covert indications, namely: visual and kinesthetic indications. The visual indicia are the imprinted coloring materials and imprinted geometrical symbols; the kinesthetic indicia are masses of materials having differing weights and making up the bodies of the pieces.

Referring now to FIG. 2A, there is here shown a perspective view of one of the pieces according to a second embodiment of the invention. The piece is shown at 8. It is made of yieldable foamed polyurethane. It has the shape of a cube, and is colored red over the entire outer surface. It comprises a first half 9 and a second half 10, which are flat sided box shaped parts having five outer sides. They are joined by glue along a center line extending around the periphery of the cube and along inner facing edges of the parts. It has a surface 11 which bears no imprinted indicium except for the coloring material making it have a red appearance. It has also a lower surface 12 indicated but not visible in the figure. It has also an edge 13 about which the piece will be rotated to be placed in the position shown in FIG. 2A.

Referring to FIG. 2B, here is shown a perspective view of the piece 8 as it appears after being rotated about the edge 13 of FIG. 2A through one hundred and eighty degrees. We see the altered position of the edge 13. Also the now visible surface 12 is shown and a symmetrically duplicated letter, the letter R at 14.

Referring to FIG. 2C, we see a red piece 15. The piece, as for the piece of FIG. 2A, comprises a first half 16 and a second half 17. It is colored red all over. There is a letter E at 18 symmetrically duplicated. There is a lower surface 19 which is indicated but invisible. There is a visible surface 20 bearing the letter E. A visible edge 21 is also shown.

FIG. 2D shows the piece 15 as it appears when rotated about the edge 21 through one hundred eighty degrees. The edge 21 is shown and it is shown that the surface 19 bears the same duplicated letter E as appears on the opposite surface 20 of the same piece.

FIG. 2E shows a plan view of representative pieces of the group of pieces provided according to the second embodiment.

At 22 are indicated those pieces which have letters of the alphabet imprinted on one side only of each. These pieces, numbering twenty-four, bear symmetrically duplicated on each respectively the letters R, S, T, U, O, and I. There are twenty-four pieces having letters of the alphabet duplicated thereon upon two oppo-

site sides of each. Four of these pieces bear E and four bear L as indicated at **23.** In addition, there are four such pieces bearing instead of E or L the letter A, four bearing I, four bearing B, four bearing D. To save space, these latter 16 pieces are not shown in the figure.

As indicated at **24, 25, 26,** and **27,** respectively, each complete set of letter bearing pieces is given a different distinctive color, the colors being red, brown, blue, and green respectively. At **8, 28, 29** and **29A** respectively are shown four of those pieces having letters on one side, the pieces being set down with the letter bearing sides upward. At **30, 31, 32** and **33** are shown respectively four of those pieces having letters on one side only, the pieces being set down with the letter bearing sides downward so that only the color brown shows. These pieces bear respectively the letters R, S, T, and U.

FIG. 2F shows a cross section view of the four pieces **30,32, 31** and **33** of FIG. 2E. At **30** is shown a piece bearing the letter R. It comprises a first half **34** and a second half **35,** each being a flat sided, five sided box-like structure molded from yieldable foamed polyurethane and colored brown on its outer surfaces. The piece **30** is cube shaped externally, being 1 5/16 inches on a side. It is formed by gluing together the structures **34** and **35.** Within the cavity formed between the structures **34** and **35** are a first square moveable sonorous metal plate **36** and a second square sonorous metal plate **36A** which are of aluminum 1/16 inch thick and are each 1 1/16 inches on a side. The word sonorous is taken herein to mean capable of producing sound as by impact with a body. Separating the parts **36** and **36A** is a four sided square box-like structure **37** constructed of aluminum and having external dimensions of 1 1/16 inches on its long edges and ½ inch on its short edges; the sides are 1 1/16 inches thick.

The upper sonorous plate **36** has formed thereon two embossed conical spikes or bosses **38** and **39.** These can be felt by a finger pressed down upon the upper surface of the playing piece, since the structure **34** is soft and spongy.

At **32** is shown a playing piece which bears the letter S. It is constructed internally exactly as is the piece **30,** except that it contains in place of the boxlike structure **37** a smaller square box-like structure **40** molded of foamed polyurethane ⅛ inch thick and having external dimensions of 1 1/16 inches on its long sides and ¼ inch on its short edges. Also, it contains a square part made of lead at **41,** which is attached by glue to a square spike bearing sonorous part. Additionally it contains a square foamed polyurethane part **42** which rests against the part **40.** The part **42** is 1 1/16 inches square and ¼ inch thick, while the lead part **41** is 1/8 inch thick and is 11/16 inch square.

At **31** is shown a piece which bears the letter T. Its construction is exactly like that for the piece **32** with two exceptions. First, the spiked sonorous parts contained in pieces **30** and **32** are here replaced by a part **43** identical except for having embossed thereon a single spike **44** rather than two. Second, the lead part **41** of the piece **32** is replaced here by an identically dimensioned part **45** of aluminum, which is left free and unattached within the central cavity of the piece **31.**

At **33** is shown a piece which bears the letter U. It is identical with the piece **31** with one exception; namely, that the aluminum part **45** of piece **31** is replaced by a piece **46** identical except for being formed of lead. The piece **46** is free and unattached in the cavity within piece **33.**

All the pieces bearing the letters R, S, T, and U are internally constructed in a manner identical respectively with the construction above described for the brown pieces bearing the same letters. All pieces bearing O or I upon one surface only are identical internally with the brown piece bearing the letter U. As explained elsewhere herein, all the pieces bearing the letters E, L, A, I, B, and D on two surfaces are capable of producing sound, bear concealed spikes and are heavy. Thus their internal construction is as illustrated at **33** in FIG. 2F for the brown piece bearing the letter U.

In the foregoing are described the details of construction of all the pieces provided according to the second embodiment of the invention. It will be seen that each of the playing pieces is formed by imbedding parts, some moveable with respect to others, within yieldable polyurethane foam. Certain of these internal parts are hard. The outer surfaces of the pieces are of foamed polyurethane and therefore are in turn moveable with respect to other parts. Each piece has a color indicium appearing on all surfaces, a symmetrically duplicated alphabetical indicium, a tactually perceptible indicium, an audibly perceptible indicium (except for pieces bearing the letter R or S) and a kinesthetically perceptible indicium. Some of the indicia are such as to lend themselves to covert testing; some lend themselves to overt testing. All this is obvious from the nature of the various pieces and the indicia borne thereon.

For example, one can press down upon the surface parts of the pieces , which are yieldable , and thereby feel with a finger whether the spiked side of the piece is facing upward and if so whether the piece is one spiked or two spiked. One can lift the piece and see if it is heavy, indicating that it contains a lead part. Providing the spikes are facing upward, the pieces, except for those bearing R or S, will produce a sound when the spike bearing surface is vigorously pushed downward. This sound is produced by impact of the moveable sonorous spiked part upon the free, unattached metal piece contained within the cavity of the piece. The sounds are either loud or weak, being weak for those pieces containing a free aluminum part within and louder for those pieces containing a free lead part within. With large spikes as shown in FIG. 2F there will be produced some sound if the piece is pushed down vigorously, even if the spikes face downward, because the spikes themselves will push through the polyurethane and impact the table upon which the piece rests. However, this sound is different from that produced within the piece itself by impact of the free metal piece with the sonorous metal plate. Although the spikes in FIG. 2F are shown rather large for emphasis, in actual practice they are preferably such as to protrude only about 1/16 inch above the surface of the sonorous metal plates on which they are embossed. This is shown by experience to be adequate for recognition of the corresponding shapes of the single or double bosses by the finger.

A desirable feature of the pieces is their symmetrical construction and the manner in which they can be adjusted by orientation as to the indications which can be produced, without revealing the orientation by visual appearance. All those pieces bearing letters upon two surfaces can be set down upon a table so that they can

produce a sound or not, depending upon whether the spike bearing parts are uppermost. We speak here of substantial sound and not of the different kind of sound, which is weak, produced when the spikes are large and themselves impact the table through the polyurethene. Where the spikes are the preferred size (1 / 16 inch) , of course , there is identically no sound when the spikes face downward. In any case, there is no way to predict from visual observation whether the piece will or will not produce a sound by impact of the contained metal piece with the sonorous plate. Similarly, each piece will produce a different tactual indication when the spikes face upward from what it will produce otherwise, but the orientation cannot be determined from visual observation.

It should be noted that one can covertly test one of the pieces when the spikes are upward and then overtly indicate whether the piece will produce its sound. To do this, one first presses gently upon the upper surface of a piece in the center thereof. Then he presses vigorously upon the upper surface but upon the outer part thereof, whereupon the sound is produced.

It will be observed that kinesthetic indications are produced by the described pieces when they are lifted. Audible indications are produced when the upper surface is pressed down vigorously. And tactile indications are produced when the upper surface is pressed down gently. All these actions require the application of manual force to a portion of a piece. To produce two different indications one may apply manual force first to the upper surface of one piece and then to the upper surface of another piece. Alternately, one may apply manual force to the upper surface of a piece when the contained spike or spikes are facing upward, and then to the opposite surface when the spike or spikes are facing downward. As a still additional alternate, one may apply manual force gently to only the central region of the upper surface of a piece, or vigorously to the outer region of the same surface, producing the tactile indication in the first case, and audible indication in the second. The playing pieces described above with reference to the first and second embodiments can be used for playing various games. Some of these will now be described to show further the utility and special advantage of the present invention.

One class of games which can be played with the pieces provided by this invention is characterized by the use of one or more pieces which can be manipulated to produce different combinations of concealed indications which the players in effect attempt to identify by guessing, generally on the basis of incomplete information which increases during the game.

An example is a game which will be designated the first illustrative game. In this game the players deploy upon a table or other playing surface nine, 16, 20, or 24 pieces chosen and oriented so that they all present the same appearance except as to color and so that any indicia other than color borne thereon will be the same for pieces of each color used. Then the pieces are shuffled upon the playing surface and the players commence one by one to test the pieces in order to covertly observe the indicia other than color borne thereon. The players attempt thus to discover the positions of a set of pieces consisting of one piece of each color, with the indicia other than color being all different for the set. On his turn, when a player feels he has sufficient information or is willing to chance it, he may cry "I win" and proceed to point out to the other player or players the positions of the set of pieces which meet the above requirements for a winning set. The first player to do this successfully is winner of that deal. The other player or players observe the indicia other than color borne on the pieces pointed out and if their observations confirm the contention of the player who cried out, then he does indeed win. Otherwise the indicia other than color are all concealed as at the start of the deal and the game proceeds without the player who cried out. If there are only two players, of course, the player who cries out incorrectly loses.

Consider the pieces of FIG. 2E. The game may be played using all the pieces bearing the letters R, S, T, U, O, and I on one side only. These may be placed upon the table with the letters facing downward and shuffled about so that the positions of individual pieces are unknown. Then each player in turn may covertly look at the lower surface of one piece. As described above, when a player has discovered enough pieces having different colors and also having different letters he should cry "I win" and turn up the pieces he chooses to support his contention. It may very well be wise for a player in some cases to guess as to the identity of a particular piece in view of interest shown by some other player in that piece and sometimes in view of the fact that one of his opponents may win before he himself has enough information for certainty.

This game becomes trivial with less than nine pieces, since in that case only two colors are of interest and they are found out in two plays. However, the game can be played very satisfactorily with nine or 16 pieces. It is of course best in the practical case to use the same number of pieces of each color.

A variation of the game can be played using only indicia observed by applying manual force. For example, consider the sixteen pieces of FIG. 2E bearing the letters R, S, T and U. These pieces may be used without reference to the letters in covertly investigating their identity. Those pieces bearing R are two spiked and light, those with S are two spiked and heavy; those with T are one spiked and light, and those with U are one spiked and heavy. Each player in this variation is allowed on his turn either to pick up the piece and determine whether light or heavy or to push on it and determine whether one spiked or two spiked. When a player wishes to cry "I win," he can then invert the selected pieces and overtly confirm the correctness of his selection according to the above described requirement for winning. Or he may push down on the piece vigorously, causing it to produce a sound and/or make an overt visual indication. Pieces with T produce a weak sound. Pieces with U produce a loud sound. Pieces with R produce no sound and very slight visual indication. Pieces with S make no sound but are greatly compressed and visibly so.

Referring now to FIG. 3A we see here the outer appearance of playing pieces provided in accordance with a third embodiment of the invention. The playing piece 47 has the shape of a parallelepiped, square when viewed from above or below. It is 1 11/32 inches square and has a height somewhat greater than 1 inch. It has an upper moveable surface part 47A which bears a symmetrically duplicated letter of the alphabet. Surrounding the part 47 is a visible groove 47B.

FIG. 3B shows a cross section view of the piece 47. It comprises the upper moveable surface part 47A

which is an interior plunger-like pusher structure, visible groove 47B separating the outer portion of part 47A from part 48. It comprises also a flat spring-like structure 47C which bears a boss or deformation causing it to produce a clicking sound when flexed. This spring-like structure is like those used in toys known as "crickets," which make clicking sounds. The part 47C is actuated by a person pushing upon the part 47A. The piece 47 comprises also an upper outer part 48, a lower outer part 49, a rectangular center part 50, a rectangular pusher plunger-like structure 51, and a solid false spring piece 52. All these parts are fastened together by glue or otherwise, except that the pusher part 47A is maintained slidably free. Furthermore, the pusher part 51 is held immoveable in the outer part 49 and under constraint by the parts 50 and 52 in such a way that it is indistinguishable from the part 47A. It has imprinted upon its outer surface the same alphabetical indicium as is imprinted upon the part 47A. The spring-like structure 47C is attached at one end to the central part 50 and its pressure maintains the part 47A in a position against the upper inner surface of the part 48.

Thus it will be seen that the piece 47 has a plunger-like surface which can be pushed by a finger and will yield and has another like-appearing surface which when pushed by a finger will not yield. The piece can be made to yield a covertly perceptible indication by pushing down upon it very gently, so that the person who is pushing can tell whether it yields, without others being able to see this to any substantial degree. Vigorous pushing down will produce an overtly visible indication, however, as well as an audible indication. This piece is therefore adapted to be characterized by moveability (equally well termed yieldability) of the top surface under pressure by a finger or by immoveability, depending upon how the piece is oriented in either of two visually indistinguishable orientations. Further, when a player pushes the upper surface of the piece it will make a clicking sound or no sound depending upon whether the surface bearing upon the spring-like member is uppermost.

There are twelve of the pieces such as illustrated in FIG. 3B colored red and bearing respectively and symmetrically duplicated upon two square faces thereof the letters I, I, A, E, O, U, R, S, T, D, L and B. Likewise there are twelve such pieces colored brown, twelve colored blue, and twelve green. In every case the color is imprinted upon both faces. That is to say, each of the pieces has a common indicium imprinted or borne upon two opposite sides, the indicium being coloring material. This is in addition to the letters.

FIG. 3C illustrates three other kinds of playing pieces in accordance with the third embodiment. At 53 is a piece identical with the piece of FIG. 3B with one exception. A sponge rubber part 53A holds in place the plunger-like structure 53B, whereas this function was served by a flat spring-like structure in the case of the piece illustrated in FIG. 3B.

At 54 and 55 are two pieces having exactly the same external appearance as the piece 53. However, their internal structures differ from that of the piece 53. In particular, it is to be noted that they exhibit the groove 56 which is visible on two square faces of each piece of the third embodiment. The piece 54 contains within a central cavity formed between two glued together box-like structures 57 and 58 a five sided shallow box-like structure 60 which is formed of foamed polyurethane and attached by glue to the inner surface of the aforesaid cavity. Within the structure 60 is placed a square part 61 formed of lead ⅛ inch thick and 11/16 inch square. The lead part is free and moveable in the cavity. The piece 55 contains only an empty cavity 62. different colors exhibited respectively

Except as otherwise noted, all the pieces of the third embodiment are constructed of aluminum. There are six pieces of the kind illustrated in FIG. 3C colored red on both square faces; six similarly colored brown; six similarly colored blue; and six similarly colored green. Each of the pieces illustrated in FIG. 3C bears the letter B imprinted symmetrically on both square faces.

The piece 53 will produce covert kinesthetic indications when pressed upon gently, if the pushable surface is uppermost. It will produce overtly visible indications if pushed vigorously. The piece 54 will produce a rattling sound if moved vigorously up and down. If moved back and forth with moderate vigor upon a table surface, it will make a rattling sound if the piece is oriented so that the polyurethane structure 60 is above the lead part. Under the same conditions it will make no sound if the orientation of the piece is such that the polyurethane piece is below the lead part, since in this case the polyurethane acts as a kind of cup and the lead piece impacts only upon soft material when rattled back and forth and thus emits no sound. The piece 55 is lighter than the other pieces, but makes no sound and its surfaces cannot be deflected by manual force.

The various kinds of pieces of FIG. 3C thus can be identified by various kinds of indications produced when manual force is applied to them. However, they cannot be distinguished merely by visual observation.

Various games which can be played with the pieces of the third embodiment are described in the preceding discussion of games as well as in discussion included later on herein.

FIG. 4A shows the external appearance of a playing piece according to a fourth embodiment of the invention. Here the piece 63 is formed by two parts 64 and 65 constructed of foamed polyurethane parts sandwiched between two hard sonorous aluminum plate-like structures 67 and 67A, which are 1/16 inch thick and two inches square. The part 67 has a hole 68 therein which exposes therethrough the surface 69 of the polyurethane material of part 64. Upon the outer surface of the part 67 is a symmetrically inprinted letter of the alphabet at 70. The hole 68 is ¾ inch in diameter and is centered along a diagonal of the part 67 and 0.8 inch from the corner thereof.

FIG. 4B shows a perspective view of the piece 63 after it has been rotated through 180° about a line passing through the corners of the part 67 and through the center of the hole 68. At 71 is shown a hole in part 67A revealing therethrough the surface of a polyurethane part at 71A. the visible edge 66 is shown to be in a different position because of the rotation of the piece. As indicated in FIGS. 4A and 4B, the surfaces of piece 63 are so imprinted as to present a colored appearance when either of the parts 67 or 67A is exposed to view.

FIG. 4C shows a cross section view of the piece 63 of FIG. 4A. At 72A is a disc shaped part formed of aluminum and fitting loosely in a hole 72B in the part 64. Between part 72A and part 67 is a disc shaped polyurethane part 73. The part 72A fits in hole 72B with appreciable clearance as indicated by the clearance space 74. At 75 and 76 are two spheres of soft but non-

spongy rubber. These are located in cylindrical holes 76A and 76B which in turn are in the part 65. The spheres are 1/8 inch in diameter as are the holes 76A and 76B. The holes 72B, 71, and 68 are ¾ inch in diameter. The pieces 64 and 65 are each ½ inch thick; the piece 73 is ¼ inch thick and ¾ inch in diameter. The piece 72A is ¼ inch thick and ⅝ inch in diameter.

There are 12 red pieces constructed along the lines of FIG. 4C. Six of these bear the letters E, A, I, B, L, and D respectively and symmetrically duplicated upon both of the square faces thereof in place of the letter shown in FIG. 4A. In these six pieces the part 72A is made of lead and the part 73 is omitted; also, the part 76 is omitted. Likewise there are six brown, six blue and six green pieces constructed in the same way as these just described red pieces.

Three red pieces are constructed to be internally identical with that bearing the letter E, differing therefrom in that these three pieces bear respectively the letters U, O, and I imprinted only upon the part of each piece which is in a position corresponding to that of part 67A in FIG. 4C. Similarly three brown, three blue, and three green pieces are so constructed.

One red, one brown, one blue and one green piece are constructed as described in the last paragraph with the exception that they bear the letter T and the lead part is replaced by an aluminum part of the same size and shape.

One red, one brown, one blue and one green piece are constructed as described in the next to last paragraph with the exception that they bear the letter S and have in place of the aluminum piece a lead piece and a polyurethane piece exactly as shown in FIG. 4C and two rubber spheres as in FIG. 4C.

One red, one brown, one blue, and one green piece are constructed exactly as shown in FIGS. 4A, 4B, and 4C, except for differences in color.

The above description covers completely the constructional features of the pieces according to the fourth embodiment. These pieces produce visible indications by means of the imprinted colors and letters of the alphabet thereon. They produce audible indications when the surfaces such as illustrated at 67 in FIG. 4C are pushed down vigorously so as to impact upon a freely moveable disc of lead or aluminum. The pieces produce tactile indications when a player pokes a finger into one of the holes as at 68 or 71 in FIG. 4C, whereby he may feel one or two rubber spheres or may merely feel an aluminum or lead disc — depending upon which piece he investigates and depending upon the orientation of the piece. In addition, certain pieces are heavier than others because of the presence of an internal lead piece therein as described in the preceding five paragraphs.

It will be seen that those pieces bearing indicia on two surfaces have each two different available orientations which present the same visual appearance. For each piece, the orientation controls what indications will be produced when a player applies manual force thereto.

FIG. 5A shows a playing piece according to a fifth embodiment of the invention. The piece 77 is a flat card. It has a central portion 78 imprinted with a color, which is red for the particular piece illustrated at 77. At 79, 80, 81 and 82 are four outer regions within which are imprinted confusing patterns of lines which serve to camouflage the presence and nature of rounded linear bosses present in the same regions, as protuberances. At 83 are shown conical bosses arranged along each short side of the card and protruding upward from the surface shown. At 84 are shown identical bosses arranged along each long side of the card. At 84A are shown other conical bosses protruding downward from the surface shown and placed along the edges of the card between the bosses 83 and 84 for example. At 85 is shown the location of a portion of the region 80 containing bosses which are camouflaged and invisible for all practical purposes both because of the camouflage and because they have rounded surfaces on this side of the card where they protrude.

FIG. 5B shows a view of the other side of the card 77. At 78A is shown a central portion of this side of the card, which is imprinted with the same color as shown by the first side. At 86 is shown a numerical indicium printed in symmetrical duplicate upon the card so that it will be readily readable from two viewing directions. Both the numerical indicium, and the imprinted color are positioned well away from the edge of the card so that they are not visible at or near the edges of the cards when they are stacked in play. At 87 is shown a pattern of linear bosses which are depressions and have sufficiently sharp edges on this side of the card so that they are visible. Bosses are shown also at 85 and 88. The bosses are double at 85 and 87 but single at 88. It should be noted that the bosses run at more or less random directions but in any event are not parallel in any one of the regions in which they are embossed. The reason for this is to minimize the chance that two of the bosses become visible at one time by some accidental reflection of light at a critical angle when the bosses protrude upward. At 85A is shown a region having no boss therein.

FIG. 5C is a cross section view of the card 77, showing conical bosses at 84 and linear bosses at 85.

FIG. 5D is a cross section view of the card, showing conical bosses as placed along a short edge thereof.

All the pieces of this fifth embodiment are constructed along the lines of the preceding description. 13 cards are provided with brown central regions; 13 with blue central regions and 13 with green central regions; also thirteen with red central regions. Each of the thirteen cards of one color bears a different numerical indicium visibly imprinted on one side thereof, namely, opposite the side of the card where the linear bosses protrude. Imprinted on the side where the linear bosses protrude and in the outer regions containing the bosses are four patterns of lines imprinted, preferably black. These form a confusing pattern which serves to camouflage the presence and number of the linear bosses in any one region. Double bosses are signficant; single bosses have no numerical significance. The bosses are placed on the cards in such a way that cards with the numeral one have a double boss in only one outer region; cards with the numeral two have double bosses in two different outer regions; cards with the numeral three have double bosses in three different outer regions and cards with the numeral four have double bosses in four outer regions. All outer regions not having a double boss have a single boss or no boss. This applies to all the cards bearing numbers one through 13. The purpose of placing the single bosses in regions not occupied by double bosses (which alone have numerical significance) is to minimize the change of accidental revelation of significant double bosses by some criti-

cally reflected ray of light. That is to say, the single bosses confuse the issue, except for covert tactile observation of the bosses by a finger. The cards bearing five, nine and 13 are embossed as are the cards bearing one. The cards bearing six and 10 are embossed as are the cards bearing two. The cards bearing seven and 11 are embossed as are the cards bearing three; and the cards bearing eight and 12 are embossed as are the cards bearing four. Bosses on cards other than those with numerals one through four are for the purpose of avoiding undesired easy identification of the cards by tactile indicia when the entire deck of cards is used for playing games played with the visible indicia only.

If desired, the deck of cards may be increased in number to some advantage by applying the bosses only to the cards with numbers one through four and then imprinting these numbers on another set of cards without the bosses — along with cards having the numbers five through 13.

All the cards having one, two, three or four and having the conical and linear boss pattern above described can be separated from the deck of cards and used to play the first illustrative game described in the foregoing. When this is done the cards are placed face down and the numerical value is covertly observed by feeling the regions of the bosses with a finger. Pieces with the number one or other numbers can readily be identified in this way.

The conical bosses are placed upon the cards so that the latter may be inverted easily during games. As shown in FIG. 5D, the conical bosses along the edges of the cards provide pivot points such that, if the card **77** is upon a table and a player pushes down in the direction and at the point indicated by the arrow at **85'** in FIG. 5D, then the opposite edge of the card will swing through the arc at **86'** and thus be raised and easily grasped.

Thus it will be seen that the cards provided by the fifth embodiment each bear two visible indicia and also tactile indicia by which a player may covertly test the numerical values thereof. On the individual card the visible indicia consist of a number imprinted on one side and a colored region imprinted on both sides. If desired, the card can simply be inverted for visual testing during play.

The following will further discuss some of the various games for which the invention is adapted.

With reference again to FIG. 3C, these pieces may be used for playing the first illustrative game as follows. One red piece as at **53**, one as at **54**, and one as at **55** are chosen; also three such pieces colored brown and three colored blue are chosen. They are placed upon the table with the pushable surface uppermost, and shuffled about. Then the players in turn test the pieces either by pushing down lightly and covertly the upper surface or by lifting. Pieces as at **53** are pushy and heavy; pieces as at **54** are hard and heavy; those as at **55** are hard and light. Overt indication of the identity of each piece selected when a player cries out "I win" can be made readily. This is done for pieces such as that at **53** by pushing down vigorously so that all can see the upper surface being pushed down; for pieces as at **56**, a vigorous up and down motion will produce a rattling sound; for pieces as at **55** nothing happens. It is assumed, of course, that in playing the game the imprinted letter B will simply be ignored.

It will be clear that the first variation of the first illustrative game can be played with any of the five preferred embodiments described herein. In the case of the pieces of FIG. 1, the pieces should be placed with the geometrical symbols facing down and tested during play by lifting the piece to see if it is light, moderately heavy, or very heavy. Again, overt confirmation of a selection of winning pieces can be made by inverting the selected pieces.

The pieces of FIGS. 4A and 5A can similarly be used in an obvious manner to play the first illustrative game. Where the pieces of FIG. 4A are used, those can be used which bear letters referenced above with respect to FIG. 2E and the game can be played in an identical manner, allowing for differences between the pieces.

For the pieces of FIG. 5A the tactile indicia may be used or the cards can simply be covertly inverted for visual testing during play. If desired, the convention may be adopted that during the game a player may use the tactile indicia only and that he may test only one pair of tactile indicium regions on each turn.

A second class of games which can be played with the pieces of the present invention is characterized by the use of two or more pieces which can be manipulated to produce different permutations of concealed indications. The players in effect attempt to identify these by guessing or inference or both.

An example is a second illustrative game which will now be described. Here two or more players choose and orient a group of six playing pieces all having relatively uninformative appearances on the table. These are chosen and oriented so that four of them are identical with respect to some concealed indicium associated therewith while two others are different with respect to the same indicium. These two will be referred to as the odd pieces. The indicium is one which can be tested or observed covertly without inverting the pieces. In addition, the chosen and oriented pieces are selected and arranged so as to provide no conclusive visual information or other unsolicited information as to the locations of the odd pieces. The players in turn test any one of the six pieces. After six turns the players will have tested all six pieces and will know with certainty the locations of the two which are odd. A player wins by being the first to cry "I win" and correctly point out the locations of the odd pieces. That is, he wins that particular deal. A score of five points is given to a winning player if his contention of a win is not challenged by one of his opponents; that is, if they do not insist upon confirming his contention by testing the pieces themselves or by having him demonstrate that he has indeed won. If, however, his contention is challenged and must be confirmed with respect to one of the players, then the winner is awarded five points plus five extra points for each opponent player who challenges. In the event that the player who cried "I win" is unsuccessful in demonstrating his contention when challenged, then he is given a negative score of 10. The first player to acquire a total score of 50 is declared winner of the entire game. At other intermediate stages he is merely winner of a deal.

Consider the pieces of FIG. 2E. All the red pieces having the letters R, S, T, U, O, and I imprinted on one side only may be used for playing the second illustrative game. They are placed upon the board with letters facing down and all the indicia are ignored except for those tactile indicia made perceptible covertly by appli-

cation of manual force to the individual piece. In this case four of the pieces are one spiked and two are two spiked, as explained in the preceding detailed description of the pieces.

Alternatively the game could be played with the same pieces by using only the kinesthetic indicia; this would be done by lifting the individual pieces as a means for covertly testing them. Since four of the pieces are heavy and two light, the game would be played in the same manner as when using the tactile indicia.

The same game can be played using only overtly perceived indicia which are of a transient nature, but in this case the game becomes mainly a test of short term memory. For example, the players may use only the audibly perceivable indicia on the red pieces having R, S, T, U, O, and I imprinted on one side only thereof. Four of these pieces are quiet and four noisy. The game would be played as explained above with reference to covertly perceived indicia.

Further, the six red pieces bearing E, A, I, B, L and D can be used. In this case the players ignore the letters and use only the tactile and audible indicia. Covert tests are made by pushing down lightly upon a piece, and overt tests are made by pushing down vigorously so that the piece makes a sound. In this case, the players orient all the pieces in the same way before the game, except that two pieces are inverted, with respect to the others. Then the pieces are shuffled about and the game proceeds.

It will be clear that properly chosen pieces of any one of the five specific embodiments may be used in playing the second illustrative game. Using the pieces of FIG. 1 the players may use five red lead pieces and one red aluminum piece. Using the pieces of FIG. 3B the players may use the pieces bearing the letters R, S, T, U, O and I, orienting five of the pieces one way and one a different way, so that five of the pieces are pushable and noisy and one is quiet and non-pushable. In this case the letter indicia may be ignored. Similarly, pieces such as those illustrated in FIGS. 4A and 5A may be used for this game.

If desired, a separate differently colored set may be chosen for each of the competing players and the convention adopted that the players can test and attempt a win only with pieces of a competitor. This makes for a more interesting game.

As another example of the second class of games a third illustrative game will be described. Here the players choose and orient a set of pieces numbering twelve so that seven of them are alike with respect to some concealed covertly observable indicium or indicium combination and five others, designated the odd pieces, are different from the seven with respect to the same indicium or indicium pattern or combination. In addition, the chosen and oriented pieces are selected and arranged so as to provide no conclusive information by unsolicited visual indications as to the locations of the odd pieces.

A first player acts as arranger and places the pieces in a line with the odd pieces being each adjacent to another odd piece or on one of the ends of the line. Then a second player tests the pieces one by one. Prior to any one of the steps of testing he may cry "I win" and then attempt to point out the locations of the odd pieces, which have been arranged in a permutation with the other pieces in accordance with the recipe outlined above. If he succeeds he does indeed win. Otherwise he loses on that deal. Next the second player becomes the arranger and the first attempts to identify the five odd pieces, winning or losing on his deal. Each player is given five deals in rotation. That player wins the game who achieves the larger score in five deals. The score given for any one deal is five points minus one point for each testing step used before declaring a win. An unsuccessful declaration of a win yields a negative score of five. More than two players may compete by allowing competition among several non-arranger players.

Where several players compete, that player wins a deal who first successfully cries "I win", etc. A player who is unsuccessful in his attempt to win is given a negative score and the deal passes to the next player in rotation. In any event, the player who achieves the highest total score in five deals is winner of the game. The game is more conveniently played where a separate set of pieces is chosen for each player. In this case, it is preferable that the different sets be distinguished by different indicia common to each piece of a set respectively.

Consider the pieces of FIG. 2E. All the red pieces may be used, with the letters turned face down for the pieces bearing R, S, T, U, O, and I on one side only. Then four of the pieces bearing E, A, I, B, L, and D on two sides are to be oriented so that the spike faces downward. Under these conditions there will be five pieces which are heavy and quiet, that is, incapable of making a sound and bearing a heavy lead part. The quiet pieces of those bearing letters on two sides are readily detected when the pieces are tested by pushing down thereon, since these pieces will have no spikes uppermost. Of the pieces bearing hidden letters on one side only, there is only one, that with the letter S which will be both heavy and quiet, so that a player can conclusively detect it only by pushing down and lifting. The convention is adopted that a player can test a particular piece in only one way at each step of testing.

The game will be played more conveniently with four players where each player uses a set comprising all the pieces of one color and arranges them as described above. Then the players are allowed to test only the pieces of one or more competitors. This arrangement makes for a very interesting and spirited four person game.

It will be clear that any of the five preferred embodiments provides pieces which can be chosen and suitably oriented for playing the third illustrative game. In the case of the pieces illustrated in FIG. 1, each player can choose a set of twelve pieces of a single distinctive color, different for each player. He can then choose the pieces of his color so that seven are very heavy and five are very light and the game can be played as described above. Or the game can be played with pieces of a single color as described. Similarly, the pieces illustrated in FIG. 3B, or the pieces illustrated in FIG. 4A or those illustrated in FIG. 5A can be used for playing the third illustrative game.

A fourth illustrative game will now be described . In this game one of the players serves as a dealer and nonguessing competitor and repeatedly places before his opponent some playing piece which is covertly predetermined to produce a specific one of two or more possible concealed indications. This activity is termed a deal. After each deal the second player serves as guesser and wagers some number of scoring points that he will exactly twice identify in some respect the indi-

vidual indications to be produced by the pieces placed before hin on four successive deals. After each wager the players observe or test the indication producible by the piece and the guesser then has the option of increasing the number of scoring points wagered. If the guesser fails to correctly name the indications exactly twice during four deals he loses. Otherwise he wins the scoring points wagered. Either player may concede after any one of the wagers. When the player loses, what he loses is the wagered scoring points which go to the dealer. When a player concedes, he loses to his competitor the wager made to that point. The players rotate the positions of guesser and dealer after each four successive deals and that player is final winner who has the larger score after each has been guesser three times.

The pieces illustrated at 15 in FIG. 2C may be used in this game as follows. The first player, acting as dealer, grasps the piece, places it behind him and covertly orients it as he desires. He then places it before the guesser, who guesses whether the tactile indication is producible on the upward facing surface of the piece; that is, he guesses whether the piece is so oriented that the protuberance thereon will be facing upward. The game then proceeds as described.

The pieces of FIG. 1 may be used thus. The dealer shuffles the pieces about upon a playing surface with the geometrical symbols (squares, triangles and stars) facing down. He then selects one of the pieces and places it before the guesser, who guesses whether it is light, heavy, or of intermediate weight. Then the game proceeds as described above.

If desired, three or more may play as follows. A first player becomes the dealer and otherwise abstains from the game. The other players compete, the second acting as guesser and the third and others as non-guessing competitors. The positions of dealer, guesser and non-guessing competitors are rotated. The players other than the guesser are not allowed to test or observe the indication of a dealed piece until after they have accepted or conceded the latest wager made by the guesser. The guesser, of course, is allowed to test or observe the piece before making his wager related thereto. This second version of the second illustrative game is of special interest in that it allows the possibility of bluffing by the guesser. The game proceeds as for the first version except for the provisions noted here to allow play by more than two.

Either version of the illustrative game may be played with more than one playing piece presented upon the deal and with more than two kinds of pieces, becoming thereby more interesting. The rules above stated will still apply, except that the dealer will present to the guesser at one time several pieces of identical appearance, which the guesser will attempt to identify successively. Where the indications are of more than two kinds, the guesser would be expected to correctly identify the indication producible by the piece under consideration in more than one respect. For example, considering the pieces illustrated in FIG. 2F, the guesser may be expected to identify the indications in question as to whether they are respectively quiet and heavy, quiet and light, noisy and heavy, or noisy and light.

It is clear that any of the five disclosed embodiments may be used in playing the fourth illustrative game.

A fifth illustrative game will now be described. Here each player uses all the pieces of a given color belonging to the pieces illustrated in FIG. 2E. The pieces are turned so that letters are facing upward on each piece. All those pieces bearing letters on two sides are turned so that the spike therein is facing downward, — except that the spike is turned facing upward for some combination of six or fewer of these pieces which will spell some word of at least three letters, when used alone or in combination with one of the pieces having letters on one side only. It is required that any letter used from the latter group must appear as the second one in the elected word. There are at least 20 dictionary words meeting the stated requirements.

The playing proceeds thus. Each player in turn covertly tests one of the pieces of an opponent by pushing down upon the upper surface thereof gently. Gradually he obtains sufficient information to justify a guess as to the word elected by an opponent. Prior to his testing turn he may declare "I win" in lieu of testing another piece and proceed to demonstrate his success by pushing down vigorously upon all those pieces he thinks are in the elected word. If he is wrong, one of the pieces will make a sound and he loses for that deal.

That player wins who achieves the larger score in five deals. The score given for any one deal is five points minus one point for each testing step used before declaring a win. An unsuccessful declaration of a win yields a negative score of five. The game may be played with the second, third and fourth embodiments.

A sixth illustrative game will now be described. This is played with special advantage by means of the pieces illustrated in FIGS. 5A, 5B, and 5C. The cards of this embodiment are first shuffled and thus thoroughly mixed. The stack is then turned with the visibly imprinted numbers one through 13 facing down. Each player (there may be two or more) on his turn has the option of drawing a card without testing it and holding it as part of a hand; or he may covertly test it and then place it in the center of the table facing down. As a still further option, the player may take into his hand without testing or may merely test any one of the pieces previously placed face down in the center of the board. As a still further option he may place face down in the center of the board one of the pieces previously added to his hand.

The object of the game is to be the first to hold a hand containing four cards of four different colors, each with a different number and forming a sequence; or a hand containing four cards of four different colors all having the same number thereon. It is required that the winning hand have only four cards. The players test the pieces by covertly inverting and examining them visually.

It will be clear that games similar to this sixth illustrative game may be played with any one of the described embodiments bearing letters rather than numbers. For most of the games described in the foregoing, essentially the same results would be obtained if the alphabetical and numerical indicia were interchanged. This is not true of the fifth illustrative game, of course. However, for most purposes in gaming it is immaterial whether letters or numbers are used as indicia on playing pieces; some kind of alphanumeric symbols are generally to be preferred, however, over other types, since they are well known and form readily recognized sequences.

It will be clear that the pieces described with respect to the first four embodiments described may be used in

playing games described in my patents above referenced.

What is claimed is:

1. Game apparatus comprising a playing piece so constructed as to produce automatically and substantially instantly one of two perceptibly different tactile indications in response to manual force applied to one of two different regions thereof, and so constructed as to convey no prior visual information as to the specific one of said indications producible by application of said force to a specific one of said regions, for at least one viewing direction and condition of orientation and position of said piece with respect to a player.

2. The apparatus of claim 1, wherein said piece comprises deformable material and two objects distinctively perceptible by touch, said material being of such nature and said material and said objects being so formed and positioned that said objects are concealed from visual observation while exposed to examination by touch.

3. The apparatus of claim 1, wherein said piece comprises a symmetrical member formed to present the same appearance to said player while disposed in either of two visually indistinguishable orientations, and to expose either of said two regions for application of said force thereto in response to disposition of the piece in different ones of said orientations.

4. A group of playing pieces provided in pairs, each piece of each pair being a member formed to stand with stability upon a surface while disposed in a particular orientation, the members of said pair being so formed and constructed as to be visually indistinguishable while disposed in said orientation and so constructed that manual force can be applied thereto in said orientation;

and indicating means attached to a particular member of each of said pairs as part thereof and so constructed as to enable the member tto produce a particular distinctive tactile indication when said manual force is applied thereto while the member is in said orientation;

the other member of each of said pairs being so constructed as not to be enabled to produce said indication when said manual force is applied thereto while in said orientation,

whereby said members produce perceptibly different tactile indications upon the application of said force.

5. The apparatus of claim 4, wherein said member comprises deformable material and an object formed to be distinctively perceptible by touch, said material being of such nature and so formed and positioned as to conceal said object from visual observation while exposing said object to examination by touch, said object being formed differently on each of said members, thereby producing a different tactile indication on each.

6. A group of playing pieces provided in pairs each piece of each pair being a member formed to stand with stability upon a surface while disposed in a particular orientation, the members of said pair being so formed and constructed as to be visually indistinguishable while disposed in said orientation and so constructed that manual force can be applied thereto in said orientation;

a particular member of each of said pairs being so constructed as to exhibit a particular distinctively perceptible weight when lifted;

the other member of each of each of said pairs being so constructed as not to exhibit said particular weight;

whereby said members produce perceptibly different kinesthetic indications upon the application of said force.

7. A group of playing pieces provided in pairs, each piece of each pair being a member formed to stand with stability upon a surface while disposed in a particular orientation, the members of said pair being so formed and constructed as to be visually indistinguishable while disposed in said orientation and so constructed that manual force can be applied thereto in said orientation;

and indicating means attached to a particular member of each of said pairs, said indicating means comprising two sonorous parts so constructed, positioned and joined to said member as to produce a distinctive sound by impact of one of said parts upon the other in response to said force when applied to the member in said orientation;

the other member of each of said pairs being so constructed as not to be enabled to produce said sound when said force is applied thereto while in said orientation;

whereby said pieces produce different indications which are audibly distinguishable, upon the application of said force thereto.

8. A playing piece so formed as to present the same appearance while in either of two different orientations, and so constructed as to produce two different indications in response to manual force applied thereto while in said orientations, and so constructed as to convey no prior visual information as to which of said indications will be produced upon the application of said force while said piece is in a specific one of said orientations;

an audible indicating means on said piece, said indicating means comprising two sonorous parts so constructed, positioned, and joined to said piece as to produce a distinctive sound by impact of one of said parts upon the other in response to said force when the piece is in one of said orientations, thereby producing one of said two different indications, said means being so constructed, positioned and joined to said piece as not to produce said distinctive sound when the piece is in the other of said orientations.

9. Game apparatus comprising nine playing pieces so constructed and formed as to produce respectively nine different combinations of predetermined indications, each piece being a member so constructed and formed as to produce a particular one of said combinations consisting of a first and a second indication, said first indication being one of a first set of three different ones of said indications and said second indication being one of a second set of three different ones of said indications;

a first indicating means on said member, so formed and constructed as to produce said first indication, said means being of such nature and so positioned and said member being so constructed that said first indication is perceptible by one of two facing players while all information relating to the pro-

duction thereof is concealed from the other of said players for at least one condition of orientation and position of the member with respect to said players.

and a second indicating means on said member, so formed as to produce said second indication and so formed and positioned and of such nature that said second indication is viewable by both said players for said condition.

10. The apparatus of claim **9**, wherein said member is a solid mass, said first set of indications comprising different weights exhibited respectively by different ones of said pieces, and said second set of indications comprising different colors exhibited respectively by different ones of said pieces.

11. The apparatus of claim **9**, wherein said member comprises a yieldable cube shaped structure, said first set of indications comprising different combinations of weights and tactually perceptible shapes exhibited respectively by different ones of said pieces, and said second set of indications comprising different colors exhibited respectively by different ones of said pieces;

said first indicating means comprising: an object within the member having a particular tactually perceptible shape, material within the member of such density and volume as to impart thereto a particular weight, and a yieldable covering which forms the exterior of the member and conceals said object and said material visually while providing for tactual investigation of said object by either of said players by pushing of the finger upon said exterior;

said second indicating means comprising coloring material exhibited on said exterior.

12. The apparatus of claim **9**, wherein said member is a flat sided hollow structure with exterior surfaces formed of rigid material, said first set of indications comprising different combinations of weights and degrees of surface yieldability exhibited respectively by different ones of said pieces and said second set of indications comprising different colros exhibited respectively by different ones of said pieces;

said first indicating means comprising: a surface portion of said member so attached to the remainder thereof as to exhibit a particular degree of yieldability in response to being pushed by the finger of either of said of said players, and material within the member of such density and volume as to impart thereto a particular weight;

and said second indicating means comprising coloring material exhibited on the exterior of said member.

13. The apparatus of claim **9**, wherein said member comprises a yieldable flattened body attached to and sandwiched between two hard plates, the sides of said body forming side surfaces of the member, said first set of indications comprising different combinations of weights and tactually perceptible shapes exhibited respectively by different ones of said pieces, and said second set of indications comprising different colors exhibited respectively by different ones of said pieces;

said first indicating means comprising : an object within the member having a particular tactually perceptible shape, and material within the member of such density and volume as to impart thereto a particular weight, said compliant body and said plates being so formed and said object being so positioned that said object is concealed form view but made accesible by means of an opening through said plate for tactual investigation by either of said players by pushing of the finger through said hole against said body;

and said second indicating means comprising coloring material exhibited on the exterior of said member.

14. The apparatus of claim **9**, wherein said member is a thin flattened body with two opposite flat faces, said first set of indications comprising different visual appearances exhibited respectively by different ones of said pieces, and said second set of indications comprising different colors exhibited respectively by different ones of said pieces;

said first indicating means comprising: an indicium imprinted on a first one only of said faces and so positioned as not to be visible at the edge of the member,

said second indicating means comprising a second indicium imprinted on said first and on the second of said faces and so positioned as not to be visible at the edge of the member,

whereby said indicia are visible only upon an exposed one of said faces when said pieces are stacked in gaming.

15. The apparatus of claim **14**, wherein said member is so constructed as to produce tactile indications in addition to said first and second indications, said tactile indications being produced by a third indicating means comprising protuberances embossed upon the member so as to protrude in the direction of said second one of said faces, said protuberances being concealed by a visibly imprinted pattern on said second face which serves as camouflage.

16. The apparatus of claim **14**, wherein said first indicium is an alphanumeric indicium and wherein said second indicium is coloring material imprinted on central regions only of both said faces.

17. The apparatus of claim **14**, wherein said pieces make up a deck of playing cards.

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