United States Patent [19]

Kramer

[11] 3,924,859

[45] Dec. 9, 1975

[54] **ARITHMETIC FACT GAME**

[76] Inventor: **George J. Kramer**, 7 High St., Terryville, Conn. 06786

[22] Filed: **Sept. 27, 1974**

[21] Appl. No.: **510,075**

[52] **U.S. Cl.** ..... **273/137 C**; 35/69; 273/150

[51] **Int. Cl.**[2] **A63F 9/20**

[58] **Field of Search** ..... 273/137 R, 137 A, 137 AE, 273/137 B, 137 C, 137 D, 157 R, 150; 35/31 G, 35 J, 69

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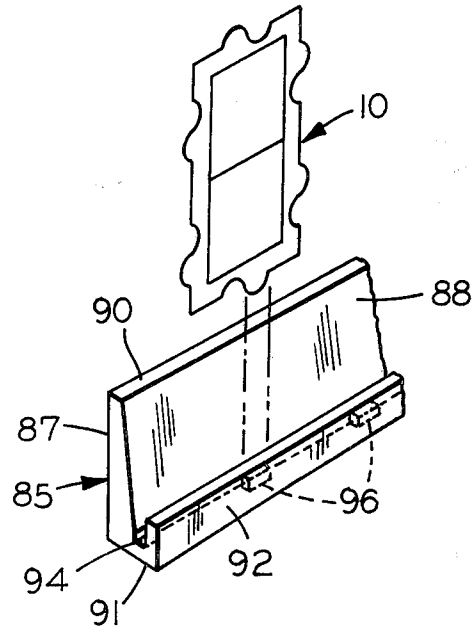
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Primary Examiner—Anton O. Oechsle

[57] **ABSTRACT**

A multiplicity of playing pieces capable of being assembled together in interlocking relation in accord with a predefined scheme, and a holder for supporting the playing pieces of a player preparatory to their being played. The multiplicity of the playing pieces all embody substantially the identical construction, differing solely from one another insofar as concerns the indicia appearing on one face thereof. The locking means each comprise a concave-shaped aperture and a convex-shaped projection formed in adjoining relation to each other along the edge on at least one of the sides of each of the playing pieces. Moreover, each of the concave-shaped apertures and each of the convex-shaped projections have the same radius of curvature so that the convex-shaped projection formed along the edge of the corresponding side of any of the playing pieces is receivable within the concave-shaped aperture formed along the edge of the corresponding side of any other one of the playing pieces. The holder consists of an upstanding member having at least one vertical side thereof formed so as to be inclined at a slight angle from the vertical and operable for supporting playing pieces of a player thereagainst in an upstanding position. In addition, the holder has formed thereon means consisting of a multiplicity of suitably spaced concave-shaped apertures cooperable with the convex-shaped projection of the locking means with which the playing pieces are provided for purposes of maintaining the playing pieces positioned in the aforedescribed manner on the holder.

7 Claims, 5 Drawing Figures



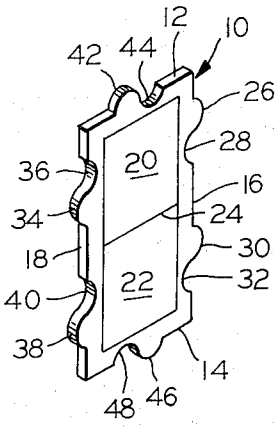


FIG. 1

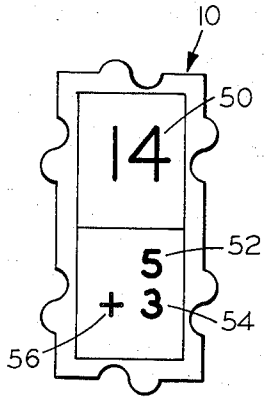


FIG. 2

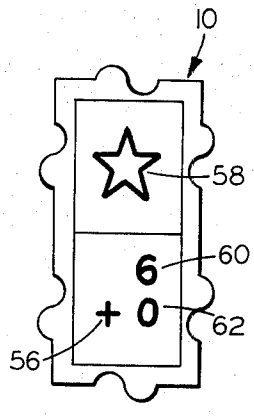


FIG. 3

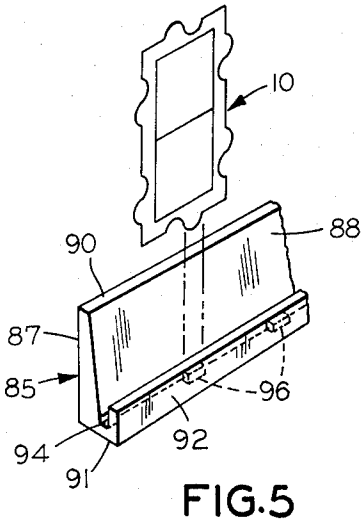


FIG. 5

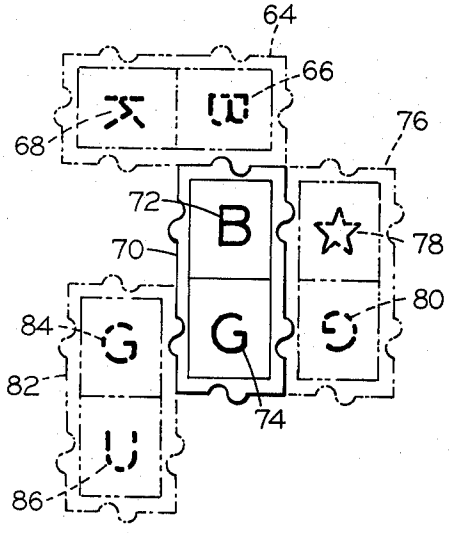


FIG. 4

ARITHMETIC FACT GAME

BACKGROUND OF THE INVENTION

In recent years, a marked increase has been evident in the number of individuals who are actively engaging in one form or another of the variety of different types of recreational activities that exist. The extent of their interest therein as well as the level of skills possessed thereby of course varies from one individual to another. However, the fact that a varied assortment of different types of recreational activities, requiring the utilization of different degrees of skills, does exist affords an opportunity for anyone, who so desires, to participate therein.

Basically, recreational activities can be classified into two categories, namely, those which are performed outdoors and those which are preferably intended to be performed indoors. In the former category, there are included such activities as the always popular sport of golf, as well as the sport of tennis which has become increasingly popular recently. In addition, there is encompassed therewithin such other activities as camping, boating and sailing.

For those individuals whose preference lies with activities that can be performed indoors, there have been developed down through the years a variety of different forms of what are commonly referred to as parlor games. The extent to which any one particular form of such parlor games is popular appears to vary in cycles. For example, immediately prior to and during the period in which the World Chess Tournament was being played a significant increase occured in the number of chess sets as well as in the amount of literature relating to the playing of chess being sold. Another form of parlor game which has recently become increasingly popular in backgammon. The attraction which such parlor games hold for individuals is found to reside in the stimulation which the individuals receive from the physical and/or mental competition which is involved in attempting to beat the other participants playing the game.

The nature of some of the other types of such indoor games which have been developed here to date is best understood from a reference to the prior art. For example, in this regard there is shown in U.S. Pat. No. 1,115,442 a game apparatus comprising playing pieces having numbers and arithmetical symbols thereon, and a starting piece which is provided with arithmetical symbols disposed transversely and adjacent the corner portions thereof. U.S. Pat. No. 1,584,062 is directed to a particular form of fact game in which a plurality of tablets are utilized. Each of the latter tablets has complete markings thereon which are adapted to be matched serially by juxtaposing markings on different tablets, the latter having markings which are different but have a common mental interpretation. In U.S. Pat. No. 2,748,500 an educational appliance is shown comprising a plurality of sectional cards with certain of the sections being foldable relative to other sections. Each of the cards includes a section having pictorial indicia thereon with the other section including Arabic numerals associated with the pictorial representations. The final patent which will be referred to herein by way of illustration is U.S. Pat. No. 3,267,590 which shows an educational game apparatus including a game board having a series of horizontal and vertical rows of squares throughout its surface, a series of numbered

tiles which may be applied to the squares, there being apertures formed in the lines which define the squares and with the apertures located intermediate the ends of the respective sides of each square, and wherein differently identified symbol markers may be applied for indicating the nature of the mathematical problem and answer.

It will be noted insofar as concerns at least some of the games which form the subject matter of the patents referred to in the preceeding paragraph that they were designed so as to be capable of fulfilling a dual objective. More specifically, in addition to their primary purpose of providing enjoyment to the participants, such games were also designed so as to be able to provide some form of educational benefit to the participants insofar as concerns their knowledge of and/or familiarity with some particular subject such as, for example, mathematics, etc. In this regard, the employment of games has long been one of the teaching techniques which teachers have utilized with much success in instructing students. As a result, continued interest has been shown in attempting to develop games wherein the educational benefits capable of being derived therefrom are increased. Notwithstanding the fact that a significant amount of effort has been directed to such an endeavor, there still remains a potential for making further improvements therein particularly with regard to the nature of the structure of the components of the games so as to facilitate ease of playing of the game, provide a game which is characterized by a relatively long playing life, etc.

Accordingly it is an object of the present invention to provide a game from which the players thereof are capable of deriving enjoyment.

It is another object of the present invention to provide such a game from which the players thereof are also capable of simultaneously deriving an educational benefit.

A further object of the present invention is to provide such a game which is capable of stimulating the learning and the quick recall of the players with respect to the basic facts which are associated with one of the four arithmetical functions, namely, addition, subtraction, multiplication or division.

A still further object of the present invention is to provide such a game including a multiplicity of playing pieces each of which is provided with a locking means consisting of a concave-shaped aperture and a convex-shaped projection cooperable with the locking means consisting of a concave-shaped aperture and a convex-shaped projection provided on another one of the multiplicity of playing pieces whereby the two playing pieces are capable of being locked together in an assembled condition when any one side of one of the playing pieces is brought into engagement with any one side of the other playing piece.

Yet another object of the present invention is to provide such a game including a holder operable for supporting thereon the playing pieces of a player preparatory of their being played.

Yet still another object of the present invention is to provide such a game wherein the components thereof are characterized by the ease with which they mey be handled, while the game itself is characterized by a relatively long playing life.

SUMMARY OF THE INVENTION

It has now been found that the foregoing and related objects can be readily attained in a fact game the playing of which is designed to provide both enjoyment and edcuational benefits to the players thereof. The game includes a multiplicity of playing pieces capable of being assembled together in interlocking relation in accord with a predefined scheme, and a holder for supporting the playing pieces of a player preparatory to their being played. The multiplicity of playing pieces all embody substantially the identical construction, differing solely from one another insofar as concerns the indicia appearing on one face thereof. More specifically, each of the multiplicity of playing pieces is polygonal in configuration, and has one face thereof divided into two sections. The two sections of any given one of the multiplicity of playing pieces are provided with different indicia. In addition, each of the playing pieces is provided with a locking means cooperable with the locking means provided on another one of the playing pieces whereby the two playing pieces are capable of being locked together in an assembled condition when brought into engagement with each other. The holder consists of a member having at least one surface thereof suitably configured for supporting playing pieces positioned in juxtaposed relation thereto.

In accord with the preferred embodiment of the invention, an arithmetic fact game is provided the playing of which is designed to provide enjoyment to the players while simultaneously stimulating the learning and the quick recall thereby of the basic facts associated with one of the four arithmetical functions, namely, addition, subtraction, multiplication or division. Each of the multiplicity of playing pieces preferably is substantially rectangular in configuration and has one face thereof divided in two sections. In one of these two sections either an integer or a special character is provided. The other section contains a pair of integers along with one of the conventional symbols commonly employed to designate the arithmetical functions of addition, subtraction, multiplication or division. Along the edges at each side thereof, each of the playing pieces is provided with a locking means. Each such locking means consists of a notch, i.e., a concave shaped aperture, and a bump, i.e., a convex-shaped projection having complementary circumferences which are arranged so as to function together as a unit. The holder consists of an upstanding member having at least one vertical side thereof formed so as to be inclined at a slight angle from the vertical and operable for supporting playing pieces placed thereagainst in an upstanding position. In addition, the holder has formed thereon means consisting of a multiplicity of suitably spaced concave-shaped apertures cooperable with the convex-shaped projections of the locking means with which the playing pieces are provided for purposes of maintaining the playing pieces positioned in the aforedescribed manner on the holder.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of one of the multiplicity of playing pieces of a fact game constructed in accordance with the present invention;

FIG. **2** is a side elevational view of one of the multiplicity of playing pieces of a fact game constructed in accordance with the present invention;

FIG. **3** is a side elevational view of another one of the multiplicity of playing pieces of a fact game constructed in accordance with the present invention;

FIG. **4** is a side elevational view of a plurality of playing pieces of a fact game constructed in accordance with the present invention, illustrating the manner in which playing pieces are assembled together during the playing of the game; and

FIG. **5** is an exploded perspective view of one of the multiplicity of playing pieces and a holder therefor of a fact game constructed in accordance with the present invention.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

Referring now to the drawings and more particularly FIG. **1** thereof, there is depicted therein one of the multiplicity of playing pieces, generally designated by reference numeral **10,** included in an arithmetic fact game constructed ifn accord with the present invention which is designed through the playing thereof to provide enjoyment to the players thereof while simultaneously stimulating the learning and the quick recall thereby of the basic facts associated with one of the four arithmetical functions, namely, addition, subtraction, multiplication or division. The playing piece **10** as best understood with reference to FIG. **2** of the drawings is substantially rectangular in configuration. More specifically, the playing piece **10** includes a top surface **12,** a bottom surface **14,** and a pair of side surfaces **16** and **18.** Moreover, one face of the playing piece **10** is preferably divided into two sections **20** and **22** by means of a suitable laterally extending line, which is identified in FIG. **2** of the drawings by means of the reference numeral **24.** As depicted in FIG. **2,** the line **24** is preferably substantially equally spaced from both the top surface **12** and the bottom surface **14,** and extends substantially the entire distance between the two side surfaces **16** and **18.**

Each of the multiplicity of playing pieces included in the arithmetic fact game constructed in accordance with the present invention is provided along the edges at each side thereof with locking means cooperable with the locking means provided on another one of the multiplicity of locking means whereby the two playing pieces are capable of being locked together in an assembled condition when any one side of one of the playing pieces is brought into engagement with any one side of the other playing piece. Each such locking means consists of a notch, i.e., a concave-shaped aperture, and a bump, i.e., a convex-shaped projection, having complementary circumferences which are arranged so as to function together as a unit. The nature of the construction of the aforereferenced locking means with which each playing piece is provided is best exemplified by reference to FIG. **1** of the drawings and the showing therein of the playing piece **10** and the locking means thereof.

Referring therefore to FIG. **1** of the drawings, as depicted therein the side surfaces **16** and **18** of the playing piece **10** are preferably each provided with a pair of locking means while the top surface **12** and the bottom surface **14** are each provided with a single locking means. More specifically, side surface **16** of the playing piece **10** is provided with a first locking means consisting of the bump, i.e., a convex-shaped projection, **26** and the notch, i.e., a concave-shaped aperture, **28,** and a second locking means consisting of the bump, i.e., a

convex-shaped projection, 30 and the notch, i.e., a concave-shaped aperture, 32. Similarly, the other side surface, i.e., surface 18 of the playing piece 10 is provided with a first locking means consisting of the bump, i.e., a convex-shaped projection, 34 and the notch, i.e., a concave-shaped aperture 36, and a second locking means consisting of the bump, i.e., a convex-shaped projection, 38 and the notch, i.e., a concave-shaped aperture, 40. On the other hand, the top surface 12 is provided with a single locking means consisting of the bump, i.e., a convex-shaped projection 42 and the notch, i.e., a concave-shaped aperture, 44 while the bottom surface is provided with the bump, i.e., a convex-shaped projection, 46 and the notch, i.e., a concave-shaped aperture, 48 which function to provide the bottom surface 14 with a single locking means.

As best understood with reference to FIG. 1 of the drawings, the locking means are arranged on the playing piece 10 so that the locking means provided on the top surface 12 is opposite the locking means provided on the bottom surface 14, while the two locking means with which the side surface 16 is provided are opposite the two locking means provided on the side surface 18. In this regard however, it will be noted that the locking means of the top surface 12 is the mirror image of the locking means formed on the bottom surface 14 in that the bump 42 on the top surface 12 is opposite the notch 48 on the bottom surface 14, while the notch 44 on the top surface 12 is opposite the bump 46 on the bottom surface 14. Similarly, the two bumps 26 and 30 formed on the side surface 16 are opposite the two notches 36 and 40 on the side surface 18, while the two notches 28 and 32 on the side surface 16 are opposite the two bumps 34 and 38 formed on the side surface 18. The reason why the aforedescribed bumps and notches which comprise the locking means on the top surface 12, the bottom surface 14 and the two side surfaces 16 and 18 are so arranged will be described subsequently in connection with the discussion of the manner in which two playing pieces 10 when brought into engagement with each other in the assembled condition are capable of being interlocked together. Finally, it is to be understood as best illustrated in FIG. 1 of the drawings that the bumps, i.e., convex-shaped projections, 26, 30, 34, 38, 42 and 46 of the locking means of the playing piece 10 each comprises substantially a semicircle with the diameter and therefore the circumference thereof all being substantially equal. Likewise, each of the notches, i.e., concave-shaped apertures, 28, 32, 36, 40, 44 and 48 of the locking means of the playing piece 10 are configured in the nature of a semicircle with the diameter and thus the circumference thereof all being substantially equal in dimension. Moreover, in accord with the present invention the dimensions of the notches 28, 32, 36, 40, 44 and 48 of the locking means of the playing piece 10 are selected so as to be equal to or slightly larger than the dimensions of the bumps 26, 30, 34, 38, 42 and 46 of the locking means of the playing piece 10. Consequently, since all of the multiplicity of playing pieces 10 embody substantially identical dimensions the bumps, i.e., convex-shaped projection, which are povided on any one of the playing pieces 10 are receivable in the notches, i.e., concave-shaped apertures, of any other one of the multiplicity of playing pieces 10.

Continuing now with the description of the nature of the construction of the playing piece 10 of FIG. 1 and more specifically the sections 20 and 22 thereof, reference will be had for this purpose of FIG. 2 of the drawings. As depicted in the latter figure, the section 20 of the playing piece 10 has an integer, designated therein by reference numeral 50, provided thereon. Section 22 on the other hand has provided thereon a pair of integers, designated in FIG. 2 by reference numeral 52 and 54, along with one of the conventional symbols, identified therein by reference numeral 56, commonly employed to designate the arithmetical functions of addition, subtraction, multiplication or division. In the case of the particular playing piece 10 shown in FIG. 2, the integer appearing in the section 20 is the numeral fourteen while the integers appearing in the section 22 are the numerals five and three. In addition, the symbol 56 appearing in the section 22 is the symbol for the arithmetical function of addition. It is to be understood however that each of the multiplicity of playing pieces 10 differs one from another insofar as concerns the integers which appear in the sections 20 and 22 thereof. Namely, although the same integer may appear, for example, in the section 20 of more than one playing piece 10, any such playing piece 10 having the same integer appearing in the section 20 thereof will have different integers appearing in the section 22 thereof. Likewise, while two or more playing pieces 10 contain the same integers in the section 22 thereof, they are provided with integers that differ in the section 20 thereof. Finally, for purposes of playing the arithmetic fact game of the present invention, all of the sections 22 of the multiplicity of playing pieces 10 of a given game embody thereon the symbol for the same arithmetical function, i.e., with all addition, all subtraction, all multiplication or all division. In this regard, by way of illustration both of the playing pieces shown in FIGS. 2 and 3 of the drawings have appearing thereon the symbol for addition. The above is believed best understood with reference to FIG. 3 of the drawings wherein another playing piece 10 is depicted which embodies in the sections 20 and 22 thereof different indicia. More specifically, as shown in FIG. 3 section 20 of the playing piece 10 is provided with a star 58, the significance of which will be discussed subsequently in connection with the description of the manner in which the arithmetic fact game of the present invention is intended to be played. The other section, i.e., section 22 of the playing piece 10 of FIG. 3 is provided with a pair of integers, designated in the drawings by reference numerals 60 and 62, along with the symbol 56. The latter two integers comprise the numeral six and the numeral zero, while the symbol as noted above previously is that of addition.

Turning next to a consideration of FIG. 4 of the drawings, there is depicted therein a plurality of playing pieces positioned relative to each other as they would appear during the progress of the playing of the arithmetic fact game of the present invention. In the interest of simplifying the following description for purposes of maintaining clarity of understanding thereof, the playing pieces which are shown in FIG. 4 have letters rather than integers appearing on their faces. With reference to the playing pieces which are shown in FIG. 4 of the drawings, there will now be set forth hereinafter a description of the manner in which the arithmetic fact game of the present invention is intended to be played. The subject arithmetic fact game is designed to be played by 2, 3 or 4 players at a time. To begin play, all of the multiplicity of playing pieces are placed face down on a supporting surface. Each player then

chooses one playing piece therefrom to determine who will start the game. The player who selects the playing piece **10** having the highest valued integer appearing in the section **20** thereof starts first, and the play is toward the left, i.e., counterclockwise. In the event of a tie, only those players involved in the tie will select another playing piece **10** from the pile thereof. Once the player who is to go first is determined, then each player chooses six playing pieces **10** from the pile and places them before him. Thereafter, the starter chooses one of the playing pieces **10** before him and places it in play. Then he draws another playing piece **10** from the pile. Each player must always have six playing pieces **10** before him at the end of his turn unless there are no more playing pieces **10** to draw from the pile. At no time can a player draw a playing piece **10** from the pile before his turn is completed. The player on the starter's left must now match the number fact appearing in section **22** of the playing piece **10** which has been played with an integer appearing in section **20** of the playing piece **10** of one of his playing pieces, or the integer appearing in section **20** of the playing piece **10** which has been played with a number fact appearing in section **22** of one of his playing pieces **10.** If the player cannot match in either manner, he must pass. He then has the option of retaining all of the playing pieces **10** before him or of returning one of his playing pieces **10** to the pile for replacement, but he may not play until his next turn. The succeeding player on the left will then attempt to make a match with the playing pieces **10** already in play. A playing piece **10** may be played so that it makes two or more matches with the placement of one playing piece **10,** namely, a double, triple, quadruple, quintuple, sextuple, etc. Another rule of the game is that a player may place only one playing piece **10** down at one time. However, if the player has another playing piece **10** before him to match the playing piece **10** he has just played during his present turn, he may play this other playing piece **10** in sequence. A sequence therefore consists of two or more up to six playing pieces **10,** each placed one at a time to match another playing piece **10** previously placed into play during one turn. In this regard however, it is to be noted that a player cannot draw from the pile until all the playing pieces **10** he wishes to play have been played. If during the placement of a playing piece **10** in a sequence, a double, triple, quadruple, quintuple or sextuple is made, the points resulting therefrom are immediately added to the player's score. Moreover, it may be possible for the player to make more than one multiple match in a sequence. Furthermore, a player who plays a sequence of six playing pieces **10** in one turn is awarded a predetermined bonus. With regard to those playing pieces **10** having a section **20** in which a star appears, the latter is considered to be "wild" and is available to be used to match any number fact or any integer appearing on a previously played playing piece **10.** More specifically, any such playing piece **10** having a star appearing thereon may be used according to the wishes of the player at any time during any of his turns. The game ends when any player has used all of the playing pieces **10** before him and there remains no more playing pieces **10** to be drawn from the original pile thereof. For purposes of scoring, a number of different methods thereof can be employed. For example, in accord with one such method, the starter is given two bonus points, each match is worth one point, a double two points, a triple three points, a quadruple four points, a quintuple five points, a sextuple six points, a sequence of six playing pieces six points, one point is deducted for making an incorrect match and the first player to end the game receives a bonus of five points. The player having obtained the most points when the game ends is declared the winner.

Applying the above to the situation of FIG. **4,** it will be assumed that the starting player has begun play by playing the playing piece depicted in solid lines in FIG. **4** which is identified therein by reference numeral **70.** The latter playing piece **70** contains in one section thereof the letter B designated therein by reference numeral **72** which is intended to represent an integer, and in the other section thereof the letter G designated therein by reference numeral **74** which is intended to represent a number fact. For this initial play, the starting player receives two points and must select a replacement for the playing piece **70** from the pile thereof. The player on the starter's left is the next to play. Assume that this player then selects to play a playing piece **64.** The latter contains in one section thereof the letter B, designated by reference numeral **66** which is assumed to represent a number fact which matches the integer denoted by the letter B on the playing piece **70.** The other section of the playing piece **64** contains the letter K, designated by reference numeral **68** which is intended to represent an integer that is different from the integer denoted by the letter B on the playing piece **70.** In playing the playing piece **64,** the player positions the latter so that the section of the playing piece **64** bearing the letter B adjoins the section bearing the letter B of the playing piece **70,** and so that one of the locking means formed on the playing piece **70** interlocks with one of the locking means which is provided on the playing piece **64.** More specifically, the bump of the aforereferenced locking means of playing piece **64** is received in the notch of the aforereferenced locking means of the playing piece **70** and the bump of the locking means of the latter playing piece **70** is received in the notch of the locking means of the former playing piece **64.** By virtue of the aforedescribed interengagement of one of the locking means of the playing piece **64** with one of the locking means of the playing piece **70,** the playing pieces **64** and **70** will remain in an assembled condition and thus will maintain the correct orientation relative to each other when other playing pieces are placed in juxtaposed relation thereto during subsequent plays by succeeding players. As with the starting player, the player who played the playing piece **64** is awarded one point and must draw a replacement therefor from the pile. The next player on the left now has two playing pieces, namely the playing pieces **70** and **64** available for making a match therein. It will be assumed that this player decides to play the playing piece **76.** The latter has a star designated by reference numeral **78** appearing in one section thereof and the letter G designated therein by reference numeral **80** appearing in the other section thereof which it will be assumed represents an integer that matches the number fact denoted by the letter G appearing on the playing piece **70.** It is to be noted here that this third player may place the playing piece **76** relative to the playing piece **70** in the manner depicted in FIG. **4,** because the star is "wild" and thus is deemed to comprise a number fact which matches the integer represented by the letter B on the playing piece **70.** This third player thus also receives one point and must select a replacement for the playing piece **76** from the pile. As shown in FIG. **4**

of the drawings, with the playing piece **76** placed in juxtaposed relation to the playing piece **70** so that the indicia on the former bears the relationship to the indicia on the latter described above, it is to be noted that the playing pieces **70** and **76** are interlocked together by virtue of the interengagement of two locking means, i.e., two sets of bumps and notches on the playing piece **76** with two locking means, i.e., two sets of bumps and notches on the playing piece **70.** To complete the play as illustrated in FIG. **4** of the drawings, the next player to the left, i.e., the fourth player must select a playing piece to play which will match with either a number fact or an integer appearing on one of the three previously played playing pieces **70, 64** and **76.** Assume that the fourth player decides to play the playing piece **82.** The latter contains in one section thereof the letter G designated therein by reference numeral **84** which is intended to represent an integer which matches with the number fact denoted by the letter G on the playing piece **70.** In the other section of the playing piece **82,** the latter is provided with the letter U, designated in FIG. **4** by the reference numeral **86** which is intended to represent a number fact which is different from any of the number facts appearing on any of the previously played playing pieces, namely, playing pieces **70, 64** and **76.** To play the playing piece **82,** the fourth player positions the playing piece **82** relative to the playing piece **70** so that the section of the former playing piece **82** which bears the latter G adjoins the section of the latter playing piece **70** which also bears the letter G and so that one of the locking means formed on the playing piece **82** interlocks with one of the locking means formed on the playing piece **70.** By virtue of the aforedescribed play, the fourth player also receives one point and is required to select a replacement for the playing piece **82** from the pile. Thus, at the end of the first round of play, four playing pieces, namely, the playing pieces **70, 64, 76** and **82** have been played in the manner shown in FIG. **4,** and the scoring is as follows, two points for the starting player and one point for each of the other three players. Play continues with the starting player being the next player to play followed thereafter by each succeeding player on his left etc. until one player has played all of his playing pieces and no playing pieces remain to be drawn from the pile.

In accord with the illustrated embodiment of the invention, the subject arithmetic fact game preferable also includes as described in FIG. **5** a holder, generally designated therein by reference numeral **85.** More specifically, there are preferably provided in the arithmetic fact game of the present invention a plurality of such holders **85,** the number thereof being at least equal to the number of players capable of playing the arithmetic fact game at one time, namely, four. Inasmuch as each of the holders **85** are identical in construction, it has been deemed sufficient to merely illustrate in the drawings and describe hereinafter one such holder **85.** The function of the holder **85** is to support the playing pieces of an individual player during the period between the time the playing pieces are selected from the pile and the time they are played by the player.

Considering next the nature of the construction of the holder **85,** reference will be had for this purpose of FIG. **5** of the drawings. As depicted therein, the holder **85** comprises an upstanding stand including a substantially vertical rear surface **87,** an inclined surface **88,** a top surface **90,** a bottom surface **91,** and a front surface **92.** In addition, the holder **85** is provided with a longitudinally extending slot **94** located between the inclined surface **88** and the front surface **92.** At suitably spaced intervals intermediate the length thereof the slot **94** has formed therein a multiplicity of recesses, i.e., a multiplicity of concave-shaped apertures, **96.** The latter recesses **96** are each suitably dimensioned so as to be capable of receiving therein one of the bumps i.e., convex-shaped projection, which together with a notch, i.e., a concave-shaped aperture, comprise one of the locking means of a playing piece **10.** In this regard, each of the recesses **96** is preferably semicircular in configuration and has a diameter equal to or slightly larger than the diameter of a bump of a locking means of a playing piece **10.** As best understood with reference to FIG. **5** of the drawings, the surface **88** is inclined at a slight angle from the vertical so as to be operable for supporting a plurality of playing pieces **10** placed there-against in an upstanding position. When a playing piece **10** is placed against the inclined surface **88** in the aforesaid manner, the base of the playing piece **10** is located within the slot **94** with the bump of one of the locking means of the playing piece **10** being received in one of the recesses **96.** Although not shown in the drawings, it should be understood that the holder **85** has a sufficient length and is provided with at least six recesses **96** so as to enable six playing pieces **10** to be supported thereon. Thus, it can be seen that the inclined surface **88,** the slot **94** and the recesses **96** all coact to maintain the playing pieces **10** positioned on the holder **85** so that the indicia appearing on the sections **20** and **22** thereof are readily visible to the player before which the holder **85** is positioned but are concealed from view from the other players participating in the playing of the game.

Although only one embodiment of a fact game constructed in accordance with the present invention has been shown in the drawings and described hereinabove, it is to be understood that modifications in the construction thereof may be made thereto by those skilled in the art without departing from the essence of the invention. In this connection, some of the modifications which can be made in the fact game have been alluded to hereinabove while others will become readily apparent to those skilled in the art when exposed to the present description and illustration of the construction of the components of the fact game. For example, although the playing pieces **10** have been described hereinabove as being provided in the section **22** thereof with a symbol denoting the arithmetical function of addition, it is of course to be understood that the symbol for any of the other three arithmetical functions, namely, subtraction, multiplication or division could be substituted therefor without departing from the essence of the invention. In this regard however, it should be noted that if the symbol for another arithmetical function is employed, it may be found necessary to change the number facts appearing in section **22** of the playing pieces **10** as well as the range of integers appearing in section **20** thereof. Moreover, the indicia appearing on the faces of the playing pieces **10** need not be limited to numerals and mathematical expressions. Rather, if so desired, the indicia could consist of letters, words, historical facts, etc. In addition, the indicia on the playing pieces **10** could also consist of differently colored Zodiac symbols with the object of the game being to match Zodiac symbols which are the same except for their color. Furthermore, it will be readily apparent that the employment of locking means, each consisting

of a bump, i.e., a convex-shaped projection, and a notch, i.e., a concave-shaped aperture, on the playing pieces **10** for purposes of enabling the latter to be interlocked in an assembled condition could be utilized in connection with other forms of playing pieces, if so desired. Finally, although the holders **85** and the playing pieces **10** in accord with the preferred embodiment of the invention are made from wood and paper material, respectively, they could equally well be formed from other materials without departing from the essence of the invention.

Thus, it can be seen that the present invention provides a novel and improved game from which the players thereof are capable of deriving enjoyment. Moreover, in accord with the present invention a game is provided from which the players thereof are also capable of simultaneously deriving an educational benefit. The game of the present invention is capable of stimulating the learning and the quick recall of the players with respect to the basic facts which are associated with one of the four arithmetical functions, namely, addition, subtraction, multiplication or division. Furthermore, in accord with the present invention a game is provided which includes a multiplicity of playing pieces each of which is provided with a locking means consisting of a convex-shaped projection and a concave-shaped aperture cooperable with the locking means consisting of a concave-shaped and a convex-shaped projection provided on another one of the multiplicity of playing pieces whereby the two playing pieces are capable of being locked together in an assembled condition when any one side of one of the playing pieces is brought into engagement with any one side of the other playing piece. Also, a game has been provided in accordance with the present invention which includes a holder operable for supporting thereon the playing pieces of a player preparatory to their being played. Finally, in accord with the present invention a game has been provided wherein the components thereof are characterized by the ease with which they may be handled, while the game itself is characterized by a relatively long playing life.

Having thus described the invention, I claim:

1. A game apparatus adapted to be played by a plurality of participating players comprising:

a. a multiplicity of playing pieces assembable relative to each other in a predetermined manner, each of said multiplicity of playing pieces comprising a member having a first pair of sides of equal length extending parallel to each other and a second pair of sides of equal length extending parallel to each other and at right angles to each of said first pair of sides, each of said members having one face thereof divided into two sections, each of said two sections having indicia provided thereon matchable with the indicia appearing on at least one of said two sections of another one of said members, each of said members further including at least one locking means formed on each one of said first pair of sides and of said second pair of sides along the edge thereof, said locking means formed on any one of said first pair of sides and of said second pair of sides of any one of said members being cooperable with said locking means formed on any one of said first pair of sides and of said second pair of sides of any other one of said members for interlocking together any two of said members to maintain said any two of said members in assembled relation in any selected one of a plurality of positions relative to each other, said locking means each comprising a concave-shaped aperture and convex-shaped projection formed in adjoining relation to each other on each of said first pair of sides and on each of said second pair of sides of each of said members, each of said concave-shaped apertures and each of said convex-shaped projections having the same radius of curvature so that said convex-shaped projections formed on any one of said first and second pairs of sides of any one of said members is receivable within said concave-shaped aperture formed on any one of said first and second pairs of sides of any other one of said members, said concave-shaped aperture formed on one of said first pair of sides of each of said members being positioned along the length of said one of said first pair of sides so as to be aligned with said convex-shaped projection formed on the other one of said first pair of sides of the corresponding one of said members and said concave-shaped aperture formed on one of said second pair of sides of said corresponding one of said members being positioned along the length of said one of said second pair of sides so as to be aligned with said convex-shaped projection formed on the other one of said second pair of sides of said corresponding one of said members, and said convex-shaped projection formed on said one of said first pair of sides of said corresponding one of said members being positioned along the length of said one of said first pair of sides so as to be aligned with said concave-shaped aperture formed on said other one of said first pair of sides of said corresponding one of said members and said convex-shaped projection formed on said one of said second pair of sides of said corresponding one of said members being positioned along the length of said one of said second pair of sides so as to be aligned with said concave-shaped aperture formed on said other one of said second pair of sides of said corresponding one of said members; and

b. a holder comprising an upstanding support having one vertical surface thereof inclined at a slight angle from the vertical for supporting thereagainst a plurality of said multiplicity of playing pieces in an upstanding position, said holder including means formed thereon cooperable with said locking means formed on any one of said first and second pairs of sides of any one of said multiplicity of playing pieces for maintaining said plurality of said multiplicity of playing pieces in supported relation on said holder, said maintaining means comprising a plurality of concave-shaped apertures formed in equally spaced relation relative to each other on said holder, said plurality of concave-shaped apertures formed on said holder each having the same radius of curvature as said convex-shaped projection of said locking means formed on each of said members so as to be capable of receiving therewithin any one of said convex-shaped projections formed on any one of said members.

2. The game apparatus as set forth in claim **1** wherein said indicia on one of said two sections of each of said members consists of a whole number.

3. The game apparatus as set forth in claim **2** wherein said indicia on the other of said two sections of each of said members consists of a number fact.

4. The game apparatus as set forth in claim 3 wherein said number fact comprises a pair of integers and a symbol denoting the arithmetical function of addition indicating that said pair of integers are to be added.

5. The game apparatus as set forth in claim 1 wherein at least four of said holders are provided.

6. The game apparatus as set forth in claim 1 wherein each of said first pair of sides of each of said members is of relatively long length, and each of said second pair of sides of each of said members is of relatively short length.

7. The game apparatus as set forth in claim 6 wherein each of said first pair of sides of each of said members is provided along the edge thereof with a pair of locking means.

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