

[54] PARLOUR GAME

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[58] Field of Search..... 273/131, 134 A, 135 A, 273/136 A, 141 A

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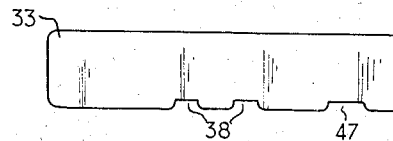
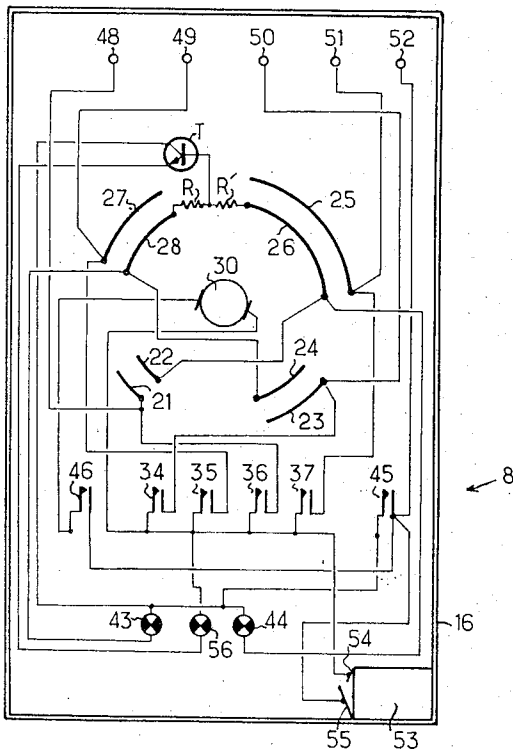
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[57]

ABSTRACT

A parlour game in which two opposing forces can be engaged in an imaginary action comprises a board representing a field of action and which is divided into a plurality of divisions. Two groups of elements, respectively representing the two opposing forces, are movable over divisions of the board, whereby elements of the two groups can be moved into range of each other to engage in an imaginary action. A simulator connected to the game has a plurality of probability representing segments, each associated with one of the two opposing forces. The segments represent probabilities which differ. A plurality of push button switches are connected respectively to each of the probability representing segments are provided for energizing specific ones of the segments in accord with and to total the probability of a given result for each of a pair of the engaged elements of the opposed forces. The push buttons are depressed to activate particular segments by one of a plurality of pattern cards, each of which represents a confrontation between particular opposing forces and carries a different pattern of notches. The notches register with particular push buttons to keep those push buttons from being depressed when the pattern card is positioned in a holder adjacent the buttons. A motor operated slidable contact is actuatable for effecting a chance selection among the segments for determining and indicating the result of the engagement of the pair of elements. An automatic timer is provided for limiting the time available to the players of the game for moving the elements into engagement.

13 Claims, 7 Drawing Figures



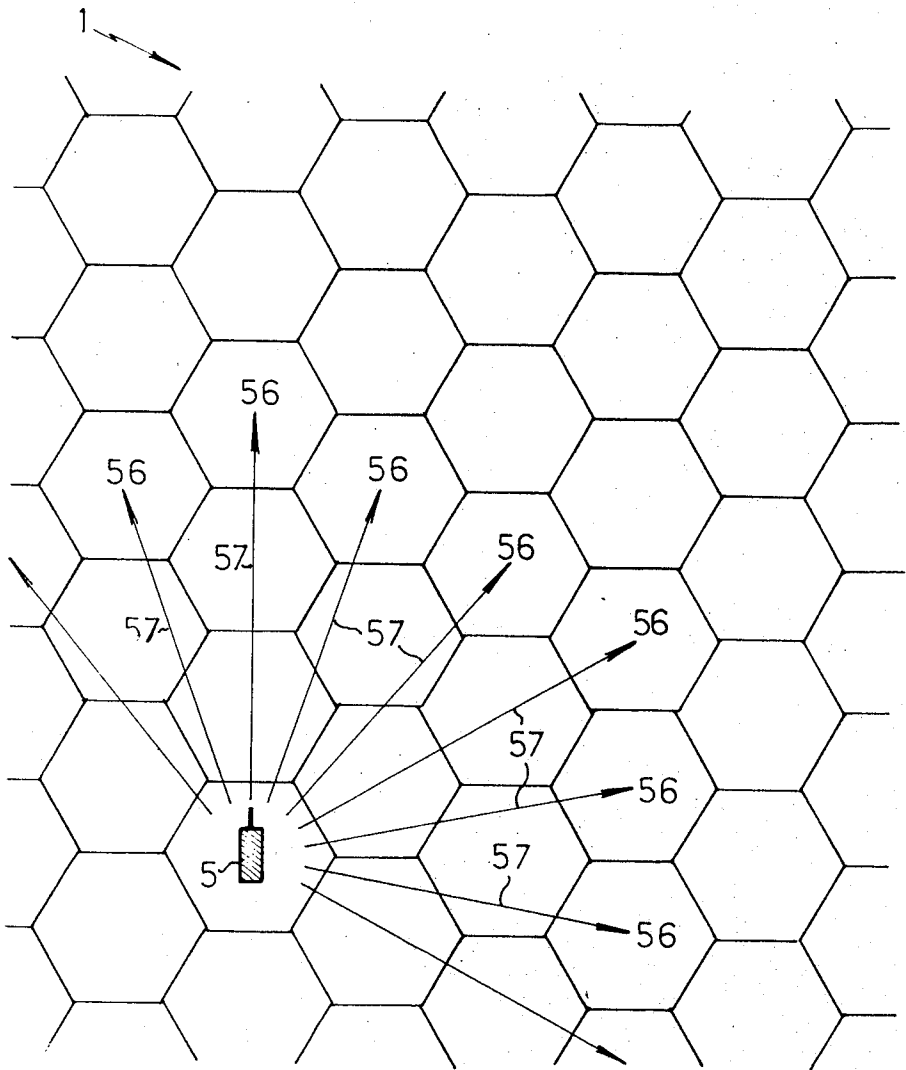


FIG. 2

FIG. 3

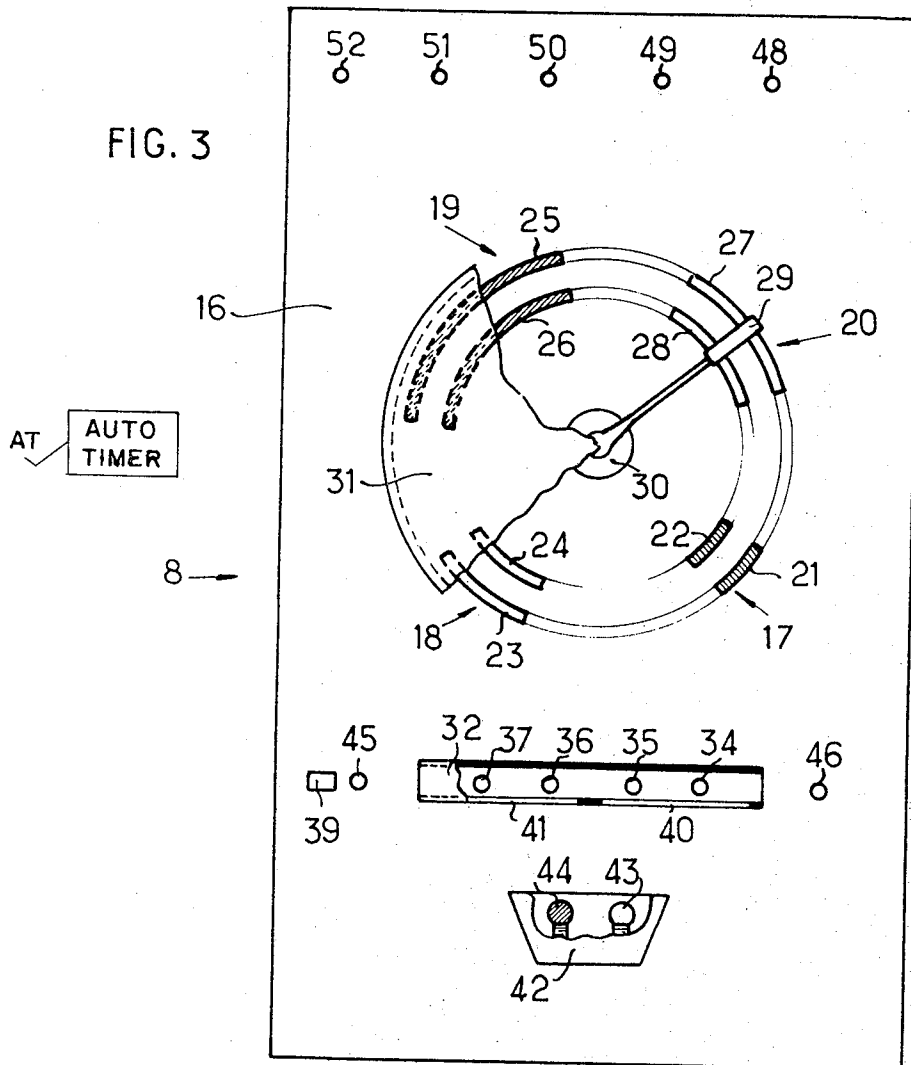


FIG. 4

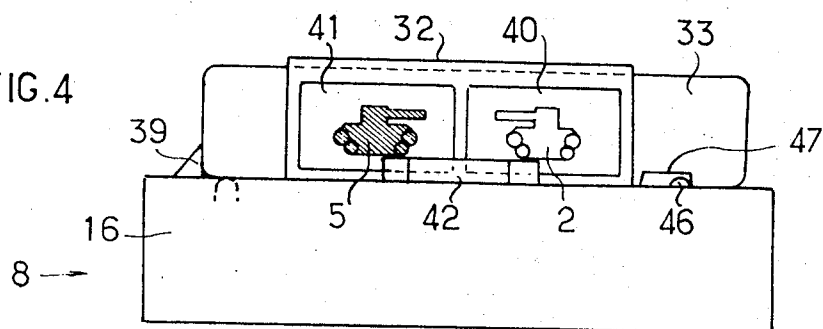


FIG. 5

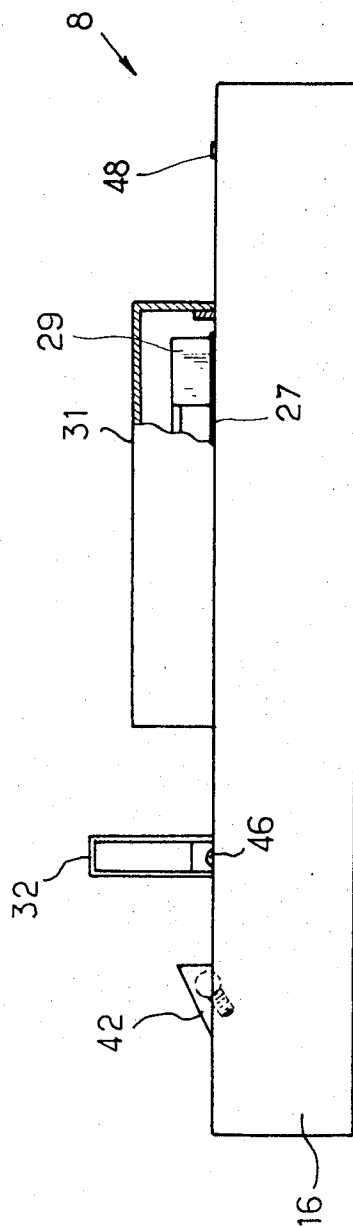
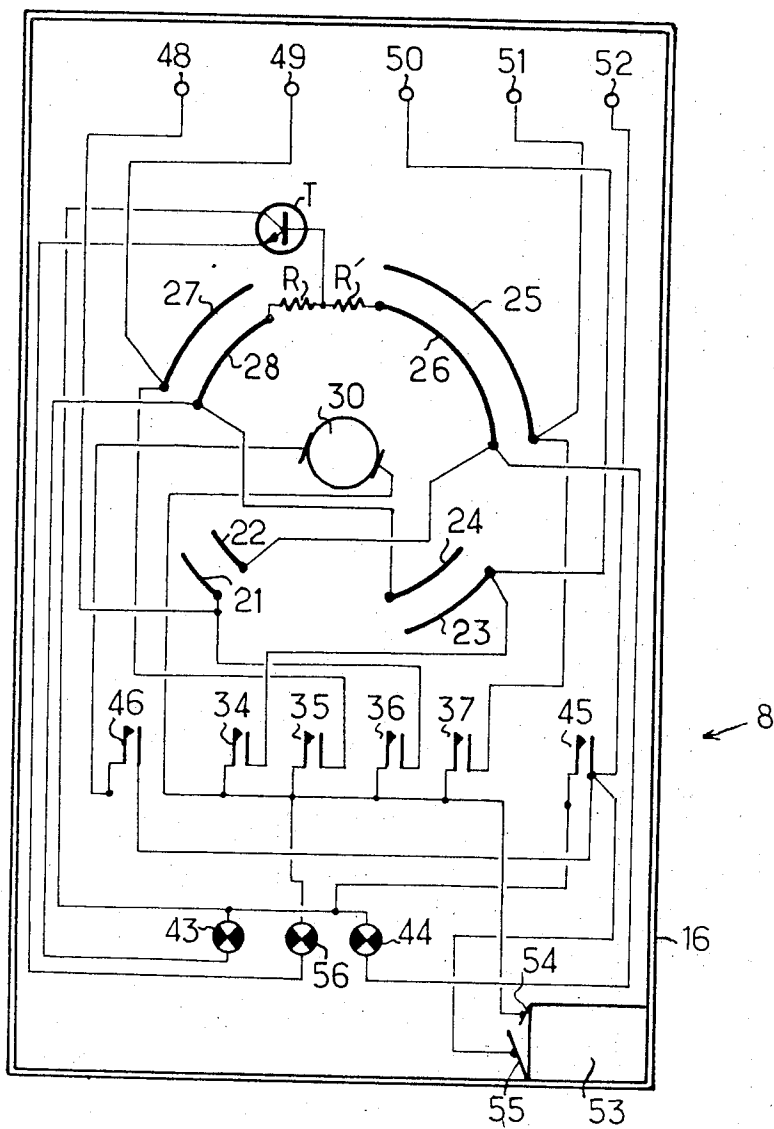


FIG. 6



PARLOUR GAME

The present invention relates to a parlour game in which the different elements representing at least two opposing forces, for example armed combat forces, can be moved by players over sections of a suitable board representing the battlefield.

Games of this type include particularly chess and draughts which are well known games in which the decision factor is predominant. However none of these games makes it possible to reproduce a real combat with sufficient accuracy because numerous hazardous factors also occur in a real combat.

It is known that in operational research different techniques are used, and particularly the technique of simulation which consists of reproducing real situations with the aid of models. Such a technique is particularly effective for the development of instruments of decision and estimation. Simulation games are therefore played according to rules which represent real situations, taking into account not only operations in which one's personal will intervenes, but also hazardous events subject to chance.

Games which lend themselves best to simulation are obviously military tactics. In order to measure the effectiveness of certain arms or weapons or different tactics, models are constructed to simulate typical situations which may occur in different types of military engagements and to collect therefore quantitative information which will then permit the planning of real battles.

The essential aim of the present invention is therefore to provide a parlour game which makes it possible not only to develop a sense of reflection and decision in players, but also to put into practice the technique of simulation used in operational research.

For this purpose the game according to the invention is characterized in that the elements of two opposing forces are moved over sections of the board at the will of the players, taking into account certain precise rules, and engaged in an imaginary action when they come within range of one another, the results of these engagements being provided by a simulator connected to the game and operating according to the method of operational research known under the name of MONTE-CARLO method.

It may be easily understood that this type of game makes it possible to reproduce with a certain amount of fidelity what may happen in reality, and particularly on a battlefield, with the aid of the MONTE-CARLO method to simulate hazardous events subject to chance. However it is obvious that this game could also be applied to types of action other than military engagements, for example to a game of football or the like. Nevertheless it must be acknowledged that tactical military engagements lend themselves particularly well to simulation according to the MONTE-CARLO method.

The simulator therefore provides the results of engagements between different elements of two opposing forces, for example mortars, tanks, anti-tank weapons or infantry, automatically taking into account the likelihood of destruction, estimated in advance for each weapon. The special feature of the MONTE-CARLO method is in fact the simultaneous intervention of chance and the calculation of probabilities.

Let it be assumed for example that in an exchange of fire between a mortar and a tank, the probability of destruction is 20 percent for the mortar and 15 percent for the tank. It obviously follows that the probability of the tank and mortar emerging undamaged from the engagement is 65 percent.

The MONTE-CARLO method is simply put into practice by providing a lottery wheel divided into segments proportional to these probabilities. The lottery wheel is then rotated and the result noted whenever the wheel stops. Therefore a sequence of results is obtained which will initially occur with a slightly different frequency from the theoretical frequency which is 15, 20 and 65 out of 100. However it is obvious that the law of theoretical probability would be more closely approximated by pursuing the number of experiences. The sequences thus obtained are called "artificial samples" of the law of given probability.

Therefore the parlour game according to the invention also has an interesting educational aspect, in allowing children to learn the technique of simulation by models, which is very effective for training children rapidly in decision making.

In a particular embodiment of the invention, the sections of the supporting board are formed by regular hexagons arranged edge to edge.

In effect the hexagon has the advantage, over the square, of approximating the form of a circle. Consequently the use of hexagons makes it possible to reproduce real events more faithfully, since the firing range of a given weapon is almost always limited by a circle.

An automatic time switch is preferably provided to limit the time allotted to players for moving the elements of their respective forces over the board.

This arrangement makes it possible to simulate a real situation requiring rapid and therefore not always the wisest decisions.

The simulator is formed by an electric device comprising a certain number of independent conductive segments of different lengths, each being allocated to one opposing force or the other and arranged over a circumference at a certain distance from one another, a sliding contact co-operating with these conductive segments, means for selectively feeding the segments with current from a voltage supply, as a function of the probabilities of eliminating the two elements in engagement, means of turning the sliding contact and the set of conductive segments relative to one another for an indefinite period of time, and electrical means for indicating the stop position of the sliding contact relative to the different conductive segments, which gives the result of the said engagement.

Hitherto in order to apply the MONTE-CARLO method, it was generally necessary, as seen above, to construct and operate a large number of lottery wheels, which is obviously a somewhat tedious operation. The electric simulator according to the invention makes it possible to precisely overcome this disadvantage. In effect it immediately gives the result of a given engagement, automatically taking into account the probability of destruction of the engaged forces, which is indicated in the simulator by means of the conductive segments supplied with current.

The conductive segments are preferably secured on a support whereas the sliding contact is mounted so as

to be rotatably movable on this support with the aid of an electric drive motor.

In addition each conductive segment is formed by two parallel and spaced pieces of metal track which can be electrically connected by the sliding contact during its movement, the means for selectively feeding a current to the different conductive segments comprising push-button switches connected respectively between one of the poles of the voltage supply and one of the pieces of each conductive segment, whereas the associated pieces are connected to the other pole of the voltage supply by indicating means.

Each conductive segment therefore constitutes a second switch controlling the selective operation of the indicating means as a function of the stop position of the sliding contact.

The simulator also comprises a set of metal plates, each representing a type of engagement, and a slide which is capable of receiving any one of these plates, and into which project the push-button switches for supplying the conductive segments with current, each plate being provided with suitable teeth for automatically actuating the push-buttons corresponding to the engagement represented by this plate.

Use of the simulator is greatly simplified on account of this arrangement and therefore does not present any difficulties, even for very young children.

The electric motor for driving the sliding contact is preferably supplied with current via a push-button switch which is automatically actuated by the plate, when the latter is introduced into the slide, then released when the said plate is positioned in the slide against a stop representing the final movement.

Therefore no additional movement is necessary for turning the sliding contact, which in turn simplifies the mode of operation of the simulator. It will also be noted that the stop position of the sliding contact is quite hazardous since it depends essentially on the introduction time of the plate into the slide, which can obviously be varied depending on the circumstances.

The indicating means are formed by two electric bulbs, each being associated with one of the opposing forces and connected to the other pole of the voltage supply by means of a common push-button switch, which is automatically actuated by the plate when the latter comes into contact with the stop.

Therefore an extremely simple means is used to automatically give the result of an engagement. This result is obtained by the possible lighting of the corresponding bulb and it is obvious that if no bulb is switched on, none of the weapons in question has been destroyed.

It should also be noted that, owing to the common switch actuated directly by the plate, the bulbs can only be switched on when the sliding contact is stopped, whereby increasing their life. In addition the players do not have any indication of the position of the sliding contact at any time and do not therefore attempt to stop the sliding contact in a position favourable to them.

Each plate comprises advantageously a figurative representation of the two elements of the corresponding engagement, the bulbs being arranged so as to directly light the element on the plate which may be eliminated.

Any error in interpreting the results is therefore prevented since the element which is destroyed during an

engagement is automatically illuminated by the corresponding lamp.

In a special application of the invention, the simulator comprises four conductive segments extending respectively over 5 percent, 10 percent, 15 percent and 20 percent of the length of the circumference, the 5 percent and 20 percent segments being associated with one force, whereas the 10 percent and 15 percent segments are associated with the other force.

In effect these four segments make it possible to obtain a certain number of combinations of probabilities which are generally sufficient in practice, at least when applied to children's toys.

An embodiment of the invention is described below by way of an example, with reference to the accompanying drawings in which:

FIG. 1 is a simplified plan view of a support representing a battlefield and permitting the playing of the parlour game according to the invention, in its particular application in the event of an engagement between two armed forces;

FIG. 2 is an enlarged detail of a portion of this support, showing the shape of the divisions with which it is provided;

FIG. 3 is a simplified plan view, partially cut away, of an embodiment of the electric simulator, and in block form of an automatic timer, connected to the game according to the invention;

FIG. 4 is a front elevation of this simulator, showing a plate engaged in the corresponding slide;

FIG. 5 is a partially cut-away side elevation of the same simulator;

FIG. 6 is an underneath view of the simulator, showing its wiring diagram; and

FIG. 7 shows a detail of one of the plates associated with the simulator.

The parlour game according to the invention consists essentially of a support 1 (FIG. 1), a certain number of movable pieces 2, 3, 4, 5, 6 and 7, symbolically or schematically representing the various elements of two opposing forces, for example forces in combat, an automatic time switch and an electric simulator 8 operating according to the MONTE-CARLO method.

The support 1 which can be seen in FIG. 1 is made for example of cardboard or wood and constitutes the battlefield on which the different pieces 2 to 7 of the two opposing forces are to perform manoeuvres. For this purpose and as shown in the enlarged detail in FIG. 2, the board 1 is divided into a given number of adjacent sections, in this case comprising regular hexagons, which allow the said pieces to be moved according to precise rules.

The particular application described here concerns a battle between two armed forces which, for the sake of convenience, will be respectively designated hereinafter as the red force and blue force.

The armed red force has been instructed to defend an underground ammunition depot 9 located on a hill in the upper right-hand corner of the board 1. To ensure this defence the red force has at its disposal a given number of units comprising five tanks 2, four anti-tank weapons 3 and five companies of infantry 4.

The objective of the armed blue force is to capture the hill on which the ammunition depot 9 is located and, for this purpose, consists of a company of twelve tanks 5, divided into three groups of four, four mortars 6 and three companies of infantry 7.

The different pieces 2, 3, 4, 5, 6 and 7 representing all these combat units are shown in FIG. 1 in their starting position, i.e., in the position which they occupy at the beginning of the game. The red force therefore occupies various points on the hill on which is located the ammunition depot 9 which the red force is instructed to defend, while the blue force, which is distinguished by shading, is arranged in the lower left hand corner of the board 1. It will now be noted that the game according to the invention consists essentially of moving the elements of the two opposing forces alternately over the hexagonal sections of the board 1, at the will of the corresponding players, these elements then engaging in imaginary combat when they come within firing range of one another.

Also shown in the board 1 are all the special features of the terrain which may affect the movements of the opposing forces 2 to 7. In addition to the ammunition depot 9, the board therefore comprises level lines 10, a certain number of natural obstacles comprising rocks 11 or woods 12, a river 13 which divides the battlefield into two parts, and a road 14 which leads to the ammunition depot 9 and along which the blue force moves, said road having a bridge 15 crossing the river 13.

The time switch at (FIG. 3) which is connected to the game according to the invention is quite conventional and has therefore not been shown in detail in the drawings. Its aim is to limit the time allotted to players for moving their pieces during the movement phase of the game, and will be regulated for example to limit this time to one minute.

The electric simulator 8 constitutes one of the essential elements of the game according to the invention and its aim is to automatically provide the results of different engagements between the blue and red forces, taking into account the probabilities of destruction of each weapon, which are estimated in advance.

The simulator is shown in detail in FIGS. 3 to 6 and comprises firstly a rigid base 16, of rectangular shape, which is made of an insulating material such as plastics material. Suitably attached to the upper face of this base 16 are a certain number of independent conductive segments of different lengths, arranged over a circumference at a certain distance from one another. In this particular described example, there are four conductive segments 17, 18, 19 and 20 extending over respectively 5 percent, 10 percent, 20 percent and 15 percent of the length of the circumference. As will be seen in the following description, the segments 18 and 20 are associated with the red force while the segments 17 and 19 are associated with the blue force, which is indicated by shading in FIG. 3.

Each of the conductive segments 17 and 20 is also formed by two parallel and spaced apart portions of metal track which are arranged in two concentric circles, as shown in FIG. 3. The segment 17 comprises therefore an outer portion 21 and an inner portion 22, the segment 18 an outer portion 23 and an inner portion 24, the segment 19 an outer portion 25 and an inner portion 26, and the segment 20 comprises an outer portion 27 and an inner portion 28.

The two metal portions of each conductive segment can be electrically connected to one another by means of a sliding contact 29 which is rotatably driven over the different segments by a centrally positioned electric motor 30. The unit comprising the segments 17 to 20, the sliding contact 29 and the motor 30 is also covered

by a protective and possibly movable cap 31, the principle aim of which is to conceal the position of the rotating sliding contacts 29 from the sight of the players.

Also secured on the upper surface of the base 16 is a slide 32 which is arranged vertically and can receive a rectangular plate such as 33, as shown in FIG. 4. Projecting into this slide are four push-button switches 34, 35, 36 and 37 controlling the current supply to the different conductive segments 17 to 20. The push-buttons 34 and 35 are associated with the red force and control the current supply to the segments 18 and 20, respectively, whereas the push-buttons 36 and 37 are associated with the blue force and control the current supply to the segments 17 and 19, respectively.

The simulator according to the invention is associated with a complete set of plates such as 33, each representing a type of military engagement and being capable of selectively actuating the different push-buttons 34 to 37 as a function of the probability of destruction of the weapons engaged in the corresponding battle. For this purpose the lower part of each plate comprises, as shown in FIG. 7, a certain number of suitably arranged notches 38 to actuate or on the other hand release the push-buttons corresponding to the military engagement represented by the plate when the latter is correctly positioned in the slide 32 against a stop 39.

Moreover, the type of military engagement may be directly illustrated on the corresponding plate, as shown in FIG. 4 in which it may be seen that the plate 33 comprises the image of a red tank 2 in its right hand section and the image of a blue tank 5 in its left hand section. Furthermore the images of these two tanks remain visible when the plate is in position in the slide 32, owing to two rectangular openings 40 and 41 arranged for this purpose in the front wall of the slide.

In the event of an exchange of fire between two tanks having the same power, the probabilities of destroying one tank or the other are obviously identical, and experience shows that this probability is approximately 25 percent. In other words, the probability of destroying the red tank is 25 percent, the probability of destroying the blue tank 25 percent and the probability of neither of the two tanks being damaged during the exchange of fire is 50 percent. Therefore the plate 33 shown in FIG. 4 does not in fact have any notch 38 as it must actuate the four push-buttons 34 to 37 simultaneously. The four conductive segments 17 to 20 are therefore supplied with current, which corresponds to a 25 percent probability of destroying the red tank (10 percent for the segments 18 and 15 percent for the segment 20) and to a 25 percent probability of destroying the blue tank (5 percent for the segment 17 and 20 percent for the segment 19).

On the other hand, the plate 33 shown in FIG. 7 comprises two notches 38 corresponding to the location of the push-buttons 35 and 36. Consequently when this plate is introduced to the slide 32, only the push-buttons 34 and 37 are actuated, which corresponds to the current supply to the segments 18 and 19, and therefore to a 15 percent probability of destruction for the red force and a 20 percent probability for the blue force. Such a probability may for example represent an exchange of fire between a mortar of the blue force and a tank or anti-tank weapon of the red force.

The different plates 33 associated with the simulator 8 therefore make it possible to provide a certain number of combinations of probabilities which are sufficient in practice to reproduce different types of possible military engagements.

The simulator according to the invention also comprises means of electrically indicating the stop position of the sliding contact 29 relative to the different conductive segments 17 to 20. These means are essentially formed by a projector 42 provided with two electric bulbs 43 and 44, said projector being arranged on the base 16 in front of and directed towards the slide 32. The bulb 43 is associated with the red force so as to illuminate the unit shown on the right hand side of the plate 33 through the opening 40 in the slide when the position of the sliding contact 29 corresponds to the destruction of this unit, whereas the bulb 44 is associated with the blue force and serves to illuminate the unit shown on the left hand side of the plate through the opening 41 when the position of the sliding contact corresponds to the destruction of this unit from the blue force.

The two bulbs 43 and 44 which can be advantageously coloured red and blue respectively are supplied with current via a push-button switch 45 arranged in alignment with the slide 32 directly in front of the stop 39. This switch is therefore actuated directly by the plate 33 but only when the latter reaches the end of its movement against the stop 39.

The electric motor 30 for driving the sliding contact 29 is also supplied with current via a push-button switch 46 arranged in alignment with the slide 32 on the opposite side to the switch 45. This switch 46 is therefore actuated by the plate 33 as soon as the latter is introduced into the slide 32. In addition there is provided a recess 47 in the vicinity of the corresponding end of the plate so that the switch 46 may be released when the plate is positioned in the slide against the stop 39.

Finally five auxiliary branch terminals 48 to 52 are provided on the upper face of the base 16 for a reason which will be more clearly shown in the following description.

With reference to FIG. 6 which shows the wiring diagram of the simulator, it may first be seen that the device is supplied with current from one source of power comprising a simple electric battery 53 arranged inside the base 16. The motor 30 for driving the sliding contact is connected, on the one hand, directly to one of the battery terminals, for example the positive terminal 54, and, on the other hand, to the negative terminal 55 of the same battery by way of the switch 46. In addition the four switches 34 to 37 are inserted respectively between the positive terminal 54 of the battery and the four outer portions 23, 27, 21 and 25 of the conductive segments. With reference to the inner portions, they are connected in pairs to the negative terminal 55 of the battery via the switch 45 and bulbs 43 and 44. The sections 24 and 28 associated with the red force are therefore connected to the terminal 55 of the battery via the red bulb 43 while the sections 22 and 26 associated with the blue force are connected to the same terminal 55 via the blue bulb 44.

Finally the four terminals 48 to 51 are connected to the four outer sections 21, 27, 23 and 25 of the conductive segments respectively, whereas the terminal 52 is

connected directly to the negative terminal 55 of the battery 53.

The electric simulator just described operates in the following manner:

When a given plate 33 corresponding to the military engagement the result of which is to be obtained is introduced into the slide 32, this plate actuates the push-button 46 first and therefore closes the corresponding switch. The electric motor 30 is therefore supplied with current and begins to rotatably drive the sliding contact 29 over the different conductive segments 17 to 20. This motor may then be stopped, then started again, as the plate is being introduced into the slide, when the notches 38 in the plate pass over the push-button 46 thereby releasing it momentarily.

Finally the recess 47 in the plate arrives on a level with the push-button 46 and releases it permanently, thereby stopping the sliding contact 29 in a position which is quite undetermined and depends purely on chance. The plate is then pushed to the very end of its path against the stop 39 so as to ensure that the notches 38 which may be provided in the plate are correctly positioned relative to the push-buttons 34 to 37. At the same time the push-button 45 is in turn actuated by the end in front of the plate, and the two bulbs 43 and 44 are therefore connected directly to the negative terminal 55 of the battery 53.

When the plate 33 is in position in the slide 32, those push-buttons 34 to 37 not located opposite notches 38 in the plate are actuated by the latter and consequently cause the corresponding outer portions of the conductive segments 17 to 20 to be connected to the positive terminal 54 of the battery, thereby indicating in the simulator a certain combination of probabilities of destruction for the two elements of the military engagement in question.

Let it be assumed for example that the plate 33 shown in FIG. 4 corresponds to a military engagement between a red tank and a blue tank 5. It is known that this plate does not have a notch 38 and therefore actuates the four switches 34 to 37 simultaneously. The four outer sections 21, 23, 25 and 27 are therefore supplied with current, which corresponds to a 25/25 ratio of probabilities.

In this particular case, if the sliding contact 29 stops for example on the segment 18 associated with the red force, it establishes an electric contact between the outer section 23 and the inner section 24 of this segment and the red bulb 43 is illuminated, thereby producing the result of the engagement. Current is in effect passed through the circuit comprising the positive terminal 54 of the battery 53, the switch 34 which is closed, the outer section 23, the sliding contact 29, the inner section 24, the bulb 43, the switch 45 which is also closed by the action of the plate, and the negative terminal 55 of the battery. The red tank 2 shown on the right hand side of the plate 33 is therefore directly illuminated by the bulb 43, therefore automatically and visually indicating to the players that during the military engagement in question the red tank has been destroyed. Naturally the same applies if the sliding contact 29 stops on the segment 20 which is also associated with the red force.

On the other hand, if the sliding contact 29 stops on one of the segments 17 and 19 associated with the blue force, it is the bulb 44 which is lighted and therefore illuminates the blue tank 5 shown on the left hand side

of the plate 33. Under these conditions the blue tank must be considered as having been destroyed during the engagement.

In fact, if the sliding contact 29 stops outside the conductive segments 17 to 20, no contact is established and the two bulbs 43 and 44 therefore remain unlit. This corresponds to an engagement in which neither of the two tanks has been damaged, and it is known that the probability of such an eventuality is approximately 50 percent. This 50 percent probability is precisely represented by the portion of the circumference not covered by the conductive segments 17 to 20.

The electric simulator according to the invention therefore makes it possible to give automatically, and in a particularly simple and attractive manner, the result of different engagements between the blue and red forces, by simultaneously taking into account the risks and probabilities of destroying each weapon in engagement, estimated in advance, in accordance with the method of operational research known under the name of MONTE-CARLO method. The risk is reproduced in the simulator by the rotational time of the sliding contact 29 which is subject to chance, whereas the probabilities of destruction are represented by the proportion of the conductive segments 17 to 20 supplied or not supplied with current, a proportion which is determined by the number and arrangement of notches 38 in the plate 33 being used.

In order to actuate the simulator, it is also possible to use, instead of the plate 33 provided with notches 38, a small toy computer of the type described in French Pat. No. 1,578,828 of the 26th March 1968, or in French Pat. No. 6940860 of the 27th November 1969. The precise object of the five branch terminals 48 to 52 provided on the upper face of the base 16 is to permit the interconnection of the two devices.

In this case the data corresponding to the probabilities of destroying the engaged weapons is introduced into the computer, which therefore automatically supplies the necessary current to the conductive segments concerned, by way of four terminals 48 to 51 which are directly connected to the outer portions of the four conductive segments. Nevertheless, the remaining operation is to actuate the push-button 46 controlling the motor 30 as well as the push-button 45 controlling the bulbs 43 and 44. This can naturally be done by hand. In effect it is sufficient to press the push-button 46 first so as to rotate the sliding contact 29, then press the push-button 45, after releasing the push-button 46, in order to permit the possible lighting of one of the bulbs 43 or 44, which visually indicates the result of the engagement.

However, in this particular case it may also be advantageous to provide a special plate for use with a computer, similar to the plates 33 shown in FIGS. 4 or 7, but comprising a notch or recess 38 for receiving each of the push-buttons 34 to 37. Such a plate would in effect make it possible to actuate the push-buttons 46 and 45 automatically and in sequence as before, while giving the computer priority for controlling the current supply to the various conductive segments 17 to 20.

In order that the advantages of the game according to the invention may be better understood, its principal rules will now be briefly described, but only by way of an example as they could be greatly modified.

At the beginning of the game the different pieces 2 to 7 of the blue and red forces occupy for example the

positions shown in FIG. 1, each piece being located in one of the hexagons on the board 1 showing the battlefield on which these pieces are to be manoeuvred. However it is obvious that other starting positions are also possible depending on circumstances.

The game may be played by two people directing combat units of the blue force and red force respectively, or by several people in each camp, each playing the part of a commander and directing one or several units of tanks, anti-tank weapons, mortars or infantry.

When all the elements of the two opposing forces have been arranged in their starting position on the board 1, the automatic timer is actuated. While this automatic timer is in operation, all or only part of the units of one force, for example the blue force, may be moved in any direction, in accordance with the following rules:

The mortars may be moved onto any free adjacent hexagon, with the exception of those on which a part of the river 13, a wood 12 or a rock 11 is shown; the mortars may pass over the bridge 15 provided that the way is clear, i.e., that it is not occupied by an engaged or destroyed combat unit;

The tanks, and also the anti-tank weapons of the red force, may advance from a vacant hexagon in any direction unless there is a wood 12 or a rock 11; however they may cross the river 13 by any unoccupied hexagon;

The companies of infantry may be moved onto any free adjacent hexagon, with the exception of those including a rock 11.

The movement of the units, a movement which is also optional, only lasts as long as the timer is in operation, for example for the duration of one minute, in order to simulate a real situation demanding rapid decisions.

The phase of movement is succeeded by the phase of combat. When the automatic timer gives the stop signal, any movement of the units of the blue force must cease and these units therefore engage in combat with the units of the red force which are within firing range. However, the mortars must allow one turn to pass after each movement, in view of the time necessary for their installation.

The ranges of the different weapons are obviously variable. A tank can reach an entire opposing unit located one, two or three hexagons away, provided that there is no obstacle in the direction of fire, i.e. a wood, a rock or another combat unit. This is clearly shown in FIG. 2 in which it may be seen that the blue tank 5 can reach, at the most, one opposing unit located in the spaces 56 located at a distance of three hexagons, as indicated by the arrows 57. Naturally the tank can also reach any opposing unit located in one of the hexagons within the perimeter defined by the hexagons 56. In this connection it will be noted that the hexagonal shape of the divisions in the board 1 considerably facilitates the estimation of units located within firing range of a given unit. In effect the firing perimeter is itself formed by a hexagon, which is relatively close to the circle theoretically representing the firing range of a weapon.

The anti-tank weapon has a greater range and can reach any opposing unit situated between one and four hexagons away, whereas the company of infantry can reach any opposing unit located one or two hexagons away, always provided that there is no obstacle in the direction of firing.

As regards the mortar, it can reach any opposing unit located between two and six hexagons away. It will also be noted that because of its curved trajectory the mortar can reach opposing units located behind obstacles, or companies of infantry positioned in the woods.

All units of combat which during the same cycle are within firing range of opposing units can engage in combat, and will be given for example an identification mark in order to avoid subsequent confusion. In accordance with the invention the results of these various engagements are given directly by the electric simulator 8, connected to the game and operating according to the MONTE-CARLO method.

The electric simulator is only actuated once for each engagement. Moreover this engagement may be constituted by a single unit firing at an opposing unit, because it is out of the range of this opposing unit, or by two units which are located within firing range of one another and consequently are both engaged in firing.

For each engagement, a plate corresponding to the type of engagement in question is selected from the plate 33 and introduced immediately into the slide 32, whereupon the push-button 46 is actuated first, then the push-button 45, while the probabilities of destroying the engaged forces are indicated in the simulator by means of the push-button 34 to 37, actuated or not actuated by the notches 38 in the plate. As seen above, the result of the engagement is therefore indicated automatically by the bulbs 43 and 44.

The units not destroyed during the engagements have their identification marks removed, whereas the destroyed units are left in position in their hexagon, but turned upside down in order to avoid any ambiguity.

When all engagements have been carried out, the automatic timer is actuated once more for the movement phase of the units of the red force. This phase is succeeded by a new combat phase in which all units not destroyed during previous combat may participate.

A new cycle is therefore initiated, first with the blue force, then with the red force, and so on, until the battle is terminated. This battle may be concluded on the success of one force or the other, the blue force succeeding in taking the ammunition depot defended by the red force, or the red force succeeding in destroying a significant part of the blue force, or on a drawn game in the event of excessive destruction on both sides.

A third bulb 56, coloured yellow or white, may be provided to be illuminated as an indication of the "drawn game". This bulb can be controlled by using two electromagnetic relays, or by using conductive segments in the neutral zones, or by providing a connection with a transistor T and two resistors R and R'.

It appears from the preceding description that the game according to the invention is very entertaining and also has a notably educational aspect since it allows children to learn the technique of simulation by models, a technique which is particularly effective in developing a decisive mind.

What we claim is:

1. A parlour game in which at least two opposing forces can be engaged in an imaginary action, comprising in combination:

a board representing a field of action and divided into a plurality of divisions;

two groups of elements respectively representing the two opposing forces, said elements being movable over the divisions of said board whereby elements

of said two groups can be moved into range of each other to engage in an imaginary action; and
a simulator comprising means defining a plurality of probability representing portions, ones of said portions being associated with corresponding ones of the opposing forces, said portions representing probabilities of zero or more, means actuable for energizing specific ones of said portions in accord with and to total the probability of a given result for each of a pair of engaged elements of the opposing forces, and means effecting a chance selection among said portions for determining and indicating the result of such engagement of said pair of elements.

2. A parlour game as claimed in claim 1 in which the simulator is an electric device, said means defining said plurality of probability representing portions comprising a support, said portions consisting of a series of independent conductive segments and spaces between such segments, differing segment configurations representing differing probabilities, each of the opposing forces having ones of said segments assigned thereto, said elements being of different types having differing probabilities of elimination in an engagement, said energizing means including means selectively connectible to ones of the segments assigned to at least one of the opposing forces in a pattern corresponding to the probability of elimination of the engaged element of such force, said chance selection effecting means being actuable for selecting, substantially on a random basis, one of said segments and spaces and including means responsive to selection of a segment assigned to said one force for indicating the elimination of said engaged element of said force in said engagement.

3. A parlour game as claimed in claim 1, in which said energizing means includes a member configured in a manner specific to the particular types of elements in the engaged pair of elements, the configuration of said member determining the pattern of energization of said portions, said chance selection effecting means including means responsive both to said member configuration and an indeterminate time period for determining the particular portion selected.

4. A parlour game in which at least two opposing forces can be engaged in an imaginary action, comprising in combination:

a board representing a field of action and divided into a plurality of divisions;

two groups of elements respectively representing the two opposing forces, said elements being movable over the divisions of said board whereby elements of said two groups can be moved into range of each other to engage in an imaginary action; and

a simulator formed by an electric device comprising a number of independent conductive segments of different lengths, each associated with one of the opposing forces and arranged over a circumference at a fixed distance from one another, a sliding contact co-operating with these conductive segments, a voltage supply, means for selectively supplying the segments with current from the voltage supply, as a function of the probabilities of eliminating the two elements in engagement, means for turning the sliding contact and the set of conductive segments relative to one another for an indefinite period of time, and means electrically indicating the stop position of the sliding contact relative

13

to the various conductive segments for giving the result of the said engagement.

5. A parlour game as claimed in claim 4, including a support and an electric drive motor and in which the conductive segments are fixed on the support and including means mounting the sliding contact with respect to this support for rotation by the electric drive motor.

6. A parlour game as claimed in claim 5, in which each conductive segment is formed by two parallel and spaced sections of metal track electrically connectible by the sliding contact during its movement, said means for selectively supplying current to the various conductive segments comprising push-button switches inserted respectively between one of the poles of the voltage supply and one of the sections of each conductive segment, the indicating means connecting the associated sections to the other pole of the voltage supply.

7. A parlour game as claimed in claim 6, in which the simulator also comprises a set of plates, each representing a type of engagement, and a slide capable of receiving any one of these plates, said pushbutton switches for feeding current to the conductive segments having push-buttons which project into the slide, each plate having appropriate teeth for automatically actuating those of the pushbuttons corresponding to the engagement represented by this plate.

8. A parlour game as claimed in claim 7, including a push-button motor control switch automatically actuable by introduction of the plate into the slide for supplying current to the electric motor to drive the sliding

14

contacts and to stop engagable by the plate when the latter is so positioned in the slide as to release the motor control switch.

9. A parlour game as claimed in claim 8, in which the indicating means comprises two electric bulbs each associated with one of the opposing forces and including a common push-button switch automatically actuable by positioning of the plate against the stop for connecting the bulbs to the other pole of the voltage supply.

10. A parlour game as claimed in claim 9, in which each plate comprises figures representing the two elements of the corresponding engagement, the bulbs being located for directly illuminating the figure corresponding to the element eliminated.

11. A parlour game as claimed in claim 4, in which the simulator comprises four said conductive segments extending respectively over 5 percent, 10 percent, 15 percent and 20 percent of the length of the circumference, the 5 percent and 20 percent segments being associated with one of the forces and the 10 percent and 15 percent segments being associated with the other force.

12. A parlour game as claimed in claim 4, in which the divisions on the board are formed by regular hexagons arranged edge to edge.

13. A parlour game as claimed in claim 4, including an automatic timer for limiting the time allotted to players for moving the elements of their respective forces over the board.

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