June 8, 1926. 1,587,685

E. R. TILLINGHAST

EDUCATIONAL DEVICE

Filed June 5, 1923

Fig. 1.

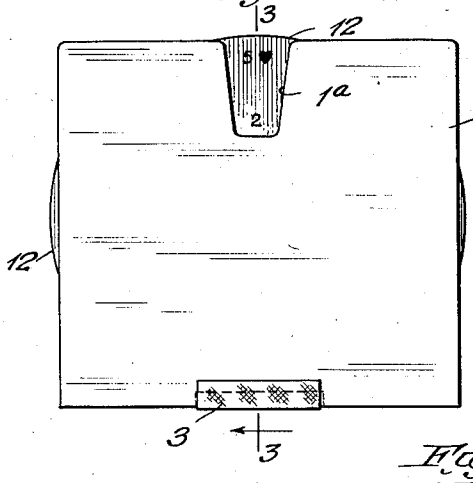


Fig. 2.

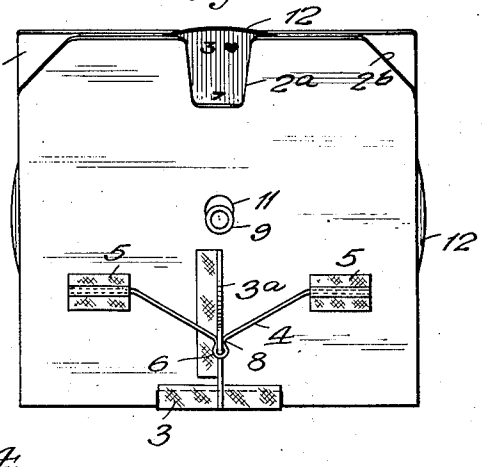


Fig. 4.

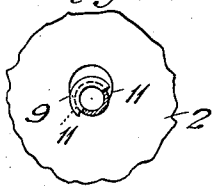


Fig. 3.

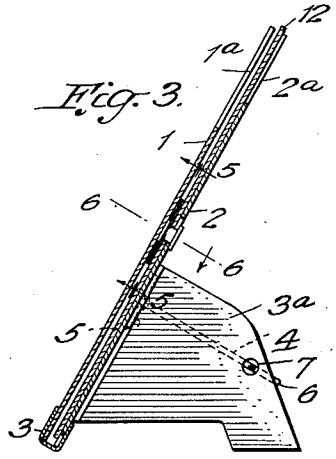


Fig. 5.

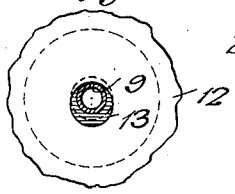


Fig. 9.

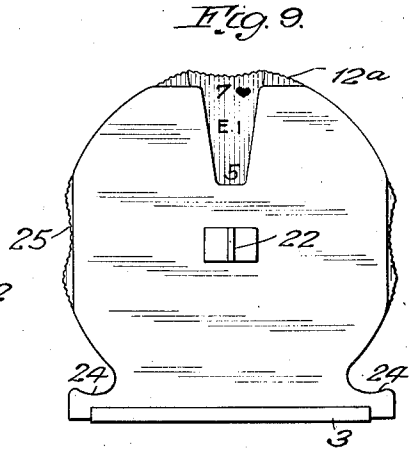


Fig. 7.

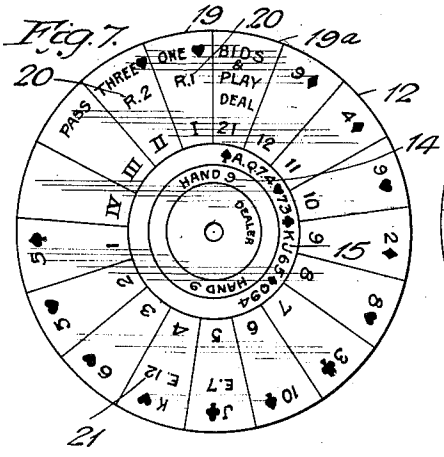


Fig. 8.

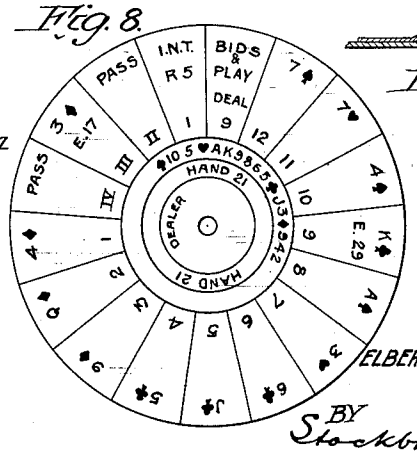


Fig. 6.



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UNITED STATES PATENT OFFICE.

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EDUCATIONAL DEVICE.

Application filed June 5, 1923. Serial No. 643,598.

This invention relates to educational devices and particularly to devices by means of which instruction in the playing of various games may be facilitated. In educational work it is highly desirable that the student be taught by having him make a decision on a point in question before being corrected or advised because of the more lasting impression the advice makes upon him. An object of this invention is to provide a mechanical device for use in instruction in the playing of various games and for like purposes, which may be used as a part of a self-instruction system or may be used advantageously in connection with direct instruction by a tutor; which will develop the judgment of the student and effectively impress upon him the rules and principles of a game; with which the likelihood of the student obtaining the advice before making a decision is reduced to a minimum; which is simple, convenient and relatively inexpensive.

Other objects and advantages will be apparent from the following description of embodiments of the invention, and the novel features will be particularly pointed out hereinafter in claims.

In the accompanying drawing:

Fig. 1 is a front elevation of a device constructed in accordance with the invention;

Fig. 2 is a rear elevation of the same;

Fig. 3 is a transverse sectional elevation of the same taken substantially along the line 3—3 of Fig. 1;

Fig. 4 is a fragmentary rear elevation of the same, on a slightly larger scale than Fig. 2;

Fig. 5 is a section of the same taken substantially along the line 5—5 of Fig. 3;

Fig. 6 is another section of the same taken substantially along the line 6—6 of Fig. 3;

Fig. 7 is a face view of one of the discs carrying a set of instructions;

Fig. 8 is a similar view of the opposite side of the same; and

Fig. 9 is a front elevation of a modified embodiment of the invention.

In the embodiment of the invention illustrated particularly in Figures 1 to 8, I provide a frame composed of front and rear sections or members 1 and 2 which are connected along abutting edges by a hinge 3, so that the members of the frame may be given relative movement toward and from one another about the hinge. Preferably the hinge 3 permits a limited movement of one of the members laterally over the face of the other for a purpose which will hereinafter appear. A prop 3^a is hinged to the rear member 2 of the frame for movement about an axis extending at right angles to the hinged edge of the member 2, so that the prop may either lie flat against the rear face of the member 2 or be swung outwardly into a substantially vertical plane at right angles to the member 2 when the latter is supported, along the hinged edge, upon a suitable supporting surface. When the prop is in its outer or angular position relatively to the member 2, it will support the frame in an inclined position as shown in Figure 3.

A bail 4 is connected by bearings 5 to the frame member 2 so as to be rotatable thereon about an axis extending at right angles to the axis of the prop 3^a. The bail is attached to the member 2 so that it may be swung downwardly over the prop 3^a when the latter is at right angles to the frame. The intermediate portion of the bail 4 is made U-shaped, as at 6, so that when the bail is swung downwardly it will pass over the prop 3^a, with the U-shaped portion 6 embracing the outer edge portion of the prop to hold it in its outward or angular position relatively to the frame. The prop 3^a is preferably provided with an aperture 7 adjacent its outer edge portion embraced by the U-shaped portion of the bail, and the latter at the ends of the U-shaped portion, is bent inwardly, as at 8,—that is, the opposite sides toward one another,—so that when the bail is moved downwardly over the prop so as to cause the U-shaped portion of the bail to embrace the prop, the inbent portions 8 of the bail will spring into the aperture 7 and yieldingly hold the bail against movement out of embracing relation with the prop.

A sleeve 9, which is externally and peripherally flanged at both ends, passes through a small disc 10 so as to be confined therein by the flanges. The disc 10 is secured in any suitable manner to the inner face of the front frame member 1 at its central portion, so as to extend therefrom toward the rear member 2. The latter is provided with a vertically disposed keyhole aperture 11 with the wider part uppermost. When the front member 1 is brought

toward the rear member 2, book-like, the sleeve 9 will strike the rear member 2 at the narrow part of the keyhole aperture 11. When the member 1 is elevated slightly, the flange of the sleeve will pass through the wide part of the aperture 11, whereupon if the member 1 is dropped, the shank of the sleeve 9 will pass into the narrow part of the hole aperture. It will be understood, of course, that the wide part of the aperture 11 will permit the flange of the sleeve 9 to pass, and the narrow part will permit the shank of the sleeve to pass, but not the flange. Therefore, when the members of the frame are brought together and the shank of the sleeve 9 is within the narrow part of the aperture 11, the members will be locked against separation by reason of the engagement of the flange at the rear end of the sleeve with the rear face of the member 2.

A disc 12 is shown mounted in the frame but any number of these discs may be provided for each frame, and each disc has a central aperture 13 of a diameter greater than the diameter of the flange at the projecting end of the sleeve 9. Thus when the front member 1 is swung forwardly about the hinge element 3 into a substantially horizontal position, the sleeve 9 will project upwardly therefrom. One of the discs 12 may then be placed upon the upper face of the member 1, with the sleeve 9 passing through the aperture 13 of the disc. When the member 1 is swung rearwardly and upwardly, and placed in locking engagement with the member 2, the disc 12 will be held upon the sleeve by the flange thereof, and will be free to rotate thereon. The sleeve 9, therefore, acts as a pivot pin for the discs 12 which are interchangeable and removably mounted thereon. The front member of the frame is provided with a sight opening or notch 1^a in its upper edge through which portions of the discs will be visible. The rear member 2 may also have a notch 2^a in its upper edge and aligned with the notch 1^a so as to facilitate grasping of the front member and disc. The rear member may also have the upper corner edges cut off, as at 2^b, to facilitate grasping of the front member.

Each disc 12 is provided upon a central portion of one face thereof with a reference designation 14 of a hand or deal of playing cards, and with designations 15 of the cards constituting a particular deal or hand. It will be understood that the deal or hand which is indicated upon each face of a disc, is a selected group of characters representing the cards which a person might possibly receive when a deck of cards is shuffled and dealt in the usual manner. For example, in Figure 7 the designation 14 indicates that this particular group of cards is referred to as hand 9, and the designations 15 indicate the cards which are to be considered as constituting that particular hand in a game. This hand 9, as indicated, consists of the king, 9, 4 and ace of diamonds, the ace, jack, 4 and 3 of spades, the ace, 4 and 7 of hearts, and the ace, jack and 8 of clubs, which is a possible representative hand that one might encounter in the game of auction bridge.

The opposite face of the disc 12, which is shown in Figure 8, is provided around its periphery with divisions 16. One of the divisions, such as 16^a, may indicate the deal number 9. The other divisions represent, in a counter-clockwise direction, the directions as to the most approved or correct manner of proceeding in playing the game with the hand represented upon the opposite face of the disc. Centrally of the face of the disc shown in Figure 8, designations 17 and 18 are provided representing, respectively, another possible hand and the cards which may constitute it. The opposite face of this disc, which is shown in Figure 7, is provided around its periphery with divisions 19, which correspond to the divisions 16. One of the divisions, such as 19^a, indicates that the instructions upon that face of the disc relate to the hand 21 which is given upon the opposite face of the disc as shown in Figure 8. The other divisions 19 contain, successively, in a counter-clockwise direction, advice as to the preferable bids and plays which the student should follow during the progress of the game.

By way of illustration, the disc 12 shown in Figures 7 and 8 carries the designations of possible hands and instructions for their use, in connection with the playing of the game of auction bridge, but it will be understood that this is for the purpose of explanation only, and that the principle of the invention is applicable to instructions for the playing of various other games. A supporting frame and set of discs are provided for each player, and in the game of auction bridge there will, of course, be four players. Each player is also preferably provided with a full deck of 52 cards, and the different sets preferably have backs of distinctive colors or designs.

Each player will then select a disc from his set,—for example, the one marked and intended for use in playing hand 21. Four discs will thus be in use for p'aying hand 21. The disc used by each of the players and designated as hand 21, will not, of course, have the same cards represented thereon as appear on the other three discs but will have represented on it the cards which might possibly have been allotted to him in the dealing of the cards in the usual manner in the game.

Each player moves the front member 1 of the frame upwardly to unlock it from the rear member 2, and then forwardly into a substantially horizontal position. He then places the selected disc upon the upper face of the front member 1 and over the sleeve 9, with the central designation of the hand 21 facing upwardly, and with the division 16^a in alignment with the sight opening 1^a. Each player then selects from his particular deck of cards, those cards which are specified by the central designation 18 of the upper face of the disc, as constituting the hand or deal which he is to play. The front member 1 is then swung upwardly against the rear member of the frame and interlocked therewith by hooking the flange of the sleeve through the keyhole aperture 11. The division 19^a, which is opposite the division 16^a will be visible through the sight opening 1^a and indicates that the instructions upon that face relate to the hand or deal 21. It will be understood, of course, that each disc 12 has indications of card hands on both faces thereof, and that the indications of the cards in a particular hand are upon one face while the instructions for bidding and playing that hand are upon the opposite face.

The game is then started by the one having the dealer's hand making a bid or passing. Assuming that the player having the disc which is shown in Figures 7 and 8 is the dealer, he will decide first as best he can, what the bid should be. After having made his decision, he will turn the disc clockwise for a distance corresponding with the width of one division, which brings the next division 19 into view through the sight opening 1^a. This indicates that the first bid should be one heart and is the bid that the player will make. If this bid does not correspond with the player's previously formed opinion, and the player wishes to know the reason why his decision regarding the proper bid is wrong, he will find in division 19 a designation 20 reading "R1" indicating that the reason for this play is explained under rule 1 found in a separate book of rules and explanations which accompanies the device. The player may then refer to this rule and learn why, under the existing conditions, it is advisable to bid one heart.

Each player in succession makes his bid in the same manner. When the first player is called upon to again bid, he first makes a decision as to what he should do, and then turns the disc to bring a second division 19 into view through the sight opening. This new division indicates that three hearts should be bid and is the bid which the player will make. In case these instructions do not agree with the judgment of the player he will find the designation 20 thereon which refers to rule 2 of the separate set of rules, to which he may refer for an explanation of why the bid of three hearts should be made. The other players in succession make their bids in the same manner, and after all have "passed" and the actual playing begins, the same process is followed in determining the order in which the cards should be played. This order is indicated in the successive divisions 19, it being understood, of course, that each player will, in every case, first make his decision, without assistance, regarding the proper play to be made, and then verify it by turning the disc to bring the explanation into view through the sight opening. In all cases the players will follow the instructions, because they are based on the assumption that each player will play properly, and a wrong play, that is, one contrary to the instructions, will so alter the situation as to nullify the value of the succeeding instructions.

Certain of the divisions will also contain designations 21 which refer to "explanations" by number, and these explanations are also contained in the separate set of rules and instructions. These may be referred to by the player for a complete explanation of the reasons why the play advised in that division is the preferable one. After the particular hand or deal has been completely played, each player selects a new disc representing a new deal, and proceeds as above explained in connection with the playing of the cards for the hand or deal 21.

When a single player desires to learn the game alone, he may take four of the frames and sets of discs and assemble them the same as would the four players. That is, if he decides to play the deal 21, for example, the disc of each set corresponding to this deal will be placed in the corresponding frames, and the player will select the cards corresponding to each hand, which cards are indicated as the hand upon one of the discs. The player takes the selected cards and makes his decisions as before, and in order to determine what the play of each of the other hands is, he turns the discs corresponding to the other hands to bring the divisions 19 thereof successively into view.

The indications thereon will show the plays which a prudent player would have made if holding that particular hand and will be assumed as the plays and bids which are really made. Since only one division 19 is visible at any time, the player will not know in advance what cards are held by the dummy players (represented by the devices) or what the order of playing of their cards will be. The player also will not be able to see the instructions for his own plays until he has made his decision and turned the disc of his device to bring into view the indication for that play. In placing the discs upon the front member 1, the instructions

for the plays to be made will be upon the under face and therefore the player will not be likely to see in advance the instructions for that hand.

In Figure 9, a slightly modified device is illustrated. In this embodiment, a tab 22 may be secured to the front member 23 of the frame to facilitate the grasping and moving of the front member. Both members of the frame may also be provided with notches 24 adjacent their lower edges at each sides, so as to provide a horizontal surface, slightly concave, in which a finger may be placed for steadying the frame while the disc is being rotated. The discs 12ª may also be provided with peripheral notches 25 to prevent slippage of the fingers of the player thereover when they are rotated.

It will be obvious that various changes in the details and arrangement of parts herein described and illustrated for the purpose of explaining the nature of the invention may be made by those skilled in the art within the principle and scope of the invention as expressed in the appended claims.

I claim:

1. An educational device for instruction in playing games comprising a frame having a front wall articulately connected thereto for movement toward and from the same, a pivot carried by the front wall so as to project from the rear face thereof, a disc removably pivoted upon said pivot and having upon one face a designation of a selected possible hand or playing condition, and upon the other face a plurality of indications of advisable moves or plays to be made by a player having the hand or condition represented upon the opposite face, said indications being arranged successively in the order in which the plays or moves should be made, said front wall having a sight aperture therein through which the indications are successively visible when the disc is rotated upon said pivot with the indication carrying face disposed against the front wall.

2. An educational device for instruction in playing games comprising a frame having a front wall articulately connected thereto for movement toward and from the same, a display element, means carried by the rear face of the front wall for supporting said element for movement relatively thereto, said front wall having a sight opening through which portions of the element pass successively when relative movement of the element and front wall occurs, said element having, upon the portions of its face that may be brought into visibility through the sight opening, a plurality of indications of advisable moves or plays to be made by a player holding a selected possible hand or playing condition.

3. An educational device for instruction in playing games comprising a frame having a front wall articulately connected thereto for movement toward and from the same, a display element, means carried by the rear face of the front wall for supporting said element for movement relatively thereto, said front wall having a sight opening through which portions of the element pass successively when relative movement of the element and front wall occurs, said element having, upon the portions of its face that may be brought into visibility through the sight opening, a plurality of indications of advisable moves or plays to be made by a player holding a selected possible hand or playing condition, said element having upon its other face identification conditions for which the indications apply, whereby one can identify the element and apply it to the frame without exposing to view the face containing the advice relating to the procedure to be followed.

4. An educational device for instruction in playing games comprising two members hinged together so as to move toward and from one another, book-like, means for supporting said members at the hinged edge in an inclined position upon a suitable supporting surface, whereby one of the members can be swung upwardly and forwardly from the other member about its hinged connection thereto, a disc pivotally and removably mounted upon the inner face of the movable member, said movable member having a sight opening therein through which a portion of the disc is visible, said disc having, upon the face lying against the movable member, a plurality of indications of the advisable order of playing procedure for a selected possible playing condition that may confront a player and which indications may be brought successively into view through the sight opening when the disc is given increments of rotation, whereby the disc may be applied to the movable member and the latter moved into contact with the other member without likelihood of observing the instructions thereon.

5. An educational device for instruction in playing games comprising two members hinged together so as to move toward and from one another, book-like, means for supporting said members at the hinged edge in an inclined position upon a suitable supporting surface, whereby one of the members can be swung upwardly and forwardly from the other member about its hinged connection thereto, a disc pivotally and removably mounted upon the inner face of the movable member, said movable member having a sight opening therein through which a portion of the disc is visible, said disc having, upon the face lying against the movable member, a plurality of indications of the advisable order of playing procedure for a selected possible playing condition that may confront a player and which indications may

be brought successively into view through the sight opening when the disc is given increments of rotation, whereby the disc may be applied to the movable member and the latter moved into contact with the other member without likelihood of observing the instructions thereon, said disc having upon its other face suitable identification characters by which one may identify the hand or playing condition to which the instructions on the opposite face apply.

6. An educational device for instruction in playing games comprising two members hinged together so as to move toward and from one another, book-like, means for supporting said members at the hinged edge in an inclined position upon a suitable supporting surface, whereby one of the members can be swung upwardly and forwardly from the other member about its hinged connection thereto, a pivot pin carried by and projecting from the inner face of the relatively moving member, a disc removably and rotatably mounted upon said pin, said movable member having a sight opening therein through which a portion of the disc is visible, said disc having, upon the face lying against the movable member a plurality of indications of the advisable order of playing procedure for a selected possible playing condition that may confront a player and which indications may be brought successively into view through the sight opening when the disc is given increments of rotation, whereby the disc may be applied to the movable member and the latter moved into contact with the other member without likelihood of observing the instructions thereon, said pin extending through the abutting face of the relatively stationary member when the members are brought together.

7. An educational device for instruction in playing games comprising two members hinged together so as to move toward and from one another, book-like, means for supporting said members at the hinged edge in an inclined position upon a suitable supporting surface, whereby one of the members can be swung upwardly and forwardly from the other member about its hinged connection thereto, a pivot pin carried by and projecting from the inner face of the relatively moving member, a disc removably and rotatably mounted upon said pin, said movable member having a sight opening therein through which a portion of the disc is visible, said disc having, upon the face lying against the movable member, a plurality of indications of the advisable order of playing procedure for a selected possible playing condition that may confront a player and which indications may be brought successively into view through the sight opening when the disc is given increments of rotation, whereby the disc may be applied to the movable member and the latter moved into contact with the other member without likelihood of observing the instructions thereon, said pin extending through the abutting face of the relatively stationary member when the members are brought together and interlocking therewith to prevent separation of the members.

8. An educational device for instruction in playing games comprising a frame having a front wall articulately connected thereto for movement toward and from the same, a pivot carried by the front wall so as to project from the rear face thereof, a disc removably pivoted upon said pivot and having upon one face a plurality of indications of advisable moves or plays to be made by a player having a selected possible hand or condition, said indications being arranged successively in the order in which the plays or moves should be made, said front wall having a sight aperture therein through which the indications are successively visible when the disc is rotated upon said pivot with the indication carrying face disposed against the front wall.

9. The educational device substantially as set forth in claim 6 in which the pin has an enlarged head at its free end whereby when the disc is placed over the same, it will be held upon the pin, by reason of its head, while the disc and said one of the members is moved upwardly and against the other.

10. In an educational device, a frame, a prop hinged to the rear of the frame so as to be swung into a position at right angles thereto, and a locking member also hinged to the frame for movement about an axis at right angles to the axis of the prop, said prop and locking member being adapted to interlock when the prop is at right angles to the frame and the member is swung into engagement therewith.

11. An educational device for instruction in playing games comprising two members loosely hinged together for relative movement toward and from one another, book-like, and also laterally of one another to a limited extent, means for supporting said members upon an edge whereby one of the members can be swung toward and from the other and also given a limited movement in a vertical direction, a pin carried by one of the members so as to project toward the other member, said pin having a flange thereon spaced from the member carrying it, said other member having a key-hole aperture, the wider part of which will permit the flange of the pin to pass, and the narrow part of which will permit the shank of the pin to pass and prevent passage of the flange whereby when the members are brought together and the movable one elevated slight-

ly, the flange of the pin can be passed through the wider part of the aperture, and when the elevated member is lowered the shank of the pin will be carried into the narrow part of the aperture to interlock the members together, and a disc removably mounted on the pin and carrying successive directions as to the playing of the game when confronted with a selected possible hand or condition, one of the members having a sight opening through which the directions are successively visible, when the disc is rotated, in the order in which the directions should be acted upon.

12. An educational device for instruction in playing games comprising two members loosely hinged together for relative movement toward and from one another, book-like, and also laterally of one another to a limited extent, means for supporting said members upon an edge whereby one of the members can be swung toward and from the other and also given a limited movement in a vertical direction, a pin carried by one of the members so as to project toward the other member, said pin having a flange thereon spaced from the member carrying it, said other member having an edge over which the flange of the pin passes when the members are given a relative vertical movement, whereby when the members are brought together with one carrying the pin elevated slightly, the flange of the pin can be passed over the locking edge, and when the elevated member is lowered the flange of the pin will be hooked over the said locking edge to interlock the members together, and a disc removably mounted on the pin and carrying successive directions as to the playing of the game when confronted with a selected possible hand or condition, one of the members having a sight opening through which the directions are successively visible, when the disc is rotated, in the order in which the directions should be acted upon.

13. An educational device for instruction in playing games and the like, comprising a supporting member, and an element removably mounted on said member for movement relatively thereto while mounted thereon, said element having thereon display characters representing advisable successive moves or plays to be made by a player confronted with a selected possible hand or playing condition, said supporting member having a portion cooperating with the element to direct attention successively to said characters, during relative movement of the member and element, in the order in which the plays or moves should be made.

In witness whereof, I hereunto subscribe my signature.

ELBERT R. TILLINGHAST.