

[54] EDUCATIONAL GAME

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[52] U.S. Cl. **35/22 A, 273/130 R, 273/136 C**

[51] Int. Cl. **G09b 19/00**

[58] Field of Search **35/22 A; 46/1 A; 273/130 R, 273/136 C, 136 GA**

[56] **References Cited**

UNITED STATES PATENTS

2,963,796 12/1960 Zalkind35/22 A

741,903	10/1903	Gates.....	35/22 A
2,994,967	8/1961	Klamer et al.	35/22 A
2,911,740	11/1959	Miller.....	35/22 A
3,500,556	3/1970	Moskowitz	35/22 A

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[57] **ABSTRACT**

An educational game is provided which includes a housing with an upper face having a plurality of apertures, of geometrical, alphabetical, numerical, animal, bird or other shapes, into which matching game pieces can be inserted. Within the housing a spring impelled plate, controlled by an adjustable timer is provided to discharge the pieces at the end of a predetermined selected time interval. The game can then be reset for the same or for a different time interval.

9 Claims, 7 Drawing Figures

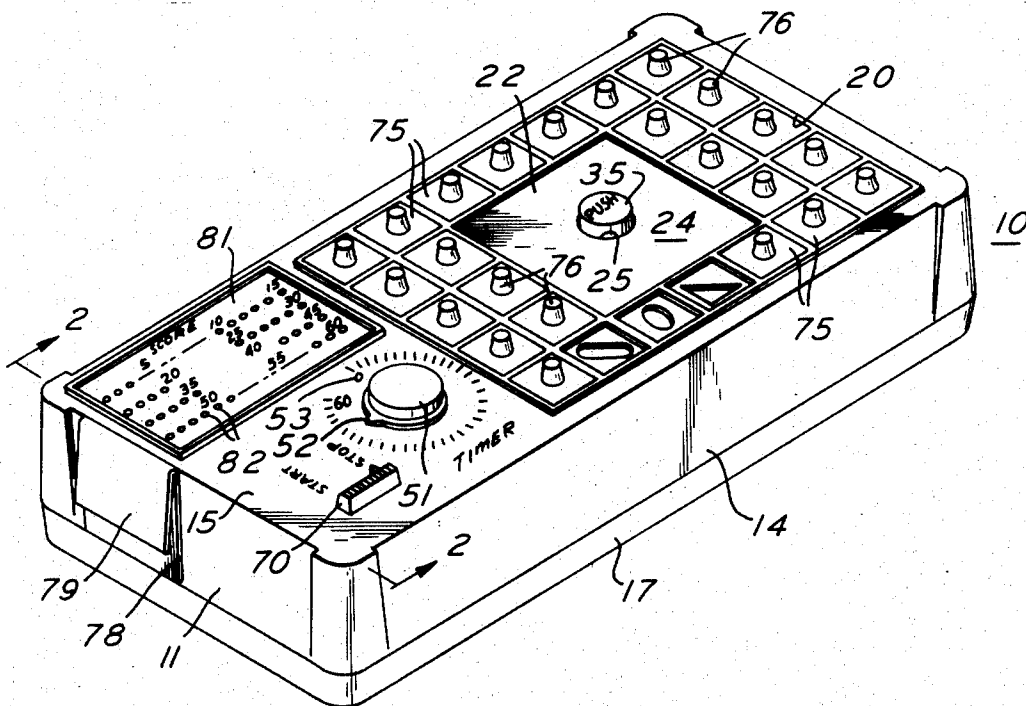


FIG. 1

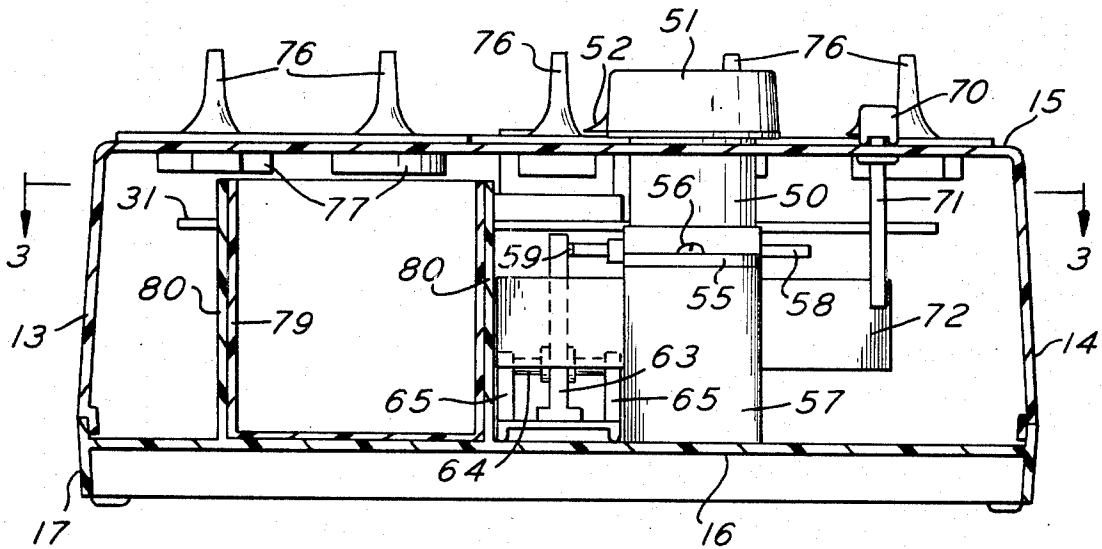
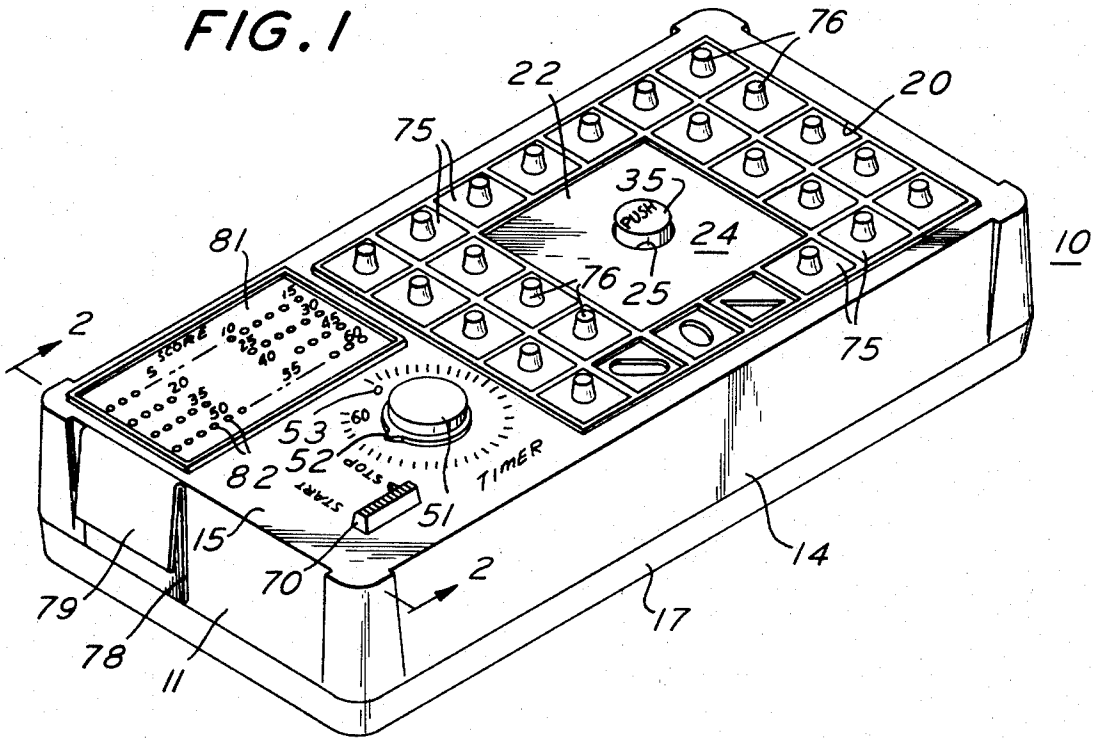


FIG. 2

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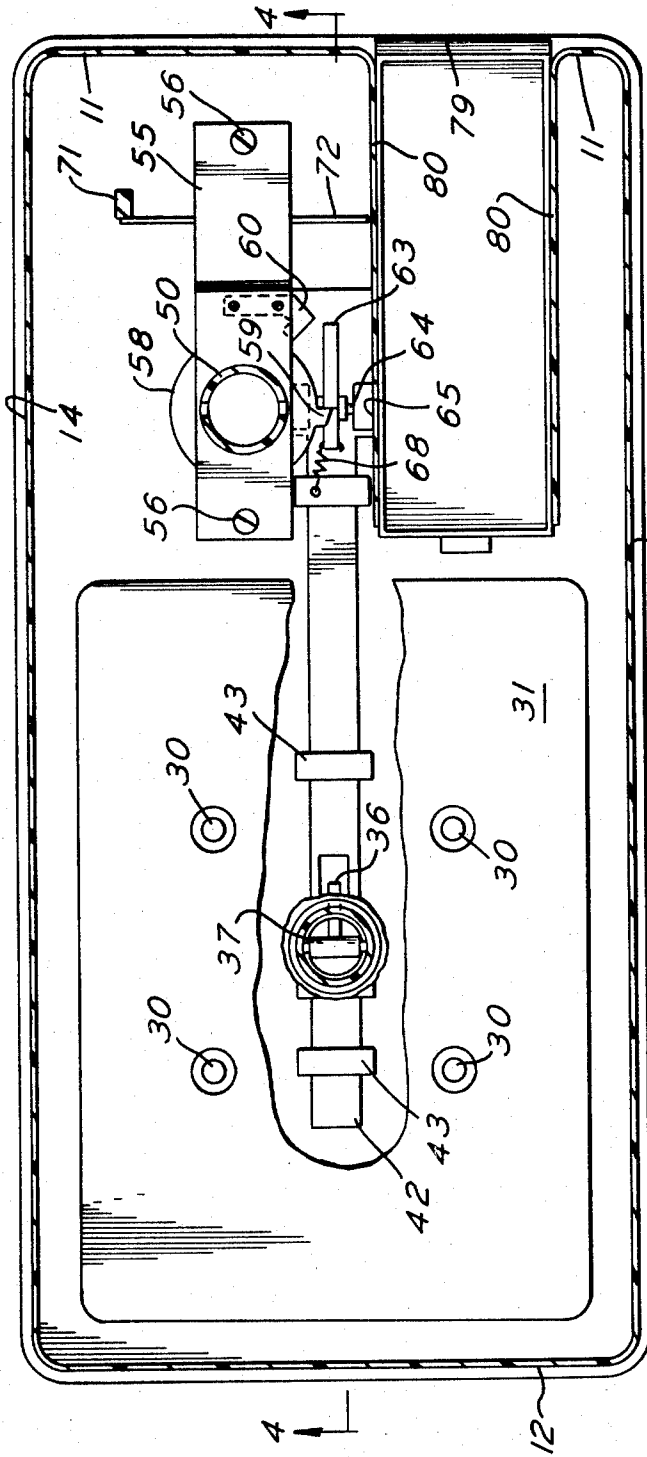


FIG. 3

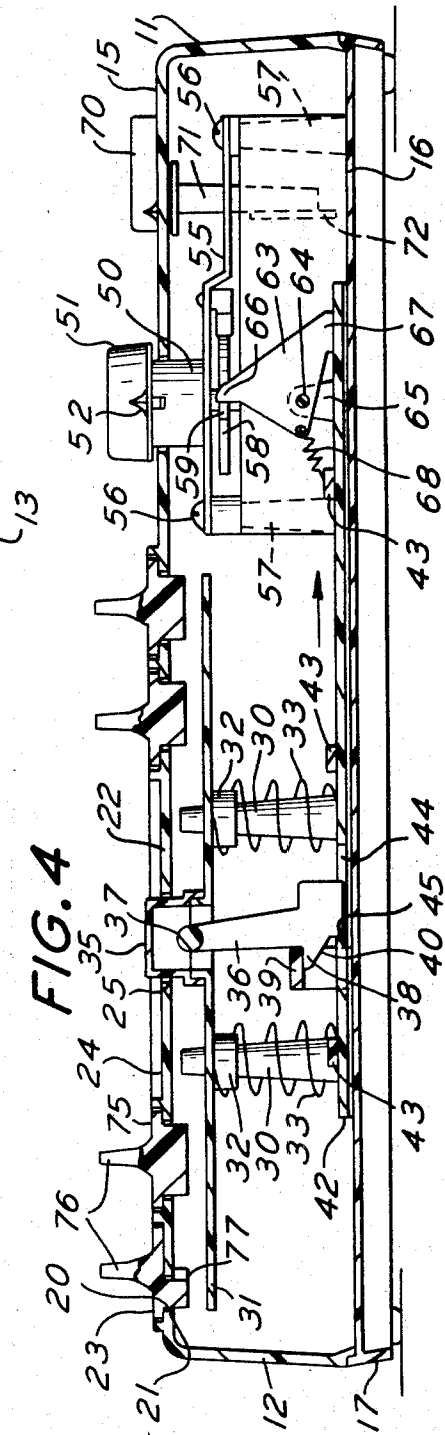


FIG. 4

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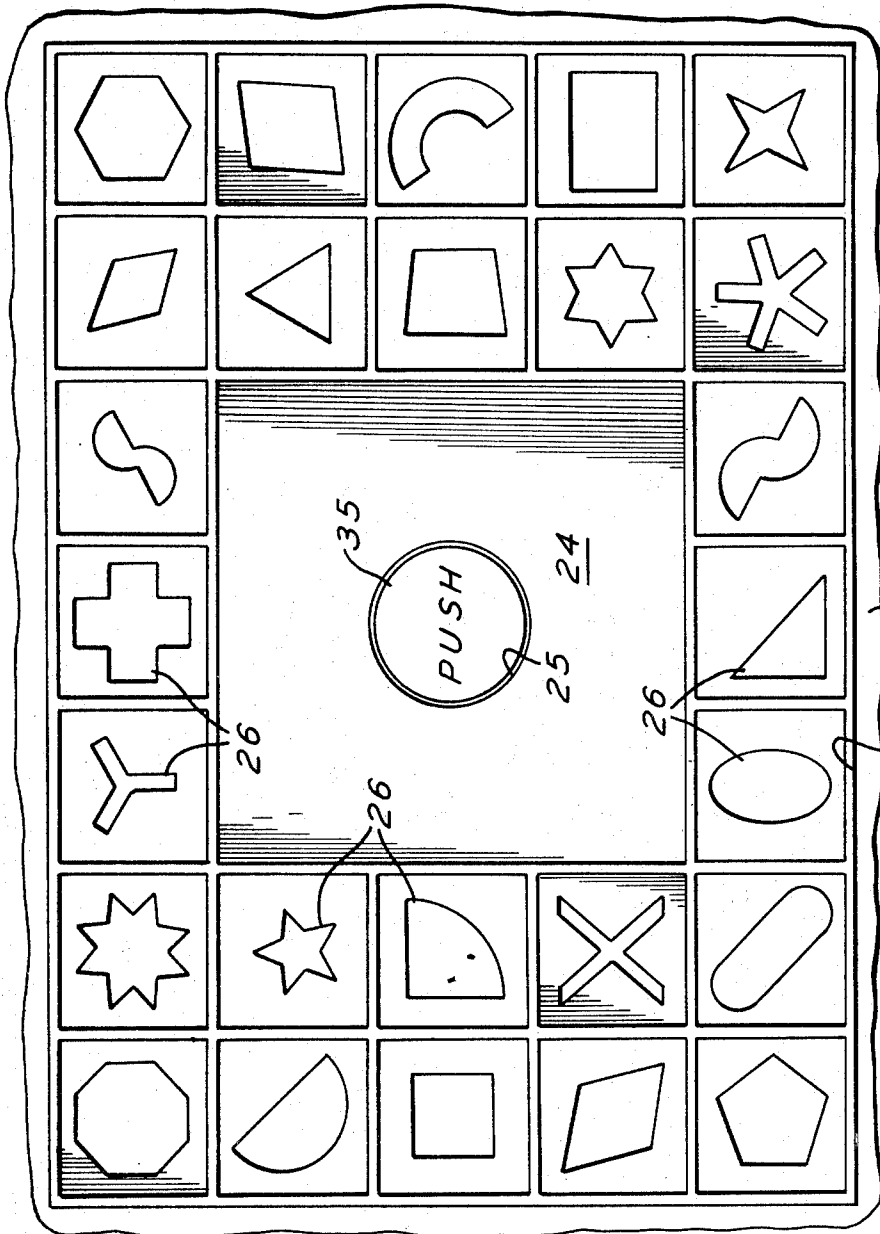


FIG. 5

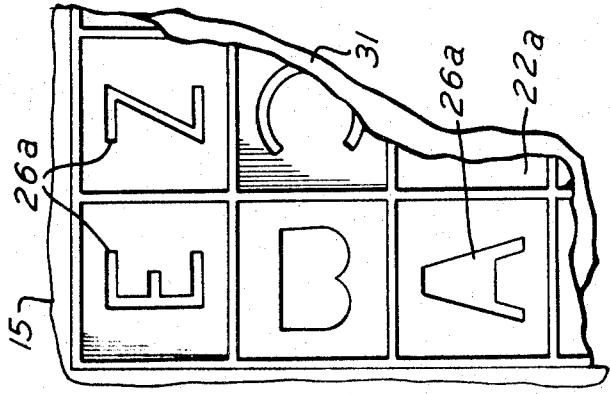


FIG. 7

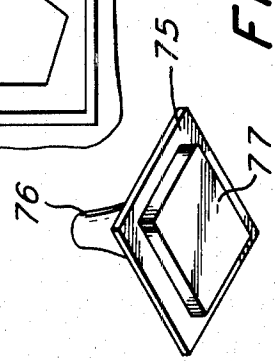


FIG. 6

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EDUCATIONAL GAME

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to educational games and more particularly to a game utilizing the concepts of a form board and mating game pieces with provisions for imposing a time limitation on the play.

2. Description of the Prior Art

Form boards having shaped apertures and matching pieces for insertion in the apertures have heretofore been proposed, among others by Klamer, et al., U. S. Pat. No. 2,994,967; Zalkind U.S. Pat. No. 2,963,796; Miller U.S. Pat. No. 2,911,740, and Moskowitz U.S. Pat. No. 3,500,556.

In Miller, Zalkind and Klamer et al., U.S. Pat. No. 2,994,967 provision is made for manual removal of the pieces when it is desired to do so.

The devices referred to above are suitable for their intended purposes but do not impose any time limitation for completion and have only a limited challenge to the player.

SUMMARY OF THE INVENTION

In accordance with the invention an educational game is provided having a housing with an upper face portion and apertures of different shapes through the face portion, and which apertures may be geometrical figures, letters of the alphabet, numerals, animals or birds or other figures, the housing in the interior having a movable discharge or knockout plate controlled by an adjustable timer to cause the discharge from the apertures of game pieces inserted therein by the player during the predetermined time interval which has been set for completion.

It is the principal object of the present invention to provide an educational game for developing skill in matching game pieces and correspondingly shaped apertures, in which the shapes are geometrical, alphabetical, numerical, animal or bird silhouettes or others and in which a time interval for completion is imposed on the player at the end of which the previously placed pieces are dislodged and discharged.

It is a further object of the invention to provide a game of the character aforesaid which is compact and essentially self-contained.

It is a further object of the invention to provide a game of the character aforesaid in which the apertures are provided in a face plate which can be changed to substitute a different face plate if desired.

It is a further object of the present invention to provide a game of the character aforesaid which may have a scoring section on the top wall thereof.

Other objects and advantageous features of the invention will be apparent from the description and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The nature and characteristic features of the invention will be more readily understood from the following description taken in connection with the accompanying drawings forming part thereof, in which:

FIG. 1 is a view in perspective of a preferred embodiment of the invention;

FIG. 2 is a transverse sectional view, enlarged, taken approximately on the line 2—2 of FIG. 1;

FIG. 3 is a horizontal sectional view taken approximately on the line 3—3 of FIG. 2, additional parts being broken away to show the details of construction;

FIG. 4 is a longitudinal vertical section taken approximately on the line 4—4 of FIG. 3;

FIG. 5 is a top plan view of one preferred form of aperture plate and illustrating geometrical shaped apertures;

FIG. 6 is a view in perspective of one of the game pieces; and

FIG. 7 is a fragmentary top plan view of another preferred form of aperture plate.

It should, of course, be understood that the description and drawings herein are illustrative merely and that various modifications and changes can be made in the structure disclosed without departing from the spirit of the invention.

Like numerals refer to like parts throughout the several views.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now more particularly to the drawings, the game in accordance with the invention includes a housing 10 having opposite side walls 11 and 12, front and rear walls 13 and 14, a top wall 15 and a bottom wall 16 with a downwardly extending supporting rim 17.

The top wall 15 has an opening 20 surrounded by a rim 21 for the reception of an aperture plate 22 having a supporting flange 23 engaged with the rim 21.

The aperture plate 22, as shown in FIGS. 1 and 5, has a central panel portion 24 with an aperture 25 therethrough and, in surrounding relation to the central panel portion 24, a plurality of apertures 26 of the desired shapes such as geometrical figures, numerals, animals, birds, alphabet outlines or the like.

As shown in FIGS. 1 and 5 the apertures 26 are in the form of various geometrical shapes and figures but other shapes of apertures 26 could be employed. In FIG. 7 a portion of an aperture plate 22a is shown having apertures 26a of alphabetical shapes.

The housing 10, aperture plate 22 and other parts can advantageously be of molded synthetic plastic material, such as polystyrene, for light weight and ease of manufacture.

Within the housing 10 a plurality of posts 30 are provided preferably integral with and extending upwardly from the bottom wall 16 on which a dislodging or striker plate 31 is vertically slidably carried by sleeves 32, springs 33 engaging the bottom wall 16 and the bottom face of the plate 31 normally urge the plate 31 upwardly for discharge of the game pieces as hereinafter pointed out.

In order to move the dislodging plate 31 downwardly so that it can be retained in a lowered position, a manually operable button 35 is provided secured to the plate 31 and extending upwardly through the aperture 25. The button 35 bears the notation "PUSH" to indicate its desired setting action.

Beneath the button 35 a striker lever 36 is pivotally carried on a pivot pin 37 movable with the button 35 and has a lower latching end 38 adapted to engage under a locking bar 39 fixedly carried on the bottom wall 16. The latching end 38 has an inclined face 40 to aid it in clearing the bar 39 upon downward setting movement and so that it can then engage under the bar 39.

A push rod 42 is provided horizontally slidable along the bottom wall 16 in guides 43 on the bottom wall 16 and has a slot 44 within which the lower latching end 38 of the striker lever 36 is received.

The slot 44 has a terminal end 45 against which the striker lever 36 engages in set position and ready for movement to release the lever 36 from its locking engagement.

An adjustable timer 50 is provided of well known spring wound type and having a knob 51 accessible above the top wall 15 for turning to wind and set the timer 50. The knob 51 carries an indicator pointer 52 which by relation to the time scale 53 on the wall 15 indicates the set time before release.

The timer 50 is mounted in a frame plate 55 secured by screws 56 on posts 57 extending upwardly from the bottom wall 16.

The timer 50 has a rotatable driving plate 58 with a driving projection 59, a stop 60 carried by the plate 55 limiting the movement of the plate projection 59 in a driving direction.

A push lever 63 is pivotally mounted on a pivot pin 64 in brackets 65 carried by the push rod 42. The push lever 63 has an upper end 66 for engagement by the driving projection 59 as driving projection 59 is advanced to a releasing position and has a lower end 67 which normally engages the push rod 42.

The push lever 63 is swingable about the axis provided by the pivot pin 64 upon movement of the push lever 63 in a counterclockwise direction, as seen in FIG. 4, to permit the driving projection 59 to be moved from engagement with the stop 60 to the set position beyond the upper end 66.

The push lever 63 has one end of a tension spring 68 connected thereto, the other end of the spring 66 being connected to a contiguous fixed guide 43.

A start-stop control button 70 slidably movable along the top face of the top wall 15 has a stop bar 71 extending downwardly therefrom with a stop plate 72 secured thereto.

The stop plate 72 is movable with respect to the push lever 63 to engage the push lever 63 to prevent movement of the push rod 42 to the right. As seen in FIGS. 3 and 4 the start-stop control button 70 is in the "START" position.

A plurality of game pieces 75 are provided each having a handle portion 76 for grasping with the fingers and a plug portion 77, the shapes of which correspond to the shapes of the apertures 26 or 26a.

The side wall 11 can be provided with an opening 78 for the reception of a drawer 79 movable in guides 80 for the storage of the game pieces 75 when they are not in use.

The top wall 15 can also be provided with a score section 81 with openings 82 for movable and insertable score indicating pins (not shown).

The mode of operation will now be pointed out.

The start-stop button 70 is placed at the start position.

The timer knob 51 is turned through the desired arc to set the same to the elapsed time desired for playing of the game.

The positioning button 35 is then pushed downwardly and this movement is effective to move striker plate 31 downwardly and move the push rod 42 to the right as seen in FIG. 4 so that the latching end 38

of the striker lever 36 engages beneath the locking bar 39 and holds the plate 31 in its lowered position.

The player then attempts to match and place in the matching apertures 26 and 26a as many of the game pieces as permitted by the preset playing time.

When the timer 50 is activated the timer driving plate 58 is rotated so that the projection 59 is moved away from the end 66 of the push lever 63. As the time for which the timer 50 has been set elapses the projection 59 moves toward the end 66 and as the end of the elapsed time approaches engages the end 66.

Further advancing movement of projection 59 is effective through the push lever 63 to move the push rod 42 to the right causing release of the engagement of the latching end 38 of lever 36 so that the striker plate 31 is rapidly moved upwardly to strike, dislodge and impel the game pieces 75 out of the apertures 26 or 26a.

The stop-start button 70 is available for use at any time to overcome the releasing action of the timer 50 by engagement of the stop plate 72 with the push lever 63 to hold the push rod 42 from striker plate releasing movement.

We claim:

1. A game comprising

a housing having a top wall with a plurality of apertures of different shapes,

game pieces having complementary plug portions for respective engagement in said apertures,

a striker plate in said housing normally urged upwardly for dislodging game pieces inserted in said apertures,

releasable latching means for holding said striker plate in a lower and inactive position,

manual means for moving said striker plate for engagement of said latching means,

timer means for releasing said latching means; and

means for adjusting said timer means to predetermine the time for release.

2. A game as defined in claim 1 in which said top wall has a replaceable plate in which said apertures are located.

3. A game as defined in claim 1 in which said housing has a horizontal wall portion with vertical posts on which said striker plate is mounted for vertical movement.

4. A game as defined in claim 1 in which said manual means includes a button accessible at said top wall.

5. A game as defined in claim 4 in which said latching means includes a latching lever, and a locking bar fixedly carried by said housing is provided for latching engagement by said latching lever.

6. A game as defined in claim 1 in which said latching means includes a latching lever, a push rod is provided for controlling the positioning of said latching lever,

a push lever is provided for positioning said push rod, and

said timer means has a movable portion for engaging said push lever to release said latching lever.

7. A game as defined in claim 6 in which said movable portion of said timer means includes a projection for engagement with a portion of said push lever for striker plate releasing movement of said push rod.

8. A game defined in claim 1 in which said timer means has a setting knob for positioning said means for predetermined timed releasing action.

9. A game as defined in claim 1 in which stop-start means is provided for selectively retaining said latching means against release by said timer means.

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