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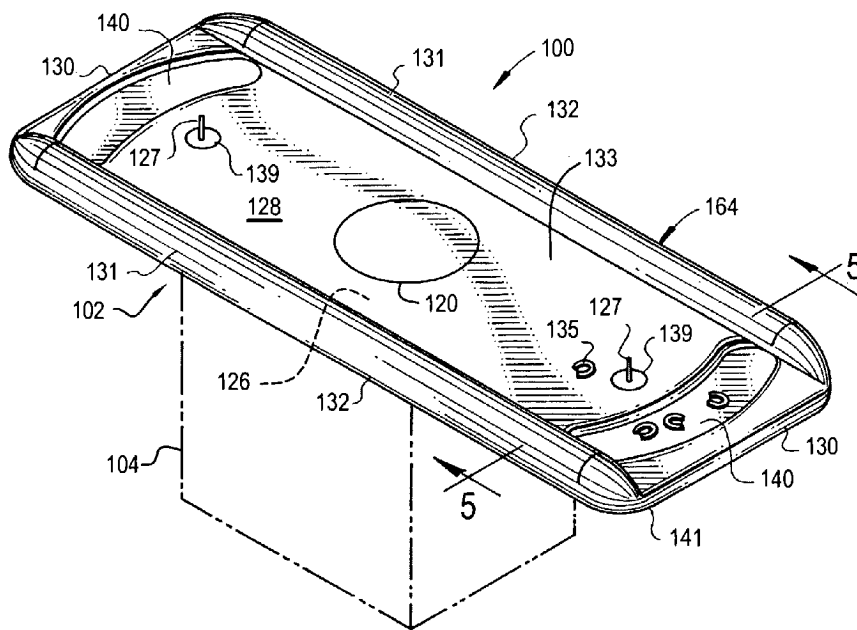
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(54) Title: TABLETOP HORSESHOES GAME SYSTEMS



(57) Abstract: A tabletop scaled-down horseshoes game system primarily for use indoors that includes a substantially horizontal playing surface and a pair of scaled-down posts to be used as the target for tossed scaled-down horseshoes. An embodiment for use in commercial establishments provides a token means to activate the game, a means to change and display each player's score, a means to keep track of and display game time, and a means to pneumatically lower the posts when the game is over. The commercial establishment game may also incorporate a vending machine to dispense the scaled-down horseshoes to be used with the game system.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

TABLETOP HORSESHOES GAME SYSTEMS

BACKGROUND

This invention relates to tabletop horseshoes game systems. More particularly, this invention relates to a system for a tabletop "horseshoes" game that may be played either in a private residence or in a commercial establishment. Even further, this invention relates to improvements in my previous tabletop horseshoes game system.

Typically, to play the game of "horseshoes" requires a playing field of sufficient size to incorporate the conventional distance between the required stakes of approximately forty-feet. Due to the size of the playing field and the need to have a soft substance, such as sand, surrounding the stakes, horseshoes is typically played outdoors. Briefly, the game is played by players taking turns throwing/pitching a full-size metal horseshoe (often specially made as a large "pitching horseshoe") at a vertical stake (typically metal) firmly set in the ground. Each player throws/pitches a horseshoe from about one stake to the other and can score specified points depending upon whether the player makes a "ringer" (if the horseshoe is curled around the stake), a "leaner" (if it is leaning on the stake), or touching or close within a specified distance, etc. Further, a player may move a previously pitched horseshoe to a scoring or non-scoring position by striking the previously pitched horseshoe with a horseshoe thrown in a subsequent pitch. In addition to playing field size limitations, the ability to play conventional horseshoes is subject to other variables such as the weather. In view of the popularity of the sport, and in view of the above-mentioned limitations, there exists a need to provide additional playing options for this type of entertainment.

Certain problems exist when playing a horseshoe game indoors, for example, during play, the horseshoes may occasionally miss the playing surface when thrown. Locating the

fallen horseshoes in a darkened environment is often difficult. Furthermore, storage and portability become much more important in an indoor environment. Even further, durability of the game movable components parts (posts) and low maintenance is highly preferred. In view of these concerns, a need exists for more variability in playing equipment.

OBJECTS AND FEATURES OF THE INVENTION

A primary object and feature of the present invention is to fulfill the above-mentioned needs by providing a scaled-down horseshoes game system.

In addition, it is a primary object and feature of this invention to provide such a game system that may be used in commercial establishments as well as in private homes.

Another object and feature of the present invention is to provide an easily stored, portable residential tabletop horseshoes game system.

Another object and feature of the present invention is to provide folding legs for a portable residential tabletop horseshoes game system.

Another object and feature of the present invention is to provide lighting for assisting in locating horseshoes that miss the playing surface.

Another object and feature of the present invention is to provide a durable, low maintenance pneumatically operated post system for raising and lowering the playing posts.

A further primary object and feature of the present invention is to provide such a system that is efficient, inexpensive, and handy. Other objects and features of this invention will become apparent with reference to the following descriptions.

SUMMARY OF THE INVENTION

In accordance with a preferred embodiment hereof, this invention provides a horseshoes game system, using at least one scaled-down game "horseshoe", comprising: at least one scaled-down "horseshoes"-game playing board having at least one substantially horizontal playing surface to play scaled-down horseshoes on such at least one scaled-down "horseshoes"-game playing board; and at least one supporter having at least one pre-set support height to support such at least one scaled-down "horseshoes"-game playing board at such at least one pre-set support height; wherein such at least one scaled-down "horseshoes"-game playing board comprises at least one post to provide at least one vertically impingeable target to which the at least one scaled-down game "horseshoe" may be tossed; and wherein such at least one supporter comprises at least one foldable leg. Moreover, it provides such a horseshoes game system wherein such at least one post is fixed.

Additionally, it provides such a horseshoes game system further comprising such at least one scaled-down game “horseshoe”. Also, it provides such a horseshoes game system wherein such at least one scaled-down “horseshoes”-game playing board is structured and arranged to be supportable by at least one pool table horizontal surface. In addition, it provides such a horseshoes game system further comprising at least one set of scoring beads situate along at least one rod adapted to assist scorekeeping of the horseshoe game system. And, it provides such a horseshoes game system wherein: such at least one set of scoring beads comprises indicia; and such at least one set of scoring beads comprises twenty-one beads. Further, it provides such a horseshoes game system wherein such at least one substantially horizontal playing surface comprises indicia.

In accordance with another preferred embodiment hereof, this invention provides a horseshoes game system, using at least one scaled-down game “horseshoe”, comprising: at least one scaled-down “horseshoes”-game playing board having at least one substantially horizontal playing surface to play scaled-down horseshoes on such at least one scaled-down “horseshoes”-game playing board; wherein such at least one scaled-down “horseshoes”-game playing board comprises at least one post having at least one vertically impingeable target to which the at least one scaled-down game-horseshoe may be tossed; and wherein such at least one post comprises at least one pneumatic post activator structured and arranged to raise such at least one post to at least one target position; and lower such at least one post to at least one non-target position; and wherein such at least one post, while arranged in the at least one target position, comprises such at least one vertically impingeable target.

Even further, it provides such a horseshoes game system wherein such at least one pneumatic post activator comprises: at least one first pneumatic element adapted to raise such at least one post to the at least one target position when such at least one pneumatic post activator is activated; and at least one second pneumatic element adapted to lower such at least one post to the at least one non-target position when such at least one pneumatic post activator is de-activated. Moreover, it provides such a horseshoes game system wherein such at least one post is removably attached to such at least one pneumatic post activator. Additionally, it provides such a horseshoes game system further comprising such at least one scaled-down game “horseshoe”.

Also, it provides such a horseshoes game system wherein such at least one substantially horizontal playing surface comprises indicia. In addition, it provides such a

horseshoes game system further comprising at least one supporter having at least one pre-set support height to support such at least one scaled-down “horseshoes”-game playing board to such at least one pre-set support height. And, it provides such a horseshoes game system further comprising at least one illuminator to assist illumination below such at least one pre-set support height.

In accordance with another preferred embodiment hereof, this invention provides a horseshoes game system further comprising: at least one game activator having at least one activation mode and at least one deactivation mode structured and arranged to activate such at least one pneumatic post activator; wherein the activating of such at least one game activator raises such at least one post to the at least one target position; and wherein the de-activating of such at least one game activator lowers such at least one post to the at least one non-target position. Further, it provides such a horseshoes game system wherein such at least one game activator comprises: at least one monetary acceptor structured and arranged to receive at least one pre-set monetary amount; wherein such at least one monetary acceptor activates such at least one game activator upon receiving the at least one pre-set monetary amount. Even further, it provides such a horseshoes game system wherein such at least one game activator comprises at least one timer having at least one time limiter structured and arranged to activate such at least one game activator for at least one specific time period. Moreover, it provides such a horseshoes game system further comprising at least one air-operated piston assembly structured and arranged to: raise such at least one post to the at least one target position when activated; and lower such at least one post to the at least one non-target position when de-activated; wherein such at least one air-operated piston assembly comprises such at least one first pneumatic element and such at least one second pneumatic element.

Additionally, it provides such a horseshoes game system wherein such at least one air-operated piston assembly comprises at least one pressurized air supply. Also, it provides such a horseshoes game system wherein such at least one air-operated piston assembly further comprises at least one air pump. In addition, it provides such a horseshoes game system further comprising at least one scoreboard. And, it provides such a horseshoes game system wherein such at least one scoreboard comprises at least one three-button scoring system having: at least one one-point button; at least one two-point button; and at least one three-point button. Further, it provides such a horseshoes game system wherein: such at least one scaled-down “horseshoes”-game playing board comprises a fixed perimeter; and wherein

such at least one scoreboard is flatly transportable within such fixed perimeter.

Even further, it provides such a horseshoes game system wherein such at least one post is structured and arranged to permit normal accidental pressure to lower such at least one post without causing serious damage to human tissue.

In accordance with another preferred embodiment hereof, this invention provides a horseshoes game system, using at least one scaled-down game "horseshoe" comprising: a playing board comprising a substantially horizontal playing surface, adapted to be impinged by the tossed at least one scaled-down game "horseshoe", wherein such playing board is substantially longitudinal and comprises a pair of transverse ends; a pair of vertical miniature posts constructed and arranged to provide an impingeable target for the at least one scaled-down game "horseshoe", each such miniature post being located near a such transverse end; at least one support element adapted to support such substantially horizontal playing surface to a tabletop level; at least one pneumatic post activator to raise such pair of vertical miniature posts sufficiently above such substantially horizontal playing surface to a target position to act as the impingeable target for the at least one scaled-down game "horseshoe", lower such pair of vertical miniature posts to a non-target position; and at least one illuminator to assist illumination below the tabletop level. Even further, it provides such a horseshoes game system wherein such at least one support element comprises at least one foldable tabletop leg.

In accordance with another preferred embodiment hereof, this invention provides a horseshoes game system comprising: playing board means for providing a substantially horizontal playing surface adapted to be impinged by tossed miniature horseshoes; attached to such playing board means, miniature post means for providing a vertical impingeable target for the tossed miniature horseshoes; and pneumatic post activator means for assisting pneumatic post activation to raise such miniature post means sufficiently above the substantially horizontal playing surface to provide the vertically impingeable target, and lower such miniature post means to a non-target position. Even further, it provides such a horseshoes game system further comprising at least one set of scoring beads situate along at least one rod adapted to assist scorekeeping of the horseshoe game system.

In accordance with another preferred embodiment hereof, this invention provides a horseshoes game system, using at least one scaled-down game "horseshoe", comprising: at least one scaled-down "horseshoes"-game playing board having at least one substantially

horizontal playing surface to play scaled-down horseshoes on such at least one scaled-down “horseshoes”-game playing board; and wherein such at least one scaled-down “horseshoes”-game playing board comprises at least one post to provide at least one vertically impingeable target to which the at least one scaled-down game “horseshoe” may be tossed; and at least one set of scoring beads adapted to assist scorekeeping of such horseshoe game system.

In accordance with another preferred embodiment hereof, this invention provides a horseshoes game system, using at least one scaled-down game “horseshoe”, comprising: at least one scaled-down “horseshoes”-game playing board having at least one substantially horizontal playing surface to play scaled-down horseshoes on such at least one scaled-down “horseshoes”-game playing board; and at least one supporter having at least one pre-set support height to support such at least one scaled-down “horseshoes”-game playing board at such at least one pre-set support height; wherein such at least one scaled-down “horseshoes”-game playing board comprises at least one post to provide at least one vertically impingeable target to which the at least one scaled-down game “horseshoe” may be tossed; and at least one illuminator adapted to assist locating and illuminating of at least one scaled-down game “horseshoe” below such at least one pre-set support height.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a perspective view of a residential-styled tabletop horseshoes game of the tabletop horseshoes game system having fixed posts and a fixed support according to a preferred embodiment of the present invention.

FIG. 2 shows a perspective view of a tabletop horseshoes game of the tabletop horseshoes game system having fixed posts and a folding leg support according to another preferred embodiment of the present invention.

FIG. 3 shows a perspective view of the scoring system of the tabletop horseshoes game of FIG. 2.

FIG. 4 shows a perspective view of a miniature horseshoe (about 1/10th scale) of the tabletop horseshoes game system that is used to play the game, shown in a hand in a sample position for tossing according to a preferred embodiment of the present invention.

FIG. 5 shows a sectional view through section 5-5 of FIG. 1.

FIG. 6 shows a perspective view of a commercial-styled tabletop horseshoe game of the tabletop horseshoes game system according to another preferred embodiment of the present invention.

FIG. 7 shows a side view of the embodiment of FIG. 6.

FIG. 8 shows an exploded perspective view, partially in section, of the embodiment of FIG. 6.

FIG. 9 shows a rear view, partially in section, of the scoreboard assembly as well as the location of the scorekeeping and timing means of the embodiment of FIG. 6.

FIG. 10 shows a side view, partially in section of the post-raising solenoid of the commercial-styled tabletop horseshoe game of FIG. 6.

FIG. 11a shows a front view of another commercial-styled tabletop horseshoe game of the tabletop horseshoes game system according to another preferred embodiment of the present invention.

FIG. 11b shows a section view through section 11b-11b of FIG. 11a.

FIG. 11c shows a top view of the commercial-styled tabletop horseshoe game of FIG. 11a.

FIG. 12a shows a front view of another commercial-styled tabletop horseshoe game of the tabletop horseshoes game system according to another preferred embodiment of the present invention.

FIG. 12b shows a sectional view through section 12b-12b of FIG. 12a.

FIG. 12c shows a diagrammatic view of the operating components of the pneumatically-controlled post, commercial-styled tabletop horseshoe game of FIG. 12a.

FIG. 13 shows a rear perspective view of the scoreboard of FIG. 11a.

FIG. 14 shows a perspective view of the scoreboard support member of the preferred embodiment of FIG. 12a.

FIG. 15 shows a perspective view, partially in section, of a pneumatically-operated post assembly according to a preferred embodiment of the present invention.

FIG. 16 shows a perspective exploded view of the pneumatically-operated post assemblies of FIG. 15.

FIG. 17 shows a diagrammatic view of the operating components of the pneumatically-controlled post, commercial-styled tabletop horseshoe game of FIG. 11a according to a preferred embodiment of the present invention.

FIG. 18 shows a diagrammatic view of the operating components of the solenoid-controlled post, commercial-styled tabletop horseshoe game of FIG. 6 according to a preferred embodiment of the present invention.

FIG. 19 shows a top view of a scoreboard transport/storing arrangement on the playing surface of the horseshoes game according to a preferred embodiment of the present invention.

FIG. 20 shows a top view of the tabletop horseshoe game utilizing a pool table for a support surface according to a preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE BEST MODES AND PREFERRED EMBODIMENTS OF THE INVENTION

FIG. 1 shows a perspective view of a residential-styled tabletop horseshoes game **102** of the tabletop horseshoes game system **100** having posts **127**, preferably fixed, and a support **104**, preferably fixed according to a preferred embodiment of the present invention.

Preferably, the tabletop horseshoes game system **100** provides a scaled-down horseshoes game system that has a playing board and horseshoes that are a reduced size from the standard game, as described above. Preferably, a one-tenth scale is used, however, upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other scaled arrangements, such as quarter-scale, miniature, non-scaled, etc., may suffice. Furthermore, upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, country of use, etc., other versions of horseshoe game rules, game-playing dimensions, etc., may suffice.

Preferably, the tabletop horseshoes game **102** may be set upon a fixed support structure **104**, as shown. Preferably, the support structure **104** may also include other gaming tables or other fixed supports (fixed referring herein to a stable support not easily moved).

Preferably, tabletop horseshoes game **102** is designed primarily for use in private homes or where a game playing time-limiter is not needed. The tabletop horseshoes game **102** provides for a playing board **126**, having a top surface **133** and a bottom surface **134** (shown in FIG. 5), preferably constructed from a sheet of substantially rigid yet lightweight material, such as plywood, and preferably having dimensions of approximately seventy-seven inches in length by about thirty-six inches in width. Most preferably, the tabletop horseshoes game system **100** is designed as a one-tenth scale of the standard regulation outdoor horseshoes game (post to post) with some size modification to the playing board **126** to adapt to interior use, for example, to fit through standard doorways, to accommodate uneven

surfaces, to accommodate the desired or available playing area, etc.

Preferably, a pair of fixed posts **127** are mechanically attached (preferably by pressing a tightly fitting post **127** into a hole in playing board **126**) to the top surface **133** of the playing board **126**, one post **127** being situated near each transverse end **130** of the playing board **126**, as shown. Preferably, the posts **127** are located at a distance of approximately forty-eight inches from each other (typically, in an outdoor regulation game the stakes are forty feet apart, therefore, in maintaining a one-tenth scale the posts are placed four feet apart). This arrangement embodies in this invention playing board means for providing a substantially horizontal playing surface adapted to be impinged by tossed miniature horseshoes, and attached to such playing board means, miniature post means for providing a vertical impingeable target for tossed miniature horseshoes.

FIG. 4 shows a perspective view of a miniature horseshoe **135** (about one-tenth-scale) of the tabletop horseshoes game system **100** that is used to play the game, shown in a hand in a sample position for tossing according to a preferred embodiment of the present invention. Shown in FIG. 4 is a representative miniature horseshoe **135** that is used in the game system **100** to play the tabletop horseshoes game of the present invention. Preferably, the horseshoes **135** are made from one-eighth-inch stainless steel sheet stock and are preferably formed by a water chip blasting process. Another preferred method for manufacturing the horseshoes **135** includes laser cutting. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, manufacturing considerations, etc., other materials and methods of manufacture, such as molded plastic, brass, aluminum, etc., may suffice. Most preferably, the horseshoe **135** comprises a smooth surface finish. In alternate preferred embodiments, the horseshoe **135** comprises indicia markings and/or decorative stampings, as shown, to match the appearance of a full sized horseshoe.

FIG. 5 shows a section view through section 5-5 of FIG. 1. Continued reference is made to FIG. 1. Preferably, a pair of longitudinal rails **131**, each preferably made of two-inch diameter PVC pipe (or in alternate preferred embodiments, an aluminum angle, as shown in FIG. 12b), preferably covered by a padding **136**, preferably a one-half-inch-thick foam material, as shown. This arrangement embodies herein a padding means for covering and protecting such playing board means and are provided for containing the preferably one-tenth-scale horseshoes **135** (when tossed) within the area defined by the top surface **133** of the

playing board **126**. Preferably, each rail **131** is mechanically attached (preferably by the use of screws **129**) to each side **132** of the playing board **126**, as shown. Rails **131** embody herein a rail means for assisting containment of tossed miniature horseshoes on such playing surface. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other means of fastening the rail to each side, such as dowels, adhesive, etc., may suffice.

FIG. 5 further illustrates that the playing board **126** and the rails **131** are preferably covered by a padding **136**, preferably one-half-inch-thick foam material, at least embodying herein padding means for covering and protecting such playing board means. Preferably, the playing board **126**, rails **131**, and padding **136** portions are also covered by a decorative and protective covering **137**, preferably vinyl, preferably washable, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, material availability, etc., other materials, preferably washable, such as leather, closed cell foam, etc., may suffice.

Preferably, indicia **120** (as illustrated in FIG. 1) may be placed onto the protective covering **137**. Preferably, the indicia **120** include advertising, logos or other such indicia to indicate, for example, a restaurant/bar, brewing company or other such sponsor. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, advertising preference, etc., other indicia, for example, photographs, embroidery, lighted signage, video panels, etc., may suffice.

Preferably, the area defined by the horizontal top surface of the covering **137** (after attachment to the padding **136** and playing board **126**), between the longitudinal rails **131**, defines the playing surface **128**. Preferably, imprinted on the protective covering **137** and encircling each respective post **127** is a scoring circle **139** that is used as a visual scoring aid (as shown in FIG. 1). Typically, the scoring circle **139** is the distance of the length of one horseshoe **135** from the exterior of the post **127** outward, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, preferred playing rules, etc., other scoring indicia, such as squares, triangles, etc., may suffice.

Further, upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other means to apply the scoring circle, such as etc., stitched, printed, appliqué, etc., may suffice. It is noted, however, that a smooth playing surface is most preferred.

Preferably, to prevent the horseshoes from sliding off the playing surface **128**, and to provide a convenient place to store the horseshoes **135** when not in play, end pockets **140** are provided at each transverse end **130** of the playing surface **128** in a preferred semi-crescent shape, as shown in the drawings. Preferably, pockets **140** (at least embodying herein a catching means for assisting capturing of tossed miniature horseshoes on such playing surface) are formed by cutting the desired pocket shape from the playing board **126**, thereby creating through-holes in the playing board **126**. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, etc., other end pocket shapes, such as round, square, horseshoe-shaped, etc., may suffice.

The padding **136** is attached to the playing board **126**, preferably by stapling; and the protective cover **137** is then placed over the padding **136** and pockets **140**. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, material availability, etc., other methods of making the pockets **140**, may suffice.

Preferably, to cover the free ends of the covering **137** and to provide further support for the playing board **126**, a baseboard **141**, having a top surface **138** and a bottom surface **145**, is bonded, preferably by gluing at its top surface **138** to the bottom surface **134** of the playing board **126**. The base board **141**, at least embodying herein a base board means for stiffening such playing board, is constructed from a substantially rigid yet lightweight material, preferably plywood, and has approximately the same dimensions as those of the playing board **126**. Thus, FIG. 1 and FIG. 3 show the details of construction of the entire playing assembly **164**.

Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, pool table size (billiards, bar table, competition table, etc.), etc., other pool table arrangements, such as a two-sided reversible pool table cover with the

horseshoes game on one side of the cover and a flat side on the other side of the cover, etc., may suffice.

Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other supports, such as bolted brackets, ceiling mounted cables, etc., may suffice.

FIG. 2 shows a perspective view of a tabletop horseshoes game **102** of the tabletop horseshoes game system **100** having fixed posts **127** and a leg support **106** in lieu of a fixed support structure **104**, as shown. Most preferably, the leg support **106** is a folding leg support, as shown. Preferably, the leg supports **106** may be folded to assist easy portability and storage of the tabletop horseshoes game **102**. Such folding legs are readily available and are preferably mechanically attached to the table bottom surface **134**, preferably by screws or other suitable attachment. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, material availability, etc., other methods and devices for attachment of the leg supports **106** to the tabletop horseshoes game **102** may suffice.

FIG. 20 shows another preferred embodiment wherein the tabletop horseshoes game **102** fits on the flat playing surface **105** of a pool table **103**. FIG. 20 shows a top view of the tabletop horseshoe game utilizing the pool table **103** for a support surface according to a preferred embodiment of the present invention. Preferably, the leg supports **106** are stored in the folded position prior to placement of the tabletop horseshoes game **102** on playing surface **105**. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as cost, leg design, etc., other leg arrangements, such as, for example, providing removable legs, etc., may suffice.

FIG. 3 shows a perspective view of the scoring system **108** of the tabletop horseshoes game **102** of FIG. 2. Preferably, the residential-styled tabletop horseshoes game **102** comprises a scoring system **108**, as shown. Preferably, the scoring system comprises a simple set of abacus-style beads **111**, preferably arranged along a rod **112**, as shown. Preferably, there are twenty-one beads **111** along the rod **112**, as shown. Preferably, the last three beads are colored to indicate the end of the game is near. Upon reading the teachings of this

specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other bead arrangements, such as multiple colors, colors indicating one, two or three point scoring, etc., may suffice.

Furthermore, indicia **114** may be placed on the beads **111**, such as advertising, logos or other such indicia **114** to indicate, for example, a restaurant/bar, brewing company or other such sponsor. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, advertising preference, etc., other indicia, such as specially manufactured beads, shaped beads, etc, to represent, for example, football helmets, casino chips, etc., may suffice.

FIG. 6 shows a perspective view of a commercial-styled tabletop horseshoe game **110** of the tabletop horseshoes game system **100** according to another preferred embodiment of the present invention. FIG. 7 shows a side view of the embodiment of FIG. 6.

FIG. 6 is a perspective view of another preferred embodiment illustrating a tabletop horseshoes game **110** of the tabletop horseshoe game system **100** designed for use primarily in a commercial establishment (referring to an owner that desires to have a playing cost and pay-for-use operating equipment as part of the tabletop horseshoe game system **100**). Playing assembly **164** in this commercial embodiment is very similar to that of the residential-styled tabletop horseshoes game **102** embodiment of FIG. 1, except that in the commercial embodiment, provision is made for vertically movable posts rather than the fixed posts used in the residential-styled tabletop horseshoes game **102**. Preferably, tabletop horseshoes game **110**, as in the embodiment of FIG. 1, also provides for a playing board **126** (as shown in FIG. 5), having a top surface **133** and a bottom surface **134**, constructed from a sheet of substantially rigid yet lightweight material, preferably plywood, and preferably having dimensions of approximately seventy-seven-inches long by thirty-six-inches wide. Preferably, near each transverse end **130** of the playing board **126** is a playing board post-hole **142** (as shown in FIG. 10) of sufficient diameter so as to allow unobstructed vertical movement of each post **127** through each playing board post hole **142**. The playing board post-holes **142** are preferably located so as to maintain a centerline distance between the posts **127** of approximately forty-eight-inches. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances,

considering such issues as economics, user preference, preferred game scale, etc., other dimensions, such as larger or smaller, etc., may suffice. For example, a smaller board game for easier portability and play may suffice.

As with the embodiment of FIG. 1, rail **131** is preferably mechanically attached to each side **132** of the playing board **126** for containing the horseshoes **135** within the playing surface **128**. Also, this embodiment preferably provides for padding **136** and covering **137** overlying the top surface **133** of the playing board **126** and rails **131** as is fully illustrated in FIG. 5. Preferably, the area defined by the horizontal top surface of the covering **137** after attachment to the padding **136** and playing board **126** in combination with the area between the longitudinal rails **131**, defines a playing surface **128**. Further, as stated above, to cover the free ends of the cover **137** and to provide further support for the playing board **126**, a baseboard **141**, having a bottom surface **145** and having longitudinal sides **132**, is preferably mechanically attached to the bottom surface **134** of the playing board **126**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, manufacturing preferences, etc., other methods of making the tabletop horseshoes game **110**, such as pre-formed rails, injected molded plastics, etc., may suffice.

Preferably, baseboard post-holes **143** (as shown in FIG. 10) are provided near the transverse ends of the baseboard **141** and are arranged for concentric alignment with the playing board post-holes **142**. As is more clearly shown in FIG. 10, aligning the playing board post-holes **142** with the baseboard post-holes **143** allows each post **127** unobstructed vertical movements. Preferably, to minimize weight, the baseboard **141** is constructed from a substantially rigid yet lightweight material, preferably plywood, and has approximately the same dimensions as that of the playing board **126**. The tabletop horseshoes game **110** also preferably provides a pair of shelf-like holders **144**, integral to and located along the front longitudinal side **124** of the base board **141**, as shown. Preferably, the base board **141** is adapted to hold beverages, other food containers, etc. while the tabletop horseshoes game **110** is being played, as shown in FIGS. 6 and 7. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other types of holders, such as ashtrays, horseshoe holders, etc., may suffice.

Preferably, as shown in FIG. 6, a scoreboard **146** constructed of a substantially rigid

yet lightweight material, preferably plywood is provided, as shown. Preferably, on the scoreboard **146** are mounted a score readout **147**, timer readout **148**, and a scorekeeping button **149**, as shown. Preferably, the scoreboard **146** is supported in an elevated position by the use of vertical support members **150**, as shown. Preferably, the tabletop horseshoes game **110** includes the use of a logo **151** mechanically attached to the front surface of the scoreboard **146**. Preferably, to support the weight of the scoreboard **146** and logo **151**, the vertical support members **150** are preferably constructed from a substantially rigid material such as square metal tubing, as shown. Preferably, rigidly attached to the lower end of each vertical support member **150** is a vertical support member base **152**. Preferably, mechanically attached to the bottom surfaces of both of the support member bases **152** is a planar support member **153**, all supported in a manner best shown and described in FIG. 8. Preferably, tabletop horseshoes game **110** comprises the planar support member **153** that is preferably constructed out of a lightweight material, preferably plywood. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, weight preferences, etc., other materials for tabletop horseshoes game construction, such as plastic, metals, etc., may suffice.

Mechanically attached to the bottom surface of the baseboard **141** is a support **154** used to support the game and maintain an elevation between the floor and the playing surface **128** of approximately thirty-six inches (that is, at approximately a tabletop height). Preferably, this tabletop horseshoes game **110** commercial embodiment uses a box frame configuration for the support **154** (at least embodying herein a support means for elevating such playing surface to a tabletop level), under appropriate circumstances, other suitable cross-sectional shapes may be used. Preferably, to provide a convenient and comfortable place for players to place their feet, the tabletop horseshoes game **110** preferably comprises a pair of foot stands **155** as an integral part of the support **154**.

Preferably, the tabletop horseshoes game **110** also includes a game activation means **156**, such as a token/coin-operated (or bill operated) machines, for example, such as those found in arcades, which is mechanically attached in the face of the support **154**, as shown, and embodies herein a game activation means for controlling such post activation means wherein such game activation means is token-initiated.

Further illustrated in FIG. 6 is a horseshoe vending machine **157**, mechanically

attached to the front surface of the support **154** and of the kind of mechanical dispensers, for dispensing the one-tenth-scale horseshoes **135**. The horseshoe vending machine **157** may be coin, dollar bill or token activated, and upon inserting the appropriate amount of coins or tokens in horseshoe vending machine **157**, a predetermined number of miniature horseshoes **135** with which to play the game using game system **100** are dispensed. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other methods of dispensing the horseshoes **135**, such as over-the-counter sales, remote vending machines, etc., may suffice.

FIG. 7 is a left side elevation view of the tabletop horseshoe game system **110** shown in FIG. 6. FIG. 8 shows an exploded perspective view, partially in section, of the embodiment of FIG. 6. Further illustrated in both FIG. 7 and FIG. 8 is scoreboard **146** preferably with a logo **151** attached to the front surface of the scoreboard **146**. Preferably, scoreboard **146** is attached to a pair of vertical support members **150** by the use of a substantially longitudinal scoreboard support **159** constructed of a rigid material, preferably angle-iron, as shown. Preferably, as shown, the scoreboard **146** is mechanically attached to the vertical surface of the scoreboard support **159** by the use of mechanical fasteners, preferably wood screws passing through pre-drilled holes in the scoreboard support **159** and engaging the back surface of the scoreboard **146**. Preferably, as shown, the horizontal surface of the scoreboard support **159** is rigidly attached to the top ends of the vertical support members **150**, preferably by welding. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other attachment methods may suffice.

Preferably, a vertical support member base **152**, having an approximately square shape, is rigidly attached to the bottom ends of the vertical support members **150**, again preferably by welding, as shown. Preferably, the vertical support member base **152** is then attached to a planar support member **153** by the use of mechanical fasteners **160** (as shown in FIG. 8) passing through pre-drilled holes in the four corners of the vertical support member base **152** and engaging the upper surface of the planar support member **153**, as shown. The planar support member **153** is preferably constructed of a lightweight material, preferably plywood. The combination of scoreboard **146**, logo **151**, scoreboard support **159**, vertical

support members **150**, planar support member **153**, and vertical support member bases **152**, preferably define a scoreboard housing **158** which is then attached as shown to the bottom surface **145** of the base board **141** by a pair of connecting members **162** (see FIGS. 7 and 8), as shown. Preferably, in order to support the weight of the scoreboard housing **158**, the connecting member **162** is preferably constructed out of a rigid material, preferably angle-iron, and preferably be of sufficient length to substantially span the length of the base board **141**, as shown. Preferably, to facilitate the attachment of the connecting member **162** to the base board **141** and planar support member **153**, holes **163** may be pre-drilled along the horizontal and vertical surfaces of the connecting member **162** to accommodate a plurality of metal fasteners **161** (shown in FIG. 8). Preferably, the connecting member **162** is then mechanically attached to the outer surface of the top portion of the support **154**, the bottom surface of the base board **141**, and the bottom surface of the planar support member **153**. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, manufacturing preferences, etc., other connection arrangements may suffice.

Also shown in FIG. 7 is a preferred embodiment comprising an electrically-actuated solenoid **166**, for raising and lowering each post **127**, preferably a twenty-four-volt electrically powered solenoid of the type commonly used in arcade games such as pinball. In this tabletop horseshoe game **110** embodiment, there are preferably two solenoids **166**, one each for raising and lowering each post **127**. This arrangement embodies a post activation means for raising such miniature post means sufficiently above such playing surface to a target position to act as an impingeable target for tossed miniature horseshoes, and lowering such miniature post means to a non-target position. It should be noted that the present embodiment will preferably comprise pneumatically-operated post assemblies (as described in FIG. 11) in lieu of solenoids **166**.

Preferably, each of the solenoids **166** is arranged for attachment to the bottom surface **145** of the base board **141**. Such attachment means may include screws, adhesive, etc, depending on the exact solenoid used, however, a mechanical attachment is preferred. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, material availability, etc., other types of fasteners may suffice. Further, upon

reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, material availability, etc., other types and voltages of solenoids, such as twelve-volt, one-hundred ten-volt, etc., may suffice.

Further illustrated in FIG. 7 is the game activation means **156** preferably mounted on the front surface of the support **154**. Also shown in FIG. 7 is the approximate preferred location of the central electronics **167** used to coordinate the interaction of the electronic components of the game system **100**, (such coordination hereinafter more fully explained with respect to FIG. 18 and at least embodying herein an electronics means for coordinating the functioning of such post activation means, such scorekeeping means, such timing means, such display means, and such game activation means). The location of the central electronics **167** is within and attached to the box-frame structure comprising the support **154**; although, under appropriate circumstances, other suitable places of attachment may be used.

FIG. 8 is an exploded view, partially in section, of the tabletop horseshoe game system **110** specifically showing the details of the interrelationship of the main components comprising the tabletop horseshoe game system **100**, as shown. It is noted again that the scoreboard housing **158** is preferably connected with game system **100** by the use of connecting members **162**. It is also noted that the central electronics **167** for coordinating the interaction of the electronic components of the game system **110** is hereinafter more fully explained with respect to FIG. 18. The location of the central electronics **167** is preferably within and attached to the box-frame structure comprising the support **154**, as shown, although, under appropriate circumstances, other places of attachment may be used. It is also noted that, in order to emphasize other details in FIG. 8, the various parts of the playing assembly **164** (detailed previously, for example, in FIG. 5, but for the movable posts) are not shown in this figure.

FIG. 9 shows a rear view, partially in section of the scoreboard assembly as well as the location of the scorekeeping and timing means of the embodiment of FIG. 6. FIG. 9 is a partial back elevation view of the illustrated tabletop horseshoe game system **110** (of the tabletop horseshoe game system **100** shown in FIG. 8). Specifically illustrated is an embodiment of the scoreboard assembly comprising a preferred scoreboard **146** mechanically attached to a longitudinal scoreboard support **159**, which, in turn, is rigidly attached to the top ends of a pair of vertical support members **150**, as shown. Preferably, the bottom ends of the

vertical support members **150** are attached to a planar support member **153** by the use of a pair of substantially square vertical support member bases **152** which are rigidly attached to the bottom ends of the vertical support members **150**. Preferably, the square vertical support member bases **152** are provided with through-holes to facilitate attachment to the top surface of the planar support member **153** preferably by mechanical fasteners **160** (FIGS. 8 and 9). Further illustrated are a score readout **147**, timer readout **148**, and scorekeeping button **149** which are housed within apertures cut into the scoreboard **146** and located near each transverse end of the scoreboard **146**. The score readout **147**, timer readout **148**, and scorekeeping button **149** are connected to the central electronics **167** by score readout leads **168**, timer readout leads **169**, and scorekeeping button leads **170**, as shown.

FIG. 10 shows a side view, partially in section of the post raising solenoid of the commercial-styled tabletop horseshoe game of FIG. 6. The post activation mounting means preferred for use in the illustrated commercial embodiment is shown in FIG. 10. Specifically illustrated is base board **141** having a base board post hole **143** therein, playing board **126** having a playing board post hole **142** therein and structured and arranged for concentric alignment with the base board post hole **143**. Also shown is padding **136** overlying the top surface **133** of the playing board **126** and covering **137** overlying padding **136**. Post activation means in FIG. 10 comprises a twenty-four-volt electrically powered solenoid **166**, as shown. Preferably, the post **127** is integral to the solenoid **166** and preferably of a sufficient length to permit a height of about one and three-quarters inches above the playing surface **128** when the solenoid **166** is activated. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other post **127** heights may suffice.

When the game system **110** is in the off mode, because either the winning score has been achieved, or the pre-determined time to play the game has elapsed, current ceases to flow through the solenoid coils **190** (shown in FIG. 18) located within each solenoid **166**, thereby terminating the internal electro-magnetic field inside each solenoid **166**. When this occurs, each post **127** is retracted so that the top end of each post **127** is at or below the playing surface **128**. Conversely, when the game is activated by placing an appropriate token in the game activation means **156**, an electrical signal is sent from the central electronics **167** to the solenoids **166**, energizing the solenoid coils **190** (shown in FIG. 9) thereby raising each

post **127** to the appropriate playing height.

The residential-styled tabletop horseshoes game **102** version of the game system **100** is preferably played by having each player, being situated at the transverse ends **130** of the playing board **126**, toss a one-tenth-scale horseshoe **135** at the opponent's post **127** located at the opposite transverse end. In order to maintain a degree of difficulty and to ensure fair play, when tossing a horseshoe a player's hand may not cross the transverse plane situated at the location of that player's post. Each player's turn consists of pitching two horseshoes **135**. The rules of the game are such that a player scores three-points if the horseshoe **135** "rings" (encircles) the post **127**, two-points for a "leaner" in which the horseshoe comes to a rest by leaning against the post **127**, one point if the horseshoe touches the post **127** but does not lean against it, and one point if the horseshoe touches or breaks the line comprising the scoring circle **139**. The first player to obtain a score of twenty-one-points wins the game though other winning scores may be used by the players without deviating from the spirit of the game.

To play the commercial-styled tabletop horseshoe game embodiments requires that the players insert the appropriate amount of coins or tokens in the game activation means **156**. Once the game system **100** is activated, the players have a pre-determined period of time in which to play. Preferably, the playing time is set to between fifteen and thirty minutes, most preferably seventeen minutes. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other playing times may suffice.

The players may obtain the horseshoes **135** to be used in order to play the game system **100** in a number of ways including renting them from the commercial establishment, purchasing their own either from a vending machine in the commercial establishment or from the vending machine **157** incorporated in the game system **100** (as shown in FIG. 6), or by using previously bought horseshoes **135**. The game system **100** is then played according to the same rules and scoring scheme as the private residence version except that if either player does not obtain a score of **121** points prior to the expiration of the pre-determined time limit, the game will automatically end. This system embodies herein a method of playing a tabletop horseshoes game, comprising the steps of: users inserting a token in a game activation structure to raise miniature horseshoes posts to a playing position on a flat tabletop, to reset a scoring structure, to reset a game timing structure, and to activate a scoring and timing display; users tossing miniature horseshoes at such miniature horseshoes posts; users entering

scores in such scoring structure at the end of each turn; and users finishing such game when such display indicates that a winner has achieved a selected score or when such game timing structure registers no time left, whichever first occurs, thereby lowering such miniature horseshoes posts.

FIG. 11a shows a front view of another commercial-styled tabletop horseshoe game **200** of the tabletop horseshoes game system **100** according to another preferred embodiment of the present invention. FIG. 11b shows a section view through section 11b-11b of FIG. 11a. FIG. 11c shows a top view of the commercial-styled tabletop horseshoe game **200** of FIG. 11a. Preferably, the commercial-styled tabletop horseshoe game **200** is similar to the tabletop horseshoe game system **110** in construction of the playing assembly **164**, however, the tabletop horseshoe game **200** comprises pneumatically-operated post assembly **202**, an alternate scoreboard embodiment, additional lighting fixtures, base levelers and additional component arrangements, as shown.

Preferably, the commercial-styled tabletop horseshoe game **200** comprises pneumatically operated post assemblies **202**, as shown. Preferably, the pneumatically operated post assemblies **202** comprise posts **204** which are located as described above in embodiment **110**, however, the post **204** are raised and lowered by air. Preferably, the pneumatically operated post assemblies **202** (further detailed in FIG. 15 and FIG. 16) are each connected to an air pump **206** by an air line **208**, preferably one-half inch O.D. air line, preferably Watts pressure braided PVC tubing, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other air line sizes, dimensions, etc., may suffice. Preferably, each respective pneumatically-operated post assembly **202** comprises a separate air pump **206**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, product availability, etc., other air pump arrangements, such as a single air pump, multiple redundant air pumps, a remote pressurized air source, etc., may suffice.

In the illustrated preferred embodiment of the commercial-styled tabletop horseshoe game **200**, the air pumps **206** are preferably Top Fin model number 17551-17556 fish air pumps such as available from, for example, Petsmart Inc. Fish air pumps **206** may preferably comprise more than one air outlet **207**, as shown. Preferably, when more than one outlet **207**

is present the air lines **210**, preferably one-quarter-inch O.D. (outer diameter) plastic air line, are combined with an adapter **212**, preferably a tee adapter, preferably a Lasco brass tee No. 17-7401, as shown (sized for the appropriate sized air line). Preferably, the air line **208** is then attached to the single adapter end **216**, as shown. Preferably, the air pumps **206** are connected to a switchable (on/off) power supply **214**, preferably, a surge protector device such as a model number 335529, available from Ace Hardware stores. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, preferred electronic routing, etc., other power supply arrangements may suffice.

Preferably, the air line, air pumps **206** and pneumatically operated post assembly **202** are enclosed within a protective cover **211**, preferably a metal cover, preferably removably screwed into the bottom **134**, as shown.

Preferably, the switchable (on/off) power supply **214** is connected to a power supply timer assembly **218**, preferably a model Infnitec ATCR54C. Preferably, the power supply timer assembly **218** can be programmed to provide power to the switchable (on/off) power supply **214** for a set number of minutes, preferably about fifteen to seventeen minutes for the tabletop horseshoe game system **100** game play as described herein.

Preferably, the power supply timer assembly **218** is connected to a vending mechanism **220**, preferably a monetary-operated coin/dollar bill vending mechanism, preferably a Coinco model No. BA50B. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other vending mechanisms, etc., such as token operated, etc., may suffice. Furthermore, upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, electronic preference, etc., other timer mechanisms, such as a combined timer and vending mechanisms, etc., may suffice.

Preferably, the commercial-styled tabletop horseshoe game **200** comprises a horseshoe vending machine **222** such as that described previously, preferably mechanically attached to the front surface of the support structure **224** for dispensing the 1/10th scale horseshoes **135**. The horseshoe vending machine **222** may be coin, dollar bill or token activated, and upon inserting the appropriate amount of coins or tokens in horseshoe vending machine **222**, a

predetermined number of miniature horseshoes **135** with which to play the game using the commercial-styled tabletop horseshoe game **200** are dispensed. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other methods of dispensing the horseshoes **135**, such as over-the-counter sales, remote vending machines, etc., may suffice.

Preferably, support structure **224** is similar to support **154** with the stated exceptions described herein for the commercial-styled tabletop horseshoe game **200**, as shown. Preferably, the support structure **224** is used to support the game and maintain an elevation between the floor and the playing surface **228** of approximately thirty-six inches. Preferably, the commercial-styled tabletop horseshoe game **200** uses a box frame configuration for the support structure **224**; however, under appropriate circumstances, other suitable cross-sectional shapes may be used. Preferably, to provide a convenient and comfortable place for players to place their feet, the commercial-styled tabletop horseshoe game **200** preferably comprises a pair of foot stands **226** as an integral part of the support structure **224**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, location size restrictions, etc., other support structure arrangements, such as round, trapezoid, rectangular, etc., may suffice.

Preferably, the commercial-styled tabletop horseshoe game **200** comprises a set of lights **230**, preferably white lights, preferably situate along the underside **232** of the playing assembly **164**, preferably along or adjacent the perimeter **234** of the playing assembly **164**, preferably opposite the vending mechanism, as shown (best seen in FIG. 11c). Preferably, at least one light **230** is placed directly above the vending mechanism **220**, as shown. Preferably, the lights **230** are courtesy lights, (for example, Blazer model No. B450C lights – twelve-volt lighting), preferably low-energy use lighting. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, desired lighting level, etc., other lights and light bulb arrangements may suffice. Most preferably, the lights **230** function to assist a player in finding horseshoes when they miss or fall from the playing assembly **164**. Preferably, the lights **230** are wired to direct power such that the lights are switchable to be always on or off regardless of whether the game is being played. Upon

reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, location of the game, etc., other lighting arrangements, such as placing lights adjacent the game, utilizing a translucent surface, utilizing a mirrored surface to reflect light, etc., may suffice.

Preferably, the support structure **224** comprises a set of lights **236** and **242**, as shown. Preferably, lights **236** are placed along the bottom portion **240** of the support structure **224**, as shown. Preferably, lights **242** are placed under the accessory shelf **244**, as shown. Preferably, the lights **236** and **242** are red in color and are accent lights, preferably twelve-volt low-energy-use lights. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other colored lights, such as white, green, etc., may suffice. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, country of origin, etc., other voltage supplies, such as twenty-four-volt, one-hundred-ten-volt, etc., may suffice.

Preferably, accessory shelf **244** is placed adjacent the playing assembly **164**, preferably adjacent the longitudinal rails **131**, as shown. Preferably, the accessory shelf **244** comprises holders **246**, for example to hold cups or ashtrays, as desired. Preferably, accessory shelf **244** is mechanically attached to the underside **248** of the baseboard **141**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, etc., other accessory shelf arrangements may suffice.

Preferably, the support structure **224** comprises a set of levelers **250**, as shown. Preferably, the levelers **250** provide height adjustability for leveling the support structure **224**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other leveling arrangements, such as shims, etc., may suffice.

Preferably, the commercial-styled tabletop horseshoe game **200** comprises a scoreboard **260**, as shown. Preferably, scoreboard **260** is constructed of a substantially rigid yet lightweight material, preferably plastic. Preferably, the scoreboard is triangular in shape,

preferably about forty-eight inches wide, about twenty-one inches tall and about four inches thick, as shown. During shipping, preferably, the scoreboard **260** fits on top of the playing surface **128** and within the two longitudinal rails **131** for easy transport and storage (as illustrated in FIG. 19, below). Preferably, the scoreboard **260** comprises two score readouts **262** and **264** and two respective scorekeeping assemblies **266** and **268**, as shown. Preferably, the scorekeeping assemblies **266** and **268** each respectively provide a three-button scoring arrangement, preferably comprising a one-point button, a two-point button and a three-point button, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other scoring button arrangements may suffice.

Preferably, the scoreboard components are all items available commercially and combined as shown and stated herein. For example, a Hoopscore model NO. JH1000 scoreboard **167'** may be used to provide the combined score readouts **262** and **264** and two respective scorekeeping assemblies **266** and **268**. Preferably, the scoreboard **260** further comprises a logo area **270** preferably having a backlight **272**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as, promotional needs, cost, etc., other backlighting arrangements, such as, for example, multiple lighting effects, marquee lighting effects, video displays, etc., may suffice.

Preferably, the logo area **270** comprises a logo or other such indicia referencing the commercial-styled tabletop horseshoe game **200** or manufacturer as desired. Preferably, the scoreboard **260** comprises a game indicia board **274**, preferably made from one-quarter-inch thick masonite, as shown. Preferably, there is a light **276**, preferably a fluorescent light (such as a GE brightstik PC12257), mounted behind the game indicia board **274** to provide lighting to the playing surface, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, lighting preference, etc., other lighting may suffice.

FIG. 12a shows a front view of another commercial-styled tabletop horseshoe game **350** of the tabletop horseshoes game system **100** according to another preferred embodiment of the present invention. FIG. 12b shows a sectional view through section 12b-12b of FIG. 12a.

Preferably, the commercial-styled tabletop horseshoe game **350** is similar to the above-described commercial-styled tabletop horseshoe game **200** in construction of the playing assembly **164**, and arrangement of the pneumatic post assemblies; however, the tabletop horseshoe game **350** comprises a simplified scoreboard system, and comprises other improvements intended to reduce manufacturing cost and increase in-service durability.

Preferably, the commercial-styled tabletop horseshoe game **350** comprises the pneumatically-operated post assemblies **202** of commercial-styled tabletop horseshoe game **200**, as shown. Preferably, to reduce the number of operating parts, both pneumatically-operated post assemblies **202** (as detailed in FIG. 15 and FIG. 16) are actuated by a single air pump **206**. Preferably, air pump **206** is coupled to the pneumatically operated post assemblies **202** by air line **208a** and air line **208b**, as shown. Preferably, both air line **208a** and air line **208b** comprise an outside diameter of between about one-quarter inch to about one-half inch, preferably comprising Watts pressure braided PVC tubing, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other air line sizes, dimensions, etc., may suffice. Furthermore, upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, product availability, etc., other air pump arrangements, such as the use of two or more air pumps, a remote pressurized air source, etc., may suffice.

In the preferred embodiment of the commercial-styled tabletop horseshoe game **350**, the air pump **206** is preferably mounted to the underside of the playing assembly **164**, as shown. Preferably, the air pump **206** comprises a commercially available aquatic-type unit, such as, for example, Top Fin model number 17551-17556. Preferably, fish air pump **206** comprises dual air outlets, one connectable to air line **208a** and the other connectable to air line **208b**, as shown. Alternately, when the air pump **206** comprises only a single air outlet, an adapter (similar to adapter **212** FIG. 11b) is preferably supplied to split the single line originating at the pump into two lines. Preferably, each line beyond the split is then routed to one of the two pneumatically operated post assemblies **202**.

Preferably, support structure **224** is similar to support **154** with the stated exceptions described herein for the commercial-styled tabletop horseshoe game **200**, as shown. Preferably, the support structure **224** is used to support the game and maintain an elevation

between the floor and the playing surface **228** of approximately thirty-six inches. Preferably, the commercial-styled tabletop horseshoe game **350** uses a box frame configuration for the support structure **224**; however, under appropriate circumstances, other suitable cross-sectional shapes may be used. Preferably, to provide a foot rest and additional stability during play, the commercial-styled tabletop horseshoe game **350** preferably comprises a pair of foot stands **226** as an integral part of the support structure **224**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, durability, location size restrictions, etc., other support structure arrangements, such as round, trapezoid, rectangular, etc., may suffice.

Preferably, the commercial-styled tabletop horseshoe game **350** comprises a set of lights **230**, preferably white lights, preferably situate along the underside **232** of the playing assembly **164**, preferably along or adjacent the perimeter **234** of the playing assembly **164**. Preferably, at least one light **230** is placed directly above the vending mechanism **220**, as shown. Preferably, the lights **230** are courtesy lights, (for example, Blazer model No. B450C lights – twelve-volt lighting), preferably low-energy use lighting. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, desired lighting level, etc., other lights and light bulb arrangements may suffice. Most preferably, lights **230** function to assist a player in finding the horseshoes when they fall from the playing assembly **164**. Preferably, the lights **230** are wired to a constant source of power (see FIG. 12c) such that the lights are switchable to be always on (or off) regardless of whether the game is being played. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, location of the game, etc., other lighting arrangements, such as placing lights adjacent the game, utilizing a translucent surface, utilizing a mirrored surface to reflect light, etc., may suffice. Furthermore, upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other light arrangements, such as using colored lights, line voltage fixtures, Light Emitting Diodes, fluorescents, fiber optics, etc., may suffice. Even further, upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate

circumstances, considering such issues as economics, user preference, country of origin, etc., other voltage supplies, such as twenty-four-volt, one-hundred-fifteen-volt, etc., may suffice.

Preferably, accessory shelf **244** is placed adjacent the playing assembly **164**, preferably adjacent the longitudinal rails **364**, as shown. Preferably, for economy of construction, the accessory shelf **244** comprises a solid shelf for supporting non-system accessories such as cups, ashtrays, etc. during play. Although less preferable due to cost, the accessory shelf **244** is modifiable to comprise integral accessories, such as, for example, cup holders or ashtrays, as desired. Preferably, accessory shelf **244** is mechanically attached to the underside of baseboard **368**, as shown. In alternate preferred embodiments, accessory shelf **244** is mechanically attached directly to support structure **224**.

Preferably, the support structure **224** comprises a set of levelers **250**, as shown. Preferably, the levelers **250** provide height adjustability for leveling the support structure **224**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other leveling arrangements, such as shims, etc., may suffice.

Preferably, the commercial-styled tabletop horseshoe game **350** comprises a manually operated scoreboard **352**, as shown. Preferably, scoreboard **352** is constructed of a substantially rigid yet lightweight material, preferably plastic. Preferably, the scoreboard **352** is triangular in shape, preferably about forty-eight inches wide, about twenty-one inches tall and about four inches thick, as shown. Preferably, the manually operated scoreboard **352** comprises two abacus-style scorekeeping assemblies **354** and **356**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other scoring arrangements, such as electronic scoring, etc., may suffice.

Preferably, scorekeeping assembly **354** and scorekeeping assembly **356** each comprise a simple set of abacus-style beads **111**, preferably arranged along a rod, as shown. Preferably, there are twenty-one beads **111** along each rod, as shown. Preferably, the last three beads are colored to indicate the end of the game is near. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other bead arrangements, such as multiple colors, colors indicating one, two or three point scoring, etc.,

may suffice.

Furthermore, indicia may be placed on the beads **111**, such as advertising, logos or other such indicia to indicate, for example, a restaurant/bar, brewing company or other such sponsor. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, advertising preference, etc., other indicia, such as specially manufactured beads, shaped beads, etc, to represent, for example, football helmets, casino chips, etc., may suffice.

Preferably, the scoreboard **352** further comprises a logo area **358** preferably having a backlight **272**, preferably located within the interior of scoreboard **352**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering issues such as, promotional needs, cost, etc., other backlighting arrangements, such as, for example, multiple lighting effects, marquee lighting effects, video displays, etc., may suffice.

Preferably, the logo area **358** comprises a logo or other such indicia referencing the commercial-styled tabletop horseshoe game **350**, bar, casino, etc., as desired. Preferably, logo area **358** comprises a translucent plastic panel inset into an opening within the front face of scoreboard **352**, as shown. Preferably, the scoreboard **352** includes an informational board **360**, comprising written indicia, typically comprising a brief summary of "rules of play", means for acquiring the miniature horseshoe **135**, etc. Preferably, informational board **360** is constructed from one-quarter-inch thick plastic, as shown.

Preferably, lights **362**, preferably a pair of low voltage surface mounted lights, are mounted to the front of scoreboard **352** above scorekeeping assembly **354** and scorekeeping assembly **356**, as shown. Preferably, lights **362** provide lighting to both the scorekeeping assemblies and playing surface, as shown.

Preferably, longitudinal rails **364** of commercial-styled tabletop horseshoe game **350** comprise a modified construction using a continuous interior metal angle **366**, in lieu of the cylindrical PVC member described in FIG. 5. Preferably, metal angle **366** comprises an extruded aluminum member mechanically fastened to baseboard **368**, as shown.

Preferably, playing assembly **164** of commercial-styled tabletop horseshoe game **350** is adapted to pivot upward to permit access to the interior of support structure **224**, as shown. Preferably, baseboard **368** is pivotally joined to support structure **224** by means of hinge **370**,

as shown. Preferably, playing assembly **164** comprises at least one, preferably two padlock hasps **372** adapted to retain playing assembly **164** in a closed position, as shown. Removal of the padlock from the hasp permits playing assembly **164** to be opened upward (as shown by the depiction in dashed lines).

Preferably, scoreboard **352** is retained in operational position by a pair of arch-shaped supports **374**, (described in greater detail in FIG. 14). Preferably, supports **374** are removably fastened, preferably bolted, to the rear structure of support structure **224** and the interior structure of scoreboard **352**, as shown. In addition, at least one of the supports **374** is utilized as a conduit for the routing of electrical conductors between scoreboard **352** and support structure **224**.

Electrical components of commercial-styled tabletop horseshoe game **350** are organized within the interior of support structure **224** to provide convenient service access, as generally described in FIG. 12c below.

FIG. 12c shows a diagrammatic view of the operating components of the commercial-styled tabletop horseshoe game **350** of FIG. 12a. Preferably, commercial-styled tabletop horseshoe game **350** represents the successful effort on the part of the inventor produce an embodiment comprising a reduction in manufacturing cost and increase in-service durability. Preferably, line voltage, such as from a 110-volt electrical wall outlet, is conducted to first surge protector device **376** via power cord **378**, as shown. Preferably, first surge protector device **376** comprises, for example, surge suppressor model number 335529, available from Ace Hardware stores. Preferably, first surge protector device **376** supplies continuous power to vending mechanism **220**, power supply timer assembly **218**, and first low voltage power supply **380**, as shown. Preferably, vending mechanism **220** comprises a monetary-operated coin/dollar bill vending mechanism, preferably a Coinco model No. BA50B. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other vending mechanisms, such as, for example, token operated, accepting only paper currency, etc., may suffice. Preferably, vending mechanism **220** is electrically coupled to power supply timer assembly **218** by means of signal wire **382**, as shown. Preferably, vending mechanism **220** is adapted to send a control signal to power supply timer assembly **218** on receiving an appropriate deposit of money. Preferably, power supply timer assembly **218** comprises a model Infnitec ATCR54C. Preferably, the power supply timer assembly **218** is

adapted to provide power to the second surge protector device **384** on receiving the electrical signal from vending mechanism **220**. Preferably, the second surge protector device **384** also comprises a commercially available a surge protector device, again comprising a model number 335529, available from Ace Hardware stores.

Preferably, power supply timer assembly **218** is programmable to supply power to the second surge protector device **384** for a set number of minutes, preferably about fifteen to seventeen minutes for the tabletop horseshoe game system **100**, as described herein. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, electronic preference, etc., other timer mechanisms, such as a combined timer and vending mechanisms, etc., may suffice.

Preferably, second surge protector device **384** supplies power to the air pump **206** and to the second low voltage power supply **386**, as shown. Preferably, the operation of both the air pump **206** and to the second low voltage power supply **386** is intermittent, operating only during the period of play as controlled by power supply timer assembly **218**.

Preferably, first low voltage power supply **380** supplies continuous 12V DC power to a first power strip **388**, as shown. Preferably, first power strip **388** supplies power to the lights **230** (illuminating the vending mechanism **220**), backlight **272**, and other lights functioning to catch the attention of a customer. Preferably, second low voltage power supply **386** supplies 12V DC power to a second power strip **390**, as shown. Preferably, second power strip **390** supplies power to lights **362** during play. Preferably, "quick" connectors **392** are utilized, as required, within the circuiting to facilitate maintenance operations.

Reference is now made to FIG. 13 with continued reference to the above Figures. FIG. 13 shows a rear view of the scoreboard of FIG. 11a. Preferably, the scoreboard **260** is supported in an elevated position by the use of vertical support member **280**, preferably a bent steel bracket, as shown. Preferably, to support the weight of the scoreboard **260**, the vertical support member **280** is rigidly attached to the support structure **224**, as shown in FIG. 11b. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, material availability, weight requirements, spacing, etc., other scoreboard mounting arrangements may suffice.

FIG. 14 shows a perspective view of the scoreboard support **374** of the preferred

embodiment of FIG. 12a. Preferably, support **374** comprises a rolled steel tube **394** having a mounting plate **396** welded to each end, as shown. Preferably, mounting plate **396** comprises apertures **398** to permit passage of mechanical fasteners. Preferably, fasteners for support **374** are selected to be of a “bolt-on” and “bolt-off” type to assist in compact shipping and on-site assembly.

FIG. 15 shows a perspective view, partially in section, of a pneumatically operated post assembly **202** according to a preferred embodiment of the present invention. FIG. 16 shows a perspective exploded view of the pneumatically operated post assembly **202** of FIG. 15.

Preferably, the pneumatically operated post assembly **202** comprises a cylinder **290**, piston **292**, post **294**, alignment tube **296**, cylinder cap **298** and mounting bracket **300**, as shown. Preferably, the pneumatically-operated post assembly **202** operates on minimal air pressure as provided by the air pump **206**. Preferably, piston **292** is mounted into cylinder **290** through open end **302**, as shown. Preferably, the piston **292** has a cylindrical bottom portion **304** that has a slightly smaller diameter, preferably five one-thousandths of an inch, than the inside diameter of cylinder **290**, as shown. Preferably, the cylinder **290** has a round inside diameter, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, manufacturing preferences, etc., other cylinder shapes, may suffice.

Preferably, piston **292** has a hollow space **310** within the vertical portion **308** to reduce piston weight and to assist air pressure in moving the piston **292** through the cylinder **290**. Preferably, cylinder cap **290** is threaded into the open end **302**, as shown. Preferably, alignment tube **296** is threaded into the top piston opening **306** of the cylinder **290**, as shown. Preferably, the vertical portion **308** of piston **292** moves freely within the alignment tube **296** with a clearance of about ten one-thousandths of an inch. The desired clearance in combination with the purposeful omission of seals within the piston design permits some air pressure to escape such that the air pumps **206** do not overheat and such that when the air pump **206** stops the piston **292** will retract, by gravity, the post **294**. Furthermore, the piston **292** is exceptionally reliable (over electrically-actuated solenoid-type pistons) and not prone to mechanical breakdown due to not having seals and maintaining minimal clearances.

Preferably, screws **314**, preferably three screws, attach a mounting bracket **300** to the

top **312** of the cylinder **290**, as shown. Preferably, the screws **314** are recessed into the face **316** of the mounting bracket **300**, as shown. Further, the mounting bracket has three additional apertures **316** to assist mounting the pneumatically operated post assembly **202** onto the commercial-styled tabletop horseshoe game **200** as described above and as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, fasteners, etc., other mounting arrangements may suffice. Furthermore, upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, manufacturing preference, durability, etc., other methods of pneumatic piston manufacture, using materials such as molded plastic, etc., may suffice.

Preferably, post **294** is threadably attached to the vertical portion **308** of piston **292**, as shown. Preferably, the post **294** is stainless steel. Preferably, the post may be replaced if bent or damaged by a user. This feature is very useful for the commercial models and allows for easy post replacement without accessing the pneumatically operated post assembly **202**.

Preferably, air enters the cylinder through air inlet **320**, as shown. Preferably, air inlet **320** is threaded such that an air hose coupling **322** can be threaded into the air inlet **320**, as shown. Preferably, air line **208** is then attached, preferably by a clamp **324** to the air hose coupling **322**, as shown. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, material availability, durability, etc., other materials and methods to attach the air source to the piston may suffice.

FIG. 17 shows a diagrammatic view of the operating components of the pneumatically-controlled commercial-styled tabletop horseshoe game **200** of FIG. 11a according to a preferred embodiment of the present invention. Preferably, the pneumatically-controlled commercial-styled tabletop horseshoe game **200** is plugged into a constant power source **330**, as shown. Preferably, the above-described lights are run on a second open-circuit power source **332** to constantly power the lights (such as Logo, courtesy lights etc). Preferably, the game is activated by having a player deposit the appropriate amount of money or tokens in the vending mechanism **220**. When the appropriate amount of money or tokens are deposited, the vending mechanism **220** activates power to the timer and to the switchable (on/off) power supply **214** thereby allowing current to simultaneously activate the power

supply timer assembly **218**, reset the scoreboard **260** and start the air pumps **206**, as shown. Preferably, upon energizing the air pumps **206**, the pneumatically operated post assemblies **202** begin pressurizing the air line **208** and the posts **204** raise up for play to begin as previously described. When the timer **218** has expired, the power to the air pumps **206** are stopped thereby stopping the air pressurizing the pneumatically operated post assemblies **202**. When the air pressure within cylinder **290** drops, the posts **204** retract and the game is over. Most preferably, additional coins can be added to extend the game length if needed prior to the expiration of the timer.

FIG. 18 shows a diagrammatic view of the operating components of the solenoid-controlled commercial-styled tabletop horseshoe game of FIG. 6 according to a preferred embodiment of the present invention. FIG. 18 is a schematic view of the central electronics **167** preferably used in the illustrated commercial embodiment of the tabletop horseshoes game system **110**. The operation of the central electronics **167**, as described below, is within the understanding of those of ordinary skill in the art of arcade electronics. Having a player deposit the appropriate amount of tokens in the game activation means **156** activates the game system **110**. When the appropriate amount of coins or tokens are deposited, electronic switches **178** in the coin counter circuit **179** are closed, thereby permitting current to pass, and to simultaneously activate the game system **100** visual lights by means of the visual-lights circuit **180**, the set and reset circuit **181**, the points and reset circuit **183**, and the solenoid post circuit **184**. Upon energizing the set and reset circuit **180**, the timer **185**, as well as the internal electronic calculation of the number of points scored, is reset to zero ("00") as displayed on the timer readout **148** and score readout **147**, both illustrated generally by the display board designation **188** which comprises part of the display counter circuit **189**.

Preferably, an Intel 4076B microprocessor is used for the display counter means, and an Intel 4520B microprocessor is used for the coin counter circuit. Simultaneous with the score and time being reset to zero ("00"), an electro-magnetic field is created within the solenoid coils **190** which causes each post **127** (shown in FIG. 6), which are integral to the solenoids **166**, to raise to a preferred playing height above the playing surface **128**. As points are scored, the scorekeeping button **149** (shown in FIG. 6) is pressed, thereby changing the count displayed on the score readout **147**. When the requisite number of points have been earned by a player, or if the pre-determined time to play a game has elapsed as evidenced by the timer readout **148**, the game system **100** is deactivated thereby shutting off the current to

the solenoids **166** resulting in the retraction of each post **127** below the playing surface **128**, and thereby ending the game. Though applicant has described the preferred embodiment of the central electronics **167**, the addition of other types of circuits, such as tilt sensors to stop rough play, may be added without deviating from the spirit of the present invention. Furthermore the above-described arrangement is readily adapted to operate pneumatically-operated post assembly **202**.

It is also noted that the pneumatically-operated post assembly **202** raises the posts **294** with very minimal air pressure such that the posts **294** will retract easily when pressed. This arrangement provides a safety feature in case a person or object impacts the post **294**; in which the post will quickly retract rather than injure the person or object. For example, in a bar fight or accidental fall the post **294** would retract until the person or object is removed from the game board. Upon reading the teachings of this specification, those with ordinary skill in the art will now understand that, under appropriate circumstances, considering such issues as economics, user preference, etc., other safety arrangements for protecting injury due to the post, such as break-away posts, etc., may suffice. This arrangement embodies herein wherein said at least one post is structured and arranged to permit normal accidental pressure to lower said at least one post without causing serious damage to human tissue.

FIG. 19 shows a top view of a scoreboard transport/storing arrangement on the playing surface of the tabletop horseshoes game system **100** according to a preferred embodiment of the present invention. Preferably, the scoreboard **260** (or scoreboard **352**, as applicable to the embodiment) fits on top of the playing surface **128** and within the two longitudinal rails **131** (or longitudinal rails **364**, as applicable to the embodiment) for compact shipping.

Although applicant has described applicant's preferred embodiments of this invention, it will be understood that the broadest scope of this invention includes such modifications as diverse shapes and sizes and materials. Such scope is limited only by the below claims as read in connection with the above specification.

Further, many other advantages of applicant's invention will be apparent to those skilled in the art from the above descriptions and the below claims.

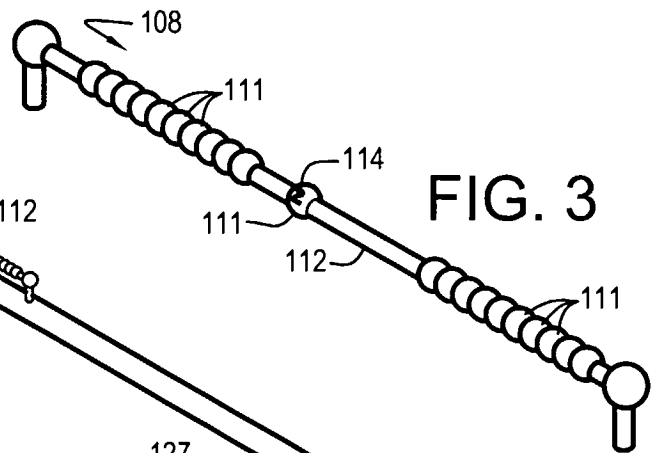
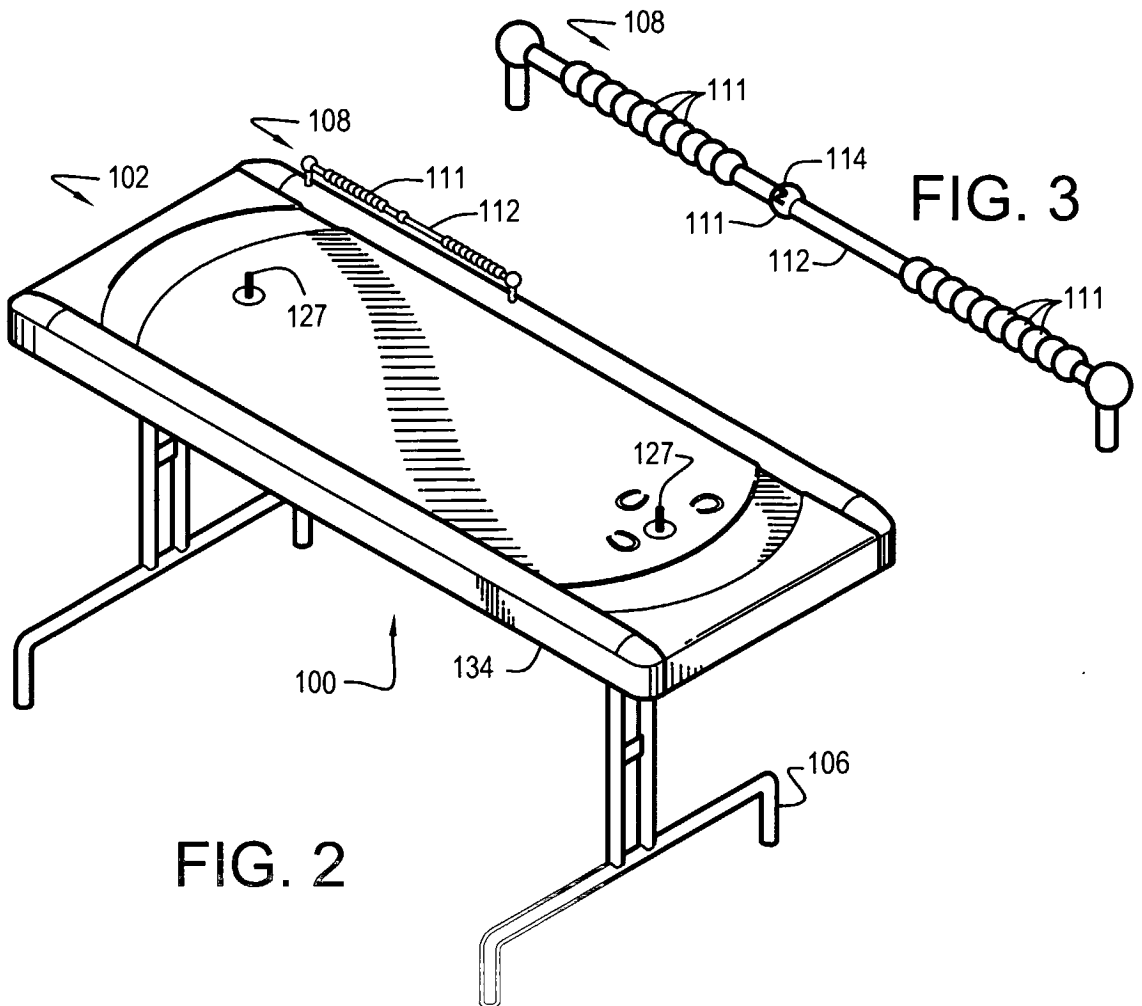
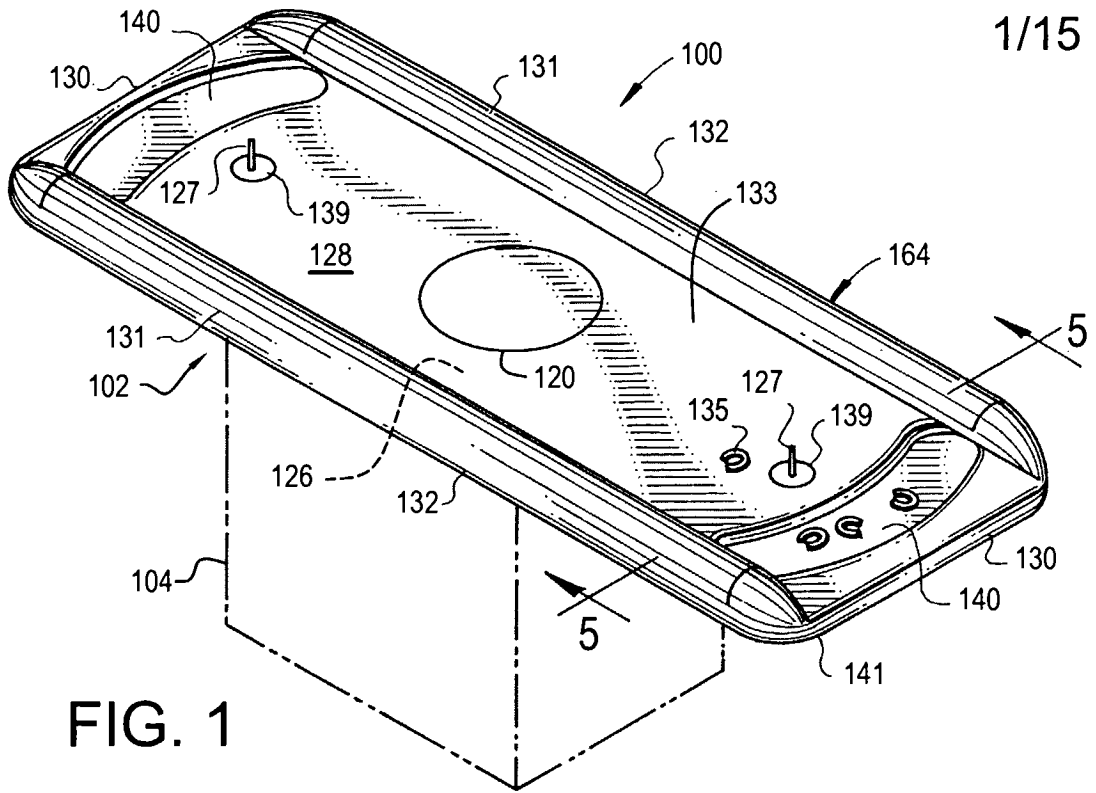
What is claimed is:

- 1) A horseshoes game system, using at least one scaled-down game "horseshoe", comprising:
 - a) at least one scaled-down "horseshoes"-game playing board having at least one substantially horizontal playing surface to play scaled-down horseshoes on said at least one scaled-down "horseshoes"-game playing board; and
 - b) at least one supporter having at least one pre-set support height to support said at least one scaled-down "horseshoes"-game playing board at said at least one pre-set support height;
 - c) wherein said at least one scaled-down "horseshoes"-game playing board comprises at least one post to provide at least one vertically impingeable target to which the at least one scaled-down game "horseshoe" may be tossed; and
 - d) wherein said at least one supporter comprises at least one foldable leg.
- 2) The horseshoes game system according to Claim 1 wherein said at least one post is fixed.
- 3) The horseshoes game system according to Claim 1 further comprising such at least one scaled-down game "horseshoe".
- 4) The horseshoes game system according to Claim 1 wherein said at least one scaled-down "horseshoes"-game playing board is structured and arranged to be supportable by at least one game table horizontal surface.
- 5) The horseshoes game system according to Claim 1 further comprising at least one set of scoring beads situate along at least one rod adapted to assist scorekeeping of the horseshoe game system.
- 6) The horseshoes game system according to Claim 5 wherein:
 - a) said at least one set of scoring beads comprises indicia; and
 - b) said at least one set of scoring beads comprises twenty-one beads.
- 7) The horseshoes game system according to Claim 1 wherein said at least one substantially horizontal playing surface comprises indicia.

- 8) A horseshoes game system, using at least one scaled-down game “horseshoe”, comprising:
 - a) at least one scaled-down “horseshoes”-game playing board having at least one substantially horizontal playing surface to play scaled-down horseshoes on said at least one scaled-down “horseshoes”-game playing board;
 - b) wherein said at least one scaled-down “horseshoes”-game playing board comprises at least one post comprising at least one vertically impingeable target to which the at least one scaled-down game-horseshoe may be tossed; and
 - c) wherein said at least one post comprises at least one pneumatic post activator structured and arranged to
 - i) raise said at least one post to at least one target position; and
 - ii) lower said at least one post to at least one non-target position.
- 9) The horseshoes game system according to Claim 8 wherein said at least one pneumatic post activator comprises:
 - i) at least one first pneumatic element adapted to raise said at least one post to the at least one target position when said at least one pneumatic post activator is activated; and
 - ii) at least one second pneumatic element adapted to lower said at least one post to the at least one non-target position when said at least one pneumatic post activator is de-activated.
- 10) The horseshoes game system according to Claim 8 wherein said at least one post is removably attached to said at least one pneumatic post activator.
- 11) The horseshoes game system according to Claim 8 further comprising such at least one scaled-down game “horseshoe”.
- 12) The horseshoes game system according to Claim 8 wherein said at least one substantially horizontal playing surface comprises indicia.
- 13) The horseshoes game system according to Claim 8 further comprising at least one supporter having at least one pre-set support height to support said at least one scaled-down “horseshoes”-game playing board to said at least one pre-set support height.
- 14) The horseshoes game system according to Claim 13 further comprising at least one illuminator to assist illumination below said at least one pre-set support height.

- 15) The horseshoes game system according to Claim 9 further comprising:
- a) at least one game activator having at least one activation mode and at least one deactivation mode structured and arranged to activate said at least one pneumatic post activator;
 - b) wherein the activating of said at least one game activator raises said at least one post to the at least one target position; and
 - c) wherein the de-activating of said at least one game activator lowers said at least one post to the at least one non-target position.
- 16) The horseshoes game system according to Claim 15 wherein said at least one game activator comprises:
- a) at least one monetary acceptor structured and arranged to receive at least one pre-set monetary amount;
 - b) wherein said at least one monetary acceptor activates said at least one game activator upon receiving the at least one pre-set monetary amount.
- 17) The horseshoes game system according to Claim 15 wherein said at least one game activator comprises at least one timer having at least one time limiter structured and arranged to activate said at least one game activator for at least one specific time period.
- 18) The horseshoes game system according to Claim 9 further comprising at least one air-operated piston assembly structured and arranged to:
- a) raise said at least one post to the at least one target position when activated; and
 - b) lower said at least one post to the at least one non-target position when de-activated;
 - c) wherein said at least one air-operated piston assembly comprises said at least one first pneumatic element and said at least one second pneumatic element.
- 19) The horseshoes game system according to Claim 8 further comprising at least one scoreboard.
- 20) The horseshoes game system according to Claim 19 wherein said at least one scoreboard comprises at least one three-button scoring system having:
- a) at least one one-point button;
 - b) at least one two-point button; and
 - c) at least one three-point button.

- 21) The horseshoes game system according to Claim 19 wherein:
- a) said at least one scaled-down “horseshoes”-game playing board comprises a fixed perimeter; and
 - b) wherein said at least one scoreboard is flatly transportable within said fixed perimeter.
- 22) The horseshoes game system according to Claim 8 wherein said at least one post is structured and arranged to permit normal accidental pressure to lower said at least one post without causing serious damage to human tissue.
- 23) A horseshoes game system, using at least one scaled-down game “horseshoe”, comprising:
- a) at least one scaled-down “horseshoes”-game playing board having at least one substantially horizontal playing surface to play scaled-down horseshoes on said at least one scaled-down “horseshoes”-game playing board; and
 - b) wherein said at least one scaled-down “horseshoes”-game playing board comprises at least one post to provide at least one vertically impingeable target to which the at least one scaled-down game “horseshoe” may be tossed; and
 - c) at least one set of scoring beads adapted to assist scorekeeping of such horseshoe game system.
- 24) A horseshoes game system, using at least one scaled-down game “horseshoe”, comprising:
- a) at least one scaled-down “horseshoes”-game playing board having at least one substantially horizontal playing surface to play scaled-down horseshoes on said at least one scaled-down “horseshoes”-game playing board; and
 - b) at least one supporter having at least one pre-set support height to support said at least one scaled-down “horseshoes”-game playing board at said at least one pre-set support height;
 - c) wherein said at least one scaled-down “horseshoes”-game playing board comprises at least one post to provide at least one vertically impingeable target to which the at least one scaled-down game “horseshoe” may be tossed; and
 - d) at least one illuminator adapted to assist locating and illuminating of at least one scaled-down game “horseshoe” below said at least one pre-set support height.



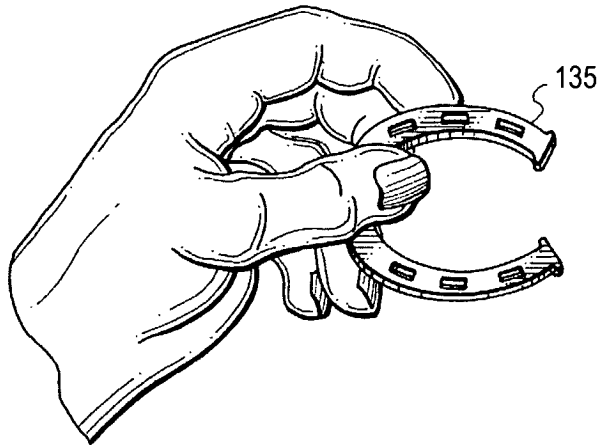


FIG. 4

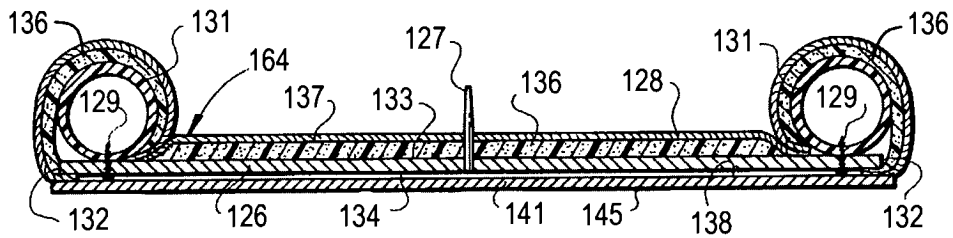


FIG. 5

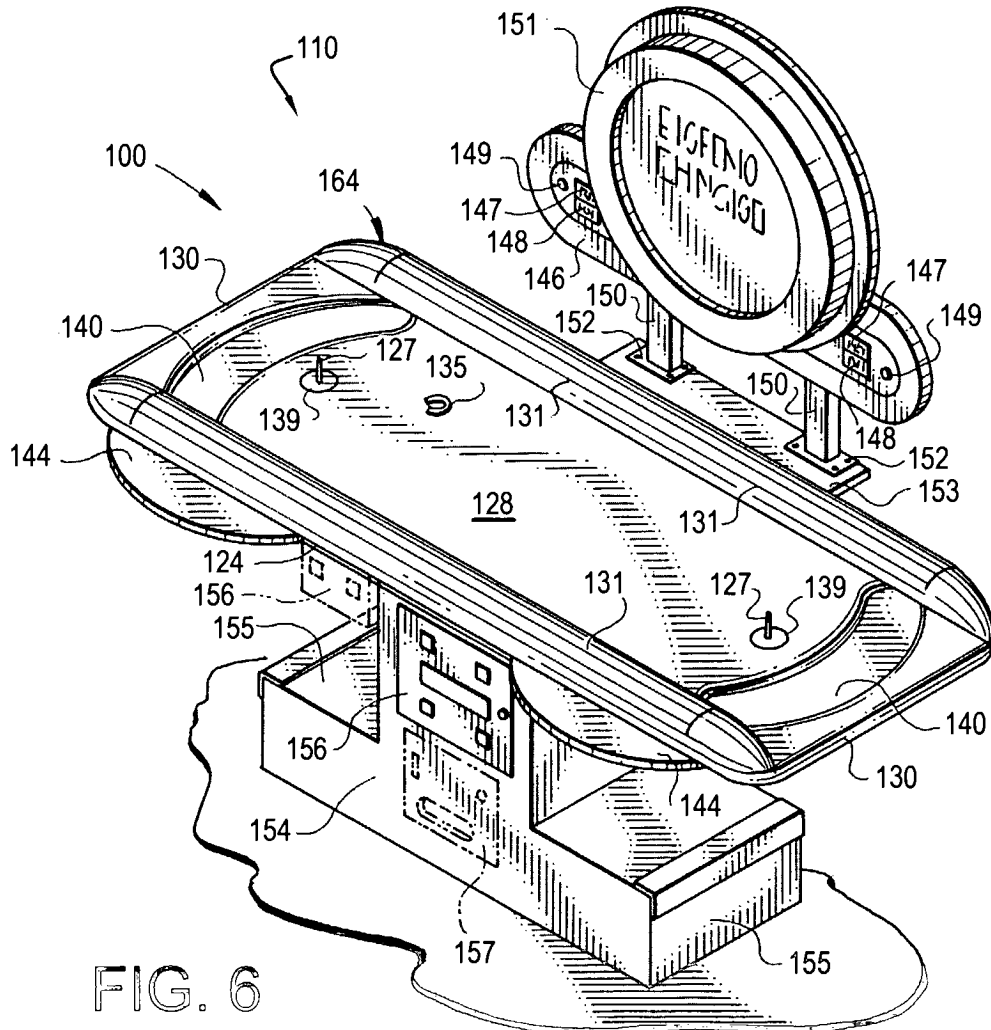


FIG. 6

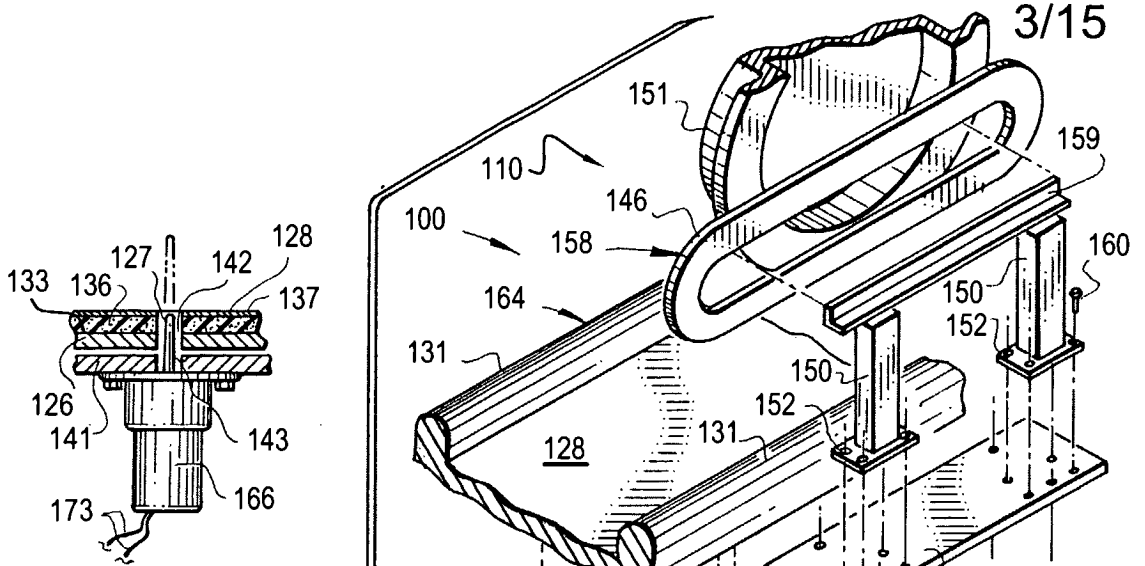


FIG. 10

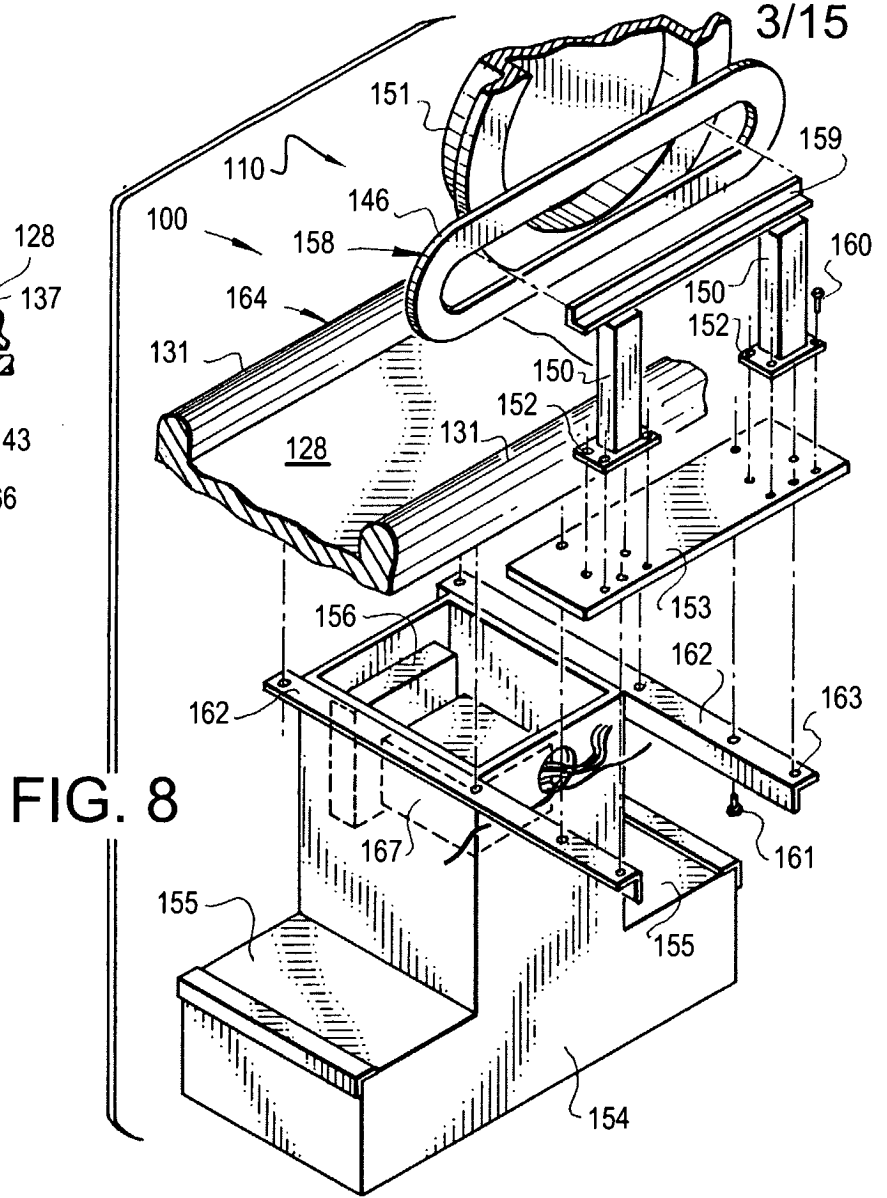


FIG. 8

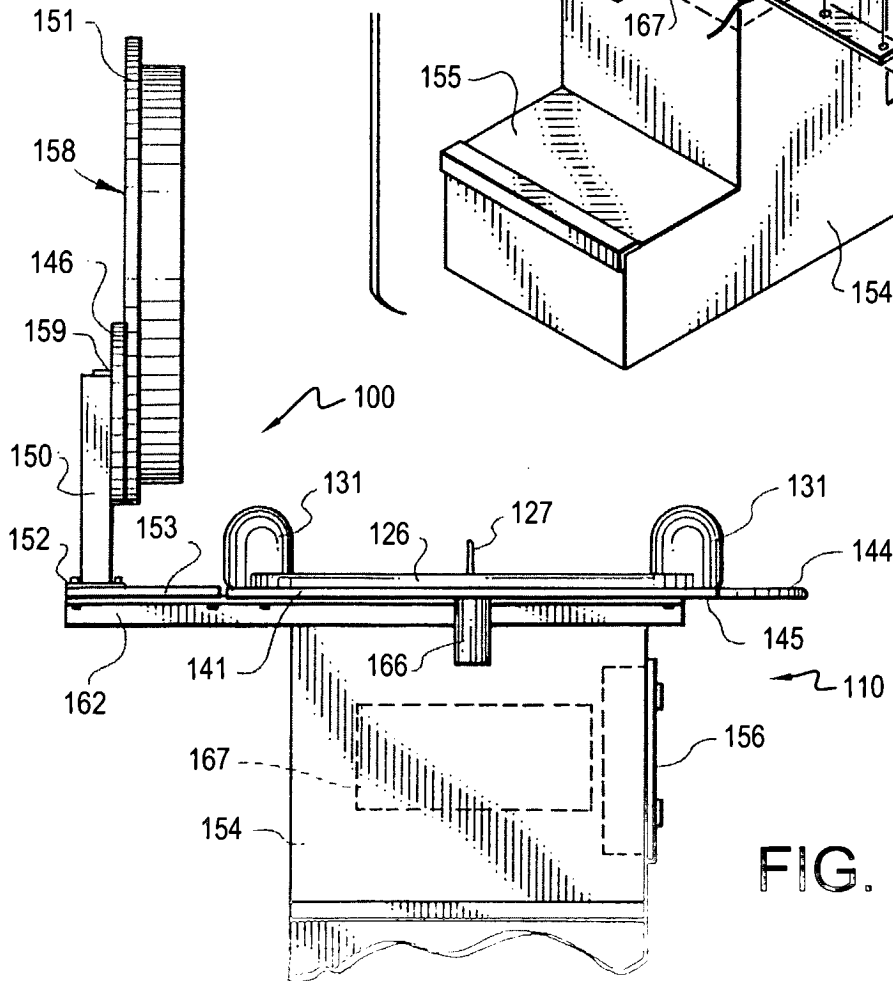


FIG. 7

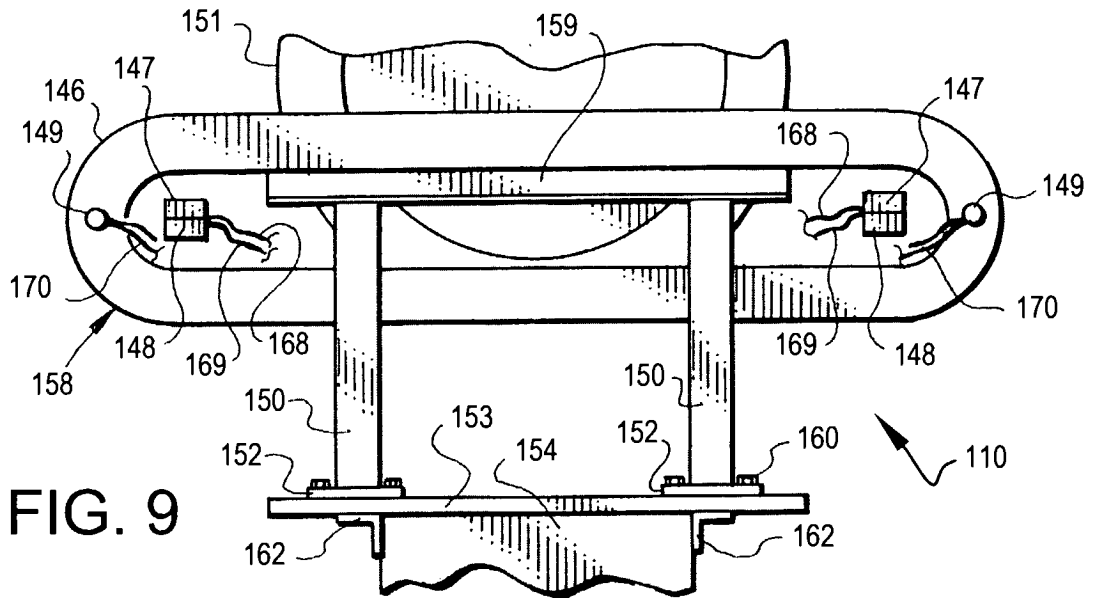


FIG. 9

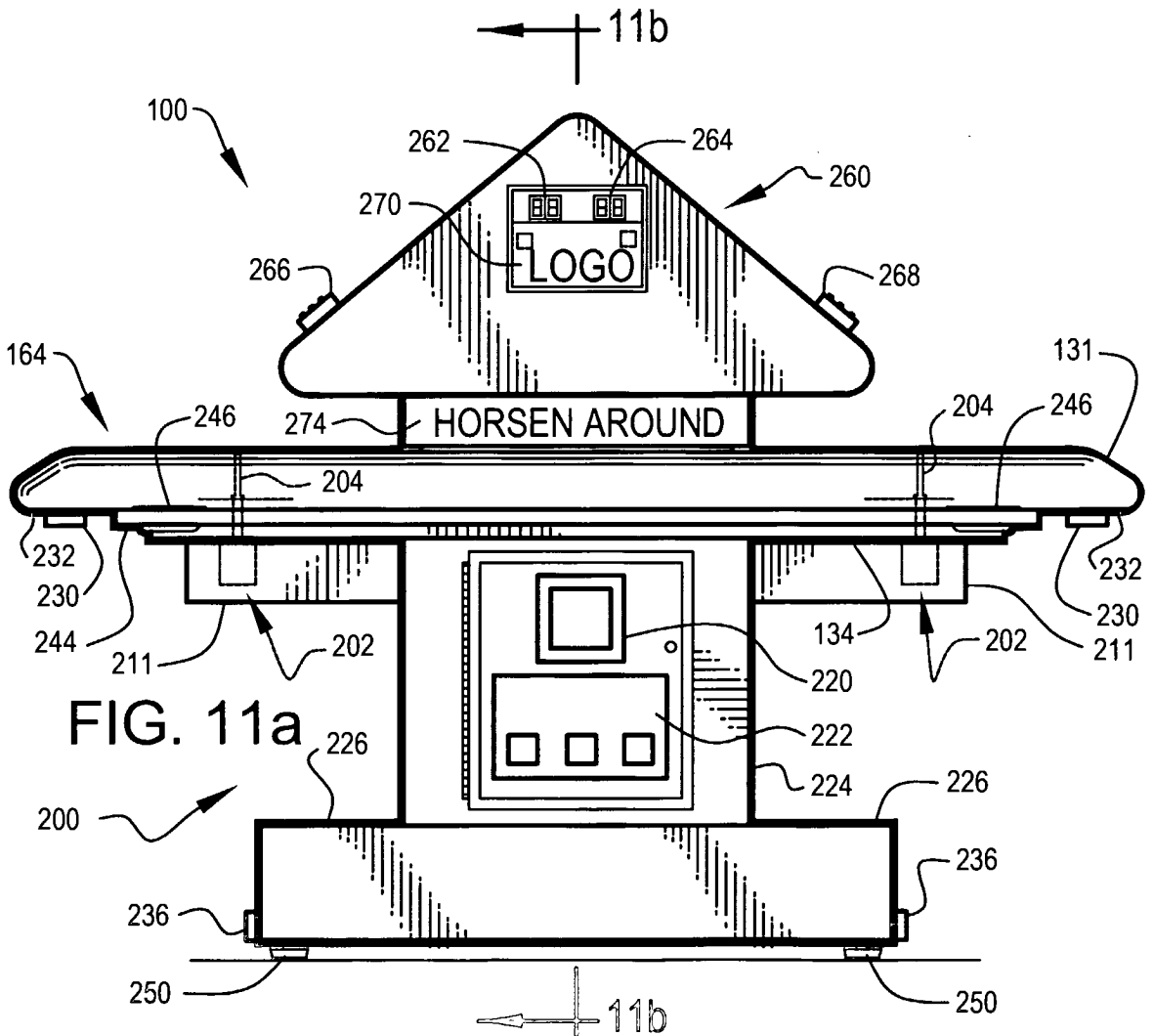
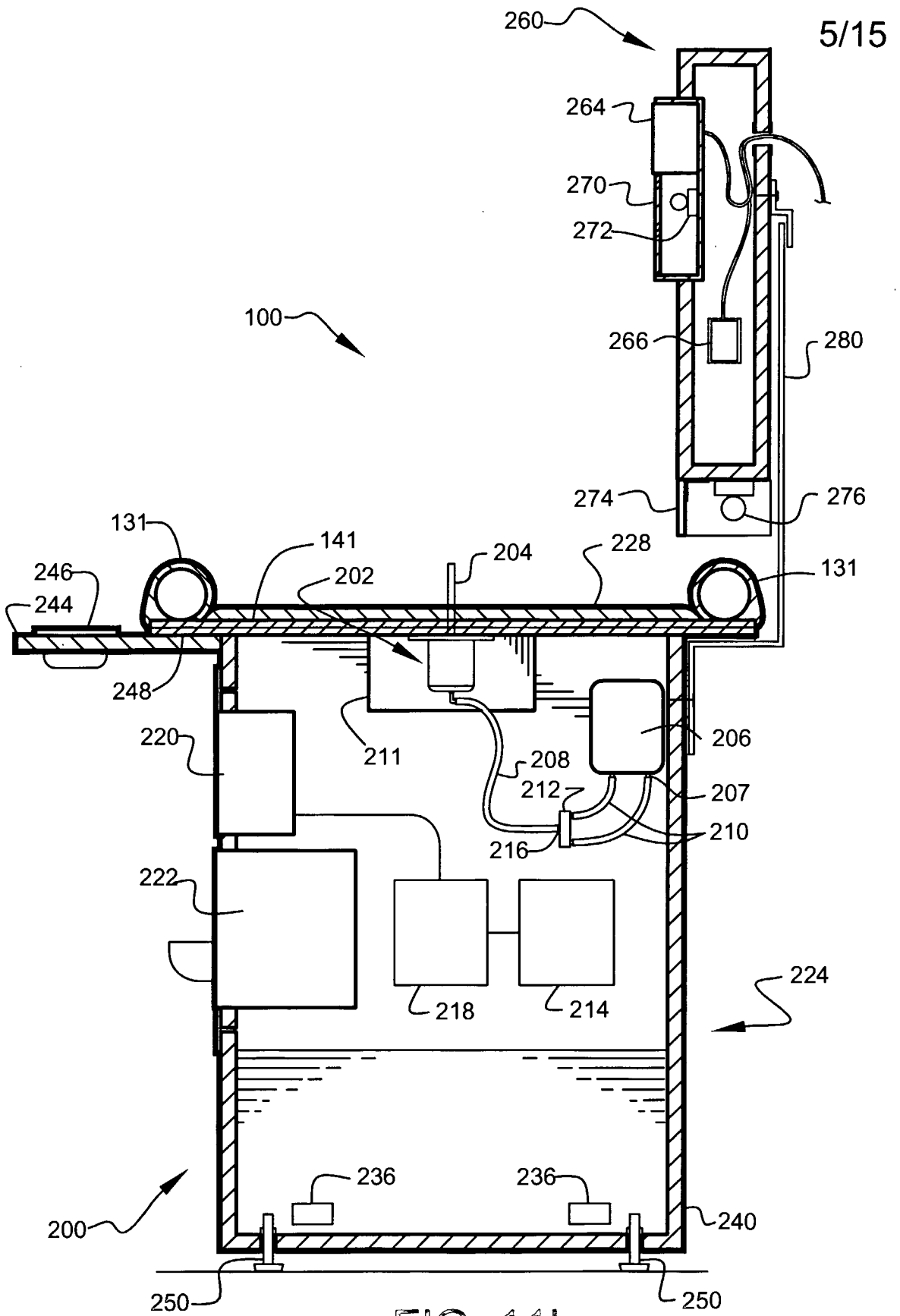


FIG. 11a



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FIG. 11b

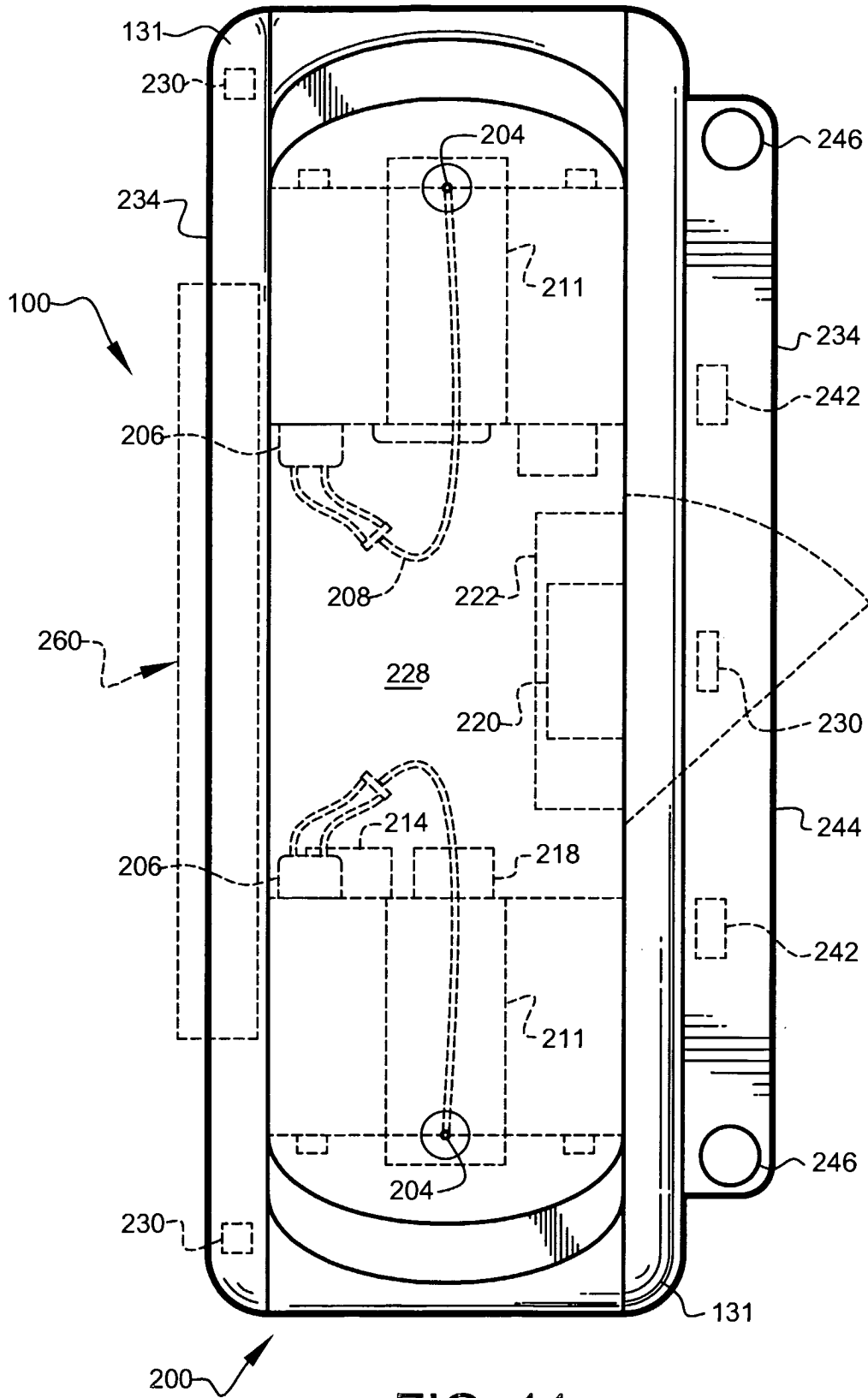


FIG. 11c

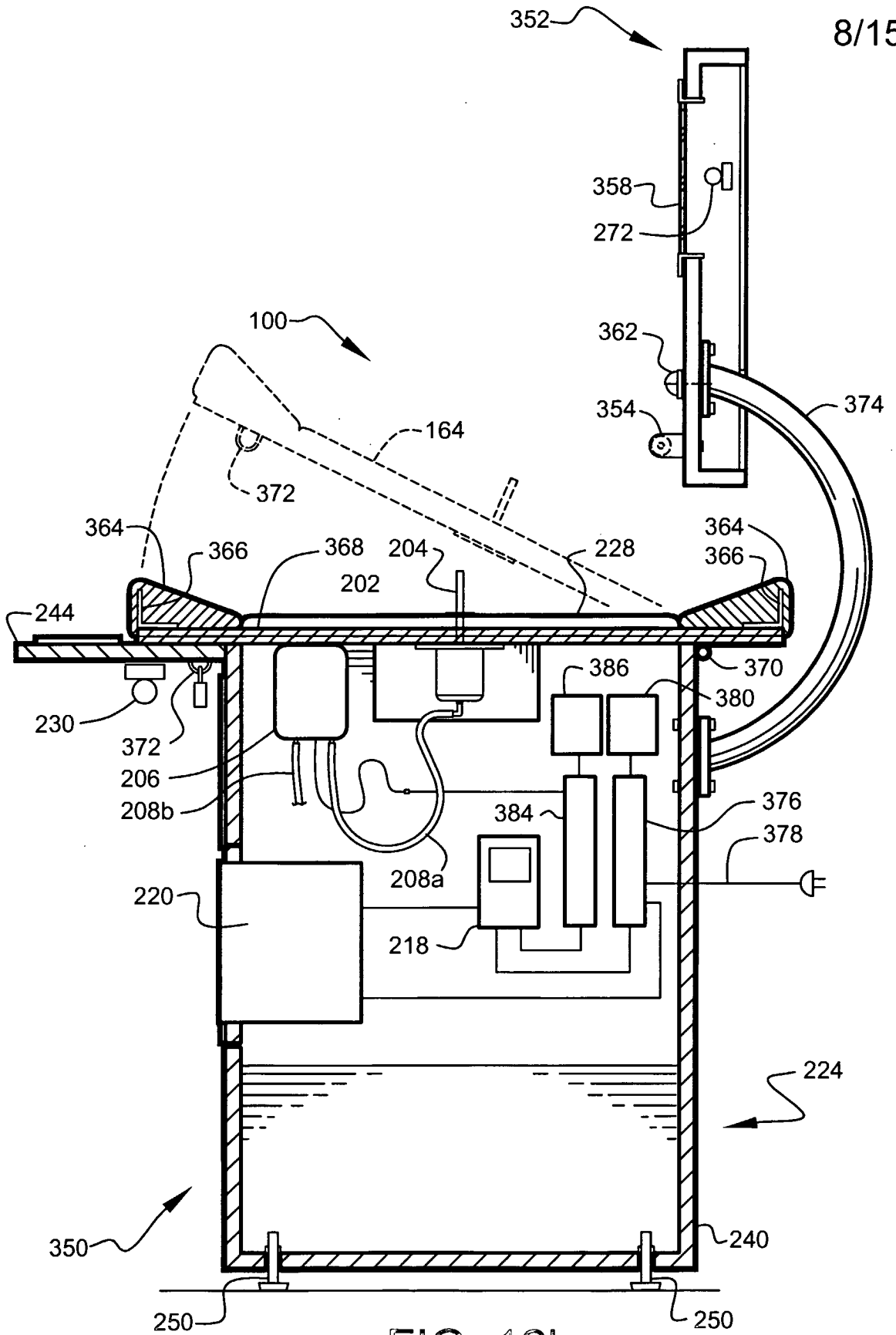


FIG. 12b

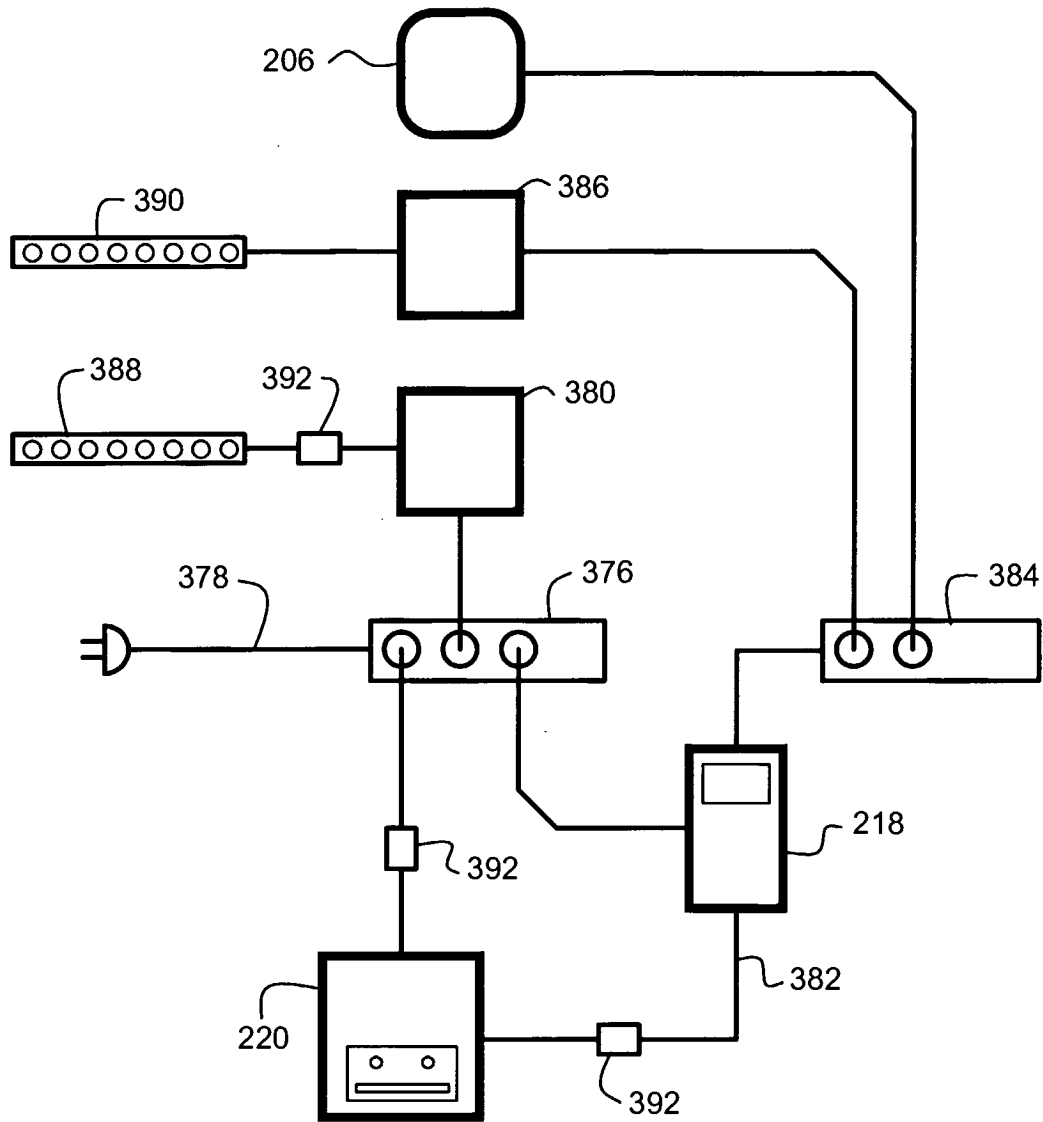


FIG. 12c

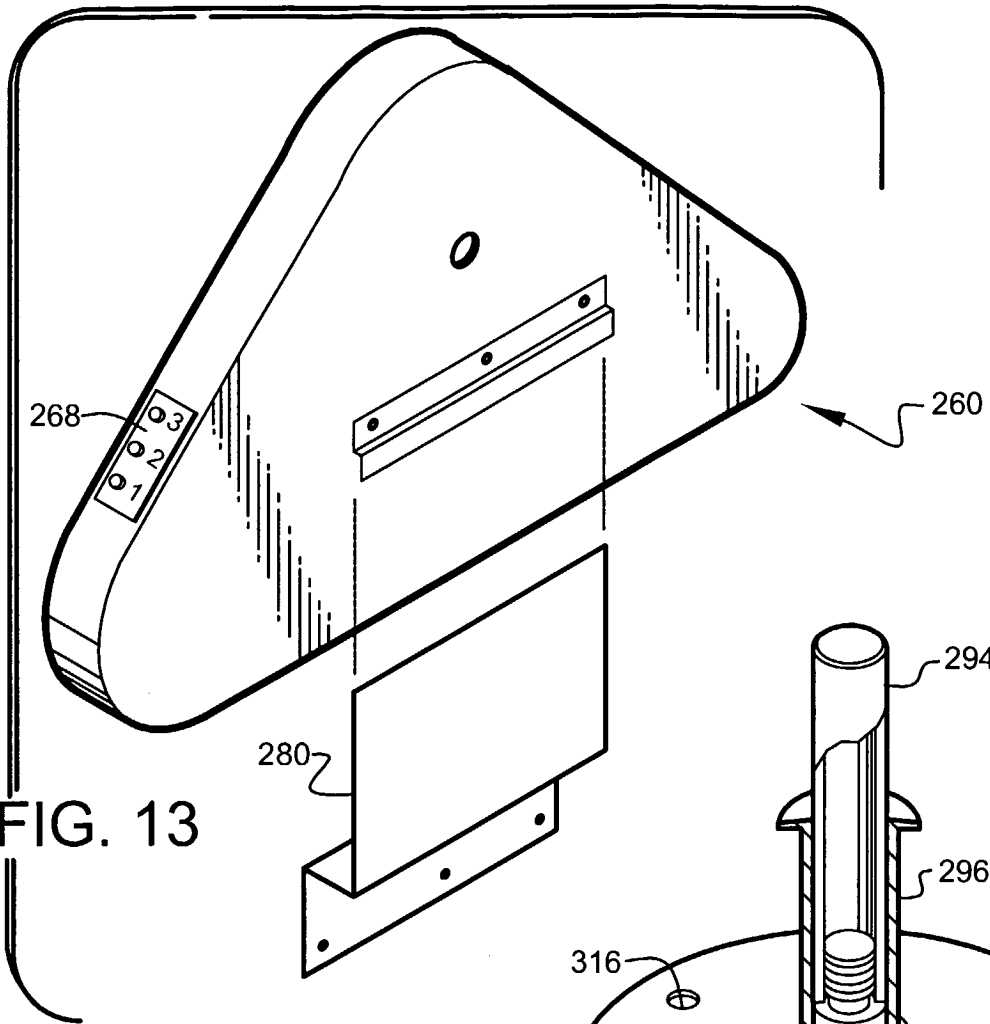


FIG. 13

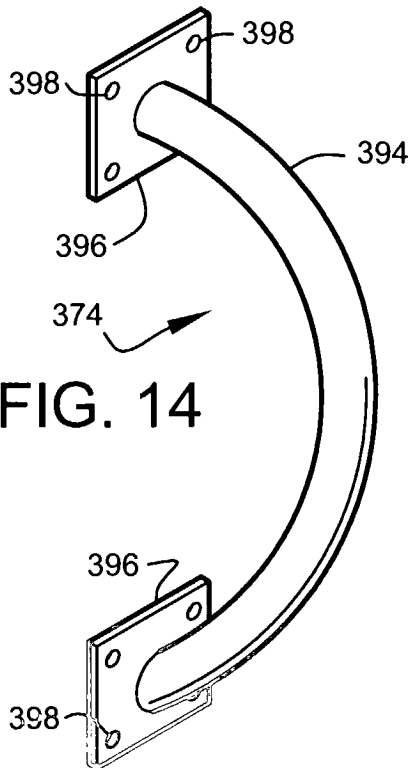


FIG. 14

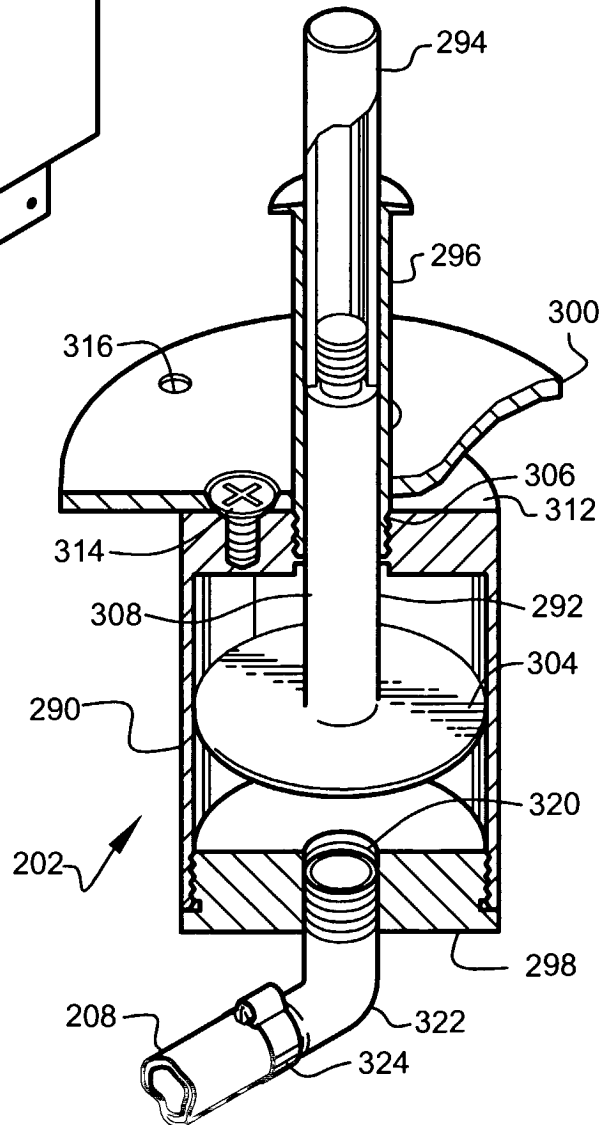


FIG. 15

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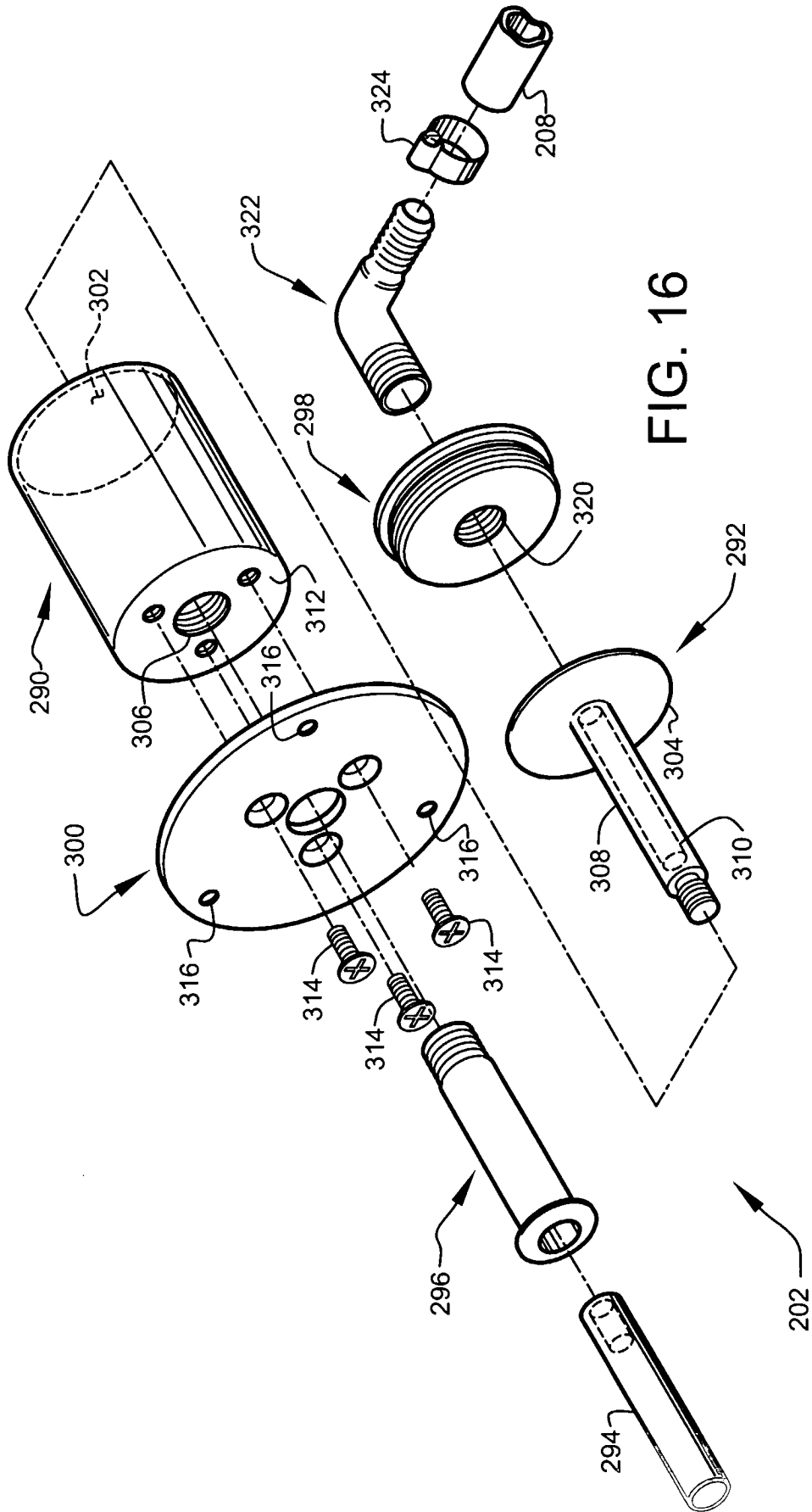
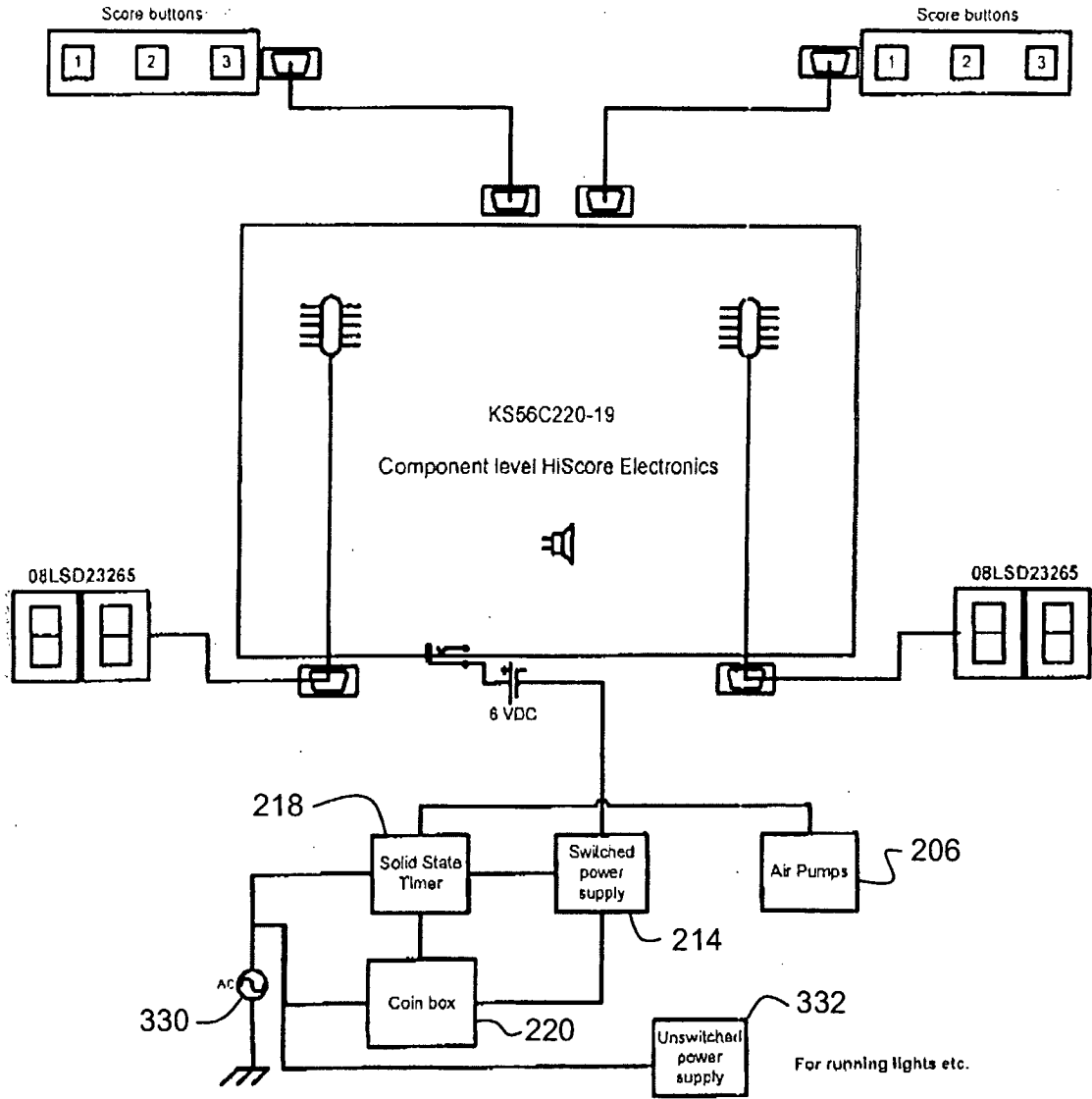


FIG. 16



200

FIG. 17

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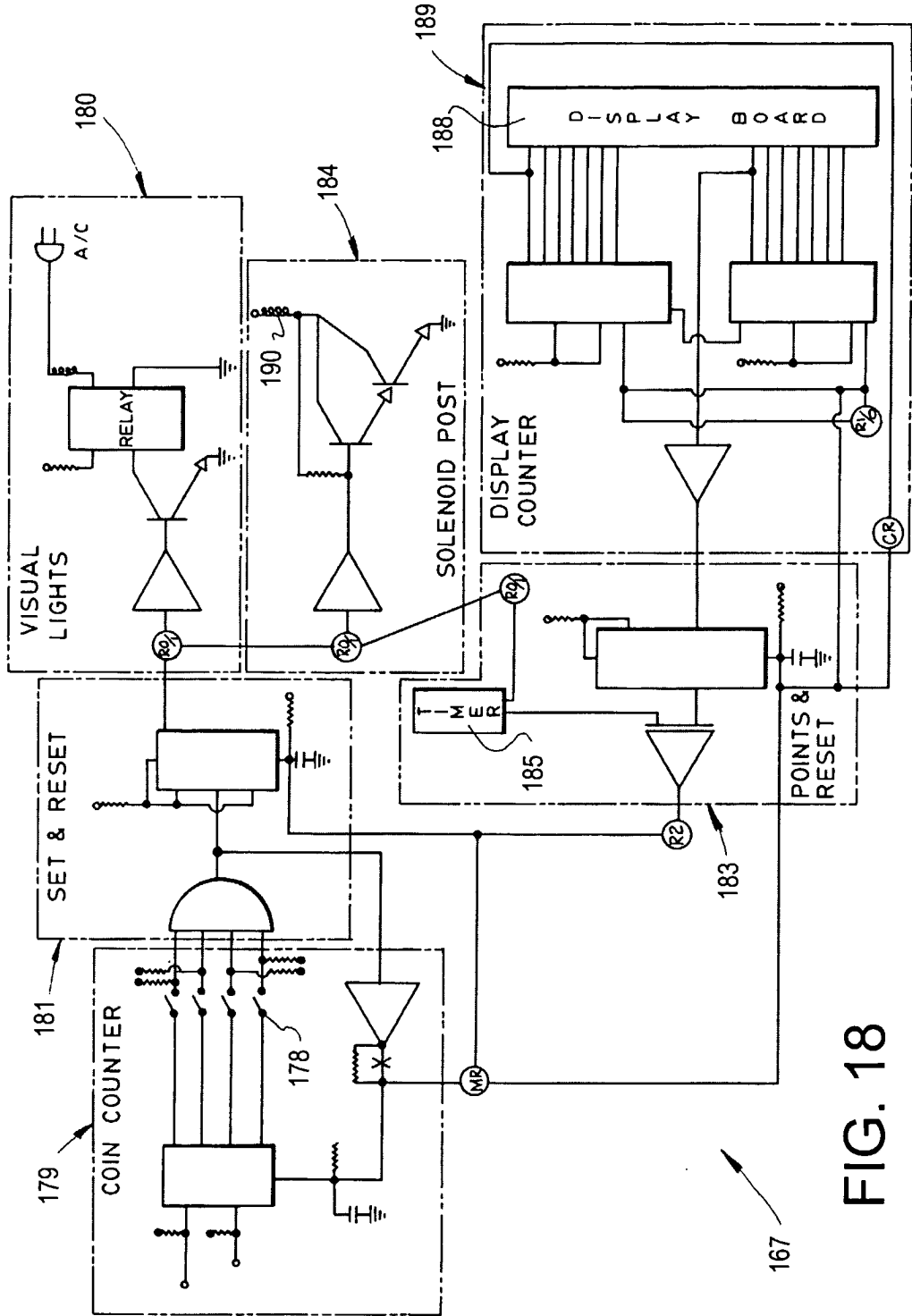


FIG. 18

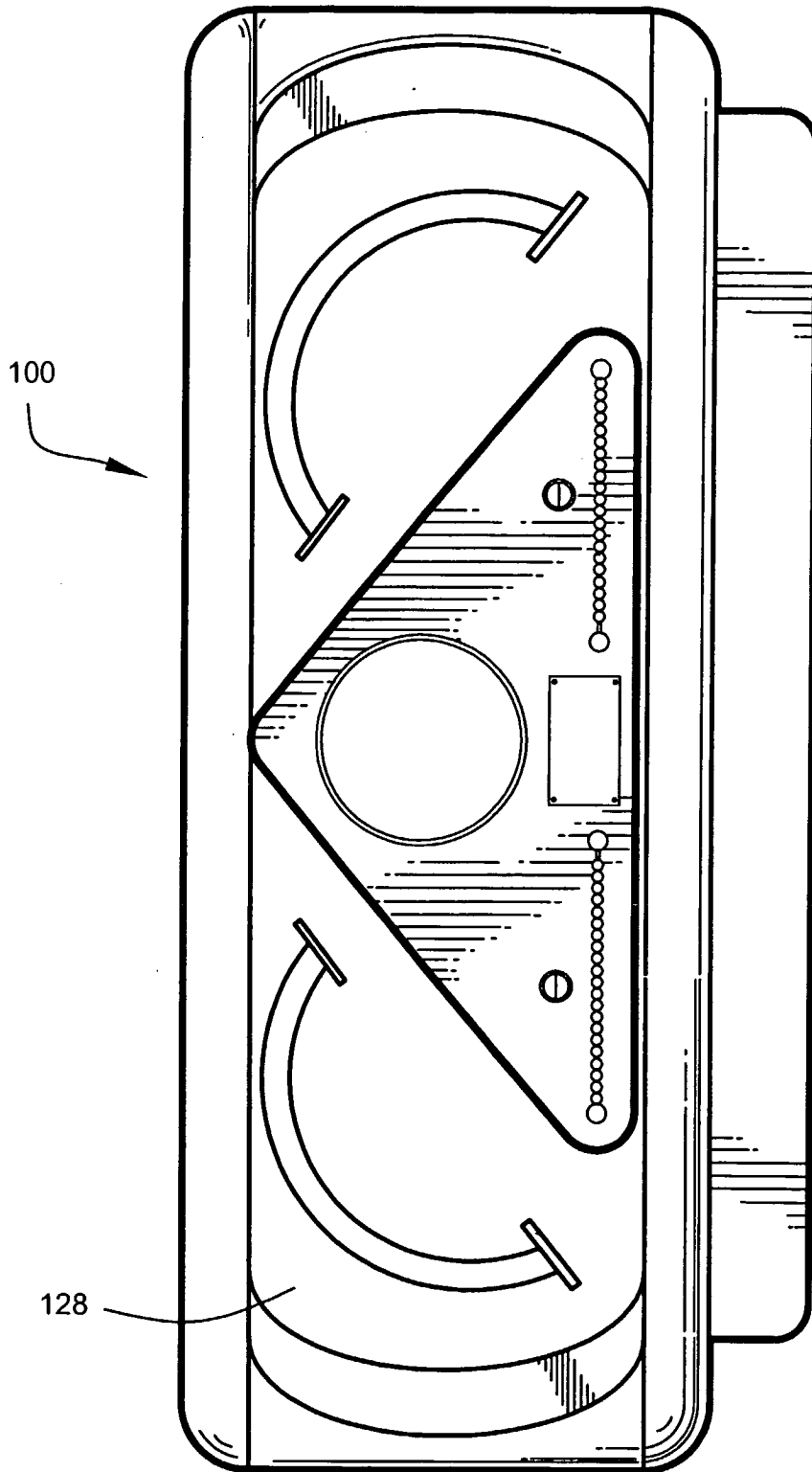


FIG. 19

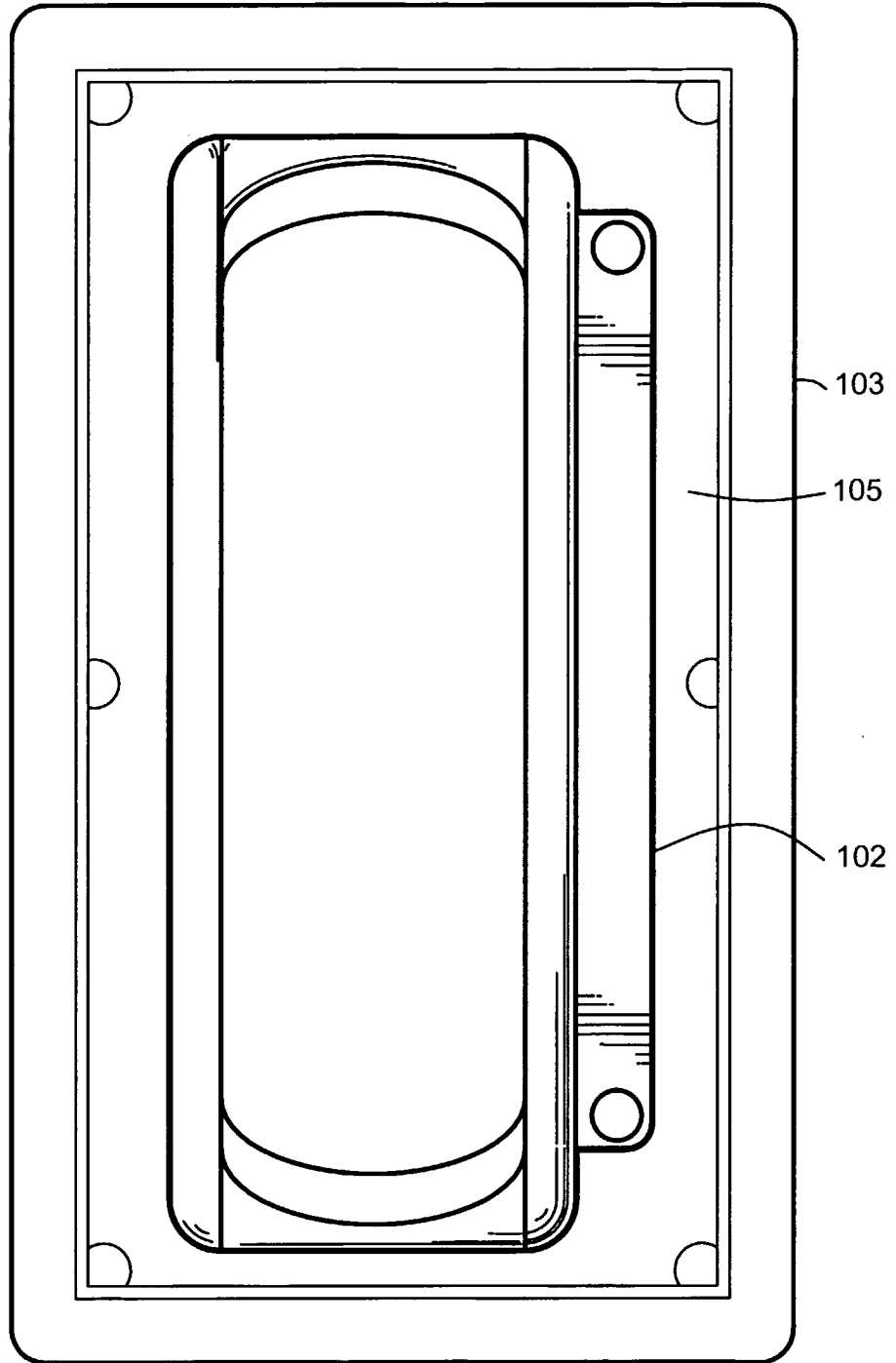


FIG. 20

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Published:

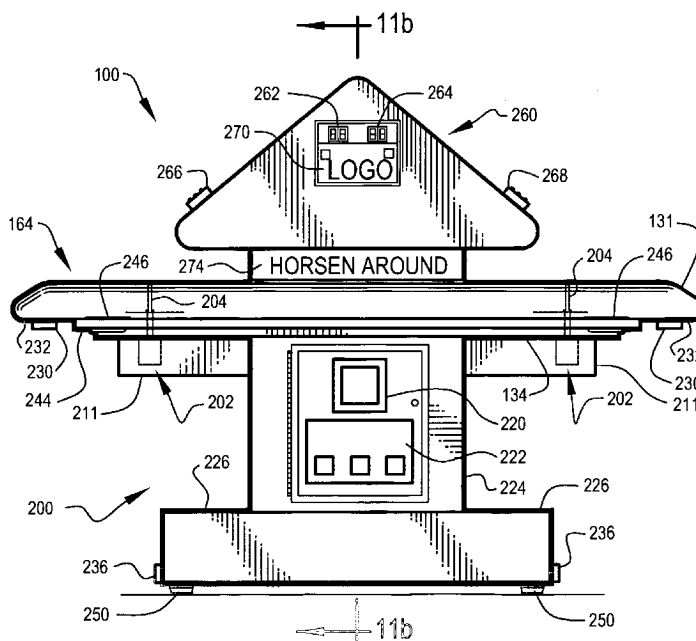
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(54) Title: TABLETOP HORSESHOES GAME SYSTEMS



(57) Abstract: A tabletop scaled-down horseshoes game system (200) primarily for use indoors that includes a substantially horizontal playing surface (128) and a pair of scaled-down posts (127) to be used as the target for tossed scaled-down horseshoes. An embodiment for use in commercial establishments provides a token to activate the game, a scoreboard (260), a game timer, and pneumatics (202) to lower the posts when the game is over. The commercial establishment game may also incorporate a vending machine (222) to dispense the scaled-down horseshoes to be used with the game system.



WO 2005/084299 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/06563

A. CLASSIFICATION OF SUBJECT MATTER

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USPC: 273/317.1,338;473/591

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B. FIELDS SEARCHED

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U.S. : 273/317.1, 336-338, 108, 108.1, 118R, 118A, 119R, 119A, 126R, 126A, DIG. 26; 473/4, 591

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
none

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,971,396 A (WIELAND) 26 October 1999 (26.10.1999), Figure 1.	8-13, 15-22 ----- 1-7, 14, 23, 24
Y	US 5,467,986 A (WEILAND) 21 November 1995 (21.11.1995), Figures 1 and 5.	1-7
Y	US 3,913,918 A (TRACHTMAN) 21 October 1975 (21.10.1975), Figure 1.	5, 6, 23
Y, P	US 2004/0067796 A1 (MURREY et al.) 08 April 2004 (08.04.2004), Figure 1.	14, 24

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