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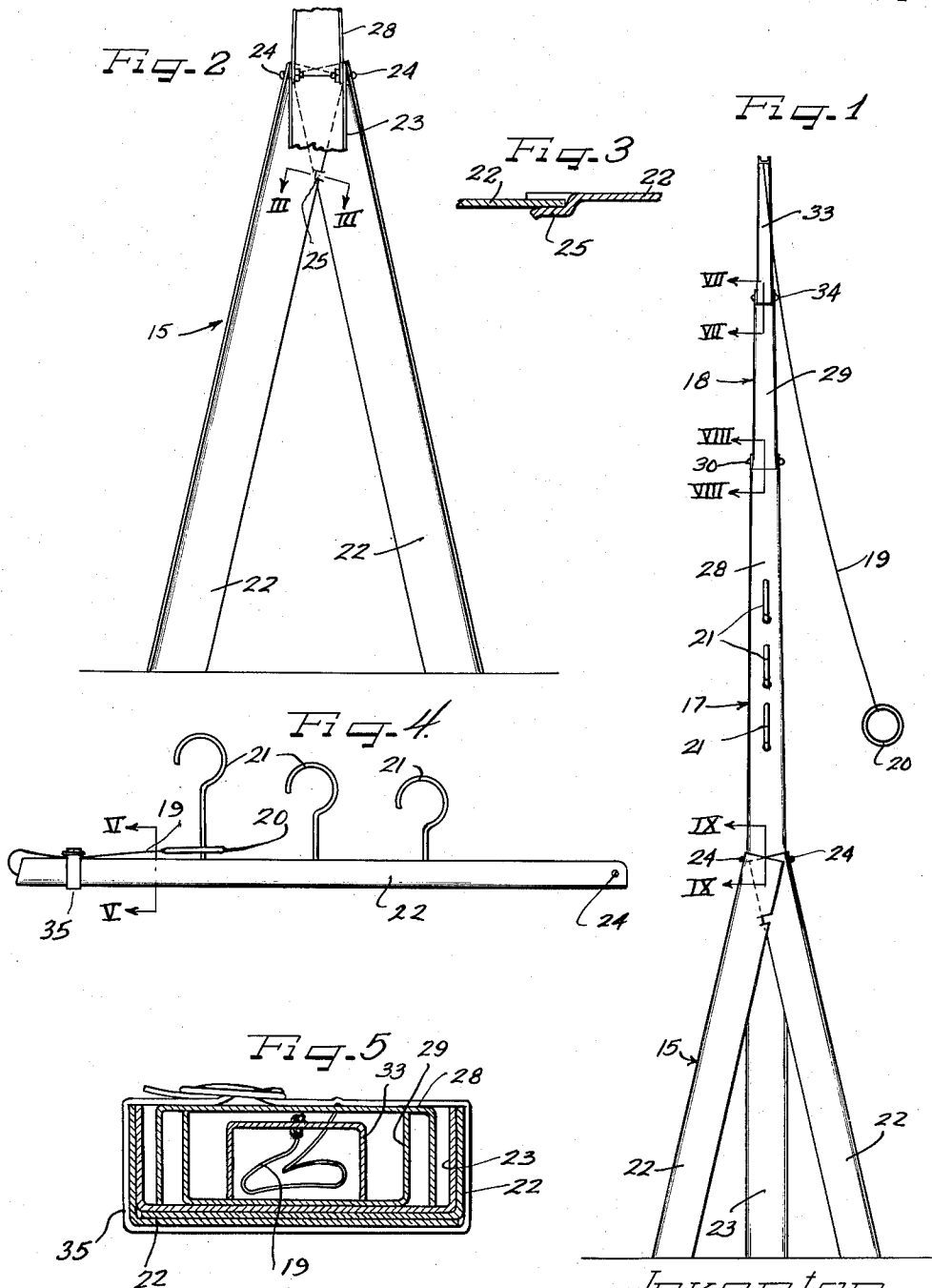
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COLLAPSIBLE GAME APPARATUS

Filed June 14, 1957

2 Sheets-Sheet 1



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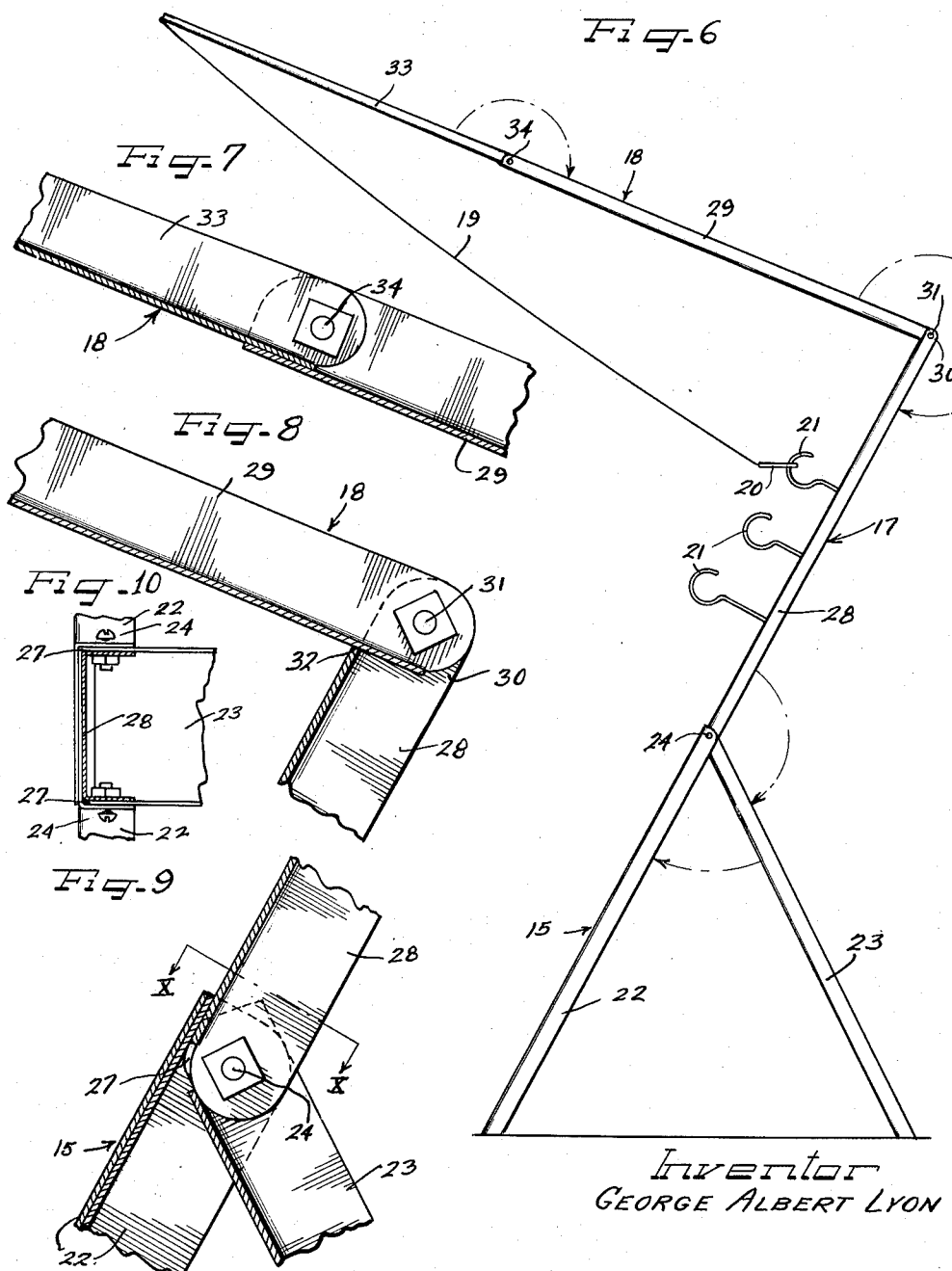
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COLLAPSIBLE GAME APPARATUS

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The present invention relates to improvements in game apparatus and more particularly concerns an improved self-contained apparatus of this kind.

One of the problems with game apparatus of the type including a supporting base structure and an arm supported thereby for carrying game playing means such as a captive leashed swingable playing member resides in a certain cumbersomeness of the apparatus for transportation and storage purposes.

It is accordingly an important object of the present invention to provide a self-contained, fully collapsible game apparatus in which a supporting stand and structure carried thereby are all adapted for collapsed, small package folded knockdown disposition for shipping, handling and storage purposes.

Another object of the invention is to provide a compactly foldable, knockdown game apparatus which is adapted to be set up to provide a device of substantial height and size.

A further object of the invention is to provide an improved captive ring game apparatus which is adapted to be made from an assembly of angular, channel members compactly foldable into one another to provide a small readily handled unit.

Still another object of the invention is to provide a collapsible game apparatus wherein a plurality of serially joined sections can be quickly and easily extended and set up from a collapsed condition and are self-sustaining in the open, utility condition of the apparatus without the need of any retaining structure other than carried by the components of the assembly itself.

Other objects, features and advantages of the present invention will be readily apparent from the following detailed description of a preferred embodiment thereof taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a front elevational view of game apparatus embodying the features of the invention and showing the same in the set up, utility or playing condition thereof;

FIGURE 2 is a slightly enlarged fragmentary rear elevational view of the base portion of the device;

FIGURE 3 is an enlarged fragmentary sectional detail view taken substantially on the line III—III of FIGURE 2;

FIGURE 4 is a side elevational view of the apparatus in the fully collapsed, package unit condition thereof;

FIGURE 5 is an enlarged fragmentary transverse sectional detail view taken substantially on the line V—V of FIGURE 4;

FIGURE 6 is a side elevational view of the apparatus in its set up, utility condition;

FIGURE 7 is an enlarged fragmentary sectional detail view taken substantially on the line VII—VII of FIGURE 1;

FIGURE 8 is an enlarged fragmentary sectional detail view taken substantially on the line VIII—VIII of FIGURE 1;

FIGURE 9 is an enlarged fragmentary sectional detail view taken substantially on the line IX—IX of FIGURE 1; and

FIGURE 10 is a fragmentary sectional detail view taken substantially on the line X—X of FIGURE 9.

Referring first to FIGURES 1 and 6, the invention is illustrated in a game apparatus especially suitable for

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playing the type of game wherein a leashed, captive playing member is adapted to be registered with a scoring device by manipulation of the playing member swingably toward the scoring device by the player. To this end, the apparatus includes a base or stand portion 15 arranged for supporting in generally upright position a scoring device portion 17 which, in turn, supports a cantilever arm portion 18. In this instance, the cantilever arm portion 18 carries suspended from the distal extremity thereof a flexible leash 19 which may be a string, cord, chain or other suitable flexible strand or connecting means to the free end of which is tethered or secured a playing member in the form of a ring 20 engageable scoringly with a scoring device such as a hook 21 carried by the scoring or body portion 17 of the apparatus and in the present instance comprising one of a selective series of the hooks 21.

In playing the game, a player stands at such a distance in front of the game device as will enable directed manipulative swinging of the ring 20 on its tether or leash 19 toward and into engagement with the selected one of the scoring hooks 21 for engagement or hooking of the ring upon the selected hook by engagement of the hook through the eye of the ring.

In a simple, economical and efficient construction, the game apparatus insofar as the base or standard portion 15, and body portion 17 and the arm portion 18 are concerned, is made from suitable angularly cross-sectioned bar stock. This may be rolled, extruded, or otherwise shaped material of preferably as light weight as is consistent with the structural strength and stress resistance required for the several components. If desired, of course, the sections or angular structural components of the apparatus may be formed up from metallic strip or sheet stock.

By preference, the base section 15 comprises a generally tripod arrangement including a pair of laterally or sidewardly divergently separable leg members 22 of similar but complementary form, and a rear divergently swingable leg 23 (FIGS. 1, 2 and 6). Each of the front leg members 22 is preferably of generally L-shaped cross-section, while the rear leg member 23 is preferably of generally U-shape cross-section.

At their functionally upper ends, the legs 22 and 23 are pivotally joined together by suitable means such as screws or bolts, although other types of pin-like connections such as rivets may be used if desired. For this purpose, respective side flanges of the front legs 22 are disposed in generally overlapping, face-to-face relation to the opposite respective side flanges of the rear leg bar 23. The upper end portions of the thus assembled legs are at each side of the assembly connected by one of the connecting members or screws 24. The arrangement is such that the front leg members or bars 22 have their remaining flanges located at the front of the assembly and in overlapping slidable relation, and the rear leg bar 23 is arranged with its web portion facing generally forwardly for nestably engaging within the channel formed by the legs 22 in their collapsed overlappingly related condition. To enable the legs 22 to be spread divergently apart in the set up, open condition of the base, the connectors 24 are of a length between the confining head and nut portions thereof to afford a loose joint sufficient to permit the desired diverging spread of the front legs 22, but limiting such spread to the preferred angularity. As best seen in FIG. 2, at the limit of the spread condition of the legs 22, the extremities of the connected side flanges of the legs shoulder against the extremities of the adjacent side flanges of the channel shaped rear leg 23 in a fixed triangulate relationship relative to the retaining screw or pin members 24.

For holding the front legs 22 in their spread apart

relationship, retaining or interlock means are provided, desirably comprising an interlock or latching lug 25 on the overlapping flange of one of the legs 22 engageable with the overlapping flange of the other of the legs adjacent to the point of divergence of the edges of the overlapping flanges in the open or spread condition of the legs. As best seen in FIG. 3, the latching lug 25 may comprise a struck out and bent up portion of the free margin of the overlapping flange of the one leg offset from the plane of such flange toward the rear side to provide a socket within which the margin of the opposing leg flange is engaged by a relative planar sliding assembly movement. Assembly of the companion leg flange margin in the lug socket is effected by resiliently overspreading the legs to the slight extent necessary to clear the edge of the margin to be interlocked past the tip of the interlock lug and then allowing the thus tensioned leg or legs to spring back and thereby maintain the interlocked relationship. For collapsing the front legs, the reverse action is effected, namely spreading the legs resiliently to the additional extent necessary to clear the locked leg flange margin from the lug socket and then relative swinging of the released margin past the interlock lug.

In the open or rearwardly spread, diverging condition of the rear leg 23, as best seen in FIGS. 6, 9 and 10, upper or head end respective stop lug extension portions 27 on the respective side flange portions of the leg 23 thrust against the adjacent upper end portions of the front flanges of the respective spread apart front legs 22. This holds the rear leg 23 in the preferred tripod angular, divergent open condition.

Also pivotally connected in the assembly by means of the attaching pins or screws 24 is a generally U-shaped elongated channel bar 28 which provides the body section 17 of the apparatus. At its base end, the body bar 28 is of a width to fit in freely slidable relation within the channel of the rear leg bar 23. Thereby the lower end portions of the side wall flanges of the bar 28 are adapted to be received within the upper end portions of the side wall flanges of the rear leg 23 and with the retaining screws 24 thereby connecting the same in pivotal assembly. By having the pivots for the side wall flanges of the body bar 28 disposed a distance below the top of the upper extremities of the tripod base leg upper extremities, the lower end portion of the web of the body bar is engageable as an opening stop against the opposing front flange of the rearmost of the side legs 22, as best seen in FIG. 9, whereby in the fully open or extended position, the body bar 28 projects substantially in alignment with the side legs 22. Such alignment is preferably with the front legs and the body bar 28 disposed obliquely upwardly and rearwardly so that the body bar 28 generally overlies the rearwardly divergently directed rear leg 23.

For weight reduction purposes, the body bar 28 preferably tapers from its base end toward its upper extremity to a somewhat narrower width.

The scoring hooks 21 are adapted to be secured in any suitable fashion either permanently or detachably to the web portion of the body bar 28. As shown, there are three of the hooks 21 but there may be a larger number or a smaller number, as desired disposed in spaced relation longitudinally of the body bar 28 and with the tips of the hooks directed generally upwardly and rearwardly.

The overhanging playing member supporting arm 18 is supported cantilever fashion by the top of the body bar 28 but is pivotally attached thereto for ready collapsibility. To this end, the arm 18 includes a first bar 29 of preferably generally U-shaped cross-section or channel shape, with the channel opening upwardly in the open extended position of the arm. At its proximal end portion, the arm bar 29 is of a width to fit slidably between the side wall flanges of the body bar 28 which are at the top end of the body bar in the form of a pair of

parallel journal ears 30 between which the joined end portion of the arm bar 29 is pivotally connected as by means of screws or bolts or pins 31 at each side. A stop shoulder 32 defined by the adjacent end edge of the web wall of the body bar 28 provides a rest forwardly and below the pivots 31 against which the opposing end portion of the arm bar 29 engages as best seen in FIG. 8 for thereby defining the angle of cantilever projection of the arm bar 29. In this instance such projection is generally upwardly and forwardly into overlying relation to the backwardly slanted body bar 28.

For collapsibility compactness, the arm 18 is preferably in a plurality of articulated sections or lengths, herein two, one of which is the bar 29 and the remainder of which is a distal extremity elongated bar 33 which, while it could be a solid bar, is preferably for lightness in weight a generally U-shaped cross-section or channel shaped elongated bar opening upwardly in the extended position thereof. At its proximal end, the bar 33 has the side wall flanges thereof slidably disposed between the distal end portions of the side wall flanges of the arm bar 29. An articulated, pivoted connection is effected by means of respective retaining pins or screws 34. By having the pivotally connected end portions of the bars 29 and 33 overlapping to a limited extent, as best seen in FIG. 7, retention of the bars in axial alignment is effected incident to opening of the bars by stop shouldering of the adjacent web portions of the bars as shown. The leash or tether 19 is secured to the distal extremity of the second arm bar 33.

Additional weight reduction is attained by having the arm bars 29 and 33 progressively tapering toward a relatively narrow tip end portion at the distal extremity of the second arm bar 33, as best seen in FIG. 1.

The construction and relationship are such that a well balanced, stable set up, extended playing condition of the apparatus is attained. This results from the well counterbalanced relationship of the several bar components of the device. Thus, by having the body bar 28 disposed well back of a vertical axis through the connection of the body bar to the tripod support 15, it, together with the underlying rear leg 23 affords an effective counterbalance for that portion of the cantilever arm 18 which projects forwardly from the vertical axis just mentioned. The forward slanting projection of the front legs 22 in addition to their sidewise or lateral spread also contributes to the stability and well balanced center of mass of the device, avoiding any tendency toward forward tilting of the assembly while in use.

Furthermore, the weight of the cantilever arm 18 acting forwardly and downwardly relative to the top of the body arm 28, retains the body arm in its generally upright, extended position without the need for any interlock or retaining means at the articulate connection of the bar 28 to the tripod base 15.

When it is desired to collapse the apparatus, that is easily effected, as indicated by the directional arrows in FIGURE 6 due to the pivoted, articulated connection of the bar components. The second or distal arm bar 33 folds into the first arm bar 29. The thus folded arm bars fold into the body bar 28. The body bar 28 with the arm bars folded thereinto folds into the rear leg bar 23. The front leg bars 22 collapse together and provide a channel into which the rear leg bar 23 with the body and arm bars folded thereinto in turn folds. The result is a compact collapsed unit as best seen in FIGS. 4 and 5. By having the several bar components from the front leg bars through the end or second arm bar 33 of progressively not only narrower dimension but also narrower side flange width, the width of the collapsed package unit may, as best seen in FIG. 5 be encompassed within the cross-sectional dimensions of the collapsed front leg bars 22. By putting a suitable tying member or strap 35 about the end portion of the collapsed assembly remote from the pivots 24, a readily handled package unit is attained

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which may be carried by means of the hooks 21 serving as handles, and may be, if desired, stored by hanging the same up by means of the hooks 21. Where the hooks are removably attached to the body bar 28, even greater compactness for shipping purposes or the like may be attained.

For storage purposes between play, or otherwise, the tether member 19 may be disposed within the chamber provided by the arm bar 33 in combination with the arm bar 29 into which it is collapsed, and with the ring 20 engaged about the shank of one of the hooks 21.

In setting up the game apparatus, the reverse of the manipulations described for collapsing the same are employed. As each of the several bars reaches its predetermined set up position in the assembly, it automatically retains such position until the device is again manually collapsed as described.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. In a game apparatus of the character described, a tripod supporting structure including three leg bars, two of which are laterally separable into divergent relationship and the third of which is swingable divergently away from said two leg bars, said two leg bars having interlock lug means interengageable by slight springing of the two leg bars beyond the normal spread relationship thereof, said two leg bars being pivotally connected to one end portion of said third leg bar.

2. In a game apparatus of the character described, a tripod supporting structure including three leg bars, two of which are laterally separable into divergent relationship and the third of which is swingable divergently away from said two leg bars, said two leg bars having interlock lug means interengageable by slight springing of the two leg bars beyond the normal spread relationship thereof, said two leg bars being pivotally connected to one end portion of said third leg bar, said two leg bars being of generally L-shape cross-section and providing in collapsed condition a generally channel shape assembly within which said third leg bar is collapsibly received.

3. In game apparatus of the character described, a base section comprising tripod leg bars, means pivotally connecting the leg bars for spreading divergently into a tripod relationship wherein one of the leg bars extends rearwardly relative to the remaining two leg bars which slope generally forwardly and downwardly, a body bar connected by said means to be supported by the tripod leg bars at their convergence and extending generally upwardly and rearwardly into overlying relation to the rearwardly extending leg bar, and a cantilever bar structure projecting forwardly from the upper end of the body bar into overlying relation thereto, the construction and relationship of the bars being such as to provide a stable counterbalanced relation so that reasonable force pulling down on the distal end of the cantilever bar may be imposed without forward tilting of the apparatus, the weight of the cantilever arm maintaining the body bar in its upright position.

4. A compactly collapsible game apparatus comprising three tripod base legs two of which are arranged to project divergently to one another and forwardly and a third directed to extend rearwardly divergently thereto and therebetween, said two legs being of L-shape cross-section and having front flanges overlappingly related and remaining flanges directed rearwardly and the third leg being of channel shaped cross-section with a web portion facing forwardly and side flanges directed rearwardly and lappingly disposed within the rearward flanges of the two legs, means pivotally connecting the upper end portions of the legs through said side flanges of the rear leg, a channel body bar having a lower end portion connected between said side flanges of the third base leg

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by said means, a cantilever supporting arm bar having an end portion disposed between side flanges on the upper end portion of said body bar, means pivotally securing said supporting arm and body bar pivotally, said supporting arm being pivotally collapsible into the body bar and the body bar with the supporting arm therein being pivotally collapsible into said third base bar and said third base bar being pivotally collapsible into said two base legs, said base legs having stop structure on their pivotally connected ends for maintaining the same in extended tripod relationship, said body bar having on the lower end thereof stop structure engageable with one of said two base legs to maintain the body bar in extended upright position, and the pivotally connected ends of the body bar and the supporting arm having interengaging stop structure to maintain the supporting arm in cantilever relation to the body bar in the extended position of the supporting arm.

5. In a foldably collapsible game apparatus, a pair of laterally swingable divergently openable base bars and a rearwardly swingable base bar, means pivotally connecting said rearwardly swingable base bar to the adjacent ends of the laterally swingable base bars, a body bar pivotally connected by said means to the base bars, an arm bar, means movably connecting one end portion of the arm bar to the opposite end of the body bar, the body bar being extendable pivotally into generally upright position, means releasably maintaining said body bar in said upright position relative to the base bars, the arm bar being extendable into generally cantilever overhanging relation to the body bar, means releasably maintaining said arm bar in said cantilever relation to the body bar, said arm bar being movable into collapsed relation to the body bar, and the base bars and the body bar with the arm bar collapsed therewith being collapsible together into side-by-side compact unit relation.

6. In a game apparatus, a generally tripod base structure comprising three bars, means divergently laterally spreadably and pivotally connecting said bars together at their upper ends, and a body bar having one of its end portions pivotally connected by said means to the base bars and extensible into a generally upright condition supported by the tripod base bars, means releasably maintaining said arm bar in said upright condition, said base bars being collapsible together by pivoting on said means and said body bar being collapsible by pivoting on said means into folded collapsed relation with the base bars.

7. In a game apparatus, a generally tripod base structure comprising three bars, means divergently laterally spreadably and pivotally connecting said bars together at their upper ends, and a body bar having one of its end portions pivotally connected by said means to the base bars and extensible into a generally upright condition supported by the tripod base bars, and said tripod base bars and said body bar having releasable adjacent stop shoulders on the pivotally connected ends thereof defining the fully spread relation of the base bars and the extended relationship of the body bar, said base bars being collapsible together by pivoting on said means and said body bar being collapsible by pivoting on said means into folded collapsed relation with the base bars.

8. In a game apparatus, a supporting base structure including a channel shaped bar extending generally upwardly in use, a body bar of generally channel shape, means movably connecting one end portion of the body bar to the upper end portion of said base bar, foldable means maintaining the body bar in generally upright playing disposition on the upper end portion of the base bar and including a cantilever arm structure, means movably connecting the cantilever arm structure to the upper end portion of the body bar, means maintaining said arm structure in extended relation to the body bar, said arm being movably collapsible into the channel of the body bar, and the body bar with the arm collapsed thereinto

being releasable and movably collapsible into the channel of the base bar.

References Cited in the file of this patent

UNITED STATES PATENTS

347,446	Stechhan	Aug. 17, 1886
502,786	Storey	Aug. 8, 1893
848,168	De Grandchamp	Mar. 26, 1907

5

1,199,770
1,517,454
1,746,486
1,787,270
2,677,518

Elphinstone	Oct. 3, 1916
Platt	Dec. 2, 1924
Martin	Feb. 11, 1930
Hayden	Dec. 30, 1930
Happy et al.	May 4, 1954

FOREIGN PATENTS

65,393	Norway	Oct. 26, 1942
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