The present invention relates to tables used for the playing of table tennis, commonly referred to as "ping-pong," and particularly to such tables of the type comprising foldable halves which are swingable about pivot-positions where they are supported upon rollers, enabling the table assemblies to be readily moved about for facilitating the storage and setup thereof.

Prior to the advent of portable "ping-pong" tables of the type above-described, the bulk and weight thereof so greatly hindered the handling and storage thereof that it was necessary to leave the "ping-pong" tables in their setup condition in play-rooms and the like, which greatly reduced the usable floor space of such rooms during periods when the "ping-pong" tables were not in use. It is, therefore, highly desirable that "ping-pong" tables be readily foldable in half and mounted on rollers in their folded conditions, so that they may be readily handled by a single person during storage and setup. Prior to the present invention, the principle of construction of these portable "ping-pong" tables comprising foldable table halves was such that, as a practical matter, each had to be completely assembled by the manufacturer, resulting in a much bulkier, heavier and more expensive article, from the manufacturer's and shipper's standpoint, relative to a "ping-pong" table which could be packaged, shipped, and sold in a knocked-down or unassembled condition. Moreover, these pre-assembled "ping-pong" table halves were not made with a sufficient number of legs that each was self-supporting and they were hinged together in a manner which made the separation thereof a difficult task, so that they could not be readily used, for example, as separate card tables or small luncheon or dinner tables for parties and the like.

It is, accordingly, an object of the present invention to provide a "ping-pong" table assembly which is so constructed that it may be shipped and sold in a knocked-down or unassembled condition and wherein the ultimate user may readily assemble the same into a portable "ping-pong" table assembly which may be readily folded into an upstanding compact condition where the table halves are supported upon rollers, so that the user may readily move the table about for storage and setup purposes.

Another object of the present invention is to provide a portable "ping-pong" table assembly which is readily convertible from a full sized "ping-pong" table having two horizontal table halves to a self-practicing table assembly where one of the "ping-pong" table halves is securely supported in a vertical position in front of the other table half which is in a horizontal position.

An important object of the present invention is to provide a "ping-pong" table assembly having some or all of the advantages and features above-mentioned and yet is relatively rugged and inexpensive.

In accordance with the most preferred form of the present invention, the "ping-pong" table assembly comprises two separate "ping-pong" table halves each having four foldable legs at the corners thereof, enabling each table half to be self-supporting and to be placed in a very compact and relatively light-in-weight condition so that, among other advantages, the table halves may be separately packaged to facilitate the handling, storage and shipment thereof to the retailer and the ultimate purchaser. Also, since the "ping-pong" table halves are self-supporting, they may be used separately as card-tables, serving tables and the like. The "ping-pong" table assembly of the present invention further preferably includes a pair of roller-carrying members which are preferably attachable between the normally contiguous opposite upper side portions of the table halves. The roller-carrying members, in addition to other functions to be described, preferably also act as the means for securing the table halves together. Most advantageously, these roller-carrying members are relatively short so that when connected between the set-up table halves they extend an appreciable distance above floor level. The roller-carrying members primarily serve as pivot-forming members which upon folding-in of the center legs of the table halves, enable the table halves to be pivoted into upwardly inclined positions upon the roller-carrying members which drop to floor level to movably support the table halves near the floor so that the overall height of the folded assembly is at a minimum. Furthermore, the connection of the roller-carrying members to the table halves is such that the bottom ends of the folded up table halves are appreciably spaced apart and the upper ends thereof are contiguous, to form a relative stable pyramid structure. Means are further provided for locking the upstanding table halves together.

Most advantageously, either the table halves or the roller-carrying members are longitudinally slotted and lateral pivot extensions, such as pivot bolts, are secured to the other of the same and to enable relative longitudinal as well as rotational movement between the table halves, so that the table halves can be manually moved from one contiguous horizontal relation or folded up into the pyramid structure described above. Also one table half can be raised and dropped a small distance relative to the other table half to brace said one table half in a vertical position against said other table half, the dropping being permitted by the downward pivoting of the member 12. In this manner the "ping-pong" table assembly can be converted into a self-practicing device where one of the table halves serves as a ball return wall.

The above and other objects, advantages and features of the present invention will become apparent upon making reference to the specification to follow, the claims and the drawings wherein:

Fig. 1 is a perspective view of the "ping-pong" table assembly of the present invention in a setup condition forming a normal, full-sized, "ping-pong" table assembly;

Fig. 2 is an enlarged fragmentary plan view, partly broken away, of the table halves shown in Fig. 1, showing the manner in which the table halves are secured together;

Fig. 3 is an enlarged perspective view of one of the roller-carrying members comprising part of the "ping-pong" table assembly of the present invention;

Fig. 4 is a view showing the manner in which the table halves are swingable into an upward position, the roller-carrying members acting as a movable base support for the table halves;

Fig. 5 is a view corresponding to Fig. 4 with the table halves completely positioned in their final upright positions, where the "ping-pong" table assembly is in a compact and portable position;
Fig. 6 is a perspective view of the “ping-pong” table assembly of the present invention with one of the table halves positioned into a dropped, upright position, to facilitate the “ping-pong” table assembly; and

Fig. 7 is a fragmentary enlarged side view of the self-practicing arrangement of the “ping-pong” table assembly shown in Fig. 6.

Referring now to the drawings, the “ping-pong” table assembly comprises a pair of identical table halves 2 each comprising a rectangular table top 4 having the dimensions of one-half of a conventional “ping-pong” table top, and including the usual longitudinal center line 6 suitably marked on the top thereof. Each of the table halves further includes a leg 8 near each of the four corners thereof which is foldable along a different side of the table top, in the manner usually found in card tables and the like. The legs 8 are preferably positioned inwardly of the corners of the table tops, so that the inner ends of the table tops may be positioned in contacting juxtaposed relationship and the outer legs do not interfere with the player movement at the outer ends of the table tops.

In accordance with the present invention, the “ping-pong” table assembly additionally includes a pair of roller-carrying members 10—10 which, in the broader aspect of the invention, may take a variety of forms. As will appear, these roller-carrying members perform a multitude of functions, among them being the securing together of the table halves 2—2 so that the two table halves are secured together against relative movement in the manner shown in Figs. 1 and 2. Moreover, the roller-carrying members 10 act as roller-carrying supports when the table halves are folded upwardly into the position shown in Fig. 5. Additionally, the roller-carrying members 10—10 preferably act as adapters enabling one of the table halves to be supported in the upstanding position shown in Fig. 6, so that the “ping-pong” table assembly is a self-practicing table.

As illustrated, each of the roller-carrying members comprises a short, generally inverted U-shaped body 12 which may be made of wood or metal. Rollers 14—14 are carried at the bottoms of the legs of the body 12, the rollers preferably being of the universal type where the rollers are freely pivotable about a vertical axis in the usual and well known way for universal rollers. The body 12 has a generally horizontal slot 18 formed in the upper portion thereof, the slot extending generally parallel to a line extending between the bottoms of the rollers 14—14.

The roller-carrying members 10—10 are securable to the contiguous upper side portions of the table tops 4—4 when the table halves are positioned in juxtaposed setup relationship by means including pivot bolts 20—20 and wing nuts 22—22 threadable over the ends of the bolts. Each of the table tops 4—4 may comprise a large horizontal rectangular piece of plywood 4a along the edges of which are secured side walls 4b—4b and end walls 4c—4c of wood or the like which form a depending skirt around the table top. The Shank end of each of the pivot bolts 20 passes through a lateral opening at the inner end of each of the side walls 4b—4b and through the slot 18 of the associated roller-carrying member 10. The slot 18 permits relative longitudinal movement between the table halves 2—2. When the table is setup as shown in Fig. 1, the confronting or inner end walls 4c—4c of the table halves 2—2 are in contact, and the wing nuts 22—22 are tightened securely to fix the table halves in their juxtaposed normal playing positions. The bolts 20 attached to each table top are then in alignment and the axes of the respective pairs of pivot bolts are widely spaced apart but spaced inwardly of the ends of the slots 18—18.

In this setup condition of the “ping-pong” table assembly, the body 12 of each of the roller-carrying members 10 is spaced well above the level of the floor. When it is desired to put the “ping-pong” table assembly away, the table net 22 are loosened and the table halves 4—4 are pulled apart to a point where the shanks of the bolts 20 engage the end of the slots 18. The axes of the respective pairs of pivot bolts are then in alignment again. Then, the wing nuts 22 are again tightened, and the center legs of the table halves are folded in, as shown most clearly in Fig. 4. When the weight of the table halves will then drop the inner ends thereof until the rollers 14 of the roller-carrying members 10 touch the floor. Then, the outer ends of the table halves may be pivoted upwardly about the axes of their respective locked bolt shanks until the bent upper ends of the table tops touch, as shown in Fig. 4. The outer legs may be folded below or above the table halves are raised. The table halves are then in a general pyramidal shape which provides appreciable stability of the upright structure. The contacting upper ends of the table halves may then be locked together by any suitable means, such as by the hook and eye connecting means 24—26 secured to the outer ends of the outer side walls 4b—4b of each of the table tops. The wing nuts 22 may then again be tightened since they may have become loosened a bit by the pivoting of the table halves to their upright positions. To set up the “ping-pong” table assembly, the process just described is reversed.

As above indicated, one of the advantages of the invention is that one of the table halves may be easily raised into a locked vertical position, as shown in Fig. 6, where the “ping-pong” table assembly can be used as a self-practice table. To set the “ping-pong” table up into this position from the normal playing position shown in Fig. 1, one of the table halves is lifted up by pivoting it about the axis of its associated pivot bolt. When the table half is raised in this manner, the weight of the table half will cause the bodies 12 of the roller-carrying members 10 to drop and pivot about the axis of the pivot bolts of the horizontal table half, as shown in Figs. 6 and 7. The roller-carrying members will pivot down until the normally upper face of the upturned table top is in face to face contact with the vertical outer surface of the innermost end wall 4c of the horizontal table top. The weight of the upturned table half will hold or lock the same in the vertical position shown. Next, the legs 8 of the upturned table half may be folded in.

In using the table arrangement in Fig. 6 as a self-practicing table, the ball is hit to the upturned table top on the fly, the ball then bouncing back upon the horizontal table top to simulate the return of the ball by the opposing player.

It is apparent from the description of the invention given above, that the “ping-pong” table assembly of the present invention is an exceedingly simple arrangement considering all of the advantages and uses to which the assembly can be put. As previously indicated, the assembly is constructed so that the “ping-pong” table assembly can be packaged and shipped in an unassembled or knocked down condition, greatly facilitating the shipping and handling thereof and eliminate the ultimate consumer. Moreover, due to the simplicity of the manner in which the table halves are assembled, a person of only average size and intelligence could readily set the table up into the playing condition shown in Fig. 1. When it is desired to store the “ping-pong” table, even a single individual can readily raise the table halves into the table pyramidal structure shown in Fig. 5 or, alternatively, raise one of the table halves into the self-practicing assembly shown in Fig. 6. When it is desired to use the table halves separately, as card tables or serving tables, the table halves can be readily disconnected from one another by loosening the wing nuts 22 and removing the bolts 20. Because of the extreme simplicity of the roller-carrying, pivot-forming members, it is apparent that the expense of the “ping-pong” table assembly having the ad-
vantages of the present invention is only slightly greater than the cost of an ordinary non-portable "ping-pong" table assembly.

It should be understood that numerous modifications may be made of the preferred embodiment of the present invention without deviating from the broader aspects of the invention.

What is claimed is:

1. A "ping-pong" table assembly comprising: a pair of table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, and adapter means connected between said table halves for supporting one of said table halves for limited horizontal and downward movement as well as rotational movement about a horizontal lateral axis, relative to the other table half supported with its top in a horizontal position, wherein said one table half can be swung into a vertical position and dropped into a self-holding stable vertical position with the normally upper face of its top vertical and resting against the confronting inner end of the table top of the other table half and extending above the top of the latter table top, to form a ball-return wall for self-practicing purposes.

2. A "ping-pong" table assembly comprising: a pair of table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, at least one of said table halves having legs for supporting the same in a horizontal position independently of the other table half, and a pair of adapter means extending between said table tops at the opposite confronting inner ends thereof and each pivotally connected at each end thereof to the adjacent table top, the pivot axes at the corresponding ends of said pair of adapter means being in lateral alignment to enable said said other table top to be swung upwardly relative to said adapter means about a first horizontal lateral axis, and to enable the adapter means to pivot about a second horizontal lateral axis spaced longitudinally of said first axis so that the united table tops can drop into a self-holding stable vertical position with the normally upper face thereof vertical and resting against the confronting inner end of the table top of the other table half and extending above the top of the latter table top, to form a ball-return wall for self-practicing purposes.

3. A "ping-pong" table assembly comprising: a pair of rectangular table halves having table tops with longitudinal center lines on the upper surfaces thereof and which form a "ping-pong" table when positioned in horizontal, juxtaposed relation with said longitudinal center lines in alignment, at least one of said table halves having legs at the four corners thereof so that it is self-supporting, and means connecting said table halves together, said means including means for supporting the inner end of the other one of said table halves for upward swinging movement about a horizontal lateral axis to bring the same into a vertical position while the other table half is in a horizontal position, and for holding the same in said vertical position to form a ball-return wall for self-practicing purposes.

4. A "ping-pong" table assembly comprising: a pair of rectangular table halves having table tops with longitudinal center lines on the upper surfaces thereof and which form a "ping-pong" table when positioned in horizontal, juxtaposed relation with said longitudinal center lines in alignment, each of said table halves having foldable legs at the four corners thereof so that each is self-supporting, means connecting said table halves together, said means including means for supporting one of said table halves for upward swinging movement about a horizontal lateral axis to bring the same into a vertical position while the other table half is in a horizontal position, and for holding the same in said vertical position, to form a ball-return wall for self-practicing purposes.

5. A "ping-pong" table assembly comprising: a pair of table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, and roller-carrying means connected between the tops of said table halves, said roller-carrying means being in lateral alignment to enable said said other table top to be swung upwardly relative to said roller-carrying means about a first horizontal lateral axis spaced longitudinally of said first axis so that the united table tops can drop into a self-holding stable vertical position with the normally upper face thereof vertical and resting against the confronting inner end of the table top of the other table half and extending above the top of the latter table top, to form a ball-return wall for self-practicing purposes.

6. A "ping-pong" table assembly comprising: a pair of table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, and roller-carrying means connected between the tops of said table halves, said roller-carrying means and said table tops having cooperating means for supporting said table tops for relative pivotal movement about respective horizontal lateral axes adjacent the inner ends thereof and also for relative outward longitudinal movement upon said roller-carrying means, said longitudinal movement enabling substantial separation substantially of said ends of the table halves so that the table tops can be swung about said lateral axes into upstanding positions while supported on said roller-carrying means, where the then bottom and normally confronting inner ends of the table tops are spaced widely apart and the then top and normally remote outer ends thereof are contiguous to each other, forming a stable pyramid structure, and means for holding the upstanding table tops together.

7. A "ping-pong" table assembly comprising: a pair of individual table halves having table tops which forms a "ping-pong" table when positioned in horizontal juxtaposed relation, each of said table halves having foldable legs at the four corners thereof so that each is self-supporting, and means connecting said table tops together in said juxtaposed relation comprising a pair of readily detachable roller-carrying members on opposite sides of said table tops, cooperating means on said roller-carrying members and table tops for supporting said table tops for relative pivotal movement about relatively widely spaced horizontal lateral axes located adjacent the inner ends of the table top, so that the table tops can be swung about said lateral axes into upstanding positions supported on said roller-carrying members, where the then bottom and normally confronting inner ends of the table tops are spaced widely apart and the then top and normally remote outer ends thereof are contiguous to each other forming a stable pyramid structure, and means for holding the upstanding table tops together.

8. A "ping-pong" table assembly comprising: a pair of table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, each of said table halves having foldable legs at the four corners thereof, and a pair of pivot members connected to opposite sides of said table tops, the end portions of said pivot members being separately pivotally connected to the sides of the table tops about respective horizontal, lateral axes located at points adjacent to but spaced from the inner ends of the table tops, the outer end of at least one of said table tops being swingable upwardly from its horizontal position into a vertical position about the points of connection thereof to said pivot members, the weight of said one table top effecting the downward pivoting of said pivot members about the points of connection of said pivot members to the other table top to drop said one table top and bring the same into a stable vertical position against the inner end of said other table top, where the then upper end of said one table top extends above the top of said other top to form a ball-return wall for self-practicing purposes.
9. A "ping-pong" table assembly comprising: a pair of table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, each of said table halves having foldable legs at the corners thereof, and a pair of pivot members carrying rollers on the bottoms thereof and connected to opposite sides of said table tops, the rollers being spaced appreciably above the floor when the table tops are supported upon their legs, the end portions of said roller-carrying pivot members being separately pivotally connected to the sides of the table tops about respective horizontal, lateral axes located at points adjacent to but spaced from the inner ends of the table tops, and both of said table tops being swingable upwardly upon said roller-carrying pivot members and, after folding in the center legs of the table halves, being stably supportable for rolling movement upon said rollers thereof, with the then bottom ends of the table tops spaced appreciably apart and the then upper ends thereof being close together to form a stable pyramid arrangement, and means for securing said upstanding table tops together.

10. A "ping-pong" table assembly comprising: a pair of table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, each of said table halves having foldable legs at the corners thereof, and a pair of pivot members carrying rollers on the bottoms thereof and connected to opposite sides of said table halves, the rollers being spaced appreciably above the floor when the table tops are supported upon their legs, the end portions of said roller-carrying pivot members being separately pivotally connected to the sides of the table halves about respective horizontal, lateral axes located at points adjacent to but spaced from the inner ends of the table halves, the outer end of at least one of said table halves being swingable upwardly from its horizontal position into a vertical position about the points of connection thereof to said pivot members, the weight of said one table half effecting the downward pivoting of said pivot members about the points of connection of said pivot members to the other table half to drop said one table half and bring the same into a stable vertical position against the inner end of said other table half, where the then upper end of said one table half extends appreciably above the top of said other table half to form a half-return wall for self-practicing purposes, and both of said table halves being swingable upwardly upon said roller-carrying pivot members and, after folding in the center legs of the table halves, being stably supportable for rolling movement upon said rollers thereof, with the then bottom ends of the table halves spaced appreciably apart and the then upper ends thereof being close together to form a stable pyramid arrangement, and means for securing said upstanding table halves together.

11. A "ping-pong" table assembly comprising: a pair of table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, each of said table halves having foldable legs at the four corners thereof so that each is self-supporting, and a pair of readily detachable roller-carrying connecting means on opposite sides of said table tops adjacent the inner ends thereof for securing the table halves together in juxtaposed relation, said roller-carrying connecting means being separately pivotally connected to the sides of the table tops about respective horizontal lateral axes adjacent the inner ends of the table tops, there being appreciable horizontal play between each table top and said roller-carrying connecting means which allows the outer ends of both of the table tops to be swung upwardly on said roller-carrying connecting means and, after folding in the center legs of the table tops, stably supporting the upstanding table tops for rolling movement thereon with the then bottom ends of the table tops spaced appreciably apart and the upper ends thereof close together to form a stable pyramid arrangement.

12. A "ping-pong" table assembly comprising: a pair of individual, self-supporting table halves having table tops which form a "ping-pong" table when positioned in horizontal juxtaposed relation, each of said table halves having foldable legs at the corners thereof, and pivot means connecting said table halves together in said juxtaposed relation comprising detachable roller-carrying members connected between the normally opposite contiguous side portions of the tops of said table halves, said roller-carrying members and table tops having co-operating means for supporting the table halves for relative longitudinal movement and for relative pivotal movement about respective horizontally spaced lateral axes, said co-operating means comprising lateral extensions on one of said table tops and roller-carrying members and longitudinal slot means in the other of same and means for holding said extensions in position in said slot means, said relative longitudinal movement enabling the substantial separation of the confronting ends of the table halves so that the latter can be swung with legs folded into upstanding positions while supported on said roller-carrying members, where the then bottom and normally confronting inner ends of the table halves are spaced widely apart and the then top and normally outer ends thereof are contiguous to each other forming a stable pyramid structure, and means for holding said upstanding table halves together.

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