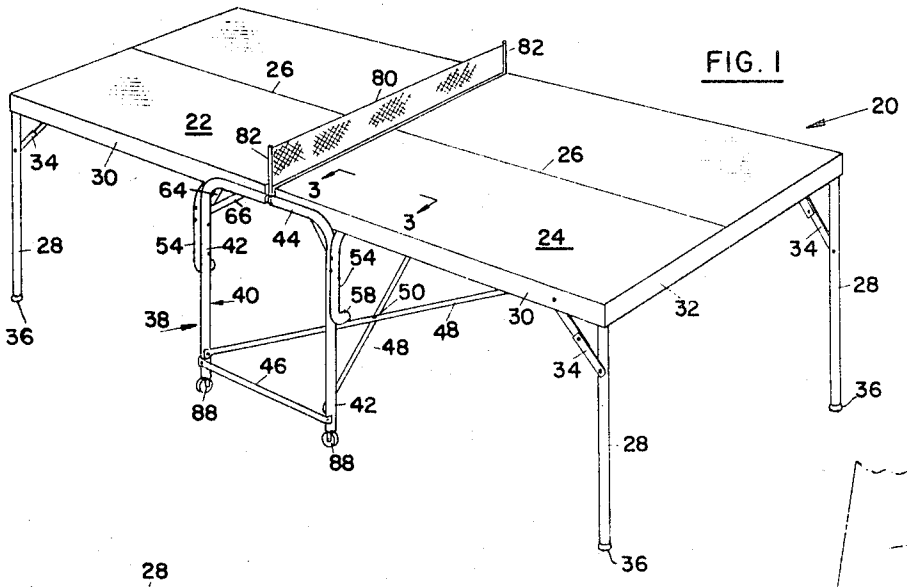
Aug. 23, 1966 C. SHORE 3,267,885

FOLDING TABLE

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FIG. 1



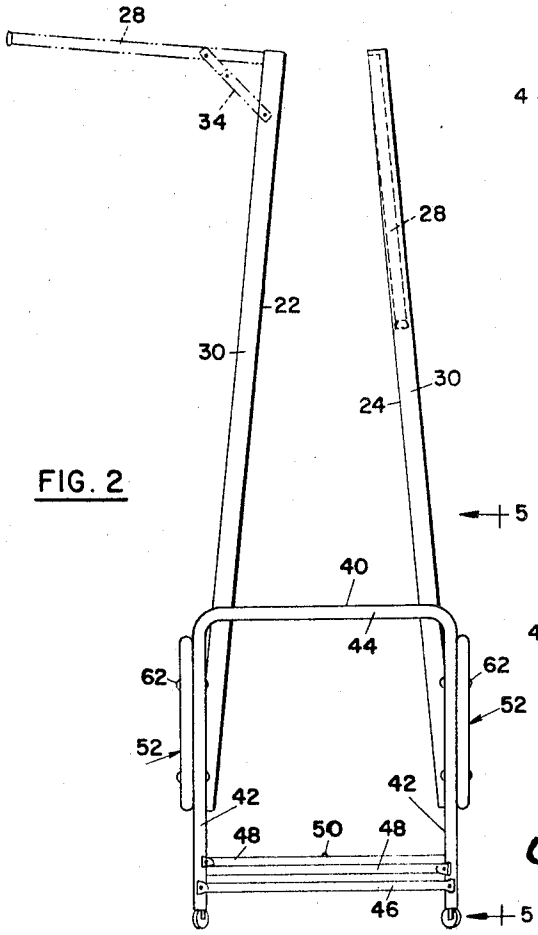


FIG. 2

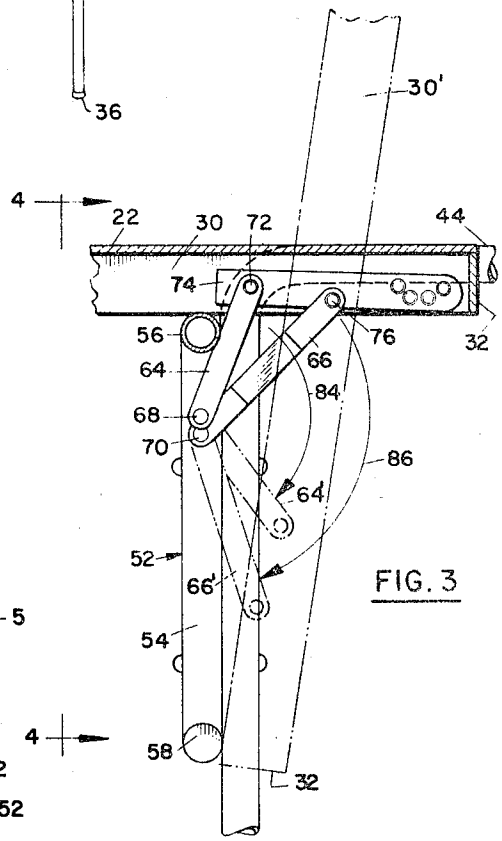


FIG. 3

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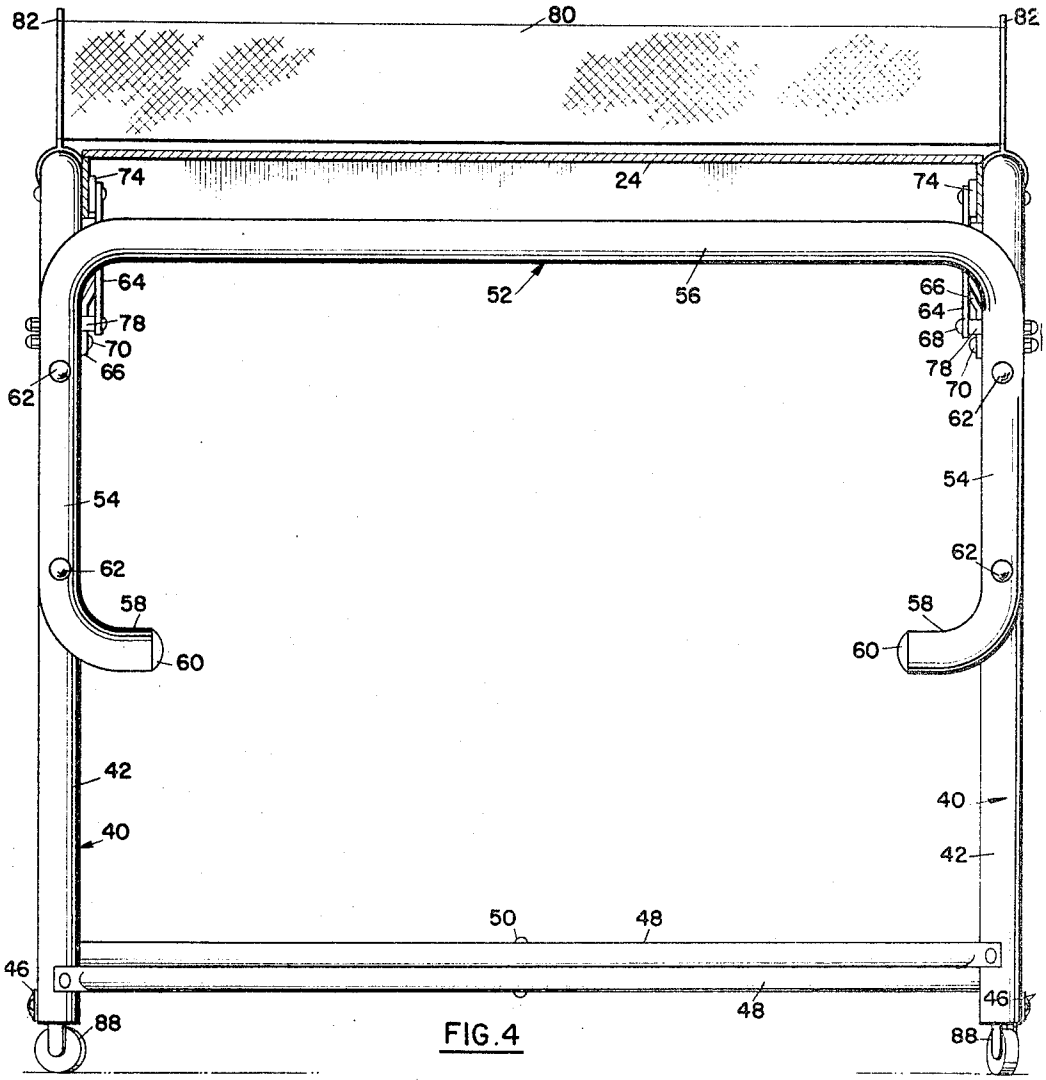


FIG. 4

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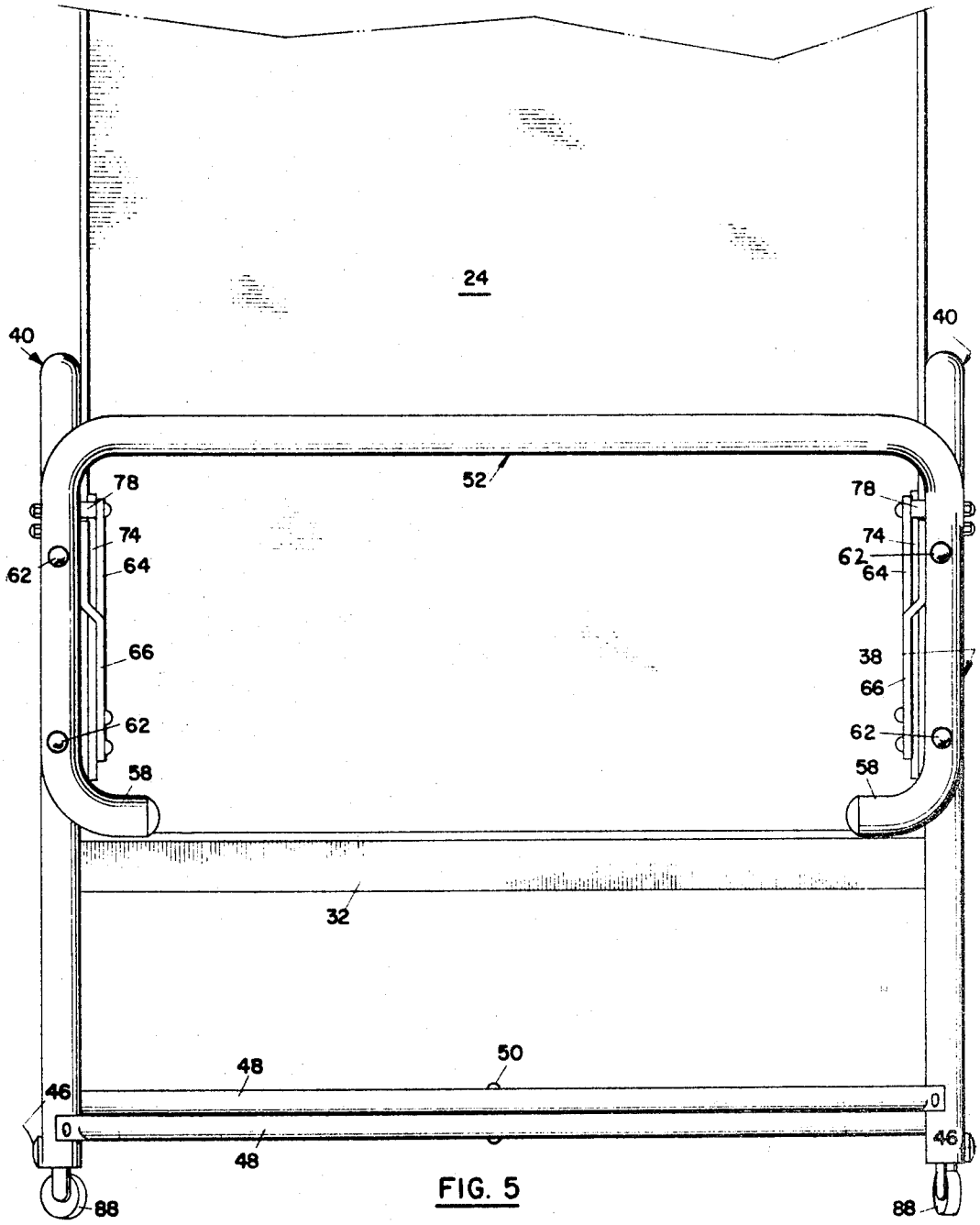


FIG. 5

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3,267,885

FOLDING TABLE

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5 Claims. (Cl. 108—112)

This invention relates to a folding table, and more particularly, to a table adapted to be used for the playing of table tennis, commonly referred to as Ping-pong.

In the recent past a number of foldable Ping-pong tables have been developed which are generally portable. Thus these tables have two halves which are pivoted upwardly from the outer end to be vertically orientated. The halves are then supported by some form of a supporting frame which includes swivelly mounted rollers, such as casters. Once the table assembly has been collapsed it can be moved to any part of a room for storage. In this way the major portion of the space of a room is not continually taken up by a Ping-pong table, and the room can be used for other functions.

The folding table of this invention embodies all of the functional features of the prior art movable Ping-pong tables. One of the novel features of the folding table of this invention, however, is the ease by which one person can open the table for use or collapse the table for storage and movement.

It is therefore an object of this invention to provide a novel folding table.

It is another object of this invention to provide a folding table which is particularly adapted for use as a table tennis table.

It is a further object of this invention to provide a folding table which includes a supporting frame mounted on casters whereby the table can be collapsed and rolled about.

It is a further object of this invention to provide a folding table which is easily opened and closed by one person.

It is a further object of this invention to provide a movable Ping-pong table wherein one half of the table top can be arranged in a vertical position to permit one person to play on the table.

These and other objects of this invention are accomplished by providing a folding table comprising a pair of table tops, a central supporting frame, each of said table tops being pivotally linked to said supporting frame, said pivotal linkage including a first bar having one end pivoted to said frame and the other end pivoted to said table top and a second bar pivoted to said frame and to said table top, and means for maintaining said table tops in a substantially vertical position when pivoted upwardly around said pivotal linkage.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

FIG. 1 is a perspective view of the folding table of this invention;

FIG. 2 is a side elevational view of the table of this invention in its folded condition;

FIG. 3 is an enlarged sectional view taken along the line 3—3 of FIG. 1, and showing the condition of a portion of one table top in its collapsed condition in phantom;

FIG. 4 is a sectional view taken along the line 4—4 of FIG. 3; and

FIG. 5 is a side elevational view of the table of this invention in its collapsed form, and taken in the direction of the line 5—5 of FIG. 2.

Referring now in greater detail to the various figures of the drawings wherein similar reference characters refer

to similar parts, a folding table embodying the present invention is generally shown at 20 in FIG. 1. Device 20 basically comprises a pair of identical table tops 22 and 24, with each having a customary center line 26, for use in playing Ping-pong, and corner supporting legs 28.

Table tops 22 and 24 can be made of any material generally used for Ping-pong table tops, such as plywood or composition board. The table tops are provided with side facings 30 and end facings 32. Collapsible leg braces 34 maintain legs 28 in the open position. Leg braces 34 are of a conventional design, such as that generally used on card tables. Legs 28 are made of tubular steel, which may be chrome plated, and have end caps 36 in the bottom thereof. These end caps are made of plastic or rubber, and can be used to glide the table along the floor.

The center of the table includes a central supporting frame generally indicated at 38. Central supporting frame 38 includes a pair of identical U-shaped members 40, with each U-shaped member having a pair of parallel legs 42 and an integral bridging section 44 being uppermost. A horizontal brace 46 is riveted to the bottom of each pair of legs 42. The two U-shaped members 40 are joined by transverse, diagonally disposed horizontal braces 48. Braces 48 are riveted to the legs 42 and are riveted at their centers as best shown at 50 in FIG. 4.

Frame 38 further includes a pair of U-shaped tubular members 52 which join U-shaped members 40. Members 52 include vertical legs 54 and bridging section 56 which is uppermost. Legs 54 also include inwardly projecting flanges 58 extending from the bottom thereof. As best seen in FIG. 4, flanges 58 are integral with and formed from legs 54. The ends of flanges 58 are sealed by end caps 60 which can be of the same metal as tube 52 or plastic. U-shaped members 52 extend perpendicularly to members 40 and are riveted thereto as shown at 62 in FIG. 4. The top surface of bridging section 56 is lower than the top surface of bridging section 44, as best seen in FIGS. 2 and 4.

Table tops 22 and 24 are each pivotally linked to center supporting frame 38 by two pairs of bars 64 and 66. As seen in FIG. 3, bar 64 has one end pivotally secured by pin 68 to leg 54 of U-shaped member 52. Likewise, bar 66 has one end pivotally secured by pin 70 to the same leg 54 of U-shaped member 52. Pivot pin 68 is vertically aligned with pin 70, but is positioned slightly above pin 70. The other end of bar 64 is pivotally secured to edge 30 of table top 22 by pin 72. In order to reinforce edge 30, a steel plate 74 is riveted to the inside face of edge 30. The pivotal connection is through this plate in addition to edge 30. The other end of bar 66 is also pivotally secured to side edge or facing 30 by pin 76. Again, the pin passes through both the facing 30 and steel plate 74.

As seen in FIG. 4, bar 64 is straight throughout its length. The base of the bar is horizontally spaced from leg 54 by a spacer ring 78. The lower portion of bar 66 is inwardly offset. Thus this lower portion will abut leg 54. The purpose of this offset will be explained hereinafter.

The use of the table of this invention as a Ping-pong table is shown in FIG. 1. As seen therein, the outer ends of the table halves are supported by legs 28. The center of the table is supported by frame 38. A conventional net 80 is mounted across the center of the table and is supported by vertical posts 82 which are secured on bridging sections 44 of U-shaped member 40. As seen in FIG. 3, when the table is in its open condition, the bottom edge of facing 30 will rest on bridging section 56 of U-shaped member 52.

When it is desired to collapse the table for storage, net 80 and its supporting post 82 are first removed. How-

ever, if desired, they can be left in place. Thereafter the table halves 22 and 24 are pivoted upwardly to the position shown in FIG. 2. This pivoting is accomplished by lifting the outer ends of the table tops and rotating the tops upwardly. This in turn causes each pair of links 64 to rotate downwardly in the direction of arrow 84 in FIG. 3. Likewise each pair of links 66 will rotate downwardly in the direction of arrow 86 in FIG. 3. As previously pointed out, each table top 22 and 24 is supported by a pair of links 64 adjacent each outer edge 30 and a pair of links 66 adjacent each outer edge 30. The lower positions of linking bars 64 and 66 are shown at 64' and 66', respectively, in FIG. 3. Having the lower portion of bar 66 inwardly offset with respect to the lower portion of bar 64, as shown in FIG. 4, aids in permitting the pivoting of these bars through the arc shown in FIG. 3.

After the table tops have been pivoted as described above, they will pass beyond the vertical, as shown at 30' in FIG. 3. Thus, the weight of the table top will tend to force continued rotation in the direction of arrows 84 and 86. However, this rotation is halted by the abutment of the lower edge of each table top against the flanges 58 of U-shaped members 52. In this manner, the mere weight of the table top alone in the angular orientation shown in FIG. 2 will maintain the table tops in their collapsed condition. It is unnecessary to use any additional securing means to hold them in place.

After the table halves have been pivoted upwardly, the legs 28 are folded into the table by collapsing braces 34. The table is then in its completely collapsed condition. If it is desired to move the table to a corner of the room or to some other storage area, the table can easily be pushed to this area by one person. This is accomplished by providing casters 88 in the bottoms of tubular legs 42 of U-shaped member 40. Thus the entire table will be supported on these casters when it is in its collapsed condition and therefore it can easily be moved about.

One of the prime features of this invention is the use of the pairs of linking bars 64 and 66. By referring to FIG. 3 it is seen that if a single linking bar 64 were used, the necessary stability of the table top could not be maintained. Thus any attempt to pivot around a single linking bar would permit too free a movement of the table top 22. Therefore it is seen that the second linking bar 66 acts as a guide and stabilizer for the first linking bar. By having the pair of linking bars, the path of movement of the table top is predetermined and this path cannot be varied once the bars are secured in place. In this connection it is seen that bar 66 is of the proper length to insure that table tops 22 and 24 will be horizontal in their open conditions. However, when the tops are pivoted upwardly bar 66 is of a length to insure that the table tops will pass over center with respect to the vertical plane. Thus the weight of the table top will tend to force the table tops through continued rotation. Having bar 66 offset relative to bar 64 permits pivot pins 68 and 70 to be closed adjacent each other thereby having substantially a single pivot point.

The table of this invention can also be used by a single person for practicing Ping-pong. Thus, one table top can be pivoted upwardly to the position shown in FIG. 2. The other table top can remain horizontal and the net can be left in place. A single person using the table could hit a Ping-pong ball against the vertically oriented table half and the ball would be returned to the horizontal half. The use of the table for this purpose is facilitated by the fact that a single person could easily open or collapse the table and roll it to the desired location on casters 88.

If desired, flanges 58 can be replaced by a pair of horizontal bars which extend across the entire width of the table and are riveted to legs 54. This horizontal bar would serve the same function as flanges 58 in providing a stop for the rotational movement of table halves 22 and 24 in their collapsed condition. However, the flanges 58 are preferred because they are more attractive in appearance and require less material. Additionally, the necessity of riveting a horizontal bar in place is obviated by having the flanges which are unitary with the U-shaped members 52.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

What is claimed as the invention is:

1. A folding table comprising a pair of table tops and a central supporting frame, said central supporting frame including a pair of vertical legs on each lateral side of said table tops, said legs being positioned adjacent the inner ends of said table tops when said table tops are in a horizontal position and aligned, said frame further including a pair of members having transverse portions passing under said table tops and being connected to said legs on opposite sides of said table tops, said members being substantially U-shaped with the transverse portions forming the bridging portions of the U and the legs of the U are secured to said vertical legs, said legs of said U having flanges formed at the bottom thereof and projecting inwardly toward each other, said flanges being integral with and formed from said legs of said U, pivot means secured to said frame and to each of said table tops whereby each of said table tops may be pivoted from a substantially horizontal position to a position which is substantially vertical, but slightly beyond the vertical, said pivot means comprising a pair of first bars and a pair of second bars secured to each of the legs of each of said members and to each of the table tops, said flanges providing means for maintaining said table tops in said substantially vertical position when pivoted upwardly around said pivot means, and legs secured to the outer ends of said table tops for maintaining said table tops in a horizontal position.

2. The folding table of claim 1 wherein each of said table tops has side facings and said bars are secured to said side facings.

3. The folding table of claim 1 wherein each of said first bars is laterally spaced from said legs of the members and each of said second bars abuts said legs of the members, each of said second bars having an offset portion adjacent said legs of the members.

4. The folding table of claim 1 wherein said vertical legs have roller means secured at the bottom thereof.

5. The folding table of claim 4 wherein said roller means comprise casters.

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