United States Patent [19]

Cecchetti

[11] 3,865,050

[45] Feb. 11, 1975

[54] **CONVERTIBLE LEG ASSEMBLY**

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[73] Assignee: **Arco Falc srl,** Milan, Italy

[22] Filed: **June 22, 1973**

[21] Appl. No.: **372,860**

[52] **U.S. Cl.** ..... **108/19,** 16/42 T, 108/156, 248/188, 248/188.8, 248/188.9

[51] **Int. Cl.** **A47b 3/06**

[58] **Field of Search** ..... 108/11, 19, 156; 16/42 R, 16/42 T; 248/188, 188.2, 188.4, 188.8, 188.9

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[57] **ABSTRACT**

A leg assembly for a table top such as a game board or the like comprising a leg adapted to be received in frictional engagement by a receiving member in the underside of the table top and a cap adapted to frictionally engage the end of the leg to serve as a floor-engaging base thereof and also adapted to be received in fractional engagement by the member in the underside of the table top to serve as a support for the table top in the absence of the leg.

7 Claims, 7 Drawing Figures

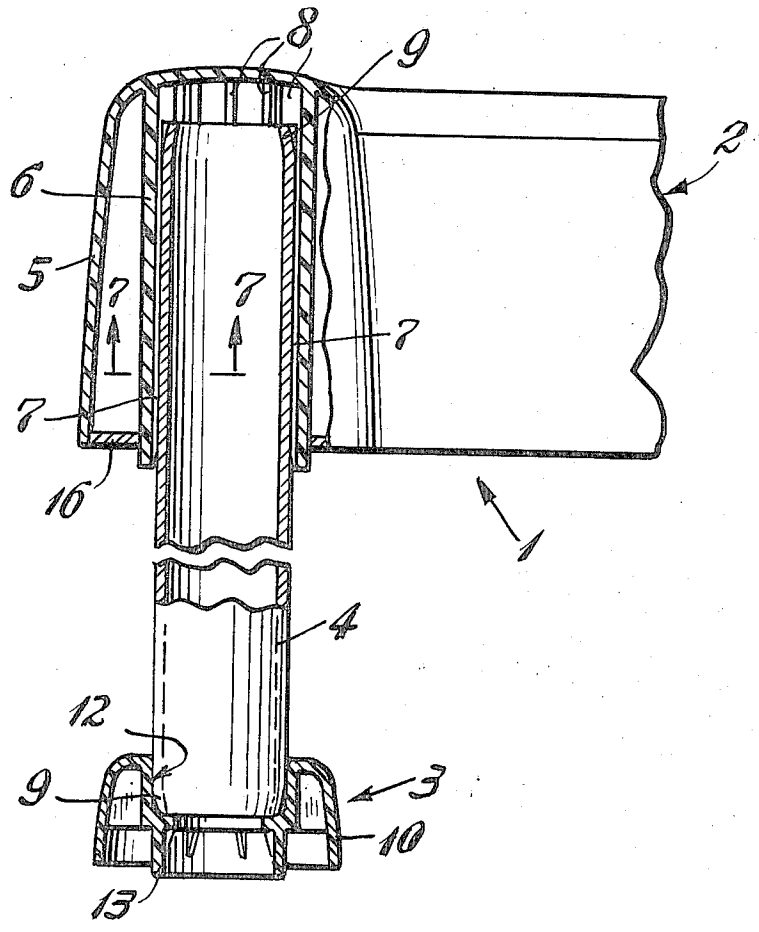


Fig. 1

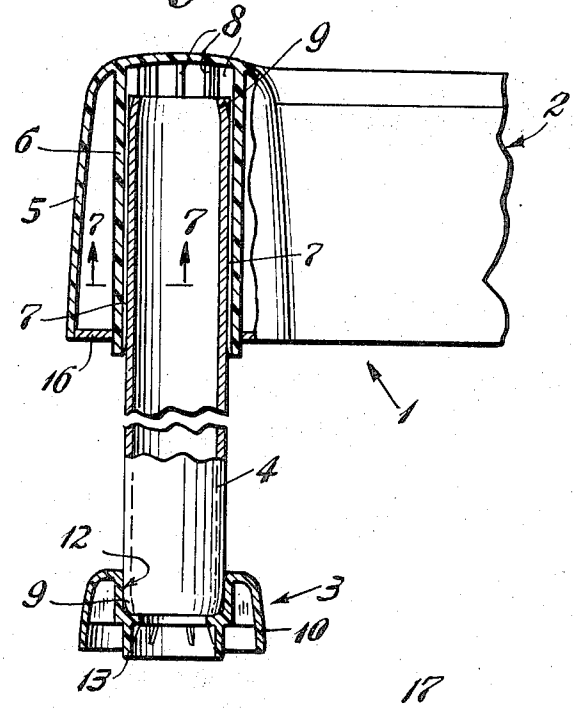


Fig. 2

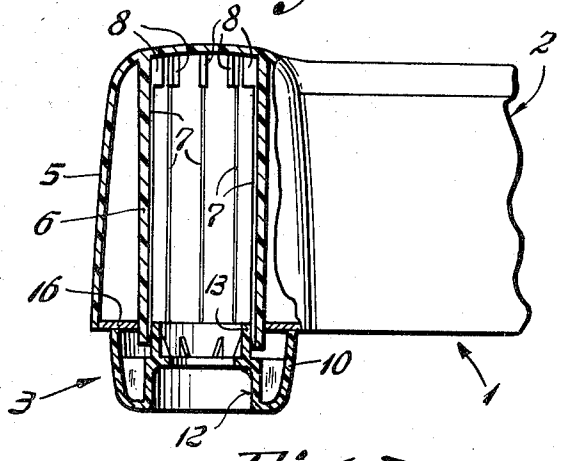


Fig. 3

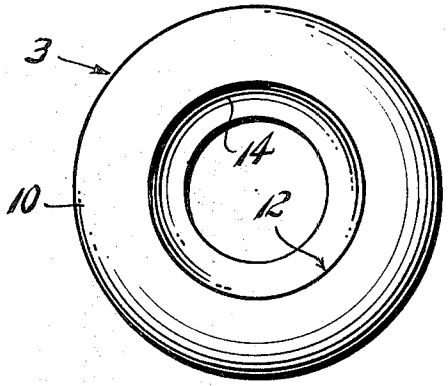


Fig. 4

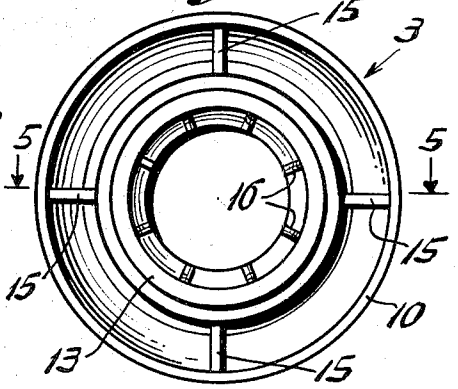


Fig. 5

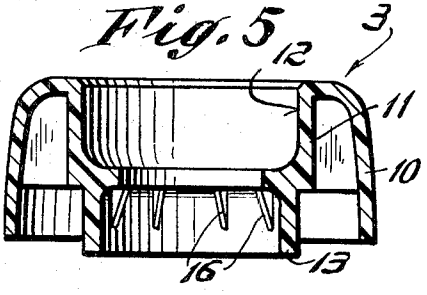


Fig. 6

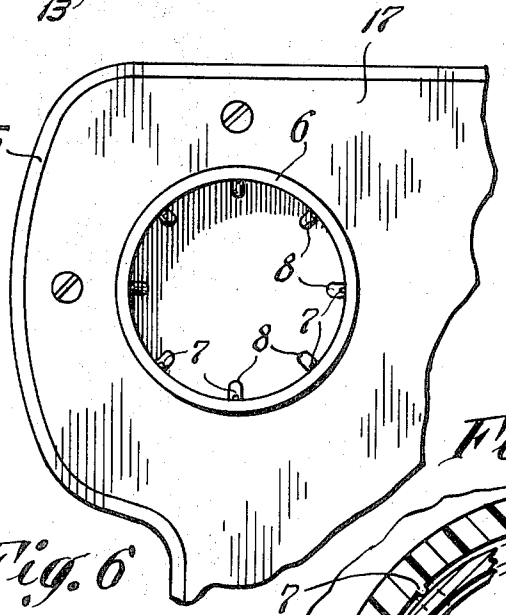
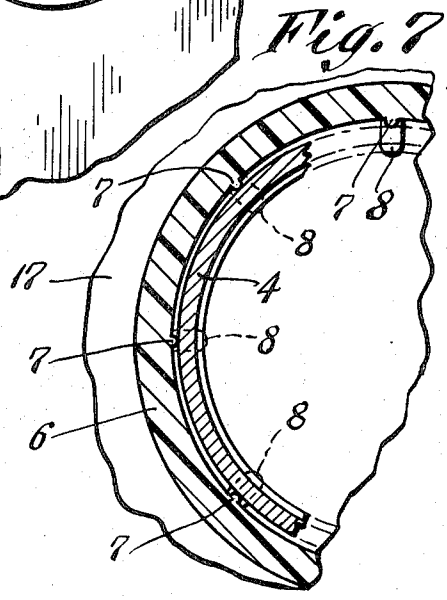


Fig. 7



CONVERTIBLE LEG ASSEMBLY

The present invention relates to a novel leg assembly for table tops of all types, particularly those table tops such as game boards which are sometimes provided with floor-engaging legs to maintain them at table height during use and which are sometimes provided without legs and are intended for use in direct contact with a table or on a floor. There are certain advantages of providing a game board with legs whereby the game can be played at table height by standing or sitting players without the necessity or interference of another support such as a table. There also are advantages of providing a game board which is free of legs and which is played on direct contact with a supporting surface such as a table or floor.

While there are presently available game boards having four removable legs, which game boards can be used without the legs on a support such as a table top or a floor, such game boards are not designed for such use and cannot be moved easily over the support without marking the surface of the support or damaging the game board or without lifting the game board to reposition it on the support as may be required with games involving alternate players sitting around a supporting table.

Similarly such game boards which are designed for use at table height with floor-engaging legs have certain disadvantages even when used with the legs in place. Generally the legs are narrow and provide a small area of engagement with the floor. If the game involves any degree of stress applied against the game board, as occurs in action games such as soccer, ice hockey, basketball, pinball, and the like, the small area of contact between the base of the legs and the floor provides little protection against movement of the legs over the surface of the floor, whereby the game is unstable during use.

Another disadvantage of known legged game boards is the difficulty of locating a level floor surface at which all four legs contact the floor and support the game board equally. The problem is compounded if the legs are not resistant to movement over the floor surface, as discussed supra, because the game might initially be positioned on a level section of the floor and might move to an unlevel section of the floor during use, thereby becoming unsteady.

It is the principal object of the present invention to provide a novel convertible table top such as a game board adapted for use with either legs having floor-engaging cups or with support-engaging cups in the absence of the legs.

It is another object of this invention to provide a novel convertible table top such as a game board having novel reversible supporting cups which are capable of frictional engagement with the legs to provide slip-resistant contact with a floor and which are also capable of frictional engagement directly with the underside of the table top to provide slip-permitting contact with the surface of a support such as a table.

It is still another object of this invention to provide a table top such as a game board having supporting legs provided with floor-engaging cups, the engagement between the legs and receiving members on the underside of the table top and between the legs and the cups being frictional whereby the table or game can be leveled on the surface on which it is placed by the application of downward pressure against the table top or game board.

These and other objects and advantages of the present invention will be apparent to those skilled in the art in the light of the present disclosure including the drawings, in which:

FIG. 1 is a partial sectional front elevation showing a table and leg assembly according to an embodiment of the present invention,

FIG. 2 is a partial sectional front elevation showing a table and leg cup assembly according to another embodiment of the present invention,

FIG. 3 is a plan view of a leg cup according to the present invention,

FIG. 4 is a plan view of the underside of the leg cup of FIG. 3,

FIG. 5 is a cross-sectional view taken along the line 5—5 of FIG. 4,

FIG. 6 is a bottom plan view of a corner of the table top containing the leg-cup receiver member, and

FIG. 7 is an enlarged sectional view taken along the line 7—7 of FIG. 1.

Referring to the drawings, in which like numerals indicate similar parts, the present invention relates to a table 1 comprising a top 2 and a plurality of supporting base members or cups 3 which are used alone in inverted position, as shown in FIG. 2, or are used in association with cylindrical tubular legs 4 in direct position, as shown in FIG. 1.

As illustrated the table top is a unitary injection-molded plastic game board comprising an outer frame 5 and a plurality of cylindrical sockets or leg-cup receiving members 6, each of which is provided with a plurality of equally spaced longitudinal ribs 7 which terminate with a stop member 8. The spaced ribs 7 provide a discontinuous interior surface on each cylindrical receiving member 6 for tight frictional engagement with each leg 4 and yet permit leg 4 to be withdrawn from socket 6 with relative ease. The stop members 8 contact the upper end of leg 4 when the leg is introduced into the receiving member 6 to the full extent, and the ends of each leg 4 have their walls tapered, as shown by 9, to facilitate introduction into receiving member 6 and into cup 3.

The cup 3 illustrated is an injection-molded plastic element having an outer wall 10 and a central inner wall 11 which comprises a top leg-receiving cylindrical well 12 having an inside diameter which is equal to that of leg 4 and a bottom cylindrical projection 13 having an outside diameter which is equal to that of the leg 4. The well 12 provides tight frictional engagement with the leg 4 when the cup 3 serves as a floor-engaging cup at the end of each leg 4, as shown in FIG. 1, to provide an element having a larger diameter than the leg for increased slip-resistance with the floor or rug thereon. However when the table top is to be used in direct contact with another support such as a table, the legs 4 are removed from the receiving members 6, the cups 3 are removed from the legs 4, inverted, and the cylindrical projection 13 on each is inserted directly into a receiving member 6 for tight frictional engagement therewith, as shown in FIG. 2. The base of the inverted cup is smooth so as to permit the cup-supported table top, such as a game board, to be slid over a support with ease and without scratching the surface of the support.

Referring to FIGS. 3 to 5 of the drawings, the cups 3 have a rounded outer wall 10 which forms the opening of the leg-receiving cylindrical well 12. Well 12 is tapered inwardly at the base, as shown by 14, to form a restraining seat for the leg, as shown in FIG. 1. As shown in FIGS. 4 and 5, the outer wall 10 of the cup is attached to the outside of the cylindrical wall 11 forming the well 12 by means of four spaced braces 15 for stability. The portion of the central inner wall 11 forming the bottom cylindrical projection 13 has a smooth outer wall which is unobstructed for frictional engagement with ribs 7 forming the interior surface of the receiving member 6, as illustrated by FIG. 6. Supporting ribs 16 are also illustrated for stability. FIG. 6 also illustrates the presence of a base board 17 which is attached to the underside of the table top, such as by means of screws, the lip of the receiving member 6 extending beyond the surface of the board 17 for engagement with the cylindrical projection 13 of the cup 3, as shown in FIG. 2. If desired, the lip of the receiving member can extend further beyond the surface of the base board 17 and the projection 13 on cup 3 can be flush with the extremity of wall 10 on cup 3 to provide a floor-engaging cup on which both 10 and 13 engage a smooth surface such as a floor. This is generally not necessary in cases where the floor has a compressible covering such as a rug.

FIG. 7 more clearly illustrates the leg 4 engaged within the receiving member 6 in contact with the surface of the longitudinal ribs 7, according to FIG. 1. As shown, the ribs provide spacing between the outer surface of the leg and inner surface of the receiving member 6 carrying the ribs. The limited areas of contact between the leg and the receiving member, i.e. the surface of the ribs 7, facilitates insertion and removal of the legs. However since the ribs 7 of the receiving member 6 tightly frictionally engage the legs 4, each leg can be pushed into its receiving member 6 to the extent required to level the table top 2 or render it steady on the floor. If the floor is even, all legs will be inserted fully until they contact stop members 8. If the floor is uneven, all legs will be inserted partially, and then the table top is pressed downward slightly until all legs contact the floor and support the table top equally. One or more of the legs will be out of contact with its stop member 8 in order to compensate for the uneven floor.

It should be understood that the specific structure illustrated is not deemed critical and that an essential feature of the present invention is the provision of a convertible table which can be used with legs having floor-engaging cups or can be used without legs, the cups being frictionally attached directly to the underside of the table top to provide surface-engaging supports.

The tables of the present invention may be games in which the table top is a game board comprising a walled playing field as used for soccer, ice hockey, basketball, pinball, or the like.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. A convertible table having a table top adapted to be supported on a floor by means of legs and also adapted to be supported directly on another surface by means of base members in the absence of legs, comprising a table top, a plurality of sockets on the underside of said table top, each of which is adapted to receive one end of a leg in frictional engagement, and a plurality of base members each of which has a base surface and a top surface, the top surface comprising means adapted to frictionally engage the other end of the leg to provide a floor-engaging member having greater slip-resistance than the leg, and the base surface comprising means adapted for direct frictional engagement with the sockets in the underside of the table top, when the base member is inverted, to provide surface-engaging supports for the table top in the absence of the legs.

2. A convertible table according to claim 1 in which the legs, base members and sockets in the underside of the table top are cylindrical.

3. A convertible table according to claim 1 in which the sockets on the underside of the table top are provided with a plurality of equally spaced longitudinal ribs which provide spaced areas of direct frictional engagement alternatively with the legs and with the inverted base members in the absence of the legs.

4. A convertible table according to claim 3 in which the sockets on the underside of the table top are also provided with stop members, associated with said ribs, to limit the extent to which the legs can be inserted into the sockets and to permit each of the legs to be inserted into its socket to the same extent as each of the other legs.

5. A convertible table according to claim 1 in which each base member has a base surface which is adapted to provide slip-resistant contact with the floor and a top surface which is adapted to provide slip-permitting contact with another surface when the base member is inverted for direct frictional engagement with the sockets in the underside of the table top.

6. A convertible table according to claim 5 in which each base member comprises an opening in the top surface adapted to frictionally engage a leg and a projection in the base surface adapted to frictionally engage the socket in the underside of the table top when the table is used without legs.

7. A convertible table according to claim 1 in which said table top comprises a unitary injection-molded plastic body containing a plurality of plastic sockets on the underside thereof.

* * * * *

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 3,865,050

DATED : February 11, 1975

INVENTOR(S) : CLAUDIO CECCHETTI

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the cover sheet, in the ABSTRACT, line 7, "fractional" should read -- frictional --; column 2, line 20, "receiver" should read -- receiving --; column 4, claim 3, line 5, "and" should read -- or --.

Signed and sealed this 1st day of July 1975.

(SEAL)
Attest:

RUTH C. MASON
Attesting Officer

C. MARSHALL DANN
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