

[54] FOLDING TABLE

[75] Inventors: Leonida Castelli; Giancarlo Piretti, both of Bologna, Italy

[73] Assignee: Anonima Castelli s.a.s, Bologna, Italy

[22] Filed: June 17, 1971

[21] Appl. No.: 154,088

[30] Foreign Application Priority Data

July 23, 1970 Italy .....52342 A/70

[52] U.S. Cl. .... 108/125, 108/129

[51] Int. Cl. .... A47b 3/00

[58] Field of Search ..... 108/35, 36, 77, 80, 108/125, 129, 131, 132; 248/155.2, 155.4, 167

[56] References Cited

UNITED STATES PATENTS

1,905,491 4/1933 Null ..... 108/125

FOREIGN PATENTS OR APPLICATIONS

185,894 8/1936 Switzerland ..... 108/35

Primary Examiner—James C. Mitchell

Attorney—Kenyon & Kenyon Reilly Carr & Chapin

[57] ABSTRACT

A folding table comprising an upper board or plate forming the bearing plane of the table which is supported by legs pivotally connected to the lower surface of said board in order to be turned against said lower

surface or to be arranged in a position perpendicular to said board, as the table is in use position, characterized by the fact that:

each leg is independent from the other and is constituted by a stanchion, to the upper end of which is connected as an integral part a sidewardly extending vertical bracket, to which is pivotally connected a second similar vertical bracket which is movable with respect to the first one and is able to accomplish swinging movements through an angle of about 90° around an axis which is concentric with the stanchion axis, said first bracket being in turn pivotally connected, by means of a hinge having a pivot axis parallel to one of the sides of said board, to an angle element fixed to the lower surface of said board near one corner of said board, said second hinge being positioned so as to be spaced apart from said lower surface of the board just enough that as the first bracket and the second bracket are in abutting relation, both said brackets can be turned against said lower surface with the second bracket sandwiched between the first bracket and said board, limit stop means being provided to limit the movement of the movable parts and resilient locking means being further provided to hold the parts of the folding table in their operative position.

4 Claims, 7 Drawing Figures

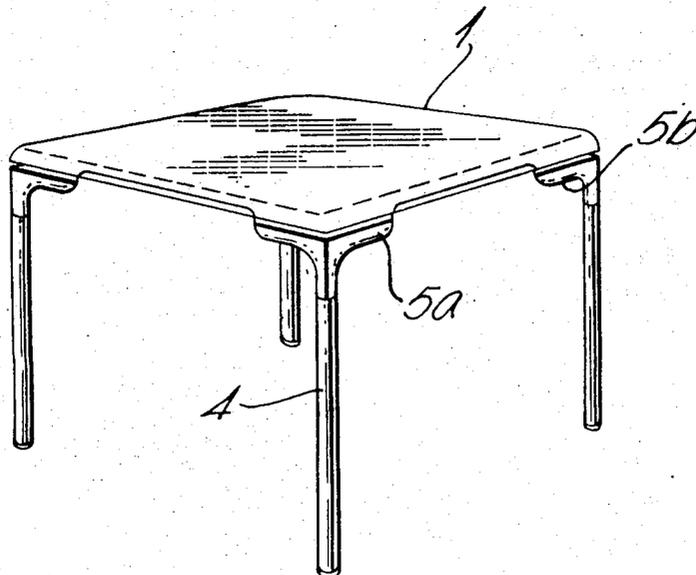


FIG. 1.

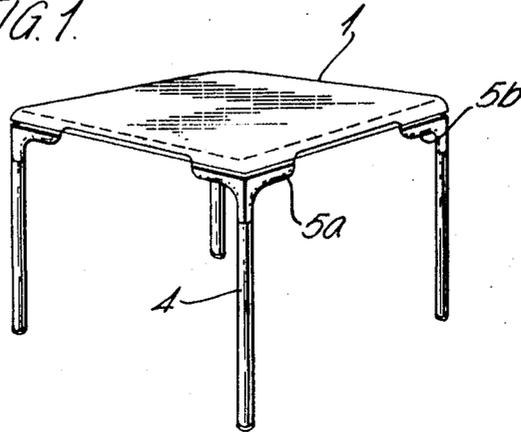


FIG. 2.

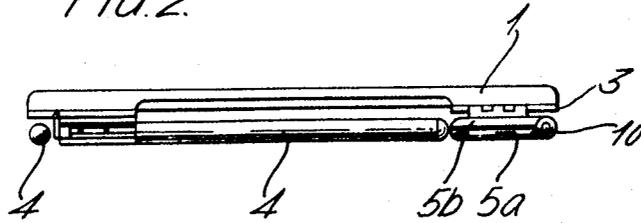
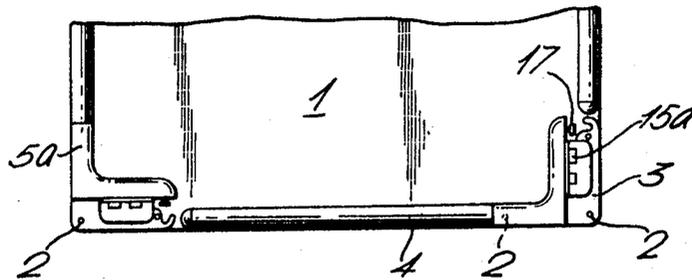


FIG. 3.



INVENTORS  
LEONIDA CASTELLI  
BY GIANCARLO PIRETTI  
*Kenyon & Kenyon, Kelly, Carr & Chapin*  
ATTORNEYS

FIG. 4.

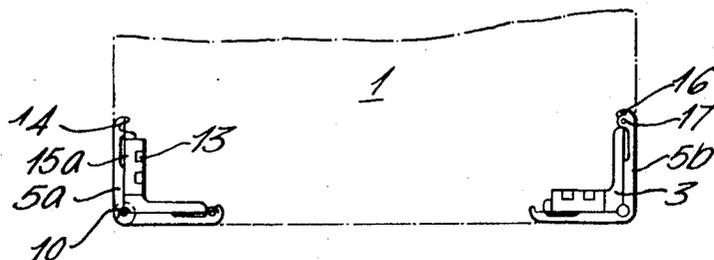
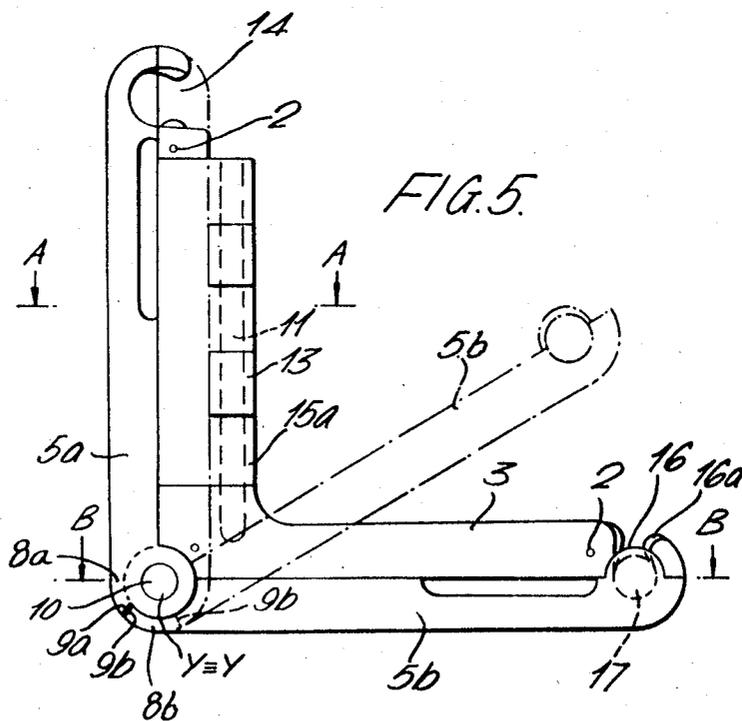
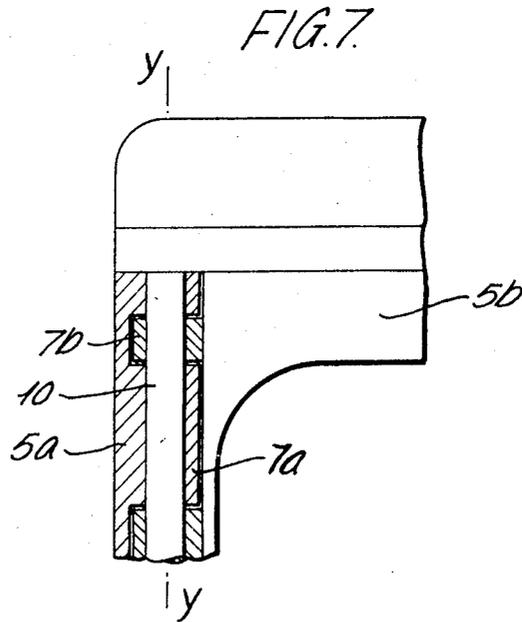
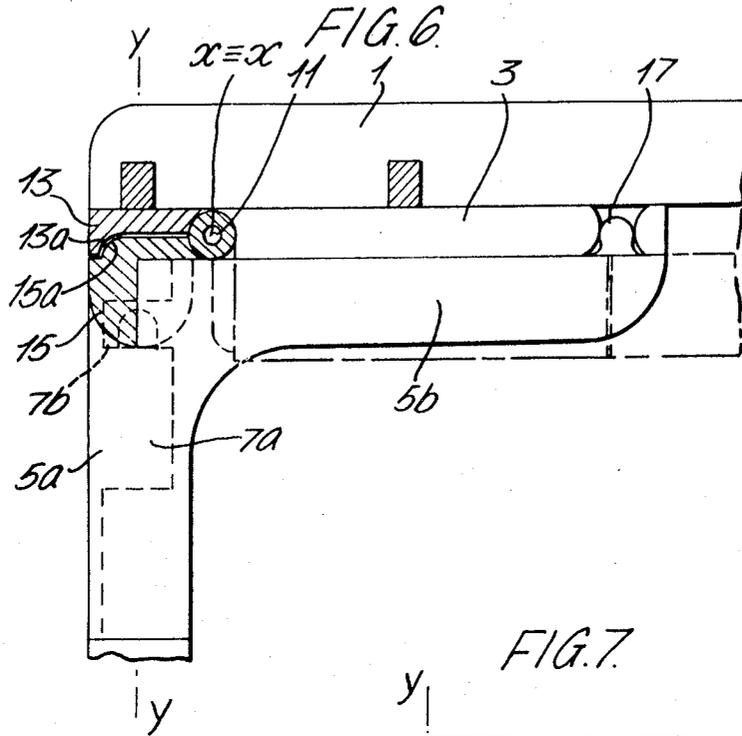


FIG. 5.



INVENTORS  
LEONIDA CASTELLI  
BY GIANCARLO PIRETTI  
TONYON & TONYON, REILLY, CORRI & CHAPIN  
ATTORNEYS



INVENTORS  
LEONIDA CASTELLI  
BY GIANCARLO PIRETTI  
*Kenyon & Kenyon, Kelly, Caw & Chapin*  
ATTORNEYS

## FOLDING TABLE

This invention relates to a folding table comprising an upper board forming the bearing plane, which is supported by legs which can be each independently folded against the lower surface of said board, thus enabling the folded table to attain a very compact disposition.

Each leg is comprised by a stanchion, to the upper end of which is connected as an integral part a first vertical bracket which is in turn pivotally connected to a second similar vertical bracket, the pivot axis between said two brackets being concentric with the axis of the stanchion so that said second bracket can perform swinging movements with respect to the first bracket through an angle of about 90°.

Therefore said second bracket, which is movable relative to the first one, can attain two limit positions, i.e., a first operative position wherein it is set at an angle of about 90° to the first stationary bracket, where it constitutes in combination with this latter a two arm supporting means for one of the corners of the board carried by the legs, and a second inoperative position, wherein the movable bracket has been turned against the first stationary bracket. The first bracket is pivotally connected to an angle member around a pivot axis which is horizontal and parallel to one of the sides of the upper board to which said member is fixed by means of screws or the like.

The hinge means provided between the first bracket and said angle member is so positioned and spaced apart from said board that, as the second bracket has been turned into contact with the first bracket both said brackets together with the stanchion can be turned against the lower surface of the board of the table. Further locking means are provided to hold the parts in their folded and unfolded positions as well as to limit the swinging movements of the parts.

In the table according to the present invention there is the advantage that, when in their use disposition, the parts forming the table, are firmly locked to each other so that the table acts as it would be constructed in a single body. Further the operations to be performed to fold and unfold the table are simple and do not require the use of any tool so that also an unskilled person is able to accomplish said folding and unfolding operations.

Several types of folding tables are already known, but they have invariably the inconvenience of being very unstable, except when they are provided with auxiliary devices to be actuated in order to hold the parts in their folded and unfolded positions, said locking devices increasing the cost of this piece of furniture which thus becomes heavy and its assembling and disassembling are difficult and complicate.

The folding table according to this invention overcomes said inconvenience and it can be constructed of various materials; preferably the board is made of wood, but it can be also substituted by a glass plate or by a plate of plastics or the like. Further all the parts are connected to each other so that the danger is avoided that any part can be lost.

The accompanying drawings show an embodiment of the invention, given merely by way of example. In said drawings:

FIG. 1 is a perspective view of the table when in use;  
FIG. 2 is a side view of the table in its folded position;

FIG. 3 is a detail of a view taken from the bottom, as the table is in its folded position;

FIG. 4 is a detail similar to that of FIG. 3, but as the table is in use position;

FIG. 5 is a detail in enlarged scale of FIG. 4, wherein in broken lines is indicated an intermediate position of the second bracket;

FIG. 6 is a detail of the cross section taken along line A—A of FIG. 5, and

FIG. 7 is a detail of the cross section taken along line B—B of FIG. 5.

With reference to the drawings, the board or plate 1 which forms the bearing plane of the table has fastened on the lower surface of said board at each corner, angle members 3. The members 3 are fastened by means of screws or the like, inserted in holes 2 arranged in said angle members 3. The angle members 3 are each constructed as an integral part of hinge members 13 of a hinge which are adapted to pivotally connect each of the table legs to said board 1 by the interposition of said member 3.

Now will be described one of the legs provided to support the board 1 at one of its corners. Each leg comprises a vertical stanchion 4 which at its upper end is integrally formed with a first vertical bracket 5a projecting, as a flag, outwardly from a side of the stanchion 4 parallel to a side of the board 1. To the first bracket 5a is pivotally connected a similar vertical bracket 5b by means of a hinge, the pivot axis of which is positioned so as to be substantially concentric with the axis Y—Y of the stanchion 4. Said hinge comprises hinge members 7a integral with the bracket 5a and hinge members 7b integral with the bracket 5b, said hinge members 7a,7b being respectively interlaced to each other and pivotally connected by a pivot pin 10, which is preferably formed of steel. This hinge device is so shaped that its parts cannot be seen, except if they are viewed from the lower part of the table when in use position. For such a purpose near the hinge the hinge members 7a and 7b respectively extend with projecting parts 8a and 8b having vertical stopping surfaces 9a, 9b radially positioned with respect to the axis Y—Y, said surfaces 9a,9b being in abutting relation as the brackets 5a and 5b reach their mutual operative position (FIGS. 1 and 5), thus constituting a limit stop means for limiting the movement of the second bracket 5b relative to the bracket 5a. In this operative position the parts 8a, 8b also hide the hinge members 7a,7b so that in this position of the table, i.e., the use position only the joint line between the abutting surfaces 9a,9b can be seen from the outside.

At its upper side the bracket 5a is pivotally connected with the angle member 3 by means of a second hinge device, wherein the hinge members 15 and 13 are made integral with the bracket 5a and with the angle member 3 respectively, are interlaced to each other and are pivotally connected by a pivot pin 11 having a horizontal axis positioned parallelly near one side of the board 1, but spaced apart enough from the lower surface of the board 1 and from the inner surface of the bracket 5a just to allow the movable bracket 5b to be turned into contact with the stationary bracket 5a and then both these two brackets 5a,5b in unison to be rotated through an angle of 90° until they rest on the lower surface of the board 1 in such a manner that the movable bracket 5b may be sandwiched and firmly held between said board 1 and said bracket 5a (FIGS. 2 and

3). Also with the hinge members 13 and 15 are associated limit stop means 13a, 15a designed to come in abutting relation one with the other to define the mutual position of the parts of the table as they reach their operative position (FIG. 6). At the ends of each angle member 3 which comprises two arms set at a right angle one to the other, means are provided designed for cooperation with other means provided at the upper end of the movable bracket 5b in order to form a resilient locking device. For such a purpose in the embodiment shown in the drawings at the inner side of the end of each arm of the member 3 are arranged seats 14 and 16, this latter being provided with a restricted entrance 16a. Concurrently from the upper parts of the bracket 5b extends upwardly a tooth 17 so constructed to be elastically deformable at least in radial direction, or said tooth could be stiff but lined with a suitable substantially resilient material. Said tooth 17 is so positioned as to be able to enter and to be engaged into recess 14, as the bracket 5b has been turned against the bracket 5a and both the brackets 5a, 5b as a whole are in turn turned against the lower surface of the board 1, i.e., against the area where there is the associated angle element 3, while said tooth 17 is entrapped into the recess 16 owing to the effect due to the resilient material of which at least the outer portion of said tooth 17 is constructed and to the constriction 16a provided at the entrance of the recess 16, as the bracket 5a has been brought in its operative position, i.e., as the bracket 5b has been turned in the opposite direction so as to be set at an angle of about 90° with respect to the bracket 5a. It will be apparent that each leg 4 and the parts connected thereto is designed to be turned against the lower surface of the board 1 by rotating around an axis X—X parallel to and near one of the side of said board 1 so that the pivot axes X—X are positioned along the periphery of the board 1 and are each successively turned of an angle of 90° with respect to the preceding one. Further each side of the board 1 is at least as long as the length of one leg 4 and of the brackets and parts connected thereto and movable therewith, so as to be foldable against the lower surface of said board or plate 1.

We claim:

1. A folding table comprised of
  - a. a board having an upper and lower surface and a plurality of corners,
  - b. at least four legs each of said legs comprised of a stanchion having a substantially linear axis, a first bracket rigidly attached to said stanchion in juxtaposition to said board, a second vertical bracket pivotally connected to said first bracket and movable about an axis concentric with the axis of said stanchion to permit said second bracket to be moved into abutting relationship with said first bracket, an angle member fastened to the lower surface of said board, pivotally connected to said first

bracket at an axis parallel to a side of said upper board and positioned in spaced apart relationship to said lower surface of the board so that when said first bracket and said second bracket are in abutting relation, said brackets can be rotated about said first hinge toward the lower surface of said board so that said second bracket is tightly disposed between said first bracket and said board;

- c. limit stop means to limit the movements of said first and second brackets; and
- d. resilient locking means to secure each of said first and second brackets in their respective positions when the corresponding one of said legs is perpendicular to said board.

2. A folding table as recited in claim 1, wherein the second bracket is pivotally connected to the first bracket by a first hinge member comprised of a pin and two female hinge members cooperating therewith and interconnected to each other, one of said two members being constructed as an integral part of the first bracket, and the second member as an integral part of the second bracket, each of said female members extending outwardly with partially cylindrical wings ending with vertical surfaces positioned radially with respect to the pivotal axis and designed for cooperation one with the other for forming stop means adapted to define the mutual operative position of said brackets as said radial surfaces are in abutting relation, while at the same time said wings hide from view said hinge members in the operative position of the table.

3. A folding table as recited in claim 1, wherein each angle member which is associated with one leg comprises two arms, the ends of each of said arms being positioned at the same distance from the corresponding corner of the board as the end of the corresponding first and second brackets, wherein each of said second brackets comprises a tooth extending upwardly from the upper side of the second bracket, and wherein at each of said ends of each said angle member a recess is provided facing the inner part of the table and designed for receiving one of said teeth, one of said recesses housing said tooth as the second bracket is in its operative position and the other as the second bracket is in abutting relation with the first bracket and both of said brackets are turned against the lower surface of said board, and further comprising means associated with the one of said recesses which is more remote from the first bracket and with said tooth in order to resiliently lock said tooth when housed in said recess.

4. A folding table as recited in claim 3, wherein each said tooth has its outer portion constructed of a resilient material, and wherein each recess where said tooth is engaged in the operative position of the second brackets has a restricted entrance through which the tooth can pass only with an elastic deformation of said outer portion of said tooth.

\* \* \* \* \*