June 6, 1972 E. J. FORD 3,667,803

CONVERTIBLE FURNITURE

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FIG. 1.

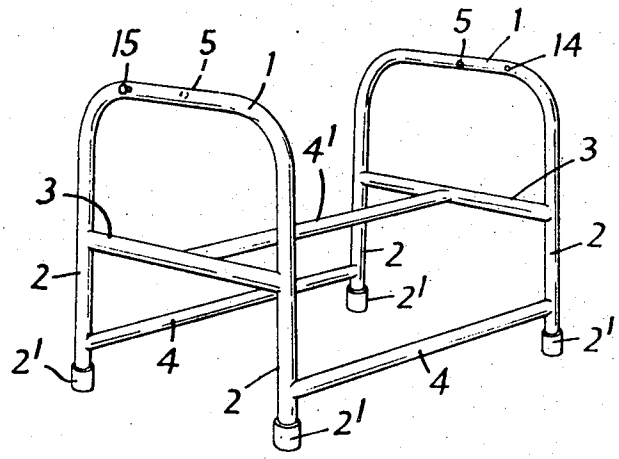


FIG 2

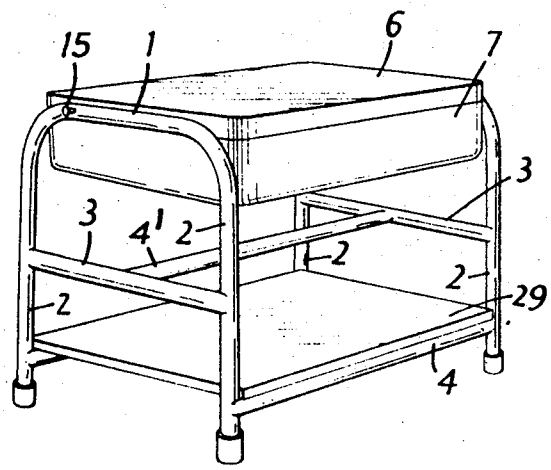


FIG. 3.

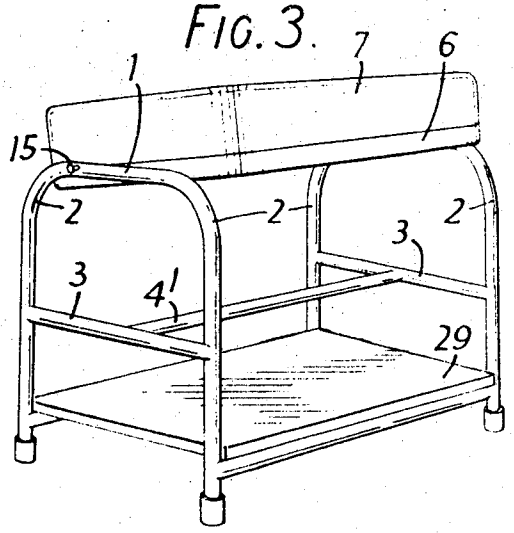


FIG. 4.

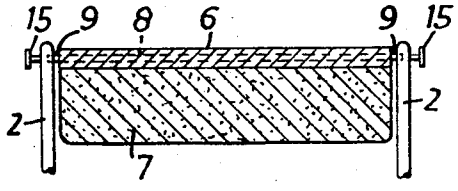
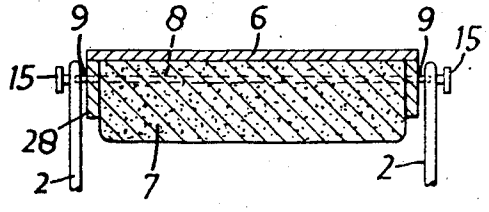


FIG. 14.



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FIG. 5.

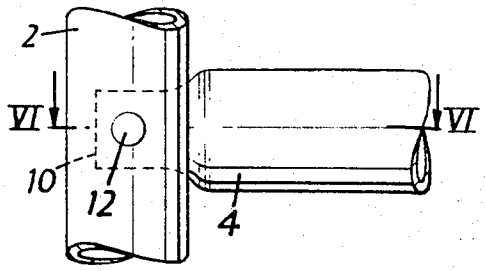


FIG. 7.

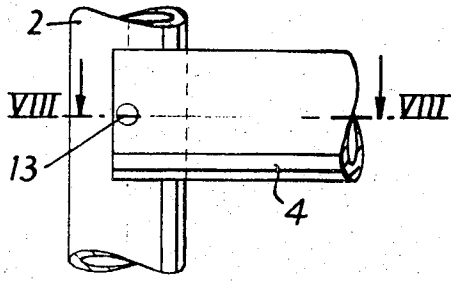


FIG. 6.

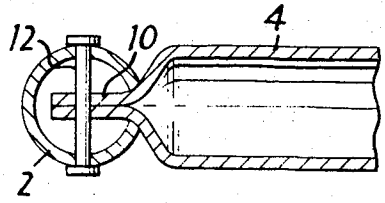


FIG. 8.

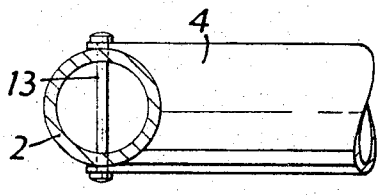


FIG. 10.

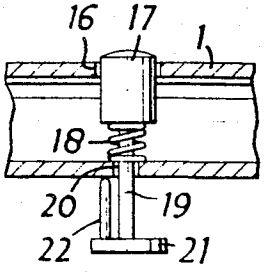


FIG. 9.

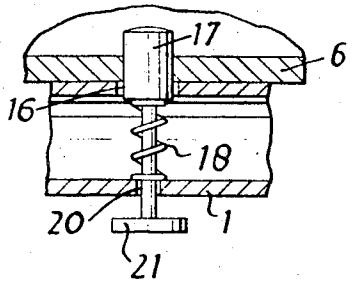


FIG. 11.

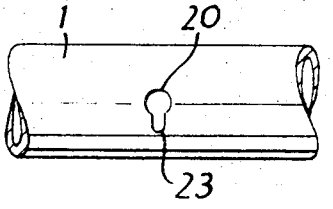


FIG. 12.

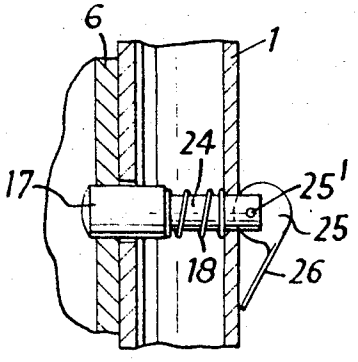
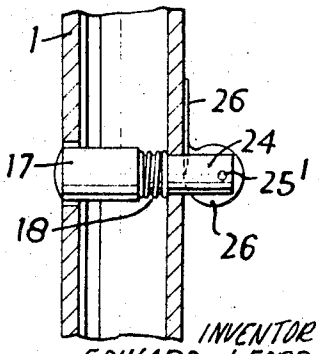


FIG. 13.



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3,667,803

CONVERTIBLE FURNITURE

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Int. Cl. A47b 85/04; A47c 7/50, 27/00
U.S. Cl. 297—119 2 Claims

ABSTRACT OF THE DISCLOSURE

A piece of furniture comprises a support portion and an upper portion that includes a table top and a cushion arranged back-to-back, the upper portion being pivotally mounted on the support portion so that the article can be converted from a table to a leg rest and vice versa by turning the upper portion so as to bring the table top or cushion uppermost as required. Means are provided for locking the upper portion to the support portion when the article is to be used as a table.

This invention relates to convertible furniture, the object of the invention being to provide an article of furniture which can be readily converted from a table to a leg rest or vice versa.

Embodiments of the invention are illustrated in the accompanying drawings, in which

FIG. 1 is a perspective view of a support portion,

FIG. 2 is a perspective view of the support portion with an upper portion arranged thereon to form a table,

FIG. 3 is a perspective view of the support portion with the upper portion arranged thereon to form a leg rest,

FIG. 4 is a view in section of part of the upper portion and part of a leg of the support portion, with the table top shown uppermost,

FIG. 5 shows part of a leg and a longitudinal member of the support portion interconnected in a manner different from that shown in FIGS. 1 to 3,

FIG. 6 is a section on the line VI—VI of FIG. 5,

FIG. 7 shows part of a leg and of a longitudinal member of the support portion interconnected in yet another manner,

FIG. 8 is a section on the line VIII—VIII of FIG. 7,

FIGS. 9, 10 and 11 are detail views illustrating means for locking the upper portion to the support portion when the table top is in use,

FIGS. 12 and 13 are detail views illustrating other means for locking the upper portion to the support portion when the table top is in use, and

FIG. 14 is a sectional view of a modified form of upper portion.

Referring to FIGS. 1 to 3, the base or lower support portion is shown by way of example as made from tubular material. It comprises two inverted U-shaped end members, each of which is formed to provide a central part which when the support portion is in use constitutes a horizontal upper transverse member **1**, and two legs **2** that project downwardly from the respective ends of the transverse member **1**, the legs **2** being provided with feet **2'**. The two legs **2** of each end member are interconnected by a lower transverse member **3** which is below and parallel to the upper transverse member **1**, and the two end members are interconnected by longitudinal members. In the case illustrated there are three parallel longitudinal members, namely two lower longitudinal members **4** that interconnect the legs of the two end members, and a third longitudinal member **4'** that interconnects the two lower transverse members **3**.

Each of the upper transverse members **1** is formed, in the side that faces the other upper transverse member **1**,

with a hole **5** through which extends a respective one of two aligned projections on the upper support portion. The upper support portion comprises a flat table top **6** to the flat underside of which (referred to the position of use of the table top) a cushion **7** is secured in any suitable manner, for example by means of adhesive. As shown in FIG. 4, a rod or tube **8** extends through the table top **6** and projects therefrom at each end to form two aligned horizontal pivot pins **9**, the pivot pins **9** forming the above-mentioned aligned projections. Each of the pivot pins projects into a respective hole **5** in an upper transverse member **1** in the manner illustrated in FIG. 4.

In the embodiment illustrated in FIGS. 1 to 3 the parts of the support portion are permanently connected together, as by welding. They may however be connected together in any other suitable manner, for example by rivets or bolts, as illustrated in FIGS. 5, 6 and 7, 8. FIGS. 5 and 6 show an end of a longitudinal member **4** flattened to form a lug **10**, which has a rivet hole, the lug **10** being inserted through an opening in a leg **2** and being secured in place by a rivet **12**. In FIGS. 7 and 8 an end of a longitudinal member **4** is arcuately shaped so as to fit partly around a leg **2**, to which it is secured by means of a rivet **13**. In both of the last-described cases nuts and bolts may be used instead of the rivets **12** and **13** respectively, to enable the support portion to be dismantled and thereby facilitate storage and/or transport.

Means are provided for enabling the upper portion to be fixed relative to the support portion when the article of furniture is to be used as a table. In FIGS. 1 to 3 each of the upper transverse members **1** is formed with a hole therethrough, one such hole being visible at **14** in FIG. 1, for the reception of a headed locking pin **15** which can be inserted through the hole **14** and into a corresponding recess in the table top. In another arrangement, illustrated in FIG. 9 to 11, each of the upper transverse members **1** is formed, in the side facing the other upper transverse member, with a hole **16** through which projects a plunger **17** which is urged towards the said other upper transverse member by a compression spring **18** which at the end remote from the plunger **17** abuts the inside of the tubular upper member **1** and which surrounds a rod **19** that projects through a hole **20** in the member **1**. The rod **19** is connected at one end to the plunger **17** and carries at its other end a head **21** that serves as a finger piece and which carries a stop in the form of a pin **22** that projects from the head **21** parallel to the rod **19**. The hole **20** is of generally circular shape (FIG. 11) with a recess **23** that forms a passageway for the pin **22**. When the article of furniture is in use as a table, the angular position of the head **21** is such that the pin **22** projects through its passageway **23** and the plunger **17** projects into a hole or recess in the table top **6** (FIG. 9) so as to lock the table top **6** in a horizontal position. When the article is to be converted to a leg rest, the head **21** associated with each member **1** is pulled so as to retract the plunger **17** from the hole or recess in the table top, the pin **22** being simultaneously withdrawn from its passageway **23**. Each head **21** is then turned so as to bring the pin **22** out of register with its passageway **23**, and is then released so that under the action of the spring **18** the pin **22** abuts the outside of the member **1** so as to hold the plunger **17** out of engagement with table top **6** (FIG. 10). The upper portion can then be turned over to bring the cushion **7** uppermost and thereby form a leg rest (FIG. 3), the upper portion then being capable of pivoting about the axis of the pivot pins **9** to a position that suits the user of the leg rest.

FIGS. 12 and 13 illustrate a modification of the locking means illustrated in FIGS. 9 to 11. In this case the plunger **17** is carried by one end of a stem **24** the other end of which is slotted or flattened, and a rivet **25'** extending across the slot or flat end serves as a pivot for a

cam **25** provided with a lever **26**. When the lever **26** is in the position shown in FIG. 12 with its free end adjacent the member **1**, the lowest part of the cam **25** abuts the outside of the upper transverse member **1**, and the plunger **17** can project into the corresponding recess in the table top under the action of the spring **18**. When the lever **26** is moved to the position shown in FIG. 13 the highest part of the cam **25** is caused to abut the outside of the member **1**, and the plunger **17** is thereby retracted from the recess in the table top (FIG. 13). It will be understood that both of the upper transverse members **1** are provided with such locking means, and that when both levers **26** are in the position shown in FIG. 13 the upper portion is released and can be turned over to bring the cushion **7** uppermost.

FIG. 14 shows a modification of the upper portion. Instead of the table top **6** having a flat underside as in FIGS. 2, 3 and 4 to which the cushion **7** is secured, there is provided around the edge of the table top a rim **28** which in relation to the table top **6** when in use as such projects downwardly to accommodate the cushion **7**. In this case the rod or tube **8**, the ends of which serve as pivot pins for the upper portion when the article of furniture is in use as a leg rest, may extend through the rim **28** and through the cushion **7** as shown. The cushion **7** may be a firm fit in the rim **28** so as to be normally retained therein but to be readily removable when desired, for example for cleaning, or it may be positively fixed in the rim **28** in any suitable manner, as by adhesive.

In a modification, instead of the pivot pins being constituted by the ends of a rod or tub **8**, individual pivot pins may be fixed in any suitable manner to the respective ends of the upper portion.

On any of the above-described embodiments of the invention the table top may be provided with a rim that projects away from the cushion **7** so as to form a tray when the table top is uppermost.

A tray **29** may be carried by the longitudinal members **4** of the support portion as shown in FIGS. 2 and 3, being provided if desired with spring clips that engage releasably over these longitudinal members or through holes in these members.

As is readily apparent from the above description, the upper support portion when the cushion **7** is positioned uppermost is freely pivotal relative to the base. This free pivotal movement is highly desirable since it permits the cushion **7** to be freely angularly displaced to accommodate the user's legs in the most comfortable position of rest or support. Further, as disclosed in FIGS. 1–3, all of the longitudinal connecting members **4** are disposed substantially below the cushion **7** when the latter is uppermost, whereby the cushion can freely angularly move to accommodate the user's legs, without the user's legs coming into contact with the longitudinal connecting members.

What is claimed is:

1. A convertible piece of furniture for use selectively as a table or a leg rest, the improvement comprising:

rigid base means including two end members rigidly interconnected solely by spacing means extending therebetween;

support means mounted on said base means and located between said end members, said support means including a table top and a cushion arranged in back-to-back relationship;

pivot means rotatably connecting said support means to said end members whereby said support means is capable of rotation relative to said base means about a substantially horizontal pivot axis to bring said table top or said cushion selectively uppermost to form respectively a table or a leg rest, said pivot means permitting free rotation of said support means relative to said base means when said cushion is uppermost so that, when the piece of furniture is used as a leg rest, said support means is capable of freely angularly turning about said pivot axis to accommodate itself to the user of the leg rest; and

said spacing means being positioned at an elevation substantially below said pivot axis and out of the path of rotation of said support means, so that when the cushion is uppermost the spacing means do not interfere with the free turning of the cushion or with the legs of the user disposed in engagement with the cushion irrespective of the angular relationship of the cushion relative to the base means; and

locking means coacting between said base means and said support means for rigidly locking said support means against rotation relatively to said base means only when said table top is uppermost, said locking means including a locking member movable between a locked position where it fixably interconnects said base means and said support means when said table top is uppermost and a released position wherein said support means is freely rotatable relative to said base means, and means for holding said locking member in said released position when said cushion is uppermost for permitting free rotation of said support means.

2. A convertible piece of furniture according to claim **1**, wherein said end members comprise substantially parallel inverted U-shaped members, each of said U-shaped members having a substantially horizontal support portion and a pair of substantially vertical leg portions extending downwardly from opposite ends of said horizontal support portion, said pivot means being connected between said support means and the horizontal support portions of said end members for permitting free rotation of said support means in the space between said end members;

said spacing means including a plurality of elongated parallel connecting members extending between and fixedly connected to said vertical leg portions, all of said connecting members being disposed at an elevation below said support means and spaced from the rotational path thereof.

References Cited

UNITED STATES PATENTS

760,473	5/1904	Nichols	287—58 CT
155,706	10/1874	Cahill	297—283
2,551,766	5/1951	Service	297—462 X

FOREIGN PATENTS

584,182	1/1947	Great Britain	297—439
1,191,864	2/1958	France	5—13
484,573	5/1938	Great Britain	297—283

PAUL R. GILLIAM, Primary Examiner

U.S. Cl. X.R.

297—283 432, 462; 312—241