Aug. 26, 1941. A. GIPSON 2,253,777

CONVERTIBLE TABLE

Filed Oct. 18, 1940 2 Sheets-Sheet 1

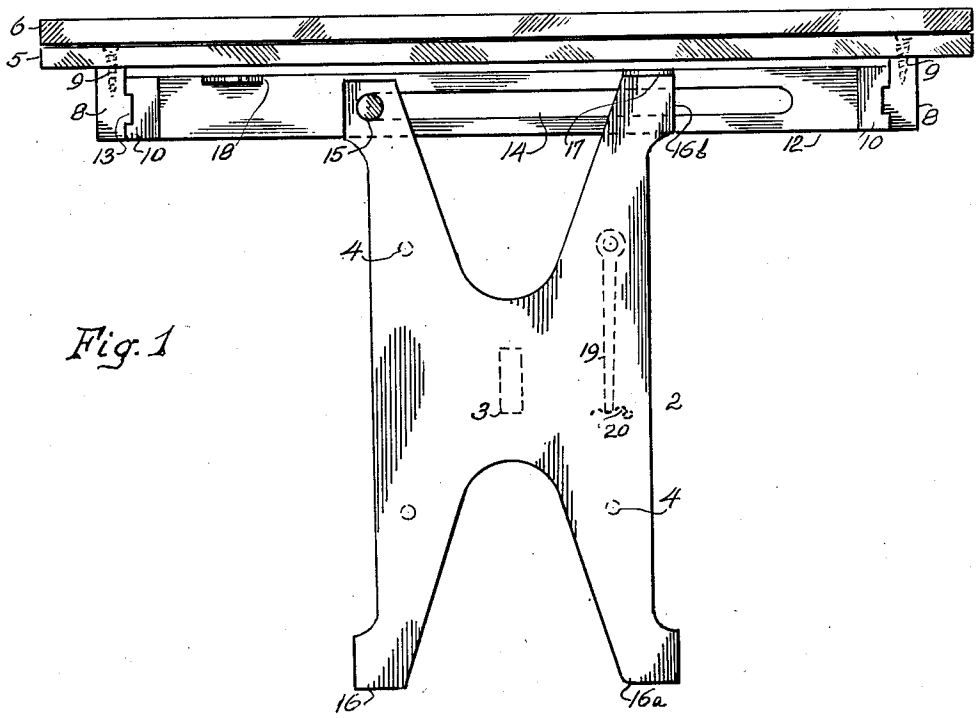


Fig. 1

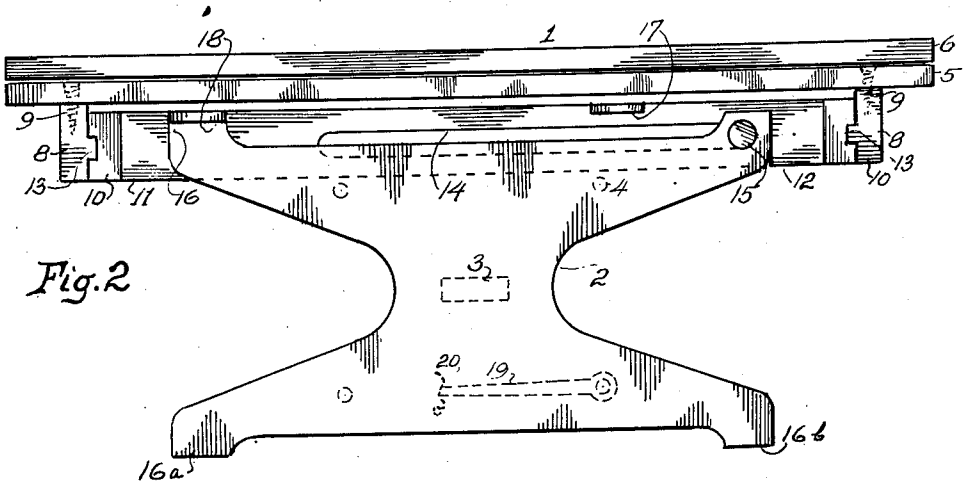


Fig. 2

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CONVERTIBLE TABLE

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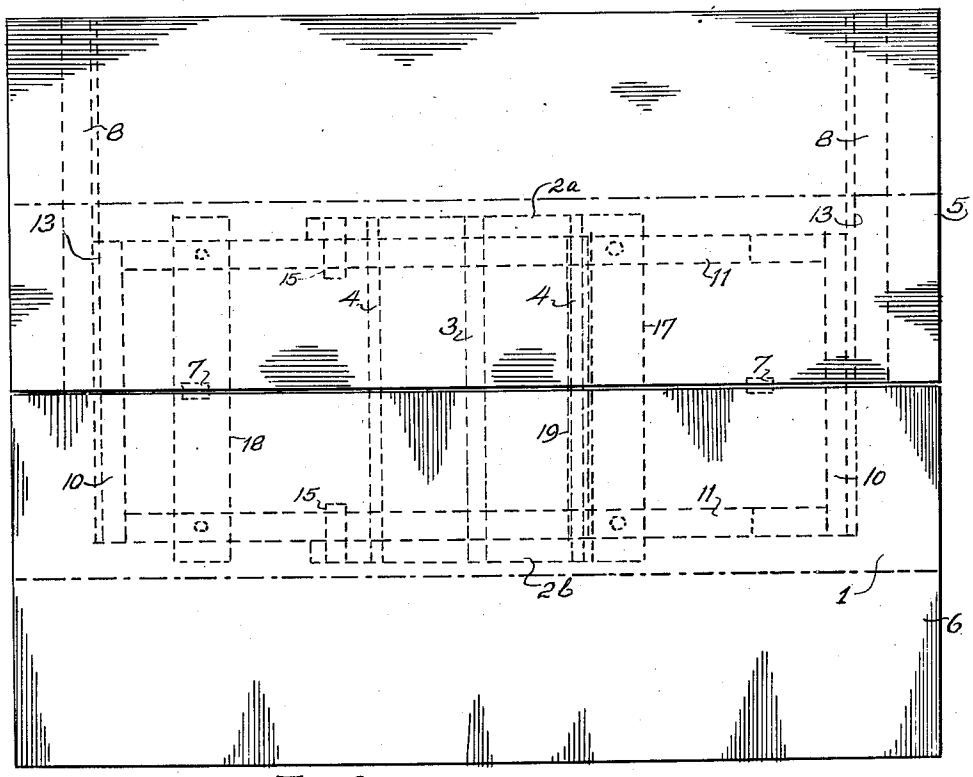


Fig. 3

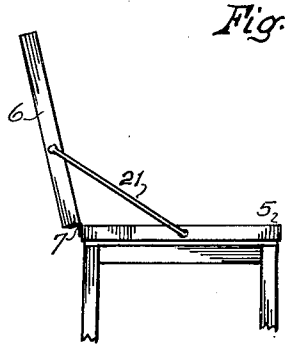


Fig. 4

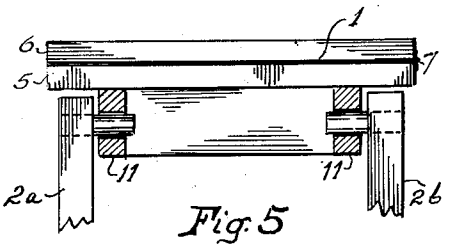


Fig. 5

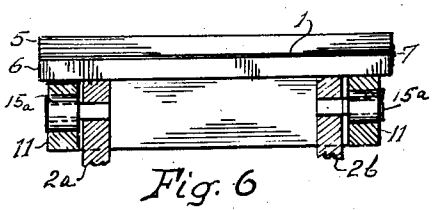


Fig. 6

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UNITED STATES PATENT OFFICE

2,253,777

CONVERTIBLE TABLE

Allen Gipson, New York, N. Y.

Application October 18, 1940, Serial No. 361,683

2 Claims. (Cl. 311—3)

My invention relates to an article of furniture which, by the means and constructions hereinafter described, can be conveniently converted from a low bench into a low table, and vice versa, and which can also be converted into a high narrow-topped table as well as a high table of considerable leaf area. Other modifications and adjustments will be brought out in this specification and all such conversions and modifications and the means for achieving them will be particularly pointed out in the appended claims.

The uses to which this convertible article of furniture of my invention can be put are mentioned in this specification, from which it will be apparent that its initial bulk is inconsiderable and that it can be placed in any apartment, room, or hall without in any manner interfering with the arrangement of other furniture and without unduly encroaching upon the space required for the unhampered moving about of the occupants.

Reference is to be had to the accompanying drawings in which:

Figure 1 is a side view of the article of furniture when used as a high table.

Figure 2 is a side view of the article of furniture when used as a low table or bench.

Figure 3 is a top view of the article of furniture when converted into a table with considerable top area.

Figure 4 shows how the narrow topped bench can be provided with a back rest.

Figure 5 shows a detail of construction.

Figure 6 shows a variation of the detail shown in Figure 5.

It is seen that the convertible article of furniture of my invention comprises two main parts, namely, the table top 1 and the base-frame 2.

The base-frame 2 has the two spaced side-frames 2*a* and 2*b* which are rigidly connected by such means as the cross-members 3 and 4 which also serve as spacers.

The side-frames 2*a* and 2*b* in their confining outlines are of rectangular conformation, and of considerably greater length than width, so that when the table-top and top-frame rest on short sides of the base-frame the table will be of ordinary height, whereas when the table-top and top-frame rest on the long side of the base-frame the table will be correspondingly lower. In order to insure level support for the table in either case, the base-frame is provided with the feet 16 and 16*a* for the high or up-ended position, and with the feet 16*a* and 16*b* for the low or prone position, all feet being accurately levelled and squared with reference to one another as well as to the table top.

The side-frames, top-frame, and table-top may be of any suitable material, metallic or non-metallic, and the side-frames may be of any ornamental design within their fundamental rectangular bounds.

The table top has the two leaves 5 and 6 which are foldably joined by the hinges 7.

The table leaf 5 is provided at its bottom side by the transverse members 8 secured to the table leaf by such conventional means as screws or nails 9 or by any other means employed in furniture construction.

The transverse members 8 have slidable supports in the members 10 which are jointed to the longitudinal members 11 and form therewith the top frame 12. The means affording the desired slidable support are exemplified by the tongue and groove construction 13. I do not limit myself to these particular means since many other constructions may be resorted to which allow the table-top to be slidably adjusted in transversely symmetrical relation to the top-frame so as to insure a balanced lifting grasp for the operator during the process of conversion.

Each longitudinal member 11 of the top-frame 12 has the slot or slotted recess 14 into which slidably and pivotally engages the pin 15 which is fixed in each of the side-frames of the base-frame in the location shown in the drawing. Instead of separate pins a bar may be used if desired.

In order to convert the low bench shown in Figure 2 into the high table with narrow top shown in Figure 1 the operator makes sure that the folded table is symmetrically disposed with reference to the top-frame and corrects its position, if necessary, by slidably adjusting it. The operator then grasps the table top with both hands at or near its longitudinal center-line and the substantially level-held table-top and top-frame are then lifted, which has the immediate effect of tilting the base-frame by reason of the eccentric location of the bearing pins with reference to the mass center of the base-frame. The tilting of the base-frame can be furthered by a slight side-ward motion of the table-top and top-frame, or possibly by a very slight divergence from their substantially level position, so that the bearing-pins 15 then slide and rotate in the slots 14 to the full length of these slots. The base-frame thereby executes a quarter-turn with reference to the floor as well as to the table-

top and top-frame. When the base-frame has attained its up-ended position and thus rests on the feet 16 and 16a, the conversion is concluded by lowering the table-top and top-frame so that the feet 16b of the base frame afford support and seat for the top-frame by contacting the transverse members 17 integral with the top-frame 12. When the conversion is from a high table into a low table, the rotation of the base-frame and the travel of the bearing pins in the slots are of course reversed.

When the article of furniture is in its low conversion, the feet 16 of the base-frame afford support to the transverse member 18 integral with top frame.

In order to convert the narrow-top table into one of larger area, the folded table top is slid transversely from the position shown in dash-dotted lines in Fig. 3 until it occupies the position of the table leaf 5. The topmost leaf 6 is then swung back until it rests on the top-frame, the narrow table-top being thereby converted into one of double the area.

It is obvious that when the table-top is in its unfolded position and conversion as to height is desired, the operation will be facilitated by first folding the table-leaves and to slidably adjust their position so that they are disposed in transversely symmetrical relation to the top-frame. The lower table-leaf will engage the entire length of the grooves in the top-frame members 10, a condition which is important since in the initial stage of the conversion practically the entire weight of the base-frame is taken by the tongue-and-groove connection of the members 10 and 13. When the table-leaves are unfolded, only part of this tongue-and-groove connection is effective, as shown in Figure 3. Moreover, when the table-leaves are folded, the operator is thereby enabled to apply his lifting grasp accurately at the longitudinal center-line of the table as a whole, whereas when the leaves are unfolded he will naturally apply his grasp at the folding-line of the table-top regardless of whether this unfolded table-top is symmetrically disposed to the top-frame and base-frame or not. In this latter case an unbalanced lift will result which causes the table to cant over toward or away from the operator. This would naturally impede the process of conversion since the base-frame would then pivot on the floor about the corner of one side-frame only instead of both. The foldability of the table-top and its transverse adjustment are therefore essential to the smooth operation of the entire device.

It is apparent that the operation of converting the article of furniture as described is extremely simple and can be accomplished in a few seconds. Since no mechanism of any description is required, the possibility of anything getting out of order is thereby completely eliminated.

Although the side-frames 2a and 2b of the base-frame have been shown, by way of exemplification at the outside of the top frames, they can of course be equally well placed inside of the longitudinal top frame members, as illustrated in Fig. 6.

The slidable and pivotal action between the base-frame and the top-frame can be facilitated by employing a roller 15a as illustrated in Fig. 6, such modifications however being merely a matter of refinement and predelection within the scope of the appended claims.

The table-top can be tilted to an inclined position by the member 19, which is hinged on any convenient cross-member of the base. When not in use it is held in place by such means as the spring clip 20. By turning the member 19 up into supporting contact with the member 17 of the top frame, the table top will assume an inclined position concurrent with a slight pivotal adjustment about the pins 15.

By providing the table leaves with restraining straps or chains 21 the top leaf can be partially swung back until held in the position exemplified in Fig. 4, which shows the low bench provided with a back rest thus contrived.

By the simple means above disclosed, the article of furniture can thus be altered to serve as a low bench suitable for living room or hall, as a low table suited to picnics, lunches and similar entertainments, as a low bench with a back rest, as a high narrow-top table, as a high narrow-top table with an up-turned back suitable for writing and reading purposes, and as a high large-topped table suited to any of the manifold uses to which such a table can be put.

Having thus described my invention, I claim:

1. An article of furniture convertible from a relatively high table into a relatively low table, and vice-versa, comprising a top-frame including longitudinally slotted frame-members; a table-top carried by said top-frame; and a movable base-frame having slidable and rotatable connection with said top-frame, the said base-frame having relatively long sides and adjacent shorter sides adapted to levelly support the top-frame and table-top, and conformed to provide selectively a relatively high support and seat for the top-frame when placed up-ended upon its short side, and a relatively low support and seat for the top-frame when placed lengthwise upon its long side, the said base-frame being provided with bearing-members in slidable and pivotal engagement with the slots in the top-frame members, said bearing-members being so constructed and positioned with reference to the mass center of the base frame that the substantially level-held table-top and top-frame can be lifted and maintained substantially level by the operator, the base frame being thereby initially tilted and subsequently quarter-turned with reference to the table-top and top-frame concurrent with the sliding and pivotal travel of the said bearing members in the slots of the top-frame members, the conversion being concluded by seating the table-top and top-frame upon the upper side of the quarter-turned base-frame.

2. An article of furniture convertible from a relatively high table into a relatively low table, and vice-versa, comprising a top-frame including longitudinally slotted frame-members; a table-top having slidable mounting in said top-frame and transversely adjustable thereto, and a movable base-frame having slidable and rotatable connection with the said top-frame, the said base-frame having relatively long sides and adjacent shorter sides adapted to levelly support the top-frame and table-top and conformed to provide selectively a relatively high support and seat for the top-frame when placed up-ended upon its short side, and a relatively low support and seat for the top-frame when placed lengthwise upon its long side, the said base-frame being provided with bearing-members in slidable and pivotal engagement with the slots of the top-frame members, said bearing members being so constructed and positioned with reference to

the mass center of the base-frame that the transversely adjusted and substantially level-held table-top and top-frame can be lifted and maintained substantially level by the operator, the base-frame being thereby initially tilted and subsequently quarter-turned with reference to the table-top and top-frame, concurrent with the sliding and pivotal travel of said bearing members in the slots of the top-frame members, the conversion being concluded by seating the table-top and top-frame upon the upper side of the quarter-turned base-frame.

ALLEN GIPSON.